MEDICINAL DICTIONARY:

INCLUDING

PHYSIC, SURGERY, ANATOMY, CHYMISTRY, AND BOTANY,

In all their BRANCHES relative to MEDICINE.

TOGETHER WITH A

HISTORY *of* DRUGS;



An ACCOUNT of their Various

PREPARATIONS, COMBINATIONS, and USES;

AND AN

INTRODUCTORY PREFACE,

1686

Tracing the PROGRESS of PHYSIC, and explaining the THEORIES which have principally prevail'd in all Ages of the World.

With COPPER PLATES.

By *R. JAMES*, M.D.

VOL. II.

The LORD *hath created Medicines out of the Earth, and he that is wise will not abhor them*, Ecclesiasticus, Chap. xxxviii. Verse 4.

Ἰητρικὴ, τεχνέων μὲν ἁπασέων ἐστὶν ἐπιφανεστάτη. HIPPOCRATES.

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M.DCC.XLV.

MEDICINAL DICTIONARY:

BEING A

BODY of PHYSIC and SURGERY.

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CALDAR, Tin. *Johnſon.*

CALDARIUM. The ſame as *Laconicum. Blancard.* See LACONICUM.

It alſo imports any Veſſel for boiling Liquids.

CALDERIÆ *Italicæ.* Hot Baths near *Ferrara* in *Italy*, good in Difficulty of Urine. *Caſtellus.*

CALDUS, for CALIDUS, (θερμὸς) is frequently uſed by *Scribonius Largus. Caſtellus.*

CALEFACIENTIA.

The *Calefacientia* of the *Latins* are the ſame with the θερμαντικὰ of the *Greeks*, and denote no more than what we commonly call *warming Medicines.* That the Natures and Qualities of the ſeveral Medicines, coming under this Denomination, may be the more thoroughly underſtood, it is neceſſary to obſerve, that there may be Heat without any external Appearance of Fire, and that it diſcovers its Preſence by numberleſs Effects; but in no Caſe more conſpicuouſly than by the Dilatation of the Air in the Thermometer, *Boerhaave's Chym. Vol.* 1. The Means, then, by which Warmth is generated in Bodies, are the very ſame with thoſe by which apparent Fire is produced: Where there is Heat, there alſo is a proportionable and correſpondent Motion and Agitation of the Parts of the Body ſaid to be hot; and, *vice verſa*, where there is an Agitation of the Parts, there is a proportionable Heat or Warmth.

Motion, conſidered in an abſtract and metaphyſical Light, does not generate Heat, ſince a Body, moving *in Vacuo*, can never produce any ſuch Effect; ſo that Warmth muſt be originally owing to a briſk and lively Attrition of ſuch Bodies as are naturally ſuſceptible of Heat, and capable of communicating it, *Mazini Mech. Med.* and *Acta Eruditorum Lipſiæ*, for the Year 1729. The Generation of Heat in Bodies, and its ſeveral Degrees, are determined by three Mechanical Axioms; the firſt of which is,

1. That the more denſe the Matter is, the Degree of Heat generated is proportionably the greater: By the Laws of Mechanics, if two Bodies move with an equal Degree of Velocity, the Effects produced by them will bear a direct Proportion to their reſpective Denſities, or Quantities of Matter.

2. The greater or ſtronger the mutual Preſſure of the Parts of one Body upon thoſe of another is, the Heat generated is, *cæteris paribus*, proportionably the more intenſe: Thus two Plates of Iron, gently and ſlowly moved upon each other, do not produce the ſame Degree of Heat, as when the Attrition is ſtronger and briſker.

3. The denſer Bodies are, the ſtronger their mutual Preſſure, and the quicker their Motions, the greater is the Degree of Heat produced; for in proportion as the Velocity is increaſed, ſo the mutual Reſiſtance between the Body moved, and that which may be ſaid to ſuſtain the Motion, is augmented.

From theſe Conſiderations we come to underſtand, why ſuch human Bodies as are denſe, hard, ponderous, robuſt, accuſtom'd to Exerciſe, and abound with compact Humours and Juices, are always found not only warmer, but alſo require a longer time to become cold than others; ſince ſuch Bodies, by a vigorous Application of the Solids to the Fluids, render'd denſe by Compreſſion, may reaſonably be ſuppoſed not only to generate a greater Degree of Heat, but alſo to retain it longer than Bodies of an oppoſite Make, or in another State. Hence alſo we underſtand, why the internal Parts of Carcaſes, deprived of vital Heat, grow cold very ſlowly; whereas their external Parts

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become ſo very ſoon. On the contrary, it is obvious, that lax, ſoft, languid, and weak Bodies, can never excite ſuch a Degree of Heat in their aqueous Humours; becauſe the Attrition of their Parts being weaker, their Fluids muſt be leſs denſe, and the Surfaces of their Parts the more lax, and conſequently leſs capable to retain the generated Heat. See *Boerhaav. Chym. Vol.* 1. *Ariſtotle* was well appriſed how much the Denſity or Thinneſs of the Blood, flowing in the Veſſels of Animals, contributed to generate or produce Heat in their Bodies, as is obvious from the following Paſſage in *Lib.* 2. *Cap.* 4. *de Part. Animal.* "That Blood, ſays he, which is too much diluted, is cold, and conſequently cannot become hard: But thoſe Animals whoſe Blood abounds with a great Number of groſs thick Fibres, have more of an earthy Principle in their Conſtitutions, and are fierce, wrathful, and furious, for Rage begets Warmth; and ſolid Bodies, and all Subſtances of a firm Texture, when become hot, warm more powerfully than ſuch as are of a moiſt and humid Nature. Now the Fibres of ſuch Animals are ſolid, and of a terreſtrial Nature; ſo that, by Rage, Fermentations and preternatural Heats are excited in the Blood: Hence it happens, that Bulls and Boars are of a fierce, a wrathful, and furious Diſpoſition, becauſe their Blood abounds more in ſolid Fibres than that of ſome other Animals." For the Maſs of Blood conſiſts not only of red Globules, ſuch as come more ſtrictly under the Denomination of Blood, but alſo of Serum, in which theſe Globules ſwim; and the larger the Quantity of Serum is, the thinner and more diluted the Maſs of Blood muſt of courſe be, and *vice verſa*. On the other hand, the thinner the Blood is, the more faint and weak the Attrition cauſed by its Motion muſt be; and the weaker its Attrition is, the ſmaller the Degree of Heat generated muſt be; therefore the thinner the Maſs of Blood is, the fainter the Heat produced by it muſt be, and *vice verſa. Boerhaav. Inſtitut. Med. Sect.* 223. Hence the Reaſon is obvious, why Men of hardy robuſt Conſtitutions, who have their Veſſels fill'd with a thick and rich Blood, are more ſubject to burning Fevers, and inflammatory Diſorders, than thoſe of lax and weak Conſtitutions, whoſe Veſſels contain a thin and much diluted Blood. Hence alſo appears the Reaſon, why Veneſection is the moſt infallible Method of diminiſhing the Heat of the Body; becauſe, by leſſening the Quantity of the Blood, its Attrition in the Veſſels, on which the Denſity of the Humours depends, is proportionably leſſen'd. But to conſider the Method in which Heat is generated and increaſed in the human Body, a little more accurately: The Blood itſelf is a Body; the Heart alſo, and an Artery, are Bodies; and conſequently the Heart cannot contract itſelf without preſſing upon the Blood, and this Preſſure is continued by the Arteries. When a Body moves through a Cylinder, the Attrition produced is little or none at all; whereas when the ſame Body moves from the Baſe towards the Apex of a conical Canal, it muſt ſtrike againſt its Sides: Hence ariſes a Repercuſſion, and conſequently an Attrition. Now the Arteries of our Bodies are ſuch conical Canals, and conſequently reſiſt the Impreſſion of the Blood; therefore an Attrition muſt neceſſarily be produced; and by Natural Philoſophy we are taught, that where there is Attrition, there alſo muſt be Heat; ſo that there can be no Heat in the human Body, but what is produced by the Circulation of the Fluids; and when this Circulation is ſtopp'd, the Heat is of courſe deſtroy'd. Hence the Degrees of Heat, in a human Body, are moſt properly eſtimated by the

Pulſe; ſince the beſt Pulſe denotes an equable Heat diffuſed thro' all the Body; whereas the Pulſe, preternaturally increaſed or diminiſh'd, indicates a proportionable Increaſe or Diminution of Heat, *Boerhaav. Inſtit. Med. Sect.* 220. and 968. Hence the Reaſon is obvious, why the Arterial Blood of the Brain is the coldeſt of any; ſince, in the Arteries of the Brain, the Syſtole and Diaſtole are very faint and languid, becauſe, upon their entering the Cranium, they loſe their muſcular Coat. This Obſervation, for the ſame Reaſon, holds true with regard to the Blood in the Bones. The muſcular Coat of the Arteries produces a proportional Preſſure of the Parts of the Blood upon each other: Hence ariſes Attrition, and this Attrition ceaſing, or being diminiſh'd, the Heat accordingly ceaſes, or is impair'd. From theſe Circumſtances we are alſo able to account for the arterial Blood being hotter than the venous Blood, ſince, in the Arteries, the Blood is always carried from wider into narrower Parts, where the Reſiſtance, the Preſſure, the Attrition, and conſequently the Heat, are increaſed; whereas, in the Veins, the Blood is carried from narrower into wider Parts, where the Reſiſtance, the Preſſure, the Attrition, and conſequently the Heat, are diminiſh'd. The Reaſon why ſome Men, otherwiſe in a good State of Health, who faint away upon ſeeing Phlebotomy perform'd, firſt become cold at the Extremities, is, becauſe in theſe Parts the Humours firſt begin to ſtop. Since, then, all the Heat in a human Body is produced by the Motion of the Fluids, and ſince the Exceſs of Heat bears a joint Proportion to the Attrition of the moving Fluids with themſelves, and with the Veſſels in which they flow, it is hence obvious, that whatever increaſes the Velocity of their circulatory Motion, muſt of courſe augment the Heat of the Body; ſo that, by Motion or Exerciſe alone, the Degrees of Heat are not only increaſed in a human Body, but alſo bear a Proportion to the Velocity of that Motion, whether it be Running, or any other kind of Exerciſe. The Reaſon why *Hippocrates*, in the fifteenth Aphoriſm of his firſt Section, aſſerts, that in Winter, and the Spring, the Belly is naturally hotter than at other Seaſons, is, becauſe at theſe Times the Blood flows thro' Veſſels braced up, and render'd narrow, by the Influence of the external Cold; for, if the ſame Quantity of any Liquid is to move thro' a Veſſel or Canal narrower by one half than the Veſſel it formerly moved in, it will flow quicker by one half than it did in the other: Hence its Attrition, and conſequently its Heat, muſt be increaſed. "The "Circulation of the Blood," according to *Hoffman*, in *Med. Rat. Syſt.* "is the immediate and productive Cauſe of Heat in "the human Body; and all Subſtances which increaſe this "Circulation, produce correſpondent Degrees of Heat in it; "whereas ſuch Subſtances as retard its Motion, of courſe pro- "portionably impair the Heat." From what has been ſaid, it is obvious, that under the Denomination of heating Medicines, all ſuch are to be rank'd, as increaſe the Velocity of the Circulation, and produce a greater Preſſure of the Veſſels upon the Fluids; ſince upon this Circumſtance depends the Denſity of the Humours, which, as it is the principal Cauſe, ſo may it alſo prove the Effect of an increaſed Degree of Heat. Among the Medicines of this Kind, we may reckon,

1. Stimulating Subſtances, among which are the Four greater hot Seeds of Aniſe, Caraway, Cumin, and Fennel; the Four leſſer hot Seeds of Biſhops-weed, Stone-parſley, Smallage, and wild Carrot; and the Four hot Ointments, which are the *Ointment of Marſhmallows*, that of *Agrippa*, that call'd the *Unguentum Aregon*, and the *Unguentum Martiatum*.

2. To this Claſs alſo belong Aſtringents, and ſuch Subſtances as block up the Pores externally; ſuch as moderate Cold, a heavy Air, cold Water, tight Cloaths, or thick Bed-cloaths.

3. Among ſuch Things as increaſe the Heat of the human Body, we may alſo reckon Muſcular Motion, and principally Frictions.

In the laſt Place, to this Claſs belongs external Heat, whether occaſioned by the Fire, or the Air; to which we may alſo refer the warm Atmoſphere immediately ſurrounding the Body itſelf, when ſhut up from a Communicaton with the neighbouring cool Air; when, for Inſtance, the Body, being covered cloſe up in Bed, becomes gradually warmer by the Heat exhaled from itſelf. According to *Celſus*, *L.* 1. *C.* 3. "the Degrees "of Heat are increaſed in the Body by Unction, by Salt-water, "eſpecially if hot, by all ſaline Subſtances, and by auſtere "Wine." The Diſtinction of heating Medicines, according to their ſeveral Degrees, ſeems to bear an Air of Abſurdity in it, ſince theſe Degrees cannot be abſolutely determined, but are merely relative to the ſeveral Conſtitutions to whom ſuch Medicines happen to be exhibited. As for Heat externally apply'd to the Body, 'tis to be obſerv'd, that a dry Heat is more proper for generating Warmth in the Conſtitution, than a moiſt one; ſince the latter, at firſt, excites the Senſation of Heat, but afterwards augments the Cauſe from which the Senſe of Cold proceeds, by relaxing the Veſſels, diminiſhing their Reſiſtance, and conſequently impairing the Preſſure which ought to be made upon the Fluids. In this Senſe we are to underſtand *Hippocrates*, when, in the ſixteenth Aphoriſm of his fifth Section, he aſſerts, that "too frequent an Uſe of hot Subſtances is attended "with Tenderneſs of the Fleſh, and Weakneſs of the "Nerves."

Old Perſons, and People of wither'd, dry, and rigid Conſtitutions, ſeem to be proper Exceptions from this Rule; ſince, in conſequence of the Relaxation to be expected from a moiſt Heat, the Paſſages of the Humours, through their capillary Veſſels, are render'd more free and open. The Health of ſuch Patients is, according to *Valleſius*, in his *Philoſophia Sacra*, moſt effectually conſulted by following the Example of pious King *David*, in the like Circumſtances. *Langius*, in the twelfth Epiſtle of his firſt Book, among the Fomentations which afford the moſt kindly Warmth, reckons a young Puppy, or a little Boy, laid in the Boſom of an old Man; and immediately ſubjoins theſe Words: "Thus," ſays he, "when "*David* was ſeventy Years of Age, and his native Heat ſo "much exhauſted, that he could not become warm by any "other Means, he, by the Advice of his Phyſicians, got *Abi-* "*ſhagh*, the lovely *Sbunamite*, to ſleep in his Arms, that the "decay'd Strength of his Stomach might be reſtored by the "kindly Warmth imparted by the blooming Lady."

When the Parts are refrigerated by the external Air, provided they are not become quite rigid by the Exceſs of the Cold, and the Blood is ſtill capable of circulating, they are reſtored to their former Vigour, by being firſt immerſed in cold Water, and afterwards beſprinkled with it; upon which they begin gradually to aſſume a genial Warmth. *Levini Lemnii occulta Naturæ Miracula*, *L.* 4. *C.* 20.

From what has been ſaid it is obvious, that heating Medicines are not only proper, but neceſſary, where thin and diluted Humours are to be inſpiſſated; where the ſolid Parts, become flaccid, are to be rendered tenſe; and where the Circulation of the Juices is either to be promoted when ſtopt, or accelerated when too faint and languid, the Pulſe of the Patient, in the mean time, directing the Phyſician how far to carry on his Deſign: So that heating Medicines, ſkilfully apply'd, muſt be adapted to what we call cold Conſtitutions; to ſuch as abound with a recrementitious Mucus, to ſuch as are too much relaxed, to the Leucophlegmatic, and conſequently to ſuch as are afflicted with œdematous Tumors. But they who practiſe Phyſic ought to take due Care, that heating Medicines be exhibited gradually; and that the Body be not warm'd by their Influence all on a ſudden, leſt, by that means, the Fluids, ſtagnating in the flaccid Veſſels, ſhould be too haſtily driven into the capillary Veſſels, and there form the moſt dangerous Obſtructions. A Man, for Inſtance, who, by being long accuſtomed to a ſedentary Life, and a want of due muſcular Motion, is become pale, and has acquired a flaccid State of all his Fibres, when, all on a ſudden, he uſes any violent Motion, or takes large Doſes of intenſly hot Medicines of the more ſtimulating and acrid Kind, he immediately begins to breathe with Difficulty, and dread a Suffocation, in conſequence of the Humours moving too violently through the Veſſels, as yet too lax, and unable to make a mutual Reſiſtance to the Impetus of the Fluids, which of courſe ruſh into the capillary Veſſels, and diſtend them ſometimes to ſuch a Degree as to burſt them, and occaſion a Diſcharge of their Contents. Accidents of this Nature happen not only in cachochymic Habits, which abound with acrid and viſcid Humours, but alſo in plethoric Conſtitutions, where the Juices are good, but move in too ſlow and languid a manner. *Boerhaav. Aph.* 118. But as a temperate Heat is abſolutely neceſſary for the Preſervation of Life and Health, ſo, as we are told by *Hoffman*, in his *Med. Rat. Syſt.* if this Heat is increaſed beyond its due Degree, an irreparable Loſs of the finer Fluids is ſuſtained; and all thoſe Diſorders brought on, which draw their Origins from the Juices being too much inſpiſſated, or rendered acrid by the Diſſipation of their diluting, balſamic, and aqueous Parts. According to *Hoffman*, in *Med. Rat. Syſt.* "Heat generates Salts in the Juices of Animals; "for which Reaſon, when the Heat is increaſed, as happens in "Fevers, the Urine contains a larger Quantity of Salts, and is "of a deeper Colour; whereas the more moderate the Heat of "the Body is, which is generally the Caſe with thoſe habitu- "ated to a Life of Eaſe and Temperance; the fainter the Co- "lour of the Urine is, and the ſmaller Quantity of Salts it con- "tains." From this Paſſage we learn, that a Change in the State and Condition of the Urine is another Sign of the Heat of the Body being increaſed or diminiſh'd; by which, as well as the State of the Pulſe, the Phyſician ought to be directed in the Uſe of heating Medicines. From what has been ſaid, it is obvious, that the Uſe of hot Subſtances is prejudicial in rigid Bodies, where the Juices move quickly, and with a conſiderable Impetus; and conſequently, that they muſt abſolutely be abſtain'd from in feveriſh Heats, and acute inflammatory Diſorders. According to *Hoffman*, in the Treatiſe laſt quoted, "Hot Subſtances, and ſuch as agitate the Blood too violently, "eaſily convert a mild Humour into a Poiſon, and a mild Diſ- "order into one of the malignant Kind." He alſo adviſes

"young

" young Men, and such as are in the Vigour of their Age, to " abstain, as much as possible, from such Substances as are hot, " or have a Tendency to throw the Blood into Commotions; " lest, by such a Piece of Imprudence, they should be suddenly " cut off by inflammatory Disorders." That heating Medicines ought also to be sparingly and cautiously exhibited to Infants, is also obvious, since their Juices are easily put into Motion, and their Vessels soon irritated; for, according to *Hippocrates*, in the fourteenth Aphorism of his first Section, they who are in a growing State contain a great deal of innate Heat. Now, that heating Medicines perform the various Offices of Corroboratives, Resolvents, and Discutients, is sufficiently obvious to any one that considers, that the Fibres, the Membranes, and the Blood-vessels, derive a certain Tone, and elastic Force, from heating Substances; by which means the Circulation of the Juices is render'd brisk and lively. But that an Excess of this Heat renders People weak and languid, is a Truth confirm'd by Experience: The Reason of it seems to be, that the thin and aqueous Humours of the Body being too much exhausted, the Blood must, of course, be deprived of the Matter allotted by Nature for the Reparation and Nourishment of the Solids. The incomparable *Boerhaave*, after making repeated Experiments by means of *Fahrenheit*'s Mercurial Thermometers, in order to determine the greatest Degree of Heat the human Body could endure or breathe in, affirms, that the vital Heat in Men amounts to ninety-two Degrees; whereas in Children it often amounts to ninety-four; that a Man is always hotter than that Portion of the Atmosphere which surrounds him; and that he cannot bear a Heat in his Body greater than an hundred and a few odd Degrees, without a Cessation of the Circulation, and Death; in which Case the Injury is first discover'd by a Depravation of the several Actions of the Head and Lungs. He also affirms, that no one can live in an Air which has ninety Degrees of Heat; but that all Animals hitherto known die very quickly in it. *Boerh. Chym.*

CALENDULA. A Plant usually thus distinguish'd.

Calendula, Offic. *Calendula sativa*, GARDEN MARIGOLD, Raii Hist. 1. 337. Hort. Monsp. 28. *Calendula simplici flore*, Ger. 601. Emac. 739. *Calendula simplex*, Park. Parad. 298. *Caltha flore simplici*, J. B. 3. 101. Cod. Med. 25. Hist. Oxon. 3. 13. *Caltha vulgaris*, C. B. 275. Tourn. Inst. 498. Boerh. Ind. A. 113. *Chrysanthemum*, *Caltha*, *Calendula*, Chab. 358. GARDEN MARIGOLD.

The Root of the Marigold is thick, whitish, and succulent, not much branch'd, and dying as soon as it has ripen'd the Seed. The Leaves are long, pretty thick, and juicy, of a pale-yellow Colour, broader at the End than at that Part next the Stalk, somewhat clammy in handling; the Stalks grow a Foot or more high, beset with smaller Leaves. The Flowers grow singly at the End of the Stalks, consisting of a Border of yellow Petala, set about a middle Thrum, of dark-reddish fistular Flosculi; of a strong, somewhat resinous, Smell, standing in green, scaly Calyces, likewise clammy in feeling. The Seed is pretty large and crooked, of a brownish Colour. *Miller's Bot. Off.*

Of the *Caltha*, or *Calendula*, there are several Species; but the most noted for Medicinal Virtues is that mentioned above.

This Plant is frequently found in the Gardens, and is of so prolific a Nature, that 'tis no easy Task to root it out of a Soil in which 'tis once sown. It begins to flower in the Month of *May*, and continues to produce Flowers through all the Summer Months; from which Circumstance some imagine it has receiv'd the Names *Calendula*, and *Flos omnium Mensium*. Some call it *Solsequia*, or *Solsequium*, and *Sponsa Solis*; because its Flower opens at the Rising, and shuts at the Setting, of the Sun.

According to *Bruyerinus*, this Herb is frequently prepared in Broths; and its Leaves, when first appearing, are made an Ingredient in Sallads. The Flowers are only used in the Shops. These are of an aromatic Smell; and when chew'd, exert a penetrating, and almost burning Acrimony: Hence they derive their sudorific Virtues, in which they are scarce inferior to Saffron itself. For this Reason the Flowers of the *Marigold* have merited a Place among the Catalogue of Alexipharmacs; and, according to *Schulzius*, in his *Prælectiones*, have had uncommon Efficacy ascribed to them, by some very celebrated Physicians, in the Cure of malignant and pestilential Fevers. *Velschius* informs us, that upon the breaking out of a pestilential Fever, *Le Fevre* prescribed the Juice of the *Marigold*, to be taken in White-wine as a Vehicle, by which most of the Patients who used it recover'd; and that this same Medicine was the celebrated *Arcanum* of *Vestingius*, *Eph. N. C. D.* 1. *a.* 4. According to *Ray*, the Juice may be given from one Ounce to two, for the same Intention. In Consequence of the Flowers of the Marigold being possessed of an alexipharmac and sudorific Quality, they are, by some, added, as a fifth, to the other four Cordial Flowers. They may be properly prescribed where-ever stimulating Medicines are necessary; for which Reason a Decoction of them is frequently exhibited, in order to promote an Eruption of the Small-pox; and, according to *Ray*, a Posset-drink, impregnated with the Flowers, has for a long time been used in *England*, to answer the same Intention. By reason of their resolvent and aperient Qualities, they are used in Decoctions for the Cure of the Jaundice, and for provoking the obstructed Menses. Besides, when used as an Ingredient in Vapour-baths, they not only excite the Menses, but also expel the Fœtus and Secundines. *Etmuller*, for the Cure of the Yellow-jaundice, recommends an Ounce of the express'd Juice of the Flowers to be taken with one Dram of the Powder of Earth-worms, upon an empty Stomach. But the same Author informs us, that *Riverius* thought the Flowers appropriated and adapted to provoke the Menses. These Flowers bruised with Wine, and besprinkled with Salt, contribute, when externally apply'd, to the Discussion of Tumors. " I was informed," says *Paulli*, " by a Man of Candor, that Warts were extir-" pated by the Juice of fresh-gathered Marigold-flowers: But " the Practice of anointing the Warts three different times up-" on three *Fridays*, is too superstitious to deserve the Counte-" nance of a Person of Sense; for they must be anointed with " this Juice till we observe them fade, and fall off." On account of the Efficacy of the Marigold in extirpating Warts, it is by some called *Verrucaria*. According to *Morison*, the Flowers reduc'd to a Powder, cure the Tooth-ach, if laid upon a little Cotton, and apply'd to the Part affected.

The Country Women have a Custom of churning the Flowers with their fresh Butter, in order to give it a grateful yellow Colour. *Morison* informs us, that the Leaves of the Herb are said to be hot, and to contain a certain heating Acrimony, which yet does not exert itself at first, on account of the Moisture with which it is join'd. For this Reason they are said to render the Body soluble, if used as other Pot-herbs. Hence we may reasonably conjecture, that the Use of the Marigold-leaves in Food is proper for such as have any scorbutic Taint in their Constitutions. According to *Paulli*, *Camerarius* prescribes the Seeds of the Marigold against Worms, and affirms, that for answering that Intention, they are equal to those of Sorrel, Purslain, and Plantain, which are said to be effectual against all Worms whatever. Vinegar of Marigold-flowers is recommended as an Antidote against the Plague, if the Physician takes some Ounces of it before he attends Patients labouring under that Distemper. With this View it is also apply'd to the Wrists, the Temples, and the Nostrils. It is certain, that common Wine-vinegar alone produces the same Effect in the like Case; for which Reason *Schulzius* affirms, " That if the *Marigold* Flowers do not much augment the " Virtues of the Vinegar, yet 'tis at least certain they neither " destroy nor diminish them." According to *Morison*, the Water distil'd from Marigold-flowers is a speedy and infallible Cure for Redness and Inflammations of the Eyes, if dropt into them in the Morning, and at Night; or if a Piece of Linen Cloth, or a little Cotton, is dipt in it, and laid over the Eyes. This Water is also said to be effectual against the Plague; and the Conserve is extol'd as answering the same Intention. The *Unguentum Calendulæ Florum*, in the *Dispensatorium Pharmaceuticum Ratisbonense*, is prepared by boiling fresh-gather'd Marigold-flowers with new and unsalted Butter. The *Syrupus Calendulæ* is, by *Quercetan*, in his *Pharmacopœia Dogmaticorum restituta*, recommended as a Specific against all paralytic Disorders.

CALENDULA ARVENSIS.

Calendula sive Caltha, Cod. Med. 25. *Calendula minor arvensis*, Rupp. Flor. Jen. 138. *Caltha arvensis*, C. B. Pin. 276. Raii Hist. 1. 338. Tourn. Inst. 499. Elem. Bot. 399. Herb. Par. 182. Vaill. Bot. Par. 26. Boerh. Ind. A. 113. Hist. Oxon. 3. 14. Mart. Hist. 1. 135. *Caltha minima*, J. B. 3. 103. *Caltha sive Calendula minima*, Chab. 359. *Calendula arvensis*, Ger. 603. *Calendula sylvestris*, Ger. Emac. 741. WILD MARIGOLD.

Its Leaves are stinking, bitter, and give a faint Tincture of Red to the blue Paper: If burnt in the Candle, they crackle, a little like Nitre; which seems to shew, that the natural Salt of the Earth is arrived there, with hardly any other Change than being united with a great deal of fetid Sulphur and Earth. Some prefer the wild *Marigold* to that of the Gardens. Its Juice is given from one Ounce to four: They mix an Ounce of it with a Dram of the Powder of Earth-worms, which has imbibed, a little before, some Drops of Spirit of Sal Ammoniac. The Infusion of the Leaves and Flowers of *Marigold* is taken from three Ounces to six; the Extract, and the Conserve, from one Dram to two. All these Preparations are excellent for the Jaundice, Palsy, Dropsy, Small-pox, malignant Fevers, and Green-sickness. Its Leaves and Flowers are good to eat as a Sallad, especially for Children who have scrophulous Tumors. *Cæsalpinus* prescribed the Water of *Marigold* for contagious Distempers: *Tragus* commended it as an excellent Remedy to cure the Redness and Inflammation of the Eyes. *Cæsalpinus* syringed the Juice of *Marigold* into the Ears to kill Worms; and applied the Powder, with Cotton, to the Teeth which ached violently: To restore the Appetite, he advised to use the Flowers in Bud, pickled in Vinegar. At *Paris* they apply its Leaves to all sorts of Tumors, and Ulcers, which have callous

Edges. For Corns, they put ſome Leaves between the Corn and the Stocking, and do not forbear Walking. *Martyn's Tournefort.*

CALENDULA PALUSTRIS *Populago*, Offic. Raii Synop. 3. 272. Dill. Cat. Giſſ. 52. Elem. Bot. 237. *Populago flore majore*, Tourn. Inſt. 273. Boerh. Ind. A. 298. *Caltha paluſtris*, J. B. 3. 470. Chab. 485. Raii Hiſt. 1. 700. Merc. Bot. 1. 25. Phyt. Brit. 19. *Caltha paluſtris major*, Ger. 670. Emac. 817. Mer. Pin. 18. *Caltha paluſtris vulgaris ſimplex*, COMMON SINGLE MARSH MARIGOLD, Park. Theat. 1213. *Caltha paluſtris flore ſimplici*, C. B. Pin. 276. Rupp. Flor. Jen. 105. Buxb. 50. *Pſeudo-helleborus ranunculoides pratenſis rotundifolius ſimplex*, Hiſt. Oxon. 3. 461. MARSH MARIGOLD. *Dale.*

It grows in watery Soils, and flowers in the Month of *May*. The Herb is only uſed in the Shops; and is ſaid, by *Dioſcorides*, to be good for removing Pains of the Loins. According to *Boerhaave*, it is of a cauſtic Quality, highly acrid, and reſembling Hellebore. *Dale Pharmacol.*

CALENTURE. A ſort of Fever, attended with a ſudden Delirium, which is common to Sailors in warm Climates, eſpecially upon paſſing the *Line*.

The following Caſe will give an Idea of the Diſtemper, and the uſual Method of treating it.

In *Auguſt* 1693. I was call'd, about Four in the Morning, to ſee a Sailor on board the *Albemarle* Man of War in the Bay of *Biſcay*, in a violent Calenture. He was between thirty and forty Years of Age, pretty tall, but thin, and had not much Fleſh about his Bones. When I ſaw him firſt, I found him in the Hands of three or four of his Comrades, who were hardly able to manage him, becauſe of his Strugglings, and conſtant Endeavours to get from them. I obſerved, he very often cried out, He would go into the green Fields: His Looks were as furious and wild as thoſe of a Lion; and, every-now-and-then, he would heartily curſe thoſe that held him. The firſt Thing I did was to examine his Pulſe: I felt, 'tis true, a diſorderly Motion of the Blood in the Artery, and a burning fiery Heat all over his Habit of Body; but could perceive no Diſtinction or Vibration of Pulſe at all. The Surgeon of the Ship, a good experienced Man in that way, had, before I came, attempted to bleed him; but tho' the Vein of the Arm was fairly open'd, yet could he not procure an Ounce of Blood from thence. Upon that I order'd him to open the Frontal Vein, which ſucceeded no better, for that ſoon ſtopp'd too. This put me upon trying, a third time, what Effects the Opening the Jugular Vein might have: From this Vein, tho' our Orifice was pretty large, we had about two Ounces of florid thick Blood, and then it quite ſtopp'd there too. I was, I muſt confeſs, not a little ſurpriſed at this; and order'd the Surgeon to unbind his Arm, and try whether he could make him bleed again at that Orifice, which I remember he did in a ſmall Quantity, and then ſtopp'd as before. However, having three Orifices open at that time, we drew Blood ſometimes from one, and ſometimes the other, where we ſaw it run moſt freely. After ſeveral Eſſays of this Kind, I always obſerved, as the Veſſels emptied, he bled more freely, and as faſt as I deſired. Not long after this, (for he bled well enough now) I obſerved his Strugglings were not ſo ſtrong, his Ravings, and Crying after green Fields, left off, his wild Looks much abated, and not only his Pulſe had recover'd its due and regular Vibrations, but his Heats were moderated too, and the Fury of his Spirits laid to that degree, that he, that juſt now was as furious as a Lion, was grown ſo tame, that one Man was able eaſily to manage him as he pleaſed. In this half Hour, as near as we could gueſs, we took from him about fifty Ounces of Blood from the three Orifices mention'd. By this time I thought we had enough; ſo I order'd him to his Hammack, as ſoon as we had ſecured the Orifices from bleeding again, and directed the Surgeon to give him an Ounce of Diacodium in a Draught of Barley-water, as he went into it. Upon this he ſlept till about Noon, when he awaked with no other Complaint but of Weakneſs from his Loſs of Blood, and a Soreneſs all over his Body, occaſion'd, I preſume, from his violent Convulſions, and Endeavours to get looſe.

It is very probable, that when they are ſeiz'd with this violent Heat and Diſorder, which, for the moſt part, happens in the Night, they ſteal privately over-board into the Sea, imagining they are going into the green Fields: And this I take to be the Reaſon we ſee ſo few; tho' I have heard frequently in the *Mediterranean*, in Summer-time, and very hot Weather, of Seamen loſt in the Night, which the Sailors took for granted were gone off, upon ſuch-like Occaſions, unobſerved. And I remember very well, this Perſon was actually going over-board, when one of his Brethren, who ſuſpected his Deſign, as he told me, caught hold of him juſt as he was going to leap off, call'd for Help, and ſecured him by this Accident. And laſtly, Calentures happen oftener by Night than by Day, becauſe our Ships are moſt cloſely ſhut up by Night, and are leſs airy than they are in the Day-time. *Philoſ. Tranſ. Abr. Vol.* 4. by Dr. *Oliver.*

The following Directions are given by Dr. *Shaw.*

Reſt ſhould be encouraged. Barley-water, with White-wine, is a proper Drink. All Malt-liquors and Spirits are prejudicial. In general, a ſlender liquid Diet is the moſt convenient.

The firſt Step to be taken in the Cure is to bleed the Patient. It not unfrequently happens in this Caſe, that the Veſſels are ſo full, and the Juices ſo viſcid, that ſeveral Veſſels muſt be open'd to obtain the deſired Quantity of Blood; for which Reaſon the Orifice ſhould be made pretty large. The Jugular Vein is here thought preferable to thoſe of the Arm.

Eight or ten Hours after Bleeding, an Emetic may be exhibited; and at Night a large Epiſpaſtic ſhould be applied to the Neck. The Bleeding may be repeated as often as there appears to be Occaſion. A Paregoric ſhould be given at Night, when the Patient goes to Reſt.

When the Diſtemper is pretty well abated, give a lenient Cathartic.

> Take of the beſt Sena-leaves, two Drams and an half; of Rhubarb, cut down, half a Dram; of Salt of Tartar, half a Scruple; of Coriander-ſeeds bruiſed, one Scruple: Infuſe all in a ſufficient Quantity of Spring-water. To every two Ounces and a half of the ſtrain'd Liquor, add of ſolutive Syrup of Roſes, ſix Drams; Syrup of Buckthorn, two Drams; of Spiritus Nitri Dulcis, and Sal Volatile Oleoſum, each thirty Drops: Make up into a Draught, to be uſed in Conjunction with a proper Regimen, and repeated twice or thrice as Circumſtances require.

Gentle Diaphoretics may alſo be of Uſe; and the Cure may be completed with the *Cortex*. This is the common Method of curing a Calenture at Sea.

I have been the leſs copious upon the Subject of a Calenture, becauſe it is a Diſtemper I have never ſeen, nor could I ever get any authentic Account of it from Gentlemen of the Profeſſion who have been at Sea. Some of the Surgeons who attended the laſt Expedition into the *Weſt-Indies*, aſſure me, that they never met with any Diſtemper attended with the Symptoms attributed to a Calenture; and that they believe nothing is meant by it but a violent Fever, attended with a ſudden Delirium.

CALERUTH is an Indication of a Deſire to the firſt Perpetual; as when any Thing has a Deſire to return to the firſt Matter from which it proceeded. *Ruland. Johnſon.*

CALESIAM, H. M. *Arbor baccifera racemoſa, vitis floribus, Acinis oblongis compreſſis monopyrenis.*

It is a very tall and beautiful Tree: The Wood is of a dark-purple Colour, ſmooth, and flexible; the Flowers grow in Cluſters, at the Ends of the Boughs, very like the Flowers of Vines, and are ſucceeded by Berries in Cluſters, like Grapes or Currants, which are of a round oblong Figure, flattiſh, green, cover'd with a thin Rind, and full of a ſucculent and inſipid Pulp, incloſing a green, oblong, flattiſh Stone, within which is a white, and almoſt inſipid, Kernel. Beſides the genuine Fruit, which ſucceeds the Flowers, there is another Sort, which grows to the Trunk and Branches, and is larger than the genuine, wrinkled, Kidney-ſhaped, cover'd with a watery-green Rind, and conſiſting of a green, denſe, and humid Pulp, within which is ſometimes found a ſmall reddiſh Worm. This Baſtard-fruit, as *Ray* remarks, is no other than Galls or Tumors, excited by the Bites of Inſects, to be a Receptacle for their Eggs, and Nouriſhment for their Brood.

It grows every-where in *Malabar*, bears Fruit once a Year, and is fruitful from ten Years Standing to fifty and upwards: Of the Wood they make Sheaths for Knives and Swords.

The Bark pulveriz'd, and made into an Ointment with Butter, cures the Spaſmus Cynicus, and Convulſions excited by great Wounds; and alſo heals malignant Ulcers, and mitigates the Pains of the Gout. The Juice of the Bark cures Aphthæ; and, taken inwardly, is a Remedy for the Dyſentery. The Bark of this Tree, with that of the *Codampulli*, reduced into a Powder, purges the Belly, and carries off pituitous and atrabilious Humours. Half a Tea-cup-full of the Decoction of the Leaves and Bark, in Water, is uſually given to Women juſt before their Labour, in order to promote an eaſy Delivery. *Raii Hiſt. Plant.*

CALI, Pot-aſh. *Rulandus.*

CALICHAPA. The true white Thorn. *Caſtellus.*

CALIDARIUM. The Name by which *Celſus*, *Lib.* 1. *Cap.* 4. calls that Part of the antient Baths which the *Greeks* named θερμαλιεων (*Pyriaterium*), or ὑποκαυσον (*Hypocauſtum*). See BALNEUM.

CALIDRIS *Bellonii*, *Jonſt.* in *French*, *Chevalier*. A Water-fowl, of the Bigneſs of a Pigeon, well feather'd, with a long red Bill, blackiſh towards the upper Part; its Head, Neck, Wings, and Tail, are of an Aſh-colour; its Belly white, with very long Legs.

Becauſe its Body is high-mounted, and its Walk ſwift, they call it the *Chevalier*, as tho' it were mounted on Horſeback. It lives about Meadows, Pools, and Rivulets: Its Fleſh is very delicious, and of a good Smell. There are ſeveral Sorts of them,

them, which differ in Colour: They contain much volatile Salt, and Oil ſomewhat exalted.

The Calidris is a Reſtorative and Corroborative. *Lemery des Drogues.*

CALIDUM, θερμὸν, hot. See CALEFACIENTIA.

CALIETA, *Caliette.* The yellow Fungi on the Juniper-ſhrub. *Paracelſus de Ictteric. Cap.* 2.

CALIGO, in a Medicinal Senſe, is an Obtenebration of the Eyes. See ACHLYS and AMAUROSIS.

CALIN. A kind of Metal, like Lead and Tin, prepared by the *Chineſe*; of which they make ſeveral ſorts of Utenſils in *Japan*, *Cochin-china*, and *Siam*; they even cover their Houſes with them. We often ſee Cheſts for Tea made of that Metal, and they import Coffee-pots of the ſame. *Lemery des Drogues.*

CALIX. See CALYX.

CALLÆON, κάλλαιον. The Gills of a Cock, which, as well as the Comb, *Galen*, *Lib.* 3. *de Al. Fac. Cap.* 21. ſays is a ſort of Food, which can neither be commended nor condemn'd.

CALLAF. A low ſhrubby Tree, of ſmooth Wood, and Leaves ſomewhat reſembling thoſe of the Cherry-tree, ſerrated at the Edges, and growing out from the Extremities of the Branches, which are ſtrait, without Joints, flexible, and of a yellowiſh Colour. The Flowers, which are produced before the Leaves, come forth very thick in *December*, at equal Diſtances; and are a ſort of oblong downy little Balls, of a whitiſh Yellow, or true yellow Colour, and of a fragrant Smell.

It has a Place in the Gardens of the Nobility, on account of its incomparable Fragrancy; and is cultivated with great Care by the Peaſants, for the Profit which they make of its Flowers.

They prepare an excellent Water of the Flowers, eſpecially at *Damaſcus*, which is of ſo ſtrengthening a Virtue, that we have none, that I know of, to be compared with it; for, by the extraordinary Sweetneſs of its Smell, it wonderfully relieves Perſons under a Lipothymy. The *Moors* uſe this Water, both internally and externally, in burning and in peſtilential Fevers: It refrigerates and moiſtens. They make an Oil alſo of the Flowers, which is ſerviceable to many Purpoſes.

This Plant, I am perſuaded, was not rightly known to the *Arabian* Authors, no not to *Avicenna* himſelf, tho' he often mentions it, much leſs to his Interpreters, who render the Words *Callaf*, *Dechen el Callas*, by *the Willow*, *the Water of the Willow*, and *the Oil of the Willow*; for the *Callaf* is ſo far from being a Willow, tho' it be very like the low broad-leaved Willow, on which Account I once took it for a Willow, that they are quite diſtinct Plants, differing in Name, Figure, and Virtues. Firſt, their Names among the *Arabians* are different; for one is called *Callaf* and *Ban*, the other, that is the Willow, *Saſſaf*, not *Saſſas*, or *Safaf*, as *Avicenna*'s Interpreters wrongly read the Word. They are alſo of different Qualities; for one has a ſweet Smell, the other none at all. The *Callaf* is uſed by the *Moors* in Fevers; but they make no Uſe at all of the Willow. Hence it is plain, that the *Callaf*, or *Ban*, is not truly a Willow; however, ſince it has a great Agreement with the broad-leaved Willow, both in Leaves and Flowers, it ſignifies not much, if you call it the Aromatic Willow. *Proſper Alpinus*, *Rerum Ægypt. Lib.* 3. *Cap.* 15.

CALLARIAS, καλλαρίας. A kind of Sea-fiſh, which *Aldrovandus* and *Rondeletius* take for the Whiting, others for a different Kind, of which they give no Deſcription. *Caſtellus.*

CALLECAMENON. Burnt Copper. *Rulandus.*

CALLENA. A Kind of Saltpetre. *Rulandus.*

CALLIA. A Name in *Dioſcorides* for the ANTHEMIS, which ſee.

CALLIBLEPHARON, καλλιβλέφαρον, from κάλλος, Beauty, and βλέφαρον, an Eye-lid. A Medicine appropriated to the Eye-lids. As the Eye-lids are ſubject to be deform'd ſeveral Ways, ſo there muſt be various Kinds of *Calliblephara*; for the Hairs may increaſe too faſt, or fall off, or be of an ill Colour, or be rang'd in a diſorderly manner. An Excreſcence of Hair is from a Redundance of Humour, their falling off is commonly owing to an acrimonious Humour, their Whiteneſs to a pituitous Humour, their Redneſs to a Humour of a like Colour. Calliblephara therefore muſt conſiſt, in a great meaſure, of ſuch Medicines as are moderately drying, and conſume the Humour which vitiates the Hairs; ſuch are Armenius Lapis, Terra Ampelitis, Soot of Frankincenſe, burnt Antimony and Lead, Squama Æris, and ſuch-like Medicines, which are endu'd with an acrimonious and drying Quality. *Marcellus*, the Interpreter of *Dioſcorides*, ſays, that the *Greeks* called both the Medicines againſt the Diſeaſes of the Eye-lids, and ſuch as contributed only to their Beauty and Gracefulneſs, by the common Name of *Calliblephara*, which, for that Reaſon, was by *Pliny* variouſly applied, according to the ſeveral Exigencies, to the different Remedies which ſerve for Glutinating, for Replication, for adorning, for Circumlition, or Anointing of the Eye-lids. *Hermolaus* and *Ruellius* call the Application of ſuch Remedies as adorn the Eye-lids, and give them an artificial Colour, *Circumlitions. Gorræus.*

Pliny's *Calliblephara* are burnt Roſe-leaves, the Aſhes of burnt Date-ſtones, mixed with Spikenard, the Marrow of the Right fore Leg of an Ox pounded with Soot, and Terra Ampelitis; which laſt, he ſays, is an Ingredient in *Calliblephara*, and ſuch Medicines as dye Hairs. *Pliny.*

CALLICREAS, καλλίκρεας. The ſame as PANCREAS, which ſee.

CALLIETTE. See CALIETA.

CALLIGONUM, from κάλλος, Beauty, and γόνυ, a Joint, or Knot; the ſame as POLYGONUM, which ſee.

CALLIOMARCUS. The *Gauliſh* Name in *Marcellus Empiricus*, *Cap.* 16. for the Herb *Equiungula*, or Colts-foot.

CALLIONYMUS, καλλιώνυμος, from κάλλος, Beauty, and ὄνομα, a Name. A Fiſh called alſo *Uranoſcopus*, that is, the Star-gazer, frequently found in the *Mediterranean* Sea. It is ſaid to be a preſent Remedy for a Cataract. It is reckon'd by *Hippocrates*, *Lib.* 2. περὶ διαίτης, among the drieſt of Fiſhes, and therefore recommended by him, *Lib.* περὶ τῶν ἐνδὸς παθῶν, as proper Food in the Leucophlegmacy, in ſplenetic Diſorders, and a Diſtemper called by him Πάχυ νόσημα, "a groſs Diſeaſe," cauſed by a Collection of white Phlegm in the Belly after a long Fever. See PACHYS.

CALLIPHYLLUM, καλλίφυλλον, from κάλλος, Beauty, and φύλλον, a Leaf. A Species of *Adiantum*, otherwiſe called *Trichomanes*. The Word is uſed by *Hippocrates* in the ſeventh Book of the Epidemics.

CALLITRICHUM, καλλίθριχον, from κάλλος, Beauty, and θρὶξ, Hair. A Name for *Adiantum*, or Maiden-hair.

CALLONE, καλλόνη, from κάλλος, Beauty. In *Hippocrates* περὶ εὐσχημ. the Phraſe καλλόνη βίε ſignifies the Ornaments of Life; and καλλόνη, in *Heſychius*, is expounded by εὐπρέπεια, Decency, Decorum.

CALLOPISMUS, καλλωπισμὸς, from κάλλος, Beauty, and ὤψ, Countenance, Aſpect, fine Dreſs, or Furniture, which makes a gay Show. *Hippocrates*, *Lib.* περὶ ἑπτὰ.

CALLOS, κάλλος, Beauty.

CALLOSITAS, τύλωσις, Callouſneſs. See CALLUS.

CALLOSUM CORPUS. A Part of the Brain thus called. See CEREBRUM.

CALLUS, τύλος, πῶρος, a Callus, ſignifies in general any cutaneous, carneous, or oſſeous Hardneſs, whether natural, or preternatural; but moſt frequently it means the *Callus* generated about the Edges of a Fracture. *Calli*, πῶροι, in ſeveral Places of *Galen*, ſignifies the Nodes in the Gout. *Calloſitas* and *Callus*, τύλωσις and τύλος, are, in a ſpecial Senſe, ſpoken of the Eye-lids, in *Galen*, *Lib.* 7. *de C. M. S. Lib. Cap.* 7. and *Scribonius Largus*, *No.* 36. *& ſeq.* For the *Callus* generated in the Soles of the Feet, or Palms of the Hands, ſee CLAVUS. *Callus* has alſo a particular Signification, in which it means the *Calloſum Corpus* of the Brain.

Paracelſus, *de Ulceribus*, gives the Name of *Callus* to an Abſceſs, or Ulcer, that owes its Original to an acrimonious and arſenical nutritious Juice, which excites a vehement Itching.

CALMET. Antimony. *Rulandus.*

CALOCATANOS. The *Gauliſh* Name in *Marcellus Empiricus*, *Cap.* 20. for the Wild-poppy.

CALOCHIERNI *Carduus Cretenſibus*, J. B. *Atractylidi & Cnico ſylveſtri ſimilis*, C. B.

It ſeems to be only a larger Species of Atractylis, and is very common in *Greece* and *Candy*. It was called *Atractylis* from ἄτρακλος, a Spindle, becauſe the Women formerly uſed them for Spindles, and even to this Day the *Greek* Women about *Conſtantinople* make Spindles of them, as Mr. *Lovell* relates; for in theſe Parts it grows to a Man's Height, and when it is come to Maturity, the Leaves fall off, and the Stalk grows dry and rigid. The ſame Gentleman aſſures us, that it is of a different Species from the common downy Atractylis, which alſo grows in great Plenty in the ſame Parts. *Raii Hiſt. Plant.*

CALOMELANOS TURQUETI.

This is a Name given by *Riverius* to a certain purgative Medicine which he frequently preſcrib'd in his Practice. It is prepar'd in the following manner:

Take of Mercurius Dulcis, one Scruple; and of Scammony impregnated with Sulphur, or of Reſin of Jalap, half a Scruple: Reduce theſe to a Powder, mix them intimately, and form into Pills, with a Mucilage of Gum Tragacanth. *Etmul. L.* 2. 146.

CALOMELAS, καλομέλας, from καλὸς, good, and μέλας, Black, becauſe of its Colour and Virtues, is Mercury well pounded with Sulphur, and reduc'd to a black Subſtance. *Blancard.*

But CALOMELAS, or Calomelanos in the common Acceptation is Mercurius Dulcis, ſix times ſublim'd. See MERCURIUS.

CALONIA, καλωνία. A Sort of Myrrh. *Calonian* Myrrh, (καλωνία σμύρνα) with Oil of Roſes, is adviſed in Suffumigations for the Uterus, in *Hippocrates* περὶ γυναικ. φύσ.

CALOR, Heat. See CALEFACIENTIA.

CALTHA, CALTHULA. The ſame as CALENDULA, which ſee.

CALVA, CALVARIA. The ſame as CRANIUM, which ſee.

CALVATA. The ſame as PHALACRA, which ſee.

CALUFAL, CALUFR, CALUFAX. *Indian* Oil. *Johnſon. Rulandus.*

CALVITIES, CALVITIUM, φαλάκρωσις, φαλάκρωμα, μαδάρωσις, μάδισις, μαδαρότης. Baldneſs, or a want of Hair, particularly on the Sinciput. *Galen, Lib.* 1. *de C. M. S. L. Cap.* 2. ſays, that the *Alopecia*, *Area*, *Ophiaſis*, and *Tinea*, proceed from a Corruption of the nutritious Humour, but the *Calvities* from a Defect of Humour. *Caſtellus.*

See ALOPECIA and PILI.

CALUMENON, καλούμενον, καλεόμενον, called. *Galen*, in his Comment on theſe Words of *Hippocrates*, *de Rat. Vict. in Morb. Acut.* τὸ δὲ ὀξύμελι καλεόμενον πῶμα, "the Drink "called Oxymel," ſays, that when *Hippocrates* adds καλούμενον, "called," or καλεῖσθαι, "to be called," to a Name, he intends to ſignify ſometimes, that ſuch an Appellation is far from being uſed by all the *Greeks*, ſometimes that it is improper, and ſometimes that it denotes ſome artificial Thing: But (as he goes on) we cannot imagine, that he meant, that the Word *Oxymel* denoted ſomething artificial; therefore he condemn'd the Word as improper, or taxes it as not ſufficiently receiv'd in Uſe. And perhaps he condemn'd the Word as importing, that the Medicine conſiſted only of Vinegar and Honey; or implying a Difference in Honey, as if one ſhould ſay, that ſome Sorts of Honey were ſour.

CALUSA. Cryſtal. *Rulandus. Johnſon.*

CALX.

What the *Latins* call *Calx*, is by the *Greeks* term'd τίτανος, or χονία, and, by the *Engliſh*, *Lime*. This Word, among Apothecaries, Chymiſts, and Phyſicians, denotes whatever is ſubjected to a certain Operation called *Calcination*, or *chymical Corroſion*. That the Nature of what we call a *Calx* or *Lime* may be the better underſtood, this Operation muſt be previouſly explain'd. All ſolid Bodies, then, are the Objects of *Calcination*; and the Effect of the Operation ſo called is a Deſtruction of the former Connexion and Coheſion of the Particles of theſe Bodies, together with a Change of Colour, Smell, Taſte, and other Qualities of a like Nature, depending upon the entire Texture of the whole Body; ſo that the Bodies ſubjected to this Operation are reduc'd to a Powder, or into ſmaller Portions, or at leaſt become friable, for which Reaſon *Calcination* is by ſome called *a chymical Pulverization*. Thus, by *Etmuller*, *Calcination* is defin'd *ſuch a Corroſion and Diſſolution of compact Bodies into their minuteſt Parts, whereby Metals and Minerals are reduc'd to Calx, and Vegetables to Aſhes, or at leaſt whereby the Body, whatever it is, becomes friable.*

This Operation receives different Names, according to the various Manners in which it is perform'd; and the Effects reſulting from theſe ſeveral Methods are no leſs different, than the Names the Methods themſelves have receiv'd. In that Method, which by way of Eminence we commonly call *Calcination*, the combuſtible Parts of the Bodies are conſum'd by being expoſed either to the common Fire, or to that of the Sun, whilſt ſuch Parts as elude the Action of the Heat are left behind; and this may properly be called *Calcination by actual Fire*. Of this Kind are not only the Calcinations of metallic and other mineral Subſtances, but alſo the Incineration obſervable in the Deflagration of Vegetables for preparing lixivial Salts, and in the Calcination of ſome Animals, ſuch as Crabs, Moles, and ſome others. *Calcination* is called *Uſtion*, when applied to Hartſhorn, Alum, and Braſs, and theſe Subſtances themſelves are diſtinguiſh'd by the Epithet *burnt*. This Operation is alſo called *Toaſting*, when applied to Rhubarb, and ſome other Subſtances. When Bodies are rarefied, and reduc'd to Powder, by the Reverberation or Reflexion of a Flame from the Sides of a Furnace, Calcination is in this Caſe call'd *Reverberation*; and, when common Salt is calcin'd, *Decrepitation* is the Term which Cuſtom has made expreſſive of the Thing.

There is another Species of Calcination, which is perform'd by an Addition of proper Menſtruums, either with or without the Aſſiſtance of Fire; and this is properly called *Corroſion*, or *Calcination by potential Fire*. Of this Kind are firſt the *immerſive* and *vaporoſe Calcinations*, or *Corroſions* of Bodies; when, for Inſtance, the Body to be calcin'd is either immers'd in its proper Menſtruum, as Copper in Spirit of Nitre, or Lead in Vinegar; or when the Body is ſuſpended in a cloſe Veſſel, in ſuch a manner, that the Steams ariſing from the Menſtruum may act upon it; when, for Inſtance, Iron is ſuſpended over *Aqua-fortis*, in order to be calcin'd into Crocus of Mars; or when Copper and Lead are ſuſpended over Vinegar, in order to be converted into Verdegriſe, and Ceruſs. Of this Kind, in a particular manner, is that Species of Calcination, called Philoſophical Calcination, or Calcination without Fire, when, for Inſtance, ſome Parts of Animals, ſuch as the Bones, Horns, and Hoofs, are, in the Diſtillation of Waters, ſuſpended in the Head of the Still, that, being penetrated by the aſcending Vapour, they may become more porous and friable. But in the Shops Bones are not, for the moſt part, philoſophically calcin'd in an Alembic, but are boil'd in Water till they are render'd ſoft and friable by the Hand. Then having cleanſed them, and taken off the blackiſh exterior Scurf, they are dry'd, and reduc'd to a Powder. The *Cornu cervi philoſophicum*, the human *Cranium*, the Teeth of the Boar, and thoſe of the Sea-horſe, are thus prepar'd. *Tralles de Remed. Terr.* Secondly, to the *Calcination* by *potential Fire* belongs that perform'd by *Illination*, when neither the Steam of the Menſtruum, nor Immerſion in it, are uſed, but the Body to be calcin'd is only anointed with it, as when Oil or Spirit of Vitriol, or of Sulphur, are laid upon a Plate of Iron, in order to produce a Corroſion. Thirdly, to the ſame Kind of *Calcination* belongs *Amalgamation*. Fourthly, *Fumigation*. Fifthly, *Detonation*. Sixthly, *Granulation*, which is alſo called *fuſory Calcination*. Seventhly, *Cementation*, or *Stratification*. Eighthly, *Extinction*, or *extinctory Calcination*, when for Inſtance, ignited Cryſtal is extinguiſhed in common Water, and then reduc'd to a Powder. That Species of Calcination which is perform'd by Fire alone, or by means of a dry Menſtruum, is called *dry Calcination*; whereas that which is perform'd by means of a liquid Menſtruum, is called *moiſt or humid Calcination*. The learned *Bohnius* calls that Species of *Calcination* perform'd by Fire, with the Addition of a Menſtruum, *mix'd Calcination*. The Calcination of Minerals perform'd by the Air, or rather in the Air, do not conſtitute a particular Claſs, but are to be rank'd among thoſe perform'd by means of a liquid Menſtruum; becauſe ſuch a one capable of calcining the Body is lodg'd in the Air, whilſt for Inſtance, the ſaline corroſive Particles with which it is impregnated, being diſſolv'd by its humid Parts, and apply'd to the metallic Body, corrode it, or whilſt the Humidity of the Air itſelf penetrates the ſaline Parts of the mineral Body, diſſolves, and puts them into ſuch a Commotion, that they corrode, and, as it were, calcine the Body in which they reſide.

'Tis now obvious, not only what a *Calx* is, but alſo that the ſeveral Species of *Calxes* muſt vary.

1. According to the Subſtances or Bodies from which they are obtain'd.

2. According to the Nature of the particular Menſtruum uſed in the Preparation.

3. According to the greater or ſmaller Degree of Fire apply'd; or according to the greater or ſmaller Quantities of humid inflammable Parts expel'd, or according as the Parts of the Bodies are more or leſs divided by the Calcination.

'Tis alſo obvious, that all Calcinations of Bodies are perform'd either by taking away the aqueous, oleous, and combuſtible Subſtance, connecting the Parts mutually with each other, or by interpoſing ſome foreign and heterogeneous Subſtance, which deſtroys the Connexion and Coheſion of the Parts. From what has been ſaid, we may alſo conceive how in ſome calcin'd Bodies ſomething is loſt; that is, thoſe Parts which could be either deſtroy'd, or exhaled by the Fire; and how in ſome others there is an Addition made by means of the Menſtrua, of which they have retain'd ſome Parts in the Calcination, and conſequently may have their Weight increaſed. From what has been advanc'd we may alſo comprehend, how ſome *Calxes*, by the Expulſion of that which they have receiv'd from the Menſtruum, may be reſtor'd to their original Form, and how ſome others may be ſo, by a Reſtitution of what they had loſt in the Calcination. Of the former Kind are the Calxes of Metals produc'd by corroſive Menſtruums; of the latter Sort are metallic Calxes produc'd by Fire alone. 'Tis an Obſervation of no ſmall Importance in Medicine, that as Subſtances calcin'd by Menſtruums, or what we call potential Fire, retain ſomething of the Menſtruum employ'd, by which a Change is induced on their Natures, which are to be judg'd of by the reſpective Menſtruums uſed; ſo alſo Subſtances calcin'd by actual Fire undergo a certain Change, and aſſume an acrid, heating, and drying Nature, which they formerly wanted, and by which they are juſtly ſaid to approach to the Nature of a *Calx*.

It muſt alſo be obſerv'd, that, generally ſpeaking, the Word *Calx*, when placed alone, imports that *Lime* which is moſt univerſally uſed in human Life, and which is prepar'd of Stones, and ſometimes the Shells of Shell-fiſhes burn'd. This Subſtance is diſtinguiſh'd by different Epithets, according to the different States in which it is. Thus we have *Quick-lime*, *Slaked-lime*, and *Waſhed-lime*.

Quick-lime, by the *Greeks* called χονία, or τίτανος ἄσβεστος, or ſimply ἄσβεστος, is no more than a calcarious Stone, burn'd into a Calx of a white cineritious Colour, of an acrid and pungent Taſte, and which, when it has not been too long expoſed to the Air, produces an Effervеſcence, Smoak, and a conſiderable

ſiderable Degree of Heat, when Water is pour'd upon it; but when it is penetrated by the moiſt and humid Parts of the Air, it ceaſes to produce an Efferveſcence, and becomes a kind of Powder.

Quick-lime may be prepar'd not only of the Stone commonly call'd Lime-ſtone, but alſo of Marble, and other Stones of a cloſe Contexture, and hard Nature. In ſome Parts of *France* it is prepar'd of a ſort of Flint, which is capable of being calcin'd. In *Holland*, and ſome other Countries, where Lime-ſtone is not to be found, they prepare it of the Sea-ſhells found on the Shore, which they calcine by the Aſſiſtance of a ſtrong and violent Fire. But this Species is leſs proper, both for the Purpoſes of Architecture and Medicine, than that which is prepar'd of Stone. The *Americans*, according to *Labat*, prepare a Quick-lime of ſubmarine Plants and Lithophytes; and, in ſeveral Parts of *England*, where a proper Stone cannot be had, Lime is made of Chalk-ſtones calcin'd.

To the due Preſervation of Quick-lime, 'tis abſolutely neceſſary it ſhould be kept from Water, ſince, when it is ſaturated by that Fluid, it becomes a pinguious white kind of Maſs, of the Conſiſtence of a Poultis, and this is call'd *Slak'd-lime*. Hence 'tis obvious, that the moſt proper Method of preſerving *Quick-lime* is, to ſhut it up in cloſe Veſſels, lodg'd in a dry Place, that it may not imbibe the moiſt Particles of the Air, to which it is otherwiſe greatly diſpos'd. The Method of extinguiſhing *Quick-lime* for Chirurgical and Medicinal Intentions, is, to add ſix or eight, and, according to the *London Diſpenſatory*, twelve Parts of warm Water to one Part of the *Quick-lime*. Rain Water ſlakes the *Lime* better than common Water, and hot Water produces the ſame Effect better than that which is cold. The Water thus impregnated with the Molecules of the *Quick-lime*, and filtrated, after ſtanding twenty-four Hours, is call'd a *Solution of Quick-lime*, as alſo the *Lixivium*, and the *Water of Quick-lime*; and the pinguious Subſtance floating on its Surface in form of a Pellide, is call'd the *Cream or Flower of Quick-lime*. Thoſe who deſire a weak Lime-water, after this Filtration pour freſh Water on the remaining *Lime*, and this they call ſecondary *Lime-water*. After this ſecond Solution, if freſh Water is ſtill added to the Lime, it is almoſt inſipid when pour'd off from it. But after ſeveral Infuſions, the *Lime*, when again calcin'd, becomes capable of producing a good and rich *Lime-water*. *Mem. de l' Acad. Roy. des Sciences*, for the Year 1700. In the *Diſpenſatorium Pharmaceuticum Ratiſbonenſe*, the Water diſtil'd from Oak-leaves ſeems, without any Reaſon, to be preſcrib'd for preparing *Quick-lime Water*, ſince it has no more Virtues for that Purpoſe than common diſtil'd Water. *Slak'd-lime*, a ſecond time waſh'd, and, as it were, edulcorated by an Affuſion of freſh Water, and then dry'd after the Water is pour'd from it, is call'd *Waſh'd-lime*, or *Prepar'd-lime*.

As for the ſeveral Uſes to which *Lime*, in its different States, is apply'd, by Architects, Builders, Plaſterers, Cloth-whiteners, Dyers, Sugar-refiners, Tanners, Cementers of China-ware, and other Mechanics, we paſs them over, as being foreign to our Purpoſe; only we muſt obſerve, that the Chymiſts ſeem to have borrow'd the Uſe of *Quick-lime* from the Architects, ſince they uſe it mix'd either with the White of an Egg, or with Cheeſe, not only for ſtrengthening their crack'd Glaſſes, but alſo for luting the Junctures of Veſſels, in order to prevent the Eſcape of Mineral Spirits in Diſtillation.

The Nature and conſtituent Principles of *Quick-lime* will moſt advantageouſly be diſcover'd by the Obſervations and Experiments of the Moderns, which will occur as we proceed in pointing out its Medicinal Virtues and Uſes. Mean time the antient Accounts of it muſt not be omitted.

"*Quick-lime*," then, according to *Pliny*, in the twenty-fourth Chapter of his thirty-ſixth Book, "is of the utmoſt Im-"portance in Phyſic, but muſt be choſen freſh-calcin'd, and "before any Water has been thrown upon it, in which Caſe it "burns, diſcuſſes, draws, and puts a ſeaſonable Stop to ſpread-"ing Ulcers; when corrected with Vinegar and Oil of Roſes, "it induces Cicatrixes; it alſo cures Luxations, when mix'd "up with Hog's Lard, or liquid Reſin, in Honey. This ſame "Compoſition alſo contributes to the Cure of the King's-evil." *Dioſcorides*, in the ninety-firſt Chapter of his fifth Book, has theſe Words concerning *Quick-lime*: "All Lime, ſays he, in "general, is of a hot, pungent, and cauſtic Nature, and, "conſequently, cicatrizes. When mix'd with ſome other "Subſtances, ſuch as Fat and Oil, it maturates, ſoftens, and "diſſipates it; it alſo cicatrizes Ulcers. It is thought moſt "effectual when freſh-calcin'd, and uſed before any Water has "been pour'd upon it." *Matthiolus*, from *Galen*, recounts its Virtues in the following Words: "*Quick-lime* is of ſo "cauſtic a Quality as to induce an Eſchar; immediately after "it is extinguiſh'd, it alſo induces a kind of Eſchar; but loſes "much of its cauſtic Quality, and, conſequently, becomes "much leſs proper for that Purpoſe after it is kept a few Days. "In Proceſs of Time it becomes entirely incapable of forming "an Eſchar, tho' it ſtill continues to heat and diſſolve the Fleſh. "If it is waſh'd in Water, it loſes its Pungency, and be-"comes a Powder; in which State it dries, without ex-"aſperating the Part to which it is apply'd. If it is twice, "thrice, or oftener waſh'd, it entirely loſes its Pungency, and "dries powerfully, without exaſperating." *Paulus Ægineta*, in the third Chapter of his ſeventh Book, informs us, "That when it is waſh'd in Sea-water, it becomes a ſtrong "and efficacious Diſcutient." *Lime* ſeems, by the Antients, to have been only apply'd externally, in Caſes where an acrid, corroding, drying, and diſcutient Topic was thought requiſite; for, when internally us'd, it was eſteem'd a Poiſon, which violently corroded the Stomach and Inteſtines; and, as Correctors to its virulent and poiſonous Qualities, emollient and viſcid Subſtances were preſcrib'd, ſuch as Juice of Mallows, and pinguious Subſtances proper for obtunding Acrimony, ſuch as Decoctions of Linſeed, Sea-grape, and Rice, together with Milk, Hydromel, pinguious Broths, and proper Juices. *Dioſcorides*, *Lib.* 6. *Cap.* 91. and *Paulus Ægineta*, *Lib.* 5. *Cap.* 61. But the Moderns uſe *Quick-lime* as a Medicine, both externally and internally. However, before I mention the ſeveral Purpoſes to which they apply it, or ſpecify the various Medicinal Uſes of *Slak'd-lime*, of the Water or Lixivium of *Quick-lime*, of the *Cream of Quick-lime*, and of waſh'd *Lime*, I ſhall firſt inquire what may be diſcover'd concerning the Natures and Properties of each, from the Experiments made upon them by the Curious.

Quick-lime, then, by an Addition of Water, becomes ſo intenſely hot, as to ſet combuſtible Bodies, that touch it, on Fire. Among other Circumſtances proving this Property of *Quick-lime*, none is more remarkable than the burning of a Ship loaded with this Commodity, when the Water, in conſequence of ſome Accident, had Acceſs to it. Quick-lime, however, ſometimes remains in cold Water for a whole Day, without exciting any Heat; but immediately exerts its burning Qualities, upon the Addition of boiling Water. *Du Hamel. Hiſt. Quick-lime*, upon an Addition of Acids, produces an Efferveſcence, and diffuſes urinous Vapours. *Eph. N. C. D.* 1. *a.* 6. Upon an Addition of Oil, it neither produces an Efferveſcence, nor acquires any Degree of Heat; neither is it ſlak'd by Spirit of Wine. *Hiſt. Acad. R. Sc.* But if Spirit of Wine is diſtil'd from Quick-lime, it aſſumes an alcaline Quality, *Eph. N. C. D.* 1. *a.* 6. Quick-lime, thrown into human Urine, raiſes a highly acrid and igneous Vapour; and, when diſtil'd with the ſame, yields a highly acrid, volatile, and igneous Liquor, like that obtain'd from it when diſtil'd with Flowers of Sal Ammoniac. When mix'd with Pot-aſh, by the Affuſion of Water, it affords a highly acrid, alcaline, and igneous Salt. *Willis* made the following Analyſis of *Quick-lime*: He put about a Pound and an half of it into a large Cucurbit; then adding Water to it, he adapted the Head to a large Receiver; upon which, in the Space of five Minutes, the Water and Lime began to ſwell, and produce an Efferveſcence; at the ſame time the Steam and Smoak rais'd heated all the Veſſels to ſuch a Degree, that they could ſcarce be touch'd. There came over into the Receiver ſix Ounces of a limpid Water, which was not in the leaſt acrid, but had a ſweetiſh ſtyptic Taſte. He boil'd the Powder remaining in the Cucurbit in common Water, and, whilſt he was evaporating the Lixivium, made of it, over a gentle Fire, there was form'd, on the Surface of the Liquor, a white cruſtaceous Pellicle, which was alſo of a ſweetiſh Taſte. When this Pellicle was taken off, a freſh one ſucceeded it; and, when the Liquor was totally exhal'd, nothing of an acrid or ſaline Nature remain'd in the Bottom of the Veſſel. *Willif. Diatriba de Fermentatione*, *Cap.* 10. So great is the Acrimony of *Quick-lime*, that when apply'd externally to the Skin of any Animal which is hot and moiſt, it forms an Eſchar upon it; and, when exhibited internally, it acts like a Cauſtic. For this Reaſon it is a Subſtance very proper for killing or baniſhing Inſects. If it is reduc'd to a Powder, mix'd with Sugar, and ſwallow'd by Mice, it infallibly kills them. For theſe Reaſons it is, by the Moderns, as well as the Antients, claſs'd among the acrid Poiſons. *Foreſt. Obſ. Med. L.* 30. *Obſ.* 8. *ſchol. Kircheri. Mund. Subterr. T.* 2. *Lanzon. T.* 1. *Vateri Phyſ. Exper. & Joel. T.* 2. *Boerhaave*, in his *Inſtit. Med. Sect.* 1143. ranks it among thoſe Poiſons, which by conſtricting, incraſſating, obſtructing, and drying, kill either quickly or ſlowly, according to their reſpective Virulence; and to prevent the fatal Effects of which, Vomits, Purges, diluting Subſtances, ſpirituous Acids, ſpirituous and oleous Alcalis, and all ſaponaceous Subſtances, are proper. Accordingly, in *Eph. N. C. D.* 3. *a.* 2. *o.* we have an Account of a Woman who eat two Apples, inadvertently put into a Bag in which there had formerly been *Quick-lime*, ſome of which adhered to the Apples. Soon after ſhe eat them, ſhe was afflicted with a preternatural Heat of her Throat and *Oeſophagus*, an Oppreſſion of her Stomach and Præcordia, and an inſatiable Thirſt. Theſe Symptoms were follow'd by a Swelling of the Belly, an univerſal Sweat, and Convulſions. In *Eph. N. C. Vol.* 2. *o.* 86. we have an Account of a young Man, who, upon pouring Water upon *Quick-lime*, was ſo ſtrongly affected by the aſcending Vapour, that he was ſeiz'd with an Oppreſſion of the Præcordia, and a violent and moſt frequent Coughing and Sneezing, which laſted for almoſt twelve Hours without Intermiſſion; by which Accident he

was

was weaken'd to such a Degree, that when he walk'd abroad in the Sun, or used any Exercise sufficient to excite a Diaphoresis, the Sneezing return'd, and continu'd for some Hours. The Stones in the Lungs, mention'd in *Eph. N. C. D.* 1. *a.* 3. *o.* 16. and which are there said to be generated by frequently drawing in the Dust of *Quick-lime* with the Breath, by no means prove its poisonous Quality, but only that it is capable of being divided into so fine a Powder, as to be imperceptibly drawn in with the Air, and form'd into Concretions in the Lungs.

The Water of *Quick-lime* is of an acrid, styptic, and, at the same time, a somewhat sweetish Taste. A white, and somewhat hard, Pellicle or Crust is soon produc'd on its Surface; and if this Pellicle is either drawn aside, or totally taken off, a fresh Pellicle succeeds it. When it has stood thus for a whole Year, in a Vessel cover'd with Paper, if the Pellicle be broke every two or three Days, and sunk to the Bottom, if, about the Middle of the Year, there is a new Addition made of common Water distil'd, if the Materials are now-and-then agitated with a small Stick, and if, at the Year's End, the whole Water is evaporated, it leaves a very dry *Calx* or *Lime*, about an eighth Part heavier than the *Quick-lime* originally employ'd in making the Lixivium. *Eph. N. C. D.* 1. *a.* 3. *Hoffman* says, that *Quick-lime-water* evaporates entirely over a gentle Fire, without leaving any thing behind. Quick-lime-water neither produces an Effervescence, nor coagulates, with Acids; for tho' it runs into a bitterish neutral Salt, yet it is not coagulated. In particular, when Spirit of Salt is added to Water of *Quick-lime*, there is no Effervescence produc'd, and yet the Acid of the Salt is chang'd into a neutral Salt, which, after Evaporation, remains very white in the Bottom of the Glass, and has exactly the same Appearance with Spume of Nitre in the Form of *small Flakes*. This Powder is of a somewhat bitterish Taste, but of a fix'd Nature; for it neither fuses in the Fire, nor does it easily yield its acid Spirit, unless by an Addition of Oil of Vitriol, which, by attacking the calcarious Principle, and intimately uniting itself with it, disentangles the acid Spirit of the Salt from its Embraces. When Water of *Quick-lime* was added in so large a Quantity to the best Spirit of Nitre, as that the Spirit was entirely saturated with it, the Mixture, when evaporated, left a certain thick, viscid, and yellowish Gum, which could not be dried, but dissolved in the Air, and which had a saline and very pungent Taste. *Quick-lime-water*, prepar'd of Quick-lime before calcin'd with common Sulphur, that it might receive an Addition of Weight from this Circumstance, when it was added to the best Spirit of Nitre in such a Quantity as to saturate it, the Mixture, upon Evaporation, left in the Bottom of the Vessel a yellowish-white Salt; which being dissolv'd in a digestive Heat, with several repeated Affusions of distil'd Water, and again evaporated, left a highly pungent Salt, resembling small square Stones, wrap'd up, as it were, in a small Portion of yellow Gum or Honey; and when a little distil'd common Water was added to this Salt, and the Mixture was agitated, the Whole of this Honey-like Substance was dissolv'd, the small Concretions of Salt remaining entire, white, pellucid, and beautiful as small Diamonds. *Eph. N. C. L. C.* Water of Quick-lime assumed a milky Colour, upon an Addition of Spirit of Sal Ammoniac, as also by an Affusion of Oil of Tartar per Deliquium. And since, by adding Water of *Quick-lime* to Urine, or to Sal Ammoniac, an urinous Spirit is perceiv'd to exhale, it may, according to *Tournefort*, serve us in inquiring whether there is any Sal Ammoniac conceal'd and wrap'd up in any particular Plant. Quick-lime-water, saturated with an Infusion of Galls, becomes thick, assumes a brownish-grey Colour, and on its Surface appears a remarkable black Spot, like a Drop of Ink. The Water of Quick-lime, mix'd with a Solution of corrosive Sublimate Mercury, becomes yellow or reddish; when mix'd with common Spirit of Wine, it becomes somewhat warm; and, by an Addition of the Solution of Sublimate, the Whole is chang'd into a Gold-colour. *Du Hamel Hist.* It ferments with all Syrups, and the Admixture of every acid Liquor renders it turbid. If it is mix'd with Milk, it prevents its Coagulation, which is contrary to what *Etmuller* asserts in *Commentar. de Bononiensi Artium Instituto.* In the Memoirs of the Royal Academy for the Year 1700. we are told, that Oxen which had unluckily drank *Quick-lime-water*, died soon after; and that the Wines which had been sophisticated with it, prov'd prejudicial to those who drank them, by their excessive and immoderate Heat.

Cream or Cremor of *Quick-lime* is an insipid Powder, which is with great Difficulty dissolv'd in Water. *Mem. Ac. R. S.* for the Year 1724.

Slak'd-lime is of a less acrimonious Nature than *Quick-lime*, and produces a less considerable Effervescence with Acids. Builders of Walls, and Bricklayers, however, find it to be in some measure acid, since it renders their Hands rough, and sometimes exulcerates them, but carries off all itchy Eruptions which happen to appear upon them. *Ramazini.* The Vapour arising from the Walls of Houses newly cover'd over with Quick-lime, proves of a very noxious Quality to those who continue for any considerable Time, or sleep, in them, during the Night. Daily Experience, and numberless uncontested Facts, prove the Truth of this. The Symptoms which generally seize those who live in new-plaster'd Houses, are principally Fevers, violent and long-continu'd Sneezings, a Sensation of *Suffocation* about the Fauces, an Infarction of the Breast, with a slow Fever. *Hoffman Med. Rat. Syst. Boerhaave*, in *Aphor.* 1060. observes, that a Palsy may be produc'd by the Vapour of *Slak'd-lime*; and, in *Instit. Med.* he ranks it in the same Class of Poisons with *Quick-lime*.

Wash'd-lime is an unactive Body, or a *Caput Mortuum* destitute of Acrimony. When this Substance is again calcin'd in a Crucible over a strong Fire, and common Water is added to it, it produces neither Effervescence nor Ebullition, but always throws up a Pellicle on its Surface, which when remov'd, a fresh one appears for a considerable Number of Times. Upon an Addition of the Solution of any fix'd Alcali, a Lixivium, for Instance, of Pot-ash, it throws up no remarkable Pellicle; but a faint Appearance, as it were, of Fat, is observed to float upon the Surface here-and-there. By the Addition of Spirit of Nitre, it excites a remarkable and noisy Effervescence, with a Number of large Bubbles, and a sensible Heat, which penetrates the Glass, and strongly affects the Hand which is apply'd to it; and a thick white Pellicle, of a sweetish Taste, floats on its Surface. A Solution of *Wash'd-lime*, a second time calcin'd, made with Spirit of Salt, filtrated, and distil'd from a Retort, yielded a simple insipid Phlegm, and the *Caput Mortuum* which remain'd was white, light, and swel'd, like burn'd Alum; it excited a sensible, and, as it were, burning Heat on the Tongue; and had a nauseous, and somewhat bitterish Taste. When common Water was added to this Substance, so strong a Heat was produc'd, that the Hand was not able to bear it; the whole Glass became intensely warm, large Bubbles appear'd in the Liquor, and the Noise of the Effervescence was sufficiently audible. *Etmuller.*

From what has been said, we may reasonably infer, that Quick-lime possesses some of the Qualities peculiar to alcaline Salts. *Tournefort* suspects, that somewhat of a vitriolic Acid is lodg'd in it. *Helmont* affirms, that there are two Salts in *Quick-lime*; the one a lixivial Alcali, and the other an Acid; and, from a Dissolution of these two by Water, and their consequent mutual Action on each other, he accounts not only for their Accension, but also, whilst they destroy each other, for their Coagulation. Hence he endeavours to deduce the Use of Quick-lime in Architecture.

Boecler, L. 1. *Part* 3. informs us, from *Herman*, that *Quick-lime* contains a large Quantity of an alcaline Salt, and very little of an acid one; but that they are both volatile and corrosive, and mix'd with a large Quantity of Earth. *Etmuller* is of Opinion, that *Quick-lime* contains both an Acid and an Alcali, join'd to earthy Particles. That it contains an Acid, he proves from the following Considerations: First, because newly-prepar'd Water of *Quick-lime* destroys the volatile Salts on which it is pour'd, fixes them, and transforms them, with itself, into an earthy Substance. Secondly, because the Water of *Quick-lime* is render'd turbid, and precipitated by an Infusion of the lixivial Salt of Tartar, since the earthy Particles are extruded, and sent to the Bottom, from the Acid lodg'd in the Lime-water, by means of the Alcali of the Tartar, which is readily absorb'd by the Acid. His third Argument, which is, that Milk is coagulated by Water of *Quick-lime*, is inconclusive, since, upon trying the Experiment, no such Effect is produc'd. He proves that Quick-lime contains an Alcali, from the following Topics: First, because the Water of a Solution of Quick-lime dissolves and extracts sulphureous Substances, common Sulphur, and Sulphur of Antimony, in the same manner that Lixiviums of alcaline Salts usually do. Secondly, because, when *Quick-lime* is added to Sal Ammoniac, it permits its volatile Salt and Spirits to come forth, in the same manner as when alcaline Salts are added to it. Thirdly, because the Water of Quick-lime restores the Colour to an Infusion of nephritic Wood, after it has been destroy'd by Vinegar. Fourthly, because it produces, tho' slowly, a Precipitation in the Solution of Mercury Sublimate, of the Colour of *Minium*. Hence he infers, that the Water of *Quick-lime* contains both an acid and an alcaline Salt dissolv'd; and, consequently, that it is somewhat of the Nature of Sal Ammoniac. But he asserts, that the saline and acid Particles of Quick-lime partake of the Nature of fix'd Alcalis, and produce all the Effects ascribed to them. According to *Hoffman*, "There are two Principles "lodg'd in Quick-lime, the one very fix'd and earthy, the "other very subtile, penetrating, volatile, and, as it were, of "a fiery Nature. So long as these are join'd and connected "with each other, they are so far from being disunited by the "strongest Degree of Fire, that they are rather more firmly "join'd together by it. But when, by the Assistance of "Water, and more particularly by boiling, the volatile Prin-"ciple is separated from the more fix'd and earthy Part, it "discovers its volatile Nature by this Circumstance, that by "means of a gentle Heat it is wholly dissipated in the Air. "Hence Water of *Quick-lime*, tho' of a very acrid Taste, "evaporates wholly, without leaving so much as one Particle

"of

" of a fix'd Matter. But if ſaturated Water of Quick-lime " is boil'd with well-calcin'd Salt of Tartar, it acquires ſo " cauſtic, corroſive, and penetrating a Quality, that it is not " only very hot and pungent on the Tongue, but may alſo be " uſed for a potential Cauſtic, ſince it eats and conſumes the " Fleſh. Of ſuch a Salt, with Spirit of Wine, is prepared a " highly acrid Tincture, commonly call'd the Tincture of Quick-" lime, or of Salt of Tartar; and this Tincture is of uncommon " Efficacy in provoking Urine. A Lixivium is alſo prepar'd in " this manner from *Quick-lime* and Salt of Tartar, which is high-" ly proper for diſſolving and extracting Tinctures from com-" mon Sulphur or Antimony. Spirit of Sal Ammoniac alſo, pre-" par'd with Quick-lime, in its penetrating Smell, acrimonious " Taſte, and even in its Volatility, far ſurpaſſes that prepared " of Pot-aſh and Sal Ammoniac. All theſe Circumſtances " evidently demonſtrate, that there is in burn'd Calxes not " a ſaline Principle, but a highly ſubtile volatile one, which is, " nevertheleſs, of a terreo-igneous Nature, and which is capa-" ble of adding the higheſt Acrimony, and alſo a cauſtic " Virtue, to fix'd as well as volatile urinous Salts; of diſſolving " oleous and pinguious Subſtances; and of fixing and retaining " volatile Subſtances, eſpecially ſuch as are of an acid Nature." *Homberg* found experimentally, that Mercury diſſolv'd with Spirit of Nitre, and by reiterated Diſtillations to Dryneſs, united in a hard Maſs to its ſolvent Acid, was by the Addition of *Quick-lime* reviv'd, when ſubjected to Diſtillation by a large Fire, the acid Spirits being thus ſeparated, but render'd weaker. Theſe Circumſtances ſeem to point out the alcaline Nature of Quick-lime, ſince it join'd itſelf to an Acid, and thus freed the Mercury from its Solvent. He then had an Inclination to try whether, by ſeveral Lixiviums, the Salt could be extracted from the Lime; but the Experiments were made in vain, nor after the Evaporation was there any thing found, beſides the terreſtrial and inſipid Cruſts, which generally are left after the Evaporation of Lime-water. *Du Hamel Hiſt.* Hence he claſſes Quick-lime among the earthy Alcalis; and, by Experiments made with Spirits of Salt and Nitre, he found that *Quick-lime* was not of a more alcaline Nature than *Slak'd-lime*, ſince both of them requir'd almoſt an equal Quantity of an Acid for their Diſſolution; only with this Difference, that the *Quick-lime* produc'd a greater Effervеſcence than that which was ſlak'd. *Mem. Acad. R. Sc.* A. 1700. But *Quick-lime* does not ſeem to be a ſimple earthy Subſtance, of an abſorbent or alcaline Nature; for it has nothing in common with abſorbent or alcaline Earths, except that it produces an Effervеſcence with Acids, whereas it has many Properties in common with alcaline Salts. The cauſtic Acrimony of *Quick-lime* is not to be found in an abſorbent Earth, which is inſipid. *Quick-lime* reſolves reſinous Subſtances, juſt as an alcaline Salt does. Sulphur, when boil'd in *Quick-lime-water*, is diſſolv'd, and yields a red Tincture, like that which ariſes from fix'd alcaline Salts with Sulphur. The filtrated Liquor, by an Addition of an acid Liquor, yields a precipitated Magiſtery, like that commonly form'd in preparing Milk of Sulphur. Quick-lime promotes the Fuſion of Sand, triturated Flint, and Cryſtal, for making Glaſs, juſt as fix'd alcaline Salts do. But abſorbent Earths, ſuch as Chalk, produce no ſuch Effect, unleſs they are previouſly reduced to a *Calx*. Quick-lime tinges Syrup of Violets of a green Colour, as fix'd alcaline Salts do. With a Solution of corroſive Sublimate Mercury it yields a yellow Precipitate, as fix'd alcaline Salts do; only with this Difference, that the Precipitate produc'd by the fix'd alcaline Salts is of an Orange, and that produc'd by the *Quick-lime* of a Lemon-colour; becauſe ſome of the white earthy Particles of the *Quick-lime* are aſſociated with the Precipitate. *Quick-lime*, as well as fix'd alcaline Salts, abſorbs the Acid of the Sea-ſalt in Sal Ammoniac, and by that means ſets the volatile urinous Salt at Liberty, which ſimple abſorbent Earths do not. The now enumerated Properties of Quick-lime are not found in Lime-ſtone before Calcination: They who deny that there is a fix'd alcaline Salt in Quick-lime, alleging that by Elixiviation the Salt cannot be extracted from it, ſeem to prove nothing at all, becauſe an alcaline Salt, by the Force of Fire united to the Sand in Glaſs, cannot be drawn from it by Elixiviation, tho' 'tis certain, that ſuch a Salt is really in it. As to that Queſtion, What is the Origin of the alcaline Salt in *Quick-lime?* I anſwer, that it is form'd in it, firſt, of the aluminous, vitriolic, or nitrous Acid contain'd in the Lime-ſtone; and, ſecondly, of the Acid of the Wood or Coal uſed in Calcination. *Geoffroy*, in *Mem. Acad. R. Sc. A.* 1720. The alcaline Nature of *Quick-lime* ſeems to be prov'd by that Property of Quick-lime Water, by which it ſerves to precipitate Metals, diſſolv'd by their proper acid Menſtruums. *Mem. Acad. R. Sc. A.* 1711. The alcaline Nature of Quick-lime is alſo prov'd from that Species of ſympathetic Ink, in which it is made an Ingredient. *Le Fevre* thinks, that from the alcaline Nature of Lime we may deduce the Origin of that alcaline Salt, which is wrap'd up in ſome mineral Waters; ſince, in the Earth where ſuch Waters abound, the Sulphur and the calcarious Earth concur, and the Acid of the Sulphur, being diſengaged from the Water, acts upon the Alcali of the Lime, and joins itſelf to it; juſt as the like Salt is produc'd from common Sulphur and Quick-lime-water, by boiling them together, and then filtrating and evaporating the Solution. *Hiſt. Acad. R. Sc. A.* 1730. Thus, I think, it can hardly be deny'd, that both Quick and Slak'd-lime are of an alcaline Nature, on account of the Effects produc'd by them. In the mean time, I can ſcarce believe, that *Quick-lime* agrees in every reſpect with an alcaline Salt; for according to *Stahl*, in his *Specimen Becher.* " *Quick-*" *lime* differs from an alcaline Salt, firſt, in that it is not fus'd " by Fire; ſecondly, when diſſolv'd in Water, it evidently " evaporates in the Air; thirdly, it has no remarkable Taſte, " much leſs a cauſtic one; fourthly, it does not coagulate Acids " into a dry or cryſtalline, but into a kind of liquid Conſiſtence; " fifthly, Quick-lime itſelf never arrives at a liquid Conſiſtence; " ſixthly, with Sulphur, it runs into a dry Conſiſtence reſembling " Cryſtals, which an Alcali does not; ſeventhly, with Sand it is " form'd into hard Concretions; eighthly, it is alſo form'd into hard " Concretions, with Mucuſes, Whites of Eggs, and Curd of Milk, " all which Subſtances are rather colliquated by alcaline Salts; " ninthly, it fixes Sulphurs more. It agrees with an alcaline Salt in " theſe reſpects: Firſt, that it ſaturates Acids; ſecondly, detains " them ſtrongly; thirdly, precipitates other Subſtances diſſolv'd by " them; fourthly, changes them, tho' not by the ſame Property " an Alcali does; fifthly, it diſſolves Sulphur and pinguious Sub-" ſtances, and much more ſuch as are mucid." Among all thoſe who have contended for a Salt, of whatever kind, in *Quick-lime*, none, ſo far as I know, ever exhibited it to the View, before the celebrated *Du Fay*, tho' all of them ſuſpected the Preſence of a Salt, from the Effects it produc'd. He was the firſt who found a Salt in *Quick-lime*, and that in the Pellicle, or Cream, floating on a Solution of it: This Salt was indeed very impure, and ſheath'd up in a great deal of Earth; but, by a ſecond Proceſs, he ſhew'd it ſeparated from the Earth, and more pure than it formerly was. He took eight or ten Pounds of Quick-lime, in Pieces as large as one's Fiſt; he laid them *Stratum ſuper Stratum* on a Furnace, with live Coals; and when the Pieces were red-hot, he took them off, one by one, and extinguiſh'd them in Rain-water, filtrated and warm; for, if common Water is us'd, then leſs Salt is obtain'd. Then he ſuffer'd the Water, with the Lime extinguiſh'd in it, to boil for about a Quarter of an Hour; and whilſt the Water was as yet boiling, he pour'd it off by Inclination into ſome earthen Veſſels. After he had ſuffer'd it to ſettle for ſome time, he pour'd it off again by Inclination into other Veſſels; taking care that no Particles of the Lime itſelf ſhould be carry'd along with it. This Water, upon Evaporation, afforded the Salt of Quick-lime, which is not very pungent, and cannot be felt, unleſs a Spoonful of it is put into the Mouth, and taſted for ſome time; and when diſſolv'd by boiling it in a large Quantity of common Water, or a proportionably ſmaller one of Rain-water, and then filtrated, and evaporated, it becomes purer, but is not white. This Salt, before Depuration, produces a conſiderable Effervеſcence with Acids, and more particularly Oil of Vitriol; but, when depurated, it neither produces an Effervеſcence with Acids nor Alcalis: So that it ſeems to belong to the Claſs of *neutral* or *middle Salts*. When lodg'd in a Cellar, upon a Piece of Marble, it diſſolves after a conſiderable Time, if it is impure, into a Liquor of a yellowiſh Colour, ſomewhat inclin'd to red; but much ſooner, if it is pure. Tho' this Salt is ſoon diſſolv'd in a Cellar, yet it has this remarkable Property, that it cannot be diſſolv'd except in a large Quantity of Water. Another Method of extracting the Salt from *Quick-lime*, us'd by the ſame Mr. *Du Fay*, is this: *Quick-lime*, left long in the open Air, and, conſequently, extinguiſh'd by its Humidity, is diſtil'd to Dryneſs, from a coated Glaſs Retort. The diſtil'd Liquor is ſomewhat reddiſh, clear, and not very acid. It ſcarcely produces any Effervеſcence, either with Acids or Alcalis. It becomes very little red with Spirit of Nitre. It is pour'd upon the powder-like Matter of the *Quick-lime* left in the Retort, with which it produces an Effervеſcence, and a violent Heat. Then 'tis to be digeſted, filtrated, and evaporated. This diſtil'd Liquor, if pour'd upon Quick-lime, or upon Lime extinguiſh'd in the Air, alſo extracts the Salt from it, but in a ſmaller Quantity. The Salt now deſcrib'd is not of a volatile Nature, but, on the contrary, very much fix'd in the Fire, ſince it did not fly off in that large Fire in which the Lime-ſtones were calcin'd. But leſt it ſhould be pretended, that the Salt obtain'd in this Caſe was owing, firſt, to the repeated Calcination with Wood; or, ſecondly, to the Air, to whoſe Humidity it had been long expoſed, for the ſake of being extinguiſh'd; or, thirdly, to the Water employ'd, which might have poſſibly abounded with Salts, the Experiment was made with Quick-lime, extinguiſhed in diſtil'd River-water, and the clear Solution being pour'd off by Inclination, and evaporated to Dryneſs, the Salt extracted was like the former. *Mem. Acad. R. Sc. A.* 1724. We have ſeen then, that *Quick-lime* is poſſeſs'd of the Properties of an alcaline Salt; afterwards, we have ſeen, that a Salt of a neutral

a neutral or saline Nature, or what is commonly call'd a *Sal Salsum*, was extracted from it. It seems very probable, that those Effects of Quick-lime, which discover it to be of the Nature of an alcaline Salt, are owing to this, that its Salt has a great Quantity of an earthy, absorbent, and alcaline Matter join'd with it. *Quick-lime* raises a more violent Effervescence with Acids, than *Slak'd-lime*. This Phænomenon *Homberg* accounts for from the Particles of Fire which enter the *Lime-stone* during Calcination, and adhere firmly in its Pores, being lock'd up, and retain'd therein, by the contracting Cold; and whilst these are expel'd by the Acids, which penetrate the Lime, the above-mention'd Motion of Effervescence is excited. *Mem. de l' Acad. Roy. des Sciences, A.* 1700.

Others also derive its Effervescence, Heat, and Fire, from Water being pour'd upon the Quick-lime, which expels the latent Fire with a kind of Impetus. See *Vitruv. L.* 2. *C.* 5. *Willis. Ferm.* and *Du Hamel. Phil. Tom.* 4. But, then, that Fire should be united, and, as it were, concreted with Bodies during Calcination, seems a precarious Hypothesis, till the Thing shall be more clearly demonstrated. Mean time, it is certain, that Quick-lime, the fiercer and the longer continu'd the Fire is, in which it is calcin'd, excites so much the more Heat, that is, actual Fire, in cold Water; in like manner as alcaline fix'd Salts, which, the longer and more strongly they have been subjected to the Fire, the more Heat they produce when thrown into Water. *Boerhaave's Chym.* 'Tis disputed, whether the Properties by which Quick-lime differs from Slak'd, ought to be ascrib'd to the changing Action of the Fire. *Helmont* was of this Opinion; for he expresses himself thus: "Stones, which may be calcin'd, "acquire the Nature of Salt, and the Acrimony of Lime. "But that very Thing is a Transmutation into a new Gene-"ration, promoted by Fire; but not an Extraction, Educ-"tion, or Separation of the Thing contain'd. But this "Discovery the Chymists owe to me." Of the Presence of a most acrid Salt in Quick-lime, if we may believe *Stentzelius de Venenis*, no one will doubt, who has ever so small an Insight into its Nature and Operation; for it is prepar'd of Lime-stone, containing in it a most strong acid Salt, which is calcin'd by the Force and Power of the Fire; divided into smaller Pieces, becomes a friable Substance; and is transmuted into an acrid Salt, consisting of the smallest Points and Spiculæ, and which comes nearest to the Nature of an alcaline Salt. Quick-lime, therefore, affects the Body precisely in the same manner as the more acrid Alcalis do; since, by the Sharpness and Stiffness of its Particles, it excoriates and corrodes the Solids, dissolves and colliquates the Fluids, and, by the too great Increase of Attrition, brings on Putrefaction and Death, *&c. Stentzel. de Venenis, Lib.* 2.

Whether the Motion among the Parts of the Quick-lime render'd dry, and, as it were, greedy of Moisture, by the Fire, arises from the Re-action of the Æther, or rarefy'd Air, at the Moment when an Acid, or Water, enters its Pores, of which the Fire produces a great Number; or whether that Virtue, by which Quick-lime differs from that which is slak'd, ought to be ascrib'd to the Salt of the former, which either is not in the latter, or is there weaken'd, or in a smaller Quantity, are Points not to be determin'd without a larger Number of Experiments than have hitherto been made, with a Design to ascertain the Truth in this Matter.

In Surgery Quick-lime is of Use, where a caustic burning Force is requir'd. *Celsus, Lib.* 5. *Cap.* 6 and 7. reckons it among the corrosive and burning Remedies. For Instance, in making the Separation of a Sphacelus, Quick-lime, reduc'd to a fine Powder, may be sprinkled on the Part; or it may be reduced to a Lixivium, by Deliquium, in a subterraneous Place, together with Pot-ash, and, after Filtration, apply'd. *Boerh. Aphor.* 462. and *Mat. Med.* It is also used in making caustic or septic Stones. Thus, three Parts of Quick-lime, and two Parts of Pot-ash, are powdered, and mixed together, and the Oil of these, by Deliquium, is evaporated to Dryness, which must be exposed to a strong Heat in a Crucible till it fuses, and then cast into Molds. *Boerh. Mat. Med.* and *Chym. Vol.* 2. In the *Paris* and *Brussels Dispensatories*, and *Lemery's Chymistry*, two Parts of Pot-ash are taken, to one Part of Quick-lime. In the *Pharmacop. Aug.* under the Title of *Potential Cautery*, equal Parts of each are taken. *Charas* teaches the same Method; where, at the same time, he intimates, that Salt of Tartar, or the lixivial Salt of Vegetables, may be employ'd for the same Purpose. In the *Edinburgh Dispensatory* the Proportion is the same; but it is directed, that the Pot-ash be sprinkled over the Quick-lime, powdered, and well calcin'd in a Crucible; and, afterwards, that they be kept in a Wind-furnace till the Salt becomes fluid; let a sufficient Quantity of Spring-water be pour'd on the Mass, receiv'd in an Iron Vessel; so let it be macerated for some Days, filtrated, and inspissated to the Hardness of a Stone. *Mustanus (Chir. Tom.* 4.) gives the following Directions for carrying on the Process:

Take of Soap-lees, two Pounds; of Quick-lime, one Pound: To these pour boiling Water; let them be united together; when the Whole is clear, pour it into an Iron Pan; add half an Ounce of Sal Ammoniac; and, by boiling, reduce it to the Hardness of a Stone.

The Potential Cautery of *Felix Platerus* is prepar'd by a somewhat shorter, and less tedious Process; for it is no more than an highly acrid Lixivium of the Soap-boilers, prepar'd with Quick-lime, and boil'd in an Iron Pan, till its Humidity is so much evaporated, that it begins to become dry. Then it is to be remov'd from the Fire; and, the Mass beginning now to grow solid, is to be taken out with an Iron Spatula, and kept in a Glass Vessel, close stop'd, in a hot Place.

The Method of applying it is this: An adhesive Plaister, with a sufficiently large Perforation in the Middle, is laid upon the Part to be cauteriz'd. Then the Cautery is laid upon the perforated Part of the Plaister, and another Plaister apply'd over it, that it may not dissolve by the Moisture of the Air. It is to remain on the Part for half an Hour, or three Quarters, after which the Skin, how thick soever, will be burn'd and mortify'd, without any Pain. The Falling off of the Eschar is to be promoted by the Unguentum Rosatum, or any other Digestive. It is, by others, call'd Corrosive, Caustic, or Infernal Stone. *Fuller* mightily extols an Epithem, which is made of Quick-lime, reduc'd to such a Consistence, with a sufficient Quantity of liquid Honey, as to be spread upon dress'd Leather, in form of an Unguent; to be apply'd to the Part affected, and, as often as it dries, to be renew'd. He says it is an extraordinary and approv'd Remedy against Scorbutic and Rheumatic Pains, and that he never yet knew it try'd in the true Gout; but is of Opinion, that it would be very efficacious. It is also good against Chilblains. In the *Leyden Dispensatory* the Unguentum Calcis is composed of Quick-lime, with the Addition of emollient and drying Ingredients. The same Composition is in the *Antidot. Bon.* where it is not Quick-lime, but Lime ten times wash'd, which is prescrib'd. It is call'd *Unguentum de Calce Compositum Jo. de Vigo*; and is commended for Burns of any kind, Itchings, Erysipelas, and old Ulcers of the Legs. For the same Purpose, but with less Effect, is us'd the *Unguentum de Calce Simplex*, (*ibid.*) which is compos'd of Quick-lime seven times wash'd with Rose-water, and which is then to be reduced to the Form of a Liniment, with Oil of unripe Olives, or Oil of Roses, and the Whites of two Eggs, with a sufficient Quantity of Wax. In *Lemery's Pharm. Mynsicht's* Ointment of Quick-lime is compounded of Quick-lime, Orpiment, Root of Florentine Orris, Sulphur, Nitre, a Lixivium of Bean-stalks, and Oil of Spike. This is recommended for a good Depilatory. *Valleri* proposes, for this Intention, Quick-lime alone, and Arsenic boil'd with Water. *Joel* recommends equal Parts of Quick-lime and Orpiment, powder'd, and boil'd together, in an acrid Lixivium, to the Consistence of a Poultis. The Depilatory of the *Italians* is prepar'd of four Ounces of Quick-lime, of Orpiment, Litharge, and Starch, each an Ounce, in a sufficient Quantity of Water, to which is sometimes added an equal Quantity of Salt of Tartar and Soap, and a sufficient Quantity of Oil of Elder, according to *Fick. Mynsicht's* Pills of Quick-lime, in *Lemery's Pharm.* to be put into hollow Teeth, that ake, are thus prepared:

Take half an Ounce of Quick-lime; of Wheaten-meal, long Pepper, Pomegranate-bark, and Galls, of each two Drams; of Henbane-seed, Cloves, Opium, and burn'd Alum, each four Scruples: Mix, and, with the Extract of Pellitory of *Spain*, make a Mass, of which afterwards let oblong Pills be made, with Oil of Cretan Origanum and Camphire. *Mynsicht.*

Tilingius's Pills of Quick-lime, for the same Uses, are made of Quick-lime, long Pepper, Henbane, and Opium, with Juice of the Root of Pellitory of *Spain*, according to *Fick.* The most familiar Masticatory of the *Indians* is Quick-lime, with the Betel-leaf, and the Fruit of the *Indian* Nut; instead of which, the most common Masticatory in *America* is of Tobacco-leaves and Quick-lime, according to the same Author.

The Water of Quick-lime, from its extraordinary Use, has been dignified by the Name of *Aqua Pretiosa*, or *Benedicta Chirurgorum*; for it is a good outward Medicine, not only for cleansing foul and putrid Wounds and Ulcers, but also for dissipating cutaneous Disorders; for which Purposes it is generally apply'd tepid, with a Linen Cloth, either alone, or impregnated with simple or camphorated Spirit of Wine; it is very proper for discussing serous and œdematous Tumors, if frequently apply'd warm with a Sponge or Linen Cloth; but particularly if

œdematous

œdematous Swellings in the Feet are in Danger of a Gangrene, which is known by an Appearance of Spots upon the Part, this Water is highly proper, not only becauſe it diſſolves the Tumors, but alſo becauſe it preſerves from Gangrene. It alſo carries off Inflammations, and reſiſts Gangrene, whether apply'd by itſelf, or with Sugar of Lead; but the Application ought to be pretty frequently renew'd. In Herpes and Serpigo, whether ulcerated or not, it is an experienced Remedy. *Hippocrates (De Morb. Popul. C. 2. Sect. 5.)* orders Lime-water, but ſo prepared, as not to exulcerate, to be uſed for the Vitiligo and Leproſy. The Moderns commend it in the Itch, if the Parts affected be waſh'd either with it alone, or together with Sulphur, in the common Itch, or with Mercurius Dulcis in thoſe of the malignant Kind. *Etmuller*, for the ſame Intention, preſcribes one Pint of Quick Lime-water, and from three Drams to half an Ounce of pulveriz'd Sulphur; theſe are to be boiled together; and after the Liquor is percolated, the Joints of the Body infected with the Itch are to be waſh'd with it; or at leaſt the Ointment apply'd to the Joints may be waſh'd with it. Three Drams of the Scoriæ of Regulus of Antimony, added to one Pint of Quick Lime-water, are more ſucceſsfully uſed in a ſcurfy Itch: This Mixture is of ſingular Service, when apply'd externally. Two Drams of Mercurius Dulcis, diſſolved in a Pint of Lime-water, is a Medicine of ſingular Service in ſome Chirurgical Caſes, ſince it radically cures all Ulcers of the Body, even thoſe of the longeſt Standing; and is ſucceſsful againſt any Species of Itch. But this Caution of *Ludovicus* muſt be obſerv'd, who in his *Pharm.* ſays, "Water of Quick Lime, ſaturated with Sulphur, is indeed a good topical Medicine, but requires Circumſpection; leſt meeting with ſaline Humours of a like Quality with itſelf, it ſhould rather increaſe than remove the Diſorder." A Circumſtance full of Danger is alſo often to be dreaded, which is the repelling the ſcabious Matter from the Skin to the internal Parts by conſtricting and obſtructing the cutaneous Pores by a drying Medicine. This Danger is beſt prevented by the Uſe of other Evacuants at the ſame time. Lancinating Pains of the Legs are frequently very much reliev'd by the Legs being put into this Water; which is alſo ſaid to take away a Polypus of the Noſtrils, if frequently apply'd. A Man forty Years of Age, having a Laſſitude all over his Body, and being afflicted with a Heavineſs and Pains of his Feet and Loins, boil'd Quick Lime-water in a Kettle, and apply'd it warm, by means of Linen Cloths, to the Belly, and the Region of the Pubes and Kidneys, for almoſt the whole Night; and by a plentiful Evacuation of Urine was cured. But in a Fever, with the Head-ach, a Cataplaſm prepar'd of Quick Lime-water apply'd to the Head, kill'd the Patient, as we may ſee in *Lindeſtolpe de Ven.* When Quick Lime-water is by well ſhaking mixt with any mild Oil, that, for Example, of Linſeed or Olives, it then acquires the Form or Conſiſtence of a Balſam, which is of ſingular Service, when apply'd externally, in freſh Burns, and alſo conduces to ſtop Inflammations. *Slare Sacch. Boyle Specif.* Quick Lime-water may alſo be impregnated with Copper, by ſtanding in a brazen Baſon: by this means it aſſumes a beautiful ſapphire Colour, and proves an excellent Remedy againſt Puſtules, Ulcers, Scabies, and Itching of the Eyes. In the *London* and *Edinburgh* Diſpenſatories, there is an *Aqua Sapphirina*, which is nothing but Water of Quick Lime, in which a little Sal Ammoniac is diſſolv'd, and which has ſtood for ſome time in a Braſs Veſſel, for the ſake of acquiring an azure Colour. In *Schroder's Pharm.* it is called the *Sapphirine Water* for the Eyes; for it is commended againſt all Blemiſhes of the Eyes, and alſo for cleanſing all ſorts of Ulcers. Empirics ſell it for Sapphire-water, againſt Humours and other Diſorders of the Eyes. *Boot. Lib. 2. Cap. 293. Etmuller* aſſerts, That no Remedy is more effectual againſt cancerous Ulcers, than this Water; and that it is very efficacious when the Eyes are hurt by the Small Pox. This Water may be more or leſs diluted, according to the Intention, becauſe, when it is not ſo, it is of too acrid a Quality. It is likewiſe highly eſteemed againſt Films of the Eyes. That which is call'd the *Aqua Cæleſtis* conſiſts of the Water of Quick-lime, Sal Ammoniac, and Alum. The Aqua Calcis of *Rulandus* for Burns is prepared of five Ounces of Quick Lime boiled with four or five Pints of Spring-water in a Braſs Veſſel. When the Liquor is filtrated, as much Vitriol is added to it, as is ſufficient for giving it a bluiſh Colour; and as much of the Sugar of Lead, as is ſufficient to make it become milky. This Water is commended as a good Application to Parts burn'd or frozen, Gangrenes, Eryſipelas, Fiſtulas, Itch, malignant Ulcers, if often apply'd to the Parts affected in the Day-time with warm Linen Cloths, *Coll. Leyd.* If twenty Grains of corroſive Sublimate Mercury are diſſolved in a Pint of Quick Lime-water, according to the *Paris Diſpenſatory*, and *Lemery's Chym.* or thirty Grains, by the Direction of the *Edinburgh Diſpenſatory*; or half an Ounce, agreeable to *Lemery's Diſpenſatory*; we have the *Aqua Phagedænica*, ſo much celebrated for external Uſe in deſtroying fungous Fleſh in Wounds, cleanſing ſordid Ulcers, and againſt Gangrenes. Some, who would render its Uſe the ſafer, mix with it Spirit of Wine well dephlegmated. Others alſo mix with it Arſenic, and Spirit of Vitriol. *Charas Pharm.* According to *Etmuller*, the Aqua Phagedænica uſed in *France*, eſpecially to put a Stop to beginning Gangrenes, particularly of the nervous Parts, is thus prepared:

Take ten Quarts of common Water; let four Pounds of Quick Lime be added to them; and when the Ebullition is at an End, add two Ounces of pulveriz'd Arſenic, and one Ounce of pulveriz'd Maſtich: Let all theſe be well ſtirr'd with a wooden Spatula, till the Quick Lime ſubſides to the Bottom; then let the clear Water be pour'd off; to which add two Ounces of Sublimate Mercury, and ſix Ounces of rectify'd Spirit of Wine. Mix them together.

He ſays this Water is really excellent in Practice; and that, if it ſeems too acrid, it may be corrected by the Addition of more Spirit of Wine. The compound Polychreſt-water of Quick Lime, moſt uſeful againſt Tumors with Inflammation, moiſt Exulcerations, and Diſpoſitions to a Gangrene, he directs to be prepared thus:

Take four or five Pounds of Quick-lime; a Pound and an half of Sal Ammoniac; half a Pound of Litharge; of Olibanum, Myrrh, and Maſtich, each half an Ounce; of Camphire, one Dram: Let them be boil'd together, till the Litharge be diſſolved. Let this be apply'd twice or thrice a Day warm with Linen Cloths.

In *Courland* this Compoſition is uſual, under the Name of

The WHITE EPITHEM.

Take three Ounces of Quick Lime; ſix Drams of camphorated Spirit of Wine; one Dram of Sugar of Lead; half a Scruple of Mercurius Dulcis: Mix them together.

With Cremor of Quick Lime, according to *Etmuller*, the Lips of a cancerous Ulcer may be anointed, that the corrupted Part may be conſum'd, while the ſound remains. With Bole Armoniac 'tis a Specific in the Ozœna. *Ludovicus*, in his *Pharm.* gives this Advice concerning the Cremor: "It is not unſucceſsful outwardly in ſordid and inveterate Ulcers; but in an exulcerated Cancer, Spina Ventoſa, or ſteatomatous Swellings, it ought to be cautiouſly apply'd; ſince inſtead of promoting the intended Separation, it often increaſes the Pain, and augments the Diſcharge of Matter."

Slak'd Lime may be ſubſtituted in the Room of Quick Lime, when a little leſs Acrimony is neceſſary. In the *Eaſt-Indies* it is apply'd to the Temples to diſſipate Head-achs ariſing from Refrigeration; and is uſed for the Wounds inflicted by Scorpions, and Stings of Waſps. But for diſpelling cold Tumors of the Knees and Abdomen, and diſcharging Wind, they reduce it with a Mixture of Honey into the Form of a Plaiſter, which they leave apply'd till it falls off of itſelf, after having perform'd its deſir'd Effect. However, before the Application of this Plaiſter, they anoint the Part affected with Oil. In the *Eaſt-Indies* it is alſo mix'd with Tobacco-juice, as a Remedy proper for killing Worms diſcover'd in Wounds. *Lettr. Edif.* and *Leeuwenh. Epiſt.* 124.

Waſh'd Lime is a Chirurgical Remedy, which dries without Pungency, and is proper for Burns, and too moiſt Ulcers. Hence Ointments of waſh'd Lime are in high Requeſt for Burns. For Example:

Mix waſh'd Lime with Oil of Roſes or Linſeed; and let them be well ſtirr'd in a Leaden Mortar, to the Conſiſtence of an Ointment, which is excellent for Burns.

This Medicine is prepared in a Leaden Mortar; for by this means the Particles of the Lead are ſucceſſively abraded, and united with the Ointment; a Circumſtance which contributes not a little to heighten its Excellence.

A very uſeful Remedy is alſo produc'd from waſh'd Lime againſt any kind of Ulcers.

Take as much as you pleaſe of Lime twice or thrice waſh'd, and almoſt dry'd; add Linſeed-oil, a ſufficient Quantity; tinge it of a Fleſh-colour with the choiceſt Bole: And thus you have an excellent Ointment.

Joel informs us, that Lime reduc'd to a very fine Powder, and waſh'd three or four times with Roſe-water, and again reduc'd to Powder, is an excellent Remedy againſt Venereal Ulcers of the Pudenda, if 'tis ſprinkled on them, as it removes and conſumes all Impurities, and quickly brings on a Cicatrix. In the *Ph. Aug.* that of *Antwerp*, and that of *Lemery*, there is an

an Ointment of Lime, made of wash'd Lime and Wax, each three Ounces; and one Ounce of Oil of Roses; which is also commended for Burns, and drying of Ulcers. If Lime be slak'd with Vinegar, thrice wash'd, and reduc'd with Oil of Roses to the Form of a Liniment, it heals Burns without any Trace of a Cicatrix, and suffers no Blisters to arise, *Muf. Worm.* Thus far of the external and chirurgical Uses of Quick Lime, and its Preparations. The Effects it produces may be accounted for, either from its corroding, burning, cleansing, and, consequently, acrimonious Quality; or from its drying and astringent Properties.

Whoever reflects on the foregoing Remarks concerning the fatal Effects, not only of Quick, but also of Slak'd Lime; whereby they have merited a Place in the Catalogue of Poisons, will, in all Probability, never reason himself into a Persuasion, that either Slak'd Lime, or the Lixivium of Quick Lime, can with Safety be used internally. But there are celebrated Physicians, who being instructed by successful Experiments, have ventured to commend, in many Diseases, the internal Use of both Slak'd Lime, and of Quick Lime-water. Thus Slak'd Lime is prescrib'd by some for a Clyster, in the Dysentery, as an astringent, drying Remedy. And according to an Observation of Mr. *Homberg*, a Man was cured of an Hypochondriac Disorder, by a Medicine prepared of two Parts of Quick Lime extinguished by the Air, mixt with one Part of Sal Ammoniac; twenty Grains of which were exhibited for a Dose. And Lime dissolved per Deliquium holds not the last Place among aperient Medicines. *Du Hamel's Hist.* Quick Lime-water is most frequently used through *Great Britain* and *Holland*, for purging away all kind of Chronical Diseases, *Schulz. Præl.* In *Bates's Dispensatory* what is call'd *Aqua Benedicta*, is prepar'd of

One Pound of Quick Lime, with eight Pints of Water; boil'd and filtrated after settling.

Three or four Ounces of this may be prescrib'd thrice a Day, or as common Drink, for a Month, in several Cases; such as Redness of the Face, Pustules, Strumæ, Asthma, Phthisis, Empyema, malignant Dysentery, aqueous Tumors of the Scrotum, Fluor Albus, the wandering Gout, Freckles, Herpes, Gangrene, Œdema, Tumors of the Knees and Legs, all Ulcers attended with an Afflux of Humours, as also in a Diabetes. What in the same Dispensatory is call'd *Aqua Benedicta Composita*, is made of

One Ounce of Sassafras-bark, six Ounces of squeez'd and ston'd Grapes, and six Drams of Nutmeg; all which together are to be infus'd cold in six Pints of the forementioned *Aqua Benedicta*, for two Days, and then strain'd.

This is said to be of the same Effect with the former, but more powerful in some Cases. In the *Edinburgh Dispensatory*, the simple *Aqua Benedicta* is the same with that mentioned above; but the Compound is thus made.

Take of the Raspings of the Wood and Bark of Sassafras, two Ounces; of Nutmegs, three Drams; of sliced Liquorice, one Dram; of fresh Lime-water, four Pints: Digest for two Days; and to the percolated Liquor add two Ounces of the balsamic Syrup.

Sylvius, one of the most celebrated Physicians in *Holland*, says, in his *Prax. Med. L.* 1. *C.* 6. § 14. "That Quick "Lime prepared of burnt Flint or Shells, admirably corrects a "saline Acrimony like that contained in marine and fossil Salt, "and in most saline Substances; so that it is no more to be "dreaded by any prudent Physician, but is with Confidence to "be used in the Form of a Lixivium, in many Disorders." In *Great Britain*, *Willis*, according to *Etmuller*, gave Quick Lime-water not only in Exulcerations, or an Abscess of the Parts situated within the Breast, but also for cleansing and deterging Abscesses of any Parts of the Abdomen after breaking; and in the Diabetes. The same *Willis*, for a diuretic Medicine, commends a Mixture made of

Four or six Ounces of Quick Lime-water, and one Dram, or a Dram and an half, of Tincture of Salt of Tartar; of which a Draught is to be taken twice or thrice a Day.

In Spitting of Blood, *Bennet* proposes this compound Lime-water:

Take of Comfrey, common Knot-grass, Plantain, Burnet, each one Handful: Let them wither in Quick Lime; and after they are perfectly dry, let them be infused in common Water; which may be added to them till they are of the Consistence of a thick Pulp. Let the Infusion be continued for three Days, and the Matter often stirr'd; then let them lie in a cool Cellar, and let the cleareſt Water be pour'd off by Inclination. Of this let the Patient take six Ounces for four or five Mornings successively; and tho' the Case should appear pretty desperate, the Remedy will scarcely fail of Success. *Bened. Theat. Tab. p. m.* 140.

Among the *French* Authors, *Sponius* says, That Quick Lime-water, drank with Milk or Whey, performs wonderful Effects in internal Ulcers, Diarrhœas, and the Dysentery. Dr. *Burlet*, a Physician of *Paris*, and a Member of the Royal Academy of Sciences, has given a Dissertation on the Use of Quick Lime-water, of the Passages of which most useful for a practical Physician, I shall here give an Abstract. Quick Lime-water, then, mixed with an equal Quantity of Cows Milk, sweeten'd with Sugar, drank thrice a Day, three Ounces being taken for each Dose, is of Use in the Dysentery. In other Diseases it may be mixt with Remedies appropriated to the particular Nature of the Disorder; for Example, in the Scurvy and Dropsy, with about a tenth Part of its Weight of the Tinctura Metallorum; six Ounces of which Mixture daily given for a Dose, in such Cases, fuse the Humours, and provoke Urine. Against those Cachexies to which young Women are subject, he prescribes the following Mixture:

Take of Quick Lime-water, and Tinctura Metallorum, each four Ounces; of the Powder of Aloes, one Ounce; of Filings of Steel, two Drams: Let them infuse for forty Hours. If to this Mixture three Drams of the Resin of Jalap be added, we have an excellent Purgative in the Dropsy, two Spoonfuls of which are to be given every other Day, in Broth of Flesh, or the Juice of red Cabbage.

In Quartans, and every kind of the more obstinate and intermitting Fevers, Peruvian Bark is with Success given with Quick Lime-water, and some Drops of the Tinctura Metallorum. In the Asthma and Atrophy,

Take of Quick Lime-water, eight Pints; of Sassafras-wood, Aniseed, and Liquorice-roots, each four Ounces; of Currants, and Damask-grapes, half a Pound: Let them be infused without Heat. Two Ounces and somewhat more of this Infusion may be exhibited twice a Day.

The following Observations have been made concerning the Use of Quick Lime-water. It often excites Nauseas; and palls the Appetite to such a Degree, that it is sometimes necessary to prescribe *Alicant* Wine, Wormwood-wine, or *Venice* Treacle. It sometimes induces Leanness, and dries too powerfully; sometimes it excites Heat, renders the Patient costive, causes plentiful Discharges of Urine, and often raises a Diaphoresis. Mixt with Milk, or a vulnerary Decoction, it is very often useful in the Cure both of internal and external Ulcers. It stops Hæmorrhages, Diarrheas, the Fluor Albus, and the Gonorrhea. It is of Service in Relaxations of the Viscera, and in a Diabetes. It is of Use in all inward Obstructions and Tumors, when they have not degenerated into a Scirrhus or Cancer, and in Scrophulæ not yet inveterate; mixt with Milk, it prevents its Coagulation, and is consequently proper for those whose first Passages abound with an Acid, which forbids the Use of Milk. increases the purgative Qualities of Scammony, Aloes, and Jalap. That the Use of Quick Lime-water may be successful, it should be long continued; but it is strictly to be adverted to, that it is proper only in Countries situated to the North; and that in such Disorders only as draw their Origins from an acid, an austere, a viscid, a mucous, or pituitous Cause; in Cases where a due Degree of Motion and Stimulus are wanting in the Fluids; and where fix'd muriatic Salts lodg'd in the Blood are to be corrected and disposed for an easy Evacuation: For Example; in *Holland*, where the Climate is cold, the Air somewhat thick with the Damps of the Marshes, where the Drink is Beer, the Food Cheese, Butter, and Salt-fish, the Blood is by these means render'd too crude, less fluid than it ought to be, and, consequently easily stopt in the capillary Vessels. Hence proceed Obstructions, and chronical Diseases; for which Alteratives are of singular Service; among which Quick Lime-water, in Conjunction with *Tinctura Metallorum*, a highly penetrating Medicine, is none of the least considerable, since it is exhibited with great Success. It is obvious therefore, in what Species of the Scurvy Quick Lime-water becomes a laudable Medicine, when daily drank to the Quantity of three or four Ounces. From what has been said, it is now manifest, that Quick Lime-water proves hurtful, when exhibited at the time of the necessary Evacuations, such as the Menses, Hæmorrhoids, and in Diarrheas, which it suppresses: Nor is it proper in Cases where there is a Weakness of Appetite, or Loathing of Food, where the

the Patient is either emaciated or costive, or where a preternatural Heat or Thirst prevails. It is equally prejudicial in Cases where the Fluids are inclin'd to an Alcalescence, where the Bile is too much exalted, where the Humours have assum'd a salino-putrid Quality, or are in a State of Dissolution, attended with an Acrimony. It is also hurtful in Disorders of the hot and acute Kind, and in Cases where the Fluids are already too much parched, or put into too brisk and lively Motions. Hence it must of course be highly improper in that Species of Scurvy, which is accompanied with Putrefaction, and draws its Origin from a rancid Oil, and an acrid Salt. For which Reasons, in the hotter Climates, such as *Paris*, the Use of it is generally attended with unhappy Consequences. But in Cases where it is proper, that is most safely used which is prepar'd of one Pound of Quick-lime, with eight Pints of Water pour'd upon it. In many Instances, where a gentle Stimulus is only requir'd, the secondary Water of Quick-lime is to be preferr'd. *Hamel's Hist. the Memoirs of the Royal Academy of Sciences*, 1700. *Slare Sacch. Boerh. Chym. Vol. II.* From the Premisses we may rationally conclude, that, whatever is the Effect of Quick-lime-water, it ought to be attributed to the alcaline and highly minute Molecules of the Quick-lime, incorporated with the Water; for on these depends that Virtue by which it absorbs Acids, dries, and consequently corroborates, and acts like a Styptic; but proves aperient, where an Alcali, meeting an Acid, constitutes a neutral Salt, which acts both like an Aperient and Deobstruent, by exciting a Diaphoresis, and promoting a Discharge of Urine.

As Quick-lime-water has a Tendency to destroy Acidity and Phlegm, hence the anthelminthic Remedy of the *Indians* is not to be esteem'd absurd, who drink it in the Morning three Days successively against Worms of the Intestines. *Lettr. Edif.* Whether Quick-lime-water, internally used, is a Remedy proper for dissolving the Stone, must be judg'd of from this Circumstance, that it reduces to a Mucilage Stones cut from Patients afflicted with that Disease. *Barthol. Epist. Cent.* 4. *Reiger.*

CALYPTER, καλυπτὴρ, from καλύπτω, to hide. A carnous Excrescence covering the hæmorrhoidal Vein. Περιπέφυκεν αὐτῇ (αἱμορροΐδι) καλυπτὴρ ὁ τῆς σαρκός "There grows about "it (the bleeding Vein) a Calypter, or Covering of Flesh." *Hippocr.* περὶ αἱμορροΐδων.

CALYPTRA. See the Explication of this under the Article BOTANY.

CALYX. See BOTANY.

CAMANHAYA, *Brasil.* Marcgr. A capillary Herb, which grows upon the highest Trees, so as quite to cover them; it is of a grey Colour, like a sort of Down, and is adorned at certain Distances with six, five, three, two, or perhaps but one Leaf, like that of Rosemary. It seems to be a Dodder. *Ray, Hist. Plant. Index.*

CAMARA, καμάρα, in Anatomy, is the Fornix of the Brain; and the camerated or vaulted Part of the Auricle, leading to the external Foramen. See AURIS.

CAMARA is also a Species of LYCHNIS, which see. *Ray Hist.*

CAMARA-JAPO, *Pison.* A Species of *Mentastrum*, or Horse-mint. It shoots up one round hairy reddish Stalk, to the Height of two Feet; the Leaves are lightly serrated, and greyish underneath, standing opposite by Pairs, with many lesser ones adjoining. On the upper Branches of the Stalk stand the Flowers, in the Form of an Umbella, coming forth all the Year round, almost like those of Tansey, with Stamina of a watry azure Colour, and smelling like Horse-mint, as the whole Plant also does, which is of a bitterish and aromatic Taste. The Seed is slender, long, and black, and, when ripe, is blown away out of its downy Husks. *Ray Hist. Index.*

CAMARA-MIRA, *Pisonis.* It is, says *Piso*, a Plant a Cubit high, of a slender and woody Stalk, bearing one small yellow Flower, which, what is to be wondered at, opens at all times of the Year, at Eleven o'Clock in the Forenoon, and continues expanded till Two in the Afternoon, when they all shut up together till the next Day. I made this no less true than delightful Observation, says he, in my Travels thro' the Deserts, and it partly supplied the Want of a Watch. It grows in *Brasil. Ray, Hist. Plant.*

CAMARA-TINGA. A Species of *Chamæpericlymenum*, or Dwarf Honey-suckle, growing in *Brasil.* It bears a red, and sometimes a yellow Flower, which is of an extraordinary Fragrancy, and the Herb itself smells sweeter than Mint. The Flowers are succeeded by Clusters of green Berries, of the Bigness of Elder-berries. *Ray, Hist. Plant.*

CAMARA-CUBA, *Brasilianis*, Marcgr. is an Herb with hairy rough Leaves like Nettles, and Flowers of the Size of those of the Buphthalmum, of a fine yellow Colour, consisting of nine Leaves, with a large yellow Umbilicus in the middle, whence rise little black Stamina, of a Smell between Nettle and Mint. To the Flowers succeeds oblong blackish Seed, like that of Succory; the Plant feels quite glutinous. *Ray, Hist. Plant.*

CAMARAN-BAJA. A Species of LYSIMACHIA, which see.

CAMARIN-BAS, *vel Umari*, Pison. Marcgr. *Arbor prunifera Brasiliensis, fructu Persici instar malli.* It is a Tree of a moderate Height, and bears a small yellow Flower, succeeded by an oval Fruit, of the Size of a Plum, which looks and tastes like our Peach, and is green, inclining to a pale yellow. The Pulp is little in Quantity, sweet, and yellowish, incloseing a large, oval, whitish Stone, which contains a Kernel that is good to eat; the Fruit is ripe, and falls off in *March.*

The Fruit eaten raw disturbs the Stomach, and is very subject to excite Vomiting; therefore they use to boil it whole, and, bruising it with the Kernel, eat it with Flesh or Fish instead of Bread.

It grows very plentifully in the grassy Fields, about the River *Gunhao*, and *Rio grande*; the Fruit falls off in *March*, and is gathered up.

Piso mentions another Species of this Tree, less tall, and bearing Fruit not unlike the former, but of a blackish Colour, and a sourish Taste, which tempers the immoderate Heat of the Stomach, and is very acceptable to feverish Persons. *Ray, Hist. Plant.*

CAMARIUM. The same as CAMARA, which see.

CAMAROSIS, CAMAROMA, καμάρωσις, καμάρωμα, is a Fracture of the *Cranium*, in which the broken Bone is elevated Vaultwise. *Paulus, Lib.* 6. *Cap.* 90. says, "It is "a Division of the Cranium in which the Bone is elevated, "or, according to *Galen*, a Recession of the Bone to the in- "ternal Parts, and an Excavation, as in an *Ecpiesma*." This is the Sense which *Paulus* puts upon *Galen*'s Words, which seems to contradict his own Definition. The Place he quotes is in *Galen, Lib.* 6. *M. M. Cap.* 6. "*Engisomata*, ἐγγεισώματα, "are Fractures of the Cranium, in the middle of which the "Bone presses upon the Membrane; but *Camaromata* are "Fractures of the same Part, in which the Middle is eleva- "ted; but when the sound Part first begins to separate from "that which is affected, the *Camaromata* recede inwards, and "press upon the Membrane." Thus *Galen*: By which it appears, that in a *Camaroma* the Extremities of the broken Bone tend inwards towards the Membrane, so as to press upon it; but the adjacent Parts of the Bone are elevated, and recede from the Membrane; and consequently, in this Species of Fracture, there is a double Eminence of the Bone on the Sides of the Wound. *Gorræus.*

Camarosis, in a general Acceptation, is defined by *Galen, Def. Med.* "a Division of a Bone, when, being fractured on "both Sides at once, it takes the Form of a Vault." Καμάρωσις ἐστιν ὀστοῦ διάστασις, μιᾶς τῆς τὸ ὀστοῦν ἅμα κεκλάσθαι ἐξ ἀμφοῖν, καὶ παραπλησίως καμάρᾳ ἐσχηματίσθαι.

CAMARU. A Species of SOLANUM, which see.

CAMATOS, κάματος. Labour, Fatigue, a Disease.

CAMBAR. A spagirical Term, derived, as is said, *Theat. Chymic. Vol.* 5. from *Canna*, Fire, and *Bar*, a Son. The Explication of this Word is not intelligible, at least by me.

CAMBIL. *Terra rubra. Rulandus.*

CAMBIUM. A Term in Use formerly to signify the nutritious Humour, which deriving its Origin from the Blood, is so concocted, prepar'd, and assimilated as to supply what that Part has lost, *& cum illa Naturam suam cambiat*, and changes Nature with it. *Sennertus, Tom. I.*

CAMBOGIUM, Offic. Commel. Flor. Mal. 66. *Carcapuli*, THE INDIAN YELLOW ORANGE OF MALABAR. Park. Theat. 1635. J. B. 1. 105. Chab. 5. C. B. Pin. 437. Raii Hist. 2. 1661. *Carcapuli Malabarensium*, Jonst. Dendr. 26. *Carcapuli Acostæ fructu, malo aureo simili*, Pluk. Almag. 81. *Arbor Indica, quæ Gummi guttæ fundit, fructu acido sulcato, mali magnitudine*, Commel. Flor. Mal. 66. *Coddam-Pulli seu Ota-Pulli*, Hort. Mal. 1. 41. Tab. 24. *Carcapuli*, Linscot. Ind. Orient. Part. 4. *Arbor Indica Gummi Guttam fundens, fructu dulci rotundo, Ceraso magnitudine*; *Kannawakoraka, Kapnajicoraka, Gobkathu, Ghoraka Cingh.* Herm. Mus. Zeylan. 26. GAMBOGE. See GUMMI GUTTA.

CAMBUCA, or *Gambuca membrata.* A Bubo, an Ulcer or Abscess of the Pudenda, a Boil in the Groin. *Castellus. Rulandus.*

CAMBUI, or the wild *American* Myrtle of *Piso* and *Marcgrave.* There are two Species of this Plant, which on account of their Fragrancy, and the Astringency of their Leaves, Flowers, and Fruit, well deserve the Name of the *Wild-myrtle.* The first is a shrubby Plant, with broad Leaves, and is like the black Cherry-tree, as to external Appearance, in Branches, Leaves, Flowers, and Fruit; but exceeds it as to its internal Qualities; for not only the Leaves and Flowers are of an excellent Smell, but the black Berries are very juicy, with a grateful Astringency, which makes them acceptable to all sorts of People, and sold in the Market. The latter Kind

is red, and is as much ſuperior to the other in Goodneſs, as it is exceeded by it in Size, the Fruit being highly delicious, as well as medicinal; it bloſſoms in *October*, the Flower being very white, fragrant, and tetrapetalous. The red Berries refreſh and corroborate the Stomach, and allay feveriſh Heats. The Juice or Decoction of the Leaves and Fruit uſed outwardly heal Ulcers, eſpecially in the Legs, and by their aſtringent and cleanſing Qualities are ſerviceable in other Diſeaſes. Uſed in Bathing, they are very ſucceſsful in Fluxes of the Belly or Uterus; they are alſo ſerviceable for the ſame Purpoſes as the common Myrtle. There is a third Species called the White-myrtle, but this is not ſo common as the others. *Ray, Hiſt. Plant.*

CAMELINA, CAMELINE. See ERYSIMUM.

CAMELOPARDALIS, CAMELOPARDUS, καμηλοπάρδαλις, καμηλόπαρδος, from κάμηλος, a Camel, and πάρδαλις, or πάρδος, a Leopard. A Beaſt ſo called, according to *Varro*, not becauſe it is generated between a Camel and a Leopard, but becauſe it is ſhaped like a Camel, and ſpotted like a Leopard; or, according to *Pliny*, becauſe it has a Head like a Camel, but has its Body variegated with Spots like a Leopard. *Horace* deſcribes it in the following Verſe, according to the common, tho' erroneous Notion,

Diverſum Panthera Genus confuſa Camelo.

The *Camelopardalis*, otherwiſe called *Camelopardalus*, *Ovis fera*, *Giraffa*, *Anabula*, *Nabis*, *Saffarat*, and *Nabula Æthiopica*, is a kind of Camel, but ſpotted like a Leopard. It is near as big as an ordinary Camel, and has two ſmall Horns, with a Tubercle in the middle of its Forehead, which might almoſt paſs for a third Horn. Its Neck is ſeven Feet in Length, and cover'd with Hair like that of a Horſe; its Tail is ſmall, thin, and hairy towards the End. It is cloven-hoofed like an Ox, its Tongue is two Feet in Length, round like an Eel, and of a dark Colour, inclining to a Violet. It feeds upon Graſs and Herbs, and the tender Branches of Trees, which by the Advantage of its long Neck it eaſily reaches.

It is found in *Ethiopia*, and other Parts of *Africa*, and is very gentle and tractable. The Horns and Hoofs raſped, pulverized, and taken inwardly, are good for the Epilepſy, ſtop a Looſeneſs, and reſiſt Poiſon. *Lemery des Drogues.*

CAMELUS, Offic. Aldrov. de Quad. Biſul. 880. Jonſ. de Quad. 67. *Camelus Capſinus*, Charlt. Exer. 13. *Camelus Dromos*, Geſn. de Quad. 59. *Camelus unico in dorſo gibbo*, Raii Synop. A. 143. THE CAMEL, or DROMEDARY.

It is found in *Aſia* and *Africa*. The Parts uſed in Medicine are the Blood, Gall, Dung, and Urine. The Blood helps the Dyſentery, promotes Conception, and cures the Epilepſy; the Dung is recommended in Apoplexies; the Urine is ſuppoſed to be effectual for cleanſing and whitening the Teeth. *Dale* from *Pliny*.

Authors differ much about the Camel and the Dromedary. The Gentlemen of *Paris*, our *Ray*, and others, call by the Name of *Dromedary*, an Animal which has but one Bunch on his Back; but call a Camel, one which has two Bunches on that Part. But I have been told by an ingenious Perſon, who very lately travelled into *Aſia* and *Africa*, and agrees with *Johnſon*, that the Camel is an Animal with only one Bunch on his Back, but the Dromedary has two; and that this latter was a very ſcarce Creature, and made uſe of by the Nobility only for its Swiftneſs; but the Camel was principally uſed for performing Journeys. *Dale.*

CAMERATIO. The ſame as CAMAROSIS, which ſee.

CAMET, CAMES. Silver. *Rulandus.*

CAMINUS, κάμινος. It ſignifies both the Furnace, and the Place through which the Smoke paſſes off. In *Rulandus* it ſignifies a Bell.

CAMIRI *Indis*, Cluſ. *Fructus rotundus inæqualis cineraceus ſaxeus*, C. B. *Fructus juglandis fere magnitudine duriſſimus, Indis Camiri, ſapore nucis maſchatæ*, J. B.

The Fruit weighs about an Ounce, and is not unlike a Walnut ſtript of its outer green Shell, rough, broader in the upper Part, but ending below almoſt in an obtuſe Point; the Shell is thick, and as hard as a Stone, containing a white Kernel, which taſtes much like an Almond. *Ray, Hiſt. Plant.*

CAMISIA *Fœtus*. The Shirt of the Fœtus; it is put for the *Chorion*, which ſee.

CAMMARUM, CAMMORUM, CAMARUM, κάμμαρον, κάμμορον, κάμαρον, is a Species of Shrimp of the Crab kind. Κάμμορον in *Dioſcorides*, *Lib.* 4. *Cap.* 77. is alſo a Species of Aconite, called alſo θηλυφόνον; and by *Nicander* in *Alexipharmic. Verſe* 41. πολλάκι θηλυφόνου καὶ κάμμορον. Here the Scholiaſt writes, that it is called κάμμορον, becauſe κακῷ μόρῳ ἀναίρεσι, "It kills with cruel Death." *Pliny*, *Lib.* 27. *Cap.* 3. ſays it is called *Cammaron*, becauſe it has a ſmall Root, reſembling the Sea Cammarum. Κάμμαρος, or κάμμερος, is a Species of Crab, called by *Athenæus* κάμμαρος. And κάμμαρον, in *Galen*'s Exegeſis, is an Animal reſembling a ſmall Sea-ſhrimp; and alſo Aconitum, becauſe it has a Root like that Animal; but then he adds, that neither of theſe Senſes will agree with that Word, as it is uſed by *Hippocrates*, *Lib. de locis in Homine*, where he preſcribes the Application of the *Cammorum* in burning Heats. Hence *Erotian* ſays, that not only the Animal is called κάμμαρον, but the Moſs which adheres to it goes by the ſame Name. *Zeno* takes it for *Cicuta*, *Zeuxis* for a refrigerating Medicine. Thus *Galen:* The Paſſage where the Word is found in *Hippocrates* runs thus: Τὰς δὲ πυρώσιας πόσιοισι καὶ φορήμασιν, ὥσπερ τὸν πυρετὸν ψυκτικῷ φαρμάκῳ ἐκλύειν, καμμάρῳ, ἢ ἄλλῳ τινὶ τοιούτῳ. "The burning Heats muſt be allayed by drinking or ſupping of Liquids, "as by ſome refrigerating antiſebrile Medicine, ſuch as the "*Cammarum*, or ſomething of that Kind." Here *Galen* and *Erotian* for καμμάρῳ both read καμμύρῳ. For tho' the Word in the Index of *Erotian* be καμμάρῳ yet in his reciting the above-mention'd Paſſage of *Hippocrates* he reads καμμύρῳ. He obſerves alſo, that this Word occurs but once in *Hippocrates*, and that *Zeuxis*, in the ſecond Book of his Exegetics, took it for ſome refrigerating Medicine; and that *Dioſcorides*, *Lib.* 4. of his *Materia Medica*, ſays, that Aconitum is by ſome called κάμμορον, by others θηλυφόνον [Woman-killer]; becauſe the Root applied as a Peſſary is mortal within the Space of a Day, as *Theophraſtus* and *Pliny* write; and the latter ſays, that by means hereof *Calfurnius Beſtia* killed his Wives when they were aſleep. *Erotian*, rejecting the Opinion of *Lycus*, who reads καμάρῳ in *Hippocrates* with a ſingle μ, and takes it to be meant of a Place in the Bath where Inunction was perform'd, ſo called, becauſe it was vaulted, thinks we are to underſtand it, as *Zeno* and *Zeuxis* did, of ſome refrigerating Medicine, as *Cicuta*, which, apply'd by way of Cataplaſm, is an extraordinary Refrigerant. *Galen* ſeems to be of the ſame Opinion. *Erotian* further tells us, that *Diodorus* the Grammarian, and *Zeno* a Follower of *Herophilus*, aſſure us, that *Cicuta* was by the *Dorians* inhabiting *Italy* called κάμορον, κάμμορον, and κάμαρον, ὡς καυσώδη τι ὄν, "as producing "fatal and deadly Effects."

CAMNO, κάμνω, to labour, in *Hippocrates* ſignifies to labour under any Diſorder, to be ſick.

CAMOMILLA. A corrupt Word for *Chamæmelum*, Chamomile.

CAMOTES. See BATTATAS HISPANICA.

CAMPANA, a Bell, in Chymiſtry, is a Receptacle for the Gas of Sulphur, where it is concentrated and collected together into a thin aqueous Matter, in order for the Preparation of the acid Spirit of Sulphur. *Caſtellus.*

CAMPANIFORM *Flowers*, [of *Campana*, a Bell, and *Forma*, Shape] ſuch Flowers as in Shape reſemble a Bell.

CAMPANULA. Bell-flower.

The Characters of the *Campanula* are,

The Summit of the Pedicle is expanded into an Ovary, whoſe Apex is crown'd with a monophyllous quinquifid Calyx, divided into five long Segments. The Flower conſiſts of one Leaf, is ſhap'd like a Bell, and is, before blown, of a pentagonal Figure, and, when fully open'd, is cut into five Segments at the Top. The Seed-veſſel is, for the moſt part, divided into three Cells, each having a Hole at the Bottom, by which the Seed is emitted. *Boerhaave* enumerates thirty-four different Species of this Plant; but I find no medicinal Virtues attributed to any but the following.

CAMPANULA ESCULENTA, *Rapunculus*, Offic. *Campanula radice eſculenta, flore cæruleo*, Herm. Cat. Hort. Lugd. Bat. 107. Boerh. Ind. A. 248. Tourn. Inſt. 111. Elem. Bot. 90. Dillen. 107. Rupp. Flor. Jen. 24. Buxb. 52. *Rapunculus*, Chab. 260. *Rapunculus eſculentus*, C. B. Pin. 94. Raii Hiſt. 1. 739. Synop. 3. 277. Hiſt. Oxon. 2. 455. *Rapunculus eſculentus vulgaris*, GARDEN RAMPIONS. Park. Theat. 647. *Rapunculus vulgaris campanulatus*, J. B. 2. 795. *Rapuntium parvum*, SMALL RAMPION. Ger. Emac. 453. Ger. 369. Mer. Pin. 104. Merc. Bot. 1. 64. Phyt. Brit. 105. RAMPIONS.

The Seed is recommended for Defluxions of the Eyes, and the Juice for Pains in the Ears. The Root is eſteem'd an agreeable Ingredient in Spring Sallads, and is ſaid to excite an Appetite; it is ſometimes eaten boil'd. If taken with long Pepper, it has the Reputation of increaſing Milk.

Trachelium, *Cervicaria*, Offic. *Trachelium majus*, Ger. 369. Emac. 448. Raii Hiſt. 1. 732. Mer. Pin. 119. *Trachelium majus, flore purpureo*, Park. Parad. 354. *Trachelium majus, ſive Cervicaria*, Merc. Bot. 1. 73. Phyt. Brit. 122. *Campanula, Cervicaria*. Chab. 263. *Campanula vulgatior, foliis Urticæ, major & aſperior*, C. B. Pin. 94. Hiſt. Oxon. 459. Boerh. Ind. A. 249. Tourn. Inſt. 109. Elem. Bot. 90. Raii Synop. 3. 276. Dill. Cat. Giſſ. 126. Rupp. Flor. Jen. 23. *Campanula major & aſperior, folio Urticæ*, J. B. 2. 805. Buxb. 52. THROATWORT.

The whole Plant, but eſpecially the Root, is of a drying and aſtringent Quality; for which Reaſon a Decoction of it is of good Uſe in the Beginning of an Inflammation, or Ex-

ulceration

ulceration of the Mouth and Tonſils, and in other Diſorders which require Aſtriction. It is alſo, no doubt, ſerviceable in the Cure of all other Ulcers, on account of its remarkably drying Virtue. The Root is of a white and tender Subſtance, and proper to be eaten in a Sallad for Breakfaſt, in the Spring. *Raii Hiſt. Plant.*

MEDIUM, Offic. *Medium Dioſcoridis*, Rauw. 284. *Medium Dioſcoridis Rauwolfio*, J. B. 2. 805. Chab. 26. *Viola Mariana peregrina*, Park. Theat. 646. *Viola Mariana laciniatis foliis, peregrina*, C. B. Pin. 94. *Campanula foliis profunde inciſis, fructu duro*, Tourn. Corol. 3. SYRIAN BELL-FLOWER.

It grows in *Syria* and *Greece*; the Root and Seed are in Uſe; the Root ſtops the Menſes, but the Seed provokes them.

Dale is of Opinion, with *Rauwolfius*, that the above Plant is to be taken for the *Medium* of *Dioſcorides*, rather than the *Viola Mariana*, which *Matthiolus* takes for it, becauſe it beſt agrees with that ſhort Deſcription which *Dioſcorides* has left us of the *Medium*. "The *Medium*, ſays he, grows in ſtony "and ſhady Places; has Leaves like the Iris, a Stalk three "Cubits in Height, which bears a large purple round "Flower. It has a ſmall Seed like the Cnicus, and a Root "three Quarters of a Foot in Length, of the Thickneſs of a "Walking-ſtick, and of a rough Taſte."

Campanula arvenſis erecta, H. L. Bat. *Onobrychis arvenſis vel Campanula arvenſis erecta*, C. B. Pin. 215. *Pentagonion, viola Pentagonia*, Tabern. Icon. 316. *Viola arvenſis ejuſdem*, 304.

The Root of this Plant is uſually eaten as a Sallad in the Spring.

CAMPE, *καμπὴ*, from *κάμπτω*, to bend. A Flexure, or Bending. The Word is uſed by *Galen, de Uſu Partium, Lib.* 11. *Cap.* 11. where, ſpeaking of the admirably contrived Perforations from the Noſtrils into the Palate, he obſerves, that they are diſpoſed in ſuch a manner, as that the Beginning of Reſpiration might not lie in a direct Line with the Aſpera Arteria, but that there might be *καμπὴ*, a Deflexion, or Bending, with a ſort of Turning or Winding, before the Air arrives at the Artery; which, he ſays, is attended with two Conveniencies; one, that of preventing the Lungs from being refrigerated by an immoderately cold Air; and the other, the intercepting Particles of Duſt, Aſhes, or any thing of that Kind, in their Paſſage to the Artery.

Καμπὴ is alſo uſed for *ἰγνὺς*, the Ham, becauſe it is the Part uſually bended; alſo for a Joint, and for an Articulation, or Flexure of the Fingers.

CAMPHORA.

The Camphire is a kind of Plant, which belongs to the Claſs of dicotyledonous monopetalous Trees, whoſe Ovary is concealed in the Flower, and its Fruit ſoft, and full of callous Seeds. The Leaves are like thoſe of the Pear-tree, fibrous, and ſtand alternately upon the Branches; the Flower conſiſts of one Leaf, which is divided into five or ſix Segments; the Fruit is like a Nut, lodged in a concave Calyx, has a brittle Shell, and a bifid Kernel. *Boerhaave Index alter Plant. quæ in Horto Lugd. Bat. aluntur.*

The Root of the Camphire-tree has but few, and thoſe ſtrong, Diviſions, which ſmell ſtronger of the Camphire than the other Parts, and yield more of it in the Boiling. The Bark is ſomewhat rugged, of a ruſſet Colour; ſmooth on the younger Branches, of a greeniſh Colour, ſhining, quite ſmooth and mucous on the inner Superficies, and therefore eaſily ſeparated. The Tree contains a large, fungous, and ligneous Medulla, or Pith; the Wood is white, but when dry reddiſh, with Variegations, of a pretty lax Subſtance, compoſed of ſomewhat thick Fibres, and is ſometimes uſed for making of Cabinets, but grows rough with Age, when the volatile Reſin forſakes its Pores. The Leaves, which ſtand ſingle and diſorderly upon ſlender carinated Pedicles, an Inch and half in Length, and ſometimes of a reddiſh-green Colour, are membranaceous, three Inches or more in Length, from a ſhort acute Beginning dilating into an Oval, and ending in an oblong narrow Mucro, or Point, undulated round the Margin, and often edged with a thin paliſh Stripe; the upper Face of a deep and ſhining Green, but the under herbaceous, and, as it were, Velvet-like; the main Rib in the Middle being prominent on both Sides, and of a whitiſh Green; a few lateral Fibres thence extending themſelves in manner of an Arch to the Circumference, between which run many leſſer ones for the better ſtrengthening of the Leaf; at the Extremities of the Fibres are often obſerved ſmall Tubercles. The Flowers come forth at the Tops of the ſmall Branches, when the Tree is of a good Age and Bigneſs, in *May* and *June*, from the Alæ of the Leaves, ſtanding on ſlender Pedicles, which are two Inches in Length, cluſter'd, and divided into other very ſhort Pedicles, each of them furniſhed with a very ſmall Perianthium. The Flowers are white, hexapetalous, radiated within the Compaſs of a Coriander-ſeed, with oval Petals, and nine Chives with their Apices, diſpoſed in ſuch a manner, that three of them preſs upon the Style, and are ſurrounded by the reſt in a Circle, which are each of them ſeparated by ſmall yellow carnous ſoft Tubercles, looſely growing to the Umbilicus. The Flower, as the Calyx grows to it, is ſucceeded by a Berry, which, when ripe, is of a black Purple, and ſhining, of the Size of a large Pea, in a manner turbinated, with a ſoft purpliſh Pericarpium, and taſting like Camphire mixed with Cloves. The Kernel within is of the Size of a Pepper-corn, cover'd with a black ſhining Rind, bifid, oleous, and inſipid; and grows in the Weſtern Parts of *Japan*, and the adjacent Iſlands, to the Largeneſs of the Linden-tree. *Kæmpf. Amœnitates exoticæ. Breyn. Cent.* 1.

The *Camphora Officinarum*, or *καφορὰ*, is not mentioned by the antient *Greeks*, and was firſt introduced into the *Materia Medica* by the *Arabians*. It is a Subſtance of a ſingular Nature, dry, friable, powder'd with Difficulty, light, white, pellucid, reſembling the Cryſtals of Salts, of an acrid and ſomewhat bitteriſh Taſte, and of a penetrating Smell, highly diſagreeable to ſome. It flames in an open Fire, and, when kindled, burns till it is totally conſumed. It alſo burns in Water, and ſends up a thick dark-coloured Smoak, which produces a blackiſh Soot. When put into a pure Glaſs Veſſel, with an Alembic fitted to it, it melts by the Force of the Fire, aſcends in the Alembic, and concretes again in the Form of Camphire, not in the leaſt changed. This Phænomenon may be obſerved by thoſe who try the Experiment frequently. In a moderately warm Air it gradually waſtes, and flies off, unleſs it be kept in cloſe Glaſs Veſſels, by which means it may be preſerved for ſome Years. In all pure Oils, and inflammable Spirits, it perfectly diſſolves; as it does alſo in *Alcohol* of Wine, being mixed with it in nearly equal Quantities, in which Caſe it looks very clear and pellucid, and is extremely odoriferous; and, being diſtil'd, comes over almoſt intirely, with the Alcohol, or ſoon after it, in an homogeneous Liquor. The Camphire does not evaporate after a Solution, before its Menſtruum is exhaled, and therefore may be well preſerved in theſe Liquors. Alcohol, in which Camphire has been diſſolved, being kindled, the Camphire is not kindled nor conſumed, before all the Alcohol, whoſe inflammable Elements are of a more ſubtile Nature, is entirely burnt and waſted; after which the Camphire, which is collected at the Bottom of the Veſſel, begins to burn, yielding a more ſtrong, white, bright, and vibrating Flame than the Alcohol, together with a black Smoak of the Taſte and Smell of Camphire, and leaving no Fœces at the Bottom of the Veſſel. Concentrated Oil of Vitriol diſſolves Camphire into a thick Liquor, of a reddiſh-yellow Colour, and void of Smell. Camphire is diſſolved alſo in Aqua-regia, and Spirit of Salt; and, being put into fuming Spirit of Nitre, is diſſolved without Noiſe, or any remarkable internal Agitation or Incaleſcence, and even without any Vapour. It is diſſolved alſo in Aqua-fortis, the Acid of the Spirit of Nitre receiving no Alteration thereby; for this Solution, which is like Oil, is ſtill fit to diſſolve Silver or Mercury. When Camphire has been diſſolved in Oil of Cinnamon, this Oil, which before would make an Effervеſcence, attended with Flame, if mix'd with fuming Spirit of Nitre, now loſes this Property. Camphire, diſſolved in a Fluid, is revived, and floats on the Surface of the Menſtruum, by an Addition of Water, or of an alcaline Salt. Camphire is not diſſolved in aqueous and alcaline Menſtruums; nor in the mild and gentle Acids of Vegetables, ſuch as Vinegar. Many celebrated Chymiſts have taken Camphire for a ſolid volatile oleous Salt, form'd like the *Offa Helmontiana*, of a ſaline and an oleous Principle; but this Sentiment is contradicted by other Authors. I think we may, with *Boerhaave*, affirm it to be a highly perfect, moſt ſimple, and volatile Reſin; or an Oil of a ſolid Form and Conſiſtence. But it is a kind of heteroclite Reſin; for there is no other Reſin known, which can be entirely ſublimed dry, without leaving any Fœces, and without undergoing a Change as to its Parts, or which, being kindled, burns away entirely, without leaving any Earth or Aſhes. *Hoffman* ſeems to favour this Opinion, when he affirms, that Camphire is, as it were, a diſtil'd Oil in a dry Form, or a moſt ſubtile volatile Oil, which ſeems to have in its Compoſition a certain ſubtile Acid, to which its ſolid Form is owing, and of which it may be deprived, if it is mix'd with Salt of Tartar, and ſubjected to Diſtillation with highly rectified Spirit of Wine; for in this Caſe a Spirit is yielded, whoſe Taſte and Smell diſcover it to be ſufficiently ſaturated with the Corpuſcles of the Camphire, and which, when pour'd into Water, does not become milky; nor is any of the Camphire precipitated, as happens with camphorated Spirit of Wine. What remains after the Drawing off the Spirit, is a pretty well ſaturated Solution of Camphire, but of a browniſh Colour, and in Taſte highly reſembling Camphire. But when it is dropp'd into Water, it does not run into a thick Coagulum, like camphorated Spirit of Wine, but may commodiouſly and eaſily be mixed with the Water; for the Salt of Tartar, entering into the moſt intimate Texture and Compoſition of this Subſtance, diſſolving the oleous and thick Parts, and inducing a Change on the more ſubtile Acids, occaſions a Reſolution of this Subſtance into highly ſubtile Parts, not afterwards to be coagulated; and the Change of its Colour from White to Brown is owing to the Sulphur or phlogiſtic

phlogiſtic Principle being diſentangled, and ſet at Liberty, by the Alcali, *Hoffm. Obſ. Phyſ.* We are confirm'd in the Truth of Camphire's being a pure inflammable Oil in a ſolid Form, by this Circumſtance, that in very hot Climates, and even ſometimes in *Europe*, aromatic Subſtances are often heated to ſuch a Degree, that their Oils are converted into Camphire, as happens in the Diſtillation of the Oil of Aniſe, Cardamoms, Caraway, Fennel, Laurel, Zedoary, Cinnamon, Southernwood, and Thyme. The ſame Phænomenon is ſometimes obſerved to happen, when theſe Oils, dropping thro' a long narrow or cold Worm, form themſelves into a ſolid kind of Maſs, which blocks up the Cavity of the Worm, but may be again diſſolved by Heat, *Boerh. Chym. Vol.* 2. But becauſe theſe camphorated Subſtances want either the Hardneſs, the Smell, or the other Properties of the common Camphire of the Shops, we ſhall only here treat of that Camphire which is produced by the *Arbor Camphorifera*, and which is called the *Camphora Japonenſis*, or *Camphora Sinenſis*. This Subſtance is extracted from the Root of the Tree, in the following manner:

They cut the Root into ſmall Pieces, which they put into large Pans over a moderate ſlow Fire: They pour a ſmall Quantity of Water on the Root, and adapt a Head to each Pan, wove of Twigs, like a Bee-hive. The external Surface of this Head is ſmooth like a Mat, but its internal Surface is ſomewhat rougher, by reaſon of the ſmall Twigs of which it is made. By this means the Camphire is carried up or ſublimed, adheres to the Filaments, and, when cold, aſſumes a whitiſh Colour, and is taken off. *Boccone, Obſ. Nat.*

Seba gives us the following Method of obtaining it: The Inhabitants of *Japan*, ſays he, form elegant ſmall Cakes of the Roots of theſe Trees.

What remains of the Root or Wood, together with the ſmall Twigs, they cut down into Pieces about an Inch long. Theſe are put into an Iron or Braſs Kettle, full of Water, and boiled for forty-eight Hours. Upon theſe Kettles they fix Covers, which, like Alembics with riſing hollow Necks, receive the Camphire raiſed with the Vapours; and, when it is cold, it is taken out, and kept for Uſe.

The Furnaces in which theſe large and broad Kettles are lodged, ought to be built of hard Stone, to have a Vent for the Smoak at the Top, and, below, a Cavity for the Reception of Wood or Fire. The Camphire, thus prepared by Sublimation, is made up into large ſmooth orbicular Cakes, and tranſported into *Europe*. This is called the *Camphora rudis*, which, when more refined by a ſubſequent Sublimation, is called *Camphora elaborata*, or refined Camphire. This Kind, depurated and reduced to an orbicular Form by the *Dutch*, is what is commonly uſed in the Shops. This crude Camphire is depurated in two Manners, either by Water, or by highly rectified Spirit of Wine. The Method of doing it by Water, is,

To put the crude Camphire into a Still, pour Water upon it, adapt a Head to it, and a Receiver. In Diſtilling, the Camphire adheres to the upper Part, whilſt the Impurities remain at the Bottom.

By highly rectified Spirit of Wine it is thus depurated:

The Spirit of Wine, pour'd upon the crude Camphire, diſſolves it entirely, and leaves the Impurities in the Bottom; and this Spirit, impregnated with the Camphire, is to be diſtil'd from a Glaſs Cucurbit. The Camphire left in the Bottom is to be raiſed by increaſing the Degrees of the Fire, and ſo gather'd.

The ſame highly rectified Spirit of Wine ſerves very well again for the ſame Proceſs.

When the Camphire is thus depurated, it is reduced by Colliquation in a Sand-heat, in ſmall Phials cloſe ſtopp'd with Clay, and covered with the Sand, into orbicular Cakes, like thoſe ſold in the Shops; for when a due Degree of Fire is applied to it, it flows like Wax, and, when cold, coagulates firmly in the Bottom, and aſſumes the Shape convey'd to it by the inferior Part of the Glaſs: Then, having warm'd the Glaſs a little, the Cake of Camphire may be ſeparated.

If Camphire, when put upon hot Bread, becomes moiſt, it is a Sign of its being good and genuine; but if it becomes dry, it is a Proof of its being bad and ſpurious. When it is mark'd with reddiſh or blackiſh Spots, theſe are ſaid to be produced by handling it with impure Hands, or to be the Effects of Moiſture; but this is eaſily prevented by gathering it in a Linen Cloth, and immerſing it in warm Water, with an Addition of Soap and Lemon-juice. Thus, when it is well waſh'd, let it be dried in a ſhady Place, by which means it becomes white.

Formerly it was the Cuſtom, in order to prevent the Exhalation and Diminution of Camphire, to keep it in Lint-ſeed, the Seeds of Flea-wort, or ſome others of a like Nature, which, by their large Quantity of Oil, might, as it were, entangle the volatile Parts of the Camphire, and prevent their flying off. Others think, that the ſame Effect is produced by Pepper; but what has induced them to entertain this Notion, is ſomewhat hard to determine. The beſt Method of preſerving Camphire is to anoint its Surface with freſh expreſs'd Oil of ſweet Almonds; for its Pores being by this means block'd up, its ſubtile and more volatile Parts will not ſo readily fly off, as they would otherwiſe do. But there is no great Neceſſity for Methods of this Kind, ſince it may be well enough kept in a Glaſs Veſſel cloſely ſtopp'd, in order to prevent the Action of the open Air upon it. *Act. Hafn. Vol.* 1. *Obſ.* 53.

Some Authors alſo make mention of a Species of Camphire called *Camphora Borneana*, which conſiſts of ſmall Pieces or Grains, and which *Salmaſius* called crude, natural, or ſimple Camphire, calling that artificial which was whiten'd by the Force of Fire, and made up into Cakes, like that of *Japan*. They alſo affirm, that, in the Iſland of *Borneo*, they gather it in two different Manners from the *Arbor Camphorifera*, which is there ſmaller than in *Japan*; for it either ſweats ſpontaneouſly from the Tree in Grains, or they take it from the Wood itſelf, eſpecially towards the Bark, in its proper and natural cryſtalline Appearance, as *Boerhaave*, in his *Chym. Vol.* 2. expreſſes himſelf. When they know, that a Tree abounds, and is, as it were, turgid with Camphire, they cut it down into ſmall Portions, which they cleave, and expoſe to the Sun, in order to be dried. When they are ſufficiently dried, they break them into ſmall Pieces, and, taking out the Camphire, paſs it thro' a Sieve, in order to purge it from its Sordes. If they find pretty large Pieces of the Camphire, they rub their Eyes gently with them. This *Bornean* Camphire is ſaid to differ very much from that of *Japan*, which is extracted by the Fire; for the former is more clear and tranſparent than the latter, nor does it evaporate and fly off like that of *Japan*. One Pound of the *Bornean* Camphire is ſold for an hundred times as much as an equal Quantity of the other; and, among the *Japaneſe*, *Bornean* Camphire is more eſteem'd than the Root *Genſing*; for they aſcribe the ſame Virtues to Camphire as to this precious Plant, and uſe it in all their Decoctions, *Boccone* and *Valent. Muſ.* But *Newman*, doubting whether Camphire can be obtain'd in any other Manner than by Diſtillation, ſuſpects the Truth of this Tradition about the Camphire of *Borneo*, and concludes, that this Species of Camphire is ſo rare, that no one hitherto has, nor perhaps ever will have, an Opportunity of ſeeing it. What we, therefore, know concerning the Virtues of Camphire, is to be underſtood of the common Camphire of the Shops, or the *Japan* Camphire.

Camphire, then, is applied to various Uſes; for it is employ'd in artificial Fires, not only becauſe it burns in Water, when kindled, but becauſe it ſends up a white and odorous Flame. It alſo ſerves for making a liquid Phoſphorus, if, to one Grain of *Engliſh* Phoſphorus, made of Urine, we add ten Grains of Camphire: After theſe are ſeparately well triturated in a Mortar, they are to be mix'd; by which means the entire Camphire becomes highly lucid, and, when diſſolved in Oil of Cloves, makes a liquid Phoſphorus, with which the Fleſh, the Skin, the Hairs, and Cloaths, may be anointed, without any Hurt or Fear of Inflammation. Camphire is alſo uſed by Painters in the Compoſition of their Varniſhes, which, when camphorated, defend the Pieces on which they are laid from Inſects. Furriers put Camphire between their Skins, in order to prevent their being ſpoiled by Moths. The *Indians* mix Camphire with acrid and aromatic Subſtances, of which they form Troches for promoting a Diſcharge of the Saliva, when chew'd. Becauſe Camphire was, in former Ages, thought to be poſſeſs'd of cold Qualities, it is ſaid to have been given to be chew'd, and ſmell'd to, by the Monks, in order to extinguiſh Inclinations to Venery. But the Falſity of this Opinion is now ſufficiently known, *Scalig. Exerc. Tachen. Hipp. Brown's Vulgar Errors.* For as Camphire conſiſts of highly volatile Parts, it is found to poſſeſs Virtues highly penetrating, diſcutient, reſolvent, ſtimulating, corroborating, alexipharmac, and proper for reſiſting Putrefaction; but it does not act in a ſtrong and draſtic manner, becauſe it does not remain long in the Parts into which it has penetrated, but is ſoon after exhaled. One Inſtance is ſufficient for proving the Truth of this Hypotheſis, and *Tralles* furniſhes us with a very memorable one in the Hiſtories of the *Breſlau* Diſeaſes, where we have an Account of "a Girl who "not only had her Skin deformed with ſcorbutic Blotches, but "had alſo a large red Tumor on her Hand, whoſe Roots ex"tended themſelves to her Arm. She had the Bezoartic Pow"der of *Wedelius* exhibited in a diaphoretic Portion, with "Nitre, and a little Camphire, as alſo Oil of ſweet Almonds, "with Camphire; upon which theſe terrible Symptoms abated "very conſiderably; her Inflammation, which tended to a "Gangrene, was diſcuſs'd; and, what is principally remarka"ble, the Sweat, excited by the Uſe of the camphorated Medi"cines,

" cines, ſmell'd ſtrong of the Camphire, from which Circum-
" ſtance we may eaſily infer its penetrating Virtue." As for its alexipharmac Quality, when uſed internally, againſt the Wounds of Serpents, ſee *Eph. N. C. D.* 2. *a.* 7. The Notion of its being poſſeſſed of a cold Quality may have poſſibly been owing to the Obſervation of its cooling Effects in Inflammations of the Eyes and Burns; for it is not only of ſingular Service in removing external Inflammations, but alſo ſuch as are internal, and which threaten a Sphacelus and Death, if they are ſevere, and eſpecially if they are ſeated in the membranous Parts. For anſwering theſe Intentions it is moſt happily exhibited with Nitre. For this Reaſon, in continued Fevers, which generally have ſomething of an inflammatory Nature in them, as alſo in other Kinds of Inflammations, in Pleuriſies, Phrenſies, Quinſeys, and Inflammations of the Uterus, the celebrated *Hoffman* made great and ſucceſsful Uſe of Camphire, with an Addition of Bezoardic Powders. Immediately after the Exhibition of this Medicine, the burning Heat, the Delirium, the Thirſt, and the Watchings, were greatly abated. *Stahl*, ſomewhere in his Works, calls Camphire the Subduer of all Inflammations. The learned *Werlhofius*, in acute Fevers, Phrenſies, and Deliriums, found very happy Effects ariſing from three or four Grains of Camphire, taken every two Hours, in nitrous Emulſions. *Com. Lit. A.* 1734. The learned *Tralles* has, in a Treatiſe wrote on Purpoſe, excellently demonſtrated the refrigerating and antiphlogiſtic Qualities of Camphire; and how efficacious it is, in Conjunction with Nitre, in a Pleuriſy, he informs us, in his Work *De Remediis Terreis*, in the following Words: " I have with Pleaſure and Surprize obſerved the happy
" Effects of this Medicine in Pleuriſies; and I am, from re-
" peated Proofs of its Succeſs, ſo convinc'd of its Efficacy, that
" after opening a Vein once, twice, or thrice, applying To-
" pics to the Side affected, ordering the Patient to take fre-
" quent Draughts of tepid Infuſions ſweetened with Honey,
" and injecting antiphlogiſtic Clyſters, I ſcarce uſe any other
" Medicine than twelve or fifteen Grains of Nitre reduc'd to
" Powder, with one, two, or three Grains of Camphire, and
" an Emulſion of Oil of ſweet Almonds, to be taken after
" each Doſe; and I am ſufficiently certain, that if theſe do
" not cure the Diſeaſe, it may be pronounced incurable."
According to *Capuccius*, an *Italian* Phyſician, the Virtues of Camphire are very great, both in curing and preventing petechial Fevers; and for this Purpoſe one or two Grains of it may be either chew'd and ſwallowed by itſelf three or four times a Week, unleſs the State of the Patient renders a more frequent Uſe of it neceſſary; or it may be made up with other Subſtances in the following manner:

Take of the Powders of Cretan Dittany, and yellow Sanders, each half a Scruple; of Camphire, two Grains; of Conſerve of Roſes, or of Borage, or ſome other Conſerve of a like Nature, as much as is ſufficient for making into a Bolus. Or,

Take of the Powder of Zedoary-root, one Scruple; five Lemon-ſeeds; and one Grain of Camphire: Mix them together, and let them be taken in any manner. *Portius de Militis in Caſtris Sanitate tuenda.*

Craanen, a celebrated *Dutch* Phyſician, in a Phrenſy and Madneſs, recommends the following Powder:

Take of Sal Prunellæ, fifteen Grains; of Camphire, four or five Grains; of Laudanum Opiatum, half a Grain: Mix up into a Powder.

In a Pleuriſy and Peripneumony he alſo highly extols Camphire, with Spirit of Nitre, or Nitre itſelf, and the Water of red Poppies. In Inflammations of the Kidneys he recommends twelve Grains of Sal Prunellæ, mixed up with four Grains of Camphire. For allaying Thirſt in continued Fevers, he orders three Grains of Camphire to be added to proper Powders; which Medicine, with the *Bezoardicum Minerale*, he alſo commends in peſtilential Fevers. In the *Philoſophical Tranſactions* we have ſome Inſtances of Maniacs cur'd by half a Dram of Camphire exhibited in Form of a Bolus, Morning and Evening. *Sethi*, from *Rhaſes*, informs us, that Camphire cures the moſt acute Diſorders, Pains of the Head ariſing from Heat, and Inflammations, eſpecially thoſe of the Liver.

Tachenius informs us, that *Avicenna* was the firſt of the practical Phyſicians who obſerved the Virtues of Camphire in acute Diſorders, and call'd it the *Theriaca contra Venena Calida*, or the Theriaca againſt hot Poiſons.

Du Verney thinks Camphire exhibited in cordial Potions an excellent Remedy againſt the Head-ach in malignant Fevers; and tells us, that he himſelf frequently preſcrib'd it for that Intention. *Du Hamel. Hiſt.*

Mindererus, in his Work *De Peſte*, ranks Camphire among the ſtrongeſt Antidotes againſt the Plague; and affirms, that 'tis more efficacious than any of the Bezoardic Preparations, as it prevents Putrefaction, and expels the poiſonous Effluvia. He makes mention of a celebrated Powder aſcrib'd to *Heſſius*, which is ſucceſsfully uſed by many, and has acquir'd a great Reputation in the Hoſpitals. The Method of preparing this Powder is as follows:

Take of Sugar-candy, three Drams; of white Ginger, two Drams; and of Camphire, one Dram: Make up into a Powder.

The Doſe of this Powder is one Dram, to be taken in ſome proper Liquor, ſuch as Marigold-water, or the Waters of Scabious, or Nuts; or if 'tis wanted ſomewhat ſtronger, the compound Water of Burdock may be uſed. But it is moſt commodiouſly exhibited in a Decoction of Tanſy, prepared with equal Parts of Sorrel or Dandelion Water, and Vinegar: But I would ſubſtitute Zedoary or Burnet in the room of the Ginger. Theſe are the Words of *Mindererus*. *Follinus* calls this Compoſition *Pulvis Pauperum*, or the Powder of the Poor, becauſe it may be prepared at a ſmall Expence, but poſſeſs uncommon Virtues. But the laſt-mentioned Author, inſtead of the Sugar-candy, uſes Sugar of Roſes, in the ſame Proportion. He alſo directs the Powder to be mixed with Wine, and ſuffer'd to ferment for a conſiderable time; he preſcribes, with *Mindererus*, one Dram in Roſe or Sorrel Water; but for Prevention, only half a Dram. *Riverius* thinks this Powder of *Mindererus* too hot, on account of the Ginger; for which Reaſon he compoſed the following, in Imitation of it; and aſſerts, that he uſed it with Succeſs in peſtilential Fevers.

Take of the Bezoardicum Minerale, three Drams; of Sal Prunellæ, two Drams; and of Camphire, half a Dram: Mix them together.

The Doſe is one Dram, to be exhibited with Water of Carduus Benedictus, or ſome other proper Liquor.

During the Plague which rag'd in the Year 1623. *Hartman* uſed the following antipeſtilential Water with great Succeſs.

Take of the beſt Spirit of Wine, one Pint; of Camphire, one Ounce; of oriental Saffron, one Scruple: When theſe are diſſolv'd in the Spirit of Wine, it aſſumes a Colour like that of Gold; and two or three Spoonfuls of it may be given for a Doſe.

Hoffman, in all putrid Diſorders, and in the Plague at its Acceſſion, and about its Criſis, recommends Camphire to be given in an acid Vehicle: For Inſtance,

Take of the Waters of Sorrel and Carduus Benedictus, each an Ounce; of the Bezoardicum Minerale, half a Dram; of Camphire, ſix Grains; of the Syrup of Lemon-juice, one Ounce: Mix all together for one Doſe.

After the ſame Author has given the Preference to Camphire above all other Medicines, againſt that viſcid Putrefaction and Malignity conveyed by impure Coition to the Lymph and vital Juices, and afterwards to the ſolid Parts and Bones, he goes on thus: " This I can from Experience affirm, that in a Go-
" norrhœa, or beginning Lues, no Medicine affords a more
" preſent Relief than Camphire; for this Reaſon 'tis properly
" added to thoſe balſamic Eſſences and Elixirs againſt a Gonor-
" rhœa, which are prepared of Opobalſam, Balſam of Capivi,
" Balſam of Tolu, Reſin of Aloes-wood, and Gum Guaiacum,
" with tartaris'd Spirit of Wine; for the Camphire wonder-
" fully heightens the Virtues of theſe Ingredients, and is of
" ſingular Efficacy in ſtrengthening the Tone of the Glands,
" and carrying off dangerous Stagnations."

In dangerous and terrible Hæmorrhages, eſpecially ſuch as accompany malignant Fevers, as alſo in Spittings of Blood ariſing from internal Cauſes, ſuch as Spaſms of the Viſcera, Camphire is of ſingular Service. Upon this Account the Pulvis Raygeri has acquired a great Reputation. It is compoſed of

Choice Myrrh and Frankincenſe, each an Ounce; of Saffron, fifteen Grains; and of Camphire, one Dram and an half.

This Powder is to be ſprinkled twenty or thirty times with Frog's-ſpawn Water; but it is to dry ſpontaneouſly after each ſprinkling. The Doſe is one Scruple.

In Vomitings of Blood *Riverius*, after Veneſection, orders half a Scruple of Camphire to be exhibited in four Ounces of Oxycrate, or Plantain-water. *Joubert* affirms of his Maſter *Rondeletius*, that in all Vomitings of Blood, eſpecially thoſe proceeding from acrid Defluxions, he ſucceſsfully uſed Camphire, and ſometimes gave a whole Scruple of it diluted in a Glaſs of Spring-water, with a little Vinegar.

Heurnius, in his Notes to *Hippocrates*, *Aphor.* 50. *Sect.* 5. in immoderate Diſcharges of the Menſes, recommends the following Powder:

Take of the Seeds of white Henbane, and of white Poppy, each one Dram; of Blood-ſtone, and red Coral, each half a Dram; and of Camphire, half a Scruple: Let the Patient take half a Dram of this Powder, Morning and Evening.

The celebrated *Craanen*, in Hæmorrhages of the Noſe, highly recommends the following Powder:

Take of Sal Prunellæ, one Scruple; of Camphire, between three and five Grains; of Laudanum Opiatum, one Grain. Or,

Take of *Armenian* Bole, and Terra Sigillata, each fifeeen Grains; and of Camphire, four Grains.

But Camphire, when mixed with Nitre, is of the greateſt Efficacy in all Hæmorrhages. Beſides, nothing is found more uſeful in promoting the accuſtomed Evacuations of Blood than Camphire, eſpecially when exhibited in Conjunction with balſamic and antiſpaſmodic Specifics.

Take, for Inſtance, of the freſh Eſſences of Myrrh and Amber, each half a Dram; of the Eſſences of Saffron and Caſtor, each two Drams; and of Camphire, half a Dram: Mix all together.

This Medicine frequently uſed about the time of Menſtruation is greatly extol'd by *Hoffman*, provided Veneſection and Purging are premiſed. In *Commer. Lit.* for the Year 1734. we are inform'd, that Camphire is of ſingular Service in a Suppreſſion of the Lochia. Camphire is alſo of Service in cold Fevers, if exhibited before the Paroxyſm, againſt the Flatuſes of hypochondriacal and hyſterical Patients, and in Caſes where the Tone of the Stomach and Inteſtines is deſtroy'd.

Take, for Example, of the Tincture of Tartar, of the Eſſence of Orange-peel, and of dulcify'd Spirit of Nitre, each two Drams; of Camphire, ten Grains: Mix all together, and give between fifty and ſixty Drops, every two Hours.

But if the Spaſms ſhould be very violent, a proper Quantity of the Eſſence or Extract of Caſtor may be added to it. Or,

Take of Crabs-eyes, diaphoretic Antimony, and depurated Nitre, each one Dram; of Camphire, half a Scruple; and of Oil of common Chamomile, or Yarrow, ſix Drops: Mix up into a Powder, the Doſe of which is half a Dram.

The Efficacy of Camphire againſt Spaſms we learn from a memorable Caſe in *Hoffman*. A Man ſubject to hypochondriac Diſorders, and their concomitant Spaſms, through Miſtake, took two Scruples of Camphire diſſolv'd in Oil of Olives. This Doſe was ſucceeded by a Vertigo, a Coldneſs of the Extremities, a ſmall and very languid Pulſe, Uneaſineſs about the Præcordia, a cold Sweat of the Head, Alienation of Mind, and a preternatural Drowſineſs. But, ſoon after, his Body became hot, a plentiful Sweat broke out, his Urine was more red, and his Pulſe became quicker; after this, by the Injection of an eccoprotic Clyſter, the Patient was freed from the ſpaſmodic Contractions of his Breaſt and Œſophagus, and recovered a perfect State of Health. Hence we may juſtly infer the antiſpaſmodic Virtue of Camphire, and conclude, that its heating Qualities are not ſo ſtrong as ſome repreſent them. The ſame *Hoffman* gives a Caution againſt taking too large Doſes of Camphire, and affirms, that two Grains of it are ſufficient for one Doſe, and can produce no bad Conſequences. The Uſe of Camphire is alſo recommended againſt Diſorders of the Urinary Bladder, ſuch as a Dyſury and Strangury. It is alſo of Service not only where a ſtrong, corroborating, and ſtimulating Medicine is required to remove a putrid Matter lodg'd in the Bladder or Urethra, but alſo in Caſes where there is a Stone form'd. For theſe Intentions Powder of Cantharides is exhibited with ſome Grains of Camphire, which corrects the violent cauſtic Quality of the Cantharides, and prevents dangerous Inflammations; for 'tis obſerv'd, that Camphire not only mitigates and corrects the Violence of the more draſtic Diuretics, which abound with a corroding Salt, but it is alſo a very proper Corrector to the ſtrong and acrid Purgatives, which act by a like cauſtic and acrid Salt; for all Cathartics, by the Addition of a little Camphire, ſome time before they are uſed, acquire a far more mild and gentle Nature than they formerly had. From what has been ſaid 'tis obvious, that Camphire may very properly be uſed internally in a great many Caſes. But we muſt not forget, that ſome Caſes entirely forbid its Uſe, or at leaſt demand great Reſtrictions and Limitations in its Exhibition; for it has been obſerved, that, by a liberal and conſtant Uſe of Camphire, fat People, and ſuch as abound with Serum, have been extenuated and rendered leaner. Camphire muſt therefore be of a drying Quality. Upon this drying Quality depends the Injury it does to the Senſe of Smelling, an Inſtance of which we have in an Apothecary, who, by frequently preparing and handling Camphire, firſt perceiv'd his Senſe of Smelling weaken'd, and at laſt entirely deſtroy'd. *Bartholi. H. A. Cent.* 4. *Hiſt.* 91. Camphorated Medicines muſt of courſe be highly improper in dry Conſtitutions, for Diſorders where Dryneſs prevails, and in Caſes where the Patient is coſtive. Accordingly *Stenzelius de Ven. L.* 3. juſtly aſſerts, "That if Camphire is exhibited to a "Man labouring under a Penury of gelatinous Juices, and in "whom the Matter neceſſary for the Secretion of the Seed is "already defective, it is not to be wonder'd at, if after its Uſe "Venereal Abilities ſhould languiſh. But Camphire poſſeſſes "no ſpecific Power of preventing the Secretion of the ſeminal "Fluid, the Erection of the Penis, or the Powers of Generation and Conception, as is thought by many, who, for that "Reaſon call it the *Ligatura*, and the *Vinculum Veneris*." When the Veſſels of the Body are fill'd and diſtended with good Juices, which is call'd a Plethora, and eſpecially when the redundant Blood is carried in too large a Quantity to the Head, which is teſtified by the red and tumid State of the Face, a heavy Pain of the Head, a Vertigo, Torpor, and Drowſineſs; as in this Caſe all volatile and ſtimulating Subſtances are injurious, eſpecially when exhibited in large Doſes, it follows of courſe, that Camphire muſt be ſo too. For Experience has taught us, that by an unwary Uſe of it Oppreſſions of the Præcordia have been produc'd, Head-achs increaſed, and all the other Diſorders excited, which generally ariſe from the Humours being render'd too turgid, and thrown into violent Commotions, ſuch as Apoplexies, Convulſions, and Epilepſies.

Wedelius, de Medicam. Facultat. juſtly obſerves, that Camphire is of ſingular Efficacy in promoting the briſk and lively Motion of the Blood, and muſt conſequently be improper, when that Fluid is too much rarefy'd, or put into an Ebullition, ſince by that very Means the Watching, the Thirſt, and Heat, would be increaſed. *Mindererus* is of Opinion, that Camphire ought never to be exhibited to ſuch as have infirm Heads, or weak Stomachs. Hence it is, that ſtudious and ſedentary People, and Women of delicate Conſtitutions, who cannot bear ſtrong Smells, have a thorough Averſion to Camphire; and theſe latter, by the Uſe of it, fall into hyſteric Fits, to which, however, it puts a Stop in more hardy and robuſt Conſtitutions. With Women, therefore, of fine and tender nervous Syſtems, as alſo with the Studious, and thoſe whoſe Spirits are eaſily diſſipated, we muſt deal very cautiouſly, ſince for ſuch Conſtitutions Camphire appears to be too generous a Medicine, ſtrikes the Brain too forcibly, and throws the Spirits into too violent Commotions. *Etmuller. Alberti Diſputatio de Camphoræ circumſpecto Uſu Medico.* But where no Circumſtances contraindicate the Uſe of Camphire internally, it may be ſafely exhibited, provided the Doſe is not too large, and eſpecially when the Uſe of it is to be continued for ſome time. *Mindererus* ſeldom preſcribes above two or three Grains for a Doſe: And except it be in Caſes which require a great and ſudden Reſolution by an Increaſe of Motion all at once, in robuſt Bodies, which can bear a conſiderable Quantity, as are thoſe of Maniacs, a ſmall Doſe is always ſafer than a larger; the ſafeſt Way, however, of taking it is with Nitre. But becauſe it is difficult to pulverize, a Drop or two of Spirit of Wine is uſually added to it, inſtead of which may very well be ſubſtituted ſome ſimple Water; it may alſo conveniently enough be reduced to a Powder by means of a Grater. *Joh. Bohn Diſſertationes Chymico-phyſicæ.*

If it is to be taken in aqueous Mixtures, you are firſt to pound it, and work it with dry'd and blanch'd Almonds, which are to be more than equal in Quantity to the Camphire; or it may be beat up with the Yolk of an Egg, taking two Scruples of Camphire for one entire Yolk.

We now come to conſider the external Uſes of Camphire, and the Medicines named from it. Some put a Grain or two of it into a rotten Tooth, and even uſe it as a Gargariſm in the Tooth-ach. The famous *Seba* recommends the following as a moſt ſafe and approved Remedy in all Ambuſtions:

Make a Solution of Camphire in ſix times the Quantity of Spirit of Earth-worms made with highly rectify'd Spirit of Wine, and dipping therein a Linen Rag, apply it to the Part affected, continuing the Uſe thereof till the Pain ceaſes, and the Ulcers are dry'd up.

If the Ambuſtion has deeply penetrated, and laid the Place open, he orders a Pound of what they call Ointment of Ceruſs to be mixed with a Solution of two Ounces of Camphire, in Oil of St. John's-wort, and this Mixture to be apply'd. *Philoſoph. Tranſactions abridg'd, and Ephemerides Naturæ curioſorum, Vol.* 1. *App. p.* 13.

Camphire worn as an Amulet has been experienced an effectual Remedy againſt Fevers. See the *Miſcellanea Curioſa Medico-phyſica Academiæ Naturæ Curioſorum. J. Boeclerus* gives the following Account of it: "Some hang Camphire about

"their

" their Necks for the Cure of an intermittent Fever; the Cam-
" phire is ſure to fly away, but the Fever very often remains."
However, this I dare aſſert, that Camphire hung about the
Neck in peſtilential Times, ſo as that the Effluvia may be
received into the Noſtrils, is no improper Preſervative, becauſe
it corrects the Atmoſphere of the Body, and ſo prevents the ill
Effects of the contagious Air.

Camphire is an uſual Ingredient in Ointments and Plaiſters,
for the ſake of its Stimulus, which is of Service in mollifying
and diſcuſſing hard Tumors, and alſo opens a Way for the Vir-
tues of the other Ingredients to penetrate deeper through the
Pores of the Skin. *Freind.* When it is to be mixed for a
Plaiſter, the beſt Way, as *Etmuller* adviſes, is to diſſolve it
with Balſam of Peru, as you find it done, for Example, in the
Emplaſtrum Samaritanum vulnerarium domeſticum, found among
the Arcana Cnoffeliana, in the *Ephemerides Med. Phyſicæ Ger-
manicæ, Decas* 1. *An.* 6. *App. p.* 179. But it is of no Service
in ulcerous Diſorders, as *Hoffman* obſerves, though it be excel-
lent for Tumors. " However," ſays that excellent Author,
" ſome good Effect may be expected from a Mixture of equal
" Quantities of Eſſence of Saffron, and camphorated Spirit of
" Wine, poured upon a Linen Cloth, and, the Spirit being
" evaporated, apply'd warm." He is ſpeaking of an Ulcer of
a malignant Kind in the inner Parts of the Lip. See *Frid.
Hoffmanni Conſultationes & Reſponſa, Tom.* 1. *p.* 381. Cam-
phire externally apply'd, either in Powder, or diſſolv'd in Spi-
rits impregnated with Saffron, has a noxious and repellent Ef-
fect in arthritic and eryſipelatous Affections, according to the
ſame Author. That the external Uſe of Camphire is hurtful
in the Tinea and Achors, we are inform'd in the *Ephemerides
Germanicæ, Dec.* 3. *An.* 9. *App. p.* 18. The *Unguentum album
camphoratum* is the *Unguentum album*, with an Addition of Cam-
phire; it is of an emollient and diſcuſſive Virtue, and is apply'd
where Heat is immoderate, or the Cuticle abraded, to pruriginous Tetters and Ambuſtions. *Hen. Schulzii Prælectiones.*
An Ounce and an half of freſh Butter, waſhed ſeveral times
with the Water of Eyebright, a Dram and an half of prepared
Tutty, together with a Dram of Camphire, make a Compo-
ſition which has been ſucceſsful againſt Redneſs and Puſtules of
the Eyes. *Ephemerides Germanicæ, Dec.* 3. *An.* 5. *Ob.* 19.
The *Emplaſtrum camphoratum Dni. Archiatri Stahl*, in the
Diſpenſatorium Regale et Electorale Boruſto-Brandenburgicum,
is made of Oil of Olives, Red-lead, and Camphire, and is
effectual for the ſame Purpoſes as the *Unguentum album campho-
ratum.* The *Emplaſtrum camphoratum* of the *Pharmacopœia
Bateana* is compounded of three Parts of Camphire, two Parts
of Balſam of Tolu, and ſix Parts of Galbanum; it is directed
to be apply'd to the Navel in hyſteric Fits, the Vertigo, and
ſuch-like Diſorders.

A Water of Camphire, according to the Account given us
by the *Arabians*, diſtils from the Tree which produces the Cam-
phire; but *Garcias* obſerves it to be a Fable. Others therefore
call by this Name the Water in which kindled Camphire has
been immerſed, and recommend it to be drank by Women
labouring under Hyſterics. A Water of this Kind is pre-
ſcrib'd in the *Pharmacopœia Pauperum*, under the Title of
Julapium Camphoratum. Horſtius relates, that ſome Virgins
taken with a *Furor uterinus* met with moſt Relief by uſing
for their ordinary Drink Water or Beer in which kindled Cam-
phire had been quenched. *Bartholini Epiſtolæ medicinales,
Cent.* 3. Camphorated Spirit of Wine is that in which Cam-
phire has been diſſolved; half an Ounce of Camphire, to a
Pint of highly rectify'd Spirit of Wine, is the common Propor-
tion; but the *London* and *Edinburgh* Diſpenſatories direct an
Ounce of Camphire. The Solution is promoted either by ſtir-
ring the Veſſel, or by digeſting it a little. It is a very common
Topic in Contuſions, Luxations, Rheumatiſms, and Caſes
which require Diſcuſſion; for it readily diſſolves the Stagnations
of the Humours in different Parts of the Veſſels, and cauſes
them to exhale, or puts them in Motion; whence it is of extra-
ordinary Service not only in all Pains and Tumors, but in all
inflammatory and eryſipelatous Affections, reſtores Warmth to
the Feet and Hands benumb'd with Cold, mitigates the Pain of
the Hæmorrhoids, prevents a Gangrene, and is commonly ap-
ply'd in Caſes of a beginning or confirmed Putrefaction, a Spha-
celus, fetid Ulcers, and Wounds, which are putrid, or inclin-
ing to Putrefaction; as alſo the Cholera Morbus, the Colic, and
the Contraction or Reſolution of the Nerves conſequent there-
on, and the like Affections both of the internal and external
Parts. It may alſo be given internally to the Quantity of
twenty Drops or more, where Diaphoretics are required. But
as *Hen. Schulzius*, in his *Prælectiones*, well adviſes, " We
" ought to be very cautious of abuſing ſo beneficial a Remedy by
" an imprudent Application of it, which may be very perni-
" cious; for the Spirit of Wine eaſily penetrates the Pores of
" the Skin, and ſpeedily coagulates the Lymph, rendering it as
" unfit for Motion, as the White of an Egg when harden'd by
" Heat, whence an Exulceration muſt neceſſarily be the Con-
" ſequence. Hence it follows, that this Spirit ought not to
" be applied whenever there is a Collection of Humours juſt
" under the Cuticle, as in the Eryſipelas, unleſs it be with
" this Caution, that the Linen Cloths, moiſten'd with this Spi-
" rit, be ſuffer'd to hang in the open Air, or near a Pan of
" live Coals, till the Spirit being evaporated, nothing but the
" Camphire, in the Form of little Flakes of Snow, be left
" ſticking on the Cloths. It is improper alſo to apply this
" Spirit where-ever the ſolid Fibres are too rigid and contracted,
" and by that means are the Occaſion of Pain, as in Ambu-
" ſtions and Combuſtions." Camphorated Spirit of Wine,
with an Addition of Saffron, is called *Spiritus Vini Camphoratus
Crocatus*, or *Elixir Camphoræ Hartmanni*. If Myrrh and Aloes
be diſſolved in camphorated Spirit of Wine, or if the Eſſences
of Myrrh and Aloes be ſaturated with Camphire, the Medicine
is called, and really is, *Spiritus Vini camphoratus contra Gan-
græna*m, " camphorated Spirit of Wine againſt a Gangrene."
Camphire precipitated from camphorated Spirit of Wine by
Affuſion of Water is called *regenerated Camphire*, and, mixed
with a little Oil of Roſes, makes an excellent Coſmetic againſt
Freckles or Puſtules in the Face. *Tachenius* prepares it by
pouring common Water upon a Solution of Camphire in Aqua-
fortis. Alcohol of Wine diſtilled with Camphire is the moſt
penetrating and volatile of all camphorated Spirits of Wine,
being good againſt Gangrenes, antiſeptic, drying, diapho-
retic, and, with reſpect to the Blood and Serum, a Styptic; but
perhaps not ſo agreeable to the expoſed Nerves, as being too
great a Drier. Upon an Affuſion of Water, the Camphire
with which it was diſtilled ſeparates from the Spirit; but when
the Camphire has been diſtilled with Alcohol of Wine, and an
Addition of Salt of Tartar, the Spirit of Wine, however mix'd
with Water, will not part with the Camphire. Hence it is, that
it is of excellent Uſe in Phyſic and Surgery, becauſe it may be
intimately mixed with aqueous Vehicles and Menſtruums with-
out Precipitation, and is a very proper Ingredient in Collyriums,
Epithems for the Head, Cataplaſms, and Gargariſms. A little
of this Solution mixed with the Water of Elder-flowers, or of
the Flowers of Sage or Roſe-water, and a Portion of Nitre,
makes an excellent Gargariſm for an Inflammation of the
Mouth and Fauces. *Fred. Hoffmanni Obſervationes Phyſico-
chymicæ.* " A celebrated Phyſician," ſays *Schulzius*, in his
Prælectiones, " often adminiſters this Spirit, mixed with two
" Thirds of Tincture of Antimony, in malignant Fevers, and
" he himſelf takes two Drams of it now-and-then for a Pre-
" ſervative. I have ſeen the ſame given with Succeſs in an
" obſtinate Sciatica, and Pain of the Os Sacrum. In this
" Diſtillation the Camphire aſcends in cryſtal Flowers, which
" this Phyſician often gives inwardly, being mixed with Pow-
" ders ſuited to the various Intentions which are to be anſwer'd,
" with very good Succeſs." Perhaps *Quercetan, Tom.* 2. *p.* 788.
had in View this camphorated, tartariſated Spirit of Wine,
when he ſays, that the Extract of Camphire is made with tar-
tariſated Aqua Vitæ. In *Maets's Chemia Rationalis* it is called
Elixir Camphoræ, or *Spiritus camphoratus*, which is thus de-
ſcribed:

> Take of the moſt ſubtile Spirit of Wine, prepared with fru-
> mentaceous Grain, becauſe this is more of an anodyne
> Nature, twelve Ounces; Camphire, three Ounces; Salt
> of Tartar very well calcined, two Ounces: Mix and diſtil
> them in *Balneo Mariæ*. Pour the diſtilled Spirit again on
> the Camphire, which is left behind, and give it another
> Diſtillation, repeating it ſeven times, and keep the Spirit
> which comes off laſt for Uſe.

The Author thus deſcribes its Virtues. " It produces," ſays
he, " ſtupendous Effects in the Tooth-ach, Head-ach, Palſy,
" Apoplexy, wandering Gout, Gout in the Feet, and all cold
" Affections. The following Liniment is made thereof:

> " Take of *Venetian* Soap, two Ounces; diſtilled Oil of
> " Caſtor, one Dram; Oil of Earth-worms, two Drams;
> " of the aforeſaid camphorated Spirit, three Drams: Mix,
> " and make them up to the Conſiſtence of a Liniment.
> " If it is required to be more penetrating, add a Dram or
> " two of Spirit of Sal Ammoniac, and make it into a Li-
> " niment for the Palſy, or Apoplexy, or ſuch-like Diſ-
> " orders.

" For Affections of the Head the following Preparation is
" recommended:

> " Take of Spirit of Wine diſtilled upon cephalic Herbs,
> " one Ounce; of the aforeſaid camphorated Spirit, one
> " Dram; of the Water of Roſemary, three Ounces:
> " Mix them.

" Some Drops of this Mixture drawn up the Noſtrils will
" give immediate Eaſe in the Head-ach or Tooth-ach. Ob-
" ſerve that the Water of the Roſemary mitigates the other
" Ingredients, and that its Strength is augmented or dimi-
" niſhed in proportion to the Quantity of the Roſemary-water."
Thus far *Maets*. In the *Collectanea chymica Leydenſia* you have
the ſame things expreſs'd *verbatim*, under the Name of *Le Mort*,
with

with an Addition of the following Words: "A Bit of Cotton "is to be moiſten'd with the cephalic Spirit of Wine, and the "Spirit of Camphire mixt as above, and put into the Ears; "taken up the Noſtrils, it cures Dimneſs of Sight; the Juice "of Daiſies being at the ſame time inſtil'd into the Eye." Beſides theſe, in the Places before quoted, there is another *Elixir Camphoræ*, which is thus prepared:

Take of Camphire, half an Ounce; highly rectify'd Spirit of Wine, three or four Ounces; Salt of Tartar, two Drams; Oil of Cloves, ſix Drops; Oil of Aniſe, ten Drops: Mix, and diſtil them to a Dryneſs. Return the Spirit upon the Fœces, and diſtil it off again; let the Spirit thus drawn off be tinctur'd with a Dram of Saffron, and reſerv'd for Uſe. Let the Spirit of Wine be very well rectify'd, that it may be qualify'd for the immediate Reception of the Camphire into its Pores. The oftener the Cohobation is repeated, the more is the Camphire volatilized, and the Elixir render'd the more penetrating.

It is diaphoretic and anodyne, and as ſuch is uſed in moſt cold or hot Diſeaſes with very good Succeſs; it promotes the Operation of all Sudorifics. Externally it is of wonderful Efficacy in all cold Affections; it cures the Head-ach, Tooth-ach, Pains of the Ears, and Vertigo, in a ſurpriſing manner, if ſome Drops of it be mixed with a double Quantity of Water of Marjoram, and taken up the Noſtrils. Internally it is given from two to eight Drops. *Le Mort*, in his *Chymia Medico-phyſica*, ſhews how to make an *Elixir Camphoræ* without Salt of Tartar, as follows:

Take two Ounces of Camphire, with twenty Ounces of Alcohol of Wine prepared of frumentaceous Grain: Mix them together, and diſtil them by a Retort *in Balneo Mariæ*; cohobate them four or five times upon the ſame Camphire, till the Camphire begins to be volatilized, and the Spirit is very much impregnated with it; to this Spirit add half an Ounce of Saffron; two Drams of Opium; and of Mace, and Nutmegs, each three Drams: Digeſt them in Horſe-dung for ſix or ſeven Days; after which, let the tinctur'd Spirit ſeparated from the Fœces be reſerv'd by the Name of an *Elixir*. If a milder Elixir be deſired, add to the Alcohol of the preceding Wine an Ounce or two of highly rectify'd Spirit of Nitre, with which the Camphire does not directly avoid uniting, but by its Mediation is reduced into a Liquor like an Oil, by a bare Affuſion, and a ſlight Maceration, in the following manner:

Take of Camphire, one Dram; of very ſtrong Spirit of Nitre, two or three Drams: Let them ſtand in a ſmall Degree of Heat for an Hour and an half, by which means all the Camphire is reduc'd to an oily Liquor, which ſwims on the Spirit of Nitre; this Liquor, being depriv'd of the nitrous Spirit, returns back again into Camphire. Repeated Cohobations are made upon the Camphire, that the Spirit may be very well impregnated with the moſt volatile Parts of the Camphire, and to avoid giving the Mixture ſo ungrateful a Taſte, as it would have had, if Camphire in Subſtance were only diſſolved in it. But if any ſhould think fit to digeſt Camphire in Subſtance with the other Simples, they may do as they pleaſe; but with this Caution, that they take no more than half at moſt of the Camphire which is required in Diſtillation, after the preceding manner. A very good Elixir may alſo be obtained from it thus:

Take of Camphire, Myrrh, Saffron, each half an Ounce; of Contrayerva-root, Cloves, each one Ounce; of Opium, one Dram; of Alcohol of Wine diſtilled upon Wood of Saſſafras, twenty Ounces: Mix, and digeſt them in Horſe-dung for ſix or ſeven Days; after which, ſeparate the Liquor which ſwims at the Top from the Sediment, and reſerve it for Uſe.

Both the preceding Medicines are excellent Anodynes and Sudorifics, give wonderful Relief in contagious and peſtilential Diſtempers, reſiſt Poiſons and Putrefaction, and take off the Senſe of Pain. The Doſe is from two to twenty Drops. Thus far *Le Mort*. A ſimple Solution of Camphire, made by a Digeſtion in eight times the Quantity of Spirit of Wine, is alſo called *Elixir camphoratum*, of which twenty Drops at moſt are a Doſe, being taken in Wine, or ſome cordial Water, with an Intention of provoking Sweat, of ſtrengthening, of reſiſting the Malignity of the Air, and Poiſons, of giving Relief under the Gout, or any Affections of the Brain. A few Drops of it upon Cotton are very proper to put into a hollow Tooth to eaſe the Pain. *Charas Pharmacopœia Regia, Galenica, & Chymica.* In *Schroeder*'s *Pharmacopœia*, and *Sala*'s *Opera Medico-chymica*, we meet with the *Eſſentia Camphoræ alexiteria Stenzelii*, which is made by diſſolving Camphire with Oil of ſweet Almonds by Digeſtion, then diſtilling the ſtrained Liquor, after it has been for ſome time circulated with Spirit of Wine, in order to draw off the Spirit of Wine, and at laſt giving the Reſiduum a Gold-colour, by an Addition of a ſufficient Quantity of Tincture of Saffron. It is recommended for preventing and curing the Peſtilence, and for Hyſterics and Fevers. The Doſe is one or two Drops. The Spirit drawn off, if uſed, will be found poſſeſs'd of as many Virtues as the other. *Frid. Hoffman*, in his *Clavis Schroederiana*, ſhews a Way to improve this Eſſence, thus:

Take of diſtilled Oils of Juniper-berries, one Ounce; of white Amber, one Dram; of Lemons, two Drams; of Angelica, half a Dram; of Camphire, a Dram and an half: Diſſolve them *in Balneo Mariæ*, and then add of liquid Extracts of Zedoary, and Angelica, each one Dram; of *Auſtrian* Saffron, half a Scruple: Mix them together.

The anti-colic Eſſence of Camphire he deſcribes as follows:

Take of the diſtilled Oils of Orange-peel, an Ounce and an half; of Zedoary, half an Ounce; of Camphire, one Dram: Diſſolve them *in Balneo Mariæ*, and then add of liquid Extracts of Zedoary, and Wormwood, each two Drams. Digeſt them, and keep them for Uſe.

Some call *Flowers of Camphire* that very ſubtile Subſtance, which firſt aſcends in the ſubliming of Camphire, and *compound Flowers of Camphire* what is obtained by ſubliming the Flowers of Benzoin, mix'd with eight times the Quantity of Camphire; and theſe perhaps may do good Service in diſſolving, upon Occaſion, a mucous tenacious Blood obſtructing the Bronchia.

Trochiſci de Camphora Meſuæ, in the *Pharmacopœia Auguſtana*, and the *Antidotarium Florentinorum*, and *Bononienſe*, are compoſed of refrigerating, heating, and mucilaginous Simples, mixed with a ſmall Quantity of Camphire. They are commended in burning Fevers, and where Heat requires to be moderated; and alſo for the Yellow-jaundice, Phthiſis, and hectic Fever. The Doſe is as far as two Scruples, in Clyſters two Drams. In the *Pharmacopœia Pariſienſis* theſe Troches are made of fewer Ingredients, with ſome Difference alſo in the Quantities. *Lemery*, in his *Pharmacopée Univerſelle*, recommends, to hyſteric Women, the *Trochiſci de Camphora reformati*, which are thus prepared:

Take of Camphire, one Ounce; of Myrrh, Aſa-fœtida, Caſtor, each half an Ounce; of Spikenard, three Drams; of Saffron, one Dram; of Opium, half a Scruple; of Oil of Amber, eight Drops: Pulverize what may be reduced to Powder, and, mixing them all together, make them into Troches, with a ſufficient Quantity of Mucilage of Gum Tragacanth, made with Water of Feverfew. The Doſe is from half a Scruple to half a Dram.

The *Electuarium Camphoratum*, in the *Diſpenſatorium Brandenburgicum*, aſcribed to *Keglerus* by *Schroeder*, and *Lemery*, contains, beſides Camphire, Aromatics, Theriaca Andromachi, Nux Vomica, Abſorbents, Aſtringents, and Sugar. It is commended for its alexipharmac and antihyſteric Virtues; and the Doſe is from one to two Drams, but it is very ſeldom uſed. I ſhould rather chuſe the *Electuarium Camphoratum* of *Gemma*'s Preſcription, which he aſſerts, from his own and his Father's Experience, to be very effectual in the Cure of the Peſtilence. It is thus compounded:

Take of Camphire, one Part; white Ginger, two Parts; Sugar of Roſes, four Parts; Wine, as much as is ſufficient; mix them carefully, and make an Electuary. The Doſe is one Dram; and let the Patient be cover'd up, and ſweat after taking it. See *Diemerbroeck de Peſte.*

Many have endeavour'd to find out and make the true, genuine, ſimple Oil of Camphire, that is, ſuch an Oil as cannot be precipitated by Water, and ſo return to its former Subſtance of Camphire. Some, not without Reaſon, have doubted whether it could ever be obtained; for when Camphire is diſtil'd, it always riſes dry, and never comes to a liquid Oil: When it is burnt, it is converted into a black Soot. For this Reaſon *Hoffman* declares, how much he is ſurpriſed at the mighty Pains and Labour of ſome eminent Chymiſts to extract the Oil of Camphire by Diſtillation, and all to no Purpoſe. "Theſe cunning Torturers of Camphire, ſays he, were igno-"rant that it was itſelf already a volatile and diſtil'd Oil; and as "it is ridiculous to pretend to extract an Oil out of diſtil'd Oils, "ſince they are already ſuch; ſo it is no leſs a Paradox to ima-"gine, that a perfect Oil can be obtain'd from Camphire." Thus *Hoffman*, tho', in his Edition of *Poterius*'s Works, he had before ſaid, "That Camphire, after pretty often repeated "Trials by Fire, with a particular kind of Earth, did at laſt "afford

" afford a ſmall Quantity of pure Oil." However, we ought to know by what Methods they have endeavour'd to diſcover this Oil, that we may not be ignorant of ſome celebrated Medicines, which thence take their Name. They diſſolve Camphire in four times the Quantity of Oil of Turpentine; then diſtil it in a Glaſs Retort luted; and the Liquor which comes off by this Diſtillation they call the Oil of Camphire, which indeed contains in its Subſtance a Solution of Camphire, but cannot properly be called its Oil. It is, however, a chirurgical Remedy, and uſeful in cleanſing Wounds and old Ulcers; and is alſo of Service in Cariofities of the Bones, cutaneous and ſcorbutic Affections, and the Scrophula; the Sciatica alſo, and Rheumatiſms. Internally it is commended againſt Vapours, or hyſteric Flatulencies. The Doſe is from four to fifteen Drops; but it ought to be thus uſed with Prudence, for it heats and dries to a very conſiderable Degree. Others, for a Medicine againſt the Peſtilence, diſſolve one Part of Camphire in three Parts of diſtilled Oil of Amber or Roſemary, and give from ſix to eight Drops. Thus *Etmuller* tells us, that *Heniſius*, a Phyſician of *Verona*, had an *Oleum peſtilentiale*, of a Gold-colour, which was compounded of the diſtilled Oil of Camphire, Amber, and Lemon; which is good in peſtilential Diſtempers, and was uſed by *Heniſius*; when the Peſtilence raged in *Verona*, with ſuch extraordinary Succeſs, that he had a triumphal Column erected to his Honour on this Account. From a Confidence in this Remedy, a certain Phyſician of *Norimberg* promiſes to cure any Perſon ſeized with the Peſtilence, with a few Drops of Oil of Camphire, provided they are taken the ſame Day the Diſeaſe attacks the Patient; and offers to forfeit his Life, if any Perſon who takes ſome Drops of Oil of Camphire in the Morning ſhould, during that Day, be viſited by any peſtilential Diſorder. Mixed with other Medicines, it is very much commended in hyſteric Caſes. Oil of Camphire, with Muſk, was uſed by *Prævotius*, a Phyſician of *Padua*, as a ſingular Remedy for Madneſs; and the following is recommended by *Paracelſus*, as a preſent Cure for the ſame Diſtemper:

Take of Oil of Camphire, one Dram; of Muſk, half or an entire Dram; mix, and give half a Dram at a time.

Oil of Camphire is principally in requeſt for its coſmetic Virtue; but inſtead of Oil of Camphire for external Uſes, the beſt Way is to take Oil of Almonds in which Camphire is diſſolv'd; it cannot, indeed, be radically diſſolv'd, but returns to Camphire again when mixed with Water; however, it is a fit Medicine for the Tooth-ach, if applied to an aching Tooth, or put into a carious and hollow one. Others for outward Uſe prepare a compound Oil of Camphire, principally for cold Pains in the Joints, and the Colic; they mix well together equal Parts of *Venice* Soap and Camphire, and then drive it out of a Glaſs Retort, by making a Fire above and under it; what comes off ſpontaneouſly, diſſolves into an Oil. See *F. Hoffman's Clavis Schroederiana*. A certain Perſon made a Secret of an Antipeſtilential Liquor of Camphire, prepar'd of one Ounce of Camphire, and ſix Ounces of Whites of Eggs; theſe two he diſtilled by a Retort, and cohobated the Liquor which came off with Spirit of Wine; and this ſerv'd him for an elegant antipeſtilential Remedy. *Etmuller*.

Whether Camphire diſtilled with the White of an Egg comes off in a liquid Form, I am not certain; but I doubt it, ſince I know of no other Menſtruums that will diſſolve Camphire, beſides oily and ſpirituous ones, and mineral Acids. In the *Diſpenſatorium Brandenburgicum*, the Method of obtaining Oil of Camphire by means of Whites of Eggs is as follows: The Whites, after they are well beaten, are diſtilled with the beſt Spirit of Wine, drawing off half the Spirit, and, to this adding the Camphire, they diſtil it over again. The extracted Spirit is in reality nothing but camphorated Spirit of Wine; ſo that it is juſtly ſaid, in *Schulzius's Prælectiones*, that there is nothing of Art more than ordinary in this Prepation; its Virtues you have above. The Oil of Camphire, which ſome ſearch after (ſee *Pharmacopœiæ Antwerp. Aug. Arg.* and *Schroed.*) by diſtilling Camphire with triple its Quantity of Clay, or ſome bolar Earth by a Retort, with an open Fire, and which is ſaid to be the higheſt of Diaphoretics and Alexipharmacs in the Peſtilence, both for Prevention and Cure, if given only in a few Drops, and is alſo recommended as a Coſmetic, and for its Virtue againſt a Gangrene, ſeems to be nothing but ſome Portion of Camphire diſſolv'd in a vitriolic Acid, which is commonly found in bolar Earths. The Proceſs is ſaid to be invented by the famous *Sennertus*, and takes its Name from him. See *Sennerti Inſtitut. Med.* Nor have we any thing more than a Solution of Camphire in what is called the Oil of Camphire in the *Copenhagen Diſpenſatory*, which is prepar'd, by rubbing Camphire with common Salt, and Salt of Tartar, then with Milk reducing it to the Form of a Poultice, afterwards digeſting it, and then diſtilling it with *Malmſey* Wine by a ſlow Fire. For the Spirit of Wine which comes off tartariſated, is impregnated with the Solution of the Camphire, but ſcarce ſeems to participate of the Acid of common Salt; therefore it is a Kind of tartariſated camphorated Spirit, whoſe remarkable Virtues have been already ſpecified. Whether that Oil of Camphire which takes its Name from *Keſler*, in the ſame Diſpenſatory, and is directed to be prepar'd by Sublimation till it is converted into an Oil, be poſſible to be obtain'd, let thoſe anſwer who amuſe themſelves in the Search of an *Oleum Olei*. For my Part, I heartily agree in Opinion with the learned and moſt judicious *Charas*, who, in his *Pharmacopœia*, ingenuouſly profeſſes his Sentiments in the following Manner: " Thoſe Authors, *ſays* " *he*, who have written about the Diſtillation of Camphire, " have, I think, exerted themſelves to no Purpoſe; for having " had the Vanity to hope, that they could invent and prepare " ſomething more perfect than what Nature had preſented, " ſeeing their Time and Labour loſt, they endeavour'd to " draw others into the ſame Error, and to that End publiſh'd " ſuch Accounts of Diſtillations, as were contrary to Expe- " rience. It is better, in my Opinion, not to attempt the " Diſtillation of Camphire, ſince in its preſent State, as it is " imported to us, for Purity, Subtility, Volatility, and a " penetrating Virtue, it excels whatever can be got out of it by " Diſtillation, after all the Care, Study, and Induſtry, which " can poſſibly be uſed, and with all the Mixtures and Variety " of Veſſels that can be deviſed. Its Pellucidity, its Snow- " like Whiteneſs, its acrid and pungent Taſte, its highly pe- " netrating Smell, its Volatility, quick Diſſipation, remark- " able Propenſion to kindle into Flames, even in Water, and " entire Conſumption without leaving the leaſt Sign of Fœces " in the Veſſel where it was kindled, all evince its extraordi- " nary Purity, and Fineneſs of Parts. Hence we may boldly " aſſert, that whatever is produc'd from it by the Art of " Chymiſtry, tho' the beſt that can be expected, will fall " ſhort of that Purity and Perfection with which Nature has " endow'd it; and that no groſs Parts can be ſeparated from " it by chymical Means; but that it is upon all Accounts the " better Way to let it remain in its native State without any " Preparation, and not by violent Means to alter its good " Qualities. For ſuch will appear to be the Event of the " Diſtillations propoſed by the Chymiſts, if juſtly examin'd, " both on account of the neceſſary Diſſipation of the greateſt " Part of the Camphire, and from Reaſons drawn from the " Nature of the Thing itſelf, which is the Subject of the Ope- " ration, from the Veſſels, and even from the Fire which is " directed to be uſed; and if you ſhould propoſe to rectify " what is drawn off by Diſtillation, what you will obtain by " this means, will, in every reſpect, be inferior in Goodneſs to " the Camphire in the State it was in before Diſtillation. For " theſe Reaſons I thought it not proper to give a Deſcription " of this Oil, ſince it is enough to ſay, that if any one is de- " ſirous of obtaining Oil of Camphire, or any oily Liquor of " the ſame, he has no more to do than to diſſolve Camphire " in Oil of ſweet Almonds, or in Spirit of Wine, or in Spi- " rit of Turpentine. But ſimple Camphire alone, without " any Preparation, has more Virtue than all theſe Liquors. " Some make uſe of *Aqua-fortis*, or Spirit of Nitre, for the " reducing Camphire into an oily Subſtance ſwimming on theſe " Spirits. But ſuch a Preparation is not much to be valu'd; " for beſides the Acrimony imparted to the Camphire by thoſe " corroſive Spirits which diſſolve it, a conſiderable Quantity " of their Particles inſinuate themſelves into it, whoſe Vio- " lence is to be ſuſpected, eſpecially if this Spirit is to be ap- " ply'd to internal Uſes." At preſent what is moſt in requeſt for external Uſes, in Cariofities of the Bones, for deterging ſordid Wounds, for ſtopping the Progreſs of a Gangrene, and for eaſing the Tooth-ach, is the *Oleum Camphoræ vulgo dictum*, in the *Pharmacopœia Pariſienſis*, which is prepar'd by diſſolving Oil of Camphire in double the Spirit of Nitre, as mention'd from *Le Mort*. Some alſo recommend its internal Uſe in Obſtructions and hyſteric Flatulencies, given from ſix to ten Drops, eſpecially if it be mixed with equal Parts of Oil of Amber, and a very ſmall Quantity of the Eſſence of Caſtor. *Helvetius* uſes this Oil, that is to ſay, a Solution of Camphire in an equal Weight of Spirit of Nitre very well dephlegmated, in the Preparation of his Tincture of Gold. His Method is to pour this Oil on a Solution of Gold in *Aqua Regia*, by which the Gold is precipitated, and a Liquor is obtain'd, conſiſting of Camphire, the Acid of Nitre, and *Aqua Regia*; perhaps it may alſo contain a ſmall Quantity of Gold, if the Spirit of Nitre did not happen to be prepar'd of Nitre perfectly free from all common Salt, and conſequently could not precipitate all the Gold diſſolv'd in the *Aqua Regia*. He then ſeparates the oleous Liquor which ſwims at the Top, and is a Solution of Camphire, and mixing it with rectify'd Spirit of Wine, and Oil of Cloves, digeſts them together. By this Method, he ſays, he obtains a Medicine both internal and external, of extraordinary Efficacy in a Multitude of Diſeaſes. To ſave the Trouble of enumerating theſe, I ſhall call his Medicine a *Panacea*, a Title which the Modeſty of the Author prevented him from beſtowing on a Remedy which he com-

mends againſt ſo many and ſo great Diſeaſes. *See Helvetius, Traité des Maladies.* But ſome perhaps will ſay, that Camphire diſſolv'd in Spirit of Wine, and incorporated with ſome eſſential Oil, to which may be added on Occaſion ſome *Spiritus Nitri dulcis*, will be altogether as good a Medicine, eſpecially if prudent Regard be had not only to the State of the Diſeaſe, but to the Conſtitution of the Patient.

Enough has been ſaid of the Nature and Virtues of Camphire, and of the various Medicines prepar'd of it. There remains only one Point to be conſider'd, which may poſſibly raiſe ſome Scruples in the Minds of thoſe who want Experience with reſpect to what has been deliver'd. We have ſhewn, that Camphire is not only qualify'd for curing external Inflammations, but that its Uſe is recommended in acute Diſtempers, for allaying the violent Heat and Orgaſm of the Humors. Beſides, the famous *F. Hoffman*, in his *Obſervationes Phyſico-chymicæ*, writes, That " a Scruple of Camphire diſſolv'd in Oil " of ſweet Almonds, or Spirit of Wine, and given to a " healthy Man, as we have often done, he ſays, by way of " Experiment, produces no ſenſible Eſtuation in the Body, " nor cauſes an Augmentation of the Pulſe, which is the " Evidence of a more intenſe Circulation of the Blood; but, " on the contrary, not a few who have taken it, have felt a " very ſenſible Refrigeration from it, eſpecially about the " Præcordia. And it neither occaſions a Thirſt, nor raiſes " the Colour of the Urine, which are the Effects of all other " hot Things. We may even go ſo far as to obſerve, that " one Ounce of pretty generous Spirit of Wine raiſes a " greater Eſtuation and Colour than one Dram of Camphire." Hence, not without Reaſon, may ariſe a Doubt whether it was not ill judg'd to contradict the Opinion which formerly prevailed, that Camphire was of a cold Nature. But that we had very good Reaſons for excluding Camphire from the Claſs of Refrigerants, will appear, if we thoroughly conſider its ſtimulating and drying Qualities, and that its Effect in refrigerating the Body is only ſecondary, that is, ſo far as it remedies Spaſms of the ſolid Parts, by which Obſtructions are promoted: Hence the Humours being impelled forwards, their Motion is increaſed to ſuch a Degree as to overcome the Obſtacle in the obſtructed Place, and excite a Heat, which the ſame Motion allays by removing the Cauſe in reſolving the Matter of the Obſtruction. Mean while the Camphire, by virtue of the exceeding Fineneſs of its Parts, quickly makes its Way out of the Body through the Skin, and, by animating the inert and relaxed Fibres, opens a Paſſage for a free Courſe of the Blood, and reſtores Perſpiration in an extraordinary manner, thereby eliminating all foreign and peccant Matter; for which Reaſons Camphire deſerves to be accounted the chief of Alexipharmacs. *Hoffman* therefore cannot be thought, by what he ſays in the before-mention'd Paſſage, to favour the juſtly abrogated Opinion of the cold Nature of Camphire. For, as *Breynius* obſerves, though in many Affections, as Inflammations of the Eyes, Eryſipelas, feveriſh Heats, and other Diſorders, it has a refrigerating Virtue, even ſo far, as oftentimes to diſſipate the natural Heat, yet theſe are not the natural, but accidental Effects of Camphire, and are produced almoſt in the ſame manner, as the Inflammation of a burnt Part is reſolv'd by holding it near the Fire, or the Flame of a Candle; or as the natural Heat is expelled outwards, or weaken'd inwardly, by an exceſſive Uſe of Pepper; and by that means the Temperament of the Body changed into cold, tho' Fire cannot on that Account be reckon'd a cold Element, nor Pepper a cold Fruit, unleſs it be in this reſpect, that cold Effects may in Length of Time be produced by them: And in the ſame manner Ice and Snow may be accounted not cold, but hot; becauſe by frequent handling of them, the Hands are known to be inflamed. Thus *Breynius*. And therefore *P. Ammannus*, in his *Irenicum*, was in the right when he remarks on the old Saying, *Camphora per nares caſtrat odore mares*, " Camphire makes Eunuchs by its Smell;" that it was a *Cretan* Lye: But what he adds, " That thoſe Monaſtics, or " Religious, who daily chew it, uſe it rather for an Incen- " tive, than Extinguiſher of Luſt," has as little Appearance of Truth, as if he had ſaid, that thoſe Religious chew Camphire, that they might temper and allay too briſk a Motion of the Blood, and too high a Colour, occaſion'd by the Fervor of their Zeal in performing their Offices. But if we are reſolv'd to find out ſome way to bring off the Antients in their aſſerting the cold Nature of Camphire, we muſt of Neceſſity either ſay, that Camphire is an Enemy to Procreation, if it be taken in large Quantities, as *Lanzonius* ſays after *Rhaſis*, becauſe it is injurious to the Body by its drying Quality; or elſe we muſt agree with *Salmaſius* in affirming, that we are ignorant of the Camphire of the Antients. *Rieger.*

CAMPHORATA, Offic. *Camphorata hirſuta*, C. B. 486. Raii Hiſt. 1. 210. Hiſt. Oxon. 3. 614. *Camphorata Monſpelienſium*, J. B. 3. 379. Chab. 454. *Camphorata major Monſpelienſium*, Park. 568. STINKING GROUND-PINE.

It is ſometimes found in the Gardens of Botaniſts. The Herb, which is uſed, is of a drying and aſtringent Quality, ſtrengthening to the Nerves, and ſerviceable in the Gout, Convulſions, Palſy, Defluxions of the Eyes, and Catarrhs. The Plant is a Cephalic, is effectual for Wounds, according to *Lobelius*, and is preſcribed by ſome in Dropſies. *Dale.*

It bears a great many woody, and ſomewhat hairy Branches, cover'd with fine Leaves, like thoſe of Tamariſk, of a ſtrong Smell, ſomewhat reſembling Camphire. The Flowers are ſmall and ſtaminous, of four Leaves apiece, ſet on among the Leaves. It grows in the Southern Parts of *France.*

The Tops are uſed, though but rarely, and then only outwardly in Baths and Fomentations, for Diſorders and Swellings of the Joints, for Cramps, Palſies, and other Affections of the Nerves. *Miller's Bot. Off.*

CAMPTER, καμπὴρ, from κάμπω, to bend, ſignifies in general any Flexure, or Incurvation, but in a ſpecial Senſe is put for the Goal of a Race, and is ſo uſed by way of Metaphor in *Galen, Uſ. Part. Lib.* 7. *Cap.* 14. where he deſcribes the recurrent Nerves of the ſixth Pair, which arriving ἐς καμπτῆρα, " at the Goal," which is ſome firm and ſmooth Part of the Clavicle or firſt Rib-bone, turn round the ſame, and perform a ſort of Δίαυλος, " backward Race."

CAMPTON, καμπτὸν, from the ſame Original with the precedent, ſignifies flexile, flexible, and that in general, from ſtrait to curve, or curve to ſtrait; or, in particular, it denotes only a Flexibility from ſtrait to curve, in which Senſe it is oppoſed to εὐθυτὸν, which is applied to what is flexible from curve to ſtrait.

CAMPYLON, καμπύλον, from κάμπω, is expounded by *Erotian* on *Hippocrates*, τὸ μὴ ὀρθὸν, ἀλλὰ σκολιῶς συγκαμμένον, " what is not ſtrait, but bent into a curve Line." It is a Word often uſed by *Hippocrates*: Thus in *Prognoſt.* ἢν δὲ καμπύλον γένηται βλέφαρον, " if the Eyelid be retorted." *Celſus, Lib.* 1. *Cap.* 6. renders the Word by *perverſa*. So (*Lib.* περὶ ἄρθρ.) τὸ δ' ἄλλο ὀστέον βραχίονος ἐς τὸ ἔξω καμπύλον, " but the other Bone of the Arm is bent outwards." Again, in *Mochlico*, καμπυλοῦσθαι δὲ πλευραὶ ἀνθρώπου ἐισὶ, " the " Ribs of a Man are very much incurvated." Καμπύλα in *Heſychius* is expounded ἐπικαμπῆ, στρεβλὰ, " inflected, diſ- " torted."

CANABIL. A ſort of medicinal Earth. See ERETRIA. *Caſtel.*

CANADELLA. A Kind of Sea-fiſh. See CHANNA. *Caſtellus.*

CANALICULUS, or CANALIS ARTERIOSUS. A Veſſel between the pulmonary Artery and the Aorta in a Fœtus, which is obliterated in the Adult. Its Uſe is to convey the Blood, which in a Fœtus has no Paſſage through the Lungs, from the pulmonary Artery to the Aorta.

CANALIS, σωλὴν, a Canal, ſignifies in general a round, hollow, oblong Inſtrument for the Conveyance of Fluids; in which Senſe all the Veſſels of the human Body, which ſerve for tranſmitting of any Fluid, are called *Canals.*

CANALIS is alſo a round, hollow Inſtrument in Surgery for embracing and holding a broken Limb, as a Leg or Thigh. It is made of the Wood of the Linden-tree, according to *Galen*, or of Earth, as *P. Ægineta* ſays; it may alſo be made of Reeds and Linen. There are various Sorts repreſented in *Scultetus's Armamentarium, Part.* 1. *Tab.* 23. *Hippocrates* treats of the Uſe of the *Canalis*, in his Second Book of Fractures, and in his Book of the Office of a Phyſician. *P. Ægineta, Lib.* 6. *Cap.* 106. *Celſus, Lib.* 8. *Cap.* 10.

CANALIS, in Anatomical Writers, is the middle Cavity, or Perforation, which extends through the Vertebræ of the Neck, and through which the Spinal Marrow reaches from the Brain. *Gorræus.*

CANALIS ARTERIOSUS is the ſame as CANALICULUS ARTERIOSUS.

CANALISCULUS. A Notch in a Piece of Wood. *Rulandus.*

CANANGÆ OLEUM. *Hoffman*, in his *Obſervat. Phyſico-chym.* mentions this as a very ſcarce Oil brought from *India*. And in his *Medicina Rat. Syſt. Vol.* 1. *Sect.* 2. *Cap.* 6. he informs us, I think, that it is diſtilled in *India*, from the Flowers of the Lime-tree. The Paſſage is a little obſcure, and I am not certain, that this is his Meaning. I meet with no other Account of the *Oleum Canangæ.*

CANATION, καναθίων. A Word in *Myrepſus, de Antidot. Cap.* 500. which *Fuchſius* renders *Menſura.*

CANCAMUM, Offic. κάγκαμον, Dioſc. C. B. Pin. 498. J. B. 1. 324. Raii Hiſt. 2. 1846.

Cancamum is the Tear of an *Arabian* Tree, in ſome meaſure reſembling Myrrh, of a very unſavoury Taſte, and uſed in Suffumigations; being mix'd with Myrrh and Styrax, it makes a Suffumigation for Cloaths. It is ſaid to be endued with the Virtue of extenuating immoderately fat Bodies, if half a Dram of it be taken in Water or Oxymel every Day for a conſiderable time. It is preſcrib'd in Diſorders of the Spleen, for the Epilepſy, and the Aſthma; and, taken in Hydromel, it provokes the Menſes. Macerated in Wine, it

ſpeedily

ſpeedily exterges Cicatrices in the Eyes, and helps Dimneſs of Sight, and is as good a Remedy as any for putrid Gums, and the Tooth-ach. *Dioſcorides, Lib.* 1. *Cap.* 23.

At preſent we know not what the *Cancamum* was. Some take it for the *Lacca*. *Matthiolus* aſſerts the *Cancamum* of the *Greeks*, and the *Lacca* of the *Arabians*, to be the ſame thing; in which, ſays the learned *Ray*, he is miſtaken; for their Virtues are different. Others will have it to be *Benzoin*; *Garcias* and *Amatus* affirm it to be *Gum Anime*, ſo that, it ſeems, none can be ſure what it is. *Dale.*

Lemery gives the following Account of the *Cancamum*.

Cancamum is a very ſcarce Gum, which ſeems to be rather a Collection of ſeveral Kinds of Gums or Reſins, united or agglutinated one to another, than only one Gum. For it is in a manner divided into four different Subſtances, which have each a diſtinct Colour. The firſt is like Amber; it melts at the Heat of the Fire, and has the Smell of Gum-Lacca. The ſecond is black, melts alſo by the Fire, but emits a ſweeter Smell than the former. The third is like Horn, and has no Smell. The fourth Species is white, and is the ſame with *Gum Anime*.

Theſe Gums, they ſay, diſtil from a Tree of a moderate Height, with Leaves much like thoſe of the Myrtle. It grows in *Africa*, *Braſil*, and the Iſland of *St. Chriſtopher*.

Cancamum is proper to deterge and conſolidate Wounds, reſolves and ſtrengthens, and is good for the Diſtempers of the Teeth.

For entire *Cancamum* they ſubſtitute *Gum Anime*.

CANCELLUS *Aſtaci marini ſpecies*, Ind. Med. 26. *Cancellus*, Rondel. de Piſc. 1. 553. Aldrov. de Exang. 218. Geſn. de Aquat. 161. Bellon. de Aquat. 362. Jonſ. Exang. 24. *Cancellus quibuſdam Bernhardus Eremita dictus*. Charlt. Exer. 58. *Cancer in teſtis degens*. Mer. Pin. 192. The WRONG HEIR.

The Oil prepar'd from it is brought from *America*, and uſed for the Rheumatiſm. *Dale.*

The *Cancellus* is a very ſmall Species of Cray-fiſh, which the *French* call *Hermit*, or *Bernard the Hermit*; becauſe it ſhuns others, and retires into the firſt Shell it meets with. Its Body is ſomewhat long, but in general much reſembling a Spider, except that it is a little thicker. It has two ſmall, ſlender, reddiſh Horns; its Eyes are pretty much elevated, its Mouth ſurrounded with ſmall Filaments, which may be called a Beard. Its two upper Paws are forked, and ſerve inſtead of Hands to convey any thing to its Mouth on Occaſion, and it is not without Teeth. It is found in the Slime near the Rocks, incloſed commonly in a Shell as big as a Nut, of a conic Figure, thick, very hard, rugged, furrow'd, grey on the Outſide, but ſmooth and white within. This Shell is ſo well adapted to the Animal, that it is a hard matter to force it out of its Incloſure. Some waſh it, and then dreſs it and eat it. It contains abundance of volatile Salt.

It is aperitive, and good for the Stone.

In the *American* Iſlands they find a much larger Species of *Cancellus* than what we have been ſpeaking of, being three or four Inches long. They call it the *Soldier*, becauſe it poſſeſſes and fortifies itſelf in a Shell, which is not its own. They who have examin'd it, and among others Father *du Tertres*, ſay that half its Body is like a Sea-graſhopper, only his Shell is a little harder than a Graſhopper's. It has two Parts with which it bites, one whereof is pretty ſlender, but the other, which is above an Inch wide, and round, ſtops up the whole Paſſage into the Shell, and ſerves the Animal not only inſtead of a Hand, but for Defence; for it ſtreightly holds, and ſtrongly compreſſes whatever it ſeizes. Beſides theſe Parts, it has four ſlender Feet, pretty like thoſe of a Crab. The reſt of its Body is about half a Finger's Breadth in Length and Thickneſs, and cover'd with a pretty thick and rough Skin; and its Tail is compoſed of three ſmall Squamæ or Scales.

This little Animal comes once every Year to the Edge of the Shore to lay its Eggs, and change its Shell; for becauſe its natural Shell leaves its hinder Parts naked, it employs itſelf, as ſoon as it is ſtrong enough, in ſearching out another, which may be proportion'd to its Bigneſs. When it has found one to its Mind, it ſtuffs its Back-part within it, and adjuſts it to its own Dimenſions. Being thus habited in the Spoils of another, it goes among the Rocks, and the hollow Trees, and lives upon rotten Wood and Leaves as Crabs do. But as it grows, and the Shell with which it accommodated itſelf is not enlarged, it finds itſelf preſſed in ſuch a manner, as to be obliged to go in Search of another. Therefore it comes to the Edge of the Shore, and it is a Piece of Diverſion for thoſe who are curious, to obſerve how he ſtops at all the Shells he meets with to conſider them, and, when he has found one which he thinks fit for his Purpoſe, how he quits his own, and with great Precipitation ſtuffs his Backſide in his new Tenement, as if he were aſham'd of being naked. And if it happens, that two of theſe little Animals together are ready ſtripped to enter the ſame Shell, they beat and bite one another till the weakeſt gives Way, and leaves the Shell to the ſtrongeſt, who, taking Poſſeſſion, takes three or four Turns in it upon the Shore; and, if he does not find it convenient for his Habitation, he returns to his old Lodging, or goes in Search of another ſomewhere elſe, and ſometimes he changes five or ſix times before he can meet with one for his Purpoſe.

When it is taken, it ſends forth a ſmall Cry, and tries to ſeize with its biting Part what holds it, which if it does, you may ſooner kill it, than make it let go its Hold; mean while it cruelly ſqueezes the Hand, and cauſes a great Pain. The readieſt way to be deliver'd is to heat its Shell; for then it quits its Hold, and its Shell too. They are eaten, and accounted excellent Meat by the Natives of the Country, but they are pernicious to Strangers. They find in its Shell about half a Spoonful of clear Water, which is a ſovereign Remedy againſt the Bliſters which are raiſed upon the Skin by a Milk or Water which falls from the Branches of a Tree of the Country, called *Manchenille*.

The Inhabitants of the Iſland fiſh for them, and, as ſoon as they have taken them, ſtring them up by the Head, and expoſe them to the Sun, which diſſolves them all but the ſolid Parts: This diſſolved Subſtance is an Oil of the Thickneſs of Butter, and in Winter is white, inclining to yellow, and half liquefy'd; but in Summer it is reddiſh, of a fetid Smell, and a fiſhy, diſagreeable Taſte.

This Oil is eſteem'd excellent for Rheumatiſms, to which the *Savages* are very ſubject; and it cures them ſo ſpeedily, that thoſe who have felt its Effect, attribute it to a kind of Miracle. It is ſold very dear, which is the Reaſon why it is ſo ſcarce in *Europe*. Brother *Yon*, a Jeſuit, having been ſo kind as to ſend me ſome from *Martinico* to *Paris*, I made Trials of it; but could not perceive, that it produced better Effects than our Oils of Earthworms, Lizards, and Caſtor. A Remedy does not act always equally in different Climates: It is poſſible, that the *Savages* having their Pores more open than the People of our Country, the Rheumatic Humour may with more Eaſe and Speed perſpire thro' them, when rubbed with this Oil; perhaps too it might loſe Part of its volatile Salt, and of its Virtue in Tranſportation. *Lemery des Drogues.*

CANCER. The Crab, of which there are two Species, the Sea-crab, and River-crab. The former is thus diſtinguiſh'd.

Cancer, Offic. Schonef. Icht. 30. *Cancri marini maximi apicibus chelarum nigricantibus*, Ind. Med. 25. *Pagurus*, Bellon. de Aquat. 368. Aldrov. de Exang. 186. Jonſ. de Exang. 21. Geſn. de Aquat. 155. Mer. Pin. 192. Charlt. Exer. 57. *Cancer Mæas*, Rondel. 1. 560. *quoad Fig. & Deſcript. ſed nomina ſunt tranſpoſita*. THE SEA-CRAB.

The other Crab is thus diſtinguiſh'd.

Cancer fluviatilis, Offic. Jonſ. de Exang. 23. Charlt. Exer. 57. Bellon. de Aquat. 365. Rondel. 2. 208. Geſn. de Aquat. 137. Matth. 307. *Cancer fluviatilis Matthioli*, Aldrov. de Exang. 207. THE RIVER-CRAB.

Rieger, from whom the enſuing Account of the *Cancer* is taken, ſeems not to diſtinguiſh betwixt the Lobſter and Crab, but treats of both together under the Name of *Cancer*. See ASTACUS.

The *Cancer* of the *Latins* correſponds to the καρκῖνος, the ἀσακὸς, or the κάμμαρος of the *Greeks*, and to the *Crab* of the *Engliſh*. It is an Animal ſo well known, that an Attempt to deſcribe it might juſtly be look'd upon as ſuperfluous. Its Shell ſupplies the Place of Bones, and affords proper Origins and Inſertions for all its Muſcles. It is an exanguious Animal, of the oviparous and amphibious Kind. There are two Species of it, the *Cancer fluviatilis*, or Craw-fiſh, found in Rivers and freſh Water. This Species is diſtinguiſh'd from the other by the Name of *Cammarus*, or *Gammarus*. The other Kind is the *Cancer Marinus*, known among us by the Names of *Sea-crab*, or *Lobſter*. This Species is an Inhabitant of the Sea, and is diſtinguiſh'd from the former by the Name *Aſtacus*.

As the *Cancer fluviatilis*, or Craw-fiſh of the *Europeans*, is moſt generally uſed in Medicinal Intentions, we ſhall at preſent take it more particularly under our Conſideration. Theſe Animals, then, are greedy of Fleſh, and flock in great Numbers about Carcaſes thrown into the Water where they are, and never retire ſo long as any of the Fleſh is left; they alſo feed upon dead Frogs when they come in their Way. No Parts of theſe Animals are eatable, except their Claws and Tails, the Fleſh of which is ſweet and ſalutary; but that contain'd in the Claws is ſofter than that of the Tail. *Marſili Danubius Pannonico-Myſicus obſervationibus illuſtratus*, Tom. 4. The Fleſh of theſe Animals is, with ſome Difficulty, digeſted by weak Stomachs: Hence many have been obſerv'd to complain of a violent Pain in their Stomachs, after eating Craw-fiſh over Night. *Eph. N. C. D.* 3. *a.* 3. *o.* 108. But, to others, Craw-fiſh boil'd proves an excellent and moiſtening Aliment, highly proper to be uſed in Summer, and by ſuch as labour under hot Diſorders. Hence we perceive, why *Etmuller* aſſerted, that the Broth or Decoction of Craw-fiſh ren-

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der'd the Body ſoluble. The Fleſh of theſe Animals is accounted beſt in the Summer Months, and is commonly thought to be bad thro' the reſt of the Year.

There are various Methods of preparing theſe Animals; for they may either be boil'd or fry'd, and then taken out of the Shells, and made up in a great Variety of Diſhes. Preparations and Broths of the Craw-fiſh are chiefly celebrated, not only for a palatable Aliment, but alſo for anſwering ſome Medicinal Intentions, as they are of a moiſtening Quality, and ſheath up and correct Acrimony. The Broth is prepar'd of three, four, or five Craw-fiſhes, either alive, or ſuffocated in Milk or Water. After having cut off their Heads, and extracted their Inteſtines, they are to be bruiſed and boil'd in the Broth of Fleſh, or Poultry, till they become ſufficiently red; after which the Liquor is to be ſtrain'd off, and Salt, Butter, or Mace, added, as the Caſe ſhall ſeem to require. This Broth is to be drank by the Patient, and may be render'd ſtill more medicinal by the Addition of various Herbs and Animals, ſuch as Snails, and other Subſtances, according to the Intention of the Phyſician. *Portius* recommends three Preparations of them, for preſerving Soldiers from Dyſenteries and Diarrhœas. The firſt Method of preparing them is to boil them in Water, together with Parſley and Smallage; and to add Butter, Oil, or the Fat of an Ox, a Weather, a He or She Goat, or of any other Animal of a like Nature. The Craw-fiſhes thus prepar'd are to be eaten, with Bread ſoak'd in the Broth. The ſecond Method of preparing them is, by roaſting them on the Coals, and eating them with Bread. The third Method is, after they are render'd ſufficiently dry by the Heat of the Fire, to reduce the Whole of them, the Shells not excepted, to a Powder, of which two Drams are to be taken twice or thrice a Week in Broth, or in any Water that may ſeem a proper Vehicle. *Portius de Militis in Caſtris Sanitate tuenda.* According to *Rondeletius*, *Foreſtus*, affirms, that the Craw-fiſh is a very proper Aliment in Atrophies, and for ſuch as are phthiſical, or require a Stimulus to Venery. For anſwering theſe Intentions, they are firſt to be well waſh'd in common Water; but the Sea-crab is to be waſh'd in a Decoction of Barley, in order to remove the Salt which adheres to its Shell: After this, they are to be ſuffocated in new Milk, and long boiled either in it, or in the Broth of a fat Capon. When thus prepar'd, they are a Diſh much uſed by the Pope and Cardinals. We have a memorable Story of a certain Religious, who was ſo immoderate a Lover of Craw-fiſhes, that, upon ſeeing ſome of them among other Diſhes at Table, he was ſeized with ſuch a Difficulty of Breathing, and an Oppreſſion of his Senſes, that he would have probably fainted away, if he had not been forthwith help'd to ſome of his darling Diſh. *Eph. N. C. D.* 1. *a.* 3. *o.* 187. But as all Subſtances do not agree with every Conſtitution, either in Conſequence of ſome Peculiarity in the Conſtitution, which Phyſicians call Idioſyncraſy, or of their being too much uſed, ſo a certain Perſon who was a great Lover of Craw-fiſh, upon eating one or two, forthwith felt an Inflation of his Breaſt, Neck and Head, attended with a certain Uneaſineſs and Efflorescences, or red and ſerous Spots on his Breaſt and Head. *Eph. N. C. D.* 2. *a.* 3. *o.* 35. When ſuch a Peculiarity of Conſtitution does not forbid the Uſe of Craw-fiſh, they are highly conducive to correct the Acrimony of the Humours, as has been ſhewn by that celebrated *French* Phyſician, *Joan. Bapt. Gaſtalidis*, in diſcuſſing that Queſtion, *Whether the Craw-fiſh is proper in a ſaline State of the Blood? Journal des Sçav. for the Year* 1714. Hence it is, that the Juice of the Craw-fiſh is very properly added to reſtorative and nutritive Broths, for ſuch as labour under a Conſumption, or a Phthiſis. This Juice is alſo of a moiſtening Quality, and, when mix'd with the Juice of Houſe-leek, is very proper for being apply'd to the Head, in order to remove thoſe violent Pains which threaten a Delirium. *Hoffman de Præſtantia Remediorum domeſticorum.* According to *Etmuller*, the expreſſed Juice of the Craw-fiſh, with that of Houſe-leek, makes an excellent Gargariſm in the Quinſey. In Burns and Scalds, ſcarce any Remedy is eſteem'd more effectual than newly expreſſed Juice of the Craw-fiſh, which *Grulingius* alſo highly extols againſt Redneſs of the Face. For the ſame Reaſon this Juice, with an Addition of that of Tobacco, proves an excellent Remedy, if pour'd or injected into ſordid Ulcers and Fiſtulas. Hence in Dyſenteries, where the large Inteſtines, or even the *Inteſtinum rectum*, are injur'd, Clyſters conſiſting of a Decoction, or of the Juice, of the Craw-fiſh, are very properly injected. In burning Pains, and Spaſms about the Region of the Kidneys, ariſing from the Stone or Gravel, there is ſcarcely any Remedy more efficacious than the Craw-fiſh bruiſed and applied to the Part affected. According to *Lanzonius*, *Rulandus* ſucceſsfully cur'd a Head-ach, accompany'd with a Delirium, by applying to the Patient's Forehead the expreſſed Juice of the Craw-fiſh, mix'd up with Opium and Saffron. *Etmuller*, Vol. 1. informs us, that ſome mix unſalted Butter with the Craw-fiſh bruiſed. Theſe they expreſs and inſpiſſate till the Moiſture is evaporated; ſo that what remains is the *Butyrum Cancrorum*, a Remedy of ſingular Efficacy againſt a Phthiſis, and Bruiſes from Falls ſince; upon account of the Craw-fiſh, it is an excellent Vulnerary, eſpecially in Exulcerations of the Kidneys, urinary Ducts, and other internal Parts. *Philippus Jacobus Sachs*, in his *Gammarologia*, gives us the following Receipt for the *Butyrum potabile Cancrorum*, which he wonderfully extols as an efficacious Remedy againſt Bruiſes from Falls.

Take ſixty Craw-fiſh in the Month of *June*, bruiſe them in a Mortar till they are reduc'd to the Conſiſtence of a Poultice; then put them in a glaz'd Veſſel, and add a large Quantity of *May* Butter, or that which is made of the Milk of Goats; of Goats Lard, and Oil of Olives, each half a Pound; of Badgers Suet, which is not rancid, a ſufficient Quantity; of Goat's Blood, one Ounce; ſix Nutmegs reduc'd to Powder; of the Powder of the Roots of Madder, Tormentil, and Burnet, each an Ounce; and of Saracens Conſound cut ſmall, one Handful. Let them boil together for half an Hour, ſtirring them continually, in order to prevent their burning; then ſtrain them thro' a Cloth; then cleanſe the Veſſel, put the ſtrain'd Liquor into it, and let it boil over a moderate Fire: Take off the Froth which riſes during the boiling, and ſtrain it a ſecond time thro' a Cloth; when the Liquor is become cool, put it into a Glaſs to be kept for Uſe.

In Falls, or in Caſes where a Vein is burſt by any violent Motion, or carrying a heavy Burden, the Doſe of this Medicine is the Bulk of a large Filbert, to be exhibited for the firſt time in Vinegar; after which the Doſe is to be frequently repeated, chuſing warm Ale for a Vehicle. In the *Pharmacopœia Argentoratenſis*, the *Oleum Cancrorum* is prepar'd by boiling bruiſed Craw-fiſh in Linſeed-oil, and afterwards ſtraining off, and expreſſing the Liquor. This Medicine is recommended to be uſed externally in Burns, and for allaying and mitigating Pains. *Simeon Sethi* affirms for a Truth, that Oil in which Craw-fiſh have been boiled, is an efficacious Remedy againſt burning Pains of the Ears, if dropt into them. The *Aqua Cancrorum Simplex*, which in *Lemery's Pharmacopœia*, and that of *Schroeder*, is order'd to be diſtilled from bruiſed Craw-fiſh in *Balneo Mariæ*, ſeems to poſſeſs no more Virtues than common diſtilled Water, ſince nothing but an inſipid Phlegm paſſes the Helm; for which Reaſon *Etmuller* thinks, that the Water obtain'd from putrid Craw-fiſh is preferable to this, ſince the former is impregnated with a volatile urinous Salt, diſengag'd and ſet at Liberty by the Putrefaction. But whether this Water poſſeſſes extraordinary diuretic and antinephritic Virtues, and is an uncommonly efficacious Remedy againſt all Inflammations, the Bites of mad Dogs, Wounds, and Ulcers of the internal Parts, and eſpecially of the Breaſt and Lungs, are Points we ſhall leave to be determin'd by the Experience of others. This Water is, no doubt, of an alcaline Quality; and this Circumſtance probably induc'd the learn'd *Tralles*, who maintain'd that moſt Diſeaſes proceeded from an Acid, to believe that it might be of Service in the above-mention'd Diſorders. *Tralles de terreis Remediis.* For external Uſe, the *Aqua Cancrorum Quercetani* is prefer'd to the expreſſed Juice of the Craw-fiſh. This Water of *Quercetan's* is prepar'd by boiling Craw-fiſh in the Water of the greater Houſe-leek, in a cloſe double Veſſel, for the Space of a whole Day; after which this Water is to be diſtil'd, and what is yielded by Diſtillation is to be three times cohobated upon the *Caput Mortuum*. This is a Medicine highly recommended againſt Burns, Inflammations, and Cancers; but it might be render'd ſtill more efficacious for the Cure of Cancers, and phagedenic Ulcers, by extracting the Salt from the Aſhes of the *Caput Mortuum*, with its own Water. *Quercet. Tom.* 2. More ſeems here to be promiſed than can well be expected from an alcaline Liquor. Nor do the wonderful Virtues which *Faber* aſcribes to his *Quinta Eſſentia*, or *Arcanum Cancrorum*, ſeem to be leſs dubious. By a ſlow Fire he diſtils Water from the Fleſh of Craw-fiſh. The Water yielded in the Proceſs he rectifies ſeven times, and then, after incinerating the *Caput Mortuum*, he orders the Salt to be extracted from it with the Water of Reſt-harrow, Gromwel, or Saxifrage, and added to the Craw-fiſh-water. He wonderfully extols this Remedy for diſſolving and expelling the Stone in the Kidneys and Bladder, and for removing its efficient and antecedent Cauſes. When mix'd with the Spirit of Turpentine, he recommends it for the Cure of a Difficulty in diſcharging the Urine; as alſo for removing Dimneſs of Sight, Specks, Films, and Cataracts of the Eyes, if dropt into them thrice a Day. He orders it to be taken internally in common Broth, or in any proper Water; but does not aſcertain the Doſe, with reſpect to which he could not well have erred, ſince it is a Liquor of no Virtues, becauſe the inſipid Aſhes of the calcin'd *Caput Mortuum* yield no Salt in Elixiviation. This Medicine, when exhibited with Spirit of Turpentine, may, indeed,

deed, operate by the Virtue of that Spirit, but otherwiſe its Efficacy will not much ſurpaſs that of common pure Water. *Fabri Oper. T.* 2. The ſame may be affirmed of that Water, which, in *Lemery's Pharmacopœia*, is ordered to be prepared by Diſtillation, from bruiſed Craw-fiſh and new Aſſes-milk. The *Aqua Ophthalmica Mynſichti*, in *Lemery's Pharmacopœia*, is poſſeſſed of a detergent Quality, in conſequence of the Things ſubjected to Diſtillation along with the Craw-fiſh; tho' it muſt be owned, that ſome of them do not yield their Virtues during the Proceſs. When, therefore, Craw-fiſh are to be uſed for Medicinal Purpoſes, their Juice, or Broth prepared of them, is preferable to a Water diſtilled from them. From putrefy'd Crabs, indeed, as alſo from freſh ones diſtilled with an Alcali, an urinous Spirit and a volatile Salt are obtained; but *Etmuller* juſtly doubts whether theſe Preparations are ſuperior to other volatile Subſtances of a like Nature; ſo that nothing of a ſpecific Nature, or uncommon Excellence againſt Diſeaſes, can be expected from ſubjecting the Craw-fiſh to Chymical Proceſſes. The Antients recommended the Aſhes of the calcined Craw-fiſh, not only alone, but alſo in Conjunction with Gentian and Frankincenſe, for the Cure of ſuch as were bit by mad Dogs. *Dioſc. Lib.* 2. *Cap.* 10. But I ſcarce think, that a modern Phyſician can be perſuaded, that theſe Aſhes poſſeſs this remarkable Virtue, even tho' the divine *Hippocrates* himſelf had aſſerted it; for theſe Aſhes are no more than an earthy Subſtance, without Salt, or a pure inactive Calx, which *Ludovici*, in his *Pharmacopœia*, when talking of its diuretic Virtue, thinks to be of little Efficacy, except when heightened and exalted by an Addition of bitter Alexipharmacs. *I muſt, however, obſerve, that theſe Shells, calcined, are a ſort of Lime, and, as ſuch, may be endued with Medicinal Virtues.* Theſe Aſhes are at preſent exploded, tho' they ſtill retain a Place in the *Pharmacopœia Pariſienſis*. *Hoffman*, in *Off. Paralep. Cap.* 11. thinks theſe Aſhes ought to be prepared of that Species of Sea-crab which has a Tail lying flat upon the Body, and which he would have to be kept in the Shops, on account of the Encomium beſtowed on them by *Galen*, who aſſerts, that he never knew any, bit by a mad Dog, in Danger, provided they only knew how to make a proper Uſe of this Powder. But the Sea-crab, when calcined, does not afford a Powder of higher Medicinal Virtues than the Craw-fiſh, or River-crab; nor is it poſſible, as *Æſchrion*, from whom *Galen* had this Secret, believed, that they ſhould acquire any additional Virtues by being calcined under certain particular Aſpects of the Planets. To *Hoffman's* Authority we ſhall oppoſe that of *Helmont*, who owned this Powder of the Craw-fiſh to be void of Efficacy. For Medicinal Intentions *Etmuller* prefers the Craw-fiſh, gradually dry'd in the Mouth of an Oven, in an unglazed earthen Veſſel, and reduced to a Powder in a Mortar, to its Aſhes, in Caſes where Urine is to be provoked, or Ulcers of the Bladder and Kidneys to be cured; as alſo for reſolving grumous and coagulated Blood. He alſo affirms, that, in Conjunction with a certain fixed vegetable Salt, and a proper Water, it cures intermittent Fevers, by exciting a Diaphoreſis; and that between half a Dram and a Dram of it was *Poterius's* Specific againſt Abortion: But its ſpecific Virtues for this Purpoſe may juſtly be called in Queſtion; nor is it probable, that it is poſſeſſed of any beſides an abſorbent alcaline Quality, by which it becomes a Corrector of Acids. *Etmuller*, however, is of Opinion, that the Craw-fiſh, calcined by a ſtrong, or a long-continued Fire, approaches to the Nature of Quick-lime. "I took, ſays he, Craw-fiſh calcined to Whiteneſs, of a "ſtronger and more penetrating Taſte and Smell than that of "Lime. Upon pouring Water upon them, ſome Marks of "an Effervescence were exhibited, but without an Ebullition; "and, immediately after, a ſaline white Pellicle floated on the "Surface." *Helmont* informs us, that Swine are ſo fatal to Craw-fiſh, that thoſe who convey the latter in a Carriage, are obliged to watch, leſt any of the former ſhould chance to run under the Carriage, in which Caſe all the Craw-fiſh are found dead. Whether this be Fact or not, we ſhall not take upon us to determine; only of this we are certain, that if it is true, it is very ſurpriſing. We now come to conſider the *Lapides* or *Oculi Cancrorum*, or, as we call them, *Crabs-eyes*. Theſe were, by the Antients, thought to be found in the Brain; but there are two of them formed in each Crab immediately above the Stomach, which is placed in the Head, and ſurrounded on all Sides by a ſoft humid Matter, called *Mucus*, by many thought to be the Fœces of the Animal, and by *Bellonius* ſuppoſed to be its Liver. Theſe Stones lie under that Membrane which is to form a new Stomach for the Animal, one on each Side, when, in the Summer Months, the Craw-fiſh caſt their Shells and Claws, and have them gradually renewed, from the Skin's becoming more and more indurated; upon which theſe Stones, being converted into the Nouriſhment of the Animal, gradually diſappear, and are loſt. As *Helmont* was the firſt who taught the Manner in which theſe Stones were formed, and as his Account has ſince been confirmed by others, it will not, on this Occaſion, be improper to preſent the Reader with a Tranſlation of what he has ſaid on this Subject. His Words are as follows: "By repeated and accurate Diſſections of the "Craw-fiſh, I have diſcovered the following Particulars: Firſt, "that the Stomach is ſituated in the Head of the Craw-fiſh, "near the Crown. The Males begin every Year to grow ſick "about the Middle of the Month of *June*, and the Females in "*July*, before they caſt their Shells; for they are, as it were, "half-dead, and immoveable for nine Days and more. At this "Time a new Membrane is formed round their Stomach, be"tween which and the Stomach there is a certain milky Hu"mour, which, by Degrees, is contracted on both Sides into "a Concavity, and acquires the Form of a Stone, upon the ex"terior convex Globe of the Stomach, where it touches and "covers it. But neither at this time, nor for a great while "after, does the Crab eat any thing. What ſeems in"credible is, that the old or interior Stomach is converted into "an alimentary Mucilage, and the new Stomach ſucceeds in "its room. Round about that milky Subſtance, adhering to "the convex Part of the old Stomach, ſuch a Pellicle is formed "as is uſual on warm Milk; and this milky Subſtance in"creaſes between the two Membranes of the old and the new "Stomach. All theſe Circumſtances I have univerſally ob"ſerved with uncommon Pleaſure, in diſſecting about two "hundred Crabs. At laſt the remaining Part of the Milk "goes to the Nouriſhment of the Animal. Laſt of all, both "theſe Stones are alſo gradually diſſolved, and converted into "Aliment by little and little. The Crab eats nothing, or, at "leaſt, nothing is found in its Stomach, ſo long as theſe Stones "remain in it; and the Animal lives about twenty-ſeven Days "upon its old Stomach, which is gradually conſumed, and upon "the Stones, which are afterwards diſſolved." Such of theſe Stones as are taken from live Crabs are of a ſomewhat azure Colour, and are eſteemed better than thoſe obtained from boiled Crabs, which are of a whiter Colour. In Figure they reſemble half a Pea; they are hard, rough, and, on the flat Side, mark'd with a ſmall Pit; but they are more ſmooth on the convex Surface, and have an earthy Taſte, but no Smell. They are of a lamellated Contexture, like that of the Bezoardic Stone. By Calcination theſe Laminæ exfoliate, and yield an urinous Smell. When ſubjected to a Chymical Analyſis, they yield the ſame things that may be obtained from the ſolid Parts of other Animals, as *Etmuller* informs us in the following Words: "Theſe "Stones, ſays he, when diſtilled by a Retort, yield a Phlegm, "an urinous Spirit, and a volatile Salt, tho' not in a very large "Quantity. A highly fetid Oil is alſo, at the ſame time, "obtained from them. The Caput Mortuum, upon an Affu"ſion of Water, produced an Effervescence, eſpecially when "newly prepared, like Quick-lime." His other Experiments on Crabs-eyes are the following: "I diſſolved, ſays "he, Crabs-eyes in Spirit of Salt, which left a kind of light "earthy Subſtance, when the Solution was drawn off by the "Heat of a Lamp. Common Water, poured upon the Ca"put Mortuum, produced a conſiderable Heat, and afforded "conſpicuous Signs of an Ebullition and Effervescence; but "the Water, when again drawn off, afforded no Marks of a "volatile Salt. At laſt the Caput Mortuum, upon taking it "out of the Glaſs, and pouring Water upon it, did not yield "the ſmalleſt Sign of Heat." From the Experiments made by Mr. *Homberg* it appears, that an Ounce of the Spirit of Salt diſſolves three Drams of Crabs-eyes; whereas four Drams and nine Grains may be diſſolved in an Ounce of the Spirit of Nitre. *Mem. Acad. Reg. Sc. A.* 1700. From what has been ſaid we learn, that Crabs-eyes are among the Number of thoſe earthy Bodies which are commonly called alcaline or abſorbent, which are diſſolved by Acids, and which do not exhibit any Signs of their containing a volatile Salt, till they have received ſome kind of Change by the Fire. From the alcaline Nature of theſe Crabs-eyes, their apparent progreſſive Motion when thrown into Vinegar, or when Vinegar is only ſprinkled upon them, is commonly accounted for, becauſe alcaline Menſtruums receive and abſorb Acids. Theſe Stones, or Eyes, are kept in moſt of the Shops, and found in great Plenty in the *Budziac Tartary* of *Beſſarabia*, but eſpecially in the Deſart of *Wallachia*, not far from the Town of *Tegina* or *Bender*; as alſo in the *Ruſſian Ukrain*, about the Rivers *Boryſthenes* and *Tyra*, throughout *Podolia*, a Country watered with ſeveral Rivers. Hence they are carried for Sale thro' *Poland*, to *Conningsberg*, *Dantzick*, and *Breſlaw*.

Fictitious or adulterated Crabs-eyes, nearly reſembling thoſe of the genuine Kind, are ſometimes ſold by Impoſtors, who prepare them of Tobacco-pipe Clay. But the Fraud is eaſily detected, becauſe they not only want the lamellated Contexture of the others, which is diſcovered in calcining them, but are alſo heavier than thoſe of the genuine Kind. Several other Methods of diſtinguiſhing the ſpurious from the genuine may be ſeen in *Eph. N. C. D.* 3. *a*, 3. *o.* 147. 151. or, as we are taught in the *Acta Literaria Sueciæ*, we may pour upon them ſome acid mineral Spirit, ſuch as that of Nitre or common Salt; for, if the Stones are genuine, an Effervescence is immediately produced; and, after the Effervescence is over, the acid Liquor becomes ſweet. But, if they are factitious, or made of Clay, a ſmall Ebullition is, indeed, produced, but the Acidity of the

Spirit remains, and again produces a violent Effervescence, upon an Addition of the Powder of true Crabs-eyes. *Valentini* informs us, that this Experiment, made with acid Spirits, is deceitful, when the factitious Stones are prepared of Shells. But Art and Fraud have taught Mankind to counterfeit these so very well, that there is scarce a Possibility of distinguishing the spurious from the genuine. There is another Piece of Imposture highly prejudicial to Health. Those Crabs-eyes which are of a somewhat azure Colour are esteemed preferable to the others, and sold at a higher Price, under the Name of live Crabs-eyes. At *Ratisbon* a certain Person tinged counterfeited Stones of this Colour, probably with Smalt, which is made of Cobalt, and is of a poisonous Quality: For one Dose of the Powder of these factitious and high-coloured Stones killed a Woman in the Space of thirty Hours. *Buchneri Miscellanea.* But whether Crabs-eyes are a Medicine of such Importance, as that the Physician ought to be highly solicitous about their being genuine or not, we leave to others to determine. Their Use in Dentifrices is not certainly so great as is commonly thought, since such a Powder, by the Hardness of its Parts, can do no more than what is to be expected from other rough Substances. *Tralles de Remediis terreis* informs us, that *Sachs*, in his *Gammarologia*, ascribes uncommon, and even incredible Virtues to them, and seems surprised, that Physicians, who have read that Work, do not attempt the Cure of some Diseases by Crabs-eyes alone, without the Use of other Medicines. The celebrated *Hoffman* tells us, "That the Powder of Crabs-eyes alone, prepared "with Egg-shells, and mixed up with a fourth Part of Nitre, "is a Medicine of so great Efficacy, that one Dram of it pro- "duces very happy Effects almost in all chronical and acute "Distempers, especially those attended with immoderate Heat. "It is a Powder of very extensive Use, and highly serviceable for "absorbing the Acid of the Primæ Viæ in Hypochondriac and "Scorbutic Cases, and for allaying Heat in all kinds of Fevers. "It is also of singular Service where a Diaphoresis is required. "The Powder of these Stones, when exhibited with distilled "Vinegar, operates still more efficaciously, since it powerfully "resolves coagulated Humours, provokes Urine and a Diapho- "resis, and is used with singular Advantage in all Fevers, in "the Plague and other malignant Diseases, in Pleurisies, Pe- "ripneumonies, and in all Inflammations." Some affirm, that Crabs-eyes are possessed of Bezoartic Virtues, and, consequently, think them of Service in several very considerable Disorders. That, in many Cases, Physicians have been persuaded of their uncommon Efficacy, is obvious from the large Number of Recipes in the Pharmacopœias, in which Crabs-eyes make an Ingredient, unless we should say, that this is only done to increase the Number of the Ingredients without any other View; which is not probable. Singular Virtues are, therefore, ascribed to Crabs-eyes in correcting Acidity, allaying the Heat of the Blood in all kinds of Fevers, exciting a Diaphoresis, and provoking Urine to such a Degree, as even to cure the Dropsy by the plentiful Discharge made. But *Tralles* seems to be in the right, when he suspects, that "Insignificant Medicines "have often been extolled at random, in Imitation of others "who went before, to the great Detriment of the Art; since "this Practice proves a Stumbling-block not only to Students, "but to Practitioners of long standing." That we may, therefore, keep a just Medium, and neither attribute imaginary Virtues to this Medicine, nor destroy its real ones, we must allow, that it only acts as an Absorbent in the Primæ Viæ, by absorbing, and consequently subduing, the peccant Acid, or correcting its Acrimony. When levigated to a fine Powder, which, in the Shops, is called Preparation, these Eyes may be exhibited in any Dose which can be borne by the Stomach, to which they can only prove offensive by their Weight. So that they prove a proper Medicine not only for removing, but also preventing Diseases arising from an Acid in the Primæ Viæ. For this Reason *Portius*, in his Treatise *De Militis in Castris Sanitate tuenda*, recommends to the Soldiers, as a Preservative against Diarrhœas and Dysenteries, a Dram of the Powder of Crabs-eyes. Their absorbent Virtue is not conveyed to the Mass of Blood, nor, indeed, is there any Occasion for it there. But if they are mixed with an Acid, either without the Body, or within it, in consequence of a Property common to all other absorbent or alcaline Substances, they are transformed into a kind of neutral or indifferent Salt: So that they may by Accident, in consequence of the Acid they have admitted and absorbed, act like an Aperient or Resolvent; that is, excite a Diaphoresis, or Diuresis; and, consequently, as they now partake of the Nature of a neutral Salt, prove serviceable in many Diseases, where the Exhibition of an Absorbent does not in the least seem necessary. This *Tralles* himself owns in *Cap.* 8. From what has been said, we may see in what Sense manifold Virtues may be ascribed to Crabs-eyes. Hence we may also perceive, why, according to *Etmuller*, a Dram of the Powder of Crabs-eyes may be said to be an excellent Prophylactic, or Preservative, for hard Drinkers, and such as are subject to arthritic or nephritic Disorders; because it corrects and subdues the Acid of the Wine, and, by that means, prevents the bad Effects it might otherwise produce. But we must beware of falling into the Error of those who affirm, that Crabs-eyes are efficacious against any particular Disease, because an Acid is its immediate Cause; for these are things that cannot be subjected to a rigorous Examination, nor does the Action of Absorbents, as such, reach the Blood-vessels, and most remote Parts of the Body. *Helmont* himself, who makes an Acid the Cause of too many Disorders, when he asserts the diuretic Virtues of Crabs-eyes, does not believe, that their Energy reaches the Seat of the Disorder. "It is far," says he, "from being so, since they only "deprive what we drink of an acescent Quality, which alone, "however little of it is conveyed to the Urine, is sufficient to "produce Stranguries, Dysuries, and other burning Pains, "arising from the Stone." If we ascribe true and genuine, and not chimerical and imaginary Causes to Diseases, we shall not readily admit the over-strained Praises by many Authors bestowed on Crabs-eyes to be just; when, for Instance, they are said to be Correctors of the Acid of Wounds and Ulcers, and for that Reason are classed among Traumatics, and made an Ingredient in the *Pulvis conglutinans Cnoefelii*, together with the Sloughs of Serpents, or, in their stead, Earth-worms. *Etmuller*, *Vol.* 1. Nor, if we consider maturely, shall we attempt laborious Preparations of Crabs-eyes for Ulcers and Wounds, which, tho' they should answer the Intention by means of the other Ingredients, might still be prepared in a more easy Manner. Of this we have Instances in the *Essentia oculorum Cancri in Boetii de Boot Gammarum & Lapidum Historia*, *Lib.* 2. *Cap.* 176. But when *Helmont* affirms, that not only a fine diuretic, but also a vulnerary, and an antifebrile Medicine may be obtained from Crabs-eyes, provided they are resolved into their original Form of Milk; we can say nothing of this Medicine, because we know not whether it ever has, or ever can be used by any one. But we must not forget, that, according to the Experiments of Mr. *Homberg*, the same Quantity of the Spirit of Nitre, and of the Spirit of Salt, is required to saturate a smaller Quantity of other earthy alcaline Substances, such as Coral, Pearl, Mother of Pearl, oriental and occidental Bezoar, the human Calculus, Oyster-shells, calcined Hartshorn, Quick and Slak'd-lime, than of Crabs-eyes a larger Quantity of which is necessary to absorb and receive an equal Quantity of these acid Spirits. Hence it follows, that Crabs-eyes are possessed of a smaller Efficacy or Virtue of absorbing an Acid, than the now-mentioned Ingredients. What we call the *Oculi Cancrorum Præparati* are only Crabs-eyes, reduced to a Powder, and levigated on a Marble, with an Affusion of common Water, or any distilled Water, such as that of Roses or Baum, and afterwards made up into Troches. These Troches are prescribed in the same Cases where the Crabs-eyes are used. The *Pulvis absorbens citratus D. Sthalii*, in the *Dispensatorium Borusso-Brandenburgicum*, is prepared thus:

Take of Crabs-eyes, any Quantity; pour as much fresh Lemon-juice upon them as is sufficient to saturate them; then evaporate the Moisture, over a gentle Fire, in an Earthen or Glass Vessel, stirring it with a wooden Spatula; then let it be triturated, and passed thro' a Linen Sierce.

Because, in this Preparation, the Acid is mixed with the Alcali, we know why a Scruple of it comes to be recommended as a gentle Resolvent in continued and inflammatory Fevers. This Powder is also called *Lapides Cancrorum, acido citri saturati. Schurz. Præl.* The *Pulvis absorbens nitratus D. Sthalii*, in the same Dispensatory, consists of a Mixture of equal Parts of Crabs-eyes prepared, of the Shells of Fish prepared, and depurated Nitre. The *Pulvis absorbens tartarisatus D. Sthalii*, in the same Work, is prepared thus:

Take of Tartar, grosly pounded, two Ounces; of Crabs-eyes prepared, half an Ounce: Boil in a sufficient Quantity of common Water; then evaporate the Moisture.

It agrees in Virtues with the *Pulvis absorbens citratus.*

The *Pulvis absorbens D. Wedelii*, in his *Opiologia*, is prepared thus:

Take of the Vitriol of Mars, six Grains; of prepared Shells, of prepared Crabs-eyes, of Coral, of diaphoretic Antimony, and of native Cinnabar, each half a Scruple, or between fifteen and twenty Grains; of Laudanum Opiatum, one Grain; and of the Oil of Cloves, one Drop: Mix up into a Powder, for six Doses, to be taken in Cinnamon-water, that of Baum, or any other spirituous Water; or with domestic Vehicles, such as Wine or Ale. The Dose may be repeated every Hour, or less frequently, according as Circumstances require.

Wedelius, the Inventor of this Medicine, bestows singular Encomiums upon it in hypochondriac and hysterical Disorders, as also in Syncopes, and Palpitations of the Heart. The *Solutio Oculorum Cancrorum* is made by dissolving Crabs-eyes in distilled Vinegar, and filtrating them thro' a Paper. This Medicine may be prepared *extempore*, when Necessity requires. When this Solution,

Solution, after Filtration, is evaporated to Dryneſs, what remains is called the Salt of Crabs-eyes, which is nothing but the Acid of the Vinegar retain'd in the Powder; but this Medicine is now obſolete, and out of Date. If to the aforeſaid filtrated Solution we add Oil of Tartar per Deliquium, a very white Powder is precipitated, which, when edulcorated and dried, is the Magiſtery of Crabs-eyes; of which we may affirm, that it is only the Powder of Crabs-eyes, deprived of the Acid before pour'd upon it, and which might be equally well prepar'd without any previous Solution.

The Shells, and eſpecially the Claws of Crabs, are of the ſame Nature and Uſes with their Eyes. Theſe Shells, reduced to a Powder, and mixed with Oil of Roſes, are recommended againſt the Itch in Children. This Medicine ſeems to be recommended againſt the Itch, from a Perſuaſion, that this Diſorder ariſes from an Acid, which is indeed often the Caſe; but that ſuch a repellent Ointment conduces to the Cure of the Diſorder, is what we dare not aſſert. The black Points of the Claws are principally uſed in Medicine. The Claws are prepared in the ſame manner with the Eyes. The *Pulvis e Chelis Cancrorum compoſitus*, which is alſo call'd *Pulvis Bezoardicus Anglicus*, and *Pulvis Gaſconii*, *Gaſcoign*'s Powder, as in the *London Diſpenſatory*, is

> Made up of prepared Pearls, Crabs-eyes, red Coral, the whiteſt Amber, calcin'd Hartſhorn, and Oriental Bezoar, each an Ounce; and of the Powder of the black Points of Crabs-claws, a Quantity equal to all theſe. When theſe Ingredients are pounded and mix'd, they are made up into ſmall Balls, with a Solution of Gum Arabic.

In the *Pharmacopœia Pariſienſis* the ſame Number of Ingredients is retain'd, but the Proportion is alter'd; and, inſtead of the Gum Arabic, Jelly of Vipers is uſed. In the *Pharmacopœia Edinburg.* the Ingredients are the ſame, but the Proportion alſo varied; and they are kept in a Powder. In the *Pharmacopœia Leidenſis* the Form of a Powder is alſo retain'd; but, beſides the above-mentioned Ingredients, there is an Addition of Contrayerva-root, Troches of Vipers, and Leaf-gold. In the *Diſpenſatorium Brandenburg.* the Troches of Vipers and Leaf-gold are omitted; and to the other Ingredients are added *Lemnian* Earth, Ceruſs of Antimony, Ambergriſe, and Saffron, all which are made up into ſmall Balls, with Jelly of Vipers. In *Lemery's Pharmacopœia*, inſtead of the *Lemnian* Earth, the reguline diaphoretic Antimony, and the Ambergriſe, Contrayerva, or *Virginian* Snake-root, are ſubſtituted.

In the *Pharmacopœia Bateana* the Powders preſcribed in the *London Diſpenſatory* are retained, unleſs that the Occidental Bezoar is ſubſtituted in the room of the Oriental. There is alſo an Addition made of Contrayerva-root, white Coral, Cryſtal, Terra Lemnia, Ceruſs of Antimony, Ambergriſe, Muſk, and Saffron; all which are, with Jelly of Vipers, reduced to ſmall Balls, under the Name of *Pulvis Cantianus*; and if, to the above-mentioned Ingredients, Cochineal is added, the Preparation is called *Pulvis Cantianus ruber*; but if the Aſhes of Toads are added to them, it is called *Pulvis Cantianus niger*. The former Compoſitions are more ſimple than the latter, which retain the Ingredients of the other, but in different Proportions, and receive alſo other Ingredients. Becauſe it is eaſy to make Additions to Things before invented, the firſt ſimple Recipe of the Inventor probably received ſeveral Additions in Proceſs of Time. A certain *Gaſcoign* firſt brought this Powder into *England*, and made conſiderable Profit by it. In the *Diſp. Brandenburg.* he is ſaid to have ſold it to the Biſhop of *Worceſter* for three hundred Pounds Sterling. *Georg. Starkey* affirms, that it degenerated very much from its ſuppoſed Efficacy after it was publicly known; and obſerves, that the ſame has been the Fate of ſeveral other Arcana in Medicine. In Caſes of this Nature, the Credulity of Mankind unqueſtionably furniſhes Medicines with Virtues, which Nature has either abſolutely refuſed them, or at leaſt beſtow'd upon them in a very ſcanty Meaſure. The Doſe of this Medicine is from half a Scruple to half a Dram. *Schulzius*, in his *Prælectiones*, extols it as an efficacious Remedy againſt acute, exanthematous, and malignant Diſorders; as alſo againſt the Plague itſelf. Dr. *Slare*, in his Obſervations upon Bezoar-ſtones, upon examining the ſeveral Ingredients in the *London* Compoſition, thinks, that the Bezoar-ſtone, the Amber, and the Hartſhorn, are ſuperfluous and uſeleſs Ingredients in a Medicine intended to correct Acids: He is alſo of Opinion, that the other Four Powders are not preferable to others of the teſtaceous Kind. For this Reaſon he prefers Chalk, with Salt of Wormwood, to this coſtly Compoſition; ſince the former is a powerful Abſorbent of an Acid, and the latter a powerful Alcali, proper for correcting Acids, and of a diaphoretic and diuretic Quality. According to *Etmuller*, *Deodatus* recommends half a Dram, or a Scruple, of the Powder of Crabs-eyes, as an excellent Purgative.

I muſt remark, that the *European* Craw-fiſh are not the ſame with the River-crabs, which *Galen* means in his famous Receipt for the Bite of a mad Dog; for theſe laſt are a Species of River-crabs, properly ſo call'd, which are not found in the Rivers in our Part of *Europe*, but which are common in thoſe of *Greece*, *Crete*, and *Sicily*.

CANCER, καρκίνος.

By the Term *Cancer*, as appears from ſeveral Places of *Celſus*, the *Roman* Writers underſtood what the *Greeks* call'd *Gangrene*, or *Sphacelus*; and the Diſeaſe which now paſſes under the Name of *Cancer*, is the very ſame as what the *Greeks* and *Romans* meant by the Word CARCINOMA; to which the Reader is referr'd for an Account thereof.

CANCHRYS, CANCHRY. The ſame as CACHRYS, CACHRY, which ſee.

CANCINPERICON, Hot Horſe-dung. *Rulandus.*

CANCRENA. A Word commonly uſed by *Paracelſus* for *Gangræna*.

CANDELA, λύχνος, κηρός, a Candle, has its Uſes in Medicine, and is reckon'd among the Inſtruments of Surgery. Thus, in *Sculletus's Armamentarium Chirurgicum, Edit. Hagæ-Comitum*, 1656. *Tab.* 13. *Fig.* 9, 10. are repreſented two Candles, prepared of ſtrong Thread doubled, and white Wax, mixed with a little Turpentine, that they might not be ſubject to break; theſe, being rubb'd over with Oil of ſweet Almonds, are introduced into the urinary Paſſage in the Caſe of an Iſchury, occaſioned by an Obſtruction from Caruncles. One of theſe Candles appears with its Top broken, to hint to the Surgeon, that he is to cut off the Extremity of the Candle with his Sciſſars, before he introduces it; leſt, in extracting it, he ſhould leave a Bit of the Wax, through which the Thread or Wick might not reach, behind, and ſo increaſe the Iſchury. There is alſo a uterine Candle, which is a ſort of Peſſary; and Wax-candles are uſed in the Operation of Cupping. *Schroder*, *Pharmacop. Lib.* 2. *Cap.* 86. gives us Preparations of *Candelæ fumales*, or Candles for Fumigation, called alſo, from their Figure, *Baculi*, or Staves, compoſed of odoriferous Powders, made up with Mucilage of Tragacanth, Styrax, and the like. They are uſed to burn in peſtilential Times, or to purify the Air upon Occaſion. They are alſo called AVES CYPRIÆ, which ſee.

The *Latin* Word *Candela* correſponds to what, in *Engliſh*, we call Candle, which is a round cylindrical or conical Body, form'd, for the moſt part, of Tallow, and ſometimes of Wax, with what the *Greeks* call ἐλλύχνιον, or a Wick, running from one End of it to the other. *Baſilius Faber*, in his *Theſaurus Eruditionis Scholaſticæ*, and *Salmaſius*, in his *Exercitationes Plinianæ*, inform us, that the Antients, for *Wicks*, uſed the *Medulla*, or what we call the Pith of Bulruſhes, which, when immerſed in liquid Wax, conſtituted their Candles. But, at preſent, the *Wicks* are generally made of Flax or Cotton, ſo twiſted as moſt commodiouſly to anſwer the End. They who either conſult Conveniency, or ſtudy the Preſervation of Health, obſerve a Difference of Candles, both with reſpect to the Flame, and the Fumes or Exhalations emitted from it. The Flame ought not to be inconſtant and vibratory; ſince, in that Caſe, it is both prejudicial to the Eyes, and inſufficient for the diſtinct Illumination of Objects. This Fault is generally the Conſequence of the Wick's being impure, not ſufficiently dry, or not duly twiſted. The Quality of the Exhalations depends upon the Matter in which the Wick is immerſed, and which ſerves to feed and nouriſh the Flame of the Candle. Wax, which is adulterated with various foreign Subſtances, muſt, when burning, neceſſarily impregnate the Air with certain Qualities, which are not only ungrateful to the Smell, but prejudicial to the Health. Beſides, Verdegriſe, and other Subſtances, which are ſometimes mixed with Wax, in order to give it an agreeable Colour, cannot fail to produce very pernicious Conſequences. Every one, who deſerves the Name of a Phyſician, very well knows, that the Air may be impregnated with medicinal Virtues, which have a conſiderable Influence on the human Body; and that it may, in like manner, be contaminated with Effluvia or Exhalations, not only prejudicial to Health, but deſtructive of Life. The Phyſician, therefore, who has Patients of a delicate and tender Conſtitution committed to his Care, muſt give the ſtricteſt Orders, that every Thing of a noxious Nature, ariſing from Candles, be kept at the greateſt Diſtance, and avoided with the utmoſt Diligence. A large Cloud of fetid Smoak, tho' riſing from Candles made of white Wax, has, from Experience, been found prejudicial to many, as it not only creates Head-aches, but ſometimes proves offenſive and injurious to the Lungs. Candles made of old Tallow, and ſuch as, for the Profit of the Seller, is adulterated with various Mixtures, by their Fumes and Exhalations conſiderably impair and deſtroy Health. Thoſe prepared of the Tallow of Beef ſend forth a more diſagreeable Smell, than ſuch as are made of the Suet of Wethers or Sheep; and Tallow-candles in general are never obſerved to ſmell more diſagreeably, than when any Quantity of Hogs-tallow is mixed with that of which they are made: Hence it is, that in *France* a Law is enacted, by public Authority, injoining Candles to be made of a Mixture of the Tallow of Oxen, Wethers, and Sheep, and expreſly prohibiting the leaſt Admixture of Hogs-tallow. *Savary*, *Dictionair. univerſel de Commerce*. *Rammazini* adviſes "Literati, or Men "of a ſtudious Turn, to uſe Tallow-candles in their Studies

" as little as poſſible; and, if their Circumſtances will not " afford Wax-candles, to burn Olive-oil in Lamps, as the " antient Virtuoſes did." *Fortunatus Plempius* informs us, from *Pliny*, *Lib. 7. Cap. 7.* " That the Exhalations of Tallow-candles are as effectual for procuring Abortion, as the " Fumes of an extinguiſh'd Lamp." In *Eph. N. C. D. 2. a. 9. o.* 205. we have the Caſe of a ſleeping Man, who, in conſequence of the Fumes of an extinguiſh'd Candle, was ſeized with Convulſions, a Difficulty of Breathing, and at laſt with Death. *Valentinus*, in his *Pandectæ Medico-legales*, *Tom.* 1. gives us the Hiſtory of a Caſe exactly parallel with the former; and *Hoffman*, in his *Medicina Rationalis*, does not heſitate to claſs the Fumes, ariſing from an extinguiſhed Candle, among poiſonous Subſtances. In the *Acta Medica & Philoſophica Hafnienſia*, *Vol. 5. Obſ.* 86. we are ſupplied with a ſufficient Proof of the noxious Quality of the Exhalations of Tallow, in the Caſe of a Woman, who, in conſequence of her being employ'd in making Tallow-candles for Sale, in the Night-time, and in a ſmall Apartment, was ſeized with a violent Head-ach, a Vertigo, a Redneſs of the Eyes, and at laſt a moſt formidable Aſthma. *Olaus Borrichius* recovered this Patient, by firſt exciting a Vomiting, and afterwards exhibiting pectoral Waters, with Oxymel of Squills; by which means, as he expreſſes himſelf, he thought he had routed the Enemy: But, on giving over the Uſe of theſe Remedies, ſhe was ſoon after ſeiz'd with an Orthopnœa; however, ſhe was again reſtored to Health by their being repeated. This Circumſtance induced *Borrichius* to caution all Candle-makers to work in Shops that were large, and expoſed to a free and open Air. Whether, in Conſequence of what has been ſaid, it is not the Duty of the Magiſtracy in large Cities to prevent the Air of the Streets being contaminated by the Steams proceeding from the Shops of Tallow-chandlers, is a Point we leave to be determin'd by others. 'Tis not our Province to conſider thoſe Candles which are prepared for laſting an uncommon Time, for diffuſing a grateful Odour, or for bearing Wind and Water without being extinguiſhed. We ſhall refer the Reader, who wants Satisfaction in theſe Particulars, to *Petrus Moria Caneporius de Atramentis*, and *Chomel's Dictionair. Oeconomique*, in the Article CHANDELLE.

'Tis more properly our Buſineſs to conſider ſuch Candles as are uſed in the Shops for medicinal Intentions.

The *Candela fumalis*, then, or the *Candela pro ſuffitu odorata*, which is alſo called *Tæda* and *Avicula Cypria*, is a Maſs of an oblong Form, conſiſting of odoriferous Powders, mix'd up with a Third or more of the Charcoal of the Willow or Lime-tree, and reduced to a proper Conſiſtence, with a Mucilage of Gum Tragacanth, Ladanum, or Turpentine. This Species of Candle may alſo be prepared of reſinous Subſtances alone, mix'd up with Balſamics. It is intended to excite a grateful Fume or Smell, without any Flame, to correct the Air, to fortify the Brain, and to excite the Spirits. Theſe Candles are alſo, from their Form, called *Bacilli*, and *Maſſæ ad Fornacem*; becauſe they are uſually applied to a hot *Grate* or *Chimney*, in order to have the Smell, they are intended to diffuſe, excited. But we muſt take care, that none of their Ingredients conſiſt of Woods, Flowers, Roots, Herbs, or Barks; becauſe moſt Subſtances of that Kind, when ſet on Fire, diffuſe an empyreumatic and ungrateful Smell. The Powders, of which they are to be compoſed, may be choſen according to the Intention of the Phyſician, and the particular Caſe or Conſtitution of the Patient for whoſe Uſe they are deſigned. Examples may be ſeen in the *Cyſta Medica Hafnienſis* of *Thomas Bartholine*, under the Article *Trochiſci odorati*. They are rarely an extemporaneous Preſcription, but are kept ready for Sale in the Shops. The *Candelæ fumales Francofurtenſium*, in *Schroder's Pharmacopœia*, are prepared thus:

> Take of Benjamin, ſixteen Ounces; of Aloes-wood, Roſe-wood, yellow Sanders, and Ladanum, each four Ounces; of Olibanum, Maſtich, and Cloves, each three Ounces; of white Sugar, two Pounds; and of the Coals of the Lime-tree, four Pounds and an half: Reduce all to a fine Powder, and, with Mucilage of Gum Tragacanth, made with Roſe-water, that of Marjoram and Lemon-peel, with the Addition of a little liquid Storax and Turpentine, form the Candles into any Shape.

The ſame Compoſition is in the *Diſpenſatorium Ratiſbonenſe*. The *Candelæ fumales* of the *Pharmacopœia Argentoratenſis*, which, in the *Pharmacopœia Auguſtana*, are called *Candelæ pro ſuffitu ſecundæ*, are prepared thus:

> Take of Styrax Calamita, and Charcoal of the Willow, each two Ounces; of Benjamin, one Ounce; of Cloves, half an Ounce; and of Ladanum, ſix Drams; which, with *Cyprian* Turpentine, and Mucilage of Gum Tragacanth, made with Roſe-water, are to be reduced to a proper Form.

The *Candelæ pro ſuffitu*, in the *Diſpenſatorium Hafnienſe*, which, in the *Pharmacopœia Auguſtana*, are called *Candelæ primæ*, contain more Ingredients than thoſe already mentioned; but what, in the *Pharmacopœia Antwerpienſis*, are called the *Candelæ odoriferæ*, differ from them all, in having an Addition of Muſk and Camphire. To theſe we may add the *Candelæ contra Subitanea*, which *Ludovici*, in his *Pharmacopœia*, borrows from the *Collectanea Wurtemburgenſia Euphoriſta*, and ordered to be prepared thus:

> Take of Male Frankincenſe, an Ounce and an half; of Female Frankincenſe, two Ounces; of white and yellow Amber, each an Ounce; of Camphire, half an Ounce; of Maſtich, two Drams; of red Myrrh, one Ounce; of Benjamin, Angelica, and Burnet, each half an Ounce; of raſped Hartſhorn, an Ounce and an half; of Wax, two Pounds. Let ſuch of the Ingredients as require pounding, be pounded, and added to the melted Wax; out of which Maſs let Candles of the common Form be made, upon Wicks conſiſting of three hempen, three ſilken, three gilt, and three ſilverized Threads, twiſted together: After which, for the ſake of Ornament, we ſometimes ſee ſmall Pieces of red Coral, Mother of Pearl, Entaglia, and Dentalia, fixed in their Surfaces.

CANDELARIA, or CANDELA REGIA. Names for Mullein, or VERBASCUM, which ſee.

CANDIDUS, CANDOR. The ſame as ALBUS, ALBEDO; but often uſed metaphorically to ſignify Sincerity of Mind. See ALBEDO.

Candidare, in *Theat. Chymic. Vol.* 5. is called the fourth Regimen, and aſcribed to the Sun. *Caſtellus.*

CANDISATIO. Candying, applied only to Sugar. See SACCHARUM.

CANDOU *Purchaſii*, Jonſt. Dendrol. *Arbor Maldivenſis.* A Tree much like the Cork-tree, as to its Wood, and of the Height of the Walnut-tree. The Trunk is fungous, and lighter than Cork, the Bark whitiſh, and it bears no Fruit. The Wood is cut into Planks, and ſerves for Fewel; and is very uſeful on another Account; for, by the Help of it, they will draw up a thouſand Weight from the Bottom of the Sea, which they do by firſt tying a Rope about what they want to have raiſed, which from thence paſſes thro' a perforated Piece of this Wood, or perhaps two or more Pieces, as they ſhall think ſufficient for the Purpoſe. *Raii Hiſt. Plant.*

CANDUM, or rather CANTHUM, Sugar-candy. *Blancard.* See SACCHARUM.

CANELA. A Word which, as *Fuchſius* ſays, *Myrepſus*, and other later *Greeks*, as well as *Averroes*, and the reſt of the *Arabian* Writers, uſe for what we now call *Cinnamon*, or rather *Caſia. Myrepſus.*

CANELLA. See CINNAMOMUM. *Blancard.*

CANELLA ALBA, Parkinſon. Theat. 1581. Raii Hiſt. 2. 1802. *Canella alba quorundam*, J. B. 1. 461. *Cinnamomum ſive Canella tubis minoribus alba*, C. B. Pin. 409. *Caſſia lignea Jamaicenſis, cortice acri candicante*, Pluk. Phytog. 81. *Caſſia lignea laurifolia Americana, cortice albo, valde acri & aromatico*, Pluk. Almag. 89. Tab. 81. *Arbor baccifera laurifolia aromatica, fructu viridi calyculato racemoſo*, Philoſoph. Tranſact. N°. 192. p. 465. Cat. Jam. 165. Sloan. Hiſt. 2. 87. Tab. 191. *Canella Cubana*, Jonſ. Dendr. 165. *Arbor Jucadice*, Nieremb. 294. *Arbor cujus cortex Gingiber æmulatur*, Laet. 24. THE WILD CINNAMON-TREE.

This is commonly, but falſly, call'd *Cortex Winteranus*; it has a Trunk about the Thickneſs of one's Thigh, riſing to about twenty or thirty Foot high, having many Branches and Twigs hanging downwards, making a very comely Top. The Bark conſiſts of two Parts, one outward, and another inward: The outward Bark is as thin as a mill'd Shilling, of a whitiſh aſh or grey Colour, with ſome whiter Spots here-and-there upon it; and ſeveral ſhallow Furrows, of a darker Colour, running variouſly thro' it, making it rough, of an aromatic Taſte. The inner Bark is much thicker than Cinnamon, being as thick as a mill'd Crown-piece; ſmooth, of a whiter Colour than the outward, of a much more biting and aromatic Taſte, ſomething like that of Cloves, and not glutinous like Cinnamon, but dry, and crumbling between the Teeth. The Leaves come out near the Ends of the Twigs, without any Order, ſtanding on Inch-long Foot-ſtalks; they are each of them two Inches long, and an Inch broad, near the End where broadiſh and roundiſh, being narrow at the Beginning, from whence it augments in Breadth to near its End, of a yellowiſh-green Colour, ſhining and ſmooth, without any Inciſures about its Edges; and ſomewhat reſembling the Leaves of Bay or *Laurocerasus*. The Ends of the Twigs are branched into Bunches of Flowers, ſtanding ſomething like Umbels, each of which has a Foot-ſtalk, on the Top of which is a Calyx, made up of ſome Foliola, in which ſtand five ſcarlet or purple Petala, within which is a large Stylus. To theſe follow ſo many calyculated Berries, of the Bigneſs of a large Pea, roundiſh, green, and containing within a mucilaginous pale-green thin Pulp four black ſhining Seeds, or Acini, of an irregular Figure.

All the Parts of this Tree, when fresh, are very hot, aromatic, and biting to the Taste, something like Cloves, which is so troublesome as sometimes to need a Remedy from fair Water.

It grows in the low Land, or *Savanna* Woods, very frequently, on each Side of the Road, between *Passage-fort* and the Town of St. *Jago de la Vega*, in *Jamaica*, in *Antigua*, and other the *Caribbee Islands*.

The Bark of this Tree is what is chiefly in Use, both in the Plantations of the *English*, between the Tropics in the *West-Indies*, and in *Europe*; and is without any Difficulty cured, by only cutting off the Bark, and letting it dry in the Shade.

It is in Use in the *West-Indies*, by the more ordinary sort of People, in place of all other Spices; being thought very good to consume the immoderate Humidities of the Stomach, help Digestion, and expel Wind.

It is likewise, as well there as in *Europe*, thought a very good Remedy against the Scurvy, and to cleanse and invigorate the Blood; being, in *London*, at Druggists and Apothecaries Shops, used for those Purposes, under the Name of *Cortex Winteranus*, which it is not, but may very well supply its Place. It is, in the *West-Indies*, mixed and given with Steel, and other Medicines; but if the Patient be any way of a hot Constitution, it does more Harm than Good, being very warm.

Rum, a vinous Spirit drawn from Molossus, or bad Sugar fermented with Water, if it be mixed with some of this Bark, it loses, in part, its loathsome empyreumatic Smell.

This Bark, if mixed with Water, and distil'd *per Vesicam*, yields an aromatic Oil, sinking to the Bottom of Water like Oil of Cloves, with some small Quantity of which it being mixed, has been sold for true Oil of Cloves. *Peter Martyr* mentions it under the Name of *Cortex, Cinnamomi Saporem, Gingiberis Amaritudinem, & Caryophylli suavem Odorem, præ se ferens*. *Nic. Monardes* describes it under the Name of *Lignum Aromaticum*; *Clusius* calls it *Lignum, seu potius Cortex Aromaticus*; and I question not but this is the same with the *white Cinnamon*, or the *Canella alba*, in some other Authors. *Linschoten*, in his *Description of America*, translated into *French*, gives an Account of it under the Name of *Arbre ou les Pigeons nichent*. Dr. *Trapham* calls it *Winter's Bark*, or *West-Indian Cinnamon-tree*; *Hernandez* and *Ximenes*, *Camingà*.

But it may be doubted, whether this be the *Ascopo* of *Havot. Phil. Trans. Abr. Vol.* 2. *p.* 665. *per Sir* Hans Sloane.

This Bark is accounted a Specific against the Scurvy, and is a good nervous Medicine, and useful in Palsies and Convulsions. It is likewise of Service against Diseases of the Stomach and Bowels. *Miller's Bot. Off.*

CANEON; κάνεον, κανεῖον, κανοῦν, κανοῦν, κανὸν, κανὶς, is a Basket, according to *Hesychius*. Κανεῖον, in *Hippocrates*, *Lib.* 1. & 2. περὶ γυναικ. signifies the Cover of a Pot, thro' which, by means of a hollow Cane or Reed, the Vapour is convey'd in uterine Suffumigations.

CANICACEUS, πιτύεος. Furfuraceous or branny. It is derived from

CANICÆ. Bran, or rather coarse Meal, so called from *Canis*, a Dog; because it was Food for Dogs. Hence *Panis canicaceus*, very coarse Bread. *Blancard.*

CANICIDA, *Cynoctonum*, κυνοκτόνον. The same as Aconitum.

CANICIDIUM. A Word used by some Anatomists for a Dissection of living Dogs. *Castellus.*

CANICULA, κυνίδιον. A Diminutive of Canis. Also the Dog-star; whence

CANICULARIS, applied to the Time when the *Canicula*, or Dog-star, rises and sets with the Sun. The *Dies Caniculares* begin on the Nineteenth of *July*, and end the Twenty-seventh of *August*. *Hippocrates* pronounces it improper to purge during these Days. *Paracelsus* affirms, that these Days favour the Generation of Worms.

CANINA APPETENTIA. See Boulimos.

CANINA BRASSICA. See Mercurialis.

CANINI DENTES. See Dens.

CANINA LINGUA. See Cynoglossum.

CANINA MALUS. See Mandragora.

CANINA RABIES. See Hydrophobia.

CANINUS SENTIS. See Cynosbaton.

CANINANA, *(Jonst.)* is a Serpent of *America*, a Foot and a half, or two Feet, in Length, green on the Back, and yellow on the Belly. It is accounted one of the least venomous, creeps after Men, and suffers itself to be handled without doing any Harm. The *Americans* eat it, after cutting off the Head and Tail. It contains much volatile Salt and Oil.

It is used in the Antidotes of the *Indians*, as the Viper is in *Europe*, upon a Supposition, that it resists Poison.

It is called *Caninana* from *Canis*, a Dog; because it follows Men, and suffers itself to be taken in the Hands like a Dog.

CANIRAM, H. M. *Malus Malabarica, fructu corticoso amaricante, semine plano compresso*, D. Syen.

It is a tall spreading Tree, with a Trunk as big as two Men can grasp, which, as well as the larger Branches, is cover'd with an Ash-colour'd, blackish, or reddish Bark. The small Branches are of a smutty Green, full of Joints, and covered with a bitter Bark. The Leaves grow by Pairs at the Joints, are of a round-oblong Form, and extremely bitter. The Flowers grow in Umbellas, at the Joints of the small Branches, and consist of four, five, and sometimes six small Leaves, of a watry-green Colour, cuspidated, and of a faint, tho' not unpleasant, Smell. The Fruit is a round, smooth, Gold-colour'd Apple, whose Pulp, when ripe, is white and mucilaginous, and covered with a thick and brittle Rind: This Pulp, and the Seed contain'd in it, are of a very bitter Taste; and the whole Tree is remarkable for its Bitterness. It blossoms in the Summer, and bears Fruit in the rainy Season.

The Root, in Decoction or Infusion, is cathartic; and useful in pituitous Fevers, the Colic, Gripes, and Fluxes of the Belly. The Decoction also makes a good Fomentation for the Gout. The same, mixed with Cows Milk, if the Head is washed therewith, is beneficial in the Vertigo and Melancholy. The Bark, bruised and mixed with the Water in which Rice has been steep'd, represses a Flux of yellow Bile. The express'd Juice of the Leaves, given in a Decoction, eases Pains of the Head; but, drank in a large Quantity, has the Effects of Poison, and causes Death; against which the only Remedy is human Dung. One or two of the Seeds, eaten every Day for two Years together, as it is pretended, are of such Virtue, as to render the venomous Bites of the Serpent, called *Cobra Capella*, of no Effect. *Raii Hist.*

CANIRUBUS, quasi *Rubus Canimus*. The same as Cynosbatos, which see.

CANIS. The Dog, a well-known Animal, thus distinguished:

Canis, Offic. Schrod. 5. 274. Ind. Med. 26. Schw. Quadr. 73. Aldrov. de Quad. Digit. 482. Jonst. de Quad. 122. Mer. Pin. 168. Charlt. Exer. 26. Raii Synop. A. 175. Gesn. de Quad. Digit. 213. THE DOG.

The *Latin Canis*, and the *Greek* κύων, correspond to our *English* Word *Dog*, and *Catulus*, or *Catellus*, to what we call *Whelp*. As the Shapes, Natures, and Properties of these Animals are too well known to require any Description, we shall only, on this Occasion, consider the several Uses to which they are applied in Medicine. The Flesh of Dogs, then, is not only used as an Aliment by the Inhabitants of *China*, but also look'd upon as a Delicacy by several Sorts of People in *Asia*, *Africa*, and *America*. *Des. Marchais Voyage en Guinée, Tome* 2. *& Journal des Sçav.* That it was of old used by the *Greeks*, is obvious to any one who has read the Works of *Hippocrates*; for, in his second Book *de Diæta*, when speaking of the Qualities of several Sorts of Flesh, he tells us, "That the Flesh of "Dogs is of a heating, drying, and corroborating Nature, but "does not easily pass off by Stool; whereas that of Whelps is "of a moistening lubricating Quality, and is easily discharged "that way." In his Book *de Morbo Sacro*, he informs us, That epileptic Patients were forbid the Use of Dogs Flesh, because it produces violent Commotions in the Intestines. In his Book *de internis Affectionibus*, he mentions Dogs Flesh, as also that of Hares and Birds boil'd, among the Number of those which are lightest, and of the most easy Digestion. In his Book *de Superfœtatione*, he recommends boil'd Whelps to be eaten by Women, in order to promote Conception. In his Treatise *de internis Affectionibus*, he also orders boil'd Whelps to be used, as common Food, by dropsical Patients; and in an *Hepatites*, after the Disease is come to a Crisis. *Pliny*, in the fourth Chapter of his twenty-ninth Book, informs us, that Whelps were not only used as other Aliments by the *Romans*, but also made a Part of their Sacrifices to the Gods. If we reflect upon the Nature and hot Constitution of Dogs, and consider that their Food is generally such as the Animal Kingdom affords, it seems highly probable, that their Flesh, beyond that of all Fowls and Quadrupeds commonly used in Food, if we except those of the ravenous Kind, and such as feed on Insects, affords what we commonly call a strong Nourishment, or such as is of a pretty alcaline Nature; and consequently not improper for heating those of cold phlegmatic Constitutions, and such as abound with a peccant Acid. The *Europeans*, however, generally abstain from Dogs Flesh, till Necessity, and that Love of Life which is natural to Mankind, obliges them to use it. Live Whelps are sometimes applied to the Abdomen, in order to allay Colic Pains, in Cases where the Cause of the Disorder may be removed by a kindly and cherishing Heat. *Bartholine*, in the *Acta Medica & Philosophica Hafnienfia, Cent.* 6. *Hist.* 53. tells us, that a Dog, when applied to the Abdomen, after he became warm by the Heat of the Patient, vomited very violently; upon which the Patient's Colic Pains were immediately abated. *Borelli, Cent.* 3. *Obs.* 28. informs us, that the Gout is surprisingly relieved by Whelps lying in Bed with the Patient; and that they contract the Disorder so as to be scarce able to walk; the afflicted Person receiving in the mean time a singular Relief. If the Words of this Author are founded upon real Facts, they suggest some Things of the greatest Use and Importance to every Physician:

"For, says he, tho' we are ignorant of the internal Disorders "of some Patients, and know not the particular Part affected; "and tho' we want Windows, which *Manus* of old wished "for, in order to discover the disordered Part; yet this may "be discovered in other less noble Animals, for which Purpose "Whelps are to be used. When these have lain in Bed for "fifteen Days with the Patient, and lick'd up the Remains of "his Aliments and his Spit, they contract a Disease of the like "Nature; and, upon being opened, the Part affected in them "corresponds to that disordered in the Patient: Thus, when "the particular Seat and Nature of the Disease is known, pro-"per Remedies may be the more easily applied." *Bartholine*, in his *Hist. Anatom. Cent.* 3: *Hist.* 66. informs us, that *Fludd*, an *English* Physician, is said to have transplanted the Gout of a certain Patient to a House-dog who slept with him; and that the Dog was afterwards periodically rack'd with the Disorder, as his Master had formerly been.

That a Dog may be affected by the gouty Matter of a Man, I think highly probable, from a Case which happen'd in *December* 1742. within my own Knowledge. A Gentleman, terribly afflicted with the Gout, took a mercurial Purge, which affected the Salival Glands so as to make him spit a little. As he sat in his Chamber with a Bason in his Lap, in order to receive the Saliva, another Gentleman coming into the Room, he set the Bason aside, for the sake of Decency, and spit two or three times on the Floor. A small Spaniel in the Room lick'd up the Saliva thus discharged; the Consequence of which was, that the Dog was, in less than half an Hour, seiz'd with violent Convulsions, and died in about ten Hours.

That Dogs may catch the Diseases of those with whom they lie in Bed, is sufficiently confirm'd by a Case in the *Ephemerides Germanicæ Curiosæ*, *Vol.* 2. *o.* 183. where we read of a Dog's being infected with the Small-pox. But as a Man, who catches the Disease of another, does not by that means relieve the Patient; so it seems consonant to Reason, that when a Patient feels any Relief from the Application of a Dog, it must only be in those Cases, in which the fomenting Heat of the Animal attacks the Disease, by opening the Pores, procuring a free Transpiration, and thus giving Vent to the morbid Matter. In Cases of this Nature, it is by no means inconsistent with Reason, that the Dog, in consequence of the morbid Exhalations admitted into his Body, should be seized with that particular Species of Disorder from which he has freed the Patient. As we observe, that Dogs generally deterge, cleanse, and consequently promote the Consolidation of their Wounds by licking them; hence Dogs may, with great Advantage, be admitted to lick the Wounds and Ulcers of Men; by which they sometimes suffer, if the Matter they lick is retain'd in the Stomach, convey'd to the Vessels, and mixed with the Fluids of their Bodies. This is sufficiently proved by a Case in the *Ephemerides Germanicæ Curiosæ*, 1. *a.* 4. *o.* 51. where we have an Account of a Dog who became itchy by licking a scorbutic Patient, who, by that very means, got quit of his Disorder. Some time ago there lived near *Paris* a certain Man, who, from the Place of his Residence, was called the *Physician of Chaudrai*; and who, without the Use of any other Means, cured many inveterate Wounds. *Colonne*, *Histoire Naturelle de l'Univers. Tome* 1. Dogs, after their Death, afford a great many Things useful in human Life; but we shall only specify such as are most common. Thus, for Instance, the Skin is by some recommended as an excellent Covering or Wrapper for the Leg, in order to allay the Pains of the Gout. *Ephemerides Germanicæ Curiosæ*, *D.* 3. *a.* 2. *o.* 35. But, in order to prevent the Gout, the Dogs Skin ought, according to *Boceler*, to be prepared with some astringent Substance, such as Galls or Alum. All Leather is tan'd by means of some astringent Substance, that its Pores being contracted, it may become the thicker. If, therefore, tan'd Dogs Skin is sufficiently thick to resist the external Cold which excites the arthritic Pains, it may very properly be recommended to such as dread an Attack of the Gout. These Skins are commonly used for Gloves in the Summer-time, with a View to keep the Skin gratefully cool, and agreeably smooth; for, as the external Surfaces of these Gloves are very smooth, they do not admit the Rays of Heat, but reflect them as they fall upon them, as polish'd Bodies do, and consequently they prevent the Sweating of the Hands. The Eat of a Dog is recommended beyond that of other Animals, on account of its penetrating and vulnerary Quality. Many order it to be exhibited in Vinegar, spread upon Bread, or mix'd with the Aliments, as a proper Remedy against the Phthisis and Epilepsy. Others roast a Dog, and, with great Success, exhibit the Fat which drops from him, in a Phthisis. *Etmuller*. In vulnerary Decoctions and Potions it is of singular Service, where an acrid Quality is to be corrected, or a Rigidity of the Parts removed: But we must take care, that it be not old; in which Case it generates a rancid Acrimony in the Body. When it is fresh, it may be given from a Scruple to a Dram and an half. "I know, "says *Konigius*, that some People, by boiling nervous Plants in "Dogs Fat, prepare an excellent anodyne Ointment for Pains "and Luxations of the Joints; as also for Pains after Child-"birth, when mix'd up with *Peruvian* Balsam, and the distill'd "Oils of Cinnamon, Mace, and Mint."

Forestus (in *Obs. Med. L.* 10. *Obs.* 85. *in Scholiis*) informs us, that in a Palsy of the Feet, produced by Colic Pains, after Cupping, and the Use of Baths prepared of heating Substances, he successfully used, by way of Ointment, the Fat of brown Whelps, boil'd in Water till their Bones were separated from each other, taking the Fat off the Surface of the Water when cold. Authors of Note and Reputation have affirm'd, that the Brain of a Dog, if eaten, mitigates and allays a Mania, as we see in the *Ephemerides Germanicæ Curiosæ*, *D.* 3. *a.* 4. *o.* 125. Tho' we cannot comprehend what specific Virtues the Brain of this Animal can have, in lessening or removing the Cause of a Mania; yet we shall not dare flatly to contradict these Authors. We are, however, inclined to think, that the Effects, supposed to be produced by this Medicine, are in reality those of other proper Remedies used at the same time; and that it only acts as a Deobstruent, in consequence of the Aromatics, in Conjunction with which it is exhibited. The Dung of Dogs is called *Album Canis*, *Album Græcum*, and *Cynocopras*, from a *Greek* Word signifying the Excrements of this Animal. That Species is best which is discharged in hot Weather by Dogs fed upon Bones, and such as have little or no Drink allow'd them. This Medicine is recommended for internal Use, not only in vulnerary Decoctions, intended for the Consolidation of Wounds, but also for exciting a Diaphoresis, resolving grumous Blood, and destroying an Acid in the *Primæ Viæ*. Concerning its antidysenteric and other Qualities, *Etmuller*, in *Tome* 2. speaks thus: "The Dose is from half a Dram to two Drams, "with the Addition of a little Sugar, in a Vehicle either of "simple or chalybeated Goats Milk; for this Dung, tho' easily "procured, is nevertheless a valuable and efficacious Remedy "in Dysenteries, and in all Hæmorrhages, those of the most "desperate Kind not excepted. *Franciscus Joel*, in his *Praxis "de Dysenteria*; *Forestus*, in his *Obs. Med.* and *Meadererus*, "in his *Medicina Militaris*, highly recommend it on several "Accounts: And I myself, says he, by means of this Dung "alone, happily cured a Country Woman, who had been "afflicted with an Uterine Hæmorrhage for more than four "Weeks." When mix'd with Gargarisms, it is recommended as a Specific in the Cure of Quinseys, and Inflammations of the Tonsils. According to *Etmuller*, "It was used in the Days "of *Galen*. Sometimes the Powder of it is blown into the "Throat: Sometimes the Dung itself is mixed with Honey, "and applied to the Parts affected; and at other times it is "mixed with Cataplasms and Ointments, prepared with an "Intention to discuss and maturate. It discusses, maturates, "and breaks Abscesses, prepares a Way for the Discharge of "Pus; and heals Ulcers of the Fauces, when applied to the "Part affected in the above-mentioned manner." The *Cataplasma Cynanchicum*, in *Bate's Dispensatory*, is prepared thus:

Take of *Album Græcum*, one Ounce; of the Conserve of red Roses, two Ounces; and of the *Syrupus de Meconio*, a sufficient Quantity: Make into a Cataplasm, to be applied under the Chin from Ear to Ear, after Venesection.

That the Fragments of half-corrupted Bones, separated from *Album Græcum*, often prove an excellent Remedy for the Tooth-ach, we are informed by *Andreas Elias Buchner*, in his *Miscellanea Medico-physico-mathematica*. In the *Pharmacopœia Parisiensis*, the *Album Græcum præparatum* is made first by drying it, then levigating it on a Marble, and forming it into Troches, with Water of Shepherds-purse. Whoever considers the hot and active Nature of Dogs, must readily perceive, that their Excrements are more hot and acrid than those of most other Animals, especially of the domestic Kind: Hence its Effects seem to be produced by a stimulating, corroding, resolvent, and aperient Acrimony. To this acrimonious Quality all the above-mentioned Effects are owing; as also its Efficacy in internal Hæmorrhages, in which Resolvents often prove useful, by restoring a free Circulation to the Blood, by whose Stagnation spasmodic Contractions, and the Effusions of Blood depending on them, are produced. Concerning the Effects of this Medicine in Dysenteries, we cannot help entertaining a Doubt, since no one has as yet dared to affirm, that acrid Substances are proper in this Case: But when *Album Græcum* is exhibited with Sugar and Milk, in the room of which may be substituted some Oil or Fat, and mild Broth, it can no longer exert its acrid Qualities; but, if exhibited in a moderate Dose, is gently saponaceous and abstergent, and consequently proper to dispose the acrid Water, which irritates the Intestines, to a Discharge of Blood, for Evacuation. And perhaps such an oleous Medicine, impregnated with *Album Græcum*, received into the Vessels, may, by resolving Obstructions, and restoring a free Circulation to the Blood, be said to cure that Species of Hæmorrhage which happens in a Dysentery. But we cannot admit, that *Album Græcum* is proper to be exhibited in every Species of Dysentery; when, for Instance, the Blood is too much resolved

by

by an Admixture of ſomething acrid and putrid; ſince, in this Caſe, even the moſt gentle Stimulus does Harm. The acrid and corroſive Quality of Dogs Excrements is ſufficiently atteſted by thoſe who, often treading among them, have the Soles of their Shoes ſooner deſtroy'd than thoſe who walk in Ground ſtain'd with the Dung of Cattle. From what has been ſaid, I think we may comprehend with what View ſome order *Album Græcum* to be put in Draughts, intended to promote the Eruption of the Small-pox; becauſe every acrid ſtimulating Subſtance generally produces that Effect. *Philoſop. Tranſ.* We do not aſſert, that this Medicine is proper in all Caſes of this Nature; our Intention is only to point out by what Quality theſe Excrements promote the Eruption of the Small-pox. Powder of *Album Græcum* is, for the ſame Reaſon that other acrid Subſtances are uſed, applied to cleanſe and abſterge Ulcers, become foul and ſordid by the prepoſterous and unſkilful Uſe of pinguious Subſtances. In conſequence of the powerfully reſolvent Quality of *Album Græcum*, a Spoonful of it, diluted in Wine or Brandy, was the Secret of a certain Soldier againſt quartan Fevers. *Ephemerides Germanicæ Curioſæ, Decad.* 2. *a.* 5. We ſee no Reaſon why *Album Græcum* ſhould be recommended as a Specific in Quinſeys, unleſs becauſe Dogs are frequently afflicted with this Diſorder; or becauſe, in a Quinſey, the Patients breathe with open Mouths, and, like Dogs out of Breath, hang out their Tongues. The *Oleum Catellorum*, in the *Pharmacopœia Pariſienſis*, is Oil of Olives, in which very young Whelps are boiled to a Diſſolution of the Compages of their Bones; and in which, after it is ſtrain'd and expreſs'd, the Tops of Origanum, Penyroyal, Mother of Thyme, St. John's-wort, and Marjoram, are put, and the Whole is expoſed to the Sun. *Foreſtus, Obſ. Med. L.* 10. *Obſ.* 82. informs us, that, in paralytic Caſes, he has known happy Effects produced by the Oil in which live Whelps, without any other Ingredient, have been boiled. This Medicine is intended for external Uſe, in Caſes of Contractions, and in Caſes where Rigidity is to be relax'd, or Obſtructions opened. In the *Pharmacopœia Bruxellenſis*, and that of *Lemery*, young Whelps are order'd to be boil'd in Oil, with Earth-worms; and to the Liquor, when ſtrain'd off, pure Turpentine, and Spirit of Wine, are added; by which means the Medicine is render'd more reſolvent, corroborative, nervous, and proper for diſcuſſing Tumors, and removing Rheumatiſms. *Konigius* alſo highly recommends it in violent Pains ariſing from Gun-ſhot Wounds. The *Unguentum de Catello*, in *Lemery's Pharmacopœia*, beſides the Whelp and the Earth-worms, has alſo for its Ingredients emollient and aromatic Vegetables, which are boil'd in mild Oils, and *Spaniſh* Wine, to a Conſumption of the ſuperfluous Humidity; after which the Oil is ſtrain'd off, and a proper Quantity of Stags Marrow, and Goats Suet, is added.

This Medicine is recommended for external Uſe, as a Reſolvent; and in Caſes where the Intention is to corroborate the Nerves. The *Balſamum e Catulis compoſitus*, in *Schroder's Pharmacopœia*, is prepared of live Whelps, ſuffocated in White-wine, and boil'd to a Balſam, with nervous Herbs, Oils, and Reſins. This Medicine is recommended againſt Contractions of the Limbs, and Sciatic and Arthritic Pains.

CANIS CARCHARIAS, Offic. Charlt. Piſ. 7. Aldrov. de Piſc. 383. Bellon. de Aquat. 60. *Canis Carcharias ſeu Lamia*, Geſn. de Aquat. 173. Raii Icht. 47. Ejuſd. Synop. Piſc. 18. *Canis Ariſtoteli ſeu Carcharias*, Jonſ. de Piſc. 13. *Canis Galeus*, Salv. de Aquat. 132. *Lamia*, Rondel. de Piſc. 1. 390. THE WHITE SHARK.

This Animal is found both in the *Mediterranean*, and in the main Ocean. The Teeth of the Serpent, and alſo of this Fiſh, when petrified, are the *Gloſſopetræ* of the Shops. Its Teeth are eſteem'd good againſt Poiſons. Women hang them about the Necks of Children, becauſe they are commonly thought to aſſiſt Dentition, and prevent Frights. *Rondeletius.* The *Gloſſopetræ* are by ſome thought to poſſeſs an alexipharmac Quality. *Dale.*

CANITIES, πολιότης, πολίωσις. Greyneſs of the Hairs; which is either ordinary, as in old Age; or extraordinary, as in Youth.

CANNA. The ſame as ARUNDO.

CANNA FISTULA. The ſame as CASSIA FISTULA. *Rieger.*

CANNA INDICA. The ſame with CANNACORUS. *Rieger.*

CANNA SEPIARIA. The ſame as the *Arundo vulgaris*. See ARUNDO.

CANNABINA, *Baſtard-hemp.*

The Characters are:

It is a Genus, whoſe Flowers have no Petals, but conſiſt of a Number of Threads, and are barren; for the Seed is produced on Female Plants, which have no viſible Flower, but have membranaceous Seed-veſſels, which incloſe triangular Seeds, which are, for the moſt part, oblong. *Miller's Dict.*

Miller, and *Boerhaave*, *Ind. Alt. Plantarum, Vol.* 2. *p.* 105. enumerate two Species of this Plant: The *Cannabina Cretica ſtorifera*: And the *Cannabina Cretica fructifera.*

But *Boerhaave*, in the ſame Work, *Vol.* 1. *p.* 159. ſpecifies ſome other Plants under the Name of *Cannabina.*

The Characters are:

It has a hollow upright Galea, with a Beard divided into three Parts, the middle Segment being the largeſt. The Flowers grow in Whorles, and reſemble thoſe of the Lamium. The Flower-cups are large, aculeated, and cloſely ſet together, as in the Clinopodium; the Segments of the Cup, or Calyx, ending in ſharp Prickles or Aculei; the Leaves reſemble thoſe of Hemp.

Of this he enumerates three Species.

1. *Cannabina flore purpuraſcente, Galeopſis procerior, caliculis aculeatis, flore purpuraſcente*, T. 185. *Urtica aculeata, foliis ſerratis*, C. B. Pin. 232. *Cannabis ſylveſtris quorundam, urticæ inerti ſimilis*, J. B. 3. App. 854. *Lamium annuum procerius, urticæ folio, verticillis ſpinoſis*, M. H. 3. 386. *a.*

2. *Cannabina, flore albo. Galeopſis procerior, caliculis aculeatis, floribus candidis*, T. 185. *Urtica aculeata, foliis ſerratis, floribus candidis*, C. B. Pin. 232. *a.*

3. *Cannabina flore magno luteo, labiis purpureis. Galeopſis anguſtifolia, flore variegato*, T. 185. *Cannabis ſpuria anguſtifolia, variegato flore, Polonica*, Barrell. Ic. 1158. Obſ. 241. *Lamium annuum procerius, urticæ foliis, flore luteo amplo, labio purpureo*, M. H. 3. 386. *Lamium cannabinum aculeatum, flore ſpecioſo luteo, labiis purpureis*, Pluk. Ph. 41. 4. *a. Boerhaave's Index alter Plantarum, Vol.* 1. *p.* 159.

CANNABIS, Offic. Chab. 478. Ger. 512. *Cannabis ſativa*, MANURED HEMP. Park. 597. C. B. 320. Hiſt. Oxon. 3. 433. Raii Hiſt. 1. 158. Synop. 53. Boerh. Ind. A. 2. 104. Tourn. Inſt. 535. Buxb. 53. *Cannabis mas & fœmina*, J. B. 3. 447. Ger. Emac. 708. HEMP. *Dale.*

Hemp is a very uſeful Plant for making Cordage, and all Things of that Kind. It bears a Leaf much like the Aſh, but of an ungrateful Smell, on a long empty Stalk. The Seed is round, which, if eaten too freely, cauſes Impotence. The Juice of the green Plant, inſtil'd into the Ears, mitigates the Pains therein. *Dioſcorides, Lib.* 3. *Cap.* 165.

Wild Hemp ſhoots forth twiggy Stalks like the Althæa, but blacker, rougher, and ſmaller, a Cubit high. The Leaves are like thoſe of the common or cultivated Hemp, only rougher and blacker. The Flowers are reddiſh, and like thoſe of the Lychnis; and the Seed and Roots are like thoſe of the Althæa.

The Root boiled, and applied by way of Cataplaſm, mitigates Inflammations, diſcuſſes Tumors, and diſſolves tophaceous Concretions about the Joints. The Bark thereof is alſo twiſted into Cordage. *Dioſcoridi, Lib.* 3. *Cap.* 166.

The Stalks of *Hemp* grow to be five or ſix Foot high, angular, and covered with a ſtrong tough Bark; and cloath'd with many digitated or finger'd Leaves, each Leaf compoſed of five, ſix, or ſeven Parts, long and narrow, ſharp-pointed, and ſerrated about the Edges, the middlemoſt being longeſt, ſet together upon one long Foot-ſtalk; they are green above, and hoary underneath, and rough in handling. The Flowers grow toward the Tops of the Stalk, in that they call the Male, in Bunches, ſmall and ſtaminous, which periſh without bringing any Seed; that being produced by the Female only, without any previous Flowers.

The Seed of *Hemp*, which is the only Part uſed in Phyſic, being boiled in Milk till it cracks, is accounted good for old Coughs, and a Specific to cure the Jaundice. It has been formerly believed to render Perſons unactive in Venereal Affairs; but that is not at all likely, for it not only cauſes Hens to lay Eggs in Plenty, if given moderately; but the famous *Bangue*, ſo much uſed by the *Perſians* and *Indians* to promote Venery, is a Species of Hemp. *Miller's Bot. Off.*

CANNACORUS *latifolius vulgaris*, Pit. Tournefort. *Arundo Indica latifolia*, C. B. J. B. *Harundo florida*, Ger. *Calamacorus*, Lob. *Arundo Indica florida*, Lob. *Cannacorus quorundam Canna Indica*, Geſ. Hor. Cluſ. Hiſp. *Cni & Flos Cancri nonnullis*, Camp. THE INDIAN REED.

This Plant ſends forth ſeveral Stalks, about four Feet in Height, of a Finger's Thickneſs, and jointed at Intervals like other Reeds. The Leaves are broad, large, fibrous, pointed at their Extremity, of a pale-green Colour, and of an herbaceous Taſte, mix'd with a little Acrimony. The Flower grows at the Top, and is ſomewhat like that of the *Gladiolus*, being of a beautiful red Colour. This Flower is a Funnel, divided by deep Jaggs into ſix or ſeven unequal Parts; ſo that, before it is thoroughly open, it ſeems to repreſent the Parts of a Crab, whence it is called Crab-flower. After the Flower ſucceeds a membranaceous Fruit, rounded at three Corners, of the Size of that of the Ricinus, and divided into three Cells, containing ſpherical Seeds, of a dark or blackiſh Colour. The Root is full of Joints, and ſurrounded with big Fibres. This Plant grows only in warm Places, the Cold being very injurious to it. It is ſuppoſed, that the Leaves which are wrapp'd about the Gum

Gum Elemi, belong to this Reed. Its Root is deterſive and aperitive. *Lemery des Drogues.*

Miller takes Notice of five Species of Cannacorus: And there is a ſixth. This is the ſame as the CURCUMA, which ſee.

CANNI. A Sort of Fiſh uſually fry'd, condemn'd by *Oribaſius, Med. Coll. Lib.* 2. *Cap.* 58. as unfriendly to the Stomach, ſubject to fluctuate, and eaſily corrupted.

CANNULA. A Diminutive of CANNA; alſo a Name for ſeveral Inſtruments in Surgery, of various Figures, according to the different Uſes made of them in Operations. A Cannula is a Tube made of different Metals, principally Silver and Lead, but ſometimes of Iron. They are introduced into hollow Ulcers, in order to facilitate a Diſcharge of Pus, or any other Subſtance; or into Wounds, either accidental or artificial, of the large Cavities, as the Thorax, or Abdomen. They are uſed in the Operation of Bronchotomy; and, by ſome, after cutting for the Stone, as a Drain for the Urine. Other Cannulas are uſed for introducing Cauteries, either actual or potential, into hollow Parts, in order to guard the Parts, adjacent to that intended to be cauterized, from Injury. They are of various Figures, as may be ſeen, Table 23.

CANON, *κανὼν.* A Canon or Rule, according to which any thing is made. *Paracelſus*, when he oppoſes the *Canons of Phyſicians* to his Arcana, or ſecret Remedies, ſeems to mean by *Canons* a Medicinal Method; and therefore, *de Caducis, par.* 4. he ſays, that a *canonical* Caſe does not take place in all Diſtempers. Purges, Syrups, and Paregorics, according to him, are *canonical* Remedies.

CANONIAI, *κανονίαι*, in *Hippocrates, Lib. de Aere, Locis & Aquis*, ſignifies thoſe who have ſtrait and not prominent Bellies, but diſpoſed, as it were, by a *Canon* or ſtrait Rule; or as *Galen*, in his *Exegeſis*, explains the Word, *ὀρθοὶ καὶ τετρασκαλμένοι τὰς γαστέρας*, "ſtrait, and of contracted Bellies." To theſe are oppoſed corpulent Perſons, who, according to *Hippocrates*, never increaſe in Height, or become *canoniai*; but are augmented in Bulk or Thickneſs. *Canoniai, κανονίαι*, then, ſeem to be ſuch as are ſtrait, and tall of Stature, and are fit to be a *Canon* or Standard for the reſt.

CANOPICON, *κανοπικὸν.* A Name in *Dioſcorides, Lib.* 4. *Cap.* 166. for the *Pityuſa*, a Sort of Spurge.

CANOPITE. The Name of a Collyrium for the Eyes in *Celſus, Lib.* 6. *Cap.* 6.

CANOPUM, in *P. Ægineta, Lib.* 7. *Cap.* 3. & 5. ſignifies both the Flower and the Bark of the Elder-tree.

CANSCHENA POU. A Species of MANDARU, which ſee.

CANSJAVA. See BANGUE.

CANTABRICA. An Herb, diſcover'd, as *Pliny* ſays, *Lib.* 25. *Cap.* 8. in the Time of *Auguſtus*, in the Country of the *Cantabri* in *Spain*, whence it takes its Name.

CANTABRICA, *Convolvulus minimus*, Offic. Mont. Ind. 39. *Convolvulus minimus, Spicæ foliis*, Ger. 713. Emac. 862. Mer. Pin. 28. Phyt. Brit. 30. *Convolvulus ſpicæ foliis*, Park. Theat. 172. Raii Hiſt. 1. 726. *Convolvulus Linariæ folio*, C. B. Pin. 295. Hiſt. Oxon. 2. 17. *Convolvulus Linariæ folio, aſſurgens, & humilior*, Tourn. Inſt. 83. Boerh. Ind. A. 247. *Volvulus terreſtris Dalechampii*, J. B. 2. 160. LAVENDER-LEAVED BIND-WEED.

It grows wild in the Fields, flowers in *June*, and is by ſome recommended as good againſt Worms.

CANTABRUM, in *Cœlius Aurelianus, Acut. Morb. Lib.* 3. *Cap.* 3. and other Places, ſignifies *Bran.*

CANTACON, Garden-ſaffron. *Rulandus.*

CANTARELLI. A kind of Worms, called alſo *Vermes Maiales*, "May-worms," which, being macerated in Oil, are ſaid to endue it with the Virtues of Oil of Scorpions. They are reckoned among the Species of Beetles, and are diſtinguiſh'd by the Epithet of *unctuous*, becauſe, when they are touched, they emit an unctuous, acrimonious, and ſtrong-ſcented Liquor, which, as *Glauber* ſays, provokes Vomiting, and purges by Stool and Urine. *Caſtellus.*

CANTERBURY WATERS.

About twelve Years ago, a *Mineral Water* was accidentally diſcovered here. In digging the Ground, they firſt met with a fat, black Mould, reaching three Foot deep, and gradually changing into another ſort of Earth, very fat, and like Butter. This ſecond Layer was too Foot thick, the Colour yellow, ſomething mixed, its Odour ſtrong and mineral; and a Piece of it being for ſome time expoſed to the Sun, it ſmelt like burning Sulphur. After this they found a Quick-ſand, of a darker Colour than the firſt Earth, mixed with ſeveral little Stones, and the Smell ſtill ſtronger that before. Two Foot farther, under the Quick-ſand, a hard Rock appeared, out of which Water guſhed with ſome Violence. They dug five Wells, about ſeven Foot Diſtance from each other; one about eight or nine Foot deep from its Surface, and twelve from the Surface of the Ground about it, and reaching the Rock; the other is not ſo deep by two Foot, and only touches the Sand. This laſt is ſomething ſtronger of the Sulphur; but the other is ſtronger of the *Mineral Spirit* and *Irony Parts.*

Two Drams of the ſecond Layer of Earth, found in Digging, being put into four Ounces of *Spirit of Vinegar*, there preſently aroſe a conſiderable Ebullition; and, ſoon after, the Spirit was tinged with a yellow-browniſh Colour, which ſuffered no Alteration with the Infuſion of Logwood, nor with Galls; but, with Oil of Tartar *per deliquium*, it turned greeniſh; and, with the Infuſion of *Lignum Nephriticum*, of a pale Red.

The Water, taken up at the Spring, is extremely limpid, but grows ſomething whitiſh in a Quarter of an Hour, and in half an Hour the Spirit is loſt; and the *Mineral* hangs firſt on the Sides of the Glaſs, and then falls gradually to the Bottom. It will not keep quite ſo well as the *Spaw* or *Tunbridge* Water. Its Taſte is harſh and auſtere, the Smell ferruginous and ſtrong, ſomething upon the Sulphur; People ſay it ſmells like Gunpowder. It will make the Root of the Tongue of the Drinker blackiſh. Linen waſhed in it turns yellow. It will not lather with Soap. The Glaſſes the Water is dipped with grow yellow, which no Scouring can take off, and are apt to fly. In froſty and cold Weather 'tis ſo warm as to melt Ice and Snow; in other Seaſons 'tis cold, tho' not ſo cold as ſome Spring-waters are.

The Weight of this Water varies greatly, according to the Seaſons and Weather. In *May* 1704. it weighed three Grains lighter than common Water, in the Quantity of a Pound. In the Spring 1705. it was equal in Weight to common Water; but was ſtill heavier in the *Auguſt* following, becauſe of the exceeding dry Weather that Summer. But in general, about Midſummer, if the Weather is no ways extraordinary, 'tis nearly equal in Weight to common Water. A ſingle Grain of good *Galls* will inſtantly turn a Pint and a half of this Water to a deep Red; *Syrup of Violets* turns it of a Graſs-green; with the *Infuſion of Brazil*, it gives a deep lively Blue; with that of *Lignum Nephriticum*, firſt a light Green, then a light Yellow; with the *Infuſion of Logwood*, a blue Black; with that of *Fuſtic-wood*, a duſky Yellow; with the *Flowers of Pomegranate*, a fair Violet; with *Tea-leaves*, a fine purpliſh Blue; with good *Nantz Brandy*, an elegant Sky-colour. It inſtantly turns a *Solution of Sugar of Lead* milky; and a *Solution of Sublimate* alſo in ſome ſmall time. *Oil of Tartar per deliquium*, and *Spirit of Vitriol*, make no ſenſible Alteration.

In calm Weather, in Winter eſpecially, a thick *oily Film* covers the Surface of theſe Waters with as great a Variety of Colours as the Rain-bow. A Spoonful of this oily Matter, drank, has the Effect of, and compoſes as much to Sleep as, a moderate Doſe of *Opium*. Some of this Scum, being dried by Evaporation, taſted very fat, and felt ſo between the Fingers. Some of the Powder being caſt upon a red-hot Iron, moſt of it immediately burnt away with ſome Sparkling, and what remained was of the Colour of Ruſt of Iron, and taſted partly ſtyptic and earthy, and partly ſaltiſh.

The *Water* itſelf, being gently evaporated, yields a yelloviſh Sediment, more or leſs according to the Seaſons. Laſt Spring a Quart yielded ſix Grains of it; but, in *September* following, the ſame Quantity afforded nine Grains; whereas a Pound of *Tunbridge-water* gave but a ſingle Grain of Sediment to Mr. *Boyle*, as appears by his *Memoirs of Mineral Waters.* This Sediment, being boiled in common Water, made a ſtrong *Lixivium*, with which *Acids* cauſed no ſenſible Fermentation; but *Syrup of Violets* turned it green. This *Lixivium*, being evaporated, yielded a fat ſulphureous Salt, which would not coagulate into Cryſtals. I can get but three or four Grains of it out of ten Grains of Sediment; but, from the Colour and Taſte of the *Lixivium*, I ſuſpect that there is a larger Proportion of ſaline Particles, which, I conceive, being volatile, evaporate with the Water.

As for *Medicinal Virtue*; from the many and wonderful Cures they perform, I believe them one of the moſt excellent Waters of this kind yet diſcovered in *England*. The *little Well* is very uſeful in Diſeaſes of the Breaſt, as Aſthmas, Coughs, Rheums, and Catarrhs. It has cured ſeveral that were given over in Conſumptions of the Lungs. Moſt Diſorders of the Stomach are cured by this *Water*. It ſeldom fails in Rheumatic and Gouty Pains of the Limbs or other Parts; in the Scurvy, Melancholy, Jaundice, Vapours, all ſorts of Stoppages, Scabs, Itch, &c. But in the Gravel, Colic, and Green-ſickneſs, 'tis a true Specific, as alſo in inward Ulcers, if not too far gone.

A *Potter* in *Bolton*, who had ſpent his Subſtance on Doctors, and was laſt Spring diſcharged out of St. *Thomas's* Hoſpital as an *Incurable*, was cured of an Ulcer in the Bladder this Summer, by drinking of this Water for three Months together. In Agues 'tis beyond the Bark: I have ſeen ſome rebellious ones, that could not be removed by the Bark, perfectly cured by this Water; and ſome Conſtitutions, quite worn out by frequent Relapſes of this Diſtemper, reſtored. This is alſo remarkable, that it agrees both with old, decayed, and weak Conſtitutions. The Water ſits pleaſantly upon the Stomach, works off by

Urine

Urine very briſkly, cauſes a good Appetite, chears the Spirits, and procures Sleep. 'Tis not binding, as ſome other Chalybeats are, but keeps the Body open in moſt People; and upon ſome it brings now-and-then a gentle Looſeneſs, which carries off the Diſtemper. For theſe four Years I have preſcribed it to many ſorts of People every Seaſon, and I could never obſerve any Inconvenience, or ill Symptom, ariſe from the drinking of it. Dr. *Scipio des Moulins*, in *Philoſ. Tranſ.*

CANTERIUM, CANTHERIUS, κανθήριον, κανθήριος. A Croſs-beam between two Poſts, in the Machine contrived by *Hippocrates*, *Lib.* περὶ ἄρθρων, for replacing the diſlocated *Os Humeri*. *Gorræus*, *Caſtellus*. See AMBE.

CANTHARIDES. Offic. Schrod. 5. 339. Mouff. Inſect. 144. Charl. Exer. 47. *Cantharis major*, Jonſ. de Inſect. 76. Aldrov. de Inſect. 476. *Cantharides vulgares officinarum*, Raii Inſect. 101. SPANISH FLIES. *Dale.*

Cantharides are Inſects of the flying Kind, and a Species of ſhining Beetle, of a golden, azure, or greeniſh Colour, and of a fetid Smell. Theſe Flies are found not only on Aſh-trees, Roſes, Elders, Walnut-trees, Privets, and other Plants, but alſo among the Corn, which they corrode and deſtroy. They are alſo moſt numerous in the warmer Climates, ſuch as *Spain*, *Italy*, and *France*; but, in *Germany*, they are rarely found in great Numbers. The Vulgar fooliſhly believe, that in their Country they only become plentiful once in ſeven Years; for ſometimes larger Swarms of them appear, and ſeem to have Impulſe of the Air. Their Appearance is attended with been drawn from ſome other Quarter of the World by the a very remarkable and ungrateful Stench. *Ephemerides Germanicæ curioſæ*, *Decad.* 1. *a.* 4. *o.* 186. In Bulkand Colour they ſometimes differ very conſiderably from each other. *Mouffeti Inſectorum Theatrum.* The common *Cantharides* of the Shops are about three Fourths of an Inch long, everywhere of a greeniſh Colour, and having *Antennæ* conſiſting of ſhort Articulations. *Raii Hiſtoria Inſectorum.* With reſpect to the Anatomy of this Inſect, the Curious may conſult the *Ephemerides Germanicæ curioſæ*, *Decad.* 2. *a.* 2. *o.* 20.

Powdered Cantharides, applied to the *Epidermis* or *Scarf-ſkin*, not only exulcerate it, but alſo frequently excite a Heat of Urine, Stranguries, plentiful Diſcharges of Urine, Thirſt, a Fever, and ſometimes a Piſſing of Blood, and a fetid cadaverous Breath. When uſed internally, they alſo excite all the above-mentioned Symptoms. But Authors have obſerved them to be in a ſingular manner prejudicial to the urinary Bladder. *Bartholini Hiſtoriæ Anatomicæ Cent.* 5. *Hiſt.* 21. A few Inſtances, among the many that might be given, will ſufficiently confirm the Truth of this. A Girl of ſix Years old, after being cured of an Incontinence of Urine, for a Fluxion and Pain of her Eyes, had a Veſicatory of Cantharides applied to the Nape of her Neck, by which a Diabetes, which put an End to her Life, was brought on. *Ephemerides Germanicæ curioſæ*, *Decad.* 2. *a.* 7. *o.* 86. Another Inſtance we have in the Caſe of *Braccus* of *Padua*, who, by the Advice of *Montagnana*, then a celebrated Phyſician, applying Cantharides to his Knees, voided more than five Pounds of Blood by way of Urine. *Jo. Lindeſtolpe de Venenis.* A certain Quack gave two Drams of Cantharides, with an Addition of the Sea Scinck, and Satyrion-root, to a certain Man of Diſtinction, as an aphrodiſiac Medicine, which proved fatal to him; for, beſides an inſatiable Deſire of Venery, a Tumor appeared in the Scrotum; and the ſeminal Matter being exhauſted, Blood was diſcharged in its ſtead, and the Patient died on the eleventh Day after the Exhibition of the Medicine. *Ephemerides Germanicæ curioſæ*, *Decad.* 1. *a.* 9. *o.* 148. According to *Lanzonius*, *Paré* informs us, that a Courtezan treated a young Man with a ſplendid Supper, dreſs'd with Sauces in which Powder of Cantharides had been ſprinkled. But, next Day, her unfortunate Gueſt, diſcharging Blood from his Anus, and his perpetually erected Penis, died in ſpite of all the Medicines that could be exhibited for his Relief. A certain Man, upon uſing Powder of Cantharides mixed with Tobacco, was forthwith ſeized with a violent Pain of the Head, and a Diſcharge of bloody Urine. According to *Pliny*, in the fourth Chapter of his twenty-ninth Book, *Coſſinus*, a *Roman* Knight, and noted for the Friendſhip which ſubſiſted between him and *Nero*, was ſeized with the Ring-worm; but, unluckily, a Phyſician, called from *Egypt* for the Cure of his Diſorder, by *Cæſar*, killed him by a Draught prepared of Cantharides. *Langius* ſuſpects, that *Coſſinus* was rather killed by the external Application of Cantharides, which, by their cauſtic Quality, extirpate Ring-worms, Scurfs, Leproſies, hard and callous Excreſcences on the Soles of the Feet, and Palms of the Hands, than by the internal Uſe of Cantharides, which can contribute nothing to the Cure of the Ring-worm. *Langius*, *Lib.* 1. *Epiſt.* 47. *Fabricius ab Aquapendente*, in his *Opera Chirurgica*, informs us, that he ſaw a Suppreſſion of Urine brought on by the Application of Cantharides to the Head; not becauſe theſe Inſects have of themſelves a Quality or Power by which they ſuppreſs the Urine, but becauſe they promote ſo plentiful a Secretion of it, that the urinary Bladder, being too much diſtended by it, loſes its expulſive Faculty, by which means an accidental Suppreſſion of Urine is produced. *Hildanus*, *Obſ. Med. Vol.* 1. informs us, that, by the Application of a Cataplaſm made of Cantharides to a ſwelled Knee, beſides other terrible Symptoms, a Pain of the Loins, Kidneys, and whole Abdomen, was excited, with ſo great a Heat of Urine, that the Patient could not, without violent Pain and Shrieks, diſcharge one Drop of Urine, which, at the ſame time, was evacuated Drop by Drop, and mixed with Blood. But, which is ſtill more ſurpriſing, *Boyle* informs us, that Authors of unqueſtionable Veracity have affirmed, that ſome particular Perſons, by only holding dry'd Cantharides in their Hands, have felt a conſiderable Pain about the Necks of their Bladders, and had ſome of the other Parts, ſerving for the Secretion of the Urine, remarkably injured. Either the Hands muſt have been warm, and Bliſters or Exulcerations raiſed on them, before we can ſuppoſe that any of the ſubtile Particles of the Cantharides could have penetrated ſo far as to injure the urinary Ducts; or, which is more probable, their Effluvia muſt have entered the Mouth in Reſpiration, and, being ſwallowed with the Saliva, have exerted their Virtues within the Body. Hence *Rammazini*, in his *Opera Medica & Phyſiologica*, adviſes Apothecaries, when pounding theſe Inſects, to take care, that the flying Duſt does not enter their Mouths; and previouſly, or at the very Time they are at work, to guard themſelves by liberal Draughts of an Emulſion of Melon-ſeeds, of Whey, or of Milk, in order to prevent or mitigate the Heat of Urine commonly produced on ſuch Occaſions. *Caldera*, in his *Illuſtrationes & Obſervationes practicæ*, *T.* 2. tells us, that a certain Druggiſt of *Carmona*, happening, when at *Seville*, to carry ſome Cantharides under the Breaſt of his Coat, was forthwith ſeized with a violent Heat of Urine, and a Piſſing of Blood. More Inſtances of this kind may be ſeen in *Santanellus*'s *Lucubrationes Phyſico-mechanicæ*. But the judicious Dr. *Freind* thinks Relations of this kind entirely chimerical, and tells us, that, in the ſixteenth Century, ſo fooliſh and ill-grounded a Dread of Cantharides prevailed, that *Adolphus Occo*, who flouriſhed about the Year 1560. would not conſent to their being carried in the Pocket, upon hearing that a certain Perſon, who had done ſo, diſcharged Blood inſtead of Urine. From what has been ſaid it appears, that Cantharides are poſſeſſed of a cauſtic Quality, which corrodes the Fibres, colliquates and putrefies the Humours, and is of ſo highly volatile a Nature, that a very ſmall Quantity of it exerts its Influence. Now, as every Subſtance, which entering the Body in a ſmall Quantity, ſuddenly and vehemently attacks both the internal and external nervous Parts, and, by its active and penetrating Principle, ſoon produces great and dangerous Changes, is generally called a Poiſon; ſo 'tis obvious, that, with reſpect to our Conſtitutions, Cantharides juſtly come under that Denomination. *Hoffman de Veſicatoriorum præſtanti in Medicina Uſu*, and *Caſpar Hoffman*, in his Work *De Medicamentis officinalibus*, calls them "a vio-"lent ſeptic Poiſon, highly deſtructive of the urinary Parts." The learned *Stenzelius*, in his *Toxicologia*, *Lib.* 1. informs us, "That Men of profligate and wicked Characters prepare what "he calls *Venenum Temporaneum*, or a temporary Poiſon, of the "Powder of Cantharides, which they mix with Honey, and "form into Troches or Electuaries, by the frequent Exhibition "of which various Diſorders are brought on, and, at laſt, the "Death of the miſerable Patient is procured. Others," ſays the ſame Author, "produce the like terrible and fatal Effects by "Pills, which, as *Benedictus Sinibaldus* informs us, from "*Fallopius*, they prepare of pounded Cantharides, in Conjun-"ction with Pepper, Cinnamon, and Cloves, as if the acrid "Poiſon of Cantharides were not ſufficient of itſelf. Theſe "Pills they exhibit ſeveral times. Of the like Nature I take "the *Morſuli Pappenheimiani* to be, which have Cantharides "for an Ingredient; and by which, Convulſions of the Penis, "Diſcharges of bloody Urine, and other Diſorders, are brought "on, as *Paulus Ammanus* informs us in his *Irenicum.*" Cantharides are claſs'd among thoſe Poiſons, to which Vomits, diluting aqueous Liquors, emollient oleous Subſtances, and Acids reſiſting Putrefaction, are oppoſed. *Boerhaav. Inſtit. Med.* 1144. "A certain Man had Cantharides exhibited to him, and was "forthwith ſeized with the following Symptoms: All the Parts "from his Mouth to his Bladder, to him, ſeem'd to be corroded; "his Breath ſmell'd like the Roſin of the Cedar, or ſome ſuch "Subſtance; the Præcordia on the Right Side were inflamed; "he diſcharged his Urine with Difficulty, and a Mixture of "Blood was now-and-then evacuated along with it. By Stool "he evacuated juſt ſuch Dregs as Dyſenteric Patients do; he "loath'd his Food, became ſubject to fainting Fits, was ſeiz'd "with ſo violent a Vertigo, that he dropp'd down, and at laſt "loſt the Uſe of his Reaſon in ſome meaſure. This Patient "had Oil of ſweet Almonds, newly expreſs'd, and mix'd with "Butter, exhibited, with an Intention to vomit him: Soon "after Cremor of Piſan, and a Decoction of Mallows, Lin-"ſeed, Fenugreek, and Marſhmallow-roots, were injected by "way of Clyſter; and an Emulſion of the Four cold Seeds "was exhibited in Milk. Soon after, upon the Exhibition of "Water

" Water and Honey, and fat Broth, prepared with Fowls, " the Patient became better." *Foreſtus, Obſ. Med. L.* 30. *Obſ.* 6. *Wedelius*, in his Book *de Medicamentorum Compoſitione extemporanea*, informs us, " That he knew a certain Man, " who, in order to excite a Stimulus to Venery, uſed an Infuſion of Cantharides in Chocolate; in conſequence of which " he was afflicted with an intolerable Dyſury, and a violent " Heat and Pain of his Penis; but by liberal Draughts of new " Milk his Diſorder, with all its Symptoms, were removed." *Jo. Lindeſtolpe de Venenis* informs us, " That nothing is more " effectual againſt Cantharides, whether drunk in any Vehicle, " or convey'd into the Body, in conſequence of the Application of a Veſicatory, and by this means lacerating the tender " Neck of the Bladder, and conſequently a Heat of Urine, " and the Priapiſm produced by it, than ſaline Acids of an oppoſite Nature, drunk in a proper Quantity, and alſo applied " externally. The beſt of theſe, for external Uſe, is warm " Wine-vinegar; and, in the Caſe of a Priapiſm, the Lees of " generous Wine. But, for internal Uſe, ſimple Oxymel is " the moſt proper, as I myſelf, ſays he, have found from Experience." By inadvertently eating a Paſte, made up with Cantharides, for a Veſicatory, violent Pains were excited, an Excoriation of the Tongue and Fauces induced, and the Patient was hereby reduced to the moſt imminent Danger. By immediately exhibiting a large Quantity of Milk, and proper refrigerating Waters, the Patient was forthwith vomited. Violent Pains were, in the mean time, excited about the Region of the Bladder, in conſequence of the Cantharides corroding that Organ. For removing theſe Pains refrigerating Clyſters ſeem'd moſt proper: At laſt a proper Quantity of the Theriaca, exhibited with Sorrel-water, procured Sleep. After which the racking Pains continued the whole Night, together with a plentiful Diſcharge of Blood inſtead of Urine; but by proper Anodynes, and the Uſe of refrigerating and cordial Syrups and Emulſions, the Patient was freed from the Tyranny of his Diſorder, and reſtored to perfect Health. *Bartholin. Hiſtoriæ Anatomicæ Cent.* 3. *Hiſt.* 16. A certain Perſon, upon taking eight or nine Cantharides in a Cheeſe-cake, was afflicted with a Heat of Urine, which was mixed with Blood, with violent Pains in his Back, and a burning Heat in his Stomach; but was cured by proper Doſes of the Powder of the Seeds of Biſhops-weed, and Sal Prunellæ, together with Emulſions, and Frogs-ſpawn Water. *Philoſoph. Tranſ. abridged, Vol.* 5. A certain Lady of Diſtinction, by the Application of a Veſicatory of Cantharides to the Nape of her Neck, was ſeized with an Inflammation of her Bladder, a Heat of Urine, and at laſt with a Diſcharge of Blood inſtead of Urine; all which Symptoms were removed, and the Patient reſtored, by Emulſions of the Seeds of Fennel, Mallows, and ſweet Almonds. *Ephemerides Germanicæ curioſæ, Decad.* 1. *a.* 2. *o.* 105. A certain Phyſician, intending to make Trial of the Effects of an Aphrodiſiacal Electuary, which contained Cantharides, by taking about the Bulk of a Cheſnut of it, was firſt ſeized with a Heat in his Penis, and afterwards with a continual Inclination to make Water, but with the moſt violent and ſcarce tolerable Pain. His Symptoms were, however, removed by a Potion made up with Turpentine, Diacodium, and Syrup of Marſhmallows. *Ephemerides Germanicæ curioſæ, Decad.* 2. *a.* 10. *Append.* Theſe Inſtances teach us what Meaſures are moſt proper to be taken in Caſes of a like Nature. The Method by which Cantharides act upon the human Body, or whence it is they derive their cauſtic Quality, are Points much controverted by the Learned. *Borrichius* obtained from one Ounce of Cantharides, put in a Glaſs Retort, increaſing the Fire gradually, a Dram and ſomewhat more of a thick, yelloviſh, fetid Oil, with a very ſmall Portion of a yellow Water, and of volatile urinous Salt about half a Dram. After he had obſerved, that this Oil and Salt, when rubbed on a Man's Hand, produced no Appearance of Bliſters, he had recourſe to the Microſcope; and becauſe, by its Aſſiſtance, he perceived that the Body and Legs of this Inſect were rough with a thouſand Spiculæ, he aſcribes their cauſtic Quality to the Entrance of theſe Spiculæ into the Cuticula or Scarf-ſkin, juſt as the Leaves of Nettles, which are armed with the like Spiculæ, produce a Senſation of Burning, when applied to the Hands. Hence he concludes, that the cauſtic Quality of Cantharides is not lodged in the Wings and Heads, but in their Legs, and the other Parts of their Bodies; and that, when the Bodies of theſe Inſects are powdered very ſmall before they are applied to the Cuticula, 'tis probable they operate more ſlowly for that very Reaſon, ſince their Spiculæ are, in a great meaſure, broken and deſtroy'd by the ſtrong Trituration. He imagines, that when Cantharides are either externally apply'd, or internally exhibited, theſe Spiculæ remaining in the Serum, and being conveyed to the urinary Ducts, by their Pungency produce thoſe Effects which are obſerved to ſucceed the Uſe of theſe Inſects. He thinks it not improbable, however, that the Force and Energy of theſe Spiculæ is augmented and increaſed by the volatile Salt contain'd in the Inſect. *Acta Medica & Philoſophica Hafnienſia, Vol.* 4. *Obſ.* 80. and *Vol.* 5. *Obſ.* 89. But it may be juſtly doubted, whether theſe Spiculæ do in reality account for the cauſtic Quality of Cantharides, ſince a great many other Inſects, which, by the Aſſiſtance of the Microſcope, are obſerved to be covered with like Spiculæ, are not, at the ſame time, found to be Eſcharotics. Beſides, ſome of the more mucilaginous Vegetables, ſuch as Squills, Garlick, and Onions, act as Veſicatories, when applied to the Cuticula. *Ephemerides Germanicæ curioſæ, Decad.* 1. *a.* 10. According to *Hoffman*, in his *Medicina Rationalis*, the Virtues of Cantharides are to be aſcribed to nothing but a certain ſubtile cauſtic Salt, by which they act upon our Bodies. *Lewenhoeck*, as he himſelf informs us, *Epiſt.* 70. obſerved ſeveral ſaline Concretions in theſe Inſects, when triturated, infuſed in Water, and dried in the Air. He alſo obſerved like ſaline Concretions in the Oil and Spirit of Cantharides, chymically extracted, diluted with an Addition of Water, and evaporated; as alſo in the Caput Mortuum, when lixiviated. Dr. *Cockburn* diſtilled eight Ounces of Cantharides from a Retort placed in a gentle Sand-heat; and, from that Quantity, obtained not only a volatile Salt, but alſo a Spirit and an Oil, two Ounces and five Drams being only left for a Caput Mortuum. He then ſeparated the Oil by the Aſſiſtance of Brick-duſt, and by that means obtained a Spirit which did not produce an Effervеſcence with Salt of Wormwood, Spirit of Hartſhorn, and Sal Ammoniac; but, when added to Spirit of Vitriol, a violent Effervеſcence was produced, and a ſtill more violent one with Spirit of Nitre; but the Effervеſcence was obſerved to be more gentle, and ſhorter, when Spirits of Hartſhorn and Sal Ammoniac were added to theſe Acids. Hence 'tis obvious, that the Spirit of Cantharides is a ſtronger Alcali than the laſt-mentioned Spirits. *Philoſophical Tranſactions abridged, Vol.* 3. According to *Vigani*, in his *Medulla Chymiæ*, Cantharides are obſerved to contain a larger Quantity of volatile Salt than any other Animal whatever. The Steam of that volatile urinous Spirit obtained from Cantharides by Diſtillation, happening to fly into the Noſe of a certain Perſon, who ſuddenly opened a Phial in which it was kept, in a few Hours after excited Pains in his Back, brought on a Diſcharge of bloody Urine, and affected his Head. This Spirit, when added to Blood as yet warm, rendered it ſo fluid, that no Fibres were any longer to be obſerved in it. *Ephemerides Germanicæ curioſæ, Decad.* 2. *a.* 1. If it ſhould be aſked why, or in what manner, Cantharides, whether internally exhibited, or externally applied, attack the urinary Bladder in a particular Manner, exulcerate that Organ, and bring on a Diſcharge of Blood inſtead of Urine; *Kircher*, in his *Mundus Subterraneus*, informs us, that it is the virulent, ſubtile, and ſpirituous Exhalation of the hot Salts contained in the Cantharides, and excited by Heat, which, by a wonderful kind of Magnetiſm, flows to the ſalſuginous Humour of the Bladder, as a Body analogous, and of a like Nature with itſelf. But, becauſe this Exhalation is of greater Efficacy than the ſalſuginous Humour of the Bladder, the former ſo taints and contaminates the latter, that a Corroſion enſues, by which means a Diſcharge of Blood muſt neceſſarily be produced. *Cæſalpinus*, in his *Speculum artis Medicæ Hippocraticum, Lib.* 3. *Cap.* 11. informs us, " That Cantha- " rides are conveyed to the Kidneys, becauſe, like Nitre, they " are eaſily diſſolved by the Urine; and becauſe, ſmelling like " the Roſin of the Cedar, they are attracted by the Kidneys." But *Lindeſtolpe*, in his Treatiſe *De Venenis*, ſeems to put this Matter in a clearer Light, when he tells us, that he does not think the Bladder affected, becauſe the cauſtic alcaline Salt of the Cantharides is more directly applied to it than to the other internal Parts, but becauſe the Cantharides being diſſolved in Water, following, like other Salts, the more aqueous Parts of the Blood, and at laſt being conveyed to the Bladder, eaſily excite a Pain in that highly nervous, and exquiſitely ſenſible, Part. Beſides, the Inteſtines, in conſequence of that Mucus, or pituitous Matter, with which they are covered, eaſily elude the Action and Force of acrid Subſtances of this kind; but they would, no doubt, be corroded by them, if they were exhibited in large Doſes. *Stentzelius* thinks, that beſides the Laxity of the Inteſtines, and the large Quantity of Phlegm lodged in them, we are alſo to conſider the Nature of the Serum which lubricates the Stomach and Inteſtines; for, according to him, this Serum partakes of the Nature of an Acid, by which means the exceſſive Acrimony of the alcaline Salt, contained in the Cantharides, is not only diluted, but alſo obtunded and blunted, by a Salt of an oppoſite Nature, to ſuch a Degree, that they are deprived of a Power of doing any Injury. Before we come to ſpeak of the ſeveral Uſes to which Cantharides are applied in Medicine, it will not be improper to conſider what Effects they produce when infuſed or injected into the Blood of live Animals, and when mixed with human Blood juſt taken from the Veins. *Baglivi* made the following Experiments, with a View to diſcover the Effects of Cantharides. At *Rome*, ſays he, in the Month of *May*, I opened the Right Jugular of a Maſtiff Dog fixed to a Table, and, by the Aſſiſtance of a Syringe, injected two Ounces of the Tincture of Cantharides; and this Tincture conſiſted of two Drams of Cantharides reduc'd to a Powder, and ſix Ounces of the Water of Carduus Benedictus digeſted for three Days on hot Aſhes. After the firſt In-

jection

jection the Dog vomited an aqueous and viſcid Subſtance, and diſcharg'd a viſcid Saliva from his Mouth, till at laſt two Ounces being injected, the Orifice was ſtitch'd up, and calcin'd Vitriol ſprinkled on it. No ſooner was this Operation perform'd, than the Dog dropt to the Ground, as if he had been dead. He would eat no more during the remaining Part of his Life, but had a violent Drought, for which Reaſon a Servant, prompted by a Principle of Compaſſion, without my Knowledge, gave him about twelve Pints of Water, by drinking which he diſcharg'd a large Quantity of yellow Urine. In the mean time he howl'd, and his inſatiable Thirſt continu'd, but we gave him no more Water. Before his Death he was ſeiz'd with Convulſions, and, on the fourth Night after the Injection was made, died howling in the moſt lamentable manner. Upon opening his Body, we found that Part of his Neck where the Injection had been made, entirely ſphacelated and fetid. In the Right Ventricle of the Heart, a large Quantity of very black Blood, little or not at all coagulated, fluctuated, and on the Surface of this Blood, ſome ſmall Drops, as it were of Oil, floated. In the ſame Ventricle we alſo found a ſmall Polypus, ſurrounded with ſome grumous Blood. In the Left Ventricle of the Heart were found two long ſlender Polypuſes, and the Blood contain'd in it was highly black and colliquated. The Lungs, and other Viſcera, were entirely ſound, but that mucous Subſtance with which the urinary Bladder is naturally livid, was entirely deſtroy'd, perhaps by the Acrimony of the Cantharides. The Bile in the Gall-bladder was become ſomewhat blackiſh. The Blood which flow'd from the open'd Veins or Viſcera, was highly black, but not at all coagulated, and had ſmall Drops, as it were, of Oil floating on its Surface. At *Rome* in the Month of *July*, I injected two Ounces of the Tincture of Cantharides into the right Jugular of a young middle-ſized Dog fixed to a Table. After the Wound was ſtitch'd up and dreſſed, as in the former Caſe, the Dog forthwith vomited, and dropt down, as it were, half dead. Two Hours after, he hung out his Tongue with the greateſt Signs of an inſatiable Thirſt. He would eat nothing, and, notwithſtanding his Thirſt, I would allow him no Water. Six Hours after, he died howling in the moſt terrible manner. Upon opening his Carcaſe, all his Viſcera were found to be ſound. His Blood, however, was highly black and colliquated, and had, as in the former Caſe, as it were, ſmall Drops of Oil floating on its Surface. This Dog was young, of a ſmall Size, and had drunk no Water; 'tis therefore no Wonder, if the Humours being ſuddenly diſſolv'd and colliquated by the cauſtic Salt of the Cantharides, he ſhould die in ſix Hours after the Experiment was made. In both Dogs I obſerv'd, that after injecting the Tincture into the Jugular, no Part was ſo ſoon affected as the Head, which immediately nodded, and hung down; neither could the Animal ſtand with a ſtrait Neck. The former of theſe Dogs immediately hung down his Head, and could ſcarce raiſe it up; but upon drinking twelve Pounds of Water, he immediately ſtarted on his Feet, mov'd his Head freely, kept his Neck ſtrait, and became more briſk and chearful than before. But he had ſcarce ſooner diſcharg'd the Water by Urine than he dropt down to the Ground, raiſed his Head no more, but died on the fourth Night half ſtupid, and nodding his Head. Hence it may be inferr'd, that Cantharides are principally prejudicial to the Head, and conſequently highly improper in acute and inflammatory Diſorders of that Part. But this Aſſertion muſt rather be confirm'd by Experience, than eſtabliſh'd by Conjecture and Hypotheſis. At *Rome*, in the Month of *April*, I took eight Ounces of Blood newly taken from a certain Patient; this Blood I divided into two Veſſels; immediately after its Extraction I mixed a Scruple of powder'd Cantharides with the Blood contain'd in one of the Veſſels, and left that in the other without any Mixture at all. The Blood mixed with the Cantharides coagulated before that left without any Mixture; but afterwards aſſum'd a livid blackiſh Colour, and a ſlender blackiſh Pellicle appear'd on its Surface. At laſt over the whole Surface of the Blood appear'd a large Number of Veſicles, which, when broken, diſcharg'd a blackiſh Serum, and ſoon after the Whole of the Blood was diſſolv'd into a black and ſomewhat livid Serum. The Blood in the other Veſſel, and which remain'd without the Addition of any thing, did not undergo the like Changes. In the ſame Month, after taking Blood from a certain feveriſh Patient, I ſeparated the Serum from the Blood, and mix'd with the former a Scruple of the Powder of Cantharides. A little after the Mixture I obſerv'd, that the Powder was precipitated to the Bottom of the Veſſel without communicating any Colour to the Serum, which only became more liquid, thin, and ſcarce afterwards to be coagulated. Thus *Baglivi*.

What Effects Cantharides are capable of producing on the Humours of an animal Body, we have already ſeen; but, according to *Pliny*, in the fourth Chapter of his twenty-ninth Book, Authors are not agreed in what particular Part of the Inſect the Poiſon is lodg'd. Some think it is contain'd in the Head and Legs, but this is deny'd by others. But it is agreed upon, that their Wings contribute to the Production of their Effects, in whatever Part the Poiſon is lodg'd. Theſe Inſects themſelves are form'd of a ſmall Worm, hatch'd for the moſt part in a ſpongious Subſtance in the Trunk of the Dog-roſe-tree, but more plentifully in that of the Aſh. Thoſe produc'd in the white Roſe-tree are leſs efficacious. The moſt efficacious are thoſe which are very plump, and variegated with pale Streaks, running in tranſverſe Directions along their Wings. Thoſe which are ſmall, flat and hairy, are leſs active; and thoſe all of one Colour, and extenuated, are, of all others, the moſt mild. Theſe Inſects are preſerv'd for ſome time in an unglazed earthen Veſſel, after which they are tied up in a Cloth with freſh Roſe-leaves, ſuſpended over boiling Vinegar and Salt till they are moiſten'd thro' the Cloth, after which they are again to be put in the Veſſel. They are of a cauſtic Quality, and ſerve to induce Cicatrices. They are ſaid to be effectual againſt the Leproſy and Ring-worm, and to provoke the Menſes and Urine; for which Reaſon *Hippocrates* exhibited them to dropſical Patients. Theſe are the Uſes to which, according to *Pliny*, the Antients applied Cantharides. *Dioſcorides*, *Lib.* 2. *Cap.* 54. and *Paulus Ægineta*, *Lib.* 7. *Cap.* 3. inform us, that thoſe Cantharides which are found among the Corn, and have their Wings mark'd with pale or yellow Streaks, were in their Days eſteem'd the moſt proper for medicinal Purpoſes. *Hippocrates*, in his Treatiſe *de Victu in Acutis*, for a dropſical Patient preſcrib'd the Bodies of three Cantharides triturated, without the Heads, Feet, and Wings, to be taken in three Glaſſes of Water. For anſwering the ſame Intention he alſo order'd five of the ſame Inſects without the Heads and Feet, to be put into the Pudenda of Women mixed up with Frankincenſe, Myrrh, Honey, Oil of Roſes, or *Egyptian* Oil, *de Morbis Mulierum*, *Lib.* 1. A little after, in the ſame Work, he recommends five Cantharides without the Heads and Feet, to be taken in mild ſweet Wine, for expelling the Secundines; but, for expelling the Fœtus, he orders ten Grains of *Ethiopic* Cumin and Caſtor, together with a little Cantharides, to be taken in Wine. But why, in the ſame Paſſage, *Hippocrates* ſhould recommend triturated Cantharides made up with Wine to be applied to the Pudenda of Women, as a Method of trying their Fecundity, is what we cannot well comprehend. In his Book *de internis Affectionibus*, he, in the Jaundice, recommends four Cantharides without the Heads and Feet, to be triturated, and exhibited twice or thrice a Day, in a Quarter of a Pint of White-wine, with the Addition of a little Honey. For promoting the menſtrual Diſcharges, he exhibited four Cantharides without the Heads, Feet and Wings, in ſome proper Liquor. *Lib. de Natura Muliebri*. But *Galen*, if we may believe *Matthiolus ad Dioſcor.* uſed to mix all the Parts of Cantharides with his Medicines. Theſe Inſects, according to the learned Doctor *Freind*, are often recommended by *Hippocrates* for internal Uſe, but no-where with an Intention to excite Bliſters, tho' at the ſame time he ſeems not to have been entirely ignorant of their Effects when applied to the Skin; ſince in the Book *de Superfœtatione*, of which he is generally ſuppoſed to be the Author, they are order'd to be mixed with other irritating Subſtances, and form'd into a Peſſary, with an Intention to purge the Uterus.

Aretæus was the firſt who order'd theſe Inſects to be rubb'd on the Skin of the Head in order to excite Veſicles. This Author recommends Cantharides in the Cure of an Epilepſy, and orders the Patient to uſe Milk for three Days before their Exhibition, to prevent the Injury the Bladder otherwiſe might ſuſtain. The ſame Method of curing this Diſeaſe, and Palſeys, was, according to *Aetius*, follow'd by *Archigenes*, whom we may reaſonably ſuppoſe to have been of the ſame Sect with *Aretæus*. *Galen* informs us, that Plaiſters made of theſe Flies may very properly be uſed for the Cure of Baldneſs, the Itch and Ring-worm; but according to *Le Clerc*, he either diſregarded this Medicine in the Cure of moſt other Diſeaſes, or, as appears from his own Writings, rarely uſed it, as being attended with dangerous Conſequences. As the *Greeks* who came after *Galen* advanced very little new upon any Subject, ſo they have been no leſs indolent with reſpect to this Particular. The *Arabians* alſo are in vain conſulted in this Affair, who, tho' ſtrongly addicted to compoſing new Forms of Medicines, yet in this Particular, as in moſt others, follow'd the Footſteps of the *Greeks*. Among the *Latins*, Cantharides ſeem to have been in very little Repute; and *Celſus* himſelf who deals very much in Sinapiſms, makes no mention of them ſo far as we know, except when, in Imitation of *Mico*, he recommends them for deterging and removing Pimples. *Pliny* informs us, that anointing the Parts affected with Cantharides is good againſt the Leproſy, the Ring-worm, and for extracting Darts. And *Scribonius Largus* is the only Author who extols them, when mixed with proper Cerates, for removing Scars. Theſe are almoſt all the Caſes in which the Antients apply'd Cantharides to the Skin, which was very rarely, and only

only when cold Humours were to be remov'd, and when the Diſorder was become inveterate. Long after the Reſtoration of Learning, Cantharides were alſo as ſcantily uſed: For *Fernelius* only preſcrib'd them in Blindneſs, and in Dropſies; but tells us at the ſame time, that their Uſe requires the higheſt Caution and Prudence. *Hollerius*, a Contemporary of *Fernelius*, an Author of a fine Taſte, and a Man well acquainted with the Writings of the Antients, orders Cantharides to be mixed in ſtimulating Topics for removing a Lethargy; tho' *Duretus*, who wrote the *Adverſaria* to the Works of *Hollerius*, diſſuades the Uſe of ſtimulating Topics in this Diſorder, becauſe it is accompanied with a Fever, in which Caſe hot Subſtances are highly improper. It is however, a memorable Cure which *Paré* and *Hollerius* perform'd by Cantharides. They adviſed a certain Lady of Diſtinction, whoſe Face was all over deform'd with burning Pimples, as if ſhe had labour'd under an Elephantiaſis, to apply a Veſicatory of Cantharides all over her Face, by which means ſhe was afflicted with ſuch racking Pains, and ſeized with a Fever ſo violent, that no Hopes of her Life ſeem'd to be left: However, when by the joint Care and Skill of theſe two ſhe was reſtor'd to Health, the Deformity of her Face diſappear'd, and never created her any Trouble for the future. The ſame *Hollerius*, when ſpeaking of Cauſtics, affirms, that ſciatic and arthritic Pains, Hemicranias, and Head-achs, are often reliev'd in conſequence of the Bliſters or Veſicles raiſed by Cantharides. He alſo tells us, that the Viſcera are purg'd, the Body entirely freed of recrementitious Sordes, and a large Number of old and obſtinate Diſorders cur'd, by means of Cantharides. We muſt not forget to mention, that the Whole of this Encomium on Cantharides is wanting in the Chirurgical Inſtitutions of *Hollerius*, firſt publiſhed with the Works of *Tagaultius*, in the Year 1540. which Edition *Geſner* and *Uffenbachus* have follow'd. From this Circumſtance we may reaſonably ſuſpect, that after this Time Cantharides began to be more frequently uſed than before. *Freind.*

From what has been ſaid we learn, firſt,

That the internal Uſe of Cantharides is more antient than the external Applications of them, at leaſt that they were more frequently preſcrib'd in the former, than in the latter Caſe.

Secondly, That theſe Inſects were uſed in Caſes where the Body was thought to require a great Stimulus; or where the Intention was to purge it. What we have above quoted from Dr. *Freind* ſufficiently ſhews, that almoſt till our own Times the external Uſe of Cantharides was a Piece of Practice which had not only its Abettors, but alſo its Enemies, as indeed all efficacious Medicines generally have, provided they are uſed by Men of Note. In our own Times theſe Inſects are uſed as the Baſis or principal Ingredient in Veſicatories, which are commonly prepar'd by mixing Powder of Cantharides with Leaven, or with a proper Plaiſter. But the Quantity of Cantharides ought to be ſpecified by the Phyſician, according as the Caſe requires an Application more or leſs acrid. By ſtimulating the Veſſels, and reſolving the Juices, external Applications of Cantharides certainly produce very happy Effects in all Diſeaſes ariſing from a ſpontaneous Glutinoſity; in the Rickets, for Inſtance, they are of ſingular Service by ſtimulating the languid Veſſels, and reſolving the mucous Concretions. *Boerhaave Mater. Med.* and *Aphor.* 1489.

As for the Effects they produce on the Skin, they are ſo obvious, that medicinal Writers ſeem to have adverted to them alone, and accounted for the good Effects of Veſicatories, from the Evacuation of Serum occaſion'd by them. This Evacuation they will have to be produc'd by the Stimulus of the Veſicatory, and the Fuſion of the Humours; ſo that when the Skin is, as it were, prick'd with ſmall Needles, the Serum is pour'd out. It muſt indeed be confeſſed, that, in conſequence of the Force of this Stimulus, the Humours flow more plentifully to the Part than at other Times: Yet we are not for this Reaſon to believe, as they do, that, whilſt the reſt of the Blood is retain'd in the Veſſels, the Serum is in a particular manner imbibed or attracted by the Particles of the Cantharides; for, when the common Coat of the Veſſels is a little corroded, the Serum is diſcharg'd merely in conſequence of its Thinneſs, whereas the Globules, which give a red Colour to the Blood, being larger than the Pores thro' which the Serum paſſes, cannot be diſcharg'd. This is obvious in thoſe Bliſters raiſed by the Fire, by which the Cuticula, which covers the Mouths of the Veſſels, being torn in the ſame manner as in caſe of Veſicatories, a Paſſage is made for the Serum.

Since then Veſicatories not only excite Pain, but eliminate and diſcharge the Serum, they muſt be of ſingular Service in the Cure of Diſeaſes, and the Evacuation of the Serum may be look'd upon as a kind of Prognoſtic; for, unleſs it is diſcharg'd, we rightly conjecture, that the Caſe will not terminate ſo happily, as otherwiſe it might be expected to do. But the Virtues of Cantharides ſeem not to be confin'd within theſe Bounds; for their Effects are ſo ſurpriſing and extenſive, that we cannot poſſibly account for them, unleſs we could comprehend the particular Manner in which they affect, not only the Skin, but alſo the Maſs of Blood; for, if they only prov'd beneficial by drawing away the Serum, the ſame Quantity of Serum diſcharg'd along with the Urine would produce equally happy Effects. But tho' in almoſt all Diſeaſes as much Serum may be diſcharg'd from the urinary Paſſages, as could be taken off by the Application of a Veſicatory; yet 'tis obvious from Experience, that the former Diſcharge in no Diſeaſe produces ſo good Effects as the latter. It ſufficiently appears how great the Virtues of Cantharides, taken internally, are, in evacuating Humours, removing Obſtructions, and promoting a briſk Circulation of the Blood. For this Reaſon they were uſed by the Antients with an Intention to provoke the Menſes, to cure the Dropſy, to expel the Fœtus, to diſlodge Worms, to ſubdue the Poiſon of mad Dogs, and to open the cutaneous Ducts in inveterate Ring-worms. It is alſo probable, that, when Cantharides are applied to the Skin, they penetrate farther, and put the Humours into the like Commotions; otherwiſe how could their external Application prove ſo beneficial in Pleuriſies, Peripneumonies, Defluxions, and Convulſions? How could they cure inveterate ſciatic Pains, or open Obſtructions? How could they diſpoſe the Humours for Perſpiration, make the Sweat flow more eaſily, and produce a ſpeedy Eruption of all Kinds of Puſtules on the Skin?

Thoſe who either neglect or overlook this internal Energy of Veſicatories, when accounting for the racking Pains and Exulceration of the urinary Ducts produc'd by them, are oblig'd to confeſs, that the Particles of the Cantharides have penetrated into the Maſs of Blood; and that their highly acrid Salts, uniting with thoſe of the Urine, act theſe painful Tragedies. Thus the Man who obſtinately adheres to an Opinion implicitly taken for granted, involves himſelf in inextricable Difficulties, and is oblig'd to run into the moſt glaring and palpable Inconſiſtencies.

If in Parts ſo far remote from the Skin, as the Bladder and urinary Ducts, they produce ſo conſiderable Effects, what Reaſon have we to doubt of their exerting their Energy in other Parts? What ſhould hinder them from inducing a certain Change on the Humours circulating thro' all the Veſſels? 'Tis certain the Diſadvantages ſometimes attending the Application of Veſicatories cannot be accounted for, but by ſuppoſing the Cantharides to act upon the Blood in the manner now ſpecified. Upon this Principle we can eaſily underſtand, why in hectic Caſes, eſpecially accompanied with colliquative Sweats, as alſo in bilious Conſtitutions, and thoſe conſtitutionally inclin'd to feveriſh Heats, Cantharides are ſometimes prejudicial, and, if we may believe ſome Authors, highly dangerous in a Plethora, unleſs a Vein be previouſly open'd; for ſince they greatly attenuate the Maſs of Blood, and accelerate its Circulation, they conſequently produce Fevers, Inflammations, and Deliriums; or, as happens in hectic Caſes, too profuſely diſſipate the Stores by Nature deſtin'd for the Support of Life; in ſlow Fevers alſo, where the Pulſe is weak and languid, if Veſicatories are ſucceſsfully apply'd, we immediately perceive it to become ſtronger, which Effect we can by no means ſuppoſe the Detraction of a very ſmall Quantity of Serum capable of producing.

Bellini, who maintains that the whole Efficacy of Veſicatories conſiſts in their ſtimulating Quality, aſſerts, that by this very means the Pulſe is raiſed, and render'd ſtronger. But I would aſk, Whether other ſtimulating Applications produce the ſame Effects? Whether, for Inſtance, Cauſtics, Fontanels, Setons, or even Veſicatories, which have not Cantharides for an Ingredient, are capable, by their Stimulus, not only of raiſing the Pulſe for a time, but alſo of reſtoring it ſo, as that it ſhall remain in its natural State? Purgatives, which ſcarce enter the Blood-veſſels, prove a Stimulus to the Inteſtines, but the Pulſe is not by that means render'd in the leaſt ſtronger than it was before; they indeed ſomewhat accelerate the Circulation of the Blood at the Mouths of the Glands, but do not appear ſo to affect the common Maſs of Humours, as to impart any Vigour to the Pulſe.

Boiling Water, in like manner, and live Coals, excite both an Itching and Bliſters on the Skin, but yet in ſuch a manner, as to convey no new Degree of Motion to the Blood. Since, then, ſo ſpeedy and unexpected Relief is in many Diſeaſes, eſpecially thoſe of the Head, afforded by Veſicatories, theſe ſeem to produce their Effects, not ſo much by Revulſion, Irritation, or Evacuation, as by ſome other Quality or Virtue. Now, if we carefully advert to this Virtue or Energy exerted internally, we ſhall underſtand the whole Nature of Veſicatories, and be able to judge in what manner they may be moſt happily accommodated to the Cure of Diſeaſes. If we were but careful in this Particular, we might at leaſt, receive ſome Aſſiſtance in executing a Deſign hitherto neglected by the Phyſicians, which is the laying down accurate, clear, and infallible Rules, with reſpect to the Uſe of Veſicatories in chronical Diſorders.

But to return to our Subject: In acute Fevers, the ſafeſt and moſt ſpeedy Relief is afforded by Veſicatories, which, tho' they powerfully derive the febrile Matter from the Brain,

yet

yet they often aſſiſt and promote the other Diſcharges, eſpecially that of the Sweat and Urine, at leaſt they never ſuppreſs them in any Caſe or Degree whatever. Nor are we to be too ſcrupulous about accommodating Veſicatories to the Conſtitution of the Patient; for whatever his Habit of Body is, whether hot in conſequence of a Redundance of Bile, or a preternatural Attenuation of the Blood, or whatever his State is, if the Fever rages beyond meaſure, the ſlight Inconveniencies of a Veſicatory are rather to be endur'd, than the Life of the Patient to be riſqu'd; for many Caſes are of ſo dangerous a Nature, as that the only Hopes of Relief are placed in Veſicatories. Inſtances of this kind occur in Gouty Patients, when the Matter which uſed to flow to the Extremities of the Body, is convey'd to the Head, and produces a Fever.

The good Effects of Veſicatories are confirm'd by daily Experience in the Small-pox, Meaſles, Scarlet and Eryſipelatous Fevers, in which Diſorders, tho' the Blood is preternaturally hot, and its Motion too much accelerated, we nevertheleſs uſe Veſicatories with Confidence and Succeſs. We are not therefore to liſten to thoſe who with *Baglivi*, in his Treatiſe *de Veſicantibus*, reject the Uſe of Veſicatories in nervous Diſorders, in burning and continued Fevers, even tho' attended with Drowſineſs, and a Delirium.

It may juſtly be aſſerted, that more have been cur'd of Fevers by the Uſe of Veſicatories, than by any other Method of Cure; and I myſelf, ſays *Freind*, can atteſt, that by this Method alone more have been ſav'd, than by all other Means in Conjunction. *Sydenham* judiciouſly uſed Veſicatories for the Cure of the Epidemical Fevers, which rag'd in the Years 1674, 1675, 1679, and 1685. But why in other Fevers he did not uſe the ſame Method, I am at a Loſs to underſtand, ſince the other Years he mentions brought in no Fevers, in which Veſicatories would not have been equally beneficial.

Dr. Freind's *Surprize at* Sydenham's *Neglect of Bliſters, in the Fevers here meant, would have ceaſed, if he had reflected, that* Sydenham's *Experience had taught him a more eaſy, and not leſs effectual Method of curing them, without frequent Bliſters.*

The Method of Evacuation by Veſicatories has this to recommend it above all others, that it may be ſafely uſed at all Times: The Effects of other Evacuations are, in violent Diſorders, ſo precarious and uncertain, that it is dangerous to attempt them, as we often experience in Veneſection. But what Patient is not more afraid of a Veſicatory than of Veneſection, tho' attended with more Danger? This Circumſtance, however, is owing to the Cowardice of the Patient, who, prompted by Nature, flies from Pain, and ſhuns, if poſſible, a Medicine which can ſcarce produce any happy Effects without exciting ſome Degree of it. But it would be a culpable Compaſſion in the Phyſician, in this Caſe, to liſten to the Suggeſtions of the Patient, and deſtroy his Life, for fear of exciting a ſmall, but ſalutary Pain in his Body.

Many Fevers are cured by Evacuations alone, without the Uſe of any other Means; but ſcarce any of the more violent Kind can be removed, without thoſe Evacuations procured by Veſicatories. *Freind de Veſicantibus.*

We now come to conſider their internal Uſe; and in what Caſes the Antients exhibited them in this way, we have in ſome meaſure ſeen, from what has been already ſaid. But whoever will be at the Pains to conſult the Paſſages of *Hippocrates* before quoted, will find, that he guarded againſt the bad Effects of Cantharides, from their Acrimony, by preſcribing them with a ſufficient Quantity of Water or Wine. *Vallisneri Comment. in Hippocr. de Victu in Acutis.* In what Caſes the Moderns recommend the internal Uſe of Cantharides, may be ſeen in many different Authors. *Baglivi* informs us, "That theſe Inſects, "taken internally, either againſt a deſperate Iſchury, or with "a View to excite Venery, or to remove a virulent Gonor-"rhœa, produce the worſt and moſt diſmal Symptoms; for, "firſt, the Bladder and Urethra are exulcerated, then the "Liver is gradually inflamed, the Inteſtines corroded, and vio-"lent Pains are excited in the Hypogaſtrium; and theſe Pains "are ſucceeded by Loſs of Reaſon, and Death, unleſs the "Cantharides be forthwith evacuated, or the Violence of "their Action broken and impaired." It is highly proper for thoſe who intend to follow the Practice of Medicine, to know in what Caſes, upon the Authority of ſkilful Phyſicians, who have gone before them, they may ſafely, and without Diffidence, preſcribe Cantharides as an internal Medicine. *Capivoccius*, then, a celebrated Phyſician in the ſixteenth Century, in his *Medicina practica*, affirms, that whole Cantharides may be ſafely and ſucceſsfully exhibited internally in Dropſies, and all Suppreſſions of Urine; and aſſerts, that, by the Uſe of Cantharides, he has ſeen Patients of this Kind reſtored, after their Lives were deſpaired of. But he lays down ſome Cautions with reſpect to the Uſe of this Medicine: Firſt, then,

When the Urine is ſo totally and ſtrongly ſuppreſs'd, that the Diſorder will yield to no other Medicines, the Phyſician is, in this Caſe, to have recourſe to Cantharides, as the moſt powerful Remedy, ſince the Life of the Patient is immediately threaten'd.

Secondly, The Phyſician is to have recourſe to Cantharides when the Urine is ſuppreſs'd, not thro' any Defect in the Bladder, for in that Caſe the Patient may be relieved by a Catheter; but thro' a Fault of the Kidneys, as generally happens in a Dropſy.

Thirdly, He adviſes their Exhibition in ſmall Quantities, and in Conjunction with other Medicines; eſpecially ſuch as have a Tendency to defend the Bladder from the Injury they may do it. Thus, for Inſtance,

> Take one entire *Spaniſh* Fly, together with a Scruple of the Powder of Rue or Lavender, or ſome other Powder of a like Nature; giving the Patient four or ſix Ounces of ſome pinguious Liquor, ſuch as fat Broth made of Fowls, to be drank after it.

Langius, in his *Epiſtolarum Medicinalium Miſcellanea*, affirms, that he had found, from his own Experience, that the Powder of torrefied Cantharides, with an Addition of Cherry-tree Gum, was more ſalutary, and leſs noxious, in diuretic Electuaries, when diſſolved in an Apozem ſuited to the Nature of the Diſtemper. *Thomas Bartholine*, for virulent Gonorrhœas, Suppreſſion of Urine, and the Stone, has taught us the following Method of preparing them ſafely, by way of Infuſion:

> Let one Scruple of Cantharides, reduced to Powder, be infuſed in three or four Ounces of *Rheniſh* Wine, or Spirit of Wine: Let them ſtand in Infuſion for ſome Days; then let the Liquor be filtrated thro' coarſe Paper, ſo that none of the Subſtance of the Cantharides may be mixed with it. Mix one Spoonful of the ſtrain'd Liquor with ſeven Spoonfuls either of Wine or Ale; and of this Mixture let the Patient take one Spoonful the firſt Day, two the ſecond, which let him continue the ſubſequent Days.

Many Authors have atteſted the happy Effects produced by this Potion. According to *Ettmuller*, the happy Effects it produces are owing to this, that the Force of the volatile cauſtic Salt is corrected by the Acid of the Wine, as it may be by Vinegar, by which means it is transform'd into a temperate and leſs corroſive Salt. Thus, at *Leyden*, a certain Phyſician ſucceſsfully cured a virulent Gonorrhœa only by the Uſe of Cantharides, macerated in *Rheniſh* Wine; but he corrected the Infuſion with ſome mild Liquor before he exhibited it, as we are told in *Bartholine's Epiſtolar. Medicinal. Centuriæ, Cent.* 4. Dr. *Martin Liſter*, in his *Exercitationes Medicinales*, informs us, that he found happy Effects, in the Cure of a Gonorrhœa, from the following Tincture or Eſſence, prepared with Cantharides:

> Take of highly rectified Spirit of Wine, half a Pound; of Gum Guaiacum, half an Ounce; of Cantharides, one Dram; of Cochineal, two Ounces; of the Juice of Hypocyſtis, two Drams; of the Spirit of Sulphur, one Scruple: Digeſt the Whole in warm Aſhes for twelve Hours, and filtrate thro' a coarſe Paper.

Dr. *Liſter* gave forty Drops of this in warm Ale in the Morning, and as many at Night, each Day. *Garidellus*, for a Gonorrhœa, highly extols a Medicine prepared in the following Manner:

> Take of entire Cantharides, half a Dram; of the inſpiſſated Juice of Hypocyſtis, and of the Gum or Extract of Guaiacum, each one Dram; and of Cochineal, one Ounce: Let them infuſe in *Balneo Mariæ* for twenty-four Hours, in one Pound of Spirit of Wine. Let the Liquor, when ſtrain'd, be kept for Uſe. The Doſe is between half an Ounce and an Ounce, to be taken in the Morning faſting, and at Bed-time, in a Draught of the Decoction of Guaiacum.

In *Dunquien*, a Province of the *Eaſt-Indies*, they generally uſe the following Method of curing a Gonorrhœa:

> They take one Handful of the Flowers of St. John's-wort, and of Crabs-eyes half an Ounce: Theſe they boil in two Pints of Wine, which leaks from the Caſks. After this they digeſt two Drams of Cantharides in one Pint of Spirit of Wine. This they mix with the Wine, and give a little of the Mixture internally, with a few Spoonfuls of Plantain-water. *Ephemerides Germanicæ Curioſæ, Decad.* 1. *a.* 1.

The celebrated *Werlhofius*, in a total Suppreſſion of Urine, when no other Remedies were of any Effect, and when the Patient laboured under the moſt terrible Symptoms, ſuch as a Delirium, a convulſive Twitching of the Tendons, a cold Sweat on the Face, a hard Tumor of the Abdomen, an irregular, weak, and frequent Pulſe, upon giving a Grain of the

Powder of Cantharides in an Emulsion, every fourth Hour, after the Exhibition of the third Dose, observed, that Urine, a little grumous and bloody, began to flow; afterwards a pituitous Urine was discharged; and lastly, it appeared limpid, with a Dysury. Because the Symptoms were forthwith mitigated, he continued the Use of this Medicine till the ninth Dose, by which means the Patient gradually discharg'd a larger Quantity of Urine, which at last was evacuated limpid, to the Quantity of several Pints a Day, with a Diminution of all the Symptoms: Thus, by little and little, the Man recovered a perfect State of Health by the Use of this Medicine alone. In obstinate Gonorrhœas *Werlhofius* also exhibited, with Success, one, two, or three Grains of Cantharides in Substance, with a Dram of the Bone of the Scuttle-fish; which Medicine he continued for several Days, according to the Effects it produced. This Preparation he thought less troublesome than infusing the Cantharides in Wine, according to the Directions of *Bartholine*, *Lister*, and others; tho' he confesses, that he found the Medicine, prepared in their Manner, attended with Success. *Commercium Literarium*, *A.* 1733. But *Astruc*, in his Book of *Venereal Disorders*, asserts, that the smallest Dose of Cantharides, exhibited internally, in a Gonorrhœa, is not only a precarious and unsafe, but also a prejudicial Medicine.

That the drastic Force of Cantharides, by which they stimulate the urinary Bladder, may be corrected and subdued by Camphire, we have already observed under that Article. *Cockburn*, in the *Philosophical Transactions abridged*, *Vol.* 5. asserts, that Camphire does by no means produce this Effect; but Experience has confirmed the Falshood of his Assertion; for four Grains and an half of Cantharides, without the Heads, Feet, and Wings, with an equal Quantity of Camphire, exhibited in any Conserve, in the Form of a Bolus, happily, and without any Trouble or Pain, removed a Dysury in a Woman, who laboured under a Dropsy. But, without an Addition of Camphire, also in obstinate Obstructions of the Lochia and Menses, in difficult Births, and Retentions of the Secundines, very happy Effects have been produced by a Bolus, made up of

Three Cantharides, prepared; Troches of Myrrh, half a Scruple; Seeds of Bishops-weed, six Grains; and Rob of Hips, a sufficient Quantity. Small Ale, Water-gruel, or any Emulsion, may be used as a Vehicle. *Philosophical Transactions abridged*, *Vol.* 5.

In Hysteric Fits, and the most violent Suppressions of Urine, *Philippus Hoechstetterus* gave Cantharides in a Potion of the Juice of Mercury, with Essence of Cinnamon, and an Elæosaccharum of Cardamoms. He also put Cantharides in a Pessary, for the same Intentions. *Velschii Hecatosteæ* 2. *Obs.* 72. In a Dropsy *Konigius* recommends a Powder compounded of

Six Grains of Cantharides; of Crabs-eyes prepared, of vitriolated Tartar, and Salt of Rest-harrow, each one Scruple: Of this a third Part is to be exhibited for a Dose.

For the same Disease some order four Ounces of the Decoction of the diuretic Roots, with an Addition of three Drams of Linseed, and two Cantharides; but the Liquor must be strain'd before it is used. *Wieri Observat. Medic.* In *Upper Hungary*, beyond the River *Teis*, the Inhabitants are often seized with an extraordinary Disease, in which their Neck suddenly swells; after which a violent Heat in their Head succeeds, which diffuses itself all over the Body. Those who do not immediately apply a Remedy, die within four Days. This Disease is somewhat like the Hydrophobia. The Method of Cure they use is this:

They take, for one Dose, ten Cantharides, reduced to Powder, which, when drank off in a proper Liquor, sometimes excites a profuse Sweat, and sometimes a plentiful Discharge of Urine, without any manner of Pain.

This Remedy could scarcely be safely used in any other Nation; but the *Hungarians* beyond the River *Teis* are of very hardy and robust Constitutions, and imagine, that they may safely take the Cantharides whole, because they think their Feet prove an Antidote to the poisonous Quality lodged in their Bodies. *Ephemerides Germanicæ Curiosæ*, *Decad.* 1. *a.* 1. *o.* 133. These *Hungarians* gather the Cantharides, for the most part, from the Ash-tree, in the Month of *May*, or in the Summer, and preserve them in strong Vinegar, against the Poison of mad Animals. If a Man, a Horse, a Cow, or a Sow, are bit by any mad Creature, to the Man they give one, two, three, or five Cantharides; but to Animals a greater Number. They exhibit them entire, with the Wings, Head, and Feet, in Brandy, or with *Venice* Treacle, or Bread. Those who take two or three of these Cantharides, are neither afflicted with a Dysury, nor a Discharge of bloody Urine; but the Urine is only discharged in a larger Quantity, during both the whole Day and Night. *Prosper Alpinus*, in the last Chapter of his fourth Book *de Medic. Ægyptiorum*, informs us, that, in *Egypt*, some Physicians prescribed to their Patients the Heads and Wings of four Cantharides, reduced to Powder, and exhibited in three Ounces of Endive-water; by which Medicine, they affirm, the peccant Matter is discharged, either by profuse Sweats, or plentiful Discharges of Urine. According to *Ettmuller*, these Insects are, by Women of profligate Characters, applied to the basest of Purposes; that is, expelling the Fœtus, before it has arrived at Maturity. Their Exhibition, in order to rouse the languid Inclinations to Venery, may also be justly reckoned among the Abuses of this Medicine. *Stenzelius*, in his third Book *de Venenis*, says, that it is well known, that Cantharides, dissolved in Essence of Amber, excite an insatiable Desire of Venery in both Sexes. From what has been said, it is obvious, that Cantharides, however poisonous a Quality they are of, prove a Medicine against several Diseases: But it is no easy Task to lay down a fixed and stated Rule for the safe internal Use of Cantharides, since one Physician prescribes them entire, and another without the Head, Wings, and Feet, accordingly, as he believes, that the Corrector of that Poison, which is lodged in their Body, is situated in the Extremities or otherwise. One Physician thinks, that they may safely be exhibited, when their deleterious Quality is corrected; and another embraces the contrary Opinion. All of them claim the Testimony of Experience in their Favour, which teaches, that even the external Application of Cantharides to the Body sometimes excites great internal Disorders; whereas at other times no such Effects are produced.

That the external Application of Cantharides only produces bad Effects on the more sensible Parts, especially the Urinary Bladder, and in others only when the Quantity is too large, is obvious; since numberless Instances occur daily of Patients, who sustain no manner of Injury by the Application of Vesicatories composed of Cantharides. These Insects may be more safely exhibited internally, and applied externally, with proper Correctors, than without them; for we seldom observe them used either for internal or external Purposes, without an Addition of some acid or oleous Substance, or perhaps both; and that these are Correctors of Cantharides, is sufficiently obvious. If, then, any unexpected bad Effects are produced by a Medicine prepared of Cantharides, the Patient, to whom it is exhibited, must either be very delicate, or the Dose too strong. For internal Use the safest way is to begin with a very small Dose at first; half a Grain, for Instance, increasing it gradually where the Nature of the Case calls for its Repetition. There is a Difference of Strength and Energy in these Insects, according as they are old or recent; for the volatile Salt they contain exhales and evaporates in time, for which Reason the recent must be the more efficacious of the two. From what has been said 'tis obvious, that great Caution is required, in order to render the Use of Cantharides safe; and that, on account of the many terrible Effects they have been observed to produce, they ought to be class'd among the Medicines not to be tamper'd with. In *France* a Law is enacted, discharging Apothecaries from selling them indiscriminately to every one who asks for them; and permitting them only to sell them to those they are acquainted with, and that too for external Use. *Pomet*, *Lib.* 2.

The Observation of some, that the Extremities of Cantharides render their Operation somewhat milder, is not altogether without Foundation; since the *Hungarians*, taught by Experience, affirm it to be Truth. *Bartholine*, in *Epistol. Medicin. Cent.* 4. tells us, in express Words, that, in order to render Cantharides mild for internal Purposes, they are to be used entire; and that, when Blisters are to be raised on the Skin, the Extremities, as being of a milder Nature, are to be thrown away. *Boerhaave*, in his *Materia Medica*, for a Vesicatory prescribes Cantharides without Wings, these being of a milder Nature, and therefore less proper for Vesicatories. Hence *Benancius*, in his *Declaratio Fraudum apud Pharmacopœos commissarum*, blames those Apothecaries, who, running into the common Error, reject the Wings of the Cantharides, contrary to the Prescription of the Physician, who intends they should be retained for the Advantage of the Medicine; for these Insects are sometimes to be sold in the Shops without their Wings, their Heads, and Feet, and after they have been impregnated with the Steam of boiling Vinegar, dried, and kept for two Years. Those found among the Corn, of a changeable Colour, with transverse yellow Streaks on their Wings, and oblong Bodies, are esteem'd the best.

Fifteen, twenty, or thirty Drops of the Tincture of Cantharides, prepared with the Tincture of Salt of Tartar, are, by *Willis*, in his *Pharmaceutice Rationalis*, commended as an excellent diuretic Medicine. *Ettmuller* directs this Tincture to be prepared in the following manner:

Take of Cantharides, half an Ounce; Salt of Tartar, six Drams; sprinkle a sufficient Quantity of Water upon them; and, when reduced to the Form of a thin Poultice, put them in some moderately hot Place, continuing to sprinkle

ſprinkle Water upon them, if they ſhould become dry. When they have ſtood eight or ten Days and Nights, let tartarized Spirit of Wine be pour'd upon them, to extract the Tincture, which, for the ſake of a beautiful Colour, may be tinged with the Powder of Cochineal, which are alſo a Species of Cantharides, and poſſeſs'd of a highly diuretic Quality.

The Tincture of Cantharides, in *Fuller's Pharmacopœia*, is thus prepared:

Take Powder of Cantharides, half an Ounce; the beſt Spirit of Nitre, one Ounce; Digeſt for twenty-four Hours; then add of camphorated Spirit of Wine, three Ounces, and digeſt for ſome Days; afterwards filtrate the Liquor.

This Medicine is uſed for provoking Urine, for Ulcers of the Kidneys and Bladder, for a Gonorrhœa, and for the wandering ſcorbutic Gout. The Doſe is from four to twenty-two Drops twice a Day, in a Draught of the Decoction of Mallows, edulcorated with Syrup of Violets. In the *Collectanea Chymica Leydenſia*, this Tincture is ordered to be thus prepared:

Take of Cantharides, one Ounce; pour upon them of the ſtrongeſt Spirit of Nitre, two Ounces: Digeſt for twenty-four Hours. Thus the Cantharides will be diſſolv'd, and the Spirit acquire a reddiſh Colour. To this Tincture add ſix Ounces of Spirit of Wine; digeſt together; and the longer the Digeſtion is continued, ſo much the better; for a ſtated Time cannot be ſpecified. Then let the Liquor be filtrated, and kept for Uſe.

This Medicine is lithontriptic and nephritic, cures a Gonorrhœa, and is of Service in the Gout, the Rheumatiſm, and the Jaundice. The Doſe is from two to twenty Drops at moſt, twice a Day. If an antinephritic Powder is deſired of this Solution made with the Spirit of Wine, we are to proceed in the following manner:

We are to add to this Solution two Parts of common Water; and afterwards to drop into the filtrated Solution a ſufficient Quantity of the Oil of Tartar *per Deliquium*, till the Effervescence ceaſes. Thus there will be precipitated to the Bottom of the Veſſel a Powder of a yellowiſh-red Colour, which is to be ſeparated from the Liquor, edulcorated, and afterwards dried in the Shade. The Doſe of this Medicine is from one Grain to four. If the remaining Liquor, when ſeparated from the Salt, is evaporated till only a third of it remains, it will yield Cryſtals of a highly antinephritic Quality; the Doſe of which is from two to twelve Grains.

The Tincture of Cantharides, in the *Edinburgh Diſpenſatory*, is prepared thus:

Take of Cantharides, two Drams; of rectified Spirit of Wine, half a Pound: Digeſt for two Days in a very gentle Heat; then pour of the ſtrained Tincture upon one Ounce of Balſam of Capivi; of Gum Guaiacum, half an Ounce; and of Cochineal, half a Dram: Digeſt in a Sand-heat for four or five Days; ſtrain the Tincture, and add to it of Camphire, two Drams; and of diſtilled Oil of Juniper, one Dram.

This ſeems to be a good Remedy againſt a Gonorrhœa; and fifteen or a few more Drops of it may be exhibited for a Doſe, in a proper Vehicle.

In the *London Diſpenſatory* the Tincture of Cantharides is prepared thus:

Take of Rhubarb, three Drams; of Gum Guaiacum, a Dram and an half; of Gum Lac, one Dram; of pounded Cantharides, two Drams; and of Cochineal, half a Dram: Infuſe in a Pound and half of rectified Spirit of Wine, and ſtrain off the Tincture.

But *Wedelius* obſerves, that common Spirit of Wine is more proper for extracting the Virtues lodg'd in the Salts of Cantharides, than that which is rectified. It is alſo to be obſerv'd, that Cantharides may be more conveniently preſcrib'd by their Number than their Weight, ſince they are ſo very light, that fifty of them ſcarce weigh a Dram.

The Magiſtery of Cantharides is the Powder of theſe Inſects diſſolved in Spirit of Nitre, and precipitated by an Addition of Oil of Tartar *per Deliquium*. This Medicine is poſſeſſed of a diuretic Quality, according to *Ludovicus*, in his *Pharmacopœia*; but, according to *Ettmuller*, the diuretic Virtue is rather deſtroy'd by the Precipitation. *Langius* informs us, that theſe Inſects are by ſome uſed, in order to ſecure the Fruit of their Orchards from being ſtolen. A little of the groſs Powder of Cantharides is put upon Apples, Plums, Figs, or Peaches, that grow on the loweſt Parts of the Trees. When theſe are ſtolen and eaten by the Thieves, they are ſufficiently puniſh'd for the Theft, by an intolerable Heat of Urine, and a Stillicidium: So that by this Medicine Thieves are more effectually baniſh'd from Gardens, and diſcover'd, than by *Priapus* the God of the *Lampſaceni*. But it is a monſtrous Abuſe of this Medicine, when poor People, of a fraudulent Turn, raiſe Bliſters on themſelves with it, in order to move Compaſſion, and extort an Alms, which the charitable and well-diſpoſed Part of Mankind think their counterfeit Miſery deſerves. *Rieger.*

The Eſſence or Tincture of Cantharides, directed in *Quincy's* Diſpenſatory, is thus prepared:

Put four Ounces of bruiſed Cantharides into a Cucurbit, and pour upon them, by a little at a time, of Spirit of Nitre, twelve Ounces, and let them ſtand in Digeſtion twelve Hours; then with a Glaſs Spoon or Spatula take off the black Scum from the Surface of the Spirit, which caſt away; pour gradually upon them of tartariz'd Spirit of Wine, one Pound: Mix them well by ſhaking, and place them in a Sand Furnace; lute on a Head and a Receiver; kindle the Fire, which gradually increaſe to the ſecond Degree; and in that Heat draw off a Pound and an half of Spirit, which keep for Uſe.

To that which remains in the Cucurbit, put, by a little at a time, ſo much Nitre as will ſatiate its Acidity, which may be known by the Ebullition ceaſing; then put that Mixture into a Glaſs or Marble Mortar; put to it of Camphire, one Ounce, and grind them till they are well incorporated, and return them again into the Cucurbit; rince out the Mortar with ſome Spirit of Wine, which was drawn off from them, and pour into the Body, with the remaining Part of the Spirit of Wine; ſhake them well, and ſet them into a digeſtive Heat; make the Cucurbit a Circulatory; lute the Joint cloſe, and let them ſtand in that Heat eight or ten Days, ſhaking them well every Day; then let it cool, and ſtand to ſettle; pour off the Tincture into a clean Cucurbit; and in a very gentle Heat draw off one half or more of the Spirit, which again put upon the Mixture, to extract more Tincture; and when that Spirit is again ting'd, draw off two Thirds, which put the third time to extract more Tincture, and diſtil as before, ſtill putting the Tincture remaining after Diſtillation of the Spirit to the firſt Tincture. Then take of Ambergriſe, one Dram; Muſk, half a Dram; white Sugar-candy, two Drams: Grind them well together, with a little of the Spirit laſt drawn off; pour them into a Matraſs, and to them put four Ounces of the aforeſaid Spirit; cloſe the Matraſs well, and ſet it to digeſt for four or five Days more; then put it to the Tincture of Cantharides, (alſo in a Matraſs) and let them circulate together four or five Days more; then pour it into a clean dry Bottle, which keep well ſtopt for Uſe.

The Materials muſt be put together, ſo as to prevent the Fume's being offenſive in every Part of the Proceſs. This may be pronounced a moſt excellent Medicine, in many Caſes, where we have not its Succedaneum, nor any thing tending that way. It is a moſt ſtimulating Cordial, and cannot fail to excite to conjugal Intercourſes, where a Conſtitution, by any Misfortune, has fallen into a Coldneſs or Indifference that way; for (if the Expreſſion may be allow'd) where there is Fuel, it will infallibly kindle it. The Satyrion, and all of that Tribe, are not to be compar'd to it. In many Caſes alſo, where ſloughy and cold Humours have clogg'd the Reins and Genital Parts, and thereby occaſioned other Miſchiefs, beſides an Inability to Coition, this Medicine is of mighty Service, and will anſwer where the moſt efficacious Balſams and Turpentines fail. It may be given from ten to an hundred Drops, in a Glaſs of Canary, or any other Liquor which a Patient may like better. But notwithſtanding theſe Commendations of this Medicine, which indeed cannot be greater than it deſerves, yet none but the truly Skilful muſt dare to meddle with it; for, by an injudicious Adminiſtration, it may occaſion Stranguries, Eroſions, Excoriations, and even Convulſions: Such is the Difference of an efficacious Medicine in the Hands of a good Phyſician, and an Empiric! This, therefore, as well as all the beſt Remedies, will for ever continue a Secret in the Hands of the Learned, notwithſtanding its Preparation is in the Knowledge and Power of every Perſon. *Quincy's Diſpenſatory.*

I muſt not diſmiſs the Subject of Cantharides without taking ſome Notice of a memorable Hiſtory relative to theſe Inſects.

In the Year 1693. Dr. *Groenevelt* was cited before the Preſident and Cenſors of the College of Phyſicians, on account of preſcribing Cantharides in Subſtance to a Woman in *Southwark*, before whom he vindicated his Practice; but a few Years after, upon ſome trifling Quarrel betwixt one of the Cenſors at that Time and the Doctor, he was again ſummon'd before Sir *Thomas Millington*, Preſident; Dr. *Burwell*, *Torleſſe*, *Dawes*, and *Gill*, Cenſors; and after ſome Proceedings not altogether juſtifiable, as the Dr. complains, he was taken up by a Warrant, ſign'd by the Preſi-

dent

dent and Cenſors, and committed to *Newgate* for bad Practice. The Doctor had the good Fortune to be acquitted upon a Point of Law, which determines that bad Practiſe muſt be accompanied with a bad Intention, in order to make it criminal. And, indeed, if it was otherwiſe, no one could practiſe Phyſic without being in perpetual Danger of incurring the Cenſure of the Law, unleſs he was infallible, which, in the preſent frail State of human Nature, I believe very few pretend to be; and even Infallibility would be a very precarious Guard againſt Malice, Envy, and the intereſted Views of open Enemies, or treacherous Friends.

This Affair ruin'd the Doctor to ſuch a Degree, that it is ſaid he was buried at the Expence of the Pariſh; but I cannot aſſert that this laſt Particular is true. Ruin'd, however, he was, with this ſingular Advantage accruing to Phyſic from his Perſecution, that the Reputation of Cantharides in Subſtance, as an internal Remedy, was eſtabliſh'd by it, inſomuch that all Phyſicians, whoſe Obſtinacy or ill Will did not hinder them, came immediately into the Practice of exhibiting them. The Diſtempers in which Dr. *Groenevelt* principally recommends them are Ulcers of the Bladder, Gravel, or mucous Obſtructions in the urinary Paſſages, Suppreſſion of Urine, and Dropſy, particularly in Women. His Manner of preſcribing them was uſually thus:

Take of Cantharides dry'd and powder'd, twelve Grains; Camphire, diſſolv'd with Oil of ſweet Almonds, fifteen Grains: Of this make two Boles; one of which is to be taken three Hours after the firſt, Evacuations ſuited to the Caſe being premiſed.

At Night let half a Scruple of *Matthew*'s Pills, with eight Grains of Camphire, be taken by way of Paregoric. Mean time let the Patient drink copiouſly Emulſions, Broths, Milk, or emollient Decoctions, with or without Gum Arabic. The Phyſician alone who has an Opportunity of obſerving the particular Circumſtances of the Caſe, and the Effects of the Remedies taken, is able to determine how long all, or any of theſe Medicines ought to be continued.

It muſt, however, be confeſs'd, that Cantharides ought not to be given in this manner, without the utmoſt Prudence and Caution; becauſe, otherwiſe, they may prove highly pernicious.

CANTHI, *κανθοί*. The Cavities at the Extremities of the Eyelids, commonly called the Corners of the Eye; the greater of them, or the great *Canthus*, is next to the Noſe; the leſſer or little *Canthus* lies towards the Temple. *Ruffus Epheſius*, *Lib.* 1. *Cap.* 4.

CANTIANUS PULVIS. A cardiac Powder, which goes by the Name of *The Counteſs of Kent's Powder*. See the Preſcription of it under CANCER.

CANTION, *κάνϑιον*, in *Myrepſus*, *Antidot.* 35. and 94. is an Epithet of *σάκχαρ*, or *σάκχαρον*, *Saccharum*, Sugar, ſignifying in Conjunction with it Sugar-candy. This is doubtleſs his Meaning, ſays *Fuchſius*, becauſe all the *Latin* Copies tranſlate it *Saccharum Candi*. He obſerves alſo, that the Word is corruptly written *κάνϑιον* for *κάνδιον*, and that *Myrepſus* curtails the Word in Imitation of the *Latins*, who read *Candi* inſtead of *Candidum*.

CANTRICES. Singing-women. Thoſe Women who are Singers or Dancers, according to *Aetius*, from *Rufus* and *Aſpaſia*, *Tetrab.* 4. *Serm.* 4. *Cap.* 51. have no menſtrual Purgations, becauſe whatever is ſuperfluous in them is conſumed by their too violent Exerciſe.

CANTUM, CANTIUM, *κανϑὸν*, *κανϑιον*. A Word in Uſe among the *Greeks* of the middle Ages, who had degenerated from the antient Purity of their Language, to ſignify *angulous*, and apply'd to cryſtallized Sugars. This *Vander Linden* endeavours to prove out of *Salmaſius* and *Meurſius*'s Gloſſary, and criticizes on thoſe who write *Saccharum Candum*, when it ſhould be written, as he ſays, *Cantum*, or *Cantium*. *Caſtellus*.

CANUM CERASA, Dog-cherries. A Species of *Periclymenum*, the ſame as *Xyloſteum*. See PERICLYMENUM.

CANUTUM, CANNUTUM. A Reed or Cane. *Rulandus*.

CANZE, CARNIT, CANNA, CUSANUM. Several kinds of Veſſels. *Rulandus*.

CAOPOIBA *Braſilienſibus*, Marcgrav. *Pomifera Braſilienſis*, *Fructu Cupulæ inſidente*, *Seminibus ſingulis duplici Pelliculæ involutis*. It is alſo ſpelt *Coapoiba*.

A Tree growing in *Braſil*, of the Height and Shape of a Beech. Its Bark is of an Aſh-colour intermix'd with Brown, like water'd Stuffs. The Leaves are ſolid and oblong, the Pedicles of which being broken, yield a milky Liquor. The Flowers ſtand each on its Pedicle, and are as big as a Roſe, and conſiſt of white Leaves like thoſe of Roſes, with fine red Ungues, and, in the Place of an Umbilicus, have a yellow reſinous Globule, of the Bigneſs of a Pea, which yield a Reſin as clear as Turpentine, glutinous and yellow, but of an unpleaſant Smell. The Fruit is ſeated in a Capſule much like an Acorn; and being cut lengthwiſe before it is ripe, ſhews many Rows of Seed of the Size and Shape of Apple-kernels. Every Seed is incloſed in a red Pellicle, which is ſurrounded with another of the Colour of Vermilion. The Pulp of the Fruit is yellow, and yields a yellow Juice. The Bark, tho' thick, is eaſily ſeparated from the Wood, which is brittle, and contains a Pith which is eaſily extracted, and leaves the Wood hollow like a Tube.

There is another Species of this Tree, which has a grey Bark, with oblong carinated Leaves, like thoſe of the *Mureci*, but not downy. The Fruit is round, and of the Size of a Tennis-ball; when ripe, green on the Outſide, but red within, and full of ſmall Grains like a Fig, dry, taſteleſs, and eaten by ſome, but not valued. I find no Medicinal Virtues aſcribed to theſe Trees. *Raii Hiſt. Plant.*

CAOVA, COAVA. A Drink, the ſame as COFFEE. *Raii Hiſt. Plant.*

CAOUP. A Tree in the Iſland of *Maragnan*, in *America*, with Leaves like an Apple-tree, but broader; the Flowers red mix'd with yellow. The Fruit is not unlike an Orange in Shape and Taſte, and full of Kernels. *Raii Hiſt. Plant.* 1693.

CAPELLA. A chymical Veſſel the ſame as *Capitellum*, or *Alembicus*, which ſee. Others by *Capella* underſtand the ſame as *Cupella*, which ſee. *Rieger.*

CAPER, Offic. Schrod. 5. 275. Mer. Pin. 166. Aldrov. de Quad. Biſul. 619. Chalt. Exer. 9. Johnſt. de Quad. 46. Geſn. de Quad. 265. Schw. de Quad. 98. *Capra domeſtica*, Raii Synop. A. 77. THE GOAT.

The Blood, the Marrow, the Suet, the Milk, the Whey, the Stones in the Stomach, the Dung, the Urine, the Bladder, the Omentum, the Skin, and the Gall of the Goat are all uſed in Medicine.

The Blood is accounted alexipharmac, deobſtruent, proper in Dyſenteries, and calculated for reſolving coagulated Blood, and diſſolving the Stone. *Dale from Schrod.*

The He-goat's Blood, and eſpecially, if we believe *Van Helmont*, that which is taken from his Teſticles, being dry'd in the Sun, is good againſt Poiſon, for provoking Sweat, Urine, and the Catamenia; and is proper in a Pleuriſy. The Doſe is from twenty Grains to two Drams. *Lemery on Foods.*

The Marrow of the Goat is more acrid and dry, and conſequently more efficacious, than that of other Animals. *Dale from Schrod.*

The Fat and Marrow of the He-goat are of a ſoftening, diſſolving, and qualifying Nature, and are alſo reputed to be good for ſtrengthening the Nerves. *Lemery on Foods.*

Goats Suet is a powerful Diſcutient, relieves thoſe afflicted with arthritic Pains, removes Stranguries, and allays hæmorrhoidal Pains.

Goats Milk is of a nutritive and abſtergent Quality, and eſteem'd proper for hectic and phthiſical Patients, and ſuch as are conſumptive or emaciated.

Goats Whey is preferable to that obtained from the Milk of any other Animal, as it is aperient, abſtergent, attenuating, and laxative; and for that Reaſon it is frequently uſed in Infuſions for purging Melancholy.

The Stones found in the Stomachs and Gall-bladders of Goats are ſaid to be poſſeſs'd of a reſolvent and diaphoretic Quality. See BEZOAR. *Dale.*

We ſometimes meet with ſmall Stones in the Gall of a Goat, which are very like the true Bezoar-ſtone. They are good againſt Poiſon, and promote Sweat. *Lemery on Foods.*

Goats Dung is of a heating, drying, abſtergent, digerent, aperient, and acrid Nature; for which Reaſon it is principally uſed in hard Tumors of the Spleen and other Parts, Swellings of the parotid Glands, Buboes, and for conſolidating deſperate Ulcers, as alſo in Dropſies, and ſciatic Pains. When calcined, it makes a fine Powder, proper in all Caſes where the Uſe of Detergents is indicated, ſuch as Alopecia and Ring-worms. Internally it is properly exhibited in Diſorders of the Spleen, Jaundice, Obſtructions of the Menſes, and other Diſeaſes of a like Nature. *Dale from Schrod.*

Goats Dung contains much volatile and ſharp Salt, which makes it to be of a diſſolving, deterſive, drying, and digeſting Nature, fit to remove Obſtructions of the Bowels; and good for the Stone, if inwardly taken. They alſo apply it outwardly for diſſolving cold Tumors, and other Diſtempers, wherein it is uſed for attenuating the Humours. *Lemery on Foods.*

Goats Urine is recommended above that of all other Animals for diſſolving the Stone, and promoting a Diſcharge of Urine; for which Reaſon it is proper in the Dropſy.

The urinary Bladder of a Goat dry'd and reduc'd to a Powder is ſaid to be a Medicine of peculiar Efficacy in an Incontinence of Urine.

The Omentum of a Goat, apply'd hot, allays and checks turbulent Motions of the Spirits, for which Reaſon it is very properly uſed in Colic Pains and a Mania.

The Skin of a Goat relieves Diarrhœas, ſtops Hæmorrhages, and eſpecially that of the Noſtrils.

The Gall of a Goat is ſaid to cure Quotidian Fevers. *Dale from Schrod.*

They mix the Gall of a Goat with Bread, the Whites of Eggs, and Oil of Laurel; and thus 'tis looked upon to be good for a Quotidian Ague, if apply'd by way of Cataplasm to the Navel. *Lemery on Foods.* See CAPRA.

CAPETUS, κάπετος, a Pit, Ditch, or Trench, in *Hippocrates, de Articulis*, signifies those Holes or Niches which are cut in the *Bathron* or *Scamnum*, (a Machine for restoring Luxations) for the Strengthening and better Management of the Axes. *Hippocrates* directs these *Capeti*, or Niches, to be made in the lower Part of the Scamnum, at Intervals of four Fingers Breadth, three Fingers Breadth in Depth, and as many wide. Thus *Galen*, on this Place; with whom agree *Erotian* and *Paulus Ægineta*. *Foesius, Gorræus.*

CAPHORA, CAPHURA. The same as CAMPHORA.

CAPICAGTINGA, *aliis Jacarecatinga, Acori Species.* Pison.

A Species of Acorus growing in the *West-Indies*, much like the *European* in the Shape of the Root and Leaves, tho' not so large; but is as much superior to it in Virtue, as exceeded by it in Size, especially the Root, which is hot and dry, and of a grateful bitterish and aromatic Taste. Taken alone, or mixed with other things, it is not only an effectual Incisive of cold peccant Humours, but is successfully used as an Antidote against Poison received inwardly both by Natives and Foreigners. It does not always grow in watery Places like the Iris, but thrives in other Places of a flat Situation, and glebous Soil.

CAPILACTEUM, ἀφρόγαλα. See APHROGALA.

CAPILLAMENTA; Capillaments, in Botany, signify, first, those slender sort of Filaments which spring up within the Leaves of a Flower, and are more usually called *Stamina*, whence a *capillaceous* Flower is the same as a *flamineous*; and, secondly, by *Capillamenta* are meant those slender Parts or Filaments which resemble Hairs, and are produced from Vegetables; as, for Instance, from Seeds, *Columel. R. R. l. 4. c. 11.* and Roots, *Pallad. R. R. l. 11. c. 12. Rieger.*

CAPILLAMENTUM, τρίχωμα, τριχωμάτιον, properly signifies any hairy or villous Integument belonging to Animals, as πτέρωμα is put for the pennous or feathery Integument of Birds; in this Sense *Capillamentum* is the same as *Capillitium.* See the preceding Word.

CAPILLARIS, τριχώδης, τριχοειδὴς, is applied in general to any thing that resembles Hair, particularly to the smallest and extreme Parts of the Veins and Arteries; it is also an Epithet of Distinction for such sorts of Plants, as, according to *Ray*, have no main Stalks, but bear their Seed on the back Side of their Leaves, and are called *Capillares*, he says, because they are supposed to remedy all Defects belonging to the *Capillus* (Hair); or they are called Capillary, because they grow close to the Ground, as the Hair grows to the Head.

Capillares Vermiculi with some signify those small Worms in Infants, which are otherwise called *Crines*, *Crinedones*, and *Dracunculi*. *Castellus.*

CAPILLATIO. A Capillary Fracture of the Cranium. See TRICHISMOS.

CAPILLITIUM. Properly the same with *Capillamentum* (see before); but is sometimes used for TRICHIASIS, which see.

CAPILLORUM DEFLUVIUM. The same as ALOPECIA.

CAPILLUS signifies properly the Hair of the Head, but is also used to signify any sort of Hair in general. *Castellus.*

CAPILLUS, the Hair, in *Rulandus*, is called LAPIS REBIS.

The Hairs are observed by the Microscope to be hollow, and furnished with a Multitude of Vessels; and, however they appear to us to be simple and equal, the Microscope shews them to be knotted like some sorts of Grass, and to send out Branches at the Joints. Their Cavity has been otherwise proved by the Distemper called the *Plica Polonica*, in which the Blood itself has drop'd through the Hairs. But I have never seen this Case, and am inclined to doubt, whether the Blood that issues be not sent from other Vessels, and only runs externally from the Root of Hair to the Extremity.

As for the Branching of the Hair, 'tis pretty visible at the Extremities with a Microscope; for it is very apt to split (as the Hair-cutters call it) especially if it be worn long, and kept dry. This Division of the Extremity (which, to the naked Eye, seems to consist but of two or three Hairs) by the Microscope appears to be a Brush of Hair.

Each of these Hairs has a little bulbous or oval Root in the Skin, which sometimes adheres to it so as to be plucked away with it.

They are commonly reputed an Excrement, and esteemed to be nourished by such; but, whatever the Matter of their Nourishment is, it seems to be more simple than the other Humours of our Bodies. For long after Death, when all the other Parts and Humours are putrefied and corrupted, the Hair will vegetate and increase, which it appears to do so long as any Moisture remains in the Part. *Drake's Anatomy.*

Those that have by Nature soft, thin, and short Hair, which, with great Difficulty, receives or retains a Buckle, and those who readily run into Baldness, or Shedding of the Hair, towards the Spring, are certainly of a loose, flabby, and relaxed State of Nerves: For the Hair seems to be only some of the fleshy Fibres lengthened outwards, and hardened; at least they seem to be of the same Kind and Nature with the other Fibres, consist of a great many lesser Filaments, contained in a common Membrane, and are solid, transparent, and elastic: And as the Hairs are in Strength, Bulk, and Elasticity, so generally the Fibres of the Body are; and those whose Hair sheds, turns thin, lank, or refuses Buckle, if it does not happen to them after recovering from an acute Distemper, ought to take care they fall not into nervous Disorders, which anointing their Hair with sweet Oils, or washing their Hands with Honey-water, will scarce prevent.

Other things being equal, those of the fairest, clearest, and brightest coloured Hair, are of the loosest and weakest State of Fibres and Nerves, not only because the fairest and lightest is the most rare, transparent, and fungous, but because Bodies of the lightest Parts consist of Parts of a weaker Union, which adhere with less Force, and consequently are less elastic, firm, and springy, than those of the darker, and more opake Colours. We generally observe, that People of very fine and white Hair, especially if so after they are come to Maturity, are of weak, tender, and delicate Constitutions: And those who deal in making artificial Covers for the Men or Women, find that such Hair will never, with any Credit to them, serve these Purposes, and seldom honestly employ it for that End. *Cheyne's English Malady.*

CAPILLUS CANADENSIS. The same as ADIANTHUM CANADENSE.

CAPILLUS VENERIS. See ADIANTHUM.

CAPIPLENIUM. A barbarous Word, used by some for a Catarrh. *Baglivi* makes use of it to signify that continual Heaviness, or Disorder in the Head, which the *Greeks* called καρηβαρία, *Carebaria.*

CAPISTRATIO. The same as PHIMOSIS, which see.

CAPISTRUM, φιμὸς, φίμος, κημὸς, besides its common Signification, a *Bridle*, is a Name for some sorts of Chirurgical Bandages used about the Head. *Castellus.*

CAPISTRUM *Auri.* Borax. *Rulandus.*

CAPITA, Heads in Plants, are either those Receptacles of the Seeds, which by their globous Figure represent a Head; as the Heads of Poppy, for Instance; or else they are the same as *Bulbi*, Bulbs.

CAPITALIA. The same as CEPHALICA, which see.

CAPITATÆ *Plantæ* are Plants whose Seeds, with their Down, being included in a squamous Calyx, are conglobated into a roundish Figure resembling a Head. *Raii Hist. Plant.*

CAPITELLUM, in *Johnson's* Lexicon, is soapy Water; in *Libavius*, and some other Authors, it signifies a Lixivium; it is also taken for an Alembic. *Castellus. Rieger.*

CAPITILUVIUM. A Bath or Lotion for the Head. *Rieger.*

CAPITIS DOLOR. See CEPHALALGIA.

CAPITIS VENA. See VENA CEPHALICA.

CAPITO. The Surname of *Artemidorus* the Physician, who published the Works of *Hippocrates*, and is often mentioned by *Galen.*

CAPITO ANADROMUS. A Fish which lives both in the Sea, and in Rivers. It has a great Head, large, beautiful, white Eyes, a thick Snout, a long Body, covered with small Silver Scales, mixed with a little Blue. It weighs about two Pounds when at its full Bigness, lives upon small Fishes and Insects, and is very good to eat.

It is thought to be proper for purifying the Blood, and to provoke Urine. *Lemery des Drogues.*

CAPITULUM. The botanic Signification of *Capitulum*, or *Capitellum*, is given under the Article BOTANY; in Chymistry they are the same as ALEMBICUS, for which see that Article; in Anatomy they signify a smaller Process or Protuberance of a Bone, received by another Bone.

CAPIVARD, in *Portuguese*, signifies a Water-dog, which is described to be an amphibious Animal, with a Body like a Hog, and Head like a Hare, and without a Tail. It keeps itself almost continually on its Posteriors, like an Ape. It is found in *Brazil.* It lives all the Day in the Sea, and at Night comes on Shore to ravage the Gardens, and root up the Trees. Its Flesh is wholsome Food. *Lemery des Drogues.*

CAPNELÆUM, καπνέλαιον, in *Galen*, *Lib. 2. C. M. S. L.* is a Resin which flows spontaneously; "of which he says there "is Plenty in *Lacedemon*; in *Cilicia* they call it καπνέλαιον, "*Capnelaion*, [from καπνὸς, Smoke, and ἔλαιον, Oil] smoaky "Oil." And in *Lib. 3. C. M. S. G.* he says, that in *Lacedemon*, and some other Places, they call these sorts of Resins πρωτοφύτους, "the first Product." It seems to be called *Capnelaion*, says *Foesius*, from the Smoak it gives when placed nigh the Fire, or because it is more liquid than all other liquid Resins, as well as hotter and thinner, and consequently comes nearer the Nature of Oil.

CAPNIAS, καπνίας, from καπνὸς, Smoak; a ſort of Jaſper, of a ſmoaky Colour. *Actius, Tetrab.* 1. *Serm.* 2. *Cap.* 36. Alſo a kind of Vine which bears part white and part black Grapes. *Theophraſtus de Cauſis Plant. Lib.* 5. *Cap.* 3.

CAPNISTON, καπνιστὸν, is an Epithet of a ſort of Oil, prepared of ſeveral ſorts of Spices and Oil, by kindling the Spices, and ſuffumigating the Oil.

CAPNITIS, καπνῖτις. See CADMIA.

CAPNOIDES, καπνοειδὲς, (from καπνὸς, *Fumaria*, Fumitory, and εἶδος, a Reſemblance, on account of its Likeneſs to Fumitory) Podded Fumitory.

The Leaves and whole Face of this Plant reſemble Fumitory; but the Style of the Flower becomes a long taper Pod, which contains many round ſhining Seeds. *Miller's Dictionary.*

CAPNORCHIS, *Indian* bulbous-rooted Fumitory.

This has the whole Face of Fumitory: The Root is ſometimes tuberous, ſometimes ſcaly, and at other times bulbous. The Flower conſiſts of two Leaves, is of an anomalous Figure, and hangs downward. The Pods are like thoſe of Shepherd's-pouch. *Idem.*

CAPNORCHIS *Americana*, Boerh. Ind. *American* bulbous-rooted Fumitory. The Flowers of this Plant are ſomewhat like thoſe of Fumitory. *Idem.*

I find no medicinal Virtues aſcribed to the three foregoing Plants.

CAPNOS, καπνὸς. The ſame as FUMARIA, which ſee.

CAPO, *Capus*, *Gallus Spado*, *Gallus Eviratus*, and the Ἀλεκτρυὼν ἐκτομίας of the *Greeks*, are ſo many different Names for that Animal we call a Capon, or caſtrated Cock. The Deſign of performing this Operation is to tame and deſtroy the Luſt of the Animal, to render him a fit Leader for the other Poultry, but principally to put his Fleſh in a Capacity of becoming more fat and nouriſhing than it was before. *Martial* reckons their Fleſh one of thoſe delicate Foods ſought after by Gluttons and Epicures. But tho' the Fleſh of the Capon is allowed to be highly nutritive, and to generate a large Quantity of laudable Blood, yet ſome celebrated Authors, among whom is *Joannes Crato*, a Man of great Judgment and Learning, have forbid the Uſe of them, eſpecially to gouty Patients, becauſe they obſerved, that this Fowl was itſelf ſubject to arthritic Diſorders; as if thoſe who eat the Feet of Capons ſhould, for that Reaſon, be afflicted with the Gout, or as if, when eaten, their Quality was not altered by the concoctive Powers of the Stomach. Capons are not therefore to be condemned, becauſe they are ſometimes ſeized with the Gout, ſince that Diſorder is in them produced by a Defluxion of Humours, and an Imbecillity of the Parts which receive them, which Accidents can never be produced in our Bodies by eating their Fleſh. But if it ſhould happen, that any one ſhould, by eating the Fleſh of this Fowl, be afflicted with the Gout, this is rather owing to theſe Capons being fed in Cages by the Poulterers; by which means their Fleſh is rendered moiſt and recrementitious, and conſequently fit for generating and increaſing Obſtructions in the Body. For this very Reaſon *Galen* condemns all Fowls fed by the Poulterers. It may juſtly be aſked, whence it happens, that a Capon, which is a Eunuch, and free from Venereal Inclinations, ſhould be ſubject to the Gout; ſince, according to the twenty-eighth Aphoriſm of the ſixth Book of *Hippocrates*, *Eunuchs are not afflicted with the Gout*; and that a Cock, which is highly ſalacious, ſhould not in the leaſt be ſubject to that Diſorder! *Scaliger*, in his *Exotericæ Exercitationes*, anſwers this Queſtion, by ſaying, that Capons are ſeized with the Gout, becauſe their Heat is ſmall, and their Appetite great; whereas in Cocks the Heat is great, and the Appetite little. The Heat, ſays he, of the Capon is ſmall, in conſequence of his Virility being deſtroyed by Caſtration. Hence, by the Voracity and Weakneſs of the Heat, many ſuperfluous Humours are generated in the Body of the Capon, which falling to the Feet, theſe more ignoble Parts, which are weak in conſequence of their cold and exſanguious Nature, produce a Gout. On the contrary, as a Cock eats more ſparingly, and abounds in natural Heat, his Body muſt be free from Crudities, and ſuperfluous Humours, and conſequently not ſubject to the Gout. And tho' it may be objected here, that a Cock weakens his Feet by exceſſive Venery, and ſo diſpoſes them for the Reception of foreign Matter, yet we may anſwer, from *Galen*, that the bare Weakneſs of the Feet is not ſufficient for the Generation of the Gout, but there is required alſo an Influx of the Humours into thoſe Parts, without which a Gout can never be formed. But there can be no Influx without an antecedent Coacervation, which can never happen whilſt the Heat is of ſufficient Strength to digeſt the Food, and to conſume or expel Superfluities; and if the Animal be moderate in Eating, and be frequently exerciſed. This being the Caſe with reſpect to Cocks, it is no wonder that they are free from the Gout, tho' frequent in the Uſe of Venery. *Sebizius de Aliment. Facult.* The antient Phyſicians ſcarce ever mention Capons, but univerſally agree in pronouncing all Aliments, if caſtrated in Seaſon, to be the beſt in their kind for Food. *Caſſellanus de Eſu Carnium.* And it is now the univerſal Opinion, that the Fleſh of Capons, eſpecially cram'd and young, is not only ſavoury, but eaſy of Digeſtion, and highly nutritive. On theſe Accounts it is not only preſcribed as a Reſtorative to Perſons on their Recovery from Sickneſs, being variouſly prepared, as roaſted or boiled, and eſpecially ſeaſoned with Lemons or Oranges; but Jelly-broths made of the ſame are recommended in chronical Diſtempers as a Strengthener, and are thought to be of excellent Service, particularly in a Hectic Fever and Phthiſis. The way of Preparation in theſe Caſes is thus:

They bruiſe the Capon, Bones and all; and then incloſing it in a Pot, with a little Cinnamon and Salt, clap it into a Copper Veſſel full of boiling Water; and when it has boiled a ſufficient Time, take it out, and ſerve it up to the Sick as a Strengthener.

Some, for Oſtentation, or out of Ignorance, add Gold Coins, eſpecially thoſe of *Hungary*, in the Boiling. *P. Hermanni Boecler Cynoſura Mat. Med. Tom.* 2.

As it is Labour loſt to ſearch after nouriſhing Virtues in diſtilled Waters, ſo it is a ridiculous Piece of Vanity to expect Nutriment from the nauſeous diſtilled Water of the minced Fleſh of a Capon. *Boerhaave's Chymiſtry*, *Vol.* 2. Wherefore thoſe Capon-waters, which are compounded with an Addition of Powders which yield forth their Virtues in the Diſtillation, would have the ſame Virtues, were there nothing of a Capon uſed in the Proceſs; ſo that the Apothecary does no Injury neither to his Patient, nor the Reputation of the Phyſician who adviſed ſuch Capon-water, if he turns the Bird out of the Diſtiller's Laboratory into his Kitchin to be dreſſed. Hence we may form a Judgment of the *Aqua Caponis Quercetani*, which is diſtilled from a Capon with Aromatics and Wine, and is recommended for recruiting the Strength, and abating continued Fevers. *Quercetani Pharmacopœia. Mynſicht's Aqua Caponis* is ſtill a leſs elegant Compoſition, ſince it has fewer Aromatics, with an Addition of mucilaginous and refrigerating Subſtances, which, in Diſtillation, yeild none of their Virtues, not to mention the Species Diamargariti frigidi, in the room of which *Quercetan* ordered prepared Coral, equally ill calculated for Diſtillation. *Mynſicht's Theſaurus.* The *Aqua Caponis*, in the *Diſpenſatorium Brandenburgicum*, and the *Pharmacopœia Auguſtana*, is prepared of the Broth of a Capon, with the diſtilled Waters of Borrage and Bugloſs, and an Addition of the Four cordial Flowers, and Cinnamon. This Water is recommended as an Analeptic. But *Zwelfer*, in his *Animadverſiones ad Pharmac. Auguſt.* has juſtly obſerved, that "Conſumptive "Patients, and ſuch as are extenuated by chronical Diſorders, "might be more effectually recruited by the Exhibition of "Capon-broth, mixed with the beſt Cinnamon-water, and "other Cordials, without Diſtillation, than by the Water "diſtilled from a Capon, which is poſſeſſed of none, or at "leaſt a very ſmall reſtorative Virtue." In *Lemery's Pharmacop.* the Proportion of theſe Species for Diſtillation is, indeed, ſomewhat varied, and an Addition of Crums of Bread made: But the Water does not ſeem to derive any Excellence from that, or to be rendered leſs ſubject to *Zwelfer's* Cenſure. The Fat of the Capon, when recent, and not rancid, is proper both for internal and external Purpoſes, where pinguious, emollient, and lenitive Subſtances are indicated. Some arthritic Patients make a Cock or Capon lie in Bed at their Feet, with an Intention, by that means, to communicate the Diſorder to the poor Animal. *Boecler. Cynoſura Mat. Med.* They may poſſibly be of Service in this Caſe, by cheriſhing the Part affected with their Heat. Whether Beans, macerated in Capons Blood before they are ſown, are, by that means, rendered Proof againſt the Injuries of Herbs that have an Antipathy to them, as the Antients thought, according to *Palladius R. R. L.* 12. *Tit.* 1. is a Point we leave to be determined by Experience. *Rieger.*

CAPOLLIN *Mexicanorum Hernandez, ſeu Ceraſus dulcis Indica.*

It is a Tree of a moderate Bigneſs, with Leaves like thoſe of an Almond, or our Country Cherry-tree. The Flowers hang down in Bunches, which are ſucceeded by Fruit, which reſembles our Cherries in Shape, Colour, Bigneſs, Stones, and Kernels; and are alſo ſomewhat acid and aſtringent, when green, but ſweet, and very grateful to the Taſte, when ripe. It bloſſoms in the Spring, and bears Fruit all the Summer. It requires a temperate Climate, and grows in Gardens and Fields in *Mexico*, as well ſpontaneouſly, as by Cultivation.

The Juice of the young Buds mollifies the Tongue when parched with Heat, the Decoction of the Bark being expoſ'd to the Sun fifteen Days, and the Weight of a Dram of it, taken, cures the Dyſentery. The Powder helps Inflammations. In a time of Dearth they make Bread and Drink of the

the Fruit; but it affords an Aliment inclining to Melancholy; and the frequent Use of it causes a Rankness of Breath, and makes the Teeth black, which, however, may be remedied by Dentifrices. There are three Species of this Tree, which differ only in Fruit; for the *Xitoma Capollin* bears a Fruit about the Bigness of a *Damascen* Plum, the *Helecapollin* one somewhat less, and the *Tolacapollin* the least; but all of them hanging in Clusters. *Raii Hist. Plant.*

CAPOTES. The same as *Cydonia exotica*, C. B. which see. *Raii Index.*

CAPPARIS, Offic. Κάππαρις, Dioscoridis. *Capparis rotundiore folio*, Ger. 748. Emac. 895. *Capparis spinosa, folio rotundo*, Park. Theat. 1023. Raii Hist. 2. 1629. *Capparis spinosa, fructu minore, folio rotundo*, C. B. Pin. 480. Jonst. Dendr. 274. Tourn. Inst. 261. Elem. Bot. 228. Boerh. Ind. A. 2. 71. *Capparis spinosa*; J. B. 2. 63. Chab. 110. CAPERS.

This is a Bush, having many running trailing Branches, full of sharp crooked Thorns, growing at the Joints, with the Leaves, which are set in an alternate Order on the Branches, about an Inch long, and as much broad, a little pointed at the Ends, on short Foot-stalks. The Flowers grow among these, on pretty long Stalks, consisting of four red Leaves, full of curl'd Apices in the Middle; and are succeeded by long roundish Fruit, containing a great Number of small Seeds.

The *Caper* Bush grows in the Southern Parts of *France*, and in *Italy*, in sandy and stony Places.

Pliny, in the fifteenth Chapter of the twentieth Book of his *Natural History*, delivers the Sentiments of the Antients, with respect to the Use of this Plant, in the following Words: " 'Tis reported, that those who eat it daily are in no Danger " of being seiz'd with the Palsy, or Pains of the Spleen. Its " Root, when bruised, removes the white Leprosy, if the " Patient is rubb'd with it in the Heat of the Sun. Two " Drams of the Bark of its Root, drank in Wine, make a " Medicine beneficial to splenetic Patients, provided they abs- " tain from the Use of Baths. 'Tis also reported, that, by " the Bark of the Root, the whole Spleen may be discharged " by Urine and Stool, in the Space of thirty-five Days. It is " drank in Pains of the Loins, and Palsies. A Decoction of " its triturated Seeds in Vinegar, or its Roots chew'd, relieve " the Tooth-ach. A Decoction of its Seeds, in Oil, is instil'd " into the Ear, for Pains of that Part. Its recent Leaves and " Root, made up with Honey, cure phagedenic Ulcers; and " the Root, when boil'd in Water, discusses strumous Swell- " ings, cures a Parotis, and expels Worms: It also removes " Disorders of the Liver. It is also used against scald Heads, " with Vinegar and Honey. A Decoction of it, in Vinegar, " cures Exulcerations of the Mouth; but it is agreed upon, by " Authors, that it is prejudicial to the Stomach." To this Account of *Pliny*'s, we shall add that given by *Dioscorides*, in the 204th Chapter of his second Book. " The Trunk and " Fruit are pickled for Food. They produce Commotions in " the Belly, are prejudicial to the Stomach, and create Thirst; " however, they agree better with the Stomach when boiled, " than when crude. Two Drams of the Fruit, drank in Wine " for forty Days successively, consume the Spleen, and occa- " sion a Discharge of Urine, and bloody Excrements. It is " drank with Advantage in sciatic Pains, Palsies, Ruptures of " the muscular Parts, and Convulsions. It also provokes the " Menses, and purges the Head. A Decoction of its Seeds, " in Vinegar, relieves the Tooth-ach, if the Mouth is wash'd " therewith. The dried Bark of the Root is beneficial in the " same Case, and deterges all old sordid and callous Ulcers: It " is used, in Conjunction with Barley-meal, for anointing those " who labour under Disorders of the Spleen." *Hippocrates*, in his third Book *de Morbis*, recommends the Bark of the Caper-tree Root, mix'd with proper abstergent Potions, as a Medicine adapted to promote the Expectoration of Matter in peripneumonic Patients. According to *Simeon Sethi*, " Capers are " possess'd of different Qualities; such as Bitterness, by which " they abstergе, cleanse, and incide; Acridness, by which " they heat, dissipate, and attenuate; and Acidity, by which " they inspissate, and prove astringent: For this Reason they " are beneficial in Hardnesses of the Spleen, whether they are " eaten, or applied, by way of Plaister, with Vinegar or Oxy- " mel. They provoke the Menses, and allay the Tooth-ach " when boiled either in Wine or Vinegar. The Bark is the " most efficacious Part of the Plant: The Trunk and Fruit " are less powerful in their Operation. They soften scrophu- " lous Tumors, and their Juice kills Worms ingender'd in the " Ears. Capers, pickled with Vinegar, open Obstructions of " the Liver and Spleen. By a Quality peculiar to themselves, " they are beneficial in Disorders of the Spleen, and sciatic " Pains; but are hurtful to the Bladder and Kidneys." From what has been said, 'tis obvious that the Antients were acquainted with the aperient Nature of its Root, and also of its corroborating Quality, in consequence of its Astringency. But it is carrying the thing too far, to assert that its Energy is so great as to consume and carry the whole Spleen out of the Body. In consequence of its Bitterness, it seems well calculated to destroy Worms. Besides, that it is so prejudicial to the Stomach, the Kidneys, and the Bladder, does not appear from the Capers in Use among the Moderns; for what *Paulus Ægineta* says of them, *Lib.* 1. *Cap.* 74. seems rather to be true. " The Caper, says he, procures an Appetite, opens the " Passages of the Liver and Spleen, and subdues Phlegm; but " it is to be used before Meals, with Oxymel, or with Oil and " Vinegar." The Author here means the green Flowers, pickled before they blow, and which are commonly sold in the Oil-shops. They gather the full-grown Buds of the Flowers before they blow, and leave them spread in a Shade for three, four, or five Hours, till they begin to grow flaccid, in order to prevent their Opening. Then they put them in a Vessel, add Vinegar to them, cover the Vessel with a Board, and let them remain in that State for eight Days: Then, taking them out of the Vessel, they squeeze them gently; and, adding fresh Vinegar, let them stand in that Condition for eight Days more. This Operation they repeat a third time, gently pressing the Capers, and adding fresh Vinegar. This done, they are put into a Cask with Vinegar; to which some add Salt.

The least are by some thought the best, and those brought from *Genoa* are generally preferr'd to the other Kinds. But *Pomet* and *Savary* assert, that they are rarely imported into the Northern Countries from any other Part than *France*, under such Names as may best please the Purchasers. Those brought to *Venice* from *Alexandria*, tho' larger than the *Italian* Capers, are esteemed the best of all others; and, according to *Hoffman de Medicamentis Officinalibus*, *Lib.* 2. *C.* 47. the largest are the best, as being the most entire. Their austere bitterish Taste sufficiently convinces us of their astringent and corroborating Virtues; and, if we consider the Qualities they derive from the Vinegar and Salt, we may easily conceive, that they are of a resolvent and inciding Nature: For this Reason they are recommended as Pickles with Food, in order to strengthen a languid Appetite; and are principally beneficial to those whose Stomachs abound with gross pituitous Humours, who have weak Stomachs, and want a due Appetite. They are also good for Obstructions of the Viscera, especially those of the Spleen, for the Palsy, and Convulsions arising from a Superfluity of peccant Humours. They are also highly recommended in long and chronical Fevers. *Prosp. Alpin. Hist. Nat.*

Laurentius Joubert, in the Plague, recommends them season'd with Salt, gently boil'd in Water, and eaten with Vinegar; " for, says he, they excite an Appetite, and open Ob- " structions, if there are any in the Body." For this Reason they ought not only to be allow'd in pestilential Cases, but also recommended, because they resist Putrefaction. *Benivenius de abditis Morborum Causis*, *Cap.* 105. informs us, that he cured a Patient, labouring under Disorders of the Spleen, only by the Use of Capers, ordering him to drink Forge-water for a Year; after he had been harrass'd with his Distemper for seven Years, consulted many Physicians, and tried many Remedies, to no Purpose. " Externally, says *Ettmuller*, the Pickle of Capers " is applied to the Side, under the Left Hypochondrium, with " Linen Cloths, or a Spunge, for discussing Swellings of the " Spleen. If, to this, Mustard-seed is added, that the Vinegar " may be impregnated with its volatile Salt, it is an excellent " Remedy in Disorders of the Spleen." In some Places of *Holland* and *Germany* the Buds of the Flowers of the *Cytisogenista Scoparia vulgaris, flore luteo*, pickled in Vinegar and Salt, are substituted in the room of Capers; nor are they less agreeable to the Palate, or less proper for exciting a languid Appetite, opening Obstructions of the Liver and Spleen, and killing Worms. *Hoffman*, according to *Konigius*, affirms, that the round Buds of the *Caltha Palustris* may be very properly substituted in the room of Capers. The Root of the Caper-tree is one of the Five lesser opening Roots. But, in a particular manner, the Bark of the Root, brought from *Egypt* and *Apulia*, dried in small Tubes like the Cinnamon, but shorter, and rough, thick, of a cineritious Colour, and of an austere bitterish Taste, is celebrated for its aperient and subastringent Virtues; for which Reason it is class'd among the Splenetic Medicines, and used in Decoctions for Disorders of the Spleen. This Bark is also used in Splenetic Plaisters, according to *Bauhine*. *Bayrus* took Caper-roots, and boiled them, in Asses Milk, to a Consumption of the third Part of the Milk, with which he anointed the Hairs of the Head over Night, which, when comb'd, become black by that means. Simple Oil of Capers, obtain'd by boiling the Bark of the Root in Olive-oil, is, by *Ettmuller*, recommended for external Use in Disorders of the Spleen. The Method of using it is to anoint the Left Hypochondrium with it. The *Emplastrum de Cicuta*, generally used in Tumors of the Spleen, is sometimes moisten'd with this Oil: But in its room the Oil of Amber may be substituted, as being of a more penetrating Nature. In some Dispensatories there is an *Oleum Capparum Compositum*, prepared of the Bark of the Root, with an Addition of some aperient Powder, sprinkled with Vinegar, and boil'd in Oil of Olives. Some also add Wine. *Jeannes Du Bois de Methodo miscend. Remed. topic.*

topic. In the *Pharmacopœia Parisiensis* the Vinegar is omitted, and, in its room, Capers pickled with Vinegar, and White-wine, are substituted. It is an antient Custom, tho' we know not the Author of it, to anoint the Hypochondria of People afflicted with hypochondriac Disorders and Inflations, with Oil of Capers, which is possess'd of an attenuating and gently corroborating Quality. *Schulzii Prælectiones de Viribus Medicamentorum.* In *Lemery's Pharmacop.* this Oil has more Ingredients than it is commonly prepared with; but the Composition may possibly not have a great deal added to its Efficacy by that means. *Zwelfer*, in the *Pharmacop. Regia*, in order to render the Composition more effectual, to the other Aperients adds Sal Ammoniac, Tobacco, Camphire, and distil'd Oil of Gum Ammoniac; and thinks, that, in order to heighten the Virtues of the Medicine, the distil'd Oils of Soot and Tobacco may be added. The *Trochisci de Capparibus*, of *Mesue*, are prepared of the Bark of the Root, and several aperient Powders, triturated very fine, and made up with Gum Ammoniac dissolved in Vinegar. *Mesue* recommends this Preparation for removing Hardnesses, and dispelling Flatulencies of the Spleen. He orders a Dram and an half of it to be given for a Dose, with Wine, in which Caper-tree Root, the Bark of the Ash, the Bark of Willows, and that of the Tamarisk, or the Points of its Branches, have been boiled. Upon which *Jacobus Sylvius* observes, that the Willow-bark is ill calculated for answering the Intention, because it is astringent. *Mesue de Re medica.* The *Extractum Capparum*, in the *Dispensatorium Hafniense*, is prepared of the Roots and common Water, with an Addition of little or no Spirit of Wine.

CAPRA ALPINA, Offic. *Capra Alpina sive Rubicapra*, Schrod. 5. 276. *Rupicapra*, Bellon. Obs. Ed. Clus. 57. Jonst. de Quad. 52. Gesn. de Quad. 292. Charlt. Exer. 9. Raii Synop. A. 78. *Dorcas sive Rupicapra*, Aldrov. de Quad. Bisul. 725. THE CHAMOIS, or GEMS.

It is frequently met with among the *Alps* belonging to *Switzerland*, and the Country of the *Grisons*, being a sort of wild Goat, in Shape and Size resembling the tame one, with short Horns, the Extremities of which are hook'd.

The Parts used in Medicine are the Blood, Fat, Liver, Gall, Dung, and the Stone found in his Stomach, call'd *Ægagropila*, and *Bezoar Germanicum*. See ÆGAGROPILA, and BEZOAR.

The fresh Blood is a Cure for the Vertigo; the Fat is good for the Phthisis, and Exulceration of the Lungs; the Liver stops a Looseness; the Gall clears the Eye of an Albugo, and helps a Nyctalops (*an Affection of the Eyes, which causes the Patient not to see in the Night, tho' some take the Word in a contrary Sense.* See NYCTALOPS); the Dung wastes and expels the Stone: And the Ægagropila, or Bezoar, besides its Virtues in almost all manner of malignant Diseases, is thought to procure an easy Delivery. *Dale.*

CAPREOLARIS, *sive Hederarius Anfractus*, κισσοειδὴς, ἑλικοειδὴς, is the Connection of spermatic Veins and Arteries, which descend to the Testicles, not by a strait Passage, but winding and twisting about in manner of the Tendrils of a Vine or Ivy. *Galen de Semine, Lib.* 1. *Cap.* 12.

The other Names for it are *Vasa præparantia*, *Corpus varicosum*, *pampiniforme*, and *pyramidale*. *Castellus.*

CAPREOLATA, *Bryoniæ nigræ folio Brasiliensis tricocca*, Margg.

It creeps and twines about other Plants: The Leaves stand on Pedicles two, three, or four Fingers Breadth in Length, and are shaped like a Heart. The Flowers grow on Pedicles two or three Fingers Breadth in Length, which, in the upper Part, are branched into four or five Divisions, each bearing a Flower. The Flowers resemble those of the Smilax, are white, but mix'd with a faint Purple on the outer Half.

In the midst of the Flower stands up a white purplish Stamen, and on its interior Circle is a lively Representation of a Star with five Rays, as tho' impress'd, and of a white Colour like the Flower itself. The Flowers are succeeded by a dark-colour'd, roundish, triquetrous Body, divided into three Capsules, in each of which is a brown Seed, of the Shape and Size of an ordinary Pea, unequally cut. The Flower is without Smell, and the Plant insipid. *Raii Hist. Plant.*

CAPREOLUS, or CLAVICULA, in Botany, is that long smooth Production in Plants which is like a String, and grows out of the Stalk. It consists of rough Vesicles, and Bundles of small Fibres, of an elegant and orderly Contexture, and is the Instrument with which some Plants of weak Stalks are furnish'd, that they may not creep on the Ground, but use it to lay hold of, and by that means twine themselves about the neighbouring Plants. *Varro, R. R. l.* 1. *c.* 31. describing the Capreolus of a Vine, says, it is a little curled Tendril, which, in order to lay hold of the neighbouring Vines, creeps along, *ad capiendum Locum*, as it were, to chuse a Place; whence it is called *Capreolus a capiendo.* Wonderful is the Nature of the *Capreolus* produced by the *Vitis Canadensis quinquefolia Tournefortii*, whose extreme Part ends in a Cotyledon, consisting of a Multitude of Papillæ, from whence issues a Resin, which serves as a Glue to fasten the Vine to the Wall. In some Plants, as in Ivy, the *Capreolus* is not only assistant to the Plant in climbing, but serves instead of a Root; whence such Plants are called *scandent. Rieger.*

CAPREOLUS, in Anatomy, is the *Helix*, or exterior Compass of the Ear, so call'd because of its Tortuosity. *Castellus.*

CAPREOLUS, in Zoology, is an Animal thus distinguish'd.

Capreolus, Offic. Schrod. 5. 278. Schw. de Quad. 78. Mer. Pin. 166. *Caprea Plinii*, Jonst. de Quad. 54. *Caprea Plinii*, *Capreolus*, Aldrov. de Quad. Bisul. 738. Raii Synop. A. 89. *Caprea sive Capreolus*, Gesn. de Quad. 296. *Dorcas*, *Capreolus*, Charlt. Exer. 12. THE ROE-BUCK.

It is found in *Scotland*. The Parts used in Medicine are the Rennet, Liver, Gall, and Dung: The Rennet is good for a Diarrhœa and Dysentery; the Liver is supposed to sharpen the Sight, and stops an Hæmorrhage, especially at the Nostrils; the Gall clears the Face of Spots, the Eyes of Albugines, Films, or other Defects, helps the Ringing in the Ears, and mitigates the Tooth-ach: The Dung cures the yellow Jaundice. *Dale*, from *Schroder.*

CAPRICALCA, *Jonston.* A Kind of wild Goose, or Bird, a little bigger than a Raven, of a black or leaden Colour, but cross'd over the Neck, Breast, and Belly, with broad obscure Stripes. Its Tail is very short and black. It makes a Noise in flying, lives in Fens, and is excellent Food.

Its Fat is emollient, and very resolvent. *Lemery des Drogues.*

CAPRICERVA. A Name for two different Species of Animals in the *East* and *West-Indies*, whence two Kinds of Bezoar are taken. It is so called from its resembling partly a Goat, and partly a Stag. See BEZOAR.

CAPRICORNUS, Lead. *Rulandus.*

CAPRIFICUS, Offic. Ger. 1327. Emac. 1510. Aldrov. Dendr. 432. Park. Theat. 1493. J. B. 1. 134. *Ficus sylvestris Dioscoridi*, C. B. Pin. 457. Raii Hist. 2. 1433. *Ficus sylvestris sive Caprificus*, Jonst. Dendr. 47. THE WILD FIG-TREE.

It grows in *Greece*, and other warm Countries. The Fruit is used in Medicine, and agrees in Virtues with that of the Garden Fig-tree. See FICUS.

CAPRIFOLIUM, *Periclymenum*, *Matrisylva*, Offic. Mont. Ind. 39. *Caprifolium*, Ind. Med. 26. *Caprifolium Germanicum*, Tourn. Inst. 608. Elem. Bot. 480. Boerh. Ind. A. 2. 226. Raii Synop. 3. 458. Dill. Cat. Giss. 109. *Periclymenum*, Ger. 743. Emac. 891. Merc. Bot. 1. 58. Phyt. Brit. 90. Mer. Pin. 92. *Periclymenum vulgare Germanicum*, Rupp. Flor. Jen. *Periclymenum non perfoliatum Germanicum*, C. B. Pin. 302. *Periclymenum non perfoliatum*, J. B. 2. 104. *Periclymenum sive Caprifolium vulgare*, Park. Theat. 1460. Raii Hist. 2. 1490. *Clymenum*, *Periclymenum*, *Caprifolium*, Chab. 113. HONEYSUCKLE, or WOOD-BIND.

The Trunk or Body of this Tree or Bush is seldom much thicker than the Wrist, shooting out long, twining, slender Stalks, which twist about any thing they meet with; the Leaves grow together at the Joint, of a long round Form, pointed at the End, of a bluish-green Colour: The Flowers are made of several long slender Tubes set together, open at Top, with broad Lips, turn'd back with several Stamina in the Middle, of a pale-red Colour, and of a most pleasant grateful Scent, succeeded by small round red Berries. It grows every-where in the Hedges, flowering good Part of the Summer.

The Leaves, which are the only Part used, are sometimes put into Gargarisms for sore Throats; tho' others affirm, they are not so proper for that Purpose, by reason of their great Heat. Some commend a Decoction of them for a Cough and Asthma, and to open Obstructions of the Liver and Spleen. The Oil, made by Infusion of the Flowers, is accounted healing and warming, and good for the Cramp, and Convulsions of the Nerves. *Miller's Bot. Off.*

Its Leaves are insipid, styptic, stink like a Dog-kennel, and give a faint-red Colour to blue Paper: The Roots give it a deeper. Their Bark is acrid, saltish, styptic, and stinking: Its Salt resembles Sal Ammoniac, but is united with some fetid Oil and Earth. The Decoction of *Honeysuckle* Leaves is vulnerary and detersive, good for Diseases of the Throat, and Wounds of the Legs. The bruised Leaves cure Diseases of the Skin: The distil'd Water of the Flowers asswages Inflammations of the Eyes, and strengthens Women in Labour. Three Ounces of it are given to drink, mix'd with one Ounce of Orange-flower Water. *Rondeletius*, on these Occasions, prescribed the Water of Honeysuckle, with Lavender-seed. *Martyn's Tournefort.*

CAPRIMULGA. A large Species of Viper, not poisonous. *Castellus.*

CAPRIZANS, σκιρτίζων. So *Herophilus* call'd a sort of irregular and unequal Pulse, when the Motion of the Artery is, as it were, disturb'd and interrupted; but is soon renew'd with more Swiftness and Vehemence, after the manner of Goats, who seem, in their Leaping, to make a double Motion. *Galen. de Diff. Puls. Lib.* 1. *Cap.* 20.

CAPSA, κάψα, (κάπτω, *Dioscorid. Lib.* 3. *Cap.* 26.) in general signifies a Receptacle for Books, Cloaths, Eatables, or any Portables; in *Rulandus* and *Johnson*, it means something whose Bottom is a Contexure of Iron Wire.

CAPSELLA. A Name in *Marcellus Empiricus*, *Cap.* 20. for *Echus*, that is *Echium*, or Vipers Bugloss.

CAPSICUM, *Piper Indicum*, Offic. *Capsicum vulgare*, Elem. Bot. 127. *Capsicum siliquis longis propendentibus*, Rupp. Flor. Jen. 37. Tourn. Inst. 152. Boerh. Ind. A. 2. 68. *Capsicum longioribus siliquis*, Ger. 292. Emac. 364. *Capsicum majus vulgatius, oblongis siliquis*, THE MOST ORDINARY GUINEA PEPPER WITH LONG HUSKS. Park. Theat. 355. *Piper Indicum vulgatissimum*, C. B. Pin. 102. Raii Hist. 1. 676. *Piper, Capsicum*, Chab. 297. *Piper Calecuticum, sive Capsicum oblongius*, J. B. 2. 943. *Solanum Capsicum dictum vulgatissimum*, Hort. Lugd. Bat. 574. *Solanum urens Capsicum dictum, sive Piper Indicum vulgatissimum*, Hist. Oxon. 3. 528. *Piper Indicum, siliquâ flavâ vel aureâ*, Comm. Flor. Mal. 215. *Capo-Molago*, Hort. Mal. 2. 109. *Quiya, sive Piper Brasilienſe*, Pis. 225. *Quiya Brasilienſibus*, Marcg. 39. *Lada Chilli*, Bont. 131. *Chilli, Piper siliquosum Mexicanum*, Hern. 135. GUINEA PEPPER.

The Stalks of *Guinea* Pepper grow to be about a Foot and a half high, thick and angular, on which are set Leaves of a full green Colour, in Shape like the Leaves of Nightshade, but longer and narrower. The Flowers grow single, at the Division of the Stalks, of one Leaf divided into five Parts, white and Star-fashion, with a yellow Umbo in the middle, bigger than Nightshade-flowers. After these are fallen, come long, round, taper Pods, of a green Colour at first, but, when ripe, of a lively, shining Red, like polish'd Coral, in which are contain'd a great many flat, round, yellow Seeds. This Fruit is of a hot, fiery, biting Taste, hotter than the strongest Pepper.

It is sown every Year in Gardens, and flowers in *August*, producing its red Pods towards the latter End of *September* and *October*, perishing with the first Frosts.

Guinea Pepper is more used as a Sauce, and in Pickle, than in Physic, being frequently put into Fish Sauce, or into any thing that is flatulent and windy, being order'd divers ways, either green or ripe, pickled or rubb'd to Powder with Salt. A Decoction of it, with Peny-royal, is commended by some to expel a dead Child. The Skins boiled, and used as a Gargle, help the Tooth-ach. A Cataplasm of the Seeds powder'd, and mixed with Honey, apply'd to the Throat, is good for the Quinsey. It is not much used. *Miller's Bot. Off.*

CAPSULA, properly a Box, or any Receptacle of that kind, in Botany, is the seminal Vessel, or Repository, in which are inclosed one or more Seeds, such as you see in siliquous or Pod-bearing Plants, whose Pods, from the Number of their Capsules or Cells, are called Unicapsular, Bicapsular, and so on. *Rieger.*

CAPSULA CORDIS is the same as PERICARDIUM, which see. *Blancard.*

CAPSULA COMMUNIS, *Glissonii*, is a Production of the Peritonæum, including the Vena Porta and biliary Duct in the Liver. *Blancard.*

CAPSULÆ ATRABILARIÆ, *Glandulæ suprarenales*, *Renes succenturiati*, are glandulous Bodies lying on the upper Part of the Kidneys. See RENES SUCCENTURIATI.

CAPSULÆ SEMINALES are the extreme Parts of the *Vasa deferentia*, which have their Cavities dilated in manner of Capsules. Their Use is to transmit the Semen from the *Testes* to the *Vesiculæ seminales*. *Blancard.*

CAPSULATE *Pods* [from *Capsa*, a Chest] are the little short Seed-vessels of Plants. *Miller's Dictionary.*

CAPSULATED, is inclosed in any thing as a Walnut is in its green Husk. *Miller's Dictionary.*

CAPULUM, from κάμπτω, to bend; a Contorsion of the Eyelids, or other Parts. *Blancard.*

CAPUR. The same as CAMPHORA.

CAPUS. The same as CAPO.

CAPUT, in Botany, imports the Head of a Plant. See CAPITA, and CAPITATA.

CAPUT GALLINACEUM. The same as ONOBRYCHIS, which see.

CAPUT MONACHI. A Name for the TARAXACUM, which see.

CAPUT MORTUUM, called otherwise *Terra Mortua*, or *Terra damnata*, in Chymistry, imports the dry Fœces left in a Vessel, after the Moisture has been distilled from it.

CAPUT. The Head.

The Antients divided the Body into three great Cavities, which they term'd *Bellies*, and into four Extremities. They called the Head the upper *Belly*, the Thorax the middle *Belly*, and the Abdomen the lower *Belly*. The Neck was by some joined to the Head, by others, to the Thorax.

The most natural and plainest Division of the Body is into the Head, Neck, Thorax, Abdomen, Arms, and Legs.

The Head view'd on the Outside is divided into the hairy Scalp, and Face.

The hairy Scalp covers the upper Part of the Os Frontis, the Ossa Parietalia, the Os Occipitis, and the upper and lower Portions of the Temporal Bones.

The uppermost Part of the hairy Scalp is termed the Vertex or Fontanella; the back Part, Occiput; the lateral Parts, the Temples. The Vertex is distinguished from the Occiput by a contorted Border of Hair, and the Temples are terminated below by the Ears.

For the Arteries of the Face, see ARTERIA.

For the Veins, see VENA.

For the Nerves, see NERVUS.

The Face comprehends all that Portion of the Surface of the Head which lies between the hairy Scalp, and the Neck, that is, the Forehead, Eye-brows, Palpebræ, Eyes, Nose, Mouth, Chin, Cheeks, and Ears.

The external Parts of the Eyes are these, the anterior Portion of the Globe of the Eye, the Membrana Conjunctiva, the Cornea Lucida, Iris, Pupilla, Caruncula Lachrymalis, Angles of the Palpebræ, and the Cilia, or Hairs of each Palpebra. The internal Parts are, the Globe of the Eye, the Tunica Sclerotica, or Cornea Opaca, the Choroides and Arachnoides; the Crystalline, vitreous and aqueous Humours; the anterior and posterior Chambers; the Muscles, and the optic Nerve. See OCULUS.

For the Parts of the Ear, see AURIS.

The external Parts of the Nose are these; the upper Extremity of the Nose, the Arch or Back, the Sides of that Arch, the Tip of the Nose, the Alæ, the Nares, and the Septum Narium. The internal Parts are, the Cavity and Bottom of the Nares, the Convolutions, the maxillary, sphenoidal, and frontal Sinuses.

The external Parts of the Mouth are these; the Lips, one upper, the other lower, the Angles or Commissures of the Lips, the Border or Edge of each Lip, the Fossula which runs from the Septum Narium to the Edge of the upper Lip, and the transverse Fold which separates the under Lip from the Chin. See LABIA.

The internal Parts of the Mouth are these; the Palate, the Septum Palati, the Uvula, the Amygdalæ, Gums, Fræna of the Lips, the Tongue, its Apex, Root, Sides, and Frænum.

The Cheeks are the lateral Parts of the Face, reaching downward from the Eyes and Temples, between the Nose and Ears. The upper prominent Part of the Cheek is commonly termed *Mala*.

The Chin is the anterior Protuberance, by which the lower Part of the Face is terminated, from whence it runs all the Way to the Neck. The under Part of the Chin is termed the Basis, and it is distinguish'd from the Throat by a transverse Fold, which reaches from Ear to Ear. In the middle of the Chin there is sometimes a Fossula, Depression, or Dimple.

The Coverings of the Head are, first, the Hair. See CAPILLUS.

Secondly, The Skin. See CUTIS, and CUTICULA.

Thirdly, The Membrana Cellulosa. See CELLULOSA MEMBRANA.

Fourthly, The Muscles. See MUSCULUS.

Besides the external Integuments of the Head, there is an Aponeurotic Expansion which covers the Head like a Cap, and is spread round the Neck, and on the Shoulders, like a Riding-hood; and for this Reason *Winslow* gives it in general the Name of *Coif*, and calls the superior Portion of it the Aponeurotic Cap.

This Aponeurosis is very strong on the Head, and it appears to be made up at least of two Strata of Fibres crossing each other. As it is spread on the Neck, it becomes gradually thinner, and ends insensibly on the Clavicles. It sends out a Production on each Side, from above downward, and from without inward, which, having passed over the superior Extremity of the Musculus Mastoidæus, runs behind that Muscle toward the transverse Apophyses of the Vertebræ of the Neck, where it communicates with the Ligamenta Intertransversalia.

The external Surface of all the Bones of the Head, as well as of all the other Bones of the human Body, except the Teeth, is cover'd by a particular Membrane, of which that Portion which particularly invests the Cranium is named Pericranium, and that which invests the Bones of the Face is simply term'd Periosteum.

The Pericranium is made up of two Laminæ closely united together. The internal Lamina, which has by some been taken for a particular Periosteum, covers immediately all the bony Parts of this Region; and the external Lamina has been looked upon as a Membrane distinct from the internal, and named Pericranium particularly.

The external Lamina of the Pericranium parts from the other, at the semicircular or semioval Plane, surrounding the Temples, and becomes a very strong Aponeurotic or Ligamentary Expansion, which covers the temporal Muscle, and is afterwards fixed in the external angular Apophysis of the Os

Frontis, in the poſterior Edge of the ſuperior Apophyſis of the Os Malæ, and in the ſuperior Edge of all the Zygomatic Arch, as far as the Root or Baſis of the Maſtoide Apophyſis.

In the Interſtice between the two Laminæ at this Place, lies a large Portion of the Temporal Muſcle, being inſerted in each Lamina in the manner mention'd below under this Article. The reſt which is not attach'd to this Muſcle, is filled by a reticular and adipoſe Subſtance, in the Interval betwixt the inferior Portion of the temporal Muſcle, and the Zygomatic Arch.

At this Place, the Aponeurotic Coif ſeems to join the external Lamina of the Pericranium, and they both communicate with particular Aponeurotic Expanſions of the neighbouring Muſcles, as the Maſtoidæus, Maſſeter, Zygomaticus, &c.

The Head is compoſed of ſeveral bony Pieces, ſome of which, connected together, form a kind of oval Cavity, properly called the Skull. The other repreſent a complicated Piece of Sculpture, which partly ſupports the anterior Half of the Skull, and, as it forms the greateſt Part of the Face, it is called by that Name.

Before we examine particularly each Bone of the Head, it is neceſſary, in order to prevent Repetitions and Obſcurity, to conſider the Head in general, that is, as conſiſting of all the Bones which belong to it. In this View, ſeveral Eminences and Cavities come to be taken Notice of, the Formation of which is owing to more Bones than one; and conſequently, in examining each Bone by itſelf, we can ſee but an imperfect Portion of them.

In the Language of Anatomiſts, theſe Parts may be called common, and thoſe that belong to ſome one Bone, may be term'd proper. The common Parts ought firſt to be diſtinctly known, before we go on to the proper ones; if we would ſhun an Inconvenience otherwiſe inevitable, of explaining one unknown thing by another equally unknown.

The bony Head being conſider'd as one Piece, the following Particulars may be taken Notice of in it. 1. Its Situation in general. 2. The Size. 3. The Figure. 4. The external Parts. 5. The internal Structure. 6. Its Situation in particular. 7. The Connection. 8. The Uſes. I ſhall follow the ſame Order nearly, through the Whole of this Expoſition.

The Head is the higheſt or moſt ſuperior Part of the whole Skeleton.

The whole Head of the Skeleton is Spheroidal, compoſed, as it were, of two Ovals, a little depreſſed on each Side. One of them is ſuperior, the Extremities pointing forward and backward; the other is anterior, the Extremities being turn'd upward and downward in ſuch a manner, as that one Extremity of each Oval meets and is loſt in the other, at the Place particularly known by the Name of the Forehead.

This complex Figure, being view'd ſidewiſe, repreſents a Spheroidal Triangle; and we ought farther to obſerve, that the Oval of the Skull is broader behind than before, and that of the Face broader above than below.

The upper Region is term'd the Crown of the Head, the lower the Baſis; the lateral Regions, the Temples, the Anterior, the Forehead, the Poſterior, the Occiput, the lower Part of which is called the Nape of the Neck.

Some of the Eminencies, Cavities, and Inequalities are external, being viſible in an entire Head; others are internal, and can only be diſcover'd by opening the Skull. Both theſe Kinds are either proper, belonging only to ſome one Piece; or common to more Pieces than one.

The external Eminences are ten in Number, two Maſtoide, two Styloide, two Condyloide, two Pterygoide, and two Arches called Zygomata. Of theſe five Pairs, the three firſt are ſimple or proper; the other two, that is, the Zygomata and Pterygoides, are compound or common, being form'd by the Connection of more Bones than one; the Zygomata by the Oſſa Temporum, and Oſſa Malarum; the Pterygoide Eminences by the Os Sphenoides, and Oſſa Palati. To theſe may be added, the Tubercle and external Spine of the Occiput, and the Condyloide and Coronoide Apophyſes of the lower Jaw.

The ſimple external Cavities are, the Parietal Holes, the Superciliary Holes, in the Place of which there are ſometimes only Notches; the ſuperior orbitary Slits, the optic Holes, the external, or rather inferior orbitary Holes, the Holes in the Oſſa Naſi, the Holes in the Oſſa Malarum, the Maxillary Foſſæ, the oval Holes in the Baſis of the Skull, the Spinal Holes, the Orifices of the Paſſages of the internal Carotides, the Maſtoide Grooves, the Stylomaſtoide Holes, the poſterior Maſtoide Holes, the large occipital Hole, the anterior and poſterior Condyloide Holes, the Glenoide Cavity and Fiſſure for the Articulation of the lower Jaw, the external auditory Hole, the ſmall poſterior maxillary Holes, the Sockets in both Jaws, the internal and external Orifices of the Canal of the lower Jaw, which laſt may likewiſe be named the Holes of the Chin.

The compound external Cavities are the Orbits, the Edges of which are divided into two lateral Parts, improperly called Angles, one internal toward the Noſe, the other external toward the Temples; the temporal Foſſæ, the Zygomatic and Naſal Cavities, which laſt are alſo called Noſtrils, which have anterior and poſterior Openings, and are parted by a middle Septum, the Vault of the Palate, the anterior Hole of the Palate, the poſterior Holes of the Palate, the Pterygoide Foſſæ, the inferior Orbitary, or Spheno-maxillary Slits, the interior orbitary Holes, one anterior, and one poſterior, the Naſal or Lachrymal Duct, the Duct of *Euſtachius*, called the Tuba Euſtachiana, the ſmall Foſſæ for the internal jugular Veins, and the Foramina Spheno-palatina, and Lacera.

The internal Eminences are the frontal or coronal Spine, Criſta Galli, the Sella Turcica, or Sphenoidalis, the Clinoide Apophyſes, Apophyſes Petroſæ, the internal occipital Spine, the crucial Tubercle, and two tranſverſe Creſts.

Of the internal Cavities, one is ſimple or proper, the Cavity of the Sella Turcica, called Foſſa Pituitaria. The reſt are compound, and are eight large Foſſæ in the Baſis of the Skull, two anterior, two middle; and, on the back Side, two upper, and two lower. The Grooves of the ſuperior Longitudinal, and of the lateral Sinuſes, and the Sulci of the Arteries of the Dura Mater.

The external Inequalities are, two large ſemicircular Planes ſurrounding the Temples, one on each Side, at which it has been obſerv'd above that the two Laminæ of the Pericranium ſeparate, the Edge or Circumference of which begins by a Sort of Criſta or Spine above the external Angle of the Orbit, and ends in two Arches, one on the fore Side, the other on the back Side of the maſtoide Proceſs; two occipital Arches, one ſuperior, the other inferior, which are both divided into two Portions by the occipital Criſta or Spine; the external Traces of the Sutures.

The internal Inequalities are the undulated Impreſſions in the Baſis of the Skull; the internal Traces of the Sutures.

The compact or ſolid Subſtance of the Bones of the Skull is called Tables, of which one is external, and another internal, called alſo the vitreous Table, as being more brittle than the former, becauſe it is of a more cloſe Texture.

The ſpungy or cellulous Subſtance between the two Tables is called Diploe, the Quantity of which is proportionable to the Thickneſs of the Bones. In ſome Places it is wanting, and there the Tables uniting are ſomething tranſparent, as in the temporal Bones. In the internal Table, there are ſeveral Depreſſions, ſome of them near a Quarter of an Inch in Depth, which run thro' the Diploe, and even reach the outer Table. Theſe Depreſſions deſerve to be taken Notice of in relation to the Operation of Trepanning.

By the Situation of the Head in particular, I underſtand the natural Poſture of it, when a Man ſtands, or ſits, without inclining his Head either backwards or forwards, to one Side or the other, or drawing it down upon the Neck or Shoulders. Particular regard ought to be had to this Situation in examining the Head, either in general, or in particular; and eſpecially in conſidering the lower Parts of the Baſis of the Skull, and Arch of the Palate.

The common Method of ſhewing theſe Parts in a Skull turn'd upſide down, has often occaſion'd even expert Anatomiſts to miſtake the upper Parts for the lower, and the lower for the upper. It is therefore very neceſſary for Beginners often to hold the Skeleton of a Head raiſed in its true Poſture, and to view it from below upwards, that they may frame to themſelves a juſt Idea of it.

In order to this, whether the Head be held in our Hands, or ſet upon any thing, the beſt Way is to place the two Zygomatic Arches in a Plane exactly parallel to the Horizon. An Head, ſaw'd down the Middle into two equal lateral Parts, is likewiſe of great Uſe in determining the true Situation of the Parts I have mention'd, and of thoſe which lie near them.

The Connection of the Head with the Trunk is by Ginglymus, the Condyloide Proceſſes of the Os Occipitis being receiv'd in the ſuperior Cavities of the firſt Vertebræ of the Neck. The Connection of the particular Bones of the Head with each other is partly by Diarthroſis, as in the Articulation of the lower Jaw; partly by Synarthroſis, which obtains in the Articulation of all the other Bones.

The principal Uſes of the Bones of the Head are to contain the Brain, to be the Seat of the Organs of Senſation, and to ſerve for Maſtication, Reſpiration, and the Formation of the Voice.

The Bones of the SKULL *in particular, and firſt, the* Os FRONTIS.

The eight principal Bones of the Skull are uſually divided into common and proper. By proper Bones, Anatomiſts mean thoſe which are wholly employ'd in forming the Globe of the Skull; and of theſe they reckon ſix, the Os Frontis,

two

two parietal Bones, the occipital Bone, and two temporal Bones. The common Bones are those which contribute to form the Face, as well as the Skull, which are the Os Ethmoides, and Os Sphenoides.

This Division is not just; for the Os Frontis and Ossa Temporum deserve as much to be call'd common, as the two which are reckon'd so; and thus, instead of six, there would be only three proper Bones, the Ossa Parietalia, and the Os Occipitis; and instead of two, there would be five common ones; the Os Frontis, two temporal Bones, the Os Ethmoides, and Os Sphenoides.

The Os Frontis is situated in the anterior Part of the Skull, and forms that Part of the Face which is call'd the Forehead, from whence it takes its Name.

Its Figure is symmetrical, resembling a large Cockle-shell almost round; so that two frontal Bones of the same Size join'd together, represent this sort of Shell-fish pretty exactly.

Before we speak of the Parts of this Bone, we must take Notice, that though it is always look'd upon as one Bone, it is sometimes to be divided into two equal Parts by a Continuation of the sagittal Suture; and this Division is common to both Sexes equally.

When we consider it as one Bone, it may be divided into an upper Part, which belongs to the Crown of the Head; a lower Part, which belongs to the Basis of the Skull; an anterior Part, which is the Forehead; and two lateral Parts, at which the Temples begin.

It has two Sides, one external, which forms the Forehead, the greater Part of it being convex; and one internal, which is concave in Proportion. By external I here mean what appears when the Skull is entire; and by internal, what cannot be seen till the Skull is open'd.

On the Outside we observe the following Eminences; two superciliary Arches, which form the upper Edges of each Orbit, or the Supercilia; three Risings not always equally apparent, one between the two Arches, and the other two above the Arches, which may be call'd the Knobs of the Forehead; five Apophyses, one at the Extremities of each Arch, one between the Orbits which sustain the Ossa Nasi; and which, in some Subjects, makes a Part of the bony Septum of the Nose. This last *Winslow* calls the Nasal Apophysis; and the other four, the angular Apophyses.

The external Cavities are these: Two orbitary Arches or Vaults, forming the upper Portions of the Orbits; a remarkable Depression in each of these Vaults, above the external Angle, which contains the lachrymal Gland; a small Depression above the internal Angle, to which is fix'd the cartilaginous Pulley of the great oblique Muscle of the Eye; two Portions of the temporal Fossæ; two little Cristæ, which form the anterior Extremity of the great semicircular Plane of the Temples on each Side, at the Edge of the superciliary Arches, near the external Angle; two superciliary Foramina, which are sometimes double, and sometimes only Notches; and, lastly, two Holes, or Portions of Holes, call'd the internal orbitary Holes.

On the Inside of this Bone we see a sharp perpendicular Eminence, call'd the frontal or coronal Spine, directly opposite to the Middle Rising on the Outside already mentioned. Above this Spine is a Portion of the Groove for the longitudinal Sinus, which, when the Spine is wanting, runs down lower. Below the Spine, a considerable Opening, call'd the Ethmoidal Opening, because it contains the Os Ethmoides; the Sides thereof are always more or less cellulous. Between this Opening and the coronal Spine, a blind Hole, which in some Subjects is wholly in the Os Frontis, in others common to that Bone, and to the Os Ethmoides, and which seems to open into the Frontal Sinuses near the Nose. The anterior Fossæ of the Basis of the Skull, which receive the anterior Lobes of the Brain, and which, by jutting out forwards, form the Risings on the Outside already taken Notice of; towards the lower Part they are uneven, answering the Inequalities of the Lobes; and they are also a little rais'd to make Room for the Orbits; Sulci or Furrows for the Arteries of the Dura Mater, and sometimes indeterminate Depressions already mention'd.

This Bone is compos'd, as has been already observ'd in general, of two Tables and a Diploe, except the orbitary Vaults, which are very thin, and without any Diploe. About the Middle of the lower Part of the Bone, where the middle Rising is commonly situated, the two Tables are parted, to form two Cavities, call'd the Frontal or Superciliary Sinuses; and the separated Portions are each of them, in some measure, compos'd of two Tables, or, at least, have two Surfaces, which makes in all four Surfaces or Tables.

The frontal Sinuses are extended on the Edge of the Supercilia, on each Side, more or less, all the Way to the superciliary Perforations: Below they are open, and communicate with the Cells of the Os Cribrosum. They are commonly parted by a bony Partition, which is often more to one Side than to the other, and more or less uneven. Sometimes it is perforated; and sometimes Part of it, and sometimes the Whole, is wanting.

In different Subjects these Sinuses are observ'd to vary extremely, both with respect of their Extent, which in some is very small; and their Form, which is often very irregular, and cellular. Sometimes they are entirely wanting; and in such Subjects the internal Cavity of the Nose is larger than ordinary. It has likewise sometimes been remark'd, that one of them does not open into the Nose, but only communicates with the other.

To have a just Idea of the true Situation of all the Parts of this Bone, we ought, in examining or demonstrating it, to hold it in the same manner as it is situated in an entire Head, placed as has been already directed. For thus we shall see, that the upper Part of it is a little inclined backward, and that its Circumference or Edges are in an inclined Plane.

The Os Frontis is articulated by Suture with seven other Bones; the Ossa Parietalia, Os Ethmoides, Os Sphenoides, Ossa Lachrymalia, Ossa Nasi, Ossa Maxillaria, and Ossa Malarum.

It contains the anterior Lobes of the Brain, and a Portion of the longitudinal Sinus. It forms the Forehead, the upper Part of the Orbits, and a Portion of the Temples.

Ossa Parietalia.

The parietal Bones are two in Number, one on each Side, situated on the superior, lateral, and a little on the posterior Parts of the Skull.

They are of a larger Extent than any other Bone of the Skull; their Figure is nearly that of an irregular convex Square.

They have each two Sides, one external and convex, the other internal and concave; four Edges, one superior or sagittal, one inferior or temporal, one anterior or frontal, and one posterior or occipital. The superior Edge is the longest, the inferior the shortest, in which there is a very large squamous Slope, which *Winslow* calls the temporal Slope. The upper and posterior Edges are indented through their whole Length. The anterior Edge is likewise indented, except at the lower Part; all the lower Edge is squamous, except a small Portion next the Os Occipitis.

It has four Angles, one anterior and superior, one anterior and inferior, one posterior and superior, and one posterior and inferior. The anterior and inferior Angle ends in a squamous Production, which, from its Situation, *Winslow* calls the temporal Angle or Apophysis.

On the Outside, above the temporal Slope, we observe the most considerable Portion of the semicircular Plane of the temporal Muscle. Near the upper Edge, towards the posterior Angle, is a small Hole call'd the parietal Hole, which is sometimes found only in one of the Bones, sometimes in the sagittal Suture, and sometimes it is wanting. In some Bones it goes only to the Diploe; in others, it perforates both Tables.

The Inside is somewhat uneven; and many Furrows are remarkable upon it, answering to the Ramifications of the Artery of the Dura Mater, the Trunk of which is lodg'd sometimes in a Groove, sometimes in a very short perfect Canal running through the Substance of the Bone near the anterior and lower Angle. Near that, another such Canal is sometimes, tho' rarely, met with, for another Artery of the Dura Mater.

Along the upper Edge of this Inside we see one Half of the sagittal Groove for the longitudinal Sinus; and at the posterior and lower Angle, we meet generally with a small Portion of another Groove for the lateral Sinus. Lastly, the same sort of irregular indeterminate Depressions are sometimes observable in this Bone, which we took Notice of in the Os Frontis.

These Bones are the weakest of the eight that compose the Skull. The Diploe is found between the Tables, through the whole Length of the sagittal and occipital Edges, and through the upper Half of the coronal Edge.

To place or demonstrate this Bone in its true Situation, we need only observe what has been said concerning its Edges and Angles, remembering only that the posterior and inferior Angle reaches further down than the anterior.

Each Parietal Bone is join'd to that on the other Side, by the sagittal Suture; to the Os Frontis, by the coronal Suture; to the Os Occipitis, by the lambdoidal Suture; and to the temporal Bones and Os Sphenoides, by the squamous Suture.

Its Connection with the Os Frontis, below the semicircular Plane, is by the squamous Suture; and the same is to be said of its Articulation with the Sphenoidal Bone, as well as with the temporal Bone. The squamous Portions of the Os Frontis are cover'd by those of the Ossa Parietalia; the squamous Slopes in these last are cover'd by the temporal Bones; and the squamous Apophysis of the temporal Bone is cover'd by a Process of the Os Sphenoides.

These Bones contain a large Portion of the Brain, form Part of the Temples, and serve for the Insertion of the temporal Muscles.

Os Occipitis.

The occipital Bone is ſituated in the poſterior and lower Part of the Cranium.

It repreſents a kind of Lozenge irregularly indented, and yet ſymmetrical, convex on the Outſide, and concave on the other. Sometimes, though very rarely, it is divided into two Pieces by the Continuation of the ſagittal Suture.

It conſiſts of an external and internal Side; of the upper, lower, lateral, and middle Parts; of four Edges, two ſuperior, which are indented, and two inferior, which are more or leſs unequal.

The Outſide is convex, near the Middle of which the occipital Protuberance or Riſing is obſervable. Under this Protuberance are two ſuperficial tranſverſe Arches, more remarkable in ſome Subjects than in others; one ſuperior and largeſt, the other inferior and leaſt, and both reaching to the Maſtoide Proceſs on each Side. The inferior Arch is cut at right Angles by a perpendicular Line, call'd the external occipital Spine or Criſta. Under the ſuperior Arch are two rough Planes, one on each Side of the Spine; and between the Extremities of the two Arches are two other ſuch Planes, one on the Right, the other on the Left. We ſee likewiſe two Condyles, or condyloide Apophyſes, cruſted over with Cartilages, a little convex, of an oblong oval Figure, and ſituated obliquely, their poſterior Extremities being at a greater Diſtance from each other than the anterior; alſo a large cuneiform Production, which, from the Condyles, is directed upwards, and in Adults is often join'd inſeparably to the Os Sphenoides; it may be term'd Apophyſis Baſilaris, or the great Apophyſis of the occipital Bone. Laſtly, ſome unequal Tubercles on the lower Part of this Apophyſis, and two little angular Productions in the Edge of the Bone, over againſt the Condyles.

We are likewiſe to take Notice of two large Notches under the lateral Angles, which receive the poſterior Apophyſes of the temporal Bones; two ſmall Notches or Portions of the Jugular Foſſæ, and of the Foramina Lacera, each of which is often divided by a ſmall bony Production; the great occipital Hole, on the anterior Edge of which there is an Impreſſion for the Inſertion of a Ligament; two anterior and two poſterior condyloide Foſſulæ; two anterior condyloide Holes for the ninth Pair of Nerves, which are ſometimes double; two poſterior condyloide Holes for ſmall Veins, which are ſometimes wanting.

The Inſide of this Bone is concave, and there we are to take Notice of a crucial Groove, the Edges of which are a little rais'd; the upper Branch contains Part of the great longitudinal Sinus of the Dura Mater; the lateral Branches receive the lateral Sinuſes; and the lower Branch is more often a Spine or Criſta, than a Groove; it is ſituated oppoſite to the external Spine, and may be call'd the internal occipital Spine. It happens often that the Groove for the longitudinal Sinus is more to one Side than the other. We ſee alſo the Place where theſe Grooves croſs each other; a conſiderable Tubercle oppoſite to the external Protuberance; four Foſſæ ſeparated by the four Branches of the crucial Groove, two of which contain the poſterior Lobes of the Brain, and the other two the Cerebellum; a very broad Groove in the Apophyſis Cuneiformis, for the Medulla Oblongata; two ſmall Portions of Grooves lower down, which complete the Grooves for the lateral Sinuſes of the Dura Mater. Along the inner Edge of the large occipital Hole there is a kind of Groove more or leſs perceivable.

The upper Part of this Bone is very thick, as being much expoſed to Blows; the lower Part of it is thin, but well guarded by Muſcles. The thickeſt Part of the whole Bone is at the occipital Protuberance, between which and the Tubercle of the crucial Groove there is a large Quantity of Diploe.

To ſet the occipital Bone in its true Situation, the great Foramen is to be turn'd downward, and placed horizontally; the Apophyſis Cuneiformis forward, and a little rais'd.

This Bone is join'd on the upper Part to the Oſſa Parietalia, by the lambdoidal Suture; on the lower and lateral Parts to the temporal Bones, by the Continuation of the lambdoidal Suture; on the lower and anterior Part to the Os Sphenoides, by the Apophyſis Cuneiformis, both which in Adults make commonly but one Bone. It is likewiſe join'd by a kind of Suture to the ſupernumerary Bones, when there are any ſuch.

The Os Occipitis forms the back Part of the Head; ſerves for the Articulation of the Head with the Trunk; contains a Part of the Brain, and almoſt all the Cerebellum; gives Paſſage to the Medulla Oblongata, and to a great many Veſſels and Nerves; and gives Inſertion to a great many Muſcles.

Os Sphenoides.

The ſphenoidal Bone is ſituated in the lower Part of the Cranium a little toward the fore Part, making the middle of the Baſis of the Skull, from whence it acquir'd the Name of Os Baſilare. It is call'd Sphenoides or Cuneiforme, becauſe it is in a manner wedged in between the other Bones.

It is of a very odd Figure, and yet ſymmetrical. Its greateſt Extent is tranſverſe, and it may, in ſome meaſure, be ſaid to repreſent a Bat, with its Wings ſpread.

It conſiſts of a great Number of Parts. The poſterior and thickeſt Part, by which it is join'd to the Apophyſis of the Os Occipitis, may be call'd its Body. The reſt is wholly made up of Eminences and Cavities; and in order to examine theſe methodically, the Bones muſt firſt be divided into two Sides, one external, the greateſt Part of which may be ſeen in an entire Skull; the other internal, which does not appear till the Skull is open'd.

The Eminences on the Outſide are theſe: Two temporal Apophyſes, which are the largeſt of all the Proceſſes of this Bone, and at the greateſt Diſtance from each other, called by *Ingraſſias* the great Wings of the Os Sphenoides; and they are ſometimes, though very rarely, ſeparated from the reſt of the Bone, by tranſverſe Sutures; two orbitary Apophyſes, which form a conſiderable Portion of the Orbit, next the Temples; a ſmall ſharp Proceſs ſhaped like a Bird's Bill, in the middle Space between the two orbitary Apophyſes; two pterygoide Apophyſes, each of which is divided into two Alæ, one external, which is the largeſt, the other internal, the lower End of which is in the Shape of a Hook; each Ala is again divided into two Sides, one external, towards the Temples, and one internal, towards the Palate; two ſpinal Apophyſes; a little anterior Eminence above the ſharp Proceſs, for the Articulation of this Bone with the Os Ethmoides. In ſome Subjects, inſtead of this Eminence there is a little Notch.

The external Cavities are as follow: Two Portions of the temporal Foſſæ; two Portions of the orbitary Foſſæ; two pterygoide Foſſæ, the lower Ends of which are divided by an irregular Notch or Slit, which may be term'd Fiſſura Palatina; a little oblong Foſſula at the Root of the internal Ala; two ſuperior orbitary or ſphenoidal Fiſſures; a little Notch at the End of each Fiſſure, for the Paſſage of an Artery of the Dura Mater; two temporal Notches; two maxillary Notches, the Edges of which help to form the inferior orbitary Fiſſures, which *Winſlow* calls Spheno-maxillary Fiſſures; theſe Edges are likewiſe ſometimes conſiderably groov'd; two Holes for the ſuperior maxillary Nerves; two other Holes by the Side of the former, call'd Pterygoide, which in an entire Skull are hid by other Bones; two oval Holes, for the inferior maxillary Nerves; two little round Holes, call'd ſpinal Holes, each of which tranſmits an Artery of the Dura Mater; ſometimes they are only Notches; another little Hole between the two maxillary Holes; a little Groove on one Side of the ſpinal Apophyſis, which forms Part of the Euſtachian Tube.

The internal Eminences are two thin ſharp tranſverſe Apophyſes, which form the ſuperior orbitary Fiſſures, call'd by *Ingraſſias* the little Wings of the ſphenoidal Bone; a little Proceſs in ſome Subjects, in the middle Space, between theſe thin Apophyſes, for the Articulation with the Os Ethmoides, which, in other Subjects, is a Notch; four Clinoide Apophyſes, two anterior, and two poſterior, which laſt are ſometimes united in one, and ſometimes they run forward all the Way to the anterior Proceſſes, forming a kind of Bridge, under which the internal carotid Artery paſſes at its laſt Curvature; this Paſſage has likewiſe been found divided in two by a middle bony Septum, beſides many other Varieties: one or two ſmall Productions, where the internal Carotid enters the Cranium; two little ſtyloide Proceſſes or Hooks, which, in ſome Subjects, join the Extremity of the Os Occipitis before the perfect Union of theſe two Bones.

The internal Cavities are two Portions of the large middle Foſſæ of the Baſis of the Cranium; two ſuperior orbitary or ſphenoidal Fiſſures; two optic Holes; a ſmall ſuperior orbitary Hole near the End of each ſphenoidal Fiſſure, which is often no more than a Notch; a ſmall Groove at the Extremities of the ſame Fiſſures; a Depreſſion between the Clinoide Apophyſes, called Sella Sphenoidalis, Sella Turcica, and Foſſa Pituitaria. We ſee likewiſe almoſt all the Holes taken Notice of in the Outſide; and in particular, that the ſuperior maxillary Hole ought more juſtly to be call'd a ſhort Canal.

Beſides the Cavities hitherto mention'd, there are two very conſiderable ones, call'd the ſphenoidal Sinuſes, ſituated in the thick Portion of this Bone, under the anterior Part of the Sella Turcica, and middle Space between the two optic Holes, reaching as far as the ſharp Proceſs or Bill already deſcribed; they are commonly divided by a bony Septum, and they open before, on each Side of the ſharp Proceſs, juſt behind the ſuperior Conchæ of the Noſe, or Oſſa convoluta ſuperiora. Their Figure, Size, Openings, and Septum, vary conſiderably; ſometimes one of them is wanting; ſometimes one opens only into the other; ſometimes they are both wanting; ſometimes there are ſeveral Cells without any Septum; and ſometimes the Septum is placed more to one Side than to the other.

The Subſtance of this Bone is compact for the greateſt Part, having very little Diploe, and what Diploe there is lies in diſtinct Parts of the Bone, that is, in the thick Portion behind

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the Sella Turcica, towards the Symphyſis with the Occipital Bone, and in the Orbitary Apophyſes in a ſmall Quantity.

To ſituate the Sphenoidal Bone right, the Sella Turcica muſt be turned upward, the ſharp Proceſs forward, and the Pterygoide Apophyſes downward.

It is articulated with all the other Bones of the Cranium, with the Oſſa Malarum, Oſſa Maxillaria, Oſſa Palati, and Vomer.

The Uſes have all been mentioned in the Courſe of the Deſcription.

Os Ethmoides.

The Os Ethmoides is ſituated internally in the fore Part of the Baſis of the Skull.

The Figure of the whole Bone taken together is very particular: it may be ſaid, however, in ſome meaſure, to be cubical.

The Diviſions of this Bone are perfectly arbitrary; that which *Winſlow* makes Choice of is, into a middle and two lateral Portions; in the middle Portion we diſtinguiſh three Parts, an upper, middle, and lower.

The upper Part of the middle Portion is an Eminence, call'd Criſta Galli, which is often ſolid; ſometimes, however, it has been found hollow more or leſs, and perforated by a ſmall Opening, which communicates with the Frontal Sinuſes: A Groove is ſometimes found in its anterior Edge, which leads to the Spinal or blind Hole in the Os Frontis.

The middle Part of this Portion is a ſmall horizontal Plate, perforated by ſeveral Holes, called Lamina Cribroſa, and in the back Part it has a little Notch for its Articulation with the Sphenoidal Bone. This Lamina may be reckoned the Body of the Bone, as being what principally ſupports all the other Parts thereof.

The lower Part is a perpendicular Lamina, which makes Part of the Septum Narium. Its Edge is rough and uneven, for its better Connection with the Vomer.

The lateral Portions of the Ethmoidal Bone are by far the moſt conſiderable, if we regard the Size only. *Winſlow* divides each of them in two; one ſuperior, which is the largeſt, and which he terms the Labyrinth of the Noſtrils, it being full of Turnings and Windings, and irregularly cellulous; and one inferior, in the Shape of a Shell.

The Labyrinth has four Sides, and two Extremities. The upper Side is partly covered by the Cells of the Frontal Sinus, and large Opening already deſcribed. The lower Side is partly joined to the Cells of the Os Maxillare, and partly left expoſed and free. It ſends backward ſeveral Productions more or leſs conſiderable, which, in Skeletons, are often broken. Theſe Productions ſometimes join the Root of the ſharp Proceſs in the Sphenoidal Bone, being there fixed in lateral Grooves. The Inſide is ſomething convex and rough. It is turned toward the Septum, and fixed only to the Edge of the Lamina Cribroſa. The Outſide is flattened, and very ſmooth, from whence it acquired the Name of Os Planum. It makes Part of the Inſide of the Orbit, and at its upper Edge there are often one or two ſmall Notches, being Parts of the internal Orbitary Holes, already mentioned in the Deſcription of the Os Frontis.

The anterior Extremity of the Labyrinth is unequally cellulous. It is partly covered by the Cellulæ in the large Opening of the Os Frontis, and partly by the Os Unguis; and, by a kind of Funnel, it communicates with the Frontal Sinus. The poſterior Extremity is covered partly by the Sphenoidal Bone, and partly by the Os Palati.

The inferior Part of each lateral Portion reſembles, in ſome meaſure, an oblong Shell, ſuch as that of a Muſcle. *Winſlow* calls it the Concha Narium ſuperior, or upper Shell of the Noſtrils. It is very rough and porous, its convex Side being towards the Septum, and the concave Side towards the Os Maxillare. One End of it is turned backward, the other forward; and there the upper Part of it joins the Labyrinth, by means of the Funnel already mentioned. This inferior Part is diſtinguiſhed from the ſuperior or Labyrinth, by a remarkable lateral Groove.

What has been ſaid is ſufficient to direct us in ſituating this Bone; remembering only, that the Head of the Criſta Galli ought to be turned forward.

It is of a very delicate and tender Structure, tho' compact, and without any Diploë, being almoſt all compoſed of very thin bony Plates. It is joined to the Os Frontis, Os Sphenoides, Oſſa Naſi, Oſſa Maxillaria, Oſſa Unguis, Oſſa Palati, and Vomer.

The Uſes of it are to be a principal Part of the Organ of Smelling, and to give a very great Extent to the Pituitary Membrane in a ſmall Compaſs.

Ossa Temporum.

The Temporal Bones are two in Number, ſituated in the lower and lateral Part of the Skull.

The Figure of each is partly ſemicircular, reſembling the Scale of a Fiſh, partly like a ſhapeleſs Rock, ending in ſeveral Points.

Each of them is divided into two Portions; one ſuperior, termed ſquamous from its Figure; the other inferior, called Apophyſis Petroſa, or the Rock, not ſo much from its Figure, as from its Hardneſs. This Portion is eaſily ſeparable from the former in Children, and ſome Marks of this Diviſion ſtill remain in Adults, as *Riolanus* has obſerved.

They are likewiſe divided into two Sides; one external and convex, the other internal and concave: And thus the Eminences and Cavities in them may likewiſe be divided into external and internal.

The external Eminences are the Maſtoide Apophyſis in the lower and poſterior Part of the Bone: The Zygomatic Apophyſis is in the anterior Part; the Styloide Apophyſis under the Bone, which ſeems originally to have been an Epiphyſis. In one Subject *Winſlow* ſaw this Apophyſis three Inches in Length; and, in another, a Styloide Appendix joined to the ordinary Apophyſis by a Ligament, and ſtretched along the Stylo-Pharingæus Muſcle; the capſular Apophyſis, in which the bony Stylet ſeems, as it were, to be ſet; the articular Eminence of the Zygomatic Apophyſis; the Lambdoidal Angle; the lower Side of the Apophyſis Petroſa.

The external Cavities are, the articular Cavity immediately behind the Eminence of the ſame Name, which both together ſerve for the Articulation of the lower Jaw; the Crack in the articular Cavities; the Maſtoide Notch or Groove, in which the Digaſtric Muſcle is inſerted; the Opening of the external Meatus Auditorius; the anterior indented Border of that Opening; the Stylo-maſtoide, or anterior Maſtoide Hole, which is the Orifice of the Paſſage of the Portio Dura of the auditory Nerve; *Fallopius* termed this Paſſage the Aqueduct, not becauſe of its Uſe, but becauſe of the Reſemblance it bears to a kind of Aqueduct in his Country; the Orifice, or inferior Hole of the Carotid Canal in the Apophyſis Petroſa, which alters its Direction upward and forward, and ends at the Point of the Rock near the Sella Sphenoidalis; a Portion of the Jugular Foſſa; and a Portion of the Foramen Lacerum.

Among the external Cavities we are likewiſe to reckon a Portion of the Ductus Palatinus of the Ear, called commonly the Tuba Euſtachiana. This Duct, which muſt not be confounded with the Aqueduct of *Fallopius*, follows pretty much the Direction of the articular Crack; the Zygomatic Notch; the Parietal Notch, which receives the poſterior and lower Angle of the Os Parietale; the Sphenoidal Notch, which receives the ſpinal Apophyſis of the Os Sphenoides; one or more little Sulci for the Ramifications of the temporal Artery; the Groove in the Apophyſis Petroſa, by which it is connected to the great Apophyſis of the Os Occipitis; we may likewiſe add the poſterior Maſtoide Hole, thro' which a ſmall Vein paſſes, that empties itſelf into the lateral Sinus; this Hole is ſometimes formed between this Bone and the Os Occipitis; ſometimes it is wanting in one of the Bones, and ſometimes in both. There is likewiſe, in ſome Subjects, a ſmall ſuperior Maſtoide Hole, which loſes itſelf in the Subſtance of the Bone.

In examining the internal Eminences and Cavities, we muſt diſtinguiſh the ſquamous Portion from the Apophyſis Petroſa. In the former we ſee the radiated Indentations of the ſemicircular Edge, which, with the Parietal Bone, forms the ſquamous Suture: A Portion of the middle Foſſa of the Baſis of the Skull on the ſame Side, and ſeveral Inequalities in that Foſſa.

The Apophyſis Petroſa, or Rock, is a ſort of pyramidal Body with three Sides, ſituated obliquely, ſo as that its Baſis is turned backward and outward, and its Apex forward and inward, toward the Sella Turcica. Of the three Sides, one is ſuperior, and inclined a little forward; the ſecond poſterior, and the third inferior. This laſt belongs to the Outſide of the whole Bone, which has been already deſcribed.

The upper Side aſſiſts in forming the middle Foſſa of the Baſis of the Skull, being uneven, in the ſame manner as the Inſide of the ſquamous Portion. We obſerve here a ſmall irregular Hole, appearing to be double, and partly to be covered by a ſmall bony Plate. This Hole is a kind of Break or Interruption in the Duct, thro' which the Portio Dura of the auditory Nerve paſſes.

In the back Side of the Rock we ſee the internal auditory Hole, and a Portion of the Foſſa for the Cerebellum. Sometimes ſmall indeterminate Depreſſions are obſervable in it, pretty deep in Children, but gradually obliterated as they advance in Years. At the Baſis of this Apophyſis we ſee a Portion of the Groove for the lateral Sinus, formed partly in this Baſis, and partly in the Lambdoidal Angle; alſo a Portion of the Foramen Lacerum; and a ſmall Point, which, as it were, divides this Hole in two, and diſtinguiſhes the Paſſage of the Jugular Vein from that of the Eighth Pair of Nerves.

As this Apophyſis has three Sides, ſo we may obſerve in it three Angles; the firſt ſuperior, between the upper and back Sides; the ſecond poſterior, between the back and lower Sides; and the third anterior, between the lower and fore Side. The ſuperior Angle, which is the moſt apparent, has a Groove for a ſmall Sinus of the Dura Mater; the poſterior Angle is in a manner interrupted near the Middle of the Foramen Lacerum, and from it proceeds the little bony Point which divides this

Hole. At the End of it is a Groove, by which it is connected with the great Apophyſis of the Os Occipitis. Between the Apex of the Apophyſis Petroſa, and the ſuperior Opening of the Carotid Canal, we often meet with a ſmall Bone of the Seſamoidal kind, mentioned long ago by *Riolanus*.

To ſet any one of the Oſſa Temporum in its true Situation, the Zygomatic Apophyſis muſt be placed horizontally, and turned forward, and the Maſtoide Proceſs directly downward.

Almoſt the whole Subſtance of the Oſſa Temporum is compact: The ſquamous Portion is thin and tranſparent: The Maſtoide Apophyſis is hollowed by conſiderable Cells: The Subſtance of the Apophyſis Petroſa is very hard and ſolid, with ſeveral internal Cavities for the Organ of Hearing contained in it.

Each Os Temporis is joined above to the Os Parietale by a ſquamous Suture; behind and below, to the Occipital Bone, partly by a true Suture, and partly by Harmony; before, to the great Alæ of the Os Sphenoides, by a ſquamous Suture; and below, to the ſpinal Apophyſis of that Bone. It is likewiſe joined before to the Os Malæ, by the Zygomatic Suture.

The chief Uſes of theſe Bones are to complete the Globe of the Skull, to ſerve for the Articulation of the lower Jaw, and for the Inſertion of many Muſcles; and, laſtly, to contain the Organ of Hearing. See AURIS.

The Supernumerary BONES *of the* HEAD.

Winſlow calls by the Name of Supernumerary Bones ſeveral Pieces found in ſome Skulls, principally between the Parietal and Occipital Bones. They form Breaks in the Lambdoidal Suture, and are joined by true Sutures to the Bones already mentioned.

Their Figure, Number, and Size, vary very much. They are ſometimes, in ſome meaſure, triangular, but more frequently of no regular Figure. In ſome Subjects they encroach on the Occipital Bone, in others on the Parietal Bone, and ſometimes they extend themſelves every Way. They are commonly indented, and broader on the Outſide of the Skull than on the Inſide, in which they are without any viſible Indentations, and ſometimes are ſcarcely to be ſeen, when they are ſmall on the Outſide.

They have been termed Keys, a Name given by Joiners to the Pieces which ſerve to ſtrengthen the Joints of Boards, but which can agree to them only with reſpect to their Situation, and not to their Uſes in the Cranium, or other Bones of the Head. They ſerve to multiply the ordinary Sutures.

Some ſuch Bones have likewiſe been found in the Joints between the Bones of the Head and Face, and between thoſe of the Bones of the Face with each other; and to theſe might be added the ſupernumerary Teeth, placed out of the Rank of the reſt.

The BONES *of the* FACE: *And, firſt, The*

OSSA MAXILLARIA.

The Oſſa Maxillaria, or great Bones of the upper Jaw, are two in Number, ſituated one on each Side, in the anterior and middle Part of the Face.

Their Conformation is very irregular, and they are of a very conſiderable Extent.

Each of them may be divided into two Sides, one external, the other internal. By the external Side I mean all that appears in an entire Skull, without taking in the Arch of the Palate; and by the internal Side, that which makes Part of the Arch of the Palate, and all that is turned, to the Septum Narium.

The external Eminences are the Naſal Apophyſis, which makes the lateral Part of the Noſe; the Orbitary Apophyſis, which makes the inferior Portion of the Cavity of the Orbit, and, by a ſort of Criſta, forms the internal Portion of its Edge; this Proceſs is likewiſe called Apophyſis Malaris, becauſe of its Connexion with the Os Malæ; the Apophyſis Palatina, which, together with that on the other Side, forms the Arch of the Palate; the Apophyſis Alveolaris, which is in the Shape of an Arch, and contains the Teeth; the Maxillary Tubercle, or the poſterior Extremity of the laſt-named Arch; the Spine of the Nares, which is a ſmall pointed Eminence above the anterior Extremity of the Apophyſis Alveolaris.

The external Cavities are theſe: A Portion of the Orbitary Foſſa, where there is a ſmall Foſſula, in which the inferior oblique Muſcle of the Eye is inſerted, near the Lachrymal Duct, and a Fiſſure or Crack; a Portion of the Zygomatic Foſſa; a Portion of the Foſſa Palatina, or Arch of the Palate, in which many Inequalities are obſervable, more or leſs pointed, and often little pointed Hooks.

The Lachrymal Opening alſo, which receives the Os Unguis; a ſmall Lachrymal Groove, which, together with the Os Unguis, forms the ſuperior Part of the Lachrymal Duct; the Opening of the Nares; a Portion of the inferior Orbitary Fiſſure, or Fiſſura Spheno-maxillaris; the Opening which receives the Os Palati; a very ſmall Notch at the anterior Extremity of the Arch of the Palate, which forms the anterior Foramen Inciſorium, ſo called from its Situation behind the Inciſors; an oblique Groove in the poſterior Part of the Maxillary Tubercle, which contributes to the Formation of the poſterior Foramen Maxillare.

Alſo the Orbitary Canal, which runs from before backward, immediately under the inferior Portion of the Orbit; an anterior Orbitary Hole, or the anterior Orifice of the Orbitary Canal; the poſterior Orbitary Hole, or the poſterior Orifice of the Orbitary Canal, by which that Canal ends at the Edge of the Spheno-maxillary Fiſſure; the Crack or Fiſſure of the Orbitary Canal, which appears more or leſs in the Orbit, and is often a little open backward; the ſmall Holes of the Maxillary Tubercle; the ſmall Holes near the Orbitary Canal, and thoſe of the Apophyſis Naſalis, vary, and are ſometimes wanting; the Sockets of the Teeth.

The internal Eminences and Cavities are as follow: The greateſt Part of the Foſſa Naſalis; the anterior Criſta of the Nares, which is high and narrow; the poſterior Criſta of the Nares, which is low and broad; theſe two Criſtæ are a Continuation of the Spine of the Nares, and are ſo diſpoſed as to form a long Groove for the Reception of the Septum Narium, when the two Maxillary Bones are joined together; a perpendicular and pretty hollow Groove, wide towards the upper Part, narrow towards the lower, which makes the inferior Portion of the Lachrymal Duct.

The anterior Ductus Palatinus, alſo, on one Side of the anterior Criſta, and near the Spine of the Nares; this Duct, in its Courſe downwards, joins that of the other Jaw, and both together form the anterior Foramen Palatinum, or Inciſorium, which is often very complex; a ſmall anterior Eminence, or tranſverſe Line, between the Naſal Opening, and the lower End of the Lachrymal Duct, which ſuſtains the fore Part of the Concha Narium inferior; a rough broad Impreſſion on the Maxillary Tubercle, on both Sides of the Paſſage of the Foramen Palatinum, by which this Bone is joined with the Os Palati; a ſmall poſterior Eminence, or tranſverſe Line, covered with a Lamina of the Os Palati, which ſuſtains the Inequalities of the poſterior End of the Concha Narium inferior, by the Intervention of a Lamina of the Os Palati.

Laſtly, the Maxillary Sinus, which is a large Cavity under the Orbit, in the Orbitary Apophyſis. It extends to the Suture of the Os Malæ, to the Spheno-maxillary Fiſſure, to the inferior Orbitary Hole, and below to the Sockets. Towards its upper Edge there are ſometimes Cells, which communicate with the Os Ethmoides. It opens between the two Conchæ Narium, behind the Lachrymal Duct, by one or more Orifices, formed partly by a Portion of the Os Unguis. Theſe Openings are all much higher than the Bottom of the Sinus.

I ſay nothing here of the Separation of this Bone by a ſmall tranſverſe Suture, behind the Foramen Inciſorium, becauſe it is ſeldom found but in young Subjects, before the Oſſification is completed.

The Maxillary Bone is almoſt all compact, and without Diploë, except in the Alveolary Arch, and at the Point of the Orbitary Apophyſis.

To put this Bone in its true Situation, the Naſal Apophyſis muſt be turned upward, the Alveolary Arch downward, and the Spine of the Nares forward.

The Maxillary Bones are connected with the Os Frontis, Os Ethmoides, Os Sphenoides, Oſſa Unguis, Oſſa Malarum, Oſſa Naſi, Oſſa Palati, Vomer, Conchæ Narium Inferiores, and with each other.

They aſſiſt in forming the Organ of Maſtication, the Arch of the Palate, the Cheeks, the Orbits, and the Noſe.

OSSA MALARUM.

The Oſſa Malarum, called alſo Oſſa Zygomatica, and Malaria, are two in Number, ſituated in the lateral and middle Parts of the Face. They are, in ſome meaſure, triangular, or irregularly ſquare.

They are divided into two Sides, the external a little convex, the internal unequally concave.

The Eminences in each Bone are the ſuperior or angular Orbitary Apophyſis, which joins by Suture with the external angular Apophyſis of the Os Frontis, and aſſiſts in forming the external Angle of the Orbit. From this Apophyſis another ſubaltern Proceſs runs inward on the Inſide of the Bone, one Side of which forms a Portion of the Orbit, the other a Portion of the Zygomatic Foſſa; the inferior or Maxillary Orbitary Apophyſis, which, with the angular Apophyſis, forms the inferior external Portion of the Orbit; the Apophyſis Malaris, which is in ſome meaſure the Baſis of the reſt, and, together with the Apophyſis Maxillaris, joins the Orbitary Apophyſis of the Os Maxillare; the Zygomatic Apophyſis, which makes a Part of the Zygoma, and alſo of the Zygomatic Foſſa.

The Cavities are the great Orbitary Slope, which makes the inferior external Portion of the Edge of the Orbit; the Zygomatic Notch above the Zygoma; one or more little Holes on the Outſide, and in the Orbitary Apophyſes.

Each Bone is compoſed of two pretty compact Tables, with a ſmall Quantity of Diploë between them, except in the anterior Part of the Apophyſis Malaris.

The true Situation will be eaſily fixed, by conſidering what has been ſaid about the Sides and Apophyſes of this Bone.

The Os Malæ on each Side is joined to the Os Frontis by the angular Apophyſis, to the Os Sphenoides by the ſubaltern Apophyſis, to the Temporal by the Zygomatic Apophyſis, and to the Os Maxillare by its Baſis.

Theſe Bones make the prominent upper Part of the Cheeks, moſt remarkable in lean Perſons. They form likewiſe a Portion of the Orbit, and complete the Zygomatic Arches.

Ossa Nasi.

The proper Bones of the Noſe are two in Number, joined together, and ſituated below the Forehead, between the two Naſal Apophyſes of the Oſſa Maxillaria.

Each of theſe Bones comes near the Figure of an oblong Square, the upper Extremity being narrow and thick, the lower oblique and thin, the middle Part bent inwards near the upper End in ſome Subjects, in others almoſt ſtrait. The two Bones joined repreſent a ſort of Saddle.

Each of them is divided into two Sides, one anterior or external, the other poſterior or internal; two Extremities, one upper, the other lower; and two Edges, one external, the other internal.

The anterior Side is convex, tho' a little depreſs'd or hollow'd above the Middle. The poſterior Side is a little concave. The upper Extremity is very thick, full of Pits or Depreſſions: The lower Extremity is thin, unequally indented, and cut obliquely in ſuch a manner, as that the two Bones, join'd together, form an acute Slope. The inner Edge, contiguous to the ſame Edge, of the other Bone, is even, except near the upper Part, where they are united by a kind of Suture: From this Edge a little Eminence runs inward or backward (which is ſometimes wanting in one of the Bones); and, when they are joined, theſe Eminences repreſent a ſort of Criſta, or prominent Line, anſwering to the Septum Narium. About the Middle of the Outſide, ſometimes higher, ſometimes lower, there is a Hole, which is ſometimes wanting in one of the Bones, and ſometimes there are ſeveral Holes in each.

The Subſtance is compact; ſometimes, however, we meet with a ſmall Quantity of Diploë at the upper End.

The particular Situation of theſe Bones is eaſily underſtood by the Deſcription.

They are join'd to each other, partly by Suture, and partly by Harmony. They are join'd above to the Naſal Apophyſis of the Os Frontis, laterally to the Naſal Apophyſes of the Oſſa Maxillaria, and internally or poſteriorly to the anterior Edge of the perpendicular Lamina of the Os Ethmoides, by means of the prominent Line already mentioned.

They form the anterior and upper Portion of the Noſe, and Part of the Septum Narium.

Ossa Unguis.

The Oſſa Unguis, or Lachrymalia, are two in Number, each being ſituated in the Orbit, at the lower Part of the internal Angle. They are the leaſt Bones of the Face, very thin, and tranſparent.

They are longer than they are broad, reſembling, in ſome meaſure, the Nail of a Finger, from whence they have their Name, eſpecially when undivided from the other Bones of the Head; for, being taken out of the Skull, their Figure is more irregular.

Each of them is divided into two Sides, one external, the greateſt Part of which appears in the Orbit, in an entire Skull; the other internal, which is hid; two Extremities, one upper, the other lower; and two Edges, one anterior, the other poſterior.

The Outſide is ſmooth, and a little concave. Towards the anterior Edge is a Groove full of ſmall Holes, like a Sieve, call'd the Lachrymal Groove. It begins at the upper Extremity, and runs down lower than any other Part of this Side of the Bone, the lower Extremity of it being hid by the Os Maxillare. It is diſtinguiſh'd from the reſt of the Outſide by a very ſharp prominent Edge.

The Inſide is rough, and unequally convex, with a perpendicular Depreſſion, anſwering to the ſharp Prominence on the Outſide. On the upper Part of this Inſide ſmall Portions of cellulous Laminæ are ſometimes obſervable, which communicate with the Entry of the Frontal Sinus. There are likewiſe ſome about the Middle, which complete the anterior Ethmoidal Cells; and others towards the lower End, which communicate with the rugged Portions of the upper Border of the Sinus Maxillaris. Theſe often vary, and are ſometimes wanting.

Theſe Bones are altogether without Diploë.

What has been ſaid about the two Sides, and Lachrymal Groove, ſufficiently determines the Situation.

They are connected with the Os Frontis, with the Os Ethmoides, covering a Part of the Cells in that Bone, with the Naſal Apophyſis of the Os Maxillare, and with the Groove of that Bone, in ſuch a manner, as that the two Grooves, joined together, form an entire Tube, call'd the Lachrymal Duct. They alſo cover a little the Opening of the Maxillary Sinuſes, and join the inferior Conchæ of the Nares, of which they appear to be only a Continuation, in an advanced Age.

The Uſes of them are to complete the internal Sides of the Orbit, to cover the fore Part of the Labyrinth of the Noſe, and to form the Lachrymal Duct.

Ossa Palati.

The Bones of the Palate are two, ſituated in the poſterior Part of the Arch of the Palate, between the Pterygoide Apophyſes and the Oſſa Maxillaria; and running up, on the Sides of the Naſal Foſſæ, all the Way to the Bottom of each Orbit.

The Figure of theſe Bones is not ſquare, as is ſaid by thoſe who have only ſeen that Portion of them which belongs to the Palate, and from thence have named them Oſſa Palati. The entire Bone is crooked, hooked, pointed, and uneven, though but of a ſmall Size.

Each of them may be divided into four Portions, one ſuperior, one middle, and two lower, whereof one is anterior, the other poſterior.

The lower and anterior Portion, which *Winſlow* calls Portio Palatina, is the Baſis or Body of the Bone, and the only Part of it which the antient Anatomiſts have obſerved, *Vidus Vidius* excepted. It completes the Arch of the Palate, and the Bottom of the Naſal Foſſa. The inner Edge of it is raiſed, and that, join'd to the like Edge of the other Bone, forms a Groove, which ſupports Part of the Septum Narium, in the ſame manner as the other Part of it is ſupported by a like Groove of the Oſſa Maxillaria. The poſterior Edge is gently ſloped, and ends inwardly in a Point, which joins a like Point in the other Bone.

The lower and poſterior Portion, which *Winſlow* names Pterygoide, is pointed and hollow'd on each Side, to join the Pterygoide Apophyſis, of which it completes the Foſſa, being fix'd like a Wedge in the irregular Notch of that Proceſs: Exteriorly it is uneven, the better to be connected with the Os Maxillare. This Portion is diſtinguiſh'd from the Portio Palatina, and alſo from the middle Portion, by an oblique half Canal, which, with the half Canal in the Maxillary Tubercle, forms an entire Canal; the lower End of which is the poſterior Foramen Palatinum.

The middle Portion, to which *Winſlow* gives the Name of Naſal, is very thin, and is ſituated laterally. It has an internal and external Side: The internal Side is a little concave, being turn'd toward the Nares; and at the lower Part of it there is a tranſverſe Eminence, or bony Line, which diſtinguiſhes this Portion from the Portio Palatina. The Outſide is a little convex, and partly covers the Opening of the Maxillary Sinus. At the lower Part of it is a tranſverſe Groove, anſwering to the Eminence on the other Side, and moulded, as it were, by the poſterior tranſverſe Eminence of the Os Maxillare.

The upper Portion, which *Winſlow* calls orbitary, is diſtinguiſh'd from the Naſal Portion by a Notch, which, together with the Pterygoide Apophyſis of the Sphenoidal Bone, forms an Opening more or leſs conſiderable, which may be call'd Foramen Spheno-palatinum, or Pterygo-palatinum. This Portion has five little Sides, three of which are rather Cavities; one ſuperior, which completes the Extremity of the Bottom of the Orbit, and is more or leſs flat, very ſmall, ſmooth, and triangular; one anterior, which is a little hollow, covering the upper Part of the Maxillary Tubercle, and, by a ſmooth raiſed Edge, completing the Fiſſura Spheno-maxillaris; the third Side is likewiſe anterior, more hollow than the former, joining the back Part of the Labyrinth of the Os Ethmoides; the fourth is poſterior, more or leſs hollow, anſwering to the Sphenoidal Sinus; the fifth is lateral and external, covering the poſterior and upper Part of the Maxillary Sinus. It muſt be obſerved, that theſe Sides and Cavities vary, being ſometimes ſingle, ſometimes complex.

There is very little Diploë in theſe Bones, except in the Palatine and Pterygoide Portions.

By conſidering the Diviſion of theſe Bones already mention'd, it is eaſy to put them in their true Situation.

They are join'd to each other by the Portio Palatina; to the Vomer by the common Groove form'd by their raiſed Edges; to the Maxillary Bones before, and laterally to the Sphenoidal Bone behind; to the inferior Shells of the Nares by their tranſverſe Eminences; and, laſtly, by their Orbitary Portions to the Os Ethmoides, Oſſa Maxillaria, and Os Sphenoides.

They complete the Arch of the Palate, the Pterygoide and Naſal Foſſæ, and the Orbit: They aſſiſt in ſupporting the Vomer, and Conchæ Narium inferiores.

Vomer.

The Situation of the Vomer is perpendicular, between the two Naſal Foſſæ backward.

The Figure of it is nearly that of an oblique Square, having ſome Reſemblance to a Plough-ſhare, from which it has its Name.

It

It is divided into two Sides, one to the Right, the other to the Left, both of them unequally flat; and into four Edges, the ſuperior, inferior, anterior, and poſterior.

The upper Edge is an horizontal Groove, which receives the ſharp Proceſs, or Roſtrum of the Os Sphenoides. This Groove is broad, and a little notch'd backward; the fore Part of it is narrower, and ends in a ſtrait Canal, which runs downward and forward in an oblique Direction, dividing the Bone, as it were, into two Laminæ.

The anterior Edge is oblique, and very unequal. It may be divided into two Parts, one anterior and poſterior. The poſterior Part is ſmall and thin, and ſupports the perpendicular Lamina of the Os Ethmoides. The anterior Part is larger, with a pretty deep Groove, continued from the Canal in the upper Edge, which ſuſtains the Cartilaginous Septum of the Nares.

The lower Edge is likewiſe unequal; and near its anterior Extremity is an Angle, which divides it into two Parts; one anterior, very ſhort, which is ſet in the Criſta Narium; the other poſterior, and much longer, ſet in the common Groove of the Oſſa Maxillaria and Oſſa Palati: The Angle which diſtinguiſhes this Edge into two Parts, lies in the Notch form'd by the Criſta Narium, and the Groove of the Maxillary Bones.

The poſterior Edge is oblique and ſharp, becoming inſenſibly more obtuſe, as it approaches to the large Groove in the upper Edge.

This Bone has but very little Diploë.

To ſituate it right, we need only attend to the Deſcription of its Parts.

It is connected with the Os Sphenoides, Os Ethmoides, Oſſa Maxillaria, and Oſſa Palati, in the manner already ſaid.

Its Uſe is to form the poſterior Part of the Septum Narium.

Conchæ Narium Inferiores.

The inferior Conchæ of the Nares are two in Number, ſituated in the Naſal Foſſæ, under the Openings of the Maxillary Sinus, and immediately above the inferior Orifices of the Lachrymal Ducts. They cover theſe Orifices much in the ſame manner as the ſuperior Conchæ of the Ethmoidal Bone cover the Maxillary Openings. They are likewiſe term'd the inferior ſpungy Laminæ of the Noſe.

Their Figure is very much like that of the ſuperior Conchæ.

Two Sides are diſtinguiſhable in each of them, one internal, and one external; as likewiſe two Extremities, the anterior and poſterior; three Edges, two ſuperior, one ſmall, the other great, and one inferior; and, laſtly, two Apophyſes, one ſmall or ſuperior, the other large or lateral.

The Inſide is a little convex, being turn'd towards the Septum Narium: The Outſide is proportionably concave, turn'd toward the Maxillary Sinus. Both Sides are rough and uneven.

The Extremities are pointed, but the poſterior more than the anterior.

The inferior Edge, the moſt conſiderable of the three, is rough, thick, a little rounded, and turn'd outward, that is, toward the Os Maxillare. It is ſuſpended like the Ethmoidal Concha, without reſting on any thing.

Of the ſuperior Edges, the ſmall or anterior Edge is thin, uneven, and of the ſame Length with the anterior tranſverſe Eminence of the Ox Maxillare, to which it is join'd. The large or poſterior ſuperior Edge is longer than the other, and is join'd backward to the ſmall tranſverſe Eminence of the middle Portion of the Os Palati. Theſe two ſuperior Edges are diſtinguiſh'd by an obtuſe Angle, form'd by them. The great Edge has a large thin Apophyſis in the Shape of a Nail, which runs down on the inner or concave Side of the Bone. This Apophyſis, which is the greateſt of the two already mention'd, is ſometimes ſmooth, ſometimes uneven, divided and notched. It partly covers the Maxillary Sinus, and helps to make the Opening thereof.

The ſmall or ſuperior Apophyſis is a thin Plate, which divides the two upper Edges: It is, as it were, a ſmall Portion of a Groove, which, join'd to the lower End of that in the Os Unguis, completes the Lachrymal Canal; and, in Adults, it has appear'd to be a true Continuation of the laſt-named Bone, as if the inferior Concha of the Nares and Os Unguis were both one Piece.

The true Situation of theſe Bones is ſufficiently ſhewn, in what has been ſaid about their Sides, Extremities, and Edges.

They are connected with the Oſſa Maxillaria, Oſſa Palati, Oſſa Unguis, and ſometimes with the Os Ethmoides, of which they appear'd, in one Subject, to be a true Continuation. In moſt Skeletons theſe Connections are but very ſlender, and therefore theſe Bones are eaſily loſt, which is the Reaſon why the Antients have not obſerved them.

They complete the bony Structure of the Noſe, augment its Surface, and render it proportionable to the Extent of the Organ of Smelling, and of the Pituitary Membrane. See Nasus.

Maxilla Inferior.

The lower Jaw is but one Bone in Adults, and makes the lower Part of the Face.

It bears ſome Reſemblance to a Bow, with the Ends bent upward.

It may be divided into a Body and Branches. The Body is that Portion which repreſents a Bow: The Branches are the Extremities bent upward. In the Body we diſtinguiſh an anterior Portion, call'd the Chin; two lateral Portions; two Sides, one internal, and one external; and two Edges, one ſuperior, which is the Alveolary Arch of this Jaw, and one inferior, call'd the Baſis, and divided into an external and internal Labium. This Baſis ends poſteriorly in a crooked Portion, term'd the Angle of the lower Jaw.

In the Middle of the anterior Side of the Chin is a perpendicular Eminence or Line, which marks the Place where this Bone is divided in Children, and for that Reaſon it is named the Symphyſis of the lower Jaw. On each Side of the Symphyſis are two Muſcular Impreſſions, one high, the other low, more or leſs excavated, and in ſome Subjects diſtinguiſh'd by a ſmall tranſverſe Eminence. The external Labium of the Baſis of the Chin is a little prominent, and border'd on each Side by Eminences more or leſs conſiderable, by which the Chin appears to be diſtinguiſh'd from the lateral Parts of the Body of the Bone.

The Backſide of the Chin is concave, and Inequalities are ſeen in it through the whole Length of the Symphyſis. From the upper Edge to the Middle of the Symphyſis, or thereabouts, runs a ſuperficial Aſperity, broader below than above, and more remarkable in the Symphyſis than on either Side. Immediately below this Aſperity there are ſeveral Tuberoſities, more or leſs raiſed, and rough, the loweſt of which is on the internal Labium of the Baſis. On each Side of the uppermoſt Tuberoſity is a large ſhallow Impreſſion. At the very loweſt Border of the internal Labium of the Baſis, on each Side of the Symphyſis, there is a pretty large muſcular Impreſſion, with a tranſverſe Aſperity between them, which in a manner joins them to each other. We ſometimes meet with ſmall Holes in the upper Part of the Symphyſis, and near it.

The Outſide of each lateral Portion of the Body of this Bone is a little convex. On each Side of the Chin is a pretty large Hole, which is the anterior Orifice of a Canal. There is alſo a long Eminence or Elevation, which, beginning at the Baſis, near the before-mentioned Hole, runs obliquely upward and backward toward the Branch of the Jaw, growing more prominent as it aſcends. The lower End of this Side ſometimes juts out a little.

In the Inſide of this lateral Portion, a little below the Alveolary Edge, there is likewiſe a long Eminence, leſs oblique, but more prominent, which runs upward and backward, much in the ſame manner with that on the Outſide.

The poſterior curve Portions are the flatteſt of all, and repreſent a ſort of oblong Square, irregular, and a little oblique. In each of theſe Branches two Sides are to be taken Notice of, one internal, and one external; alſo two Apophyſes in the upper Part of them, one anterior, call'd the Coronoide Apophyſis, and one poſterior, call'd the Condyloide Apophyſis; a large Opening between the two Apophyſes; and, laſtly, an Angle, by which the poſterior and lower Part or Baſis of the Branch is terminated.

The anterior or Coronoide Apophyſis is flat, ſharp at the upper End, broad at the lower, ſomething uneven on the Outſide, and a little prominent about the Middle of the Inſide, by the Continuation of the internal oblong Eminence of the lateral Portion. The anterior Edge of this Apophyſis is a Continuation of the oblique external Eminence of the ſame Portion.

The poſterior Apophyſis is term'd Condyloide, becauſe it ends in a Head reſembling a Condyle, ſet upon a kind of Neck. This Condyle is oblong, and ſituated almoſt tranſverſly, the internal Extremity of it being only turn'd a little backward, and the external forward, which Direction anſwers to that of the articular Eminence and Cavity of the Os Temporis, with which this Condyle is articulated. It advances more toward the Inſide than toward the Outſide of the Bone, and the Neck is bent a little forward. This Neck is convex on the Back, and on the fore Part there is a muſcular Foſſula immediately under the Condyle.

The great Opening between the Apophyſes has a ſharp Border, which is, as it were, a Continuation of the poſterior Edge of the Coronoide Apophyſis. It is in the Shape of a Creſcent, and ends at the outer Extremity of the Condyle, on the Outſide of the Foſſula in its Neck.

The Outſide of the Branch is very full of ſuperficial Inequalities, or muſcular Impreſſions, eſpecially near the Angle. This Angle is blunt, uneven, and turn'd more or leſs toward the Outſide.

The Inſide has the ſame ſort of Inequalities towards the Angle. About the Middle of this Side is a very irregular Hole, being the internal Orifice of a large Canal, which, after having

run

run down a little Way in the middle Subſtance of the Branch, changes its Direction, continuing its Courſe thro' the Middle of the lateral Portion, all the Way to the Hole near the Chin, which is its external Orifice, and then loſes itſelf in the Subſtance of the Chin. The internal Orifice of this Canal is broad above, oblique, flat, more or leſs notched, and in ſome meaſure lacerated. A little below this Orifice are ſometimes found two little Holes, one above, and at ſome Diſtance from the other, which are the Orifices of a very ſmall Canal, running immediately under the Surface of the Bone. This Canal is the Continuation of a ſmall Groove, which begins at the Edge of the Orifice of the great Canal, and from thence runs a very little Way down. In ſome Subjects we find only this Groove, without any Canal.

The upper Edge of the Body of the lower Jaw is pierced by ſixteen Holes or Foſſulæ, call'd Sockets, which contain the like Number of Bones, call'd Teeth. See DENS.

This Bone appears to have a larger Share of Diploë, in proportion to its Size, than any other Bone of the Face, eſpecially near the Alveolary Arch. The Tables are very ſolid, and not equally thick in all Parts.

There is no Difficulty in determining the Situation of the lower Jaw.

The lower Jaw is connected with the Oſſa Temporum by a very ſingular kind of Articulation, partaking of the Nature both of a Ginglymus and Arthrodia, and therefore *Winſlow* terms it Amphidiarthroſis. Its principal Motions are upward and downward, and in all the different Degrees thereof; we can thruſt it forward, pull it backward, and turn it to either Side; and in the ſame manner, in any Degree of Motion, forward, backward, or laterally, we can raiſe or depreſs it. The Mechaniſm of this Articulation, and the Motions thereof, depend alſo on a Cartilage, to be deſcribed hereafter.

Recapitulation of the FORAMINA *or Holes in the Head, as repreſented by* Keill.

They are either external or internal. The external Holes are,

1. The two in the Coronal Bone above the Orbit, through which a Vein, Artery, and a Nerve, from the Ophthalmic Branch of the Fifth Pair, paſs, for the Brow and Frontal Muſcles. This frequently appears only as a Notch.

2. The *Orbiter internus*, in the ſame Bone within the Orbit, a little above the Os Planum, for another Branch of the Fifth Pair of Nerves, which goes to the Noſe.

3. The third is between the *Os Unguis* and the *Os Maxillare*, in the great *Canthus*, thro' which the Lachrymal Duct paſſes to the Noſe.

4. The *Orbiter externus* in the *Os Maxillare*, below the Orbit, thro' which the Nerves and Veſſels, which come from the Teeth, paſs to the Cheek.

5. One ſingle Hole in the ſame Bone, behind the fore Teeth, which comes from the Noſe.

6. Two in the *Oſſa Palati*, through which a Branch of the Fifth Pair of Nerves paſſes to the Palate, Uvula, and Gums.

7. In the Temporal Bone, between the Maſtoide and Styliform Proceſſes, thro' which the *Portio Dura* of the Auditory Nerve paſſes.

8. The *Ductus Auditorius externus.*

9. The *Ductus Auditorius internus.*

10. The Conduit for the Carotid Artery.

11. Another in the ſame Bone, thro' which a Vein paſſes from the external Teguments to the lateral Sinuſes. This is behind the Maſtoide Proceſs.

12. In the Occipital Bone behind its Apophyſis, thro' which the Vertebral Veins paſs.

13. In the ſame Bone, for a Branch of the external Jugular.

14. One ſingle large Hole for the Medulla Spinalis.

The internal Holes are,

1. The blind Hole above the *Criſta Galli.*

2. The Holes in the *Os Ethmoides.*

3. In the *Os Sphenoides* for the Optic Nerves.

4. The *Foramen Lacerum*, thro' which the third, fourth, firſt Branch of the Fifth, and Sixth Pair of Nerves paſs.

5. For the ſecond Branch of the Fifth Pair of Nerves.

6. For the third Branch of the ſame Nerve.

7. The *Foramen Arteriæ duræ Matris.*

8. The Canal thro' which the Carotid enters, and the Intercoſtal Nerve paſſes out; but this is counted among the external Holes.

9. In the Proceſs of the *Os Temporum*, thro' which the Auditory Nerve paſſes.

10. Between the Temporal and Occipital Bones, it is divided in two by the *Dura Mater*; thro' the one Part paſſes the Eighth Pair of Nerves, and the *Nervus Acceſſorius*; thro' the other the lateral Sinuſes open into the internal Jugulars.

11. One in each Side of the large Hole of the *Occiput*, thro' which the Ninth Pair of Nerves goes out.

The lower Jaw has four Holes, two on its Inſide near its Proceſſes, and two on its Outſide near its Middle. By the internal Holes enter a Branch of the Fifth Pair of Nerves, an Artery from the Carotids, a Vein paſſes out to the Jugulars, their Branches are ſpread in the Roots of the Teeth. By the external Holes theſe ſame Veſſels paſs, and are diſtributed upon the Chin. It has alſo ſixteen Sinuſes, into which the Teeth are ſet. *Keill.*

I muſt appriſe Students in Phyſic, that it is not poſſible to form a perfect Idea of the Bones of the Head, and their various Connections, by any Deſcription whatever. The only Method of acquiring a Knowledge of them, is to procure a Skull ſeparated artfully into the ſeveral Bones, of which it is naturally compoſed; and another with the Bones connected together by their proper Articulations. Thus by carefully comparing them with the Deſcription here given, and with each other, a perfect Knowledge of theſe Parts may be readily acquir'd, which is indiſpenſably neceſſary in Surgery particularly. It is farther of Importance to the Surgeon, to know the Situation of the Cartilages and Ligaments belonging to the Head, of which *Winſlow* gives the following Account; but neither his, nor any other Deſcription of them is ſufficient for a complete Knowledge of them, without diſſecting the Parts to which they belong.

The Condyloide Apophyſes of the Os Occipitis, the Glenoide Cavities or articular Foſſulæ of the Temporal Bones, the Eminences next theſe Cavities, and the Condyloide Apophyſis of the lower Jaw, are all cruſted over with very white and ſmooth Cartilages; and there is likewiſe an inter-articular or moveable Cartilage in each Articulation of the lower Jaw with the temporal Bones.

This Cartilage is thick near the Circumference, very thin and tranſparent, and ſometimes perforated, in the Middle. The lower Side is uniformly concave, anſwering to the oblong Convexity of the maxillary Condyle; but the upper Side is partly concave, and partly convex, ſuited to the Foſſula and Eminence in the temporal Bone.

For the Cartilages and Ligaments of the Noſe, ſee NASUS.

For the Cartilages and Ligaments belonging to the Eye, ſee OCULUS.

For the Cartilages and Ligaments of the Ear, ſee AURIS.

For the Cartilages of the Os Hyoides, ſee LINGUA.

The Ligaments of the Bones of the Head are theſe. 1. Thoſe betwixt the Occipital Condyles, and the ſuperior Apophyſes of the firſt Vertebra of the Neck. 2. Thoſe between the Os Occipitis and Apophyſis Dentiformis of the ſecond Vertebra. 3. Thoſe of the Articulation of the lower Jaw with the Temporal Bones. 4. Thoſe by which the Os Hyoides is connected to the Styloide Apophyſes.

The Ligaments of the Occipital Condyles reſemble the articular Ligaments of the Vertebræ, conſiſting of a ſtrong Texture of ligamentary Filaments placed cloſe by each other round the whole Articulation, and fixed by one End in the Occipital Bone, by the other in the Edges of the ſuperior Apophyſes of the firſt Vertebræ, and ſurrounding the Capſular Ligament.

The Ligaments which go from the Os Occipitis to the Apophyſis Dentiformis, are very thick, and diſpoſed in ſeparate Faſciculi, which afterwards unite. The Faſciculi are fixed immediately before the great Occipital Foramen in the lower Side of the Apophyſis Baſilaris, and the united Ligament is inſerted in the Apophyſis Dentiformis.

The Ligaments of the Articulation of the lower Jaw are very ſtrong, and are diſpoſed and inſerted much in the ſame manner with thoſe by which the Clavicle is connected to the Sternum. They are fixed by one Extremity round the Glenoide Cavity, or articular Foſſula and Eminence of each Temporal Bone; by their Middle, round the inter-articular Cartilage; and by the other Extremity, round each Condyle of the lower Jaw. The Diſpoſition of the Capſular Ligament, with reſpect to the inter-articular Cartilage, is the ſame as in the Articulation of the Clavicle with the Sternum.

The Bones of the Head, as well as all other Bones of the human Body, are cover'd by a particular Membrane, of which that Part which belongs to the Skull, is term'd Pericranium, and that which covers the Bones of the Face, or of the two Jaws, is called ſimply Periоſteum.

The internal Structure of the Bones of the Head being for the moſt part cellulous, they contain alſo diſtinct Portions of Marrow included in membranous Cells lying in the Diploë.

The Sinus Frontales, Maxillares, and Sphenoidales, are lin'd with a glandulous Membrane, which ſecretes a Mucilage very different from that of the Joints.

The true mucilaginous Glands of the occipital and maxillary Articulations have nothing peculiar to them. They are proportion'd to the Joints to which they belong, and lie between the Capſular Ligament and Circumference of the Cartilages. *Winſlow.*

The Os Hyoides is a Bone properly belonging to the Head,

but, as it is describ'd under LINGUA, I must refer to that Article for an Account of it.

As it is of infinite Importance to the Practice both of Physic and Surgery, to be perfectly acquainted with all the Parts of the Head subjected to Injuries either external or internal, I shall proceed to give an Account of the Muscles of the Head most subject to Wounds, Contusions, Abscesses, and other Disorders. This I chuse to do after the Descriptions of the Bones, because the Origins and Insertions of the Muscles could not have been comprehended without a previous Knowledge of the bony Parts.

MUSCLES *of the* HAIRY SCALP *and* FOREHEAD.

To demonstrate these Muscles, the following Method may be observ'd: Make an Incision through the common Integuments of the Head, the first and direct Line of Division being continued from the middle and inferior Part of the Os Occipitis, to the same Part of the Os Frontis; the other transverse from two circular Ducts round each Ear, intersecting the former on the Sinciput, begin from the Concourse of Angles, taking care, in freeing the Forehead, not to raise the Musculi Frontales.

OCCIPITALIS.

This and its Partner are mentioned by *Columbus*, and accurately describ'd by *Fallopius*; they are short, but broad, thin, fleshy Muscles, situated on the Occiput, from whence they derive their Names; each of these arises fleshy from that Part of the Os Occipitis, where the Mastoideus and Musculus Splenius are inserted, and soon becoming tendinous, joins with the Pericranium, which firmly adheres to the hairy Scalp on the Sinciput. When these act, they pull the hairy Scalp backwards. *Cowper.*

Eustachius figures two other Muscles on the Occiput, which *Lancisi* calls *Musculi quadrati*; and which are represented *Tab.* 11. *Fig.* 1. 1.

Because, says *Lancisi*, none either of the Antients or Moderns, so far as I know, has given Representations of these Muscles, tho' *Thomas Bartholine* makes mention of them, but asserts, that they are not always, but only sometimes, to be found, I therefore think it worth while to say something by the Way concerning them.

These Muscles, as I myself have seen, in all the Subjects I have dissected, rise with a fleshy Origin on both Sides the Os Occipitis, and with broad Tendons are carried directly upwards to the lambdoidal Suture. With respect to their Use then, till some more accurate Anatomist advances something more probable, we may conjecture, that they perform the same Office in the posterior Part of the Cranium, that the frontal Muscle does in its anterior Part; for after this last-mention'd Muscle has drawn the anterior Part of the Head, commonly called the Forehead, upwards, and when the Muscles of the Ears have in some measure corrugated the lateral and posterior hairy Parts, these posterior Parts of the Skin are soon drawn downward by these occipital Muscles, which act, as it were, like Antagonists, which any one may experience in himself, as I myself have often made Trial of the Thing. Perhaps these are the Muscles which becoming often preternaturally contracted and tense, especially in hysteric Women, create the Pain in the Occiput, so often mention'd by *Hippocrates.*

FRONTALIS, *Tab.* 10. *Fig.* 1. 1.

This arises thin, broad, and fleshy, from the upper Part of the Os Frontis, near the Sutura Coronalis; and, descending by the posterior and fore Part of the Temporalis, meets with its Partner near their Insertions to the Skin of the Eyebrows.

These, acting, draw up and wrinkle the Skin of the Forehead, and cannot antagonize the *Occipitales*, as some imagine, since their Originations are from the Bone above, and their Terminations in the Skin of the lower Part of the Forehead.

Besides these, *Volcherus Coiter* counts another Pair, which later Authors call *Corrugatores*, arising near each great Canthus of the Eye at the Puncta Lachrymalia, seeming to terminate about the middle Region of the Eyebrows. But we rather incline to the Opinion of others, who take them to be two oblique Elongations of the former Muscles. *Douglass* makes these distinct Muscles.

To raise the Skin, and discover the Muscles of the Face, which in the Order of Dissection are next to be prosecuted, continue your former Division from the Dorsum Nasi, where you before left it, to its Apex; form two semicircular Sections on each Side the Alæ Nasi, to the Septum Narium; make a direct one to join with a circular Incision about the Lips, and from the Middle of that of the lower Lip draw your Knife directly over the Chin, Neck, and Sternum, till you meet the longitudinal one made in the Dissection of the Muscles of the Abdomen. The Skin is best clear'd from the Eyelids, after raising it from the circumambient Parts. In the Practice of this Operation special Attention must be had, lest you wound the Orbiculares Palpebrarum, *Tab.* 10. *Fig.* 2. 2. Care also must be taken, in raising the Skin of the Neck and Face, not to raise the *Quadratus Genæ*, or Subcutaneus, with it.

Of the MUSCLES *of the* EYELIDS.

Galen, and the antient Anatomists, together with *Vesalius*, were extremely deceived in their Ideas of these Muscles, in dividing the *Orbicularis* into two, and supposing thereby all the Motions of the Eyelids were perform'd. But this System was first alter'd by *Fallopius*, partly from an Intimation of *Oribasius*, in his Book *de Dissect. Muscul. ex Galeno*, *Cap.* 6. where he takes Notice, that, in the Cure of an *Ægileps*, not only the described Beginnings of these Muscles are cut and burnt away, but the Bone underneath exfoliated; and yet the Motion of the Eyelids remains: And partly from the Dissection of the Eye in a Sea-calf, where he observed four Muscles latent in the Orbit, inserted above, underneath, and on both Sides the Palpebræ, he was induced to make the like Inquiry in Man, in whom he happily discover'd the *Aperiens Palpebram Rectus*, which shall be described hereafter. We mention this Passage, because some later Authors have favoured the Account of the former, retaining their Distinctions into *Semicircularis superior*, and *Semicircularis inferior*.

ORBICULARES PALPEBRARUM.

Tab. 10. *Fig.* 2. 2.

This is a thin fleshy Muscle, whose Fibres circularly environ the Eyelids, and are inserted to them, (like the Sphincter Labiorum, *Tab.* 10. *Fig.* 11. 11.) not adhering to any Bone from whence we may derive their Origin, except the superior Part of the great Bone of the Nose, by some reckon'd the fourth Bone of the upper Jaw.

This Muscle, acting like the Sphincters of other Parts, constringes the Eyelids. To these *Riolan* adds another Muscle, belonging to each Eyelid, which he calls Ciliaris, which we take to be a Portion of the former, adjacent to the Cilia.

To discover the *Aperiens Palpebram Rectus*, that Part of the Orbicularis Palpebrarum lying between the upper Eyelid and Eyebrow must be raised; after which the *Glandula Lachrymalis*, with Part of the Fat within the Orbit, being removed, by extending the upper Eyelid, either with a Hook, or your Fingers only, its tendinous Insertion, and slender fleshy Body, will appear.

APERIENS PALPEBRAM RECTUS.

So call'd from its strait Progress and Use. It arises, sharp and fleshy, from the profoundest Part of the Orbit, near the Place where the Optic Nerve is transmitted; passing directly over the *Musculus Attollens*, it becomes tendinous as it marches over the Bulb of the Eye, whence growing still broader and thinner, till it is inserted to the whole superior Part of the upper Eyelid.

For the Muscles of the Eyes, see OCULUS.

The MUSCLES *of the* NOSE.

The Nose is altogether immoveable, except in its lower gristly Parts, which are not improperly call'd Alæ or Pinnæ: These, by their Approach or Recess, constringe or dilate the Nostrils. *Galen* assigns but one Pair of Muscles to them, to which *Jacobus Beringarius Carpensis*, in his Commentary on *Mundinus*, adds another, arising from the Extremities of the Bones of the Nose, and inserted to the Inside of the Alæ; wherein he is follow'd by *Vesalius*. *Columbus* pretends those described by *Galen* belong to the upper Lip, and that those placed in the Inside of the Nose (above-mentioned) are entirely fictitious; describing still another Pair, arising from the upper Parts of the Bones of the Nose, and inserted to their Alæ. *Fallopius* is not positive, whether he has seen those internal Muscles, mention'd by *Carpus* and *Vesalius*; but Mr. *Bueffier*, an accurate Anatomist, inform'd *Cowper*, he had frequently observed them; adding, that those describ'd by *Columbus*, above-mention'd, do not properly belong to the Alæ, but are rather Parts of the Orbiculares Palpebrarum. *Fallopius* still describes another Muscle, not taken Notice of before him, which late Anatomists call *Constrictor Alæ Nasi*, the Invention of which *Placentinus* assumes. In describing these Muscles we shall imitate the Order of *Riolan*, and others, who divide them into proper and common.

The proper are those which move the *Alæ* alone, as the *Dilatores Alarum Nasi.*

The common are those which move the *Alæ*, together with the upper Lip, as the *Retractores* and *Constrictores Alarum Nasi.*

First of the proper,

Dilatores Alarum Naſi.

Theſe are ſmall thin Muſcles, having a double Order of Fibres decuſſating each other, not unlike the Muſculi Intercoſtales. They ariſe from the inferior and internal Parts of the Oſſa Narium, and are ſoon inſerted to the ſuperior Parts of the Alæ. Theſe pull up the Alæ, and dilate the Noſtrils; but I am inclin'd to think they are not found in all Subjects.

Retractores Alarum Naſi, & Elevatores Labii ſuperioris.

Theſe were mentioned by *Galen*: They ariſe, broad and fleſhy, from the fourth Bone of the upper Jaw; whence deſcending obliquely, they are ſoon inſerted to the upper Lip and Alæ Naſi.

The *Conſtrictor Alæ Naſi*, mention'd by *Fallopius* and *Placentinus*, we ſuſpect to be altogether fictitious.

Conſtrictores Alarum Naſi, ac Depreſſores Labii ſuperioris.

Theſe ariſe fleſhy from the fore Parts of the fourth Bones of the upper Jaw, immediately above the Gums of the Dentes Inciſorii, and, aſcending, are ſoon inſerted in the Roots of the Alæ Naſi, and ſuperior Parts of the upper Lip.

When theſe act, they draw the upper Lip and Alæ downwards, by which means they bring the latter nearer each other. Hence, when we attempt the Reception of any odoriferous Effluvia, the upper Lip is pull'd downwards.

Of the Muscles *of the* Cheeks *and* Lips.

Since Authors generally diſagree concerning the Number, Deſcription, and Uſe of theſe Muſcles, we ſhall not inſert their particular Differences.

Theſe Muſcles of the Lips are either common to the Cheeks and Lips, or to both Lips, or proper to the upper and under Lip only.

Thoſe common to the Cheeks and Lips are two Pair, on each Side two Muſcles, *viz.* the Quadratus and Buccinator.

Quadratus Genæ, ſeu Tetragonus.

By *Galen* call'd *Platyſma Myoides*, or the muſcular Expanſion. This is a great ſquare Muſcle, lying under the Skin of the Neck, and is ſpread over the whole inferior Region of the Face. It ariſes thin and membranous, according to *Galen*, from the Spines of the Vertebræ of the Neck. It alſo ſprings from the Skin on the ſuperior Part of the Cucullaris and Pectoral Muſcle; from hence aſcending under the Skin of the Neck, it becomes fleſhy; and one Part, adhering to the Os Hyoides, is ſoon inſerted to the Middle of the lower Jaw; the other broader Portion proceeding farther to its Implantation in the Cheeks, below the Angle of the Lips.

When both theſe Muſcles act, they pull down each Angle of the Mouth, together with the Cheeks, which Poſture of the Face is the proper Expreſſion of Sorrow. But if the inferior Parts of theſe Muſcles (which lie on the Neck) act alone, they diſtend the ſuperincumbent Skin, by making it approach to a direct Line with the Claviculæ and lower Jaw-bone, which otherwiſe is indented according to the Formation of the Part, whereby a double Chin (as they call it) is repreſented. This Muſcle is alſo call'd *Subcutaneus*.

The Buccinator is deſcribed under the Article of its Name, which ſee.

The Muſcles common to both Lips are ſuch as are inſerted into the Angles of the Mouth, as the *Zygomaticus*, *Elevator*, *Depreſſor*, and *Conſtrictor Labiorum*.

Zygomaticus.

Tab. 10. *Fig.* 8.

So call'd by *Riolan*, becauſe it ariſes from the Os Jugale, or Zygoma. Its Origination is round and fleſhy, from the external Part of the ſame Bone; whence deſcending obliquely forwards, is inſerted near the Angle of the Lips.

When this Muſcle and its Partner act, they draw both Lips upwards, and make a pleaſant Countenance.

Elevator Labiorum.

Tab. 10. *Fig.* 9.

This lies between the Zygomaticus and Elevator Labii ſuperioris Proprius, *Tab.* 10. *Fig.* 10. It ariſeth from the fourth Bone of the upper Jaw, and deſcends directly to its Inſertion under the Termination of the former.

Depressor Labiorum.

This ariſes fleſhy from the lower Edge of the inferior Jaw-bone laterally, and aſcends directly to its Inſertion at the Angle of the Lips.

This, with its Partner, and the Quadrati, acting, expreſs a ſorrowful Countenance, in drawing down the Corners of the Mouth and Cheeks.

Constrictor Labiorum, or *Sphincter & Orbicularis Labiorum.*

Tab. 10. *Fig.* 11. 11.

This environs the Lips with Orbicular Fibres, and, when it acts, it corrugates them; wherefore ſome name it *Oſculatorius*.

The Muſcles proper to the upper and under Lip, in particular, are three Pair; *Elevatores Labii ſuperioris*, *Depreſſores*, and *Elevatores Labii inferioris*. Of theſe in their Order.

Elevator Labii superioris.

This ariſes fleſhy from the fore Part of the fourth Bone of the upper Jaw, immediately above the *Elevator Labiorum*, and deſcends obliquely under the Skin of the upper Lip, joining with its Partner, in a middle Line, from the *Septum Narium* to its Termination in the *Sphincter Labiorum*.

Depressor Labii inferioris.

It is difficult to determine, whether this be one only or two Muſcles. It lying between the *Depreſſores Labiorum* (deſcrib'd above) poſſeſſes that Part of the lower Jaw call'd the Chin, and, aſcending with a direct and tranſverſe Order of Fibres, is inſerted into the under Lip, in depreſſing of which it turns it outwards.

Elevator Labii inferioris.

This Muſcle, with its Partner, lies within the lower Lip. Theſe we firſt obſerved ſome time ſince. They ariſe fleſhy from the inferior Part of the Gums of the lower Jaw, which belong to the Dentes Inciſorii, and deſcend directly to their Implantations in the inferior Part of the Skin of the Chin. Hence it is, when theſe act, they make divers Indentations in the Chin, as may be obſerved in living Perſons when the lower Lip is drawn upwards. *Cowper.*

For the Muſcles of the Ear, ſee Auris.

For the Muſcles of the Tongue and Os Hyoide, ſee Lingua.

As *Winſlow*, from whom I have taken the Deſcriptions of the upper Jaw, enumerates the Bones in a manner different from ſome other Anatomiſts, in order to the underſtanding the Origins and Inſertions of the Muſcles, as ſpecified by *Cowper*, it is neceſſary to remark, that

The firſt Bone of the upper Jaw is the *Os Mali*, or *Zygoma*.

The ſecond is the *Os Maxillare*.

The third is the *Os Unguis*.

The fourth is the *Os Naſi*.

The fifth is the *Os Palati*.

The Muscles *which move the lower Jaw.*

Theſe Muſcles are ten in Number, five on each Side, which are the

Maſſeter.
Temporalis.
Pterygoidæus major ſive internus.
Pterygoidæus minor ſive externus.
Digaſtricus.

To theſe ſome add the two Muſculi Cutanei, or Quadrati Genæ, but very improperly.

Masseter. *Tab.* 10. *Fig.* 5.

This is a very thick fleſhy Muſcle, ſituated at the back Part of the Cheek. It ſeems to be made up of three Portions, like a *Triceps*, one large and external Portion, one middle, and one ſmall and internal.

The external Portion is fix'd by one tendinous Extremity to all the inferior Edge of the Os Malæ, and a little to the neighbouring Parts of the Os Maxillare, and Apophyſis Zygomatica of the Temporal Bone. From thence it runs down obliquely backward, being wholly fleſhy, and is inſerted by the other Extremity, in the rough Impreſſion on the Outſide of the Angle of the lower Jaw.

The middle Portion is fix'd by one End to the lower Edge of the whole *Apophyſis Zygomatica* of the Temporal Bone, and a very little to that of the *Os Malæ*. From thence it runs down a little obliquely forward, in an oppoſite Direction to the firſt Portion, under which it croſſes; and is inſerted, by its other Extremity, in the Middle of the Inſide of the Branch of the lower Jaw, near the Inſertion of the external Portion, with which it mixes.

The third Portion, which is leaſt and moſt internal, is fix'd by one Extremity to the inner Labium of the lower Edge, and alſo to the Inſide of almoſt all the Zygomatic Arch; and, by the other, to the Root or Baſis of the Coronoide Apophyſis, where it mixes, wholly fleſhy, with the Inſertion of the middle Portion. This third Portion, by its Nearneſs of Situation, ſeems

ſeems ſometimes to be an Appendix of the Temporal Muſcle.

The *Ductus Salivalis ſuperior* paſſes over this Muſcle, and this is obſerved, by *Cowper*, to be a provident Contrivance of Nature to accelerate the Motion of the *Saliva* during Maſtication.

Temporalis, *or* Crotaphites. *Tab.* 10. *Fig.* 4.

This is a broad flat Muſcle, reſembling a Quarter of a Circle in Figure. It occupies all the ſemicircular or ſemioval Plane of the lateral Region of the Cranium, the temporal Foſſa, and Part of the Zygomatic Foſſa. From this Situation it has its Name of Temporalis, and likewiſe that of Crotaphites, which is ſometimes given to it.

To conceive juſtly the Inſertions of this Muſcle, it muſt be obſerved, that, thro' all the Circumference of the ſemicircular Plane already mentioned, the Pericranium is divided into two Laminæ. The internal Lamina, ſometimes taken for a particular Periоſteum, covers immediately all the bony Parts of this Region. The external Lamina, ſeparated from the other, is ſpread out like an Aponeurotic or Ligamentary Expanſion, by means of its Adheſions to the external angular Apophyſis of the Os Frontis, to the poſterior Edge of the ſuperior Apophyſis of the Os Malæ, and to the upper Edge of all the Zygomatic Arch, all the Way to the Root of the Maſtoide Apophyſis.

This Muſcle is compoſed of two Planes of fleſhy Fibres, fixed to the two Sides of a tendinous Plane nearly of the ſame Breadth with them, by which they are ſeparated, it being ſpread quite through the Muſcle like a concealed middle Tendon; as may be plainly ſeen by dividing the Muſcle all the Way to the Bone, according to the Direction of its Fibres. The Body of the Muſcle thus formed is incloſed between the two Aponeurotic or Ligamentary Laminæ, in the following Manner.

The internal fleſhy Plane is fixed, by a broad radiated Inſertion, to all the ſemicircular Plane of the Cranium, by the Intervention of the internal Lamina of the Periоſteum.

Thus it is fixed to the lateral external Part of the Os Frontis, and to its external angular Apophyſis, to the lower Part of the Os Parietale, to the ſquamous Portion of the Os Temporis, to the great Ala, or Temporal Apophyſis of the Sphenoidal Bone, by which the Temporal Foſſa is formed; and a little to the Backſide of the internal Orbitary Apophyſis of the Os Malæ, which forms Part of the Zygomatic Foſſa.

Through all this Space the fleſhy Fibres contract gradually, by means of their Adheſions to the Tendinous Plane, which diminiſhes in Breadth, and increaſes in Thickneſs, in proportion as it deſcends.

The external fleſhy Plane is fixed in the ſame radiated Manner to the Inſide of the external Lamina of the Pericranium, from the great ſemicircular Circumference, all the Way to a ſmall Portion of this Lamina more or leſs ſemicircular, above its Inſertion in the Zygomatic Arch. Here the fleſhy Fibres leave the external Lamina, and the void Space thus formed between the ſmall ſemicircular Portion and the fleſhy Fibres is commonly filled with Fat.

Through the whole Extent of this Inſertion the fleſhy Fibres gradually contract, and adhere to the Outſide of the middle Tendinous Plane, in the ſame manner as the internal Plane adheres to the other Side, but in a contrary Direction.

The middle Tendinous Plane, continuing to contract by Degrees, ends at length in a very conſiderable Tendon, the Extremity whereof, which is in a manner double, incloſes the Coronoide Apophyſis of the lower Jaw, being ſtrongly inſerted in the Edges and Inſide thereof, and alſo a little in that Part of the Bone which lies between the two Apophyſes. The internal Portion of this Inſertion is thicker, and has more fleſhy Fibres, than the external, which is almoſt wholly Tendinous or Aponeurotic.

There is another ſmall Plane reckoned by ſome to be a Portion of this Muſcle; which, in reality, is no more than the third Portion of the Maſſeter, as may eaſily be perceived by ſawing off the Zygomatic Arch at the two Ends, and then turning it down; for this ſmall Muſcle parts from the Temporalis without Difficulty, and continues to adhere to the Maſſeter.

The Uſe of the Temporal Muſcles and Maſſeters is, to draw the lower Jaw upwards in Maſtication, or the Formation of Sounds, and Modulation of the Voice. *Cowper* ſays, he could never obſerve thoſe dreadful Symptoms which Authors relate to enſue from Wounds of the Temporal Muſcle, tho' he has ſometimes ſeen it divided, in order to apply the Trapan in Fractures of the Cranium.

Pterygoidæus major sive internus.

This Muſcle lies on the Inſide of the lower Jaw, almoſt in the ſame Manner as the Maſſeter does on the Outſide, being of the ſame Figure with that Muſcle, only ſmaller and narrower. It is fix'd above in the Pterygoide Cavity, principally to the Inſide of the external Ala of the Apophyſis Pterygoides. This Inſertion is wholly fleſhy, and from thence the Muſcle has its Name.

It runs down obliquely toward the Angle of the lower Jaw, and is inſerted a little Tendinous in the Inequalities on the Inſide thereof, oppoſite to the Inſertion of the Maſſeter. It might be called Maſſeter Internus.

When the Pterygoidæus Major on either Side acts, it draws the Jaw to the contrary Side. If both act together, they aſſiſt the Temporal Muſcles and Maſſeters in drawing up the lower Jaw.

Pterygoidæus minor sive externus.

This is an oblong fleſhy Muſcle, much ſmaller than the other, and ſituated almoſt horizontally between the Outſide of the Apophyſis Pterygoides, and the Condyloide Apophyſis of the lower Jaw, the Subject being conſidered in an erect Poſture.

It is fixed by one Extremity to the Outſide and Edge of the outer Ala of the Pterygoide Apophyſis, filling the Foſſula which is at the Baſis of this Apophyſis, near the Baſis of the Temporal Apophyſis of the Sphenoidal Bone.

From thence it runs backward, and a little outward, into the void Space between the two Apophyſes of the lower Jaw, and is inſerted anteriorly in the Condyloide Apophyſis, at a ſmall Foſſula immediately under the inner Angle of the Condyle. It is alſo fixed to the Capſular Ligament of the Joint.

When this and its Partner act, they draw the lower Jaw forwards, and force the Teeth of the inferior Jaw beyond thoſe of the ſuperior, as *Fallopius*, their firſt Deſcriber, obſerves.

Digastricus.

This is a ſmall long Muſcle, ſituated laterally between the whole Baſis of the Jaw and the Throat. It is fleſhy at both Extremities, and tendinous in the Middle, as if it conſiſted of two ſmall Muſcles joined endwiſe by a Tendon; and from thence it is called *Digaſtricus* in *Greek*, and *Biventer* in *Latin*.

It is fixed by one fleſhy Extremity in the Sulcus of the Maſtoide Apophyſis. From thence it runs forward, inclining towards the Os Hyoides, where the firſt fleſhy Body ends in a round Tendon, which is connected to the lateral Part, and Root of the Cornua of that Bone, by a kind of Aponeurotic Ligament, and not by a Vagina or Pulley, as appears at firſt Sight, becauſe of its Paſſage by the Extremity of the Muſculus Styloglоſſus; of which under the Article of its Name.

Here the Tendon is incurvated, and preſently ends in the other fleſhy Body, which is fixed immediately above the internal Labium of the Baſis of the Chin near the Symphyſis, in a ſmall unequal Depreſſion. This Inſertion is broader than that of the other Extremity. Sometimes the anterior Inſertions of the two Digaſtrici touch each other, and ſometimes ſeveral of their Fibres croſs each other conſiderably. *Winſlow.*

The middle Tendon of this Muſcle, and its Partner, paſſing through the Aponeurotic Ligament, at the lateral Part and Root of the Cornua of the Os Hyoides, is a wonderful Contrivance of the Author of Nature to render them capable of pulling the lower Jaw-bone down, which, had their Progreſs been direct from their Originations, they could not have performed. Nor are there any Proceſſes, whether of the Vertebræ of the Neck, or the neighbouring Parts, that could give an Origination to theſe Muſcles below their Inſertions, as in ſome Quadrupeds: Wherefore the Divine Architect of human Bodies has placed this Aponeurotic Ligament to ſerve as a ſort of Pulley below their Terminations, whereby they perform their deſigned Office. Hence Deglutition is hindered, when theſe Muſcles are in Action, they then preventing the Aſcent of the Tongue and Larynx. Neither can we at that time draw the lower Jaw down, becauſe the Centre of Direction is pulled upwards. Wherefore we are obliged on that Occaſion to keep the Jaws cloſe together. But in Dogs, and other voracious Animals, who have theſe Muſcles ariſing from the tranſverſe Proceſſes of the firſt Vertebra of the Neck, theſe Actions are not dependent; whence it is they devour their Aliment ſo quick.

There are ſeveral Muſcles, beſides thoſe already mentioned, which are inſerted in the Head, and conſequently are ſubject to be affected in Wounds of that Part. The firſt of theſe is the Cucullaris, which is inſerted in the lower Part of the Occiput, as is expreſſed, *Tab.* 11. *Fig.* 2.

The Maſtoidei Anteriores, or Sternomaſtoidei, are inſerted into the Maſtoide Apophyſes. See Mastoideus.

The Splenii (*Tab.* 11. *Fig.* 3. expreſſed only on the Right Side) are inſerted in the upper Part of the Maſtoide Apophyſes, and along the adjacent curve Portion of the tranſverſe Ridge of the Occipital Bone. See Splenius.

The Complexus is inſerted by a broad fleſhy Plane in the poſterior Part of the ſuperior tranſverſe Line of the Occipital Bone, near the Criſta or Spine of that Bone. At its Inſertion it joins, by one Edge, the Complexus of the other Side, and by the other, the Splenius, which covers it a little. See Complexus.

The

The Complexus Minor, or Maſtoidæus Lateralis, is inſerted in the poſterior Part of the Apophyſis Maſtoidæus, where it is covered by the Splenius. See COMPLEXUS MINOR.

The Rectus major is inſerted in the poſterior Part of the inferior tranſverſe Line of the Occipital Bone, at a ſmall Diſtance from the Criſta, being a little covered by the Obliquus Superior. See RECTUS MAJOR.

The Rectus minor is inſerted immediately under the poſterior Part of the inferior tranſverſe Line of the Occipital Bone, in a ſuperficial Foſſula on one Side of the Criſta Occipitalis. See RECTUS MINOR.

The Obliquus ſuperior five minor is inſerted in the tranſverſe Line of the Occipital Bone, almoſt at an equal Diſtance from the Criſta and the Maſtoide Apophyſis, between the Rectus minor and Complexus minor, which covers it. See OBLIQUUS SUPERIOR.

The Rectus anticus longus is inſerted in the fore Part of the lower Side of the Apophyſis Baſilaris, or great Apophyſis of the Occipital Bone. See RECTUS ANTICUS LONGUS.

The Rectus anticus brevis is inſerted in a tranſverſe Impreſſion in the lower Side of the Apophyſis Baſilaris of the Occipital Bone, immediately before the Condyle on the ſame Side, being covered by the Rectus anticus longus. See RECTUS ANTICUS BREVIS.

The Tranſverſalis anticus primus is inſerted in a particular Impreſſion between the Condyle of the Occipital Bone, and the Maſtoide Apophyſis of the ſame Side, behind the Apophyſis Styloides, and under the Edge of the Jugular Foſſula. See TRANSVERSALIS ANTICUS PRIMUS.

In order to underſtand perfectly what is ſaid concerning Diſorders of the Head from an external Cauſe, it is indiſpenſably neceſſary to form a juſt Idea of the Membranes ſurrounding the Brain, which I am ſenſible no Deſcription can give without an Inſpection of the Parts themſelves. But the Perſon who has once ſeen them, will reap ſome Advantages from the following Account of them.

The Meninges, or Membranes of the Brain, are two in Number, one of which is very ſtrong, and lies contiguous to the Cranium; the other is very thin, and immediately touches the Brain. The firſt is named Dura Mater, the ſecond Pia Mater; which is again divided into two, the external Lamina being termed Arachnoides, the internal retaining the common Name of Pia Mater.

DURA MATER.

The Dura Mater incloſes the Brain, and all its Appendages. It lines the Inſide of the Cranium, and ſupplies the Place of an internal Periofteum, being ſpread in all the Holes and Depreſſions, and covering all the Eminences in ſuch a manner as to prevent their being hurtful to the Brain.

In deſcribing the Dura Mater, we muſt take Notice,

1. Of its Compoſition;
2. Its Adheſion to the Cranium;
3. Its Folds or Septa;
4. Its Productions, Veſſels, and Nerves.

The Dura Mater is made up of two Laminæ, adhering very cloſely together, the Fibres of both croſſing each other obliquely. By rubbing any Part of this Membrane between the Fingers, we eaſily perceive the two Laminæ ſliding a little upon each other. Their Texture is very cloſe and ſtrong, appearing to be partly ligamentary, and partly tendinous.

The Dura Mater ſticks cloſely to the Cranium by a great Number of Filaments of the external Lamina, which enter the Pores of the Bones principally at the Sutures, both above and below; and, by penetrating theſe Joints, they communicate with the external Periofteum. Theſe Filaments are, for the moſt part, ſmall Veſſels, which being broken in ſeparating the Dura Mater from the Skull, a great Number of red Points appear on the external Surface of that Membrane.

It adheres much more to the whole inner Surface of the Cranium in Children and young Perſons, than in thoſe of an advanced Age, the Filaments becoming then very ſmall, being compreſſed by the Contraction of the bony Pores; and conſequently they are more eaſily broke by any Force applied to them.

Theſe Adheſions are formed entirely by the external Lamina. The internal Lamina is very ſmooth, and poliſhed on the Inſide, which is alſo continually moiſtened by a fine Fluid, diſcharged thro' its Pores, much in the ſame manner as in the Peritonæum and Pleura.

The Folds of the Dura Mater are made by the internal Lamina; and three of them form particular Partitions, one of which is ſuperior, and repreſents a kind of Mediaſtinum between the two great Lobes of the Brain. The ſecond is in a middle Situation, like a Diaphragm between the Cerebrum and Cerebellum. The third is inferior between the Lobes of the Cerebellum. The ſuperior Partition is longitudinal, in Form of a Scythe, from whence it is termed the Falx of the Dura Mater; and it may likewiſe be called Septum Sagittale, Verticale, or Mediaſtinum Cerebri. The middle Partition is tranſverſe, and might be called the Floor of the Cerebrum, the Diaphragm of the Brain, or the Tent of the Cerebellum. The inferior Partition is very ſmall, and runs down between the Lobes of the Cerebellum; on which Account it may be term'd either ſimply Septum cerebelli, or Septum occipitale minus; the middle Partition being conſidered as the Septum occipitale majus.

The ſuperior or vertical Partition, called the Falx of the Dura Mater, is a long and broad Fold or Duplicature of the internal Lamina, reaching from the Edge of the Criſta Galli, along the Sagittal Suture, to the Middle of the tranſverſe Partition, which it joins in ſuch a manner, as that the lateral Laminæ of the Falx are continuous, on each Side, with the neighbouring Portions of the ſuperior Lamina of the middle Partition.

It is broader where it joins the middle Partition than at the Os Ethmoides, and it is thicker at that Edge which adheres to the Cranium than at the other, which lies looſe, and is very ſharp; and from this Reſemblance to a Scythe it had the Name of Falx.

The tranſverſe or middle Partition is fixed to the Os Occipitis, along the Grooves of the lateral Sinuſes, and thoſe of the great Angles of the Apophyſes Petroſæ, all the Way to the poſterior Clinoide Apophyſes of the Os Sphenoidale. By this Situation it forms a ſort of Floor, Tent, or ſhallow Vault, on the fore Part of which is a large Notch, almoſt of an oval Figure.

This Partition divides the Cranium into two Cavities; one large or ſuperior, and the other ſmall or inferior, which communicate together by the great oval Notch. It is formed by a particular Fold, and a very broad Membrane of the internal Lamina of the Dura Mater; and in the natural State it is very tenſe, becauſe of its Union, or rather Continuity, with the Falx.

This Union or Continuity of theſe two Partitions keeps them both very tenſe, ſo that the middle Partition is capable of ſuſtaining a conſiderable Weight without ſinking downward; and the Falx is able to reſiſt lateral Preſſures, without giving way to the Right Hand or to the Left.

We may be convinced of this reciprocal Tenſion by, firſt, touching theſe two Partitions in their natural State; and, again, after they have been cut one after the other, according to their Breadth, or rather after having cut in this manner the Falx in one Subject, and the tranſverſe Partition in another; for, as ſoon as the Falx is cut, the other will be perceived immediately to loſe its Tenſion and Firmneſs; and the ſame thing will be obſerved in the Falx, as ſoon as we cut the Septum Medium, or tranſverſe Partition.

The ſmall Occipital Partition is both very ſhort and narrow. It runs down from the Middle of the tranſverſe Partition to the Edge of the great Occipital Hole, being fixed to the internal Spine of the Occipital Bone. It is formed by a Fold and Duplicature of the internal Lamina of the Dura Mater, in the ſame manner as the other two, and diſtinguiſhes the lower Part of the Occipital Cavity of the Cranium into two lateral Parts. In ſome Subjects this Partition is double, anſwering to the double Spine of the Occipital Bone.

Beſides theſe large Folds, there are two ſmall lateral ones, on each Side of the Sella Sphenoidalis, or Turcica, each running from the poſterior to the anterior Clinoide Apophyſis on the ſame Side. Theſe two Folds, together with the anterior and poſterior Parts of the Sella Sphenoidalis, form a ſmall Foſſula, in which the Pituitary Gland is lodged. There are likewiſe two anterior Folds, at the Edges of the Sphenoidal, or ſuperior Orbitary Fiſſures, which augment the Depth of the middle Foſſulæ of the Baſis of the Cranium. Thus we have ſeven Folds of the internal Lamina of this Membrane, three large, and four ſmall, which may be termed internal Productions or Proceſſes of the Dura Mater.

The Elongations of the Dura Mater are Productions of both Laminæ, which go beyond the general Circumference, and paſs out of the Cranium, thro' the Openings therein; and in this they differ from the Folds which are formed entirely by one Lamina, and do not go out of the Skull. They may be nam'd the external Productions of the Dura Mater.

The moſt conſiderable of theſe Elongations paſſes thro' the great Occipital Foramen, and runs down the common Canal of the Vertebræ in form of a Tube, lining the Inſide of that Canal, and incloſing the ſpinal Marrow, by the Name of the Dura Mater of that Marrow. The other Elongations accompany the Nerves out of the Cranium in form of Vaginæ. Theſe are more numerous than the nervous Trunks which are reckoned by Pairs. Thus for the Olfactory Nerves there is the ſame Number of diſtinct Vaginæ, as there are Holes in the Lamina Ethmoidalis; and ſome Nerves are accompany'd by ſeveral Vaginæ thro' one Hole, as thoſe of the Ninth Pair.

There are two particular Elongations which form the Periofteum of the Orbits, together with the Vaginæ of the Optic Nerves. Theſe Orbitary Elongations go out by the Sphenoidal or ſuperior Orbitary Fiſſures, and, enlarging in their Paſſage,

line the whole Cavity of the Orbits, at the Edges of which they communicate with the Pericranium and Periosteum of the Face. They communicate likewise thro' the Spheno-maxillary or inferior Orbitary Fissures with the Pericranium of the Temporal and Zygomatic Fossæ; and by these Communications we may explain the Accidents which happen to these Parts in Wounds of the Head.

The Elongations of the Dura Mater, which accompany the Blood-vessels through the Foramina of the Cranium, unite with the Pericranium afterwards. Such, for Instance, are the Elongations which line the Fossulæ of the Foramina Lacera or Jugularia, and the bony or carotid Canals of the Apophysis Petrosa.

The Vessels of the Dura Mater are Arteries, Veins, and Sinuses. The Arteries in general are distinguished into anterior, middle, and posterior, and come from the Carotids and Vertebrals on each Side. The external Carotid sends a Branch through the spinal Hole of the Os Sphenoidale, which is the middle Artery of the Dura Mater, and is called, by way of Eminence, Arteria duræ matris. It is divided into a great Number of Branches, which are plentifully dispersed thro' the Substance of the external Lamina as high as the Falx, where these Ramifications communicate with their Fellows from the other Side. The Impressions of this Artery are seen on the Inside of the Parietal Bones, the anterior and lower Angle of which, instead of a simple Impression, contains a Canal for the Passage of a Trunk or Branch of this Artery; on which Account several Accidents happen in Fractures of the Skull.

The external Carotid sends another small Branch through the Corner or small End of the Sphenoidal or superior Orbitary Fissure, where there is sometimes a little Notch on purpose. This Branch is the anterior Artery of the Dura Mater, and it gives off Ramifications in the same manner as the former, with which it communicates, but its Ramifications are not so numerous. The internal Carotid, as it enters the Cranium, gives off a small Branch to the Substance of the Dura Mater.

The two Vertebral Arteries enter by the great Occipital Foramen, and unite in one Trunk on the anterior or Sphenoidal Apophysis of the Occipital Bone. Immediately afterwards they enter the Substance of the Dura Mater on both Sides, each of them by one or two Branches. These are the posterior Arteries of the Dura Mater; and they communicate by some Ramifications with the middle or spinal Artery above-mentioned.

The Dura Mater contains in its Duplicature several particular Canals, into which the venous Blood, not only of that Membrane, but of the whole Brain, is convey'd. These Canals are termed Sinuses; and some of them are disposed in Pairs, others in uneven Numbers; that is, some of them are placed alone in a middle Situation, others are disposed laterally on each Side of the Brain. The most antient Anatomists reckon'd only four, to which we can now add four times as many.

These Sinuses are in the Duplicature of the Dura Mater, and their Cavities are lined on the Inside by particular very fine Membranes. They may be enumerated in this manner:

The great Sinus of the Falx, or superior Longitudinal Sinus, which was reckoned the first by the Antients.

The two great Lateral Sinuses, the second and third of the Antients.

The Sinus called Torcular Herophili, the fourth of the Antients.

The small Sinus of the Falx, or inferior Longitudinal Sinus.

The posterior Occipital Sinus, which is sometimes double.

Two inferior Occipital Sinuses, which form a Portion of a Circle, and may likewise be called the inferior Lateral Sinuses.

Six Sinus Petrosi, three on each Side; one anterior, one middle or angular, and one inferior. The two inferior, togegether with the Occipital Sinuses, complete a circular Sinus round the great Foramen of the Occipital Bone.

The inferior transverse Sinus.

The superior transverse Sinus.

Two circular Sinuses of the Sella Sphenoidalis; one superior, and one inferior.

Two Sinus cavernosi, one on each Side.

Two Orbitary Sinuses, one on each Side.

All these Sinuses communicate with each other, and with the great Lateral Sinuses, by which they discharge themselves into the internal Jugular Veins, which are only Continuations of these lateral Sinuses. They likewise unload themselves partly into the Vertebral Veins, which communicate with the small Lateral or inferior Occipital Sinuses, and partly into the external Jugular Veins, by the Orbitary Sinuses which communicate with the Angular, Frontal, Nasal, and Maxillary Veins, as the Lateral Sinuses likewise communicate with the Occipital Veins.

Thus the Blood which is carried to the Dura Mater by the external and internal Carotids, and by the Vertebral Arteries, is returned to the Heart by the external and internal Jugular and Vertebral Veins; so that when the Passage of the Blood is obstructed in any particular Place, it finds another Way by virtue of these Communications, tho' not with the same Ease. This Observation is of Importance with respect not only to Obstructions, but to the different Situations of the Head.

The great Sinus of the Falx reaches from the Connection of the Ethmoidal Crest with the Os Frontis, along the upper Edge of the Falx, all the Way to the posterior Edge of the transverse Partition, where it ends by a Bifurcation in the great Lateral Sinuses. It is very narrow at its anterior Extremity, and from thence becomes gradually wider all the Way to its posterior Extremity.

The Cavity of this Sinus is not cylindrical, but triangular, having, in a manner, three Sides; one superior, parallel to the Cranium, and two lateral, inclined to the Plane of the Falx. The upper Side is formed by the external Lamina of the Dura Mater, and thro' the Middle of its Breadth a kind of fine Raphe or Suture runs from one End to the other.

The two lower or lateral Sides are Productions of the internal Lamina, which, having parted from the external, are inclined towards each other, and then unite, forming first the Sinus, and afterwards the Duplicature of the Falx. This Sinus is lined internally by a fine proper Membrane, which forms likewise a kind of Raphe or Suture along the Bottom of the Sinus, that is, along the Union of the two lateral Sides.

In this Sinus we observe several Openings, and several Ligamentary Fræna. The Openings are Orifices of Veins, the smallest of which belong to the Dura Mater, the largest to the Brain. The Veins of the Brain enter the Sinus, for the most part, obliquely from behind forward, after they have run about a Finger's Breadth in the Duplicature of the Dura Mater.

It has been thought, that the Arteries of the Dura Mater discharged themselves immediately into the Sinuses, because Injections made by the Arteries, or a Hog's Bristle thrust into them, have been found to pass into these Sinuses. But, on a more close Examination, it has been discovered, that the Injections passed from the Arteries into the Veins, and from thence into the Sinuses, thro' the small Orifices already mentioned; and that the Hog's Bristle pierced the Sides of the Artery, which, near the Sinuses, are very thin.

This Mistake gave Rise to another, that the Dura Mater had no Veins; and what confirmed it was, that the Arteries of the Dura Mater cover the Veins so entirely, that the Edges of the Veins are hardly perceivable on either Side of the Arteries. There are, however, some Places where the Veins being broader than the Arteries, their two Edges are seen on each Side of the Arteries like Capillary Vessels. These Veins are, for the most part, Branches of the Sinuses, and the small Trunks of some of them open into the Head of the internal Jugular Vein. We may easily be satisfy'd, that the Arteries on both Sides of the Dura Mater communicate with each other above the great Sinus of the Falx, either by injecting, or blowing into them.

The internal Fræna of this great Sinus appear to be tendinous, and to be designed to prevent the too great Dilatation of the Sinus by the Blood. They vary, however, in different Subjects, and do not always reach from one Side to the other. It has been pretended, that Glands have been found there; but we ought to take care not to take for such certain small Corpuscles which are the Products of Diseases.

The inferior Sinus of the Falx is situated in the lower Edge of its Duplicature, being very narrow, and, as it were, flatted on both Sides. It communicates immediately with the fourth Sinus of the Antients; and, in some Subjects, seems even to be a Continuation thereof. It likewise communicates with the great or superior Sinus, by small Veins which go from one to the other, and with the Veins of the Cranium by the same means.

The lateral Sinuses represent two large Branches of the superior Longitudinal Sinus, one going to the Right Hand, the other to the Left, along the great Circumference of the transverse Partition, all the Way to the Basis of the Apophysis Petrosa of the Temporal Bone; from whence they run down, having first taken a large Turn, and then a small one; and, being strongly fixed in the lateral Grooves of the Basis of the Cranium, they follow the Course thereof all the Way to the Foramina Lacera, and Fossulæ of the Jugular Veins.

They do not always arise by an equal and symmetrical Bifurcation of the superior Longitudinal Sinus; for, in some Subjects, one of the lateral Sinuses appears to be a Continuation of the longitudinal, and the other to be a Branch from it. This Variety may happen on either Side; and we sometimes find one of those Sinuses higher or lower, larger or smaller, than the other.

The Cavity of these lateral Sinuses is likewise triangular, and furnished with a proper Membrane, and with Fræna; and it has also the small venal Openings, which indeed are common to it, not only with the longitudinal Sinus, but with most part of the others. The posterior or outer Side of this Cavity is formed by the external Lamina of the Dura Mater, and the other two by the internal Lamina.

As these two Sinuses go out by the posterior Portions of the Openings of the Basis of the Cranium called Foramina Lacera, they

they are dilated into a kind of Bag, proportioned to the Foſſulæ of the Jugular Veins, where they terminate in theſe Veins.

Near the Concourſe of the ſuperior longitudinal and lateral Sinuſes, we obſerve an Opening, (ſometimes double) which is the Orifice of a Sinus ſituated along the Union of the Falx and tranſverſe Partition. It does not always end directly at the lower Part of the ſuperior Sinus, but ſometimes opens at the Beginning of one of the lateral Sinuſes, eſpecially when the Bifurcation is not equal; and in this Caſe it often terminates in that lateral Sinus, which appears like a Branch from the common Trunk of the ſuperior and other lateral Sinus.

This Sinus has been named Torcular Herophili, from its firſt Diſcoverer. Its Diameter is but ſmall, and it forms a kind of Bifurcation with the inferior longitudinal Sinus, and with a Vein of the Cerebrum, which is ſometimes double, called Vena magna Galeni.

The cavernous or lateral Sinuſes of the Os Sphenoides are Reſervatories of a very particular Kind, containing not only Blood, but conſiderable Veſſels and Nerves. Theſe Reſervoirs are within fill'd with a ſpongy or cavernous Subſtance full of Blood, much like that of the Spleen, or Corpus cavernoſum of the Urethra.

We obſerve ſome nervous Filaments, which go to the Dura Mater, from the Trunk of the Fifth Pair, at the Entry of the cavernous Sinus; and from the common Trunk of the Eighth Pair, and Nervus Acceſſorius, or Spinalis, as they paſs thro' the Foramen Lacerum. The ſmall Tubercles, ſometimes found on the lateral Sides of the longitudinal Sinus of the Falx, require farther Examination before we can determine any thing about them. The whole Inſide of the Dura Mater is moiſtened in the ſame manner as the Peritonæum and Pleura.

The prominent Fibres interſecting each other in different Manners, which appear on the Inſide of the Dura Mater, eſpecially near the Falx and tranſverſe Partition, and which have been taken for a kind of fleſhy Fibres, ſeem to be only ligamentary and elaſtic. The univerſal Adheſion of this Membrane to the Cranium proves, that it can have no particular Motion, and conſequently that ſuch fleſhy or muſcular Fibres would be altogether uſeleſs. This Adheſion was plainly demonſtrated by *Veſalius* and *Riolanus*, and afterwards by *Roonhuyſen*.

Pia Mater.

This Membrane ſurrounds the whole Maſs of the Brain more particularly than the Dura Mater. It adheres very cloſely to the Brain, and is connected to the Dura Mater only by the Veins which open into the Sinuſes, as has been already ſaid.

The Pia Mater is made up of two very fine Laminæ, the outermoſt of which covers pretty uniformly all the convex Surface of the Brain, and lines in the ſame manner all the concave or inner Surface of the Dura Mater. The internal Lamina forms, by a great Number of Folds and Duplicatures, a great Number of Partitions, which inſinuate themſelves into all the Folds and Circumvolutions, and between the different Strata of the Cerebrum and Cerebellum.

The two Laminæ of the Pia Mater are not ſo cloſely united as thoſe of the Dura Mater, being connected only by a cellulous Subſtance, which accompanies them through their whole Extent, except at ſome Places of the Baſis of the Cerebrum, where the internal Lamina continuing its Inſertions, the external remains uniformly ſtretched over the prominent Parts, the Interſtices of which are entirely ſeparated from the other Lamina, without any cellular Subſtance between them. Theſe ſeparate Portions of the external Lamina have made it been looked upon as a third Membrane of the Brain, diſtinct from the Pia Mater; and it has been named Membrana Arachnoides, from its Reſemblance to a Cobweb in Delicacy of Texture.

In each of theſe Laminæ of the Pia Mater we diſcover another kind of fine Duplicature, which contains a Number of Veſſels; but theſe ſmall Veſſels are hardly perceivable without the Help of an Injection, or of a great Inflammation. The cellular Subſtance does not only accompany the two Laminæ thro' their whole common Extent, in the manner already ſaid, but alſo the internal Lamina in particular, thro' all the Duplicatures and Partitions. This we diſcover by blowing through a ſmall Pipe, cautiouſly introduced between the two Laminæ, ſo as not to offend any of the Parts near it. *Winſlow.*

Before the Reader proceeds to the enſuing Detail of Diſorders incident to the Head from an external Cauſe, I ſhould adviſe him to read the Article Cerebrum, which he is to conſider as the Sequel of this Part of the Article Caput.

Wounds *of the* Head.

No Wounds can poſſibly be of a more formidable and terrible Nature than thoſe of the Head, ſince the leaſt Injury done to the Brain ſometimes proves the fatal Cauſe or immediate Death. Beſides, in thoſe Wounds of the Head which do not penetrate the Skull, but are received by a gentle Fall, or a Blow with blunt Inſtruments, ſome of the minute internal Veins and Arteries are ſometimes broken, and, by diſcharging their Contents on the Brain, excite the moſt melancholy Symptoms, and often put a ſpeedy End to Life. For this Reaſon Wounds of the Head, apparently the moſt light and ſuperficial, are never to be looked upon as inconſiderable, but always treated with the greateſt Care and Circumſpection.

In treating Wounds of the Head, 'tis the Surgeon's Duty to conſider,

1. What Parts of it are wounded; and,
2. In what manner the Wound has been inflicted.

For Wounds may be made in the Head either by the Puncture or Cutting of ſharp and pointed Inſtruments, or by ſuch as are blunt; by Blows, for Inſtance, Contuſions, the Throwing or the Falling of Bodies, and by Bullets. Wounds of this laſt Species are generally far more ſevere and dangerous than thoſe inflicted by ſharp and cutting Inſtruments.

As for the Parts of the Head wounded, they may either be the common Integuments, or, together with theſe, the fleſhy Parts of the Face, or the Pericranium itſelf, or the Temporal Muſcles, or the Cranium. Beſides theſe, the internal Parts of the Head may alſo be injured; ſuch as the Dura and Pia Mater, the Cortical or Medullary Subſtances of the Brain, as alſo its Ventricles. In ſome Wounds of the Head the Cranium is cut, and in others it is fractur'd, ſhatter'd, and contus'd; for which Reaſon we ſhall here reduce the Wounds of the Head to two Claſſes; thoſe inflicted on the Face, and thoſe which either injure, or entirely penetrate, the Cranium.

Wounds *of the* Face.

Since then the Parts of the Face are of the more noble and neceſſary Kind, two Things are carefully to be adverted to in treating its Wounds. The firſt is, that the Uſes of the reſpective Parts wounded may be preſerved; and, ſecondly, that as beautiful and comely Cicatrices as poſſible may be induced. But ſince there are various Parts of the Face, each of which calls for a different Method of Treatment, we ſhall at preſent conſider theſe Parts ſeparately, and by themſelves.

In almoſt all Wounds, then, of the Forehead, we are firſt to cleanſe the Wound from the Blood, then to anoint it with ſome vulnerary Balſam, ſuch as the Balſam of *Capivi*, or that of *Peru*, or ſome other of a like Nature; after which we are, with narrow Shreds of adheſive Plaiſter, to bring the Lips of the Wound into Contact, and apply ſome vulnerary Plaiſter over all. But, when the Wound is of the larger Kind, theſe Plaiſters alone are not ſufficient for producing an equable and beautiful Cicatrix; for which Reaſon, that the Wound may be the more commodiouſly conglutinated, Powder of *Sarcocolla*, or a Powder prepared of Comfrey-root, Gum Tragacanth, and Gum Arabic, are to be ſprinkled upon it, before the abovementioned Plaiſters are laid on; and upon theſe proper Compreſſes, and tight Bandages, are to be applied. Nor is it proper to uſe Suture in theſe or any other Wounds of the Face, except where it is abſolutely neceſſary, becauſe, by that means, the Number of Scars, and conſequently the Deformity, is increaſed. In longitudinal Wounds of the Forehead, that uniting or incarnating Bandage repreſented *Tab.* 23. at *f.* is of ſingular Service for inducing an agreeable Cicatrix. But in tranſverſe Wounds of the Forehead, where the Fibres of the frontal Muſcles are ſo divided, that the Eye-brows hang down in a diſagreeable manner, and the Skin of the Forehead cannot corrugate itſelf as uſual, the beſt Method is, immediately after cleanſing the Wound, to bring its Lips into Contact by one or two Stitches, and apply ſome vulnerary Powder or Balſam, uſing over all conglutinating Plaiſters, and proper Bandage, and injoining Reſt to the Patient at the ſame time: For it ſometimes happens, eſpecially in young Conſtitutions, that the cut Fibres of the Muſcles are again united and conſolidated by means of an accurate Dreſſing of this kind, without any Suppuration. If violent Effuſions of Blood ſhould happen, they are firſt to be ſuppreſſed with Linen Cloths, Compreſſes, and tight Bandage; but, at the next Dreſſing, the Wound is to be waſhed with warm Wine, and its Lips are to be brought into Contact with adheſive Plaiſters.

The Wounds of the Eye-brows are to be treated in the ſame manner with thoſe of the Forehead; only in theſe we muſt take care, leſt any violent Inflammations ſhould happen, which may prove prejudicial to the Eyes and Sight. For this Reaſon every thing of an acrid Nature, either in Meat or Drink, ought to be abſtained from by the Patient; Veneſection, in caſe of a Plethora, ought to be celebrated; and Compreſſes, dipt in warm Spirit of Wine, to be applied to the Wound, with a Plaiſter over them. But if the Eye-brows are quite divided by a large Wound, it ſeems neceſſary to uſe ſome kind of Suture, to dreſs the Wounds with vulnerary Balſams, to apply a Plaiſter of the ſame Quality, and ſo to fix the Eyes with ſome proper Bandage, that they may not eaſily move; for, when theſe Precautions are neglected, the Eyes are generally very much diſfigured.

Large Wounds, either of the ſuperior or inferior Eye-lids, are, for the moſt part, with great Difficulty conglutinated, and that not only by reaſon of the Tenderneſs of the Parts themſelves, but alſo on account of the large Quantity of Humours, which

which render the Eyes continually moiſt. In order, therefore, to treat the Wounds of theſe Parts with the more Succeſs, the Eye muſt be fomented gently with a Decoction of Chamomile, Hyſſop, or Eye-bright, till the Effuſion of Blood is ſtopp'd, and the Wound thoroughly cleanſed. If the Wound is tranſverſe, it ought to be forthwith ſtitch'd up in the Middle, with a ſlender Needle; and Powder of Sarcocolla, or a Powder prepared of Comfrey-root, Gum Tragacanth, and Gum Arabic, muſt be ſprinkled upon it; or it may be anointed with Balſam of *Capivi*, Balſam of *Mecha*, or any other of a like Nature, or with Oil of Eggs; applying, after all, a Plaiſter of *Diapalma*, and binding the Eyes in ſuch a manner, that they cannot move, that the Conglutination may ſucceed the more happily. But where the Wound of the Eyelids is longitudinal, its Lips muſt be brought into Contact by more Stitches, and the Wound itſelf, in other reſpects, treated as we have now directed.

If the Eye itſelf is wounded, but in ſuch a manner that none of the vitreous and cryſtalline Humours are diſcharged, the *Unguentum Alabaſtrinum*, or the White of an Egg, or the Mucilage of Quince-ſeeds, and Flea-bane, prepared with Roſe-water, may be applied to the Wound twice or thrice a Day, by means of a Feather or Pledget; and the Surgeon muſt always apply a ſmall Compreſs, ſufficiently moiſten'd in the following Collyrium, in order to contract the Lips of the Wound; and this Compreſs muſt be ſecured with proper Bandage. The Collyrium is prepared thus:

> Take the Whites of two Eggs; Roſe-water, two Ounces and an half; Oil of Roſes, half a Dram; and of Camphire, three Grains: Shake all well together.

Nuck, in his Treatiſe *de Duct. oculor. aquoſ.* gives us an Inſtance of a Wound of the Eye, which he himſelf cured, without any Injury to the Sight, tho' ſome Part of the vitreous Humour was diſcharged. The Method he follow'd was this: He cut off the prolapſed Part of the vitreous Humour, and carefully fomented the Eye with a Collyrium, prepared of the White of an Egg, Roſe-water, *Armenian* Bole, and Camphire, ſufficiently agitated together. One Scruple of Gum *Arabic*, diſſolved in an Ounce of Roſe-water, is an excellent Medicine in this Species of Wounds of the Eyes. But if a violent Inflammation ſhould happen, as it ſometimes does, I have often found it proper to apply a larger Compreſs over the ſmall one, dipt in warm camphorated Spirit of Wine: But, in order to mitigate the Inflammation, we muſt, on this Occaſion, take care to keep the Patient's Body ſoluble, for ſome Days, with Potions prepared of Rhubarb, and the Pulps of Tamarinds, or any other refrigerating and laxative Subſtances. Then, if the Patient abounds in Blood, he is to be blooded in the Neck or Feet; all Aliments of a heating Nature are to be abſtain'd from; and the Patient is to be injoin'd as much Repoſe as his State will admit of; for, by following theſe Precautions, not only the Eyes, but the Sight of the Patient, are preſerved. But in Caſes where the cryſtalline Humour, or any Part of it, has penetrated into the Wound, it is forthwith to be taken out, leſt the Eye ſhould by its means become deform'd, and ſubject to other terrible Infirmities.

But when the vitreous and cryſtalline Humour are entirely fallen from the Eye, it is very difficult, if not altogether impoſſible, to preſerve either the Figure or the Sight of the Patient's Eye. In Caſes of this Nature, then, we are firſt to apply Compreſſes, dipt in warm Wine, or Spirit of Wine; and afterwards ſome vulnerary Balſam, in order to conglutinate the Wound; and, to prevent the Deformity of the Face, an artificial Glaſs, or Silver Eye, delineated in *Tab.* 28. *Fig.* 1. may be introduced into the Orbit, inſtead of the natural Eye.

It ſometimes happens, that when the *Tunica Albuginea* and *Sclerotica* are only gently wounded, the *Cornea* and the *Uvea* remaining entire, the Eye, tho' it has diſcharged its vitreous and cryſtalline Humours, is again ſupplied with a freſh Recruit of theſe Humours, and the Sight of courſe reſtored. The celebrated *Scegerus*, a Phyſician at *Stugart*, ſome time ago kindly communicated to me an Inſtance of a Woman, who had a Cure of this Nature happily perform'd upon her. By a careful Reflection upon this, I am induced to believe, that the Art of reſtoring the Eyes and Sight, even when the Humours are diſcharged, which *Burrhus* and *Kerkringius* ſo much boaſted of, is not altogether chimerical; and that Sight may ſometimes remain, even when the cryſtalline Humour is wanting, which ſome have of late denied.

Slight Wounds of the Noſtrils have their Lips generally brought into Contact by adhefive Plaiſters; but if they penetrate deep, or have ſo cut the tranſverſe Cartilage, that they cannot be retain'd by Plaiſters, the Skin on the Lips of the Wound muſt be ſtitch'd up. But tho' it is ſcarce probable, that any Part of the Noſtrils, when cut off, ſhould again adhere and unite with the reſt of the Noſe; yet *Blegny* maintains, that this End has ſometimes been obtain'd by means of Suture. When the Bone of the Noſe is depreſs'd by a Blow, it is proper, after reſtoring it to its natural Situation, to ſupport it for ſome time by introducing ſmall Silver or Leaden Pipes, ſuch as thoſe repreſented *Tab.* 23. by the Letters P. Q. R. leſt fungous Fleſh, ſprouting up in the Noſe, ſhould block up its Paſſage, or induce other troubleſome Symptoms. Externally any Balſam, or the Eſſence of Maſtich, Amber, and Myrrh, or ſome conglutinating Powder, ſuch as the Powder of *Sarcocella*, or a Powder prepared of Comfrey-root, Gum Tragacanth, and Gum Arabic, may be very properly applied. The Lips of the Wound itſelf muſt be brought into Contact by conglutinating adhefive Plaiſters, and ſecured by a four-headed Bandage.

Wounds may be made in the Lips either with ſharp or obtuſe Inſtruments, or with Bullets. The Wounds made by ſharp Inſtruments, whether direct or tranſverſe, are moſt properly conglutinated by the Application of conglutinating Plaiſters; and, when they are of the larger Kind, they ought to have ſuch conglutinating Powders, as we have already recommended, ſprinkled upon them. In this Caſe the Patient muſt carefully abſtain both from ſpeaking and eating; for which Reaſon he is only to uſe ſuch Aliments as may be ſupt, ſoft Eggs, and other Food which requires no Maſtication. But if the Wound is ſo large as not to be cured by theſe Means, Conglutination muſt be aſſiſted by a proper Suture. In Wounds of the Lips made by obtuſe Bodies, Falls, or Bullets, the firſt Thing to be done is, by ſome digeſtive Ointment, to ſuppurate the contuſed Parts; after which the Lips of the Wound, when cleanſed, are to be brought into Contact by conglutinating Plaiſters, or by Suture, in the ſame manner with the Hare-lip.

Wounds of the Cheeks are to be treated in the ſame manner, and with the ſame Circumſpection as thoſe of the Lips: But if any of the Salival Ducts, which derive their Name from *Steno*, and which run acroſs the Cheek from the parotid Gland, ſhould happen to be cut, the Wound, in this Caſe, can with great Difficulty, if at all, be conglutinated, before an artificial Perforation is made for the Diſcharge of the Saliva into the Inſide of the Mouth; becauſe the Saliva, which continually flows from the wounded Duct as from a Canal, eſpecially in Maſtication, prevents the Wound from healing.

Wounds of the external Ear are either to be united and conglutinated by adhefive Plaiſters, or, if the Cartilage is quite cut, by Suture, applying, at the ſame time, Lint impregnated with ſome vulnerary Balſam, over which Compreſſes, and proper Bandage, muſt be applied. In Wounds of the Ear, near the *Meatus Auditorius*, we are, above all things, to take care, that no Blood, nor other Subſtance, ſlip in, and injure the *Membrana Tympani*: To prevent this, the internal Ear is to be carefully fill'd with Lint or Cotton.

It rarely happens, that the Tongue is pierced or cut, ſince it is defended from Accidents of this Nature by the Teeth and Jaws: But it is ſometimes cut by the Biting of a Perſon's own Teeth in Epilepſies, or by violent Falls, and eſpecially by Bullets. If, then, either by Bites, Blows, or Puncture, the Tongue is but gently wounded, ſo as to be left entire, either in the Middle or on both Sides, the moſt proper Method is, in this Caſe, frequently to anoint the Part affected with Oil of ſweet Almonds, mix'd with Sugar-candy; or with Honey of Roſes, mix'd with Oil of Myrrh *per Deliquium*.

Large and ſevere Wounds of the Tongue are, with Difficulty, conglutinated without the Help of Suture; ſo that, when the Tongue is wounded near the Gullet, it is not to be wonder'd at, if the Wound remains ever after, ſince the Situation of the Part renders Suture impracticable. That the Faculty of Speech may therefore ſuſtain as little Injury as poſſible, we are, in the firſt Place, to take care, that, in large Wounds of the anterior Part of the Tongue, the Lips be commodiouſly joined by Suture as ſoon as poſſible, and the above recommended Medicines applied to the Wound; for conglutinating Plaiſters cannot, in this Caſe, be applied. *Purmannus* informs us, that, for conſolidating Wounds of this Kind, he ſucceſsfully uſed a certain *Fibula* made of Silver Wire, or ſome other ſuch Subſtance. In Wounds of the Tongue made by Bullets, the moſt proper Medicines are Oil of ſweet Almonds, mix'd with Sugar-candy, or Honey of Roſes, mix'd with Oil of Myrrh *per Deliquium*; for, in this Caſe, Suture is of little or no Service. It alſo ſeems neceſſary, that, in Wounds of this Kind, the Patient ſhould, about the Beginning of the Conglutination, abſtain both from ſpeaking, and from ſuch Aliments as require Manducation.

Wounds of the Palate cannot more commodiouſly be conglutinated, than by anointing them either with Honey of Roſes alone, or with an Addition of a little *Peruvian* Balſam, and afterwards with Oil of Myrrh *per Deliquium*. Theſe Medicines are alſo found to be very effectual in conglutinating other Wounds of the internal Parts of the Mouth.

See VULNUS.

Wounds of the Head injure either the external common Integuments only, or the *Periоſteum*, or the *Cranium*, or the

the *Dura Mater*, or the *Pia Mater*, or the Veſſels, Subſtance either cortical or medullary, or the Ventricles of the Brain.

We may know, that the Integuments only are injured, firſt, by conſidering the Figure of the wounding Inſtrument.

Thus, if the Wound is made by an Inſtrument with a direct or ſtrait Edge, ſuch as a broad Sword or a Knife, the Wound may be pretty large, and yet not penetrate very deep. But if the Point of a ſharp Inſtrument is puſh'd againſt the Head, the external Wound may be very ſmall, and it may, notwithſtanding, ſink very deep; and if the Wound is made with a Weapon which has a convex Edge, as a Scymitar or Hanger, the Wound cannot be long, without being at the ſame time very deep.

Secondly, by reflecting on the Force with which the Wound was inflicted.

For, if this was ſmall, the Wound cannot be deep, and *vice verſa*. This can only be learn'd from the Patient, the Spectators, or the Perſon who did the Miſchief.

Thirdly, the Condition, and eſpecially the Figure, of the Part injured, will afford us ſome Light as to the Depth of the Wound.

Thus, when the Part affected happens to be flat, and but little convex, the external Wound may be long without being very deep; but when the Wound is upon a Part which is angular, prominent, and much convex, it is plain, that it muſt neceſſarily be deep, if it is extended in Length. *See what has been ſaid concerning the Figure of the Head above.* Becauſe all Heads are not exactly ſhaped alike, it is neceſſary the Surgeon ſhould be acquainted with the moſt uſual Deviations from the natural Conformation. *See, therefore, Tab. 9. and the Explications thereof.*

Fourthly, from the Mildneſs of the Symptoms, which conſiſt principally in the Depravations of the ſeveral Functions conſequent to the Wound.

The more numerous, and the more violent, theſe Symptoms are, the greater Suſpicion there is, that a proportionable Number of Parts, and thoſe too ſuch as are more remarkably neceſſary to the Perfection of Health, are injur'd. But ſince the Origin and Spring of the Animal Actions is lodged in the Head, it ought firſt to be inquir'd, whether, in conſequence of the Wound, any Change is induced on theſe. A Vertigo, a ringing Noiſe of the Ears, a Vomiting of Bile, Drowſineſs, a total Privation or Depravation of all, or at leaſt ſome of the Senſes, and an involuntary Diſcharge of the Urine and Excrements, are, in Caſes of this Nature, inauſpicious Prognoſtics. If none of theſe Symptoms appear at all, or if they are but ſlight, and ſoon go off, it is to be preſumed, that the Inſtrument, with which the Wound was made, has not penetrated very deep. *Hippocrates*, in the fifteenth Section of his Book *de Capitis Vulneribus*, beſides the Symptoms immediately ſubjected to our Senſes, carefully injoins the following Particulars to be inquired into, *ſince they are Signs or Marks of a Patient's being more or leſs dangerouſly wounded, Whether*, for Inſtance, *he is ſeized with a profound Sleep, a Loſs of Sight, a Vertigo; or whether he falls down apoplectic.* But it muſt be owned, that very ſevere Wounds of the Head, which have penetrated into the very Subſtance of the Brain, are not, upon their firſt Reception, univerſally attended with theſe formidable Symptoms; for, in the *Journal des Sçavans*, for *April* 1735. we have an Account of a young Man of twenty-ſix Years of Age, who had the Bone of the *Bregma*, on the Right Side, tranſfix'd in the Middle, by an Arrow pointed with Iron; but whilſt the Patient endeavour'd to extract the Arrow, its wooden Shaft broke near the Iron Point, which remain'd in the Wound. Notwithſtanding this, he remain'd in a tolerably eaſy State till the ſeventh Day, when, an Inciſion being made, the *Os Bregnatis* was found perforated with a circular Hole, and the retain'd Point of the Arrow appear'd. Tho', by applying the Trepan twice, a large Portion of the *Cranium* was removed, and tho' the *Dura Mater* was cut away all round the Perforation in it, yet the remaining Point of the Arrow could not be extracted. The Side, oppoſite to that on which the Wound was inflicted, became paralytic, a plentiful Suppuration came on, and a conſiderable Number of fungous Excreſcences appear'd on the Brain. Three Months after, the Iron Point was, by means of a Probe, felt in the Subſtance of the Brain: The Surgeon endeavour'd to extract it, but Convulſions, immediately ſeizing the Patient, put a Stop to his Deſign. But, about the End of the fourth Month, the Iron Point ſpontaneouſly preſented itſelf at the Aperture of the Wound; and, being laid hold on with a proper Tenaculum or Forceps, was eaſily, and without any Detriment, extracted; and, twenty Days after, this Wound, apparently ſo dangerous, was cover'd with a Cicatrix. Many other Obſervations occur in Authors, which ſhew us, that it is ſometimes adviſeable to leave foreign and adventitious Bodies in Wounds, ſince they are afterwards happily excluded purely by the Efforts of Nature. *Hippocrates*, and the moſt ſkilful Phyſicians who ſucceeded him, ſuſpected the Diſorder to be of the more terrible Kind, if violent Symptoms appear'd, not at firſt, but ſome Days after the Wound was inflicted: Thus *Hippocrates* informs us, "That he who is wounded in the Head is "in the moſt hopeful State, when he does not become feveriſh, when no Eruption of Blood appears, no Inflammation "enſues, and no Pain is felt; but that, if any of theſe Symptoms ſhould appear, they are the moſt lucky Prognoſtics, "when they do ſo in the Beginning, and remain only for a "ſhort time; whereas Fevers ſeizing Patients wounded in the "Head, on the fourth, ſeventh, or twelfth Day, generally "prove mortal." Hence *Jacetius*, in his learned Commentaries upon the *Coacæ Prænotiones*, lays it down as a general Axiom, that Fevers, and all other Symptoms of ſhort Continuance, which appear immediately after Wounds are inflicted, are leſs to be dreaded than ſuch as laſt for a conſiderable time, or happen ſome time after: When, therefore, violent Symptoms appear at the Beginning, he orders the Phyſician to ſuſpend his Judgment, till he ſees whether they prove permanent or not. 'Tis therefore obvious, that a certain Prognoſtic cannot be drawn from the Violence or Slightneſs of the Symptoms, but that other Circumſtances muſt be taken into the Account: But it may ſafely be affirm'd, that the worſt is to be dreaded, if formidable Symptoms immediately appear. We are not, however, to deſpair in the moſt terrible Caſes, nor to indulge a fooliſh Confidence, tho' in the Beginning no unfavourable Symptoms ſhould occur.

Fifthly, Wounds of the Integuments only, are diſtinguiſh'd from others by the Sight. In Wounds, therefore, of the Head the Hair is immediately to be ſhaved off, and the Part is to be waſh'd with equal Parts of Wine and Water, a little warm. The Wound is then, before the firſt Dreſſing, to be carefully inſpected, that the Parts injured may be known, a juſt Prognoſtic form'd, and a right Method of Cure purſued.

But, among the Signs ſubjected to our Sight, and which inform us, whether the Bone is injur'd, or only the common Integuments, *Hippocrates*, in his Treatiſe on *Wounds of the Head*, adviſes us to obſerve, whether the Hairs are cut off by the Weapon, and fix'd in the Wound; and if this ſhould happen, we may then aſſert, that the Bone is injur'd; for whilſt the wounding Inſtrument, tho' ſufficiently ſharp, only penetrates the ſoft Integuments of the *Cranium*, the Hairs follow the Impreſſion made by the Weapon, without being cut: But when the Hairs are ſtruck againſt the hard Bone, they can no longer yield to the Edge of the Inſtrument, but muſt of courſe be cut.

Sixthly, the Probe will diſcover the Nature of theſe Wounds.

Thus, gently drawing aſide the Lips of the Wound, an obtuſe pointed Probe, of the ſofteſt Lead, or pureſt Silver, which is always moſt ſoft and flexible; is, with a wary and cautious Hand, to be introduced, and the Bottom of the Wound thoroughly explor'd; and if the Bone is any-where laid bare, a Sound will be produced, by which it may be diſcover'd; but if in no Part any Roughneſs or Aſperity is felt, if all the Parts appear ſoft, and if no Noiſe is made by the Probe, we may infallibly conclude, that the Cranium is neither laid bare, nor injur'd, in the Part in which the Wound is inflicted.

Tho' theſe Wounds may at firſt ſeem ſlight, yet they frequently become dangerous, on account of the Vicinity of the Muſcles, Tendons, tendinous Expanſions, Sutures, Periofteum, Cranium, Nerves, Blood-veſſels, and the Brain; as alſo becauſe the great contractile Force of the wounded Part cauſes the Sides of the Wound to recede from each other, and conſequently enlarges it.

When, therefore, we are aſcertain'd, that the *Cranium* is not injur'd, we are nevertheleſs frequently to expect very dangerous and violent Symptoms; though the Force, with which the Wound was inflicted, was not ſufficient to cauſe a Concuſſion of the Brain, or otherwiſe to injure any of the Parts within the Cranium: For a great many ſtrong Muſcles are inſerted in the Cranium, as the *Cucullaris*, *Splenius*, and ſome others, taken Notice of above in the Deſcription of theſe Parts; and there is a tendinous Expanſion, or *Aponeuroſis*, which covers the whole Head, and which is deſcrib'd in the ſame Place: The temporal Muſcles alſo cover a large Portion of the lateral Part of the *Cranium*. Now Wounds of the tendinous Parts are productive of very bad Symptoms, as is ſpecified under the Article VULNUS; and Wounds of the temporal Muſcles frequently, tho' not always, are follow'd by Convulſions; inſomuch that *Hippocrates*, in his *Coacæ Prænotiones*, pronounces, that thoſe who are wounded in the Temples are affected with Convulſions on the oppoſite Side.

As to the Sutures, it has been obſerved, that the *Dura Mater* adheres firmly to them, and communicates with the *Pericranium*; which alſo is ſtrongly connected to the Sutures, by particular Veſſels paſſing thro' the *Cranium* at theſe Places: Hence Injuries done to the external Parts, near the Sutures, may readily affect the internal Parts by theſe Communications.

As the *Perioſteum* imparts Blood-veſſels to the Bones of the *Cranium*, receives mutually Veſſels from theſe Bones, and is connected to the Bones by the means of both theſe ſorts of Veſſels, the Influx and Efflux of the vital Fluid to and from the Bones of the *Cranium*, eſpecially the external Table, depends upon the entire State of the *Perioſteum*. When, therefore, the Perioſteum is affected, the Diſorder is readily communicated to the Bones of the Cranium, and hence to the *Dura Mater*, particularly about the Sutures; where, by particular Veſſels, a manifeſt Communication is form'd between theſe two Membranes.

As to the Nerves, thoſe ariſing from the fifth Pair, and the hard Portion of the ſeventh, are diſtributed thro' the external Parts of the Head, in very numerous and conſiderable Ramifications. When, therefore, theſe Nerves are prick'd, or partially divided, all thoſe Symptoms are to be dreaded, which, under the Article VULNUS, are ſaid to attend Wounds of this kind in all Parts of the Body. This muſt happen here ſo much the ſooner, becauſe the Nerves are very tenſe as they run along the Integuments of the Cranium, and are alſo very near their Origin.

As to the Veſſels, very conſiderable Arteries run along theſe external Integuments. Wounds of which are ſometimes ſucceeded by profuſe Hæmorrhages.

As to the Brain, in ſome Parts the Bone of the Cranium is ſo thin, as to be tranſparent in a prepared Skull. For this Reaſon, when the Integuments are cut, 'tis always to be dreaded, leſt the Brain, which lies ſo near, ſhould be affected. This Effect may be brought about either in conſequence of an Injury done to the Nerves, or by reaſon of the Continuity of the external Perioſteum, and Dura Mater, or by any Affection ſubſequent to the Wound, and which may not only hurt the Cranium itſelf, but alſo reach the Brain contained in it.

As to the contractile Force of the injured Part, it is a common Phenomenon in all Wounds, (ſee VULNUS) that the ſolid Parts, when divided, recede from each other; but this Receſſion is greater or leſs, in proportion to the contractile Force of the Parts. The Skin of the Head is thick and ſtrong, equally tenſe on all the Parts of the Cranium, and very moveable, in conſequence of which it muſt eaſily yield. A cellular Membrane alſo lies under it. For theſe Reaſons, when the Skin of the Cranium is divided, the Lips of the Wound are ſpeedily far retracted from each other; for which Reaſon Wounds of the Forehead generally leave large Scars behind them. Now, if the Nerves are partially divided, and if the Lips of the Wound forcibly recede from each other, the Symptoms attending a Nerve thus wounded will be far more violent. Beſides, the more the Lips of the Wounds are retracted, the larger Portion of the ſubjacent Parts is expoſed to the Cold of the ambient Air, whence various Inconveniences may alſo ariſe.

If a Contuſion ſhould accompany a ſlight Wound, this Circumſtance renders it more liable to be attended with bad Symptoms.

For Contuſions tear and deſtroy a great Number of the ſmall Veſſels; whence the Humours which they contained are extravaſated, and conſequently ſtagnate and corrupt in the Places which receive them. But as the Cranium, a hard Body, lies under the Integuments, unleſs the wounding Inſtrument be exceedingly ſharp, ſome Degree of Contuſion muſt neceſſarily happen. Now, in this Caſe, becauſe the Skin upon the Head is extremely thick, the ſubjacent *Panniculus Adipoſus* is thin, and liable to be eaſily dilated; and becauſe the hard Bones of the *Cranium* lying under it reſiſt, in ſome meaſure, its Dilatation, hence the extravaſated and corrupted Humours readily make way thro' the yielding *Panniculus Adipoſus*, and, deſcending by their own Weight, may fall upon, and irritate, the large Muſcles above-mentioned, inſerted in the Bone of the *Occiput*, and there produce very bad Symptoms: Or theſe Humours may, in the ſame manner, deſcend to the Temporal Muſcles, or the Muſcles of the Forehead, near the Eyes, or the Root of the Noſe, and there produce the ſame Diſorders. That this is ſometimes the Caſe, we certainly know from undeniable Obſervations; for every one concerned in Practice muſt have frequently obſerved, that the very Day after a Contuſion has been made on the Top of the Head, the Forehead, and even the Eye-lids, have become tumid and livid, on account of the extravaſated Blood falling down upon theſe Parts. Hence *Hippocrates*, in his Treatiſe concerning Wounds of the Head, juſtly condemns thoſe as of a bad Kind which are made with obtuſe Darts.

Another Misfortune to be dreaded from this is, that the *Perioſteum* and Bone may be contus'd or affected by the extravaſated Fluids: Hence a Corruption of the Bone, and the other Symptoms attending ſuch an Accident, are to be apprehended; for the Bones of the *Cranium* may be contus'd, tho' they appear to be in their natural State; and the Wound made by the Contuſion may have penetrated more or leſs into the Subſtance of the Bone, tho' the preciſe Degree of the Injury cannot be determin'd by the Eye, as *Hippocrates*, in the above-mention'd Work, juſtly obſerves. Hence 'tis obvious how juſtly Wounds of the Head, accompany'd with Contuſions, are ſuſpected by ſkilful Surgeons; ſince, long after, when all is thought to be in a happy State, the very worſt Symptoms ſometimes appear. Among the many Obſervations which prove this, *Bohnius (De Renuntiat. Vulner. Sect. 2. Cap. 1.)* gives us, from *Paaw*, the following remarkable one. A certain Man was by his Neighbour, whilſt drinking, ſtruck on the Bone of the Bregma, on the Right Side, with a Pewter Pot; upon Inſpection there was no Fiſſure found in the Bone; the Party wounded remain'd vigorous, and walk'd about till ten Months after; when, being ſeized with a Vertigo, he dropt down, and ſoon after dy'd. Upon opening the *Cranium*, in the Place where the Blow was received, the Bones and Membranes of the Brain were found putrid and fetid.

If the Aperture is but ſmall, the Contuſion large, and a great Quantity of corrupted Humours are contain'd within, bad Symptoms will very probably enſue.

It frequently happens, in Caſes of a Fall, or an Injury received from any blunt Inſtrument, that a ſlight Wound is only inflicted in the Skin of the Head, at the ſame time that a conſiderable Portion is injur'd by the Contuſion. In Caſes of this Nature not only the Perſons wounded, but alſo leſs ſkilful Surgeons, are ſubject to overlook the Misfortune, till at laſt they are ſurpriſed to find ſo terrible Symptoms ariſing from a Wound apparently ſo ſmall: Nor is this to be wondered at, ſince the collected Matter, not being able to find a Paſſage thro' ſo ſmall a Wound, is increaſed, and finds out new Ways for itſelf thro' the cellular Membrane; or the corrupted Humours, by their Stay, affect the ſubjacent *Pericranium*, and adjacent Muſcles.

Some Years ago, ſays *Van Swieten*, I was call'd to a Joiner, who had labour'd under a Fever; and as his Diſorder had nothing in common with the epidemic Fever then raging, and as, by the ſtricteſt Scrutiny, I was not able to aſſign any Cauſe, tho' various Symptoms diſcovered ſome latent Diſorder, I was entirely at a Loſs what Judgment to form. His Head-ach was very intenſe; his Forehead, and the Eye-lids of both his Eyes, were become red and tumid; he complain'd of a Tenſion in the Nape of his Neck, and his Sleeps were broken and diſturb'd. I aſked him, Whether his Head had been hurt by any external Cauſe. The Patient denied, that it had, tho' I told him over and over again, that I ſuſpected ſuch a Thing. A Servant who was preſent, luckily call'd to mind, that, about eight Days before, a Tile had fallen from a ſmall Height upon the Patient's Head. He own'd it was ſo, but at the ſame time affirmed, that he felt little or no Pain from it, and was not ſenſible of any bad Conſequences ariſing from it. The Patient, upon this, permitting me to inſpect the Place, I found a ſmall Wound, ſcarce larger than a Pin's Head, but under it a Contuſion of an Inch Diameter. I forthwith ordered the Integuments of the Part affected to be removed, and the next Day the Fever, and all the other Symptoms, were conſiderably mitigated. At laſt, a kindly Suppuration coming on, the Wound was deterged, and the Patient happily cured, without the Appearance of any other Symptom.

In Caſes of this kind, the ſordid Humours, collected and retain'd within, cauſe conſiderable Tumors, an Eryſipelas, or Oedema, Pains, Convulſions, Putrefactions of the Bones and Perioſteum, Fevers, and Death.

The Air alſo getting into the Cavities of the cellular Membrane, and being there confin'd by the incautious Application of Plaiſters, raiſes conſiderable Emphyſematous Tumors.

Tumors are rais'd particularly, when, by a powerful Contuſion, the Skin remaining entire, or being only very little broken, a large Number of Veſſels are hurt, and their diſcharg'd Contents collecting themſelves, and being pent up within the entire Skin, raiſe in it a large Tumor. This Effect is very ſuddenly produc'd, ſince the ſubjacent Cranium cannot poſſibly yield, for which Reaſon the whole Maſs of the diſcharg'd Juices diſtend and elevate the Skin conſiderably. And this is the Reaſon, why, in other Parts of the Body, Contuſions neither produce ſo large, nor ſo ſudden Tumors. I remember, ſays *Van Swieten*, in a Houſe where I once lodg'd, to have ſeen the Maid fall down-ſtairs, and daſh her Forehead upon a Stone Floor. I made all poſſible Haſte to her Aſſiſtance the Moment I obſerv'd her; but, before ſhe could be taken up, a Tumor as large as a Hen's Egg appear'd on her Forehead. It is a common thing for Children, amidſt their Diverſions, to have ſuch Tumors appear on their Heads, when they daſh them againſt any hard Bodies.

As for the Difference between an Eryſipelas and a Phlegmon, ſee the Article INFLAMMATIO.

It is ſufficient to obſerve here, that by Eryſipelas is underſtood a ſuperficial Inflammation, generally ſeated in the Skin only, of a reddiſh-yellow Colour, and which, for the moſt part, reſides in ſmaller Veſſels than thoſe deſtin'd for the Conveyance of the red Globules of Blood. According to *Galen*, *Meth. Medend. Lib.* 2. *Cap.* 1. a perfect Eryſipelas is a Diſorder of the Skin only. This Species of Swelling occurs more frequently in no Part of the Body than in the Head and Face, and in Wounds of the Head it almoſt always denotes ſomething malignant. Hence *Hippocrates*, in the nineteenth Aphoriſm of the ſeventh Section, ſays, Ἐπὶ τρώσει κεφαλῆς ἐρυσίπελας· and *Galen*, in his Commentaries upon this Place, thinks, that, in the End of this Aphoriſm, the Word κακὸν ought to be underſtood; becauſe an Eryſipelas does not always ſucceed a Denudation of the Bones; but, when it does, it is always a bad Symptom. Beſides, 'tis certain that in many Paſſages, *Hippocrates*, by the Word ὀστέον, or Bone, means the Cranium, as is obvious from the twenty-fourth Aphoriſm of the ſeventh Section. Hence 'tis eaſily underſtood how ſuch a Diſorder may ariſe from a Compreſſion of the Veſſels of the Skin, by the diſcharged Humours diſtending it, or from the Irritation excited by their Acrimony.

Tho' an Oedema, in the general Acceptation of the Word, ſignifies any Tumor, eſpecially one which is ſoft and cold, yet ſuch a Tumor is not here underſtood, but one of a far different Nature. This cold Tumor, for the ſake of Diſtinction, is now called Oedema Oedematodes. But when ſuch a Tumor is white, pellucid, and accompany'd with Heat, it is call'd Oedema Eryſipelatodes. This Diſorder is ſaid to be preſent, when thoſe Veſſels which are ſo ſmall as neither to admit the red nor yellow, but only the pellucid Humours, are inflam'd. See the Article INFLAMMATIO. This Diſorder is alſo call'd *Eryſipelas Bullatum*, becauſe it diſtends and renders tumid the Parts it ſeizes, eſpecially the Eye-lids and whole Face, if it reſides about the Head. In Wounds of the Head it ariſes from the ſame Cauſes with a common Eryſipelas, but is generally eſteemed a worſe Symptom.

As for Pains, they are produced by the collected Matter diſtending the Skin and Nerves; or this Matter, by ſtagnating becoming acrid, affects the Pericranium, which is highly ſenſible, or even the adjacent Tendons and Muſcles.

As for Convulſions, they may ariſe from the ſame Cauſes, and particularly when the Diſorder penetrates at laſt to the internal Parts of the Cranium.

As for the Putrefaction of the Bone and Periоſteum, under the cellular Membrane lies that tendinous Expanſion taken Notice of above in deſcribing the Parts of the Head, and under it the Pericranium, which lies immediately on the Cranium, and communicates with it both by receiving Veſſels from it, and ſending forth others to it. Whilſt then the extravaſated Humours remain pent up under the tough Skin of the Head, the Diſorder produc'd by ſuch a Circumſtance is eaſily communicated to the Pericranium, which, when injured, intercepts the Influx of the vital Juices to the Cranium itſelf. Hence that Part of the Cranium which lies under the affected Pericranium putrefies, which muſt afterwards be ſeparated, before the Diſorder can be cur'd; or, becoming putrid, it will affect the ſubjacent Meninges and Brain itſelf. Hence ariſe the moſt formidable Diſorders, ſuch as Fevers, and even ſometimes unexpected Death: An Inſtance of which we have in a Caſe already mention'd, of a young Man, who, in conſequence of this Circumſtance, was ſeiz'd with a Vertigo, and dy'd ſuddenly.

As for the Air entering the Cavities of the cellular Membranes, this ſubtile Fluid is of ſuch a Nature as to preſs equally on all Sides. When, therefore, a Wound is inflicted on the Head in ſuch a manner as to penetrate the Skin as far as the Membrana Celluloſa, and eſpecially when the Surgeon, by introducing a Probe under the Lips of the Wound, ſearches carefully whether the Periоſteum, or the Cranium itſelf, is hurt, the Air enters the cellular Membrane. If at this time the Wound is perfectly cover'd with any Plaiſter of an adheſive Nature, the Egreſs of the received Air is prevented, and, being rarefy'd by the Heat of the Body, it makes its Way thro' the cellular Membrane, and renders the adjacent Parts tumid. Upon obſerving this, Surgeons generally ſearch more narrowly with the Probe, in order to find out the latent Diſorder. By this means they give a freſh Admiſſion to the Air thro' the dilated Membrane; and, by applying the Plaiſter again, the Tumor is augmented, and ſpreads itſelf farther, eſpecially over the Forehead, Eye-lids, and Face. Hence it happens, that next Day the whole Face is ſometimes ſurpriſingly affected with a pellucid and elaſtic Tumor, inſomuch that the Eyes are, as it were, bury'd, and the Noſe not to be diſcover'd; for 'tis obſerv'd, that the cellular Membrane is the more eaſily diſtended, the more tender it is, and the leſs Fat it contains. Hence it is, that the Parts under the Eye-lids ſwell ſo eaſily, and that the cellular Membrane of the Penis and Scrotum are diſtended to ſuch an enormous Size in that Species of Dropſy call'd Anaſarca, becauſe, in theſe Caſes, the cellular Membrane contains no groſs Fat, but only a kind of mucilaginous Subſtance; but, in caſtrated Animals, a large Quantity of Fat is collected in theſe Parts. Tumors of this kind are properly enough call'd Emphyſemata, of Inflations, which *Gorræus*, in his *Definit. Medic.* defin'd Collections of a flatulent Air in the empty Spaces of the Body. *Galen*, in *Method. Medend. Lib.* 14. *Cap.* 7. uſes this ſame Word in the like Senſe. "Inflations," (ἐμφυσήματα) ſays he, "ariſe from a flatulent Air collected "ſometimes under the Skin, and ſometimes under the Membranes which cover the Bones, or which ſurround the "Muſcles, or any of the Viſcera: A large Quantity of this "Air is alſo ſometimes collected in the Stomach and Inteſtines, "as alſo in the intermediate Space between theſe and the Peritonæum." In order to diſtinguiſh thoſe Tumors from an Oedema, he afterwards ſays, that, when preſs'd with the Finger, they do not retain its Print, but yield a Sound reſembling that of a Drum. But this is only true, when this flatulent Subſtance is collected in a large Cavity of the Body, ſuch as the Abdomen, which, when ſtruck, ſounds like a Drum; for which very Reaſon this Diſorder is by Phyſicians call'd Tympanites. But when this flatulent Subſtance is lodg'd in the cellular Membrane, it may yield when preſs'd with the Finger; becauſe, in conſequence of its flatulent and elaſtic Nature, it is protruded into the adjacent Cells of this Membrane, and recovers its former Place when the Preſſure ceaſes, or is remov'd. Becauſe the Eye-lids ſwell ſo eaſily on account of the great Laxity, and conſequent Dilatability, of their cellular Membrane, *Paulus Ægineta*, in *Lib.* 3. *Cap.* 22. for this Reaſon defines an Emphyſema of the Eye-lid an œdematous Tumor of that Part. But in *Book* 4. *Cap.* 28. he ſays the ſame Things concerning an Emphyſema as thoſe already quoted from *Galen*.

But how eaſily the Air, when once admitted into the cellular Membrane, paſſes thro' all its Parts, we may learn from the Practice of Butchers, who, by making a ſmall Orifice in the Skin of the ſlain Animal, inject the Air, that they may the more eaſily ſeparate the Skin from the ſubjacent Fleſh without mangling it. 'Tis alſo confirm'd by Obſervation, that Air, entering the Panniculus Adipoſus, may pervade almoſt all the Parts of the Body, and excite ſurpriſing Tumors in various Parts, and ſometimes almoſt over all the Surface of the Body. In the *Mem. de l' Acad. des Sciences*, *Ann.* 1704. we have an Account of a Girl of five Years of Age, gradually waſted with a chronical Diſorder, who, three Days before her Death, had a Tumor appearing on her Right Cheek, which gradually ſpread over the whole Trunk of her Body. When the Tumor was preſſed with the Fingers, the contain'd Air withdrew itſelf with a kind of Noiſe. After her Death, an Inciſion being made in the Skin of her Abdomen with a Knife, the entire Tumor forthwith ſubſided, and the flatulent Matter exhal'd with an intolerable Stench. *Thomas Bartholine*, in *Hiſtor. Anatom. rarior. Cent.* 5. *Hiſtor.* 12. gives us an Account of a robuſt young Man, who receiv'd two Wounds, one near the Right Clavicle, the other in the poſterior Part of his Body, near the Left Scapula. In conſequence of theſe Wounds, not only his Face, but all the other Parts of his Body were ſeized with a Tumor, which, in ſome meaſure, reſembled a Sponge full of Wind, and which reſtored itſelf to its former Situation after Preſſure. The ſame Author, in *Cent.* 6. *Hiſt.* 89. gives us another Inſtance of the ſame Nature. This Species of Tumor may alſo, probably, be produc'd whilſt the extravaſated Humours are becoming putrid; ſince at this Time, as is confirm'd by Experience, by the Putrefaction, the latent elaſtic Matter of Bodies is drawn out into Action, which, if it is not Air, is yet a Subſtance capable of being immenſely expanded by Heat. Thus the Carcaſes of Perſons drowned beginning to putrefy, and the Whole of the Body becoming diſtended, eſpecially the Abdomen, emerge and riſe above the Water, ſince, by having their Bulk enlarg'd, they are render'd ſpecifically lighter than that Fluid. Now, as a Collection of this extravaſated Matter, lodg'd under the Skin, is capable of degenerating ſo far, 'tis obvious it may ſometimes prove the Cauſe of this ſurpriſing Diſorder. Perhaps this was the Caſe with the Girl, who, being waſted with a chronical Diſorder, had the whole Trunk of her Body render'd tumid three Days before her Death.

Hildanus, in *Obſerv. Chirurg. Centur.* 2. *Obſ.* 25. gives us a Caſe, in which, after ſevere Wounds of the Head, the Carcaſe of the Deceas'd, two Days after the Wounds were inflicted, ſmell'd ſo ſtrong, that none could approach it; and next Morning the Head, Face, and Arms, were ſwell'd in an incredible Manner, and the Scrotum ſo diſtended as in Bulk to equal a Child's Head.

When ſuch an Emphyſema appears, the very Nature of the Thing indicates, that this elaſtic diſtending Subſtance ſhould be expel'd from the cellular Membrane, which it diſtends to ſuch a Degree. This Effect may be produc'd by moderate Preſſures, or Frictions, by driving the included Air to the Aperture of the Wound, which may alſo be dilated, if Neceſſity requires it; or a free Diſcharge of this Matter may alſo be procur'd by Scarifications, which penetrate into the cellular Membrane. *Paré*, *Lib.* 10. *Cap.* 30. gives us a memorable Inſtance of the Succeſs of Scarification in a Caſe of this Nature: A Man receiv'd

rein'd a Wound in the Throat with a Sword, which cut a Part of the Aſpera Arteria, and one of the Jugular Veins; whence enſu'd a profuſe Hæmorrhage, and a whizzing Noiſe, made by the Air paſſing thro' the Wound of the Aſpera Arteria. The Lips of the Wound were united by Suture, and aſtringent Remedies were apply'd. A little after, the Air, inſinuating itſelf into the cellular Membrane, not only wonderfully diſtended the Places adjacent to the Wound, but alſo the whole Body. The Face was ſo inflated, that the ſmalleſt Traces of the Eyes and Noſe were not to be obſerv'd. Whilſt the Patient was by all abandon'd in this deplorable State, as one whoſe Recovery was not to be expected, a ſkilful Surgeon boldly ventur'd to make ſeveral deep Scarifications in his Skin, with an Intention to give a free Exit to the included Air. The Succeſs of the Operation was ſo ſurpriſingly happy, that the Patient was ſnatch'd from the Jaws of Death, and reſtor'd to perfect Health.

But thoſe emphyſematous Diſorders much more frequently accompany thoſe Wounds of the Breaſt which penetrate into the Cavity of the Thorax, becauſe the Air convey'd thro' the Wound into the Cavity of the Breaſt cannot often be diſcharg'd thro' the Wound, when it is either too ſmall, or obſtructed by any Cauſe whatever: Hence, being rarefy'd by the Heat of the vital Organs, it makes its Way into the cellular Membrane, But if the injur'd Lungs let the inſpir'd Air paſs into the Cavity of the Breaſt, 'tis obvious that terrible Emphyſemata may be produc'd, ſince by every repeated Inſpiration an Acceſſion of new Air is made.

If the Integuments only are injur'd, without any of the unpromiſing Circumſtances above related, the Cure is eaſily perform'd, tho' the Wound appears to be very large, by proper Bandage, and the Method directed for the Cure of Wounds in general, under the Article VULNUS. But the Cure ſucceeds beſt, when proper Meaſures are purſu'd whilſt the Wound is recent; when the Lips of the Wound are properly brought together; when it is dreſs'd but ſeldom, and then with the utmoſt Expedition; when all moiſt, relaxing, unctuous Applications are carefully avoided; and when it is well defended from the Air.

From what has been ſaid it is evident, that leſs is to be apprehended from a large Wound, than from a ſmall Wound with a great Contuſion; which laſt may be, and frequently is, attended with Danger. This, however, may, in ſome meaſure, be prevented, by enlarging the Aperture of the Wound.

All the Cautions relative to Wounds in general, given under the Article VULNUS, are applicable to Wounds of the Integuments of the Head without Contuſion. But there are ſome Particulars to be obſerv'd in Wounds of the Head, even when the external Parts are only injur'd. Thus the Ligatures deſign'd either for ſecuring the Dreſſings, or keeping the ſeparated Parts in Contact, ought to be ſo moderately apply'd, as only to ſecure the Parts gently; for if they ſhould be apply'd too tight, the external Integuments are preſs'd upon the hard Cranium, which every-where lies under them. Hence a Compreſſion of the Veſſels, an Inflammation, and the ſeveral Diſorders ariſing from it, are brought on. Expert and ſkilful Surgeons, on Occaſions of this Nature, always uſe ſoft and gentle Bandage. The Union alſo of the gaping Lips in Wounds of the Head is not ſo properly obtain'd by Compreſſions and Bandage, as by adheſive Plaiſters, or what we call the dry Suture, becauſe theſe Wounds generally divide only the Skin, and the ſlender ſubjacent cellular Membrane adhering to the Skin eaſily follows it.

The moſt ſkilful Surgeons, in Caſes of this Nature, to the Patient ſeem to do nothing at all, whilſt, at the ſame time, they ward off and prevent many Symptoms, which, in the like Caſes, are brought on by the officious Care of leſs ſkilful Hands, and which are afterwards remov'd with Difficulty; for all that is here requir'd is, that the ſeparated Integuments of the Head may again grow together, and be united. But for this Purpoſe Nature alone is ſufficient, and Art only removes the Impediments, and proves a kind of Aſſiſtant. When, therefore, all the Symptoms declare, that the Cure is proceeding happily, there is no manner of Occaſion for cleanſing the Wound often, and expoſing the ſprouting tender Veſſels to the unaccuſtom'd Influence of the Air; and that ſuperfluous and prepoſterous Method of wiping Wounds by the frequent Application of Pledgets will deſtroy the tender Parts, as faſt as they begin to ſprout afreſh. It is, therefore, ſufficient to dreſs Wounds but ſeldom; for if any thing peccant is conceal'd, or if too large a Quantity of Pus calls for Abſterſion, the Heat and gentle Itching about the Wound will inform us of it; we may alſo diſcover by the Smell, whether any thing of a putrid Nature is contain'd in the Wound; and the increas'd Malignity of the Symptoms will immediately indicate, whether any thing highly dangerous is to be dreaded. *Cæſar Magatus*, who has ſupported the rare Dreſſing of Wounds with the moſt ſolid Arguments, and evidently demonſtrated the happy Conſequences of that Practice, when ſpeaking of ſimple Wounds of the Head without a Denudation of the Bone, after having directed the Lips of the Wound to be united, and Turpentine, with Maſtich and Sarcocolla to be apply'd, forbids the Removal of the Dreſſings for four Days; becauſe, in that Time, he ſays, the Conglutination will be accompliſh'd. But where there is a Loſs of Subſtance, or where the Gaping of the Lips of the Wound requires a Generation of new Fleſh, he orders the Removal of the Dreſſings of the Wound to be defer'd till the ſeventh Day. The Surgeon may, indeed, once a Day, or oftener, inquire whether any Pain, Itching, or Heat, are perceiv'd; he may alſo ſmell whether any thing of a putrid Nature is contain'd in the Wound: But if he diſcovers no ſuch thing, 'tis more adviſeable to let the Dreſſings remain; and if a freſh Dreſſing is neceſſary, it ought to be apply'd with all poſſible Expedition; and every thing ought to be in Readineſs before the Wound be uncover'd. In Wounds of other Parts of the Body, where the Integuments are only divided, the uncovering and cleanſing them frequently does generally little more Harm than retarding the Cure; but this Practice is more dangerous in Wounds of the Head, ſince the Diſorders of the Integuments are ſo eaſily communicated to the ſubjacent Pericranium, and even to the Cranium itſelf: For this Reaſon the ſeldom Dreſſing of theſe Wounds cannot be too carefully inculcated. Where there is a Wound of the ſoft Parts, attended with a Fracture of the Bone, after the Bone is reſtor'd, the Dreſſing is left on for ſeveral Weeks; and yet the Cure of the Wound accompanying the Fracture ſucceeds very happily, tho' it has not been artificially deterg'd.

All moiſt, relaxing, and unctuous Applications ought carefully to be avoided; for under the external Integuments lies the tender and eaſily dilatable cellular Membrane, naturally pent up between the Skin and Cranium: When, therefore, upon a Diviſion of the Integuments, moiſt and relaxing Medicines are apply'd to the Wound, the cellular Membrane, moiſten'd by theſe, will become luxuriant, be fill'd with adventitious Fluids, and degenerate into a fungous Subſtance, to be again ſeparated by a ſubſequent Suppuration, which, when copious and laſting, ſeldom fails to affect the ſubjacent Pericranium. Hence all ſkilful Surgeons have unanimouſly condemn'd the Uſe of them in Wounds of the Head; and in this Particular they have follow'd the Practice of *Hippocrates*, who, in his Treatiſe of Wounds of the Head, Sect. 17. affirms, that "A Wound of "the Head is not to be moiſten'd with any thing, no not "with Wine, or at leaſt with very little; neither does ſuch a "Wound require Cataplaſms or *Liniments*." In the ſame Treatiſe he afterwards adds, that "It is a bad Symptom when in "Wounds of the Head the Fleſh is humid, moiſt, (μυδᾶσαν) and "long before it is render'd clean." And after he has inform'd us, that Fleſh, ſhatter'd and mangled by a Dart, ought to be converted into Pus, he tells us, that the Wound is to be brought to a Suppuration as ſoon as poſſible; but when it is depurated, it ought to become drier, by which means it will heal the ſooner, and a dry and not over-moiſt Fleſh be generated. When, therefore, a Contuſion, accompanying a Wound, requires Fomentations, the Surgeons now always uſe Wine, leſt too great a Relaxation ſhould be produc'd by aqueous Applications alone. For the ſame Reaſons no pinguious Subſtances ought to be us'd in Wounds of the Head, by reaſon of the great Relaxation they induce. Oleous Subſtances alſo, by their Tenacity, obſtruct the Capillary Veſſels, and render them impervious. *Ludovicus Duretus*, in his *Comment. in Coac. Hippoc.* informs us, that in *Italy*, eſpecially among the *Florentines*, Wounds of the Head were obſerv'd to be very difficultly cur'd, which they aſcrib'd to ſome latent bad Quality of the Air. But ſeveral Authors, among whom *Bonetus*, in his *Anat. Practic. Tom.* 3. is one, have obſerv'd, that they apply Oil of Roſes and of unripe Olives to the Wound, and alſo anoint the adjacent Parts with the ſame. Hence theſe Authors inform us, that none or few eſcape, tho' they have been but ſlightly wounded. Hence alſo *Marcus Aurelius Severinus*, in his *Trimemb. Chirurg.* deplores the fatal Uſe of Oil, which, at *Naples*, was common in Wounds of the Head; and affirms, that the ſlighteſt Wounds became dangerous, inſomuch that of an hundred ſcarce one eſcapes; whereas the Phyſicians of *Malta* us'd a Mixture of Wine and Oil with ſuch Succeſs, that among an hundred ſcarce one periſh'd, as the tenacious Quality of the Oil was corrected by the Admixture of the Wine.

Wounds of the Head are alſo to be preſerv'd from the Air, not becauſe it is always hurtful in conſequence of ſome malignant Quality; tho' in Hoſpitals, where there are many Patients, the Air, contaminated with putrid Exhalations, may prove prejudicial to any Wound; but the principal Reaſon is, becauſe the tender ſprouting Veſſels are mortify'd by the Cold, to which they are not accuſtom'd; or becauſe, being too moiſt, it may produce bad Effects, by ſoftening and relaxing them. Hence the uncovering theſe Wounds very ſeldom is alſo to be recommended for this Reaſon. And when Wounds of the Head are dreſs'd, a dry and hot State of the Air is principally proper, which may be obtain'd by Fire, and kindled Aromatics, ſuch as Amber, Maſtich, and Frankincenſe.

When any of the Muſcles, Tendons, tendinous Expanſions, Perioſteum, Cranium, Nerves, Blood-veſſels, or Brain, are injured, or when a Wound near the Sutures is productive of bad Effects, the Treatment muſt be varied, as the different Parts affected, and the Nature of the Injury, require, and as is directed under the Article of *Wounds* in general.

'Tis obvious, that nothing can be univerſally determin'd with reſpect to the Cure of the Diſorders ariſing from theſe Cauſes. But we muſt firſt know the Part adjacent to the Wound, and the Injury either already done to this Part by the Wound, or ſuſpected to follow from it, before we can determine any thing certain either with reſpect to the Cure or Prevention of theſe Diſorders: For another Method of Cure is requir'd, when conſiderable arterial Blood-veſſels are cut together with the common Integuments of the Head, than when a Wound of a Tendon brings on terrible and fatal Symptoms.

Thus, in Caſe of Contuſion, the Parts contus'd muſt be well digeſted by ſuch Applications as are capable of diſſipating the ſtagnating Humours, or of ſuppurating them; but, for theſe Purpoſes, ſuch Medicines muſt be made Choice of as are friendly to the Nerves and Membranes, or the contus'd Parts may be cut away.

A Contuſion ſuppoſes many Veſſels broke, and their contain'd Humours diſcharg'd, which being then collected in the cellular Membrane, frequently excite ſurpriſing Tumors; and unleſs the wounding Inſtrument is pretty ſharp, ſome Degree of Contuſion almoſt always accompanies Wounds of the Head. In Caſes of this Nature 'tis neceſſary to carry off the diſcharged Humours, or to diſpoſe them for being again abſorb'd, and to reſtore the Veſſels to their former Soundneſs. If the Contuſion is ſlight, and the diſcharged Liquids ſtill capable of being diſſipated, 'tis moſt proper and ſafe to procure this End by fomenting the Part with ſuch Medicines as dilute and reſolve concreted Fluids, reſiſt Putrefaction, and are not, at the ſame time, too emollient. The Urine of a ſound Man, with the Addition of a little Sea Salt, or Sal Ammoniac, and Wine, is an excellent Medicine in theſe Caſes, and often proves effectual for diſſipating the Tumors ariſing from Contuſions in the Heads of Children. Fomentations of Rue, Scordium, and Herbs of a like Nature, are alſo to be uſed, becauſe, by their ſingular antiſeptic Virtue, they guard againſt Putrefaction, and powerfully reſolve Concretions. Nor are ſlight Contuſions only cured by theſe Medicines, but alſo conſiderably large Tumors, which one would think could only be remov'd by Inciſion, may be happily diſſipated by them. A certain Woman, happening to fall from a Chariot, ſtruck her Forehead againſt the froſty Ground; by which means a large Tumor was forthwith excited on the Part. The Surgeon, underſtanding that the Patient had vomited a few times after the Accident, concluded that the Cranium was depreſs'd, and was juſt about to make a crucial Inciſion: But the celebrated *Ruyſch*, being called to the Conſultation, declared againſt the Inciſion, and apply'd a warm Fomentation of cephalic Herbs, boil'd in Wine, and put in a Linen Cloth, with ſuch ſurpriſing Succeſs, that in three Days the Tumor began to grow leſs, and was ſoon after diſſipated, without the Appearance of any bad Symptom whatever. He adds, that he has often, by the like means, ſav'd thoſe who were juſt about to have the Inciſion-knife plung'd into their Heads.

But when the Diſſipation of Contuſions is in vain attempted by ſuch Fomentations, or where the Greatneſs of the Diſorder leaves no Hopes of ſuch a mild and gentle Reſolution, then the only Method to be purſu'd is, to endeavour the Separation of the corrupted Parts by Suppuration. This is what Surgeons call *to digeſt*, when they convert a Matter, which cannot be reſolv'd, into a laudable Pus; and they call thoſe *digeſting Medicines*, which change the diſcharg'd irreſoluble Humours to the Condition of good Pus: But concerning theſe ſee the Article VULNUS. In Wounds of the Head, we are always to take care not to uſe ſuch Applications as may prove prejudicial, by relaxing too powerfully: Hence we are to abſtain from Cataplaſms, becauſe they moiſten too much; but we are to take the pureſt Turpentine, or any other native Balſam of a like Quality, and by the Addition of the Yolk of an Egg to correct its tenacious Quality, which in this Caſe would prove hurtful; then we are to add a little of the *Unguentum Baſilicon aureum*, or ſome ſuch Ointment; then Aloes, Myrrh, or Frankincenſe, reduced to a fine Powder, are to be ſprinkled upon it. Thus we have a digeſtive Medicine, in which are all the Ingredients which reſiſt every kind of Putrefaction, and are obſerv'd to be friendly to the Nerves, and the nervous and tendinous Membrane. This Medicine, ſpread upon a Pledget, is to be apply'd to the Part affected. Then an aromatic Plaiſter is apply'd, in order to cheriſh the Parts, and excite a ſomewhat briſker Motion in them, which is always uſeful in promoting a Suppuration. Over all theſe are to be apply'd Woollen Cloths, moiſten'd in ſome Fomentation which penetrates, diſſolves, and reſiſts Putrefaction. But care muſt be taken, that they be apply'd as warm as the Patient can poſſibly bear, and that the Part be not ſuffered to cool ſuddenly. All theſe Medicines are to be varied according to the Conſtitution of the Patient, and the Seaſon of the Year.

Boerhaave, in his *Materia Medica*, informs us, that in theſe Caſes ſuch Medicines as attenuate, dilute, and preſerve from Putrefaction, are to be us'd; and orders the following Ointment to be apply'd upon Pledgets.

Take of Turpentine, two Ounces, and the Yolk of an Egg: When theſe are ſufficiently mix'd, add two Ounces of Baſilicon, and of pure Aloes, four Drams.

Over this let the following Plaiſter be apply'd.

Take of Gum Galbanum, depurated, and made up with the Yolks of Eggs, four Ounces; of yellow Wax, two Ounces; of the Oil of St. John's-wort, three Drams: Mix all together.

Then add the following Fomentation, which is to be apply'd as warm as poſſible, with expreſs'd Woollen Cloths.

Take of the freſh Leaves of Rue and Scordium, each two Handfuls; of the Flowers of the Leſſer Centaury, Elder, and Roſes, each three Ounces: With thirty Ounces of theſe, boil'd in Water, and expreſs'd, mix five Ounces of Spirit of Wine, and two Drams of *Venice* Soap.

But when, by a profuſe Effuſion of Humours, the cellular Membrane is diſtended into a large Tumor, a Suffocation often hence ariſes; and the Membrane, almoſt become gangrenous, is ſeparated, together with the Humours pent up in it. In this Caſe it may ſafely be cut away. We ſee how ſurpriſingly the cellular Membrane ſwells in other Parts of the Body: In the Back of the Hand, for Inſtance, there is ſcarce any Fat, but the Tendons of the Muſcles are lodged in a very ſlender cellular Membrane; yet, when an Inflammation happens in this Place, a Tumor two Inches in Thickneſs is often produc'd, and the Whole of this is lodged in the ſlender cellular Membrane: Upon this a Suffocation happens; and, upon opening the Place, large gangrenous Portions of the Membrane appear, and may ſafely be extirpated. The ſame may alſo happen in Wounds of the Head; and this corrupted Membrane, together with the extravaſated Humours, may ſeparate. But we do not here mean, that Contuſions, which cannot be reſolv'd, are cruelly to be cut out, with the Skin which covers them; for it would be prejudicial to lay bare ſo large a Part of the Pericranium from its Integuments, which would not eaſily grow again; and, beſides, the Place would be render'd ſtill weaker, and be left more expoſed to external Injuries. Hence *Galen*, in *Comment.* 3. in *Hippoc. de Fracturis*, carefully adviſes the Skin to be preſerved as much as poſſible in all Wounds and Ulcers, becauſe, ſays he, bare Fleſh, when left without the Skin, is difficultly brought to a Cicatrix. I myſelf, ſays *Van Swieten*, ſaw a melancholy Proof of this. A healthy Man, of a middle Age, had a broad Wart near the inferior lateral Part of his Forehead, adjacent to his Temple. When its Removal had been in vain attempted by various Remedies, a Surgeon, in other reſpects ſufficiently ſkilful, cut out the whole Wart, together with the Skin. The Place, thus depriv'd of its Skin, could never by any Remedies be brought to a Cicatrix; but the Skin being gradually more and more retracted, the ſubjacent Parts were of courſe more expoſed, and a malignant Ulcer preying upon the adjacent Parts, the Patient died a miſerable Death ſoon after. Nor is this to be wonder'd at, ſince the Pericranium alone, lying on the Bone, does not ſeem ſufficient for the Regeneration of ſo much loſt Subſtance: But we are here only ſpeaking of the diſtended and corrupted cellular Membrane, which may be ſafely extirpated.

If the Humours ſtagnating in the contus'd Parts produce conſiderable Tumors, Pains, Convulſions, Putrefaction of the Bone and Perioſteum, and their Conſequences, the moſt prudent Method is, to lay them open by Inciſion, and to depurate the Parts by digeſtive, abſtergent, corroſive, or drying Applications, as directed under the Article VULNUS.

For all the Malignity of ſuch a Wound conſiſts in this, that the diſcharged Humours, being pent up by the thick Skin of the Head, and not being able to paſs thro' the too narrow Orifice of the Wound, make a Way for themſelves thro' the cellular Coat; or being corrupted by their Stay, they affect the Pericranium, and the Cranium itſelf. By dilating the Wound, therefore, a Paſſage is made for the extravaſated Humours, and the Part affected may be more commodiouſly treated with proper Medicines. Such a Diſorder is diſtinguiſhed by the narrow Aperture of the Wound, by the Tumor and Mobility of the adjacent Integuments when touch'd with the Fingers, and from the Patient's being ſeiz'd with a Fever, for which no other Cauſe can be aſſign'd.

Nor, in this Caſe, is there any Danger of wounding the tendinous Expanſions, ſince the Whole of this Tumor is lodged in the Cellular Membrane, which may be ſafely cut out, together with the Skin. And we are convinced, by numberleſs Inſtances, that not only the Skin, but alſo all the Integuments, may be ſafely cut to the very Bone, when it is neceſſary.

Whilſt *Hippocrates* (*de Capit. Vuln. Sect.* 18.) is recounting thoſe Wounds of the Head which require Inciſion, he mentions thoſe "which have not a Length and Breadth ſufficient to "diſcover if the Bone has been injured by the Weapon, *&c.* "and when Wounds have a kind of oblique Cavity, that Ca- "vity muſt be cut broad, *&c.* and when Wounds are orbicu- "lar, and very hollow, they muſt alſo be cut with a double "Inciſion longitudinally, that the Wound may be render'd "longitudinal."

But how greatly, in ſuch Caſes, the Symptoms are relieved by a timely Inciſion, we learn from the above related Caſe of a Joiner, who had his Symptoms conſiderably abated next Day after laying open the Integuments of the Parts affected. But, after the Wound is dilated, then the digeſtive Medicines, above recommended, may be applied. Concerning the Depuration of Wounds, ſee the Article VULNUS. But only that Dilatation of the Wound which is made with the Knife is commendable; for that which is made by Sponges, or other dry Subſtances, which ſwell by abſorbing the Humours, is generally prejudicial; becauſe, by their means, the Orifice of the Wound is ſo block'd up for ſome Hours, that nothing can be diſcharged: Hence an *Emphyſema*, and other Tumors, may be produced. Beſides, the Contuſion and Inflammation become greater in the Lips of the Wound, which will afterwards require a longer continued Suppuration, before they can be again conſolidated.

When the Pericranium is injur'd in ſuch a manner, as that the Bone lies for ſome time bare, or putrefies, the Bone is deprived of the Veſſels, which it otherwiſe receives from the Pericranium, and conſequently of its own proper Veſſels: Hence, the Humours ſtagnating in the Part, the Bone putrifies, and a Scale ſeparates from it: Whence the Bone appears yellow, brown, or black, and at laſt exfoliates.

After having treated of thoſe Wounds of the Head which only injure the common Integuments, it now remains, that we inquire into thoſe Diſorders which are produced by Wounds of the Pericranium. As all the other Bones of the Body are cover'd with a peculiar Membrane, which adheres pretty cloſely to them; ſo the Bones of the Cranium have alſo their Covering, which is call'd the *Pericranium*. *Ruyſch* demonſtrated, by Anatomical Injections, that a large Number of Veſſels were diſtributed thro' this Membrane, which, by Branches ſent off, were inſerted into the ſubjacent Bone, and ſerved to ſupply it with the Humours neceſſary for Life and Nouriſhment: By means of theſe Veſſels ſent off, the Coherence between the Cranium and Pericranium is very ſtrong: Hence, by tearing this Membrane from the ſubjacent Bone, in a living Animal, many ſmall red Spots appear in the Bone. The Pericranium cannot therefore be injured, but a large Number of thoſe Veſſels, running to the Bone, muſt be deſtroy'd. But the Extremities of the broken Veſſels may, on the external Surface of the bare Bone, form again a like Membrane in that Place where the Bone was ſtript of its Pericranium, by the ſame common Law by which all loſt or ſeparated Subſtances in Wounds grow again. *See* VULNUS. But where the Bone has been long bare, and eſpecially when the Air has had a free Acceſs, theſe tender Extremities of the Veſſels are deſtroy'd, and become quite unfit for forming a Membrane like that which is loſt. The external Surface, then, of the Bone, being deprived of the vital Influx of the Fluids, becomes mortified, nor can it ever grow again with the live Parts: Hence Nature, by means of the live Veſſels underneath, attempts the Separation of the corrupted and mortified Part from the ſubjacent ſound vital Part, and thruſts off the dead and mortified Part. After the Separation of this there grows a new Pericranium out of the Bone, and the adjacent ſound Membrane. When a Bone is thus affected, it may be known from its Change of Colour, which, in ſound Bones, is a little reddiſh, or, in many Places, of a whitiſh Blue: But, on this Occaſion, a yellowiſh Colour ariſes in the Part affected, which gradually becomes darker and darker, till it grows blackiſh, and at laſt the corrupted Part of the Bone is ſeparated. The more, then, the Colour of the Bone recedes from what it naturally ought to be, and the blacker it is, the greater Tendency it has to Corruption, as is obvious in the Teeth, which, when diſorder'd by any Cauſe whatever, begin gradually to loſe that bluiſh Pearl-colour they naturally ought to have, and become at firſt pale, then yellow, and at laſt, becoming blackiſh, fall away in Pieces. Now 'tis certain, from the moſt accurate Obſervations, that the Bones of the Cranium were originally in the Fœtus cartilaginous Membranes, in the Middle of which the firſt Rudiments of the Bone are form'd, and bony Ramifications are diffuſed every-where from this common Centre: Thus the internal bony Table of the Cranium, call'd the vitreous Table, is at firſt produced. Then theſe bony Ramifications, or the Filaments of this reticular Subſtance, gradually become broad externally, and form ſmall Plates, different as to their Bulks, Figures, and Situations, and of which the *Diploë* of the Cranium is form'd. Then the Points of theſe Plates, of which the Diploë is form'd, are blunted, as it were; and, becoming broad, are laid over each other like Scales, and form a kind of uneven Lamina, which conſtitutes the external Plate of the Cranium. Then both Tables become thicker, and more ſolid; for theſe bony Ramifications, and ſlender Plates, become tumid, and new Scales are added. From this Account of the Formation of the Bones of the Cranium, founded not on Speculation, but, by the celebrated *Albinus*, taken from the genuine Works of Nature, 'tis obvious, that the Structure of the Bones of the *Bregma*, *Occiput*, Forehead, and Temples, which are principally ſubject to be injur'd by Wounds, is lamellated: Hence the Diſorders of the injur'd Pericranium may be communicated to the ſuperior Laminæ of the ſubjacent Bone, and injure them more or leſs. And it is highly probable, that, in Infancy, when the Bones have not as yet acquired a great Degree of Solidity, Veſſels are diſtributed betwixt each of theſe Laminæ, which are afterwards, in Proceſs of Time, like many other Veſſels, gradually obliterated. This Conjecture is confirm'd by ſome Obſervations on the Parts conſtituting the Bone, which, being every way enlarged in their Dimenſions by a Diſeaſe, have appear'd to be of ſuch a pulpous, ſoft, and vaſcular Structure: Thus, in the *Hiſt. de l'Acad. des Sciences*, for the Year 1734. we are told, that the Bones of the Cranium of a Child of three or four Years of Age were every-where ſeven or eight Lines thick, and ſoft; and that, upon being preſs'd, they diſcharged a large Quantity of Blood and Lymph; and that the Blood-veſſels appear'd very conſpicuouſly in them. *Hippocrates*, in his Treatiſe of Wounds of the Head, *Sect.* 2. ſeems, in the following Words, to acknowledge this: "The whole Bones, "ſays he, of the Head, except a ſmall Portion of the loweſt "and uppermoſt, are like a Sponge, and contain a large Quan- "tity of a moiſt fleſhy Subſtance, which, when preſs'd with "the Fingers, diſcharges Blood: There are, beſides, in theſe "Bones, ſmall Veins full of Blood." The ſmall Laminæ, therefore, totally deprived of a vital Influx of the Humours, will be ſeparated by means of the Veſſels diſtributed between them; and if theſe ſhould be obliterated by the near Approach of the bony Laminæ to each other, the Veſſels which, ariſing from that ſoft ſpongious Subſtance call'd the *Diploë*, between the two Tables of the Cranium, are diſtributed to the Bone, may perform this Office: Hence, perhaps, the corrupted bony Laminæ are, with Difficulty, ſeparated in old Men: Hence alſo appear the happy Effects of making a great many ſmall Perforations in the Bone, in the manner hereafter to be deſcribed.

Tho', therefore, when the Bone is deprived of its Pericranium, if a remarkable Change of Colour happens, we are to expect a Separation of the corrupted Laminæ, by what Surgeons call Exfoliation; yet we are, by ſome very rare Caſes, taught, that a Cure may be completed without this; for *Ruyſch*, in *Obſervat. Anatom. Chirurg. Centur. Obſervat.* 5. gives us an Account of a Man, "who, being ſtruck by a Horſe "on the Head, fell to the Ground like one dead, with ſo large "a Denudation of the Os Sincipitis, that a Crown was "ſcarce ſufficient to cover it. The whole denudated Part of "the Bone became black, except a Circle about a Straw's- "breadth next to the Skin. This white Circle becoming daily "leſs, the Patient recover'd, without any viſible Separation of "the Bone, or the Uſe of the Raſpatory." Perhaps the affected Part of the Surface of the Bone was not ſeparated in the Form of a Scale, but was gradually carried off by the Pus in minute Particles.

One principal Cauſe of the Putrefaction, and conſequent Exfoliation, of the Bone, is an Interruption of the Continuity of the Veſſels which nouriſh it, and conſequently of the Circulation of the Humours thro' them. Another Cauſe is the Coldneſs of the Air, which contracts and dries up the Extremities of the ſmall Veſſels of the Bone, without, however, any of that imaginary Malignity which ſome attribute to the Air.

By means of a Wound, all thoſe Actions are injur'd which depend upon the Integrity of the Parts now ſeparated by the Wound, and the determinate Circulation of the Fluids thro' the Veſſels: But the Uſe of the *Pericranium* is to ſend off Veſſels to the Bone, and receive others from it, as appears obviouſly by the artificial Injection of the *Perioſteum* of a *Fœtus*; for, in ſuch a Subject, the Veſſels are, in this Membrane, found to be far more numerous than in a more advanced Age, when they coaleſce, and are obliterated. The *Pericranium* therefore being deſtroy'd, the Continuity of the Veſſels, on which the Life and Nouriſhment of the Parts depend, muſt of courſe be removed: That Part, then, of the Bone, which is thus deprived of the vital Influx of the Humours, will become mortified, and be ſeparated from the ſubjacent live Parts.

But as Surgeons always obſerved, that the Surface of the Bone, deprived of its *Pericranium*, cannot be long expoſed to the Air without a ſubſequent Corruption and Exfoliation of the Bone, and as, on the other hand, they often found, that the Bone, when deprived of the *Pericranium*, often did well, without any Separation, if immediately defended and cover'd up from the Air, they imagin'd, that the Air was poſſeſs'd of ſome malignant Quality, which corrupts the Bones: 'Tis, indeed, very true, that ſeveral Subſtances may be lodged in the Air, which may not only prove injurious to denudated Bones, but alſo to all Wounds in general. Thus, in Hoſpitals where there is a great Number of Patients, the Air, contaminated by the putrid Exhalations, is obſerved to render the Cure of Wounds difficult: But tho' theſe Subſtances are lodged in the Air, yet they are, properly ſpeaking, diſtinct from that Fluid. But the Air, freely admitted to denudated Bones, ſeems by its Coldneſs, and that Principle by which it attracts Moiſture and dry Bodies, ſo to ſhrivel the broken Extremities of the Veſſels on the Surface of the Bone, as to render them entirely impervious to the Humours: Hence all the other Symptoms are induced, as was obſerved above. For this very Reaſon, *Hippocrates* never accuſed the Malignity of the Air, but only aſſerted, that a cold Air was hurtful to the Bones, the Teeth, and the Nerves.

Whilſt the ſuperior Scale of the Bone, deprived of its Veſſels, is corrupted, the Diſorder is eaſily convey'd to the Part of the Bone lying immediately under it: Thus it may reach thro' the whole Thickneſs of the external Lamina of the Cranium to the *Diploë*, and corrupt it; which Diſorder may at laſt affect the inner Table of the Cranium, call'd the vitreous Table; or, creeping along in the *Diploë*, between the two Tables, may produce the worſt Symptoms.

In Caſes where the Bone is thus affected, the Cure is to be perform'd,

Firſt, By gently making in the Bone a great Number of ſmall Holes with the Perforator; by which means Exfoliation is prevented, and the Periоſteum, or ſomething analogous to it, is regenerated.

Secondly, By keeping the Wound clean from Pus and Sanies, at the ſame time defending it from every thing unctuous and watery, and applying to it Pledgets dipt in Spirit of Wine, impregnated with Maſtich.

Thirdly, By renewing the Dreſſings very ſeldom, and then with the utmoſt Expedition.

When we are certain, that the Bone of the Cranium is diveſted of its *Pericranium*, and, by the free Acceſs of the Air, ſo changed in its Surface, that all vital Motion of the Humours is obſtructed, what is mortified muſt neceſſarily be ſeparated from the ſound Parts with which it coheres, before ſuch a Wound can be heal'd: But this Separation is entirely perform'd by ſound Veſſels lying under the mortified Part, which, by their continual Motion, and, as it were, Puſhing, ſeparate and expel the mortified Part of the Bone. *Hippocrates*, in his Treatiſe of *Wounds of the Head*, made the ſame Obſervation in the following Words: "In Wounds of the Head, the Bone to be "ſeparated, whether the Trace of the Weapon is left in it, or "whether it is much denudated, is, for the moſt part, ſepa"rated when it is render'd exſanguous (ἀφίσα) ὑπὸ τοῦ ἐξαι"μος)." And he afterwards adds, "For this Reaſon it is "principally ſeparated from the reſt of the Bone which has "Life and Blood, and is exfoliated, when become dry and ex"ſanguous." But if this Work is left to Nature, it proceeds very ſlowly, and is not perfected ſooner than in forty Days, and ſometimes more; for, in ſo many Days, the contuſed Margins of the Perforation, made by the Trepan, are obſerved to be ſeparated. But, in this Interval of Time, various unlucky Changes may happen to ſuch a Wound, and the Diſorder of the Bone may be communicated to the ſubjacent Laminæ, and the Evil conſequently increaſed. Patients, eſpecially in public Hoſpitals, are, for the moſt part, much affected when obliged to remain long in them, as is atteſted by all Surgeons who have had an Opportunity of attending Hoſpitals: But this Circumſtance is obſerved to prove moſt fatal to thoſe who labour under Wounds of the Head: Hence it is a beautiful and uſeful Improvement of the Art, to diſcover by what Means the Separation of the corrupted from the ſound Bone may be accelerated. Surgeons have attempted this by raſping the Bone with a Rugine, and burning it with a Cautery; but thus the abraded or burnt Surface muſt be again ſeparated. The whole Separation of the mortified Part, as we have already obſerved, depends upon the Action of the ſubjacent live Parts: Every thing, then, which can make way for the ſubjacent live Veſſels, and promote their Riſing under the corrupted Part, will accelerate this Separation. The beſt Method, then, of anſwering this End, is gently to perforate the bare Bone with minute Holes, pretty near each other, to the *Diploë*, where we are ſure, that a great Number of live, and, at the ſame time, conſiderably large Veſſels are lodged. This is perform'd by the pyramidal Apex of the perforating Trepan, or by the Point of a common Needle, ſo fix'd in a Handle as to be commodiouſly turn'd about, or by the Inſtrument repreſented *Tab.* 28. *Fig.* 2. and *Fig.* 7. A.

And whilſt theſe Holes are made in various Parts, pretty near each other, the live ſubjacent Veſſels, not being encumber'd by the Part which covers them, riſe thro' theſe Holes, form a new Periоſteum, and often ſuch a Wound is happily cured without any Exfoliation. Beſides, the Veſſels lying between the Plates of the Bone may riſe, and be lengthen'd out thro' theſe Apertures, and thus ſeparate the ſuperincumbent corrupted Part of the Bone. Uncommon Succeſs has demonſtrated the Uſefulneſs of this Method; and *Belloſte*, a ſkilful Surgeon, to whom this Invention is owing, or at leaſt who firſt accurately deſcrib'd it, affirms, that, in many Caſes, he has by this Method perform'd happy Cures; and, in his *Treatiſe of Surgery*, gives two Caſes, which were cured before many Spectators in the public Hoſpital, in Confirmation of it.

A Soldier had the common Integuments of his Head carried off by a large Cannon-ball, but the Bone was unhurt, tho' the Pericranium was ſo contuſed as to become quite livid. *Belloſte* ſcratch'd off the Pericranium with his Nails, laid bare the ſubjacent Bone, and gently perforated it in ſeveral Places: Two Days after, the Dreſſing being removed, the Bone appear'd reddiſh; and, two Days after this, more than half of the denudated Bone appear'd cover'd with a freſh Pericranium. Seven Days after, the whole Surface of the Bone was entirely cover'd, and the Wound thoroughly conſolidated in the Space of eighteen Days.

The other Soldier, upon receiving a Wound on the Left Bone of the Bregma, with a cutting Inſtrument, had a pretty large Portion of the Cranium laid bare. At the ſecond Dreſſing the Bone had eight or ten ſmall Perforations made in it; but in ſuch a manner as not to reach entirely to the Diploë. The other Meaſures taken were the ſame as in the former Caſe. Two Days after, the Wound being uncover'd, the Bone began to appear red, and ſomething began already to riſe thro' the ſmall Perforations. Eight Days after, the Bone appear'd cover'd with a new Membrane, and the Cure was completed in ſeventeen Days, notwithſtanding the Largeneſs of the Wound.

From theſe two Caſes the Uſefulneſs of this Method is ſufficiently obvious; and it is plain, that 'tis, in theſe Caſes, only neceſſary artfully to procure a free Paſſage to the ſubjacent live Veſſels to emerge and ſprout out. By the laſt of theſe Examples it is alſo obvious, that it is not always neceſſary, that the Bone ſhould be perforated to the *Diploë*; but that, by a ſlight Aperture, the Veſſels lying between the Plates of the Bone are ſometimes ſufficient for the Regeneration or Reproduction of the loſt Pericranium; for *Belloſte* informs us, that he tried this Method with no other View, but in order to be certain, whether a gentle Perforation of the Bone was ſufficient for anſwering this Intention. But where the yellow or browniſh Colour of the denudated Bone indicate, that the Corruption of the Bone has penetrated pretty deep, it is neceſſary to perforate it to the *Diploë*, that, by means of the conſiderably large Veſſels lodged in it, a Separation of the corrupted Bone may be made, and a new Pericranium form'd.

Hippocrates ſeems to have had this Method in his View, when, in his Treatiſe of *Wounds of the Head*, *Sect.* 30. he uſes theſe Words: "But when the Bone is diveſted of its "Integuments, we ought carefully to conſider, if we cannot "diſtinguiſh, with our Eyes, whether the Bone is ſplit and "contuſed, or whether it is only contuſed, or whether "the Contuſion or Fiſſure, or both, bear any Reſemblance to "the Shape of the Inſtrument with which they were made; "and if the Bone ſhould be in any of theſe States, it is to be "perforated with a ſmall Perforator, and Blood extracted from "it; only it is to be remember'd, that the Bones of the Cra"nium are thinner in young Perſons than in Adults." 'Tis certain, that when the Perforator has reach'd the *Diploë*, the Blood breaks out; and it ſeems to be ſufficiently obvious, that, in this Paſſage, *Hippocrates* does not mean a Removal of the Bone by the Trepan, but only a gentle Perforation of it till the Blood burſts out, that is, till the Inſtrument has reached the *Diploë*.

All Surgeons who have wrote on the Cure of Wounds of the Head, agree in this, that all pinguious, aqueous, and moiſtening Subſtances are prejudicial in theſe Wounds, as has been already obſerved.

Much more are we to abſtain from theſe Subſtances where the Bone is denudated, and the tender Veſſels beginning to ſprout thro' the Perforations; for aqueous Subſtances would make theſe pulpous Veſſels become tabid; and oleous Subſtances would obſtruct, and render them impervious. The Pus alſo, ariſing in too large a Quantity from the wounded Integuments, or attenuated and render'd acrid by its Retention, may injure the delicate and tender Compages of the ſprouting Veſſels: Hence Wounds of this Kind are to be gently and cautiouſly cleanſed with ſoft Lint, leſt theſe tender Veſſels ſhould be injured.

jured. 'Tis alſo obvious, from what has been ſaid, that ſuch Wounds ought to be preſerv'd from the Air, left, by its Coldneſs, and its drying Quality, it ſhould deſtroy theſe Veſſels. *Belloſte*, in theſe Caſes, applied a Pledget of Lint, dipt in Spirit of Wine, to the denudated Bone: Over this Pledget he applied a gentle Digeſtive, which did not touch the Bone, but proved beneficial to the Lips of the Wound made in the Integuments: Thus the Air was excluded, all Putrefaction prevented, and, by the corroborating Quality of the Spirit of Wine, the pulpous tender Veſſels are hinder'd from riſing in fungous Excreſcences. The fine Powder of Maſtich, Olibanum, Sarcocolla, and Myrrh, is very properly ſprinkled upon denudated Bones, ſince theſe Subſtances cover them over with a balſamic Cruſt, without proving injurious by their pinguious Quality. They alſo defend the ſubjacent Parts from the Air, and from all Fluids diſcharged in the Wound. With the ſame happy Succeſs the Powder of theſe is boil'd in weak Spirit of Wine, for Alcohol would quickly burn theſe Veſſels; and Pledgets, impregnated therewith, are applied to the denudated Bone. Thus,

Take of once rectified Spirit of Wine, an Ounce; of diſtil'd Roſe-water, half an Ounce; and of the Powder of Maſtich, three Drams; and, when boil'd in a tall Veſſel, preſerve it for Uſe in a long Phial.

Nothing is more carefully to be guarded againſt than a free Acceſs of the Air, which, by its Coldneſs and drying Quality, proves prejudicial to all Wounds, but eſpecially thoſe of the Head: Hence the Dreſſing of theſe Wounds very ſeldom cannot be too carefully inculcated. *Belloſte*, in the Caſes abovemention'd, ſuffer'd the firſt Dreſſings to remain for two Days; and afterwards only remov'd them every third Day. If, therefore, no Itching, or preternatural Heat, is felt about the Wound, if no fetid Smell is perceived, and no ſanious Subſtance is diſcharged, ſuch a Wound may ſafely be left without renewing the Dreſſings; but when a new Dreſſing is to be applied, it ought to be done with all Expedition. Let the Pus be imbibed by ſoft Pledgets, gently applied; then let others of the ſame Kind be applied, and the Wound cover'd up; for a curious and long Inſpection of ſuch a Wound, and a rude and incautious Cleanſing of it, will deſtroy the Mucus lodged in it, which is nothing but the Compages of the ſprouting Veſſels. It is of ſingular Service, if, before the Wound is uncover'd, a Veſſel is placed on each Side, with live Coals on which a little Amber, Maſtich, or Olibanum, has been ſprinkled; for thus the tepid Atmoſphere, richly impregnated with a grateful, corroborating, and aromatic Steam, will every-where be applied to the uncover'd Wound.

By the Treatment juſt mention'd a new fleſhy Subſtance ariſes out of the Punctures, and, ſpreading all around, covers the Part of the Bone depriv'd of its Periofteum; and then the reſt of the Cure is to be perform'd by the Methods ſpecify'd above, when the Periofteum and Bone have received no Injury.

To know in what Senſe the Subſtance which ariſes from the Punctures may be call'd Fleſh, ſee the Article VULNUS. *Belloſte*, who has given ſo plain a Deſcription of every Thing which belongs to this Method, ſays, in very proper Terms, that the Perforations of the Bone, after the ſecond Day, begin to germinate or ſprout; for there begins to ariſe inſenſibly, from theſe ſmall Perforations, a ſort of Mucus, which, view'd with a Microſcope, repreſents very tender little Veſſels, and you may even diſtinguiſh the Motion of the ſmall Arteries in this Mucus. A Contexture of Veſſels emerging from theſe little Perforations, and meeting with a like Subſtance ariſing from the neighbouring Perforations, weave, as it were, a new Membrane, and that in ſo ſhort a Time, that *Belloſte*, in thoſe Inſtances which are given above, obſerved a denudated Part of the Cranium, of the Compaſs of a Florin, cover'd over again in the Space of ſeven Days.

Fourteen Years ago there happen'd a pretty rare Caſe, which afforded an Opportunity of accurately examining this pulpous vaſcular Subſtance, which thus ariſes from theſe Perforations made in the Bone. A Man fifty Years of Age, in an acute continual Fever, had, by a ſudden Metaſtaſis, in the Space of one Night, all the extreme Part of his Right Foot, about as far as the Place where the Bones of the Tarſus and Metatarſus are contiguous, ſeiz'd with a Mortification. The Part affected was ſo perfectly ſphacelated, that the Patient felt no Pain from an Inciſion, made with the Knife, to the very Bone, and no Blood came from the Wound. Remedies being apply'd, in order to preſerve the dead Part from Putrefaction, and to ſtop the Progreſs of the Sphacelus, the Event was ſo happy, that the ſpreading of the Sphacelus was prevented; and, in the Space of five Days, a Line appear'd, ſeparating the dead Parts from the living, which gave good Hopes of a Cure beyond our Expectation. After an entire Separation of the corrupt from the ſound Part, the ſtrongeſt Tendons being cut with the Sciſſars by a very dexterous Surgeon, all the fore Part of the Foot was taken off, and the Patient, thus mutilated, eſcaped from a very dangerous Diſorder, and is ſtill living. In this Caſe it manifeſtly appear'd, that the Bones of the Tarſus, which were contiguous to the ſphacelated Bones of the Metatarſus, had contracted a conſiderable Injury; for a good Part of them, which appear'd prominent above the mutilated Member, being quite black, threaten'd to give us more Trouble. This obliged us to ſaw off as much of the corrupted Bones, as could be taken off without hurting the incumbent Parts. However, the dead Superficies of theſe Bones ſtill remain'd, and was to be ſeparated, before the Wound could be cloſed, with a good Cicatrix.

A very ſkilful Surgeon then perforated all this Superficies of corrupt Bones, with very ſmall Perforators, in a Multitude of Places pretty near each other; and in two Days we had the Pleaſure to ſee, that every one of theſe little Perforations had contracted a Moiſture; and, examining the ſame with a Microſcope, it appear'd very diſtinctly, that in all theſe Punctures there were ſmall Veſſels, which beat with a true Syſtole and Diaſtole, that perfectly correſponded with the Pulſe of the Patient, felt at the ſame time in the Carpus. This fully convinced us, ſays *Van Swieten*, that the Subſtance ariſing from theſe Perforations was really a Contexture of ſmall Veſſels.

When a Bone, deprived of its Membrane, is, by this Method, inveſted with a new one, the Cure is perfected by ſuch Means as are directed above, in caſe of ſimple Wounds of the Integuments.

If the Skull itſelf is injur'd, it will be either crack'd, broken, contuſed, depreſs'd, or deprived of a Portion of its Subſtance, according to the Difference of the Inſtrument, and the Force with which the Blow was given; and theſe may happen either in one only, or both its Tables.

Having conſider'd the Hurts and Injuries incident to the common Integuments, and the Pericranium, we come now to treat of Wounds of the Head which affect the Cranium; and here, firſt, are enumerated the different Ways by which the Bone of the Cranium may be injur'd, according to the various Figures of the Inſtruments by which the Wound is inflicted, or the Degree of Violence of the Stroke.

A Fiſſure is a Solution of Continuity in a Bone, generally of an oblong Figure, and very narrow, in which there ſtill remains ſome Coheſion of the Parts. There is a great Variety of Fiſſures, with reſpect to their Largeneſs, their ſtrait or winding Courſe, and the different Parts of the Cranium affected by them. Some paſs no farther than the outer Table, others penetrate into the inner Table of the Cranium, tho' the outer one appears to be ſound. Sometimes the Fiſſure is not in the Place to which the Inſtrument that gave the Wound was apply'd; but in a different and frequently oppoſite Part of the Cranium, and is then call'd a *Contrafiſſure*: Of this there are many Examples in Authors. Thus *Tulpius* relates, that a Man received a Stroke on the Head with a Gun, and, tho' he was immediately trepan'd, died the ſixth Day. After his Death the Cranium, tho' ſound outwardly, appear'd to have ſeveral Fiſſures on the Inſide. *Paré* confirms the ſame by two Examples. A certain Man, by a Blow from a Stone, had a violent Contuſion, with a Tumor, and ſmall Wound, made in the Right Bone of the Bregma. Upon dilating the Wound the ſubjacent Bone appear'd ſound; but the Patient died the twenty-firſt Day after his Misfortune. After his Death, the Cranium being cut out with a Saw, it appear'd, that the Bone of the Bregma, in the oppoſite Side of the Head, was ſplit. In another Gentleman of Diſtinction, who died by a violent Contuſion of his Head, notwithſtanding it was cover'd with a Helmet, the interior Table of the Cranium was ſo ſhatter'd, that the broken Splinters thereof ſtuck in the very Subſtance of the Brain, tho' the external Table of the Cranium was found entirely ſound. *Hippocrates* obſerved this, and after having recounted the ſeveral Methods in which the Cranium could be hurt, he adds this as the laſt: When, for Inſtance, the Bone is hurt on the Side oppoſite to that on which the Wound was received; and he affirms, that there is no Cure for this Diſorder, becauſe we cannot diſcover in what Part of the Head it is lodged. Hence *Celſus*, in the fourth Chapter of his Eighth Book, informs us, "That when any "one has receiv'd a ſevere Blow on the Head, if bad Sym"ptoms enſue, and if the Fiſſure is not found where the "Skin is cut, it is not improper to view whether, on the op"poſite Side, there is not ſome Part ſoft and tumid, which is "to be laid open, ſince the Bone will be found ſplit there; "nor is the Skin difficult to be heal'd, tho' the Operation "ſhould be perform'd in vain." But all theſe Things are uncertain, ſince the Fiſſure has been often found in the ſame Bone, tho' not in the Place where the Wound was inflicted: Thus *Joh. Bohnius*, *de Renunciat. Vulner.* gives us an Account of a Man, who being ſtruck with a Club in the Forehead, near the Right Eye-brow; and who, after his Death, had nothing

chang'd

chang'd in that Part of the Bone where the Wound was receiv'd, but in the Orbit of the Right Eye appear'd a Contrafiſſure of an Inch and half long, reaching to the *Sella Turcica*. It has alſo ſometimes been obſerv'd, that the Fiſſure has been propagated from the Part on which the Wound was inflicted, to other Bones of the Head. *Ruyſch*, in his *Obſervat. Anat. Chirurg. Cent. Obſerv.* 47. gives us ſuch a Caſe, where, by the Violence of the Contuſion, the Fiſſure of the Left Bone of the Bregma reach'd thro' all the Bone, then thro' the ſquamous Suture of the Os Temporum, the whole Os Petroſum, and as far as the large Foramen of the Os Occipitis, which tranſmits the Medulla Oblongata. From which Caſe 'tis obvious, that the Sutures do not hinder Fiſſures of any Bone of the Cranium from being propagated beyond the Limits of that Bone, as many imagine.

A Fracture of the Cranium differs from a Fiſſure, becauſe in a Fiſſure, properly ſo call'd, there is as yet ſome Coheſion of the Parts; whereas in a Fracture there is a total Solution of Continuity: Hence a Fiſſure is a ſmall Chink in the Bone, but a Fracture ſuppoſes a larger Separation of Parts formerly united. A Fracture may alſo be of ſuch a Nature, that the broken Piece of Bone may be entirely diſengaged from the reſt of the Bone, or it may be united with it in ſome of its Parts. If ſuch an entire Solution is made by the wounding Inſtrument, the diſengag'd Part of the Bone is almoſt always preſſed inwards, and injures the Brain. What *Hippocrates* call'd ἕδρη, or the Seat or Trace of the Weapon, may alſo be refer'd to Fracture. When, for Inſtance, a Wound made with a Hanger carries off all the Integuments of the Cranium, and injures the Bone itſelf. His Words are as follows: "It is call'd the Trace of the "Weapon, when the Bone remaining in its natural Situation, "the Inſtrument leaves a manifeſt Impreſſion in it." And he afterwards adds, "That the Removal of the Integuments, "διαχωρὴ, tho' thro' the whole Length and Breadth of the "Bone, may be refer'd to the Trace of the Weapon; provided the other Bones, contiguous to this Removal, remain "in their natural Situation, and are not preſs'd inwards by the "Wound." For he would no longer have it call'd the Taace of the Weapon, when the Bone, being every-where diſengag'd, changed its Situation, and was preſs'd inwards; in which Caſe he call'd it ἔσφλασις.

The Cranium is ſaid to be contus'd, when by a heavy and obtuſe Inſtrument it is ſo hurt, that neither Fiſſure nor Fracture appear; for as a Contuſion of the ſoft Parts may break a large Number of Veſſels whilſt the Skin remains whole, ſo likewiſe, in a contus'd Bone, it may happen, that the Veſſels lying between the bony *Laminæ* may be injur'd by the Contuſion, tho' the Bone appears entire. This Diſorder is often long before 'tis diſcovered, till malignant Symptoms appearing, prove the bad State and Condition of the Bone. This Diſorder was, by *Hippocrates*, call'd θλάσις, and he informs us, that we cannot by the Eye judge whether the Contuſion has injur'd the Subſtance of the Bone more or leſs, or whether ſuch a Wound has penetrated more or leſs deep; for if the Veſſels diſtributed thro' the Diploë, ſituated between the two Tables of the Cranium, are broken by ſuch a Contuſion, tho' the Bone ſhould remain whole, yet 'tis obvious, that the worſt Symptoms may be produc'd by the extravaſated Humours, the internal Table of the Cranium may be corroded, and the Diſorder may thus be communicated to the Meninges and Brain itſelf.

The Cranium may be depreſs'd in two manners; for either the broken Part of the Bone, being entirely diſengag'd from the adjacent Bones, falls inwards, or the Bone, without having the Coheſion of its Parts deſtroy'd, is preſs'd inwards, which principally happens in the Craniums of young Perſons, upon the Application of an obtuſe wounding Inſtrument; for in theſe the Bones, being as yet flexible, eaſily yield without being fractur'd. Such Depreſſions are alſo ſometimes obſerv'd in Adults; for the Bones of the Cranium in a living Man are moiſt, and far leſs friable, than in a Skeleton the ſame Bones appear to be when dry'd. But Depreſſions of this kind rarely happen to Adults, without being at the ſame time accompanied either with a Fiſſure or a Fracture.

The Cranium may be depriv'd of a Part of its Subſtance, which, in Cuts, is often the Caſe, when, together with the Integuments, a Portion of the Bone is cut off by the wounding Inſtrument. This is call'd the *Dedolatio*, or Paring of the Cranium; and *Scultetus*, in his *Armamentar. Chirurg. Obſerv.* 17. gives us a Caſe, where a Portion of the Cranium, as large as a Crown-piece, was taken away, and yet the Patient was happily cur'd. 'Tis alſo certain, that after ſtrong Contuſions of the Head, Splinters of Bone have ſtarted from the inner Table of the Cranium, and injur'd the ſubjacent Brain; an Inſtance of which we have already given from *Paré*.

All theſe Cauſes, already recounted, may either affect only the external Table of the Cranium, or the internal alone, or both; but they are always more dangerous in proportion as they have penetrated deeper, in which Caſe 'tis obvious the Cure muſt be far more difficult than otherwiſe.

Because Wounds of the Skull may have very bad Effects, it is neceſſary to examine diligently when the Head is wounded, whether the Bone has receiv'd any Injury. But a ſuperficial Scrutiny is not ſufficient, of which *Hippocrates* warns us, when he confeſſes, with the Spirit of a Man of Senſe and Honour, that he himſelf miſtook one of the Sutures for a Fracture.

We are enabled to form Judgment whether the Bone is injur'd or not,

Firſt, By conſidering the Force with which the Wound is given.

This, however, cannot in all Caſes be preciſely known; and the Appearance of the Wound may poſſibly deceive us, when it is made with a blunt Inſtrument, or when it is very ſmall, and accompany'd with a conſiderable Contuſion.

Secondly, By comparing the Size of the Wound with the Part injur'd.

Thus, as has been already obſerv'd, if the Wound is upon a flat Part of the Head, it may be large, without penetrating deep. But if the Part is very convex, angular, and prominent, the Wound muſt penetrate deep in order to be large; unleſs, however, it ſhould happen to be made with an Inſtrument with a concave Edge, or a ſort of Turn ſhould have been given to the Inſtrument whilſt the Wound was inflicted.

Thirdly, By the Probe.

Skilful Surgeons, when call'd to Patients in this Condition, gently waſh the Wound with warm Water mix'd with a little Wine, and a few Grains of Salt; then, cautiouſly drawing aſide the Lips, inquire whether any Wound of the Bone is to be diſcover'd. Then they introduce a ſmooth blunt Probe, which ought to be ſmall and ſoft, and is moſt commodiouſly made of fine Silver, made red-hot, and then gradually cool'd, into the Wound. Thus, by trying about every-where, they ſearch, firſt, whether the Bone is laid bare, which will be eaſily diſcover'd by the Sound of the Probe upon it; then, running over all the Surface of the denudated Bone, they examine whether any thing rough occurs. That this might be perform'd without any Dread of Danger, *Celſus*, in the fourth Chapter of his eighth Book, adviſes, "That the Probe ſhould neither "be too ſlender, nor too ſharp; leſt, when it lights upon "ſome natural Sinuſes, it ſhould falſly create an Opinion of "the Bone's being broken; nor ought it to be too thick and "groſs, leſt the ſmall Chinks and Fiſſures ſhould eſcape its "Point. When the Probe has reach'd the Bone, if it appears "ſound and ſmooth, it is, in all Probability, entire: But if "any thing rough and uneven occurs where there are no Su"tures, 'tis a Sign the Bone is broken." Hence 'tis obvious, that we are carefully to obſerve the Places where the Sutures occur, which, in different Perſons, and at different Ages, ſometimes vary. Thus the Sagittal Suture, in young Perſons, divides the Os Frontis in two to the very Root of the Noſe, but is gradually obliterated and effac'd in Perſons of a more advanc'd Ages; tho', in ſome Men conſiderably advanc'd in Years, it is ſtill to be obſerv'd; for which Reaſon, in Wounds inflicted on the Forehead, we are always to have a Regard to this Suture. In a very advanc'd Age, and ſometimes ſooner, all the Sutures are ſometimes effac'd and obliterated. According to *Herodotus*, in *Calliope*, after the Battle of *Platæa*, when the bare Bones were all carry'd into one Place, there was one Cranium found which had no Suture at all, but conſiſted of one entire Bone. It is alſo obſerv'd, that, in young Perſons, the Sutures are ſometimes obliterated: Thus, in the Cranium of a Boy about eight Years old, the ſmalleſt Traces of the Sagittal and Coronal Sutures could not be diſcover'd either in the external or internal Surface of the Cranium. The celebrated *Hunauld*, in *Hiſt. de l' Acad. des Sciences*, for the Year 1734. has obſerv'd, even in younger Subjects, the Obliteration of theſe Sutures beginning, for which Reaſon he thinks, that Caſes of this Nature are not ſo rare as is commonly thought. Beſides, in ſome Places, the Cranium is naturally rough, as in the *Os Occipitis*, for Inſtance; and ſometimes the Sutures themſelves differ from each other very conſiderably in different Men. Thus I myſelf, ſays *Van Swieten*, have in my Cuſtody a Cranium, the Sagittal Suture of which, near the Occiput and Forehead, is quite narrow, but, towards the Crown of the Head, is diſtributed in winding Meanders, ſo as to take up the Space of almoſt an Inch. Hence *Hippocrates*, in the Beginning of his Book on Wounds of the Head, juſtly obſerves, "That Mens Heads are not univerſally "alike in Shape, nor their Sutures ſituated in the ſame Places." See *Tab.* 9.

When, therefore, a Wound is inflicted near a Suture, even after a Search with the Probe, the Caſe remains dubious, and the Wound of the Bone is with Difficulty diſcover'd: Thus *Celſus*, in the fourth Chapter of his eighth Book, informs us, that *Hippocrates* himſelf was deceiv'd in a Caſe of this Nature. "This," ſays he, "he ingenuouſly confeſs'd, like all truly "great Men, who, conſcious of their ſuperior Worth, ſuſtain

" no Loſs of Reputation by acknowledging their Errors; " whereas ſuperficial Geniuſes are never fond of loſing a " Share of the little they have. 'Tis the diſtinguiſhing Cha- " racteriſtic of every truly great Genius, who, at any rate, " has a ſufficient Stock of Merit to recommend him, to con- " feſs his Blunders with Frankneſs and Ingenuity, eſpecially " when they are of ſuch a Nature as to be uſeful to Poſterity, " by preventing their being deceiv'd, and led into the ſame " Error he himſelf has committed."

Fourthly, Pouring ſome Ink upon the Part has alſo been recommended as one Method of diſcovering a Fiſſure of the Bone, when thoſe above ſpecify'd are not ſufficient.

When, from a Knowledge of the wounding Inſtrument, the Violence with which the Wound was inflicted, and the Malignity of the ſubſequent Symptoms, ſuch as a Vertigo, Inability to ſtand, and a profound Sleep, 'tis to be dreaded, that the Cranium has ſuſtain'd ſome Injury; and yet, upon laying bare the Part, neither a Fiſſure nor a Contuſion of the Bone can be diſcover'd either by the Eye or the Probe; *Hippocrates* preſcrib'd another Method for diſcovering the latent Diſorder, which, if neglected, might afterwards induce the moſt terrible and dangerous Symptoms. For this Purpoſe he orders the Bone to be cover'd over with ſome black liquid Medicine, and the Wound to be dreſs'd with a Linen Cloth ſoak'd in Oil, over which a Cataplaſm of Maize is to be apply'd. Next Day, when the Wound is uncover'd and cleans'd, he order'd the Bone to be ſcrap'd, by which means this black Subſtance was left in the Fiſſure or ſhatter'd Part of the Bone, whereas the ſound Parts appear'd white. 'Tis therefore obvious, that nothing elſe is here requir'd, than to apply the black Liquid to the bare Bone, which being again abraded or wip'd off, will appear in the Parts where the Cranium is ſplit or contus'd; becauſe, as it penetrates farther into theſe Parts, it cannot be ſo eaſily abraded or wip'd from them, as from the reſt of the Surface of the denudated Bone.

But 'tis by no means certain, from this Paſſage, whether for this Intention *Hippocrates* us'd Ink; tho' *Celſus*, in the fourth Chapter of his eighth Book, ſeems to have paraphras'd it in this Senſe: " For," ſays he, " if the Fiſſure is not mani- " feſt, Ink is to be laid upon the Bone, and afterwards abraded " with a Rugine, in which Caſe the Fiſſure, if there is any, " will retain Part of the black Subſtance."

In *Paulus Ægineta*, *Lib.* 6. *Cap.* 90. for diſcovering a latent narrow, and otherwiſe imperceptible Fiſſure, there is a black liquid Medicine propos'd, or ſuch Ink as is us'd in Writing [φαρμακόν τι μέλαν ὑγρὸν, ἢ ᾧ ἀντὶ γραπτοῦ ἐγχέαντες]. Beſides, the Antients us'd the Liquor of the Cuttle-fiſh, and perhaps other Subſtances, inſtead of Ink; at leaſt the Ink now us'd, and which is prepar'd of Vitriol, Galls, the Bark of Pomegranates, and other ſuch aſtringent Subſtances, ſeems very improper for this Purpoſe, unleſs when much diluted; ſince, if apply'd to the bare Bone, it would forthwith ſo conſtrict the tender Veſſels, as to deſtroy them; after which a mortify'd Scale would of courſe be ſeparated, and caſt off. And there is certainly no Neceſſity for uſing Ink for this Purpoſe, ſince the Intention may be equally well anſwer'd by any other colour'd Fluid; and if a black Colour ſhould ſeem more proper than any other, the Liquor for anſwering this Intention might be prepar'd of Bones calcin'd to Blackneſs, triturated to a fine Powder, and diluted with Water; as alſo of various other Subſtances, more proper than the Ingredients of which Ink is compos'd.

Beſides, it ſeems to be ſufficient to tinge the bare Bone with ſuch a Liquid, and afterwards to wipe it off with a Sponge; nor does it ſeem neceſſary to abrade the whole Surface of the Bone with a Rugine, ſince, by that means, a new Separation might be expected in the abraded Surface, as ſhall hereafter be ſhewn. As the Search by the Probe may prove fallacious about the Sutures, and in thoſe Parts where the Surface of the Bone is naturally rough, ſo this Method may alſo prove deceitful; for the colour'd Liquor will inſinuate itſelf into the Interſtices of the Sutures, and adhere to the Inequalities of the Cranium.

Fifthly, It may farther give us ſome Inſight into Wounds of this kind, to make the Patient ſqueeze ſome hard Subſtance betwixt his Teeth.

Hippocrates, in his *Prænotiones Coacæ*, when it is doubtful whether the Cranium is fractur'd or not, adviſes the Patient to take the Stalks of Aſphodel or Fennel between his Jaws, and chew them, and at the ſame time to obſerve, whether in any Part of the Cranium a Noiſe is perceiv'd, which will be the Part fractur'd. But it is obvious, that ſuch a Noiſe cannot be perceiv'd, unleſs the Fracture is conſiderably large; a Fiſſure, therefore, of the Cranium can never be certainly and infallibly diſcover'd by this Method. This Sign entirely depends on this, that the Temporal Muſcles, which, during the Action of Chewing, preſs the inferior Jaw with great Force to the ſuperior, ariſe broad on both Sides from the lateral Part of the Cranium, that is, from the ſuperior Proceſs of the Os Jugale, from the adjacent Side of the Os Frontis, from the largeſt Proceſs of the Sphenoide Bone, from the Os Bregmatis, and the ſquamous Part of the Os Temporis. Hence, whilſt theſe Muſcles act, if in the Neighbourhood of their Inſertion there is a large Fracture, the ſhatter'd Bones may poſſibly be mov'd, and make a Noiſe; and ſince theſe Muſcles are inſerted in ſo many Bones of the Cranium, and diffuſe themſelves ſo far, Fractures in various Parts of the Cranium, provided they are conſiderably large, may be diſcover'd by this means. Some Surgeons alſo order the Patient to bite an Iron Nail for the ſame Purpoſe; or they make him take a Cord in his Teeth, which, when extended, they ſtrike with their Finger, deſiring the Patient, in the mean time, to obſerve whether he perceives any Motion or Noiſe in his Cranium.

Sixthly, If the Cranium is broken or contus'd, or if white Spots appear upon it, the Sight will direct us to judge of the Injury it has receiv'd.

If the Wound is either ſpontaneouſly, or by the Aſſiſtance of Art, made ſo large, that the denudated Bone may be view'd by the Eye, then the Fiſſures or Fractures, if there are any, will be ſufficiently conſpicuous; but where the Bone is contus'd without a Separation of its Coheſion, the Injury will be diſcover'd with the greater Difficulty, as *Hippocrates* juſtly obſerved.

The principal Sign by which, in a Caſe of this Nature, the Surgeon can be determin'd, is, if the Bone changes its natural Colour, which, for the moſt part, is ſomewhat reddiſh, or a little inclin'd to blue. If pale Spots appear here-and-there, 'tis a Sign, that the ſubjacent Veſſels, which gave their Colour to the pellucid bony Lamina, are mortify'd, and no longer fit for tranſmitting the Fluids; whence the Separation of the Lamina, now deſtitute of the ſubjacent Veſſels, is to be expected.

Seventhly, The Touch will alſo contribute to the Diſcovery of the particular Injury done to the Cranium.

We muſt not here forget to obſerve, that the Touch of the Fingers is often ſo deceitful, as to make the Surgeon believe, that the Bone is depreſs'd, when in reality it is not. In violent Contuſions, the Integuments, by being forcibly daſh'd againſt the ſubjacent Cranium, are often ſo much injured, that many Veſſels being broken, a large and ſudden Collection of the diſcharg'd Humours is form'd under the Skin, which remains entire. If, in ſuch a Caſe, the Edges of this Tumor are preſs'd with the Fingers near the ſound Part, the Bone appears to be depreſs'd, the Reaſon of which Phenomenon is this: The Integuments of the Cranium are conſiderably thick, and eſpecially the Skin. Theſe Integuments are, by the ſubjacent Parts, elevated when the cellular Membrane becomes turgid with the diſcharg'd Humours, and about the Edges of ſuch a Tumor the Skin as yet is contiguous to the ſubjacent Parts. By carrying the Finger a little farther to the ſwelled Part, ſince the Skin is there elevated, the Margin, which is the Boundary between the ſound and contus'd Parts, feels as if the Bone was depreſs'd, becauſe the thick Skin is there elevated from the ſubjacent Bone and Pericranium. Skilful Surgeons have often been impos'd upon by this Circumſtance; and the celebrated *Ruyſch*, in *Obſerv. Anatom. Medic. Centur. Obſerv.* 55. confeſſes, that when handling with his Fingers a large Tumor of the Forehead, produc'd by a violent Contuſion, he ſhould have been tempted to think, that the Cranium was depreſs'd, as a Surgeon then preſent affirm'd it to be, unleſs, by repeated Experience, he had been taught, that in ſuch Caſes the Touch might prove fallacious.

Eighthly, The Appearance of the Integuments will alſo furniſh us with Signs whereby to judge of the Injury done to the Cranium, as will likewiſe a Separation of the Integuments from the Bone about the ſeventh Day; great Pain; an ichorous and fetid Diſcharge from the Wound; and an apparent Malignity, not uſual when the Integuments only are affected.

From theſe Signs the Cranium is known to be injur'd, but the Diſcovery is frequently not made, till bad Symptoms ariſing, contrary to the Expectation both of the Phyſician and Surgeon, cut the Patient off. When Wounds are only inflicted on the Integuments, without wounding the Cranium, they are often ſoon cur'd, tho' pretty large, by obſerving the Directions already laid down concerning Wounds of the Integuments; but when the Cranium is injur'd, and the Injury cannot be diſcover'd by the now enumerated Signs, the Wound is generally treated like a ſimple Wound, and often the Cure ſeems to ſucceed well enough for ſome few Days in the Beginning. In the mean time the ſubjacent injur'd Bone begins to become corrupted; the Integuments are ſeparated from the affected Bone; the Pain is increas'd; concocted Pus no longer appears, but only a thin, and often a ſufficiently fetid Ichor is diſcharg'd; and the Wound, proving obſtinate to the beſt-choſen Remedies, affords a certain Sign of a latent, and ſtill undiſcover'd Diſorder. But all theſe Symptoms appear ſooner or later, according to the Violence of the Diſorder, the Conſtitution of the Patient, and eſpecially the greater or leſſer Warmth of the Atmoſphere. *Hippocrates*,

pocrates, in his *Prænotiones Coacæ*, accurately obſerv'd all theſe Circumſtances; for, after he has recounted the Signs by which Fractures of the Cranium may be known, he adds, "But, in "Proceſs of Time, Fractures are diſcover'd partly on the "ſeventh, and partly on the fourteenth Day, and partly by "other Circumſtances; for a Separation of the Fleſh from "the Bone happens, the Bone becomes livid, the Pain is in-"creaſed, and Ichor is diſcharg'd; and theſe Symptoms very "difficultly admit of a Cure." And, in his Treatiſe concerning Wounds of the Head, where he recounts the Signs which prognoſticate the Death of a Patient wounded in the Head, he uſes theſe Words: "If the Bone is fractur'd, ſplit, or "contus'd, &c. and if Scraping and Cutting have been ne-"glected, upon a Suppoſition, that it did not ſtand in need of "them, as being ſound, a Fever will generally ſeize the Pa-"tient before the fourteenth Day in the Winter, but, in the "Summer, after the ſeventh. A little Ichor will be diſcharg'd "from it, and the inflam'd Part will become mortify'd. When "this happens, the Ulcer becomes diſcolour'd, glutinous, like "ſalted Fleſh, (ὥσπερ τάριχος) of a browniſh Colour, and "ſublivid; and, when the Bone begins to be corrupted, "(σφακελίζειν) becomes black, ſmooth, and, towards the "Margin, pale and whitiſh; but, when it becomes purulent, "Puſtules appear on the Tongue, and the Patient, growing "delirious, dies." Thus accurately did *Hippocrates* advert to all theſe Circumſtances; for ſo long as the Lips of the Wound are red, and but little inflam'd, ſkilful Surgeons are not much afraid of Danger; but when this live Colour is loſt, and the Lips of the Wound begin to aſſume a Colour reſembling that of wither'd Fleſh, or ſuch as has lain long in Salt, they well enough know, that the moſt terrible Symptoms are approaching. For this Reaſon the moſt ſkilful Surgeons, after *Hippocrates*, as we have already obſerv'd, are not ſo much afraid of terrible Symptoms which appear immediately after the Infliction of the Wound, as of thoſe which appear afterwards, eſpecially about the ſeventh Day.

For the ſame Reaſon *Hippocrates* affirm'd, that, in Wounds of the Head, Fevers which began on the fourth, ſeventh, or eleventh Day, were generally mortal.

Since, then, even gentle Wounds of the Cranium are often ſucceeded by many and terrible Symptoms, ſome of which we have already conſider'd, and others of which will be enumerated, 'tis obvious, that this ſort of Wound is to be carefully laid open, and cur'd as ſoon as poſſible. Such is the Nature of the already recounted Signs, that if many of them concur, they afford a pretty certain Diagnoſtic; and thoſe hereafter to be enumerated furniſh an infallible Proof, that the Bone is injur'd: But then the latent Diſorder is often diſcover'd too late for a Cure, whereas, had it been ſooner found out, effectual Relief might have been afforded.

From what has been ſaid, the Reaſon is obvious, why ſkilful Surgeons do not neglect, or ſuperficially treat, the ſlighteſt Wounds of the Head; ſince often a latent Wound of the Bone has eſcaped the moſt Skilful; and ſometimes, when the Integuments are only wounded, the ſubjacent Bone has been affected by the Pus, or the Atmoſphere.

The Effects of the Injuries above-mention'd, done to the Pericranium, are,

Firſt, A Mortification or Deſtruction of that Part of the Bone, which happens to be ſeparated from the reſt.

The Mortification of the Bone is produced by a Deſtruction of thoſe Arteries of the Perioſteum, which convey the vital Juices to the Bone, and an Abolition of thoſe Veins which carry back the ſame Juices: When, therefore, theſe Veſſels ceaſe to do their Offices, the Plate of Bone, with which they have a Connection, becomes mortified. Whether by a Wound of the Pericranium the Veſſels, communicating with the Bone, are deſtroy'd; or whether the Veſſels diſtributed from the Pericranium, between the Laminæ of the Bone, are obliterated by a Wound of the Bone itſelf; or whether thoſe Veſſels which paſs to the Diploë thro' the Foramina or Holes in the external Lamina of the Cranium, are deſtroy'd, the Effect will be the ſame; that is, the Part deprived of thoſe Veſſels which convey and tranſmit the vital Juices, will become mortified. Now every Part of the Body, totally deprived of an Influx of the vital Juices, can never be again united with the live Parts; but muſt always be ſeparated from the adjacent ſound Parts: Hence the mortified bony Laminæ are ſeparated and expel'd, in the manner already mention'd, when treating of Wounds of the Pericranium.

Secondly, By the Mortification of the ſeparated Portion of Bone, the adjacent Parts of the Cranium will be infected.

And, *Thirdly*, Hence a Putrefaction of all the Parts, thus infected, may be produced.

The Bones of the Cranium conſiſt of various Laminæ, laid over each other, and between which very tender Veſſels are diſtributed, at leaſt before an advanced Age, when theſe Veſſels are obliterated and effaced, by a cloſe and near Approach of the Laminæ to each other, as has already been obſerved. This is alſo confirm'd by the Experiment try'd by *Belloſte*, in which the Bone was gently perforated, tho' not entirely to the Diploë; and yet Veſſels aroſe thro' the Perforations, by means of which the corrupted Part was ſeparated, and a freſh Pericranium form'd, as we have above obſerved. There were, then, Veſſels in the bony Subſtance of the external Table of the Cranium, which, being freed from the ſuperincumbent bony Laminæ, and lengthen'd out, conſtituted this Compages of Veſſels, ariſing thro' the ſeveral Perforations. *Tulpius*, in his *Obſervat. Medic. Lib.* 1. *Cap.* 2. relates a very memorable Caſe, which confirms this: "A certain Man was ſtruck with a "Muſket on the hinder Part of the Head; and tho' no Fiſ-"ſures were to be diſcover'd in the Cranium, yet the Violence "of the ſubſequent Symptoms was ſo great, that the Trepan "was apply'd; and, whilſt the Surgeon was twiſting about "the Crown of the Trepan, a large Number of ſmall Drops "of Blood burſt thro' the ſound Bone, and, like Drops of "Dew, cover'd the whole Cranium. Theſe Drops, being "ſeveral times wiped off, forthwith burſt out afreſh." It is therefore obvious, that, in conſequence of the Continuity of the Veſſels, a Way is open to the Blood from the very Subſtance of the Bone, ſince it may burſt forth, like Dew, over all the external Surface of the Bone. If, then, the ſuperior Lamina, for Inſtance, of the Bone is mortified, this Diſorder is eaſily communicated to the ſubjacent Veſſels, by the Injury done to which the ſubſequent Lamina will be affected: Thus the Diſorder may be propagated thro' all the Laminæ of the external Table, which again will affect the Diploë; which, in its Turn, may, in like manner, corrupt the internal Table.

From what has been now ſaid, it is obvious, that, by the Deſtruction of the Veſſels, the Life of the Part is aboliſh'd; whence the Corruption of the mortified Part ſpontaneouſly follows. And we have before given an Inſtance of a Man dying ten Months after a violent Contuſion of the Head, where the Cranium was found entirely putrid and fetid. *Paré*, in the twenty-ſecond Chapter of his tenth Book, gives us a ſurpriſing Caſe, by which it appears, that the Cranium may not only become thus putrid, but alſo be ſeparated when it is ſo, the Patient remaining alive at the ſame time. "A certain Man "received a Wound on the Left Bregma with a Sword, which, "tho' it wounded the Bone, did not, however, penetrate to "the internal Table of the Cranium. When the Wound was "almoſt heal'd; the Patient happening, with his Companions, "too wantonly to indulge his Appetite in the Uſe of rich "Wine, and Aliments of a hot Nature, was ſeiz'd with an "acute Fever, a Loſs of his Senſes and Speech, and a violent "Swelling of his whole Head and Face. Some Days after, an "Apoſtem ariſing in the wounded Part, and being laid open "with a Lancet, yielded a large Quantity of Ichor; upon "which the whole Subſtance of the ſubjacent Bone of the "Cranium appear'd black, putrid, and fetid; and a large "Quantity of live Worms afterwards form'd their Neſt in the "Wound. A Portion of the corrupted Bone, as large as the "Palm of the Hand, was ſeparated; but the Patient was en-"tirely cured of ſo terrible a Diſorder; only the Cicatrix re-"main'd for a long time weak, and very ſenſible of Pain."

Fourthly, A Caries of the Diploë will be produced.

When the corrupted Bones moulder, as it were, into a fine Powder, this is ſaid to be a Caries of the Bones, which is entirely diſtinct from that Separation of the corrupted Laminæ which is made by Exfoliation. The Diploë, lying between the two Tables of the Cranium, conſiſts of a large Number of Veſſels, and the cellular Structure of the Bone: It alſo contains a medullary Oil, capable of being very ſoon corrupted. Hence, whether the Wound of the Bone, by propagating the Diſorder, at laſt affects the Diploë; or whether, in conſequence of a violent Contuſion, the Bone in the mean time remaining entire, the broken Veſſels of the Diploë diſcharge their contain'd Juices; from both theſe Cauſes may ariſe a Corruption of the ſtagnating and extravaſated Fluids: By theſe corrupted Fluids the tender Veſſels, which are as yet entire, may be corroded, and the Diſorder thus increaſed; ſince, by creeping thro' the bony Cellulæ of the Diploë, between the two Tables of the Cranium, it may diffuſe itſelf very far; and it is, at the ſame time, obvious, that the Diploë being thus affected, both Tables of the Cranium may be in like manner corrupted: An Accident which is ſucceeded by a numerous Train of Misfortunes.

Fifthly, A Corruption of the Integuments of the Cranium, and of thoſe of the Brain itſelf.

The Pericranium covers the convex Part of the Cranium; and the Dura Mater, which is the internal Perioſteum of the Cranium, firmly adheres to its concave Part. Both theſe Membranes diſtribute Veſſels to the contiguous Bone, and receive others from it. And it ſeems highly probable, that the Veſſels

Veſſels of the Pericranium, which penetrate the external Table, do, in the Diploë, communicate and unite with the like Veſſels ſent from the Dura Mater, thro' the internal Table, to the Diploë. When, then, the Bone of the Cranium is corrupted, and eſpecially when the Diploë itſelf is thus affected, both the internal and external Integuments of the Cranium may, in conſequence of this Communication of Veſſels, be equally affected. This is confirm'd by the Inſtances above related. But when the internal Integuments of the Cranium are thus diſorder'd, the ſoft contiguous Brain is eaſily affected and corrupted, as we are taught by a Variety of Inſtances.

Laſtly, All thoſe Diſorders which proceed from Affections of the Brain, as Convulſions, profound Sleep, Palſey, Apoplexy, and Death.

All Senſations and Motions of the ſpontaneous and arbitrary Kind depend upon the Brain, as is obvious from Phyſiological Obſervations: When, therefore, the Brain is corrupted or injured, either all or only ſome of its Actions may be diſturb'd or aboliſh'd, according as the Diſorder affects either the whole Maſs of the Brain, or only ſome Parts of it; but when the Diſorder, being ſlowly communicated from the wounded Bone, gradually affects the Brain itſelf, the Symptoms often follow in the Order here enumerated. In Caſes of this Nature various Obſervations alſo prove, that Patients have ſometimes been cut off by a ſudden and unexpected Death. It is ſufficient to obſerve here, that all the Diſorders of the Brain, from the ſlighteſt Vertigo to the moſt fatal and terrible Apoplexy, have been found to derive their Origin from this Cauſe.

From what has been ſaid above, relative to Wounds of the Head, their different Natures, and the Prognoſtics thence deducible, are eaſily underſtood.

From what has been already ſaid concerning Wounds of the Head, it may, ſo far as Art can aſſiſt us, be determin'd, whether the Cranium is injured or not; tho', when the Wound is very ſevere, there is always ſome Dread of a latent Diſorder, tho' it cannot be diſcover'd by the Senſes. When, for Inſtance, the Cranium is often ſplit in another Part than where the Wound was inflicted, as we have already obſerved.

But when, by the Signs already ſpecified, 'tis obvious, that the Cranium is wounded, in forming our Prognoſtics we are always to dread the Symptoms enumerated above; not that they always enſue, but becauſe they may ſometimes follow. Prudence therefore requires, that the Danger ſhould be repreſented to the Patient's Friends, leſt the ſubſequent Train of terrible Symptoms ſhould be aſcrib'd rather to the Unſkilfulneſs of the Surgeon, than the Malignity of the Wound: Beſides, when both the Patient, and his Friends who attend him, are ſufficiently warn'd, that ſo terrible Symptoms may be conſequent to Wounds of the Head apparently very ſlight and ſuperficial, they will be far more careful in obſerving the neceſſary Precautions, requir'd both with reſpect to Regimen, and the Cure of the Wound; from a Neglect of which a ſudden and unexpected Death has often cut the Patient off, when he was thought to be entirely out of Danger.

The curative Indications, hence ariſing, are,

Firſt, To lay bare the injur'd Bone.

We have much Reaſon to doubt, whether 'tis always abſolutely neceſſary to lay bare the wounded Part, tho' there ſhould be a ſtrong Suſpicion, that the Cranium is injur'd; ſince 'tis poſſible, that, when wounded or ſplit, it may again unite, as happens in other Bones of the Body. For this Reaſon 'tis adviſeable, as much as poſſible, to avoid both Extremes; for ſome Surgeons, in all Wounds of the Head, indiſcriminately have recourſe to Inciſion; whilſt others, too much under the Influence of Fear, dare not venture upon it in the moſt terrible Caſes. *Ruyſch*, in *Obſervat. Anatom. Chirurg. Centur. Obſerv.* 60. who, during a long Courſe of Practice in a populous City, had ſeen ſuch a great Variety of Caſes, tells us, That, in true Fractures of the Cranium, when the Symptoms are not augmented, we are not immediately to proceed to Inciſion and Perforation; but that, after Veneſection, we are to attempt the Cure by the often repeated Application of warm cephalic Fomentations: And he adds, That he himſelf had, by this very Method, cured many, after an Inciſion was juſt about to be made. *Celſus*, in the fourth Chapter of his eighth Book, informs us, "That, when Bones were ſplit or fractur'd, the "antient Phyſicians had immediate recourſe to Inſtruments for "their Extirpation: But, ſays he, 'tis far more adviſeable, "firſt to make Trial of ſuch Plaiſters as are intended for Diſ"orders of the Cranium." This Method he order'd to be uſed till the fifth Day. "But, continues he, if the Fleſh "begins to grow, if the Fever is either removed, or become "more gentle, if the Patient ſleeps ſufficiently, and his Appe"tite returns, we are to continue in the Uſe of the ſame Me"dicine. By this Method the Fiſſures are often fill'd with a "kind of Callus, which is, as it were, a Cicatrix of the Bone. "And Bones ſo fractur'd, as not to cohere together, are again "conglutinated by a Callus of the ſame Nature. This Callus "is a more proper Covering for the Brain than the Fleſh, "which grows after the Exciſion of the Bone: But if, in the "Beginning of the Cure, the Fever is increaſed, if the Pa"tient's Sleeps are ſhort, and diſturb'd by Dreams, if the Ulcer "is moiſt, and is not nouriſh'd, if ſmall glandular Tumors "appear in the Neck, if the Patient is afflicted with violent "Pains, and if his Loathing of Food is increaſed, we are "then to have recourſe to manual Operation, and the Uſe of "the Rugine."

Hence 'tis obvious, that from the Violence and Malignity of the Symptoms we are principally to determine, whether, when the Bone is injur'd, the Place affected ought to be laid bare; or whether there is any Hope left of the Wound of the Bone being cured, without making an Inciſion.

Secondly, To cleanſe the Wound,

By removing whatever cannot poſſibly be reunited to the ſound Parts, as grumous Blood, Fragments of Bone entirely divided from the reſt, and corrupted Membranes; or by bringing away, by means of Suppuration, all thoſe partially divided Parts, that will not unite with thoſe which are ſound. By theſe Means whatever impedes the healing of the Wound, whilſt remaining in it, is removed; and thus the Cure is facilitated.

Thirdly, To make ſmall Perforations in the Bone,

In the Manner already directed; that,

Fourthly, A new Periofteum, or a Membrane equivalent to it, capable of communicating Veſſels to, and receiving them mutually from, the Bone, may be regenerated:

Becauſe the Integuments will not adhere to the Bone whilſt it is bare, and deſtitute of ſuch a Membrane.

Fifthly, To heal the Wound,

By proper Bandage, and the Methods directed above, for ſimple Wounds of the Integuments, without Contuſion.

When the Condition of the Wound, and the Symptoms conſequent to it, ſhew that there is a Neceſſity of laying bare the Part affected, the Integuments muſt be cut thro' quite to the Bone, by an Inciſion, which muſt be either direct, angular, perpendicular, or decuſſated, as the Nature of the Place affected, and of the particular Injury received, ſhall require; taking care to preſs cautiouſly on the Bones which are fractur'd, and yield to the Knife.

After the Hairs are ſhaved off, we muſt inquire into the Largeneſs of the wounded Part, and its Situation, with reſpect to the Sutures, Muſcles, and Tendons: By this means we are principally enabled to determine what Kind of Inciſion is neceſſary; whether, for Inſtance, one Inciſion thro' the Middle of the wounded Part is ſufficient; or whether two Inciſions are requir'd, which again may be made to denudate a larger or ſmaller Portion of the Bone, according to their various Inclinations to each other; for, if two Inciſions are ſo made as to form an Angle, the whole Portion of the Bone, included within the two Sides of that Angle, may by that means be laid bare; but if one Inciſion is made by way of a Line, touching the Margin of the wounded Part, and if another Inciſion is made perpendicular to the former, thro' the Middle of the injur'd Part, 'tis obvious, that by this means double the Portion of the Bone may be denudated. And if this perpendicular Inciſion ſhould be lengthen'd out, and cut croſs the Inciſion on the Margin of the Part affected, in the middle Point, 'tis obvious, that by this means four right Angles muſt be form'd, and conſequently a Portion of the Cranium, four times as large, muſt be laid bare, as by that Method in which the two Inciſions form'd only one Angle. This is call'd a decuſſated or crucial Inciſion of the Integuments, which, becauſe it denudates the largeſt Portion of the Bone, *Celſus*, in the fourth Chapter of his eighth Book, affirms to be the moſt commodious. "This Inciſion, ſays he, "is moſt properly made by two tranſverſe Lines, in the Form "of the Letter X, that the Integuments may be raiſed from "each of the four Angles." But, at preſent, ſuch an Inciſion is only made as is ſufficient for laying bare the Part affected; and it is obvious, that a ſingle Inciſion is only required, when the injur'd Part is ſo ſmall, as to be expoſed to the Eye by the receding or gaping of the Lips of the Wound. But an angular Inciſion is proper when the Part injur'd is not exceſſively large, but yet too large to be laid bare by a ſingle Inciſion. But when a large Portion of the Bone is to be laid bare, that Method is to be uſed in which a ſtrait Inciſion is made, by way of Tangent to the Circumference of the Part affected, and another made to fall perpendicularly upon it, thro' the Middle of the injur'd Part: And, where a ſtill larger Portion of the Bone is to be denudated, a ſtrait Inciſion is to be made thro' the Middle of the Part affected, and another made ſo as to cut it in the Middle at right Angles: Thus the four Angles of the cut

Integuments

Integuments being raiſed, the whole Portion of the Bone, contain'd within the Extremities of theſe two Inciſions, may be laid bare.

This Inciſion ought to be made with a Knife which is ſharp, and ſufficiently ſtrong, leſt its Edge ſhould happen to be blunted; for the Skin of the Cranium, in conſequence of its hard and callous Nature, requires a conſiderable Force to cut it.

The Edge of the Knife ought to be carried immediately to the Bone, that, by ſtriking upon it, the Pericranium may alſo be divided by one and the ſame Inciſion: "Leſt, ſays *Celſus*, "(in the fourth Chapter of his eighth Book) any Part of the "Membrane which ſurrounds the Cranium, below the Skin, "ſhould be left undivided; for a Laceration of this Membrane, "with Rugines and Perforators, excites violent Fevers and In-"flammations." For, whilſt the Inciſion is making in the Integuments, if the Edge of the Knife does not run cloſe upon the Bone, there is a Neceſſity for dividing the Pericranium afterwards. 'Tis, indeed, true, that, by the Knife, a kind of Furrow is made in the Bone; but, tho' this cannot be avoided, yet the Injury done the Bone may be eaſily cured, after the Part affected is laid bare.

Since, then, for this Purpoſe, 'tis neceſſary, that the Knife be pretty ſtrongly apply'd to the Bone, it is obvious, that we ought carefully firſt to examine, whether the Cranium is ſo fractur'd, as that the ſhatter'd Parts may be depreſs'd by the Application of the Knife to the Bone; from which the moſt terrible Symptoms, and ſometimes Death itſelf, may enſue, as is plain from various melancholy Inſtances. When, therefore, by feeling every-where with our Fingers, we diſcover ſomething looſe, the Inciſion is to be ſo made as to avoid this Place; but where a violent Contuſion has raiſed a large Tumor on the Part affected, it is often very difficult to diſcover, whether the fractur'd Bone is looſe and yielding, or not.

We muſt alſo be as careful as poſſible not to cut the large Arteries diſperſed thro' the Integuments. The remarkable Ramifications of Nerves diſperſed, for Inſtance, in the Forehead, above the Orbit of the Eye, muſt carefully be avoided: As alſo the Muſcles, Tendons, and Sutures, the Situations of all which are to be learned from the Anatomy of the Parts above given.

Sharp ſays, That if the Fracture be not complicated with a Wound of the Scalp, or the Wound is too ſmall to admit of the Operation, which ſeldom fails to be the Caſe, then the Fracture muſt be laid bare, by taking away a large Piece of the Scalp. It is a Faſhion with ſome Surgeons to make a crucial Inciſion for this Purpoſe, which they prefer to all other Methods, upon the Suppoſition, that the Wound will more eaſily heal again after the Operation, by turning down the Flaps; and in caſe we find no Fracture, which ſometimes happens, after Scalping, that, by making this Species of Wound, an Exfoliation of the Bone, and a Tedioufneſs of Cure, will be avoided. But whoever has ſeen the Practice of the crucial Inciſion, muſt be ſenſible of the falſe Reaſoning uſed in its Favour; for it ſeldom or never happens, that we inquire for a Fracture of the Skull by ſcalping, but that the Scalp itſelf is contuſed, which Circumſtance bringing on a plentiful Suppuration, and the Matter lodging between the Cranium and Skin not only prevents their immediate healing, but generally occaſions a Caries of the Bone, which is the Accident meant to be ſhunned by it; and frequently at laſt the Lips of the Wound, growing callous, require cutting off to procure a Cicatrix. If then the Objection be good to the crucial Inciſion, when no Operation is perform'd, it becomes of ſo much more Force when we are aſſur'd of uſing the Trepan, that he thinks it is indiſputably right at all times to take off the Scalp, when we lay bare the Cranium with a View to the Operation, which ſeldom fails to granulate with Fleſh in a few Days, if dreſs'd only with dry Lint, and rarely grows carious, if not affected by a great Diſcharge of Matter from the Brain; or if, after it is thus expos'd, new Fleſh ſhould not generate upon its Surface, the Growth of it may be quicken'd by boring little Orifices into the Subſtance of the Bone, or raſping it with the Rugine. The Form of the Piece taken away may be nearly circular; and, to be better aſſur'd of the Courſe of the Fracture, it will be proper it ſhould be of the whole Length of it. He believes there are few who will care to expoſe ſo much naked Skull; but whoever knows the great Advantage, and the little Danger of it, will not heſitate. When the Scalp is remov'd, the Periоſteum muſt be rais'd, and the Arteries immediately ty'd, which will make Way for the Operation to be directly perform'd; tho' the Effuſion of Blood has been eſteem'd ſo troubleſome in this Part, as to have made it almoſt an univerſal Practice to poſtpone the Uſe of the Trepan to the Day after: But the Apprehenſion is without Foundation; for if two or three of the larger Veſſels are ty'd, the others may eaſily be ſtopt with a little dry Lint, and the Operation take place without any Inconvenience; which he has always done himſelf, and would recommend to others, conſidering how urgent the Nature of the Diſtemper is, and that leſs than twenty Hours is often the Difference between Life and Death, when the Brain is much preſs'd by a fractur'd Bone. *Sharp.*

The next Step to be taken is, to ſeparate exactly the Parts cut from the Cranium, by the Rugine, an Inſtrument of which there are various Forms, repreſented *Tab.* 28. *Fig.* 3, 4, 5.

The Pericranium, as has been already obſerv'd, adheres pretty firmly to the Cranium, by means of the Veſſels it ſends to it, and receives from it. Hence, tho' all the Integuments, together with the Pericranium, are cut, they will, nevertheleſs, by a broad Surface, adhere to the Cranium. For this Reaſon, before the bare Bone comes in View, the Pericranium muſt be ſeparated from the Cranium. Sometimes, upon elevating the Angles made by Inciſion, the Pericranium follows, and is ſeparated from the Bone, eſpecially when it adheres but looſely to it, as is obſerv'd in old Patients; but when it adheres ſtrongly, as it often does, it is as ſoon as poſſible to be abraded from the Cranium with a well-poliſh'd Ivory Rugine, which cannot be done without a very intenſe Pain, unleſs the Patient is quite ſtupid and lethargic, as it often happens in violent Wounds of the Head. It were, therefore, to be wiſh'd, that young Surgeons would exerciſe themſelves on the Heads of Calves or Sheep, in order to learn, by a dexterous Uſe of the Rugine, to make a ſpeedy Separation of the Pericranium from the Cranium, ſince to acquire a Dexterity of this kind upon Men is both cruel and dangerous.

The next thing to be done is, to ſtuff the Wound, thus made, with dry Lint.

When the Integuments are thus ſeparated, the Blood diſcharg'd generally hinders the Wound of the denudated Bone from being accurately diſcover'd. For this Reaſon, except the utmoſt Danger preſſes, a farther Examination of the Wound is generally defer'd till next Day, or at leaſt for ſome Hours. But leſt the Parts lately divided ſhould grow together again, which they are very ſoon obſerv'd to do, flat ſoft Pledgets of Lint are applied to the denudated Bone under the elevated Integuments, by which means this Accident is prevented. Thus, when the Hemorrhage is ſtop'd, the Pledgets remov'd, and the Integuments rais'd, the whole Surface of the denudated Bone appears. By this means *Hippocrates*, in his Treatiſe concerning Wounds of the Head, informs us, that next Day the Wound will be ſufficiently large: He alſo orders a Cataplaſm to be applied, of fine Flour boil'd in Vinegar till it becomes highly glutinous, to prevent too great an Inflammation; for the dry Pledgets, by abſorbing the Blood, and other Juices, become tumid, and dilate the Wound, which always produces a kind of Irritation and Inflammation. See the Quotation above from SHARP.

The Blood, Pus, Sanies, and Sordes, muſt be abſorb'd by Sponges; the Fragments, Splinters, and Scales of Bone, if ſmall, not adherent to any Membrane, and in Sight, muſt be taken away by the Forceps, or they may be cut away by the Sciſſars. This is an artificial Mundification.

When the Pledgets are remov'd, and the Blood and all manner of Sordes, which may hinder a full View of the expos'd Superficies of the Bone, are abſterg'd, we are next to ſearch with all poſſible Care, whether there be any thing that requires to be taken off, or ſet to rights. If there appears no Fracture, nor Contuſion of the Cranium, nor the leaſt Sign of a Fiſſure, can be diſcover'd, and there ſeems no Reaſon to ſuſpect an Extravaſation of Humours within the Cranium, which would require Perforation in that Place, in order for their Extraction, the Wound is to be incarn'd and conſolidated again. The moſt experienc'd Phyſicians and Surgeons have been ſubject to Miſtakes in this Affair, when they have concluded, before Scalping, as they thought, from evident Signs, that ſome Defect or Diſorder lay in the Place to be open'd. Obſervations and Examples to this Purpoſe are very numerous: *Hippocrates* obſerv'd, that ſometimes the Bone is fractur'd in a Part remote from the Place where the Wound was receiv'd; and it appears, from Obſervations made by very good Authors, that the Caſe may be always dubious; and therefore it is the beſt way to tell the Patient and his Friends before-hand, that all the Signs indicate the laying open of the affected Part, in order to diſcover the latent Diſorder, which yet may be ſeated in another, and perhaps remote, Part of the Head. A prudent Surgeon, therefore, conſults with a Phyſician, or ſome other Surgeons, what is to be done in ſuch Caſes; by which means he will, at leaſt, reap the Advantage of having ſome to atteſt for him, that all things have been perform'd according to the Rules of Art, tho' the Event did not anſwer his Wiſhes.

When it appears, that the denudated Bone has been injur'd, the general Indication directs the Removal of all thoſe things which may poſſibly obſtruct the Cure of the Wound. Any Effuſion of the Humours which adhere to the Part, and incommode it, are eaſily abſorbed with Sponges, or dry Lint; but Fragments of Bones, ſmall Splinters, and Scales which ſeparate themſelves, or are ſeparated by the Inſtrument, are to be regarded as heterogeneous Bodies, which may do Miſchief by

their Preſence, and much retard the Cure of the Wound. But firſt, as has been obſerv'd, we are to conſider whether they may be remov'd without injuring the Part, or whether it would be ſafeſt to leave them till they ſeparate, and fall off of themſelves. If the Fragments of the Bones are but ſmall, and no longer cohere to the living Parts, there is no Hope of their Reunion, and they may be ſafely remov'd with proper Inſtruments. But ſince the Bones, being depriv'd of their Perioſteum, may be very much injur'd by the free Acceſs of the Air, as is ſaid above, it is requir'd alſo, that theſe Fragments ſhould appear to View in ſuch a manner, as to be readily ſeparable, and not to give Occaſion for long exploring a Wound of ſuch a Nature with Inſtruments. It is no leſs dangerous to pull away by Violence any bony Fragments which continue to adhere to the Membranes, ſince the Vehemence of the Pain, and the Connection of the Pericranium with the Dura Mater, eſpecially about the Sutures, may produce very bad Effects; but if there is a Neceſſity of their being remov'd, it is better to cut them off with the Sciſſars.

That Depuration of a Wound, which is thus perform'd with the Hand, or with an Inſtrument, is call'd *artificial* Mundification, to diſtinguiſh it from what ariſes ſpontaneouſly by Suppuration, and is for that Reaſon call'd *natural*.

If the Fragments, Splinters, or Scales, are very large, with any conſiderable Adherence, or if they are ſo conceal'd as not readily to be come at, they are to be left; and they will either ſeparate ſpontaneouſly, or unite with the other Parts. This is a natural Mundification.

If the Fragments of the Cranium are very large, we are to examine whether they are corrupted to ſuch a Degree as to leave no Hope of their reuniting with the other Parts of the Bone. This is principally known by the Change of Colour; for if a Fragment of a Bone be turn'd yellow, brown, or black, it will never grow again, but will ſpontaneouſly ſeparate in ſome Time, or is to be remov'd immediately, if it may conveniently be done. But when ſuch Fragments retain their natural Colour, and eſpecially if they ſtill cohere to the Pericranium, there is great Hope, that they will grow again. It ſometimes happens, that in Fractures of large Bones, the Tibia, for Inſtance, or Os Femoris, the middle Fragment is entirely diſunited from the other Parts on both Sides; and yet it has been frequently obſerv'd, that ſuch Fragments have united and grown together again with the reſt of the Bone; therefore we are not to deſpair of the ſame Event in the like Fractures of the Cranium, agreeably to the Obſervations of Surgeons. A Man receiv'd ſo ſevere a Kick from a Mule ſhod with Iron, that the Os Frontis was fractur'd and depreſs'd. A round Piece was cut out of the Cranium with the Trepan, that the fractur'd and depreſs'd Bone might be the more conveniently elevated, and taken out; but as the Fracture reached from the Middle of the Forehead to the leſſer Canthus, M. *Paré* would not venture to take out ſo large a Portion of Bone, but elevated the broken Bone ſo as that it might no longer preſs upon the Dura Mater, and the Patient was happily cured. And a Fragment of a Bone, which was entirely ſeparated from the reſt of the Cranium, but cohering to the Pericranium, has been known to grow together again. A Captain had a large Portion of his Os Frontis, being about three Fingers Breadth in Length, and as many wide, cut off with a Sword, ſo that the Dura Mater was quite naked, and expoſed to View. This large Fragment of Bone ſtill cohering to the Pericranium, together with the Integuments hanging over the Face, was a diſmal Spectacle, and *Paré* was thinking of cutting off the Whole; but fearing leſt the Dura Mater, being left bare, and expoſed by ſo great a Wound, might be very much injur'd, he wip'd off the Blood which cover'd the Dura Mater, he adapted to it the cut Bone with the Integuments, and ſecur'd the Whole with a ſlight Suture in three Places, that it might not be eaſily mov'd out of its Place. The good Succeſs of this Method ſhew'd what might be expected in the like Caſes, when ſo large a Portion of Bone, entirely cut off, had yet the Power to grow again, and that upon a Man who had receiv'd ſeveral other Wounds.

As long, therefore, as ſuch Fragments adhere to the quick Parts, they ſeem proper to be left, becauſe there is Hope, that they may be reunited with the reſt of the Bone; but if this ſhould not ſucceed, and there are Signs, that theſe ſeparated Fragments begin to corrupt, they may be always taken out, or they will ſeparate ſpontaneouſly. Hence it appears, that it is prejudicial to be too curious in ſearching Wounds of the Head, in order to the Extraction of ſuch Fragments of Bones as do not immediately preſent themſelves in View; for if they cohere in any Part to the living Corpuſcles, they may poſſibly unite; or if they are incapable of ever growing again, they will ſeparate themſelves by ſpontaneous Suppuration. Nature often knows how to provide for its own Security in the moſt dangerous Caſes, as we are taught by the following Hiſtory: A Girl, nine or ten Years of Age, receiv'd eighteen Cuts on the Head with a Sword, beſides ſome others on the Arms and Body. All theſe Wounds on the Head affected the Cranium, and took off ſome Portions of Bone home to the Diploë; and in other Places the whole Cranium, quite to the Dura Mater, was cut away. This miſerable mangled Head was dreſs'd with a proper Bandage, and was open'd only once in two Days. Every Dreſſing Splinters of Bones adher'd to the Pledgets, and ſeparated themſelves without giving any further Trouble; and thoſe Fragments, which ſtill coher'd to the Pericranium, grew together again, and readily fill'd up the Places where the whole Cranium had been taken off; ſo that in the Space of five Weeks this Girl, who had receiv'd ſo many Wounds, was cur'd of them all. But it is to be obſerv'd in this Caſe, that there was no artificial Mundification; for whatever was incapable of growing again, was ſeparated by a ſpontaneous Suppuration.

It is therefore very prudently obſerv'd by *Hippocrates*, in his Treatiſe on Wounds of the Head, "That thoſe Bones which "are violently alter'd from their natural State, and depreſs'd "inwards by a Fracture, or entirely cut off, are leſs dangerous "if the Membrane remain entire; and Bones affected on the "Inſide with more and wider Fiſſures are leſs dangerous, and "more eaſily extracted; for none of theſe needs Section, "nor muſt we try to remove them by violent and dangerous "Means, before they make their own Way out ſpontaneouſly."

If the Bone appears to be contus'd, white, brown, livid, or crack'd, a great Number of ſmall Perforations muſt be made in it, in the Manner directed above, that, thro' theſe, live Veſſels may ſprout out, and the ſtagnating and putrefy'd Humours may be diſcharg'd: For by theſe means a new Perioſteum is generated.

It ſometimes happens, that after the Integuments are taken off, no Fracture appears in the Bone, tho' it may be much injur'd; and this is principally obſerv'd when the Wound was made by a blunt Inſtrument, or the Patient fell with his Head upon a plain and hard Superficies. For, in ſuch a Caſe, either the Bone of the Cranium is crack'd, the Integuments of the Head frequently remaining entire; or the Pericranium ſuffers ſuch a Preſſure and Attrition between the reſiſting Body imping'd againſt, and the hard Bone of the Cranium, as to cauſe a Rupture of the Veſſels which keep up a Communication between the Cranium and Pericranium, whence follows an Abolition of all vital Influx into the Lamella of the Cranium, which is contiguous to the Pericranium; and it is evident, that the Veſſels lying between the Lamellæ of the Cranium may be injur'd by the ſame Cauſes, whence the Diſorder will be increas'd. This Contuſion and Deſtruction of the Veſſels in the Bone of the Cranium are known by the Colour of the Bone being chang'd: For ſound and living Bones are naturally reddiſh, or of a bluiſh white, becauſe the vital Veſſels, which are full of a colour'd Liquid, appear thro' the Lamella of the Bone, which is white, and, by reaſon of its Thinneſs, pellucid, of ſuch a Colour. Where-ever, therefore, the Veſſels ſituated under the oſſeous Lamellæ are deſtroy'd by a Contuſion, there will be a Whiteneſs; for which Reaſon, among the Signs of an injured Cranium, pale Spots upon it are enumerated above; and *Belloſte*, *Chirurg. & Hoſpital.* after perforating the Cranium, depriv'd of its Membrane, with minute Punctures, mentions it as the firſt Sign of a happy Event, for the Bone to begin to turn reddiſh, as being a manifeſt Indication of the Return of Life into it, whereas it was before depriv'd of the Influx of the vital Humours. When the Bone, after the Deſtruction of its Veſſels, begins to corrupt, the white Colour changes to yellow, brown, livid, and even quite black, the Degrees of its Corruption increaſing in proportion as it alters more and more from its natural Colour, as has been already obſerv'd.

In ſuch a Caſe, therefore, as it is to be fear'd, that this Corruption of the Bone ſhould infect the ſubjacent and contiguous Lamellæ, and that the Contagion ſhould ſpread to the Diploë, with the ſubjacent vitreous Table, and afterwards to the Brain itſelf, and the more, becauſe the extravaſated and corrupted Humours have no Paſſage thro' the entire Superficies of the contuſed Bone, hence, again, appears the excellent Uſefulneſs of the Method before deſcrib'd, which directs the making of ſmall Perforations here-and-there in the Cranium, that the extravaſated Humours may find a Way to diſcharge themſelves, and the living Veſſels underneath, being freed from this hard Covert of a dead Bone, may be enabled to emerge and caſt off all that is dead and corrupted. For the Separation of the corrupt Part of the Bone is only to be expected from the ſubjacent living Veſſels, as *Hippocrates* long ago obſerv'd, *Lib. de Cap. Vuln.* where, after he had adviſ'd to make no raſh and dangerous Attempts to extract the Fragments of Bones, but let them alone to be work'd off ſpontaneouſly, "which is done by "the growing of Fleſh under them, which Fleſh grows out of "the Diploë, and the ſound Part of the Bone, if only its upper "Part be corrupted." Thus did *Hippocrates* learn from Obſervation alone, what the Induſtry and Experience of the Moderns have confirm'd the Truth of: For the antient Phyſicians gave the Name of *Fleſh*, which is the Word uſed alſo by Moderns, to that Contexture of Veſſels, which, ſprouting up in Wounds,

reſtores,

reſtores, by its Growth, the Loſs of Subſtance in them. *Hippocrates* adds, what deſerves our Notice, that this *Fleſh* pullulates from the Diploë, thro' which ſuch manifeſt Veſſels are diſpers'd; he obſerves alſo, that when only the ſuperior Lamellæ are corrupted, this Fleſh grows out of the ſubjacent ſound Part of the Bone, and not from the Diploë.

In the Caſe of a Fiſſure the ſame Method will have a like Effect; for all the bad Symptoms, conſequent upon a Fiſſure, depend principally upon the Rupture of a great Number of Veſſels, and a Detention of the extravaſated Liquids, whence the Bone is corrupted, which is attended with many other Evils. But if the Bone have little Perforations made in it about the Place of the Fiſſure, there are Outlets open'd for the extravaſated Humours, and an eaſy Way made for the living Veſſels to ſtretch, and to work themſelves thro', and to weave themſelves into a new Pericranium.

How expeditiouſly a Cure may be perform'd by this Method, and even when the Cranium has receiv'd conſiderable Damage, appears from what has been ſaid above.

When a new Periofteum is generated by the Method above directed, the reſt of the Cure is to be conducted as in ſimple Wounds of the Integuments.

From what has been ſaid above the Reaſon is evident, why a ſmall Fiſſure is frequently more dangerous than a large Contuſion of the Cranium.

All ſkilful Phyſicians and Surgeons agree, that a Fiſſure of the Cranium is frequently of far more dangerous Conſequence than a violent Contuſion, or a Fracture itſelf.

For a Fiſſure is more difficult to be known, and frequently is not diſcover'd till late, eſpecially if it lies about the Sutures, or affects only the inner Table of the Cranium, the outer remaining entire; and ſo alſo when the Fiſſure is to be found in a Part of the Cranium remote from the Place where the Wound was given. To theſe Reaſons may be added, that a Fiſſure, tho' it appears in View, frequently runs too far for the Surgeon, with any Safety, to lay it all open by cutting away the Integuments. That all theſe Caſes may one time or other happen, has been prov'd by very credible Obſervations, which are given above.

But when the Bone receives a large Wound, it lays itſelf open to View; and the Phyſicians and Surgeons, being mov'd with the formidable Appearance, try all their Skill, in order to prevent the threatening Danger; whereas a Fiſſure, which is ſo often conceal'd, and ſometimes diſcoverable by no Sign at all, may deceive the moſt ſkilful Practitioners, as *Hippocrates* ingenuouſly confeſſes of himſelf.

Another Reaſon why a ſmall or ſtrait Fiſſure is accounted ſo dangerous is, becauſe it cannot be certainly known how far it has penetrated, whether it be only to the Diploë, or deeper: If the Fiſſure reach to the Diploë, ſome conſiderable Veſſels muſt be broken, and the extravaſated Humours, finding no Way thro' the ſtrait Fiſſure of the Bone, will be corrupted, and deſtroy the tender cellulous Part of the Bone which conſtitutes the Diploë, and extending themſelves between the two Tables of the Cranium, will corrupt all before them. The inner Table of the Cranium being corroded, and eaten thro', the Brain itſelf may come to be affected; and ſo the Patient may die ſuddenly when he was thought to be in perfect Health, tho' afterwards it appear otherwiſe, when the whole Bone is found corrupted. Many Examples of this kind are to be met with in Authors. But when there is a large Wound made in the Cranium, there is a Paſſage laid open for the extravaſated Humours, or a Way may be made by Art for their Diſcharge, and the living Veſſels underneath will have Strength ſufficient to ſeparate the corrupted Parts. For theſe Reaſons very formidable Wounds of the Head, wherein the Cranium has been very much injur'd, have often been happily cur'd, when a ſlight Fiſſure, not diſcover'd till too late, has frequently carry'd off the Patient on a ſudden, when he miſtruſted no Harm. *Hippocrates*, therefore, *de Locis in Homine*, takes the Liberty to aſſert, "That if the "Bone *(of the Cranium)* be fractur'd and contus'd, it is void "of Danger; but if it be crack'd, and the Fiſſure proceeds "inwardly, the Caſe is very dangerous." He adds, that the Saw is to be us'd, in order to prevent the Sanies from flowing thro' the Fiſſure of the Bone upon the Dura Mater, and ſo putrefying the ſame. And, *de Cap. Vuln.* he ſays, that a Fracture of the Cranium, or a large Piece of it cut away, or the Bone divided by many and large Cracks, are none of the moſt dangerous Caſes. Beſides, it is to be conſider'd, that the Cranium can receive no Fiſſure, without being at the ſame time more or leſs contus'd; by which means a more conſiderable Number of Veſſels in the Subſtance of the Bone, or diſpers'd in the Diploë, happens to be broken, whence every bad Symptom is exaſperated.

It is farther evident, that this Method of boring ſmall Perforations, is preferable to Burning, Scraping, or the Application of that ſort of Trepan us'd by the Antients on theſe Occaſions.

From what has been ſaid above, it appear'd, that the Piercing of the Cranium with ſmall Perforations was both a ſafe and ſpeedy Remedy for the Diſorders there mention'd, and, conſequently, to be prefer'd before all other Methods. And tho' we meet with ſomething of this kind in *Hippocrates*, as we ſaid before, yet in his Time they commonly us'd a Rugine, in order to ſeparate the corrupted Part of the Bone by Abraſion. But if we thoroughly conſider all the Effects which neceſſarily follow from this Practice, we ſhall find it to be leſs ſafe, and to conduce very much to the Prolongation of the Cure. Some Surgeons have recommended Burning with a hot Iron, but I do not remember, that this has been mention'd by *Hippocrates*, nor by *Celſus*; and indeed it would be very difficult to burn the corrupted Part of the Bone, without hurting the ſound Part which lies under it, which, in that Caſe, requires a new Separation before a Cure can be expected.

Where a ſmall Fiſſure, or the Mark of the Weapon, appeared in the Bone, the Antients us'd Rugines of various Figures and Sizes anſwerable to the preſent Occaſion, with which they abraded the Bone, till there was no Sign of a Fiſſure, or Mark of a Weapon, left: And that they might be ſure, that the Fiſſure was quite aboliſh'd, they firſt mark'd the Bone with Ink, or ſome other black Liquors, (ſee above) which, penetrating into the Fiſſure, might ſhew how deep it reach'd; for they continu'd raſping or ſcraping till the Black quite diſappear'd. If the Fiſſure penetrated deep, and could not be obliterated by ſcraping, they had recourſe to the Trepan, with which they cut out a good Piece of the Bone. Where a large Part of the Cranium had been damag'd by a Contuſion, and it appear'd by the Signs, that the Bone was corrupted, they us'd what they call'd the *exfoliatory Trepan*, which conſiſted of two Wedges plac'd in a contrary Direction: This they turn'd about, and ſo wore away the Superficies of the Cranium by an orbicular Abraſion. And becauſe the Superficies of this Bone is convex, and in ſome Places unequal, it is evident, that the Abraſion of the corrupted Part cannot be equal in all Places. Beſides, after the Fiſſure had been obliterated, or the corrupted Part of the Bone taken away by means of the Rugine, or the exfoliatory Trepan, the abraded Superficies of the Bone remain'd dead, becauſe of the Deſtruction of all its Veſſels; and therefore it requir'd to be ſeparated, before the Part could be inveſted with a new Pericranium. It appears, therefore, that not much Good is to be expected from theſe Proceedings; but, by the Method above recommended, the Separation of the corrupted Part is neatly perform'd, and at the ſame time the loſt Subſtance is quickly regenerated.

When the Cranium is preſs'd inwards, in young Subjects, without Fracture, or, in older Subjects, with Fracture, the Brain muſt be compreſs'd. Hence, according to the Difference of the Part compreſs'd, and according to the various Degrees of Magnitude, Profundity, Sharpneſs, and Puncture of the Part compreſſing, Dulneſs of the Senſes, Lethargy, Vertigos, Ringing in the Ears, Deliriums, bilious Vomiting, Pains of the Head, Convulſions, Palſies, involuntary Diſcharges of the Urine and Fœces, Apoplexies, Fevers, and Death, are produc'd.

Having ſpoken of Diſorders conſequent upon Hurts of the Bone of the Cranium, we are now to examine what Effects will be produc'd from a Compreſſion or Hurt of the Brain by the Cranium, when preſs'd inwards, or beaten in upon it by a Fracture. It appears from Geometry, that among Figures of equal Perimeters, the Circle comprehends the greateſt Space; but the Figure of the Cranium is nearly ſpherical, and therefore, if it be preſs'd inwards, its Capacity muſt be diminiſh'd. It is known alſo from Phyſiology, that the Cavity of the Cranium is always quite full in Health; whence, if the Cranium be cut away, the Brain ſwells, and elevates itſelf, to ſuch a Degree, that the Part of the Cranium, which is cut off, can never be fitted again to its Place, unleſs it be by Violence. It is plain therefore, that as ſoon as the Figure of the Cranium is chang'd by Intropreſſion, the Contents of its Cavity muſt of Neceſſity be compreſs'd.

Whether, therefore, the convex Figure of the Cranium be chang'd by Intropreſſion without a Fracture, or the fractur'd Bone be forc'd from its Place, and depreſs'd, the Effect will be the ſame, which is a Compreſſion of the Brain. In young Subjects the Softneſs of the Cranium is enough to perſuade us of the Poſſibility of an Intropreſſion without a Fracture; but the Firmneſs of that Bone in Adults ſeems to ſhew the Neceſſity of a Fracture in order to ſuch an Effect. *Hippocrates*, *Lib. de Cap. Vuln.* enumerating the various Species of Fractures of the Cranium, reckons this Introceſſion in the third Place, which he calls ἔσφλασις, *(Eſphlaſis)* and ſays it was always attended with Fiſſures. "For what is preſs'd inwards is fractur'd, and broken "off from another Bone, which continues in its natural State; "and ſuch an Intropreſſion muſt neceſſarily be accompany'd "with a Fiſſure." But the Subſtance of the human Bones is much ſofter in a living Body, than it appears to be in dry'd Skeletons; for which Reaſon it is not, perhaps, altogether impoſſible

for

for a Depreſſion of the Cranium to happen without a Fracture in adult, tho' not in very old Perſons.

But ſince the Whole of the human Life and Nature depends on the Things contain'd within the Capacity of the Cranium, and the whole Subſtance of the Brain is ſoft, and eaſily compreſſible, it appears, that all the Functions which depend upon the Soundneſs of the Brain, may be diſturb'd, and even totally aboliſh'd, by an Intropreſſion of the Cranium. And becauſe the Cerebellum is a firmer Subſtance, and more ſafely lodg'd, than the Brain; hence it is, that the ill Effects produc'd by an Intropreſſion of the Cranium primarily affect the Actions of the Brain, but at length extend their miſchievous Influence ſo far as to deſtroy the Action of the Cerebellum, on which Life depends. It appears alſo, that the Effects of this Diſorder are various, according to the different Places of the Brain which ſuffer the Compreſſion; or as the compreſſing Cauſe acts with more or leſs Violence; or, laſtly, as the ſharp Fragments of the Bone penetrate more or leſs into the Subſtance of the Brain: That a ſlight Compreſſion of the Brain may diſturb its Action, appears from an extraordinary Caſe: A Woman who had half her Cranium taken away, went about the Streets with it, begging from Door to Door, where, if any one touch'd the Dura Mater, which lay bare, with the Tip of his Finger, tho' but ſlightly, ſhe cry'd out aloud, ſaying that ſhe ſaw a thouſand Candles. *Mem. de l' Acad. des Sciences.*

As to Dulneſs of the Senſes, it is a Symptom conſequent to a very ſlight Compreſſion of the Brain. In all thoſe who are apoplectic from a cold and viſcid Cauſe, there is firſt obſerv'd ſuch an unuſual Hebetude of all the Senſes, with a Slowneſs and Indiſpoſition to muſcular Motion, which are Signs of a gradual Collection of ſuch Humours in the Cranium, as, by a ſlight Compreſſion, blunt and obſcure the Vivacity of all the Senſes, and are at length accumulated to ſuch a Degree, as wholly to extinguiſh them. If the Cranium, by Intropreſſion, affects the Brain, by compreſſing it in a ſlight manner, a like Dulneſs of the Senſes is produc'd, which remains during Life, if the compreſſing Cauſe be not remov'd. We have an Example in *Hildanus*, *Obſerv. Chirurg. Cent.* 3. *Obſerv.* 21. to this Purpoſe: A Boy, ten Years old, of promiſing Parts, had his Cranium, near the Lambdoidal Suture, depreſs'd by a Fall. Becauſe no threatening Symptom follow'd the Misfortune, the Parents neglected the Caſe, and the Impreſſion in the Bone continu'd. By Degrees the Boy's Memory and Underſtanding began to fail him, ſo as to render him utterly incapable of learning any thing; and in this ſtupid Condition he liv'd to the fortieth Year of his Age, and then dy'd of the Peſtilence. A like Hebetude is obſerv'd when the Blood, in too great a Quantity, diſtends the larger Veſſels in plethoric Habits; or when, in acute Diſtempers, it has its Velocity increas'd, and becomes rarefy'd to ſuch a Degree as to dilate the Veſſels, which by that means preſs upon the pulpous Subſtance of the Brain.

A Lethargy indicates an increas'd Compreſſion of the Brain; for, as ſoon as the Cauſes which produced a Dulneſs of the Senſes are increas'd, there ariſes a Drowſineſs, and at laſt a moſt profound and mortal Sleep, which is the ſame as an Apoplexy. Hence, among dangerous Symptoms from Wounds in the Head, *Hippocrates*, *de Vuln. Cap.* reckons profound Sleep, and Vertigo, accompany'd with Dimneſs of Sight.

A Vertigo is one of the ſlighteſt Diſorders which belong to the Brain; for almoſt all of them begin and end in a Vertigo. In every Vertigo there is uſually an apparent Rotation of external Objects, which are really at Reſt; ſometimes all things ſeem to fall downwards, or the contrary. When the Diſorder increaſes, the Objects appear of various Colours, and ſoon after follows a Tottering of the whole muſcular Frame. The Patient begins to be afraid of falling, and catches hold of every thing near him to ſuſtain himſelf; his Nerves fail him all at once, ſo that he falls to the Ground; and at the ſame time Darkneſs overwhelms him, and takes away all Senſe of Seeing. And this is the utmoſt which the Patient is ſenſible of; for, if the Diſorder proceed farther, it terminates in an Apoplexy, Epilepſy, or Lipothymy.

The ſlighteſt Vertigo, then, is when there appears a Rotation of all Objects; as the Diſorder increaſes, there comes on a Dimneſs, and then the Diſeaſe is call'd σκοτοδινιασμος, (*Scotodinos*) a dim or dark Vertigo; at length the Patient falls to the Ground. *Hippocrates*, in the Book before quoted, among other Symptoms of dangerous Wounds in the Head, reckons up theſe three: Dimneſs of Sight, Vertigo, and Falling to the Ground. When *Antilochus* wounded his Enemy in the Forehead, ſo that the Point of his Lance penetrated the Bone, the Eyes were cover'd with Darkneſs, ſays wiſe *Homer*: τὸν δὲ σκότος ὄσσε κάλυψεν, *Iliad.* 4.

A ſimple Vertigo, then, indicates but a ſlight Compreſſion of the Brain; a Vertigo, accompany'd with Dimneſs of Sight, denotes an Increaſe of the Diſorder, which, the compreſſing Cauſe being remov'd, ceaſes. Hence, in acute Diſeaſes, when the larger Veſſels, being diſtended by the great Quantity and impetuous Motion of the Blood, preſs upon the Brain, there ariſes ſuch a dark Vertigo, which is remov'd by an Hæmorrhage at the Noſtrils, as *Hippocrates* informs us in his *Coacæ Prænotiones*, "a dim or dark Vertigo in the Beginning is reſolv'd by "a Flux of Blood from the Noſtrils," that he might diſtinguiſh it from a like Vertigo, which does not moleſt the Patient ſo much in the Beginning, but comes on more ſlowly from Bile corrupted by the Diſtemper, or from a Collection of other Sordes about the Præcordia.

As to a Ringing in the Ears, a Vertigo, attended with a Dimneſs of Sight, is almoſt always accompany'd with an uneaſy ringing Noiſe in the Ears, as if the Patient heard a thouſand ſmall Bells. But when, without the Concurrence of an external Cauſe, ſuch a Noiſe is heard, it is call'd a Ringing of the Ears. This ſometimes ariſes from a very ſlight Diſorder in the Organ of Hearing, in which Caſe 'tis generally pretty ſoon remov'd by thruſting the little Finger into the auditory Paſſage, and twiſting it about, or by compreſſing the Tragus; nor does this Species of the Diſorder protend any future Ill. But when a Ringing of the Ears proceeds from a Diſorder of the Brain, it is not ſo eaſily remov'd, but often proves troubleſome for Years together, and is the ungrateful Harbinger of an approaching Apoplexy, or Epilepſy, as *Hippocrates* has obſerv'd in his *Coacæ Prænotiones*. This Symptom proceeds from the ſame Cauſe which produces a Vertigo, and almoſt always ſucceeds violent Wounds of the Head.

As to Deliriums, 'tis known from Phyſiological Obſervations, that the Brain is that important Organ, on the Soundneſs of which the Perception of Ideas, their various Combinations, the ſeveral ſubſequent Judgments form'd, and the Affections of the Mind, depend. But when the Perception of Ideas does not correſpond to their external productive Cauſes, but depends on the Change induc'd on the State of the Brain itſelf, a Delirium is ſaid to be preſent. When the Brain is compreſs'd, in conſequence of the Figure of the Cranium being chang'd, all the Functions of the Body, which depend upon a free and uninterrupted Action of the Brain, may be diſturb'd; for 'tis obſerv'd, that moſt of thoſe who have the Misfortune to be born Idiots, have ſomething amiſs and uncommon in the Shape and Figure of their Heads; and *Hippocrates*, when recounting the fatal Symptoms which follow any Wound of the Cranium, if due Care is not taken to treat it properly, at laſt adds, that the Patients, who become delirious, die: And he elſewhere pronounces a Delirium following Wounds in the Head to be a bad Sign; for, ſays he, in *Aphor.* 14. of *Sect.* 7. a Stupor or Delirium, ſucceeding Wounds of the Head, are bad and inauſpicious Symptoms; and in *Aphor.* 24. of the ſame *Section*, he tells us, that a Wound of the Bone, penetrating into its Cavity, produces a Delirium.

As to a Vomiting of Bile, this ſurpriſing Symptom in Wounds of the Head always denotes, that the Brain is wounded, or diſorder'd either by Compreſſion or Concuſſion; for 'tis obvious, from daily and unqueſtionable Obſervations, that remarkable Changes in the Brain of the ſoundeſt and moſt healthy Men not only excite ſuch bilious Vomitings, but alſo often ſurpriſingly change the Bile itſelf almoſt in a Moment of Time.

A Man not accuſtom'd to the Toſſings of a Ship, after a Vertigo, and intolerable Uneaſineſs, vomits an eruginous Bile. The ſame happens to the moſt healthy Man, when quickly turn'd round for ſome Time. In this Caſe alſo a Vertigo precedes, which ſhews that the Brain is affected. On the contrary, a corrupted Bile, lodged about the Præcordia, ſurpriſingly diſturbs all the Actions of the Brain, by producing Vertigos, Deliriums, and Convulſions; and when this ſordid Bile is diſlodg'd, and thrown off, the above-mention'd Symptoms forthwith ceaſe. Hence 'tis obvious, that there is a ſurpriſing Communication between the Head and the Præcordia, ſince they act ſo effectually upon each other. Nor can this Phenomenon be eaſily accounted for from the known Structure of the Parts, tho' the Truth of the Fact is evinc'd by the moſt unexceptionable Experiments. Thus *Scultetus*, in his *Armamentar. Chirurg.* obſerves, that almoſt all thoſe who receive Wounds on their Heads, complain of a bitter Taſte in their Mouths.

This has, therefore, been always accounted a bad Sign in Wounds of the Head; accordingly *Hippocrates*, in his *Coacæ Prænotiones*, tells us, "That he whoſe Brain is wounded is, "for the moſt part, ſeiz'd with a Fever, a Vomiting of Bile, "and an Apoplexy; and that his Condition is, in conſequence "of theſe Symptoms, very deſperate." In the fifteenth *Aphoriſm* of his ſixth *Section*, he informs us, "That Wounds "of the Brain muſt neceſſarily be ſucceeded by a Fever, and a "Vomiting of Bile:" And, in his *Coacæ Prænotiones*, he tells us, "That Vomitings of Bile are bad Symptoms, when "ſucceeding any Wound, eſpecially thoſe of the Head." When the Brain begins to be compreſs'd, or otherwiſe affected by internal Cauſes, the Vomiting of Bile, eſpecially of the eruginous kind, is enumerated among the bad Signs; for *Hippocrates*, in *Prorrhet. Lib.* 1. tells us, "That, in Pains of the Head, "eruginous Vomitings, accompany'd with Deafneſs and "Watching, ſoon render the Patients highly delirious." The Truth of this Aſſertion is, in his Epidemics, confirm'd by the Example of *Philiſta*, who was ſeiz'd with all theſe Symptoms in

the Order in which they are enumerated, and died on the fifth Day of the Diſorder.

'Tis therefore obvious, that when the Brain is diſorder'd, either by an external or an internal Cauſe, a Vomiting of Bile frequently enſues, and is an unfavourable Prognoſtic. But 'tis to be obſerved, that ſince ſlight Diſorders of the Brain are ſometimes follow'd by a Vomiting of Bile, we are not, therefore, to prognoſticate the worſt from this Symptom, unleſs other bad Symptoms appear in Conjunction with it; for it often happens, that Perſons falling from an Eminence, and daſhing their Heads againſt a hard Body, vomit from the ſole Concuſſion of the Brain, tho' afterwards no bad Symptom whatever appears; for, in that Caſe already mention'd from *Ruyſch*'s *Obſervat. Anatom. Chirurg.* when the Surgeon underſtood, that the Woman, who had fallen from the Chariot upon the Ground, harden'd by the Froſt, had vomited ſeveral times, he ſuſpected the worſt Conſequences; and would have made a crucial Inciſion in the contuſed Part of her Forehead, had not *Ruyſch* prevented him, and ſpeedily carried off the Diſorder by applying Fomentations to the Part affected.

As to Head-achs, it is not as yet confirm'd by Experiments, whether, when the Head aches, the Subſtance of the Brain or Cerebellum is pain'd. We know, for certain, that the cortical Subſtance of the Brain, when ſprouting forth in Funguſes, may ſafely be wounded, and even cut off. 'Tis, in like manner, certain, that when the medullary Subſtance of the Brain is wounded, Convulſions are forthwith produced. But, upon this Emergence, all the Functions of the Brain are ſo diſturb'd, that it cannot, at that Time, be determin'd whether the Brain is affected with Pain or not. 'Tis, however, certain, that the external Integuments of the Cranium, eſpecially the Pericranium, and the tendinous Expanſion lying upon it, as alſo the internal Periоſteum, or Dura Mater, are affected with Pain when they are wounded. For this Reaſon the moſt celebrated Phyſicians have affirm'd, that a Head-ach was a Diſorder proper to the Cranium and its Integuments; whereas a Delirium was an Affection of the Brain: Since, then, a Depreſſion of the Cranium, or an Intropulſion of it, in conſequence of a Fracture, cannot happen without a Wound, or at leaſt a Diſtraction of the Integuments and Dura Mater, it is obvious, that Head-achs muſt be produced by ſuch a Diſorder; unleſs, at the ſame time, the Brain is ſo compreſs'd by the Depreſſion of the Bone, that all the Senſes are entirely aboliſh'd. For this very Reaſon, in Caſes of this Kind, Head-achs denote ſomething of a promiſing Nature, which is, that the Functions of the Brain are not entirely deſtroy'd.

As for Convulſions, they always teach us, that the Brain is ſo compreſs'd or wounded, that the equable Influx of the Spirits into thoſe Nerves, which are ſubſervient to muſcular Motion, is diſturb'd.

As to Palſeys, they are produced when the Brain is ſo wounded, that the Influx of the Spirits into thoſe Nerves, which move the Muſcles, is entirely hinder'd. This Diſorder receives various Names, according as it affects all the Muſcles, or thoſe of one Side, or only ſome particular Muſcles; for, according to the various Parts of the Brain wounded or compreſs'd, the Effect will be proportionably different. A Palſey, following a Wound of the Head, is always an unfavourable Prognoſtic, becauſe it denotes, that the medullary Subſtance of the Brain is compreſs'd or wounded.

As to an involuntary Diſcharge of the Urine and Fœces, proceeding from a Relaxation of the Sphincter Muſcles of the Anus and Bladder, it is, in all Diſeaſes, and eſpecially in Wounds of the Head, enumerated among the worſt Symptoms; for the Nerves, ſubſervient to theſe Sphincter Muſcles, draw their Origins from the laſt Nerves of the ſpinal Marrow, which paſs thro' the Foramina of the Os Sacrum; from which it is obvious, that the Origin of the ſpinal Marrow muſt be by this time injur'd in the Brain. But we muſt diſtinguiſh between this Relaxation of the Anus and Bladder, by which the Urine and Fœces are gradually and continually diſcharged; and when, in Apoplectic Caſes, as alſo in acute inflammatory Diſorders of the Head, the Urine, previouſly collected in the Bladder in a large Quantity, is diſcharged perhaps every ſix Hours, without the Knowledge of the Patient; but, at the ſame time, without a Relaxation of the Sphincter of the Bladder, becauſe the Urine remains ſo long ſhut up in it before it is diſcharged.

For it is a far more terrible Diſorder, when, in conſequence of a Relaxation of the Sphincter of the Bladder, the Urine is inſenſibly diſcharged, than when, being collected in a large Quantity, it is evacuated without the Patient's perceiving it. This laſt Misfortune happens frequently to Children in a tolerable State of Health, and ſometimes to grown Perſons, without any bad Conſequences following from it. Hence it is obvious, that a far greater Diſorder is indicated when the Urine is inſenſibly diſcharged, in conſequence of a Relaxation of the Sphincter of the Bladder, than when a conſiderable Quantity of it is collected in the Bladder, and diſcharged without the Patient's being conſcious of it: But *Hippocrates*, in his *Coacæ Prænotiones*, after having recounted the bad Properties of Urine, as to Colour, Thickneſs, and other Qualities, abſolutely condemns every Kind of Urine which is involuntarily diſcharged; λαθρίους ἐρήμους.

As to Apoplexies, Fevers, and Death, the Phenomena already enumerated denote, that a Depreſſion of the Cranium may, by a gentle Compreſſion, diſturb ſome Actions of the Brain; but when the Compreſſion is ſo far augmented, that all the internal and external Senſes, together with the ſpontaneous Motions, are deſtroy'd, then there is an Appearance of a profound Sleep, which is call'd an Apoplexy, and which is almoſt always accompanied with a ſtrong and quick Pulſe; whilſt the Action of the Cerebellum not only remains, but is increaſed, becauſe, lying ſafely defended under the Dura Mater, it is leſs eaſily compreſs'd. At laſt, when the Cerebellum is alſo compreſs'd, or its Structure deſtroy'd by an Augmentation of Motion, Death enſues; ſince, when the Brain is compreſs'd, the whole Force of the Blood, which ought to circulate thro' it, acts almoſt entirely on the Cerebellum.

If the Brain itſelf is any way injur'd, the ſame Symptoms and Effects will be produced, as by its Compreſſure by the Bone, in conſequence of its being affected by an Inflammation, Suppuration, Gangrene, Fungus, or Hæmorrhage.

The principal Malignity of Wounds of the Head depends upon this, that the adjacent Brain is eaſily affected: When, therefore, the Wound is ſo great as to reach the Brain itſelf, 'tis obvious, that the worſt and moſt terrible Symptoms are thence to be dreaded; for the Whole of the human Functions depend upon the Soundneſs of this ſoft and pulpous Organ. Now 'tis obvious, from anatomical and phyſiological Obſervations, that the whole Brain conſiſts of Veſſels, in which, when compreſs'd or hurt, Obſtructions, Inflammations, and all their terrible Conſequences, may happen; as alſo all thoſe Diſorders which are excited by the Preſſure of the extravaſated Juices, or their corroding Quality, when become corrupted. But chirurgical Obſervations teach us, that all theſe Conſequences may follow Wounds of the Brain.

A certain Man was wounded in the poſterior Part of his Head with a Hanger, which alſo injur'd the Cranium; and as, from the Beginning, he was under the Care of an unſkilful Surgeon, who, rudely examining the Wound with the Probe, thruſt a third Part of it thro' the Fiſſure of the Cranium into the Subſtance of the Brain; when more ſkilful Surgeons were call'd, they would not make uſe of the Trepan, for fear of rendering this Operation, which proves ſalutary to many, infamous. After the Appearance of various Symptoms, the miſerable Patient died on the twenty-third Day; and, upon opening the Cranium, a large Abſceſs was found in the Left Side of the Brain, included in its proper Membrane: When this was laid open, a large Quantity of fetid Pus was diſcharg'd. *Scultet. Armamentar. Chirurg.* *Paré*, in the twenty-third Chapter of his tenth Book, tells us, that he had often obſerved a large Quantity of Pus, and even a Corruption of the Subſtance of the Brain, whilſt examining the Bodies of thoſe who had died of Wounds of the Head, in order to give in a Report to the Judges. He alſo adds another Caſe, which informs us, that the Patient remain'd alive, after a Suppuration happen'd within the Cavity of the Cranium. A Boy daſh'd his Head againſt a Stone Floor, with ſuch Violence, that he was forthwith deprived of all his Senſes; upon which a Fever, Delirium, and other terrible Symptoms, ſucceeded. On the ſeventh Day a profuſe Sweat broke out, the Patient was ſeiz'd with a Sneezing, and a large Quantity of Pus was diſcharged from his Mouth and Noſtrils: Thus all the Symptoms were relieved, and the Patient cured. In the *Hiſt. de l' Acad. des Sciences*, for the Year 1700. we have a memorable Caſe, where, after a Fall from an Eminence, by which the Cranium was wounded, a large Quantity of Pus was diſcharg'd thro' a ſmall Hole in the Sagittal Suture; which Evacuation being ſometimes ſuppreſs'd for ſome Days, the Patient was ſeiz'd with Convulſions frequently each Day. But when the Pus began again to be diſcharg'd, the Convulſions ceaſed: On the fiftieth Day, however, the Patient died. In the Cranium there was found a large Fiſſure, above ſix Inches long, which had already grown together. In the Dura Mater no Diſorder appear'd, but the whole Left Lobe of the Brain was ſuppurated; whilſt its Right Lobe, and the Cerebellum, remain'd entirely ſound.

Many Obſervations of this Nature occur in practical Authors; but theſe are ſufficient to demonſtrate, that a genuine Suppuration may happen in the Subſtance of the Brain. And, at the ſame time, it appears, that tho' a Suppuration in this Part is always very dangerous, yet Death is not always the Conſequence of it.

But when, inſtead of a benign and kindly Suppuration, which ſeparates every Thing in which the Circulation can no longer be perform'd, a Gangrene ſeizes the Brain itſelf, 'tis obvious, that all Hopes of the Patient's Recovery are cut off. But that ſuch a Diſorder ſometimes ſucceeds Wounds of the

Brain, is ſufficiently vouch'd by the Obſervations of good Authors. Thus *Sculletus*, in his *Armamentar. Chirurg.* gives us an Account of a Soldier, who, after a violent Contuſion of the Head, without any Wound, was taken into the Hoſpital: But, nine Weeks after, when he felt no more Pain, nor any Diſorder, and was thinking of returning to his native Country, he died ſuddenly in the Night-time in his Bed. No Wound was diſcover'd in his Cranium; but about a Finger's Breadth of the Subſtance of the Brain, lying under the Part where the Blow was received, appear'd corrupted, like a rotten Apple; together with a violent Putrefaction, which reach'd almoſt to the anterior Ventricles. The Pia Mater was alſo ſlightly corrupted, but all the other Parts appear'd ſound. *Hildanus*, in *Obſerv. Chirurg. Centur.* 2. *Obſervat.* 25. gives us an Account of a Man, who, in the Month of *October*, died two Days after having received ſome terrible Wounds of the Head, which penetrated into the Subſtance of the Brain. Upon removing the Dreſſings, after his Death, his Wounds diffuſed ſo offenſive a Smell, that none almoſt durſt venture to come near his Corpſe; ſo violent was the Putrefaction produced in a healthy Man, in a ſufficiently cold Seaſon.

Hippocrates obſerved, that the Brain might be corrupted; and uſed the Words σφακελίζειν to denote this Corruption: Thus, in his *Coacæ Prænotiones*, he tells us, that "when the "Brain is corrupted, ſome die in three, and others in ſeven "Days; and that, if they paſs theſe Days, they recover; but "that thoſe die, in whom, after an Inciſion made, the Bone "appears disjoin'd." And, in the fiftieth Aphoriſm of his ſeventh Section, he tells us, "That they whoſe Brain is cor-"rupted (σφακελισθῇ) die in three Days; but that they reco-"ver, if they ſurvive that Time." But, in theſe Paſſages, he inſinuates, that the Cure is ſtill poſſible, tho' the Brain is corrupted. It will hereafter appear, that the Subſtance of the Brain, riſing in fungous Protuberances, may be cut off or corroded, whilſt not only Life, but all the Functions of the Brain, are preſerved entire afterwards.

Under the Article VULNUS it is ſhewn, that when the Skin is cut, the ſubjacent Part, being now no longer reſtrain'd by the equable Preſſure of the Skin, riſes up, and degenerates into what we call fungous Fleſh in Wounds. The like Misfortune happens in Wounds of the Head, when the Cranium and Dura Mater are cut thro'; for, naturally, the Cavity of the Cranium is very full, as has already been obſerved: When, therefore, in conſequence of the Wound of the Cranium and Dura Mater, their Contents are no longer reſtrain'd, they begin to protuberate; and becauſe the Arteries, before they enter the Subſtance of the Brain, loſe their thick elaſtic Coats, they are therefore leſs able to reſiſt the Fluids propel'd to them from the Heart, to which they are pretty near: Hence they are greatly dilated, and form ſurpriſing Tumors; and becauſe theſe Tumors riſe much ſooner than Expectation, and expand themſelves very wide, after they have got without the external Lips of the Wound, whereas they are more compreſs'd in the Wound itſelf; they are therefore call'd Funguſes of the Brain, becauſe they reſemble that Subſtance both in their Shape, and ſudden Production. But the largeſt of theſe Fungi are produced when a violent Fever increaſes the Force and Velocity of the Liquids, convey'd to the Veſſels of the Brain, which are ſo eaſily dilated. But, ſo long as the Dura Mater is ſtill entire, Funguſes of this Kind are rarely produced; for this Membrane, being conſiderably ſtrong, reſtrains the ſubjacent Subſtance of the Brain: But when the Pia Mater is at the ſame time wounded, theſe Funguſes ariſe ſtill more; for, in Carcaſes, we obſerve, that, when a gentle Wound is made in the Pia Mater, the cortical Subſtance of the Brain forthwith riſes thro' the Wound.

Many chirurgical Obſervations prove, that, when the Cranium and Dura Mater are cut, the Subſtance of the Brain riſes thro' the Wound in ſurpriſing Tumors: But one or two Inſtances of this Kind will be ſufficient for our Purpoſe.

Paré, in the twenty-third Chapter of his tenth Book, gives us an Account of a Youth of Diſtinction, who, by a Blow of a Stone, had his Right Os Bregmatis broken. Immediately the Bulk of half a Nut of the Subſtance of the Brain was thruſt forth; and when a certain young Phyſician preſent denied, that it was a Part of the Brain, affirming it only to be Fat, *Paré* proved, by Experiment, that the Subſtance of the Brain had come out at the Wound. This Caſe proves, that when the Cranium, and Membranes ſurrounding and encompaſſing the Brain, are cut, the ſoft Subſtance of the Brain may very ſoon protuberate, and appear thro' the Wound.

Hildanus, in *Obſervat. Chirurg. Centur.* 4. *Obſerv.* 3. gives us an Account of a Youth of fourteen Years of Age, who, amidſt his Play, had the Left Part of his Os Frontis ſtruck with a wooden Ball. He immediately fell down, vomited Bile, and afterwards continued to vomit up almoſt every thing he eat or drank. Two Months after, whilſt the Patient ſtill remain'd in a bad State, his Cranium being perforated, the Pus burſt thro' the Perforation with conſiderable Force. Afterwards the Subſtance of the Brain began to riſe, nor could it be reſtrain'd; for which Reaſon it was cut off, by means of a Thread tied about it. Immediately a like Subſtance, reſembling a Fungus, broke out to a Height equal to three Fingers Breadth, which was alſo removed by the ſame Method. This Method was ſo frequently repeated, that all the Funguſes cut off were as large as one's Fiſt; and yet the Patient was afterwards cured.

In the *Miſcell. Curioſ. Decur.* 2. *Anno* 9. *Obſerv.* 174. we have an Account of a Boy of ſeven Years of Age, who, by a Fall from a Horſe, had his Right Os Bregmatis violently wounded. On the fifth Day a Fungus, as thick as one's Finger, and an Inch long, grew forth from the wounded Part of the Cranium. The Boy's Parents would not admit of the Wound's being accurately examin'd, and the depreſs'd Part of the Cranium elevated; but conſtantly affirm'd, that they would rather have their Son die by mild and gentle Meaſures, than be ſubjected to the Agonies of an Operation, the Event of which was dubious and uncertain. For this Reaſon, both Phyſician and Surgeon endeavour'd to remove the Fungus, almoſt by the Uſe of drying Medicines alone: However, it remain'd without any conſiderable Change for three whole Months; but the formidable Symptoms, which appear'd at the Beginning, were much mitigated, and almoſt entirely removed. All the vital, animal, and natural Actions were reſtor'd to ſuch a Degree, that the Habit of the Patient's Body became fuller, and he could divert himſelf by his uſual Recreations. About the Beginning of the fourth Month the Fungus increaſed very much, but was removed by ſprinkling it with the Powder of Euphorbium, and burnt Alum. However, in the Space of twenty-four Hours another Fungus, as large as a Hen's Egg, appear'd, with an Increaſe and Exacerbation of all the Symptoms. In this laſt Fungus there was a ſtrong Pulſation of the Arteries, and, when handled roughly, it diſcharged a large Quantity of Blood. Attempts to deſtroy the luxuriant Fungus by Corroſives were vain and fruitleſs; for which Reaſon the Surgeon tied a Thread about the narrow Part of its Neck, upon which there aroſe ſo violent a Pulſation of the Arteries in the Fungus, that the Whole of it ſeem'd to have a ſubſultory Motion: However, by drawing the Thread tighter, the greater Part of the Fungus fell off with an intolerable Stench, together with the Thread. The remaining Part of the Fungus appear'd blackiſh, ſordid, and corrupted to ſuch a Degree, that the very Sight of it was loathſome. Convulſions, Tremors, and an Hemiplegia, ſucceeded. Some Days after, all the corrupted Parts of the remaining Fungus dropt off: But a freſh Fungus, of a cineritious Colour, as large as a Walnut, without Pain, and with a manifeſt Pulſation of the Arteries diſperſed thro' it, aroſe from the Wound; but in a few Days ſpontaneouſly dropt off, and left a large Hiatus, which penetrated into the very Subſtance of the Brain. Two Days after, the Whole of this Cavity was, in the Space of one Night, fill'd with a freſh Fungus; and a few Days after he died, in the End of the fourth Month after he received the Wound, having been violently rack'd with Convulſions in the poſterior Part of his Body for two Days before his Death; but all his Senſes, his Speech, and the Uſe of his Reaſon, remain'd till the very End of his Life.

This ſurpriſing Caſe teaches us, that ſuch Funguſes conſiſt in a Dilatation of the vaſcular Subſtance of the Brain itſelf; and that they ſoon ſprout out afreſh, when they are removed or taken away. Upon opening the Patient's Cranium the cortical Subſtance of the Brain was found quite conſum'd in the wounded Part, and the Whole of the Brain overflow'd with a large Quantity of Pus.

As to the Effects of a Hæmorrhage of the Brain, three Kinds of Blood-veſſels are generally conſider'd in the Brain: Firſt, thoſe Arteries which, being diſperſed thro' the Dura Mater, are pretty ſtrong and vigorous; and, being defended by the Duplicature of this Membrane, are pretty ſafely ſituated. But that very conſiderable Arteries are lodged here, we are ſufficiently convinced, by the Furrows they impreſs upon the Cranium. Secondly, the Blood-veſſels diſperſed thro' the Pia Mater, the Whole of which is, by Anatomical Injections, demonſtrated to be of a vaſcular Structure. Now theſe Arteries, loſing their thick Coats before they enter the Pia Mater, muſt be very tender, and of courſe eaſily ſuſceptible of Injuries. But as ſoon as theſe Blood-veſſels have reach'd from the Pia Mater to the contiguous cortical Subſtance of the Brain, they no longer contain red Blood, but a far finer Fluid; for, naturally, no red Blood ever appears in the cortical Subſtance of the Brain. Thirdly, thro' the medullary Subſtance of the Brain there are Blood-veſſels diſpos'd, which are ſufficiently conſpicuous to the Eye, which, by their benign Warmth, nouriſh the tender medullary Stamina; ſufficiently large Blood-veſſels of the ſame kind alſo ſurround the Medulla Oblongata. In the hollow Ventricles of the Brain are lodg'd thoſe ſurpriſing Proceſſes of the Pia Mater call'd the Plexus Choroidei, which adhere to no Part of the Ventricles of the Brain, but fluctuate there freely, and are entirely vaſcular, as is obvious not only from anatomical Injections, but alſo, without theſe, from Obſervations made

with

with the naked Eye. In all these Parts, therefore, Wounds inflicted may injure these Vessels; and Blood, consequently, may be discharg'd; and tho' the wounding Instrument does not penetrate very deep, yet, by a strong and powerful Concussion, the tender Vessels, dispers'd thro' the Pia Mater and Ventricles of the Brain, may be broken, and the discharg'd Blood may, by compressing the Brain, either disturb, or entirely destroy, all its Actions, as is plain from numberless Instances.

Whatever is the Cause, then, which injures the Brain, or compresses it, or destroys its Structure and Compages, by Inflammation, Suppuration, or Putrefaction, all those Symptoms, already recounted, may be produc'd by it, from the slightest Vertigo, to the most fatal Apoplexy.

A Depression of the Cranium is distinguish'd by Feeling, or by the Sight, especially when the Integuments are taken away.

In applying the first Dressings to Wounds of the Head, Circumstances are, with all possible Care, to be inquir'd into, since the Symptoms, succeeding Wounds of the Head, are frequently the same, tho' different Parts of it are wounded; for, whilst the Cranium, being depress'd, or forcibly driven inwards by a a Fracture, compresses the Brain, all the Disorders of the Brain may, by that means, be produc'd: And, on the contrary, when the Cranium is unhurt, but the Vessels of the Pia Mater broken, the Blood discharg'd compresses the Brain, from which all the same Symptoms may ensue: But when, by the Senses, it can be discover'd, whether the Cranium is wounded, or not, this is the first thing to be set about; and the Method of doing it is this: The Hairs are first to be shav'd off; then the Part affected is gently to be felt every-where with the Fingers, that it may be discover'd, whether the convex Figure of the Cranium is chang'd, or not. But we have before observ'd, that, in this Examination, great Caution is requir'd, and that the Touch often proves fallacious; but if the Depression of the Cranium is so conspicuous as to be discover'd by the Eye, no Doubt can remain: And when, on account of the Violence of the Symptoms, the Integuments are rais'd, and the Bone laid bare, 'tis easily discover'd, whether there really is such a Disorder, or not.

A Removal of whatever pricks the Brain; a Restitution of whatever presses it, to its natural State; and a Retention of it in this State, are sufficient, in the last-mention'd Cases, for the Cure.

The general Indication of Cure is comprehended in these three Particulars; for it sometimes happens, that a sharp and pointed Splinter of the Cranium, when fractur'd, and driven inwards, wounds the subjacent Brain; and sometimes it happens, especially when the Head is dash'd against any round Object, that an orbicular Portion of the Cranium is thrust inwards, which compresses, but neither pierces nor tears, the Substance of the Brain. It has sometimes also happen'd, that, whilst the external Table of the Cranium remain'd entire, the internal one has been broken into Splinters, which, by penetrating and lacerating the subjacent Brain, have frequently brought on Death. *Paré*, in the eighth Chapter of his tenth Book, gives us a Case of this kind: A Gentleman, says he, of Distinction, whose Head was cover'd with a Helmet, happen'd, by a Musket-bullet, to have his Iron Defence depress'd: No Wound, however, appear'd in the external Integuments, nor could any Depression of the Cranium be discover'd. On the sixth Day the Patient dy'd apoplectic. Upon laying open the Cranium, it was found, that, tho' its external Table was entire, yet its internal one had been broke into Splinters, which had penetrated into the Substance of the Brain. He also affirms, that he exhibited another Case of the like Nature, in the Presence of some very celebrated Physicians. The Difficulty of discovering a Disorder so latent, and remote from the Senses, may be easily conceived. But, when this is known to be the Case, the pointed Splinter is, with the greatest Caution, to be extracted, and the highest Care taken, lest, by twisting it about, or handling it roughly, the Brain should be more severely wounded. When that Part of the Cranium which is depress'd, or driven inwards, is restor'd to its natural Situation, 'tis highly necessary to take proper Measures to retain it in this Situation, and prevent its falling inwards again. When the compressing Cause is remov'd, the equable Circulation of the Fluids, thro' the now pervious and free Parts, will restore their natural Use: Art can only, in this Case, restore those Parts to their natural Situation, which were put out of it.

The Cranium in Children, when depress'd, may sometimes be restor'd by means of an adhesive Plaister, as being soft and yielding; but, in Adults, where it is more firm, an Elevator is necessary to raise it. In Cases, however, where the depress'd Bone is loose, and yields to the Terebra, a Perforation must be made in the Skull, near the Fracture, thro' which a Lever must be introduc'd, in order to elevate the depress'd Bone. Sneezing, and holding the Breath, have been recommended for the same Purpose.

The Cranium, says *Heister*, especially of young People and Children, is sometimes, like a Vessel of Tin or Copper, by an external Force, such as a Blow or Fall, depress'd, without any manifest Fracture; or, at least, so fractur'd, that, by reason of its Flexility, it coheres firmly with most of the contiguous Parts of the Cranium: But, in Adults, the Cranium, in consequence of its Rigidity, can scarcely, if at all, be depress'd, without having its Parts disjoin'd and separated. This kind of Wound in the Cranium is, by Physicians, call'd Fractures, by which the Parts of the Brain are, at the same time, compress'd, and its Actions and Offices disturb'd.

Sharp says he has met with one Instance of a Depressure without a Fracture himself, in a Girl of seven Years of Age. When she first receiv'd the Injury, she had the Complaints of an oppress'd Brain; but they soon went off. The Blow form'd a large Tumor on the Parietal Bone, for which she was put under his Care some Days after the Accident. He open'd immediately into it, by cutting away a large circular Piece of the Scalp, and took out a great Quantity of grumous Blood, lying underneath the Periosteum; he then dress'd the Depression with dry Lint, and, finding no Complaint come on, continu'd the same Method, till in about six Weeks she was perfectly cur'd.

Hence, in my Opinion, says *Heister*, 'tis obvious, that no less fatal Symptoms are produc'd by Depressions of the Cranium, than by those other Wounds of it we have already mention'd. This Species of Wounds are, however, more or less dangerous, according as the Depression is greater or less. They are sometimes incurable, because almost always some internal Blood-vessels are broken, and pour forth their Contents on the Brain, from which the most terrible Consequences must necessarily ensue.

That the Cranium is thus fractur'd or depress'd, may be known either, first, by Inspection, or, secondly, by the Touch, or, thirdly, by the Instrument with which the Wound is made, and, fourthly, from the succeeding Symptoms. Fractures and Depressions of the Cranium are, for the most part, much more easily discover'd than small Fissures: But that any Wound of the Cranium is not only dangerous, but may also prove mortal, may be easily infer'd from what has been said.

In the Cure of this Disorder we are, above all things, to remove the Substance which compresses the Brain, or to elevate, and restore to its former Situation, the depress'd Bone, when it coheres with the rest of the Bones of the Cranium; and if any Splinters are detach'd from the Bone, and prick the Brain like so many Needles, these are to be remov'd with all possible Expedition.

But if slight Depressions are made in the Cranium of Children, without troublesome Symptoms ensuing, it seems better to abstain from the more violent Methods of elevating the depress'd Part, and to treat the Part affected with a View to attenuate the contus'd Matter, either with the resolvent Fomentations, or with warm Spirit of Wine, or with camphorated Spirit of Wine; or, in still gentler Depressions, with some digestive Plaister, such as the *Emplastrum de Meliloto*, or the *Emplastrum de Betonica*; for, by these Remedies, gentle Depressions in the Cranium of Children are often happily and thoroughly cur'd.

But when, in Children, the Symptoms are of a very formidable Nature, the depressed Part may be elevated in the following Manner: A Piece of Leather, cover'd with some highly adhesive Plaister, and strong Cords affix'd to it, is to be apply'd warm to the Part affected, after the Hairs are shav'd off; and, after it is suffer'd to stay on for some Time, that it may adhere the more firmly, the Cords are to be strongly pull'd upwards, see *Tab.* 28. *Fig.* 6. and thus the Plaister and depressed Part of the Cranium are both elevated at the same time. If the Operation does not succeed at the first Time, it is to be repeated till the Intention of the Surgeon is answer'd; for, by this means, depress'd Parts of the Cranium are often happily restor'd. According to *Hildanus*, *Cent.* 2. *Obs.* 5. a Plaister for this Intention may very properly be prepar'd of Pitch, Resin, Colophony, and Gum Elemi: Sometimes also a large Cupping-glass, apply'd to the Head, is of singular Service for elevating the depress'd Part of the Cranium, especially when the Mouth and Nostrils are kept shut, that the retain'd Breath may buoy up the Brain, and, by that means, elevate the depress'd Part of the Cranium. But, if the Intention can neither be answer'd by the Plaister nor the Cupping-glass, 'tis necessary, after having remov'd the Integuments and Membrane of the Cranium, gently to enter a Terebra, like that represented in *Tab.* 28. *Fig.* 7. *Let.* B. into the Cranium, and, drawing it back, by that means to elevate the depress'd Part.

But when, in Adults, or even in Children, the Cranium is so depress'd, that the Bones are quite broken asunder, the depress'd Parts are forthwith to be restor'd to their former Situation. Some maintain, that Sternutatories are very properly exhibited with an Intention to distend the Brain, and, by that means, to elevate

elevate the depreſs'd Parts of the Cranium: But I do not think it adviſeable to recommend this kind of Medicine, ſince it may very poſſibly produce fatal and unhappy Effects. We muſt, therefore, have recourſe to the Elevators repreſented *Tab.* 28. *Fig.* 7. *Let.* C. and *Fig.* 8. provided there is a Fiſſure, or Chink, at which the Inſtrument may be introduc'd. But where no Chink or Fiſſure can be perceiv'd, the Terebra, repreſented by *Let.* B. *Fig.* 7. or ſome ſuch other, is forthwith to be us'd, and, by its Aſſiſtance, the Part depreſs'd to be elevated. But there ought always to be a previous Inciſion made with a Knife to the Bone, in the Part where the Wound appears moſt ſoft and tumid, that the Integuments may be laid aſide; and, by the Aſſiſtance of a ſharp Inſtrument, like that repreſented by *Fig.* 2. or that by *Let.* A. in *Fig.* 7. in *Tab.* 28. a ſmall Perforation is to be made, that the Terebra may enter the Bone with the greater Eaſe and Facility.

But, ſince ſuch is the Frame and Make of the Elevators repreſented by *Fig.* 7. and 8. *Tab.* 28. that they cannot be ſafely us'd, without the Depreſſion of the contiguous Parts of the Cranium, when they are either fractur'd or weak; the antient Phyſicians, with good Reaſon, contriv'd a certain Species of Elevator, which they call'd a *Tripes*, repreſented *Tab.* 28. *Fig.* 12. which ought to be almoſt as large again as 'tis there exhibited. Its Feet, A. A. A. may be brought nearer, or drawn farther from each other, as the Nature of the Operation requires; and the Method of applying it is this: The Machine is ſo apply'd, as that its Feet may reſt upon the ſound Parts of the Cranium. Then, after making a Perforation with the Inſtrument repreſented by *Fig.* 2. the Terebra, B. C. by continually turning about its Handle, D. D. is gradually enter'd into the depreſs'd Part. After this the Terebra is, by means of the Screw, E. E. to be elevated along with the depreſs'd Part of the Cranium, till it is in its natural Situation; as may be ſeen more fully in *Tab.* 28. *Fig.* 13. But, if any Fiſſure or Aperture is obvious between the Parts of the ſhatter'd Bone, it will be more proper to remove the Point of the Terebra, and fix the Elevator, G. by means of the Screw, H. at the *Let.* F. *Fig.* 12. and, by its means, raiſe the depreſs'd Part of the Cranium in the manner now directed.

We find another very convenient Elevator of this kind, but more ſimple in its Structure, deſcrib'd by *Hildanus*, in *Cent.* 2. *Obſ.* 4. We have given a Repreſentation of it in *Tab.* 28. *Fig.* 14. In this Machine there muſt alſo be a Terebra, A. and a Hook, repreſented by *Fig.* 15. either of which ought firſt to be introduc'd into the depreſs'd Part, and held by the Lever, B. C. paſs'd thro' them. Then the Plate, D. is to be apply'd to the ſound Part of the Cranium, with Compreſſes under it, for fear of exciting Pain; and, elevating the Extremity of the Lever, B. the depreſs'd Part of the Cranium is, by that means, to be gently rais'd. Near the other Extremity of the Lever there is a Joint, C. for inclining the Plate, D. as the Caſe requires, or the Convexity of the Head calls for it; and this Plate may be either rais'd or depreſs'd at Pleaſure, by means of the Screw, E. But it will be proper to uſe a Lever ſomewhat longer than that we have repreſented; ſince, by that means, the depreſs'd Part may be both more forcibly, and more commodiouſly, elevated.

But, if the depreſs'd Part of the Cranium is entirely ſeparated from the reſt of the Bones, and ſunk ſo far, that it can neither be elevated by theſe means, nor extracted, it ſeems neceſſary to perforate the adjacent ſound Part of the Cranium with the Trepan, and cut the Piece of Bone, interpos'd betwixt the perforated Part and the Fracture, with a ſlender Saw, repreſented by *Fig.* 9. *Tab.* 28. as far as it ſafely may; and then to cut it quite out with a proper Chiſel, repreſented *Fig.* 10. and a Leaden Mallet, repreſented *Fig.* 11. for, by making a Perforation of this kind, Elevators may be more eaſily apply'd, and, conſequently, the depreſs'd Parts more commodiouſly elevated; but it rarely happens, that this laborious and tedious Operation is neceſſary.

When the depreſs'd Parts are reſtor'd, we muſt take all poſſible Care, that they be not again depreſs'd; for this Reaſon the Patient's Head is to be laid on the ſound Part, with the Wound uppermoſt. Then the Part affected is to be fortify'd with a Plate of Braſs, Copper, or Iron; and the Wound is, in the mean time, to be treated according to the Directions above laid down. Or a Ring may be made of Paper, or twiſted Linen, ſomewhat larger than the Part affected, that the Whole of it may be contain'd within its Circumference; and this, being fixed by proper Bandage, will prevent the Pillow, or the Bandage deſtin'd to keep on the Dreſſings, from preſſing too forcibly on the Part.

As to Sneezing, and Retention of the Breath, above recommended, it is to be obſerv'd, that, in Sneezing, a mild and gentle Titillation is perceiv'd about the Noſtrils, and ſometimes about the Præcordia. When any one or both of theſe Senſations are perceiv'd, all the other Actions of the Body are ſuſpended, and the Patient is oblig'd to wait for what is to happen. The next Moment all the Muſcles, ſubſervient to the Purpoſes of Expiration, are convuls'd in an irreſiſtible manner, and the Lungs, ſuddenly contracting, expel the Air contain'd in them with a kind of whizzing Noiſe. At the very Inſtant, therefore, in which this ſtrong Expiration is made, the Blood cannot poſſibly paſs thro' the Lungs. Hence the venous Blood, returning from the Head, is hindered from diſcharging itſelf freely into the Right Ventricle of the Heart; by which means all the Veſſels of the Brain are not only diſtended, but alſo the Impetus of the arterial Blood is, at the ſame time, augmented, by the Violence of the Concuſſion: Thus, by the Concurrence of theſe two Cauſes, the whole Maſs of the Brain is ſufficiently diſtended. That this is a genuine Repreſentation of the Affair, is obvious, becauſe, by a repeated Sneezing, all the Senſes, and muſcular Motion in general, begin to fail, the Face ſwells, Tears burſt from the Eyes, and the Noſtrils drop; and, if Sneezing is very often repeated, all the Actions of the Brain are often ſurpriſingly diſturb'd.

But, whilſt the Breath is retain'd, the Circulation of the Blood is, in like manner, obſtructed thro' the Lungs, which are compreſs'd by the retain'd Air dilated by the Heat. Hence the jugular Veins cannot diſcharge their Contents, by which means all the ſame Effects will be produc'd as by Sneezing; only with this Difference, that, during the Interval between two Sneezings, the Blood has a free Paſſage thro' the Lungs; but, ſo long as the Breath is retain'd, the Compreſſion of the Lungs is every Moment augmented, ſince the Air contain'd in them is, by its Continuance, gradually more heated, and, conſequently, more dilated. When, therefore, in young Patients, the Bones are as yet flexible, or when, in Adults, they are ſo broken as to be mov'd by a gentle and ſmall Force, the Brain, render'd turgid by the retain'd Blood, may elevate the depreſs'd Part of the Cranium, or, at leaſt, contribute to its Elevation, in Conjunction with other Meaſures.

How conſiderable the Force is with which the diſtended Brain preſſes outwards the depreſs'd Cranium, we may learn from a very memorable Caſe, related by Mr. *Jamieſon*, Surgeon in *Kelſo*, in the ſecond Volume of the Medical Eſſays. "Some "Slates," ſays he, "falling from the Roof of a Houſe four "Stories high, upon the Head of a Girl about thirteen Years "of Age, broke and ſhatter'd her Cranium, at the Place "where the ſagittal and coronal Sutures meet, making a De"preſſion of the Bone, of about four Inches Diameter. The "Symptoms attending this Accident were ſuch as commonly "attend Caſes of a like Nature, that is, an univerſal Stupor, "Bleeding at the Noſe, Difficulty of Breathing, and a full "irregular Pulſe. I immediately took twelve Ounces of Blood "from her Arm, and ſent for all the Phyſicians and Surgeons "of the Place, who agreed to trepan her ſpeedily, which I "perform'd. When I endeavour'd to raiſe the depreſs'd Pieces "of Bone, they were all found ſeparated from the neighbour"ing ſound Bone, and therefore were all brought away, and ſo "left a terrible Chaſm in the Cranium. The Dura Mater was "cover'd with a Syndon, dipt in Honey of Roſes, with a little "Tincture of Myrrh; Pledgets, wet in the Tincture, were "apply'd to the Cranium, and the other common Dreſſings "were put on. Being laid in Bed, an emollient Clyſter was "injected, and procur'd two plentiful Stools; and before "Night ſhe recover'd the Uſe of her Tongue, and all the "other Parts of her Body, except the Left Arm, which con"tinu'd in a paralytic State for eight Days.

"She was kept to a low Diet; and the Cure went ſucceſsfully "on, and was completed ſo far in three Months, that the In"teguments were cicatriz'd.

"On the fifth Day after her Wound, I had caus'd a Plate "of Lead to be made for covering all the Dreſſings, and kept "it on all the time ſhe was under my Care, with two Pieces "of broad Tape put thro' four Holes, one on each Side of the "Plate before, and the other two behind, tying the Ends under "the lower Jaw, and behind the Occiput.

"Notwithſtanding the Wound's being ſkinn'd over, I re"commended the conſtant Uſe of the Plate of Lead laid over "a Compreſs, upon the Cicatrix, to ſupply the want of Bone; "and ſhe kept it on two Months after I left off ſeeing her; "but then, thinking herſelf ſecure, ſhe laid it aſide, and con"tinu'd well ſeven Months more, when the Chin-cough, "*(Tuſſis Convulſiva)* then epidemic in the Place, ſeiz'd her, "and was ſo violent one Night, when ſhe was in Bed, that "the Cicatrix in her Head was lacerated, and the Brain was "puſh'd out at the Teguments. Being inſtantly call'd for, I "found above two Ounces of the Brain lying on the Scalp. "After cleanſing this away, I apply'd Dreſſings, with the "Plate of Lead over them, thereby preventing a greater Diſ"charge.

"The Symptoms that follow'd this direful Accident, were, "an entire Paralyſis of the Limbs, ſhe retaining ſtill the Uſe "of her Reaſon and Tongue; but much inclin'd to Sleep, "with a low depreſs'd Pulſe, and Anxiety; and her Urine "was diſcharg'd involuntarily. In this Condition ſhe con"tinued five Days, and then died."

'Tis ſufficiently known, that, in this troubleſome Species of Cough, the Circulation of the Blood is ſo obſtructed, that the whole Face of thoſe who are afflicted with it becomes monſtrouſly

ſtrouſly livid, and ſometimes black; ſince no venous Blood, carried either from the internal or external Parts of the Head, can enter the Right Ventricle of the Heart, already full by the Convulſion of the Lungs, whilſt the Left Ventricle of the Heart continues, in the mean time, to puſh the Blood thro' the Arteries: Hence the much diſtended Maſs of the Brain broke thro' the Cicatrix of the Wound, which had now been cured for nine Months. Hence 'tis obvious, how violently the diſtended Veſſels of the Brain preſs upon the Cranium.

In Caſes of a Fiſſure, Fracture, or Contuſion of the Cranium, the Arteries, Veins, or Lymphatic Veſſels, within the Cranium, are ſometimes broke, and diſcharge their reſpective Humours: Now theſe, by preſſing on the Brain, produce the ſame Conſequences as a Compreſſion of the ſame Part by a Depreſſure of the Skull: Theſe alſo, when converted into Pus or Ichor by Putrefaction, infect the extremely tender adjacent Parts of the Brain, and hence are productive of the ſame Diſorders. Theſe Veſſels (the Veins and Arteries) are propagated from the Cranium to the Dura Mater, thence to the Pia Mater, thence to the Brain, its Sinuſes and Ventricles, where, when ruptur'd, they produce various Inconveniences, both with reſpect to the Degrees of Danger, and Difficulty of Cure.

If the wounding Inſtrument is applied to the Head with ſuch Force as to ſplit, break, or, by a ſtrong Contuſion, to injure the Bone of the Cranium, 'tis obvious, that it is highly to be dreaded, leſt the Blood-veſſels, and others fill'd with finer Fluids, and diſperſed thro' the Membranes and Subſtance of the Brain, ſhould be broken, and by that means the diſcharg'd Humours, collected under the Cranium, compreſs the Brain; for, as we have already obſerved, ſince the whole Cavity of the Cranium is always perfectly full, the diſcharg'd Humours, collected here, muſt neceſſarily compreſs the Brain. All thoſe Symptoms, therefore, which ariſe from ſuch a Compreſſion, and which have already been enumerated, are, on this Occaſion, to be dreaded; for 'tis no matter what the compreſſing Cauſe is, ſince, whether, by a Change of the Figure of the Cranium, its Cavity is leſſen'd, or whether the diſcharg'd Humours, whilſt its Cavity remains the ſame, poſſeſs the Space formerly taken up by the Brain, the ſame Effects will be produced; which are a Perturbation, or total Abolition, of the Actions of the Brain, in conſequence of its Subſtance being compreſs'd.

The Blood-veſſels diſperſed thro' the Dura Mater are ſufficiently ſtrong, ſince, as in moſt other Parts of the Body, they are furniſh'd with callous Coats, in conſequence of which they are with Difficulty broken: But when we conſider, that the Dura Mater every-where adheres firmly to the Cranium, 'tis obvious, that the Force of the wounding Inſtrument, acting upon the Cranium, may be eaſily communicated to the Dura Mater, in conſequence of their Contiguity to each other. When therefore the Cranium is ſplit or fractur'd, there is great Danger, leſt the Dura Mater, which adheres to it, ſhould at the ſame time be lacerated or wounded by ſharp Splinters of Bone. But the conſiderably large Blood-veſſels diſtributed thro' the Pia Mater, and Medullary Subſtance of the Brain, are very tender, ſince, when they arrive here, they loſe their callous Coats, as is plain from phyſiological Obſervations; for this Reaſon they are more eaſily broken, tho' they are more ſafely ſituated.

Beſides, the Humours, diſcharged from the broken Veſſels, ſtagnating, will ſpontaneouſly degenerate, and become corrupted; and, when they have acquir'd an acrid Quality, will, by inflaming, ſuppurating, and corroding, deſtroy the tender pulpous Subſtance of the Brain. Hence again will ariſe all thoſe Symptoms which were obſerved to be produced by Compreſſion; but they will be ſtill more terrible in the former, than in the latter Caſe; becauſe, when the compreſſing Cauſe is removed, there are ſome Hopes, that the Functions may be entirely reſtored; whereas when the Structure of the Brain itſelf is deſtroy'd, and its tender Veſſels corroded, the Diſorder is incurable. Now that, by an Effuſion and Corruption of the Humours, ſuch Symptoms may be produced, is obvious, from what has already been ſaid, and what is ſpecified relating to Wounds in general, under the Article VULNUS.

Hence 'tis obvious, that the moſt violent Wounds of the Head, when, by a Fracture of the Cranium, a free Paſſage is given to the diſcharg'd Humours, are often leſs dangerous, than when, in conſequence of a ſmaller Wound, the effuſed Humours are retained under the Cranium, as has been before obſerved.

But that the Arteries and Blood-veſſels, when broken, diſcharge their Contents within the Cranium, is not to be doubted; and that, by this Blood compreſſing the Brain, all the Symptoms already recounted have been produced, is obvious, from uncontroverted Inſtances. But 'tis more to be doubted, whether the Lymphatic Veſſels, diſtributed thro' the Compages of the Brain, do, when broken by a like Accident, diſcharge ſo large a Quantity of Lymph as will, when collected, compreſs the Brain, ſince theſe Veſſels are ſo very ſmall; and ſince it rarely happens, that when the Blood-veſſels, diſtributed thro' the Brain, remain entire, the Lymphatic Veſſels alone are broken.

But that there are ſuch Veſſels, which convey the fine Lymph, is ſufficiently certain; for the whole Surface of the Dura Mater, which lies above the Pia Mater, always appears moiſt; as alſo the whole external Surface of the Brain. The whole Circumference of the Ventricles of the Brain is alſo wet with this fine Fluid, without which the contiguous Surfaces of the Parts would ſoon coaleſce, and grow together. Unleſs this highly ſubtile Fluid, which is continually diſcharged from the tender Veſſels in the Form of Exhalations, is again reſorb'd by the Veins, it is accumulated, and may produce all the various Diſorders of the Brain. And many Inſtances, given by Authors, teach us, that this Lymph has been collected betwixt the Dura Mater and the Brain, betwixt the Pia Mater and the Tunica Arachnoides lying above it, and in the Ventricles of the Brain themſelves; for *Winſlow* has obſerv'd, that the whole Surface of the Ventricles of the Brain is cover'd with a very tender Membrane, which, by Anatomical Injections, and the Inflammations ſometimes ariſing in it, is found to be of a vaſcular Structure; but the ſmall Veſſels, of which it conſiſts, naturally contain only the fine Lymph, but not red Blood. Beſides, what Anatomiſts commonly call Lymphatic Veſſels, and which are always of a venous Nature, were here alſo diſcover'd, and are delineated by *Ridley*, in his *Anatomy of the Brain*. Since, therefore, when other Parts of the Body are wounded, an incredible Diſcharge of thin Lymph ſometimes enſues, 'tis not only probable, that this may alſo happen in the Brain, but alſo confirm'd by the Obſervations of Phyſicians. Thus *Bohnius*, in his Work *de Renunciat. Vulnerum*, gives us an Account of a Boy of ſeven Years of Age, who, being ſtruck with a Stick on the Head, died on the twenty-ſixth Day, after having been afflicted with Head-achs, Watchings, Drowſineſs, and a Vertigo. Upon laying open the Cranium, the anterior Ventricles of the Brain were found diſtended with a limpid and tranſparent Serum. In the *Miſcellanea Curioſa*, *Decur.* 1. *An.* 6. *Obſerv.* 12. we have an Account of a Man of ſingular Diſtinction, who, falling down Stairs, daſh'd the Left Side of his Head ſo violently againſt the Steps, that he lay like one half dead, without Senſe, Motion, or Speech, almoſt for a whole Day. After Veneſection he recover'd a little; but was ſeiz'd with a violent Pain of his Head, which rack'd him Night and Day, and entirely deprived him of Sleep. By the common Conſent of the moſt ſkilful Phyſicians it was agreed, that the Trepan ſhould be apply'd; and, when it was juſt about to be done, a ſerous Humour began to drop from his Left Ear, which continued dropping till about eight Pounds were diſcharged. There are many Obſervations of this Kind to be met with; but, in all theſe Caſes, the Lymph was either found in the Brain, or diſcharg'd from the Ears, a conſiderable time after the Wound was inflicted; ſo that 'tis ſtill ſomewhat dubious, whether this Accumulation of Lymph was produced by a Rupture of the Lymphatic Veſſels, or by ſome other Cauſe.

As to the Veins and Arteries propagated from the Cranium to the Dura Mater, the Pia Mater, and the Brain, together with its Sinuſes and Ventricles; ſince the Fluids diſcharged from theſe Veſſels, when ruptur'd, are depoſited in various Places of the Brain, they may, by Compreſſion or Corroſion, injure its ſeveral Functions: Thus, for Inſtance, when the Humours diſcharg'd in the Ventricles of the Brain arrive at the fourth Ventricle, which is the Beginning of the Aperture, which runs down thro' all the Length of the Spinal Marrow, they may fall down thro' this Aperture, and produce various Kinds of Palſeys and Hemiplegias. But when other Circumſtances are alike, the Diſorder will always be the more terrible, and the more difficult of Cure, in proportion as the extravaſated Humours are lodged deep, or the reverſe; for the Blood, collected between the Cranium and Dura Mater, will immediately be diſcharg'd upon perforating the Cranium. If it is lodged between the Dura and Pia Mater, it cannot be extracted without making an Inciſion in the Dura Mater. If the diſcharg'd Humours are lodged in the Ventricles of the Brain, or about its Baſe, 'tis obvious, that the Danger is great, and the Cure not only difficult, but ſometimes alſo utterly impracticable; ſince the Attempts of Art, to procure a Diſcharge of the extravaſated Humours which compreſs the Brain, may be vain.

A violent Concuſſion of the Head, without fracturing the Cranium, will frequently, on account of a Rupture of the internal Veſſels, and conſequent Compreſſure of the Brain, cauſe the ſame Diſorders, as the Preſſure of the depreſs'd or fractur'd Bones of the Cranium upon the Brain have been ſaid above to produce.

Sometimes it happens, in conſequence of a Fall from an Eminence, or a violent Contuſion of the Head made with an obtuſe Inſtrument, that, whilſt the Cranium is entire, the Brain is ſo wounded, that all the Symptoms already enumerated enſue. When, for Inſtance, one, falling from an Eminence, daſhes his

his Head againſt a hard Body, the Brain contain'd in the Cranium is carried downwards with the ſame Degree of Velocity; but the reſiſting Body firſt ſtops the Motion of the Cranium: Hence the Maſs of the Brain, moving at that Inſtant in its former Direction, may be forcibly daſh'd againſt the Cranium, and thus remarkably injur'd; juſt as when one, carried in a Ship, proceeds to move forwards, and falls when the Veſſel is ſuddenly ſtopt by any Obſtacle. 'Tis, indeed, true, that, when the Cranium is entirely fill'd with the Brain, the Violence of this Shock is conſiderably leſſen'd; but that, even in this Caſe, the Veſſels of the Brain may be ruptur'd, the Humours diſcharg'd, and the Symptoms ariſing from theſe Circumſtances produced, is ſufficiently plain from Inſtances given by Authors of unqueſtionable Veracity. Thus *Hippocrates*, in the ſecond Book of his *Epidemics*, gives us the following Account: "A "beautiful Damſel, of twenty Years of Age, and the Daugh- "ter of *Nereus*, was, in Sport, ſtruck on the Sinciput with "the flat Hand of a young Woman, her Companion. Upon "which ſhe was ſeiz'd with a Vertigo, accompanied with "Dimneſs of Sight, and her Reſpiration ceaſed. When ſhe "was brought home, ſhe was ſeiz'd with a Fever, her Head "aked, and her Face became red. On the ſeventh Day, "above an Ounce of a fetid reddiſh Pus was diſcharg'd from "her Right Ear; upon which ſhe ſeem'd to be better, and "had her Symptoms relieved; but died on the ninth Day." 'Tis obvious, that by ſuch a gentle Stroke, given with the flat Hand, the Cranium could neither be fiſſur'd, fractur'd, nor depreſs'd; but that the Brain itſelf had been ſo wounded, that the Humours, diſcharg'd from the ruptur'd Veſſels, degenerated into a fetid reddiſh Ichor, which Accidents were follow'd by the Death of the Patient. In later Authors many Obſervations occur, by which it is prov'd, that, even when the Cranium remains entire, the Brain may, by ſtrong Percuſſion, be ſo wounded, that its larger Veſſels being broken, and the Blood diſcharg'd within the Cranium, immediate Death enſues. But one Inſtance of this Kind is ſufficient for our Purpoſe: *Bohnius*, then, in his Treatiſe *de Renunciat. Vulnerum*, gives us an Account of a Girl, who died on the fourth Day after receiving a violent Fall. He himſelf, as he tells us, examin'd the Body, in order to give in a Report to the Judges; and tho' during the Time ſhe lived, after the Reception of the Wound, and alſo after her Death, a large Quantity of Blood was diſcharg'd from her Mouth and Noſtrils, yet no Effects of Violence could be diſcover'd in her Head. Upon laying open her Cranium, and elevating the Brain, the Left anterior Branch of the Carotids was found ruptur'd. By this Caſe we are taught, that this large Artery, ſituated ſafely, as it ſhould ſeem, under the Baſis of the Brain, may be broken by ſuch a Concuſſion alone, whilſt the Cranium, in the mean time, remains unhurt. Hence 'tis obvious, that the like Misfortune may happen to the other Veſſels of the Brain. But ſince 'tis plain, from phyſiological Obſervations, that as ſoon as the Arteries, diſpers'd thro' the Pia Mater, enter the cortical Subſtance of the Brain, they become extremely minute, and, as it were, villous, and that the ſmall Medullary Fibres are continuous to theſe tender Veſſels of the cortical Subſtance, 'tis very obvious, that, by ſuch a powerful Concuſſion, theſe tender Stamina of the Brain, on which Life and the Animal Functions depend, may be broken; and by that means all the various Depravations, or even a total Abolition, of all the Functions of the Brain, produced, tho' no Wound nor Effuſion of Humours can be diſcover'd within the Cavity of the Cranium; for theſe highly minute Veſſels entirely elude and eſcape the Obſervation of the Senſes. In the *Hiſtoire de l' Academie des Sciences*, for the Year 1705. we have an Account of a robuſt young Man, who, in order to avoid being broke upon the Wheel, put his Hands behind his Back, and, ſtooping forwards with his Head, run ſo forcibly againſt the Priſon-wall, that he forthwith dropt down dead, without uttering a ſingle Word, or making the leaſt Noiſe: When his Body was examin'd, no Contuſion, no Tumor, no Fracture, were found in the Crown of his Head, the Part he daſh'd againſt the Wall, as was atteſted by his Fellow-priſoners. When the Integuments were removed, no Wound appear'd on their internal Surface, which lies next to the Cranium, nor in the Cranium itſelf, except that the ſquamous Part of the Os Temporum was a little removed from the Os Bregmatis, on which it lies; but, from this, ſo ſudden a Death could by no means have follow'd. Upon cutting open the Cranium with a Saw, no Injury at all appear'd; but the Brain did not exactly fill the Cavity of the Cranium, as it generally does; and the Whole of its Subſtance appear'd more firm and ſolid, than in other Subjects it is found to do. From this Caſe it is obvious, that the ſudden Death, produced by this violent Blow on the Head, could only be aſcrib'd to this ſubſiding of the whole Brain, by which thoſe tender Stamina, of which it conſiſts, were either broken, or ſo contorted and ſhrivel'd together, that they were no longer pervious to the Fluids of the whole Body.

From what has been ſaid we may alſo infer, that various Functions of the Brain may be injur'd, according as different Parts of that Organ have been hurt by ſuch a Concuſſion. *Hippocrates*, in the fifty-eighth Aphoriſm of his ſeventh Section, informs us, that "they who, by any Cauſe, have their Brain "concuſs'd, muſt neceſſarily be ſoon deprived of Speech." And, in the ſecond Section of his firſt Book *de Morbis*, he tells us, that "a Perſon who meets with this Misfortune, "muſt neceſſarily neither hear nor ſee." And *Heurnius*, in his Commentaries on this Aphoriſm, informs us, that he knew ſeveral Perſons, who, in conſequence of Falls upon the Occiput, loſt the Senſes of Smell and Taſte all their Lives after. In the *Miſcel. Curioſ. Dec.* 1. *An.* 2. *Obſ.* 120. we have an Account of a Boy of four Years of Age, who could ſpeak without any Difficulty, and who fell off a Deſk on his Head; but no Injury was obſerv'd to be done by the Fall. On the third Day, however, when he aroſe, he began to ſtammer in his Speech, tho' he was well enough in other reſpects; and on the ſubſequent Days his Diſorder increaſed; but, by the Application of cephalic Fomentations to his Head, and the Exhibition of ſome Medicines internally, the perfect Uſe of his Speech was reſtor'd. In the *Hiſtoire de l' Academie des Sciences*, for the Year 1732. we have an Account of a Man, who, in conſequence of a Blow on his Head, labour'd under a Difficulty of Speech for many Years, when he lay down in Bed. Such a Concuſſion may not only happen by a Blow on the Head, but alſo by daſhing any Part of the Body againſt a hard Object, in conſequence of a Fall from an Eminence. Thus *Galen*, in the ſixth Chapter of his firſt Book *de Locis Affectis*, gives us an Inſtance of a Man, who, falling from an Eminence, daſh'd the Beginning of his Back upon the Ground: On the third Day his Voice became very low, and on the fourth he was entirely dumb: His Legs, in the mean time, were paralytic, but his Arms remain'd well; and, on the ſeventh Day, his Speech, and the Uſe of his Legs, return'd. *Galen*, indeed, in this Caſe, attributed the Diſorder to an Affection of the Spinal Marrow; but ſince the Palſey ſeiz'd only the inferior Joints, it is obvious, that the Beginning of the Spinal Marrow was not injur'd; otherwiſe the Hands would have become paralytic. Hence the Privation of Voice ſeems, in this Caſe, juſtly to be aſcrib'd to the Concuſſion of the Brain.

The Diſorders ariſing from a Rupture of the internal Veſſels, either with or without an Injury done to the Cranium, are diſtinguiſh'd, by conſidering the Cauſe, its Violence, and the Part which receiv'd it.

When all theſe Circumſtances are thoroughly known, they contribute conſiderably to the Diſcovery of latent Diſorders; for a blunt Inſtrument, forcibly apply'd to the Head, always lays a Foundation for ſuſpecting either a Fracture or Fiſſure of the Cranium; and the Danger is more or leſs, according as different Parts of the Head are wounded; for in ſome Parts the Cranium is very thin, and in others conſiderably thicker. Beſides, very conſiderable Arteries of the Dura Mater are, in ſome Parts, lodged in deep Sinuſes of the Cranium; for which Reaſon the wounding Inſtrument, apply'd to theſe Parts, may eaſily break theſe Veſſels, and the diſcharg'd Blood may compreſs the Brain.

Bilious Vomitings,

Subſequent to Wounds of the Head, almoſt always denote, that the Brain is affected, whether it is compreſs'd by the diſcharg'd Humours, or its Action is diſturb'd by the Violence of the Concuſſion: But of Vomitings of this Kind we have already ſpoke.

When the Senſes of Seeing, Hearing, Smelling, Taſting, and Touching, are either diminiſh'd, depray'd, or aboliſh'd,

'Tis a Sign, that the Brain is more or leſs affected; for it is certain, from phyſiological Obſervations, that the Soundneſs of the Brain, and its free Communication with the Nerves ſubſervient to theſe Senſes, are requiſite to the Perception of thoſe Ideas which are repreſented to the Mind by the Interpoſition of the external Senſes: Hence 'tis obvious, that if, in conſequence of Wounds of the Head, the Whole or only ſome of theſe Senſes are either depraved, or entirely deſtroy'd, the Brain is ſo affected, that the Origin of the Nerves ſubſervient to theſe Senſes, being either compreſs'd, or by any other means injur'd, is no longer capable of tranſmitting the highly ſubtile Spirits, ſecreted in the Compages of the Brain, and requiſite to the Perfection and due State of the Senſes.

A Vertigo, a Dimneſs of Sight, and Inability to ſtand, are alſo Signs of the Brain's being affected.

We have already obſerv'd, that the ſlighteſt Diſorder of the Brain is a Vertigo, or an apparent Circumrotation of the viſible Objects; that, when the Diſorder is increaſed, a Dimneſs of Sight is produced, in which Caſe the Diſeaſe is call'd *Vertigo tenebricoſa*. Upon this the Strength of the Body is ſo far loſt, that all its Members begin to fail, and the Patient drops down. Now this denotes, that not only that Part of the Common Senſory

Senſory is affected, which affords an Origin to thoſe Nerves which are the Inſtruments of Senſation, but alſo that the Diſorder has reached to thoſe Parts in which the Origins of the Nerves, ſubſervient to muſcular Motion, are lodg'd. Hence *Hippocrates*, in the fifteenth Section of his Treatiſe on Wounds of the Head, when enumerating the Signs, by which it is known, that any one is ſeverely wounded in the Head, joins theſe three Symptoms, Dimneſs of Sight, a Vertigo, and Falling down: And, in the tenth Section of the ſecond Book of his *Prorrhetics*, he tells us, that, in all conſiderable Wounds of the Head, it is of Importance to know whether the Patient has dropt down, or fallen into a profound Sleep; for, if either of theſe has happened, the greater Care is required, for this Reaſon, that tho' theſe Symptoms do not always denote, that the Brain itſelf is wounded, yet they prove, that it is, at this Time, ſenſible of the Wound, τῷ ἐγκεφάλῳ ἐσαῦτὸ τῷ τρώματι.

In Wounds of the Head, a profound Sleep is always enumerated among the bad Signs; but, if a Stertor is join'd to it, it is ſtill more formidable.

When, for Inſtance, the Patient, during Sleep, breathes deep, with a Noiſe, as happens to thoſe who are apoplectic, then it imports, that all the Actions of the Brain are deſtroy'd by the Wound, and that only the Functions of the Cerebellum remain entire: And, in this Caſe, they are, for the moſt part, increas'd, ſince, in conſequence of the free Circulation of the Blood thro' the Brain being hinder'd, the Circulation of the Fluids thro' the Compages of the Cerebellum is render'd quicker and ſtronger.

Palſeys and Convulſions are alſo Signs, that the Brain is affected.

For ſince the Exerciſe of muſcular Motion, ſo far as it is ſubjected to the Will, depends upon the Soundneſs of the Brain, hence all or ſome of the Muſcles of the Body may become paralytic, in conſequence of a Wound of the Brain; and, becauſe the Muſcles, thus affected, are flaccid and pendulous, they are ſaid to be paralytic, or preternaturally relax'd. But, when a violent, alternately repeated, and involuntary Contraction of a Muſcle, which ought to move by the Direction of the Will, happens, then a Convulſion is ſaid to be preſent, which, in this Caſe, is generally produc'd, when the Tranſmiſſion of the Spirits thro' ſome Parts of the Brain remains entire, and is obſtructed in others. This Diſorder may alſo be produced by Splinters of Bone pricking the medullary Subſtance of the Brain, or by the diſcharged Humours, when they acquire an acrid and corroſive Quality. Both Palſeys and Convulſions, produc'd by Wounds of the Head, denote that the Brain is affected.

A Delirium is alſo a Sign, that the Brain is affected.

When the Ideas, excited in the Mind, do not correſpond to the external Objects, but are produced by the Change induced on the Common Senſory, then the Patient is ſaid to be delirious. Hence 'tis obvious, that, in Wounds of the Head, a Delirium is always a bad Sign, becauſe it ſhews, that the Brain is affected, as has been obſerv'd above from *Hippocrates*.

A Lethargy alſo is a Sign, that the Brain is affected.

This Diſorder is a State of Indolence and Oblivion, which deſtroys Motion and Senſation, and produces an irreſiſtible Neceſſity of Sleeping, but in ſuch a manner, that the Patients may be wak'd by ſuch Things as powerfully affect the Senſes, but they immediately fall aſleep again. Hence this Diſorder imports, that all the Actions of the Brain are much hindered, and, conſequently, denounces great Danger.

An Apoplexy is another Sign, that the Brain is affected.

All the Symptoms already enumerated teach us, that the Brain is affected in ſuch a manner, as to have ſome of its Functions deprav'd or aboliſh'd; but, when all the Actions of the Brain, all the internal and external Senſes, and voluntary Motion, ceaſe, the Action of the Cerebellum, which is ſubſervient to the vital Motions, in the mean time, remaining, then an Apoplexy is ſaid to be preſent, which is the higheſt Diſorder of the Head, and generally is a Sign, that, in Wounds of the Head, the Brain is compreſſed by the diſcharged Humours.

Horripulation is alſo a Sign, that the Brain is affected.

This Symptom, following Wounds of the Head, almoſt always denotes, that the Blood is diſcharged from the Veſſels, eſpecially when it recurs irregularly, and does not accompany a beginning Fever. We alſo frequently obſerve, that, in ſeveral Diſeaſes, ſuch a Horripulation precedes conſiderable Changes. Hence 'tis always a bad Symptom in Wounds of the Head, as it is a Sign of a thorough Perturbation of the Common Senſory, by which ſuch Concuſſions in the whole Body are cauſed.

A redoubled Fever is alſo a Sign, that the Brain is injur'd.

Every conſiderable Wound, whilſt the Pus is forming, is accompanied with a ſlight Fever, which prognoſticates nothing fatal; but, when this ſlight Fever is ſuddenly increaſed, or when, after it has ceaſed, a new and violent Fever appears, it always ſignifies, that ſome violent Diſorder lies conceal'd. For this Reaſon *Hippocrates*, in his *Coacæ Prænotiones*, tells us, "That thoſe who are wounded in the Head are generally ſeiz'd "with a Fever, a Vomiting of Bile, and a Palſey; and that "ſuch Patients are in a bad State." And, in the Paſſage already quoted from his *Prorrhetics*, he ſays, "That it is the beſt Sign, "when thoſe, wounded in the Head, do not become feveriſh; "but that, when any of thoſe Symptoms happen, 'tis beſt "they ſhould appear in the Beginning. But when, in Wounds "of the Head, a Fever begins on the fourth, the ſeventh, or "the eleventh Day, it is a very fatal Sign;" for ſuch a Fever denotes a new Inflammation, or a ſtrong Suppuration, which, in this Caſe, are ſo dangerous. Hence, in the Caſe before ſpecify'd from the ſecond Book of *Hippocrates*'s Epidemics, ſuch a Fever was followed by the worſt of Symptoms, and, at laſt, by Death; for the Girl, who was gently ſtruck on the Sinciput with the flat Hand of her Companion, became immediately feveriſh; but when, on the ſeventh Day, a reddiſh fetid Pus was diſcharged with a Relief of the Symptoms, the Fever again increaſed, the Patient became lethargic, and loſt her Speech, the Right Side of her Face was contracted, her Reſpiration became difficult, ſhe was ſeized with a Tremor and Convulſions, and at laſt died on the ninth Day. In peruſing thoſe Authors who have wrote on Wounds of the Head, many ſuch Caſes occur, which teach us, that the Fever ſuddenly increaſing after ſome Days, or appearing afreſh, is an unlucky Prognoſtic, and almoſt always denotes, that the Brain is wounded or depreſs'd.

Blood diſcharged from the Mouth, Noſe, and Ears, is alſo a Sign, that the Brain is affected.

It is not probable, that the Blood diſcharged within the Cranium can be evacuated thro' theſe Paſſages, ſince the Dura Mater ſo cloſely covers the internal Surface of the Cranium, that there can be no Evacuation made this Way. It is, indeed, obvious from ſeveral Caſes, that chronical Diſorders of the Head have often been relieved by a Diſcharge of Humours from theſe Paſſages, as *Hippocrates*, in the tenth *Aphor.* of his ſixth *Sect.* obſerves, in theſe Words. "When any one labours "under any Diſorder, or univerſal Pain, of the Head, Pus, "Water, or Blood, diſcharged from the Mouth, Ears, or "Noſe, put a happy Period to the Diſeaſe." But Anatomiſts have not as yet diſcovered the Paſſages, by which the Humours, contained in the Cavity of the Cranium, are thus diſcharged: Perhaps they are produc'd by the Diſeaſe, tho' they naturally had no previous Exiſtence. Thus, in other Diſeaſes, ſuch Diſcharges of Humours are obſerv'd, tho' the Paſſages by which they are convey'd are not as yet diſcovered. A Pleuriſy, for Inſtance, is carry'd off by Spit, convey'd thro' the Lungs, and expectorated. 'Tis certain, that if the Evacuation of the Blood, diſcharged within the Cranium, were ſo eaſy, there would be no Neceſſity for the Operation of the Trepan, which, however, is proved not only to be uſeful, but alſo indiſpenſably neceſſary, by numberleſs Inſtances. But the Blood diſcharged from the Mouth, Ears, and Noſe, is a Sign, that the wounding Inſtrument has ſtruck the Head with great Force, ſince it was capable of breaking the Arteries: 'Tis, therefore, to be highly dreaded, that the Blood-veſſels running thro' the Brain, and which no longer retain their callous Coats, are broken.

Redneſs of the Face and Eyes is alſo another Sign, that the Brain is affected.

The Blood, thruſt from the Heart thro' the carotid Arteries, goes partly to the internal Parts of the Head, thro' what we call the internal Carotids, and is partly diſtributed thro' the external Carotids, which lie near the Face, and external Parts of the Head. When, therefore, by an Effuſion of Blood compreſſing the Brain, the free Circulation of the Humours thro' that Organ is obſtructed, the Blood is carried in a proportionably larger Quantity thro' the external Carotids, by which means the Face will become more red, tenſe, and florid; and ſince the internal Carotid, after it emerges from the bony Canal thro' which it paſſes, ſends off Ramifications, which reach to the Orbit of the Eye, and the Eye itſelf, and there communicate with the Branches of the external Carotid, the Circulation of the Blood thro' the Veſſels of the Brain being by this means obſtructed, the Eyes become red, becauſe immediately a larger Quantity of Blood is carried thro' theſe Branches of the internal Carotid which reach to the Eyes. For this Reaſon a Redneſs of the Face and Eyes is juſtly look'd upon as a bad Symptom in all Wounds of the Head. Patients afflicted with the moſt violent Apoplexy have their Faces red, turgid, and inflated. This florid Colour of the Countenance is, by *Hippocrates*, ſaid to be

an unlucky Omen in phrenetic Patients; and the Girl who died by a gentle Stroke of her Companion's flat Hand on the Sinciput, and whose Case we have already given from *Hippocrates*, had a Redness of her Face. In several Passages of *Hippocrates*, this Redness of the Eyes and Countenance is condemn'd. Thus, in his *Coacæ Prænotiones*, he tells us, "That they who have "a Head-ach, Stupor, and Delirium, attended with Costive-"ness, a Fierceness and Redness of the Eyes, are seiz'd "with Convulsions in the posterior Parts of their Bodies;" in which Passage he means, that the Eyes are fierce, turgid, and blood-shot, as happens in violent Fits of Anger: And, in the next Sentence, he adds, "In Concussions of the Head, red "Eyes and a Delirium are very unlucky Symptoms."

When, from the preceding Signs, 'tis certain, that the Brain is wounded, whether the wounding Instrument has reach'd to the internal Parts of the Head, or whether the Brain is compress'd by a Depressure of the Cranium, or an Effusion of Humours, it ought to be determin'd in what Part of the Brain the Injury is done. 'Tis highly obvious, that a Knowledge of this must be a Circumstance of the last Importance, since the Operation of the Trepan can neither be judiciously nor successfully perform'd, till we know in what particular Place the Disorder is lodged. But 'tis frequently pretty difficult to determine the Part affected; for sometimes the Wound is found in a Place remov'd at a considerable Distance from that to which the wounding Instrument was apply'd, as we have already observed. It also often happens, that neither the Patient nor the Bystanders can determine what Part of the Head has receiv'd the Blow. Nor can this certainly be determined by observing the injured Functions, in consequence of a Wound receiv'd in the Head. Hence it may, indeed, be concluded, that the Brain is wounded; but no one can, from that Circumstance, conclude what particular Part of it is injur'd. Who would take upon him to determine the particular Parts of the Brain, whence the various Nerves, subservient to the external Senses, derive their Origins? Who can ascertain the precise Seat of the Memory, and Faculty of Reasoning, in this surprising Organ? Some Men, justly celebrated for their Learning, have advanced surprising Hypotheses with respect to this Subject; but the Event has prov'd, that the greatest Geniuses are capable of falling into the most egregious Blunders, when they wantonly indulge themselves in Speculation. The great *Steno*, who was so skilful an Anatomist, frankly acknowledged, before a Set of Men eminent for their Learning, that he was an entire Stranger to the Structure of the Brain; and in a beautiful Dissertation, to be found under the Article CEREBRUM, destroys all the chimerical Hypotheses relating to this Subject, and pointed out the true Way by which human Industry can gradually attain to a Knowledge of this Organ. By the Signs, however, hereafter enumerated, we are, with all our Art, to inquire into the Part of the Brain affected; and if, notwithstanding an accurate Examination of these, the Surgeon should err, the Miscarriage is not to be attributed to his want of Skill, but to the Defect of the Art, which, perhaps, the Discoveries of succeeding Ages may amend.

The injured Part, therefore, within the Cranium, is distinguished, first, by the external Appearances already describ'd; secondly, by an Investigation of the particular Injuries received by the Cranium, in the manner already taught.

For when it is discover'd, that the Cranium is hurt, and, at the same time, any Symptoms appear, which give Reason to believe, that the Brain is affected, 'tis highly probable, that the internal Injury lies immediately under that which is external.

Thirdly, by a Tumor and Redness of the Skin after shaving the Head, and the Application of a Plaister to it.

When, by the Signs already recounted, it is obvious, that the Brain is wounded; and when, at the same time, there is no particular and distinguishing Circumstance, by which the Part affected can be determin'd, then Surgeons endeavour to discover it in the following Manner: They shave off the Hair, and then apply to the whole Head any aromatic Plaister, which they suffer to remain for some Hours. Then, taking off the Plaister, they carefully examine whether any Tumor or Inflammation appear in any Part; and, if these are found, we may justly suspect, that the wounded Part lies under them. For, since this Plaister adheres to the Skin of the Head, and, by its mild aromatic Stimulus, excites a somewhat brisker Motion of the Humours, if there is any Contusion, it will the more easily appear, when a Tumor arises. When it cannot be discover'd in what Part of the Head the Wound is lodged, *Hippocrates* pronounc'd the Disorder incurable by any Medicines.

Fourthly, by a spontaneous Motion of the Patient's Hand to a particular Part of the Head.

Tho' we cannot ascertain the particular Reason why this is done, yet we are certain, from incontestable Facts, that it is so. Very lately, says *Van Swieten*, I saw a Man, who had fallen from an Eminence, lying without any Sense; and, as he had dash'd the Right Part of his Head and Face against a hard Object, and had a strong Contusion, and slight Wounds of these Parts, he forthwith lifted up his Right Hand, and not only touch'd, but pretty strongly rub'd, the Parts affected. Two Hours after, when, in consequence of a liberal Venesection, he recover'd a little, he said, that he was conscious of nothing after his Fall. Whilst Surgeons, therefore, observed, that the Hands of Patients thus wounded were, by a kind of mechanical and necessary Motion, convey'd to the wounded Part, they thought they had Reason to conclude, that, when no external Wound appear'd, the Part affected was indicated, if the Patient's Hand was, by such a mechanical Motion, always carry'd to a particular Part of his Head. In apoplectic Patients the same Phenomenon also frequently appears. This Sign seems to be of considerable Importance, when several such repeated mechanical Motions appear, which are not perform'd by the Direction of the Will, nor predetermined by any Act of the mental Powers, but to which our Bodies themselves are wisely and necessarily determined by the bountiful Author of our Natures, to attempt the Removal of what is hurtful and injurious to them.

Fifthly, from a Palsey on one Side, and Convulsions on the other.

That corporeal Organ of the Body, upon which Sensation and voluntary Motion depend, seems to be double with respect to its Origin, Collection, Distribution, and Operation; for there is a Right and a Left Carotid Artery, and a Right and a Left Vertebral one: From these arise the Right and Left Hemispheres of the Brain, which are intirely distinct from each other. The whole Collection of the Medulla is also divided into two Partitions, one on the Right, and another on the Left Side; which evidently appears in the Corpus Callosum, the Fornix, the Crura medullæ oblongatæ, the optic and olfactory Nerves, as also in the spinal Marrow, and the Nerves distributed from it. But, tho' all these Parts are thus found double, yet the Man who perceives and feels by their means, is but a single and individual Man; for the two olfactory Nerves, so distinct in their Origin and Progress, at last excite the same Sensation of Smelling. Tho' with our two Eyes we doubly see each Object presented to them, as is obvious from the intermediate Space between the two Eyes, or from gently pressing the Bulb of either Eye with the Finger, yet Vision is only single. This same Observation holds with respect to the Sense of Hearing.

Since, then, the Brain, the immediate Instrument of Sensation and Motion is double, 'tis hence obvious, that one Part of it may remain sound, whilst another may become entirely unfit for performing all its several Functions, as is plain in an Hemiplegia, in which Disorder half of the Body is rendered so paralytic, that none of the Motions depending on the Direction of the Mind remain in it: Yet the conscious Faculty, which designs and directs the Motion, remains; and though the Person so affected endeavours, as much as possible, to move the affected Side, yet no subsequent Motion is produced in the Muscles; and sometimes, in the worst Species of this Disorder, all Sensation is also entirely destroy'd on the affected Side.

Hippocrates, in the third Section of his Book *de Morbo Sacro*, made this same Observation in the following Words: "The "Brain, says he, of Man, as well as of all other Animals, is "double, and divided in the Middle by a slender Membrane; "for which Reason the Head does not always ake in one Part, "but sometimes in one, and sometimes in another; and some-"times the Whole of it feels the Pain." A subtile Question here arises, which is, Whether this Origin of Sensation, and Principle of Motion, are situated on the Side opposite to that on which their Effects are produced; that is, Whether the Origin of the Sensation and Motion, exercised on the Left Part of the Body, is lodged in the Right Side of the Brain, or in the Left: But this must be determin'd by the minute Observations of accurate and skilful Anatomists; and, when this Circumstance is fully known, it will be of singular Service in Wounds of the Head, to determine, from the Disorder of the Sensations and Motions on either Side of the Body, what particular Part of the Brain is wounded.

The soft and pulpous Substance of the Brain has always laid a Foundation for great Difficulties in Anatomical Demonstrations: But its Consistence is least of all firm in young Persons, whereas in an advanced Age, and especially in those Men who have been accustom'd to hard Exercise, it is more firm, and capable of being handled with greater Freedom. In such Subjects, after, by a long-continued Maceration, the cortical and cineritious Substance of the Brain has in a great measure been dissolved, it has evidently appear'd, that the medullary Fibres, arising in the Right Side of the Brain, were stretch'd out to the Left Side, and *vice versa*. But this Direction of the Fibres is principally observable in three Parts, that is, in the anterior and posterior Border of the annular Protuberance; and still more conspicuously in the Extremity of the Medulla Oblongata, where it terminates in the Spinal Marrow. But this Phenomenon is most distinctly observ'd about two Lines below the *Corpora Pyramidalia* and *Olivaria*; for if the *Corpora Pyramidalia*

midalia are gently drawn from each other, not ſlender Fibres, but large Congeries of them are obſerv'd to run acroſs each other to the oppoſite Parts, as *Santorini*, in his *Obſervat. Anatom. Cap.* 3. has obſerv'd. This is almoſt all that Anatomy has diſcover'd, with reſpect to the Direction of the medullary Fibres of the Brain.

Several medicinal Obſervations confirm this decuſſated Action of the Brain. *Hippocrates*, in the fifth Book of his *Epidemics*, gives us an Account of a Girl of twelve Years of Age, whoſe Cranium was contuſed and fractur'd; but the Trepan being injudiciouſly apply'd, ſhe died on the fourteenth Day. Her Left Hand was ſeiz'd with Convulſions, tho' the Wound was inflicted on the Right Side of the Head. In his *Coacæ Prænotiones* he tells us, that thoſe who are wounded in the Temples, are ſeiz'd with Convulſions on the Side oppoſite to that on which the Wound is inflicted. And, in the nineteenth Section of his Treatiſe on *Wounds of the Head*, he confirms the ſame Doctrine, by adviſing Surgeons not raſhly to make Inciſions in the Region of the Temples, becauſe ſuch Inciſions produce ſubſequent Convulſions; and he affirms, that if an Inciſion is made in the Left Temple, the Right Part of the Body will be ſeiz'd with Convulſions; but that, if the Inciſion is made in the Right Temple, the Left Side will of courſe be convulſed. And, in the thirty-firſt Section of the ſame Book, when he enumerates the Signs by which it is known, that a Patient wounded in the Head will die, he affirms, "That moſt Patients ſo wounded are ſeiz'd with Convulſions on the Side oppoſite to that in which the Wound was receiv'd; for, if there is a Wound on the Left Side of the Head, the Right Side of the Body will be ſeiz'd with Convulſions; but, if the Wound is on the Right Part of the Head, the Left Side will be convulſed." Thus, in theſe early Ages of Medicine, ſuch were the Obſervations which favour this Opinion:

Among later Authors, *Fabricius Hildanus*, who generally only ſimply relates what he ſaw, without any Admixture of Reaſoning, has various Obſervations, which confirm the Truth of this Doctrine. Thus, in his *Obſervat. Chirurg. Centur.* 2. *Obſerv.* 3. he gives us an Account of a Man of forty Years of Age, who, being ſtruck on the Left Bregma with a Ball of Iron, which weigh'd more than a Pound and an half, had his Cranium conſiderably depreſs'd and fractur'd; upon which he dropt to the Ground like one dead; and not only loſt his Speech, Sight, and Hearing, but was alſo ſeiz'd with a Palſey on the Side oppoſite to that on which the Wound was inflicted. By elevating, however, the depreſs'd Parts of the Cranium, and uſing other proper Means, he was reſtor'd to perfect Health. In the ſame *Century* of that Work, *Example* 3. he gives us an Account of a Man of ſixty Years of Age, who, by the Blow of a Stone, had the Left Part of his Os Frontis, where the Hairs begin to grow, conſiderably depreſs'd: He no ſooner receiv'd the Blow than he dropt to the Ground, loſt his Speech, his Reaſon, his Sight, and his Hearing; and had the whole Side, oppoſite to that on which the Wound was receiv'd, ſeiz'd with a Palſey. His Friends would not ſuffer an Inciſion to be made in the Integuments, and the depreſs'd Parts of the Cranium elevated, ſo that he died a few Days after.

In the thirteenth Obſervation of *Centur.* 1. he gives us an Account of a Woman, who received a Wound with Contuſion in the Right Os Bregmatis, accompanied with a Fracture and Depreſſion of the Cranium. Upon this ſhe immediately vomited up a bilious Humour, together with crude and indigeſted Aliments; and her Left Side became paralytic, whilſt the Right was ſeiz'd with Convulſions. She recover'd, however, tho' a large Quantity of the Subſtance of the Brain was extracted thro' the Wound. In the nineteenth Obſervation of the ſame *Century*, he gives us an Account of a robuſt young Man, who, with a Club, receiv'd a Wound on the Left Bregma, accompany'd with a Fracture of the Bone. After dilating the Wound, and extracting the Splinters of the Cranium, the Wound was almoſt cover'd with a Cicatrix in the Space of five Weeks; when, a few Hours after Venereal Intercourſe with a Courtiſan, he was again ſeiz'd with a Fever; and the Pain of his Head became more violent than before. The oppoſite Side, in the mean time, became paralytic; the Arm, on the Side on which he had receiv'd the Wound, was ſeiz'd with Convulſions; and, on the fourth Day after, he died. In the *Hiſtoire de l'Academie des Sciences*, for the Year 1700. we have an Account of a Boy, who, falling from an Eminence, receiv'd a Wound in his Head, which at firſt was thought to be but ſlight. Some time after, however, the Bone began to be denudated in the Middle of the Wound; and in the Sagittal Suture a ſmall Hole appear'd, thro' which a large Quantity of Pus was diſcharged. This Evacuation was ſometimes ſtopt for a few Days; and, at this time, his Right Arm was four or five times a Day violently convulſed, for the Space of a Quarter of an Hour; as alſo the Jaw on the ſame Side. As ſoon as the Evacuation of Pus return'd, theſe Convulſions ceas'd. At laſt, upon the Patient's Death, the whole Left Lobe of his Brain was found ſuppurated, whilſt the Right Lobe and Cerebellum remain'd entirely ſound.

Valſalva, in his Treatiſe *de Aure humana*, affirms, that, in the Diſſection of many Subjects, either of whoſe Sides had been paralytic, he always found the Cauſe of the Diſorder lodg'd in the oppoſite Side of the Brain; and mentions Men of Skill and Learning, who were preſent at theſe Diſſections. And if, on any Occaſion, he found the Wound extending to the other Side of the Brain, yet he obſerv'd, that it was more conſiderable in the oppoſite Part. Among the Men of Skill and Learning, who were preſent at theſe Experiments, he mentions *Petrus Molinellus*, Doctor of Philoſophy and Medicine, who, in his *Comment. de Bononienſi Scientiarum & Artium Inſtituto*, made the following remarkable Experiment: He open'd the Left Part of the Cranium of a live Dog; then, making frequent Punctures in the Dura Mater, he obſerv'd, that the Dog was thrown into various Convulſions, eſpecially when that Part of the Dura Mater, which adher'd moſt firmly to the Cranium, was prick'd; but the Animal never became apoplectic. At laſt he extracted the Left Lobe of the Brain entirely; upon which the Animal immediately fell, not on the Left Side, as might have been expected, but on the Right; and, being raiſed up, fell down again on the ſame Side. The Right Part of his Body ſeem'd, in the mean time, to be deprived of all Senſation and Motion; whilſt the Left, on the contrary, retain'd both. He adds, that he knew others who had tried the ſame Experiment with the like Succeſs; and, from theſe Circumſtances, concludes, that *Morgagni* and *Lanciſi* had juſt Reaſon to affirm, that we might eaſily conjecture what Part of the Brain was injur'd, provided we only remark what Side of hemiplectic Patients was affected.

Many other Caſes might be brought, which both in other Diſorders, and in Wounds of the Head, confirm the Truth of this Doctrine; but theſe already given are ſufficient: And this Doctrine is, in a particular manner, confirm'd by the laſt-mention'd Experiment made upon the live Dog. 'Tis not, however, to be denied, that, in practical Authors, ſome Inſtances occur, which ſeem repugnant to this Sentiment.

Thus *Foreſtus*, in *Obſervat. Lib.* 10. *Obſ.* 11. gives us the Caſe of a Boy of eleven Years of Age, who, falling into a violent Lethargy, had, whilſt faſt aſleep, the whole Right Side of his Body ſo affected with a Palſey, that the Powers both of Senſation and Motion were deſtroy'd in it. *Foreſtus*, being call'd, and having no other Medicines at hand, apply'd Thyme, beat up with Vinegar, to his Right Noſtril, by which the Boy ſeem'd to be ſomewhat relieved; and, at the ſame time, a thick, highly corrupted, bloody, and viſcid Matter, reſembling putrid Sanies, was diſcharged from the Noſtril. From this Circumſtance *Foreſtus* prognoſticated, that there was an Abſceſs and Sphacelus lodged in the Right Part of the Brain. Soon after, the Boy died: But *Foreſtus*, before his Death, concluding his Caſe to be deſperate, intended to leave him; but was detain'd by a Lady of Diſtinction, who had the Care of the Boy in his Parents Abſence, with a View to have the Body diſſected, the Cauſe of his Death diſcover'd, and a juſt Account of the Accident given to the Parents. The Cranium being divided, the poſterior Parts of the Brain and Cerebellum, on the Right Side, were found entirely ſanious, putrid, corrupted, and bloody; but, on the Left Side, the Brain was white, ſound, and uncorrupted. Thus the Truth of the Prognoſtic, diſcover'd in the Subject, procured a large Share of Reputation to *Foreſtus*. This Caſe, ſo accurately deſcribed, is directly repugnant to thoſe before given, and ſeems to be of conſiderable Moment.

Bonetus, in his *Sepulch. Anatom. Pract. Lib.* 1. *Sect.* 15. *Obſerv.* 27. gives us an Account of a Youth, who was wounded in the Region of the Left Bregma. Next Day convulſive Motions were obſerved in his Right Side, and his Left became paralytic. The whole Region of the Left Bregma was found contuſed to ſuch a Degree, that eight Splinters of Bone were ſpontaneouſly ſeparated, one of the ſharpeſt of which had pierc'd both Meninges, and was found lodged in the Subſtance of the Brain itſelf. In this Caſe, the Side on which the Wound was inflicted became paralytic, and the oppoſite Side was convulſed, which is quite the Reverſe of what happen'd in the above-mention'd Inſtances.

Valſalva, in the fifth Chapter of his Book *de Aure humana*, frankly and ingenuouſly confeſſes, that, in one or two Inſtances, the Diſorder to him appear'd equal in both Hemiſpheres of the Brain; but that he had moſt frequently found that Side of the Brain affected, which was oppoſite to the paralytic Side.

But we muſt obſerve, that frequently no Diſorder has, after Death, been found in the Brain, tho', before Death, its Functions have been highly impair'd and injur'd; for a ſlight Change or Compreſſion of the tender Stamina, of which it is compoſed, is ſufficient to produce the moſt terrible Symptoms, as *Valſalva*, in the Place above quoted, proves by a beautiful Experiment.

The Nerves of a Dog, which are diſtributed to the Heart, being ſtrongly compreſs'd by a Ligature, which was immediately after removed, they were ſo weaken'd in their Structure, that

the Dog died ſome Days after, juſt as if they had been cut off; but, upon being inſpected, the ſmalleſt Marks of any ſenſible Injury they had ſuſtain'd were not to be diſcover'd: Hence it may happen, in ſuch Caſes, that, by the Concuſſion only, the oppoſite Hemiſphere of the Brain may be injur'd, tho', at the ſame time, no Diſorder ſhould be diſcover'd after the Death of the Patient; which will appear ſtill more probable, when we conſider, that the Cranium is often fiſſur'd in the oppoſite Part, whilſt that on which the Blow was received remains entire, as we have already obſerved.

Since, then, numberleſs Obſervations made by celebrated Authors, and Experiments tried on live Animals, confirm this decuſſated Action of the Brain, which is the immediate Inſtrument of Senſation and Motion; ſince there are only few Inſtances repugnant to this Doctrine, and ſince even theſe may be explain'd in ſuch a manner as to appear leſs inconſiſtent with it, it is obvious, that it is, if not certain, yet at leaſt highly probable, that, if the one Side is paralytic, and the other convulſed, then the Origin of the Diſorder is lodged within the Cranium, in the Part oppoſite to the paralytic Side: But if the Convulſion ſeizes the Right Side, and if no Diſorder is obſervable in the Left, then, for the ſame Reaſon, it ſeems highly probable, that the Left Part of the Brain is ſo affected, that the equable Influx of the Spirits into the Muſcles of the Right Side is indeed diſturb'd, tho' not entirely obſtructed. Such Caſes occur among the Inſtances already given.

But it is to be particularly obſerved, that, in the Nerves, this Oppoſition of Direction does not obtain, which, by theſe Experiments, is diſcover'd in the Brain; for the Nerves, ariſing in the Right Part, are diſtributed thro' the ſame Side. Some celebrated Anatomiſts have been of a different Opinion, and believed, in particular, that the Optic Nerves mutually decuſſated each other; and that each of them reach'd to the Eye of the oppoſite Side: And ſome Philoſophers have been of Opinion, that this Circumſtance might enable us to account for many Phenomena in Optics. A fortuitous Inſtance has, however, prov'd the contrary: The celebrated *Santorini*, as we are inform'd in the third Chapter of his *Obſervat. Anatom.* was diſſecting the Body of a Man, whoſe Right Eye had, for a long time before his Death, been blind of a true *Amauroſis*; tho', at the ſame time, no apparent Diſorder was obſervable in the Eye itſelf. The Optic Nerve of this Eye was found ſlenderer, and of a more dark and cineritious Colour, than it ought to have been: And, when this accurate Anatomiſt was diligently tracing it as far as he could, he perceived, by the Diverſity of its Colour, that it always kept the Right Side. He evidently obſerved, at the ſame time, that the Optic Nerves were ſo far from decuſſating each other, that they were not ſo much as mix'd; but that they only lay juſt by each other, and were again diſjoined.

When it appears, that the Functions of the Brain are injur'd, whatever be the Cauſe, by the Application of which to the Head ſuch an Effect is produced, our firſt Care is to inquire into the Nature of the Hurt or Injury; as, whether it be a Compreſſion of the Brain from the forcing inwards of the Cranium, a Puncture or Laceration of the ſame Part by ſome ſharp Fragments of that Bone, an Effuſion of Humours under the Cranium, or, laſtly, a violent Concuſſion. The diagnoſtic Signs belonging to each of theſe Caſes have been ſhewn already; and the Cure of a depreſs'd Cranium has been treated of above.

By a violent Concuſſion, the very tender and pulpous Subſtance of the Brain may be affected in ſuch a manner, as to have its minuteſt Veſſels compreſs'd by the Shock, ſo as to prevent the Paſſage of the Humours thro' them: But if theſe Veſſels are not broken, or wholly deſtroy'd, an equable Circulation of the Humours will open anew theſe compreſs'd minute Canals; and, after ſome Hours, the Brain will, by degrees, reſume its Functions. If there be any thing ſettled under the Cranium, which may compreſs or hurt the Brain, the general Indication directs us to remove it; in which Caſe it will appear reaſonable to obſerve the following Rules:

Firſt, Then, the extravaſated Blood is immediately to be taken away;

Becauſe, ſo long as it remains, it will preſs upon the Brain; and, if this Preſſure continues long, the Sides of the ſmall Canals, thus compreſs'd, will grow together, and remain for ever impervious; and hence an incurable Impediment to the Functions may ariſe.

Secondly, The Parts infected muſt be depurated,

And cleanſed from the extravaſated Humours, corrupted by their Stagnation, and converted into Pus, Ichor, or Sanies: And the ſolid Parts, if affected, muſt be deterg'd, and reduced to a ſound State.

Thirdly, If any Splinters of Bone ſtick in the Brain, they muſt be taken away.

The extravaſated Blood is taken away,

Firſt, By Reſorption.

In Contuſions where, the Veſſels being broken, an Effuſion of Blood ſettles under an entire Skin, and marks the Place affected with a black or blue Spot, we very frequently obſerve all the extravaſated Liquid to diſappear by degrees, being inſenſibly reſorb'd into the bibulous Veſſels of the Veins, and attenuated by the Afflux of thinner Humours. What ſhould hinder, then, but that the ſame Effect might be accompliſh'd in ſuch a Place as this, of which we are ſpeaking? Now extravaſated Blood, in a cloſed Place, where the Air has no Acceſs, may ſettle a very long time, without being corrupted.

Secondly, By Diſſipation;

Which is effected, when the extravaſated Blood is ſo attenuated by Diluents and Reſolvents, as to be reſorb'd into the venous Veſſels, which are open, and extended over all the internal, as well as external, Superficies of the Body; and is by that means diſſipated, and inſenſibly diſappears.

Thirdly, By perforating the Cranium.

When the Quantity of extravaſated Blood is ſo great, as, by its ſtrong Compreſſion, to injure the Functions of the Brain to a very conſiderable Degree, the Caſe will not allow us Time for the Removal of ſo great an Inconvenience by the ſlow Ways of Reſorption or Diſſipation; for the Patient would often ſooner periſh. There remains, then, no other Help, but the neceſſary, tho' cruel, Remedy of the Trepan; by which, the Cranium being perforated, a Paſſage is open'd for the Diſcharge of the extravaſated Blood.

We come now to give Directions how each of the three fore-mention'd Intentions may be anſwer'd.

The Blood is ſaid to be reſorb'd, when it is repel'd, by the vital Powers, into the Veins evacuated by plentiful Bleeding, and ſuccedaneous Purging.

If we open the Cranium of a living Animal, which is young, and which, for that Reaſon, will the more eaſily admit of having the Cranium removed, there manifeſtly appears a Vapour to exhale from the internal Parts, the Surfaces of both Membranes are cover'd with Humidity, and the whole Circumference of the Ventricles is moiſten'd with a thin Sort of Dew. The fineſt and minuteſt Veſſels, being thus in a State of continual Exhalation, muſt, by that means, diſcharge a very thin Liquid, ſuch as moiſtens and cheriſhes theſe internal Parts. If, therefore, there were no reſorbent Veins in thoſe Places, the Quantity of Liquor would by degrees be ſo accumulated, as, by Compreſſion, to deſtroy the Functions of the Brain; and hence I conclude, that the extravaſated Blood muſt be reſorb'd by the gaping Orifices of theſe minute Veins. It may ſeem ſtrange, perhaps, that the Blood, which immediately concretes when out of the Veſſels, ſhould be capable of entering theſe very fine Tubes; but if we conſider, that the extravaſated and concreted Blood is by degrees again diſſolved, and reduced to a thinner Liquid; and the ſooner, as ſuch an Effect is promoted by the Influence of a kindly Heat, and the very fine dewy Exhalations which are continually diluting the coagulated Blood; and further, that the Cranium, being always full, is ſtrongly preſs'd; and that the arterious Fabric belonging to the Brain, and eſpecially the Veſſels of the Dura Mater, are alternately diſtended and contracted by the Blood impel'd by the Heart; it will appear from theſe Conſiderations, that the extravaſated Blood is not a Moment free from Preſſure, Attrition, and Dilution, with the fineſt of Liquids; whence it may, at length, be ſo attenuated, as to be capable of entering the leaſt Orifices of the abſorbent Veins. But ſince theſe minute abſorbent Veſſels convey the Humours, after Reſorption, to Veins of a larger Capacity, the Reſorption will be facilitated by the Depletion of the larger Veins; for which Reaſon, taking away a large Quantity of Blood is here recommended. Again, ſuch Cathartics as ſtrongly evacuate, and, without Acceleration of Motion, or adding a Stimulus, powerfully reſolve, are proper to diſcharge the Body of Humours; which being effected, thoſe Humours which remain are attenuated, and, their Paſſage into all Parts being facilitated, the Veſſels are leſs diſtended. By theſe means an eaſy Ingreſs is open'd for the reſorb'd Humours into the exhauſted Veins; and the Body, being render'd drier by theſe Evacuations, greedily abſorbs the Liquids, where-ever contiguous to its internal or external Superficies: Hence ſtrong Purges are obſerved to excite a vehement Thirſt; and Liquids, drank in great Quantities, are very quickly abſorb'd by the gaping Orifices of the Veſſels, in the Cavities of the Stomach and Inteſtines. The great Efficacy of this Method, for Reſorption of extravaſated Blood, is apparent to Sight in great Contuſions. I knew a Tumor, ſays *Van Swieten*, in the Nates, as big as a Child's Head, which was occaſion'd by a Fall out of a Coach, totally diſſipated by this Method, tho' all the Part was black, from a Stagnation of the extravaſated Blood under the entire Skin. Now ſcarce any one will venture to ſay, that this Blood perſpir'd thro' the unbroken Skin; for, if the coagulated Blood might be attenuated to ſuch a Degree as to find a Paſſage, by Exhalation, thro'

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the Veſſels of the Skin, it cannot be doubted, but it may very well enter the Mouths of the abſorbing Veins: Great Benefit, therefore, may be expected from this Method.

The Forms of Purges, recommended on theſe Occaſions, in *Boerhaave*'s *Mat. Medica*, are the following:

Take of the fineſt *Syrian* Scammony, fourteen Grains; and of *Hungary* Water, two Drams: When they are ſufficiently triturated in a Glaſs Mortar, add ſix Drams of ſolutive Syrup of Roſes with Senæ, for a Draught. Or,

Take of the Powder of Jalap-root, one Dram; and of the fineſt Sugar, two Drams: When they are ſufficiently triturated in a Glaſs Mortar, add gradually, and at different times, three Ounces of Rain-water. Make into an Emulſion; to which add half an Ounce of the Syrup of Rhubarb, for a Draught.

Bleed, therefore, and purge, immediately upon theſe Occaſions, to the greateſt Degree the Patient can bear; and let theſe Evacuations be repeated, and that more than once, if after the preceding the Symptoms are alleviated.

Such large Evacuations, provided the Strength hold out, can never be prejudicial to the Patient, eſpecially plentiful Bleeding, which, on the contrary, tho' repeated, has been found of excellent Service; for it has been frequently obſerved, that, where there have been all the Indications of a Compreſſion of the Brain by an Effuſion of Blood under the Cranium, the Symptoms have immediately remitted under a very bold Phlebotomy, tho' the Trepan was ready to be apply'd. And tho' the Diſeaſe ſhould not give way to theſe Remedies, but it ſhould be found neceſſary afterwards to have recourſe to the Trepan, it can be of no Diſadvantage to the Patient to have his Body, by this Method, rendered leſs ſubject to an Inflammation, ſince hereby ſome very bad Symptoms, which are ſometimes conſequent upon a Perforation of the Cranium, and eſpecially the Generation of Funguſes of the Brain, are, in a great meaſure, prevented. Theſe Remedies, therefore, ſeem proper firſt to be tried before Trepanning. If, then, thoſe bad Symptoms, which attend the Compreſſion of the Brain by an Effuſion of Humours, begin to be alleviated, we may conceive good Hopes, that, by their repeated Uſe, reſpect being always had to the Strength of the Patient, they may be wholly removed. I remember, ſays *Boerhaave*, with Pleaſure, the extraordinary good Effects of this Method, which I have often ſeen; and *Paré* has a remarkable Example of Bleeding boldly, ſucceſsfully repeated. A young Man, he ſays, twenty-eight Years of Age, by a Fall, had ſtruck the Left Os Bregmatis with great Violence againſt a Stone. There was a Contuſion, but no Fracture of the Cranium. On the ſeventh Day the Patient was ſeiz'd with a ſtrong Fever, Delirium, and a great Inflammation, with a vaſt Tumor of the whole Head, Face, and Neck, beſides an Impediment of Speech, Sight, and Deglutition. The next Day the Surgeon took away twelve Ounces of Blood; and, the Day after, *Paré* being ſent for, and finding that theſe very bad Symptoms did not remit, but that the Strength was firm, he had forty-two Ounces of Blood more taken away. The following Day the Diſorder rather increaſing, he took away twelve Ounces more, and after that fifteen Ounces at two ſeveral times; ſo that, within the Space of four Days, the Patient loſt eighty Ounces of Blood, and was afterwards perfectly cur'd of ſo dangerous a Diſorder. The great *Hippocrates* has indeed obſerved, *Aphor.* 3. *Sect.* 1. "That Evacuations, carry'd to Extremity, "are dangerous;" but, in his ſixth *Aphor.* of the ſame *Sect.* he ſays, "That Diſeaſes in their Extremity require extreme "Remedies." Since, therefore, this young Man was in danger of his Life without ſpeedy Relief, we ſee the Reaſon for ſuch large Evacuations, which, in ſlight Diſorders, no prudent Man would venture to uſe.

The Diſſipation of the ſtagnating Humours is brought about,

Firſt, By a Reſorption of the finer Parts, in the manner juſt mentioned;

Secondly, By attenuating the reſt, by diluting, aqueous, and reſolvent Potions, drank very warm.

If Blood, taken from the Vein of a healthy Perſon, and coagulated, be ſhaken in warm Water, the coagulated Maſs will decreaſe by degrees. Water pour'd upon it grows red, and at laſt ſo little of it will remain as is ſcarce credible; ſome of it will, however, ſtill remain, perhaps becauſe the Blood has been ſo long expos'd to the open Air; for we every Day ſee the extravaſated Blood, in Contuſions, diſſolv'd in ſuch a manner as to be entirely diſſipated. Wherefore, after Phlebotomy and Purging, let as great a Quantity of aqueous Decoctions be drank, as the Strength is ſufficient to move and circulate with the Blood. By this means all the Blood is diluted, and the exhaling Fluid is ſupplied with Plenty of Matter, whence the coagulated Maſs is inſenſibly diſſolved, and afterwards reſorb'd into the minute Veins. But becauſe aqueous Liquors, drank by themſelves, eſpecially after great Evacuations, enervate the Body to ſuch a Degree as to diſpoſe it to a Dropſy, by beginning to collect themſelves together in its Cavities, therefore mild Aromatics, which are gently reſolvent, and alſo ſtimulating to Motion, which can do no Harm after the preceding Evacuations, are mix'd with theſe Decoctions.

For our whole Intention is directed to the rendering of the Blood ſo very much diluted, that a ſufficient and perpetual Exhalation of a thin Liquid through the ſmall Veſſels may be continually apply'd to the extravaſated Blood, till this be render'd alſo ſo diluted and attenuated, as to be capable of Reſorption into the Veins.

Boerhaave's Preſcription, in his *Mat. Medic.* is as follows:

Take of white Sanders, half an Ounce; of yellow Sanders, one Ounce; of Saſſafras, half an Ounce; of the Leaves of Rue, half a Handful; of Agrimony, one Handful; of the Flowers of *Arabian* Stœchas, and Lavender, each two Drams; of the Roots of Fennel, Parſley, and Butchers-broom, each an Ounce: Boil theſe for a Quarter of an Hour in a cloſe Veſſel, with a ſufficient Quantity of Water for four Pints of the ſtrain'd Liquor, of which let the Patient take two Ounces every half Hour.

Thirdly, By applying to the Part affected, when ſhaved, Plaiſters, Cataplaſms, and Fomentations, made of diſcutient, nervous, and cephalic Ingredients.

Theſe Remedies, indeed, cannot act directly and immediately on the extravaſated Humours, which are ſettled under the Cranium, ſince the external Parts of the Head receive almoſt all their Humours from the external Carotids. They will, however, be of Efficacy, by warming and relaxing the external Parts of the Head, ſo as to leſſen and retard the impetuous Motion of the Humours towards the inward Parts; and alſo becauſe Part of theſe Remedies enters the Blood by the reſorbent Veins of the external Skin, and afterwards, in the common Courſe of Circulation, may be convey'd to the Part affected. Nor is it always worth while to diſpute about the Manner, in which Remedies thus applied act, provided we are convinc'd, by Experience, of their Efficacy. Thus, when an acute inflammatory Diſtemper ſeizes the internal Parts of the Head, we find, that Fomentations of Water, Vinegar, and Nitre, are very ſucceſsfully applied to the Head, being firſt ſhaved. Wherefore, in ſo dangerous a Diſorder as is our preſent Subject, all Methods are to be put in Practice, and nothing left untried, from whence any Benefit, tho' never ſo little, may be expected. But, in the Uſe of thoſe Remedies, regard is always to be had to what has been ſaid above, with reſpect to the Application of Topics in Injuries done to the Integuments only; and we muſt always take care to have the Cataplaſms and Fomentations kept in a due Heat, which is done by a frequent Application of hot Woollen Cloths. The Plaiſter and Fomentation directed above, in caſe of Contuſion of the Integuments, are here proper.

Fourthly, By the Application of the ſame diſcutient, nervous, and cephalic Ingredients to the Ears and Noſe.

The Dura Mater, it is true, moſt exactly covers the internal Superficies of the Cranium, ſo that the whole Maſs of the Brain ſeems to be ſecluded from all others within its proper Region: However, we are convinced by Obſervations, that theſe two Places are a kind of Vent-holes to the Brain, by which the Humours are often diſcharg'd in a ſurpriſing Manner. We took Notice above, that chronical Diſorders of the Head are often very quickly relieved by an Efflux of Water, Pus, or other Matter, thro' the Ears or Noſtrils, and confirm'd the ſame by the Teſtimony of *Hippocrates*: And it is well known, that in all Diſeaſes of the Head, which proceed from a Repletion of the Veſſels of the Brain, or an inflammatory Denſity of the Humours, an Efflux of Blood by the Noſtrils has proved beneficial. We have alſo related Examples above, by which it appeared, that in very terrible Hurts of the Head, which, by the unanimous Advice of the moſt experienc'd Phyſicians and Surgeons, required the Uſe of the Trepan, the Patients have been cured by an Efflux of Lymph thro' the Ears; ſo that the neareſt Way to the internal Parts of the Head ſeems to be thro' theſe Paſſages. Of this we are certain, that on the Top of the Noſtrils is placed the Os Ethmoides, like a thin Plate full of Perforations, which, indeed, in a living Perſon, are moſt exactly fill'd up with Vaginal Proceſſes, and nervous Fibrils, from the Dura Mater; but how thin is the Partition, which, in this Place, ſeparates the Cavity of the Cranium from the Noſtrils! So that Vapours attracted thro' the Noſtrils are almoſt immediately applied to the Brain.

If, after the Evacuations and Applications above directed, the Symptoms are not entirely removed, or, at leaſt, much diminiſh'd, but, on the contrary, perſevere or increaſe, the Cranium muſt immediately be perforated by the Trepan, for the Convenience of diſcharging the extravaſated Humours, depurating

depurating the affected Parts, and removing the Splinters of Bone, if any ſhould ſtick in the Brain, or its Membranes.

It ſeems a Piece of Raſhneſs and Cruelty to be immediately for perforating the Cranium, upon Indications that the Functions of the Brain are very much injured by a Wound of the Head: For, unleſs we are certain, that the Cranium is depreſs'd, or that ſome Fragments of it hurt the Brain, and that theſe Diſorders can no way be remov'd but by the Trepan, it is beſt to wait a few Hours at leaſt, and try whether the Symptoms may not be mitigated by ſtrong Evacuations: For many ſuch Caſes occur every Day; as where a Perſon, by a Fall from an Eminence, lies depriv'd of all Senſe and Motion, and, after a few Hours, revives by degrees, the Brain being diſturbed by ſo ſtrong a Concuſſion, tho' there was no Effuſion of Humours. And tho' it might be proper to apply the Trepan, yet the taking away a large Quantity of Blood can never be prejudicial, but on the contrary, be highly beneficial: Therefore the Method before propoſed ſeems fitteſt always to be tried in the firſt Place; and if, in the Space of twelve Hours after the Uſe of thoſe Remedies, the Patient receives not the leaſt Relief, but the Diſorder rather increaſes, the laſt and only Remedy left is, by making a Perforation in the Cranium, to open a Way for the Diſcharge of the extravaſated Humours. The Friends of the Patient are to be then ſeriouſly told, that nothing but Death can be expected, and that in a ſhort time; that the only Way, by which it can poſſibly be prevented, is by the hazardous and troubleſome Operation of the Trepan, from which there is good Reaſon to expect much Benefit, but that a certain Cure cannot be promiſed: For it is poſſible, that the extravaſated Humours may be lodg'd in ſuch Places, as, tho' the Cranium be opened, may render their Diſcharge impracticable; and a ſtrong Concuſſion may break the very tender Stamina of the medullary Subſtance of the Brain, on which the human Life and Functions depend. When the Operation is determin'd to be neceſſary, the ſooner it is perform'd, the better; for the Efflux of the Liquids out of the broken Veſſels will continue, and the Compreſſion of the Brain, by the extravaſated Liquid, which increaſes in Quantity every Moment, will be augmented; whence it often happens, that the very tender medullary Fibres, which are only pervious to the thinneſt Liquid in all the Body, having their Sides compreſs'd, and render'd contiguous, ceaſe to be open Canals; and tho' the compreſſing Liquids may be afterwards diſcharged, yet the Sides of theſe minute Veſſels, being once rendered contiguous by the equable Preſſure of the ſurrounding Liquid, will always continue in that State of Contact; whence they will grow together, to the irreparable Damage of all thoſe Functions which depend on the Motions of the moſt ſubtile Liquid thro' theſe minute Veſſels: Beſides, the extravaſated Humours, being left to ſettle for a conſiderable Time, may be corrupted, and, by their acquir'd Acrimony, corrode every thing near them. From the Whole it appears, that Delay in this Caſe is dangerous; and yet, by very credible Obſervations, we are inform'd, that Perforation of the Cranium has been very ſucceſsfully perform'd a long time after the Hurt was receiv'd: For Inſtance, a Man receiv'd a Wound in his Head, which, being attended with no bad Symptoms, was healed in fourteen Days. A long time afterwards the Patient was ſeized with a great Pain of the Head, a Vertigo, and Dimneſs of Sight, with a Palſey of the Right Arm; all evident Symptoms of ſome latent Diſorder of the Parts of the Head. Upon this Conſideration *Scultetus*, (*Arm. Chir. Obſ.* 13.) the nine-and-twentieth Week after the Wound was inflicted, laid bare the Cranium, and, obſerving a narrow Fiſſure, he made two Perforations in the Cranium, and cut out the Bone between them with a Saw. Thro' this wide Aperture the Collection of Humours under the Cranium was diſcharged, and, in a Month's time, the Patient was reſtor'd to his perfect Health. From this Hiſtory it plainly appears, that the Quantity of extravaſated Liquid under the Cranium was at firſt but inconſiderable; but the Cranium being divided with a ſmall Fiſſure, there aroſe, by degrees, a Collection of Pus or Sanies in the Place. But when, after a Rupture of the Veſſels, there immediately gathers a conſiderable Quantity of the effuſed Liquid under the Cranium, it is plain, that the Operation cannot long be deferred without Danger. Wherefore *Hippocrates*, *de Cap. Vuln.* ſpeaking of thoſe Caſes which require Perforation, ſays, "That in three Days we muſt "proceed to Section, and never exceed that Time, eſpecially "if we undertake the Cure, at firſt, in a hot Seaſon of the "Year:" And yet he is treating here only of ſuch Wounds of the Cranium as could not be eraſed with the Rugine; but the Danger is more imminent and preſſing from an Effuſion of Humours under the Cranium.

Trepanning the Cranium is uſually undertaken, as is ſaid above, for the ſake of raiſing a looſe and depreſs'd Bone with the Elevator, but, in this Caſe, a threefold Benefit may be expected from it: Firſt, The opening a free Paſſage for the Diſcharge of the extravaſated Liquids; ſecondly, That, if any thing ſhould require to be ſeparated by Suppuration from the living Parts, the Pus, after it is generated, may find a Vent; and, laſtly, That the Fragments of the Bone, which incommode the Brain by Puncture, Laceration, or otherwiſe, may conveniently be extracted.

Mr. *Sharp* ſeems not to agree entirely with *Boerhaave*, but is for trepanning at all Adventures: Altho' People with Concuſſions in a violent Degree, ſays he, ſometimes recover, it is ſo very ſeldom, that there can be no Pretence, when they happen, for neglecting the Trepan, but not being able to learn in what Part the Concuſſion is. The Opportunities I have had, ſays *Sharp*, of opening ſome People who have died under this Circumſtance, have ſufficiently convinc'd me, how little is to be truſted to any other Method than an Opening for the Diſcharge of the Abſceſs, which, by Confinement of the Matter, becomes very ſharp, ſpreading over a great Quantity of the Brain before it kills.

When we are aſſur'd of a Fracture or Depreſſion, tho' the Symptoms, in a great meaſure, go off, it is yet adviſeable to trepan as ſoon as poſſible, to prevent the ſpreading of the Abſceſs, which ſeldom fails to follow upon the Rupture of the Veſſels of the Brain and Membranes, and, for the moſt part, in a few Days, tho' there are a great many Inſtances of Fractures not bringing on a fatal Abſceſs for a great Length of Time after the Accident.

Sharp ſays, he once trepan'd a young Woman about a hundred Days after ſhe receiv'd the Blow. The lower Part of the Parietal, and upper Part of the Temporal Bones, were fractur'd and depreſs'd. She had bled at the Noſe and Ears when ſhe firſt receiv'd the Injury, and had at times been drowſy, and in ſome little Pain, till towards the ninetieth, when the Symptoms of a compreſs'd Brain came on ſtronger; and, a ſmall time after, ſhe put herſelf under his Care; which, with the many Inſtances of the ſame kind to be met with in Authors, ſhew how little ſafe it is to truſt to any Extravaſation, or Depreſſion on the Brain, doing well, without the Aſſiſtance of the Trepan. *Sharp.*

The Trepan is to be applied upon the Part of the Cranium which is injur'd, as being the moſt proper Place, unleſs any Circumſtances render its Application there improper.

After it is agreed upon to apply the Trepan, in order to procure a free Diſcharge to the extravaſated Humours, it ought next to be diligently inquir'd, on what particular Part of the Cranium this Operation is to be perform'd. 'Tis ſufficiently obvious, that, when by the Signs already enumerated the wounded Part is diſcover'd, the Trepan ought to be apply'd there, ſince 'tis moſt probable, that the extravaſated Blood will reſide in that Part; but, from what follows, it will appear, that there are various Parts of the Cranium, where it is either abſolutely impoſſible, or highly dangerous, to apply the Trepan. The Part, then, to which this Inſtrument is to be apply'd, ought not to be determin'd without mature Deliberation and Reflection, leſt afterwards the Repetition of this Operation, apparently ſo cruel in the Eyes of the By-ſtanders, tho' the Patients themſelves are, on theſe Occaſions, generally ſo ſtupid and dull as to be inſenſible of Pain, ſhould again become neceſſary.

The Circumſtances which render Trepanning immediately upon the injur'd Part of the Cranium improper are,

Firſt, A Suture lying immediately under it.

Whilſt, in a human Subject, Anatomiſts endeavour to elevate the Cranium after it is every-where divided with a Saw, they evidently perceive, that the Dura Mater, almoſt in every Part, adheres to the Cranium; but that, where the Sutures occur, this Adheſion is ſo ſtrong, that, by the Interpoſition of an Iron Lever, it can with Difficulty be ſeparated. 'Tis, therefore, obvious, that if, in theſe Parts, the Trepan is apply'd, the orbicular Portion of Bone cut cannot be extracted without a conſiderable Dilaceration of the Dura Mater; whence an immenſe Pain, Convulſions, and other terrible Symptoms, may be produc'd. For this Reaſon, by the common Conſent of all Authors, theſe Parts are avoided, and the Trepan is rather to be applied on either Side of the Suture, than directly on it. *Hildanus*, in *Obſerv. Chir. Cent.* 2. *Obſerv.* 8. gives us an Account of a Man who receiv'd a ſevere Wound with an Ax, in that Part where the Sagittal is united with the Coronal Suture. After very terrible Symptoms, and the Extraction of ſeveral Splinters of Bone, the Patient, indeed, recover'd; but *Hildanus* could not, with all his Art, prevent a fiſtulous Ulcer remaining in the Part. For this Reaſon he ranks the Difficulty of Cure among the Arguments uſed againſt applying the Trepan immediately upon the Sutures: But the celebrated Phyſician *Johannes Fredericus Werdenburgius*, in an Epiſtle to *Hildanus* on this Subject, to be met with in the laſt quoted Part of that Author, affirms that he ſaw this Operation perform'd immediately on the Sutures, when he reſided in *Italy*, for the ſake of Improvement in his Studies. But 'tis obvious, from what has been now ſaid, that it is always dangerous to apply the Trepan on the Sutures themſelves.

Secondly,

Secondly, Some remarkable Muſcles lying upon the Part.

'Tis ſufficiently known, that about the Occiput very ſtrong Muſcles are inſerted in the Cranium, and that its lateral Parts are, on both Sides, poſſeſſed by the Temporal Muſcles; for which Reaſon theſe Parts ought, if poſſible, to be avoided. *Hippocrates*, in the nineteenth Section of his Treatiſe on Wounds of the Head, informs us, "That the Head may be ſafely cut in "any Part, except in the Temples, and that Space which lies "above them, near the Vein which paſſes thro' the Temples; "and that theſe Parts ought not to be cut, becauſe, by that "means, the Patient is ſeized with Convulſions." And, in a "Paſſage of his *Coacæ Prænotiones*, already quoted, he tells us, "That they who are cut in either of the Temples, be-"come convuls'd on the Side oppoſite to that on which the "Inciſion was made." From which we may conclude, that it is always dangerous to wound theſe Muſcles, tho' Death does not always enſue; for many Caſes prove, that theſe Muſcles have been cut, and the Trepan apply'd to that Part of the Cranium which lies under them, and that, notwithſtanding this, the Patients have recover'd. We ſhall give a few Inſtances of this kind from among the great Number that might be brought *Scultetus*, in his *Armamentar. Chirurg. Obſerv.* 3. gives us an Account of a Man who receiv'd a Wound in his Left Temple with a Hanger, which made a Fiſſure in his Cranium large enough to admit the fore Finger; yet this Wound, apparently ſo dangerous, was ſoon cur'd, and the Patient ſav'd. *Riverius*, among the Obſervations communicated to him by *Samuel Formius*, a Surgeon of *Montpelier*, who had practis'd for fifty Years, gives us the following Caſe, in the nineteenth Obſervation: A certain Woman receiv'd a Blow with a Stone on her Left Temple. When the Trepan was thought neceſſary, that ſkilful Surgeon, being call'd to the Conſultation, did not heſitate to make a crucial Inciſion in the Temporal Muſcle, and apply the Trepan to the denudated Cranium; and he affirms, that no violent Symptom enſu'd. He elſewhere gives us another Caſe of a like Nature, which was communicated to him by another Surgeon. A Boy of twelve Years of Age, by a Fall from a high Tree, had his Temporal Bone ſo fractur'd, that the Surgeon was forc'd to remove a large Portion of the Temporal Muſcle, in order to diſcover the latent Diſorder, and apply the Trepan. The Cure, however, ſucceded happily in every reſpect, except that the lower Jaw remain'd a little diſtorted towards the oppoſite Side. Where Neceſſity, therefore, demands it, it is more adviſeable to apply the Trepan to theſe Parts, than cruelly to abandon the Patient to inevitable Death.

Thirdly, The Cavities of the Os Frontis lying under it.

It is ſufficiently known, from anatomical Obſervations, that the Tables of the *Os Frontis*, divided from each other, conſtitute what we call the Frontal Sinuſes, which are, for the moſt part, pretty large; but of different Sizes in different Men, lengthen'd out above the Orbits of the Eyes, almoſt to the Middle of the Eye-brows, and ſometimes divided into leſſer Cavities by bony Lamellæ. Theſe Sinuſes open in two pretty large Apertures, at each Side of the Septum Narium, and thus increaſe the internal Cavity of the Noſtrils. Theſe Sinuſes are every-where cover'd with the ſame Membrane which lines the internal Surface of the Noſtrils. If, therefore, the Trepan was apply'd here, upon perforating the external Table, this Membrane, which covers its internal Surface, would forthwith occur; and there would be a Neceſſity for removing it, as well as that Part of the ſame Membrane, which, in like manner, covers the internal Table, before the internal Table could be perforated. 'Tis therefore obvious, that this muſt be highly difficult, if not altogether impoſſible; ſince the Membrane, lining the Cavity of the Noſtrils, is ſo exquiſitely ſenſible, that, by the ſlighteſt Agitation of a Feather in the Noſtrils, Sneezing is excited, and the whole Body convulſed. We muſt, at the ſame time, obſerve, that thoſe Wounds, which penetrate to the Frontal Sinuſes, can ſcarcely ever be brought to a Cicatrix. *Celſus*, in the fourth Chapter of his eighth Book, made this Obſervation; and expreſly tells us, "That, after the Application of the "Trepan, a Cicatrix may be induced on all Parts of the "Head, except that Part of the Forehead which lies a little "above the intermediate Space between the Eye-brows; for "here it is ſcarce poſſible, but, during the Whole of the Pa-"tient's Life, an Exulceration muſt remain, which muſt be "cover'd with a Cloth, on which ſome proper Medicine is to "be laid." The Obſervations of later Authors have ſince given a Sanction to this Remark. Theſe Parts, then, the Situation of which is to be learn'd from Anatomy, are carefully to be avoided in the Application of the Trepan.

Fourthly, The Neighbourhood of ſome conſiderable Artery.

Upon accurately viewing a prepar'd human Cranium, in its internal Surface, various Impreſſions appear, and ſometimes conſiderably deep Traces, which correſpond to the Ramifications of the larger Arteries diſtributed thro' the Dura Mater. But if ſuch a large Branch of an Artery ſhould occur, and, during the Operation, happen to be lacerated by the Teeth of the Crown, a violent Hæmorrhage may happen, which not only embroils and diſturbs the Operation, but is often ſtopt with Difficulty. But it is a difficult Taſk exactly to determine theſe Parts; becauſe, in different Men, the Situation of theſe large Ramifications varies: There are, however, ſome Parts in which theſe larger Sulci, or Furrows, are generally found in moſt Craniums; theſe Parts are, therefore, to be avoided in applying the Trepan. Thus, for Inſtance, in both the Oſſa Bregmatis, near the Coronal Suture in the inferior lateral Part, ſuch a large Furrow appears, and is gradually diminiſh'd as it aſcends; but theſe Parts are principally known by a mutual Compariſon of different Craniums with each other.

Fifthly, The low Situation of the Part injur'd.

For if the diſcharg'd Humours are lodg'd near the Baſis of the Cranium, there is ſcarce any Hope, that they can be evacuated by the Trepan, ſince it muſt of courſe be apply'd much higher. 'Tis, indeed, true, that, ſince the Cranium is always exactly full, the extravaſated Humours may, by the Preſſure of the Brain which fills the Cavity of the Cranium, be forced up to the Perforation made, and thus evacuated. But, at the ſame time, 'tis obvious, that this Effect muſt be with conſiderable Difficulty brought about. *Tulpius*, in the third Chapter of the firſt Book of his *Obſerv. Medic.* gives us an Account of a Man of ſeventy Years of Age, who, being drunk, and falling from an Eminence, receiv'd ſo large a Wound in his Cranium, that, thro' the Aperture, every thing that ſtuck in the external Membrane of the Brain might be extracted. He was, however, forthwith ſeiz'd with a Vertigo, a Vomiting, and a Stupor. Next Day, indeed, he appear'd free from a Fever, and all other Symptoms; but, on the fourth Day, he unexpectedly died apoplectic, after having expectorated a purulent Matter. Upon laying open his Cranium, a large Quantity of Humour was found in the Ventricles of his Brain; and, near the Sella Turcica, a large Splinter of the Os Cuneiforme appear'd ſeparated from the reſt of the Bone; and there was, in this Place, a large Collection of coagulated Blood. Since, then, thro' ſo large a Wound, the diſcharg'd Blood, collected near the Baſis of the Brain, could not be evacuated, 'tis obvious, that, in ſuch a Caſe, very little Good was to be expected from the Application of the Trepan. Hence *Celſus*, in the twenty-ſixth Chapter of his fifth Book, juſtly affirms, that "the Patient, the "Baſis of whoſe Brain is wounded, cannot be preſerv'd."

Sixthly, The Inſtability of the Bone, whether on account of a Fracture, Contuſion, or Caries.

Upon applying the Trepan to the Cranium, the orbicular Portion of Bone cannot be extracted, without preſſing the Trepan to the Bone: If, therefore, that Part of the Bone, to which the Trepan is apply'd, is either entirely diſengaged from the reſt, or only retains a ſlight Coheſion, it will, in the Operation, be depreſs'd, and the ſubjacent Brain by that means compreſs'd. The ſame Misfortune is to be dreaded, when a Lues Venerea, for Inſtance, has corroded the Bone, or when the Cranium has, by any other Cauſe, contracted a Caries; for, in theſe Caſes, the Trepan, applied with a very gentle Force, would forthwith penetrate thro' the whole Thickneſs of the Bone. We have already given Inſtances of the Bone of the Cranium becoming thus corrupted, after Wounds of the Head.

Seventhly, A conſiderable external Convexity, and, in conſequence of that, an internal Concavity of the Part.

Upon accurately examining the internal Surface of the Cranium, it evidently appears, that it is not ſmooth and even, but that in ſome Parts it protuberates and riſes; whereas in others it is more excavated, that it may be the better accommodated to the Veſſels and Sinuſes of the contain'd Brain: Hence the Bone of the Cranium is of a different Thickneſs in different Parts. It would, therefore, be moſt proper, whilſt we are deliberating on the Part to which the Trepan is to be apply'd, to take a View of ſeveral Craniums, and obſerve in what Parts theſe Inequalities are principally found, that we may, if poſſible, avoid them.

Tho', from the Rules of Art, and an anatomical Knowledge of the Parts, it is ſufficiently obvious, that, in the Application of the Trepan, the ſeven Circumſtances above enumerated render the Application of it, upon the Places above-mention'd, improper, if it can be avoided; yet the beſt Surgeons have, in Caſes of Neceſſity, adviſed to perform the Operation, tho' it ſhould be attended with ſome of theſe Diſadvantages; ſince, when the Death of the Patient is otherwiſe certain, it is often better to try a doubtful Remedy than none at all; for it is ſcarce credible, that all theſe Cautions could be obſerved, with reſpect to a Girl of twelve Years of Age, who, falling from an Eminence, had the Trepan apply'd to twelve different Parts of her

Cranium, in the Space of a few Days. The Girl, however, was perfectly cured, tho' the whole Os Bregmatis, and Part of the Temporal Bone, were entirely fractur'd by the Violence of the Fall. This memorable and surprising Case is related by *Dionis*, in his *Operat. de Chirurgie*, whose Son perform'd the Operation, the fourth time, on the Patient.

If any of the above related Circumstances render the Application of the Trepan, to the injur'd Part, improper, it must be apply'd as near as is possible to that Part.

When, for the Reasons above enumerated, the Trepan cannot be apply'd on the wounded Part, the Place, of all others the most proper for its Application, is that which is free from these Obstacles, and lies most contiguous to the Part immediately afflicted. Some Cautions, however, of considerable Importance, are to be observed, with respect to this Particular: The Dura Mater, as has been before observ'd, adheres everywhere to the Cranium, but most strongly where the Sutures occur: Hence the discharg'd Blood, lodging between the Cranium and Dura Mater, may separate the latter from the former; but this cannot happen in those Parts where the Sutures occur: Hence the Blood, extravasated between the Cranium and Dura Mater, will remain confin'd within certain Limits; since it cannot easily go beyond the Parts where the Sutures occur. Thus, for Instance, if the wounded Part was in the anterior Portion of the Os Bregmatis, which, on account of its Vicinity to the Coronal Suture, by which it is join'd to the Os Frontis, and the large Artery which is generally situated here, cannot have the Trepan safely apply'd to it; then, indeed, the Place most contiguous to it is to be chosen, but, at the same time, this Place must be contain'd within the Os Bregmatis; for, if the Trepan was apply'd to the Os Frontis, on the other Side of the Coronal Suture, the Blood lying below the Os Bregmatis, on the Dura Mater, could not be evacuated; because the Dura Mater, adhering strongly to the Coronal Suture, will prevent its being discharg'd that Way. With this Limitation we are, therefore, to understand the general Rule, which orders us to chuse the most contiguous Part, when the Trepan cannot be apply'd to the Part affected itself; for the Blood, extravasated between the Cranium and Dura Mater may thus be lodg'd, as it were, in distinct Cells, which have no manner of Communication with each other. The largest Space of this Kind is under the Ossa Bregmatis, and is, by the Sagittal Sutures, divided into two such equal and distinct Cells. This also holds with respect to the Forehead, which, in like manner, has a Space thus separated; for, since the Os Frontis is generally in young Persons, and often in Adults, divided as far as the Root of the Nose, by a middle Suture, it is obvious, that this Space must, in like manner, be divided into two.

But, when the extravasated Blood is lodg'd between the Dura and Pia Mater, we must remember, that the whole internal Cavity of the Cranium is divided into two Parts; for what is commonly call'd the Falciform Process of the Dura Mater, reaches from the Crest of the Os Ethmoides, all along the Sagittal Suture, as far as the transverse Process of the Dura Mater, which covers the Cerebellum, and defends it from the Pressure of the incumbent Brain, and, being sunk deep between the two Hemispheres of the Brain, divides the internal Cavity of the Cranium into two, and hinders the Blood, extravasated on the Right Side, from reaching to the Left. For this Reason we are, in Cases of this Nature, to have a due Regard to the now mention'd Circumstance.

If the threatening Symptoms of a compress'd Brain, above related, are very urgent, tho' the precise Place, where the Compression resides, cannot be exactly determin'd, yet the Trepan must be apply'd to one or more Parts of the Cranium, if necessary, in order to remove the Pressure, and depurate the Part affected.

It sometimes happens, that all the Symptoms inform us, that the Blood, extravasated under the Cranium, compresses the Brain; and yet, at the same time, there are not certain Indications, by which it can be determin'd in what Part of the Cranium it is lodg'd. In this Case the Patient must either be abandon'd to certain Death, or the Trepan must be apply'd to the Cranium, whilst the Event is entirely uncertain; for the extravasated Blood may be lodg'd about the Basis of the Cranium, or in the Ventricles of the Brain; in a Word, it may be accumulated in a quite different Part from that to which the Trepan shall be apply'd. In this Case, after having duly apprais'd the Patient's Friends of the ambiguous Event of the Operation, it seems more advisable to try a doubtful Remedy than none at all; especially since, from numberless Instances, 'tis plain, that the Operation of the Trepan, when skilfully perform'd, is not so dangerous as it is commonly thought; and since the Patients, who stand in need of it, are generally entirely depriv'd of Sensation. Thus *Dionis*, in his *Operat. de Chirurgie*, informs us, that he himself, after having apply'd the Trepan in a young Gentleman of Distinction, evacuated the Blood discharg'd under the Cranium; and that the Patient never knew of his having undergone such an Operation, till he was told of it, after the Cure was completed: Hence, tho' a Repetition of this Operation in another Part of the Cranium, when it has prov'd unsuccessful in a former Attempt, may appear cruel to the By-standers, yet it is not generally very painful to the Patients themselves. But when we know nothing at all of the Part affected, then the Trepan is generally apply'd to the Os Bregmatis; because it constitutes the largest Part of the Cranium, and because considerably large Vessels lie under it. If by this means no Disorder is discover'd, the Operation is to be attempted afresh in the Os Bregmatis of the opposite Side. We do not find, that *Hippocrates* repeated the Operation of the Trepan in one and the same Patient: But, so far as we can learn from his Book on *Wounds of the Head*, he did not apply the Trepan in order to procure a Discharge to the Humours extravasated under the Cranium, but only with a View to remove the affected Part of the Cranium itself. In the fourth Section, indeed, of the above-mention'd Book, he observes, that the disorder'd Bone of the Cranium may collect Pus, which may fall down on the Brain; but he makes no Mention of an Extravasation of Humours, in consequence of a Rupture of the Vessels, under the sound Cranium: Hence he did not, in all Probability, apply the Trepan, except when it was evident, that the Cranium was disorder'd, and when the Part affected was known. Accordingly, when the Bone was broken in another Part of the Head than that in which the Wound was inflicted, he, in the tenth Section of the same Work, asserts, that the Disorder was incurable by any Remedies. *Celsus*, however, seems to have been acquainted with such an Extravasation of Humours; for, in the fourth Chapter of his eighth Book, he has these Words: "Sometimes, tho' "rarely, it happens, that the Bone remains sound and entire, "whilst, in consequence of a Blow, some Vein, ruptur'd in "the Membrane of the Brain, discharges some Blood inter"nally, which, stagnating there, excites violent Pains, and, "in some, produces Blindness. But, generally, there is also a "Pain in the opposite Part, where, an Incision being made, "the Bone appears pale, and is therefore also to have the Tre"pan apply'd to it." In the same Chapter he also orders the Trepan to be apply'd in various Parts, if the Fissure is long.

In later chirurgical Authors various Instances occur, by which 'tis prov'd, that the Trepan may, with Success, be apply'd to several Parts of the Cranium. Thus *Dionis*, in his *Operat. de Chirurg.* gives us an Account of a Man, who, by a Fall from a Horse, receiv'd a Wound in the Os Bregmatis. Upon applying the Trepan, a large Quantity of Blood was evacuated, but without any Alleviation of the Symptoms. Three Days after, a Tumor appear'd on his Occiput: When this Tumor was laid open, the Trepan was a second time apply'd to the Os Occipitis: A large Quantity of Blood was discharg'd from the Perforation; and, whilst this Blood was flowing out, the Patient began to return to himself, and was at last perfectly cur'd. This Case excellently confirms what we advanc'd in the preceding Paragraph, which was, that the Blood, extravasated between the Dura Mater and the Cranium, was lodg'd in separate Cells, which have no Communication with each other. The same Author, in the above quoted Work, gives us an Instance of a Girl, who had the Trepan successfully apply'd to both Bones of the Bregma. *Scultetus*, in *Armamentar. Chirurg. Observ.* 7. informs us, that he was forced to apply the Trepan seven times in one Day, about the Circumference of a Depression of the Cranium, receiv'd by a certain Captain; who, in the Space of two Months, was, nevertheless, so effectually cur'd, that he was able to perform the several Functions of his Office with Approbation and Applause. And, in the memorable Case already related, a Girl of twelve Years of Age had the Trepan apply'd to twelve different Parts of her Cranium, and yet was at last happily cur'd. *Solingen*, the most celebrated Surgeon of the Age in which he lived, in his *Manuale Operatien der Chirurgie*, gives us a still more memorable Case. *Philip* of *Nassau*, descended from the illustrious House of *Orange*, by a Fall from a Horse, had his Head so violently dash'd against the Stump of a Tree, that his Cranium was fractur'd in various Parts: For this Reason the Trepan was twenty-seven times apply'd to different Parts of his Cranium, by a Surgeon of *Nimmegen*, and yet the Patient recover'd. This Account *Solingen* saw confirm'd under the Hand of the illustrious Patient, after his Recovery. And the same Author adds, that *Philip* was, after this Accident, so robust, that, at a Drinking-match, he kill'd three of his Companions.

Hence 'tis obvious, that the Operation of the Trepan, tho' frequently repeated, is sufficiently safe, provided it is perform'd with Judgment; the Method of doing which we now come to consider.

When the Place for the Operation is fixed upon, and the Hair shav'd off, the Integuments must be cut thro', and separated from the Cranium, the Lips of the Wound must be lifted up, the Bone dry'd, and cover'd with Lint, the Blood stopt, the Pain mitigated, Inflammation prevented; and then, if the Symptoms are not very pressing, the Part must be properly

properly bound up, and the Operation be defer'd till the next Day.

After the Place for the Application of the Trepan is fix'd upon, the Cranium must be laid entirely bare of its Integuments, leſt the Teeth of the Trepan ſhould lacerate the ſoft Parts left. We muſt be particularly careful, that none of the Pericranium be left, ſince a Laceration of it with the Rugine or Trepan excites violent Fevers and Inflammations, as has already been obſerved from *Celſus*. Hence, when the Hairs are ſhav'd off, a crucial Inciſion is to be made in the Integuments to the very Bone, as we have already directed on another Occaſion. The four Angles of the Inciſion thus made are to be rais'd, and the Pericranium ſeparated from the Cranium with the Fingers, or a Rugine. With ſoft Pledgets, a little warm'd, the Blood is to be wiped from the Surface of the denudated Bone. Then a Pledget of the like kind, with a little finely powdered Maſtich, ſprinkled upon it, is to be applied to the denudated Cranium. Lint is alſo to be put under the elevated Integuments, that they may recede the farther from the denudated Bone. The Hæmorrhage is, in this Caſe, generally ſlight, and ſoon ſtops; but if any conſiderably large arterial Ramification ſhould happen to be cut, the Hæmorrhage may be ſtopt by the Application of warm Alcohol, or the Effuſion of Blood may be ſtay'd by the Application of a proper compreſſive Bandage for ſome Hours; or, where the Symptoms are very urgent, the cut Artery may commodiouſly enough be ty'd, by paſſing a Thread thro' that Part of the Integuments where it lies; for 'tis ſufficiently obvious, that the Trepan cannot be apply'd ſo long as the Hæmorrhage continues, ſince the Effuſion of Blood would immediately hinder the Operator from examining how far the Perforation of the Cranium was carried on. The Pain attending the Operation may be alleviated, by gently anointing the Parts with Unguentum Populeum, which is highly ſoft, and at the ſame time of an anodyne Nature; but generally Patients, in this State, are dull, and inſenſible of Pain. If an Inflammation is dreaded, and eſpecially if the Trepan is not to be immediately apply'd, but the Operation defer'd till the following Day, 'tis proper to foment the Parts with Water and Vinegar. Thus *Hippocrates*, in a Paſſage before quoted, when the Cranium was to be laid bare, after making the Inciſion in the Integuments, order'd the Wound to be fill'd with Lint, in order to enlarge it with as little Trouble as poſſible; but, at the ſame time, during the Uſe of this Lint, he adviſ'd the Application of a Cataplaſm of fine Flour, boil'd in Vinegar to a proper Conſiſtence, in order to prevent too great an Inflammation.

We now come to inquire whether, when the Cranium is laid bare, the Operation ought to be deferred for a few Hours, or till next Day; or whether it ought to be performed immediately. It ſeems proper, then, always to perform this Operation as ſoon as poſſible, ſince it is rarely us'd except in urgent Caſes. Three Cauſes are generally aſſigned by ſome Surgeons, why they would have the Operation deferred: The firſt is, becauſe the Shaving off the Hairs, the Inciſion of the Integuments, and their Separation from the Cranium, require a conſiderable Time. Hence, they think, the Patient's Friends take it ill, that he ſhould be ſubjected to longer Torments. The ſecond is, the Dread of an Hæmorrhage after an Inciſion of the Integuments: And, laſtly, they would have the Operation deferred, becauſe the cut Integuments, being ſpontaneouſly retracted, will render the Wound larger, and, by that means, afford an eaſier Acceſs to the Trepan. But if we conſider, that ſuch Patients are generally depriv'd of all Senſation, or, at leaſt, are pretty inſenſible of Pain; that the Hæmorrhage may, by proper Remedies, be ſufficiently ſeen, or, at leaſt, in a few Hours, ſtopt; and that the Lips of the Wound, provided it has been made large enough, may be ſo drawn from each other, as to afford an Acceſs to the Trepan; it will appear of all other Methods the moſt proper, to proceed to the Operation immediately after the Denudation of the Cranium.

Nor does the Authority of *Hippocrates* run counter to this Doctrine: He, indeed, after the Inciſion of the Integuments, with a View to inveſtigate the Wound of the Bone, ordered a farther Examination to be defer'd till next Day; but, as we obſerv'd juſt before, *Hippocrates* ſeems not to have performed the Operation of the Trepan, in order to procure a Diſcharge to the extravaſated Humours, but only with a View to remove the diſordered Part of the Cranium; in which Caſe the Operation may certainly be delay'd longer without ſo much Danger; but when the ruptur'd Veſſels continue to pour out their Contents, unleſs a free Diſcharge is given to them, it is to be dreaded leſt the Brain ſhould be ſo compreſs'd, that the injur'd Functions cannot again be reſtor'd, tho', by an Application of the Trepan, the extravaſated Humours ſhould be evacuated. *Hippocrates*, however, in his Book on Wounds of the Head, after enumerating the Signs, which indicate that a Patient wounded in the Head will die, uſes theſe Words: "If you are "ſure, that the Patient labours under a Fever, or any other "urgent Symptom, the Operation is by no means to be de"lay'd, but the Bone is either to be cut with a Saw, or raſp'd "with a Rugine to the very Membrane."

The OPERATION *of the* TREPAN; *From* HEISTER.

The Antients us'd Trepanning not only for external Percuſſions of the Cranium, but alſo for ſome internal and obſtinate Diſeaſes of the Head, which were incurable by inward Medicines, or the Uſe of Iſſues upon the Coronal Sutures, by which means they thought to give a more immediate Vent to the peccant Humours; but the modern Surgeons ſeldom or never perform this Operation for internal Diſorders of the Head, but ſeldom neglect it in external Percuſſions, from a Fall, ſome miſſile Weapon, Blow, or Bullet; or in ſome dangerous Contuſion, or Colliſion, where, in any of theſe Caſes, there is a manifeſt Fracture of the Cranium, or a Suſpicion of a Fracture, Fiſſure, or Collection of extravaſated Humours, which can no other Way be diſcharg'd, and threaten the Death of the Patient.

When you are determin'd to uſe the Trepan, you are to ſet about it with all Expedition; but be very cautious and circumſpect, and not too haſty, in the Management of that Inſtrument: For it is extremely difficult, if not impoſſible, to cut out the leaſt Portion of the Cranium, and to ſeparate it from the Dura Mater, which ſo cloſely adheres to it, without injuring that Membrane, tho' you uſe the greateſt Circumſpection. Wherefore I think they are highly to blame, to ſay no worſe, who, on almoſt every Occaſion, where the Head receives any violent Percuſſion, are, without any farther Conſideration, for having recourſe immediately to the Trepan. For I am wholly of the Opinion of *Celſus*, and moſt Moderns, who adviſe firſt to try all manner of Medicines, both internal and external, as Phlebotomy, Purging, Clyſters, internal Reſolvents, and digeſtive Aromatic Topics, before you proceed, by a too precipitate Perforation of the Cranium, to hazard, without Neceſſity, the Life of the Patient.

In the mean time we are to be no leſs ſolicitous, on the other hand, leſt our Delay ſhould prove the Ruin of the Patient; for as ſoon as it appears, that the Injury which the Head has receiv'd is of ſo conſiderable a Nature, that no Medicines, which Phyſicians, with their utmoſt Care and Skill, can preſcribe, are of the leaſt Efficacy, but that the Diſorder is rather increaſed, we muſt with all Speed betake ourſelves to the Trepan, in order to elevate or extract the depreſs'd Parts of the Cranium, and to open a Way for the ſpeedy Diſcharge of the extravaſated Humours; for here, if in any Caſe, Delays are dangerous.

When the Wound of the Head is bound up, the Apparatus of Inſtruments, and other Things neceſſary for the Operation, is to be provided, among which the firſt and principal is the Trepan or Terebra, with its Crown (*Tab.* 36. *Fig.* 3.). Some of the Antients us'd a Trepan made in the Shape of a common Carpenter's Gimlet, according to the Figures of *Fabricius ab Aquapendente*, *Andreas a Cruce*, and *Scultetus*, which Inſtrument they manag'd with one Hand, whence it is uſually denominated the *Hand Trepan*. But becauſe it labours under ſeveral Defects, which render the Application of it leſs commodious, we generally uſe at preſent the Trepan, or one much like it, repreſented (*Tab.* 36. *Fig.* 3.) with a Handle turning round, much like the Inſtrument us'd by Coopers or Cabinet-makers, which is much more commodious than that of the Antients, eſpecially if the Crown of it be not cylindrical, or of uniform Dimenſions, as formerly, but decreaſing downwards in the Shape of an inverted Cone, as repreſented (*Tab.* 36. *Fig.* 3. A.); by which it is the more eaſily prevented, after penetrating the Cranium, from deſcending into the Brain. Some call this kind of Inſtrument the *Trepan of Hildanus*; but *Celſus*, to ſay nothing of others more antient than *Hildanus*, was long ago acquainted with the Uſe of it, and has deſcrib'd it. The Crown of this Inſtrument, mark'd A. is join'd to the lower Part of the Handle at B. by a Screw, that it may be taken off at Pleaſure, and another Crown, as the Surgeon is ſuppoſed to be provided with Crowns of different Sizes, fitted on in its Place. Some of our modern Surgeons have contriv'd the Juncture of the Crown and Handle after a different manner, which they fancy to be more commodious; but what has been deſcrib'd is found, by common Experience, convenient enough for all Purpoſes. When the Crown is furniſh'd with a ſharp or pyramidal Spike, which ſticks out in the Middle, the Inſtrument is call'd a *Male Trepan* (*Fig.* 3. E.); but if this Spike (*Fig.* 4.) be taken out by the Key (*Fig.* 5.) fitted for this Purpoſe, it is term'd a *Female Trepan*. *Heiſter*.

Mr. *Sharp* recommends the Hand Trepan, or Trephine, which *Heiſter* condemns as incommodious, and prefers the cylindrical to the conical Crown. As I am not capable of determining which is in the right, I muſt do Mr. *Sharp* the Juſtice to let him anſwer for himſelf.

The Crown or Saw of the Trepan, as repreſented by *Sharp*, is cylindrical, differing from thoſe in Uſe, which are all conical, and ſome in a very great degree. Surgeons have hitherto conceiv'd

ceiv'd great Advantages to arise from this Form: First, as a Circumstance of the utmost Importance, they have imagin'd there would be Danger of injuring the Brain, by sawing too suddenly thro' the Cranium, if the Enlargement of the Saw did not increase the Obstruction in proportion as they advanc'd towards it, and make the Working of the Instrument exceeding slow. It has also been believ'd, that, unless the Saw was smaller near the Teeth than towards its Basis, it would be impossible to incline it on any Part where it had not made so deep an Impression as in another, in consequence of which one Side of the Circle would be saw'd thro', and the Membranes or Brain injur'd; while, on the other, perhaps the Saw would not have penetrated thro' the first Table of the Cranium. The last remarkable Argument in favour of the conic Saw is, that it more readily admits, and afterwards retains, the saw'd Piece of Bone in its Cavity. But I think all the Advantages attributed to this Figure are imaginary, and the great Labour of working so slowly and difficultly is not only very inconvenient to an Operator, but by no means serviceable to the Operation; for, notwithstanding the Saw be cylindrical, and works without any other Impediment than what lies before the Teeth, yet, even with this Advantage, the Operation goes on so gradually, that, from the Experience I have had, says he, I do not find the least Danger of suddenly passing thro' the Brain, as is apprehended, if we proceed with the Caution of not leaning too hard on the Instrument when the Bone is almost saw'd thro'. Indeed with respect to the Impracticableness of inclining it on any particular Part of the Circle when saw'd uneven, which is commonly alleg'd, whoever will try the Experiment will in a Moment discover the Falseness of the Assertion. Besides, the very Instance stated overthrows this Reasoning; for, if the Circle has been already made deeper in one Part than another, it must imply, that we have lean'd with more Force on one Part than another, and, consequently, may at Pleasure do the same thing again. As to the last suppos'd Advantage, of its receiving and retaining the saw'd Piece of Bone in its Cavity, the Benefit would be so frivolous, if it had truly the Preference of the cylindrical one in that respect, that it would not be worth mentioning. But, in fact, the cylindrical Saw receives the Piece of Bone very readily, and will be more likely to hold it in its Cavity than the other, because there will be more Contact between the Edges of the Bone and the Inside of the Saw. *Sharp.*

In the next Place, the Surgeon ought to be provided with an Incision-knife, armed with a blunt or flat Head, (*Tab.* 36. *Fig.* 6.) which some call the *Lenticular*; and also with an Instrument proper for depressing the Dura Mater, and arm'd like the other (*Fig.* 7.). He must also have in Readiness a perforating Instrument, (*Fig.* 8.) to begin the Operation, which is usually fasten'd to a Handle near the Letter B. (*Fig.* 3.); also a Hair-brush, (*Fig.* 9.) or something like it; a smaller Terebra, (*Tab.* 28. *Fig.* 7. *Let.* B.) or another like it; a Lancet; Elevator (*Tab.* 28. *Fig.* 7. *Let.* C. *Fig.* 8. and 14.); a Toothpick made of a Quill; a Probe with a very sharp Point; some Dossils of Lint, and a Vessel with highly rectify'd Spirit of Wine; all which must be plac'd in a large Dish or Plate, in their proper Order, that they may be ready to the Surgeon's Hand, when performing his Operation. The Apparatus of Dressings and Bandage, to be apply'd after the Operation, consists, first, of a Dossil of Lint, of an orbicular Figure, and of the Breadth of a Piece of Money of an ordinary Size; to which, in the Middle, is fasten'd a Thread, a Span long, represented (*Tab.* 36. *Fig.* 11.). Next must be provided a Ball of Lint, adapted to the Size of the Dossil before-mentioned, and ty'd in like manner with a Thread (*Tab.* 36. *Fig.* 12.). There must be also in Readiness some orbicular Pledgets of Lint, of various Sizes, for filling up the Wound made in the Cranium (*Tab.* 36. *Fig.* 13.); besides, some Honey of Roses, Essence of Amber or Mastich, or Spirit of Mastich, scrap'd Lint, a square Compress, and, in the last Place, a good large Napkin, or Piece of Linen, to make the Bandage for the Head; all which Particulars are to be orderly dispos'd in a peculiar Dish, that they may be ready at hand when wanted.

All things being thus rightly dispos'd, we proceed next to the Operation; to perform which with the greater Readiness and Exactness, the Patient must, first of all, be dispos'd in a convenient Room, with the Air well temper'd, in a proper Posture, upon a Chair, or, if he be weak, upon a Couch, in such a manner that the Surgeon and his Assistants may have free Access to him. This done, the Dressings remov'd, and the Cranium cleansed from the Blood, the Patient is to have his Head dispos'd as conveniently as may be, supported by Pillows, and firmly held by an Assistant. The Surgeon then takes the perforating Trepan, (*Tab.* 36. *Fig.* 8.) and adapting it to the Handle, (B. *Fig.* 3.) instead of the Crown, (A.) he turns round the Handle at (D.); and having thus made a small Entrance into the Cranium, he then applies the Trepan, with its Male Crown (*Fig.* 3. A.). Upon the Top of the Trepan (C. C. *Fig.* 3.) the Surgeon fixes his Left Hand, upon which he places his Chin or Forehead. It has been generally the Custom hitherto to place the Forehead upon the Left Hand, but it seems to be a better Practice to apply the Chin, as Mess. *Petit* and *Garengeot* direct, because, in such a Situation, the Surgeon has a better View of the Place he is to perforate, while, with his Right Hand, he slowly and cautiously turns round the Handle (D. *Fig.* 3.) till he perceives, that the serrated Crown, with the Spike in its Centre, have made a sufficient circular Impression upon the Cranium; after which he takes out the Spike, by the Help of the Key, (*Fig.* 5.) and, putting on the Crown again, continues to work with his Right Hand, turning it with all the Circumspection imaginable, and taking care, all the while, by Help of his Brush and Toothpick, to clear the Cranium and Crown of the Trepan from the Saw-dust, till he perceives it to become bloody, which is a Sign, that the Instrument has penetrated to the Diploë, or the middle and medullary Part of the Cranium. But it is to be observ'd, that he will not always meet with this Signification, because, in some Parts of the Cranium, this medullary Substance is not to be found. However, as soon as the Saw-dust comes off bloody, the Instrument is taken off; and, the Blood being first deterg'd with a Sponge dipt in Spirit of Wine, the Surgeon enters the small Terebra (*Tab.* 28. *Fig.* 7. B.) into the little Hole or Aperture first made in the Middle, and, after a few Turns, takes it out again; and then putting on the Crown once more, turns it two or three times about, but very gently. The Saw-dust is again cleans'd, and the Surgeon, with a slender Probe or Toothpick, carefully searches whether the Cranium be sufficiently perforated, which cannot be better known than by heedfully attending to the Colour of the circular Groove or Trench; for when the Bottom of it, which before was white, appears of a bluish or grey Colour, it is a Sign, that the Dura Mater appears thro' the Cranium, which, of consequence, is nearly penetrated. In this nice Juncture, therefore, the Trepan must be manag'd with the greatest Circumspection, lest the serrated Instrument should happen to lacerate the Dura Mater, so closely annexed, or growing to the Bone, the Consequence of which might be a violent Inflammation, or some other fatal Symptom. But if the circular Groove appears black only in some Parts, it is a Sign, that the Cranium has not been equally saw'd, and therefore the Crown must be a little inclin'd, and press'd upon the whitish Parts, where it has not cut deep enough, and be very gently turn'd about, till the round Piece of Bone, which is to be cut out, becomes loose or moveable. In that Case it will not be convenient to cut quite thro' the Cranium with the Teeth of the Crown, for fear of wounding the Dura Mater, but rather to screw in the Terebra (*Tab.* 28. *Fig.* 7. B.) again into the Aperture wherein the Pin had been inserted, and with the same cautiously move the Bone this way and that way; or with the Help of the Elevator it may be taken out.

Having thus extracted the round Piece of Cranium, the Blood effus'd underneath usually follows it; which being deterg'd, the Surgeon's next Business is carefully to examine whether there be any loose Fragments of Bones to be extracted, or depress'd Parts to be rais'd: If so, he must set about it immediately; if not, he must apply himself to the Smoothing the Roughness of the inner Margin of the Aperture with the Lenticular, (*Tab.* 36. *Fig.* 6.) to secure the Dura Mater from being prick'd or injur'd by any of the sharp Points. This done, the Blood, if there be any within, will the more readily discharge itself; but, to promote its Exit, it will be very convenient gently to move the Patient's Head from Side to Side, and with the before-mention'd Lenticular, or the Depressor, (*Fig.* 7.) in a very tender and cautious Manner, to depress the Dura Mater. While the Surgeon is thus employ'd in freeing the Brain from the Weight of the incumbent Blood, or the Pressure of the Bone, the Patient often recovers his Senses, either suddenly or by degrees, like one rous'd from a deep Sleep. When the Patient is thus come to himself, and yet the Blood is, in some measure, retain'd, some advise the Application of a Sternutatory now-and-then to the Nostrils; for, say they, not only holding the Breath, but especially Sneezing, expels the extravasated Blood, when not free to discharge itself, with a kind of Violence; but this is a very dubious Remedy.

If, after the Operation, the Dura Mater appears black, or elevated as tho' it were ready to break thro' the Aperture of the Cranium, it is a Sign, that Blood or Pus are retain'd underneath it. In this Case, the only Remedy, tho' it be a doubtful one, is to perforate the Dura Mater, and the Pia Mater too, if the peccant Matter lies so deep, with a Lancet or Incision-knife; carefully avoiding the larger Veins, since the Blood or Matter can no way else be discharg'd, and their Retention must be very fatal to the Patient. Some condemn all Perforation of the Dura and Pia Mater as absolutely destructive; but, besides my own Experience, we are assured, by the Authorities of *Paré*, *Glandorp*, *Coiter*, *Fallopius*, *Marchetti*, *Rouhault*, *Blancard*, and other Writers of good Credit, that these Membranes have been frequently perforated without Danger of Death, especially if you avoid cutting any of the larger Veins or Arteries. If any Fragments of Bones, which press upon the Brain, happen to appear, they must be very carefully extracted either with the Fingers,

Fingers or the Forceps; or, if they are only depreſs'd, they muſt be rais'd with the Fingers or the Elevator, and reſtor'd to their former natural Situation. If a Splinter be lodged between the Dura Mater and the Cranium, ſo that you cannot conveniently extract it by the firſt Aperture, a ſecond or third Perforation muſt be made with the Trepan, till you have removed every thing that may be injurious to the Brain. Sometimes it will be neceſſary to cut off the Parts of the Bones between the Perforations, if they are hard and ſtrong, with a ſmall Saw, (*Tab.* 28. *Fig.* 9.) or a very ſharp Forceps, or with a Mallet and Chiſel, repreſented in the ſame Plate (*Fig.* 10. and 11.); or, if theſe intermediate Parts are but thin and weak, they may be cut off and removed by the Lenticular, (*Tab.* 36. *Fig.* 6.) in order to the extracting of the offenſive Splinters or Fragments. When there is a long Fiſſure in the Cranium it will be proper to trepan at each Extremity; but when the Fiſſure runs in ſeveral Directions, you muſt trepan upon each, becauſe every one of them has uſually ſome extravaſated Blood or Pus lodged under it.

Having deſcribed the Method of perforating the Cranium by the Trepan, and of diſcharging the Blood, Matter, and bony Fragments, we now proceed to the Dreſſings and Bandage, which are perform'd in the following manner: Firſt of all a round Pledget of dry Lint (*Tab.* 36. *Fig.* 11.) is to be laid next the Dura Mater, with a Thread faſten'd to it, and hanging out of the Aperture; it muſt be dry, that it may the more conveniently be placed under the Cranium. On this Pledget muſt be poured Honey of Roſes, diluted with a little Spirit of Wine. Many adviſe an Application of Spirits or Eſſences of Maſtich, Amber, and the like, which, in my Opinion, are too acrimonious, becauſe they often put the Patient to great Pain. Upon this Pledget then you apply a Ball of Lint, furniſh'd alſo with a String, (*Fig.* 12.) and upon that lay round Doſſils of Lint, (*Fig.* 13.) till the Cavity be filled. In the next Place, the Cranium, and external Wound, muſt be dreſſed with Lint ſpread with ſome mild digeſtive Ointment, or Honey of Roſes; upon which add a ſquare Compreſs, dipt in warm Spirit of Wine, or Lime-water, and camphorated Spirit of Wine; but uſe no Plaiſters, as being unneceſſary on this Occaſion; and the Whole muſt be ſecured with the Head-bandage.

In the ſubſequent Dreſſings, which muſt be repeated once or twice every Day, you muſt ſtrictly avoid fat and oily Applications, which will corrupt the Bones and Membranes. Inſtead of ſuch you muſt uſe balſamic Topics, particularly Honey of Roſes, with a little Spirit of Wine, or Eſſence of Maſtich, which are excellent Remedies. The Wound being thus duly dreſſed and attended, there will be a ſpontaneous Exfoliation of a thin Lamina from the Margin of the bony Aperture, uſually within forty or fifty Days, which ought not to be pulled away by Force. Your Exfoliation being obtained, new Fleſh will appear ſhooting up from the clean Bone and Dura Mater, which at length will fill up the whole Cavity. When you find the Cavity about half filled, the new Fleſh is to be moderately compreſſed by Lint, and a proper Bandage, to prevent it from becoming too lax and ſpongy; and when it is grown up even with the Surface of the Bone, you muſt endeavour to extend over it, and unite the Edges of the external Skin, in order to its Coalition with the new-formed Maſs, which, having filled up the Cavity, becomes gradually more and more indurated; but in ſuch a manner, as even at laſt to be rather a Cartilage than a Bone; for upon boiling the Cranium it ſeparates and falls off. And this ſeems to be the Reaſon why thoſe who have undergone trepanning are not only ſenſible of a remarkable Weakneſs or Pain of the Head, but are much affected with the various Changes of the Weather; which Inconveniencies may, in ſome meaſure, be remedy'd by keeping the Place cover'd with a Leaden or Silver Plate.

It ſometimes happens, that, after the Operation, a Vein opens, and bleeds profuſely; in which Caſe you muſt ſprinkle Powder of *Armenian* Bole, Sanguis Draconis, Frankincenſe, and Colophony, upon the Place, and compreſs it for ſome time with Lint. If the Brain or Dura Mater ſhould be ſeized with an Inflammation, you muſt endeavour to remedy it by internal reſolving and cooling Medicines, together with Abſtinence and Phlebotomy; or, as *Roubault* adviſes, by Scarification of the Dura Mater, and the Application of common Malt Spirit impregnated with Saffron, and lower'd with Elder-flower Water. If there ſhould happen a Suppuration or Exulceration, the Surgeon's Buſineſs is firſt to wipe off the Sordes with Lint, and then to apply to the Part affected Honey of Roſes, mixed with Spirit of Wine, or Eſſence of Maſtich or Amber, or Elixir Proprietatis, or a Powder prepared of Myrrh, Maſtich, and Frankincenſe. When the Patient, after being once trepanned, feels great Uneaſineſs, with a Weight in the Head, it ſignifies that ſomething preternatural ſtill infeſts the Place; and that the Trepan muſt again be applied. If any ſpongy or fungous Exceſcence ſhoot forth from the Wound of the Cranium, it muſt be repreſſed by ſome of the following Methods: Firſt by applying a Doſſil of Lint dipt in Spirit of Wine or Maſtich at every Dreſſing, and ſtrongly depreſſing the ſame upon the growing Fleſh; or, in the next Place, by Application of the round perforated Piece of Lead, contrived by *Belloſte*, (*Tab.* 36. *Fig.* 14.) and furniſhed with *Anſæ*, (ſee *Fig.* 15.) which is to be depreſſed into the Aperture of the Cranium, and well cover'd with round Pledgets of Lint; but you will ſeldom have Occaſion for this Inſtrument, if the firſt Method be rightly obſerved: Or, laſtly, if the fungous Excreſcence be already prominent above the Aperture, it may be cut off either by tying it round with a Thread, or by the Sciſſars, as it is practiſed in Tubercles. What is left of it may be repreſſed by rubbing it with blue Vitriol, or ſprinkling on it the Powder of Savin or burnt Alum, and afterwards compreſſing it with a tighter Bandage, and ſtrongly compacted Doſſils of Lint; by which means not only the ſpongy Fleſh will be check'd and reduced, but the Wound alſo will be the more ſpeedily healed. *Heiſter.*

As this Operation is one of the moſt important in Surgery, I ſhall add the Method of performing it, recommended by *Sharp*.

The Manner of Trepanning is this: Having fix'd your Patient's Head ſteady, either on the Bolſter of a Bed, or by placeing him in a low Chair, with the Pin of your Saw mark the Centre of the Piece of Bone to be taken out; then with the perforating Trepan make an Orifice deep enough to receive the Pin, which, being fixed in it, will prevent the Saw from ſlipping; and thus you are to continue ſawing till the Impreſſion made will preſerve the Steadineſs without the Pin, when it is to be taken away for fear of its wounding the Brain before the Saw has entered through the Cranium, which it would do at laſt, becauſe of its Projection. In working through the Bone, the Teeth of the Saw will begin to clog by the time you arrive at the Diploë: Wherefore a Bruſh muſt be ready to clean it every now-and-then; and with a pointed Probe you muſt clear away the Duſt in the Circle of the trepan'd Bone, obſerving if it be deeper on one Side than the other, to lean afterwards on that Side where the Impreſſion is leaſt, that the whole Thickneſs may be ſaw'd thro' at the ſame time. To do all this with leſs Interruption it will be proper to have two Saws of exactly the ſame Diameter, that an Aſſiſtant may be bruſhing one while you operate with the other. We are adviſ'd to ſaw boldly till we come to the Diploë, which, it is ſaid, will always diſtinguiſh itſelf by the Bloodineſs; but, however, this is not a certain Mark to go by; for though where there is a Diploë, it will manifeſt itſelf by its Bloodineſs, yet ſometimes the Skull is ſo very thin as not to admit of any; in which Caſe, if an Operator ſhould puſh on his Inſtrument in Expectation of meeting with this Subſtance, he would unwarily wound the Brain. This is not very often the Caſe, but however often enough to put a Man on his Guard, and make him enquire whether the Bone be looſe after a little ſawing; which is the only Rule we go by, when we have paſs'd through the Diploë; and may as well be attended to before coming at it, without any conſiderable Loſs of Time. When it is quite ſaw'd through, and lies looſe, it may be taken away with the Forceps contriv'd for that Uſe (*Tab.* 60. *Fig.* 1.); and if the lower Edges of the Orifice next to the Dura Mater are ſplinter'd, they may be ſcrap'd ſmooth with a Lenticular.

This is the chief of the Operation of the Trepan; the only thing remaining to be done is with an Elevator introduc'd at the Orifice, to raiſe the Depreſſion or broken Splinters, if they cannot otherwiſe be laid hold of, and to draw out the grumous Blood, or any other extraneous Body. If the Dura Mater be not wounded or tore, an Inciſion muſt be made through it to give way to the Blood or Matter, which almoſt certainly lies underneath it, if the Symptoms have been bad, and none has been diſcharg'd from between the Cranium and Dura Mater.

I have uſed the Word Trepan all along, ſays *Sharp*, for the ſake of being better underſtood; but the Inſtrument he recommends is a Trephine, the Advantages of which, as alſo that of a cylindrical Saw, are above deſcribed in the Quotation from *Sharp*.

With regard to the Dreſſings of theſe Wounds, I think, ſays *Sharp*, it is very certain, that, as the greateſt Part of the Evil proceeds from the Quantity and Preſſure of the Matter, whatever approaches towards the Nature of a Tent, and increaſes its Quantity and Preſſure by locking it up, muſt be pernicious. I would therefore exclude the Uſe of all Syndons whatever; the haſty Application too of Spirits of Wine, which is ſo commonly adviſed, cannot be proper, as they are not only unfit for Inflammations in general, but alſo criſp up the Veſſels of the Dura Mater and Brain; and ſtopping the Suppuration, ſometimes produce a Gangrene. Since then a cloſe Application is inconvenient, and whatever Good there may be in topical Medicines, it cannot, for the moſt part, be communicated to the Abſceſs, by reaſon of its Extent beyond the Orifice; the beſt Remedy will be dry Lint only, which muſt be laid on looſely to give Vent to the Matter, and be repeated twice a Day, till the Diſcharge is leſſen'd, when once in twenty-four Hours will be ſufficient to the finiſhing of the Cure, which will be ſomething retarded by the Exfoliations that ſometimes follow this Operation. The Patient afterwards may wear a Plate of Tin upon the Scar, to defend it from Blows, or any accidental Injury. *Sharp.*

Treatment of the Accidents ſubſequent to the Operations of the Trepan, from Boerhaave.

The Inflammation, Suppuration, Gangrene, or Fungus of the Membranes, or even of the cortical Subſtance of the Brain itſelf, which will ſometimes ariſe, are remov'd by Remedies which are proper for the reſpective Diſorders, by the Application of Antiphlogiſtics, Detergents, and Antiſeptics; by a Thread, and a Plate of Lead.

It now remains, that we conſider thoſe Symptoms which are ſometimes ſubſequent to the Operation of the Trepan, and which are often accompanied with the greateſt Danger: For ſince after the Bone is taken away, in conſequence of the Fulneſs of the Cranium, the contain'd Brain, together with the Dura Mater, ariſe through the Perforation made, unleſs this Accident be prevented, the Dura Mater will be preſſed againſt the Margins of the Bone; by which means a free Circulation of the Blood thro' its Veſſels will be obſtructed, and an Inflammation, with all its ſubſequent Symptoms, eſpecially a Suppuration and Gangrene will be produc'd. The unaccuſtom'd Acceſs of the Air, eſpecially if cold, contributes very conſiderably to this Misfortune. The ſame Accident may happen in the Veſſels of the Pia Mater, and in the cortical Subſtance of the Brain, by which means all its Functions may be injur'd. By the general Method of Cure in Inflammations, of which we ſhall ſpeak under its proper Article, the preſent Diſorder may be remov'd; but it is always ſafer to prevent it before it appears. Liberal Veneſection, Epiſpaſtics applied to the Soles of the Feet, Lenitive Clyſters, a ſpare Diet, and liberal Draughts of Whey, or Milk and Water, will reduce the Body to a State not in the leaſt ſubject to Inflammation. Theſe Remedies will alſo be able to remove the Inflammation after it is brought on, and may be boldly repeated, if the Symptoms are urgent; for in this Caſe it is not to be doubted, but a Suppuration is highly dangerous, and a Gangrene generally mortal. Hence theſe bad Conſequences of an Inflammation are with the greateſt Care and Skill to be prevented.

A common, but, at the ſame time, a very terrible Symptom, generally enſues the Operation of the Trepan; which is a fungous, and ſuddenly increas'd, Dilatation of the Brain. This, indeed, rarely or never happens, ſo long as the Dura Mater is entire. But when this Membrane is cut or corroded, the Pia Mater is ſo ſlender, that it is not able to reſtrain the riſing Subſtance of the Brain, which will ſtill ſooner protuberate, if at the ſame time the Pia Mater is wounded. Theſe Protuberances, on account of the Quickneſs of their Growth, and their Figure, are call'd Funguſes, as we have before obſerv'd. *Celſus* ſeems to have taken Notice of this Accident, but he believ'd that it was a Swelling of the Dura Mater: For, ſays he, "After the Cranium is laid open, and the Dura "Mater expoſed to View, if that Membrane is inflam'd and "tumid, tepid Oil of Roſes is to be pour'd into the Wound. "But if it is ſo tumid as to protuberate without the Bone, it "muſt be reſtrain'd by well triturated Lentils, or the Leaves "of the Vine triturated, and mixed up with freſh Butter; or "the Fat of a Gooſe." But it ſeems to be confirm'd by all the Obſervations hitherto made, that theſe Funguſes are produc'd by the pulpous cortical Subſtance of the Brain, when diveſted of its ſurrounding Membranes, and the bony Covering of the Cranium, immenſly dilated by the Fluids driven to it by the Arteries; and more eſpecially when a Fever has increaſed the Velocity of the Circulation. But ſince the cortical Subſtance of the Brain naturally contains no red Blood, hence theſe Funguſes, when cut or corroded, rarely diſcharge any Blood, unleſs by a violent Dilatation the Diameters of theſe ſmall Veſſels ſhould happen to be ſo enlarg'd, as to admit the red Blood. Though this, indeed, rarely happens, yet there are ſome Inſtances of its having occurr'd: Thus, in that ſurpriſing Caſe we have before related, ſuch a fungous Maſs ariſing thro' the fractured Cranium, had a ſtrong Pulſation in its Arteries; and when rudely handled, diſcharg'd a large Quantity of Blood: For this Reaſon theſe Funguſes generally ſubſide before the Death of the Patient, in conſequence of the Force of the Circulation being impair'd, as was obſerv'd in the ſame Caſe ſome Days before the Boy's Death; for the Fungus, which was as large as a Walnut, of a cineritious Colour, and without Pain, ſpontaneouſly ſubſided, and a large Chaſm, in the Subſtance of the Brain itſelf, appear'd. *Scultetus*, in *Armament. Chirurg. Obſervat.* 19. gives us an Account of a Man, who, receiving a Wound in the Head with a Hanger, had a pretty large and wide Fiſſure made in the Cranium, with two Funguſes ariſing out of it. But when, after the Patient's Death, he was inſpecting the Wound, he found that the Funguſes had ſubſided very much. All theſe Circumſtances prove, that theſe Funguſes ariſe from the Dilatation of the cortical Subſtance of the Brain, by the Humours driven to it.

We now come to inquire what is to be done in ſuch a Caſe. Where ſuch a Fungus protuberates it cannot be repreſſed; ſince by that means the Brain would be compreſſed, and the pulpous ſmall Veſſels, of which the Fungus conſiſts, would be deſtroy'd by a very gentle Preſſure; from which Circumſtance a violent Putrefaction, and the moſt terrible Symptoms, would ariſe. On the contrary, to cut off or corrode the Subſtance of the Brain itſelf, may poſſibly ſeem an Attempt attended with too much Danger. Numberleſs Obſervations, however, inform us, that ſuch Funguſes have been cut off, whilſt the Lives of the Patients were not only ſaved, but alſo all the Functions of the Brain preſerved entire. Thus *Hildanus*, in *Obſervat. Chirurg. Centur.* 4. *Obſerv.* 3. gives us an Account of a Boy of fourteen Years of Age, thro' whoſe Cranium, after the Application of the Trepan, ſuch a Fungus aroſe. It was cut off by the Application of a Thread about it; but another of the ſame Kind aroſe, and was cut off in the ſame manner. When this Method had been follow'd for ſeveral times, it appeared that a Quantity of the Brain, as large as one's Fiſt, had been loſt. The Patient, however, recover'd, though, in conſequence of his Poverty, he eat any thing that came in his Way, and had his Wound but indifferently taken care of by the Women who had the Charge of him in the Surgeon's Abſence. In the firſt Century of the ſame Work, *Obſerv.* 15. we have an Account of a Boy of the ſame Age, who, by a Stroke from a Stone, which fell from a conſiderable Height on the Right Side of his Head, had a large Fracture made in his Cranium, when, after extracting ſeveral Splinters of the Cranium, every thing ſeem'd to have a good Appearance; and when that Part of the Dura Mater, which had been lacerated by the Splinters, was ſeparated, on the twenty-firſt Day there aroſe from the Wound a Fungus, which, in the Space of twenty-four Hours, appear'd as large as a Hen's Egg, without the Cranium. By ſprinkling it, however, with drying aromatic Powders, and applying a Plaiſter made of the like Ingredients, the Fungus entirely ſubſided in the Space of fourteen Days, and the Patient was afterwards thoroughly cur'd. More Inſtances occur in the ſame Author, by which we are taught, that ſuch Funguſes may ſafely be remov'd. But to attempt the Removal of theſe Excreſcences by acrid Medicines ſeems dangerous. And in the ſame Place *Hildanus* gives us an Account of a Surgeon, who deſpiſing the Advice of another, who had more Skill than himſelf, ſprinkled the Powder of Vitriol and burnt Alum upon ſuch a Fungus; which Practice was immediately ſucceeded by a violent Pain, an acute Fever, an Inflammation, a Delirium; and a few Days after Death enſued.

If we conſider that wonderful Apparatus, by which the Arteries diſtributed to the Brain every-where communicate with each other, after they have enter'd the Cranium; and if at the ſame time we conſider, that as anatomical Injections have taught us, the Arteries of the Pia Mater are every-where united to each other by Anaſtomoſes; and that from Analogy it is highly probable, the ſame obtains in the laſt villous Veſſels of the cortical Subſtance of the Brain; the Reaſon will be obvious, why 'tis poſſible, that when a large Portion of the cortical Subſtance of the Brain is remov'd, the Functions of the Brain may ſtill remain entire. 'Tis alſo to be obſerved, that tho' the cortical Subſtance of the Brain is but of a ſmall Bulk, yet, when freed from the Integuments which confine it, it may eaſily be extended to an immenſe Largeneſs, as it conſiſts of Veſſels ſo tender, and ſo eaſily dilatable.

It ſeems then of all other Methods the moſt proper, to cut off large Funguſes with a Thread apply'd near the Orifice of the Cranium, where they are always ſmalleſt; and to keep down ſmaller ones by drying Medicines, which Intention ſeems to be excellently anſwer'd by Spirit of Wine digeſted with Maſtich or Olibanum; or the Powder of Maſtich, or of Sarcocolla, may be alſo ſprinkled upon the Fungus.

But though the Fungus is removed, yet it ſoon riſes again, as we are taught by numberleſs Inſtances, unleſs ſuch an equable Preſſure is reſtored, as may prevent the exceſſive Diſtention of the luxuriant Veſſels; and unleſs the Velocity and Force of the Circulation are at the ſame time ſo moderate, that the eaſily dilated Veſſels may not be too much diſtended. The former of theſe Intentions is anſwer'd by filling the Hole of the Cranium with Lint, or by applying a Leaden Plate, and with proper Bandage ſecuring it ſo, that it ſhall remain in the intended Situation. The latter Intention is anſwer'd by Veneſection, in order to diminiſh the Quantity of the diſtending Liquid; by Eaſe of Body and Mind; by diluent antiphlogiſtic Liquors, copiouſly drank; by mild and attenuating Aliments; and by gentle Anodynes, the exceſſive Velocity of the Circulation may be quell'd. And Clyſters made of the like Ingredients, Fomentations apply'd to the inferior Parts, and Epiſpaſtics, will derive the Impetus of the Blood to the inferior Parts.

From the Whole of this Hiſtory of Wounds of the Head, as alſo from what is ſaid concerning Wounds in general, it is ſufficiently obvious, that ſlight Wounds of the Head have often prov'd mortal; and on the contrary, that very ſevere Wounds, not only of the Cranium, but alſo of the Brain itſelf, have ſometimes been happily cur'd, without any Abolition or Injury of the Functions. Various Obſervations have been related from the beſt Authors, which confirm this. Hence it

ſeems reaſonable to lay it down as a Maxim, That no Wound of the Head, however ſlight it may appear to be, is to be treated in a ſuperficial and careleſs Manner; and that we ought not to deſpair, in the moſt terrible and apparently dangerous Caſes.

The Malignity of Wounds of the Head is eſtimated,

Firſt, By their Situation. Thus a Wound in the Occiput, Vertex, Parietal Bones, or upon the Sutures, are the worſt of all.

A Wound in the Occiput is highly dangerous, becauſe here very ſtrong Muſcles are inſerted into the Cranium: The Cerebellum, on which Life totally depends, is ſhut up here. Large tranſverſe Sinuſes alſo occur in this Part. Blood, diſcharg'd from ruptur'd Veſſels, is hence evacuated with the greateſt Difficulty; and if extravaſated Humours are lodg'd under the expanded Veil of the *Dura Mater*, which covers the Cerebellum, and defends it from the Preſſure of the incumbent Brain, their Evacuation ſeems to be entirely impracticable.

Wounds in the Vertex are alſo highly dangerous, ſince that Part of the Cranium is, of all others, the ſloweſt in acquiring a bony Hardneſs. In Children this Part, which is call'd the Fontanella, remains long of a membranaceous Texture. Here the Falciform Proceſs of the Dura Mater adheres pretty ſtrongly, and the longitudinal Sinus lies under it: Hence it is ſufficiently obvious, that Wounds, inflicted on this Part, muſt be accompany'd with great Danger.

Wounds of the Parietal Bones muſt alſo be highly dangerous, becauſe generally the Oſſa Bregmatis, eſpecially about their Middle, are found to be very ſlender; and the Furrows, impreſs'd upon theſe Bones, inform us, that conſiderably large Arteries of the Dura Mater are ſituated in this Place. Beſides, theſe Bones of the Head are generally only cover'd with the common Integuments. Hence *Hippocrates*, in the third Section of his Treatiſe on *Wounds of the Head*, concluded Wounds inflicted on this Part to be highly dangerous; becauſe the Bone is weak, cover'd with little Fleſh, and has a large Quantity of the Brain lying under it.

Wounds on the Sutures are alſo dangerous, becauſe, where theſe occur, the Pericranium ſeems to be united with the Dura Mater; and ſince, in theſe Parts, the Dura Mater adheres ſtrongly to the Cranium. Hence the Diſorders ariſing in the external Parts may, in conſequence of the Continuity of Subſtance, be eaſily propagated to thoſe which are internal. When, in conſequence of the Operation of the Trepan, the extravaſated Humours are to be evacuated, the Trepan, in this Caſe, ought never to be apply'd to the Sutures themſelves; and, when the extravaſated Blood is lodg'd between the Cranium and Dura Mater, it is always dubious on which Side of the Suture the Trepan ought to be apply'd; ſince the Dura Mater, adhering firmly to the Sutures, may place the extravaſated Fluids, as it were, in ſeparate and diſtinct Cells, as we have already obſerved.

Secondly, By the Symptoms. As a Fever, appearing after the ſeventh Day, attended with Coldneſs and Tremors; a Paleneſs, Dryneſs, and Lividneſs of the Wound; an Aſperity or Yellowneſs of the Bone; a Hemiplegia, or Convulſions.

The Symptoms, ſubſequent to the Infliction of a Wound, inform us, what Functions are injur'd, and what Degrees of Danger are to be dreaded: The more numerous, therefore, and the more ſevere theſe are, the Danger muſt be proportionably the greater. But we before obſerved, that violent Symptoms, appearing immediately after the Reception of the Wound, were often leſs formidable than thoſe which appear ſome Days after; and this Obſervation was confirm'd by the Authority of *Hippocrates*. A Fever ariſing on the ſeventh Day, after the Infliction of the Wound, was always look'd upon as an unlucky Prognoſtic, ſince it almoſt always portends a new Inflammation or Suppuration, which, in this Caſe, are ſo much to be dreaded. And *Hippocrates*, in the thirty-firſt Section of his Book on *Wounds of the Head*, pronounces this Fever to be a Sign, that the Cranium is corrupted, and that the Cure of the Patient has been neglected. But when the red Colour of the Wound is chang'd, and becomes pale or livid; as alſo when the Lips of the Wound become dry, and appear like wither'd Fleſh, or that which has lain long in Salt; theſe Signs denote, that the Parts have a Tendency to a Mortification and Corruption, as we have already obſerved. But ſince the Cranium is naturally ſmooth, and of a whitiſh Red, or ſomewhat bluiſh Colour, its Roughneſs, and the Change of its Colour into Yellow or Brown, teach us, that it is corrupted; and that the Part thus affected muſt be ſeparated, either by Nature or Art, as we have already more fully explain'd. But Hemiplexies and Convulſions inform us, that the Brain itſelf is affected, whether it is compreſs'd by the depreſs'd Cranium, as has been already obſerved; or whether it is injur'd by the Preſſure or Corruption of the Humours, extravaſated under the Cranium; or whether, by the Force only of a powerful Concuſſion, without any conſiderable Extravaſation of Humours, the tender Fabric of the Brain is remarkably chang'd or deſtroy'd, as we have already taken Notice.

Thirdly, By the Age of the Patient.

In young Perſons the Bones eaſily yield, and are leſs capable of reſiſting wounding Inſtruments. In Adults they are more firm; and in old Men the Bones are, indeed, hard, but, at the ſame time, very brittle. Beſides, in a youthful State, all the Bones are of a more vaſcular Texture, and, for that Reaſon, abound more with Moiſture; whereas, in a more advanced Age, many Veſſels are obliterated, as *Hippocrates* has juſtly obſerved, in the twenty-ninth Section of his Treatiſe on *Wounds of the Head*. "The Bones, ſays he, of Children are more "thin and ſoft, becauſe they abound more in Blood, *&c.* "Hence, by the ſame or a ſlighter Wound, the Bone of a "Child will become more and ſooner purulent, than the Bone "of an Adult. And, if both Patients are to die of the "Wound, the young Perſon will be cut off ſooner than the "Adult." The whole nervous Syſtem is, in young People, eaſily put in Motion; for which Reaſon they eaſily become convulſed by very ſlight Cauſes; ſo that, at this Age, Wounds of the Head are ſo much the more dangerous: But, in old Perſons, the Separation of the affected Bone, and the Regeneration of that which is loſt, are always obſerved to be more difficult; becauſe, at this Age, the Number of vital Veſſels in the Subſtance of the Bone is ſmaller; and it often happens, in a very advanced Age, that the Diploë, which is almoſt entirely vaſcular, is totally obliterated.

Fourthly, By the Conſtitution of the Patient.

The Conſtitution of a Patient may be conſider'd in two different Lights, either as ſound, or morbid; for the Health of every individual Man is peculiar to himſelf, and can be ſaid to be Health, with reſpect to his Body alone, ſince we obſerve, that different Bodies are ſtill healthful, tho' the Compages of their Solids, and the Qualities of their Fluids, differ very widely. This is what is meant by Soundneſs of the Conſtitution, which the Antients divided into hot and cold, moiſt and dry. It is ſufficiently obvious, that, in conſequence of this, there muſt be a conſiderable Difference betwixt the Wounds of different Perſons, eſpecially thoſe inflicted on the Head; for, in Men of hot and bilious Conſtitutions, a ſtronger Inflammation, and a greater Degeneracy of the extravaſated Humours, are to be expected; whereas in Men of cold, mucous, weak Conſtitutions, the contrary obtains. But a morbid Conſtitution is known from the predominant Cacochymy; and, in Wounds of the Head, that morbid Conſtitution is worſt, which generally affects and corrupts the Bones; ſuch as a ſcorbutic, rickety, or venereal Habit, for Inſtance.

Fifthly, By the Seaſon of the Year.

Exceſſive Heat, and its ungrateful Oppoſite, pinching Cold, are always injurious to Wounds of the Head; but the genial Spring is, of all other Seaſons, moſt friendly to them. *Hippocrates*, however, in the fourth Section of his Book on *Wounds of the Head*, condemns the ſcorching Heats of the Summer, as more noxious than the nipping Colds of the Winter: "For, "ſays he, if any one has receiv'd ſuch a Wound as will prove "mortal in any Part of the Head, he will live longer under "it in the Winter than in the Summer." And, in the thirty-firſt Section of the ſame Book, after having recounted the Signs by which it is known, that a Patient wounded in the Head will die, he ſays, "In the Summer they die before the ſeventh Day, "and in the Winter before the fourteenth." It is alſo much eaſier to correct an intenſe Cold, by kindling a Fire, than to render an exceſſive Heat moderate. Perhaps, for this Reaſon, in the warmer Climates, Wounds of the Head have been obſerved to be more difficultly cured than in colder Countries: Thus, in *Italy*, *Ludovicus Duretus* informs us, that this actually happens; but we have already aſſign'd another Reaſon for this Phenomenon.

Sixthly, By the Malignity and Impurity of the circumambient Air.

We have already obſerved, that the free Acceſs of the Air, eſpecially when cold, was noxious to Wounds of the Head: And, in the Article VULNUS, it is demonſtrated, that a pure Air, often renew'd, and free from putrid Exhalations, is highly advantageous to all Wounds in general: Hence, after Battles, which are generally fought in the Summer, whilſt a large Multitude of the Wounded are laid in the Hoſpitals, the Air is fill'd with ſo many putrid Exhalations, that many die, eſpecially thoſe who are wounded in the Head. Hence that ſkilful Surgeon *Belloſte*, among the ſeveral Advantages attending his Method of making ſmall Perforations in the Cranium, which we have already deſcrib'd, eſteems this one of the moſt conſiderable; that the Patients are, by this means, much ſooner cured than they would otherwiſe be, and conſequently are not oblig'd

to languiſh long in the Hoſpitals; where, 'tis obvious, from numberleſs Inſtances, that the ſoundeſt Conſtitutions are conſiderably affected by the malignant Exhalations: And he affirms, that he has an hundred times ſeen thoſe Patients who were already cured, and thinking of their Departure, ſeiz'd with putrid Fevers, Hæmorrhages, and Diarrhœas, which cut them off.

I muſt appriſe the Reader, that nothing I have ever met with gives a greater Inſight into the Nature of Diſeaſes of the Head, from an internal Cauſe, than a Knowledge of what happens in Diſorders of the ſame Part, from an external Cauſe: The preceding Treatiſe on the Head will, therefore, be of much Importance in Phyſic, as well as in Surgery.

CAPUTPURGIA. A barbarous Word uſed by ſome Phyſicians to ſignify ſuch external Remedies as purge the Head, which are either *Sternutatories*, by *Galen*, *S. M. F. l.* 5. *c.* 20. call'd ῥῖνα, "*Errhines*;" or Maſticatories, which he calls ἀποφλεγματίζοντα, "Apophlegmatiſms." See ERRHINA, and APOPHLEGMATISMUS.

CAPUUPEBA, *Braſilienſibus*, *Gramen dactylon plumeum*, *Luſitanis Pes Gallinaceus dictum*. A ſort of Graſs in *Braſil*, two or three Foot high, with a round ſmooth Stalk, jointed, and with Leaves, at the Joints, above half a Foot long. At the Top the Stalk is branch'd into twenty, twenty-four, and ſometimes thirty leſſer ones; each of which, towards the Top, is cover'd with a Silver-colour'd Pinacle, three or four Fingers Breadth in Length, containing a graſſy Seed. The Stalks are of a fine reddiſh Colour.

The Natives commend the Root, drank in any convenient Liquor, againſt Poiſon. *Raii Hiſt. Plant.*

CARA *Braſilienſibus*, Inhame de S. Thome, *Congenſibus Quiquoaqui Congo*, Margg. *Igname ſive Inhame Luſitanorum*, Cluſ. *Rapum Braſilianum ſive Americanum alterum*, C. B.

It is a Species of Convolvulus, with a ſquare Stalk, pennated at the Angles, green, but here-and-there reddiſh, and a little contorted. It creeps a long Way upon the Ground, and propagates itſelf ſo vaſtly, that one ſingle Plant will eaſily fill up a Plot of a hundred and twenty Feet ſquare; for the Stalk and Branches, as they here-and-there touch the Ground, take Root; and, even when they cannot touch the Ground, ſhoot forth Fibres for Roots; but theſe, for want of due Nouriſhment, cannot grow to a juſt Bigneſs. The Leaves are like thoſe of our *Sagittalis*: The Stalk, when cut, ſheds Plenty of a Liquor like the Tears of a Vine: The Root is above a Foot in Thickneſs, and eight, nine, twelve, or more Fingers Breadth in Length, cover'd with a thin Skin of a duſky Aſh-colour, under which it is yellowiſh. The Subſtance is white, juicy, and, as it were, milky, and not ungrateful to the Taſte. [According to *Cluſius*, the Roots are cover'd with a rugged and uneven Rind, like the Roots of the true long Ariſtolochia, and ſhoot forth many ſmall Fibres.] Boil'd with Butter, or ſeaſon'd with Oil and Pepper, it is of a good Taſte, but dry and mealy, whence it ſerves the Inhabitants of *Guiney* for Bread. *Margg.*

Cluſius mentions another Species, which has a rough Rind, ſet with prickly Tubercles, which they call *Yeam Peru*. *Margrave* alſo ſpeaks of another Species, call'd, by the *Braſilians*, *Carainambi*, which has a Stalk that creeps a long Way, with ſolitary Leaves, ſet at Diſtances, of which ſome are of the Figure of a Heart, others have Lobes: The Root is white. *Raii Hiſt. Plant.*

CARAB. A Pod. *Johnſon.*

CARABE, *Succinum*, Offic. *Succinum*, Worm. 31. Charlt. Foſſ. 14. Boet. 321. Calceol. Muſ. 180. Aldrov. Muſ. Metall. 403. Mer. Pin. 219. Gæbal. 10. AMBER. See AMBRA.

CARABUREA, καραβυρέα, in *Myrepſus*, *Antidot.* 304. as *Fuchſius* ſays, is a corrupt Word, of which he knows not the Meaning, unleſs it be a Species of *Carui*, which the modern *Spaniards* call *Caroneia* and *Caraneia*.

CARABUS, κάραβος, ſometimes ſignifies an Inſect which lives in dry Wood, and belongs to the Genus of *Scarabæi*. Sometimes is taken for the *Cammarus* or *Aſtacus*, and ſometimes for the *Locuſta marina*, which ſee. *Caſtellus*. *Rieger.*

CARACALLA. The Name of the *Phaſeolus Americanus perennis*, *flore cochleato odorato*, *ſeminibus fuſcis orbiculatis*.

CARACOSMOS. A Name for the *Oxygala equinum*, or ſour Mare's Milk; accounted, by the great Men among the *Tartars*, a delicious Food. *Caſtellus.*

CARAGUATA, *Margg.* is the Aloe of *Braſil*. Some, in their Account of the *Indies*, have written, that Ambergriſe is the concreted Juice of ſome ſort of *Caraguata*, *Manguey*, or *Metl*, growing in great Plenty among the Rocks, which, being torn away by the Violence of the Waves, is toſs'd from Place to Place, and at laſt coagulated: Sometimes there are formed great Lumps by the Concurrence of ſmaller ones.

Thus *Ray*, from Dr. *Tancred Robinſon*, who adds, that Dr. *Trapham* obſerved the Leaves of this ſucculent Plant to be turgid with a kind of viſcous, thick, and bituminous Matter, very like Ambergriſe. See AMBRA.

CARAGUATA, *ſecunda*, Margg. differs little from the former.

CARAGUATA, *guacu*, Margg. is a larger Species than the two preceding. Of the Leaves of this Plant may be made very good Cloth, and better than Linen. The white Filaments of the Subſtance of the conic Corpuſcles, before they open into Flowers, may be drawn out like Cotton. The Root, or the freſh Leaves, bruiſed and thrown into the Water, render Fiſhes ſo ſenſeleſs, that they immediately riſe to the Surface, and may be taken up with the Hand. The dried Wood burns like a Rope dawb'd with Sulphur; and Fire may be got out of it, by the Attrition of a hard Piece of Wood.

CARAGUATA, *acanga*, Margg. bears a Fruit five Fingers Breadth in Length, which may be eaten.

This Plant, ſays *Ray*, ſeems to be very much of the Nature of the *Mexocotl* or *Maguei* of *F. Hernandez*, ſo that it may be doubted whether they are the ſame. However, it does by no means belong to this Genus; but, becauſe of the Similitude of its Leaves, we have ſuffer'd it to keep its Place, till we ſhall more certainly know under what Head it ought to be diſpoſed. *Raii Hiſt. Plant.*

CARAMBOLAS, *Malus Indica*, *Pomo anguloſo Carambolas dicta*, *Tamara tonga*, *ſeu Carambolas*, H. M. *Carambolas*, Park. *Carambolas Acoſtæ*, J. B. *Mala Goenſia*, *Fructu octangulari*, *Pomi vulgaris magnitudine*, C. B. *Erroneè*; *Fructus enim quadrangularis eſt aut pentagonus.*

It bears an oblong Fruit, with a ſmall Umbilicus; but ſtanding out, at the Top, ſulcated with five pretty thick Ridges, which are moſt prominent in the Middle, and cover'd with a thin Rind, ſticking very cloſe to the Pulp, ſmooth, ſhining, firſt green, afterwards yellowiſh, ſurrounding a Pulp, which is firſt whitiſh, then yellowiſh, tender, juicy; of a harſh Taſte at firſt, but afterwards of an acid Sweetneſs. In its pentagonal Middle are contain'd ten oblong Seeds, blunt at one Extremity, and ſharp at the other, red, ſmooth, ſeparated by ſome hard and membranaceous Pellicles in ſuch a manner, that one Cell holds two of them. *Garcia* and *Acoſta* make the Fruit quadrangular, and divided, as it were, into four Parts, and to be of about the Size of a large Hen's Egg.

It is cultivated in Gardens and Orchards; bloſſoms and bears ripe Fruit thrice in a Year, from three Years after grafting or planting the Seed till fifty.

The Juice expreſs'd from the Roots, being taken inwardly, aſſwages feveriſh Heats. Of the bruiſed Leaves, together with an Infuſion of Rice, they make a Cataplaſm, which effectually mollifies and diſſolves all Sorts of Tumors: Of the ſame, boil'd or macerated in an Infuſion of Rice, is prepared an excellent vulnerary Decoction. The expreſs'd Juice of the Fruit cures the Itch, Impetigo, Pſora, and the like cutaneous Affections, if Linen Cloths be moiſten'd with it, and now-and-then applied to the affected Places. The ſame, drank with burnt Wine of the *Indian* Nut, commonly call'd *Arac*, eaſes Pains in the Belly, and ſtops a Diarrhœa. Of the Leaves bruiſed, together with the expreſs'd Juice of the Flowers of the Date-tree, is prepared a Cataplaſm, which cures all Kinds of Inflammations. Of the dried Fruit, together with the bruiſed Leaves of *Betel*, is prepared a Powder, which, being drank in burnt *Arac*, promotes the Pains of Child-birth, and expels the dead Fœtus and Secundines. The ripe Fruit is delicious Food: The unripe is preſerved with Sugar, or in Pickle with Vinegar. The Juice of the unripe Fruit, falling on Cloaths, takes off the Colour with its Acidity; and is frequently uſed for taking Spots out of Linen: Colours alſo are prepared of it, for the Staining of Linen; and it is cuſtomary for Goldſmiths to take the unripe Fruit, and boil it with Silver Veſſels for their Depuration. There are two Species of this Tree, which can hardly be diſtinguiſh'd, but in that the Fruit of one of them is altogether of a ſweet Taſte. *Raii Hiſt. Plant.*

CARAMBU. A Species of *Lyſimachia*, growing in *Malabar*. See LYSIMACHIA.

CARANAIBA. A Species of the *Palma*, or Date-tree. See PALMA.

CARANDAS, *Garciæ*, C. B. *Carandas Indica*, J. B. An *Auzuba Oviedi?*

This, according to *Garcias*, is a Shrub of the Bigneſs of the *Arbutus*, and with Leaves like it. Its Fruit very like a little Apple, blackiſh when ripe, of a very grateful Taſte, like that of Grapes, out of which ſome preſs a vinous Juice. The green Fruit is about the Size of a Haſle-nut, or larger, and ſometimes diſtils a viſcid and milky Juice. The ripe Fruit is ſometimes eaten with Salt, but is uſually pickled green with Vinegar; and is of Uſe to excite a languiſhing Appetite. It grows in the Iſland of *Balagate*, and alſo on the Continent.

The *Auzuba* is deſcrib'd, by *Oviedus*, to be a large beautiful Tree, growing in the Iſland of *Hiſpaniola*, of a firm and uſeful Subſtance; bearing a Fruit, which, in reſpect of its extraordinary Sweetneſs, is like the *Pyra Apiana*, which they call *Moſchatellina (Muſk-pears)*; but, being full of a viſcid and glutinous milky Juice, ſuch as is in unripe Figs, lies heavy on the

the Stomachs of thoſe who eat it; except they firſt throw it into Water, and, with their Fingers, preſs out the milky Juice, which ſubſides to the Bottom.

The *Carandas* of *Bontius*, tho' he takes it to be the ſame, ſeems to be a different Tree from the foregoing. The Leaves, he ſays, of the Tree, which the *Malayans* call *Caraudie*, are exactly like thoſe of the Tamarind-tree; but the ripe Fruit is incloſed in Shells, like Nut-kernels, one in a Shell, and not after the manner of Tamarinds. The Fruit, when the Shell is open'd, appears of an Orange-colour; and its outer Pulp is very grateful to the Taſte, and not ſo ſubject to ſet the Teeth on Edge as that of Tamarinds, but participates of a Sweetneſs; and, beſides, is not endu'd with a laxative Virtue, as are the Tamarinds. *Raii Hiſt. Plant.*

CARANNA, Offic. C. B. Pin. 503. J. B. 1. 319. Chab. 74. Park. Theat. 1576. Raii Hiſt. 2. 1847. Jonſ. Dendr. 356. *Caranna ſeu Caragna*, Geoff. Tract. 356. *Tlabuclilsca Quahuitl*, i. e. *Arbor inſaniæ*, *Caragna nuncupata*, Hern. THE CARANNA-TREE. *Dale.*

Hernandez, according to *Konigius*, in his *Regnum Vegetabile*, deſcribes the Caranna-tree to be tall, with a yellow, ſmooth, ſhining, and odorous Trunk, and oleaginous Leaves, diſpos'd in the Form of a Croſs. According to *Des Marchais*, in his *Voyage en Guinée*, the Caranna-tree is a Species of Palm, and ſpontaneouſly pours out its Reſin or Gum, when an Inciſion is made in its Bark. This Gum or Reſin is externally of a cineritious or blackiſh Colour, but internally of a Colour reſembling that of Pitch, of a bitter, pinguious, and oleaginous Taſte, of a fragrant Smell, reſembling that of Lavender.

This Gum is imported in ſoft Maſſes, wrapt up in the Shreds of Reeds or Bulruſhes, from *Carthagena*, a Province in the *Weſt-Indies*, or of *New-Spain*.

The whiter the Caranna is, the better it is thought, eſpecially if it is ſoft, and of the Conſiſtence of a Plaiſter. In Virtues it agrees with the Tacamahac, but is more efficacious. The *Indians*, according to *Monardes de Simplicibus Medicamentis*, uſe it in Tumors, and Pains of all Kinds. It is recommended in the ſame Diſeaſes in which Tacamahac is proper; but exerts its Virtues in a ſhorter Time, and cures thoſe Diſorders which prove too obſtinate for Tacamahac. Of this, ſays *Monardes*, I have ſeen an Inſtance in a Patient, who, in conſequence of a violent Pain of his Shoulder, could not move his Arm for a great while, tho' he had uſed Tacamahac; but, after he began to apply Caranna, his Diſorder was removed in three Days. This Gum is of ſingular Efficacy in Pains of the Joints, which, when apply'd, it eaſily removes; except in Caſes where there is a Defluxion of hot Humours. It diſcuſſes inveterate Tumors, and puts a timely Stop to Defluxions of cold or mix'd Humours. It is highly beneficial in any Pains of the Brain and Nerves; and, without an Admixture of any other Medicine, cures recent Wounds, eſpecially of the Nerves and Joints. If apply'd to the Ears and Temples, it ſtops Defluxions on the Eyes and other Parts. Theſe are the Virtues which *Monardes* aſcribes to Caranna. *Ettmuller*, *Tom.* 1. informs us, "that, "in Cardialgias, Pains, and other Diſorders of the Stomach, "it is often apply'd, by way of Plaiſter, to the Region of the "Stomach. The Method of preparing it for this Purpoſe is, "to put it in a warm Mortar, and, with a warm Peſtil, to "mix it with a ſufficient Quantity of Balſam of *Capivi*. "Nothing is better than this Plaiſter in continued, malignant, "and intermitting Fevers, where the Patients complain of an "Uneaſineſs of the Præcordia. It is alſo proper for ſtopping "Vomitings, when made up with the diſtil'd Oils of Nut-"meg and Mace. This Plaiſter is highly beneficial in Pains "of the Joints, commonly aſcrib'd to catarrhous Defluxions, "in Caſes where the Joints have been expoſed to Cold, either "during a Diaphoreſis, or after it is over. When moiſten'd "with Oil of Amber, it is an excellent Remedy againſt arthri-"tic Pains, and thoſe of the Joints; as alſo for Wounds of "the Nerves, and Contuſions of every Kind. It is alſo uſed "in Cephalic Plaiſters, and thoſe apply'd to the Bregma. The "Moderns apply a Plaiſter of it, as big as a Dollar, to the "Temples, as a Preſervative againſt the Tooth-ach; but, for "this Purpoſe, Maſtich is by moſt preferr'd to it. In Inflam-"mations of the Eyes, apply'd in the ſame manner, it is an "excellent Remedy for preventing Defluxions, and giving a "Check to the Lymph, which often abounds too much in "Ophthalmies and Tooth-achs." In *Schroder's Pharmacopœia* there is a celebrated Plaiſter againſt the Gout, prepar'd of one Ounce of Gum Caranna, and half an Ounce of yellow Wax, made up with Oil of Mullin. *Faber*, in his *Myrotheciun Spagiricum*, *L.* 2. *C.* 41. orders the Quinteſſence of Caranna to be prepar'd in the following manner:

> Digeſt Caranna with highly rectify'd Spirit of Wine, in a moderately warm Heat, for fifteen Days, that it may be diſſolved: Then diſtil; but obſerve the Degrees of the Fire ſo carefully, that firſt a Spirit, then a yellow Oil, and laſtly a reddiſh Oil, may be yielded: Rectify theſe Oils three or four times: Calcine the remaining Fœces. With theſe Oils mix, in a moderate Bath-heat, the Salt, lixiviated from the calcin'd Fœces, after it has been often calcin'd and diſſolved.

This Medicine he highly recommends for external Uſe, either alone, if the Part affected be anointed with it moderately warm; or, mix'd with other Ointments, in arthritic Pains, ariſing from a cold Cauſe; as alſo for diſcuſſing or ſoftening hard, cold, and ſcirrhous Tumors; and for healing old and inveterate Ulcers: As alſo in colic Pains, ariſing from Phlegm, and glutinous or flatulent Humours. It is alſo good in a Hemicrania, and Pains of the Head, ariſing from a cold Cauſe. He recommends it to be taken internally from ten to twelve Drops, in a poach'd Egg, Syrup of Violets, or Syrup of Poppies. In *America* there is a celebrated Balſam, made of Caranna, for Wounds, and the Hæmorrhoids. *Pomet*, *L.* 2. orders it to be prepar'd in the following manner:

> Take of the beſt Turpentine, half an Ounce; of liquid Amber, three Ounces; of Balſam of Capivi, Tacamahac, and Caranna, each two Ounces; of Maſtich, Myrrh, Aloes, Frankincenſe, Dragon's-blood, and Sarcocol, each one Dram: When the Gums and Reſins are melted over a Fire, the other Ingredients, reduced to a Powder, are to be mix'd with them.

Geoffroy obſerves, that this is term'd a Gum, but very unjuſtly, becauſe it is diſſoluble only in Spirit of Wine, which is the Property of reſinous Subſtances.

CARA-NOSI. An *Indian* Shrub. The ſame as NEGUNDO, which ſee. *Ray.*

CARAPATINA. The ſame with BUFONITIS, which ſee.

CARARU *Braſilienſibus*, *Blitum Braſilianum Luſitanis*, Bredoſ. Margg. A Species of Blite growing in *Braſil*, which has in it nothing remarkable. *Raii Hiſt. Plant.*

CARA-SCHULLI, H. M. *Frutex Indicus ſpinoſus*, *Capparis Forma*, *Siliqua bivalvi brevi*. An *Indian* Shrub, like the Caper-ſhrub. As to its medicinal Uſes, being reduced to Powder by the Fire, and mix'd with Vinegar, and rubb'd on the Part, it diſſolves Tumors. Beaten to Powder, and mix'd with the Liquor call'd *Surie*, made of the Cocoa-nut, it ſerves to ripen and break Abſceſſes. The Decoction of the Root is good in a Suppreſſion of Urine; taken with a little Rice, it is effectual in a Tumor of the Belly. A Decoction of the Leaves, with a ſmall Quantity of Rice, taken inwardly, is good to extenuate tumefy'd Limbs. *Raii Hiſt. Plant.*

CARATA, or KARAT. This was a Weight antiently uſed by the Workers in Gold, and Lapidaries. With reſpect to Gold, twenty-four Karats made a Marc; but, in our Times, it is only uſed for judging of the Purity of Gold. But, with reſpect to precious Stones, the Word *Karat* imported a Weight only of four Grains. *Rieger.*

CARAUCIA. See under CARABUREA.

CARBASUS, κάρβασος, ἄμμινον. Thin Linen, or Threads of fine Linen, on which Surgeons lay their Powders, or ſpread their Ointments, to be apply'd to diſeaſed Parts; or uſe to dry up the ſuperfluous Moiſture in ulcerated Places. The Words uſed by *Scribonius Largus*, N°. 227.

CARBO. A Coal; properly, I think, Charcoal, which is generally meant by Authors, when uſed without the Epithet *Foſſilis*. Foſſil Coals are thus diſtinguiſh'd.

CARBO FOSSILIS, *Lithanthrax*, Offic. Mer. Pin. 216. *Lithanthrax ſeu Carbo foſſilis*, Charlt. Foſſ. 14. Boet. 339. *Carbo foſſilis*, *ſeu Lithanthrax*, Worm. 31. Gæbal. 26. PIT-COAL, or SCOTCH COAL.

Upon the Subject of foſſile Coal, *Hoffman* has given us the following curious Remarks.

To diſcover the Elements or Principles of foſſile Coals, by means of a chymical Analyſis, ſays he, is our preſent Deſign. Theſe Coals, then, diſtil'd from a Retort by an open Fire, yield firſt a Phlegm, then a ſomewhat acrid ſulphureous Spirit, then a ſubtile Oil, then a groſſer Oil, which ſubſides to the Bottom of the Receiver; and, laſtly, by a briſker Degree of Fire, a certain acidulated Salt, reſembling that of Amber. In the Retort there is left a light black Earth, which, upon the Application of Fire, emits neither Flame nor Smoke. I ſhall here give a brief, but accurate Deſcription of the ſeveral Experiments I made, in order to inveſtigate the Nature of theſe Principles.

The Spirit yielded in Diſtillation is at firſt white, but afterwards appears ting'd with a reddiſh-brown Colour; which Phenomenon may alſo be obſerved in the Spirits yielded by Woods, Tartar, Myrrh, and other Subſtances of a like Nature. Upon an Affuſion of the acid Spirit of Salt, a large Number of Bubbles immediately appear'd at the Bottom of the Veſſel, which, becoming gradually and ſucceſſively more numerous, aſcended to the Surface of the Liquor, but without any remarkable Perturbation of the Mixture. With Spirit of Nitre the Conflict was greater, and the Liquor was render'd more turbid,

Upon a ſufficient Quantity of Quick-lime being thrown into this Spirit, a ſtrong volatile Spirit immediately affected the Noſe in a forcible manner. Upon an Affuſion of Spirit of Nitre to this Mixture, a thick white Fume was forthwith emitted; which we always obſerve to happen, when we add Spirit of Nitre to volatile Salts or Spirits. The fetid Oil, intimately united and incorporated with Salt of Tartar, alſo diffuſed a Smell like that of volatile Salt. Upon Diſtillation, this Mixture yielded an alcaline, volatile, and oleous Spirit, which immediately became green with Syrup of Violets, as all Alcalis do; but, when mix'd with an Acid, raiſed a ſudden Efferveſcence, and immediately aſſum'd a perfectly red Colour.

The groſs empyreumatic Oil of theſe Coals, obtain'd in the firſt Diſtillation, emitted a ſulphureous Smell. When put into a Silver Spoon, to which a gentle Heat was apply'd, it immediately ting'd it of an obſcure blackiſh Colour; a ſure Proof, that a true mineral Sulphur is diſſolved in it; for common Sulphur, diſſolved in Oil of Turpentine, tinges Silver Veſſels with the ſame Colour.

The acid Salt, upon an Admixture of Oil of Tartar per Deliquium, aſſum'd a near Affinity to that obtain'd from Amber by Diſtillation. Spirit of Sal Ammoniac excited a large Number of very broad Bubbles, which collected themſelves in the Bottom of the Glaſs: But, immediately after, the Mixture, which was before limpid, aſſum'd a reddiſh Colour; and, upon the Affuſion of an Acid, return'd to its former Tranſparence.

'Tis rarely obſerv'd, that an Acid is thus ting'd by an Alcali. That I might, therefore, trace the Cauſe of this Phenomenon more accurately, I mix'd diſſolved volatile Salt of Amber, which I thought of a like Nature with the Salt of which we now ſpeak, with vinous Spirit of Sal Ammoniac; by which means, after ſome Conflict, the Mixture in a little time aſſum'd a beautiful browniſh-red Colour; and an excellent Medicine, of Virtues not inferior to ſuccinated Spirit of Hartſhorn, was produced.

Theſe are the principal Experiments I made, in order to inveſtigate the Nature of foſſile Coals; from which, I think, it is obvious, that no deleterious Principle, nothing offenſive to the Maſs of Blood, and the minuteſt Parts of the Body, in a Word, no noxious Mineral, no Quantity of Arſenic, are found in them.

That a mineral Sulphur is not ſo fatal as is commonly believed, is ſufficiently atteſted by thoſe Men who prepare, fuſe, and boil the Sulphur of *Goſlar*, who are ſound and vigorous, in compariſon of other Metal-workers. Nor is there, in the *German* Coal, a very conſiderable Quantity of this Sulphur, otherwiſe it might be eaſily obtain'd dry, and in the Form of Flowers, by Sublimation; for theſe mineral Coals are a porous and ſpongious Earth, richly and intimately impregnated with a bituminous and ſubterraneous Juice. Bitumen is their conſtituent Principle, without which they would neither emit Flame nor Smoak: But the Bitumen they contain, like all the other Species of Bitumens, of which Amber is one, conſiſts of oleous, ſulphureous, acid, and fine alcaline Parts, as is obvious from the chymical Analyſis of Amber, Bitumen Judaicum, Naphtha, Petroleum, and all other reſinous Bodies.

So far, then, are theſe Principles from proving prejudicial to the vital Juices, that, by drying up the ſuperfluous Humidity, they rather defend the Maſs of Blood, and the Body, from Corruption and Putrefaction; for, according to *Galen*, all Bitumens are endow'd with a balſamic Virtue. Beſides, that bituminous Bodies, ſet on Fire, correct the bad State of the Air, and diſſipate its ſuperfluous Humidity, are Points admitted by moſt modern Phyſicians; and the Antients uſed Sulphur and Aſphaltus, in order to correct and purify the Air, when Plagues and contagious Diſeaſes raged.

Places in which the Atmoſphere is very moiſt, and impregnated with aqueous Exhalations, which weaken its Force and Elaſticity, are not wholſome; becauſe, by that means, Perſpiration being obſtructed, a Load of recrementitious and ſaline Sordes are retain'd in the Body, and communicate a depraved and ſcorbutic Intemperature to the Blood and Humours, from which terrible chronical Diſorders ariſe. 'Tis therefore obvious, that the ſulphureous Vapour of foſſile Coals is of ſingular Service in Countries where the State of the Air is moiſt and unactive, as is evident from the City of *Halle*.

An immenſe Quantity of aqueous Exhalations, ariſing not only from the River *Sale*, diffuſed into many Branches, but alſo from the Salt-works, whilſt each Day at leaſt ten thouſand Pounds of Water are evaporated into the Atmoſphere ſurrounding that City, muſt of courſe beſet the Town, at Morning and Night, with Clouds, which every one muſt perceive to be prejudicial to Health, unleſs an Eaſterly or Northerly Wind diſpel them. And, in Times paſt, no City was more obnoxious to Scurvies, Conſumptions, purple and malignant Fevers, than *Halle*; but ſince, about twenty Years ago, they began to burn foſſile Coals for boiling the Salt, the Atmoſphere is ſo purify'd, that theſe Diſeaſes are ſcarce heard of in that City. In former Times the Phyſicians, who practiſed in it, complain'd, that no Diſeaſe occur'd to them, which was not accompany'd with a ſcorbutic Taint. Numbers of young Men were cut off by Conſumptions and Dyſenteries; and petechical and ſpotted ſcorbutic Fevers raged exceſſively; but now theſe Diſorders happen rarely, and then only a few are affected with them.

But I am well appris'd, that it is by ſome objected, that the Exhalations of foſſile Coal are rather pernicious than advantageous to Health; becauſe they prey upon Metals, eſpecially the Iron and Lead of Windows, which they conſume; and becauſe, in Gardens which are near them, and thick ſet, they render the Trees and Shrubs barren and ſapleſs. 'Tis alſo objected, that in *England*, and eſpecially *London*, a Conſumption is produced, peculiar to that Country, by a preternatural Dryneſs of the Veſicles of the Lungs, in conſequence of this Smoak; as alſo, that its Smell is fetid, and highly diſagreeable.

But to all theſe Objections we anſwer, That tho' the Smoak ariſing from a mineral Sulphur, and from Vinegar, are poſſeſs'd of a powerful Virtue, by which they conſume thoſe lighter and more porous Metals, Iron and Lead; they are not, for that Reaſon, leſs proper for purifying the Air, when a Plague rages, or diſſipating its ſuperfluous Moiſture, ſo prejudicial to Health. Beſides, that this Smoak does not, in the leaſt, injure the Health of thoſe People who inhabit the Houſes expoſed to it, and in which the Leads of the Windows are corroded, is a Fact atteſted by daily Experience, ſince few of them labour under any Diſorders of the Breaſt.

That this Smoak, however, may prove prejudicial, when thick and denſe, is a Fact of which I am firmly perſuaded; for as a large Quantity of Exhalations from a balſamic Gum, which is friendly to Nature, for Inſtance, from Maſtich, Benjamin, or *Peruvian* Balſam, is ungrateful; ſo 'tis not to be doubted, but the denſe Vapour of Bitumen, which is not very grateful, may create Diſorders; which, however, ſeems to be owing not ſo much to its Nature, as to the Exceſs of its Quantity. 'Tis not, therefore, to be wonder'd at, if in *London*, where a groſs State of the Air, Gluttony, and exceſſive Drinking, eſpecially of ſpirituous Liquors, induce a morbid State of the Humours, an exceſſive Quantity of the Smoak, ariſing from foſſile Coals, ſhould prove prejudicial, and produce a Dryneſs of the Lungs.

As to that Objection of the Smoak being fetid, diſagreeable, hurtful to the Nerves, and membranous Parts, and prejudicial to thoſe who labour under a Weakneſs of the Nerves and Head, we anſwer, That tho' the Smells of fetid Subſtances are not always grateful to the Delicate, yet they are not, for that Reaſon, prejudicial to Health; as is obvious in the Spirits of Soot, Worms, and Hartſhorn, which are all highly fetid. But how much theſe Spirits contribute to repair the Strength, and to preſerve and purge the Maſs of Blood and Humours, is known to almoſt every one concern'd in Phyſic. It muſt alſo be obſerved, that the Smell, even of Perfumes, is ungrateful to many; as we obſerve in Women who have weak Nerves, and who not only bear Fetids more chearfully, but receive a Kind of Relief from them. *Hoffman's Obſer. Phyſico-chymicæ ſelectiores.*

It would be happy for the *Engliſh*, if their Conduct would permit me to contradict, with Truth, the Charge which *Hoffman* has brought againſt them.

Of Vegetable Coals.

All vegetable Subſtances, eſpecially Woods, when treated with a cloſe Fire, are converted into Coals, which are porous, light, black Bodies, retaining the Figure of the original Body, and which eaſily take Flame; and, by a ſtrong Degree of Fire, partly fly off in the Air, and partly are reſolved into Aſhes.

The Coals moſt frequently in Uſe are thus prepared:

A Pile of Wood is rear'd up, and cover'd with Earth. Fire is then put under it. Thus it is kept from flaming openly; and the Fire, gradually and gently ſeizing the Wood, thoroughly extracts all its Moiſture; as alſo its acid Principle, and the ſubtile Oil it contains. The remaining thick Oil is indeed extracted, but afterwards penetrates more deeply into the Pores of the Parts.

In conſequence of this Oil being diſengaged, and ſet at Liberty, they eaſily take Flame; juſt as we ſee Linen Cloth, ſo gently burnt, that all their Oil is not extracted, afford a Baſis, and prove, as it were, a Nouriſhment to the Fire. This is what we call Tinder, which is uſed for renewing the Sparks of Fire ſtruck from Steel and Flint. Not only all Vegetables, but alſo all the Parts of Animals which preſerve their Blackneſs, may be converted into Coals of this Kind, fit for taking Flame.

But 'tis to be obſerved, that no Kind of Coals, even by the greateſt Force of Fire, will either burn, or be converted into white Aſhes, in a cloſe Veſſel; which eaſily happens in the free and open Air, where they are reſolved into a fine Smoak, leaving Aſhes, which, when lixiviated, afford an alcaline Salt, if the Coal has been taken from the Vegetable Kingdom. If theſe Aſhes, which are impregnated with Salt, are boil'd in

Water,

Water, the Salt becomes more cauſtic; which Effect is alſo produced, if they are form'd into ſmall Balls with Water, dried, and again ſubjected to the Fire. Tho' this Species of Coal is generally uſed for Fewel, yet it is of more extenſive Uſe for anſwering the various Purpoſes of Mechanics, Chymiſts, and Metal-workers.

But as there is a great Difference between Vegetables, ſo the Coals produc'd from them vary proportionably from each other. Beech-wood is prefer'd to all others for Fire, and the Coals prepar'd of it are better and more valuable than all others, for which Reaſon they are us'd for converting Iron into Steel; for the more ſolid and ponderous Coals are, the fitter and more proper they are for this Purpoſe. *Becher*, in his *Phyſica Subterranea*, mentions an Experiment, by which Coals may be reduc'd to an inflammable inſipid Spirit, by being mix'd with diſtil'd Vinegar; but as little Credit is to be given to the Experiments of this Author, ſo we have ſome Reaſon to doubt of the Succeſs of this.

'Tis, however, certain, that Coals, by a lively briſk Flame, are diſſolv'd into a very fine and ſcarce viſible Vapour, and are diſſipated into the Air without any ſenſible Smell; but this Vapour or Smoak immediately becomes viſible, if with a clean Pen Letters are made on a Piece of Paper with a Solution of Alum, or with Spirit of Vitriol; for when the Letters are dry, and the Paper held over the Smoak of the Coals, they appear as black as if they had been wrote with the blackeſt and beſt ſaturated Ink.

If in a Room, eſpecially one with a low Cieling, the Air is impregnated with this ſubtile Vapour ariſing from kindled Coals, eſpecially in cold Weather, it is as fatal to Animals, eſpecially to Man, as Poiſon, and induces an apoplectic Stupor and Drowſineſs, which, if due Meaſures are not taken, kill the Patient in a ſhort time; innumerable Inſtances of which every-where occur, eſpecially if, in cold Winters, too large a Quantity of theſe Coals are incautiouſly put into the Stove. The noxious and prejudicial Quality of this Vapour has been obſerved by the antient as well as the modern Phyſicians, and numberleſs Examples of its bad Effects are ſpecify'd by them.

But, tho' the noxious Quality of this Vapour has long ago been prov'd by uncontroverted Facts, it is ſurpriſing, that it ſhould be ſo much overlook'd, and ſo little adverted to, by moſt of our modern Phyſicians, that few of them have taken the leaſt Notice of it, or laid down the Precautions which an Affair of ſuch Importance ſeems to require; much leſs has the Cauſe of this noxious Quality been inquir'd into, or the Reaſon inveſtigated, why this Smoak, drawn in with the Breath, throws the Patient into a profound Sleep, a Stupor of the Senſes, a Palſey, a Hemiplegy, and, if ſeaſonable Relief is not afforded, induces Death itſelf.

But ſince almoſt the ſame Effects are obſerv'd to be produc'd by the Smoak of common Sulphur, whilſt a very ſmall Portion of it, ſet on Fire in a little Room, kills ſome Animals, we are to inquire whether Coals and mineral Sulphur are poſſeſs'd of one common Principle, by which they produce ſo ſudden and ſo fatal Effects.

'Tis well known, that a few Grains of Sulphur, ſet on Fire, will diffuſe a large Quantity of a very fine, but fetid Fume thro' all the Parts of a large Room. 'Tis not to be doubted, but by the Fire almoſt the whole Subſtance of the Coal may be diſſipated in the Air, in a fine inviſible Smoak or Exhalation, which alſo becomes viſible when Letters are wrote upon a Paper with a Solution of Alum, and apply'd to the Smoak of the Coals, as we have already obſerv'd.

This thin and ſubtile Vapour, then, being carried into the Air, and, by Inſpiration, convey'd thro' the Noſtrils into the Head, and thro' the Aſpera Arteria into the Lungs, by the Tenuity of its Parts intimately inſinuates itſelf into the Pores of the ſolid Parts and Veſſels, and penetrates the minuteſt Pores of the Nerves, Meninges, and Brain, where, conveying a Taint into that fine ſubtile Fluid, by means of which Senſation and Motion are perform'd, it diſturbs and inverts the animal Actions. It alſo happens, that the Air being impregnated with a great deal of theſe Vapours, when it is received into the Lungs, loſes a great deal of that Force and Elaſticity by which it ought to diſtend and inflate the pulmonary Veſſels.

Now ſince mineral Sulphur, the Vapour of which is as prejudicial as that ariſing from live Coals, conſiſts of two Subſtances, one of which is of an acid, and the other of a pinguious earthy Nature, which takes Fire; and ſince this ſomniferous and narcotic Virtue does not reſide in an acid Spirit; the Cauſe muſt be ſought for in that exhalable, ſulphureous, or phlogiſtic Subſtance, ſuch as is alſo found in Coals, from which, as is well known, Sulphur may be obtain'd by means of an Acid. Hence it happens, that the Vapour of Coals produces the ſame Effects, and the ſame Train of Symptoms in Animals, with the Smoak of Sulphur, the phlogiſtic Part of both being nearly the ſame. But every one knows, that all ſedative, narcotic, and anodyne Virtues, are to be deduc'd from Sulphur reſolv'd into very fine Vapours, as is obvious in Saffron, Opium, Nightſhade, Thorn-apple, Poppies, and Mandrake. Theſe Effects may be produc'd, tho' the Smell of the Coals is not really perceiv'd, becauſe the Smell ariſes not ſo much from the Sulphur alone, as from that, and a Mixture of the Salt which exalts it.

We ſhall now recount the various Phenomena produced by throwing various kinds of Salts and Minerals upon live Coals. Firſt, then, Nitre, fus'd in a Veſſel by a very intenſe Fire, does not burn; but, upon throwing live Coals into it, immediately takes Flame; which greatly increaſes the Fire of the Coals themſelves, juſt as if a Bellows were apply'd to them.

Common Salt, when thrown upon live Coals, not only decrepitates, but alſo animates and invigorates their Fire, and raiſes a whitiſh Smoak, which, when adhering to any Veſſel, is with Difficulty taken off, and taſtes ſomewhat ſaltiſh.

Vitriol, which partakes of the Nature of Copper, when thrown upon live Coals, emits a beautiful azure-colour'd Flame. If Alum is thrown upon them, it firſt boils, and riſes in a white Froth; and, upon increaſing the Fire, loſes all its Taſte, and remains an earthy, ſpongious, and white Body. When a few Drops of Oil of Vitriol are thrown upon live Coals, a Vapour, of a Smell reſembling that of Sulphur, is forthwith emitted.

Borax thrown upon them is firſt converted into a white Froth; and afterwards, by rendering the Fire more intenſe by a Pair of Bellows, it immediately runs into a Mucilage, which is ſoon turn'd into a vitreous pellucid Maſs.

I alſo made an Experiment with *Epſom* Salt, that of *Glauber*, depurated Aphronitre of *Gena*, as alſo with the *Sedlitz* Salt in *Bohemia*, the native *Schemnitz* Salt in *Hungary*, and that prepared from the Fountains of *Egra*. Theſe I threw ſeparately into the Flame, expecting a ſulphureous Smell to be emitted, but no ſuch Phenomenon appear'd; for they were firſt rais'd into a thick Froth, which, when all the Humidity was evaporated, ſunk down into a white earthy Maſs, of a ſaline ſubaſtringent Taſte, and which, with Spirit of Vitriol, neither produc'd an Ebullition, nor emitted any conſiderable Smell. But we obſerve a very ſignal Difference between theſe Salts, if they are not put directly and immediately upon the Fire of Coals, but are mixed with their Duſt, and Fire is afterwards apply'd to them in a Crucible; for, by this means, they are partly carry'd off into the Air, like the Fume of Sulphur, and partly leave behind them a ſulphureous alcaline Maſs.

By this Experiment alone we are ſufficiently taught the different Effects produc'd by treating ſome Bodies, even of the mineral Kind, with the Flame of Coals, and by ſubjecting them to the Fire, when mixed with the Powder of Coals in a cloſe Veſſel.

The Arcanum Duplicatum, vitriolated Tartar, and all neutral Salts with which the Acid of Vitriol is join'd, when thrown upon live Coals, firſt decrepitate gently, and afterwards fly off in the Air, without any viſible Exhalation or Smell, and without almoſt leaving any perceptible Traces of themſelves; whereas, when expoſed to the Fire in a Crucible, and mix'd with Powder of Coals, they are, by the Addition of a ſmall Quantity of an alcaline Salt, converted into Liver of Sulphur.

In Metal-working it is a remarkable Circumſtance, that Tin, Iron, Copper, and Lead Ore, as alſo the Calxes of Antimony, the Scoriæ and Glaſſes of Metals, are not converted to a pure Metal, unleſs Coals are intimately mix'd with them, and they are then fuſed by an open Fire. Whether by this means, as ſome think, any Part of the phlogiſtic Principle of the Coals paſſes into the Mixture of the Metal, and reſtores that which is carried off in Calcination by the Fire, or by the Addition of any other Subſtances; or rather, whether, by this means, that which prevents and hinders the Fuſion of the Metals is only remov'd, are Points that deſerve a more accurate Diſquiſition.

The Phenomenon is, in my Opinion, to be accounted for in another manner. The Acid of the Sulphur inheres in the metallic Ore, becauſe, by the previous gentle Calcination, the oleous and inflammable Part flies off. The Calxes alſo, and Glaſſes of Metals and Minerals, are produc'd by an Acid, which intimately penetrates their Pores, and changes the Figure and Situation of their Parts; but when this acid Salt, which is the Cauſe, is remov'd, they return, and are reſtor'd to their former State and Contexture. For theſe Purpoſes, then, ſuch Subſtances are indicated as penetrate intimately, and poſſeſs a Power of abſorbing an Acid, among the Number of which are Coals, which, when in a Flame, not only afford an immediate Fire for reducing Bodies, but alſo, by their oleous, rarefactive, alcaline, and volatile Principle, enter the minuteſt Pores where the Acid lurks: This Acid they abſorb, and, by that means, reſtore the Metal. That the Smoak alone of Coals is of a very penetrating Nature, and fit for correcting Acids, is ſufficiently proved by the Obſervation of *Stahl*, who found, that the fix'd and acid Oil of Vitriol cannot be obtain'd, if in the Retort there are any Fiſſures, by which the penetrating Smoak of the Coals entirely changes and deſtroys the acid Vapour of the Vitriol, ſo that a highly volatile Spirit is yielded inſtead of a corroſive Acid.

'Tis

'Tis worthy our Obſervation, that the ſolid and highly lucid *Engliſh* Phoſphorus cannot be prepared in ſo large a Quantity, unleſs Powder of Coals is added to the putrid and inſpiſſated Urine.

How beneficial Powder of Coals is in rendering the Ground fruitful, is well known to Gardeners, who for that Purpoſe uſe Coal Duſt, Marls, and old Mortar taken from Walls. 'Tis incredible how ſurpriſingly Lemon and Orange-trees, as alſo Clove-gilly-flowers, thrive by this means.

The Duſt of Coals renders moiſt Soils ſo fruitful, that the Strawberries produc'd in them are by this means render'd much larger than they would otherwiſe be; and all Plants are conſiderably enlarged; for that earthy and ſulphureous Alcali lodg'd in the Coal Duſt, being reſolved by the Rain, and the Heat of the Sun, renders the Earth ſo fruitful, that the nutritive Juice, percolated thro' it, not only quickly enters the minuteſt Pores of the Vegetables, but is more eaſily converted into their Subſtance.

From this Experiment it is obvious, that the chief Principle of Fecundation is rather to be ſought for in a ſulphureous than in a ſaline Subſtance, which, if it is of an alcaline Nature, produces no other Effect than to attenuate and reſolve the ſulphureous Matter more, and to change and abſorb the Acid, which greatly obſtructs Vegetation.

Not only the Duſt of Coals, but much more the Bones of Animals calcin'd to black Aſhes, impart a certain Fruitfulneſs to the Ground, becauſe they contain in them a larger Quantity of Oil than Coals do; ſo that they may very properly be us'd, in Conjunction with other Subſtances, to forward the Growth of Vegetables.

We have no Reaſon to doubt of the anodyne Virtues of Coals in ſpaſmodic and convulſive Diſorders, ſince Coals of the Lime-tree make the principal Ingredient in the black antiepileptic *Saxon* Powder, which has acquir'd ſo extenſive a Reputation for the ſurpriſing Effects it produces. *Rulandus*, in his *Theſaurus Medicus*, informs us, that Epilepſies, Gripes, Colics, and Fluxes, are cur'd by the Coals of the Lime-tree. *Hoffman. Obſervat. Phyſico-chymicæ.*

I muſt take the Liberty of adding to what *Hoffman* relates concerning the deleterious Vapour of vegetable Coals, that foſſile Coals, eſpecially thoſe half burnt, which are uſually call'd *Cokes*, will have a like Effect, if the Fumes thereof are confin'd in a ſmall Room. Of this I met with Inſtances in two Servant-maids, who took ſome Coals in a Warming-pan into a damp Room where they lay, in order to warm it during the Night. The Conſequence of this was, that the next Morning they were found, in all Appearance, expiring, being ſenſeleſs and ſtupid. The Method I took for their Relief was, immediately to expoſe them to the freſh Air, to bleed them, and to attempt to reſtore the Circulation of the Blood by Frictions, and every thing which would ſtimulate ſtrongly, either adminiſter'd internally, or applied externally. By theſe means they both recover'd in a few Hours; being more fortunate than two other Servants of the ſame Sex, who were found actually dead in the Morning, on account of the ſame Imprudence, in the Neighbourhood where I at that time reſided.

CARBUNCULUS, ἄνθραξ, a Carbuncle.

Of Ulcers which ariſe from internal Cauſes, and corrupt a Part of the Body, there is none worſe than a *Carbuncle*, the Characters of which are as follow: There is a Redneſs, with an Elevation of Puſtules, though to no great degree of Eminence. Thoſe Puſtules are generally black, ſometimes livid, or pale: They ſeem to contain a Sanies, and are black within. The Part poſſeſs'd by the Carbuncle is dry, and harder than in its natural State, cover'd with a kind of Cruſt, and environ'd by an Inflammation. In that Place there is no raiſing of the Skin, which ſeems fix'd to the ſubjacent Fleſh. The Patient is oppreſs'd with Drowſineſs, and ſometimes is ſeiz'd with a Shivering, or Fever, or both. The Diſeaſe ſpreads underneath, and out of Sight, ſometimes ſlowly, ſometimes ſwiftly, and propagates itſelf, as it were, by Roots. Above, as it takes its Progreſs in open View, it appears firſt whitiſh, then livid, and ſurrounded with ſmall Puſtules; and if it happens about the Stomach or Fauces, it often ſuddenly ſtrangles the Patient. *Celſus*, *Lib.* 5. *Cap.* 28.

Carbunculus is defin'd by *Galen*, or whoever is the Author of the *Definitiones Medicæ*, Ἐξαρσώδης ἕλκωσις, μὴ ῥευμάτων καὶ φλεγμαίνουσα, ἐνίοτε καὶ βεβώσαν, καὶ πυρετῶδες. "A cruſty ſpreading Ulcer, "attended with a Conflux of Humours, and ſometimes with "Buboes and a Fever." *Galen*, *Com. ad Aph.* 45. *Lib.* 6. gives a ſhorter Definition, tho' not diſagreeing with the former, as follows: Ἄνθραξ ἐστὶν ἕλκος ἐξαρσῶδες ἅμα πολλῇ τῇ περὶ πέψεις σωμάτων φλογώσει "A Carbuncle is a cruſty Ulcer, attended "with a great Inflammation of the adjacent Parts." It derives its Original, according to the ſame Author, *Lib.* 2. *de Præſag. ex Puls. Cap.* 1. from melancholy Blood putrefying, and inflam'd to ſuch a degree as to burn the Skin. And, in his *Comment.* 3. in *Lib.* 3. *Epid.* he ſays, Ὁ ἄνθραξ ἐκ δεσμῆς μέλανος πυρούται, παχέας δὲ καὶ τὴν σύσασιν ἔχει τὴν γίνεσιν "A Carbuncle is generated of a groſs Matter, and attended "with a fiery Heat."

Paulus Ægineta gives the following Original and Deſcription of a Carbuncle: Τὸ αἱμα μελαγχολικώτερον γενόμενον, &c. "When the Blood becomes atrabilious to an immoderate De"gree, and, being put into an Effervescence, falls upon any "Part, there is generated what they call a Carbuncle, which "is a cruſty Ulcer, beginning, for the moſt part, with a "Puſtule (φλυκταίνης) like a Burn, and ſometimes without it. "At firſt the Patient falls a ſcratching the Part, when ariſes "ſometimes one Puſtule, ſometimes more, like Grains of "Millet for Smallneſs, which breaking there becomes a cruſty "Ulcer, as if it were produc'd by an actual Cautery. The "Cruſt appears ſometimes of an Aſh-colour, and ſometimes "black, and alſo adheres, and is fix'd on its Baſe, to the Part, "and dilates itſelf by its phagedenic Property. The Fleſh all "around is very much inflam'd and black, and ſhines like "Pitch or Bitumen. This exactly anſwers the Nature of "black Bile. Carbuncles in the Fleſh are but of ſhort Dura"tion; but thoſe which affect the Membranes and Nerves are "of longer Continuance, and communicate their ill Effects, "by Conſent of Parts, to the neighbouring Places, ſo as to "affect them with eryſipelatous Inflammations, many of which "come to a Suppuration, but moſt of them are attended with "a Fever. Carbuncles, alſo, ariſe from epidemic Cauſes." Thus *P. Ægineta*, *Lib.* 4. *Cap.* 25. whom *Actuarius* copies Word for Word.

A Carbuncle is an Inflammation, which, in peſtilential Times, riſes with ſuch Veſicles as are the uſual Effects of a Burn. This Inflammation, for the moſt part, ſuddenly degenerates into a Sphacelus, and corrupts the ſubjacent Parts to the very Bones, rendering them as black as a Coal; and this ſeems to be the Reaſon why the *Latins* call this ſort of Puſtules or Veſicles *Carbunculi*, and the *Greeks* ἀνθρακες, *Anthraces*.

A Carbuncle almoſt always breaks out very ſuddenly and unexpectedly, in an Hour or two at the moſt, and is attended with a Pain and Heat. As ſoon as it is opened, it diſcharges a livid Sanies, or ſometimes a limpid Water. It is black within, which is a Sign, that the Sphacelus has already ſeiz'd the ſubjacent Fleſh, and is making its Progreſs; but in thoſe who recover, there is by degrees a Separation made between the corrupt and the ſound Fleſh, by means of Suppuration. Thoſe peſtilential Veſicles are more or fewer, larger or leſs, at different Times, on the ſame Perſon; and there is ſcarce a Part of the Body but is ſubject to be infeſted by them, and they are ſeldom or never obſerv'd without Buboes.

The proximate Cauſe of a Carbuncle is, no doubt, a violent Inflammation excited in the Blood by the Virulence of the peſtilential Contagion. The Conſequence of this Inflammation is a ſudden Corruption of the Part, or a Sphacelus; for there is no Generation and Maturation of Pus in this as in other Tumors, but all the corrupted inward Parts are immediately ſeparated, and fall off: Or, in other Words, the adjacent Parts by degrees receive the Inflammation, and, unleſs ſudden Death happens, are converted into a Suppuration, in which Caſe the Carbuncle is ſeparated from the ſound and living Fleſh, and by degrees wholly ejected.

A Carbuncle is a very dangerous Diſeaſe, as Experience ſhews, and much worſe than a Bubo, eſpecially if the Puſtules turn black or livid immediately after Eruption; for the Diſorder is of a milder Nature, when the Puſtules are at firſt red, and gradually become of a Lemon-colour. The worſt are obſerv'd to be thoſe which ariſe in the Face or Neck, on the Breaſt, or under the Arm-pits; for they almoſt conſtantly deſtroy the Patient. *Heiſter*, *Chirurg.*

There is another kind of Ulcer, which ſome call a Carbuncle, different from this above deſcrib'd. *Van Swieten*, in his Commentary on *Boerhaave*'s *Aphoriſms*, thus deſcribes it: A Carbuncle, he ſays, is a Name which our modern Surgeons give to an Ulcer, when after a violent, and commonly very painful Inflammation, there happens a Rupture of the Skin in ſeveral Places, and Fragments of the corrupted Panniculus adipoſus are diſcharg'd at the Orifices.

Celſus, *Lib.* 2. *Cap.* 18. takes Notice of a Carbuncle on the Penis, which ſhould ſeem to be a ſort of *Chancre*; but his Deſcription is not very diſtinct. *Ætius* and *Paulus Ægineta* likewiſe mention it.

There is no better Way of treating a Carbuncle than by immediate Application of an actual Cautery; nor need we be apprehenſive of the Pain, for it has no Feeling, becauſe the Fleſh is dead; and we muſt continue to cauterize till the Pain be thoroughly felt in all Parts, after which the Ulcer is to be treated like other Burns: Thus, when corroſive Medicines have induc'd a Cruſt over the Part, the ſame, being duly ſeparated from the living Fleſh, draws with it all the corrupt Particles, ſo that the Sinus, being now freed from Impurities, may be heal'd with Incarnatives. If the Diſeaſe be only ſuperficial, or ſeated on the Surface of the Skin, it may be cur'd by Corroſives alone, or, if Neceſſity requires, by cauterizing, which

which is to be more or leſs ſevere, in proportion to the Greatneſs of the Diſtemper; but whatever Remedy you apply, if throughly effectual, it will immediately ſeparate the corrupted from the ſound Parts.

And we may generally depend upon a Cure, if the corrupt Fleſh falls off whenever the corroſive Medicine exerts its Virtue; but if this does not happen, and the Diſeaſe proves too ſtrong for the Remedy, we muſt have ſpeedy recourſe to Cauterizing. In theſe Caſes we muſt abſtain from Food and Wine; but it is good to drink plentifully of Water. Theſe Directions are to be obſerved with the greater Strictneſs, if the Diſorder be attended with a Fever. *Celſus, Lib. 5. Cap. 28.*

The Cure is to begin with opening a Vein, if there be no Contra-indication; and Bleeding till the Patient faints, proves beneficial in this and the like Caſes. As to the Part affected, the Inflammation ſeems to require Refrigerants, did not the Groſſneſs and Malignity of the Humour potently reſiſt Repellents; or were there no Danger, if they ſhould prove ſucceſsful, of diverting the Courſe of the peccant Humours inwards upon the noble Parts. However, the Afflux of the Humour is to be checked; for which End ſuch Medicines are required, as being moderately repellent, are alſo digeſtive. Of this Nature are Cataplaſms of Plantain, or boiled Lentils, mixed with ſoft Crums of Bread bak'd in the Oven, which has neither too much of the Bran, nor is wholly cleanſed from it; for what is quite pure is ſubject to ſtick, and obſtruct the Pores of the Skin; and the furfuraceous, or branny, is of too groſs Parts. To the Ulcer we muſt apply ſome powerful Medicine, ſuch as thoſe of Andron, Paſion, or Polyidas, [*ſee them under their proper Articles*] which are to be diſſolved in ſweet Wine to a ſtrigmentitious Conſiſtence: The proper Wines for this Purpoſe are the Theræum, or Scybelites; or for want of them Sapa, which we call Hepſema [*ſee what theſe are under their proper Articles*]. Digeſtives and Suppuratives, which are uſually apply'd to other Ulcers, are improper here; becauſe they would augment the Putrefaction of the Part. But after Bleeding, it may be proper enough to ſcarify ſuch kinds of Tumors, and to make the Inciſions pretty deep, becauſe of the Craſſitude of the Humour. The Inflammation being removed, the Ulcer muſt be cicatrized by the ſame Means as other Ulcers. *Galen, M. M. Lib.* 14. *Cap.* 10.

Paulus Ægineta, after having tranſcribed the Method of Cure quoted above from *Galen*, goes on thus:

The Powder of Maſſaliotes [*ſee the Word*] dry, or diluted with Paſſum, is to be uſed about the Ulcer; or the Root of Dracunculus, or of Birthwort, or the Juice of Silphium, may, any one of them, be uſed with Vinegar to anoint the Place. A Carbuncle, which appears like an Eryſipelas, muſt be anointed with ſomething adapted to that Diſeaſe. Thoſe Parts which are ſuſpected to ſuffer by Conſent, are to be embrocated with Wine and Oil, in unwaſh'd Wool. When the Heat is allay'd, cephalic Cerates diluted, and ſpread upon Linen, are properly apply'd to the Carbuncle. If the Hardneſs continues, the *Emplaſtrum melinum Serapionis* [ſee MELINUM] muſt be apply'd; and we muſt endeavour to bring the Carbuncle, as ſoon as poſſible, to a Suppuration; for which End the Cataplaſms, and other Medicines, muſt be changed, twice in the Day, and once in the Night. To eradicate a Carbuncle, and totally prevent its ſpreading, boil four Pomegranates in Vinegar, and when they are ſoft, ſpread them upon Linen, and apply them to the Place; when they are dry, moiſten them with Vinegar. Suppuratives and Breakers of Carbuncles are old or young Walnut-kernels, the Leaves, Buds, and freſh and tender Nuts of the Cypreſs-tree, with Polenta, Raiſins of the Sun ſtoned, dry'd Figs boiled in Wine, the Flowers of the yellow horned Poppy, the Juice of Silphium with Rue and a little Honey, and Tar mix'd with Raiſins and Hogs Fat.

An excellent Receipt for a Carbuncle is as follows:

> Take of Spuma Argenti, one Pound; old Oil, one Pound and an half; Orpiment, one Ounce: Boil the Spuma Argenti and the Oil together, till it will not ſtain; then taking it off, put in the Orpiment, and boil them again, 'till the Mixture becomes black; and beating it in a Mortar, uſe it ſpread upon Linen.

For Carbuncles, eſpecially in the Eyelids, and alſo for Gangrenes, old Chironian Ulcers, ſtrumous Swellings, and the Gout:

> Take of Opium, Acacia, Miſy torrefy'd, Squama Æris, each two Drams; Copperas, one Dram; Seeds of Henbane, one Dram: Bruiſe them, and uſe them in Water. The Plaiſter called the Tetrapharmacum is alſo a good Remedy, with an Addition of a fifth Part Frankincenſe.

For a Carbuncle in the Pudenda:

> Take of Chalcitis, Copperas, each eight Drams, twenty Grains; of Aphronitrum, two Drams: Bruiſe them, and uſe them with Water. Sheeps-dung torrefy'd and Honey is alſo a good Remedy.

In *Alexandria* they make a Cataplaſm of green Serapias; which is alſo called Orchis and Triorchis, and Crums of Bread; which they make uſe of for Carbuncles, and all cruſted Sores. When the Cruſt is fallen off, the Cure is the ſame as for common Ulcers. *P. Ægineta. Lib. 4. Cap. 25.*

The Cure of a Carbuncle by internal Means, ſuch as proper Diet and Medicines, muſt be regulated in the ſame manner as we have directed in the Caſe of a peſtilential Bubo (ſee BUBO); for the principal Part of the Cure conſiſts in keeping the Patient in a gentle and continual State of Perſpiration, or under a very gentle Sweat.

The external Cure is directed principally with a View to accelerate, as much as poſſible, the Separation of the Carbuncle or corrupted Fleſh from what is ſound. Therefore ſome of our modern Surgeons immediately, and not without Succeſs, betake themſelves to Scarification, making frequent Inciſions in the corrupted Part; by which means they evacuate the acrid and peſtiferous Matter, together with the corrupted Blood and Sanies. Others only open the Puſtules with the Sciſſars; and after Emiſſion of the Sanies, make repeated Inunctions of the Carbuncle with warm camphorated Spirit of Wine, or Spirit of Wine in which Theriaca Andromachi has been digeſted; and then apply a maturating Cataplaſm, ſuch as the following:

> Take of Honey, four Spoonfuls; Leaven, three Spoonfuls; two Yolks of Eggs; and half an Ounce of Soap: Mix them well together, and apply them warm: Or,
>
> Take of Meal of Wheat or Rye, two Ounces; with half an Ounce of Vinegar: Boil them in Water or Butter-milk; and, making of them a Cataplaſm, mix therewith an Ounce of Honey, and a Dram of Saffron; apply it warm, changing it very frequently.

The Cataplaſms or Malagmas above recommended, are to be continually apply'd till the Carbuncle be ſeparated from the ſound or quick Part, and fall off; for it is better to reſolve and looſen the Carbuncle from the other Parts by degrees, than to cut it out all at once. And there are not wanting Examples of ſuch, as by an unſeaſonable Exciſion of the Fleſh have killed their Patients; for we are taught by Obſervation, that the moſt exquiſite Pains, and other very dangerous Symptoms, are the uſual Conſequences of this extraordinary and over-doing Remedy. However, when the greateſt Part of the Carbuncle is looſen'd, and ſeparated from the quick Fleſh, the reſt of it which remains unlooſen'd, may be cut off with the Knife without much Danger.

When by too haſty an Exciſion, or elſe ſpontaneouſly, a bad Kind of luxuriant Fleſh grows within, it will be neceſſary to exterminate it by ſome Corroſive, as *Unguentum Ægyptiacum*, or the *Unguentum fuſcum Wurtzii*; or by what follows:

> Take of Honey, two Spoonfuls; two Yolks of Eggs; burnt Alum powder'd, Gentian, Birthwort, each one Ounce: Mix them, and make them into an Ointment.

If the Inflammation, as is not unuſual, inclines towards a Gangrene, it will be proper to apply the following Ointment:

> Take of Oil of Wormwood, an Ounce and an half; Scordium, Flowers of Elder, Flowers of Chamomile, each one Handful; pure Water, two Pints and an half: Boil them well together; ſtrain them, and inſtil therein ſix Ounces of the beſt Spirit of Wine, or camphorated Spirit; and two Ounces of Venice-treacle. Let this be apply'd in folded Linen Cloths or Bolſters to the Carbuncle, warm; and be very frequently repeated, till the Violence of the Inflammation be abated.

* But in Caſes where theſe bad Symptoms do not appear, it will not be improper, after ſeparating the Carbuncle from the ſound Fleſh, to deterge the Ulcer with the *Unguentum fuſcum Wurtzii*, or with ſome ſuch Digeſtive as we have deſcribed under the Article BUBO. This Deſign ought to be executed with the greateſt Care and Dexterity, leſt any Part of the Poiſon remaining within, ſhould lay a freſh Foundation for the Diſorder. For this Reaſon we are to continue deterging the Ulcer, till the leaſt Symptoms of the Plague are no longer to be diſcover'd. After this the Wound is to be conglutinated like other Abſceſſes, eſpecially by applying the Eſſence of Myrrh and Aloes upon Lint; as alſo the *Emplaſtrum de Lithargyro*, of others of a like Nature, till the Ulcer is entirely conſolidated.

Some Surgeons, indeed, of diſtinguiſhed Characters, maintain, that nothing is more effectual than the actual Cautery, either for the Extirpation or Cure of the Carbuncle; for they

forthwith order the mortified Flesh to be cauterized, till a Sense of Pain is excited in all the Parts contiguous, that no Remains of the Carbuncle may seem to be left. And *Hodges* informs us, that, during the Plague in *London*, he observ'd this to be the most expeditious Method of curing Carbuncles. But not only the Horror of the Patients, but also many other Circumstances, such as the Importance of the Parts affected, sometimes concur to render the Method of Cure by Cautery not only improper, but palpably absurd; and in these Cases the other Method of Cure is to be pursu'd.

The celebrated *Sylvius* is of Opinion, that the most expeditious Method of extirpating Carbuncles is, by anointing the adjacent Parts with Butter of Antimony; since, according to that Author, by its Means alone the Disorder is not only hinder'd from spreading, but also an Eschar is generated, which gradually divides the sound from the corrupted Part, and at last procures a total Separation. But the later Physicians, who have wrote upon the Plagues of *Vienna* and *Ratisbon*, have affirm'd, that Butter of Antimony is so far from being beneficial in the Cure of Carbuncles, that it rather induces a fatal Train of Symptoms, and for the most part procures the sudden Death of the Patient. *Batticherus*, however, in his *Loimographia Haffniensis*, agrees with *Sylvius*, and bestows very large Encomiums upon Butter of Antimony, as a Medicine of all others the best calculated for answering the Purpose. But notwithstanding the Character of these Authors, who have recommended the actual Cautery, and Butter of Antimony, for extirpating Carbuncles, I cannot forbear thinking, that the other Method is milder, safer, and consequently preferable. If, however, any one intends to use these Methods of Cure, he must remember to deterge and conglutinate the Wound, in a proper Manner. *Heister.*

CARBON *humanum*, in *Paracelsus*, according to *Schroder*, *Lib.* 5. *Class.* 1. N°. 23. signifies human Dung.

CARBONES *Cæli*. The Stars. *Rulandus. Johnson.*

CARBUNCULATIO, ἀνθράκωσις, properly signifies a Carbuncle incident to the Eye, and is described by the Author of the *Definitiones Medicæ*, ascribed to *Galen*, ἕλκος ἐσχαρῶδες μέλαν νομῆς, καὶ ῥεύματος, καὶ βεβαθοῦς, ἐνίοτε καὶ πυρετῶν γινομένων, περὶ τὸ ἄλλο πᾶν σῶμα. ἔστι δὲ ὅτε περὶ ὀφθαλμούς. "A crusty, phagedenic Ulcer, attended with a Flux of Humours, and a "Bubo, and sometimes with a Fever; and, among other Parts "of the Body, incident to the Eye." And *Paulus*, *Lib.* 3. *Cap.* 22. defines it to be a malignant crusty Ulcer, affecting sometimes the Ball of the Eye, sometimes the Eyelid, as well as any other Part of the Body.

CARBUNCULUS *Rubinus*, Offic. Worm. 103. Schrod. 329. Mont. Exot. 14. Schw. 390. De Laet. 11. Calc. Mus. 235. Geoff. Prælect. 83. Charlt. Foss. 37. *Rubinus verus*, Boet. 144. *Carbunculus*, Kentm. 50. *Carbunculus, sive Rubinus*, Aldrov. Mus. Metall. 957. THE RUBY.

It is a glittering diaphanous Gem, of a red Colour, and Proof against the File; the most beautiful are found in the Island of *Ceylon*.

They say, that being worn or drank it resists Poison, is a Preservative against the Pestilence, expels Sadness, restrains lascivious and evil Thoughts, prevents frightful Dreams, exhilarates the Mind, and preserves the Body in Health. *Schroder.*

It is prescrib'd in Medicine in our Shops, but I know not how it comes to be omitted in the Catalogue of Simples. *Dale.*

CARCAPULI, Park. J. B. C. B. *Fructu Malo aureo æmulo coddam Pulli*, H. M. THE INDIAN YELLOW ORANGE OF MALABAR.

This is a tall spreading Tree, the Trunk as much in Compass as two Men together can incircle with their Arms; the Leaves stand by Pairs on the Sprays, at the Extremities of which appear flesh-colour'd and yellowish tetrapetalous Flowers; which are void of Smell, but of a sourish Taste. The Calyx consists of four pale concave Leaves; and the Fruit, which hangs by a Pedicle an Inch long, is big, round, and distinguish'd by eight, nine, or ten Extuberances like Ribs, with a small Head at the Top, striated in like manner with small Ribs; it is first greeen, then yellow, and when ripe whitish, and has an acid Sweetness of Taste; the Seeds are contained in the Middle of the Pulp, and are oblong, flattish, and of a dark azure Colour.

This Fruit, according to *Acosta*, as to Size and Shape, is like a Quince with the Rind taken off, and consists in like manner of grumous Parts, but not separable, as in the Quince; it is cover'd with a thin, light, and shining Rind. It is dry'd, and exported from *Malabar* to other Countries.

It is commonly eaten, and the Inhabitants commend it much for medicinal Uses; but it is most eminent for stopping a Flux of the Belly of what Kind soever, especially contracted by excessive Venery. The ripe Fruit is either eaten alone, or its Juice, or the Powder of it dry'd, is taken in sour Milk, mixed with which, and boiled Rice, it mightily recovers a lost Appetite. The Juice and Powder aforesaid are efficacious in Specks and Cataracts of the Eyes. The Powder is much used by Midwives for expelling the Afterbirth, for increasing the Purgations, and to procure Plenty of Milk; and they say it is very serviceable in facilitating the Birth.

CARCAPULI *Linschotani*. *Carcapuli de Bry.*

C. Bauhine confounds this with the preceding; but they differ in Flower and Fruit, though agreeing in other respects. The first bears an acid, sulcated, gold-coloured Fruit, as big as an Apple; this latter produces a round sweet Fruit, of the Bigness of a Cherry; the first by the Natives is called simply *Ghoraka*, the other *Kanna Ghoraka*; both afford Gum Gutta, but the *Kanna Goraka* the best. But this Gum Gutta, says *D. Syen*, must not be confounded with the common Gum Gutta, which, as *Bontius* assures us, is collected from a Plant which is near akin to the *Esula Indica*, and is called by the *Indians Lonam Cambodia*, because it grows plentifully in the Country of *Combodia*. *Raii Hist. Plant.* See GUTTA GAMBA.

CARCAROS, κάρχαρος. A kind of Fever, which is attended with a Horror, or Shivering. See QUERQUERA.

CARCAX. A Species of Poppy, which has a Head large enough to contain a Pint and an half of Liquor. *Castellus from Hartman de Opio.*

CARCER, in *Paracelsus*, *Tract.* 2. *de Morb. Ament. C.* 3. signifies a Remedy proper to restrain the loose and disorderly Motions both of Body and Mind, as in curing *Choreas*; for Instance the *Chorea Sancti Viti*.

CARCHARIAS, καρχαρίας. The Fish called the *Canis marinus*, or Sea-dog. See CANIS.

CARCHARODONTA, καρχαροδοντία, from κάρχαρος, sharp, and ὀδὼς, a Tooth, sharp-toothed, is an Epithet, in *Galen*, *de Usu Partium*, *Lib.* 8. *Cap.* 2. apply'd to such Animals as have sharp and serrated Teeth, as the Lion and Bear among Quadrupeds, and the *Canis marinus*, or Sea-dog, among Fishes; for which Reason it is called *Carcharias*.

CARCHESIUM, καρχήσιον. *Foesius* thinks the *Greek* Word should rather be render'd *Carchesia*, which is the *Latin* Name for those Perforations at the Extremity of the Mast, through which the Ropes are transmitted. Thus *Lucilius*, in *Nonius*, says *Mali Carchesia summa*; and *Catullus* has almost the same Expression. *Galen*, in his *Exegesis*, expounds it to be the Top of the Mast where the Pully is plac'd. *Athenæus*, *Pollux*, and *Hesychius*, give much the same Explication.

Carchesii, καρχήσια, in *Galen*, *Com.* 3. *in Lib. de Art.* and in his *Exegesis*, is expounded the Ropes which are extended from the Top of the Mast, and support the Sails.

Carchesius Laqueus, καρχήσιος βρόγχος, is the Name of a Bandage taken Notice of by *Galen*, *Cap.* 3. *in Lib. de Art.* of which there are two Sorts, called the single and the double *Carchesius Laqueus*, which are both described by *Oribasius*, in his Book *de Laqueis*, *Cap.* 9. 10.

Carchesium, καρχήσιον, is also a Cup, described by *Athenæus*, *Lib.* 11. and we meet with *Carchesia Bacchi Pocula*, in *Virgil*, *Lib.* 5. *Æneid.* and *Georg. Lib.* 4.

CARCHICHEC *Turcarum, sive primula Veris Constantinopolitana*, Cornuti. *Primula Veris Turcica Tradescanti, Flore purpureo*, Parkin. BLUE PRIMROSE.

The Leaves are like those of the common Sort, only softer; from the Midst of them arise a Multitude of Pedicles, about an Inch in Length, supporting greenish Calyces, striated with as many Sinuses as the succeeding Flower is to consist of Leaves; which are seldom above five, shaped like a Heart, and of a faint purple Colour, except at the Bottom, or Unguis, which is like a Ray of Gold shaded with Saffron. The Umbilicus, or Middle of the Flower, is stellated with five very effulgent Radiations. From the Centre of the Star rises the Pointal, of the same Colour. The Herb bears Flowers almost during the whole Year, which are succeeded by white Seeds like those of the white Poppy, and are inclosed in a thin Capsule.

Carchichec, with the *Turks*, signifies Snow-flower; which Name they give it on account of the Vivacity of its Flowers, which exalt themselves above the Snows in the Middle of Winter; they are of an infinite Variety of Colours, as Sky-coloured, of a faint or deep Purple, or Violet, Carnation, Iron-coloured, of a dead Pale, Vermilion, white, and many others, all owing to the Management of its Propagation by Seed.

It is hot and dry, and considerably astringent to the Taste. It is of good Effect in the Cure of atrabilious and pituitous Affections, and is very serviceable in putting a Stop to a Looseness, corroborating the Stomach, and by consequence the whole Intestines. *Raii Hist. Plant.*

Carchichec polyanthes is a Primrose of *Constantinople*, which bears upon one Stem a Multitude of Flowers, diffused in the manner of an Umbella, and somewhat less than those of the preceding, but of the same Variety of Colours, and often double like the other. *Raii Hist. Plant.*

CARCINADÆ. A Name in *Aetius*, *Tetrab.* 1. *Serm.* 2. *Cap.* 139. for a very small sort of Sea Fish, resembling Crabs, which he condemns as fetid and unsavoury, hard of Concoction, and of bad Juice.

CARCINETHRON. A Name in *Oribaſius*, *Med. Coll. Lib.* 12. for the *Polygonum Mas*, or common Knot-graſs.

CARCINODES, καρκινώδες, from καρκίνος, a Cancer, and εἶδος, a Form or Likeneſs, a Tumor reſembling a Cancer.

CARCINOS, CARCINOMA, καρκίνος, καρκινώδης ὄγκος, καρκίνωμα. A Cancer.

When black Bile ſettles in the Fleſh, if it be of an acrimonious Quality, it corrodes the circumjacent Skin, and breaks out in an Ulcer; but if it be of a milder Nature, it generates a Cancer, without an Ulceration. *Galen. de Tum. præternat. Cap.* 11.

Cancerous Tumors are generated in all Parts of the Body, but moſtly in the Breaſts of Women whoſe natural Purgations are ceaſed, which, while under due Regulation, preſerve a Woman in Health. All preternatural Tumors, therefore, of this Kind, are generated of a Superfluity of black Bile, of which we have ſpoken in our Treatiſe of *Natural Powers*, where we ſhew'd, that this Humour was generated in the Liver, in Sanguification, after the manner of Lees in Wine; but was purged by the Spleen, whoſe natural Aliment it was. And, a little after, he ſays, We have often obſerved, in the Breaſts of Women, a Tumor very much reſembling the Animal call'd a *Crab* (καρκίνος, *Cancer*); for as this Creature is furniſh'd with Claws on both Sides of its Body, ſo, in this Diſeaſe, the Veins, which are extended from the Tumor, repreſent with it a Figure much like a Crab. *Galen. de Art. Curat. ad Glaucum*, *Lib.* 2. *Cap.* 10.

A Cancer is an unequal Tumor, with very elevated Edges, loathſome to Sight, ſomewhat livid, and painful, ſometimes without an Ulcer, which Sort *Hippocrates* calls *occult*, κρυπτὸν and, if it be chirurgically treated, it grows the worſe. Sometimes it is attended with an Ulceration; for, being generated of black Bile, it is, for the moſt part, of a corroſive Quality. It riſes in many Parts of the Body, but principally infeſts the Uterus and Breaſts of Women, having Veins around it extended in manner of the Claws of a Crab, whence it took its Name [καρκίνος, *Cancer*, ſignifying a Crab]. *P. Æginet. Lib.* 6. *Cap.* 45.

A Cancer may be generated in moſt Parts of the Body, as in the Eyes, the Uterus, and other Places, but eſpecially in the Breaſts of Women, as being of a lax Contexture, and very ſuſceptible of the groſſeſt Matter. Cancers owe their Original to black Bile put in a State of Effervescence; and, if there be any thing of an acrid and corroſive Quality mix'd with this Humour, the Cancer is attended with an Ulceration. Cancers are blacker than other Inflammations, but not ſo hot. The Veins all around it are bloated, and diſtended in the manner of the Claws of a Crab, whence it has its Name *Cancer* (a Crab); or, as others will have it, becauſe it adheres with ſuch Obſtinacy to the Part it ſeizes, that, like that Animal, it cannot, without great Difficulty, be ſeparated from it. *P. Æginet. Lib.* 4. *Cap.* 26. tranſcrib'd almoſt verbatim by *Actuarius*.

Καρκῖνοι κρυπτοὶ, occult and ſecret Cancers, in *Hippocrat. Aphoriſm.* 38. *Lib.* 6. are either ſuch as are not exulcerated, or ſuch as are ſeated in the inner Parts of the Body; ſo *Galen* explains it in his Comment on that Place. *By* οἱ κρυπτοὶ καρκῖνοι οἱ ἀποβεβυσμένοι, "ſecret Cancers, which are deeply ſeated." *Lib.* 2. *Prorrhet.* are meant ſuch Cancers as are not exulcerated, and are profoundly ſeated in the Body; for Example, thoſe which infeſt the Anus, Inteſtines, Uterus, the Breaſts, and Palate. Oppoſite to theſe are, *ibid.* οἱ καρκῖνοι οἱ κρυπτοὶ καὶ οἱ ἀκρεμμάθοι, "Cancers not ulcerated, and ſuperficially ſeated." And this is *Galen*'s Explication of the Paſſages above, in his Comment on the aforeſaid Aphoriſm; tho' κρυπτὸς, in itſelf, ſignifies either *not exulcerated*, or *deeply ſeated*, as we firſt obſerved out of *Galen*.

Καρκῖνος κρυπτὸς, in *Galen*, *Lib. de atra Bile*, is a ſecret and occult Cancer, not exulcerated, but generated by a melancholy Juice, which has inſinuated itſelf into the Habit of the Body, and is neither acrimonious, malignant, nor corroſive, ſo as to cauſe an Exulceration.

Philoxenus, in *Aetius*, *Tetrab.* 4. *Lib.* 4. *Cap.* 43. ſays, that by κρυπτοὶ καρκῖνοι are peculiarly meant thoſe Cancers which infeſt the Uterus and Inteſtines; which *Paulus* alſo, *Lib.* 3. *Cap.* 67. ſeems to hint, when he, in ſome meaſure, appropriates the above-mention'd Aphoriſm to Cancers of the Uterus, tho' it may be underſtood of Cancers in general.

CARCINΩMA, καρκίνωμα, is the ſame as καρκῖνος, and defin'd, by the Author of the *Definitiones medicæ*, a malignant and very hard Tumor, with or without an Ulcer, and taking its Name from a Crab. And, again, he ſays, a *Carcinoma* in the Uterus is a Tumor without an Ulceration, unequal, and with very tumid Edges.

A *Carcinoma* principally infeſts the upper Parts, as the Face, Noſtrils, Ears, Lips, and the Breaſts of Women. It has its Original from the Liver or Spleen. There is a kind of pungent Senſation about the Part; and the Tumor is immoveable, unequal, and ſometimes without Senſation. The Veins about it are inflated, and, as it were, retorted, of a pale or livid Colour, and ſometimes inviſible. Some feel a Pain, if the Part be touch'd, others not; and ſometimes the Place affected is harder or ſofter than in its natural State, without an Ulceration; and ſometimes all the before-mention'd Symptoms attend an Ulcer of the Part. Sometimes it has nothing ſingular to diſtinguiſh it; and ſometimes, by its Bulk and Aſperity, it reſembles what the *Greeks* call a *Condyloma* [κονδύλωμα]. The Colour of it is red, or like that of a Lentil. *Celſus*, *Lib.* 5. *Cap.* 18.

A *Carcinoma* is an Affection of the Cornea Tunica of the Eye, with a Pain and Tenſion, a Redneſs of the Tunics, accompany'd with a throbbing Pain, which reaches to the Temples, eſpecially upon any Concuſſion. *P. Æginet. Lib.* 3. *Cap.* 22.

Καρκίνωμα is uſed by *Hippocrates*, *Lib.* 5. *Epid.* where he ſays, καρκίνωμα περὶ τὸ στῆθος ἐγένετο "She had a *Carcinoma* "in her Breaſt." And again, *Lib.* 7. *Epid.* he ſays, ὁ τὸ καρκίνωμα τὸ ἐν τῇ φάρυγγι ἔχων ὑγιὴς ἐγένετο ὑφ' ἡμέων "One "who had a *Carcinoma* in the Fauces, was cured by our apply-"ing an actual Cautery to the Part."

CARCINODEES CHOIRADES, καρκινώδεες χοιράδες, are ſtrumous Swellings of a malignant Quality, which are painful to the Touch, and exaſperated by Application of Medicines. *P. Æginet. Lib.* 6. *Cap.* 35. See STRUMA.

See that Part of the Article BUBO, which relates to a cancerous Bubo.

Before I begin the modern Accounts of a *Cancer* or *Carcinoma*, I muſt appriſe the Reader, that he is to conſider what follows as the Sequel of the Article SCIRRHUS.

Among all the Diſorders incident to the human Body, none is more juſtly terrible than a Cancer; ſince it has not hitherto been known, that the Calamity has been remov'd without the Extirpation of the affected Parts: Nor is this Diſorder only to be dreaded on account of its Obſtinacy, which is Proof againſt all Medicines; but it is alſo terrible on account of the racking Pains, and intolerable Putrefaction, by which it gradually preys on the Body, whilſt the Patient is yet alive. To all theſe unhappy Circumſtances we may add the Duration of the Pains, which, for ſeveral Months, and ſometimes for ſeveral Years, afflict the miſerable Patients, before Death, that laſt, but ungrateful Remedy to all the Calamities of human Life, puts an End to their wretched State, by the moſt intolerable Agonies; for, unleſs they die of an Hæmorrhage, in conſequence of the larger Blood-veſſels being corroded, they lead a long and miſerable Life before the Diſorder ſpreads thro' the whole Body, and procures them a grateful Relief, by placing them beyond the Reach of Pain.

> In a Scirrhus, if the ſtagnating Matter, which forms it, being increaſed by its Duration, begins to move; or if the Humours in the adjacent Parts are moved in ſuch a manner, as to inflame the Veſſels ſituated on its Margin; it becomes malignant, and is then call'd Cancer, or Carcinoma.

This Diſorder is by the *Latins* call'd *Cancer*, and by the *Greeks* καρκῖνος, and καρκίνωμα. *Galen* thinks, that this Name was affix'd to it on account of a certain Reſemblance it bore to the Animal we commonly call a Crab. As this Animal ſtretches out its Claws on both Sides, ſo Veins, turgid with black Blood, are every-where ſent off from that Species of Tumor we call a Cancer. *Paulus Ægineta*, in the twenty-ſixth Chapter of his fourth Book, adds, that a Cancer firmly adheres to the Parts it affects, juſt as a Crab ſecurely holds its Prey in its Claws; and thus he found out another Inſtance of Similitude between them. 'Tis plain, that *Celſus*, under the Name *Cancer*, deſcrib'd a Gangrene and Sphacelus: But he uſed the Word *Carcinoma* to denote that Diſorder which modern Phyſicians and Surgeons call *Cancer* and *Carcinoma* promiſcuouſly; for though, in the twenty-eighth Chapter of *Celſus*'s fifth Book, the Deſcription of the Carcinoma is ſomewhat obſcure, yet, from his Words, it may be known, that he gave this Name to the Diſorder we now ſpeak of; for he affirms, that it principally happen'd about the Face, the Noſe, the Ears, the Lips, and Breaſts of Women; and that the Veins about it were, as it were, retorted. He alſo took notice of its uncommon Malignity, and of its being eaſily irritated, when it was cut or cauteriz'd. He alſo aſſerted, that, in this Caſe, Medicine was never ſerviceable to any one; ſince, when cauteriz'd, they were forthwith exaſperated, and augmented till they became mortal; and, when extirpated, they return'd, after a Cicatrix had been form'd, and proved the Cauſe of the Patient's Death: From all which Circumſtances it is ſufficiently evident, that, under the Name *Carcinoma*, *Celſus* deſcrib'd what the Moderns call *Cancer*.

A Cancer is ſubſequent to a Scirrhus, or rather a Scirrhus is chang'd into a Cancer. But it is another Queſtion, Whether a Cancer never ariſes in the Body, without a previous Scirrhus. It will appear, by what ſhall be hereafter ſaid, that this Diſorder may be found in many Parts of the Body, accompany'd with equal Malignity, and the ſame direful Effects, tho' no Scirrhus has preceded. But we muſt conſider, how a Scirrhus

paſſes

paſſes into a Cancer, and by what Signs it is diſtinguiſh'd from that Diſorder: By the common Conſent of all Phyſicians, a Scirrhus is ſaid to be *a hard Tumor, without Pain:* But when a Scirrhus is degenerating into a Cancer, the Tumor indeed remains; but then Pain, which was before abſent, begins to rack the Patient. Pain, therefore, is the Sign by which a Cancer is diſtinguiſh'd from a Scirrhus. But ſince there is a great Difference between a Scirrhus beginning to degenerate into a Cancer, and an exulcerated Cancer; and ſince this Diſorder paſſes thro' ſeveral Degrees before it arrives at its higheſt Malignity, Authors have, for this Reaſon, ſometimes retain'd the Name of Scirrhus, even after lancinating Pains began to rack the Patient. But in this State of the Diſorder, for the ſake of Diſtinction, it is better to call it an occult or latent Cancer than a Scirrhus.

A Scirrhus has for its Cauſe whatever can inſpiſſate, coagulate, or dry the Juice prepar'd by the Glands, in the ſecretory or excretory Ducts, or in the Follicles which receive it. Whilſt, at the ſame time, the intricate Structure of the Veſſels which conſtitute the Glands, or the Humour lodged in the Follicles, as it were, without the Laws of the Circulation, hinder the Impetus of the arterial Blood from acting upon theſe obſtructed Veſſels or Receptacles, and upon the obſtructing Matter, in ſuch a manner, that the Concretions may be reſolved; or that ſuch Concretions as can no longer obey the Laws of the Circulation, may be ſeparated by a gentle Suppuration. The coagulated Juice, then, remains in the Veſſels, or in the Cavities of the Follicles, whoſe Sides conſiſt of Veſſels of all manner of Kinds; and it may remain long in theſe without undergoing any Change, or without any conſiderable Detriment to the Patient, as is ſufficiently obvious from Inſtances which daily occur. The Function of the ſcirrhous Part alone is injur'd, or ſometimes the Action of thoſe Parts, which are compreſs'd by the adjacent Scirrhus, is diſturb'd: But when, by any Cauſe, the Motion of the Humours is increaſed thro' the live and pervious Veſſels, which lie contiguous to the Subſtance of the Scirrhus, 'tis evident, that an Inflammation may eaſily be here produced; ſince theſe Veſſels, compreſs'd and render'd narrow by the ſcirrhous Concretion, cannot freely tranſmit the Humours when put in Motion, but are entirely obſtructed by an Acceleration of the Circulation. But the Inflammation ariſing here will be follow'd with all the Conſequences of an Inflammation, which are Pain, a violent Attrition, and the different Degrees of Heat produced by it. Now 'tis demonſtrated, under the Article ALCALI, that an Acceleration of the Motion of the Humours, and an Increaſe of Heat, highly diſpoſe to Putrefaction. The ſcirrhous Concretion, therefore, which has hitherto remain'd mild, and like an inert Body, in the infarcted Veſſels or Receptacles, will begin to putrefy, and acquire a greater Acrimony: Thus it will become capable of irritating and corroding the Parts in which it is contain'd. In this State, therefore, 'tis no Wonder, that a Pain ſhould be produced, which, as we have already ſaid, diſtinguiſhes a Cancer from a Scirrhus. The ſame Effect will be produced, if the adjacent Veſſels ſhould become inflam'd, in conſequence of their being preſs'd by the contiguous Scirrhus; for, in this Caſe, 'tis obvious, that the like Diſorder will ſoon be produced in the Scirrhus itſelf: Hence it ſo often happens, that a Scirrhus is chang'd ſo ſuddenly into a Cancer in the Breaſts of thoſe Women who gain their Livings by Working; for, in this Caſe, the hard Scirrhus is preſs'd againſt the neighbouring Veſſels, which by that means are inflam'd; and thus the Scirrhus ſoon degenerates into a Cancer. When, therefore, a Scirrhus, becoming gradually larger, compreſſes the adjacent Parts, a Cancer will ſoon be produced. But, beſides, the ſcirrhous Concretion itſelf may, in Proceſs of Time, become acrid ſpontaneouſly, and produce the ſame Train of cruel Symptoms; for, in the Article SCIRRHUS, it is ſhewn, that the atrabilarious Matter of the Blood greatly promotes the Production of ſcirrhous Tumors. The Antients deduced the Origin of Scirrhuſes almoſt entirely from this Cauſe: Accordingly their whole Intention of Cure, in treating a Scirrhus, was to reſolve and evacuate this Matter from the Body.

But it will appear, from what is ſaid under the Article MELANCHOLIA, that this atrabilarious Humour, which is almoſt of the Conſiſtence of Pitch, may, by its long Stay and Stagnation, become acrid and corroſive, in conſequence of which it will produce the moſt terrible Symptoms. The ſame Accident may, therefore, happen in a Scirrhus, and more eſpecially in Men of atrabiliarious Conſtitutions: Thus it may become malignant, or be chang'd into a Cancer, by its Age alone, without the Concurrence of any other Cauſe whatever.

In a Cancer, the Degree of the neighbouring Inflammation, the Exceſs of putrid Acrimony in the Part affected, the Importance of the Part, the Number and Condition of the Glands connected with it, and the whole Conſtitution, determine the Degrees of Malignity in the firſt State.

When the Scirrhus firſt begins to degenerate into a Cancer, it is then ſaid to be malignant, and very deſervedly, on account of the terrible Symptoms which afterwards enſue: But this Malignity is greater or leſs, and ſooner or later arrives at its worſt State, according to the various Conditions following.

As for the Degrees of the neighbouring Inflammation, a ſlight Eryſipelas, or gentle Inflammation in the Neighbourhood of the Scirrhus, or in its Integuments, may be often carried off by a ſeaſonable Application of a Plaiſter, in which Lead is an Ingredient; or by Vinegar of Litharge, diluted with a large Quantity of Water, and other Things of a like Nature: Thus the Scirrhus may be hinder'd from degenerating ſoon into a Cancer. But when a violent Inflammation appears either in the Integuments of the Scirrhus, or in the adjacent Parts, the moſt formidable Symptoms are ſoon to be look'd for.

As for the Exceſs of putrid Acrimony in the Part affected, the principal Malignity of a Cancer conſiſts in this, that the Subſtance of the Scirrhus, as yet remaining in the live Veſſels or Receptacles, becomes putrid, and, by a virulent Sanies, corrodes and exulcerates all the adjacent Parts. But, even in exulcerated Cancers, the Diſorder does not immediately arrive at this laſt Stage of Malignity, but proceeds to it gradually. The greater, therefore, the Putrefaction is, the more terrible all the Symptoms will be. In open Cancers, the Degrees of the Putrefaction are ſufficiently known, from the fetid Smell of the diſcharg'd Sanies, and the Corroſion of the adjacent Parts: But in occult or latent Cancers, the Itching, the Heat, the lancinating Pains, and the ſudden Increaſe of the ſcirrhous Tumor, indicate various Degrees of Putrefaction now begun.

The Importance of the Part is likewiſe a Circumſtance of great moment; for if the Pancreas, for Inſtance, the Stomach, the Liver, or the Inteſtines, are affected with a Cancer, far more cruel Symptoms muſt enſue, and the Prognoſtic muſt be far more unfavourable, than when this Diſorder is only lodged in the Breaſts.

As for the Number and Condition of the Glands connected with the Part affected, a ſingle Cancer may be longer tolerable, and afflict the Patient leſs, than when the ſame Diſorder ſeizes different Parts of the Body. The Diſeaſe muſt, of conſequence, be worſe when it ſeizes ſuch a Part, as, by propagating the Diſorder, may affect the adjacent Glands. It ſcarce ever happens, that a Scirrhus, ſo conſiderable as already to threaten a Cancer, is long lodged in the Breaſt, but the axillary Glands of the ſame Side begin to grow ſcirrhous, as is obvious from daily Experience. It alſo frequently happens, that, when one Breaſt has been long ſcirrhous, the other becomes in like manner affected: And, ſince there is ſo great an Affinity and Communication between the Breaſts and Uterus, this latter often begins to labour under the like Diſorder. The celebrated *Boerhaave* ſaw a melancholy Caſe, which confirms this: A Cancer, not yet exulcerated, was extirpated from the Right Breaſt of a Lady of Diſtinction. A Year after, another of a like Nature was cut out of her Left Breaſt: But ſhe afterwards languiſh'd, and had all the Signs of a Cancer in the Uterus; till at laſt, being rack'd with the moſt violent Pains, ſhe died. In the Hiſtory of a Scirrhus it is obſerved, that it is evident, from the Obſervations of Phyſicians, that, when all the Glands of the Neck are become indurated, thoſe of the Meſentery are in like manner affected: 'Tis therefore in vain to attempt a Cure, in Caſes of this Nature, ſince the Diſorder is convey'd to the communicating Glands.

As to the Conſtitution of the Patient, the atrabilarious Conſtitution is ſubject to produce ſcirrhous Tumors, as is obſerved under the Article SCIRRHUS: The ſame Conſtitution may, therefore, increaſe and augment a Scirrhus already formed; but a Scirrhus is, by an Increaſe of its Bulk, changed into a Cancer, as we have already obſerved. 'Tis, therefore, evident, that, when a Scirrhus happens in theſe dry, emaciated, and atrabilarious Conſtitutions, there is the greateſt Dread of its being changed into a Cancer, eſpecially if this atrabilarious Juice, which predominates in the Blood, begins to be reſolved, and become acrid; for, as we ſhall afterwards ſhew, every acrid Subſtance, mixing with a Scirrhus, converts it into a Cancer. The ſame Obſervation will hold good in Caſes where a putrid Scurvy afflicts the Patient; for, in ſuch Conſtitutions, Scirrhuſes generally ſoon become malignant.

If a Cancer is confined within its own Membranes, it is called an occult Cancer; but, if theſe are broke and ulcerated, it is called a manifeſt, or ulcerated Cancer; the laſt being the Offspring of the firſt.

A Scirrhus is a hard Tumor, unaccompanied with Pain, and ſituated in a glandular Part; but when a Titillation, Itching, Pain, and Heat, are perceived in this Tumor, it is no longer call'd Scirrhus, but aſſumes the Name of Cancer. So long as the Integuments of the Cancer are not corroded, it is called a latent or occult Cancer; but when it has degenerated to that Degree of Malignity, as to corrode the Integuments, and diſcharge a Sanies, it is then denominated a manifeſt or ulcerated Cancer. *Ætius*, in *Tetrabibl. 4. Serm. 4. Cap.* 43. informs us, that *Philoxenus* called that a latent or occult Cancer, which was lodg'd in ſuch Parts of the Body as were hid from our Sight, ſuch

ſuch as the Uterus or Inteſtines. Others, after him, have advanced the ſame thing: But *Hippocrates* ſeems to have been of a different Opinion; for, as may be ſeen under the Article SCIRRHUS, he calls this Diſorder, when ſituated in the Breaſts, an occult Cancer; for, when he treats of a Retention of the menſtrual Diſcharges, in conſequence of a Diſtortion of the Mouth of the Womb, he ſays, that the retained Menſtrua are convey'd to the Breaſts, and delude Women with a ſpecious Appearance of Pregnancy: And he afterwards adds theſe Words: "And in the Breaſts hard Tubercles ariſe, ſome of "which are large, and others ſmall. Theſe Tumors never "come to Suppuration, but always become harder, till at "laſt occult Cancers are produced from them." *Hippoc. de Morb. Mulier. Lib.* 2. *Cap.* 20. Hence 'tis ſufficiently evident, that *Hippocrates* diſtinguiſhed a Scirrhus from an occult Cancer, and that he gave this laſt Name to the Diſorder, tho' lodged in the external Parts of the Body. An occult Cancer is always previous to one of the ulcerated Kind, as is evident from what has been ſaid.

The Cauſe of a Cancer is, whatever is capable of forming a Scirrhus; an Acrimony of any kind introduced into a Scirrhus; a Change induc'd in the Circulation of the Blood, from a Retention of the menſtrual Flux, the Hæmorrhoids, or any habitual Hæmorrhage; Sterility; Celibacy; the Age in which Women ceaſe to be prolific, generally from forty-five to fifty; an auſtere, acrid, and hot Diet; Melancholy and bilious Affections of the Mind; any external Irritation, whether by Motion, Heat, or Acrimony, or by emollient, ſuppurating, cauſtic, or veſicating Applications; or internal Remedies producing the ſame Effects.

We now come to treat of the Cauſes by which a Scirrhus, which is unattended with Pain, is chang'd firſt into an occult, and then into an ulcerated Cancer. Every Cauſe, therefore, which contributed to the Production of the Scirrhus, may be conſidered as a remote Cauſe of the Cancer; but this Cauſe, continuing to act, may increaſe the Scirrhus, and ſo change it into a Cancer.

As to Acrimony introduc'd into the Scirrhus, whether the Matter of the Scirrhus itſelf is, in Proceſs of Time, converted into an acrimonious Subſtance, and corrupted; or whether, by Diſeaſes, the mild Nature of the ſound Humours is perverted and depraved; the Scirrhus, which before was free from Pain, will be irritated, and degenerate into a Cancer. The ſame Effect will be produc'd, if acrid Subſtances, which cannot be corrected by the Action of the Veſſels and Inteſtines, are uſed as Food: Of this kind are moſt Spices, but more eſpecially the acrid Bulbs of Onions and Garlick; for the Sweat and Urine of thoſe who uſe theſe Roots daily ſmell of them. Hence 'tis obvious how treacherous a Diſorder a Scirrhus, even of the ſlighteſt kind, is; for tho' all acrid Subſtances were abſtained from, yet no one can at all times ſecure himſelf againſt the Attacks of epidemical Diſeaſes, which often rage, and by which the mild Nature of the Humours is ſo often changed: It alſo happens, that acrid Subſtances prove hurtful by increaſing the Velocity of the Circulation, by which alone a Scirrhus may be converted into a Cancer, as we have already obſerv'd. Many Inſtances evince how dangerous the Uſe of acrid Subſtances is in Caſes of this Nature, but one is ſufficient for our Purpoſe. *Hildanus*, in his *Obſerv. Chirurg. Cent.* 1. *Obſerv.* 1. gives us an Account of a Gentleman of Diſtinction, whoſe Eye, after an Ophthalmy, broke, and diſcharg'd the Humours: Upon this the Eye-lids, collapſing, grew together. In this Condition he lived fourteen Years, without the Appearance of any malignant Symptom: But as at that time he wantonly indulged himſelf in the Uſe of Wine, and greedily eat Foods of hard Digeſtion, Spices, Onions, Garlick, Leeks, and Radiſhes, the Diſorder, which had been latent ſo long, broke out on the optic Nerve; for the cloſed Eye-lids began gradually to be opened, and there grew from the Bottom of the Orbit a Tumor, which was hard, livid, malignant, and at laſt became a monſtrous Spectacle, by riſing without the Eye-lids as large as a Gooſe's Egg. *Hildanus*, however, ſucceſsfully cut this cancerous Tumor out of the very Bottom of the Orbit, and cur'd the Patient. For this Reaſon *Galen*, in his *Meth. Medend. Lib.* 2. *Cap.* 12. when ſpecifying the Aliments proper for thoſe afflicted with Cancers, recommends Cremor of Piſan, Whey, the ſofteſt Pot-herbs, Mallows, Arrach, Blite, and Rock-fiſhes.

As to a Change induc'd in the Circulation of the Blood from a Retention of the menſtrual Flux, the Hæmorrhoids, or any habitual Hæmorrhage, the Reader may conſult the Article SCIRRHUS; for there 'tis evident, not only from the Authority of *Hippocrates*, but alſo from the Obſervations of the beſt Authors, that ſcirrhous Tumors have not only been produced by an Obſtruction of theſe accuſtomed Evacuations, but alſo that Scirrhuſes, when they have been formed before, have, in conſequence of this Accident, ſoon degenerated into Cancers. Scirrhous Tumors lodged in the Breaſts, or about the Uterus, are more conſiderably irritated by a Suppreſſion of the Menſes than by any other Cauſe whatever.

As to Sterility, under the Article SCIRRHUS, where the Effects of a Scirrhus, formed in various Parts of the Body, are enumerated, it is obſerved, that Sterility is often produced by a Scirrhus in the genital Parts of Women; and, ſo far as appears from the Obſervations of Phyſicians, it ſeems to be one of the moſt common and frequent Cauſes of Sterility. In barren Women, therefore, Phyſicians juſtly ſuſpect latent ſcirrhous Tumors, which, by their Duration and Increaſe, generally degenerate into Cancers. Beſides, during the Time of Geſtation, when all the Veſſels which conſtitute the Subſtance of the Uterus are ſo much dilated, it often happens, that the beginning Obſtructions are thus open'd, in conſequence of the Capacities of the Veſſels being enlarged; or, at leaſt, that the Veſſels of the Uterus are ſo diſpoſed, as afterwards to tranſmit the Humors more freely. For this Reaſon Pregnancy has ſo often prov'd beneficial to Women, before labouring under Irregularities and Suppreſſions of the Menſes.

As to Celibacy, and that Age in which Women ceaſe to be prolific, which is generally from forty-five to fifty, 'tis evident, from various Inſtances, that theſe contribute to the Production of Cancers; for, as is obſerved under the Article SCIRRHUS, *Dionis* remarks, that a fourth Part of ſuch Women as are afflicted with Cancers, are ſeized with this Diſorder between the forty-fifth and fiftieth Year of their Age; and he adds, that he has moſt frequently obſerved Nuns ſeized with this Diſorder. This alſo is atteſted by *Veſalius*, in *Chirurg. Magn. Lib.* 5. *Cap.* 16.

As to auſtere, acrid, and hot Diet, we have already obſerved, that an atrabilious Matter often contributes to the Production of ſcirrhous Tumors. It is alſo obvious, from what was there ſaid, that Scirrhuſes are increaſed, and diſpoſed to the Malignity of a Cancer by it. All Subſtances, therefore, which increaſe the atrabilious Juice in the Blood, or which render it more acrid by a new Acceſſion of Heat and Motion, muſt in theſe Caſes be highly prejudicial. But, as is obſerved under the Article MELANCHOLIA, auſtere, dry, hard, earthy Aliments, together with great Reſt, and Inactivity of Body, generate an atrabilious Juice in the Blood, and, conſequently, muſt increaſe the Cauſes of a Scirrhus, and the ſubſequent Cancer. All acrid hot Subſtances are alſo to be abſtained from, becauſe, as we obſerved before, they prove hurtful by increaſing the Motion of the Humours.

As to melancholy and bilious Affections of the Mind, when Men of high and generous Tempers entertain a deep and troubleſome Senſe of Injuries done them, and boundleſly indulge themſelves in Sorrow, they generally fall into a deplorable Melancholy, and at laſt die, after having ſtruggled with the moſt terrible chronical Diſorders. 'Tis, therefore, no Wonder, that, by this means, ſcirrhous Tumors ſhould be generated where they were not before; and that, where they were, they ſhould be converted into Cancers; ſince the atrabilious Habit of Body, produced by theſe melancholy Affections of Mind, is very ſubject to generate theſe Diſorders. But Sorrow, which may be juſtly called a bilious Affection, is highly prejudicial to ſcirrhous Tumors; for, whilſt Sorrow is exceſſively indulg'd, a great Heat is excited in the Body, the Motion of the Humours is increaſed, a violent Fever is often brought on, and the whole Body ſwells, and becomes red: Hence, in conſequence of the increaſed Motion, the Scirrhus is in Danger of degenerating into a Cancer.

As to an external Irritation, whether by Motion, Heat, or Acrimony, all theſe, under whatever Denomination they may come, are always prejudicial in theſe Caſes; for no prudent Surgeon will attempt the Cure of a Scirrhus which is confirm'd, and not capable of being reſolved by any other Method than Extirpation. But where this cannot be attempted, the only remaining Means of Safety is, to keep the Scirrhus as long as poſſible from undergoing a Change; for every Change of ſuch a Scirrhus is for the worſe. Where there are any Hopes of a Reſolution left, Friction is an excellent Remedy; but it ſoon changes a malignant Scirrhus into a Cancer. Heat, by diſſipating the moſt moveable Parts, will render the Scirrhus intolerably hard, or promote a Putrefaction, ſo much to be dreaded in this Caſe. How hurtful emollient, ſuppurating, and corroſive Medicines are, is obſerved under the Article SCIRRHUS. Hence it is a general practical Rule, in the Cure of ſuch a Scirrhus, to exhibit nothing internally which can either augment the Motion, or the Heat; and to apply nothing externally which can irritate the Scirrhus. A ſoft Piece of Leather, or a Plaiſter in which Lead is an Ingredient, in order to prevent the Attrition of the Clothes, are the moſt proper Applications.

The Parts ſubject to a Cancer are the ſame as thoſe affected by a Scirrhus.

Since a Cancer generally ariſes from a Scirrhus, it is ſufficiently evident, that it muſt poſſeſs the ſame Place. The Obſervations of Phyſicians ſeem, however, to evince, that a Diſorder, entirely

tirely similar to a Cancer, may be produced in some Parts of the Body, tho' no Scirrhus preceded: In the Lips, for Instance, when that thin Membrane which covers their Surface is either fissur'd by the Cold, or lacerated by any other Cause, a fungous Tumor begins to arise, which is often pretty soft to the Touch, which, gradually increasing, is extended to a large Bulk, and which, with respect to its Pain, the malign Ichor discharg'd, the Corrosion of the adjacent Parts, the Hæmorrhage, and its rebellious Nature against all Medicines, in every respect resembles a true Cancer. This Tumor, unless seasonably extirpated, preys upon all the adjacent Parts, just as an exulcerated Cancer does. In the Tongue likewise the nervous Papillæ, divested of their restraining Integuments, expand themselves into a fungous Mass, which degenerates into the same Degree of Malignity, as is obvious from many deplorable Instances. In the human Penis the like terrible Depravations of the nervous Papillæ are also observ'd: Memorable Instances of this Nature are to be met with in *Hildanus*, who, in *Observ. Chirurg. Cent.* 3. *Observ.* 88. gives us an Account of a Smith, who, from his Infancy, had a Wart on the Glans of his Penis, not exceeding the Bulk of a Lentil, and which he bore without any great Trouble so long as he was unmarried; but, after he entered into a matrimonial State, the Pain of it became so violent and uninterrupted, that he was obliged to abstain from the Embraces of his Wife for the Space of thirteen Years. In Process of Time the Wart degenerated into a monstrous Cancer, as large as the Head of a new-born Child. His whole Penis was transform'd into a fleshy, rough, and livid Mass, corroded here-and-there with Ulcers, thro' which his Urine was discharg'd. The Smell of the Part affected was so highly fetid, that his Friends and Acquaintance could not come near him. When, after using many Remedies to no Purpose, he was by all concluded to be past Recovery, *Hildanus* amputated his entire Penis, and cured him so effectually, that he became robust, worked at his Employment, and lived ten Years after the Operation. See AMPUTATIO. But 'tis obvious from Anatomy, that in the Tongue, the Lips, and the Glans Penis, there are a prodigious Number of nervous Papillæ, which, when deprived of the Membrane which covers them, are highly sensible of Pain; and these Papillæ seem to degenerate into these terrible Disorders most frequently in the Places now mentioned, and others of a like Nature, where they are only cover'd with a tender Membrane. Nor have Disorders of this kind been only observed to happen in these Parts, but also in others cover'd with the Skin. Accordingly *Van Swieten* informs us, that in an adult Virgin he saw a pretty large Wart, which she had on her Back from her Infancy, by the Attrition of her Stays, which were made of Whale-bone, so increased as to degenerate into a Cancer; but, as it hung by a narrow Neck, the Surgeon apply'd a Thread tightly about it, by which means the Wart soon dropt off, upon which he apply'd Lapis Infernalis to its Root. But soon after a large and malignant Fungus arose, and the adjacent Skin became indurated; and when the Surgeon intended the Extirpation of this terrible Disorder, the Patient was seized with another Disease, of which she died. The same Author informs us, that, in consequence of a Surgeon's rashly paring the Nail of a Country Girl's great Toe, and wounding the tender nervous Pulp situated there, he saw a like Fungus arise; and whilst the same Surgeon attempted to consume it with Corrosives, he so irritated it, that it degenerated into a monstrous Cancer, which they were afterwards forced to extirpate. Now, if any one should assert, that the harder Warts, which generally arise in Parts covered with Skin, may be comprehended under the general Distinction of a Scirrhus, yet it may be answered, that, in the Lips and Tongue, soft Funguses often arise, which, however, are not of a less malignant Nature. Perhaps Disorders of this kind, arising from Depravations of the nervous Papillæ, may, for the sake of Distinction, be properly called fungous Cancers.

But since, from the Injections of the celebrated *Ruysch*, it is certain, that the nervous Papillæ consist not only of a nervous Pulp, but also of a pretty large Number of small Blood-vessels, all these degenerate together, and are increased in Bulk. Hence it is that dangerous Hæmorrhages so often happen in consequence of the imprudent Extirpation of malignant Warts. Nor is it improbable, that the Substance of the Nerves, properly so called, degenerates in this manner also; for the highly acute Pain, both in these fungous Cancers, and in a Scirrhus when degenerating into a Cancer, demonstrates, that the Nerves distributed thro' this Mass remain alive. And, from what is said under the Article CAPUT, it is sufficiently evident, how easily the Substance of the Brain, when divested of the Cranium, and its restraining Membranes, rises in a fungous Mass. The Nerves distributed to various Parts of the Body are defended and confined by pretty thick Coats; but when, after having laid aside these, their soft Substance is more unfolded, as in the Tongue, for Instance, the Glans Penis, and the internal Surface of the Eye-lids, they are restrained by a Membrane which covers them: When this Membrane is corroded, or injured by any Cause, such fungous Excrescences arise. 'Tis, therefore, necessary, that Physicians and Surgeons should know, that a Cancer is often to be dreaded, tho' no Scirrhus preceded it.

An occult Cancer is known to be formed, when, after the Signs of a preceding Scirrhus, enumerated under that Article, a Titillation, Itching, Heat, a lancinating, burning, pungent Pain are perceived; when the Colour of the Part becomes reddish, red, purple, bluish, livid, or black; when it feels considerably hard, ragged, and rough, with a rising Apex; when the Tumor increases; and when the adjacent Blood-vessels become tumid, knotted, varicose, thick, and black.

The Signs by which a Scirrhus is known are laid down under the Article SCIRRHUS; but that a Scirrhus may become a Cancer, and that a Cancer may, when formed, be known and distinguish'd from a Scirrhus, some new Symptoms, which were before absent, must appear. A Scirrhus, then, is never suddenly converted into the worst of Cancers, but, changing gradually, degenerates into higher and higher Degrees of Malignity. The Changes, therefore, which happen to a Scirrhus, are successive, and are here enumerated in the Order in which they generally follow each other. An ulcerated Cancer, or even an occult Cancer, when just about to be changed into one of the ulcerated Kind, are sufficiently known by every-body; but, when a Scirrhus first begins to afford Signs of its degenerating into a worse State, it seems somewhat more difficult to know it. *Galen*, when treating of this Disorder, in *Meth. Med. Lib.* 14. *Cap.* 9. gives a Caution with respect to this: "For," says he, "where all the Symptoms are violent, no-"body is at a Loss what Appellation to give the Disorder; and "all unanimously agree to call Indispositions of this Nature by "the common Name *Cancer*. But it is reasonable to think, "that a beginning Cancer may not be known by every one; "just as in Agriculture, Roots, when first beginning to appear "above the Ground, are only known by those who are tho-"roughly skill'd in them." For since a Scirrhus is defined a hard Tumor unattended with Pain, it may retain that Name so long as no Pain is perceiv'd; but when a Titillation and Itching begin to arise, it then degenerates from its easy State, nor does it as yet deserve the Name of a Cancer properly so call'd, tho' it will soon be changed into that Disorder. But tho' there were any Doubt remaining with respect to the Denomination of this Disorder at the time a Scirrhus is degenerating into a Cancer, yet this Doubt will lay no Foundation for an Error in the Method of Cure, since both an inveterate Scirrhus, and a beginning Cancer, require the same Remedy, which is Extirpation, or the Use of such Medicines as will alleviate the new Symptoms, prevent future ones, preserve the incurable Disorder in the same State, and prevent its degenerating into a worse. That a Scirrhus is degenerating into a Cancer, may be known by the following Signs, as is said above.

By Titillation and Itching.

This, in inveterate scirrhous Tumors, is a bad Sign, and indicates, that the Nerves distributed thro' the Substance of the Scirrhus are either not sufficiently tense, or else that they are irritated; but soon after, the Distention of the Nerves being increased to such a Degree as to threaten their Destruction, the Itching is succeeded by Pain, a Sign, as we have before observ'd, that the Scirrhus is changed into a Cancer. The Danger of this Symptom is increased by the Patient's being oblig'd, contrary to his Inclinations, to scratch the itching Part, by which means the Malignity of the cancerous Scirrhus is augmented, since any external Irritation, as was before observed, is sufficient to change a Scirrhus into a Cancer. And as the ignorant Vulgar are persuaded, that an Itching, in Disorders of this kind, is the Sign of a beginning Cure, they are often overjoy'd when the greatest of Evils, a Cancer, is just approaching. Thus *Van Swieten* tells us, that he saw an impudent Mountebank congratulate a miserable Woman, when she perceived such an Itching in an incurable Scirrhus, on which he had laid a Plaister composed of very hot Ingredients; but, a few Weeks after, a highly malignant ulcerated Cancer miserably prey'd upon the whole Breast, and all the adjacent Parts. But, tho' skilful Physicians and Surgeons unanimously pronounce these Disorders incurable, yet the Patients, notwithstanding all the Cautions they can receive to the contrary, listen to the vain Boastings of these Villains, since it is natural for the human Mind to be easily persuaded of the Truth of what it earnestly desires.

By the Heat and Redness.

So long as a Scirrhus is benign, it is of the same Colour, and the same Degree of Warmness, with the adjacent Skin. When Heat and Redness, therefore, happen, the worst is to be dreaded; for these are Signs, that an Inflammation is begun in the live Vessels distributed thro' the Substance of the Scirrhus, or, at least, in the Integuments of the Scirrhus, and the adjacent Parts. For it is obvious, from what is said under the Article INFLAMMATIO, that Redness and Heat are justly to be classed among

the Effects of Inflammation. And we have obſerv'd before, that, when the Redneſs and Heat are increas'd, the Scirrhus degenerates into a Cancer: The Danger is increas'd by this Circumſtance; that the greater Degree of Heat diſpoſes to Putrefaction, as has been taken Notice of under the Article ALCALI. It has been alſo obſerv'd, under the ſame Article, that the Putrefaction begun creates an uneaſy Senſation of Heat: Heat, therefore, perceiv'd in a Scirrhus, either denotes a Putrefaction already begun, or indicates, that it will ſoon happen: Hence 'tis, in theſe Caſes, always a dangerous Symptom.

By a lancinating, burning, and pungent Pain.

This Sign, as we have before obſerved, diſtinguiſhes an occult Cancer from a Scirrhus. Firſt, Pains are perceived, which are not of the continued Kind, but only ſeize by Intervals, and ſuddenly go off, juſt as if a ſharp Lancet were ſuddenly thruſt through the Scirrhus. It often happens, that when Scirrhuſes are not irritated by the Application of prepoſterous Medicines, theſe lancinating Pains are not again perceived for a great while, and the Diſorder lies latent for ſome Years. But when theſe lancinating, and at laſt pungent Pains, return almoſt daily, and do not go ſoon off, 'tis highly to be dreaded, leſt the latent or occult Cancer ſoon be changed into one of the ulcerated Kind. That Species of Pain is, of all others, the worſt, which excites the Senſation, as it were, of a live Fire, preying upon the internal Part of the Scirrhus; for then the Integuments of the occult Cancer are gradually torn from its ſwell'd Maſs, and corroded by a higher Degree of Acrimony.

By the reddiſh, deeper red, purple, bluiſh, livid, black Colour.

The various Degrees of Malignity, in an occult Cancer, are known from the Change of its Colour. A reddiſh Colour denotes the ſlighteſt Degree of the Diſorder, and a black Colour the worſt and moſt malignant kind; whereas the other Changes of Colour indicate the intermediate Degrees of Malignity; for a reddiſh Colour denotes only a ſlight Inflammation; a deeper red, a ſtronger Degree; and a purple Colour, a ſtill higher, together with a beginning Mortification. But, when the Integuments of the Cancer are rendered thin, and begin to be corroded, the Colour of the ſubjacent Cancer becomes tranſparent, and appears firſt bluiſh, and afterwards, when the Diſorder is increaſed, livid; and, when it is juſt ready to become exulcerated, a blackiſh Colour is perceived, through the thin and diſtended Skin of the Cancer.

By its feeling conſiderably hard, ragged, and rough, with a riſing Apex.

Whilſt an occult Cancer, in conſequence of its Integuments remaining entire, is not, as yet, changed into one of the manifeſt and ulcerated Kind, it always appears hard like a Stone; and the greater this Hardneſs is, the more fatal Conſequences are to be expected. But, when it is exulcerated, a Part of the contained Matter protuberates through the Integuments, and it appears leſs hard. The Surface of ſuch a Tumor never appears ſmooth and equal, but rough and ragged, with knotty Eminences. In that Part, where the Integuments are more diſtended or corroded, they are capable of making leſs Reſiſtance, and a ſmall prominent Apex appears, which is a certain Sign, that the Cancer will ſoon be exulcerated: Afterwards the Integuments on this Apex are excoriated, gradually recede from each other, and generally the Cancer firſt becomes ulcerated in this Part.

By the Increaſe of the Tumor.

A benign Scirrhus often remains, for ſome Years, without any remarkable Increaſe of its Bulk: But when it begins to become malignant, it often, in the Space of a few Weeks, becomes four times as large as it formerly was; and then we certainly know, that it is degenerating into an exulcerated Cancer. This never appears more evidently, than when a Scirrhus, which has before appeared benign, but at the ſame time incapable of being reſolved, is irritated by a prepoſterous Application of Medicines.

By the adjacent Blood-veſſels becoming tumid, knotted, varicoſe, thick, and black.

A Cancer of this kind is a very ſhocking Spectacle; and the Name Cancer was principally given to this Diſorder, becauſe, by extended Veins on every Side, it reſembled the Figure of that Animal, as we have already obſerved; for this hard Tumor, as yet confined within its Integuments, but increaſed in its Bulk, compreſſes the adjacent Veins, which, in conſequence of the Blood's paſſing with Difficulty through them, are diſtended, and appear varicoſe; and whilſt the thinneſt Part of the Blood only is forced thro' the compreſſed Veſſels, the Collection of thicker Blood, which ſtagnates, has almoſt a blackiſh Colour. But it is always obſerved, that the Veins of the Skin are much enlarged, when diſtended by any Humour whatever. Thus, in dropſical Patients, and Women big with Child, the Skin of the diſtended Abdomen has its Veins varicoſe, and very large: But, when theſe varicoſe Veins are preſſed upon by a ſubjacent Tumor, they appear ſtill larger, than when they retained their round Figure. The Veins appear knotted, becauſe the rough and ragged Surface of the Cancer, in ſome Parts, compreſſes them more, and in others leſs. This black Colour of the Veins made the Antients ſuſpect, that a melancholic Humour, here lodg'd, acted as a Cauſe. But whence this black Colour proceeds, is ſufficiently evident from what has been ſaid.

By theſe Signs, an occult Cancer, lodged in the external Parts of the Body, may be known; but it is, with more Difficulty diſtinguiſhed, when ſituated in the internal Parts. The Signs of a preceding Scirrhus, together with a Heat and Pain in thoſe Parts, in which there was only, before, an indolent Senſe of Weight perceived, afford us ſome Light in theſe obſcure and dubious Caſes.

Ætius, in *Tetrabibl.* 4. *Serm.* 4. *Cap.* 43. when deſcribing an occult Cancer in the Breaſt, enumerates all theſe Signs in the following Words: "When an occult Cancer is lodged "in the Breaſt, a large Tumor appears, which reſiſts the "Touch, is unequal, intenſely painful, deep ſeated, extending its Roots far and wide; it is ſurrounded with Veins, "which are every-where varicoſe. It is of a cineritious Colour, ſomewhat inclined to red, and ſometimes livid; and "tho', to ſuch as look at it, it appears to be ſoft, yet it deceives the Sight, and feels highly hard to the Touch. It "induces a pungent Pain, which is often ſo intenſe, as, by "Conſent, to excite malignant Inflammations of the Glands "in the Arm-pits. Theſe Pains alſo reach to the Clavicle "and Scapulæ."

An ulcerated Cancer is diſtinguiſhed by the Opening of a preceding occult Cancer; for then the Skin is laid bare by a kind of Excoriation, and a thin acrid Ichor, as it were, tranſudes through it.

An ulcerated Cancer only differs from an occult one, in the Corroſion of the Integuments, and in its being ſubſequent to the occult one, as we have already obſerved. Hence it may be eaſily known; for it ſuppoſes a previous occult Cancer, and its becoming open. But the Integuments are never broken ſuddenly, nor, when they are broken, is the contained Liquid copiouſly diſcharged, as it is obſerved to be in ripe Abſceſſes, which open ſpontaneouſly. But the Skin and Epidermis are gradually excoriated and ſeparated, and ſomething of a thin Ichor is preſſed through the ſlender Integuments, the ſeveral Strata of which are thus torn with racking Pain, till the Subſtance of the Cancer is gradually preſſed through the Aperture made. But, how an exulcerated Cancer runs through the various Degrees of increaſed Malignity, till at laſt it terminates in Death, we now proceed to deſcribe.

The Progreſs of a Cancer is thus: The ſound Veſſels, about the Edges of the hard Cancer, being weakened by the perpetual Attrition of the circulating Fluids, and diſtended by the Neighbourhood of the Tumor, at laſt break; hence a Putrefaction, and thence a ſubtile, acrid, fetid, cadaverous Sanies, which corrodes the circumambient Parts, preys upon thoſe which are near it, and makes a Progreſs all around; whilſt it propagates its malignant Roots every Way deep into the adjacent Parts, by which it adheres ſtrongly. The Lips then become ſwell'd, retorrid, and diſmal; an intolerable burning, pungent, corroding Pain is perceived; the Colour becomes cineritious, livid, or black; occult Cancers appear in the Glands, which communicate with the Part affected; the next Stage is attended with Hæmorrhages, Convulſions, a ſlow Fever, Extenuation of the whole Body, a Loſs of the Senſe of Smelling, callous Tubercles in the Ears unattended with Pain, Faintings, and laſtly, Death, in conſequence of the Corroſion and Conſumption brought on by the Diſeaſe.

To this horrid Train of Symptoms give me Leave to add a violent Pain in the Back and Loins, not unfrequent in the laſt Stage of a malignant Cancer.

As to the ſound Veſſels about the Edges of the Cancer, it has been already obſerved, that the Increaſe of the Tumor, together with its Hardneſs, are Signs of a Scirrhus degenerating into a Cancer. There is, therefore, an Attrition of the ſound Veſſels about the Edges of the Cancer, as alſo about all its Surface. The ſame Thing alſo happens to thoſe Veſſels, which, being diſtributed through the Subſtance of the Cancer, remain pervious to the vital Juices; for theſe, being every-where compreſſed by the hard cancerous Tumor, in which they are lodged, are continually rubbed againſt it. The Inflammation, and what accompanies it, the greater Velocity of the Humours circulating through the Veſſels, increaſe all theſe Symptoms. By this continual Attrition, the Veſſels are ruptured, and pour forth their Contents, which ſoon become putrid.

putrid. But, in this Caſe, there is no Hope of a benign Suppuration, by which this mortified and corrupted Part may be ſeparated from the ſound Parts. This will appear, if we conſider the Symptoms which happen in a Phlegmon, when going off in a Suppuration, and compare them with the Nature of a Scirrhus, and the Cancer formed by it; for, in an Abſceſs, the ultimate tender Extremities of the arterial Veſſels, obſtructed with a coagulated Liquid, which cannot be reſolved, have their Coheſion deſtroyed, and are, as it were, cut aſunder by the Impetus of the arterial Fluid. Theſe obſtructed Extremities being ſeparated, the gaping Mouths of the Veſſels pour forth the ſound Juices, which, mixing together in a cloſe and warm Part, are, in a few Days, converted into a mild and laudable Pus, which is evacuated, either when the Part breaks ſpontaneouſly, or is laid open by Art. Thus, by the Victory of Nature, as *Galen de Febribus, Lib.* 1. *Cap.* 7. well expreſſes it, Pus is formed, and the putrefying Humour is, from its very Nature, inclined to ſuch a Change or Alteration; for theſe Extremities of the Veſſels, together with their ſtagnating and obſtructing Fluids, are, as it were, aſſimilated, and converted into an homogeneous Pus, by the Affuſion of the ſound Humours. But, in a Scirrhus, the coagulated Juices often remain, for ſome Years, before it degenerates into a Cancer; and theſe Juices are, at the ſame time, lodged in Places, on which the Efficacy of the arterial Fluid, when put in Motion, can hardly act; that is, in the Cavities of the Glands, or in the intricate Contexture of the ſmall Ramifications, which ſecern the ſeveral Liquors brought from the arterial Blood. The obſtinate Matter, therefore, of a Cancer, and the little or no Efficacy of the vital Humours upon it, never ſuffer us to expect a ſalutary Concoction of the morbid Matter: Hence, a malignant Putrefaction is only to be looked for. *Galen*, in the ſeventh Chapter of his firſt Book, *de Febribus*, very juſtly obſerves, that Putrefaction may ariſe from two Cauſes, either a Weakneſs of the concoctive Faculty, which is not able to induce a Change for the better on the putrefying Subſtance, or the great Malignity of the putrefying Humour, which cannot be ſurmounted and corrected by a very ſtrong concoctive Faculty. Now, both theſe Cauſes concur in a Cancer; for, in this Caſe, the Efficacy of the vital Fluid, on which the concoctive Faculty, meant by *Galen*, depends, is very weak, or none at all; and the Malignity of the Matter to be corrected by this Faculty is very great. They, therefore, tantalize and delude the miſerable Patients, who pretend, that, by their boaſted Secrets, the Matter of a Cancer can be reſolved, and brought to a Suppuration. But it may be aſked, Whether the whole Cancer may not become mortified, and afterwards, as happens in a Gangrene and Sphacelus, be ſpontaneouſly ſeparated from the live Parts, by a Suppuration ariſing all around? The Man, who could bring about this happy Effect, would certainly deſerve well at the Hands of Mankind, and have Reaſon to boaſt of his ſuperior Art. Tho' this may ſeem to have ſome faint Shadow of Poſſibility in it, yet 'tis obvious, that the Difficulties to be ſurmounted are very great. For the entire Cancer does not become mortified, but the Veſſels pervious to the vital Humours, and the live Nerves, are lodged in the Middle of this mortified and corrupted Maſs: Of this we are ſufficiently informed by the intenſe Pain, and the continual and copious Diſcharge of Sanies. But, in a Gangrene and Sphacelus, the Parts, being totally mortified, feel no Pain, tho' they be deſtroyed with the Knife, or the actual Cautery, as is obſerved under the Article GANGRÆNA. In a Cancer, therefore, the mortified and corrupted Part, furniſhed with intercurrent live Veſſels and Nerves, excites the ſevere Calamities now to be enumerated. Nor does it appear poſſible ever to ſurmount this Diſorder, unleſs the mortified Part could be removed, or the live Veſſels become mortified, without propagating the Diſorder to the adjacent Parts; for, in this Caſe, all vital Influx and Efflux thro' the Part being deſtroyed, a Gangrene or Sphacelus would be produced inſtead of a Cancer, and the Part affected would indeed be deſtroyed, but the Progreſs of the Diſorder might be ſtopt, and the corrupted ſeparated from the ſound Parts. In very ſmall Cancers deſtroyed all at once, either by violent Corroſives, or the actual Cautery, this Method of Cure has ſometimes ſucceeded. Thus the celebrated *Boerhaave* cured a ſmall, but malignant Tumor, on the external Part of a Clergyman's Noſe, by corroding it all at once by highly acrid Oil of Vitriol: For thus a dead Eſchar is produced, which, if it covers the whole Cancer, may be afterwards ſeparated from the live and ſound Parts by a benign Suppuration. *Celſus* has a beautiful Paſſage, concerning this Uſe of corroſive Medicines, as follows. "An Eſchar, "ſays he, is induced by corroſive Medicines, which, when "ſeparated every-where from the ſound Fleſh, draws along "with it whatever was corrupted; and the Sinus, when thus "rendered pure, may be filled with incarning Medicines." But it is impoſſible ſo to deſtroy large Cancers, by the momentaneous Action of the moſt acrid Corroſive, or by the actual Cautery itſelf, as entirely to change them into dead Eſchars; for the ſmalleſt Thing of a cancerous Nature, which is not by this means mortified, and remains under ſuch an Eſchar, will afterwards rage with boundleſs Fury: Hence, little is to be expected from this Method, except in ſmall Cancers, which may, at the ſame time, be more ſafely extirpated with the Knife. But no one ever aſſerted, that any Remedies were known, which could reſtrain the preying Putrefaction of a Cancer, and ſeparate it from the live and ſound Parts. In the third Book of *Herodotus* we read, that *Democedes*, in conſequence of his having cured a dangerous Luxation in King *Darius*, which had been in vain attempted by the *Egyptian* Phyſicians, was employed to cure *Atoſſa*, the Daughter of the celebrated *Cyrus*, and Queen of *Darius*, of an Ulcer, (φῦμα) which aroſe in her Breaſt, and which, breaking, ſpread itſelf as a Cancer does. This Ulcer, ſo long as it remain'd ſmall, *Atoſſa*, from a Principle of falſe Modeſty, conceal'd; but, when her State became worſe, ſhe diſcovered her Diſorder to *Democedes*: But in the Progreſs of this Cure, there is not the leaſt Mention made, either of Inciſion, or the Uſe of the Cautery. *Helmont*, *in Capitulo de Ideis Morboſis*, informs us, that there was a Man in the Duchy of *Juliers*, who by ſprinkling a Powder, which created no manner of Pain, upon all kinds of Cancers, cured them, and afterwards conſolidated them by an incarning Plaiſter: And he adds, that this Art was buried with its Owner. Whatever Truth there may be in Accounts of this Nature, for any thing we can find, no ſuch Remedy is known at preſent.

As to the ſubtil, acrid, fetid, and cadaverous Sanies, the mortified Maſs of the exulcerated Cancer is, by the Acceſs of the Air, and the Heat of the adjacent live Parts, ſoon converted into a terrible Putrefaction, and diſſolved, as it were, into a highly fetid Sanies. But the live Veſſels, diſpers'd thro' the Subſtance of the Cancer, bring freſh Fluids, which are ſoon corrupted, whilſt they waſh theſe putrid Parts: The Nerves, which are alive, and highly ſenſible of Pain, being continually irritated by this acrid Sanies, are, perhaps, the Occaſion of a larger Quantity of thin and acrid Serum being derived to theſe Parts. 'Tis obvious, from what is ſaid under the Article VULNUS, that tenſe Nerves, Tendons, and nervous Membranes, wounded by a ſmall Puncture, produce the worſt of Symptoms; and eſpecially, that a copious Evacuation of thin and acrid Serum often accompanies theſe Accidents. 'Tis, therefore, highly probable, that this Cauſe concurs in an ulcerated Cancer, from which a large Quantity of a thin Fluid is often diſcharg'd: But the Fluid convey'd to the Cancer ſeems to degenerate, and acquire ſo malignant a Nature in the Place affected, tho', before, it was mild and benign; for *Van Swieten* tells us, that he ſaw an exulcerated Cancer in a Woman, otherwiſe ſound and healthy, diſcharge ſuch an acrid Sanies, which did not, therefore, pre-exiſt in the Blood, but was generated in the Part affected. Hence, in an exulcerated Cancer, ſuch an acrid Sanies is not immediately diſcharg'd, but its Malignity gradually increaſes, in proportion as the Putrefaction daily augments. We alſo obſerve, in other Diſorders, that Fluids, lodg'd in ſome Parts of the Body, and degenerating from the Nature of the ſound Humours, aſſimilate, and change into their own Condition, other Fluids convey'd to them. When, for Inſtance, after the Extirpation of a Breaſt, a large Wound has remain'd, Phyſicians and Surgeons often complain, that, in conſequence of the large Quantity of Humours convey'd to the Part, and chang'd into a laudable Pus, the whole Body is exhauſted and dry'd up, as it were, by a true Maraſmus. Where a Liquor, degenerating from laudable Pus, is lodg'd in the Cavity of a fiſtulous Ulcer, a white Pus, of an equal Conſiſtence, is never collected in that Part, but either an Ichor, or a Sanies. When a fiſtulous Ulcer ariſes, for Inſtance, from a carious Bone, the Nature of the Fluid, collected in its Cavity, will ſtill be worſe; from all which it ſeems to be obvious, that the putrefy'd cancerous Maſs converts the Humours convey'd to it into the ſame Nature with itſelf, tho', before, their State was very good. *Helmont*, in his Treatiſe intitled, *Scabies & Ulcera Scholarum*, ſeems to have been of this Opinion, when he ſays, "Sanies "and Pus are not the Excrements of an Ulcer, or any "Part affected, nor the Effects of a natural Digeſtion; but "they are produced by the Seeds or Roots of the Ulcer, *&c.* "— Whilſt the proper Principle of Corruption is lodg'd in "the Ulcer, and corrupts the alimentary Blood, before it is "fit for Digeſtion, *&c.* — Sanies, therefore, and Pus, are "not the Excrements of the Ulcer, but the Effects of a cor-"rupting Principle, and they are, at once, the Indications, "Signs, and Effects, of a Blood degenerated and deprav'd into "a noxious Matter." He afterwards treats of this Doctrine at large, and confirms it by Arguments. The above Quotation ſufficiently evinces, that he thought the ſound Humours convey'd to an Ulcer degenerated into the ſame Degree of Malignity with the Humours lodg'd in the Bottom, and at the Lips of the Ulcer.

But, that this Sanies, diſcharg'd from an ulcerated Cancer, may acquire an intolerable Acrimony, is certain from numberleſs Inſtances. Thus *Van Swieten* informs us, that he ſaw the

Linen.

Linen Cloths, apply'd to a cancerous Part, wet with ſuch a Sanies, eat away, and corroded in the ſame manner, as if they had been touch'd with Aqua Fortis. Hence *Ætius*, in *Tetrabibl. 4. Serm. 4. Cap.* 43. juſtly ſaid, "That an ulcerated "Cancer continually corrodes, penetrates deeper, cannot be "ſtopt, and diſcharges a Sanies more deleterious, than the "Poiſon of venomous Animals, and which is abominable, "both on account of its Quantity and Smell." 'Tis, therefore, no Wonder, if this highly acrid Poiſon corrodes and preys upon all Parts near it. Thus *Van Swieten* informs us, that he ſaw an exulcerated Cancer of the Breaſt, which had eaten as far as the Arm-pit, when, the larger Blood-veſſels being corroded, the Patient died of a profuſe Hæmorrhage. *Hildanus*, in *Obſervat. Chirurg. Centur.* 3. *Obſer.* 87. informs us, that, in the Space of four Months, he knew an ulcerated Cancer corrode the whole Breaſt, and all the adjacent Parts, as far as the Sternum and Axil. *Stalpart Vander Weillæ*, in his *Obſervat. Rarior. Centur. Poſt. Part* 1. *Obſ.* 26. informs us, that he found a Hole, as large as one's Fiſt, eaten in the Stomach by a cancerous Tumor: The Lobe of the Liver, which lay upon the Stomach, and the adjacent Diaphragm, were in like manner corroded. In the *Miſcellan. Curioſ. Dec.* 1. *A.* 1. *Obſerv.* 99. we are inform'd, that, by means of a cancerous Pancreas, the Diaphragm was perforated, the Spina Dorſi corroded, and the Kidneys become entirely corrupted and putrid. Many Caſes of a like Nature occur in practical Authors.

As to the Diſorder's making a Progreſs all around, and ſpreading its malignant Roots every Way deep into the adjacent Parts; if an exulcerated Cancer was, by this acrid Sanies, corroded to the live Parts, and thus conſumed by its proper Sanies, there would ſtill remain ſome Hopes of a Cure, after ſo many Calamities. But this terrible Diſorder changes all the adjacent Parts into a like Malignity, firſt indurating them, and then corroding them by a true and genuine Propagation of the Diſorder. This happens not only in the Circumference, but the Diſorder, breaking the Pellicles, penetrates deep, and is, for this Reaſon, ſaid to ſend forth malignant Roots, by which it adheres very ſtrongly to the adjacent Parts; for theſe indurated Ramifications of an exulcerated Cancer are generally diſtributed every Way, and, if the ſmalleſt Portion of them remains after the Extirpation of the Cancer, it ſoon ſprings up afreſh, and brings on a Diſorder equally terrible.

As to the Lips being ſwell'd, retorrid, and diſmal; whilſt a Scirrhus is beginning to be chang'd into a Cancer, a great Hardneſs and Increaſe of the Tumor are obſerv'd, as has already been taken notice of: But when, by a Conſumption of the Integuments on that riſing Apex, which uſes to appear in a malignant Scirrhus, a Way is open'd for the Cancer, every Way preſs'd upon, to expand itſelf all round the Aperture, to thruſt back the Lips of the Ulcer, and to grow out in a fungous Maſs, ſometimes of a livid, and ſometimes of a blackiſh Colour: Hence theſe terrible Lips of an ulcerated Cancer are conſtituted.

As to the intolerable burning, pungent, and corroding Pain; the Skin, as yet entire, is gradually burſt by the ſwelling cancerous Maſs. Hence, in conſequence of the cutaneous Nerves being ſlowly lacerated, the moſt violent, and at the ſame time the moſt continued Pain is produced; beſides, the Nerves diſtributed thro' the Subſtance of the Cancer remain alive, and are every Moment corroded by the acrid Sanies, which alſo diffuſes itſelf thro' the adjacent Parts, and preys upon them. In conſequence, therefore, of the continual Laceration, and ſlow Corroſion, a violent Pain, almoſt without any Intermiſſion, racks the miſerable Patients. 'Tis, therefore, evident, how much more ſevere a Cancer is, than a Gangrene and Sphacelus; ſince theſe laſt Diſorders, in conſequence of all the Parts being deſtroy'd by a perfect Mortification, are entirely free from Pain.

As to the cineritious, livid, or black Colour; when the Fleſh of the ſoundeſt Animal, after it is ſlain, is ſuſpended in a warm Air, the red Colour is ſoon chang'd into a pale and cineritious one; then, when a Putrefaction begins, it becomes livid, then blackiſh, and is at laſt reſolved into a putrid Sanies. In a Gangrene and Sphacelus, the ſame Change of Colours is obſerv'd in the affected Parts of the human Body. Since, therefore, in an ulcerated Cancer, the greateſt Part of it is mortified, and become putrid by the Heat of the adjacent Parts, and the Acceſs of the Air, 'tis ſufficiently evident why the Colour muſt thus be chang'd, according to the various Degrees of Corruption. Hence, a cineritious Colour is beſt, a livid one worſe, and that which is black worſt of all, becauſe it implies the higheſt Degree of Putrefaction.

As for occult Cancers appearing in the Glands, which communicate with the Part affected; it is ſufficiently plain, from phyſical Obſervations, that whilſt the Glands, in certain Parts of the Body, are diſorder'd, others are alſo affected in different and remote Parts. Thus, under the Article SCIRRHUS it is obſerv'd, that when the Glands of the Neck are ſcrophulous, thoſe of the Meſentery are generally affected with the like Diſorder; whence theſe Glands are juſtly ſaid to communicate or correſpond with each other. In inveterate Scirrhuſes, and particularly in Cancers of the Breaſt, the ſubaxillary Glands, almoſt always becoming indurated and tumid, degenerate into occult Cancers.

As to Hæmorrhages; when the Blood-veſſels, diſtributed thro' the Subſtance of the Cancer, are diſſolv'd, or when the remarkable arterial Ramifications are corroded, by the Diſorder preying upon the adjacent Parts, as in Cancers of the Breaſts, it has often been obſerv'd, that the axillary Artery, or its larger Ramifications, being corroded, an Hæmorrhage has been brought on, which ſoon prov'd mortal. Such an Effuſion of Blood is with the greateſt Difficulty ſtopt, ſince, either by Compreſſion, or the Application of acrid Styptic Liquors, the Cancer is generally much irritated: Nor may a large Hæmorrhage only happen from a Corroſion of the large adjacent Veſſels; but the Veſſels diſtributed thro' the Subſtance of the Cancer are often ſo dilated, that the greateſt Danger is to be dreaded from a Rupture of them, tho' in a ſound State they were ſufficiently minute. In that terrible Cancer of the Eye, before mentioned from *Hildanus*, the dilated Veſſels happening to break, ſeventy Ounces of Blood were diſcharged in the Space of two Days; and tho', from ſo great a Loſs of Blood, the Patient was become very weak, yet next Day, when the Bandage, with which the Rupture was cover'd, was remov'd, the Blood burſt out with a more terrible Force than before. It ſometimes happens in barren Women, that after all the Signs of a Scirrhus of the Uterus have preceded, a fixed and continued Pain ſeizes the Pubes, Hypogaſtrium, and Loins, and a ſanious Ichor is diſcharged from their Pudenda: At this Time, a violent Hæmorrhage of the Uterus generally enſues, by which, when they are render'd very weak, they feel an Alleviation of their Symptoms for a little time, 'till at laſt, upon a Recovery of their Strength, they return with the ſame Violence. In this Caſe there ſeems to be a cancerous Diſpoſition about the Parts of the Uterus, which corrodes the dilated Veſſels.

As to Convulſions; theſe are generally produced, either by a previous Evacuation of Blood, or an Irritation of the Nerves, or an intolerable Pain.

As to a ſlow Fever; this is produced by the perpetual Watching, and the intenſe Pain felt: Beſides, that acrid and putrid Sanies, always waſhing the Surface of the Cancer, inſinuates itſelf into the ſmall corroded Veins, and corrupts the whole Maſs of Blood with a putrid Taint. For which Reaſon, a Cancer is enumerated as one of the particular Cauſes of a Fever: For if mild Pus, too long retain'd in a cloſe Abſceſs, and entering the Veins, is capable of producing the Symptoms enumerated under the Article ABSCESSUS, how much more may they be produc'd by a cancerous Sanies reabſorbed into the Veſſels?

As to Extenuation of the whole Body; how much Pain long endur'd, and an uneaſy State of Mind, are capable of extenuating the Body, is obvious from daily Experience. Since, then, ſuch Patients are rack'd with continual Pain, and dread the worſt Symptoms, 'tis no Wonder they ſhould be extenuated. Beſides, a large Quantity of Liquor is evacuated from the Body, whilſt an exulcerated Cancer continually diſcharges this acrid Sanies. A gentle hectic Fever, in the mean time, and protracted Watchings, prey upon the Body; and, at the ſame time, thoſe Functions which are ſubſervient to the Reſtoration of the loſt Juices, by preparing laudable Humours from the Aliments taken, are deprav'd.

As to the Loſs of the Senſe of Smelling, and callous Tubercles in the Ears, unattended with Pain; an ulcerated Cancer diffuſes a Smell ſo fetid and intolerable, that the By-ſtanders can ſcarce endure it: The miſerable Patients are, however, oblig'd to bear it Day and Night; hence their Senſe of Smelling is entirely loſt. *Hippocrates, de Morbis Mulier. Lib.* 2. *Cap.* 20. reckon'd the following among the Symptoms of a Cancer: "The Patients have their whole Bodies extenuated, "their Noſtrils are dry and contracted, they breathe ſhort, "and their Senſe of Smelling is entirely loſt; They have, in"deed, no Pain in their Ears, but ſometimes callous Tuber"cles are form'd in them." *Van Swieten* informs us, that he had often obſerved thoſe afflicted with Cancers to be depriv'd of the Senſe of Smelling; but ſays, he never ſaw callous Tubercles, unaccompanied with Pain, form'd in the Ears of ſuch Patients; and where they happen, he ſuppoſes them to be begining Scirrhuſes of the Follicles, which are lodg'd in the *Meatus Auditorius*.

As to the Faintings, and at laſt Death; the Faintings may proceed from the Strength being impaired by Hæmorrhages, Pains, Watchings, or a Fever; and, at laſt, a welcome Death puts an End to a miſerable Life.

From what has been ſaid 'tis obvious, how deplorable a Diſorder a Cancer is, when it cannot be amputated; as alſo what terrible Effects it muſt produce, when it preys upon the internal Parts of the Body. In this Caſe, the only Comfort which the Patients can have is, that they ſhall ſoon die, in conſequence

ſequence of their Viſcera being corroded; whereas, when the Diſorder is ſituated in the external Parts, it only corrodes ſlowly, and often requires ſome Years to kill the Patient. From what has been ſaid it alſo appears, how carefully a Scirrhus, which is, as it were, the Foundation of a future Cancer, ought to be treated; for if no Hopes of a Reſolution are left, it is forthwith to be extirpated, however little prejudicial it may ſeem to be in conſequence of its Freedom from Pain.

An occult Cancer, in a Body of a good Habit, may be ſometimes endur'd without great Inconvenience; but if once mov'd in the manner above deſcribed, it will infallibly cauſe a great deal of Pain and Trouble.

As to the Prognoſtics, therefore, all the Diſorders before enumerated may juſtly be feared, if the Cancer be ulcerated: For as long as it is occult, and reſtrained within its Coats, it may be endured, provided it be left at Reſt, and irritated by no Remedies, which may increaſe the Motion of the Humours through the Veſſels, in the very Subſtance of the Cancer, or in the adjacent Parts; under which Circumſtance the Cancer would ſoon be enraged. This was very well obſerv'd by *Celſus*, who ſeems in a manner to have deſpaired of the Cure of a Carcinoma, or Cancer, and for that Reaſon recommends only a palliative Cure. "None of them," ſays he, "was ever the better for Medi"cines; but when cauterized, they have been exaſperated; "and increaſed, till they have deſtroy'd the Patient; and "when cut out, and after the Wound has been cicatrized, "they have returned, and brought the Cauſe of Death with "them. On the contrary, many who uſe no violent Means "to free themſelves from ſo troubleſome a Diſorder, but apply "gentle Medicines, which ſooth, as it were, and ſoften the "Diſtemper, have lived under it to extreme old Age." *Lib.* 5. *Cap.* 28. The Hiſtories of Medicine inform us, that occult Cancers have been many Years in the Body, without doing any conſiderable Injury. *Tulpius*, *Obſerv. Med. Lib.* 1. *Cap.* 7. relates, That a Woman carry'd a Cancer about fifty Years and more, without any great Inconvenience. Being afflicted afterwards with her Huſband's ill Fortune, the Pain and Itching, of which ſhe had hitherto been ſcarce ſenſible, increaſed; and upon the Application of Cauſtics, which was adviſed by an Empiric, the Diſeaſe was converted into a very bad kind of ulcerated Cancer.

Hildanus, *Obſerv. Chirurg.* relates, That a Citizen of *Lauſanne* had a cancerous Tumor, as big as a Hen's Egg, near his Left Breaſt, for many Years. By the Advice of ſome Phyſicians he apply'd to it Plaiſters of Mucilage, Melilot, and the like, with an Intention of gradually mollifying the Tumor: But a Pain and Inflammation ſoon following, he removed the Plaiſters, and mitigated the Symptoms by an Application of Refrigerants. Some time afterwards he again apply'd the Plaiſter, but with the ſame Effect as before; wherefore he abſtain'd from the Uſe of them for the future, and lived a long time afterwards. Hence appears the Truth of that Aphoriſm of *Hippocrates*, quoted before, which determines, that it is better not to meddle with thoſe who are troubled with occult Cancers; becauſe if they are treated with Remedies, they die in a ſhort time; but being left to themſelves, endure the longer; which *Hildanus* confirms by ſeveral Examples.

We cannot expect that an occult Cancer ſhould lie long without giving any Moleſtation, unleſs the Body of the Patient be full of good Humours, or that his Blood, and all his Humours, be of a mild and benign Temperature, as they are in thoſe who enjoy perfect Health: For under any remarkable Predominance of a Cacochymy, by which the Humours degenerate from their natural Temperament into an immoderate Acrimony, as in the acrid Scurvy, a confirmed atrabilious or a hot bilious Temperature, the occult Cancer will ſoon degenerate into an ulcerated one, as was before obſerved.

A beginning Cancer, if ſmall, moveable, ſituated in a proper Place, not adhering by any conſiderable Veſſels, proceeding from an external Cauſe, in a young and otherwiſe ſound Body, and being the only one in the whole Body, is immediately to be extirpated by the actual Cautery, or cut out.

Though it appears from what was ſaid under the preceding Head, that occult Cancers may be ſometimes endur'd for a long time; yet, ſince even a Scirrhus ſtill threatens the Patient with the Fear of a worſe Evil, as was obſerved before, far greater is the Danger of which we ought to be apprehenſive from a Cancer; we may therefore eſtabliſh it as a practical Axiom in Medicine, that all Cancers are to be extirpated, if it may be done with the Safety of the Patient, and without Fear of a Return: For though *Celſus* writes, that no Remedy ever did Good to a Cancer, yet we are convinced, by innumerable Obſervations, that a Cancer may often be ſafely and ſucceſſfully ſeparated from the other Parts by Cutting. But *Celſus*, as we have already obſerved, has given but an obſcure and confuſed Deſcription of a Cancer; and if we conſider his Directions in the Cure of it, we ſhall eaſily ſee the Reaſon why it prov'd unſucceſsful. For he adviſes the immediate Application of Cauſtics; and if by theſe means the Diſorder is leſſen'd, and the Symptoms abated, you may then, he ſays, proceed in the Cure with the Knife and Burning. But it ſufficiently appears, that by this Method the Cancer is extremely irritated before you proceed to its Extirpation; and if we conſider what the other antient Phyſicians have directed, concerning the Deſtroying of a Cancer, the Reaſon will be evident, why the worſt of Events ought to be expected from their Management. Thus we read in *P. Ægineta*, *Lib.* 6. *Cap.* 45. that ſome conſum'd all the corrupt Parts with Cauteries, others cut off the entire Breaſt, and then cauterized the Wound; but he adds, that *Galen* only approved that Section in which the Cancer could entirely be cut out. *Aetius*, *Tetrab.* 4. *Serm.* 4. *Cap.* 45, 46. giving an Account of *Leonidas*'s chirurgical Treatment of a Cancer, ſays, that the ſound Part of the Breaſt is to have an Inciſion made in it, and then to be cauterized, till, by inducing a Cruſt, the Hæmorrhage be ſtopped; ſoon afterwards the Cutting is to be renewed, and then the Cauterizing as before; and thus are we to proceed by alternate Cutting and Cauterizing, till the Cancer be quite conſumed. And when the Work of Amputation is perfectly performed, all the Parts are to be cauterized over again to a Dryneſs; and he ſays, that the firſt Cauterizings are made for the ſake of ſtopping the Blood; but the laſt, with an Intention of conſuming the Reliques of the Diſeaſe. Yet he obſerves, that a Scirrhus may be extirpated by Section alone, without a Cautery; for he believed there was no Danger of an Hæmorrhage in that Caſe, and therefore no need of Burning. But how dangerous this cruel Method of curing a Cancer muſt be, will ſufficiently appear hereafter; and alſo if it be conſider'd, that Convulſions are to be feared at the very Time when the Ulcer is under Repurgation. But when the Cancer is to be deſtroy'd by Section alone, according to the modern Practice, the Cure does not ſeem to carry much Danger in it, provided the Cancer be qualify'd according to the following Conditions:

Firſt, that it be in its Beginning; for the longer it continues, the worſe, every thing conſider'd, muſt be the Event; ſince it is to be feared, that the Cancer has fixed its malignant Roots in the neighbouring Parts underneath.

Secondly, that it be but ſmall; for a large Cancer carries more Danger in the Operation; and the Cure of a great Wound, which muſt then be inflicted, cannot but be difficult; for it frequently happens, that by the copious daily Diſcharge of Pus, the exhauſted Patients fall into a true Maraſmus; or the Pus, continuing too long within a Wound of a conſiderable Compaſs, is reſorb'd into the Blood; by which means a purulent Cacochymy is generated in the Fluids, which often proves mortal.

Again, in the third Place, the Cancer muſt be free and diſengaged, or moveable; for unleſs it can be removed, Root and Branch, at once, the leaſt Reliques of it will ſprout forth anew with more Malignity than ever; and if it be firmly united by Accretion to the ſubjacent Parts, it cannot be entirely taken out. How to know when a Cancer is free and diſengag'd, ſee SCIRRHUS.

Fourthly, it ought to be ſituated in a proper Place, and not united by Accretion to large Veſſels. On this Subject ſee the Article SCIRRHUS: Where alſo it appears how far the Dexterity and Intrepidity of a ſkilful Surgeon will go in the moſt dangerous Caſes; for even ſcirrhous Parotides, and ſubaxillary Glandules, which are ſo much to be dreaded, on account of the Vicinity of very large Veſſels, have been extirpated by a ſkilful Section, with all the Succeſs that could be deſired. However, the worſt of Conſequences are doubtleſs to be apprehended from the Accretion or Growing of a Cancer to large Veſſels; tho' we are of Opinion, that a doubtful Remedy ought to be try'd, if there be but the leaſt Hope of delivering the Patient from this moſt dreadful of all Evils, a Cancer.

A fifth Qualification requir'd in a Cancer, in order to its happy Extirpation, is, that it be produced by an external Cauſe in a young and ſound Body. For where there is a Scirrhus from a latent Diſpoſition, and a Cancer generated of that Scirrhus, it is greatly to be feared, that, after the Extirpation of the Cancer, the ſame Cauſe remaining, another ſhould ariſe; but when, for Inſtance, it owes its Original to a Contuſion of the Breaſt, there is no Fear of its growing again. Since alſo a very good State of Health is required, in order to the Conſolidation of the Wound after Extirpation, it is eaſy to infer how great Reaſon there is to hope for a Cure, when the Operation is performed on a young and healthful Body. But in Perſons of an advanc'd Age, eſpecially the Female Sex, and in atrabilious Temperaments, the Conſtitution is diſpoſed to the Production of Scirrhoſities and Cancers.

Laſtly, the Cancer which is to be extirpated, muſt be the only one in the whole Body; for we learn by Obſervation, that when a Cancer is taken off, if there be but a ſmall Scirrhus in another Part of the Body, it will increaſe in a ſhort time, and degenerate into a Cancer. Therefore we muſt carefully examine all the glandulous Parts of the Body, and find whether they contain any latent Scirrhoſity. And becauſe, by Obſervations made

on a Scirrhus, it appears, that Diſorders of this Kind may be latent in the interior Parts of the Body, we are to be no leſs ſolicitous, whether there be any Signs to be diſcover'd, by which we may know, that the internal Parts of the Body are affected with a Scirrhus, or a Cancer. Thus, for Example, they who have almoſt all the Glandules of their Neck affected with the Scrophula, generally labour under the ſame Diſorder in the Glandules of the Meſentery. And ſince there is a ſurpriſing Communication or Correſpondence between the Breaſts and the Womb, before we proceed to the Extirpation of a cancerated Breaſt, we muſt carefully examine, whether there be any Suſpicion of the like Diſorder about the Uterus. For if there be a Senſe of an unuſual Weight about the Hypogaſtrium, or a Pain in thoſe Places; or the Patient be frequently afflicted with a Hæmorrhage of the Uterus, or a Diſtillation of ſanious and acrimonious Matter from the Vagina, or the like Symptoms, it is greatly to be feared, that after Extirpation of the Breaſt, tho' moſt ſucceſsfully perform'd, a worſe Diſeaſe will ſucceed in the room of the other, and infeſt the Uterus.

Emollient, emplaſtic, ſuppurating, acrid, excoriating, veſicating, and cauſtic Applications, convert an occult into an ulcerated Cancer: All theſe are, therefore, to be avoided.

The many fatal Events, which have been known to happen after Application of the like Topics, are a ſufficient Proof that a Cancer can never be cured, but only irritated, by ſuch Remedies; for which Reaſon they are prohibited, by the unanimous Conſent of all prudent Phyſicians and Surgeons, ſince the only Cure for a Cancer is Extirpation. All Emollients, Emplaſtics, and Suppuratives, only diſturb the incorrigible Matter of a Cancer, and diſpoſe it to the worſt ſort of Putrefaction, but can never reduce it to Suppuration. Acrid, excoriating, veſicatory, with actually and potentially cauſtic Applications, diſſolve the Integuments of an occult Cancer, and, in a ſhort time, render it open, and ulcerated, in the worſt manner. Accounts of the ill Effects of ſuch Medicines are given above, and alſo under the Article SCIRRHUS. I ſhall only give here one Example from *Paré*, *Livre 7. Chap.* 31. A noble Virgin, who was Maid of Honour to the Queen Mother, had a Tumor, of the Size of a Walnut, in her Left Breaſt, which manifeſted the Malignity of its Nature, by the racking Pains it gave her. *Paré* was of Opinion, that a Palliative was the only proper Cure, which was alſo the Sentiment of a very experienced Phyſician, with whom he conſulted. After two Months, the Diſeaſe continuing in the ſame State, the Patient, being diſſatisfy'd, conſulted another Phyſician, who confidently promiſed her a perfect Cure, tho' he was told, that the Diſeaſe was by others accounted incurable. He apply'd heating and mollifying Things to the Tumor, by which, in a ſhort time, the Breaſt was ſwelled to a vaſt Bigneſs, and was at the ſame time affected with a moſt acute Pain, and a violent Inflammation. At length the Tumor broke, and a great Hæmorrhage follow'd; which the Phyſician endeavouring to reſtrain by cauſtic Powders, all the bad Symptoms were extremely exaſperated, and the Patient dy'd in a ſhort time after. How unhappy is the Man whoſe Conſcience reproaches him with having, by his own wilful Raſhneſs, precipitated his Neighbour into the like Deſtruction!

A Cancer which is large, of long ſtanding, adherent, ſituated in any Part inconvenient for Extirpation, growing to or lying upon any conſiderably large Veſſels, proceeding from an internal Cauſe, in a Body which is old, of a bad Habit, and diſpoſed to cancerous Diſorders, and which is accompany'd with Cancers in other Parts, muſt neither be touch'd with the Knife, nor any of the topical Medicines abovementioned.

Here are enumerated all the Marks or Qualifications which forbid the Extirpation of a Cancer, and which are oppoſite to thoſe before recited, and are eaſily underſtood by what was there ſaid. Now it is requir'd, that, in the like Caſes, when Deliberation is taken about extirpating a Cancer, all things be ſeriouſly weighed; for if a Cancer, which may be extirpated, be ſuffer'd to continue, the Health of the Patient is very ill conſulted; and if we remove a Cancer, when it requires to be left at Reſt, all the bad Symptoms are increaſed, and the unfortunate Patient endures the Torment of a cruel Operation to no Purpoſe. Whenever, therefore, a Cancer is to be dreaded, either for the Greatneſs of its Bulk, or the Length of its Continuance, or when it is grown to the adjacent Parts, we can hardly expect a good Event from an Extirpation, which alſo ſufficiently appears to be impoſſible in a Situation which is inacceſſible to the Hands and Inſtruments of the Surgeon. But where the Danger of the Operation is demonſtrated by the Vicinity of large Veſſels, the Cure is not to be attempted, unleſs we could infallibly reſtrain the dreaded Hæmorrhage by Ligatures, or ſome other way. It appears from what has been ſaid above, that no good Event is to be expected from the Extirpation of a Cancer proceeding from internal Cauſes, eſpecially if old Age, or a remarkable bad Habit, obſtruct the Conſolidation of the Wound; for, as it appears by Obſervations on Wounds, the Reſtitution of loſt, and the uniting of ſeparate Subſtances, muſt be effected by good Humours convey'd thro' ſound Veſſels in a due Quantity, and with a proper Force. But when we meet with ſeveral Scirrhuſes, or occult Cancers, in diſtant Places, it is an evident Sign, that the Body is diſpoſed to the Generation of Cancers; and therefore it would ſignify nothing to extirpate a bad Stock in one Place, the Shoots of which appear in other Places, and will ſoon ripen into the ſame Malignity. It muſt, however, be confeſſed, that it may be ſometimes moſt adviſable to extirpate a Cancer, tho' attended with ſome Symptoms which ſeem to prohibit an Extirpation as dangerous, and ſometimes as unſerviceable; for the high Malignity of this Diſorder renders a dubious Remedy preferable to a certain and terrible Death, provided the ſmalleſt Hopes of a happy Event are left; or, at leaſt, after Extirpation, it may be long hindered from appearing afreſh in other Parts. All theſe Degrees of Danger ought, however, to be laid before the Patient, and his Friends, leſt the Phyſician ſhould either appear to have been ignorant himſelf, or to have impoſed upon thoſe with whom he had to do. Thus, under the Article SCIRRHUS, it is obſerved, that Extirpation has ſucceeded happily in Parts highly dangerous, on account of the Vicinity of large Blood-veſſels. *Hildanus*, as we have related from his Obſervations, extirpated a Breaſt, tho' ſeveral pretty large Scirrhuſes were lodg'd under the Armpit on the ſame Side, which he cut out at the ſame time. 'Tis the Duty of a conſcientious Phyſician, to adviſe nothing to be done to his Patients, but what, were he in the like Circumſtances, he would order to be done to himſelf. When, therefore, after a due Conſideration of the Caſe, 'tis obvious, that the Extirpation is entirely impoſſible, or uſeleſs, if it could be performed, nothing remains but to alleviate the Symptoms, and preſerve the incurable Diſorder in the ſame State as long as poſſible. But the Method of obtaining this End will be laid down in what follows.

Unleſs a Cancer can be entirely extirpated, together with its Roots and Seeds, any Attempt to take it off by Inciſion will exaſperate it, make it recur to the inward Parts, and there generate others, or increaſe thoſe already found.

Any Part of the Subſtance of a Cancer, which grows to the adjacent Parts, and is diſtributed through them, is call'd the Root of the Cancer; for we have already obſerv'd, that an ulcerated Cancer ſends off malignant Roots very deep everywhere, by means of which it adheres ſtrongly to the adjacent Parts. This Name is very properly given to theſe Ramifications of a Cancer; becauſe from theſe, when left, the Diſorder ſoon ſprings up afreſh, as it were, from Roots. *Hildanus*, in *Centur.* 3. *Obſerv.* 84. informs us, that whilſt he was examining a ſcirrhous Tubercle of the Tongue, he, by the Touch, perceiv'd Roots like a large Thread, diſtributed from this Scirrhus thro' the Subſtance of the Tongue. Unleſs, therefore, the Cancer, together with its Roots, can be extirpated, the ſame Diſorder will ſoon ſpring up afreſh. *Ruyſch*, in *Obſervat. Anatom. Chirurg.* gives us an Account of ſuch a bold Cure, in which, after an Extirpation was made, the actual Cautery was apply'd to the Part, in order entirely to deſtroy the Roots of the Cancer. An old Woman had for a long time been afflicted with an indurated malignant Tumor in her Tongue, and, after repeated Inciſions, her Diſorder ſtill return'd. Upon this the celebrated *Ruyſch*, and a ſkilful Surgeon, unanimouſly concluded, that nothing remain'd but again to extirpate the Diſorder, and apply the actual Cautery to the Part. The courageous old Woman eaſily ſubmitted to this cruel Cure, and bore it bravely, almoſt without a Shriek, tho' the Cautery was at different times pretty forcibly apply'd. When the Eſchars were ſeparated, the Place was ſoon brought to a Cicatrix, and the Patient afterwards remain'd ſound.

That Cauſe, whatever it is, which laid the firſt Foundation of the Scirrhus, is call'd the Seed of the Cancer. Now, if either from a Suppreſſion of the Menſes, or of an accuſtomed hæmorrhoidal Diſcharge, an atrabilious Habit of Body, a ſorrowful Life, or an hereditary Taint, the Scirrhus, of which the Cancer is afterwards form'd, draws its firſt Origin, unleſs theſe Diſorders are corrected, the Cancer will in vain be extirpated; ſince whilſt the Cauſe remains, 'tis juſtly to be dreaded, leſt the ſame Diſorder ſhould ſoon appear afreſh in other Parts; and perhaps the Rudiments of the Scirrhus are by this time lodg'd in the internal Parts. But if Scirrhuſes are already form'd in other Parts, upon extirpating the Cancer, they will ſoon be increas'd, and degenerate into a like Malignity, as is evident from many Inſtances. *Tulpius*, in his *Obſervat. Med. Lib.* 1. *Cap.* 46. informs us, that in a Girl, who was ſuffocated in an Hoſpital by ſcirrhous Strumæ of the Neck, he ſaw under each ſtrumous Swelling others of a ſmaller Size ſecretly lodg'd. Twenty of theſe, he ſaid, occurred in one and the ſame Place; and in Figure ſomewhat reſembled the Seeds of Lupins. Theſe latent Seeds of the Strumæ were ſo diſpoſed, that the larger always lay above the leſſer, which

were

were gradually ſo diminiſh'd, as ſcarcely to equal the Seed of Seſamum.

The Cauſe of a Cancer muſt be removed, together with the Cancer, or rather before it. And, unleſs a Cancer can be entirely taken away, it muſt be left. A Cancer in the Uterus, Palate, Armpits, or Groin, is incurable (*See* BUBO). A Cancer in the Lips is not cured without Difficulty.

As to the Cauſe of a Cancer; the Reaſon why it ought to be removed with the Cancer itſelf, or rather before it, is obvious from what has been ſaid. The beſt Method is, if the Virulence of the Diſorder will admit of a Delay, to remove the Cauſe of the Cancer by proper Remedies, before the Extirpation is attempted: But, if Circumſtances are ſuch as to render a Delay dangerous, the Cancer may be extirpated; provided there is any Hope, that the cancerous Diſpoſition in the Body may be ſurmounted and corrected.

As to the total Extirpation of a Cancer; it is certain, that the Remains of the extirpated Cancer, tho' very ſmall, will in a ſhort time ſpring up to a like Bulk, and acquire the ſame, and ſometimes a greater, Degree of Malignity. Of this the celebrated *Boerhaave* ſaw a memorable Inſtance in a Lady of Diſtinction, who had a cancerous Breaſt extirpated by a very ſkilful Surgeon. After the Operation, in the Middle of the Wound there appear'd a Mark of a cineritious Colour, and ſcarcely ſo large as the Nail of one's little Finger: But, as this Mark was lodged in the Subſtance of the Pectoral Muſcle, the Surgeon would not venture to cut it out entirely, but thought, by the Uſe of Corroſives, to remove it. The Cure of the Wound ſucceeded ſo well, that all its Surface was almoſt cover'd with a Cicatrix: Upon which the Mark began to riſe in a fungous Maſs, which, with the greateſt Malignity, prey'd upon the adjacent Parts, till the miſerable Patient died. In another Caſe of a like Nature, a more hardy Surgeon, as *Van Swieten* informs us, ventured to cut out the Root of a Cancer left in the Pectoral Muſcle. And, whilſt the Cure ſeem'd to go happily on, the Patient's Jaws, on the fourteenth Day after the Extirpation, began to be contracted; and at laſt became ſo ſtiff, that no Force could draw them aſunder; and, after having in vain try'd the moſt efficacious Medicines, the Patient died convulſed. From theſe Inſtances it is obvious, with how much Care we ought to examine, whether the Cancer is every-where free, and adheres to no Part, before the Extirpation is attempted.

But, in ſome Parts of the Body, the Cure of Cancers is either utterly impoſſible, or highly difficult. It is evident, for Inſtance, that, when Cancers are lodged in the Viſcera, no Cure can be expected, ſince the Surgeon's Hand can have no Acceſs to the Part affected. Cancers of the Uterus, eſpecially of the ulcerated Kind, are alſo generally accounted incurable. *Tulpius*, indeed, in his Obſervations, informs us, that a ſcirrhous Tumor, already degenerating into a cancerous Malignity, was happily extirpated from this Part, as we have before obſerved. But what Surgeon durſt venture on the Extirpation of an exulcerated Cancer from this Organ, ſince it every-where adheres to it with malignant Roots? as the ſame Author, in *Obſerv. Med. Lib.* 3. *Cap.* 34. obſerved in the Carcaſe of a Woman, who died of a Cancer of the Uterus; for a livid and black Tumor, cover'd with Blood and Sanies, was, by membranous Filaments, every-where fix'd to the Uterus. *Aretæus*, *de Cauſ. & Sign. Morbor. diuturn. Lib.* 2. *Cap.* 2. when treating of the Diſorders of the Uterus, makes mention of a cancerous Ulcer in that Part; and informs us, that it proves mortal, after having for a long time afflicted the Patients: "For, ſays "he, a putrid Matter flows from the Ulcer, which is not "tolerable to the Patients themſelves; and the Ulcer is irri-"tated and exaſperated by being touch'd, or by the Applica-"tion of any Medicines whatever." 'Tis obvious, that he here deſcrib'd a true Cancer of the Uterus, tho' he afterwards adds, "But a Cancer is by no means an Ulcer, but a hard in-"corrigible Tumor, which diſtends the whole Uterus." He ſeems to have meant this of an occult Cancer, and to have deſcrib'd an ulcerated one, under the Name of a malignant and corroding Ulcer; for he immediately ſubjoins, "Both theſe "Diſorders are of a cancerous, chronical, and fatal Nature; "but the Ulcer is far worſe, both with reſpect to the Smell, "the Pain, and every other Circumſtance, than the Diſorder "not attended with Exulceration."

As to the Fauces; we have already obſerved, that Scirrhuſes are frequently form'd in thoſe mucous Follicles, which every-where occur in the internal Part of the Mouth, the Fauces, and the Pharynx; becauſe by their means a Mucus, which is viſcid, and from its Nature eaſily inſpiſſated, is ſecreted and collected from the Blood. Beſides, the numerous nervous Papillæ, diſtributed thro' the Surface of theſe Parts, ſometimes degenerates into a malignant cancerous Fungus, as is already obſerved. Thus *Van Swieten* informs us, that he ſaw a great Part of the Palate, and the Whole of its pendulous Veil, become cancerous in an old Man, who, after enduring the higheſt Agonies, died of this Diſorder. When a Cancer has ſpread its Roots deep in the Fauces, 'tis obvious the Diſorder muſt be incurable: But, when it only poſſeſſes a ſmall Part, it may poſſibly be extirpated, if due Care be uſed. In the *Epidemics* of *Hippocrates*, we are inform'd, that a Cancer in the Fauces was cured by the Application of the Cautery.

As to the Palate; the hard and callous Membrane which lines the Palate, as we have now obſerved, ſometimes degenerates into a Cancer, which is generally incurable, unleſs when very ſmall. The Difficulty of the Cure is increaſed, becauſe, when this Membrane is deſtroy'd or corroded, the denudated Bones of the Palate are corrupted; whence the worſt of Symptoms muſt be produced. For this Reaſon *Galen*, when explaining the thirty-eighth Aphoriſm of the fourth Section of *Hippocrates*, which diſcharges Attempts to cure occult Cancers, ſays, "They who cut or cauterize Cancers in the Palate, or "in the Anus, or in the Breaſts of Women, can never bring "the Ulcers to a Cicatrix; but, by the violent Pain of the "Cure, waſte Patients till they die, who, without a Cure, "would have lived longer, and endur'd leſs Pain."

As to the Armpits and Groin; the Vicinity of large Blood-veſſels to theſe Parts renders it almoſt impoſſible to extirpate Cancers from them, without the Danger of a mortal Hæmorrhage. Under the Article SCIRRHUS it is obſerved, that *Hildanus* happily extirpated a ſcirrhous malignant Tumor under the Armpit, after a Pain was perceived in it: But when theſe Diſorders have degenerated into true Cancers, eſpecially of the ulcerated Kind, 'tis ſufficiently evident how dangerous ſuch a Cure would be; ſince the Veſſels about the Cancer are not only varicoſe, but alſo ſince it is greatly to be dreaded, leſt it has already grown to the ſubjacent Veſſels. We may alſo add, that the Taint is often lodged in the adjacent Glands; for which Reaſon, after a dangerous Extirpation, the Diſorder would often appear afreſh.

As to the Difficulty of curing Cancers of the Lips; it frequently happens, that, when the Lips are hurt, thoſe round Bodies, diſperſed thro' their Subſtance, are confuſed: Hence ariſe Scirrhuſes, which often degenerate into the moſt malignant of Cancers. When alſo the tender Membrane, which covers the Lips, is wounded, their nervous Part riſes in cancerous Funguſes: When, therefore, the ſmalleſt Trace of ſuch a Diſorder appears, it is forthwith to be extirpated, either with Corroſives, which Method ſometimes ſucceeds in ſmall Cancers of theſe Parts, or with the Knife, which is far ſafer. So long as Cancers of the Lips have not grown to a great Bulk, they may be ſafely extirpated: But if they are neglected, if the Diſorder is ſuffer'd to ſpread, and has already corroded the whole Lip, and adjacent Parts, it cannot, in this Caſe, be extirpated without great Danger; and, after the Extirpation, a fearful Deformity remains. But it is ſcarce credible, how large Cancers ſkilful Surgeons have ſometimes extirpated from the Lips, and happily cured the Wounds, without leaving any conſiderable Deformity. Thus *Van Swieten* informs us, that he ſaw a Man, two Thirds of whoſe inferior Lip were cut out, and yet a ſufficiently beautiful Cicatrice was form'd on the Wound. He alſo tells us, that in another, who would not ſubmit to an Extirpation, he ſaw the whole Chin gradually corroded, and eaten away, before the Patient died.

In cancerous Tumors of the Lips, Dr. *Harris* recommends a Decoction of Elm-bark, and the Leaves of the Sanicula, to bathe the Part with. He alſo adviſes Turpentine upon a Pledget, apply'd to the Part, till it firſt grows ſofter, and then entirely waſtes.

In caſe, therefore, of a Cancer, which cannot prudently be extirpated, all that can be done is,

Firſt, To keep it quiet.

Secondly, To moderate the Symptoms.

When therefore a Cancer, known by the Signs already enumerated, cannot, by reaſon of the Conditions heretofore ſpecified, be either extirpated by the Knife, or cured by Medicines, the Condition of the Patient is highly miſerable, ſince he lodges a latent Enemy in his Boſom, who, by Cauſes which often no Prudence can prevent, may be eaſily irritated in ſuch a manner as to rage with unrelenting Fury. This fatal Prognoſtic is not, however, to be diſcover'd to the Patient himſelf, but only to his Friends; and the Afflicted himſelf ought to be chear'd with the agreeable Perſuaſion, that the Diſorder, when judiciouſly treated, may be render'd tolerable, till the Patient's Death; for *Galen*, in his Commentary on the thirty-eighth Aphoriſm of the ſixth Section of *Hippocrates*, in which the Cure of an occult Cancer is forbid, excellently obſerves, that we are not to abſtain from ſuch a Cure as mitigates and alleviates the Cancer, but from ſuch Meaſures as have a Tendency to irritate it. The Whole, therefore, that is to be done in this Caſe, is to render the Diſorder tolerable, to prevent its becoming more malignant, and, at the ſame time, to alleviate the Symptoms with which it is attended; the principal of which are Itching, Heat, and Pain;

Pain: But in what Manner, and by what Remedies, these Intentions are to be obtain'd, will be specified in what follows.

Such a Cancer is kept quiet,

First, By defending the Part from all external Injuries by Applications, wherein Lead and Narcotics are Ingredients.

We have already observed, that, whilst there is an Attrition of the adjacent Vessels against the hard Margins of the Scirrhus, by an Increase of the Motion of the Humours, an Inflammation is produced, and a Scirrhus, which was before benign, converted into a Cancer: And, from what has already been said, 'tis also obvious, that the Malignity of a Cancer may be increased by the same Cause; so that Rest must, in this Case, be absolutely necessary. Absolute Rest, indeed, only obtains in a lifeless Carcase; but a calm and moderate Circulation of the most laudable Humours, thro' pervious Vessels, is only here understood, that there may be no Irritation of the Cancer, either from an Increase of the Motion, or a Conveyance of acrid Substances to the Parts.

How prejudicial any external Irritation is to Scirrhuses, and the Cancers arising from them, we have already observed: The Part affected is, therefore, carefully to be defended from the Attrition of the Clothes; and, as is heretofore taken Notice of, great Care is to be had, that occult Cancers of the Breasts be not too violently press'd by tight Stays, or irritated by the powerful Action of the Pectoral Muscle, which lies under them: Hence public Alms can never be better bestow'd than in supporting those Women, who, tho' labouring under occult Cancers, are yet reduced to a Necessity of working for a Livelihood. The best Method that can be taken is to cover the Part affected with a Piece of soft Leather, in order to prevent the Attrition of the Clothes. Plaisters are also recommended for the same Purpose; but they ought to be of such a Nature as neither to prove hurtful by softening the Integuments too much, nor moving the Matter of the Cancer. In these Cases, therefore, Plaisters, in which Lead is an Ingredient, are only proper; and these too must be prepar'd in such a manner, as not to adhere firmly to the Parts to which they shall be apply'd; for, in that Case, it is to be apprehended, that the exhaling Liquid, pent up by an adhesive Plaister, should macerate the Integuments, and soon produce a Rupture in them. With these Narcotics are also generally mix'd, which, by their Efficacy, a little sooth the easily irritated Nerves dispersed thro' the Cancer and its Integuments, and thus allay the Itching, and alleviate the lancinating Pains. The *Emplastrum Diapompholygos* of the Shops, prepar'd of the Oil of Nightshade, and Calx of Lead, is of singular Service in Cases of this Nature.

Take of the pure and newly express'd Juices of the Leaves of Henbane, Garden-poppy, and Water-hemlock, each four Ounces: Boil these over a gentle Fire; inspissate; and then mix with them, of white Wax, eight Ounces; and of Oil of Roses, one Ounce. Make up into a Plaister. Or,

Take of Sugar of Lead, Cerus, and an Amalgama of Quick-silver and Lead, each two Drams; of white Wax, four Ounces; of the Oil of Roses, three Drams. Make up into a Plaister. *Boerhaave Mat. Med.*

The following Mixture has been much esteem'd by some Practitioners, for quieting an occult Cancer, and preventing it from ulcerating.

Take four Ounces of Lapis Calaminaris, calcin'd in a Charcoal Fire, and quench'd three times in a Pint of White-wine; one Ounce of white Tutty, calcin'd in a Crucible, and quench'd three times in a Pint of red Rose-water; then the Lapis Calaminaris and Tutty are to be powder'd separately, and put into their respective Liquors, which must be mix'd.

Cloths, impregnated with this Mixture, are to be worn perpetually on the Part affected, being frequently renew'd.

Dr. *Harris* approves of the red *Lead Plaister* above all others, and says, Dr. *Harvey* had a great Opinion of it; and that he has used this Plaister in Pains of the Breast, which have threaten'd a Cancer, with great Success.

The Ochre which is left in the Chanels of some mineral Springs, and the Mud of them, are recommended, as doing great Service, as Topics in Cancers.

Secondly, By diminishing, correcting, or averting the known Cause, which is done by lenient Purges of mild Vegetables, and Mercurials, exhibited in small and frequent Doses.

For all the Causes already enumerated, since they change a Scirrhus into a Cancer, may, if they continue to act, or are increased, change an occult into an ulcerated Cancer. These Causes, therefore, which are known by their Signs, ought to be removed, or at least diminish'd; and, if this cannot be obtain'd, their Action ought to be averted from the Part affected as much as is possible. Nothing is more prejudicial to a Cancer than the Acrimony of the Humours, since by its means a benign Scirrhus may soon degenerate into a Cancer, as we have before observed. We are, therefore, diligently to inquire, whether there is an Acrimony of the Humours, and of what Kind it may possibly be; after which the Acrimony ought to be corrected by Medicines opposite to its particular Nature; for different Remedies are requir'd for correcting acid, muriatic, putrid, rancid, and oleous Acrimonies. To avert the morbid Matter lodg'd in the Humours, gentle Purgatives are of excellent Service, and such as, without exciting violent Commotions in the Body, attenuate and evacuate the Humours. The mildest mercurial Preparations, mix'd with Purgatives, are principally recommended in these Cases, on account of their resolvent Quality; but we must take care, lest, by an imprudent Use of them, we excite a Salivation, which, in this Case, would prove prejudicial. If any Signs of Putrefaction are discover'd, as it often happens in a Scurvy, a Decoction of Tamarinds, with Sena-leaves, Cremor, and Crystals of Tartar, and other Things of a like Nature, are beneficial. But that the Commotions excited in the Body, even by gentle Purgatives, may be allay'd, it is proper to give a mild Opiate, after the Operation of the Purgatives is at an End. But how great the Use of Purgatives is, in preserving occult Cancers from degenerating into ulcerated ones, we learn from *Galen*, who, in *Libell. quos decet purgare, &c.* tells us, that about the Beginning of the Spring he, every Year, purg'd a certain Woman pretty severely, who had a Disposition or Tendency to a Cancer in her Breast, with a Medicine which purg'd black Bile; and he observes, that, by an Omission of the usual Purgation, a Pain arose pretty deep in her Breast; which was a certain Sign, that the Malignity of the cancerous Humour was then increased. *Boerhaave*, in a Cancer, recommends the following Preparations:

Take of Resin of Jalap, six Grains; Diagrydium, seven Grains; unwash'd diaphoretic Antimony, twenty-four Grains. Make up into a Powder.

Take of Mercurius Dulcis, fifteen Grains; of Diagrydium, twelve Grains. Make into a Powder, to be taken once a Week.

Galen recommends Purging, with Epithymum in Whey, or his own Hiera, which *Aetius* calls *Hiera Galeni*. *Actuarius* commends the Hiera Lagodii for purging off the melancholic Humours. *Harris* says the *Confect. Hamec.* is excellent for this Purpose.

Thirdly, By diluting, mildly aperient, and subalcalescent Internals.

The whole Intention is, in this Case, to procure a calm and equable Circulation of the Humours, which is obtain'd by diluting them more, and rendering the Vessels pervious. There are, then, Medicines which dilute and attenuate, without, at the same time, increasing the Motion of the Humours: But Water alone is almost the only Fluid which dilutes, as is observed under the Article OBSTRUCTIO. To this Water must, at the same time, be added such Substances as are possess'd of an attenuating Quality, and by their mild Nature correct all Acrimony. This Intention is therefore excellently answer'd by Decoctions of the Roots of Burdock, China, Vipers-grass, Sarsaparilla, and Dogs-grass; as also by Infusions of Agrimony, Betony, the Flowers of Marshmallows, Mallows, Mullein, Elder, and red Poppies; for thus a diluting Vehicle is convey'd to the Blood. The Humours are resolved, and their Acrimony is corrected, by attenuating and gently obtunding Ingredients; and whatever is noxious is carried off by Urine, or a Diaphoresis: Hence these Medicines are, by Physicians, call'd Cleansers of the Blood. But tho' Salts bear a great Character in the List of attenuating Medicines, yet those of the more acrid Kind are not proper in these Cases. Those of a mild and subalcaline Nature are only to be exhibited, such as stibiated Nitre, and Sal Polychreston; in which the fix'd Nitre, at that time alcaline, is so chang'd by the acid Vapour of the kindled Sulphur, as to become less acrid, tho' it still continues to partake of the Nature of an Alcali: Hence these Salts are then call'd subalcaline Salts. These are principally chosen, because, in the Cure of a Scirrhus, alcaline Salts, corrected by the oleous Acid of *Rhenish* Wine, have so often proved beneficial. But since there are, in the Shops, a sufficient Number of Simples, whose mild attenuating Quality is well enough known, the Forms may be varied at Pleasure; lest the continued Use of a Remedy should create a Nausea in the Patient, whilst, in this Case, the curatory Indication continues long the same.

The Remedies specified in *Boerhaave's Mat. Medica*, are,

Decoctions of Burdock,
China-root,
Fennel,
Parſley,
Sarſaparilla, and
Vipers-graſs. Or,

Take of unwaſh'd diaphoretic Antimony, eight Grains; Sperma Ceti, one Dram: Mix up into a Powder, to be divided into two Doſes, one of which is to be taken in the Morning, and the other at Night.

Venice Soap, diſſolved in any proper Menſtruum, or made into Pills, and given to a Dram for a Doſe, twice a Day, is recommended as a Specific in the Cancer. *Turner's Surgery.*

In this alſo the Leaves of the Solanum Lethiferum, as a Topic, are accounted Specifics.

Dr. *Stahl*, firſt Phyſician to the King of *Pruſſia*, recommends the Eryſimum, or Verbena Fœmina, as a good Medicine for ſcirrho-cancrous Tumors, both when taken internally, and apply'd to the Tumor. Mr. *Bingert*, Surgeon at *Berlin*, communicated two Caſes, wherein its good Effects have appear'd. *Act. Medic. Berolin. Dec.* 3. *Vol.* 1.

That Part of a Walnut, that lies betwixt the Lobes of the Kernels, is ſaid to cure, or at leaſt to prevent Cancers. It muſt be dried and powder'd.

An exact Milk-diet always relieves, and ſometimes cures Cancers. *Wynter's Cyclus Metaſyncriticus.*

Dr. *Harris* ſays he cured a Lady of a Cancer in a few Months, by directing a Powder of Lignum Sanctum, Sarſaparilla, and yellow Saunders, to be taken three times a Day, in common Water. By theſe means the Pain, Tumor, and livid Colour vaniſh'd, and the Cancer entirely diſappear'd. She uſed no Topics but Flannel.

Fourthly, By avoiding whatever may act as a Cauſe, whether taken internally, or apply'd externally.

An Increaſe of Motion in the Humours of the whole Body, or of the Part affected, any Acrimony of the Juices, any Irritation, are, as we have already obſerved, the principal Cauſes which change a Scirrhus into a Cancer. All theſe Things are, therefore, carefully to be guarded again, both by a proper Choice of Diet, and ſuitable internal and external Remedies. And as an atrabilious Viſcidity of Humours not only lays a Foundation for the Generation of Scirrhuſes, but alſo adds Malignity to them, when form'd, we muſt take particular Care to abſtain from ſuch Things in Food as may either produce or increaſe this atrabilious Viſcidity of the Juices. The Diet muſt, therefore, be ſuch as under the Article SCIRRHUS is directed for an incurable Scirrhus. And becauſe, as we have already obſerved, violent Paſſions, eſpecially Sorrow, are, in theſe Caſes, ſo prejudicial, the Patients are to be chear'd with agreeable Hopes, that they may not be rack'd with the conſtant Dread of imminent Danger. If theſe Meaſures are duly obſerved, this dreadful Calamity may be alleviated, and kept under not only for ſome Years, but often till old Age; when, by the common Fate of Humanity, or the Attack of other Diſeaſes, the miſerable Patients are cut off, and ſnatch'd from the Pains which daily threaten'd them. This is all which, in this Diſorder, can be expected from any Art hitherto known.

The Symptoms are moderated by the ſame Means by which the Cancer is kept quiet, except that Opiates are requir'd in caſe of Pain.

For all the Symptoms, which happen in an occult Cancer, depend only on an Increaſe of its Malignity. If, therefore, by the Method above deſcrib'd, the Cancer is preſerv'd in the ſame State, the preſent Symptoms will be alleviated, and future ones prevented. The principal Symptom is Pain, ariſing from a Dilaceration of the Integuments, in conſequence of an Increaſe of the Tumor; or from the Acrimony of the Cancer corroding the live Nerves diſtributed thro' its Subſtance. We cannot often remove the Cauſe of the Pain, in which Caſe nothing remains to be done, but, by the Uſe of Narcotics, ſo to obtund the common Senſory as to remove the Senſe of Pain, tho' its Cauſe continues, and guard againſt ſome Effects of Pain, which, in this Caſe, are to be dreaded; for, unleſs this Method is purſued, the Patient will be ſeiz'd with Watchings, Reſtleſſneſs, Anxiety, and a Fever, and all the Symptoms will ſoon be increaſed.

An exulcerated Cancer, which will not admit of Extirpation, may frequently be mitigated, by keeping it clean, by applying to it extremely mild Preparations of Lead, and by the Methods above ſpecified.

When a Cancer, upon breaking the Integuments, becomes exulcerated, it affords a melancholy Proſpect to Phyſicians, and is often ſo terrible an Appearance, that I have ſeen, ſays *Van Swieten*, old and intrepid Surgeons, who could ſcarcely look upon it without Tears; for the highly fetid Smell, the retorrid Lips, and the abſolute Impoſſibility of a Cure, are Circumſtances which move even thoſe, who, in performing the moſt cruel Operations, are untouch'd with the agonizing Shrieks of the Patients. However, tho' I am of Opinion, that no one would willingly chuſe to be a Spectator of theſe Calamities, yet that Love of our Neighbour, which is interwoven with our Frame, ought to prompt us in our Endeavours to alleviate an incurable Diſorder, and not permit us to render the Miſerable ſtill more ſo, by abandoning them.

An highly acrid Ichor, which becomes daily more malignant, and which, as has already been obſerved from *Aetius*, is more deleterious than the Poiſon of venomous Animals, corrodes the painful Surface of the Cancer, if it is long left upon it; and, diffuſing itſelf thence, preys upon all the adjacent Parts. For this Reaſon the Part affected ought to be cleanſed ſeveral times a Day; and the adjacent Parts defended either with ſoft Ointments, or Plaiſters in which Lead is an Ingredient, leſt they ſhould be corroded by the diſcharged Sanies. The beſt Method is, four times at leaſt in twenty-four Hours, to abſorb the collected Poiſon with Pledgets, gently warm'd: Then let the whole Surface of the exulcerated Cancer be cover'd with the like Pledgets, ſlightly ſpread over with the *Unguentum Nutritum*, compoſed of Vinegar of Litharge and Oil, mix'd together; for tho' dry Pledgets would beſt imbibe the diſcharged Ichor, yet they would adhere to the Ulcer, and, by being afterwards pull'd off, excite the moſt intenſe Pain. Thus the free Acceſs of the Air is prevented, and the Parts are hinder'd from becoming dry; and the Strength of the Vinegar reſiſts Putrefaction, whilſt its Acrimony is corrected by the Addition of the Lead. Pinguious Subſtances are obſerved to be prejudicial, ſince they block up the Pores of the Ulcer, and by that means prevent the Diſcharge of the Sanies. Over theſe Pledgets we are to apply a Plaiſter of the *Emplaſtrum Diapompholygos*, with a large Number of Holes cut in it, that the Sanies may be freely diſcharg'd. Over theſe Holes dry Lint is to be apply'd, in order to imbibe the diſcharg'd Ichor. Theſe Dreſſings are to be ſecured with a gently apply'd Bandage, ſince a ſtrong Preſſure, on the Part affected, would immediately exaſperate all the Symptoms.

But, as a violent Putrefaction generally accompanies an exulcerated Cancer, this is alſo to be prevented as much as poſſible. Vinegar, Sea-ſalt, and Sal Gemmæ, efficaciouſly correct every Kind of Putrefaction; but, at the ſame time, an ulcerated Cancer is highly irritated by all acrid Subſtances. *Hildanus*, in *Obſervat. Chirurg. Cent.* 3. *Obſerv.* 86. informs us, that a Surgeon apply'd to a cancerous Breaſt *Unguentum Ægyptiacum*, in order to correct the fetid Smell, and check the fungous Luxuriance of the Cancer; but the Diſorder was by that means ſo irritated, that, in a ſhort time, the whole Breaſt was corroded to the very Ribs: Hence 'tis evident, how great Prudence and Circumſpection are neceſſary in Caſes of this Nature. But all theſe Medicines are to be apply'd ſo weak to an ulcerated Cancer, as not to prove prejudicial by their Acrimony. Vinegar, diluted with twenty times the Quantity of Water, with an Addition of a ſmall Quantity of Sea-ſalt, may be endur'd by the Patient; and it will be of ſingular Service to waſh the whole Surface of the Part affected with ſuch a Liquor, tepid, every time the Cancer is cleanſed. Since Spirit of Sea-ſalt ſo powerfully reſiſts every Kind of Putrefaction, it will, in this Caſe, be of great Uſe, provided it be diluted with ſo large a Quantity of Water, that it will ſcarce create any Pain when dropt into the Eye. *Van Swieten* informs us, that, by the Uſe of this Medicine, he preſerved an ulcerated Cancer, in the Breaſt of a poor Woman, in other reſpects of a ſound Conſtitution, from degenerating into a worſe State, for fifteen Months; and that, in the Margins, he ſaw ſome Traces of a Suppuration, by which ſome Part of the fungous Maſs, being ſeparated, fell off; whilſt at the ſame time the Bottom of the Ulcer appear'd ſufficiently clean: But his great Hopes were afterwards diſappointed, whilſt, the Malignity being increaſed, he could no longer check the Putrefaction by this mild Remedy; and the Diſorder was forthwith exaſperated by more acrid Applications; upon which the poor Woman died, after having been afflicted with an ulcerated Cancer for two Years.

Hildanus, in his *Obſervat.* ingenuouſly confeſſes, that he was deceiv'd whilſt treating an ulcerated Cancer of the Tongue with various Remedies; the Cure was carried on with ſuch Succeſs, that the Diſorder was not only daily alleviated, but alſo the whole Tumor diſappeared after a plentiful Hæmorrhage, and a copious Diſcharge of a cadaverous Sanies. The Malignity being removed, the Ulcer diſcharged a laudable Sanies, and the Fleſh was gradually growing up, not of a livid Colour, but ſound and reddiſh; ſo that the Place ſeemed almoſt covered with a Cicatrix, a ſmall Fiſſure being only left. When he thought every thing was now ſafe, a ſcrophulous Tumor, lodged under the inferior Jaw, becoming daily larger, communicated a freſh Taint to the Tongue, which in a few Days ſwell'd ſo as not only to fill the whole Cavity of the Mouth, but alſo to hang out beyond the Teeth; ſo that *Hildanus*, before the Patient's Death,

Death, ſaw the Tongue miſerably corroded, and the ſuperior join'd to the inferior Teeth. Theſe lamentable Caſes inform us, how terrible a Diſorder an ulcerated Cancer is, ſince, after ſo ſo fallacious a Truce, it often rages with redoubled Fury. Perhaps, from Inſtances of this Nature, ſome faint Hopes may be conceived, that the Separation of a Cancer from the ſound Parts is not abſolutely impoſſible; tho' the Methods, and various Medicines, by which this Intention is anſwered, are hitherto unknown. How juſtly would the Man be celebrated, who ſhould diſcover this Method! but how juſtly would he deſerve Puniſhment, if, from mercenary Views, he ſhould conceal it from the World!

To theſe Medicines which reſiſt Putrefaction, we may very properly add ſuch as, by their narcotic Quality, are able to mitigate the burning Pain, even when apply'd externally. For this Purpoſe *Galen*, in *Meth. Med. Lib.* 2. *Cap.* 2. recommends the Juice of Nightſhade; others extol Hemlock and Water-hemlock. *Paulus Ægineta*, in *Lib.* 4. *Cap.* 26. for removing the Pain of ulcerated Cancers, orders a double Linen Cloth, ſoak'd in the Juice of Nightſhade, to be apply'd to the Part affected, and ſoft Wool, dipt in the ſame Juice, to be laid over it, taking care that they do not become dry. Various Fomentations, of the like Intention, may be prepared of the Leaves of Henbane, Hound's-tongue, and Poppies, infuſed in Water, with an Addition of Vinegar and Salt, tho' in a ſmall Quantity, leſt by their Acrimony they ſhould augment the Pain, and exaſperate the Diſorder, which is ſo eaſily irritated. With the ſame Intention a few Grains of Opium may be mix'd with theſe Fomentations. With reſpect to Foods, the ſofteſt Pot-herbs are only proper, Fleſh-broths, and Preparations of Milk; but all ſuch Subſtances as are of difficult Digeſtion, or may prove hurtful by their Acrimony, are to be abſtain'd from, as has been already obſerv'd. The liberal Uſe of the Infuſion of the Leaves of Elder and wild Poppies is generally highly beneficial.

Heiſter, in an open or exulcerated Cancer, recommends as Applications, Oil of Myrrh per Deliquium, or Eſſence of Myrrh with Eſſence of Amber, or Lime-water, either alone or with a ſmall Quantity of Sugar of Lead. Or,

Take of the Vinegar of Litharge, an Ounce and an half; and of the Oil of Roſes or Nightſhade, one Ounce: Mix up into an Ointment, in a Leaden or Glaſs Mortar.

Or,

Take of the Waters of Roſes, Elder-flowers, and wild Poppies, each two Ounces; of the Sugar of Lead, and Eſſence of Opium, each one Ounce; and of the Spiritus Vini Theriacalis, two Ounces: Mix all together.

Or,

Take of the Waters of Frogs-ſpawn and Nightſhade, each three Ounces; of calcin'd Lead, one Ounce; and of the Sugar of Lead, half an Ounce: Mix all together.

Inſtead of theſe we may alſo uſe ſome vulnerary Decoction, prepared of Horehound, Agrimony, and Paul's Betony, or the Juices of Nightſhade and Plaintain; for at every Dreſſing the Cancer may commodiouſly be cleanſed with theſe, and Lint dipt in them may be laid over the Dreſſings; but when the Pains are very intenſe, a larger Quantity of Opium, or of the Eſſence of Opium, is to be mix'd with them; or pure Eſſence of Opium, laid on Lint, may be apply'd to the Part affected, ſince, in ſome Caſes, the Pains cannot be alleviated by any other Method. For ſoothing the Pain of the Wound more effectually, we muſt prepare or dilute the Eſſence of Opium, not with Spirit of Wine, but rather with proper diſtil'd Waters, ſuch as thoſe of Nightſhade and the Flowers of wild Poppies. *Dionis* orders a Piece of raw Veal to be apply'd to the Part affected. The ſprinkling dry Powders upon Cancers is found to be a Piece of Practice not ſo advantageous as in ſome other Ulcers; but calcin'd Lead apply'd to the Part, with Mucilage of Linſeed, or of Flea-bane, ſurpriſingly contributes to mitigate the Pain. Tho', in the Application of each of theſe, a grateful Variation were to be deſired, yet the Phyſician is principally to exhibit ſuch as are beſt accommodated to the State and Condition of the Patient. The *Aqua Sclopetaria*, or Eau d' Arquebuſade, diſtil'd rather from Nightſhade-water than Wine, and apply'd warm to the Part affected, is alſo of ſingular Service in anſwering this Intention.

Before the Amputation of a Cancer is perform'd, the Body muſt be prepar'd by a proper Diet, and Medicines which are ſtrengthening, and oppoſite to the Cauſe of the Cancer.

If an ulcerated Cancer is lodg'd in ſuch a Part of the Body that the Surgeon's Hands can have Acceſs to it; if it has not as yet grown to the adjacent Parts; if in other Parts there are not Scirrhuſes found, which cannot be extirpated; and if there is no Suſpicion, that the like Diſorder lies concealed in the internal Parts of the Body; it is, in this Caſe, to be extirpated as ſoon as is poſſible, leſt, by being ſuffered to continue, its Malignity ſhould be increaſed, or the adjacent Glands affected. But, in extirpating a Cancer, the following Cautions are to be obſerv'd:

Since this is often a highly cruel Operation, and ſince, after the Extirpation, a pretty broad Wound ſometimes remains, it is proper, before the Operation, to recruit the Body by mild balſamic Aliments, and to reſtore the Strength which is impair'd with Pain, Fear, and Watchings, by grateful Cordials, which, at the ſame time, do not excite violent Commotions; for, by this means, the Conſolidation of the Wound made will afterwards ſucceed more happily. We muſt alſo remember, that ſuch things are to be exhibited as are oppoſite to the known Cauſe of the Cancer: if, for Inſtance, a putrid Scurvy, predominating in the Body, has chang'd a benign Scirrhus into an ulcerated Cancer, all farinaceous Subſtances, ſoft ripe Fruits, or ſuch as are gently acid, are ſerviceable. If the Diſorder proceeds from an atrabilious Habit, Honey and the Juices of Graſſes are proper, in Conjunction with the former; but if the Symptoms inform us, that an auſtere Acid predominates in the Body, Fleſh-broths and ſoft pinguious Subſtances are to be exhibited. But when the Cancer, from its own Nature, tends to a violent Putrefaction, Aceſcents alone are in this Caſe generally exhibited. But the Virulence of the Diſorder is often ſo great, that there is not a proper Time allow'd for correcting the known Acrimony of the Humours before the Extirpation. Since 'tis to be apprehended, that the ulcerated Cancer may affect the adjacent Parts, or ſpread its Roots deep, and thus render the Extirpation impracticable; in this Caſe it is adviſeable to cut out the Cancer immediately, and afterwards, by proper Food, and well-choſen Remedies, to correct the known Cacochymy of the Humours.

As the various Methods of amputating a Cancer are deſcrib'd under the Article AMPUTATIO, I ſhall only here obſerve, that 'tis *Boerhaave*'s Advice to dreſs the Part, after Amputation, but ſeldom, and to prevent the Bandage from preſſing too forcibly upon it, taking care firſt to evacuate prudently the neighbouring Veſſels of their Blood.

Since the Blood-veſſels adjacent to the Cancer are generally tumid and diſtended with black Blood, as we have already obſerv'd, it ſeems proper, after the Extirpation, to permit this Blood, which in ſome Caſes has ſtagnated long in the Veſſels, to be freely diſcharged, and not immediately to ſtop the Hæmorrhage; for 'tis juſtly to be dreaded, leſt this Blood, lodged ſo near the Cancer, has contracted ſomething of a malignant Nature, by which the like Diſorder may again be produc'd in other Parts of the Body; for it has been already obſerv'd, that an ulcerated Cancer, by propagating the Contagion to the communicating Glands, excites occult Cancers; nor, on theſe Occaſions, will the Patients ſuſtain any Injury, though ſome Ounces of Blood ſhould be diſcharged. *Paré*, *Lib.* 7. *Cap.* 31. for the ſake of Caution, orders the varicoſe Veins diſtended with black Blood to be every-where preſſed, that they may be entirely evacuated. Then he uſed the actual Cautery, partly with a View to ſtop the Hæmorrhage, and partly in order to deſtroy the latent Remains of the Diſorder, if there ſhould happen to be any. This cruel Method of ſtopping the Hæmorrhage by Cauteries is almoſt out of Date at preſent, ſince the ſame Intention may be ſafely anſwer'd by milder Remedies; and, if the Cancer is entirely extirpated, there is no Neceſſity for cauterizing the crude Wound in order to remove its Remains. We have, however, before obſerved, that the celebrated *Ruyſch* extirpated a Cancer of the Tongue, after it had appeared a ſecond time, and cauterized the Part, with Succeſs.

Upon the Extirpation of the Cancer the Wound is crude, and pretty broad, if the Cancer has been large, and the whole Integuments cut off along with it; but if the Extirpation has been made after laying back the Integuments, the Wound will be ſmaller, and ſooner cured, as is obſerv'd under the Article SCIRRHUS. 'Tis proper to dreſs the Part ſeldom, leſt the neceſſary Nouriſhment of the Body ſhould be ſubtracted by too great a Diſcharge, and the Patients thus die of a Maraſmus. We muſt alſo take care, leſt the Pus, being too long left on the Surface of ſo large a Wound, ſhould be reabſorb'd by the minute Veins, and thus contaminate the Blood with a purulent Cacochymy, whence the worſt of Symptoms would be produced afreſh. But, as by this Method much of the Subſtance of the Body is loſt, all thoſe Cautions are to be obſerved which are proper in Wounds with Loſs of Subſtance. See the Article VULNUS. But, when the Wound is dreſs'd, a mild and gentle Cleanſing of the Part is neceſſary, leſt, by rough handling, the tender Pulp of the ſprouting Veſſels ſhould be deſtroy'd, as is alſo obſerved under the Article VULNUS.

After the Extirpation of a Cancer by Amputation, the Patient muſt perſiſt, for a long time, in the Uſe of the Diet and Medicines which are proper in a preſent Cancer.

Since nothing can happen either more diſgraceful to the Phyſicians, or more terrible and afflicting to Patients, than that, after ſubmitting to a cruel Operation, the ſame Diſorder ſhould again appear in other Parts of the Body; the Patients are, therefore,

therefore, long to perſiſt in the Uſe of the ſame Aliments and Medicines as are known to be oppoſite to the Cauſes of the Cancer, eſpecially if theſe are internal; for when a Cancer is produced in a ſound Body by an external Cauſe, ſuch as a Contuſion, for Inſtance, after its Extirpation there is hardly any Danger of its appearing afreſh. But, even in this Caſe, a rigid Care is preferable to a ſupine Negligence; and Patients, who have once felt the Smart of this Diſorder, are eaſily prevailed upon to obey the Directions of the Phyſician. The Uſe of all thoſe things already mentioned is, therefore, long to be perſiſted in.

From what has been ſaid under this Article, it evidently appears, that very great Diſorders may ſometimes ariſe from Cancers, when ſituated in a Part where they cannot be extirpated.

Since, from what has been ſaid, it is obvious, that Scirrhuſes and Cancers are ſometimes found in the internal Parts of the Body, it is evident, that dreadful Symptoms muſt be produced, whilſt a corroding Sanies flows from the cancerous Ulcer, and preys upon the Viſcera. Many, and thoſe highly obſtinate, chronical Diſorders draw their Origins from Scirrhuſes of the Viſcera; and it is evident, from Inſtances related under this Article, and the Article SCIRRHUS, that intenſe Pains, ſurpriſing Corroſions of the Viſcera, and, after the moſt cruel Torments, ſudden Death, have been produc'd by a Cancer preying upon the internal Parts of the Body.

CARDAMANTICE. The ſame as CARDAMINE, which ſee.

CARDAMELEUM, *καρδαμύλεον*. The Name of a Medicine mention'd by *Galen*, *C. M. P. G. Lib.* 7. *Cap.* 7.

CARDAMINDUM. See ACRIVIOLA MAXIMA ODORATA.

CARDAMINE, Offic. Ger. Emac. 259. Ger. 201. LADIES-SMOCK, Raii Hiſt. 1. 814. Synop. 3. 299. Merc. Bot. 1. 25. Phyt. Brit. 20. Mer. Pin. 20. *Cardamine pratenſis, magno flore*, Tourn. Inſt. 224. Elem. Bot. 191. Boerh. Ind. A. 2. 16. Dill. Cat. Giſſ. 49. Rupp. Flor. Jen. 62. Buxb. 54. *Naſturtium pratenſe, magno flore ſimplici*, Hiſt. Oxon. 2. 233. *Naſturtium pratenſe, magno flore*, C. B. Pin. 104. *Naſturtium pratenſe majus, ſive Cardamine latifolia*, Park. Theat. 825. *Iberis Fuchſii, ſive Naſturtium pratenſe ſylveſtre*, J. B. 2. 887. Chab. 282. MEADOW CRESSES.

This is a ſmall tender Plant, growing about a Foot high, having its lower Leaves pinnated, each Leaf conſiſting of four or five Pair of ſmall roundiſh Pinnæ, not always ſet directly oppoſite, having one ſingle, that at the End larger than the reſt. The Stalk is ſmooth and round, bearing Leaves which are leſs, and have narrower Pinnæ; the Flowers grow ſeveral together at the Top, each conſiſting of four roundiſh Leaves, of a white Colour, or, in ſome Plants, having a Daſh of Purple, with darker Veins running thro' them. The Seed is ſmall and reddiſh, growing in long ſlender Pods. The Root is ſmall and fibrous. It grows every-where in the Meadows, and flowers in *April*.

This Plant, as it ſomewhat reſembles Water-creſs, ſo it agrees with it in its Qualities, being heating and warming, and good for the Scurvy; and, where Water-creſſes cannot be had, may ſupply their Place. It is ſeldom us'd in the Shops. *Miller's Bot. Off.*

CARDAMOMUM. Cardamums.

The beſt Cardamums are imported from *Comagene*, *Armenia*, and the *Boſphorus*: They grow alſo in *India* and *Arabia*. Chuſe what is full, cloſe, and difficult to be broken. What has not theſe Properties, is ſtale and decay'd. It ought alſo to have a piercing Smell, with an acrid and bitteriſh Taſte.

They are of a heating Quality; drank in Water, they are of Service in the Epilepſy, Cough, Sciatica, Palſey, Ruptures, Convulſions, and Gripes, and expel the broad Worm; taken in Wine, they are effectual in Diſorders of the Kidneys, and Difficulty of Urine; and are a Remedy againſt the Poiſon of the Scorpion, and all other venomous Creatures; a Dram, taken with the Bark of the Root of the Bay-tree, breaks the Stone; us'd as a Suffumigation, they deſtroy the Fœtus; and, rub'd on the Parts with Vinegar, they cure the Pſora. They are a common Ingredient in Ointments and Antidotes, and ſerve to inſpiſſate them. *Dioſc. Lib.* 1. *Cap.* 5.

We have three ſorts of Seeds in the Shops called by this Name. The firſt is, The

CARDAMOMUM MAXIMUM.

Grana Paradiſi, Offic. Ger. Emac. 1542. *Grana Paradiſi Officinarum*, C. B. Pin. 413. *Cardamomum majus*, Barr. Icon. 571. Obſ. 1394. Matth. Valg. 27. *Cardamomum Arabum majus*, Ger. 1358. *Cardamomum, Granum Paradiſi, Melleguetta*, Chab. 128. *Cardamomi genus maximum, Grana Paradiſi ſive Melleguetta*, J. B. 2. 204. *Melleguetta*, Jonſ. D. *Melleguetta ſive Cardamomum maximum, & Grana Paradiſi*, Park. Theat. 1576. *Melleguetta, Grana Paradiſi Officinarum*, Raii Hiſt. 2. 1205. GRAINS OF PARADISE. *Dale.*

Theſe are ſquariſh, corner'd, reddiſh-brown Grains, white within, of a hot biting Taſte, but not ſo aromatic as the Cardamums. They grow in roundiſh Pods, in the Shape of an unripe Fig, and come from *Guinea*; but we are ignorant of the Plant they grow upon.

They are hot and drying, warm the Stomach and Bowels, help the Colic, and are of Service in paralytic and nervous Affections. *Miller's Bot. Off.*

They have the ſame Virtues as Pepper, and are a Specific in all paralytic Diſeaſes. *Dale.*

The ſecond is, The

CARDAMOMUM MAJUS, Offic. Bont. 127. Raii Hiſt. 2. 1204. *Cardamomum majus vulgare*, Ger. Emac. 1542. Park. Theat. 1576. *Cardamomum majus Officinarum*, C. B. Pin. 413. Jonſ. D. Ger. 1358. *Cardamomum cum ſiliquis longis*, J. B. 2. 205. Chab. 148. *Cardamomum medium*, Barr. Icon. 571. Obſ. 1595. Matth. Valg. 27. GREAT CARDAMUMS. *Dale.*

Theſe are long, roundiſh, ſomewhat triangular Pods, full of corner'd, reddiſh-brown, hot, aromatic Grains.

They grow in the Iſland of *Java*, in the *Eaſt-Indies*, and from thence uſe to be brought to us; but we have had none come over for many Years, being now grown quite out of Uſe, and not to be met with in the Shops. *Miller's Bot. Off.*

The Seed is the Part in Uſe, which is of a heating and drying Quality, comforts the noble Parts, attenuates, diſcuſſes Flatulences, helps Concoction, provokes Urine and the Menſes, helps Shortneſs of Breath, and removes Obſtructions of the Liver, Spleen, and Meſentery. *Dale.*

The third is, The

CARDAMOMUM MINUS, Offic. Bont. 126. Ger. 1358. Raii Hiſt. 2. 1204. Barr. Icon. 571. Obſ. 1396. Matth. Valg. 27. Boerh. Ind. A. 2. 128. C. Comm. Flo. Mal. 71. Bod. in Theoph. 1014. *Cardamomum minus vulgare*, Ger. Emac. 1547. Park. Theat. 1576. *Cardamomum ſimpliciter in officinis dictum*, C. B. Pin. 414. *Cardamomum cum ſiliquis ſeu thecis brevibus*, J. B. 2. 205. *Elettari* 2. Hort. Mal. 11. 9. Tab. 6. *Enſal*, Herm. Muſ. Zeylan. 66. COMMON CARDAMUM. *Dale.*

Theſe are ſmall triangular Capſulæ or Pods, growing on little ſhort Stalks, tough, and full of Striæ, containing ſeveral corner'd, brown, ſmall Grains, of an hot, ſpicy, aromatic Taſte, and a pleaſant Smell.

They are brought to us from the *Eaſt-Indies*, but we have no certain Knowledge what ſort of Plant they belong to. They are in frequent Uſe, being of a warming Nature, comforting and ſtrengthening the Stomach and Bowels, helping Digeſtion, expelling Wind, and are good in all Diſtempers of the Head and Nerves. They provoke Urine and the Menſes, and are of Uſe in the Jaundice. *Miller's Bot. Off.*

The Seeds are in Uſe, which have the ſame Virtues as the great Cardamums. *Dale.*

The Amomum is reckon'd a Species of Cardamum. See AMOMUM.

CARDAMON. The ſame as CARDAMINE, which ſee. *Blancard.*

CARDEL. Muſtard. *Johnſon.*

CARDIA, *καρδία*. The Heart; but it generally ſignifies the Left and ſuperior Orifice of the Stomach. See VENTRICULUS. Sometimes it is us'd to expreſs the Pith of a Tree.

CARDIACA, in Botany, is a Plant thus diſtinguiſh'd.

CARDIACA, Offic. J. B. 3. 320. Raii Hiſt. 1. 571. Synop. 3. 239. Park. Theat. 41. Tourn. Inſt. 186. Elem. Bot. 155. Ger. 569. Emac. 705. Boerh. Ind. A. 180. Dill. Cat. Giſſ. 122. Buxb. 55. Phyt. Brit. 21. Mer. Pin. 20. Rivin. Irr. Mon. *Cardiaca Lycopus Ruellii*, Chab. 437. *Marrubium Cardiaca dictum*, Hiſt. Oxon. 3. 378. *Marrubium Cardiaca dictum, ſorte primum Theophraſti*, C. B. Pin. 230. MOTHERWORT. *Dale.*

The lower Leaves of *Motherwort* are pretty large and broad, roundiſh towards the End next the Foot-ſtalks, which are pretty long: They are deeply cut in on the fore Part, having three ſharp Points, the middlemoſt being longeſt, ſomewhat hairy and high-vein'd, green above, and whitiſh underneath. The Stalk is four-ſquare, woody, and brittle, having two ſmaller and tripartite Leaves at a Joint, growing likewiſe on long Foot-ſtalks. The Flowers come forth at the Joints with the Leaves, many growing together, Whirl-faſhion, in hard rough Calyces, which end in ſeveral prickly Points: They are of a reddiſh purple Colour, with a Labella cut into three Parts, and a round Galea, and are ſomewhat woolly on the Outſide. The Seeds grow four together in each Calyx. The Root is ſmall and ſlender, creeping in the Ground. It grows in waſte Places and Lanes, and by Wall-ſides; and flowers in *June*. *Miller's Bot. Off.*

This Plant is call'd *Cardiaca*, becauſe it relieves in Faintings, and Diſorders of the Stomach, the ſuperior Orifice of which is call'd *Cardia*; for, according to *Schroder*, in his *Pharmacopœia*, it is of ſingular Service in Diſtentions of the Hypochondria, and Diſorders of the Stomach in Children. The Herb is of a highly bitter and penetrating Taſte, a Circumſtance which indicates its ſtimulating, inciding, reſolvent, and aperient Qualities;

lities; in consequence of which it is proper in Diseases proceeding from a Redundance of Phlegm or viscid Juices: Hence it is exhibited with an Intention to provoke Urine, promote the Menses, and facilitate difficult Labours. A Decoction of Motherwort, and the Powder of it, mix'd with Sugar, are, by *Ray*, said to be Medicines of uncommon Efficacy in Palpitations of the Heart, Affections of the Spleen, and hysteric Disorders. *Matthiolus*, on *Dioscorides*, affirms, that a Spoonful of its Powder, drank in Wine, is of singular Service in difficult Births.

Ettmuller informs us, that this Plant, cut down, and, by boiling, reduced to the Form of a Cataplasm, is, in consequence of its inciding and resolvent Qualities, very good against those Disorders of Children produced by a mucous Acid, and the Flatulencies arising from it, if applied to the Region of the Stomach and Hypochondria.

A Water distil'd from Motherwort, with Oak of *Jerusalem*, is used in Inflations of the Hypochondria of Children. *Simon Pauli*, in his *Quadripartitum Botanicum*, orders its Leaves to be boil'd in Oil of Wormwood, and of bitter Almonds, and applied to the Navel, in order to kill Worms of the Intestines.

Motherwort is also used by Farriers in Diseases of Cattle and Horses; and, according to *Ray*, in his *Catalogus Plantarum Angliæ*, it was exhibited with singular Success when the Murrain raged among Horses in *England*.

CARDIACA PASSIO. The Cardiac Passion, in *Nosology*, is a Disorder frequently mentioned by the Antients, but by the Moderns more frequently treated of under the Name of *Syncope*.

Cœlius Aurelianus gives the following Account of this Disorder.

Some divide the Cardiac Passion into two Species, one of which they call *common*, and the other *proper*. The former of these is, when there is a preternatural Substance in the Stomach, and Entrance into the Belly, with a subsequent biting Pain of these Parts, as we are inform'd by *Hippocrates*, in the first and second Book of his Epidemics, and by *Erasistratus*, in those Books he wrote concerning the Belly. The latter Kind, of which we are now to treat, is by them called the *proper Cardiac Passion*, and is accompanied with an Eruption of Sweat, and a weak Pulse. This Disorder, according to some, derived its Name from the Part affected; for they imagine, that the Heart is the principal Seat of the Disease: Others are of different Opinions with respect to this Particular; for the Vulgar have a Custom of bestowing pompous Names upon Things which are great or important in their respective Kinds: Thus they call the Sea, the great and sacred Ocean; and the Epilepsy, the *Lues Deifica, by which Words, though hard to be translated, they, no doubt, meant a stubborn and Herculean Disease.* Now, as the Heart is the most important Organ, and most immediate Source of Life, this Disease, as being of a formidable Nature, deriv'd its Name from that Part.

Soranus declin'd giving Definitions of Diseases. *Artimedorus Sidensis*, a Follower of *Erasistratus*, asserted this Disorder to be *A Tumor about the Heart.* The Followers of *Asclepiades*, also, define it, *a Tumor about the Heart, produc'd by a Coacervation or Obtrusion of Corpuscles.* But *Soranus*, whose Sentiments I profess to deliver, affirms, that there is no perceptible Sign of any Tumor in Patients afflicted with this Disorder. A great many do not think it probable, that in this Case the Heart is affected; and *Soranus* asserts, that the Cardiac Passion is *a quick and instantaneous Solution or Relaxation*, by which he suspects the Corpuscles, or Atoms, to be dispersed and driven thro' all the most remote and minute Passages of the Body. This Disease seizes more frequently in the Summer, than in any other Season of the Year: Men are more subject to it than Women. Young People of hot Constitutions, Men of full Habits of Body, and such as are accustomed to violent Exercises, are more frequently afflicted with this Disorder, than Persons of an opposite Character. But the antecedent Causes of this Disease are many and various: 'Tis, however, most commonly produc'd by Indigestion, drinking to Excess, bathing after Meals, and vomiting after Supper; or by Sadness or Terror, in which Case, the Body is, in consequence of its Consent and Connection with the Mind, dissolved into Sweats. In continued burning and inflammatory Fevers, this Disorder, also, frequently seizes the Patients on the fifth or sixth Day.

We may know those who are about to be seiz'd with the Cardiac Passion, and those who already labour under it, by the following Signs. Those who are just about to be seiz'd by it, have an acute, violent, and burning Fever, a quick, a dense, a low, and, as it were, a *moist* [*humectus*] Pulse, during the whole Time of the Accession, and sometimes till the very End of the Paroxysm; so that, tho' the Heat be in some measure abated, the Pulse is not proportionably elevated, but rather depressed, in Comparison of what it was before. The Pulse is, also, sometimes inordinate, but not quite deficient, since it beats quick, confusedly, and without Order or Measure. The Patient has also a Loathing of Food, an immoderate Thirst, little Sleep, from which he is also easily awaked, a Readiness to commit Mistakes, Dulness, and a restless Tossing of the Body. During the Accession, or even till the End of the Paroxysm, the Knees, Elbows, and Legs, are cold and numb'd. These Symptoms sometimes appear as the Consequences of the Disease itself, even when the Strength of the Patient has not been previously impair'd. But it sometimes happens, that when the Strength is previously impair'd, by too liberal Discharges of Blood, violent Purging, or an immoderate Evacuation of any kind, and the Fever growing worse, a great Loss of Strength ensues. Some, also, in this Case, have Regard to the Heat of the Atmosphere, and observe, whether Diseases caus'd by it are not epidemical; whether he is of a *lacteous* [*lactea*] Habit of Body, or whether he is weak, whitish, large, corpulent, and pale; and lastly, whether, in Time past, he has been subject to this Disorder: But, according to *Soranus*, these Signs are uncertain and precarious.

The Patient, actually labouring under the Cardiac Passion, is affected with a Coldness and Numbness of the Joints, sometimes in both Legs or Hands, and sometimes all over the Body. The Pulse is dense, quick, small, weak, empty, and, as it were, fleeting; as the Fit increases, the Pulse becomes sunk, obscure, tremulous, formicating, irregular, and deficient, attended with a Depravation and Despondency of Mind, perpetual Want of Sleep, and, in some, with a sudden and plentiful Eruption of Sweat all over the Body. Sometimes a small, thin, and aqueous Sweat breaks out first about the Neck and Face, which afterwards becomes, as we find, universal and copious; and then it becomes thick, glutinous, viscous, and of an ill Smell, like Washings of Flesh. Respiration is small, short, and very difficult; and, in the Progress of the Disorder, the Speech becomes slow and faltering. Add to these a Paleness of the Countenance, and a Hollowness of the Eyes, with an oppressive Weight on the Thorax, thro' Weakness and Faintings, at the Approach of the Accession. In some, tho' the Brain be affected, the Tongue is moist; others, where the Disorder is complicated with a small Tumor in the Viscera, have their Tongues parched with Drought, and are desirous of cooling Liquors: The Patient, when he faints, is affected with a Dimness of Sight, and a Lividness of the Joints, with an Incurvation of the Nails, which the *Greeks* call γρύπωσις (*Gryposis*); many retain their Reason entire, in some it fails them, and there is a quick Pulsation of the Heart. After this, if the Lipothymy is violent, the Superficies of the Body becomes wrinkled, and, what is a common Symptom with dying Persons, there is an involuntary Discharge of the Fœces.

Tears flowing involuntarily, that is, without the Patient's having any Reason for it; or a sanious and purulent Lippitude in some Part of the Eye; or when there arises in the Black of the Eye a whitish Spot, of the Figure of a Man's Nail, or the Moon just appearing after the Change, which Spot gradually increases, and is called by the *Greeks* ὄνυξ (*Onyx*); these are fatal Symptoms. Also a continued Deglutition of the Food entire and unchew'd, with a sort of Noise, prognosticates Death, and the more infallibly, when the Things received into the Stomach remain unaltered and undigested for a long Time, and when the Belly is moved, and emits, as from a Bladder, that Sort of Sound which the *Greeks* call βόμβος (*Bombus*); for it is a Sign, that the Body is dead, when the Food is deposited in an inanimate and insensible Receptacle. It is a bad Sign, also, to nauseate all manner of Food, and to refuse any Sustenance, or to have no Appetite to Wine, or after Eating to feel an Oppression, or to be feverish, with a Return of the Fainting; also, if after some slight Refreshment the Fit soon returns, or the Patient throws up what he has taken, or is seiz'd with a Diarrhœa, or a Trembling of the Lips. It is an ill Prognostic to bite the Spoon, or the Brim of the Cup, in Eating or Drinking; for it is a Sign of a Defect of Spirits, as if they were exhausted, and not sufficient to expand the Mouth, but constrained to give Way to involuntary Bitings. It is a dangerous Case, when the Cardiac Passion is attended with a Delirium; because, in such a Circumstance, we can make no Use of Wine, or Choice of Diet, for the Refreshment and Support of the Patient. It is no less dangerous, when, after the Patient has received Sustenance, and been refreshed, the Fever returns upon him; for the Spirits are, in such a Case, dejected, the Strength exhausted by Sweat, the Body enervated, and the Tone of the Parts relaxed, attended with Dimness of Sight, Roughness and Dryness of the Tongue, an Attraction of the Præcordia upwards, and an Oppression from the Food. Thus, after a gradual Extenuation, and languishing for many Days, the Strength is at last quite exhausted, and the Patient sinks under the Distemper; for neither can the Strength be supported by a sparing or simple Diet, nor is the Stomach capable of digesting much or solid Food. Some, without Sweating, languish and pine away, and their natural Vigour is exhausted by a secret

cret Way, which the *Greeks* call ἄδηλος διαφόρησις, "an in-"sensible Diaphoresis," when the whole Habit of the Body is relaxed, and in a State of Fluxion and Dissipation.

If the Disease be attended with favourable Symptoms, and the Patient begins to recover, the Pulse resumes its Vigour, the Coldness of the Parts is succeeded by a kindly Warmth, and the Difficulty of Respiration is lessened, which salutary Signs are accompany'd with a sort of Security of Mind; after Eating, the Patient feels his Strength recruited; and when he being, takes himself to his Rest, he sleeps as soundly as a Man after Labour. *Cœlius Aurelianus, Acut. Morb. Lib.* 2. *Cap.* 32.

It is disputed, whether the *Cardiac Passion* be attended with a Fever: Very many before *Asclepiades* deny'd it; others, among whom was *Apollophanes*, a Follower of *Erasistratus*, held the contrary. *Asclepiades* asserts, that very many of those, who labour under this Disease, are free from a Fever; for in those Treatises which he wrote upon *Erasistratus*, and which he intitles *contradictory*, "I assert, he says, "that Persons affected with the Cardiac Passion are under no "Fever." But, in his second Book of *acute Distempers*, he says, that those who are under this Disorder, are seldom afflicted with a Fever. *Themison*, *Thessalus*, and *Demetrius Aponius* say, that some of them are feverish, others not. *Demetrius Aponius*, in particular, asserts, that all are feverish in the Beginning and Increase of the Distemper; but, when the Fever begins to be violent, the *Passion* is said to remit.

They, then, who assert, that none under the Cardiac Passion are affected with a Fever, allege, that all Fevers are necessarily attended with great Heat, Heavings, and an Indisposition for Motion, together with a Dryness, a pungent Sensation in the Pores, Redness and a Distention of the Præcordia: None of these Symptoms, they say, affect a Person labouring under the Cardiac Passion, and consequently he cannot be said to have a Fever. Again, a Fever, according to *Asclepiades*, is a violent Heat in all or most Parts of the Body, with a raising of the Pulse to a vehement Degree, because of an Obtrusion of Corpuscles (*Obtrusio*). But in Cardiac Patients, the Pulse is not fuller but smaller; nor stronger, but weaker; nor is the Heat excessive, but moderate in the interior Parts of the Body, and least in the middle Parts. For these Reasons, he constantly prescribes Clysters, where there is no Fever.

Some, who ascribe the Cause of Fevers to an Obstruction of the Pores or Passages, say, that a Dissipation, or Diaphoresis, is effected by a Rarefaction of all the Parts of the Body; and that a Fever happening from a Condensation of the Parts, the Heat is produced by a kind of Attrition.

Apollophanes tells us, that it was the Opinion of *Erasistratus*, that all who labour'd under the Cardiac Passion were feverish; for this Disorder seemed to proceed from a Tumor of the Heart, and a great Stricture is the Cause of a Fever. Some late Writers say, that to be sick without a Fever, was a Sign, that the Distemper was not dangerous; but that malignant Diseases were caused by the Accession of a Fever, in which Case a Diaphoresis by Sweat was excited, which ceasing, the Reliques of the Fever still remained.

But *Soranus* will not admit of either of these Assertions; for to the first he answers, that a *Sign* is a different Thing from an *Accident*; for a *Sign* never recedes, but is inseparable from the Thing signify'd; but an *Accident*, which the *Greeks* call "a Symptom," now presents itself, then recedes and disappears; of which Kind we take to be what they call the *Accidents* of feverish Persons, such as Difficulty of Motion, Heaviness and a Tension of the Præcordia; for some Patients, under a Fever, feel none of these Symptoms; if the Disease be owing to a Solution or Relaxation; but some Cardiacal Patients are affected with a stimulating Heat, which seems to be seated in the interior Part, and is a Sign of a Fever.

Asclepiades, in his second Book of acute or quick Diseases, says, that the *Cardiac Passion* is frequently, tho' not always, excited by a Fever. But if he will have it, that Cardiacal Persons are free from a Fever, because, in his Opinion, they have not the Signs of such a Disorder upon them; we answer, that his Error arises from his not perceiving the true Signs of a Fever. For in the Beginning of the Fit, the Joints are manifestly perceived to be cold, and the Pulse low and weak; and this may serve, also, as an Objection against those who take an Obstruction or Condensation of the Pores or Passages to be the Cause of a Fever.

Some will tell you, that the Cardiac Passion, attended with a Fever, is a Complication of Diseases; whence some of the Pores being expanded, and others obstructed, the Rarity of the first causes a Diaphoresis, and the Density of the rest, with an Attrition of Bodies, excites a Fever.

As for our Parts, we determine, according to the Judgment of *Soranus*, that a Fever is absolutely the Effect of a Solution, and a consequent Laxness, of the Pores, as he has taught us in his Treatise of Fevers. And to the Followers of *Erasistratus* we answer, that it is not true, that all Fevers are caused by a Stricture, for some are the Effect of a Solution; but if they are not willing to allow this, they will, however, not deny, but the Cardiac Passion may be excited without a Tumor: For since the Patients have the free Use of their Reason, and are affected with no Sense of Pain, or any other Signs of a Stricture, it must be very erroneous to assert a Tumor or Stricture of the Heart; and that all Cardiacal Patients labour under a Fever. Nor are dangerous Diseases rightly distinguished by the Characteristic of a concomitant Fever; for the *Cholera Morbus* is a severe and dangerous Distemper, but never attended with a Fever. It is true, that the Cardiac Passion is preceded by a Fever, which sometimes meets with a Solution by Sweat; as does also a Tumor, by being converted into a Collection of purulent Humour. That there are Reliques of a Fever remaining after the Sweating, is contrary to Experience; for very many are found who have no Fever.

We say then, as do all our Methodics, that some of those, who labour under the Cardiac Passion, are free from a Fever; for Example, those, in whom a Solution is caus'd by an Hæmorrhage: Others have a Fever accompanying that Disorder; for if you apply your Hand to the Hypochondria, and Parts adjacent, or upon any Part upon which the Patient has lain, you will perceive a hot and stimulating Vapour ascending from the interior Parts, which is itself a manifest Diagnostic of a Fever, and is, besides, attended with a hot and quick Respiration, and a Delight in cooling Drinks, and sometimes also with a Dryness and Roughness of the Tongue. *Cœlius Aurelianus, Acut. Morb. Lib.* 2. *Cap.* 33.

The Part principally affected by the Cardiac Passion, according to *Erasistratus* and *Asclepiades*, is the Heart. Some will have it to be the Membrane which surrounds the Heart (*the Pericardium*); others the Diaphragm, that is, the Membrane which separates the Intestines from the Viscera (*the Heart and Lungs*); some assert it to be the Lungs, others the Liver. They who say the Heart is the principal Sufferer, argue, first, from the Name which is given to this Disorder; it is called the Cardiac Passion, say they, because it proceeds originally from the Heart; for the *Greeks* call the Heart καρδία (*Cardia*). A second Reason is, that the Palpitation which is felt under the Fit, seems to belong to the Heart, and the Weight, or Oppression, to be in the Left Part of the Thorax, near the Breast. Thirdly, the Greatness of the Disorder is a good Argument, they think, for their Opinion; since the Disease could never arrive to so violent and dangerous a Height, were not some principal Part of the Body primarily, and not by Consent of Parts, affected. Now the Heart is a noble and necessary Part of the human Body, as it distributes Blood and Spirits to all the rest.

But to the first of these Arguments some answer, that the Disease is denominated from its Greatness, not from the Part affected. In Answer to the second, they say, that the Palpitation or Pulsation of the Heart and Arteries are alike; and that some Cardiac Patients are sensible of an Oppression in the whole Region of the Thorax, and not only in the Left Part; or, if this latter were the Case, the Oppression might be owing to a Disorder of the Pleura, or some neighbouring Part, if Causes are to be ascribed to Places. As to the Greatness of the Disorder, which is the third Reason, they answer, that there are many dangerous Distempers, of which the Heart is not the Cause as the primary Sufferer; for it is not necessary, that under every great Disorder some principal [*propriam*] Part of the Body should be affected, since all Parts are principal and necessary with respect to the Integrity of the Body.

Others deny, that the Heart is primarily affected under this Disorder; because, by the Confession of those who assert this, as soon as a principal Part, and one that is necessary to Life, is affected, Death prevents all Sensation: as, for Instance, if it happens to be wounded, Death immediately anticipates all Effects of the Wound; nay, if it receives the slightest Hurt, it is necessarily deprived of Life, and not, like other Parts, withers, hardens, or becomes paralytic.

But to these it is reply'd, that a Wound of the Heart is suddenly mortal, because it cannot be inflicted, without a previous Penetration of many other Parts, and a very copious Effusion of Blood, and not from a Solution. That it neither withers, hardens, nor is affected with a Palsy, is no Argument, that it is not at all, but that it is slightly affected; for, if it be constituted of the same Nature with the other Parts of the Body, it must of Necessity be subject to the Influences of the same Causes.

As to our Opinion in this Case, since, agreeably to the Judgment of *Soranus*, it appears, that the whole Body labours under a Relaxation, it is necessary, we think, that every Part should be affected; but what particular Part is the greatest Sufferer, we do not care to dispute, lest we should be found to contend in the Dark: For neither the Diagnostics, nor Method of Cure, will receive any Alteration in this respect, since Remedies are to be provided suitable to all Parts of the Body.

There are others, in the last Place, who tells us, that the Cardiac Passion or Solution proceeds sometimes from the Heart, sometimes from the Pericardium; and that in the latter Case the Patient is affected with a Pain, and frequent pungent Sensations; but when the Cause is in the Heart, he is only sensible of a Weight or Oppression. But to these we answer, that their diagnostic Signs are but imaginary; for when the Parts near or contiguous to the Heart are affected, it is necessary that sometimes a pungent Sensation, sometimes an Oppression, should be the Consequence. *Cœlius Aurelianus*, *Acut. Morb. Lib.* 2. *Cap.* 34.

Because many Persons labouring under a *Cardialgia* are affected with Sweating, a Coldness of the Joints, and a Lowness of the Pulse, with Fainting and Paleness, which are all Symptoms of the Cardiac Passion, I think we ought to shew the Difference between these two Diseases.

Asclepiades, in distinguishing them, says, that Cardiac Patients may be known from those who are affected with a *Cardialgia*, (*Stomachi Supinitas*) because the former have a very low and weak Pulse, but accompany'd with a great and vehement Beating of the Heart, together with an Oppression at the Thorax, and a Difficulty of Respiration; whereas, on the contrary, those who languish under a *Cardialgia*, have a strong Pulse of the Arteries, but their Heart beats weakly; to say nothing of other Accidents, which the *Greeks* call Symptoms.

We, for our Parts, have not perceived such a great Pulsation of the Heart in the Cardiac Passion; for the Heart itself is affected more in Supposition than Reality; yet some Patients, under that Disorder, are sensible of an Oppression at the Thorax, and a Difficulty of Respiration. Some, under a Cardialgia, are only sensible of a great Weakness; and all Cardiac Patients do not complain of a Difficulty of Respiration.

We conclude, therefore, that as the Stomach is affected sometimes with a Stricture, sometimes with a Solution or Relaxation, the former State is attended with a Heat and Pain in those Parts of the Thorax which are under the Ribs, or in the opposite Parts between the Scapulæ, and sometimes with the Sense of a Load or Oppression, after eating. In the latter Case, or when the Stomach is relaxed, there follows a Flux of the Saliva, with an aqueous Humidity, and Nausea, or Vomiting of liquid Substances, and sometimes of the Food, together with a Coldness of the Joints; but in the Beginning of the Fit the Patient is cold and hot by turns.

But now in the Cardiac Passion there is neither Pain, nor an Oppression after Meat, nor Vomiting; and, besides, the Coldness or Numbness of the Joints continues equally the same. Moreover the Sweat which proceeds from a Person affected with the Cardiac Passion is sometimes thick, and of an ill Smell, so as to resemble Sanies or Blood; but in Cardialgias, quite thin and watrish: The Fainting also, in the Cardialgia, is more towards the Beginning of the Fit; in the Cardiac Passion, towards its Recess. If both Diseases concur at the same time, the Distinction between them is render'd the more difficult, but not their Cure, which is perform'd by the same Remedies.

The Cholera Morbus, Tetanus, Hysteric Passion, and Asthma, are all attended with much Sweating, and a cold Numbness, but are not destitute of proper Symptoms by which they may be distinguish'd: For the Cholera Morbus is accompany'd with Vomiting; the Tetanus with an Inclination of the Neck; in the Hysteric Passion there is a Tumor of the Matrix; and an Asthma must of Necessity be attended with a very considerable Stricture. But tho' there should be found none of the preceding Causes sufficient to excite the Cardiac Passion, yet since there is an actual and evident Solution, which is the Characteristic of that Disorder, we confidently pronounce it the Cardiac Passion, without thinking ourselves of Necessity obliged to discover the Causes of that Solution; for the Method of Cure is not to be alter'd according to the Difference of the antecedent Causes.

There is a Disorder also, which some call *Cardimona*, and the *Greeks* καρδιωγμὸς (*Cardiogmos*). It is always attended with a Pain at the Mouth of the Stomach, which many ignorant Persons call a Pain of the Heart.

In general, then, to conclude, the Cardiac Passion is a Disease of *Solution*, and one of the acute and vehement Kind, though sometimes attended with some Symptoms of a *Stricture*, as a Tension or Tumor of the Middle Parts, (the Hypochondria, Ilia, and Belly) which are not properly or necessarily incident to Cardiac Patients. *Cœlius Aurelianus*, *Acut. Morb. Lib.* 2. *Cap.* 35.

Because those salutary Sweats which the *Greeks* distinguish by the Epithet *critical*, do, by reason of their Profuseness in the Crisis of violent and continued Fevers, bear a certain Resemblance to the Cardiac Passion, we therefore judg'd it necessary to ascertain the Difference and Distinction between them, since many unskilful Physicians, with an Intention to relieve those who labour'd under the Cardiac Passion, have, by repressing salutary and moderate Sweats, not only render'd the Constitutions of their Patients morbid, but even kill'd them. For this Reason 'tis absolutely necessary, that a Difference should be establish'd between them; and this Difference may be collected from various Circumstances; as, first, from what has preceded; from the different Kinds of the Disorders; from the Profuseness, the Time, the Nature, the Quantity and Quality of the Sweat itself. From what has preceded, we find out the Difference, by considering whether any Symptom has prognosticated a salutary Diaphoresis, or such a preternatural Sweat as the Cardiac Passion produces. The Difference between these is also discovered, by adverting to the Kinds of the Disorders, which are found out by attending to their Qualities. If the Disorder proceeds from Solution, the Sweat must necessarily be of the prejudicial Kind, and such as Cardiac Patients are afflicted with. But if the Disorder proceeds from Stricture, the Greatness of the Disorder is to be adverted to: For in a small Disorder a Diaphoresis is not necessary; but if the Disorder is great, Nature's Time for the Eruption of the Sweat is to be waited for. In the Height of the whole Disorder, and of the particular Paroxysm, or during the manifest Remission, the Sweat is for the most part critical and salutary; but in the Beginning and Increase of the Disorder, it is hurtful and pernicious. This Difference may also be determined from the Nature of the Sweat itself: That which is equal, is esteemed good; whereas that which is unequal, is accounted bad. We may also draw a Diagnostic from the Quantity of the Sweat; for when it is moderate, it is a good Symptom; but when immoderate, the reverse. Those who have sweated to Excess have sometimes fallen into the Cardiac Passion. We may also draw Diagnostics from the Quality of the Sweat, which is to be judg'd of by the Touch. A salutary Sweat is warm, thin, and not ill-smell'd; whereas a Sweat of the prejudicial Kind is cold, viscid, ill-smell'd, and, in Appearance, resembling the Washings of Flesh. Our Judgment is also to be form'd upon the present and concomitant Symptoms; for Cardiac Patients have a Pulse more small, frequent, weak, and languid. Their Thorax is also oppressed, and their Respiration frequent; they are uneasy and restless, dejected, have a small Voice, and become pale; whereas those who sweat in a salutary manner, have a brisker Pulse, a freer and easier Respiration, a chearful Propensity to Sleep, a Diminution of all unfavourable Symptoms, and a Refreshment both of Body and Mind. *Cœlius Aurelianus*, *Acut. Lib.* 2. *Cap.* 36.

CARDIACA, in Pharmacy call'd also *Cordialia*, *Analeptica*, *Confortantia*, *Confortativa*, *Refectiva*, *Resumptiva*, Cardiacs, are properly such Medicines as preserve or increase the Strength of the Heart, and by that means the vital Forces, tho' they do not immediately work upon the Heart, nor are particularly appropriated to the Corroboration of that Part. This Effect they perform either by replenishing the exhausted Vessels with good Humours, or exciting Motion where it was required. Therefore Nutritives, or Repletives, duly chosen, with respect to particular Constitutions, belong to this Class, as well as astringent Corroboratives and Stimulants, which are usually accounted the only Cardiacs. In this Sense we are to understand the Definition given by *Harvey* of a Cardiac, which, he says, is something that is endu'd with the Virtue of speedily recollecting the scatter'd and broken Spirits, and recruiting them with plentiful Supplies, or of corroborating the flaccid Fibres of the Heart.

Hence it appears, that *Cardiacs* are principally destin'd to the Removal of some Weakness; and that any thing may be called a Cardiac, which removes the Obstacles to Circulation. Wherefore *Valcarengus* was very just in his Notion, when he says, that "A Cardiac is whatever destroys, or at least blunts the Force of, "the morbific Cause, restores the lost Tone of the Solids, and "gives due Motion to the Fluids; and by that means procures "a just Equilibrium, which is the only and lasting Principle of "all the Motions in our Body." "Generally what promotes "Motion, says *Rega*, in his *Methodus Medendi*, is also a "Cause of the Heart's acquiring a greater Strength for "Action."

But since Weakness does not only arise from a Defect of good Humours, and a flaccid Indisposition of the Vessels, but oftentimes from a Redundance of Humours, a thick and stagnating Blood, with an Obstruction of the Vessels from too great a Rigidness, Contraction, or Compression, it follows, that what we commonly call debilitating, refrigerating, relaxing, resolvent and evacuating Medicines, belong to the Class of Cardiacs, inasmuch as they remove a present Weakness of the Body, by acting immediately and directly in Opposition to the Cause of that Weakness. *Tralles*, *de Remediis terreis*, *Cap.* 12. *Riverius* justly observes, that as the Heart may be debilitated sometimes by a hot, and sometimes by a cold, Intemperature, some Cardiac Medicines must of course be of a hot, and others of a cold Nature. *Lindestolpe*, in his Treatise *de Venenis*, uses these Words: "The Vulgar indeed are of Opinion, that there are "some Medicines which immediately corroborate and exhilarate "the Heart. But I have as yet found out none of this Kind; "for all Substances which corroborate the Heart, or occa-"sion its strong and frequent Contraction, are the most viru-"lent Poisons, and of a Quality most unfriendly to the Con-"stitution;

" ſtitution; of this Kind are all acrid, metallic, acid, and " alcaline Poiſons, and the putrefactive Poiſons of Animals; " for by large Doſes of theſe Subſtances the Motion of the " Heart is increaſed, and the Ruin of the Conſtitution pro- " moted at the ſame time. And as Diſeaſes ariſe from different " Cauſes, ſo whatever Medicine is contrary to a Diſeaſe, may " be ſaid to be poſſeſs'd of a cardiac or cordial Quality; not " becauſe it corroborates the Heart, but becauſe it proves " grateful and agreeable to the whole Habit. Thus in putrid " Fevers, and ſuch as ariſe from a predominant *Alcali*, all " acid, metallic, and vegetable Subſtances are Cordials; on " the contrary, in Diſorders ariſing from a predominant Acid, " we are to have recourſe to alcaline Subſtances, as the moſt " proper Cordials. In Diſeaſes produc'd by Rage and Wrath, " we muſt injoin Calmneſs and Compoſure of Temper; in " Grief and Sorrow, Joy and Chearfulneſs; and in every Diſ- " eaſe, what ſeems moſt directly oppoſite to it." Volatile and diſſolvent Cardiacs, which ſtimulate the Fibres, raiſe the drooping Spirits, and overheat the Body, univerſally and indiſcriminately exhibited to Patients of all Conſtitutions, are by no means to be approved of. 'Tis, however, become almoſt univerſally cuſtomary, to uſe inflammable Spirits, and balſamic and aromatic Medicines, in order to raiſe the Spirits when ſunk, and render'd languid, by whatever Cauſe. It muſt, indeed, be confeſs'd, that ſuch Subſtances rouſe the Spirits, and procure a momentary Eaſe to the Patient; but when unſeaſonably or exceſſively uſed, they excite too violent Commotions in the Juices, and diſſipate thoſe which are moſt fluid; by which means thoſe which are too thick, and unfit for Circulation, are left behind in the Body. Hence ariſe Dryneſs and Rigidity of the ſolid Parts, and a Weakneſs ariſing from Obſtructions; and if, in Caſes of this Nature, the Uſe of ſuch cordial Medicines is repeated or perſiſted in, the now mentioned Diſorders are augmented and increaſed. In a Word, the Man who fooliſhly ſeeks to reſtore his Strength, or raiſe his Spirits, by this Method, has the Fate of him who, by blowing his Fire, renders it, indeed, briſker, but, at the ſame time, leſs durable, than it would otherwiſe have been. *Paulus Valcarengus*, in his *Medicina Rationalis*, endeavours to ſhew, that what proves a Cordial to one Patient, may prove a Poiſon to another. The Origin and fatal Conſequences of this wretched Cuſtom are, by Dr. *Cheyne*, in his Eſſay of Health and long Life, excellently deſcribed in the following manner, when ſpeaking of the idle Habit contracted by ſome Ladies of drinking Cordials. " A Fit of the Colic, or of the Vapours, a Family Misfortune, " a caſual Diſappointment, the Death of a Child, or of a " Friend, with the Aſſiſtance of the Nurſe, the Midwife, and " the next Neighbour, often give Riſe, and become the weighty " Cauſes of ſo fatal an Effect. A little Lowneſs requires " Drops, which paſs readily down, under the Notion of Phy- " ſic; Drops beget Drams, and Drams beget more Drams, " till they come to be without Weight, and without Meaſure; " ſo that at laſt the miſerable Creature ſuffers a true Martyr- " dom, between its natural Modeſty, the great Neceſſity of " concealing its Cravings, and the ſtill greater one of getting " them ſatisfied ſome-how. Higher and more ſevere Fits of " Hyſterics, Tremors, and Convulſions, begot by theſe, " bring forth farther Neceſſity, upon Neceſſity, of Drops, " Drams, and Gills, till at laſt a kind of Dropſy, nervous " Convulſions, a nervous Atrophy, or a colliquative Diar- " rhœa, if not a Fever or a Frenzy, ſet the poor Soul free."

Give me Leave to remark, that Dr. *Cheyne* might have added as one frequent Cauſe of the horrid Cuſtom of drinking Drams, to theſe above-mentioned; I mean the habitual Uſage of very warm diluting Fluids, ſuch as Tea, which, in conſequence of their Heat, relax the digeſtive Organs; whence Flatulencies, Lowneſs of Spirits, and a Neceſſity for Drops, or ſomething elſe, in order to raiſe the ſinking Spirits.

There are, however, ſome Caſes, in which Cardiac Medicines of this Kind may properly be exhibited. In Palpitations of the Heart, for Inſtance, and Syncopes, when theſe Diſorders ariſe from a cold and aqueous, or an inert and mucous State of the Juices; in which Caſes the diſtil'd cohobated Waters, and the diſtil'd eſſential Oils of Baum and Lemon-peel, are principally proper. See AQUA.

Ettmuller informs us, that the Cephalico-cardiac Medicine, communicated by *Elizabeth* Queen of *England* to the Emperor *Rudolphus* the Second, conſiſted of Amber, Muſk, and Civet, diſſolv'd in Spirit of Roſes. According to the celebrated *Hoffman*, in his *Medicina Rationalis*, " We are not to imagine, " that a true and permanent Reſtoration of Strength is to be " procured by ſuch Medicines as communicate Motion to the " Spirits, and ſolid Parts; ſince, in various Diſorders, eſpe- " cially Fevers and Convulſions, the moving Force of the " Heart, Arteries, and Membranes, is ſufficiently great, and " yet the natural Strength is languid and impair'd; ſo that the " true and genuine Perfection of the natural Strength, for the " moſt part, depends upon proper Aliments and Liquors con- " verted into laudable Juices and Blood, of which is afterwards " generated that highly ſubtile Fluid, which is ſeparated in the " Brain, convey'd thro' the Nerves to the Muſcles and muſ- " cular Coats, and which imparts Strength and Vigour to the " Body, and all its Parts. The beſt Analeptics are, therefore, " thoſe nutritive Subſtances which are poſſeſs'd of the moſt " ſalutary Qualities; of this Kind are Jelly, Broths of Fleſhes, " Capons, Bones, and their Marrow, prepared by boiling in " Water in a cloſe Veſſel, with an Addition of a little Wine, " a few Slices of Lemon, a little Salt, Powder of Mace and " Cloves; of this Kind is alſo the Broth prepared of black " *Weſtphalian* Bread, (ſee BOMPOURNICKEL) Water, Wine, " and Eggs. To this Claſs alſo belongs Chocolate, with or " without Milk, Aſſes Milk, Water diſtil'd from coarſe " Bread, and Lemon-peel; Wine, eſpecially old generous " *Rheniſh* Wine, and genuine *Hungarian* Wine. But theſe " nutritive and alimentary Medicines are moſt proper for " recruiting and reſtoring the Strength not immediately under " the Diſeaſe itſelf; nor when the whole Maſs of Blood and " Humours is highly impure; but in the Decline of Diſeaſes, " and in Caſes where the Strength has been exhauſted and im- " pair'd by the Shocks of a previous Diſorder, the Sallies of " exorbitant Paſſions, exceſſive Watchings, Labour and Fa- " tigue of Body and Mind, or profuſe Hæmorrhages; and " even in theſe Caſes a cautious and prudent Moderation is to " be uſed, becauſe theſe Subſtances very quickly paſs into the " Maſs of Blood, and augment its Quantity." With reſpect to the Uſe of Cordials in hot Diſorders, ſuch as continued Fevers, the incomparable *Sydenham* delivers his Sentiments in the following Words: " Cordials, as I have experienced, when " given too ſoon, do Miſchief; and, unleſs Bleeding has pre- " ceded, may derive the crude Matter of the Diſtemper upon " the Membranes of the Brain, or upon the Pleura: For this " Reaſon I never exhibit them, when either no Blood, or very " little, has been previouſly taken away, or when no other con- " ſiderable Evacuation has been made, or the Patient has not " paſs'd the Meridian of Life; for whilſt the Blood remains " rich enough of itſelf, it ſhould not be rendered richer, to the " endangering the Patient; nor does it require to be raiſed and " exalted, ſo long as no remarkable Evacuations have diminiſh'd " its natural Heat. Patients of this kind have Cordials ſtored up " within themſelves, which render external and adventitious ones " either ſuperfluous or prejudicial. In Caſes of this Nature, " therefore, I either preſcribe no Cordials at all, or thoſe of " the weakeſt Kind. But if the Patient ſhould be greatly " weaken'd and diſpirited by copious Evacuations, or if he " ſhould be in the Decline of Life, I generally admit of Cor- " dials even in the Beginning of the Fever; and on the twelfth " Day of the Diſorder, when the Criſis is juſt approaching, I " think a freer Uſe of the hotter Remedies allowable; and " they may be exhibited ſooner, provided there is no Danger of " the febrile Matter falling upon the principal Parts; for, at " this Time, the more the Blood is heated, the more the " Buſineſs of Concoction is promoted." And a little after he ſubjoins, " In this Diſtemper I uſe the milder Cordials at the " Beginning, when the Exeſtuation is moſt violent, and gra- " dually proceed to the hotter, according as the Fever, or the " Degrees of Ebullition, require, always remembering, where " Veneſection has been freely uſed, or when the Patient is ad- " vanc'd in Years, to adminiſter thoſe of a ſtronger Kind, than " when no Blood has been previouſly taken away, or when the " Patient is in the Vigour of Life. The milder Cordials are " ſuch as are made of the diſtil'd Waters of Borage, Lemons, " Strawberries, and the compound Scordium-water, with a " Mixture of the Syrup of Baum, Cloves, or Juice of Le- " mons. But the ſtronger are *Gaſcoign*'s Powder, Bezoar, " Confection of Hyacinth, Venice-treacle, and others of a " like Nature." See ANALEPTICA.

All the modern Diſpenſatories are ſo full of Cardiacs, or Cordials, both of the dry and liquid Kind, that theſe alone would take up a Volume, was I to ſpecify them all, and that to very little Purpoſe, becauſe they are generally very inſignificant and trifling Medicines. The beſt Cardiacs are thoſe Remedies which remove the Diſorder of which Lowneſs of Spirits is the Conſequence; and, next to theſe, is Wine, which, exhibited in proper Quantities, and more or leſs diluted as Circumſtances require, will generally anſwer better Purpoſes than more pompous Cordials, whilſt it is leſs capable of doing Miſchief.

I ſhall conclude this Article with the Opinions of *Harvey* and *Valliſneri*, with reſpect to the Cardiac Powders of the Shops. The firſt of theſe affirms, That there is more of a real cordial Quality in a Spoonful of good Broth, or a few Drops of Brandy, than in a whole Ounce of thoſe officinal Powders, diſtinguiſh'd by the pompous Epithet of *Cordial*. *Valliſneri*, in his *Opere Fiſico-mediche*, *T.* 3. informs us, that thoſe are miſtaken, who imagine that earthy Subſtances, ſuch as *Armenian* Bole, ſeal'd Earth, Samian Earth, Pearls, and Bezoars, are in malignant and peſtilential Fevers properly exhibited, with an Intention to reſiſt that Putrefaction which is generated by an Exceſs of Heat and Moiſture, ſince this Putrefaction ariſes purely from Obſtructions, and muſt be great in proportion to them; and ſince

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by earthy, cold, and dry Subſtances, Obſtructions, and conſequently the Putrefaction ariſing from them, are augmented.

CARDIALGIA, καρδιαλγία, from καρδία, the Heart, or rather the Left Orifice of the Stomach, and ἄλγέω, to be pained, the Pain of the Mouth of the Stomach, or Heart-burn. The Antients call'd the Mouth of the Stomach καρδία, as *Galen* obſerves in many Places, particularly *Lib. 2. de Placitis Hippoc. & Plat.* ἡ μὲν δὴ καρδιαλγία τοῦτο μα, &c. "This "Word *Cardialgia*," he ſays, "does not ſignify the Pain of "the Heart contained within the Thorax; but there lies an "Equivocation in the Term, as is well known to thoſe who "are verſed in the Writings of the Antients, who call'd that "Principal of the Viſcera which is included within the Tho"rax, and the Mouth of the Stomach, by the common Name "of *Heart*." This he goes on to prove by Quotations from *Nicander*, *Thucydides*, and *Hippocrates*. Thus he expounds καρδίης πόνον, "the Pain of the Heart," *Hippoc. Prorrhet.* by στόμα]ος ἢ γαστρὸς πόνον, "the Pain of the Mouth of the "Stomach." Again, *Comment.* 3. in *Lib.* 1. *Epid.* he explains καρδιαλγέειν, "to be pained at the Heart," by τὸ στόμα ἢ χειλίας ὀδυνᾶσθαι, "to have a Pain at the Mouth of the "Stomach." Thus again, *Comment.* 3. in *Progn.* γινομένης δ' ἐκτὸς τῶν κατὰ τὸν πνεύμονα τόπων ἀναθυμιάσεως τοιαύτης, &c. "Such an Exhalation, which proceeds from the Lungs, is "diſtinguiſhed from what proceeds from the Stomach, which "is the Cardialgia; for the Lungs have little or no Senſation of "ſuch Humours; but the Mouth of the Stomach, which we "know is alſo call'd καρδία, by reaſon of the Multitude, and "quick Senſation, of its Nerves, cannot but be ſenſible of "every thing which is in it. Thus when, under a biting "Senſation from bitter Bile, there is excited that Diſorder "which is call'd *Cardiogmus*, and is attended with bilious Vo"mitings. Of this *Thucydides* alſo takes notice, where he "ſays, That when it (the malignant Humour) ſettled at "the Mouth of the Stomach (καρδία), it ſubverted that Part; "and what the Phyſicians call'd bilious Purgations moleſted "the Patients." The Place in *Thucydides*, quoted by *Galen*, is in his ſecond Book, where he deſcribes the Plague; where the Scholiaſt alſo obſerves, that the Mouth of the Stomach was called by the Antients καρδία (*Cardia*). See CARDIOGMUS.

The *Cardialgia* is none of the leaſt Evils incident to Mankind, but of the Nature of thoſe Diſorders which affect the Mind as well as the Body; nor is it a Pain of the Heart, as it is commonly reckoned, but of the Stomach, which is a very nervous Part, and of exquiſite Senſation, and principally affects its Orifices, being ſeated near the Pit of the Stomach, and very pungent, attended with great Anxiety, Difficulty of Breathing, Loſs of Strength, Reſtleſſneſs, Strainings to vomit, Trembling and Coldneſs of the extreme Parts, and a ſlight Lipothymy, and owing its Original to a Convulſion or Inflation, and frequently communicating its ill Effects, by Conſent of Parts, to the whole nervous Syſtem.

Every Pain of the Stomach is not to be termed a *Cardialgia*, ſuch, for Inſtance, as is attended with a Preſſure and Anxiety, proceeding from the Quantity and long Detention of crude Aliment in the Stomach, becauſe in this there is not that acute Senſation, nor are the Orifices of the Stomach much pained, nor are there that Toſſing and Reſtleſſneſs, and Loſs of Strength, which are almoſt the proper and formal Diagnoſtics of this Diſeaſe, unleſs any one has a mind to call the fore-mentioned Diſorder a ſpurious Cardialgia. The Pain is more intenſe or remiſs, and attended with milder or more ſevere Symptoms, in proportion to the Greatneſs of the Cauſe.

The Seat of this acute Pain, according to the common Opinion of antient and later Phyſicians, is only in the Left Orifice of the Stomach, which *Hippocrates* and *Galen* of old called *Cardia*, whence the Name *Cardialgia*; but we believe it to be rather ſeated in the Right Orifice called *Pylorus*, and that the whole Stomach is affected on account of its extremely ſenſible nerveo-fibrous Coat; and this appears to be true, as we imagine, becauſe this ſevere Pain always begins and fixes about the Pit of the Stomach, under the Cartilago enſiformis, towards the Right Side, where is the conſtant Seat of the Pylorus; and thence extends itſelf to the Left Orifice, which is ſituated in the Back, near the Spine, and penetrates the Diaphragm near the eleventh or twelfth Vertebra of the Thorax: For, in Diſſections of thoſe who have died of the *Cardialgia*, the Right Orifice has been found more affected than the Left, inſomuch that Ulcers, Abſceſſes, Tumors, and ſphacelous Corruptions, have been obſerved in the Pylorus, which have affected alſo the Duodenum, and the very Bottom of the Stomach itſelf.

But as a painful and uneaſy Senſation cannot be excited in the ſenſitive Part of the human Frame, unleſs the nervous and fibrous Parts, from a violent Cauſe, are either affected with a vehement Diſtention, which threatens a Solution of Continuity, or with a ſtrong and convulſive Conſtriction, we may hence obſerve, that a *Cardialgia* is either flatulent, or ſpaſmodic. In the firſt of theſe Diſorders the whole Stomach is violently diſtended, by Flatulences included within its Cavity; in the other, it is corrugated, and contracted into a narrower Space.

It is of no ſmall Importance to know the proper Signs and Diagnoſtics which diſtinguiſh between the flatulent and ſpaſmodic *Cardialgia*. The firſt is attended with a greater Difficulty and Streightneſs of Reſpiration, becauſe the Stomach, being inflated, intercepts the free Deſcent of the Diaphragm, which is abſolutely neceſſary to an eaſy Inſpiration. Beſides, a Tumor manifeſt enough to Senſe, and like an Egg, is frequently obſerv'd in the Pit of the Stomach, inclining to the Right Side, while the Pylorus is continually elevated by the inflated Stomach. There are alſo frequent Eructations, which, while they are diſcharging, ſeem a little to alleviate the Pain; moreover, after Food, eſpecially of a flatulent kind, the Pain is uſually exaſperated; but when the whole Subſtance of the Stomach is affected with a pretty obſtinate Spaſm, there is a greater Anxiety about the Præcordia, a greater Loſs of Strength, Uneaſineſs, and Coldneſs of the extreme Parts.

If the Cauſe be a Humour of a venomous Nature, the Symptoms are highly exaſperated, and threaten much Danger. Hence the Head is affected with Pain, Vertigo, Dimneſs of Sight; want of Sleep, and ſometimes a Delirium and Convulſions, come on; an Oppreſſion of the Breaſt, a Trembling of the Heart, and Syncope, a ſmall weak Pulſe, ſometimes hard, unequal, and intermitting, attend; the Region of the Abdomen is moleſted with Gripes, Conſtipation of the Belly, and Suppreſſion of Urine; the external Parts labour under Refrigerations, Tremblings, Shiverings, cold Sweat; the Face is livid and contracted, and the Patient has a yelloviſh and unpleaſant Aſpect.

That ſo formidable a Train of Symptoms affecting the whole Body ſhould owe their Original to a diſordered Stomach, cannot ſeem ſtrange to one verſed in Anatomy, who knows, that the Eighth Pair of Nerves, which furniſhes the principal internal and nervous Parts with its Diviſions, communicating to them Vigor, Strength, Senſe, and Motion, ſends off two very conſiderable and remarkable Branches near the Left Orifice of the Stomach, of which the internal paſſes, in form of a ſmall Arch, to the Pylorus, and the external goes to the Bottom of the Stomach. And hence we may very well account for that Conſent which ſubſiſts between this noble Part, the Stomach, and the Syſtem of the Nerves; for there is no other Part in the whole Body, which maintains the like Conſent and Communication with the more noble Parts, as does the Stomach. A clear Proof of this, beſides others which may be alleged, are the Obſervations which are found in the Writings of thoſe Phyſicians who have left us Caſes relating to judiciary Medicine, (*Medicine conſidered as it is concerned in determining judiciary Proceedings; as, for Inſtance to the preſent Purpoſe, whether a Man received his Death by a Blow on the Stomach, in which Caſe the Opinion of the Phyſician or Surgeon is required*) by which it appears, that a violent Blow with the Hand, or any hard Weapon, about the Pit of the Stomach, has excited the moſt terrible Symptoms, as immediate Chilneſs, and Falling to the Ground, Epilepſy, and ſudden Death itſelf.

As there are two Kinds of *Cardialgias*, as well as Colic, which are, the flatulent or windy *Cardialgia*, proceeding from Flatulencies violently diſtending the whole Cavity of the Stomach, and the ſpaſmodic convulſive *Cardialgia*, we are next to inquire by what means theſe Flatulencies, which at other times have a free Paſſage thro' the open Orifices, happen to be firmly included and detained within the Cavity of the Stomach. The Reaſon of this Phenomenon has ſcarce been touched upon by Phyſicians; but we ſhall not ſcruple to aſſert, that all ſuch violent Inflations of the Stomach are effected by a Convulſion, which, however, does not affect the whole nerveo-membranous Subſtance of the Stomach, but only its Orifices, as they are Parts endu'd with a quicker Senſation: Theſe Orifices, then, being ſtrongly compreſs'd and cloſed, no Wonder if Vapours, which are principally generated from a Maſs of crude and indigeſted Aliment, being excited by Heat, and finding no Vent, ſhould, by violently diſtending and ſtretching the whole Cavity of the Stomach after a ſurpriſing manner, be the Cauſe of moſt diſmal Pains, attended with the higheſt Anxiety, and Difficulty of Reſpiration.

Hypochondriacal Perſons, whoſe Stomachs abound with acid and bilious Humours, are principally ſubject to this flatulent *Cardialgia*: Hence is the Patient, ſome Hours after Eating, moleſted with ſtrong Tenſions about the Præcordia, Inflation, and ſevere Pains, with a Difficulty of Reſpiration, which Symptoms, by a Diſcharge generally of acid Eructations, are afterwards, in ſome meaſure, abated; or, by pituitous acid Vomitings, are conſiderably alleviated: and at length the Diſorder, by the gradual Returning of the Heat to the Stomach, and extreme Parts, which were ſhivering with Cold, entirely ceaſes. We have frequently obſerved this Diſeaſe in thoſe who, after a pretty long Indiſpoſition, have contracted a great Infirmity of Stomach, when they have eaten a little too greedily, eſpecially of improper Food, ſuch as what is fat, acid,

and disposed to Fermentation, or of Summer-fruits. In such Cases the Disorder has been excited, and made frequent Returns upon the Patient at Intervals, attended with Refrigeration of the Body, and especially of the Feet, or Region of the Loins.

We have observed also such an Inflation of the Stomach, attended with a Pain and Difficulty of Respiration, in sucking Infants, proceeding from Milk coagulated in the Stomach, and there stagnating, and turning acid; whence the whole Region of the Præcordia, under the spurious Ribs, has been distended and turgid with Flatulencies, in a surprising manner, which was perceiveable both to Sight and Touch. We remember also, on this Occasion, an Example of a young Man, who, from an immoderate Eating of new and soft Cheese, and drinking upon it *Rhenish* Wine, not strong, but sourish, was seiz'd with a severe Fit of the flatulent *Cardialgia*, (which was mistaken by a Physician for the Colic) seated in a much inferior Place, and not attended with so great a Difficulty of Respiration. And here we are oblig'd to take some Notice of the Difference between the Colic seated in that Part of the Colon which lies immediately under the Stomach, and the Stomachic Colic, if we may so call it, because we have more than once observ'd Physicians mistaken in this Affair. Besides, therefore, the Circumstances of the pained Places, the antecedent Causes, and the Symptoms peculiar to the *Cardialgia*, let the prudent Physician always carefully observe the Success of the Remedies in these Cases; for I have known the Pain of the Colic, seated under the Stomach, removed by only one discutient Clyster.

Though generally the common Cause of both the flatulent and tensive Pain of the Stomach be a vitiated Humour; which, being too long detained within the Cavity of the Duodenum, excites Flatulencies affecting the Orifices of the Stomach with a spasmodic Constriction; yet we have known Instances of the flatulent Disorder, where we could discover no vitiated Matter either in the Cavity of the Stomach, or of the Duodenum. And we have been enabled to pass this Judgment by considering, that such anxious and flatulent *Cardialgias* very frequently molest the younger sort of Women, on a Stoppage of the Menses, and even in the first Months of their Pregnancy, and manifest themselves by Eructations, and a Pain about the Pit of the Stomach and the Back, which return exactly about the usual Period of the Menses. We have observed something of the like Disorder in Men who have laboured under a Suppression of the Hæmorrhoids.

Though it be not so easy to discover the Cause of this Disorder, yet, when we consider, that a Stagnation of Blood within the Vessels of the Membranes of the Colon, or Intestinum Rectum, excites spasmodic Pains in those Parts, we judge, by Parity of Reason, the Cause to be no other than that the Blood is thrown upon the Regions of the Stomach and Præcordia, and by overcharging the Vessels of the Stomach excites those convulsive Strictures which affect that Part, and especially its Orifices. And we are confirmed in our Opinion, when we consider, that it is found, by frequent Observations, that those who have laboured under a spasmodic, flatulent, stomachic Asthma, which is often mortal, and generally follow'd by a Dropsy, have, after their Death, been discovered to have their Viscera, especially the Liver, stuffed and obstructed with Blood, and even polypous Concretions have been found in the Ventricles of the Heart, which, by putting a Stop to the free Circulation of the Blood, might easily divert its Impetus upon the Præcordia, which might occasion the Pain and Anxiety, which are always attended with Eructations.

But because there is a very severe *Cardialgia*, or Pain of the Stomach, attended with Anxiety, but with no, or at least no remarkable Inflation, which affects not only its Orifices, but whole Substance, on account of its nervous Coat, with violent Convulsions, we shall inquire a little more exactly into the Causes of such a Disorder. We scarce meet with any thing more frequent in Practice, than for a Person, after a vehement Fit of Anger, to be seized with a compressory and constrictive Pain about the Præcordia, and the Pit of the Stomach, which lies more towards the Right, and is attended with Anxiety and Streightness of the Breast, a Nausea, and Loathing of Food, and a Bitterness in the Mouth. Now it will not be difficult to discover the Cause of this Disease, if we consider, that such is the Nature and Force of Anger, when kindled to a vehement Degree, as to exert its pernicious Effects principally on the Præcordia; under which Term, as *Fernelius*, *de Febr. l. 4.* very well explains it, are comprehended the Region about the Stomach, the Diaphragm, the Cavity of the Liver, and biliary Ducts included therein, the Pancreas, the Stomach in particular, and its upper Orifice, with whatever is contained under the Inflections of the spurious Ribs, towards the fore Parts and the Sternum; all which, by the Violence of this furious Passion, are subject to be affected with spasmodic Constrictions. Besides, it is certain, that, by Anger, the bilious Juice is put in a great Commotion, and the biliary Canals, contracting themselves to a more intense Degree, discharge a greater Quantity of Bile into the Duodenum, where, by too long Continuance, it is corrupted, and contracts a corrosive Quality, being the sole Occasion of Diarrhœas, Cholera Morbus, Vomitings, and Cardialgic Pains, because it irritates the Pylorus, and the Bottom of the Stomach, by its Acrimony. The *Cardialgia* is also frequently caused by a Fright; and *Platerus*, *Observat. 2.* shews by an Instance, that Sorrow, by insensibly corrupting the Humours, disposes to long and severe *Cardialgias*.

The convulsive Affection of the Stomach is frequently symptomatical. We have often met with Instances where a Stone, sticking in the Beginning, or, what is worse, in the Middle of the Ureters, has, besides other troublesome Symptoms, excited a violent *Cardialgia*, attended with an intolerable Anxiety. We have observed the like Effects from bilious Stones passing through, or lodging in, the Cystic Duct, or Ductus Cholodochus. Hence it clearly appears, that a Part of our Body, endu'd with Sensation, may suffer merely from a disorderly Motion, by Consent of Parts, without any material Cause existing in it.

But the most severe and dangerous sort of *Cardialgia* is what is excited by taking Poisons of a burning and caustic Nature. That common and mischievous Drug, which has been the Bane of Multitudes, Arsenic, and others like it, are mortal on no other Account, than that, by their subtile and penetrating venomous Spicula, they insinuate themselves into the innermost Parts of the nervous Fibres of the Stomach, and, by cutting and corroding them, excite those dreadful convulsive Strictures in those Parts, which, being afterwards, by Consent, communicated to the whole System of the Nerves, are not only the Cause of those Symptoms which are essential to the *Cardialgia*, but of others more formidable and fatal, as a sphacelous Inflammation, Delirium, and Convulsions.

Emetics prepared of Regulus of Antimony, if given in too large a Dose, are the Cause of Cardialgic Symptoms; and if there be other internal Causes concurring, as when the Præcordia are already affected with spasmodical Strictures, they kill in the Operation after the same manner as Poisons: Of this there are but too many Examples. The same is to be understood of the stronger and more acrimonious sort of Cathartics, which act by a subtile, caustic, and vesicating Principle, and, being imprudently used, destroy Multitudes.

The Virulence of the pestilential Contagion is known to exercise its Malignity, first, by exciting Spasms and Inflammations in the Stomach, with severe *Cardialgias*, and oftentimes a Syncope. A *Cardialgia*, succeeding a Fever with petechial or purple Spots, is accounted a deadly Sign. It is also a very bad Symptom when a *Cardialgia* follows the Gout, as it frequently happens, the peccant Matter turning inwards upon the more noble Parts; or when it succeeds, as is usual, foul Exulcerations of the Skin, and the external Parts. For when the offending Matter, of an active and caustic Nature, being separated from the Humours, was propel'd to the Superficies of the Skin, and afterwards retires inwardly, and deeply insinuates itself into the nervous Coats of the Stomach and Intestines; whether these Coats be of a tender or firm Contexture, it acts after the manner of Poison, and, if not soon expel'd, by inducing Cardialgic Anxieties, throws the Patient into a Lipothymy, which is often succeeded by Death itself.

Epidemic and malignant Dysenteries, if imprudently suppress'd, are follow'd by a *Cardialgia*, which prognosticates a bad Event; for the acrimonious and caustic Matter being, by a retrograde Motion and Impetus, transfer'd from the inferior Parts of the Intestines to the superior, and the Stomach, greatly infests these noble Parts, and sometimes induces fatal Symptoms.

There is also a dangerous *Cardialgia* that owes its Original to Worms, which, as *Trallian* well observes, ascend from the lower Parts to the Stomach, and firmly adhere to its Orifices. Of this we have a remarkable Example, recorded by *Hercules Saxonia*, *Prælect. Prac. Part 2. Cap. 7.* "Three Years "ago," says he, "I was call'd to a Boy eleven Years of Age, "who was full of Worms. I gave him some Pills, but, when "I returned the next Day, he was dead. I took care to have "his Stomach opened, where I found three-and-thirty live "Worms, about nine Inches in Length, which adhered so "tenaciously to the Mouth of the Stomach, that they could "scarce be pull'd away." More Instances to this Purpose may be found in *Henricus ab Hier*, *Lancisi de Mort. subit.* and *Riverius*, *Lib. 9. Cap. 10.* It is very probable, that the Cause of such a sudden Death was no other than an invincible Syncope, proceeding from a strong Constriction of the Heart, or rather its adjacent Vessels. Hence we understand the Excellency and Importance of that noble Part the Stomach, for the Preservation of Life; which *Helmont* thought so considerable, that for this Reason he plac'd the Seat of the sensitive Soul in that Part.

There are other, and those occult, Causes of those dismal convulsive Disorders of the Stomach: For where there is a continual Pain for many Months together, by which the Flesh is consumed, and the Strength quite exhausted, we may rightly conclude, that there is a latent Defect and Disorder in the solid Parts; and this is confirm'd by Dissections. Thus *Riverius*, *Cent. 1. Obs.*

Obſ. 90. in ſuch a chronical Diſorder found a Scirrhus, which ſurrounded the whole Pancreas, with the Beginning of the Pylorus and Duodenum. And *Holler*, *de Morb. intern.* relates a Story of a Man, who, after he had a long time labour'd under a Fever, Cardialgia, Vomiting, Gripes, and Stools like Pitch, at laſt dy'd; his Body being diſſected, there was found an Ulcer, ſurrounded with Puſtules, which had corroded all the Coats of the Stomach on that Part which leads to the Pylorus.

Another Way of generating this troubleſome Diſeaſe is by Tranſlation. Thus we have known two Examples of this kind in the Female Sex, where a *Cardialgia*, with a Difficulty of Reſpiration, ſucceeded a conſiderable Tumor of the Parotid Glands, which diſappeared after ſome external Applications. I have alſo obſerved, that a Hemicrania and a Cardialgia have appeared, and diſappeared, alternately; ſo that when the Cardialgia was remov'd, the Hemicrania appeared, and *vice verſa*.

That Pain of the Stomach which we call *Cardialgia*, when not attended with an Inflammation, is among the Number of thoſe Diſeaſes which are not generally mortal, except when they continue long. For this Reaſon the Diſorder is dangerous when it ſucceeds other Diſeaſes, eſpecially acute and malignant Fevers; for *Hippocrates*, in the ſixty-fifth Aphoriſm of his fourth Section, juſtly obſerves, "That, in Fevers, a violent Heat "about the Stomach, and a Senſation, as it were, of a gnawing "Pain about the Heart, are bad Symptoms." This Diſorder is alſo to be claſs'd among the Number of theſe which return ſometimes at ſtated Intervals, and ſometimes not; which continue ſometimes for a longer, and ſometimes for a ſhorter Period; and which at one time are mild and gentle, and at another rage with intolerable Fury. As the firſt Approaches of this Diſorder are generally accompany'd with a Coldneſs of the Back, a Chilneſs of the Skin, and ſometimes with a Yawning and Stretching; and as, in its Height, the extreme Parts, eſpecially what we call the lower Extremities, become ſo cold, that a conſiderable Heat, when applied to them, is not perceiv'd; ſo this Indiſpoſition is not remov'd till the Heat returns to the Extremities, and a warm Sweat ariſes over all the Body. And as, during the Cold, the Pulſe is contracted, and ſmall; ſo, in the Decline of the Diſorder, it becomes larger and ſofter, which is a certain Sign, that the Indiſpoſition is going off.

As a wiſe and ſkilful Phyſician ought not invariably to recommend ſtated Remedies for the Cure of a Diſorder, nor at all times to proceed in a beaten Path; but to regard Cauſes of various Kinds, the Conſtitution of the Patient, preceding Diſeaſes and Symptoms, together with other Circumſtances of Importance; ſo 'tis neceſſary he ſhould take the like Meaſures in the Cure of this Diſorder. He ought, however, to keep theſe general Indications of Cure in his Mind, that he may be able to preſcribe ſuch Remedies as will afford Relief. The firſt is, that the Matter, peccant either by its Quantity or Acrimony, and which is lodged about the Stomach, be temperated, corrected, render'd mild, and gently removed, by Diſcutients, or proper Evacuants. The ſecond is, to alleviate and ſooth the violent Pains, which ſurpriſingly impair the Strength, leſt an Inflammation ſhould ſucceed. The third is, if the Diſorder is ſymptomical, to have a due Regard to the primary and original Diſeaſe. The fourth is, by proper Remedies, to reſtore and confirm the Strength and Tone of the Stomach and Inteſtines, which have been weaken'd by the Violence of the Pains and Spaſms.

Since it often happens, that the Saliva and Humours, accumulated and collected in the Region of the Stomach, do, by their long Retention, render the Bile in the Duodenum porraceous, æruginous, and highly corroſive, and, by corroding the nervous Coats, prove the Cauſe of the Cardialgia; and, as this frequently happens in hypochondriac Patients, as alſo in others, by a too liberal Uſe of acid Wines, and the Fermentation of unripe Fruits, it is agreeable to Experience to attempt the Cure only by Abſorbents, and ſuch Medicines as correct Acrimony. For anſwering this Intention, we recommend Powders prepar'd of Crabs-eyes, calcin'd Hartſhorn, Mother of Pearl, Mountain Cryſtal, or rather the Lapis Specularis, (*Muſcovy Glaſs*) prepared; eſpecially if they are exhibited in a gently ſpirituous carminative Water. For correcting and reſtraining the Acrimony, we alſo recommend gelatinous and well ſaturated Decoctions of the Shavings of Hartſhorn, and Water-gruel, qualified with ſweet Almonds, and edulcorated with Syrup of white Poppies.

But when a highly acrid ſulphureous and hot Bile, thrown into Commotions by an Exceſs of any Paſſion, is the Cauſe of this Diſorder, it is adviſeable to mix a few Grains of purified Nitre with the above-mention'd Powders, of which a proper Doſe is to be exhibited in a Decoction. But 'tis ſometimes neceſſary gently to evacuate the corrected Bile by Stool. I have alſo learn'd from Experience, that when this troubleſome Diſorder ariſes from a too hot, effervescent, and cauſtic State of the Bile, repeated Exhibitions of half a Pint or more of pure cold Water, covering the Body well, and applying warm Fomentations to the Region of the Stomach, have proved ſingularly beneficial; ſince by that means an univerſal Diaphoreſis is excited, and the Diſorder removed. I have alſo obſerved, that, by the ſame Remedy, the bilious Acrimony has not only been diluted and corrected, but alſo the intenſe Heat allay'd, and the Strength, impair'd by the Heat and Pain, in ſome meaſure reſtor'd. I have alſo ſeen a Cardialgia, accompany'd with a *Cholera Morbus*, conſiderably alleviated by this Medicine. The liberal Uſe of Whey and Emulſions is alſo of conſiderable Service in Caſes of this Kind.

'Tis no uncommon thing, after tertian Fevers, to obſerve Patients afflicted with a troubleſome Pain about the Præcordia, accompany'd with a conſiderable Languor of the Strength, Loathing of Food, Dryneſs of the Mouth, and ſometimes with gentle Swoonings away, and hectic Heats; all which Symptoms were produced by an acrid and peccant Bile, collected in a large Quantity, and ſtagnating long in the Duodenum, when its periſtaltic Motion is impair'd by the Shock of the Diſeaſe. This I learn'd from the Exhibition of an Emetic, two or three Grains, for Inſtance, of emetic Tartar, with a ſufficient Quantity of Water; for by this means a large Quantity of Sordes was diſcharg'd, upon which I immediately obſerved the abovemention'd Symptoms to diſappear. Hence *Hippocrates*, in the ſeventeenth Aphoriſm of his fourth Section, juſtly obſerves, "That, in Patients who have no Fever, Loathing of Food, "a gnawing Pain at the Mouth of the Stomach, a Vertigo, "accompany'd with Dimneſs of Sight, and a bitteriſh Taſte "in the Mouth, denote that Evacuations, by Vomit, are ne"ceſſary."

In Caſes where, to a bilious Cardialgia, a Vomiting, as it frequently happens, is join'd, I have afforded the Patient inſtantaneous Relief, by an Exhibition of the anodyne mineral Liquor, with cold Spring-water, or the Waters of the Flowers of Chamomile, Yarrow, *Egyptian* Thorn, the Lime-tree, Elder, Lilies of the Valley, and Primroſes. In this Caſe the Phyſician is to be careful not to exhibit the hot ſtomachic or carminative Eſſences, nor to load the Patient's Stomach with the repeated Uſe of hot Infuſions, ſince all theſe rather increaſe than diminiſh the Diſorder.

But when an intenſe, preſſing, and heavy Pain for a long time affects the Region of the Stomach; and when this Pain ariſes from acido-viſcid Crudities, firmly adhering to the Coats of the Stomach and Duodenum, which very frequently happens in thoſe who are juſt recover'd from a Diſeaſe, and in ſuch as, from any other Cauſe, labour under a Weakneſs of the Stomach; then another and a different Method of Cure is to be follow'd; for, in ſuch Caſes, digeſtive Medicines, and thoſe which act by a ſaline, oleous, aromatic, inciding, and corroborating Quality, are neceſſary. For anſwering this Intention we ſhall recommend the following Things, ſince Experience has convinced us of their Efficacy.

Take, then, of the Root of Arum, Burnet, Ginger, Galangals, the external Surface of Orange-peel, Cumin-ſeeds, and Mace, each a Dram; of Sugar-candy, a Quantity equal to all the reſt of the Ingredients: Mix up into a Powder; a proper Doſe of which is to be gently boil'd in the beſt Wine, and drunk.

The following Mixture is alſo very proper in ſuch Caſes:

Take of the Eſſence of Zedoary, of *Wedelius*'s carminative Eſſence, and of the Spiritus de Tribus, each two Drams; and of my Balſam of Life, fifteen Drops.

But ſometimes, before the Uſe of theſe, 'tis neceſſary, that the Collection of ſordid and peccant Humours ſhould be gently evacuated by Vomit, eſpecially if the Patient has any Inclination that way. But, even when this is neceſſary, we muſt not venture upon more powerful Emetics than Ipecacuanha, ſince it neither ſtrongly irritates the nervous Coats, nor, after its Operation, leaves a Diſpoſition to vomit, as the Preparations of Antimony generally do.

If, by a Draught of cauſtic Poiſon, or the Exhibition of a draſtic Purge or Vomit, any one is ſo violently ſeiz'd with this Diſorder, as to have his Life immediately expoſed to Danger, a more efficacious or inſtantaneous Relief is to be expected from nothing, than from the Uſe of ſweet Milk, oleous Subſtances, Oil of ſweet Almonds, and Olive-oil, drank in ſufficient Quantities, exhibiting at the ſame time a Doſe of *Venice* Treacle. But 'tis more adviſeable, at firſt, to give Milk only, or rather Cream, without the Treacle, leſt the Vomiting and Purging, by which the poiſonous and corroſive Matter is often moſt effectually evacuated, ſhould be too ſoon ſtopt.

When a Cardialgia, as a Symptom, attends other Diſeaſes of the acute or of the exanthematous Kind, which rarely happens without Danger of a fatal Inflammation, then bezoardic Powders, with a few Grains of Nitre, and one Fourth or half a Grain of Camphire, are of ſingular Service, in conſequence of their gently diſcutient and diaphoretic Quality. But, that theſe Powders may the more effectually anſwer the Intention, I adviſe them to be exhibited in an Emulſion prepared of ſweet Almonds, the Four cold Seeds, the Seeds of the Carduus Ma-

riæ, and Elder-flower-water. And if the peccant Matter, repel'd from the Surface of the Body, and almoſt reſembling the Nature of Poiſon, is again to be ſtruck out to the Skin, I have often found, that the Intention was excellently anſwer'd by my anodyne mineral Liquor, mix'd with a fourth Part of the *Spiritus Buſſii*, or of the Spirit of Tartar, exhibited at different times, as the Condition of the Patient requires: A proper and mild diaphoretic Regimen muſt be uſed at the ſame time.

When this Diſorder derives its Origin from an Obſtruction of the Menſes, in conſequence of which the Impetus of the Blood is directed to the Præcordia, then Veneſection in the Foot affords immediate Relief; provided it is not perform'd during the Paroxyſm, but on its Remiſſion, nor at the Time the Extremities are cold. Afterwards the Cure is to be completed by gentle Anodynes, and Diſcutients, externally apply'd. In all Cardialgias I recommend the Flowers of common Chamomile, and Preparations of them, as Remedies of ſingular Efficacy: Of this Kind is Chamomile-flower-water, diſtil'd Oil of Chamomile, which is delicate, genuine, and not adulterated with Oil of Turpentine, reduced to an Elæoſaccharum. Any proper Eſſence alſo, well ſaturated with moderately ſtrong Spirit of Chamomile-flowers, and made up with an Elæoſaccharum of the Oil of the ſame, is highly efficacious in ſoothing ſpaſmodic Motions. To this Claſs alſo belongs the Extract of Chamomile, which, with other proper Ingredients, may be made up into Pills. A Decoction of Chamomile-flowers, in Ale or Water-gruel, with an Addition of Oil of ſweet Almonds, drank warm, is indeed a common, but at the ſame time an approved Remedy for this Diſorder.

In Cardialgias of every Kind, anodyne and emollient Clyſters never fail to prove beneficial: Of this Kind are thoſe prepared of the Flowers of Chamomile, thoſe conſiſting of the Oil of theſe Flowers, either by Coction or Diſtillation, and thoſe prepar'd of the Four carminative Seeds. They anſwer the Intention beſt, when prepar'd with Milk. But 'tis ſometimes neceſſary they ſhould be twice or thrice injected; for, as in almoſt all violent Pains, ſo in this, they afford a ſingular Relief by their kindly and anodyne Warmth; as alſo by that Quality they poſſeſs, by which they ſoften and relax the rigid Fibres.

In violent Cardialgias, and Pains of the Præcordia, proper Remedies, apply'd externally to the Epigaſtric Region, are always obſerved to be of ſingular Advantage. And, amongſt many others for this Purpoſe, I have often experienced the ſurpriſing Efficacy of the following; the firſt of which is a Liniment, to be prepar'd thus:

Take of Theriaca, and expreſs'd Oil of Nutmegs, each an Ounce; of Caſtor, Saffron, and *Peruvian* Balſam, each one Dram; of the Oils of Cedar and Cloves, each twenty Drops; of Camphire, half a Dram.

The following Powders are alſo of ſingular Efficacy for this Purpoſe:

Take of Mint, of common and *Roman* Chamomile-flowers, and of Elder-flowers, each an Handful; of Bay and Juniper-berries, each half an Ounce; of Cumin and Caraway-ſeeds, of Cloves and Nutmegs, each two Drams. When they are ſufficiently cut, and beat together, let the Species be included in a Bag, and apply'd warm to the Part affected; for Heat, in a certain Degree, has, from its very Nature, a Power of alleviating and diſcuſſing.

If Worms ſhould happen to be the Cauſe of this Diſorder, then a quite different Method of Cure is to be follow'd: But if they are lodged in the Stomach, the ſtronger Anthelminthics, eſpecially thoſe which operate by an acrid, draſtic, and corroſive Quality, ſuch as mercurial Preparations, Vitriol of Copper, Vitriol of Iron, aloetic Purgatives, or even Salts, in other reſpects proper enough, are by no means to be exhibited, becauſe they often exaſperate the Diſorder; but warm Milk, with a ſufficient Quantity of the Oil of ſweet Almonds, is rather to be preſcrib'd. Theſe Subſtances, in conſequence of their anodyne Quality, and their affording Food for the Animalcules, in order to prevent their gnawing the Coats of the Stomach, are highly proper for the Cure of this Diſorder; eſpecially if we conſider, that warm Milk, drank in large Quantities, will make the Patient retch, and diſlodge theſe unwelcome Gueſts by Vomit.

Patients, ſubject to the Hypochondriaco-ſpaſmodic Paſſion, are frequently long afflicted with Returns of theſe uneaſy Pains; in which Caſes, after the Exhibition of other Medicines to no Purpoſe, I have often ſeen the Waters of warm Springs, eſpecially of the *Caroline*, uſed for ſome time, prove highly beneficial. But the Uſe of theſe ought ſometimes to be repeated. That a hæmorrhoidal Diſcharge, contributing greatly to the Relief of the Patient, has been produced by their Uſe, I have often obſerved. Beſides, my *Elixir Balſamicum Viſcerale*, mix'd with Eſſence of Caſtor, as alſo mild gently nitrated antiſpaſmodic Powders, and Veneſections at the Equinoxes, are of ſingular Service in chronical Pains, and Diſorders of this Kind.

Thoſe who are ſubject to Cardialgias, both in and out of the Paroxyſm, ought carefully to abſtain from Medicines of a ſaline Nature; of which Kind are the *Sedlitz* Waters, the Uſe of which I have often obſerved to do more Prejudice than Service in theſe Caſes.

To prevent the Return of this troubleſome Diſorder, ſeveral Circumſtances of Importance are carefully to be obſerved: Firſt, then, they who are ſubject to Cardialgias ought not to uſe the more acrid Purgatives; becauſe theſe, being in their very Nature prejudicial to the Stomach and its Coats, if frequently uſed, produce a Weakneſs of theſe Parts, than which nothing more effectually contributes to a Relapſe. Beſides this Misfortune attending them, they derive the Humours from other Parts of the Body to the *Primæ Viæ*. We are, however, to take care, that the Body be always kept ſoluble; which End is, in this Caſe, more ſafely obtain'd by Aliments than Medicines. The Back alſo, and the Præcordia, where the Stomach and its Orifices are ſituated, are carefully to be defended from the Cold by ſufficiently warm Clothes; for 'tis ſcarce credible how prejudicial Cold is to the nervous Parts, and thoſe Diſeaſes ariſing from a Weakneſs of them. But 'tis difficult to perſuade Mankind of the Truth of this. With reſpect to Aliments, the Patients muſt abſtain from all Subſtances poſſeſs'd of a high and intemperate Quality, Things too ſalt, or ſuch as are indurated in the Smoak, Pepper, Garlick, Things pickled in Vinegar, Horſe-radiſh, and other Things of a like Nature. But we recommend, as proper Aliments, Broths of Fowls and Veal; but order the Patients to abſtain from pinguious Fleſhes, eſpecially when they are to drink any thing which is cold, or when the external Cold has Acceſs to the Region of the Stomach.

The Heart-burn is uſually cauſed either by an alcaline or acid Acrimony prevailing in the Stomach. If by a redundant Acid, which is moſt generally the Caſe, alcaline Subſtances will cure the preſent Diſorder, as teſtaceous Powders, or a Clove chew'd in the Mouth, and ſwallow'd gradually: But, if the Diſorder proceeds from an Alcali, the Cure will conſiſt in the Exhibition of acid or aceſcent Subſtances.

Galen recommends Vinegar of Squills, taken in a Morning, as a moſt effectual Remedy for preventing a Cardialgia: But *Hippocrates*, in the ſecond of his *Epidemics*, orders hot Bread, with pure Wine, to be given in this Diſorder.

I remember an habitual Cardialgia treated ſucceſsfully, by a foreign Phyſician, by a Mixture, in which the only Ingredients were Preparations of Mint, as Mint-water, Spirit of Mint, Salt of Mint, and Syrup of Mint.

CARDIMELECH. A fictitious Term in *Dolæus*, *Encyclop. Lib.* 2. by which he intends to expreſs a ſort of particular active Principle, reſiding in the Heart, appointed to what we commonly call the *Vital Functions*, as Reſpiration, and Diſtribution of the Blood thro' the Body.

CARDINALIS FLOS. The *Trachelium Americanum*, or *American* Throatwort; ſo call'd becauſe its Flower, by the intenſe Redneſs of its Colour, ſeems to emulate the ſcarlet Robes of a Cardinal, eſpecially when the Sun ſhines on it. *Blancard.*

CARDINAMENTUM. A Hinge-like Articulation.

CARDIOBOTANON, καρδιοβότανον. The Name of an Herb in *Myrepſus*, *de Unguentis*, *Cap.* 46. which the *Latin* Copies, as *Fuchſius* ſays, render *Carduncellus*, by which they mean the ſame as *Carduus benedictus*; but he believes, that *Myrepſus*, by καρδιοβότανον, intended what we call *Cardiaca*, or Motherwort; both becauſe they ſeem to agree very well in Name, and alſo becauſe the Herb *Cardiaca* cuts, attenuates, and diſcuſſes groſs Humours.

CARDIOGMUS, καρδιασμὸς (from καρδιάω, to have a gnawing Pain at the Mouth of the Stomach). A biting or vellicating Senſation at the Mouth of the Stomach, from an acrimonious Humour infeſting that Part. It is a Word frequently uſed by *Hippocrates*, and is thus explain'd by *Galen*, *Comment. ad Aph.* 17. *Lib.* 4. Καρδιασμὸς, ὄνομα καρδίας, τέθεικε τὸ στόμα τῆς γαστρὸς, ὀνόμαζον δὲ οἱ παλαιοὶ καὶ τοῦτο καρδίαν "Cardiogmus is a biting Senſation at the Cardia, that is, Mouth "of the Stomach, which Part the Antients call'd *Cardia*." And again, *Lib.* 8. *C. M. S. C.* Εἰρηται πολλάκις ὡς τὸ τῆς γαστρὸς στόμα καλεῖν εἰώθασιν οἱ ἰατροὶ, ὥσπερ καρδίαν, ἄνω καὶ στόμαχον, &c. "We have often obſerved, that it is cuſtomary "with Phyſicians to call the Mouth of the Ventricle, or Sto"mach, ſometimes *Cardia*, ſometimes *Stomachus*; but for"merly *Cardia* was the more uſual Appellation, whence τὸ "καρδιώσειν, and ἡ καρδιαλγία, are ſtill in Uſe *(to expreſs the "Pain or biting Senſation at the Mouth of the Stomach)*." *Euſtathius* explains καρδιώντες by καρδίαν ἀλγοῦν καὶ γναυτιᾶν "To be "affected with a Pain at the Mouth of the Stomach, and a Nau"ſea." *Heſychius* expounds the ſame Word by τὴν καρδίαν ἀλγοῦν but adds, that with ſome it ſignifies δάκνεσθαι στόμαχον ὑπὸ λιμοῦ, "to have a biting Senſation at the Mouth of the "Stomach from Hunger;" and that it is alſo taken for ναυτιᾶν, "to be affected with a Nauſea, or Averſion to Food." But *Erotian* is moſt full to the Purpoſe, in expreſſing the Force of this

this Word καρδιώσειν. "The Antients, he says, call'd the "Mouth of the Stomach *Cardia*, which we now commonly "call *Stomachus*; whence καρδιάζειν and καρδιαλγεῖν signify "to be affected with a Pain and Nausea at the Stomach; and "καρδιωγμὸς is used to express a biting Sensation at the Sto-"mach. There is another *Cardiogmus* [καρδιωγμὸς] which "belongs to the *Cardia*, taken properly as one of the Viscera, "*(the Heart)* being a *Diogmus*, [διωγμὸς] that is, a quick and "vehement Palpitation of that Part." *Galen*, in his *Comment. ad Aph.* 65. *Lib.* 4. explains the Homonymy in the following Words: "Most of those, he says, who have expound-"ed the Aphorisms, have understood καρδιώσειν and καρδιαλγεῖν "in the same Sense; but some take καρδιωγμὸς for a palpi-"tating Motion of the *Cardia*, understood as one of the Visc-"cera. Now a vehement Estuation being excited in the Sto-"mach by an Effervescence of yellow Bile within its Coats, "it is agreeable to Reason, that, when the Coats of the Sto-"mach are thus affected, its Orifice should also suffer by a "biting Sensation, which is therefore a bad Symptom. But "if you will have *Cardiogmus* to mean a quick and swift Mo-"tion of the Cardia *(Heart)* most like Palpitation, it is the "worst of Symptoms, as it indicates an Inflammation of the "vital Principle." The Word καρδιώσειν, explain'd by *Erotian* before, is read in the following Passage of *Hippocrates*, *(Lib.* 1. περὶ γυναικ.) ἐπὰν δὲ ἐσι κατὰ μέσην κοιλίην πυρεσσαίνειν, καὶ φρίσσειν, καὶ καρδιώσειν. "It is probable, that, in the interme-"diate Time, the Woman is feverish, shivering, and molested "with a biting Pain at the Mouth of the Stomach." He uses the Word in many other Places of the same Book. See CARDIALGIA.

CARDIOTROTUS, καρδιότρωτος. A Person who has a Wound in his Heart. *Galen.*

CARDIR, Tin. *Johnson.*

CARDIS, *Mars*, Iron. *Johnson.*

CARDO. The Articulation call'd *Ginglymus* is sometimes expres's'd by *Cardo*, on account of its Similitude to a Hinge.

CARDONIUM. Wine medicated with Herbs, in the Phrase of *Paracelsus.*

CARDOPATIUM. A Name for the *Carlina acaulos, magno flore. Rieger.*

CARDUELIS, Offic. Will. Ornith. 1. 189. Raii Ornith. 256. Ejusd. Synop. A. 89. Aldrov. Ornith. 2. 798. Gesn. de Avib. 215. Jonst. de Avib. 68. Charlt. Exer. 87. Mer. Pin. 175. Schw. A. 233. Bellon. des Oyse, 353. THE GOLD-FINCH.

This Bird roasted, and eat, is said to be a Remedy against Iliac and Colic Pains. *Dale.*

CARDUNCELLUS. It is not certain whether this Word imports the Herb *Carduus Benedictus*, or the *Cardiaca*, Motherwort. See CARDIOBOTANON.

CARDUUS. The Thistle. See ACANTHUS.

Many Sorts of Carduus were taken notice of by the Antients, but it is no easy Matter to distinguish them by their Names. *Pliny, Lib.* 20. *C.* 23. informs us, that the Root of every sort of Carduus, boil'd in Water, causes Thirst, and corroborates the Stomach; and that it has some Effect upon the Uterus, causing Males to be generated, according to the Report of *Chæreas* the *Athenian*, and *Glaucias.*

Apicius, L. 3. *C.* 19. gives several Methods of preparing these Plants for culinary Purposes; which the Reader who thinks Cookery of more Importance than Physic, may consult.

The modern Botanic Authors have very much embroil'd the Species of Carduus, every one having taken the Liberty of classing those Plants, which were most agreeable to their particular Systems, under the *Cardui*, and banishing others. *Boerhaave* enumerates thirty-three Species.

The Characters of the *Carduus* are:

The Leaves grow alternately on the Branches, and are prickly: The Heads are, for the most part, squamose and prickly; and the Plant is, in every Part, beset with Multitudes of rigid Prickles; and the Plants, at least most of them, are lactescent.

1. *Carduus; Pycnopolycephalus; Sylvestris*; Triumfett. 100. 103. Ic. M. H. 3. 153. *a. b.*

2. *Carduus; spinosissimus; angustifolius; vulgaris.* C. B. Pin. 385. *Carduus, sylvestris, tertius.* Dod. p. 740. *Carduus, caule Crispo.* J. B. 3. 59. *b. Flore purpureo.*

3. *Carduus; spinosissimus; angustifolius; flore albo. b.*

4. *Carduus; caule crispo; capitulis minoribus.* b. *Carduus æsminus, seu sylvestris.* THISTLE UPON THISTLE.

This Thistle grows to be three or four Foot high, and sometimes to be taller than a Man, if the Soil is agreeable to it. The Root is single, white, and surrounded with numerous capillary Fibres; the Stalk an Inch thick, somewhat hairy, greenish, furnish'd with prickly curl'd jagged Membranes, growing to it lengthwise, hollow, and divided into a Multitude of very long Branches. The Leaves are nine Inches, or somewhat less, in Length, jagged, of a dark Green, hairy, and beset with numerous very sharp Prickles. The Heads of the Stalk and Branches are squamous, set with softer Prickles, and open into purple or white Flowers, follow'd by dark-colour'd Seeds, producing Down at their Top. It grows by the Sides of Ditches, near Hedges, and among Bryars.

Riverius observes, that half an Ounce of the Roots, boiled with two Drams of Liquorice, makes a good Medicine for those who are afflicted with the Stone, cleansing the Bladder and Kidneys from Sand and Gravel.

5. *Carduus; lanceatus; latifolius.* C. B. P. 385. M. H. 3. 153. *Carduus, lanceolatus, sive sylvestris, Dodonæi.* J. B. 3. 58. *b. Flore purpureo.*

6. *Carduus; lanceatus; latifolius; flore albo.* b.

7. *Carduus; lanceolatus; ferocior.* J. B. 3. 58. *b.*

8. CARDUUS HÆMORRHOIDALIS, Offic. Chom. 762. Cod. Med. 28. *Carduus vinearum repens sonchi folio*, C. B. Pin. 377. Boerh. Ind. A. 136. Dill. Cat. Giss. 113. *Carduus vulgatissimus viarum*, Ger. Emac. 1173. Raii Hist. 1. 310. Synop. 3. 194. Hist. Oxon. 3. 156. Mer. Pin. 21. *Carduus vulgatissimus, radice repente ceanthos Theophrasti*, Merc. Bot. 1. 27. Phyt. Brit. 23. *Carduus ceanothos sive viarum & vinearum repens*, Park. Theat. 959. *Carduus serpens lævicaulis*, J. B. 3. 59. *Cirsium arvense sonchi folio, radice repente, flore purpurascente*, Tourn. Inst. 448. Rupp. Flor. Jen. 151. Buxb. 72. THE COMMON CREEPING WAY-THISTLE.

M. *Herman* had Reason to believe, that this Plant is the same with the *Carduus in avena proveniens*, C. B. Pin. and the *Carduus serpens lævicaulis*, J. B. 3. 59. Mr. *Ray* adds to it the *Carduus spinosissimus, capitulis parum aculeatis*, C. B. Pin. But the Figure of the *Onopyxus alter*, Lugd. does not very well agree with it. Most Authors, that have mention'd this Plant, have taken no notice of the creeping of its Roots: *Columna's* Figure and Description are excellent. *Martyn's Tournefort.*

The Root is whitish, and now-and-then inclining to black, of a pretty strong Smell, sending forth Fibres as it creeps along under the Ground, and propagating itself to an immense Degree. It grows to the Height of a Cubit and a half, and sometimes more, with a slender, single, round, striated, green, and sometimes red Stalk, which is hairy near the Ground, and furnished with a few small Prickles, which have Leaves growing to them, jagged, like those of the Sonchus, or Sow-thistle, sometimes woolly, sometimes smooth, sometimes narrow; others wider, and not so deeply jagged, with their upper Face green and shining, but paler underneath. The Stalk runs out into Branches, bearing small, oblong, turbinated, squamous Heads, which are furnished with short, but not at all stiff Prickles, and produce Flowers of a faint red Colour, succeeded by small oblong Seeds, of a brown or dark-olive Colour, and involv'd in Down. The Flower often changes its Colour; and the upper Part of the Stalk is sometimes converted into a Body of a thick Substance, and of a nearly oval Figure, which serves as a Matrix for a kind of Insect.

This Thistle is too frequent in Tillage Grounds, and is often found in uncultivated Places, and by the Way-side; it creeps deeply under the Earth, whence it is very difficult to be extirpated; and it flowers in *July* and *August.*

It is called *Hæmorrhoidalis* (Hæmorrhoidal) from its Effects; for the Herb bruised, or boiled in Water, and reduced to the Form of a Cataplasm, mitigates the Pain of the Hæmorrhoids. Some affirm, that the Tubercles arising from the Bitings of Insects on the Stalk, if worn in a Bag, or ty'd in a Patient's Shirt, produce the same Effect; others advise wearing the dry'd Heads of the Plant in a Bag.

9. *Carduus; vinearum; repens; folio sonchi; flore albo.* C. B. Pin. 377. *b.*

10. CARDUUS MARIÆ, Offic. Ger. 989. Emac. 1149. Raii Hist. 1. 312. Synop. 87. *Carduus Mariæ vulgaris*, Park. 975. *Carduus Marianus, sive lacteis maculis notatus*, J. B. 3. 52. *Carduus Marianus sive lacteus*, Chab. 348. *Carduus albis maculis notatus vulgaris*, C. B. 381. Hist. Oxon. 3. 155. Tourn. Inst. 440. Boerh. Ind. A. 136. Dill. Cat. 129. Buxb. 56. LADIES THISTLE.

This *Thistle* is distinguished from all others which grow in *England*, in that its Leaves, which are large and long, of a shining green Colour, cut into several Laciniæ, full of sharp hard Prickles, have all the upper Part spotted with long and broad white Spots. The Stalk arises to be four or five Foot high, full of the like Leaves; on the Tops of the Stalks grow large Heads, whose scaly Covers are full of stubborn, hard Prickles, each Scale terminating in one; in the Middle of the Heads, come Thrums of purple fistular Flowers; which are succeeded by white Seed, oblong, and somewhat flattish, inclos'd in a great deal of Down. The Root is thick, growing deep in the Ground: It grows frequently upon Banks and Borders of Fields, and flowers in *June.* The Leaves and Seed are used.

When the Leaves of this Thistle come first out of the Ground, and are young and tender, they are boiled with salt Meat, like Colewort, the Prickles being first cut off, and are esteem'd by many as a Dainty. It is supposed to partake of the Virtues of the Carduus Benedictus, but in a lower Degree. It is commended by some as a Specific for the Pleurisy, especially an Emulsion of the Seeds: It is helpful also for the Jaundice, the Stone, and Stoppage of the Urine. It is but seldom used in the Shops. *Miller's Bot. Off.*

Its Leaves are bitter, aſtringent, and give but a very faint red Colour to blue Paper: They ſeem to contain a Salt, reſembling the *Oxyſal diaphoreticum Angeli Salæ*, that is, an acrid Salt, abounding with Acid; thus it is ſudorific and diuretic. Four Ounces of the Juice of its Leaves give great Relief in the Dropſy. *Martyn's Tournefort.*

The Seed is of a ſtimulating and opening Property; the Doſe is a Dram in Powder, but it is generally uſed in Emulſions, being mix'd with other Seeds for that Purpoſe. Its frequent Uſe in Pleuriſies makes it called by the *Germans Stech-Korner*, that is, (a Remedy) againſt pungent Pains; and, indeed, an Emulſion prepared of the Seed, with Honey, or a little Syrup of Violets, and drank, is highly to be commended in ſevere pleuritical Pains. M. *Tournefort*, for the Pleuriſy, and that Species of Rheumatiſm which reſembles it, adviſes an Emulſion, prepared of two Drams of the Seeds of Carduus Mariæ, with ſix Drams of the diſtilled Water of the Leaves. "This Medicine, ſays *Pontedera*, gives Relief under all Pains, "mollifies Hardneſſes, evacuates Humours, and maturates "Pus; wherefore it is recommended as a preſent Remedy for "all Diſorders of the Lungs and Throat." The Seed pulverized, and taken in Wine, from one to two Drams, is recommended by *Lindanus*, according to *Ettmuller*, againſt an Hydrophobia, and the Bite of a mad Dog, as being an excellent Sudorific. The diſtilled Water of the Herb is much commended by ſome againſt Diſtempers of the Breaſt, Lungs, Liver, Spleen, Kidneys, and Uterus, and for opening Obſtructions of thoſe Parts. But this Water is ſcarce uſed at preſent, and may very well be ſpared without any Damage to the Sick, becauſe the Virtues of the Plant, which depend on its Bitterneſs and aſtringent Quality, will not aſcend into the Alembic. Externally, they ſay, it is good for Nomæ, and phagedenic and corroding Ulcers, if Linen Cloths be moiſten'd with the ſame, and apply'd to the affected Parts. Whether this be true, I ſhall not determine, but leave every Man at Liberty to think as he pleaſes; tho', to ſpeak my Mind freely, I can hardly believe this Water to be preferable to any other diſtilled Water. *Rieger.*

11. *Carduus*; *Mariæ*; *non maculatus.* M. H. Blæſ. *a.*

12. *Carduus*; *maculis albis notatus*; *exoticus.* C. B. Pin. 381. M. H. 3. 155. *Carduus, lacteus, Syriacus.* Camer. 35. Ic. 10. *Carduus, lacteus, peregrinus. Camerarii.* J. B. 3. 53. *Flore purpureo. Cnicus, albis maculis notatus, flore purpureo.* T. 450, *a.*

13. *Carduus*; *maculis albis notatus*; *exoticus*; *flore albo.* H. R. P. *Cnicus, albis maculis notatus, flore albo.* T. 451. *Carduus, leucographus, capitulis acutiſſimis, ferociſſimis, ſpinis eminentibus circumdatus.* H. C. *b.*

14. *Carduus*; *galactites.* J. B. 3. 54. M. H. 3. 154, *b.* THE MILKY THISTLE.

15. *Carduus*; *humilis*; *alatus*; *ſive Carduus Mariæ*; *annuus*; *folio lituris obſcuris notato.* H. C. *b.*

16. *Carduus*; *nutans.* J. B. 3. 56. *Carduus, alatus, major, flore rubro moſchato, capite nutante.* M. H. 3. 153, *b.* THE MUSK, or NODDING THISTLE.

17. ACANTHIUM, Offic. *Acanthium vulgare*, Park. 979. Raii Hiſt. 1. 313. *Acanthium album*, Ger. 988. Emac. 1149. *Spina alba latifolia tomentoſa ſylveſtris*, C. B. 382. *Spina alba ſylveſtris Fuchſio*, J. B. 3. 54. Chab. 311. *Cardius tomentoſus Acanthium dictus vulgaris*, Raii Synop. 87. *Carduus tomentoſus latifolius ſylveſtris, ſpina alba, vel Acanthium dictus*, Herm. Cat. 119. *Carduus alatus tomentoſus latifolius vulgaris*, Hiſt. Oxon. 3. 152. *Carduus tomentoſus, acanthi folio, vulgaris*, Tourn. Inſt. 441. Dill. Cat. 122. Boerh. Ind. A. 136. Buxb. 55. *Carduus Acanthium dictus*, Volck. 84. *Carduus leucanthemus*, Schw. 38. COTTON-THISTLE.

The Stalk of this Thiſtle is three or four Cubits high, ſtriated, woolly, hollow, furniſhed with Membranes growing to it lengthwiſe, which are very prickly, ſinuated, or bent in, conſiderably prominent, and cover'd with whitiſh Hairs. The Leaves, which are a Continuation of theſe Membranes, are a Foot or more in Length, ſinuated, arm'd with Prickles, and hairy and white on both Sides alike, eſpecially the ſmaller Leaves before the Stalk is grown out. The Tops of the Stalks and Branches are adorned with Heads, which are generally ſingle, large, flat, and broad, and ſcaly or ſquamous, the Scales running out into long ſharp, and ſtiff Prickles, which ſtick out from the Head; the Prickles on the Heads and Leaves are of a deep Yellow. The Flowers are of a purpliſh Red, ſeldom white, and are ſucceeded by large furrow'd Seeds, creſted with Down, and involv'd in a lanuginous Subſtance, and of an acrid and bitteriſh Taſte. The Root is tender, white, of a ſweetiſh Taſte while the Plant is ſprouting forth, but harder and ligneous when the Stalk is grown. It grows every-where by the Sides of Paths, and on the Brinks of Ditches. It flowers in its ſecond Year, from *June* to *Auguſt*; when the Seed is ripe, the Root periſhes.

The Root is ſaid to be opening and diuretic, carminative and ſtomachic, diſcutient and reſolvent. Some commend it for the Tooth-ach, and for epileptical Diſorders in Infants. The Flowers are uſed to curdle Milk; therefore ſome call the Plant *Preſura.*

18. *Carduus*; *tomentoſus*; *acanthi folio, auguſtiore.* T. 441. *Spina, tomentoſa, altera ſpinoſior.* C. B. Pin. 382. *Carduus, quibuſdam dictus Acanthium Illyricum, aliis vero Onopordon.* J. B. 3. 55. *Onopordon.* Dod. p. 738. *Acanthium ſylveſtre, flore albo.* H. Eyſt. Æſt. o. 11 F. 7. Fig. 2. *Carduus, tomentoſus, Illyricus, procerior.* M. H. 3. 152, *b.*

19. *Carduus*; *tomentoſus*; *acanthi folio*; *altiſſimus*; *Luſitanicus.* T. 441. *Acanthium altiſſimum, Luſitanicum.* H. R. Par. M. H. 3. 153. *Acanthium Luſitanicum.* M. H. Blæſ. *b.*

20. *Carduus*; *tomentoſus*; *acanthi folio*; *Alepicus*; *magno flore.* T. 441. *Acanthium, ex Alepo, caule alato, flore magno, cæruleo, cinaræ inſtar.* H. Edinb. *b.*

21. *Carduus*; *Græcus*; *parvus*; *acanthi folio tomentoſo*; *flore minore.* T. Cor. 31, *b.*

22. *Carduus*; *Creticus*; *acanthi folio viridi, & glutinoſi*; *flore purpuraſcente.* T. Cor. 31, *b.*

CARDUUS ERIOCEPHALUS, Offic. Ger. Emac. 1152. Merc. Bot. 1. 27. Phyt. Brit. 22. Mer. Pin. 20. Boerh. Ind. A. 137. Buxb. 56. *Carduus capite rotundo tomentoſo*, C. B. Pin. 382. Hiſt. Oxon. 3. 155. Tourn. Inſt. 441. Rupp. Flor. Jen. 150. *Carduus capite tomentoſo*, J. B. 3. 57. *Carduus tomentoſus Corona fratrum dictus*, THE FRIERS CROWN THISTLE, Park. Theat. 978. Raii Hiſt. 1. 311. Synop. 3. 195. WOOLLY-HEADED THISTLE.

It ſhoots forth a thick ſtriated Stalk, which is divided into numerous Branches, and runs up the Height of three or four Cubits, cover'd with a white woolly Subſtance, not at all prickly. The Leaves are armed with long, rigid, ſharp Prickles, jagged, large, extending a Foot, or a Foot and a half, in Length, but narrow, woolly on the lower Part, but green on the upper, and conſtituting, as it were, four Rows of Leaves, with their Jags, diſpos'd at Diſtances, the two lower Rows being flat and equal, the others elevated. On the Tops of the Stalks are numerous, ſcaly, prickly, round Heads, cover'd with Plenty of a fine white Down, and producing from their Summits Flowers of various Colours; under the Flowers is a white pulpous Subſtance, of a grateful and aromatic Taſte. The Seed is oblong, ſhining, lubricous, aſh-colour'd, ſtriated, moderately flat, of a ſweet Taſte, and involv'd in a woolly Subſtance. The Root is thick, and not of an ungrateful, but aromatic Taſte, as well as the Stalk and Leaves, if you except a white, dry, and inſipid medullary Subſtance; when the Heads are cut off, there appears a milky Juice. It grows by the Sides of Fields, in Meadows, and in mountainous and uncultivated Places. It flowers in *July* and *Auguſt*, and took the Name of *Eriocephalus* from ἔριον, Wool, and κεφαλὴ, a Head; and it is alſo called *Corona Fratrum*, becauſe the Branches, which are of equal Height, and loaden with their woolly Heads, ſtand in a Circle about the large Head on the Top of the Stalk, as Monks uſe to do about their Abbot, or Prior. Some boil the Heads before the Flowers come forth, and ſeaſoning them with Butter and Pepper, after the manner of *Arthichokes*, ſerve them up at Table as a delicious Diſh at a ſecond Courſe. *Rieger.*

Borelli ſays, its Juice, or bruiſed Leaves, cure the Cancer of the Noſe and Breaſt: He calls it *Ornipodon*, and recommends the frequent Uſe of it in thoſe Caſes. *Martyn's Tournefort.*

24. ACARNA, Offic. *Acarna Theophraſti*, Ger. 1012. Emac. 1175. *Acarna major caule non folioſo*, C. B. 379. Park. 966. *Acarnæ ſimilis Carduus polyacanthus*, Leon di Cardi Maſchio. *Caſabonæ*, Chab. 356. *Polyacanthus Caſabonæ acarnæ ſimilis*, J. B. 3. 92. Raii Hiſt. 1. 315. *Carduus polyacanthus folioſo caule, Acarna dictus*, Hern. Cat. 120. *Carduus polyacanthus, caule non folioſo Acarna major dictus*, Pluk. Almag. 85. *Cardius cæruleus procerior, ſpinis ternis per intervalla foliorum marginibus donatus*, Hiſt. Oxon. 3. 159. *Carduus ſeu Polyacantha vulgaris*, Elem. Bot. 350. Tourn. Inſt. 441. FISH-THISTLE.

This grows ſpontaneouſly in *Italy*; but I find no particular medicinal Virtues aſcribed to it.

25. *Carduus*; *caneſcens*; *aculeis flaveſcentibus munitus. Acarnæ ſimilis, flore purpureo, Chamæleon Salmanticenſis Cluſii.* J. B. 3. 91. *Cnicus, polycephalus, caneſcens, aculeis flaveſcentibus munitus.* T. 451. *Chamæleon, Salmanticenſis.* Cluſ. H. 154. *Acarna, major, caule folioſo.* C. B. 379. H.

26. The twenty-ſixth of *Boerhaave* is the *Chamæleon, niger, umbellatus, flore cæruleo hyacinthino*, which *Dale* makes a Species of the *Carthamus.* See CARTHAMUS.

27. *Carduus*; *humilis*; *aculeatus*; *ptarmicæ Auſtriacæ foliis.* Triumf. 96. *Carduus, ſtellatus, foliis integris, flore purpureo.* H. R. Par. *Carduus, ſtellatus, leucoii lutei foliis.* A. R. Par. 69. *Carduus, leucoii folio.* M. H. Blæſ. *a. Semina huic pappo carentia.*

28. *Carduus*; *mollior.* Cluſ. H. 150. *b.*

29. *Carduus*; *Creticus*; *tomentoſus*; *folio acanthi*; *flore magno, purpuraſcente.* T. C. 31. *b.*

30. *Carduus*; *Hiſpanicus*; *altiſſimus.* Salvad.

31. *Car-*

31. *Carduus*; *Orientalis*; *folio acanthi candidiſſimo*; *flore parvo, ſuaverubente*. T. C. 31. *b*.

32. *Carduus*; *leucographus*; *purpureus*; *capitulis acutiſſimis, ferociſſimis, ſpinis eminentibus ſubtus circumdatus*. H. C. *Eſt flore albo*. a.

33. *Carduus*; *paluſtris*. C. B. P. 377. Prodr. 156. Park. *Carduus, polyacanthos*, 3. Ger. *Carduus ſpinoſiſſimus, erectus anguſtifolius, paluſtris*. M. H. 3. 153. *b*.

Dale mentions amongſt the *Cardui*, the

ACANUS, Offic. *Acanus Theophraſti*, Park. 975. Raii Hiſt. 1. 314. *Carduus latifolius acinos obſoletæ purpuræ ferens*, C. B. 380. THEOPHRASTUS's THISTLE.

This grows in *Crete*: The young Shoots, before the Stalk is form'd, are us'd in Food. I find no Virtues aſcrib'd to it.

CARDUUS ALTILIS is the Artichoke. See CINARA.

CARDUUS BENEDICTUS. See CNICUS.

CARDUUS BRASILIANUS, *foliis aloes*, is the ANANAS, which ſee.

CARDUUS CHRYSANTHEMUS is the *Scolymus Theophraſti*, which ſee.

CARDUUS DOMESTICUS, *or* SATIVUS, is the Artichoke. See CINARA.

CARDUUS FULLONUM is the Teaſel. See DIPSACUS.

CARDUUS STELLATUS is the CALCITRAPA, which ſee.

CARDUUS *ſtellatus luteis foliis cyani*, is the *Jacea ſtellata, Spina ſolſtitialis dicta, foliis cyani*.

CARDUUS VENERIS is the DIPSACUS, which ſee.

CARDUUS XERANTHEMUS: It is an Epithet of ſome of the Species of the CARLINA, which ſee.

CAREBARIA, καρηβαρία, from κάρη, the Head, and βάρος, Heavineſs. An uneaſy, and ſomewhat painful Heavineſs of the Head.

CARENA. The twenty-fourth Part of a Drop. *Rulandus*.

CARENUM, κάρηνον, the Head. *Galen*.

CARETTI. A Name of the BONDUCH, which ſee.

CAREUM, Caraway.

CARICA, a Fig, commonly one that is dry'd.

CARICUM, καρικὸν, a cathæretic Medicine, which deterges ſordid Ulcers, and eats away proud Fleſh. *Hippocr. de Ulceribus*. It is prepared of black Hellebore, Sandarach, Squama Æris, waſh'd Lead, Sulphur, Orpiment, and Cantharides; theſe, being mix'd, are made up with Oil of Cedar into a liquid Medicine; ſometimes there is added Arum, in Decoction or Juice, or the Powder of it mix'd with Honey. The dry Medicine, or Powder for the ſame Purpoſe, is prepared of the ſame Ingredients, omitting the Oil of Cedar, and the Honey; it is alſo made of black Hellebore and Sandarach only. Καρικὸν, in *Galen*'s Exegeſis, is thus expounded: Καρικόν τι ἔδεσμά ἐστιν ὀνομάζει, ἢ τὴν σκευασίαν ἐν τῷ περὶ ἑλκῶν γράφει. Here *Foeſius*, for ἔδεσμα, which ſignifies ſomething eatable, and therefore, as he ſays, muſt needs be erroneous, will have ſubſtituted σκεύασμα, "Preparation," or ἄλειμμα, "an Ointment;" or ſome ſuch Word; and then the Paſſage may be thus rendered; "Caricum is a kind of medicinal Compoſition, ſo called by "him (*Hippocrates*), the Preparation of which he gives us in "his Book of Ulcers." Some write *Carycum*, and fancy it takes that Name from κάρυον, a Walnut; but erroneouſly, for there is no Mention of Walnuts. Καρικὸν is alſo an Oil, in *Athenæus*, *Lib.* 2.

CARIDES, καρίδες, Shrimps. *Galen*.

CARIES. A Diſeaſe of the Bones ſo call'd. See Os.

CARIM-CURINI, H. M. *Frutex Indicus ſpicatus, floribus galeatis, vaſculo bivalvi dicocco*. An *Indian* Shrub, which bears galeated Flowers, of a greeniſh azure Colour, growing in a Spike, with bivalve Seed-veſſels, each of the two Cells containing a very flat roundiſh Seed, cuſpidated like a Heart; when ripe, of a yellowiſh, or pale reddiſh Colour, of a rough Superficies, eſpecially when dry, and quite inſipid.

The Root, which is fibrous, whitiſh, and its Bark of a biteriſh Taſte, drank in a Decoction, is of Service in arthritic Pains; boiled with Oil and Butter, it increaſes the Strength; the ſame bruiſed, and given with the Oil *Sirgelim*, mitigates the Pains of the Gout. The Decoction of the Root and Leaves, being drank, breaks the Stone; and the Leaves bruiſed, and ty'd upon the Belly, have the ſame Virtue; the expreſſed Juice of the Leaves ſerves for the ſame Purpoſe. A Decoction of the Leaves helps the Dyſury; an Infuſion of them in hot Water, being drank, mitigates the Cough, and Pains of the Stone; and works the ſame Effect, if the Belly be fomented with it.

BEM CURINI, H. M. *Frutex Indicus ſpicatus, florum pediculis brevioribus*. It differs from the preceding, only in the Leaves, and ſeminal Veſſels.

A Decoction of the Root is good in Fevers, and Diſorders of the Head. The Leaves fry'd in Oil, and afterwards bruiſed, are apply'd to Ulcers, in order to heal them. *Raii Hiſt. Plant. p.* 1709.

CARIMPANA. A Species of Palm-tree. See PALMA.

CARINA, with the antient Botaniſts, ſignify'd the oſſeous hard Shell of Walnuts: With the Moderns it denotes any thing, whoſe Cavity runs into an Angle, like the Keel of a Ship; whence the under Leaf of a papilionaceous Flower is called *Carina*. In the Account of Gramina, or Graſſes, *Carina* is uſed to ſignify that furrow-like Cavity which runs thro' the whole Length of the Leaves of the Cyperoides, and Cyperus Graſſes, or graminifolious Plants, and ends in an acute Angle; and hence thoſe Leaves, being excavated, or hollowed into an acute Angle, are called *carinated*. Sometimes by *Carina* is to be underſtood the Prominence of this Furrow, which juts out on the Backſide of the Leaf, and runs like a Nerve through the Middle of it. *Rieger*.

CARINA, in Zoology; a Word apply'd firſt, I think, by *Malpighi*, to the firſt Rudiments of the Spine of a Chicken, during Incubation.

CARIUM TERRÆ, Lime. *Rulandus*.

CARLINA. The Carline-thiſtle.

The Characters are;

It hath, for the moſt part, a radiated Flower, from whoſe Diſk ariſe many Florets, which reſt upon the Embryos; but the plain Petals, which ariſe from the Crown, have no Embryos fix'd to them: The Flower-cup is large and prickly, incloſing the Embryos. Theſe Embryos afterwards become Seeds, which have a Down adhering to them, and each is ſeparated by an imbricated Leaf.

Boerhaave takes Notice of ſeven Species of the *Carline-thiſtle*.

1. CARLINA, *Chamæleon albus*, *Carlina*, Offic. *Carlina, ſive χαμαιλέων λευκὸς, Dioſcoridis*. THE WHITE CARLINE-THISTLE OF DIOSCORIDES, WITH THE RED FLOWER, Ger. Emac. 1157. Ger. 995. *Carlina humilis*, Park. Theat. 968. Raii Hiſt. 1. 288. *Carlina acaulos magno flore*, C. B. 380. Tourn. Inſt. 500. Boerh. Ind. A. 101. *Carlina caulifera vel acaulis*, J. B. 3. 64. *Carlina, Carolina*, Chab. 353. *Carlina major*, Schw. 39. *Carduus Xeranthemos, flore albo ampliore acaulis*, Hiſt. Oxon. 3. 162. CARLINE-THISTLE.

The Leaves of the *Carline-thiſtle* are very long and narrow, cut into ſeveral deep Segments, and arm'd with a great Number of ſharp Prickles. They lie flat on the Ground, and encompaſs a large ſtalkleſs Head, ſet about with ſmaller and ſhorter prickly Leaves. Out of this Head ariſes the Flower, conſiſting of a Border of white, ſhining, ſharp-pointed Petala, ſet about a yellow fiſtular Thrum, which, paſſing into Down, incloſes a great Number of ſmall long ſhining white Seed. The Root is long and large, of a reddiſh-brown Colour on the Outſide, and whitiſh within, of an aromatic Taſte. It grows in *Germany*, and other Parts beyond the Seas; flowering in *July*.

The Root, which is the only Part uſed, is accounted ſudorific, alexipharmic, and uſeful againſt all contagious peſtilential Diſeaſes, and even the Plague itſelf. It is likewiſe diuretic, helps the Dropſy, promotes the Catamenia, and is ſerviceable in hypochondriac Diſtempers. It is rarely uſed in *England*. *Miller's Bot. Off.*

This Plant, as many ſuppoſe, is call'd, by *Dioſcorides* and *Pliny*, *Chamæleon*, from the Variety of its Leaves, which are green, whitiſh, Sky-colour'd, and ſometimes red. It is call'd ἰξία (*Ixia*) from a ſort of Bird-lime which grows on its Roots, and is gather'd thence, and uſed inſtead of Maſtich; for ἰξία ſignifies Bird-lime. The *Germans* call it *Eber Wurtzel*, that is, *Boars-root*, becauſe the Roots of it are greedily coveted by Boars, and not becauſe it kills Swine, if given them in their Food; for this is contrary to Experience. *Pontedera* thinks it is miſtaken for the Chamæleon of *Dioſcorides*, and that it is with more Probability referr'd to his *Leucacantha*, or white Thorn. "The Carlina, ſays *Pontedera*, is an Herb much "valued by Phyſicians. The Root has an aromatic Taſte, "mix'd with ſome Sweetneſs; and is very much celebrated for "its Virtues againſt the Peſtilence, Poiſons, and malignant Fevers. It conſiſts of volatile Parts, for which Reaſon the "Root expels the Matter of Diſeaſes by Sweat; and, on the "ſame account, is ſaid to give Relief in the Beginning of an "Anaſarca, and in hypochondriacal Diſorders, and Weakneſs "of the Stomach." *Philip Melanchthon*, being moleſted with Pains in the Hypochondria, is ſaid, by *Bauhine*, to have reliev'd himſelf by the Uſe of this Herb. *Amatus Luſitanus*, on *Dioſcorides*, commends the Head of the Carline-thiſtle, ſtript of its Prickles, and cleanſed, and then preſerved in Sugar or Honey, as a good Remedy for a cold Stomach. *Johannes Langius*, in his *Medicinalium Epiſtolarum Miſcellanea*, informs us, that this is a Remedy much uſed by the *Italians*. *Ray*, from *Geſner*, tells us, that the ſmall fleſhy Heads of the Carline-thiſtle, when the Calix, Flowers, and Seeds, are cut off, afford a ſweet and agreeable Food, when boil'd in Water, with Butter, Salt, and Pepper, in the ſame manner with Artichokes. *Bedæus* informs us, that the Inhabitants of *Savoy* and *Piedmont* take the young Heads of the Carline-thiſtle, before the Flower appears, and pulling

pulling off the rougher Leaves, and the ſeveral ſmall Laminæ ſhut up within them, cut the Bottoms into Slices, which they boil for Food like Turneps over a Fire, ſeaſoning them with Salt, Butter, and Pepper. When thus prepared, as the ſame Author informs us, they are more delicate and grateful to the Taſte than the Bottoms of Artichokes. *Valentini* informs us, that the Inhabitants of *Switzerland*, and the *Pyrenæan* Mountains, uſe both the Roots and Heads for Food. The Root is kept in the Shops, and is accounted beſt when recent, entire, well dried, of a ſweetiſh Taſte, and of an agreeable and aromatic Smell. It may properly be exhibited in Caſes where Nature is to be irritated, and requires a Stimulus to throw off an excrementitious Load. Hence 'tis obvious, that it muſt be proper for opening Obſtructions, exciting a Diaphoreſis, provoking the Menſes, promoting a Diſcharge of the Urine, and killing Worms, in conſequence of its Bitterneſs. The common Method of exhibiting it is in Powder, from half a Scruple to half a Dram, in a Vehicle accommodated to the Nature of the Diſeaſe, or the Conſtitution of the Patient.

It is alſo preſcrib'd in Decoctions and Infuſions; and for Palſies, eſpecially thoſe of the Tongue, it is generally join'd to Pellitory of *Spain*. In the Plague, a Dram of it, reduced to Powder, is exhibited in Wine, both with a preſervative and curative Intention. With this View it is by ſome given to Cattle, and eſpecially to Hogs, becauſe it is thought an effectual Preſervative againſt peſtilential Contagion. Whether, as an Amulet, it is beneficial in the Plague, is a Point we will not take upon us to determine. In *Upper Germany* the Country-people give this Root to their Dogs, in order to render them more fierce and voracious; becauſe the Veſſels are ſtimulated by it, the Circulation of the Humours accelerated, and the Animal render'd bolder. From this Circumſtance the Obſervation of *Helmont* is probably to be accounted for, That the Carline-thiſtle baniſhes Sleep, and much more prevents preternatural Drowſineſs. A Decoction of it, prepar'd with Vinegar, is recommended for waſhing Parts affected with the Itch, Ring-worm, or any other cutaneous Foulneſs of difficult Cure. This ſame Decoction is alſo ſaid to alleviate and relieve the Tooth-ach. If Experience confirms theſe external Uſes, the Reaſon of the Thing may be deduced from the aromatic, acrid, reſolvent, and aperient Nature of this Root. But 'tis ſomewhat more difficult to comprehend, how the Perſon who chews or carries this Root about with him, becomes ſtronger by that means; whereas thoſe about him become weaker. *Valentini*, when ſpeaking on this Subject, ſays, "If any one ſhould happen to be weaken'd by this means, the Accident is to be aſcrib'd to the Smell, which he could not endure. Thoſe, on the contrary, who chew the Root, perceive themſelves recruited and invigorated by its aromatic Quality, which rouſes the animal Spirits." Beſides, by its too ſtrong Fragrance, it excites, in many, troubleſome Head-achs, Vertigos, and Nauſeas, as *Boeclere* has obſerved. Hence we underſtand the Reaſon why *Hoffman*, in his *Clavis Schroder.* affirms, that in Practice he has often obſerved, that Fleſh-broth, in which it had been boil'd, excited a Vomiting in ſome People. 'Tis alſo owing to its Acrimony, that, when mix'd up with Flour, it kills Mice; but this *Hoffman* ſeems to have borrow'd from *Pliny*, who affirms the ſame Thing concerning the Chamæleon.

2. *Carlina caulescens flore magno albente*, Cod. Med. 28. Tourn. Inſt. 500. Boerh. Ind. A. 101. *Carlina caulescens magno flore*, C. B. Pin. 380. Elem. Bot. 401. Rupp. Flor. Jen. 172. Volck. Flor. Nor. 87. Buxb. 57. *Carlina caulifera*, J. B. 3. 64. Raii Hiſt. 1. 288. *Carlina caulescens*, Park. Theat. 968. *Carduus Xeranthemos, flore albo caulescens*, Hiſt. Oxon. 3. 162. CARLINE-THISTLE WITH A STALK.

In medicinal Virtues this agrees with the *Carlina Acaulos*; for which its Root is alſo ſubſtituted.

3. *Carlina sylvestris*, Offic. Raii Hiſt. 1. 288. *Carlina sylvestris major*, Ger. 997. Emac. 1159. Park. Theat. 969. Mer. Pin. 22. *Carlina sylvestris vulgaris*, Cluſ. Hiſt. 156. Tourn. Inſt. 500. Elem. Bot. 401. Dill. Cat. Giſſ. 167. Boerh. Ind. A. 101. *Carlina sylvestris quibusdam, aliis Atractylis*, J. B. 3. 81. Chab. 353. Raii Synop. 3. 175. Buxb. 58. *Carlina scandens*, Wedel. 175. *Cnicus sylvestris spinosior*, C. B. Pin. 378. *Heracantha*, Rupp. Flor. Jen. 172. *Carduus vulgaris*, Merc. Bot. 1. 27. Phyt. Brit. 23. *Carduus Xeranthemos vulgaris annuus*, Hiſt. Ox. 3. 162. COMMON WILD CARLINE-THISTLE.

The medicinal Virtues of this are ſaid to be the ſame as thoſe of the preceding. *Wedelius* recommends it for the Head-ach. *Dale.*

4. *Carlina; sylvestris; flore aureo; perennis.* H. L. *Carduus xeranthemus, vulgaris, annuus.* M. H. 3. 162. *Cnicus sylvestris, spinosior, flore aureo, perennis.* H. R. Par. 54. H. WILD PERENNIAL CARLINE-THISTLE, WITH A GOLDEN FLOWER.

5. *Carlina; sylvestris; minor; Hispanica.* Cluſ. H. 157. *Acarna flore luteo, patulo*, C. B. P. 379. *Carduus, Carlina minor sylvestris Clusii, flore luteo.* J. B. 3. 84. *Carduus xeranthemos, flore luteo, patulo, Hispanicus, perennis.* M. H. 3. 162. H. LESSER WILD SPANISH CARLINE-THISTLE.

6. *Carlina; flore purpuro-rubente, patulo.* T. 500. *Carlina, annua, purpurea, Monspelliensium.* Bot. Monſp. *Acarna, flore purpuro-rubente, patulo.* C. B. P. 379. *Carduus xeranthemos, flore purpureo-rubente, patulo.* M. H. 3. 162. *Acanthoides, parva, Apula.* Col. 1. 29. a. b. H.

The ſeventh Species of *Carlina*, taken notice of by *Boerhaave*, is the *Carlina patula atractylidis folio & facie*; but this has been already mention'd as one of the Species of CARDUUS.

CARMEN, ᾠδή, *ode*. Properly a Verſe; but, in ſuperſtitious Medicine, the ſame as *Incantatio*; that is, an Inchantment or Charm, which was uſually perform'd by pronouncing certain Verſes. See AMULETUM.

CARMES *(Eau de)*. The Carmelite-water, famous in *France*, and now in moſt Parts of *Europe*, for its extraordinary cordial Virtues. It is ſaid to be extremely reviving, to be good in all ſort of Fits, Apoplexies not excepted, and to relieve in the Gout, when it attacks the Stomach.

The *Carmelites* at *Paris*, who make a conſiderable Advantage by vending this Water, have endeavour'd to keep the Preparation of it a Secret. But I am pretty well inform'd, that the following Receipt for it is the genuine Preſcription, by which theſe Religious make it.

EAU DES CARMES, *or* MAGISTERIAL WATER *of* BAUM.

Take of the freſh Leaves of Baum, four Ounces; of the freſh external Rind of Lemons, two Ounces; of Nutmegs, and Coriander-ſeeds, each an Ounce; of aromatic Cloves, Cinnamon, and the Root of *Bohemian* Angelica, each half an Ounce. Bruiſe the Leaves, and pound the other Ingredients, and put them into a Glaſs Cucurbit; then pour upon them a Quart of Brandy: Stop the Mouth of the Cucurbit, and leave them to digeſt two or three Days in a warm Place; then add a Pint of the beſt ſimple Baum-water; ſhake them together; fix a Head to the Cucurbit, and to that a Receiver: Then diſtil *in Balneo Mariæ*, with a Heat ſufficient to make one Drop follow another, which continue till the Ingredients in the Cucurbit remain almoſt dry. When the Veſſels are cold, take the Water from the Receiver, and preſerve it in Bottles well ſtopt.

CARMIN. A Droſs or Powder of a very beautiful deep-red Colour; ſeparated from Cochineal by means of a Water, in which are infuſed *Chouan* and *Autour*. *(See the Words.)*

The Cochineal uſed in that Operation is a wild Sort, which is found on the Fig-trees of *India*, naturally produced, without being brought thither; but this Cochineal, which is thus ſpontaneouſly produced, is much inferior to the other, and ſells at a much lower Price. *Carmin* ought to be an impalpable Powder, and deeply colour'd.

It is uſed for Painting in Miniature, and colouring of Draperies red, in Pieces of Value. *Lemery des Drogues.* See COCHINILLA.

CARMINANTIA, or CARMINATIVA. Carminative Medicines.

Quincy ſays, that theſe have a Place among the nervous Simples, by reaſon the nervous Parts are frequently under great Diſorders from Flatuſes, or Wind pent up; and, therefore, what diſſipates and expels ſuch Vapours, muſt be reckon'd of great Service to thoſe Parts.

A great many ſeem to be Strangers to this Term, as it does not appear to carry in it any thing expreſſive of the medicinal Efficacies of thoſe Simples which paſs under its Denomination. This Term had certainly its Riſe as thus apply'd, when Medicine was too much in the Hands of thoſe Jugglers, who, for want of a true Knowledge in their Profeſſion, brought Religion into their Party; and what, thro' their Ignorance, they were not able to do by rational Preſcription, and the Uſe of proper Medicines, they pretended to effect by Invocation, and their Intereſt with Heaven. Which Cant being generally, for the Surprize-ſake, couch'd in ſome ſhort Verſes, the Word *Carmen*, which ſignifies a Verſe, was made alſo to mean an Inchantment; which, as it was a good Cover for their Ignorance as well as their Knavery, was frequently made uſe of to ſatisfy the People of the Operation of a Medicine they could not account for. And as thoſe Medicines, now under this Name, are of ſome quick Efficacy, and the Conſequences thereof, in many Inſtances, very great and ſurpriſing; the moſt violent Pains, which ſometimes ariſe from pent-up Wind, immediately ceaſing upon its Diſperſion; for theſe Reaſons, I ſay, ſuch Medicines as give Relief in this Caſe are more particularly term'd Carminatives, as if they cured by Inchantment; the Complaint removed by them being ſo ſudden, that the ordinary

rary Means of the Operation of a natural Cauſe are not eaſily imagin'd to take place ſo ſoon.

But, howſoever this Term came into the Profeſſion, its common Uſe has ſufficiently determin'd its Meaning; ſo that by it every one underſtands ſuch Things as conduce to expel Wind. How they do ſo, may be conceived, when we conſider, that all the Parts of the Body are perſpirable. *Sanctorius*, in his *Medicina Statica*, determines all we call Wind in the Bowels, to be ſuch perſpirable Matter as makes its Eſcape thro' the Coats of the Stomach and Inteſtines. Between the ſeveral Membranes likewiſe of the Muſcular Parts may ſuch Matter break out, and lodge for ſome time. Now whatſoever will rarefy and render thinner ſuch Collections of Vapours, muſt conduce to their utter Diſcharge out of the Body, and conſequently remove thoſe Uneaſineſſes which ariſe from their Detention. And as all thoſe Things in Medicine, which paſs under this Denomination, are warm, and conſiſt of very light ſubtile Parts, it is eaſy to conceive how a Mixture of ſuch Particles may agitate and rarefy thoſe Flatulences, ſo as to facilitate their Expulſion; and eſpecially when we conſider, what a Help to promote this End thoſe grateful Senſations may be, which ſuch Medicines give to the Fibres; which cannot but invigorate their Tonic Undulations ſo much, that by degrees the obſtructed Wind is diſlodged, and at laſt quite expel'd. But if the Obſtruction is not great, as it ſeldom is in the Bowels, by reaſon of the large Vent both upwards and downwards, the Rarefaction of the Wind, upon taking ſuch a Medicine, is often ſo ſudden, and likewiſe its Diſcharge, that it goes off like the Exploſion of Gunpowder.

All the Things under this Claſs, being warm and diſcuſſive, are much uſed in the Compoſitions of Cathartics, of the rougher Sort eſpecially; for the Irritation, occaſion'd by thoſe, would be ſcarce tolerable without the Mitigation of ſuch grateful Ingredients. Many likewiſe, of this Sort, are in the Compoſitions of diſcuſſive Topics, as they warm, rarefy, and attenuate the obſtructed Humours. *Quincy.*

The Medicines of the Carminative Kind are ſuch as are calculated to diſpel Flatulencies of the Primæ Viæ, Stomach, and Inteſtines, and remove the Pains ariſing from them: For this Reaſon they are alſo call'd *Flatus diſcutientia*, or Medicines capable of diſpelling Flatulencies; and ſuch is their Nature, that they are able to remove Spaſms in the above-mentioned Parts. For this Reaſon, among the *Carminatives*, we may juſtly reckon *Antiſpaſmodics*, of which thoſe are always to be exhibited, which are moſt directly oppoſite to the known Cauſe of any given Diſorder. Thus, for Inſtance, in order to correct a known acrid Acid, an Alcali muſt be preſcribed; but to illuſtrate the thing by a particular Inſtance, after taking a Doſe of Arſenic, Oil of Tartar per Deliquium is, in conſequence of its directly oppoſite Nature, of all other Medicines the moſt proper. When the Diſorder proceeds from a cold mucous Cauſe, or from a dull inactive Phlegm, the Patient can only expect Relief from heating Medicines, ſuch as Mint, Chamomile, Wormwood, Orange-peel, Juniper-berries, the Four greater and ſmaller hot Seeds, the diſtil'd Waters and Oils of theſe, and other Aromatics, ſpirituous Liquors, all Balſamics, and, in a Word, all hot Stomachics, generally comprehended under the common Name *Carminatives*. Thus *Foreſtus*, *Lib.* 18. *Obſ. Med.* 39. gives us an Account of a Man of a weak Stomach, who, in the Autumn, happening to indulge himſelf in the Uſe of flatulent Aliments, and drinking Muſt immediately after, was ſeiz'd with an intolerable Pain of the Stomach, together with an externally apparent Inflation of it. This Diſorder was, however, remov'd, by the Patient's drinking Ale, in which common and *Roman* Chamomile, with an Addition of a few Aniſe and Canary Seeds, were boil'd.

Sylvius, by way of Specimen, recommends to young Practitioners the following Mixture againſt Flatulencies:

> Take of the Waters of Mint and Fennel, each two Ounces; of rectified Spirit of Wine, or of the Aqua Vitæ of *Matthiolus*, or of the carminative Spirit of *Sylvius*, one Ounce; of the beſt Spirit of Nitre, twenty Drops; of Laudanum Opiatum, three Grains; of the diſtil'd Oil of Mace, ſix Drops; of the Syrup of Mint, an Ounce and an half: Mix all together.

Let a Spoonful of this Mixture be given at a time, and repeated as often as the Violence of the Pains and Tenſions requires.

Ettmuller recommends the carminative Water of *Managetta* corrected, which is prepared of ſeveral aromatic Vegetables ſprinkled with Spirit of Nitre, and diſtil'd with Wine, or the Spirit of Wine. But ſuch Medicines are not proper for thoſe whoſe Flatulencies proceed from too large a Quantity of Blood diſtending the Veſſels, from a Plethora, or hot and acrid Subſtances uſed in Food. *Boerhaave's Chym. Vol.* 2. and Obſervations on Proceſs 23. *Sylvius* judiciouſly obſerves, that Aromatics, and volatile Salts of every Kind, which are generally preſcribed againſt Flatulencies, often prove prejudicial to the Patients, becauſe by their means the violent Heat of the Body is augmented; and he thinks, that for diſpelling Flatulencies no Medicine is comparable to the Spirit of Nitre, whether ſimple, or that diſtinguiſh'd by the Epithet *Dulcis*, ſince it not only incides the Matter of the Flatulencies, and glutinous Phlegm, but alſo corrects the exceſſive Acrimony of the Bile. *Boerhaave, in Chym. Vol.* 2. Obſervations on Proceſs 135. among the Medicines calculated for diſpelling Flatulencies, aſſigns the principal Place to the *Spiritus Nitri Dulcis*. Carminatives are principally intended for thoſe who are afflicted with Flatulencies and Rumblings of the Inteſtines, ſuch as thoſe labouring under Diſorders of the Spleen, hypochondriac and hyſteric Patients, and Infants diſorder'd by an acid Milk. The Effect of carminative Medicines is to diſpel Flatulencies, either by Eructations, or by a Diſcharge downwards; nor is it a Matter of any Moment, whether this Diſcharge is upwards or downwards, as *Demetrius* is repreſented to ſay in *Seneca*, *Epiſt.* 91. And, according to *Cicero*, [9 *Epiſt. ad Fam.* 22.] the Stoics affirm'd, that Diſcharges downwards were as decent as Eructations. But in polite Company this would not at preſent be thought conſiſtent with good Manners. The *Arabians*, a People highly delicate with reſpect to their Ears and Noſes, eſteem'd it a Crime for a Man to break Wind in their Preſence. *Memoires du Chevalier d'Arvieux.* 'Tis therefore obvious, that the Uſe of Carminatives ought to be confin'd to certain Times and Places, ſince there is no-where as yet publiſh'd ſuch an Edict as *Claudius* the *Roman* Emperor intended to make, by which every one might freely break Wind at an Entertainment, when he found that the Life of a certain modeſt Man had been endanger'd by Retention. *Sueton. in Claud.* Hence knowing Phyſicians, being ſufficiently appriſed of the bad Conſequences of retaining Flatulencies, have preſcrib'd various Medicines of different Forms, for diſpelling them. Some of theſe are intended for internal, and others for external Uſe; but moſt of them conſiſt of hot Ingredients, as being oppoſite to the cold and pituitous Viſcidity which produces Flatulencies.

CARMOT. The Matter of which the Philoſophers Stone conſiſts. *Caſtellus.*

CARNABADIUM, *καρναβάδιον, καρναβάδι*, in *Myrepſus*; is the ſame as *Cuminum Æthiopicum*, as he himſelf explains it; *Antidot.* 429. *Simeon Sethi*, and ſome of the more modern *Greeks*, as *Fuchſius* obſerves, call *Carnabadium*, *Caruum*; whence the *Latin* Copies of *Myrepſus*, inſtead of *Carnabadium*, read *Caruum*. They are miſtaken then who expound *Carnabadium* by *Doronicum*.

CARNEOLUS LAPIS, *Sardus*, *Sarda*, *Carneolus*, Offic. *Sardus*, *Sarda*, Geoff. Prælect. 78. *Sardius Lapis*, Schrod. 331. *Sardius Lapis*, *ſive Corneolus*, Aldrov. Muſ. Metall. 923. *Sardius*, *ſive Carneolus*, Boet. 230. *Sarda*, Laet. 60. Kentm. 48. *Corneolus*, *vel potius Carneolus*, Worm. 92. Charlt. Foſſ. 35. *Carniolus*, Schw. 371. *Carneolus*, *Sardius Lapis*, *Sardonyx*, Mont. Exot. 14. *Lapis Sarda aut Corniola*, *ſanguinis diluti coloris*, Cup. Hort. Cath. Supp. 2. 50. THE CORNELIAN.

It is a precious Stone, half-tranſparent, and like the Waſhings of Fleſh, or bloody Fleſh; it is found in *Sardinia*.

The Powder is preſcrib'd to be drank in all manner of Hæmorrhages; being worn, it is ſaid to exhilarate the Heart, expel Fear, confer Boldneſs, avert Faſcinations, defend the Body againſt all manner of Poiſons, and, by a peculiar Property, to ſtop Bleeding in any Part of the Body; ty'd about the Belly, it prevents Miſcarriage. *Dale from Schroder.*

CARNICULA. A Word uſed by *Fallopius*, *Expoſ. de Oſſib.* inſtead of *Caruncula*, to ſignify in particular the Fleſh which ſurrounds the Teeth, and is called the Glue of the Teeth. *Caſtellus.*

CARNIFEX. The ſpagiric Vulcan, or Fire, in the Affair of the Philoſophers Stone. *Caſtellus.*

CARNIFORMIS *Abſceſſus*. An Abſceſs, with a harden'd Orifice, and of a firm Subſtance, or hard Conſiſtence, like a Shell, not much elevated into a Tumor, but broad and expanded, with Membranes, Fibres, and Capillaries, uſually interſperſed. It generally riſes where the Muſcles apply themſelves to the Joints. *Caſtellus from Severinus.*

CARNIVORUS, *σαρκοφάγος*. Fleſh-devouring, an Epithet of the ASSIUS LAPIS, which ſee.

Animals, whoſe Food is Fleſh, are call'd carnivorous, to diſtinguiſh them from thoſe which eat Vegetables, and are call'd graminivorous.

CARNOSA *Cutis*. The ſame, according to *Caſtellus*, as PANNICULUS CARNOSUS.

CARO, *σὰρξ, κρέας*, Fleſh. The common Signification of this Word is too well known to require Explication: It is ſufficient to obſerve, in this Place, that what Anatomiſts mean by *Caro*, or Fleſh, is only the red Part, or Belly of a Muſcle.

CARO, in Botany, is the Pulp of a Fruit.

CAROBA, *Siliqua dulcis*, *Garoba*, *Carantia*, Offic. Rand. Ind. 84. *Siliqua*, Mont. Ind. 19. Schrod. 4. 158. Chab. 89. *Siliqua edulis*, C. B. Pin. 402. Jonſ. Dendr. 381. Tourn. Inſt. 578. Elem. Bot. 449. Boerh. Ind. A. 2. 38. *Siliqua dulcis*,

dulcis, Commel. Plant. Uſu. 79. Mill. Cat. 148. *Siliqua dulcis ſive vulgatior*, THE ORDINARY SWEET BEAN, OR CAROB-TREE, Park. Theat. 236. *Siliqua Arbor ſive Carantia*, J. B. 1. 413. Raii Hiſt. 2. 1718. *Ceratia, ſiliqua ſive Ceratonia*, Ger. 1241. Emac. 1429. *Ceratia, ſive Siliqua dulcis & edulis*, Phyk. Almag. 97. *Ceratonia*, Herm. Cat. Hort. Lugd. Bat. 135. THE CAROB-TREE. *Dale.*

It grows in *Sicily*, and the Kingdom of *Naples*; the Fruit is uſed, tho' but ſeldom; it is drying and aſtringent; and is principally uſed in hot Diſorders of the Stomach, and in Coughs. *Dale, ibid.*

It is a tall-ſpreading Tree; the Roots, which are incurvated like a Horn, have procur'd it, among the *Greeks*, the Name of κεράτιον, and κεφαλωνία, Words derived from κέρας, a Horn. The very Shell of the Pods, as *Pliny* tells us, is eaten, being of a ſweet Taſte like Honey. Eaten green, as *Dioſcorides*, and from him *Pliny*, affirm, they diſturb the Stomach, and looſen the Belly; but dry'd, they bind the Belly, are more friendly to the Stomach, and provoke Urine. Though all who have written of theſe Fruits, ſays *J. Bauhine*, ſay they bind the Belly, yet we at *Venice*, where they are ſold in great Plenty, experience the contrary; for they not only excite a Nauſea, but purge by Stool, like Pulp of Caſſia, ſo that the Stomach loaths them afterwards; though I do not deny but they may agree well enough with thoſe who are uſed to them. The *Egyptians*, according to *Alpinus*, extract a very ſweet Sort of Honey out of the Pods, which the *Arabians* uſe inſtead of Sugar. They make very frequent Uſe of this Honey in Clyſters; and ſome preſcribe it to be taken at the Mouth, in order to looſen the Belly, for which Purpoſe it is as effectual as Pulp of Caſſia; they uſe it alſo both inwardly and outwardly, for Inflammations of the Kidneys. The Pod eaten is an excellent Remedy, according to *Ettmuller*, in the burning Heat and Pain of the Stomach.

Siliqua purgatrix, C. B. *Caroba, ſive Siliqua ex Guinea purgatrix*, Park. Pona. Ital.

This grows to a great Tree in its native Soil, *Guinea*; and, in the manner of its Growth, differs from the preceding; the Pod is ſhort, thick, and incurvated; and, as *Pona* ſays, ſomething like the Anacardium, called *Cajous*, three Inches long, and of a brown Colour, like the common Carob, but of a more acrid Taſte, and almoſt burning the Throat.

Siliqua Africana, fructu minore. The Pod of this is two or three times ſmaller than that of the common Carob, and has nothing elſe remarkable. *Raii Hiſt.*

CARŒNUM, κάρωνον, is ſuppoſed to be a *Latin* Word, and uſed by the later *Greeks*, to ſignify what the Antients called σίραιον, (*Siræum*) and ἕψημα (*Hepſema*). It is made uſe of by *Palladius*, *Lib.* 11. *Cap.* 18. where ſpeaking of the Preparation of *Defrutum Carœnum*, and *Sapa* from Muſt, he ſays, that *Defrutum* is ſo called *a deferuendo*, becauſe it is made of Muſt, reduced by a ſtrong Deſpumation, to a convenient Thickneſs. *Carœnum* is Muſt, boiled to the Conſumption of one Third; and *Sapa* the ſame, boiled to the Conſumption of two Thirds. *Marcellus Empiricus*, *Cap.* 26. mentions *Carœnum* among Remedies for the Stone, and Diſeaſes of the Kidneys; and *Myrepſus* uſes the Word often, and particularly in the Antidote of *Adrian*, *Antidot. Cap.* 5. which, for thoſe who are moleſted with the Sciatica, or Diſtempers of the Kidneys, he preſcribes to be taken in *Carœnum.*

CAROLI. A Term in ſome Authors, ſignifying venereal Puſtules on the Pudendum Virile, otherwiſe called *Caries Pudendorum* or *Chancres.*

CAROS, κάρος, is defin'd by *Galen*, *Com. ad Aph.* 5. *Lib.* 5. ἡ παῦλα τῆς σώματος αἰσθήσεως καὶ κινήσεως, "a ſudden Deprivation of Senſe and Motion, affecting the "whole Body." *Hippocrates* often expreſſes this Affection by ἀφωνίαν for, as *Galen* aſſures us, in the forementioned Place, it is cuſtomary with him to call τοὺς ἐπόσον κεκμηκότας ἀφώνους, "thoſe who were any way affected with a *Caros*, *Aphoni*" (ſee APHONIA). The ſame Author, *Lib.* 4. *Cap.* 2. *de Locis affectis*, tells us, that a *Caros* is a Privation of Senſe and Motion, the Faculty of Reſpiration being not at all injur'd; and that it is cauſed by an Affection of the fore Part of the Brain only, the middle Ventricle of the Brain alſo ſuffering by Conſent of Parts, ſo as to diſturb the Actions of the rational Faculty. But if this *Caros*, or Sopor, oppreſſes Reſpiration to ſo violent a Degree, as that the Patient cannot breathe without great Efforts, as thoſe who ſnore under a deep Sleep, it is called an Apoplexy, the Solution of which is generally ſucceeded by a Paraplegy; but a *Caros* is uſually follow'd by a good State of Health. Again, in his *Comment.* 2. *in Prorrhet.* he hints, that κάρος is ſometimes taken for a heavy and profound Sleep, calling it βαθὺν καὶ δυσέγερτον ὕπνον, "a deep Sleep, from which "it is difficult to be rouſed;" which ſignifies that the Brain is oppreſſed with too great a Quantity of benign Humour, which is not prejudicial on account of its Quality, but excites a profound and invincible Sleep, and ſuch as uſually ſeizes on thoſe who are drunk with Wine. A *Caros* of this Nature he acknowledges to be ſometimes beneficial, and that ſuch a profound Sleep has been of great Service, where the Patient has wanted Sleep for three or four Days together. To Infants alſo ſuch a Sleep, which has continued a whole Day, and even two Days together, as he himſelf ſays he has known it happen, has been of great Benefit. There is, beſides this, a κάρος νοσῶδες, "a Caros, which is a Diſeaſe," and always hurtful; and this happens when the Brain abounds with a vitiated cold Humour, or is replete with Phlegm, by which means Senſation is deſtroy'd. This *Caros* little differs from a Lethargy, but reſembles a *Coma* or *Cataphora*, and is called a δυσδιέγερσιν καθάσαις; "a State out of which it is difficult to be rouſed," as *Galen*, in the Place before quoted, informs us; for, ſays he, ὅταν ὑπὸ φλέγματος ὁ ἐγκέφαλος ὑγραινθῇ καὶ ψυχθῇ, &c. "When the "Brain has been moiſten'd and refrigerated with Phlegm, and "ſo diſpoſed to lethargic Affections, there happens a *Coma*, "which, if you pleaſe, you may call a *Carus*. But ſome call "it *Carus*, when the Patient lies for ſome time depriv'd of "Senſe and Motion, tho' you prick or ſtrike him, or call him "with a loud Voice, as it happens when a Perſon has received "a violent Blow on the Temporal Muſcles. We often meet "with this Symptom alſo in feveriſh Diſorders, [καὶ τὰς "πυρετώδεις νόσους ἐν ἐπιπομαίαις] in which the Patients are "inſenſible to Prickings, Blows, or vehement Noiſes." The ſame Author, *Meth. Med. Lib.* 13. diſtinguiſhes καθαρὰς βαθύτητας, "violent Inclinations to a profound Sleep," which are owing to a cold Humour not putrefy'd, and without a Fever, into an *Apoplexy*, *Caros*, and *Catoche*; for ſuch as are attended with a Putrefaction of the cold Humour, and a Fever, produce, he ſays, a Lethargy. *Cœlius Aurelianus*, *Cap.* 5. *Lib.* 3. *Acut.* calls κάρον, *Gravatio*; and *Pliny*, *Cap.* 13. *Lib.* 25. calls it *Gravedo*: For as *Dioſcorides*, *Cap.* 76. *Lib.* 4. ſays, of Mandrake-apples, that being eaten or ſmelled to, they were καρωτικὰ, "diſpoſed to a *Carus*;" ſo *Pliny* ſays of them, *Gravedinem etiam afferunt olfactu. Eretian*, on *Hippocrates*, expounds τὸ καρῶδες, by καρηβαρία, ἢ καρωτικὸν, "a Gravedo, "or Heavineſs of the Head, or what diſpoſes to a *Caros* or "*Sopor*;" where he ſeems to have an Eye to that Paſſage in the *Prorrhet. Lib.* 1. 63. τὸ καρῶδες ἀεί γε παύλαχύ κακὸν, "it "is to be conſider'd, whether a Diſpoſition to a profound Sleep "or Sopor is to be conſtantly reckon'd a bad Sign." In *Coac.* ἀπὸ μὲν κάρου ἀφωνίαι, &c. "Loſs of Voice, attended with a "*Caros*, or deep Sopor, threaten Convulſions." In *Lib.* 7. *Epid.* καρώδεα ὄμματα, are Eyes affected with a Sopor, or *Caros*; and ἀτενίζοντες κεκαρωμένῳ ἐφθαλμοί, ſignify Eyes rigid, or fixed in the Head, and affected with a *Caros.*

CAROSIS, κάρωσις, the ſame as CAROS in *Moſchion. de Mulierum Morbis.*

CAROTA. The Carrot. See DAUCUS.

CAROTICUS, an Adjective from *Caros*, ſoporous, ſleepy.

CAROTIDES, καρωτίδες, from κάρη, the Head. The Carotid Arteries, which convey Blood to the Head, mark'd 5. 5. in *Tab.* 5. See ARTERIA.

CAROUM. The *Carum*, Caraway, is call'd thus. See CARUM.

CARPASUS, κάρπασος. An Herb taken notice of by *Dioſcorides*, *Pliny*, *Galen*, and *Paulus Ægineta*, the Juice of which is call'd Opocarpaſon, or Opacarpathon, and is eſteem'd very poiſonous. *Paulus*, *L.* 5. *C.* 153. ſays, it induces Sleep, and ſudden Suffocation. The Antidotes, he ſays, are the ſame as thoſe againſt Hemlock. I don't find that the modern Botaniſts know what Plant is here meant. It was very like Myrrh, ſo as to deceive ſome who took the Carpaſus inſtead of it, and by that means were poiſon'd.

CARPENTARIA. A Name for the PRUNELLA, Self-heal, which ſee. *Gerard.*

Blancard ſays it is the HERBA JUDAICA, which is *Ray*'s ſeventh Species of the SIDERITIS, Ironwort.

Lemery ſays it is the MILLEFOLIUM, Yarrow.

CARPESIUM, καρπήσιον. An Aromatic mentioned frequently by the Antients, and ſaid to be endu'd with the Virtues of Cinnamon. The *Arabians* miſtake it for Cubebs. But it is not known what it was.

CARPHALEON, καρφαλέον, dry. *Hipp.*

CARPHUS, κάρφος. This the *Latin* Authors tranſlate Feſtuca. It ſignifies, in *Hippocrates*, a Straw, or Mote, or any very ſmall Subſtance; who pronounces it a bad Symptom, and a Sign of a Phrenſy, when, in acute Diſtempers, the Patients pick theſe ſmall Subſtances out of the Bed-clothes, or from the Walls near the Bed. It alſo ſignifies a ſmall Puſtule; for the Cure of which *Aetius*, *Tetrabibl.* 1. recommends rubbing them with the dry'd Seeds of Mercury.

CARPIA. Lint. *Blancard.*

CARPINUS. The Horn-bean-tree. *Gerard.*

CARPIO, Offic. *vel Carpo*, Schrod. 5. 326. *Cyprinus*, Aldrov. de Piſc. 635. Bellon. de Aquat. 273. Geſn. de Aquat. 309. Charlt. de Piſc. 43. Jonſ. de Piſc. 111. Mer. Pin. 190. Raii Ichth. 245. Ejuſd. Synop. Piſc. 115. Rondel. de Piſc. 2. 150. Salv. de Aquat. 91. *Carpa*, Caſſiod. THE CARP.

See the Article ALIMENTA.

You ought to chooſe that Carp which is large, fat, well fed, not too young, and that has been catched in a River, which is better than that which lives in Ponds.

Carp is eaſily digeſted, affords pretty good Nouriſhment, and is good Food.

Some Authors pretend, that this Fiſh hath many heavy, viſcous, and groſs Juices in it; however, 'tis very commonly eat, and no bad Effects are produced by it.

It contains much Oil, Phlegm, and volatile Salt.

It agrees at all times with any Age and Conſtitution.

The Carp is a freſh-water Fiſh ſo well known, as not to need a Deſcription. You meet with it in Rivers, Ponds, and Marſhes. It does not live in the Sea, as *Pliny* ſays, *Lib.* 9. *Cap.* 16. When they are in a Place where they can get Food enough, they grow to a great Bigneſs. Some Authors ſay, they had ſeen Carps in ſome Lakes, that were ten Feet long. They multiply apace, and are found almoſt every-where in great Numbers. They feed upon Herbs, Mud, and Slime, which, perhaps, has made ſome ſay they are not good Food. They live a long time, which is proved by thoſe great and large Carps, which are often found in Town-ditches, and kept there for a Rarity. *Geſner* aſſures us, that he knew a Man of good Reputation, who affirmed to him, he had ſeen one of an hundred Years old.

Rondeletius ſays, that Carps ſometimes are produced of themſelves, without the Help of Generation; and that, it ſeems, from the Corruption of ſome Matter: And for the proving of his Opinion, he aſſures us, that he had ſeen Carps in the Hollows of Mountains, that received no other than Rain-water: However, with this Author's Leave, it is impoſſible, that this Fiſh, or any other, can be produced in the Way he talks of, without a Male and Female Carp. As for the Matter of Fact he cites, I ſhall not regard it; but have a great deal of Reaſon to ſuſpect what he ſays in this Particular.

The Carp being naturally ſoft enough, and full of phlegmatic Moiſture, you muſt not pitch upon that which is young; for as it grows older, ſo proportionably does its over-abounding Moiſture diſappear; and then it becomes firmer, better taſted, and more wholſome; and thoſe Carps which are old enough, and of a yellowiſh Colour, are much eſteemed. We alſo prefer the Male before the Female, becauſe 'tis firmer, and better taſted. Laſtly, the Time of the Year wherein they pretend the Carp is beſt, is *March*, *May*, and *June*.

They find in the Head of a Carp a ſtony Bone, which is looked upon to be good to provoke Urine, to diminiſh the Stone in the Kidneys and Bladder, to ſtop Looſeneſſes, and to waſte ſharp and acid Humours.

The Gall of a Carp clears the Eye-ſight.

The Head of a Carp is the beſt Part of all, eſpecially upon account of the Tongue, which has a moſt delicious Taſte. *Lemery on Foods.*

CARPOBALSAMUM, from καρπὸς, Fruit, and βάλσαμον, Balſam. The Fruit of the Balſam-tree. See BALSAMUM.

In *Egypt*, according to *Proſper Alpinus*, the Carpobalſamum is uſed in all the Intentions for which the Balſam itſelf is apply'd, but is not ſo efficacious. The Doſe is two Drams, with a Decoction of Spikenard. It is alſo uſed in Suffumigations for uterine Diſorders ariſing from a cold Cauſe.

The only Uſe the *Europeans* make of the Carpobalſamum is in the Venice-treacle, and Mithridate: And this is not a great deal; for Cubebs, or Juniper-berries, are generally ſubſtituted for it.

CARPOS, καρπὸς. A Seed, or Fruit.

CARPUS, καρπὸς. The Wriſt. See BRACHIUM.

CARSIA. *Johnſon* explains this by *Aqua ſalis Panis.*

CARTHAMUS. Baſtard-ſaffron.

The Characters are;

This Plant agrees with the Thiſtle in moſt of its Characters; but the Seeds of this are always deſtitute of Down. *Miller's Dictionary.*

Boerhaave enumerates but three Species of this Plant.

1. CARTHAMUS, *Cnicus*, Offic. *Carthamus ſive Cnicus*, J. B. 3. 79. Ger. 1006. Emac. 1169. Raii Hiſt. 1. 302. Synop. 88. *Carthamus Officinarum, flore croceo*, Tourn. Inſt. 457. Boerh. Ind. A. 139. *Cnicus ſativus, ſive Carthamum Officinarum*, C. B. 378. Hiſt. Oxon. 3. 145. *Cnicus ſive Carthamus ſativus*, Park. 259. *Cnicus, Cnecus, Carthamus*, Chab. 354. *Carduus ſativus, Cnicus ſeu Carthamus dictus*, Pluk. Almag. 82. BASTARD-SAFFRON.

This is an annual Plant, having a ſmall woody Root, which runs not very deep into the Earth. The lower Leaves are pretty broad, long, and round-pointed. The Stalk grows to be two or three Foot high, corner'd, and without Prickles, branching into ſeveral Diviſions towards the Top, beſet with leſſer Leaves an Inch broad, and two Inches long, pointed, and having a few not very hard Prickles growing on them. The Flowers ſtand on the Ends of the Branches, conſiſting of round ſcaly Heads, having a few Spinulæ growing on them, out of the Middle of which ſpring Thrums of deep-yellow or Saffron-colour'd fiſtular Flowers, ſucceeded by white, corner'd, longiſh Seed, narrow at one End. It is ſown in Fields and Gardens, flowering in *July*. The Flower is call'd Safflower, and is much uſed in dying Silk. The Seed only is uſed in the Shops.

It is accounted a pretty ſtrong Cathartic, evacuating tough viſcid Phlegm both upwards and downwards; and, by that means, is ſaid to clear the Lungs, and help the Phthiſic. It is likewiſe ſerviceable againſt the Jaundice; though grown pretty much out of Uſe. *Miller's Bot. Off.*

The Seeds of the Carthamus, or Baſtard-ſaffron, are apply'd to medicinal Uſes, and are eſteem'd beſt when thick, perfectly ripe, recent, but thoroughly dry'd; but ſince ſome Impoſtors have the Art of preparing the Seeds of Melons and Cucumbers in ſuch a manner as to reſemble the excorticated Seeds of Carthamus, for which they vend them, we muſt obſerve, that the genuine Seeds of the Carthamus are round at one End, ſharp at the other, and do not appear ſo white as the Seeds of Melons and Cucumbers. But, according to *Pauli*, the Goodneſs of theſe Seeds, before they are decorticated for medicinal Purpoſes, ought carefully to be examined into: What ſubſides, ſays he, in Water is good, but what ſwims is to be thrown away as uſeleſs. With reſpect to its Virtues and Uſes, *Dioſcorides* acquaints us with the following Particulars: The expreſs'd Juice of the triturated Seeds, exhibited in Conjunction with Honey and Water, or the Broth of a Fowl, purges the Inteſtines, but proves prejudicial to the Stomach. Of this Juice, with an Addition of Almonds, Nitre, Aniſe, and boil'd Honey, are prepar'd Cakes which render the Body ſoluble. Theſe Cakes are to be divided into four Parts, as large as a Walnut, two or three of which are ſufficient for a Doſe, to be taken before Supper. The Proportion in which the Ingredients are mixed is as follows:

> Of white Cnicus, a Pint; of blanch'd and excorticated Almonds, three Ounces; of Aniſe, one Pint; and of Nitre, one Dram; with the Pulps of thirty Figs. *Dioſcorides, Lib.* 4. *Cap.* 82.

The Juice of theſe Seeds coagulates Milk, and gives it a ſtronger Virtue of purging the Inteſtines. According to *Guliel-mus Pantinus*, in his *Comment. ad. Celſum*, "Some coagulate "Milk with the contus'd Seeds of Cnicus, and, having ſtrain'd "it off, add Salt or Sea-water to it: When thus prepared, it "is an effectual Purge, and a pleaſant Drink. But there is no "Neceſſity for Salt when the Intention is only to ſcour the In-"teſtines, or where the Body is previouſly ſtuffed with acrid "and corroſive Humours. This Preparation of it is proper "for old Men, Children, and People of lax Habits of Body: "But in other Conſtitutions, and in more violent Diſorders, a "more *draſtic Preparation of it is required.*". *Hippoc. de Diæta, Lib.* 2. informs us, that the Cnicus is purgative. *Galen*, according to *Matthiol. ad Dioſc.* affirms, that the Seeds of the Cnicus are only uſed for Purges. *Paulus Ægineta, Lib.* 7. *Cap.* 4. reckons them among the Hydragogues. *Sylvius* alſo does the ſame. *Bauhine* informs us, that the Seeds, bruis'd, boil'd in the Broth of Fleſh or Chiches, and drank, evacuate Phlegm, and tough and viſcid Humours. *Ettmuller* tells us, that "It is proper in Caſes where the Primæ Viæ are loaded with a "thick and viſcid Mucus; as alſo in Diſorders of the Breaſt, "in Aſthmas, and Coughs produc'd by a thick and viſcid "Matter; for which Reaſon it is claſſed among the Medicines "which evacuate Phlegm." Theſe Seeds are found to be a draſtic purgative Medicine, which, by reaſon of its acrid Quality, in Conjunction with its Viſcidity, generally excites violent Gripes, with an Inflation of the Abdomen. For this Reaſon, when Phyſicians preſcribe theſe Seeds, they generally obtund and correct their Force by an Addition of Salts or Aromatics, ſuch as Nitre, common Salt, or Sal Gemmæ, Ginger, Aniſe-ſeeds, Cardamoms, or Cinnamon; for by theſe their Viſcidity is diſſolv'd, ſo that they adhere leſs forcibly to the Inteſtines than they would have otherwiſe done. Some, in preparing Decoctions for Clyſters, in which theſe Seeds ought to be an Ingredient, wrap them up in a ſlender Linen or Muſlin Cloth whilſt the Decoction is preparing, leſt, by their Viſcidity, they ſhould adhere to the Inteſtines, and immediately induce a Hypercatharſis, a Teneſmus, or other Diſorders of a like Nature. When theſe Seeds are to be exhibited in Subſtance, the greateſt Doſe is three Drams; but this is not often practiſed, ſince, for the moſt part, they are exhibited in the Form of an Emulſion, which *Ettmuller* directs to be prepared in the following Manner:

> Take of the Seeds of Carthamus, two Drams, or between three and four; with ſome gently aromatic Water, ſuch as that of Fennel or Aniſe, or a Decoction of the Seeds of Fennel or Aniſe: Reduce them to the Form of an elegant purgative Emulſion, to which add one Dram of Cinnamon-water. Mix for one Doſe.

This is an agreeable Draught, and powerfully evacuates the peccant Matter. Beſides, with an Intention of relaxing, theſe Seeds

Seeds are mixed with Decoctions and Infuſions, from half an Ounce to ſix Drams, but very improperly. Theſe Seeds are generally ordered in Clyſters, when ſevere Purging and Revulſion from the Head are neceſſary in Diſeaſes of the Head, a Carus, an Apoplexy, an Epilepſy, a Lethargy, and that in the Beginning of theſe Diſorders. Others prepare an Extract from theſe Seeds, with a ſpirituous Menſtruum, ſuch as the ſpirituous Waters of Aniſeſeed or Orange-peel, or Spirit of Wine, or Spirit of Aniſe moderately rectify'd. The Doſe of this Extract is from one Scruple to half a Dram, or a Dram, which proves a ſtrong Purge. This Extract may alſo be exhibited in the Form of Pills. The Oil expreſs'd from the Seeds proves purgative, when the Abdomen is anointed with it. From what has been ſaid, I think it is ſufficiently obvious, that, in Caſes where theſe Seeds produce their intended Effects, they act by a reſolvent purgative Quality; for which Reaſon they are recommended by Authors in the Dropſy, Jaundice, Gout, Cough, and for provoking the menſtrual Diſcharges. *Sennertus*, in his *Inſtitutiones Medicæ*, juſtly, therefore, obſerves, "That the Seeds of the Carthamus "evacuate Phlegm and Water, by Vomit and Stool; for this "Reaſon they are proper for Diſorders of the Liver, Spleen, "and Breaſt, and beneficial in Dropſies, Colics, and Aſthmas." The ſame is alſo obſerved by *Meſue*, *de Re Medica*. But what proves thus powerfully cathartic with Men, the Magpyes chearfully eat without any Detriment; for which Reaſon *Averroes* calls them *Semen de Papaga*, and the *Venetians Semen Papagalli*. Beſides that, the Flowers prove an elegant Ornament to Gardens. *Bauhine*, from *Tragus*, informs us, that the poor People uſe them bruiſed by way of Sauce; nor unelegantly, ſince they give a fine Saffron-colour to the Aliments, and render the Body ſoluble. One Dram of the Flowers proves purgative, and they are exhibited, in Conjunction with Marigold-leaves, in Diſorders of the Menſes, and the yellow Jaundice. Apothecaries proſtitute theſe Flowers to the worſt of Purpoſes, when they adulterate the Stamina of genuine Saffron with them, for the ſake of augmenting the Weight. Hence this Plant is called Baſtard-ſaffron. But the Fraud is diſcovered by the Smell, which is leſs aromatic than that of genuine Saffron. According to *Matthiolus*, ſome in *Italy* call it *Crocus Saracenicus*, becauſe, in Country Villages, its Flower is generally uſed inſtead of Saffron.

2. CARTHAMUS; *Africanus*; *fruteſcens*; *folio Ilicis*; *flore aureo*. H. R. D.

3. CHAMÆLEON NIGER, Offic. Ger. quoad Deſcript. 997. Emac. 1160. Chab. 352. *Chamæleon niger verus*, Park. 970. *Chamæleon niger umbellatus*, *flore cæruleo hyacinthino*, C. B. 380. *Chamæleon niger Dioſcoridis Maranthæ*, J. B. 3. 63. Raii Hiſt. 1. 314. *Carthamus aculeatus*, *Carlinæ folio*, *flore multiplici veluti umbellato*, Tourn. Coroll. 33. *Carduus Chamæleon dictus*, *capitulis pluribus minoribus cæruleis*, *corymbatim diſpoſitis*, Hiſt. Oxon. 3. 159. BLACK CHAMELEON.

It grows in *Greece*, and flowers in *June*. The Root is only uſed, which is oblong, thick, browniſh externally, but white internally. It is of ſo acrimonious a Quality, that its Juice burns the Skin; but it is very efficacious in cleanſing malignant Ulcers. *Dale* from *Bellon. Epiſt. ad Cluſ.*

CARTILAGO.

A Cartilage is a whitiſh or pearl-colour'd Subſtance, which covers the Extremities of Bones join'd together by moveable Articulations, increaſes the Volume of ſome of them after the manner of Epiphyſes, unites others very cloſely together, and has no immediate Adheſion or Connection with others.

The Subſtance of Cartilages is more tender, and leſs brittle, than that of Bones; but with Age they ſometimes grow ſo hard as to become perfectly bony. They are pliable and elaſtic, and ſo capable of reſtoring themſelves after having been compreſſed, or bent to a certain Degree; but, when bent beyond that Degree, they break.

All that *Winſlow* has ſaid is comprehended in the ſhort Definition which *Carolus Stephanus* has given of them in his Anatomy. "A Cartilage," ſays he, "is a Part of the Body which truly "deſerves the Name of ſimple or ſimilar. It is harder than all "the other Parts, but ſofter than the Bones, white, ſmooth, "poliſh'd, and pliable or flexible. The Coheſion of its Parts "is different in different Cartilages; and no ſenſible Cavity, "Cell, or Bone, appears in any Part of its Subſtance, except "very ſmall Paſſages for the Blood-veſſels," *&c.*

The Cartilages of the Bones differ from each other in Size, Figure, Situation, and Uſe; and may all be rank'd under two general Heads, thoſe which are cloſely united to Bones, and thoſe which are not immediately connected with them.

The Cartilages united to Bones are of four Kinds. Some cover both Sides of the moveable Articulations, and are very ſmooth and ſlippery.

Some unite the Bones to each other, either ſo firmly as to allow no ſenſible Motion, as in the Symphyſis of the Oſſa Pubis, and ſtill more in that by which the Epiphyſes are join'd to the Bones; or in ſuch a manner as to allow of different Motions, as in thoſe by which the Bodies of the Vertebræ are connected. The firſt grow eaſily hard, the others appear, in ſome meaſure, viſcid, and retain their Flexibility.

Some increaſe the Size and Extent of Bones. Of theſe, again, ſome are articulated with other Bones, as the cartilaginous Portions of almoſt all the true Ribs; or with other Cartilages, as the Septum Narium: Others ſerve only for Borders, as thoſe of the Baſis of the Scapula, and of the Criſta of the Os Ilium, the Supercilia of Cavities, and thoſe of the ſpinal and tranſverſe Proceſſes of the Vertebræ.

Some, in fine, have a ſingular Form, as thoſe of the Ears, and moſt of thoſe of the Noſe, in which laſt their Elaſticity appears moſt ſenſibly.

The Cartilages belonging to the ſecond general Claſs, or thoſe not immediately joined to Bones, are, for the moſt part, plac'd in the moveable Joints, and may likewiſe be ſubdivided into ſeveral Kinds.

Some lie altogether looſe, being join'd neither to the articulated Bones, nor to the Cartilages which cover them, but ſlide freely between them in different Directions; as thoſe which are placed in the Articulation of the Tibia with the Os Femoris, in that of the lower Jaw with the Oſſa Temporum, and in that of the Clavicle with the Sternum. Thoſe between the Clavicle and Acromium, and between the firſt and ſecond Vertebræ of the Neck, are of the ſame Kind.

Some are partly join'd to other Cartilages, and partly ſlide between the cartilaginous Extremities of the articulated Bones; as the Cartilage at the lower Extremity of the Radius.

We might likewiſe reckon among the Cartilages, tho' more improperly, ſeveral of the ſmall Seſamoide Bones, which remain long cartilaginous, and alſo the cartilaginous Portions of Tendons, which do the ſame Office with Seſamoide Bones. *Winſlow.*

There are likewiſe ſeveral Cartilages in the Body, which do not belong to the Bones, as thoſe in and about the Larynx, and others which are either deſcrib'd with the Parts to which they belong, or under the Articles of their particular Names.

In Zoology, cartilaginous Fiſh are ſuch as have the Spine of their Back cartilaginous; as many of the flat Fiſh, and ſome others. See SELACHOS.

CARUI. Caraway. See CARUM.

CARUIFOLIA, J. B. C. B. is the *Carum Pratenſe* of *Parkinſon*.

CARVINUM. *Johnſon* explains this by *Lac quoddam*.

CARUM, Caraways.

The Characters are,

It hath winged Leaves, which are cut into ſmall Segments, and are placed oppoſite on the Stalks, having no Foot-ſtalk: The Petals of the Flowers are bifid, and ſhaped like a Heart; the Seeds are long, ſlender, ſmooth, and furrow'd. *Miller's Dictionary.*

Boerhaave takes notice but of three Species of this.

1. CARUM, Offic. *Carum ſive Careum*, Ger. 879. Emac. 1034. Raii Hiſt. 1. 446. Synop. 3. 213. Mer. Pin. 22. *Carum*, Rivin. Irr. Pent. Dill. Cat. Giſſ. 64. Rupp. Flor. Jen. 227. *Carum vulgare*, Park. Theat. 910. *Carum ſive Carui*, Mor. Umb. 24. Hiſt. Oxon. 3. 296. Hort. Lugd. Bat. 121. *Caros*, J. B. 3. 69. *Caros*, *Carus*, *Carum*, *& Careum*, Chab. 391. *Carui*, Tourn. Inſt. 306. Elem. Bot. 256. Boerh. Ind. A. 59. *Cuminum pratenſe*, *Carui officinarum*, C. B. Pin. 158.

CARAWAYS. *Dale.*

The Root of *Caraways* is pretty thick and large, ſinking deep in the Ground, of a white Colour, and of a pleaſant ſweet Taſte, prefer'd by many to Parſnips. The lower Leaves are large and winged, divided into a great many Sections, like the Leaves of Carrots; but finer, ſmoother, and little or nothing hairy. The Stalk grows to be two or three Foot high, ſtriated and divided into ſeveral Branches, having finer Leaves at each Diviſion, thoſe towards the Top being near as fine as Fennel. The Flowers are ſmall and white, of five Leaves each: They grow in Umbels, and are ſucceeded by long, brown, ſtriated Seed, two ſticking together, as in other umbelliferous Plants, of a warm aromatic pleaſant Taſte. They grow wild in ſeveral Places of *Lincoln* and *York* Shires, according to Mr. *Ray*. I have ſometimes found it in the Fields about *London*, but ſuſpect it to ariſe from Seed accidentally ſcattered, which is the only Part uſed, and comes from *Germany*.

The Seed is one of the greater hot Seeds; it is ſtomachic and carminative, expels Wind, and is ſerviceable againſt the Colic and Weakneſs of the Stomach, helps Digeſtion, is good for Dizzineſs in the Head, Weakneſs of Sight, to provoke Urine, and increaſe Milk in Nurſes.

Officinal Preparations are, the Seed candy'd with Sugar, and an Oil diſtil'd from the Seed. *Miller's Bot. Off.*

The Seed only of this Plant is in Uſe, tho' ſome uſe the Root in carminative Ptiſans and Glyſters. The Seed is ſtomachic, diuretic, and very proper to diſſolve the glutinous Matters which cauſe the Colic. Caraway-ſeeds are put in Bread to avoid this Diſeaſe. Take an hot Loaf, ſprinkled with bruiſed Caraway-ſeeds, dipt in good Brandy, and apply it to the lower

Belly

Belly for that Diſeaſe. Candy'd Caraway-ſeeds diſpel the Wind. The chymical Oil is very acrid and penetrating; five or ſix Drops of it are preſcribed in Oil of ſweet Almonds; ſome Drops of it in Spirit of Wine, imbibed by Cotton, and put in the Ears, may be uſed in the Caſe of Deafneſs, inſtead of Syringing. *Martyn's Tournefort.*

2. *Carui*; *ſemine majore*. Vaill. a.

3. *Carui*; *Alpinum*. C. B. P. 158. Prodr. 84 deſcr. a.

CARUNCULA. A Diminutive from from *Caro*, Fleſh. A Caruncle, or ſmall Piece of Fleſh, or, at leaſt, what has the Appearance of it. Thus there are the *Carunculæ Lacrymales* in the Corners of the Eyes. See OCULUS. The *Carunculæ Myrtiformes*, which are ſmall Caruncles at the Entrance into the Vagina, ſaid to be formed by the Rupture of the Hymen. The *Carunculæ Papillares*, in the Kidneys: And a Caruncle in the Urethra, at the Orifice which opens from the Veſiculæ Seminales; beſides many others. The Uvula is alſo ſometimes call'd *Caruncula*.

Morbid Excreſcences of Fleſh are alſo call'd Caruncles; and ſmall Portions of a fleſhy Subſtance, which are ſometimes diſcharged in a Dyſentery by Stool, or, in Diſeaſes of the urinary Paſſages, by Urine, are call'd Caruncles.

CARUS. See CAROS.

CARYA, καρύα. The Walnut-tree. *Theophraſtus.*

CARYCHUS, κάρυχος. An Ingredient in one of *Myrepſus*'s Antidotes, *Cap.* 295. which *Fuchſius* confeſſes to be unknown to him.

CARYCIA, CARYCE, καρυκεία, καρύκη. *Suidas*, *Erotian*, and *Galen*, informs us, that it was a coſtly ſort of Food, or ſeaſon'd Diſh, invented by the *Lydians*, and prepared of Blood, with other Ingredients. *Varinus* ſuppoſes it was called *Caryce*, becauſe it was of a black Colour, like that of Carya, or Walnuts boil'd. *Gorræus.*

CARYCOIDEA, καρυκοειδέα, from καρύκη, the preceding Word, and εἶδος, Reſemblance, in *Hippocrates*, *Epid. Lib.* 4. is expounded, in *Galen's Exegeſis*, ὕφαιμα, "ſomewhat reſem-"bling Blood." The Paſſage, in *Hippocrates*, is as follows: Ὅσα τὰ μέλανα κατ' ἀρχὰς ὑπῆν, ὑπόστρυγα, καρυκοειδέα. "Their Stools in the Beginning were black, ſomewhat fe-"culent, reſembling Caryce" (the Culinary Preparation before-mention'd). In the ſame Senſe is CARYCODE, καρυκώδη, in *Actuarius*, *Lib.* 5. *Meth.* to be taken, where he applies this Epithet to the Stools of thoſe who have drank Bulls Blood.

CARYEDON CATAGMA, καρυηδὸν κάταγμα. A Species of Fracture, the ſame as ALPHITEDON, which ſee.

CARYITES, in *Dioſcorides*, *Lib.* 4. *Cap.* 165. is a Name for the Female Tithymalus.

CARYOCES, CARYOSSE, Names given by the *Portugueſe* to the Fruit of the *Guiney* Palm-tree. *Raj.*

CARYOCOSTINUM ELECTUARIUM.

Take of Cloves, white Coſtus, or Zedoary, Ginger, and Cumin-ſeeds, of each two Drams; of Hermodactyls, clear'd of their Huſks, and of Diagrydium, each half an Ounce; of the Honey of Roſes, three times the Quantity of the Whole: Let them all be powder'd together, except the Diagrydium, and ſtirr'd into the Honey of Roſes with a wooden Spatula; and, at laſt, put in the Diagrydium by itſelf, and make them into an Electuary. *S. A.*

This differs not from any preceding Diſpenſatory of the College, nor the *Auguſtan*, both which have it, unleſs in ordering Honey of Roſes for common Honey, which is an Alteration of no great Conſequence. *Zwelfer* gives this a great Commendation for purging away Choler, and breaking away the Obſtructions of cachectic Conſtitutions; and it is an excellent Purge for ſtrong People. It works very briſkly, and fetches the Humours from the moſt remote Parts; and is therefore found of great Service in Rheumatiſms, and arthritic Complaints. Its Warmth alſo, and Fitneſs to carry watery cold Humours, makes it very good in Dropſies, and ſuch-like groſs Habits. In apoplectic and paralytic Caſes likewiſe, where the Fibres want to be ſtimulated, and ſhook with Briſkneſs, this is a proper Medicine, if Purging be required; but it is too ſmart for weakly People. Its Doſe is from one Dram to ſix Drams. There is in every half Ounce of this, of Diagrydium and Hermodactyls, of each 15 Grains. *Quincy.*

CARYON, κάρυον. A Nut. A Word apply'd to all ſuch Fruit as incloſe ſomewhat eatable within a hard Shell. *Plutarch*, *Sympoſ.* 3. *Quæſt.* 1. writes, That the Antients called the Walnut *Caryon*, becauſe it induces a Heavineſs and Stupidity upon the Spirits, ſo as to affect even thoſe who lie under it; and that the Diſeaſe *Caros* took its Name from this Tree, or the Tree from the Diſeaſe.

CARYON BASILICON, *ſive* EUBOICON, *ſive* PERSICON, κάρυον βασιλικὸν, ἢ Εὐβοϊκὸν, ἢ Περσικόν. The Walnut.

CARYON HERACLEOTICON, *ſive* PONTICON, κάρυον Ἡρακλεωτικὸν, ἢ Ποντικόν. A ſmall Nut, as a Filberd, or Haſlenut, ſo call'd becauſe it was brought from *Heraclea*, in *Pontus*, into *Greece*.

CARYON LEPTON, *ſive* LEPTOCARYON, κάρυον λεπτὸν ἢ λεπτοκάρυον, from λεπτὸς, ſmall. The ſame with the preceding.

CARYOPHYLLATA, *Avens*, or Herb-bennet.

The Characters are,

It hath pennated or winged Leaves, ſomewhat like thoſe of Agrimony. The Cup of the Flower conſiſts of one Leaf, which is cut into ten Segments. The Flower conſiſts of five Leaves, which ſpread open in form of a Roſe: The Seeds are form'd into a globular Figure, each of which have a Tail to it. The Roots are perennial, and ſmell ſweet. *Miller's Dict.*

Boerhaave mentions eight Species of this Plant.

1. CARYOPHYLLATA, Offic. Ger. 842. AVENS, or HERB-BENNET, Emac. 994. Raii Hiſt. 1. 606. Synop. 3. 253. Mer. Pin. 22. *Caryophyllata vulgaris*, ORDINARY AVENS, Park. Theat. 136. C. B. Pin. 321. Dill. Cat. Giſſ. 97. Tourn. Inſt. 294. Elem. Bot. 244. Boerh. Ind. A. 42. Hiſt. Oxon. 2. 430. Rupp. Flor. Jen. 86. Buxb. 58. *Caryophyllata vulgaris*, *Herba Benedicta*, Merc. Bot. 1. 27. Phyt. Brit. 23. *Caryophyllata vulgaris flore parvo luteo*, J. B. 3. 398. *Caryophyllata*; *Sanamunda*, Chab. 172. AVENS. *Dale.*

The Root of this Herb (which has its Name *Caryophyllata* from its ſmelling ſomewhat like *Caryophylli* Cloves) is ſlender, hard, and woody, full of ſmall Fibres, of a reddiſh Colour, having a Smell of Cloves. The lower Leaves are made up of about ſeven Pinnæ, whereof the odd one at the End, and the two next it, are much the largeſt: They are hairy, as is likewiſe the Stalk, growing two Foot high, or ſometimes more, beſet with ſmaller Leaves, having two pretty large Alæ or Wings growing cloſe to the Stalk, and ending in three Pinnæ. The Flowers grow at the Tops of the Branches on long Foot-ſtalks, of five ſmall yellow Leaves, with ſeveral brown Stamina in the Middle. Theſe are ſucceeded by Cluſters of little flat hairy Seed, each having a crooked Hook at the End, by which it eaſily adheres to any thing which comes in the Way. It grows in Woods, and by Hedge-ſides; and flowers a great Part of the Summer.

The Roots only are uſed, which, being infuſed in Wine, give it a pleaſant Smell and Taſte, and render it more cordial and chearing to the Spirits. They eaſe Pain ariſing from Cold, or Wind in the Bowels. They are cephalic and alexipharmic; and, being manifeſtly of a binding Nature, are uſeful for all kinds of Fluxes and Hæmorrhages. *Miller's Bot. Off.*

The *Avens* is bitter, ſtyptic, and gives a deep-red Colour to blue Paper. Its Root ſmells like Cloves. Its Salt reſembles the Sal Ammoniac; but is very much loaded with Acid, and involved by a great deal of eſſential Oil and Earth. An Infuſion of *Avens-roots* in Wine is ſtomachic, according to *Tragus*, and removes Obſtructions of the Liver. This Wine is alſo very vulnerary and deterſive. The Extract has the ſame Virtues. It is preſcrib'd in Rheumatiſms. *Martyn's Tournefort.*

2. *Caryophyllata*; *Alpina*; *lutea*. C. B. P. 322. *Caryophyllata*, *Alpina*, *lutea*, *major*. M. H. 2. 430. *Caryophyllata*, *montana*, *flore luteo*, *magno*. J. B. 2. 398. *Caryophyllata*, *montana*. Dod. p. 137. *Caryophyllata*, *montana*, 2, & *Caryophyllata*, *Alpina*, *aureo flore*. Cluſ. H. 103.

3. *Caryophyllata*; *Alpina*; *flore croceo*.

4. *Caryophyllata*; *aquatica*; *flore nutante*. C. B. Pin. 321. *Caryophyllata*, *montana*, 1, & *Caryophyllata*, *Alpina*, *nutante flore*. Cluſ. H. 103. *Caryophyllata*, *aquatica*, *nutante flore*, *purpureo*, *Calathi effigie*. M. H. 2. 431. *Caryophyllata*, *aquatica*, *flore rubro*, *ſtriato*. J. B. 2. 398.

5. *Caryophyllata*; *Virginiana*; *albo flore*; *minore*; *radice inodorâ*. H. L.

6. *Caryophyllata*; *montana*; *flore luteo*, *nutante*. C. H. R. Par. 39. *Caryophyllata*, *montana*. H. Eyſt. Vern. 0. 1. F. 5. Fig. 2.

7. *Caryophyllata*; *montana*; *flore rubro*, *nutante*, *prolifero*.

8. *Caryophyllata*; *Alpina*; *Chamædryos folio*. M. H. 2. 432. *Chamædrys Alpina*, *ciſti flore*. C. B. P. 248. *Chamædrys Alpina*, *flore fragariæ albo*. J. B. 3. 290. *Chamædrys III*, *ſeu montana*. Cluſ. H. 351. MOUNTAIN-AVENS, WITH GERMANDER-LEAVES. *Boerhaave.*

CARYOPHYLLUS. The Clove-gilly-flower, Carnation, or Pink.

The Characters of the Caryophyllus, according to *Boerhaave*, are:

The Leaves are of an oblong Figure, entire, conjugated, adhering to the Stalks, without Pedicles.

The Calyx, or Flower-cup, is bifoliated, ſmall, including another ſmall bifoliated one; and, above theſe two, ariſes a third cylindrical membranaceous Calyx, quinquefid, or with five Diviſions, on its upper Part.

The Flower is pentapetalous, the Leaves, or Petals, ariſing from the very Bottom of the Calyx, and extending themſelves from a long and narrow Beginning to a conſiderable Breadth, diſpoſed in a Circle, and furniſh'd with ten Stamina.

The Ovary grows to the Placenta ſituated in the Bottom of the Calyx, is furniſh'd with two long erect Tubes, and becomes a cylindrical Fruit, which is incloſed in a Calyx, opens at the Top, and is full of foliaceous Seeds.

1. *Caryophyllus flore ſimplici*, Offic. *Caryophyllus hortenſis ſimplex, flore majore*, C. B. Pin. 208. Tourn. Inſt. 331. Elem. Bot. 279. *Caryophyllus ſimplex major*, Ger. Emac. 590. *Betonica coronaria ſive Caryophyllus flore ſimplici ſativus*, J. B. 3. 328. SINGLE PINKS.

The medicinal Virtues of this Species are the ſame as thoſe of the *Caryophyllus ruber*, ſpecify'd below.

2. *Caryophyllus; hortenſis; ſimplex; flore majore, pallidè purpuraſcente, vel incarnato.* C. B. P. 208.

3. *Caryophyllus; hortenſis; ſimplex; verſicolor.* C. B. P. 208. H. Eyſt. Æſt. o. 14. F. 11. Fig. 2.

4. *Caryophyllus; hortenſis; ſimplex; variegatus; petalis albeſcentibus ſtigmatibus rubris diſperſis.* C. B. P. 208. *Caryophyllus, major, ſylveſtris, variegatus.* H. Eyſt. Æſt. o. 14. F. 12. Fig. 1.

5. *Caryophylli hortenſis; ſimplicis, flore majore, amœna ex diverſitate colorum varietas.*

6. *Caryophyllus; maximus; ruber.* C. B. P. 207. M. H. 2. 561. *Caryophyllus, maximus, plenus, flore rubro.* H. Eyſt. Æſt. o. 14. F. 6. Fig. 1. *Tunica Officinarum.*

7. *Caryophyllus; maximus; alter; lato Porri folio.* H. R. Par.

8. *Caryophyllus; maximus; variegatus.* C. B. P. 207. M. H. 2. 561. *Caryophyllus, major, rubens & albicans, flore pleno, punctulis rubentibus, fortuitis adſperſo.* Lob. Ic. 441. *Caryophyllus, multiplex, maximus, variegatus.* H. Eyſt. Æſt. o. 14. F. 9. Fig. 1. *Betonica, Coronaria, flore pleno, maximo, punctis rubris variegato.* J. B. 3. 327.

9. *Caryophyllus, maximus, & pleniſſimus; colore miſto; carneo; corniculis quibuſdam carneis.* Bry. C. B. P. 207. M. H. 2. 561.

10. *Caryophyllus; maximus & pleniſſimus; colore vario in diverſis foliis ſcarlatino, dilutius rubente, albo.* Bry. C. B. P. 207. M. H. 2. 561.

11. *Caryophyllus; maximus & pleniſſimus; colore rubro, ſaturatiore, ſtaminulis tribus niveis in medio.* Bry. C. B. P. 207. M. H. 2. 561.

12. *Caryophylli maximi, hortenſis, pleni, ampliſſima diverſitas.*

13. *Caryophyllus ruber, Vetonica, Tunica*, Offic. *Caryophyllus hortenſis pleno rubro*, Park. Parad. 306. *Caryophyllus multiplex*, Ger. 472. Emac. 588. *Caryophyllus hortenſis*, Raii Hiſt. 2. 986. *Caryophyllus altilis major*, C. B. Pin. 207. Hiſt. Oxon. 2. 561. Tourn. Inſt. 350. Elem. Bot. 279. Boerh. Ind. A. 217. *Betonica Coronaria ſativa, ſive Caryophylleus flos*, J. B. 3. 327. CLOVE-JULY-FLOWER.

This flowers in *July*. The Flowers are eſteem'd cephalic and cordial, and are principally uſed in a Vertigo, Apoplexy, Epilepſy, and other Affections of the Head and Nerves; in a Syncope, and Palpitation of the Heart. They are good againſt Wounds, facilitate Delivery, and are recommended in Weakneſs of the Stomach, Cardialgia, and peſtilential Fevers.

The officinal Preparations of this Clove are a Conſerve, ſee CONSERVA, and a Syrup.

SYRUPUS CARYOPHYLLORUM: *Syrup of Clove-gilly-flowers.*

Take of Clove-gilly-flowers, with the white Heels cut off, one Pound; let them ſteep a whole Night in two Pints of Spring-water; then ſtrain the Liquor, and boil it up into a Syrup in a Bath-heat, with two Pounds of the fineſt Sugar. *S. A.*

Double the Quantity of Sugar to the ſame Quantity of Flowers and Water as was before order'd, which was ſufficient to give the Conſiſtency of a Syrup as ſoon as diſſolved: But this requires ſo much boiling before it comes to that Body, that great Care muſt be taken not to ſpoil the Beauty of its Colour, which too haſty an Heat will eaſily do. *London Diſpenſatory.*

14. *Caryophyllus; plenus; miniato colore.* H. Eyſt. Æſt. o. 14. F. 11. Fig. 1.

15. *Caryophyllus; flore majore; dimidiatâ parte carneus; dimidiatâ verò alterâ rubris & albis ſtriis & punctis variegatus; plenus.* H. Eyſt. Æſt. o. 14. F. 4. Fig. 1.

16. *Caryophyllus; multiplex; foliis florum ex rubro & albo dimidiatim diviſis & punctatis*, H. Eyſt. Æſt. o. 14. F. 5. Fig. 1.

17. *Caryophyllus; plenus; purpuraſcens; punctatis & laciniatis foliis.* H. Eyſt. Æſt. o. 14. F. 8. Fig. 1.

18. *Caryophyllus; plenus; miniato colore.* H. Eyſt. Æſt. o. 14. F. 11. Fig. 1.

19. *Caryophyllus; purpureus; flore multiplici, laciniato.* H. Eyſt. Æſt. o. 14. F. 11. Fig. 3.

20. *Caryophyllus; multiplex; flore albo.* H. Eyſt. Æſt. o. 14. F. 10. Fig. 1.

21. *Caryophyllus; multiplex; laciniatus; flore pleno.* H. Eyſt. Ib. Fig. 2.

22. *Caryophyllus; multiplex; flore e purpureo rubeſcente.* H. Eyſt. Ib. Fig. 3.

23. *Caryophyllus; plenus; lætè rubeſcens, inſtar florum mali Perſici.* H. Eyſt. Æſt. o. 14. F. 7. Fig. 7.

24. *Caryophyllus; multiplex; flore carneo.* H. Eyſt. Æſt. o. 14. F. 5. Fig. 2.

25. *Caryophyllus; purpureus; flore multiplici; profundè laciniato.* H. Eyſt. Ibid. Fig. 3.

26. *Caryophyllus; flore minore, pleno, rubeſcens, punctatus.* H. Eyſt. Æſt. o. 14. F. 4. Fig. 2.

27. *Caryophyllus; miniatus, medio albeſcens.* H. Eyſt. Ib. Fig. 3.

28. *Caryophyllus; tenuifolius; plumarius; flore pleno, purpuraſcente.* Flor. 2. 92. *Caryophyllus, flore tenuiſſimè diſſecto.* C. B. P. 209. *Caryophyllus, plumarius, flore inodoro, tenuiſſimè ſecto.* M. H. 2. 562. *Superba Recentiorum.* Lob. Adv. 189. Obſerv. 241. *Caryophyllæus minor.* Dod. p. 174. *Caryophyllus ſylveſtris.* H. Eyſt. Æſt. o. 14. F. 12. 13. 14. *Betonica, coronaria, tenuiſſimè diſſecta, ſive Caryophyllæa, ſuperba, elatior, vulgaris.* J. B. 3. 330. *Armerius, ſimplici flore.* Cluſ. H. 287.

29. *Caryophyllus; tenuifolius; plumarius; flore pleno, albo.* Flor. 2. 92.

30. *Caryophyllus; tenuifolius; plumarius; flore pleno, albo, cum Corollâ purpureâ.* Flor. 2. 92.

31. *Caryophyllus; tenuifolius; plumarius; flore ſimplici, albo, cum duobus Corniculis.* Flor. 2. 92.

32. *Caryophyllus; tenuifolius; plumarius; flore ſimplici, pallidè incarnato, cum duobus Corniculis.* Flor. 2. 92.

33. *Caryophyllus; tenuifolius; plumarius; flore ſimplici, albo, cum corollâ ſanguineâ.* Flor. 2. 92.

34. *Caryophyllus; tenuifolius; plumarius; flore ſimplici, carneo, cum corollâ pallidè purpuraſcente.* Flor. 2. 93.

35. *Caryophyllus; tenuifolius; plumarius; ſerotinus; flore ſimplici, odoratiſſimo.* Flor. 2. 93.

36. *Caryophylli tenuifolii, plumarii, multiplex ex varietate ſuavi pulchritudo.*

37. CARYOPHYLLUS BARBATUS, Offic. *Caryophyllus hortenſis barbatus latifolius*, C. B. Pin. 208. Tourn. Inſt. 333. Boerh. Ind. A. 218. *Caryophyllus barbatus, hortenſis, ſimplex, latifolius*, Hiſt. Oxon. 2. 563. *Betonica coronaria latifolia petræa flore punctulis albis notato*, J. B. 3. 333. *Armeria rubra latifolia*, Ger. 479. BROAD-LEAVED SWEET WILLIAM, Emac. 598. Raii Hiſt. 2. 991. *Armerius latifolius ſimplex, flore rubro*, Park. Parad. 319. SWEET WILLIAMS.

I don't know that theſe are uſed in Medicine. *Dale* ſays, they take Spots out of woollen Cloth, if the Spots are rubb'd with theſe, and afterwards waſh'd with Water.

38. *Caryophyllus; Barbatus; hortenſis; latifolius; flore albo.* C. B. P. 208. *Flos Armerius, albus.* H. Eyſt. Æſt. o. 9. F. 4. Fig. 1.

39. *Caryophyllus; Barbatus; hortenſis; latifolius; flore variegato. Flos Armerius, variegatus.* H. Eyſt. Æſt. o. 9. F. 4. Fig. 3. *Caryophyllus, Barbatus, hortenſis, ſimplex, latifolius, flore verſicolore, rubro & carneo guttato in eodem Ramulo, ſeu diverſicolore ex albo, rubro, & medio.* H. L.

40. *Caryophyllus; Barbatus; hortenſis; ſimplex; latifolius; flore carneo.* H. L.

41. *Caryophyllus; Barbatus; flore multiplici.* C. B. P. 208. M. H. 2. 563. *Betonica, coronaria, latifolia, petræa, pleno flore rubro, vel ad purpureum accedente.* J. B. 3. 333. *Armerius, pleno, rubro, flore.* H. Eyſt. Æſt. o. 14. F. 14. Fig. 1. *Armerius, pleno flore.* Cluſ. H. 287.

42. *Caryophyllus; Barbatus; flore multiplici, albo.* C. B. P. 208.

43. *Caryophyllus; Barbatus; flore multiplici, roſeo.* C. B. P. 208.

44. *Caryophyllus; Barbatus; hortenſis; anguſtifolius.* C. B. P. 209. M. H. 2. 563. *Betonica, coronaria, minus latifolia, flore profunde diſſecto.* J. B. 3. 333. *Armerius flos, alter.* Dod. p. 176. *Colore rubro.*

45. *Caryophyllus; Barbatus; hortenſis; anguſtifolius; colore niveo.* C. B. P. 209.

46. *Caryophyllus; Barbatus; hortenſis; anguſtifolius; colore purpuraſcente, oris albis.* C. B. P. 209.

47. *Caryophyllus; Barbatus; hortenſis; anguſtifolius; flore verſicolore in eodem ramulo.* C. B. P. 209.

48. *Caryophyllus; Barbatus; ſylveſtris; annuus; anguſtifolius; perpaucis capitulis donatus.* M. H. 2. 563. *Caryophyllus, Barbatus, ſylveſtris.* C. B. Pin. 209. *Viola, Barbata, anguſtifolia.* J. B. 3. 335. *a.*

49. *Caryophyllus; Barbatus; ſylveſtris; latifolius; annuus; multis capſulis, ſimul junctis, donatus.* M. H. 2. 563. *Caryophyllus, ſylveſtris, prolifer.* C. B. Pin. 209. H. Eyſt. Æſt. o. 14. F. 13. Fig. 2. *Betonica, coronaria, ſquamoſa, ſylveſtris.* J. B. 3. 335. *a.*

50. *Caryophyllus; Sinenſis; ſupinus; leucoii folio; flore vario.* T. Ac. Reg. 1705. H.

51. *Caryophyllus; Sinenſis; ſupinus; leucoii folio; flore rubro.* H.

52. *Caryophyllus; Sinenſis; ſupinus; leucoii folio; flore albo.* H.

53. *Caryophyllus; Sinenſis; ſupinus; leucoii folio; flore pleno.* H.

54. *Caryophyllus; repens; anguſtifolius; flore eleganti rubro.*

55. *Caryophyllus; minimus; muralis.* C. B. P. 211. *Betonica coronaria, ſive Tunica minima.* J. B. 3. 337. *Tunica minima.* Lugd. 1191. *Lychnis, minima, muralis.* M. H. 2. 547. *Flore rubro. a. b.*

56. *Caryophyllus; minimus; muralis; flore albo. a. b.*

57. *Caryophyllus; montanus; ſaxatilis; flore dilutè rubente; foliis anguſtiſſimis. Micheli. Boerhaave Index Alter.*

CARYOPHYLLUS SYLVESTRIS, Offic. *Caryophyllus ſylveſtris vulgaris latifolius,* C. B. Pin. 209. Tourn. Inſt. 333. *Betonica coronaria ſive Caryophyllus ſylveſtris vulgatiſſimus,* J. B. 3. 334. *Betonica coronaria vulgatiſſima,* Chab. 441. *Armeria alba,* Ger. 478. WHITE JOHNS. Emac. 597. Raii Hiſt. 2. 990. *An Armerius latifolius flore rubro, ſaturo, holoſerico?* Park. Parad. WILD PINKS.

It grows in Paſtures and uncultivated Places, and flowers in *June*. It is ſaid to be good for the Stone and Epilepſy, taken with Water of Reſt-harrow or Lilies of the Valley. *Dale.*

Beſides the *Caryophylli* Cloves above-mentioned, there are ſome Aromatics which go by this Name; the firſt of which is, The

Caryophyllus, Offic. *Caryophyllus aromaticus fructu oblongo;* C. B. Pin. 410. Breyn. Prod. 2. 25. Raii Hiſt. 2. 1508. *Caryophyllus aromaticus vulgaris,* Jonſ. Dendr. 174. *Caryophyllus aromaticus,* Ogilb. Chin. 1. 223. *Caryophyllus aromaticus Indiæ Orientalis, fructu clavato, monopyreno,* Pluk. Almag. 88. Phytog. Tab. 155. *Caryophyllus Indicus,* J. B. 1. 423. *Caryophylli,* Chab. 32. Park. Theat. 1577. *Caryophylli veri Cluſii,* Ger. 1351. Emac. 1535. *Caryophylli aromatici,* Mont. Exot. 9. *Ts-hinka,* Piſ. Mant. A. 177. CLOVES. *Dale.*

Theſe are dark-brown, almoſt black, Fruit, in Shape of a thick ſhort Nail, ſomewhat compreſs'd, with four crooked Horns on the Top, and a round, brittle, hollow Cap in the Middle of them, eaſily falling off. They are of a pleaſant, grateful, hot, ſpicy Taſte. They are the unripe Fruit of a large Tree, with Leaves like the Leaves of the Bay-tree, but of a thicker, firmer Texture. They grow in the *Molucca* Iſlands, in the *Eaſt-Indies.*

Cloves are very heating and drying, cordial, cephalic, and ſtomachic, ſtop Vomiting, ſtrengthen a weak Stomach, expel Wind, prevent Fainting, and are good in malignant Diſtempers. The diſtil'd Oil cures the Tooth-ach, a Bit of Lint dip'd in it being put into the hollow Tooth.

The only officinal Preparation is the diſtil'd Oil. *Miller's Bot. Off.*

There are two Sorts of this Fruit ſold in the Shops; the firſt is the *Cloves* ſo call'd, being the unripe Fruit, which is oblong, reſembling a Nail, angulous, depreſſed, wrinkled, of a dark-ruſty Colour, marked at the Top with four little ſtellated Apices, with a convex, hollow, little Head in the Middle, whence the Flower is to proceed, which is of an acrid, bitteriſh, and grateful Taſte, and of a moſt fragrant Smell. The other Sort are the *Anthophylli*, which are the ſame Fruit with the others, but arrived to perfect Maturity: They reſemble an oblong Nail, are blackiſh, and like the former, only thicker, and more tumid, and including, within a pretty hard Rind, an oblong Grain, of a duſky Colour. You are to chuſe ſuch Cloves as have a fragrant Smell, and, when preſſed, yield an oily kind of Humidity. The *Anthophylli* are rarely to be met with in our Shops.

They are an excellent Cardiac, Cephalic, and Stomachic, being of a heating, drying, and diſcuſſing Quality; for which Reaſon they are ſerviceable in a Lipothymy, the Tooth-ach, Crudities of the Stomach, and the Vertigo, and are expulſive of malignant, uterine, and other Diſorders. *Dale.*

The diſtil'd OIL *of* INDIAN CLOVES.

This *Indian* Spice is very extraordinary: The greater Sort bears its Seed nearly on the Top; and the leſſer, which is without Seed, is ſo rich in a ſharp balſamic Oil, that when perfect, and a little heated, it ſpontaneouſly yields one which is highly odoriferous and corroſive, barely by the Preſſure of the Finger, or the Prick of a Needle. And it is incredible what a large Proportion of Oil theſe Cloves contain, when they firſt come to us from the *Indies*, and are taken from the Middle of the Bags, and immediately examined, ſo that there is ſcarce any thing comparable to them, in reſpect of aromatic Oil. Let a Parcel of theſe, therefore, be choſe perfect, and commit them entire to twelve times their own Weight of Water, and immediately diſtil them briſkly by the Alembic and Worm: There will come over a milky, thick, turbid Water, and, at the ſame time, a large Quantity of Gold-colour'd Oil, which falls and collects at the Bottom of the Water. When two Thirds of the Water at firſt poured on are thus come over, change the Receiver, and add as much freſh Water to the Remains as comes over in Diſtillation, and work as before, whereby there will be obtained a Water ſomewhat impregnated with the aromatic Virtue of the Cloves. Keep all the odoriferous Waters apart, to be uſed inſtead of common Water in future Diſtillations of the ſame Oil. There will now remain at the Bottom a brown, thick, ſcentleſs Liquor, of an acid and ſomewhat auſtere Taſte, but without any of the former Virtue of the Cloves; tho' theſe Remains of the Subject ſo far retain their priſtine Form and Colour, as, when half dried, eaſily to paſs upon the unwary for genuine; and, if mixed with thoſe which have not been rob'd of their Oil, they again acquire their natural Smell and Taſte, by attracting the Oil of the reſt, ſo that they cannot afterwards be diſtinguiſhed from them; in which manner they are often fraudulently adulterated by certain Dealers in Spices. The Oil, thus diſtil'd, always appears ſomewhat mucilaginous: If it, therefore, be required purer at the firſt Operation, inſtead of common Water let Salt and Water be employ'd, and the Diſtillation be performed after a previous Digeſtion of two or three Weeks; but the Remainder, in this Caſe, cannot ſo well be examined.

REMARKS.

The Oil is extremely heating, and even cauſtic; and, therefore, affords a very proper and incomparable Remedy in cold Conſtitutions, and cold Diſeaſes, if prudently uſed. It is alſo a noble Medicine for raiſing the languid Spirits, being uſed either internally or externally. But it is ſurpriſing, that this noble Oil ſhould ſo ſoon loſe its Spirits, by ſtanding expoſed, in a wide Glaſs, in the warm open Air, at the ſame time perfuming the Place with its Odour, and at length changing to an indolent, viſcous, unctuous Subſtance; whereas the Spice ſo long retains this Spirit in the violent Heat of the hoteſt Country. This Oil is alſo heavier than Water, ſo as always to ſink to the Bottom thereof, and remain in full Virtue under it. The like is ſcarce to be found in the Oils of *Europe*, being principally obſerved only in the hoteſt Parts of *Aſia*, *Africa*, and *America*; and chiefly of the aromatic Trees, as Clove, Cinnamon, Guaiacum, and Saſſafras: Yet this Oil, tho' it be ſo ponderous, becomes volatile with boiling Water, and diſtils along with the Vapour thereof. Laſtly, it is remarkable, that the Plants, abounding with ſo hot an Oil, do not appear alcaline in their Remains after Diſtillation, but acid, auſtere, cold, and conſiderably fixed, as if it were to detain this Oil, which, of itſelf, might prove too volatile. *Boerhaave's Chymiſtry.*

Lint, impregnated with Oil of Cloves, diſſolv'd in highly rectify'd Spirit of Wine, is recommended by *Hoffman* as an excellent Application for ſtopping the Progreſs of a Gangrene.

Another Caryophyllus is, The

CASSIA CARYOPHYLLATA, Offic. *Caſſia Caryophyllata, Cortex Caryophylloides,* Mont. Exot. 8. *Caryophyllus folio & fructu rotundo,* Breyn. Prod. 2. 26. *Caryophyllus aromaticus fructu rotundo, Caryophyllon Plinii,* C. B. Pin. 411. Jonſ. Dendr. 176. *Caryophyllus aromaticus Indiæ occidentalis, foliis & fructu rotundis, dipyrenis ſeminibus fere orbiculatis planis,* Pluk. Almag. 88. Phytog. 155. Tab. 3. *Amomum quorundam, ſorte Garyophyllon Plinii,* Ger. Emac. 1610. *Amomum aliud quorundam, & Caryophyllon Plinii Cluſio ſuſpicatum,* A SORT OF BASTARD OR FALSE AMOMUM, SUSPECTED BY CLUSIUS TO BE THE GARYOPHYLLON OF PLINY, Park. Theat. 1567. *Amomum quorundam odore Caryophylli,* J. B. 2. 194. SWEET-SCENTED JAMAICA-PEPPER, or ALL-SPICE, Raii Hiſt. 2. 1507. *Xocoxochitl ſeu Piper Tavaſci,* Hern. 30. Laet. 277. *Piper Chiapæ,* Redi Lat. 132. THE CLOVE-BERRY-TREE. *Dale.*

It is produced in great Plenty in the Iſland of *Cuba*, and other Parts of the *Weſt-Indies*. Its Bark, which is uſed for medicinal Purpoſes, is ſlender, of a reddiſh or ruſty Colour when its external Pellicles are removed, and wrapt up in the Form of ſmall Pipes: It is of an acrid, pungent, aromatic Taſte, and of a fragrant Smell, reſembling that of Cloves. The Fruit of this Tree is fraudulently ſold in the Shops for the Carpobalſamum, or, according to others, for the Amomum. This Fruit is a round blackiſh Berry, a little larger than Pepper, umbilicated in the Top, and including, under a ſlender Pellicle, and a fungous Subſtance, two black Seeds, of a Taſte and Smell approaching to thoſe of Cloves. It is cephalic, cordial, and agrees with Cloves in all their Virtues. *Dale. Pharmacolog.*

A third Sort of Caryophyllus is, The

Pimenta, Offic. *Piper Jamaicenſe quibuſdam, odoratum Jamaicenſe noſtratibus,* SWEET-SCENTED JAMAICA-PEPPER, or ALL-SPICE, Raii Hiſt. 2. 1507. *Myrtus arborea, foliis laurinis, aromatica,* JAMAICA PEPPER-TREES, Tranſ. Philoſoph. Abr. p. 663. N. 192. Cat. Jamaic. p. 161. Hiſt. 2. 76. Tab. 171. Raii Dendr. 33. *Caryophyllus aromaticus Americanus, Lauri acuminatis foliis, fructu orbiculari,* Pluk. Almag. 88. Phytog. 155. Tab. 155. *Piper Caryophyllatum, Piper Jamaicenſe,* Mont. Exot. 9.

Cæculi Indi aromatici, Muſ. Regiæ Societ. JAMAICA PEPPER, or ALL-SPICE. *Dale.*

The *Myrtus arborea, foliis laurinis aromatica, Pimenta*, or *Jamaica Pepper-tree*, has a Trunk as thick as one's Thigh, riſing ſtrait about thirty Feet high, covered with an extremely polite or ſmooth Skin, of a grey Colour, and branched out on every hand, having the Ends of its Twigs ſet with Leaves of ſeveral Sizes; the largeſt being four or five Inches long, and two or three broad in the Middle where broadeſt; and, when it decreaſes to both Extremities, ending in a Point, ſmooth, thin, ſhining, without any Inciſures, of a deep-green Colour, and ſtanding on ſuch long Foot-ſtalks, when bruiſed, very odoriferous, and, in all things, like the Leaves of a Bay-tree. The Ends of the Twigs are branched into Bunches of Flowers, each Foot-ſtalk ſuſtaining a Flower, made up of four herbaceous or pale-green Petala, bowed back, or reflected downwards, within which are many Stamina of the ſame Colour. To theſe follow a Bunch of crowned or umbilicated Berries, (the Crown being made up of four Foliola or ſmall Leaves) which are bigger when ripe than Juniper-berries; at firſt when ſmall, greeniſh, but when ripe, they are black, ſmooth, and ſhining, containing, in a moiſt, green, aromatic, and biting Pulp, two large Acini or Seeds, ſeparated by a Membrane lying between them, each whereof is an Hemiſphere, and both joined make a Globe or ſpherical (appearingly one) Acinus; whence *Cluſius* makes it one Seed diviſible into two Parts.

It grows on all the hilly Parts of the Iſland of *Jamaica*, but chiefly on the North Side thereof; and where-ever theſe Trees grow, they are generally left ſtanding when other Trees are fell'd; and they are ſometimes planted where they never grew, becauſe of the great Profit from the cured Fruit, ſent in great Quantities yearly into *Europe*.

It flowers in *June*, *July*, and *Auguſt*, but, in ſeveral Places, ſooner or later, according to their Situation, and different Seaſon for Rains; and, after it flowers, the Fruit ſoon ripens; but 'tis to be obſerved, that, in clear open Grounds, 'tis ſooner ripe than in thick Woods.

There is no great Difficulty in the curing or preſerving of this Fruit for Uſe: 'Tis, for the moſt part, done by the Negroes; they climb the Trees, and pull off the Twigs, with the unripe green Fruit, and afterwards carefully ſeparate the Fruit from the Twigs, Leaves, and ripe Berries; which done, they expoſe them to the Sun, from its Riſing to Setting, for many Days, ſpreading them thin on Cloths, turning them now-and-then, and carefully avoiding the Dews, which are there very great. By this means they become a little wrinkled, or rugous, dry, and from a green change to a brown Colour; and then they are fit for the Market, being of different Sizes, but generally of the Bigneſs of black Pepper, ſomething like in Smell and Taſte to Cloves, Juniper-berries, Cinnamon, and Pepper; or rather having a peculiar mix'd Smell, ſomewhat akin to them all; whence the Name of *All-ſpice*. The ripe Berries are very carefully ſeparated from thoſe to be cured, becauſe their wet and plenteous Pulp renders them unfit for Cure; whence theſe Berries always coming unripe dried into *Europe*, has been the Occaſion of Naturaliſts thinking it to be *Fructu umbilicato ſicco*. The more fragrant and ſmaller they are, they are accounted the better.

This Fruit, with Water diſtil'd *per Veſicam*, yields a very odoriferous Chymical Oil, ſinking to the Bottom of Water, like Oil of Cloves. It may deſervedly be counted the beſt and moſt temperate, mild and innocent, of common Spices; and fit to come into greater Uſe, and to gain more Ground, than yet it hath, of the *Eaſt-India* Commodities of this kind, almoſt all of which it far ſurpaſſes, by promoting the Digeſtion of Meat, attenuating tough Humours, moderately heating, ſtrengthening the Stomach, expelling Wind, doing thoſe friendly Offices to the Bowels, as we generally expect from Spices.

It is now commonly ſold by Druggiſts for Carpobalſamum, which, I ſuppoſe, came from *Hernandez*, who ſays it may be its Succedaneum; but it is not altogether like that Fruit, but ſeems more fragrant, and leſs aſtringent and balſamic. *Cluſius* ſays, that it takes away, if chewed, a ſtinking Breath. *John de Barrius* tells us 'tis one of the Ingredients of Chocolate in *New Spain*: And *Franciſcus Vria*, who brought it from *New Spain*, and gave it to *Redi*, ſaid it was there commended againſt the Epilepſy and Gutta Serena; which he in divers Perſons try'd, but without Succeſs; but he, at the ſame time, ſays he thinks it a good ſtomachic and cephalic Medicine, moderately given.

It has been taken by *Cluſius* for *Pliny*'s *Caryophyllon*, and by others for *Amomum*; but it is not likely, that it was known to the Antients, not being known to grow in the *Eaſt*, but *Weſt-Indies*.

It is very likely, that *Hernandez* deſcribes this under the Name of *Kocoxite ſeu Piper Tavaſci*, his Deſcription agreeing in every thing but the Flower, which noways agrees to this. And, perhaps, this is the Tree which *Piſo* deſcribes under the Name of *Anbuiba Miri*. *Philoſ. Tranſ. abr.*

CARYOTI, κάρυωτοι. A Name in *Galen*, *de Al. Fac. Lib.* 2. *Cap.* 26. for the beſt Dates, or Fruit of the Palm-tree, growing in *Syria* and *Paleſtine*.

CASAMUM, κάσαμον, in *Myrepſius*, and the later *Greek* Writers, is a Name for the κυκλαμινάια (*Cyclamen*). *Fuchſius in Myrep. Antidot. Cap.* 412.

CASCARILLA. A Diminutive from *Caſcara*, which, in *Spaniſh*, ſignifies Bark, or a Shell. The Drug moſt generally known by this Name is the *Peruvian* Bark, which is at this time entered at our Cuſtom-houſe by the Name of *Caſcarilla*. But ſome other Barks have been call'd by this Name, probably at firſt by People unacquainted with the Import of the Word; and this has introduced ſome Confuſion in the Materia Medica.

The Bark, which *Dale* calls by the Name of *Caſcarilla*, is The

Cortex Thuris, Offic. *Cortex Thuris nonnullis dictus, vel Thymiama*, Raii Hiſt. 2. 1841. *Elaterii Pharmacopol. vel Elatherii Cortex, Thymiama*, Schrod. 4. 166. *Caſcarilla*, Ind. Med. 29. *Schakarilla, Chakarilla*, Mont. Exot. 8. *Kina-kina Aromatica Palode Calenturas. Caſcarilla, Cortex Eleterii, ſive Scacarilla Officinarum. Cortex Peruvianus griſeus, ſive ſpurius*, Geoff. Tract. 307. *Storax rubra Officinarum*, C. B. Pin. 452. Jonſ. Dend. 127. *Thus Judæorum*, Park. Theat. 1602. INDIAN BARK.

It is imported into *Europe* from the *Eaſt-Indies*, but we have it from one of the *Bahama* Iſlands in *America*, called *Elatheria*. The Bark is cannulated, conſiſting of a Collection of little Tubes or Pipes, and is in ſmall Bits, of the Thickneſs of Cinnamon, of the Colour of ruſty Iron, of an acrid, aromatic, and bitter Taſte, and of a ſweet and pleaſant Smell, eſpecially when it is burnt. It generally wants its outer Rind, which is rough, and of an Aſh-colour. The moſt valuable is what is thick, fat, ſcented, ſmooth, and without the leaſt Aſperities. In Suffumigations, wherein it is a common Ingredient for the ſake of its pleaſant Smell, it helps Contractions of the Uterus.

Tho' this Drug be called *Cortex Thuris*, that is, the Bark of Frankincenſe, in the Shops, yet Naturaliſts are not agreed about the Tree from which it is taken, ſome aſſigning one Tree, ſome another. Some will have it to be the νάσκαφος, or νάσκαφος of *Dioſcorides*, *Lib.* 1. *Cap.* 22. which he makes to be a ſort of Bark imported from *India*, like the Bark of the Mulberry-tree, and uſed in Suffumigations for the ſake of its grateful Smell. *Cæſalpinus* takes it for the outer Bark of the Nutmeg-tree; *Amatus*, for that Species of Calambac which the *Portugueſe* call *Lignum Aquilæ*, that is, *Eagle-wood*; *Parkinſon* thinks it is the Bark of that very Tree which bears the Frankincenſe. Whether it be any or neither of theſe Trees, I ſhall not take upon me to determine; tho' I cannot be of the Opinion of *C. Bauhine* and *Bellonius*, that this Bark is the ſame with the red Styrax of the Shops. *Dale.*

I cannot take upon me to determine whether this Bark mentioned by *Dale*, and ſaid to be produced in the *Eaſt-Indies*, is the ſame as the *Weſt-Indian* Bark, which now goes by the Name of *Caſcarilla*, or a different Sort. With reſpect to this latter, *Juncher*, *Valentini*, and ſome *German* Authors, confound it with the *Cortex Winteranus*. The beſt Account of this *Caſcarilla* I have met with is in the *Hiſt. de l'Acad. Roy. des Sc.* as follows:

The *Caſcarilla*, a Medicine little known, and hardly mentioned in any of our Hiſtories of Drugs, is a pretty woody Bark, about a Line, or a Line and an half thick, of a Colour almoſt reſembling that of the common *Quinquina*, but of a ſomewhat paler brown, leſs compact, more friable, of a bitter, and ſomewhat ſtyptic Taſte, pungent, and pretty acrimonious to the Tongue, and leaving at laſt a Senſation of Bitterneſs, mixed with ſomething of an aromatic Nature. This Bark is covered with a Pellicle, which is whitiſh, ſlender, inſipid, wrinkled, and gently furrowed in various Parts. This is the Bark of a *Peruvian* Plant, as yet unknown.

It bears ſo near a Reſemblance to the *Quinquina*, that, as there are at preſent ſix Species of this latter enumerated, it is reckoned as a ſeventh. It is by ſome alſo called *Kina-kina ſpuria*, or *falſa*; or *Kina-kina urens*, or *Kina-kina odorifera*. It is by Druggiſts called *Cortex Elaterii*, no doubt on account of its pungent Bitterneſs, reſembling that of the *Elaterium*. But it is by no means probable, that it is the Bark of the wild Cucumber; for the Name *Chacril*, which we (the *French*) give it, comes from the *Spaniſh* Word *Chacarilla*, or *Caſcarilla*.

Caſcarilla, notwithſtanding its Reſemblance to the *Quinquina*, differs very much from it. The former is more bitter, acrid, and almoſt cauſtic to the Taſte; whereas the *Quinquina* is of a more diſagreeable Bitter, and of a more aſtringent or ſtyptic Quality. The *Caſcarilla*, when heated or burn'd, diffuſes a more aromatic Odour than the *Quinquina*. In a Word, the *Caſcarilla*, when kindled at a Wax Candle, yields a thick Smoak, and a large Quantity of a ſooty Matter; and what remains is only a rarefied and diſtended Coal, like that of burned Reſins; a Circumſtance which ſhews it to contain a large Quantity of a reſinous Matter in compariſon of the *Quinquina*.

Hence Mr. *Boulduc* the younger, when inquiring into the Nature and Effects of *Caſcarilla*, thought that, by means of

the Spirit of Wine, it would yield a large Quantity of a reſinous Extract; and, upon making the Experiment, one Ounce of the *Caſcarilla* yielded five Drams of a reſinous Extract, of a bitter, pungent, aromatic Taſte, like that of the Subſtance before the Proceſs, and of a beautiful purple Colour. Mr. *Boulduc* was not acquainted with any Vegetables which yielded ſo large a Quantity of Extract; for ſcarce twenty Grains can be obtained from an Ounce of *Quinquina*. The Feeces, when dried, weighed three Drams, and conſiſted only of the earthy and fixed Parts of the *Caſcarilla*. From this Circumſtance it appears, that a very ſmall Quantity of the compound Body muſt be poſſeſſed of very conſiderable Virtues.

The deceaſed Mr. *Fagon* often told Mr. *Boulduc*, that when the Quinquina was as yet ſcarce in *France*, he often employed the *Caſcarilla* with Succeſs in intermittent Fevers. In all Probability its reſinous and penetrating Parts divide and attenuate the ill-concocted, thick, and viſcid Subſtance, which is the Fomes of the Fever. This Febrifuge has the Advantage over the *Quinquina* in this reſpect, that it acts in a ſmaller Doſe, and is not neceſſary to be ſo long continued.

Upon the Whole, Mr. *Fagon*, according to the Account of Mr. *Boulduc*, was ſo firmly perſuaded, that, in febrifuge Medicines, it was the reſinous Part which principally contributed to the Cure of the Fever, that he often ordered an Infuſion of the *Quinquina* to be made with *Aqua Vitæ*, as a kind of Aſſiſtant to the ordinary Infuſions, and in order to haſten and accelerate the Effects of the *Quinquina*. Some others, who are of the ſame Opinion, add different reſinous Subſtances.

Apinus, a celebrated Phyſician and Profeſſor at *Altorf*, ſeems to have been the firſt who employ'd *Caſcarilla*, either in Tincture or Infuſion, for the Cure of epidemic and catarrhous Fevers, and in Subſtance for the Cure of thoſe of the ordinary Kind. The illuſtrious Mr. *Stahl*, Phyſician to the King of *Pruſſia*, extended its Uſe farther, and preſcribed it for ſevere and convulſive Coughs, ſuch as thoſe called Chin-coughs. And even in theſe Caſes the *Caſcarilla* produces its Effects, by inciding and attenuating the viſcid Matter. For the ſame Reaſon, it is highly beneficial in Caſes where the Intention is to aſſiſt or augment Tranſpiration.

Mr. *Boulduc* experienc'd the Virtues of *Caſcarilla* in flatulent Colics, and in thoſe hyſteric or hypochondriac Diſorders, commonly call'd Vapours. But it muſt be obſerved, that when the Intention is only to attenuate and render the Humours ſubtile, the Tincture of *Caſcarilla* is ſufficient for that Purpoſe, becauſe it contains all the reſinous Part: Whereas, when the Intention is to reſtore and confirm the Tone of any Parts that have been ſhock'd, agitated, or ſtrain'd, *Caſcarilla* in Subſtance ought to be preſcrib'd; becauſe 'tis in this Caſe neceſſary, that its earthy and ſtyptic Parts ſhould perform the Office of Aſtringents.

Caſcarilla, in Subſtance, is of ſingular Service in the internal Hemorrhoids, which flow with Difficulty, provided the Patient is of a pretty corpulent Habit of Body. This happens, becauſe in ſuch a State the Skin being relaxed, the *Caſcarilla* augments the Tranſpiration, in conſequence of which, the Humours will have more Liberty, and the Hæmorrhoids be opened. Perhaps, alſo, the *Caſcarilla* may contribute to make the Hæmorrhoids flow, by reſtricting and bracing up thoſe Veſſels which contain the hæmorrhoidal Blood. Of this Fact Mr. *Boulduc* himſelf was a Witneſs.

But what he obſerv'd, as more particularly advantageous in the *Caſcarilla*, was the ſingular Service it did in the Dyſenteries which raged in the Year 1719. whether accompany'd with a Fever or not. *Ipecacuanha* on this Occaſion was almoſt brought into Diſrepute, and *Caſcarilla* acquired a great Reputation, which does not at the ſame time prove, that it would have been equally beneficial in any other Year, ſince, to the great Misfortune of Mankind, thoſe Diſeaſes of different Years which go under the ſame Name, are yet of widely different Natures. Mr. *Boulduc* found, that whereas *Ipecacuanha*, and the other emetic Vegetables, left a long Indiſpoſition, and a great Weakneſs in the Stomach, *Caſcarilla* ſpeedily reſtored and confirmed its Tone and Strength. This Bark then has the ſame Virtues with its fellow Medicines the *Quinquina* and *Ipecacuanha*, and perhaps exerts them to greater Advantage than either the one or the other. Mr. *Boulduc Hiſt. de l' Acad. Royale des Sciences, Ann.* 1719.

CASCHU. The ſame as CATECHU, which ſee.

CASEUS, τυρός. Cheeſe.

New Cheeſe, and unſalted, is nouriſhing, agreeable to the Stomach, and eaſily diſtributed; it ingenders Fleſh, and gently mollifies the Belly. Cheeſe differs in Goodneſs according to the Nature of the Milk, of which it is made. Boiled, then preſſed, and afterwards toaſted, it acquires a binding Quality; apply'd as a Cataplaſm to the Eyes, it helps Inflammations and Sugillations. Cheeſe new-ſalted yields leſs Nouriſhment [for ἐυτροφώτερος, I read ἀτροφώτερος with *Saracenus*, and the Senſe requires it], diminiſhes the Fleſh, is bad for the Stomach, and diſorders the Belly and Inteſtines; but ſtale or old Cheeſe has a binding Property. Whey is very nouriſhing to Dogs. *Dioſcorides, Lib.* 2. *Cap.* 79.

Cheeſe receives an Acrimony from the Rennet in its making, and depoſits all its Humidity, but more remarkably when it has been long kept; for then it becomes more acrid than before, and is manifeſtly of a more heating and ardent Quality; whence it is render'd more provocative of Thirſt, more difficult of Digeſtion, and of a worſe Juice. Though Cheeſe, therefore, be endued with acrimonious and attenuating Properties, which ought to belong to ſuch groſs Aliments, it cannot be ſaid to be a harmleſs Food; for it is more pernicious on account of the Badneſs of its Juice, and its burning Heat, than beneficial by its attenuating Quality, which does not render this Juice leſs diſpoſed for the Generation of Stones in the Kidneys; for we have ſhewn, that Stones breed in thoſe Bodies, where a Thickneſs of the Juices is accompany'd with an igneous Heat. Such Cheeſe, therefore, is to be avoided, as not at all conducive either to Concoction or Diſtribution, nor promoting Evacuations by Stool or Urine, nor generating good Juices. Cheeſe which is neither old nor acrimonious is bad, but leſs hurtful than the other. Of all new Cheeſe, the beſt is what is made with us at *Pergamus*, and in *Myſia* above *Pergamus*, and is called by the Inhabitants four-milk Cheeſe [ἐξυγαλάκτινος]. It is really a moſt pleaſant Food, not at all noxious to the Stomach, but of all Kinds of Cheeſe the moſt eaſy of Digeſtion and Paſſage, of no vicious Juice, nor conſiderably groſs, which is the common Fault of all Cheeſe. That is an excellent Sort too, which is in ſo much Requeſt at *Rome* among the wealthier People, and goes by the Name of *Bathys*; and there are ſome very good kinds of Cheeſe to be met with in other Countries. Now, ſince there is a very conſiderable Difference in Cheeſe, with reſpect to the Nature of the Animals which yield the Milk, and the Way of Making, beſides the Age, we ſhall here endeavour to ſum up their Properties under a few Heads, which if well conſidered, we cannot be at a Loſs to diſtinguiſh the Good from the Bad. Theſe Properties then in general may be reduced under two Heads; the firſt of which regards the Subſtance of Cheeſe, in which reſpect it is either harder or ſofter, denſer or looſer, glutinous or friable. The other general Head reſpects the Taſte, as ſome Cheeſe is diſtinguiſh'd for its Tartneſs, other Sorts for their Acrimony, Fatneſs, Sweetneſs, or ſome other Taſte, or for an equal Mixture of all theſe Taſtes. With reſpect then to the particular Diſtinctions under theſe two Heads, ſoft Cheeſe is preferable to hard, and that of a rare and lax Subſtance to the denſer and more compact; but ſince Cheeſe which is very glutinous, and what is friable even to Aſperity, are both vicious, a Medium between theſe two Properties is beſt. As to the Diſtinctions which ariſe from Taſte, that is the beſt Cheeſe which has no Quality in Exceſs, but exceeds a little in Sweetneſs; what is mild is better than the ſtrong, and what is moderately ſalt is to be choſen before that which is either very much or not at all ſalted. Moreover, if you would take upon you to examine Cheeſe, you have another Way to know the better from the worſe; and that is from Eructation; for Cheeſe, whoſe Taſte goes off gradually, is the moſt wholſome; but that whoſe Taſte continues long, is not good, for this plain Reaſon, becauſe it is very difficult of Alteration, and therefore very hard to be digeſted; and we know, that Concoction of Aliments is neceſſarily followed by an Alteration of all the before-mentioned Qualities. *Galen. de Aliment. Facult. Lib.* 3. *Cap.* 17.

Cheeſe is nouriſhing enough, helps Digeſtion, and produces ſeveral other good Effects, if you take but a little of it.

When Cheeſe is too new, 'tis hard of Digeſtion, heavy upon the Stomach, and cauſes Wind and Obſtruction; but on the contrary, when 'tis too old, it heats much, by reaſon of its great Acrimony, produces bad Juice, has an unpleaſant Smell, and is binding.

It contains much Oil, an indifferent Quantity of eſſential Salt, and little Phlegm and Earth.

It agrees, at all times, with young People, who are uſed to hard Exerciſe or Labour, and have a good Stomach; but old Folks, and nice Perſons, uſed to an idle Life, and who have ſome Touches of the Stone and Gravel, ought to abſtain from it, or uſe it moderately.

Cheeſe is nothing but the Curd of Milk ſeparated from the Whey, and hardened by a ſlow Heat.

We are to look upon Cheeſe as the groſſer and more compact Part of the Milk; from whence we may eaſily judge, that 'tis nouriſhing enough, and proves ſolid Nouriſhment; but 'tis hard of Digeſtion, when made uſe of to Exceſs, tho' otherwiſe it may help Digeſtion, if taken ſparingly.

Cheeſe is made either of ſkimmed Milk, or that which has the Cream in it; and the laſt is much better than the other, becauſe of the creamy and butteriſh Part remaining in it, which is the moſt exalted Part of the Milk, and moſt full of oily Principles, and volatile Salts.

Cheese made of Cows Milk is that which is moſtly uſed. It is of a very pleaſant Taſte, nouriſhing enough, but a little hard of Digeſtion: Some pretend, that Cheeſe made of Sheeps Milk, is to be preferred before the other, becauſe 'tis eaſier of Digeſtion, and is not ſo groſs and compact a Subſtance as the other; however, 'tis not ſo nouriſhing as Cheeſe made of Cows Milk.

They alſo make Cheeſe of Goats Milk, but it is not much valued; however, 'tis eaſily digeſted and diſſolved. There are ſeveral other Animals which yield Milk, of which Cheeſe may be made; but we ſhall not ſpeak of them here, becauſe ſuch ſort of Cheeſes are not in Uſe amongſt us. When Cheeſe is new, it is ſoft, viſcous, and full of Moiſture, and it is then heavy upon the Stomach, windy, and hard of Digeſtion; however, it is nouriſhing enough, and a little laxative: When, on the other hand, Cheeſe that is too old, grows dry, pungent, and burns the Tongue, ſmells ſtrong and unpleaſantly, and produces the ſeveral ill Effects before-mentioned: In a Word, old Cheeſe can hardly be known to be the ſame as when it was new; and *Matthiolus* ſeems to be of Opinion, that it is then only good for gouty Perſons, by being outwardly applied to the Parts where they feel their greateſt Pains; and this Author, to ſupport his Notion, inſtances ſome Perſons, who by the Uſe thereof have been recovered.

We therefore conclude, that Cheeſe which is neither too old nor too new, is the wholſomeſt of any. *Lemery on Foods.*

It is well known, that Oils by Age grow rancid and acrid. This happens in rich Cheeſe, that is, Cheeſe replete with Oil; inſomuch that *Boerhaave* informs us, he has known the Lips, Gums, Tongue, Palate, and Pauces, violently inflamed by the Uſe of it. The Stomach, therefore, and Inteſtines, muſt be very great Sufferers by Cheeſe of ſo acrimonious a Nature.

It is a vulgar Opinion, that old Cheeſe digeſts every thing elſe, but remains itſelf undigeſted. I don't know what Foundation there is for this, nor can I determine whether it is true, or a vulgar Error. But I ſhould ſuſpect, that in caſe of a Viſcidity of the Juices contain'd in the Stomach, old rotten Cheeſe may, by its Acrimony, attenuate theſe Viſcidities, and thus act medicinally.

The particular Averſion, which ſome People have to Cheeſe, is utterly unaccountable, however real.

CASIA. The ſame as CASSIA, which ſee.

CASIBO. Cyprus, (a Species of exotic Privet). *Johnſon.*

CASMINARIS, or CASMUNAR. See CASSUMMUNIAR.

CASSA. A barbarous Word, in *Fallopius de Oſſib.* for *Thorax.*

CASSALE *Vulnus.* A Term uſed by ſome Phyſicians to ſignify a Wound in the Breaſt; it is derived from the *Arabic Cas*, the Breaſt.

CASSAMUM, κάσσαμον, a Name given by ſome to the Fruit of the Balſam-tree. *P. Ægineta, Lib. 7. Cap. 3.*

CASSATUM, weak, ſpiritleſs, and grumous Blood in the Veins, hindering the Paſſage and Motion of good Blood. *Paracelſus Archidox. Lib. 7. Sect. de Specifico Diaphoretico.*

CASSAVI. A ſort of Bread uſed in the *Weſt Indies*, and made of the Root of the Plant MANIHOT, which ſee.

CASSIA. The Characters of the Caſſia are;

The Flowers are pentapetalous, diſpoſed in an orbicular Order; with a Stylus like a Proboſcis.

The Pods are either long and cylindrical, or flat, divided into many Cells by tranſverſe Partitions, which are lined with a black Pulp, containing hard Seeds.

Boerhaave mentions four Species of CASSIA.

1. *Caſſia; Americana, fœtida; foliis oblongis, glabris.* T. 619. *Pajomiriôba.* J. Piſonſ. Edit. 1658. 185. *Senna, occidentalis, odore Opii viroſo; Orobi Pannonici foliis mucronatis, glabra.* H. L. H. Prægn. THE STINKING AMERICAN CASSIA, WITH OBLONG SMOOTH LEAVES.

2. *Caſſia; Americana; fœtida; foliis ſubrotundis, acuminatis.* T. 619. *Pajomiriôba,* II Piſonſ. Edit. 1658. 185. *Senna, occidentalis, odore Opii minus viroſo, foliis glabris obtuſis.* H. L. H. Prægn. THE AMERICAN CASSIA, WITH ROUNDISH POINTED LEAVES.

3. CASSIA FISTULA, Offic. Ind. Med. 29. Ger. 1242. Emac. 1431. *Caſſia ſolutiva, Caſſia fiſtularis,* Mont. Exot. 10. *Caſſia fiſtula Alexandrina,* THE ORDINARY PURGING CASSIA. Raii Hiſt. 2. 1746. C. B. Pin. 403. Tourn. Inſt. 619. Elem. Bot. 492. Boerh. Ind. A. 2. 58. Commel. Flor. Mal. 73. *Caſſia nigra ſeu fiſtuloſa prima, ſive Caſſia fiſtula Alexandrina.* Cat. Jam. 145. Hiſt. 2. 42. *Caſſia fiſtula Chaiarxambar vocata.* Alp. Ægypt. 7. *Caſſia fiſtula vulgaris flore luteo,* Breyn. Prod. 2. 26. *Caſſia ſolutiva vulgaris,* Park. Theat. 234. *Caſſia purgatrix,* J. B. 1. 416. Chab. 89. *Caſſia fiſtula purgatrix Alexandrina,* Jonſ. Dendr. 382. *Arbor Caſſiam ſolutivam ferens.* Bont. 101. *Conna.* Hort. Mal. 1. 37. Tab. 22. *Quauhayohuatli* 2. *ſive Caſſia fiſtula.* Hern. 87. THE PUDDING PIPE-TREE. *Dale.*

This is the Fruit of a great Tree which grows in *Egypt*, and in both the *Eaſt* and *Weſt Indies:* It bears large winged Leaves, in Shape reſembling the Leaves of the Walnut-tree, among which grow yellow five-leav'd Flowers, each ſucceeded by a long, ſlender, round Pod or Fruit, ſcarce an Inch in Diameter, but a Foot, and often two Foot long, whoſe Outſide is a dark brown, hard, woody Bark, having a large Seam running the whole Length on the one Side, and another leſs viſible on the other: The Inſide is made up of a great Number of thin Plates or Partitions, covered with a black ſweet Pulp, with a flattiſh, ſmooth, oval Seed between every Partition, *Miller's Bot. Off.*

Proſper Alpinus is of Opinion, that thoſe Pods of the Caſſia are the beſt, which, when ſhaken, make a kind of Noiſe by the Motion of the Seeds contained within them; and affirms, that ſuch of them as do not make this Noiſe are deſpiſed by the *Egyptians*, who think that this Accident happens in conſequence of the Pulp being vitiated, and an aqueous Humidity collected within. But *Veſlingius* maintains the contrary in the following Words. "The *Egyptians*, ſays he, who dealt in "Caſſia, perſuaded our Countryman *Alpinus*, that thoſe Pods "were the beſt, which, when ſhaken, made a Noiſe; but I "obſerved the more ſkilful Merchants carefully ſeparate thoſe "which made ſuch a Noiſe, from the more ſolid Pods; and "if one Part of the Pod was ſolid, and the other rattling, "they broke off the latter as uſeleſs; ſince it only contains "dry Seeds, and is deſtitute of a ſweetiſh Pulp, and that thin "Juice with which thoſe that are ſolid abound. But as the "State of all Things is changeable, ſo an unlucky Accident "often deſtroys the Fruit of the Caſſia, when upon the very "Brink of Maturity; for in high Winds the Pods are daſh'd "againſt each other, and fall off in great Numbers; after "which they are of no Uſe for medicinal Purpoſes. The ſe-"veral Pods, therefore, of the ſame Branch are tied toge-"ther, that they may the better ſuſtain the Shock of Acci-"dents. The great Care neceſſary to preſerve them from the "Attacks of Thieves, is a Circumſtance which conſiderably "enhances their Price." Theſe Pods are not to be gathered for medicinal Uſes, till they are entirely ripe: But they are often bought by foreign Merchants, after they are very old, ſince a large Quantity of them is frequently laid up in Store-houſes, and kept ſometimes for forty Years. Theſe Pods, immediately when gathered from the Trees, are ſo diſpoſed of in proper Places, that the Air may not have Acceſs to them; ſince by the ſmalleſt Approach of that Fluid the Caſſia is corrupted. Hence the Caſſia-pods imported to the *Venetians* are generally become acid and vitiated with Age: For this Reaſon, *Proſper Alpinus* adviſes Phyſicians and Apothecaries not to ſuffer themſelves to be impoſed upon for the future, but to make Choice of ſuch Pods as are recent, and whoſe Subſtance is of a ſweetiſh Taſte, rejecting thoſe which are old, and of an acid or ſaline Flavour. The *Egyptians* never uſe the Caſſia-pods till they are four Months old, ſince, when young and recent, they are obſerved not only to be uſeleſs, but noxious. They uſe the Pulp, extracted from the Pod, either in the Form of a Bolus or a Potion, in all the Diſeaſes and Symptoms ariſing from an over-heated Bile; for they are of Opinion, that *Caſſia* exhibited internally, by evacuating and obtunding the hot and parched Parts of the Blood and Humours, cools the Blood, and renders it more pure; they alſo find from Experience, that, by its means, the Stomach is disburdened of any excrementitious Subſtance that may prove offenſive to it. They alſo uſe it with great Succeſs in Defluxions of hot Humours upon the Lungs or Thorax, exhibiting it either alone, or mix'd with Sugar-candy, or with Oil of ſweet Almonds. When either thus prepared, or uſed without any Admixture, they find it ſingularly beneficial to the Bladder and Kidneys. This Pulp of the Caſſia-pod, made up with Sugar-candy and Liquorice, they generally uſe as an Arcanum in Diſorders of the Kidneys and Bladder; for it extinguiſhes an immoderate Heat of the Kidneys, ſcours the Humours from theſe Parts, and diſcharges them by Urine: Hence the frequent Uſe of it prevents the Generation of Stones and Gravel. The Caſſia Pulp, in Conjunction with Agaric, is alſo uſed by the *Egyptians* againſt immoderate Coughs, Dyſpnœas, Aſthmas, and Orthopnœas. They alſo uſe it by way of Plaiſter, to be apply'd to the Parts affected, in hot Pains of the Joints, the Gout, and hot Inflammations. They preſerve, in Honey, or Sugar, the ſmall green Pods of the Caſſia, after having gently boiled them in Water, and dried them in a Shade. Theſe they keep for the Uſe of Children and delicate Women; to the latter of whom they exhibit four Ounces at moſt for a Doſe, and to the former only one. Theſe they alſo preſcribe for the before-mentioned Diſorders. The Flowers preſerved with Sugar make a highly beneficial Medicine for correcting the Heat of the Kidneys, and eliminating the tough and viſcid Recrements lodg'd in the Ureters: Beſides, theſe Flowers are, by the *Egyptians*, uſed for alleviating Pains of every kind, eſpecially thoſe of the Gout. *Proſper Alpinus, Medicina Ægypt. L. 4. Cap. 5.*

Acoſta,

Aceſta, in his Treatiſe *de Medicamentis in India orientali naſcentibus*, informs us, that, in the *Eaſt-Indies*, Eryſipelaſes and Inflammations are anointed with the Pulp of the Caſſia. The Caſſia-pods, whilſt as yet green, are preſerved with Sugar, and an Ounce of them, with Succeſs, is exhibited to tender Women and Children. Theſe muſt be choſen when recent, and very tender, before the Bark is indurated. They muſt alſo be macerated in cold Water, before they are prepared with the Sugar. The Flowers, when thus prepared, are gently purgative, and operate without creating any Uneaſineſs.

Bontius, in his *Hiſtoria Naturalis & Medica Indiæ orientalis*, informs us, that the Uſe of the Caſſia-pulp is very frequent among the *Malayans*, in Diſorders of the Kidneys and Bladder, and in all nephritic Indiſpoſitions; as alſo in Gonorrheas, contracted by impure Embraces, when it is mix'd with Powder of boil'd Turpentine. The Caſſia cultivated in *America*, according to *Nicolaus Monardes de Medicamentis ſimplicibus ex occidentali India dilatis*, purges gently, and without any Gripes; and evacuates principally Bile, then Phlegm, and laſtly the Matter which obſtructs the Inteſtinal Ducts. It renders the Conſtitution of thoſe who uſe it temperate, and purifies the Blood. It is beneficial in all Diſorders; but more eſpecially thoſe of the Kidneys, and urinary Bladder, if exhibited two Hours before Supper: It is good againſt Defluxions, if taken two Hours after a light Supper. It is daily uſed, in the Form of a Linctus, againſt Diſorders of the Breaſt and Sides. It is proper in feveriſh Heats, and extinguiſhes Thirſt. The daily Uſe of it, before Dinner or Supper, prevents the Generation of the Stone and Gravel. When mix'd up with the Oil of ſweet Almonds, it is an excellent external Application for alleviating violent Pains of the Lungs and Kidneys. The Doſe of the Pulp is from ten Drams to an Ounce and an half; and of the Pulp, in Conjunction with the Pod, four Ounces. In *America* the tender and newly form'd Pods are preſerved, after having been prepared, and boil'd with Sugar. Theſe purge, without creating an Uneaſineſs, or exciting any of thoſe Symptoms and Gripes which generally attend the Uſe of Purgatives; for they are grateful to the Taſte, and operate eaſily. The Doſe is from two to three Ounces.

The Flower may be preſerved in two Manners; for it may either be triturated with Sugar, like Sugar of Roſes, or the entire Flower may be put in Sugar, and boil'd along with it. When prepared in either of theſe manners, it taſtes well, and evacuates without creating the Patient any Uneaſineſs. Two or three Ounces may be given for a Doſe. If this Medicine ſhould not anſwer the Intention, it is owing to the Coarſeneſs of the Sugar with which it is prepared. The Pods of the Caſſia are at preſent imported into *Europe* from *Egypt*, and the *Eaſt-Indies*; as alſo from *Brazil* and *Antigua*, in *America*. Thoſe are accounted beſt which are blackiſh, ſmooth, weighty, full of a pinguious Pulp, on the Backs of which reddiſh Streaks are conſpicuous, which are recent, ripe, and when ſhaken make no Noiſe. Thoſe imported from the *Eaſt-Indies* are reckon'd worſt, becauſe they are generally corrupted by the Length of the Time required for performing the Voyage; they are, perhaps, alſo gather'd before they are fully ripe, that they may not corrupt ſo ſoon as otherwiſe they would. In the *Pharmacopœia Bruxellenſis*, it is affirmed, that one Ounce of *Braſilian* Caſſia purges more effectually than two of the *Egyptian*, which is the common Caſſia of the Shops, and is generally call'd *Siliqua Ægyptia*, and *Fiſtula Alexandrina*. It was firſt introduced into Medicine by the *Arabians*; but, according to Dr. *Freind*, in his Hiſtory of Phyſic, *Actuarius* was the firſt of them who mentioned and deſcribed it among the milder and more gentle Purgatives. *Actuar. Method. Medend. L. 5. Cap. 2.* It is not mentioned by the antient *Greeks*, with whom, for the moſt part, the *κασία σύριγξ*, or Caſſia Fiſtula, imported the Cinnamon of the Moderns. But among the later *Greeks* the purgative Caſſia was call'd *κασία μέλαινα*, *κασία ξεκαθαρμένη*, and *κασία καθαριομένη*. When, therefore, in the Compoſitions of the antient *Greeks*, Caſſia is preſcrib'd, Cinnamon is to be uſed. The ſame Rule is to be follow'd, in thoſe Writings of the *Arabians*, in which they recount the Compoſitions of the *Greeks*, as alſo in ſuch Medicines as do not render the Body ſoluble. But if Remedies of a purgative Intention are either deſcribed or ordered by the *Arabians*, we are, in this Caſe, to uſe purgative Caſſia, as is very juſtly obſerved in the *Antidotarium de exacta componendorum Medicamentorum ratione*, by *Matthiolus ad Dioſcor.* and by *Bodæus in Theophraſt.* It is the Pulp of this Caſſia which is applied to medicinal Uſes, and is call'd the *Medulla Caſſiæ*, *Caſſia extracta*, *Caſſia Cribrata*, *Caſſiæ Atramentum*, and *Flos Caſſiæ*. The Extract is made by paſſing it thro' a Sierce with a Spoon, with the Addition of a little Water. Phyſicians generally order this Extract recent, becauſe it ſoon corrupts, in conſequence of its Diſpoſition to ferment. Hence *Boerhaave*, in his *Elementa Chymiæ*, *Vol. 2.* claſſes it among the Subſtances which promote Fermentation. The Apothecaries, in order to preſerve this Extract the longer, and prevent its Fermentation, generally add Sugar to it; but by this means its genuine Virtue is loſt. This Extract, when made from Pods which are fully ripe, is a ſufficiently gentle and innocent Purge; for which Reaſon it is claſs'd among the beſt of the cholagogue Purgatives. It is exhibited either in the Form of a Bolus, or of a Potion. When recent, and in Subſtance, the Doſe of it, for internal Uſe, is from three Drams to an Ounce; and, in Clyſters, from one to two Ounces. When it is not recent, it may be exhibited internally, from half an Ounce to an Ounce and an half, or two Ounces; and, in Clyſters, four Ounces of it may be uſed. *Schulzius*, in his *Prælectiones de Viribus & Uſu Medicamentorum*, ſpeaks of it in the following manner: "It is purgative," ſays he; "but be-"cauſe in Subſtance a large Doſe of it is to be taken, and "becauſe it is obſerv'd to weaken the Stomach, it is rarely "exhibited at preſent with us: But if the recent Extract is to "be uſed, it may moſt properly be exhibited with the Addition "of ſome Carminative, ſuch as Aniſe or Fennel. The Doſe "is from one Ounce to ten Drams." *Hieronymus Capivaccius*, in his *Practica Medicina*, informs us, that its Virtues exceed theſe of Manna, as it powerfully evacuates the thin recrementitious Humours, and thoſe which are moderately thick. Beſides, it refrigerates, obtunds Acrimony, moiſtens, and poſſeſſes ſome nutritive Parts. But it is eaſily converted into Flatulencies, which, by diſtending the Veſſels, excite conſiderable Pains. Caſſia, therefore, according to *Rhaſes*, is to be boiled before it is exhibited; ſince, by the boiling, that Part of it is diſſolv'd, which was ſubject to be converted into Flatulencies, as happens in Barley and Beans, which, by being boiled, loſe their flatulent Part. *Rhaſes* alſo ordered Caſſia to be boiled in the Juice of Succory. But if Caſſia is to be exhibited unboil'd, it is to be corrected with Aniſe, Fennel, or Lemon-ſeeds. *Jacobus Duttelius*, in his *Tractatio Medico-practica de virulenta Purgantium Indole*, informs us, that Caſſia is gently purgative, on account of its ſweetiſh Taſte, and moderately acrimonious Quality. Hence it is highly proper, eſpecially when rightly adminiſtered, to evacuate bilious and acid Humours; ſince it operates, without exciting any violent Commotions, or preternatural Heat. Experience, the moſt powerful and concluſive of all other Arguments, ſufficiently proves, that it is an efficacious Medicine in Diſorders of the Breaſt, in ſaline arthritic Affections, in the Stone, in Caſes where the Primæ Viæ are loaded with ſaline Acids; as alſo in catarrhous Fevers, and ſometimes in thoſe of the tertian Kind. With reſpect to the Exhibition of Caſſia, when the Intention is to purge, we muſt obſerve, that it ought to be uſed in a pretty large Quantity, either alone, or with an Admixture of Manna, otherwiſe it operates little or none at all. It is alſo carefully to be adverted to, that Caſſia operates more ſucceſsfully with the Addition of ſome neutral Salt, eſpecially the *Tartarus Tartariſatus*. Beſides, a Decoction of Caſſia is not to be taken at one Draught, but ſucceſſively, and at different times; and ſome hot Potion is to be uſed after it, leſt it ſhould excite any Uneaſineſs or Vomiting. But hypochondriac and hyſteric Patients, thoſe who are afflicted with a Weakneſs of the Stomach and Flatulencies, and ſuch as are ſubject to the Colic, ought carefully to abſtain from Caſſia. Neither is this Medicine by any means to be preſcribed for pregnant Women. *Duttelius*, in the ſame Work, oppoſes *Sennertus*, who, with *Meſue* and *Actuarius*, aſſert, that Caſſia may be ſafely uſed by pregnant Women. The Reaſon of his Oppoſition is, that as Caſſia is improper in hyſteric Caſes, on account of its flatulent Quality; ſo it ought not to be order'd to pregnant Women, whoſe lower Belly is already diſtended by the Bulk of the Fœtus, ſince, by an Acceſſion of new Flatulencies, the Abdomen might be more diſtended, and various bad Symptoms excited. *Caſpar Hoffman* informs us, that in pregnant Women it powerfully relaxes the Placenta; and *Foreſtus*, in his *Obſerv. Medic. Lib. 2. Obſerv. 28.* affirms, that Caſſia is highly improper for pregnant Women, becauſe it principally evacuates from the Kidneys; in conſequence of which an Abortion is the more to be dreaded. The ſame Author, in *Lib. 10. Obſ. 85. in Scholio*, pronounces Caſſia prejudicial to paralytic Caſes, becauſe it is of too moiſtening a Quality; and, in the ſame Book, *Obſ. 33. in Scholio*, he aſſerts, that it is injurious to the Head, by filling the Brain with Fumes, and by that means inducing a *Cataphora*. According to *Rondeletius*, the Uſe of Caſſia is not ſafe in cold and moiſt Weather, eſpecially the former, ſince by its too ſtrong emollient Quality, eſpecially when it is recent, it generally excites Diarrheas, Lienteries, and, at laſt, Dyſenteries. We might poſſibly think, that more weighty Objections could not be made againſt Caſſia, unleſs *Joannes Riolanus*, a celebrated Phyſician at *Paris*, had aſſerted, that a ſmall Quantity of it proves mortal to ſome Patients. But *Michael Baudewyns*, a learned Phyſician of *Antwerp*, in his *Ventilabrum Medico-theologicum*, refutes this Charge, and tells us, that the Caſſia may certainly be abus'd, yet happy Effects are to be expected from the judicious Exhibition of it. Beſides, in this Caſe, the Intention of *Riolanus*, ſays he, is to be conſider'd, which is nothing elſe than to caution the Magiſtracy not to allow every one who profeſſes himſelf a Phyſician, to practiſe; becauſe moſt Medicines in their Exhibition require great Caution,

tion, Care, and Circumſpection. From what has been already ſaid from *Alpinus* and *Bontius*, *Wedelius*, in his Work *De Medicamentorum Facultatibus*, ſeems to be in the right, when he aſſerts, that Caſſia is a Pectoral, beneficial in nephritic Pains, proper for correcting the Acrimony of the Humours, and, for that Reaſon, conducive to the Cure of a Gonorrhea. *Fallopius* atteſts the ſalutary Uſe of this Medicine in the laſt of theſe Diſorders. Some, and among the reſt *Bernardinus Ramazini*, in his *Opera Medica & Phyſiologica*, entirely condemn the Uſe of Caſſia in all Diſorders of the Kidneys, becauſe they think it is poſſeſſed of a certain Virulence. *Zecchius* alſo, in his *Conſultationes Medicinales*, affirms, that, in Diſorders of the Kidneys, Caſſia is not altogether ſafe, unleſs the Stomach and Primæ Viæ are previouſly evacuated, either by Abſtinence, Vomiting, or Purging; adding this as a Reaſon, that it was one of the beſt of the diuretic Medicines. With an Intention, however, to evacuate the Primæ Viæ, he himſelf recommends Caſſia. Hence *Veſſingius* ſeems to have come nearer the Truth, when he aſſerts, that if, in conſequence of the Uſe of Caſſia, the Heat and Impetus of the Urine, which is acrid, are increas'd, and the nephritic Pains by that means augmented, this Accident cannot be charg'd upon the Caſſia which is ſound and good, but only on ſuch as is corrupted and deſtitute of its Virtues. Nor indeed is it poſſible, that a Medicine imported from Countries ſo remote, and which can hardly be preſerv'd for any conſiderable Time in its native Soil, ſhould long retain its Virtues after it comes to our Hands. The Sentiments of *Veſſingius* and *Wedelius*, with reſpect to Caſſia, ſeem to be juſt and well-founded, ſince, from the Practice of the *Egyptians*, and others, it is obvious, that it is a Medicine proper for allaying preternatural Heats, and correcting the Acrimony of the Humours; and ſince *Borelli*, in his *Obſervat. Medico-phyſic. Cent.* 3. *Obſ.* 5. informs us, that Caſſia was highly beneficial in allaying and correcting the preternatural Heats attending epidemic and peſtilential Fevers; for it has this Advantage attending it, that it reſiſts Putrefaction, and, at the ſame time, inclines to an aceſcent Nature. *Caſpar Hoffman*, *de Medicamentis officinalibus*, *Lib.* 2. *Cap.* 7. pronounces the Uſe of Caſſia ſafe, ſo long as it is recent and ſweet; and not only informs us, that Headakes, ariſing after Meals, cannot be more ſucceſsfully remov'd, than by the Uſe of Caſſia, and that by its means obſtinate Inflammations of the Eyes have been cur'd; but alſo, in expreſs Words, pronounces it to be a highly beneficial Medicine in preternatural Heats of the Kidneys. But becauſe the Uſe of it is obſerv'd to promote a copious Diſcharge of Urine, I ſhould think it adviſable not to preſcribe it to Patients who diſcharge bloody Urine, who have been cut for the Stone, who labour under a Diabetes, or other Diſorders of the Parts ſubſervient to the Secretion of the Urine, ſince, in theſe Caſes, it is not ſo beneficial, but ought to be abſtain'd from. *Fallopius* informs us, "That in preternatural Heats of the Bladder, Caſſia is a "very improper Remedy; becauſe, in conſequence of its diu-"retic Quality, it conveys to the Bladder ſmall Concretions "of Sand, together with a ſaline and acrid Matter, which "augment the Heat, which is more troubleſome and uneaſy, "ſo long as the Caſſia operates, tho' it is afterwards ſomewhat "alleviated by that means." *Valliſneri*, in his *Opere Fiſicomediche*, *Tom.* 3. informs us, "That Caſſia and its Pulp are "of a refrigerating and moiſtening Quality, not only when ex-"hibited internally, but alſo in external Applications; ſince, "in the moſt violent arthritic Pains produc'd by Heat, the "Pulp of Caſſia is ſucceſsfully preſcrib'd, and ſurpriſingly alle-"viates the Pains. But it is commonly thought, that it "moiſtens more powerfully than it refrigerates, which is con-"firm'd by the large Quantity of hypochondriacal Flatulencies "generally produced by uſing it; for whilſt the Humidity un-"dergoes a Change by the Heat, it is converted into Flatu-"lencies, which, as they poſſeſs a large Space, diſtend and "relax the Veſſels, and by that means create Pains, and ſome-"times Gripes. Hence Phyſicians, taught by Experience, "generally mix ſome Carminative with Caſſia, in order to "prevent the above-mentioned Accidents." To theſe we may add the Obſervation of *Paulus Valcarengus*, in his *Medicina Rationalis*, that Caſſia is highly prejudicial by exciting Pains of the Stomach and Gripes, when it is exhibited in thoſe Diſorders which proceed from a tough and glutinous State of the Bile. But we now return to ſpeak of the Intention with which Caſſia was firſt receiv'd into Medicine, which was to render the Body ſoluble, and evacuate the Fœces. For this Purpoſe it is generally preſcrib'd two or three Hours before Meals. But *Monardes* aſſures us, that he had learn'd, from the Experience of many Years, that when thus exhibited, it evacuated very little; for, ſays he, as it is very weak, it is reſolv'd into Vapours, which diffuſe themſelves thro' the whole Body; and if the Meal is longer deferr'd, it is converted into Aliments. Hence he adviſes it to be exhibited a very ſhort time before Meals, about half an Hour at moſt; becauſe, when mixed with the Aliments, it exerts its Virtues in Conjunction with them, and by that means operates more eaſily, and with leſs Trouble. But if, continues he, the Intention is not to evacuate, but only to diffuſe Vapours thro' the Kidneys, and the other Parts of the Body, it may be exhibited ſeveral Hours before a Meal. *Aloiſius Mundella*, in his *Epiſtolæ Medicinales*, *Epiſt.* 10. and 26. gave the ſame Directions before *Monardes*. But *Laurentius Jonbertus*, in *Tom.* 1. is of another, and, perhaps, a juſter Sentiment, when he adviſes the Pulp of the Caſſia to be exhibited in the Morning, in order to render the Body ſoluble; and not, as moſt do, an Hour or half an Hour before Dinner: For, ſays he, the lighter the Medicine is, the more ſlowly it operates, and the leſs it is ſuſceptible of an Admixture of the Aliments, by which its languid Energy is eaſily extinguiſhed. That Caſſia may be the more ſafely uſed, we muſt obſerve, from *Sennertus*, in his *Inſtitutiones Medicinæ*, that becauſe this Medicine is improper, in Caſes where the Stomach is weak, and abounds with ſuperfluous Humidity, or where the Inteſtines are too ſlippery; when it is to be exhibited for this latter Diſorder, a proper Quantity of Rhubarb or Myrobalans is to be added to it; whereas, in a Weakneſs of the Stomach, it is to be corrected with Cinnamon or Maſtich; and, in Flatulencies, with the Seeds of Aniſe, Fennel, and Carrot. The ſame Author tells us, that the Medicines which either aſſiſt or correct Caſſia, are generally mixed with it, from half a Dram to a whole Dram; and that it is leſs commodiouſly exhibited in a liquid Form, than in that of an Electuary, or Bolus. To the foregoing Obſervations we muſt add thoſe of *Valliſneri*, in his *Opere Fiſicomediche*: Twelve Drams, ſays he, of the Pulp, are exhibited for a Doſe. Caſſia is alſo exhibited in Potions, after it is diſſolv'd in diſtil'd Waters, Decoctions, or proper Broths; but it is rarely preſcrib'd in this Form, except to thoſe who cannot take a Bolus. The *Venetians* frequently preſcribe this Medicine clarified with Whey, ſo as to loſe its nauſeous Smell, and diſagreeable Sweetneſs, in which Form it evacuates with Succeſs. The Pulp is alſo extracted from the Pods, and exhibited in the ſame Doſe, when cut down together with the Seeds, and the ſmall Laminæ which interſect the Pod. This Method of Exhibition is entirely new; and thoſe who follow it aſſert, that theſe Laminæ do not prevent Refrigeration, Humectation, and the Evacuation of the Bile, but give the Preparation this Advantage, that by means of theſe Laminæ it incides and carries off thoſe thick and pituitous Humours, which adhere to the Coats of the Inteſtines. Thus by the Exhibition of Caſſia cut together with its proper Laminæ, they obtain the Evacuation of the Bile, and of other thick and viſcid Subſtances. *Ettmuller* informs us, that the purgative and evacuating Qualities not only of the Pulp of the Caſſia, but alſo of the woody Interſtices lodg'd within the Pulp, were firſt caſually diſcovered; for a Caſſia-pod being thrown to an Ape, the Animal was violently purg'd by eating it. An Account of this Obſervation is to be found in *Fallopius*. *Monardes*, in his *Epiſtolæ Medicinales*, two Centuries ago, inform'd us, that the Seeds were more effectual for rendering the Body ſoluble than the Pulp. It does not hold univerſally, that the Uſe of Caſſia changes the Colour of the Urine into that of red or black. What is already ſaid is ſufficient, with reſpect to the internal Uſe of Caſſia. Externally the Pulp of the Caſſia is uſed in lenitive and reſolvent Cataplaſms. Thus in arthritic Pains ariſing from a hot Humour, the following Cataplaſm, which is inferior to none, may be applied to the Parts affected:

> Take of the Pulp of Caſſia, half an Ounce; of the Meals of Barley and Beans, each three Drams; of the Juices of Smallage and Quinces, each ſix Drams; of red Sanders, half an Ounce; and of the Oils of Violets, Roſes, and Lilies, each a ſufficient Quantity: Mix up into a Cataplaſm.

Caſſia, according to *Ettmuller*, bruiſed or boiled with Nightſhade, is an excellent Medicine for anointing the Parts affected in arthritic Pains. It may alſo be very properly apply'd to Inflammations in the ſame manner. Caſſia, extracted with Spirit of Wine, is uſed as a Topic for anointing the Parts affected with the Gout. That we may not be ignorant of what has been diſcovered of the Nature of Caſſia by a chymical Analyſis, *Boecler*, in his Continuation of *Paulus Hermannus's Cynoſura Materiæ Medicæ*, informs us, that if the Pulp of Caſſia, which eaſily becomes aceſcent, is diluted in a ſufficient Quantity of Water, and put in a ſmall Veſſel for ſome Months, an eſſential Salt, like Cream of Tartar, will be precipitated; but that if it be diſtil'd, it will be converted into an acid Phlegm, and an Oil. According to *Tournefort*, from two Pounds of Caſſia, half a Pound of an acid Phlegm, and three Ounces of an inſipid Phlegm, may be diſtil'd. And if this Liquor is farther diſtil'd, he ſays, that ſix Ounces of a volatile urinous Spirit, ſix Drams of Oil, and about an Ounce of a fixed Salt, are yielded, a Caput Mortuum remaining.

Officinal Preparations from *Caſſia* are the *Caſſia Extracta cum vel ſine foliis Senæ*, and the *Diacaſſia cum Manna*; it is alſo a principal Ingredient in the lenitive Electuary. The Method of making the Extract of *Caſſia* is already deſcrib'd.

Diacaſſia cum Manna.

Take of *Damaſcus* Prunes, two Ounces; of Violet-flowers, an Handful and an half; of Spring-water, a Pint and an half: Let them boil till half is waſted; and then in the ſtrained Liquor diſſolve of freſh Caſſia-pulp, ſix Ounces; of Syrup of Violets, eight Ounces; of the Pulp of Tamarinds, one Ounce; of white Sugar-candy, one Ounce and an half; of the beſt Manna, two Ounces; and make into an Electuary.

This hath continued the ſame thro' all the Emendations of the College, unleſs in the preſent Omiſſion of the Sugar of Violets, no ſuch Thing being now made. Its Author is, by the *Auguſtan Diſpenſatory*, acknowledged to be uncertain. *Zwelfer*, in his Animadverſions upon it, cautions that it ſhould be made but in ſmall Quantities at a time, as indeed all other Compoſitions of the like Kind ſhould, leſt they grow acid, and ferment, by long keeping. *Fernelius* alſo gives the like Admonition; but that may be pretty eaſily prevented, by ſimmering them over a ſlow Heat, and ſtirring all the while with a wooden Spatula to prevent Burning, till they are of a good thick Conſiſtence. It is now wholly neglected in common Preſcriptions.

Caſſia extracta, cum Foliis Senæ: Extract of Caſſia, with Sena-leaves.

Take of the Diacaſſia, with Manna, two Pounds; of Sena-leaves powdered, two Ounces; of Caraway-ſeeds, one Ounce; of Syrup of Violets, a ſufficient Quantity to mix them together into an Electuary. *Quincy's Diſpenſatory.*

Caſſia; ſylveſtris; fœtida; ſiliquis alatis, Plum. Nov. Gen. App. 13. 18. H. Prægn. THE WILD STINKING CASSIA, WITH WINGED PODS, call'd in the *Weſt-Indies* FRENCH GUAVA. *Boerhaave.*

Miller mentions five other Species of the CASSIA. The CASSIA LIGNEA is a Species of CINNAMOMUM, which ſee.

CASSIBOR, CASSIDBOTT, Coriander. *Johnſon. Rulandus.*

CASSIDA.

Scutellaria, Offic. Bivb. 298. Rivin. Irr. Mon. *Scutellaria aquatica, vulgò Tertianaria dicta*, Herm. Hort. Lugd. Bat. 546. Volck. Flo. Nor. 344. *Scutellaria aquatica, anguſtifolia vulgaris*, Herm. Flor. 2. 77. *Scutellaria paluſtris repens cærulea*, Hiſt. Oxon. 3. 416. *Caſſida paluſtris vulgatior flore cæruleo*, Tourn. Inſt. 182. Elem. Bot. 150. Boerh. Ind. A. 117. Dill. Cat. Giſſ. 117. Rupp. Flor. Jen. 180. Raii Synop. 3. 244. *Tertianaria aliis Lyſimachia galericulata*, J. B. 3. 435. *Lyſimachia galericulata*, Ger. 387. n. 6. HOODED LOOSE-STRIFE, Emac. 477. Mer. Pin. 74. *Lyſimachia cærulea galericulata*, Merc. Bot. 1. 49. Phyt. Brit. 71. *Lyſimachia cærulea Galericulata ſeu Gratiola cærulea*, C. B. Pin. 246. Raii Hiſt. 1. 572. HOODED WILLOW-HERB. *Dale.*

This *Caſſida* is hardly of any Uſe in Phyſic; however, *Camerarius* ſays, that the Decoction of it is good for the Quinſey. And *J. Bauhine* relates, that *Turner* affirm'd, that it was call'd *Tertianaria*, becauſe it cured intermitting Fevers. It is bitter, ſtinks like Garlick, and gives ſuch a faint Tincture of Red to blue Paper as the common Scordium, and ſome other febrifugous and aperitive Plants. *Martyn's Tournefort.*

Boerhaave mentions thirteen Species of this Plant.

CASSINE.

There are two Sorts of the Caſſine, which are the third and fourth Species of the ALATERNUS, which ſee.

Miller calls the *Caſſine vera Floridanorum* the South-ſea Tea-tree, and the *Perygua* the Caſſioberry-buſh.

The *Paraguay*, or South-ſea Thea, is accounted by the *Indians* very wholſome, and (as I have been inform'd by ſeveral worthy Perſons, who reſided for ſeveral Years in *Carolina*) is the only Phyſic the *Indians* uſe; and for which, at certain Times of the Year, they come in Droves, ſome hundred Miles diſtant, for the Leaves of this Tree (it not being known to grow at any conſiderable Diſtance from the Sea); where their uſual Cuſtom is to make a Fire upon the Ground, and, putting a great Kettle of Water thereon, they throw into it a large Quantity of theſe Leaves; and immediately ſet themſelves round the Fire, and, with a Bowl that holds about a Pint, they begin drinking round large Draughts, which, in a very ſhort time, vomits them ſeverely: Thus they continue drinking and vomiting for the Space of two or three Days, until they have ſufficiently cleanſed themſelves; then they gather every one a Bundle of the Tea to carry away with them, and retire to their Habitations. But theſe Gentlemen obſerved ſomething very extraordinary in the Operation of this Plant, which was, that, in Vomiting, it gave them no Uneaſineſs or Pain; but came away in a full Stream from their Mouths, without ſo much as declining their Heads, or the leaſt Reaching.

Monſieur *Frezier* alſo ſays, that the *Spaniards*, who live near the Gold Mines in *Peru*, are obliged frequently to drink of the Herb *Paraguay*, or *Mate*, to moiſten their Breaſts; without which they are liable to a ſort of Suffocation, from the ſtrong Exhalations which are continually coming from the Mines.

The ſame Author alſo adds, that the Inhabitants of *Lima*, during the Day-time, make much Uſe of the Herb *Paraguay*, which ſome call St. *Bartholomew's* Herb; who, they pretend, came into thoſe Provinces, where he made it wholſome and beneficial, whereas before it was venomous. This (he ſays) is brought to *Lima* dry, and almoſt in Powder.

Inſtead of drinking the Tincture or Infuſion apart, as we drink Tea, they put the Herb into a Cup or Bowl, made of a Calabaſh, tipp'd with Silver, which they call *Mate*: They add Sugar, and pour the hot Water upon it, which they drink immediately, without giving it time to infuſe, becauſe it turns as black as Ink. To avoid drinking the Herb, which ſwims at the Top, they make uſe of a Silver Pipe, at the End whereof is a Bowl full of little Holes; ſo that the Liquor, ſuck'd in at the other End, is clear from the Herb. They drink round with the ſame Pipe, pouring hot Water on the ſame Herb, as it is drank off. Inſtead of a Pipe, which they call *Bombilla*, ſome part the Herb with a Silver Separator, call'd *Apartador*, full of little Holes. The Reluctancy which the *French* have ſhewn to drink after all Sorts of People, in a Country where many are pox'd, has occaſion'd the inventing the Uſe of little Glaſs Pipes, which they begin to uſe at *Lima*. This Liquor, (he ſays) in his Opinion, is better than Tea: It has a Flavour of the Herb, which is agreeable enough. The People of the Country are ſo uſed to it, that even the pooreſt drink it once a Day, when they riſe in the Morning.

The Trade for this Herb (he ſays) is carried on at *Santa Fé*, whither it is brought up the River of *Plate*. There are two Sorts of it; the one call'd *Yerba de Palos*; and the other, which is finer, and of more Virtue, *Yerba de Camini*. The laſt is brought from the Lands belonging to the *Jeſuits*: The great Conſumption of it is between *La Paz* and *Cuzco*; where it is worth half as much more as the other, which is ſent from *Potoſi* to *La Paz*. There come yearly from *Paraguay* into *Peru* above fifty thouſand Arrova's, twelve thouſand Hundred-weight of both Sorts; whereof at leaſt one Third is of the *Camini*, without reckoning twenty-five thouſand Arrovas of that of *Palos* for *Chili*. They pay for each Parcel, containing ſix or ſeven Arrovas, four Royals, for the Duty call'd *Alcavala*, (being a Rate upon all Goods ſold) which, with the Charge of Carriage, being above ſix hundred Leagues, doubles the firſt Price, which is about two Pieces of Eight; ſo that, at *Potoſi*, it comes to about five Pieces of Eight the Arrova. The Carriage is commonly by Carts, which carry a hundred and fifty Arrovas from *Santa Fé* to *Jujuy*, the laſt Town of the Province of *Tucuman*; and from thence to *Potoſi*, which is an hundred Leagues farther, it is carried on Mules.

What this curious Author has obſerved, on there being two Sorts of this Herb, may very well agree with thoſe two Sorts here mention'd; ſince both of them are generally ſuppoſed to agree in their Qualities, though one is much preferable to the other; therefore I imagine the *Yerba de Camini* is what we call *Paraguay*, or *South-ſea Tea*; and the *Yerba de Palos* to be our *Caſſioberry-buſh*, the Leaves of which are extreme bitter, eſpecially when taken green from the Tree; and the Taſte is hardly to be gotten out of the Mouth for ſome Hours after chewing a Leaf thereof. But as our Author only ſaw the dried Herb, he could no more diſtinguiſh their Difference, than we can the Tea brought from *China*; I mean as to the particular Trees which produce it. *Miller's Dictionary.*

CASSITA. The *Alauda criſtata*, or creſted Lark. See ALAUDA.

CASSITEROS, κασσίτερος. Tin.

CASSIUS. A celebrated Phyſician, who lived in the Time of *Celſus*, or a little before him, and is call'd by him, in his *Preface*, the moſt ingenious Phyſician of his Age. He was a Follower of *Aſclepiades*, and is the ſame whom *Galen* and *Scribonius Largus* quote by the Name of *Caſſius the Phyſician*, and who is the Author of the Problems ſtill extant under his Name. Moſt of the Queſtions in that little Treatiſe of his, M. *Le Clerc* ſays, are curious enough, and the Anſwers to them very ingenious.

CASSOLETA. A Kind of humid Suffumigation deſcrib'd by *Marcellus*, *de Præſ. Remed. Form.*

CASSOUVARIUS. The Name of an exotic Bird, which Dr. *Grew*, in his *Comparative Anatomy*, affirms to be without a Craw.

CASSUMMUNIAR, Offic. *aliàs Ryſagon*, Peach. Obſ. *Caſmunar*, Mare. *Riſagon*, Muſ. Reg. Soc. *Zedoaria radice lutea*, Breyn. Prod. 2. 105. *An Zerumbeth, ſeu Zingiber rubrum, ſylveſtre, Ternatenſe*, Camel. Syllab. ? CASUMUNAR. *Dale.*

This is a Root which comes from the *East-Indies*, and has been much in Request of late Years. It is about the Thickness of the little Finger, cut into short Pieces; its Outside encompass'd with Circles like Galingal, of a brownish-yellow Colour, and of a somewhat bitter hot aromatic Taste.

It is not known what Plant this is the Root of; but it is very much commended as an excellent nervous Medicine, and good for the Palsy, Convulsions, Colic, Griping of the Bowels, and Hysteric Affections. *Miller's Bot. Off.*

This Root is said to be moderately heating and astringent, for which Reason it is recommended for corroborating the Nerves, recruiting the vital and animal Spirits, strengthening the Stomach, and expelling Flatulencies. It is also prescrib'd in Apoplexies, convulsive Motions, Palsies, Tremors, Hysteric and Hypochondriac Disorders, Vertigos, and Gripes. It is highly extol'd for a Loss of Memory, and esteem'd a Corrector to the *Peruvian* Bark. *Albertus Seba*, in his *Rerum naturalium accurata Descriptio*, under the Article *Radix Cafminaris Mexicana*, affirms, that it bears a pretty near Affinity to the Root of round Zedoary, which, being cut into Slices, resembles white Jalap; that it is here-and-there rough, with small Fibres, is in part yellow, of the same Taste with Zedoary, and of a cephalic and stomachic Quality. The same Author also informs us, that a strong Tincture of it, prepared with Spirit of Wine, is of singular Service in Apoplexies. A Spoonful may be exhibited internally; and the Parts most immediately affected may be anointed with it. Its distil'd Oil may also be used as a Liniment.

CASSUTHA. The same as CUSCUTA, which see.

CASSYMA, κάσυμα, in *Hippoc. Epid. Lib.* 5. is a Shoe, as *Fœsius* renders it; or rather, according to *Cornarius*, the Sole of a Shoe; which is the Sense also, that the Scholiast of *Aristophanes* puts upon the Word καττύματα (*Cattymata*). We find this Term κάσυμα in a brief Relation of a remarkable Event, which is the forty-fifth Case in the said Book, and is as follows: Ὁ σκυτεὺς κάσυμα κεντῶν ὁ ἐπὶ τὸ σφυρὸν ἐκέντησεν ἑαυτὸν, &c. "A Cobler in *Pityum* ran his Awl thro' the Sole of a "Shoe into his Flesh, above the Knee, almost a Finger's "Length; no Blood follow'd, and the Wound immediately "closed up. Soon after, the whole Thigh swell'd; and the "Swelling extended itself to the Groin and Ilia, and the third "Day the Man died."

CASTALTICUM. A barbarous Term for CATASTALTICUM, which see.

CASTANEA. The Chesnut, of which *Boerhaave* mentions three Sorts.

1. CASTANEA, Offic. Raii Hist. 2. 1382. Aldrov. Dendr. 294. *Castanea sativa*, C. B. Pin. 418. Tourn. Inst. 584. Boerh. Ind. A. 2. 178. Jonst. Dendr. 117. THE CHESNUT-TREE. *Dale.*

Sardinian Acorns, which some call *Lopima*, or *Castana*, (Chesnuts) *Mota*, (in *Athenæus Amota*) and *Jupiter's* Acorns, are of an astringent Quality, and therefore work the same Effects as the Acorns of the Oak, especially the Coat between the Kernel and the Shell. The Kernel is good for those who have drank the Ephemeron. *Dioscorides, Lib.* 7. *Cap.* 145.

The *Chesnut* is a handsome beautiful Tree, and frequently planted in Parks for its agreeable Shade. It is thick-set with long, somewhat narrow, and sharp-pointed Leaves, deeply serrated about the Edges. The Catkins are long, thin, and slender; and the Fruit inclosed in a round echinated prickly Husk or Cover, two or three together; having a thin brittle smooth Bark or Coat, of that brown Colour which gives Name to the Chesnut Colour, and under it a tender fine Skin, immediately covering the white Fruit, which is of a pleasant sweet Taste, especially when roasted.

Chesnuts are more used for Food, especially in the warmer Countries, than Medicine; though they are but a windy stuffing Diet. They are accounted restringent and binding, especially the inward Skin, which some pretend to be good for all kind of Fluxes, either of Blood or Humours. *Miller's Bot. Off.*

2. CASTANEA, Ind. Med. 30. *Castanea sylvestris*, Chom. 619. Jonst. Dendr. 118. *Castanea sylvestris, quæ peculiariter Castanea*, C. B. Pin. 419. Ger. 1253. Emac. 1442. Mont. Ind. 39. Raii Synop. 3. 440. *Castanea vulgaris*, THE ORDINARY CHESTNUT-TREE, Park. Theat. 1400. THE WOOD CHESNUT-TREE. *Dale.*

Chesnuts fatten and nourish, but they bind also, and sometimes generate Wind. The Meal, mix'd with Honey, or the *Chesnuts* themselves roasted, and work'd up with Honey and Flowers of Sulphur, make a good Electuary for those who spit Blood, or cough much. The Decoction of *Chesnuts*, or their Shell roasted, assuages the Flux of the Belly; as does also the little Skin under the Shell. An Emulsion made of *Chesnuts*, Poppy-seed, and Barley-water, assuages the Heat of Urine. *Chesnuts* are sweet, a little styptic, and redden blue Paper, which shews, that Alum and Sulphur predominate in this Fruit. *Martyn's Tournefort.*

3. *Castanea*; *humilis*; *racemosa*. C. B. P. 419. J. B. 1. 127. *Castanea*; *humilis*. Lugd. 33. *Boerhaave.*

CASTOR, Offic. Schrod. 5. 279. Aldrov. de Quad. Digit. 276. Charlt. Exer. 18. Rondel. de Aquat. 2. 236. Jonst. de Quad. 102. Gesn. de Quad. Digit. 309. *Castor sive Fiber*, Raii Synop. A. 209. *Fiber*, Bellon. de Aquat. 30. *Fiber sive Castor*, Schonef. Ichth. 34. THE BEAVER. *Dale.*

Castor, *Fiber*, *Canis Ponticus*, and κάστωρ, are so many different Names of that Animal which we commonly call a *Beaver*. This is a swift Quadruped, with five Toes on each Foot, and a narrow Claw on each Toe. It has two remarkable *Dentes Incisores* in each Jaw; its Tail is horizontal, smooth, and without Hair; it is an Animal of the amphibious Kind, lives upon Vegetables, and more especially on the Barks, Branches, Leaves, Fruits, and Roots of Trees, particularly of the Willow. These Animals are found almost every-where, but are produc'd in greatest Plenty in *North America*, and *Russia*. They are not at present seen in *England* and *Wales*, because, according to *Ray*, the Breed was long ago exterminated by the Huntsmen. They were also frequently found in *Pontus* by the Antients, for which Reason the Animal is call'd *Canis Ponticus*. It is now universally believ'd, that the Follicles, containing the Castor, are different from the Testicles; and 'tis, consequently, a vulgar Error, that the Beaver, when keenly pursu'd, pulls off and throws away its Testicles, the supposed Treasure for which its Life is sought.

In the *Mem. de l'Acad. Roy. des Sc.* for the Year 1704. Mr. *Sarasin* gives an anatomical Description of the Beaver, and subjoins the following curious Particulars, with respect to their Method of Living, and Œconomy.

When the large Inundations are over, the Females return to their Habitations to bring forth their Young; but the Males keep the Fields till the Months of *June* and *July*, and do not return home till the Waters are quite low. Then they either repair the Damage done to their Habitations by the Inundation, or build new ones. They change their Places of Abode principally for three Reasons; first, when they have consumed the Aliments within their Reach; secondly, when their Company is too numerous; and, lastly, when the Huntsmen disturb them too much.

They choose for their Residence a Place abounding in Food, watered with a small River, and fit for having a Lake formed in it. They begin by building a Bank of a sufficient Height to raise the Water to the first Floor of their Habitations. If the Country is level, and the River deep, the Banks are long, but less elevated than in the Valleys. These Banks are ten or twelve Feet thick at the Foundation, and diminish gradually to the Top, where they are generally only two Feet thick. As these Animals cut Wood with a great deal of Ease, they do not spare it, but generally cut it into Pieces as large as one's Arm or Leg, and from two to four, five, or six Feet long. One End of these they drive pretty deep into the Earth, and fix them pretty near each other, interweaving them with small and pliant Twigs, the Vacuities of which they fill up with Clay. They continue this Work in proportion as the Water rises, that they may transport their Materials with the greater Ease. At last they finish these Banks, when the retained Water can reach the first Floor of the Habitation they intend to make. The Side of the Bank which the Water touches is slop'd; and the Water, which gravitates in proportion to its Height, presses it strongly against the Earth, but the opposite Side is perpendicular. They are solid enough to support the Animals which tread upon them; and these Creatures carefully preserve them, repairing the least Openings with Clay. If they observe, that the Huntsmen perceive them, they either do not work at them but in the Night-time, or they abandon the Place.

When the Bank is finished, they labour at their Cottages, which they always found in a solid Manner, on the Brink of the Water, on some little Island, or on Stakes driven into the Ground. These Lodgings are round and oval, and two Thirds of them appear without the Water; but they have the Precaution to leave an Opening which the Ice cannot shut up. Sometimes they build the Lodging entirely upon the Earth, and make Pits five or six Feet deep, which they conduct to the Water. They employ the same Materials for their Lodgings they do for the Banks, except that the Lodgings are perpendicular, and terminated like a Cupola. The Walls are generally two Feet thick. As their Teeth are as sharp as the best Scythes, they cut all the Ends of the Sticks which jet out beyond the Walls, and apply a Covering of Clay and dry'd Herbs both within and without, and employ their Tails in order to secure this Covering.

The Inside of the Lodging is vaulted, and is capable of containing eight or ten Beavers. Without, this Cottage is eight or ten Feet broad, and ten or twelve Feet long, provided it is oval; within, it is four or five Feet broad, and five or six long. If the Number of Beavers is fifteen, twenty, or even thirty, which rarely happens, the Lodging is proportioned to them; and sometimes there are several Lodgings opposite to each other.

Some

Some Miſſionaries aſſured Mr. *Sarraſin*, that four hundred Beavers were found in Cottages which communicated with each other. Theſe Cottages are diſpoſed in Stories of different Heights, that they may retire as the Water riſes. They have alſo an Opening different from the Door, and from the Place thro' which they deſcend into the Water; and it is by this Opening they go to the Water in order to diſcharge their Excrements.

Thoſe are called Land-beavers which lodge in Caverns made in Earth, raiſed above the Brink of the Water. They begin to prepare their Lodging by making an Opening, which goes more or leſs into the Water, according as the Ice may be more or leſs thick; and they continue this Opening for five or ſix Feet; but it is no larger than to allow them to paſs through it: After which they make a Lake, three or four Foot every Way, into which they deſcend when they pleaſe. Afterwards they cut another Opening into the Earth, which gradually riſes in Stories, in order to keep themſelves dry when the Water riſes. Theſe Openings are ſometimes found more than an hundred Feet in Length. Theſe Beavers cover the Places where they lie with Graſs. In Winter they make Shavings of Wood, which ſerve them as Beds.

All theſe Pieces of Work, eſpecially thoſe made by the Beavers in cold Countries, are generally finiſh'd in the Months of *Auguſt* and *September*, the Time in which they muſt begin to make Proviſions for the Winter. They cut the Wood in Pieces from two or three to eight or ten Feet long. The large Pieces are carried by two or three of theſe Animals, and the ſmaller Pieces by one, but in different Roads, that they may not incommode each other. They firſt uſe a certain Quantity of it, which floats in the Water; then they lay more above it, Piece above Piece, till their Proviſion anſwers to the Number of Animals which deſign to lodge together: For Inſtance, the Proviſion for eight or ten Beavers is twenty-five or thirty Feet ſquare, and eight or ten deep. This Wood is not piled up like that in a Carpenter's Yard, but in ſuch a manner as allows them to take what Parts of it they pleaſe, and they only eat thoſe which are ſoaked in the Water. Before they eat it, they cut it ſmall, and convey it to that Part of the Cottage in which they lie. If they had cut it before they piled it up, the Water would have carry'd it away, or diſperſed it.

The Beaver is hunted from the Beginning of *November* to the Months of *March* and *April*, becauſe, at that Seaſon, theſe Animals are well furniſh'd with Hair.

The Anus of the Beaver, ſituated betwixt the Os Pubis and the Beginning of the Tail, is not, as in other Animals, ſhut by a Sphincter Muſcle, but by a kind of Chink, thro' which both ſolid and liquid Excrements are diſcharged; not in the manner of Birds, whoſe Ureters depoſit their Urine in the End of the Inteſtinum Rectum; but in the Beaver there is a peculiar Duct, terminating in the common Aperture under the Inteſtinum Rectum: For *Wepfer* diſtinguiſhes the Orifice of the Anus from this Chink in the following Words: "In the entire Skin left upon "the Pubes there appeared two remarkable Orifices, the ſuperior of which is the Chink under the Os Pubis, and the inferior the Anus under the Tail." According to *Rondeletius*, "The Female Beaver has one common Paſſage for diſcharging "her Excrements, and bringing forth her Young." On each Side of this Chink, near the Groins of the Animal, whether Male or Female, are two ſmall Bags, the inferior of which is but little, and the ſuperior larger. The ſmaller of theſe Bags, being internally covered with a rough, folded, and glandulous Membrane, and opening, by an excretory Duct, into the Place between the Chink and the Anus, which, by Anatomiſts, is called the Perinæum, is fill'd with an oleaginous yellow Subſtance, of a Conſiſtence ſomewhat more liquid than Honey, and of that nauſeous Smell diffuſed by Caſtor. Hard by the Neck of this Bag or Follicle, in the inferior Part, is a Gland about the Bulk of a Kidney-bean, which being compreſs'd, there is diſcharged from its lower Orifice, which is not much larger than the Punctum Lacrymale, a Subſtance of the Conſiſtence of new Cheeſe, and which ſmells like Caſtor. The other Follicle, lying on the ſuperior Part of this, is larger, in Figure reſembling a dry'd oblong Pear, opening by a pretty large Orifice, which admits one's Finger, into the common Chink, and contains a wax-like, yelloviſh, and friable Subſtance, of a nauſeous and acrid Smell, and which, being afterwards divided into ſmall Portions, of the Bulk of a Pea, or ſomewhat larger, is called Caſtor. Sometimes ſmall Stones of different Bulks, of a laminated Structure like Bezoar, and of the Smell of Caſtor, are probably formed in this Subſtance, inſpiſſated and concreted, juſt as the Stones found in the Gall-bladders of other Animals are produced. From both theſe Follicles, therefore, four Ducts are diſtributed to the Chink, and open their Mouths or Orifices into it. The large Number of Blood-veſſels diſtributed thro' theſe Receptacles, ariſe from the adjacent hypogaſtric and iliac Veſſels, the conglomerate ſebacious Glands form'd of which ſeem to change the Humours they receive into an unctuous Matter, and throw it into the common Emunctory or Follicule. This Matter, when collected in the larger Follicule, and becoming thick by its Continuance there, conſtitutes the Caſtor. In the ſuperior Part of the Chink the Penis of the Male is lodged, in a particular Sinus formed by the Proceſs of the Peritonæum under the two larger Follicules of Caſtor. The Penis of this Animal is a bony Subſtance, as in Dogs. The Teſticles are ſituated under the Os Pubis, near the Caſtor; but it cannot be diſcovered externally in the Groin, either by the Eye or the Touch, that they are lodged there; and tho' they are ſituated pretty near the Caſtor, yet there is no manner of Communication between the former and the latter, nor do they ſmell like Caſtor, either when recent or dry'd. But 'tis falſe, as *Rondeletius* and *Amatus ad Dioſcoridem* affirm, that the Teſticles adhere to the Spina Dorſi. In Figure they reſemble thoſe of a Dog, but are ſomewhat longer, and leſs in proportion to the Size of the Animal. Thus alſo the Epididymis, and all the Veſſels ſubſervient to Generation, are not in the leaſt different from thoſe of a Dog. From what has been ſaid 'tis obvious, that the Follicules containing the Caſtor are different from the Teſticles; and, conſequently, that it is a vulgar Error, that the Beavers, when keenly purſued for the ſake of the Caſtor, pull off their Teſticles, and throw them away, and thus preſerve their Lives by loſing that for which they are ſo eagerly ſought after. And, in *Faber's Lexicon*, we read from *Horapollus*, that the *Ægyptians* paint a Beaver, when they intend to repreſent a Man who caſtrates himſelf, becauſe this Animal, when hotly purſued, throws away its Teſticles, for which it is hunted. *La Hontan*, in his *Nouveaux Voyages dans l'Amerique Septentrionale*, informs us, that theſe Animals never go far from the Water, in order to prevent their being hunted by Dogs; that they plunge themſelves into it upon hearing the ſmalleſt Noiſe; and that they are often more ſought after for their Skins than for the Caſtor: Beſides, the Beaver is unfit for affording Diverſion, when purſued by a Pack of Dogs. *Dioſc. Lib.* 2. *Cap.* 23. affirms that 'tis falſe, that they pull off and throw away their Teſticles when hunted; adding, as a Reaſon, "That they cannot be touched, becauſe they are conceal'd." *Pliny*, in *Lib.* 32. *Cap.* 3. repreſents *Sextius Niger* as entertaining the ſame Sentiments before *Dioſcorides*. But *Salmaſius*, in the *Prolegomena* to his *Exercitationes de Homonymis*, informs us, that it is an Aſſertion of *Pliny*, and not of *Sextius*, that they adhere to the Spine, and cannot be taken away without deſtroying the Life of the Animal. But *Pliny* himſelf, *Lib.* 8. *Cap.* 30. affirms this ſpontaneous Caſtration or Amputation to be real. According to *Wepfer*, this Amputation is, if not impoſſible, yet always ſo highly dangerous, that, inſtead of preſerving the Life, it would rather haſten the Death of the Animal; ſince not only the Teſticles, but the Follicules containing the Caſtor, muſt be ſnatch'd away at one Bite, which cannot happen without a violent Hæmorrhage, on account of the large Baſe of theſe Parts, and the conſiderable Blood-veſſels lodged in them. This Hæmorrhage is the more fatal, becauſe the Blood in theſe Animals is highly fluid, and, becauſe, during their Purſuit, they have not the Advantage of Dreſſings and proper Bandage. *Rondeletius*, a Man of great Judgment, ſeems to have been the firſt who made the Diſtinction between the Teſticles of this Animal and the Follicules containing the Caſtor. But, perhaps, he was ignorant, that there were four Follicules, ſince he only deſcribes two which contain the perfect Caſtor. "The Beavers," ſays he, "have two Protuberances in their Groins, one on each "Side, incloſed in its proper Membrane, and as large as a "Gooſe's Egg; betwixt theſe the Penis is ſituated in the "Males, and the Pudendum in the Females. Theſe Protu"berances are not the Teſticles, but Follicules covered, as I "have already ſaid, with a Membrane. In the Middle of each "of theſe Follicules are Ducts, from which a pinguious and "ſerous Liquor ouſes, which the Beaver itſelf often ſucks out, "and licks. With this Liquor it afterwards beſmears, as with "an Oil, thoſe Parts of its Body it can reach, juſt as Birds do, "eſpecially thoſe trained up for Bird-catching by Fowlers, in "which, above the Anus, or in the depending Part of the "Tail, there is a Bladder, full of a certain pinguious Liquor "like Oil, which they draw out with their Beaks, and with it "anoint firſt their larger Feathers, and then the ſmalleſt. "This Naturaliſts affirm to be a Preſage of Rain; ſince Na"ture prompts the Birds, living in the open Air, thus to "guard themſelves, that their Feathers, being, as it were, "anointed with Oil, may not become wet. That theſe Pro"tuberances are not the Teſticles, may be certainly known "from this, that there is no Paſſage nor Duct from theſe to "the Penis, by which any Humour ſhould be conveyed into "its Opening, and diſcharged: Beſides, the Teſticles are "lodged deeper." Probably alſo this Liquor ſerves to defend the Body of the Animal againſt the Coldneſs of the Water; for it is acrid, ſtimulating, and, conſequently, heating: It may alſo contribute to cleanſe the Teeth of the Animal, when clog'd with the Gums of the Trees on which it feeds. Their Opinion is, therefore, falſe, who aſſert, that, in order to excite a languid Appetite, the Beaver, with its Foot, expreſſes the Caſtor from its Follicule, licks it, and ſwallows it down: It is alſo falſe, that the *Indians* anoint the Snares, which they uſe for-

for catching the Beavers, with it. In the *Mem. de l'Acad. Roy. des Sc. Anno* 1704. we are told, that, in *America*, they anoint with this Humour the Nooſes intended to catch the rapacious Animals which deſtroy the Beaver. The commonly received Opinion, that Caſtor, ſwallowed by the Beaver, ſerves to diſſolve and incide the Shreds of its Aliments, is conſidered in the *Commentarii Academiæ Scientiarum Petropolitanæ*. The Mind amuſes itſelf with curious Conjectures, when our Senſes do not enable us to make unexceptionable Experiments. But 'tis obvious, that the Conjecture is groundleſs, which ſuppoſes Caſtor to derive its Name from the Animal's caſtrating itſelf. When we come to inquire into the Origin of theſe two Errors, that theſe two Follicules are taken for the Teſticles, and that the Animal tears them from itſelf when hunted; the former ſeems to ariſe from this, that theſe Follicules or Bags are found in the Groins, where one would expect the Teſticles; and as for the Animal's tearing out any Part of its Viſcera, *Wepfer* thinks this Story firſt falſly invented by the Huntſmen, either becauſe they ſaw the Beavers, wearied by their Flight, lick their Groins, or becauſe they themſelves fraudulently ſtole the Caſtor as a precious Commodity, and endeavoured, under a Pretext of this Amputation, to impoſe upon their Maſters.

Various Parts of the Beaver are applied to different Purpoſes in human Life: The Skin, in conſequence of its Thickneſs, is an excellent Defence againſt the Winter Cold; but its Weight is ſo great, that it is rarely uſed for any other Part of Dreſs than Caps and Gloves. *Rondeletius* affirms, that it is highly beneficial to arthritic Patients to wear Shoes made of the Beaver's Skin. It is by no means probable, that this learned Author aſcribed any ſpecific antiarthritic Virtue to theſe Skins, farther than that they defended againſt the external Cold, and cheriſhed the native Heat; a Circumſtance highly beneficial to gouty Patients. Thus alſo, to whatever Parts of the Body the Beaver's Skin has been apply'd with Succeſs, the good Effects produced by it ſeem to be owing to its guarding againſt the Cold, and preſerving a due Degree of Heat. *Marius* informs us, that a Cap, made of the Beavers-ſkin, when worn, ſurpriſingly increaſes the Memory of the Patient, if every Month he anoints his Head and Spine with the Oil obtained from the Beaver, and twice a Year takes a proper Quantity of Caſtor; but the Man muſt have more Credulity than Philoſophy who can believe this; tho' the *Jew*, who communicated the Medicine to *Marius*, affirm'd that it was a Preſcription of the celebrated King *Solomon*. They who recommend the Hairs of the Beaver for ſtopping Hæmorrhages of the Noſe, and thoſe ſubſequent to Wounds, muſt ſuppoſe the Hæmorrhage ſlight, in which Caſe the Blood may be abſorb'd, and conſequently ſtop'd, by any ſoft Wool or Hairs whatever. The ſurpriſing Efficacy aſcrib'd by *Francus* to the Teeth of the Beaver, in various Diſorders, ſeems, in all Probability, to be derived from their abſorbent Quality, when reduced to a Powder; and, in this reſpect, they agree with the Teeth of other Animals. We ſhall not inſiſt on the medicinal Virtues aſcribed to the Urine, the Blood, the Runnet, or Gall of the Beaver, ſince they poſſeſs no Virtues but what may be expected from the ſame Parts of other Animals. Concerning its Fleſh, *Rondeletius* informs us, that it is hard, pinguious, reſembles Beef, but always ſmells ſtrong, generates bad Juices, in whatever manner prepared, and that it is beſt when roaſted, with Aromatics ſprinkled upon it. According to *Sebizius*, the Huntſmen prefer the poſterior to the anterior Part of the Body. The ſame Author afterwards ſubjoins, that the Tail is accounted a delicate Diſh, and is principally uſed during *Lent*, when the Catholics may alſo eat the Fleſh of the Beaver. It is variouſly prepared by Cooks, and dreſs'd with different Sauces, in order to render it grateful to the Palate. It generates a thick, tough, and phlegmatic Juice, is of difficult Digeſtion, and, in conſequence of its being pinguious, relaxes the Stomach, and creates a Loathing when eaten plentifully. According to *La Hontan*, in his *Nouveaux Voyages dans l'Amerique Septentrionale*, the Inhabitants of *Canada* account the Tail a delicious Diſh; and *Bellonius* informs us, that the Inhabitants of *Lorrain* uſe it during *Lent*, becauſe, when well prepared, the Taſte of it almoſt reſembles that of a Lamprey. *Wormius* to the Tail adds the poſterior Legs; and *Geſner*, according to *Aldrovandus*, thinks that theſe Parts are to be prepared in the ſame manner Eels are. *Francus* informs us, that for Food the poſterior Parts of the Animal ought to be pickled in black Broth; but that the anterior Parts are to be macerated for ſome Days in Vinegar, and then boiled, after which they make an excellent Diſh: Or, ſays he, they may be roaſted on a Spit, when ſtuck with Lard, Cloves, and Lemon-peel. But he directs the following Preparation of the Tail: After ſeparating the firſt Skin by boiling Water, it is boiled, together with the Feet, for two or three Hours, or till it becomes white, and the ſecond Skin is ſeparated; after which the Tail is to be cut in Slices, and fry'd with White-wine, Ginger, Pepper, Cinnamon, Currans, Almonds, and Saffron. But, among all the various Parts of the Animal, none is ſo juſtly celebrated, nor ſo univerſally uſed, as what we call Caſtor, which is an oleous Subſtance, reſembling a Mixture of Wax and Honey, of a dark Colour, of a ſtrong and fetid Smell, of a bitteriſh and nauſeous Taſte, and found in two Bags or Follicules, ſituated in the Groins of the Beaver. This Subſtance is capable of being diſſolved in ſpirituous, oleous, and aqueous Menſtruums. It ſeems to conſiſt of oleous and ſaline Parts, which have an earthy Principle join'd to them. It even ſeems to be a Species of Sal Volatile Oleoſum, in which a large Quantity of earthy Parts are mix'd. It is imported from various Countries, but in the largeſt Quantities from *Poland*, *Ruſſia*, the *Eaſt* and *Weſt Indies*. That imported to *Dantzick* from *Poland*, *Ruſſia*, and *Pruſſia*, is generally accounted the beſt, and is commonly called *Dantzick Caſtor*. In the *London* and *Edinburgh Diſpenſatories*, where-ever Caſtor is to be uſed, that of *Ruſſia* is preſcrib'd. This is equal'd in Goodneſs by that which is obtain'd from the Beavers of the River *Roan* in *France*, and which is often ſold for that of *Dantzick*. That of *Canada* is accounted the worſt, becauſe it is almoſt void of Smell, and that which it diffuſes is ungrateful: Hence many, erroneouſly, believe it to be adulterated. But that which is imported from the *Eaſt Indies* is preferr'd to all the other Species of Caſtor. *Alb. Seba*, in his *Deſcriptio Rerum naturalium*, reckons the *Siberian* Caſtor beſt; and the other Species ſucceed it in the following Order: The *Norwegian*, the *Swediſh*, and the *Polonian*; but that of *Canada* is, of all others, the worſt for medicinal Purpoſes. But, whatever Country it is imported from, that is eſteem'd good which is taken from a full-grown Beaver, has a fetid and diſagreeable Smell, an acrid biting Taſte, a browniſh Colour, and a friable Texture: That which is unctuous and ſoft, is eſteem'd leſs valuable. According to *Dioſcorides*, it is adulterated by mixing Gum Ammoniac and the Blood of the Beaver with the Caſtor. According to *Matthiolus* on *Dioſcorides*, it is adulterated by triturating the Kidneys of the Beaver, and ſtuffing the Follicules with them. In the *Prolegomena* to the *Pharmacopœia Auguſtana*, we are inform'd, that it is frequently adulterated by cutting and bruiſing the Liver of the Beaver ſmall, and making it up with the oleaginous Juice of Caſtor; but that the Fraud may be diſcover'd by this, not only that the genuine Follicules ariſe both from one common Source or Beginning, but alſo from the firmer Conſiſtence and greater Bulk of the Lumps, than the natural Largeneſs of theſe Follicules will admit of: Beſides, the Smell, in this Kind, is not ſo ſtrong as in that which is genuine. But the Difficulty of diſtinguiſhing genuine from ſophiſticated Caſtor is greater than is commonly believed; for that is often thought adulterated, which, in reality, is not; becauſe the Diverſity of the Smell and Conſiſtence is often to be aſcrib'd to the Climate in which the Beaver lives, the Aliments it uſes, and its Age. Beſides, according to *Rondeletius*, in his *Hiſtoria Piſcium, Tom.* 2. Caſtor, when recent, reſembles an Oil; but, when older, it aſſumes the Colour and Conſiſtence of liquid Honey. But it is a groſs and palpable Sophiſtication, when Membranes, Pellicles, and Fibres, appear intermix'd with the Caſtor. The Caſtor is dried in its own Follicules for medicinal Purpoſes, that, the watery Part being diſſipated, its Smell may be the ſtronger; as alſo, that it may keep the longer without corrupting. It is better preſerved, when entire, than when reduced to a Powder. It may be dried in two manners; either in a Shade, according to *Geſner*; or in the Smoak, by hanging up the Follicules in a Chimney: This latter Method is generally uſed in the Shops. Without recounting all the fabulous Stories told of Caſtor, we ſhall confine ourſelves ſtrictly to its medicinal Uſes: What Notions, therefore, the Antients entertain'd of its Virtues, we learn from *Dioſcorides*, who aſcrib'd a heating Quality to it; and recommends not only the internal Exhibition of it, but alſo its external Uſe, by Smelling and Fumigation, for provoking the Menſes, expelling the Fœtus and Secundines; as alſo againſt Inflations, Gripes, Hiccoughs, Poiſons, Varices; and for rouſing lethargic Patients, however violent their Diſorder may be. He alſo affirms, that the internal Uſe of it, and Unction with it externally, are ſerviceable in Tremors, Convulſions, and all Diſeaſes of the Nerves. The ſame Sentiments are deliver'd by *Pliny*, at greater Length, in *L.* 32. *C.* 3. According to *Matthiolus* on *Dioſcorides*, *Galen* admitted both the internal and external Uſe of Caſtor in Diſorders of the Nerves; but, as it is of a heating and drying Quality, he informs us, that it is highly prejudicial in thoſe Convulſions which are produced by a Want of due Moiſture, or by Inanition. He alſo adviſes it to be abſtain'd from in Hiccoughs proceeding from Dryneſs, Evacuation, or the Stimulus of acrid Humours. But he aſcribes a ſingular Uſe to it, in Caſes where a moiſt Habit is to be dried, or a cold one invigorated, and render'd hot: Then he adds, "Nor does it prove hurtful to any "Part, eſpecially if the Patient is free from a Fever, or does "not labour under a very hot, but only a tepid one, ſuch as "generally attends a Cataphora and Lethargy. And I have, "to many, exhibited Caſtor, with white Pepper, of each two "Scruples, to be drank in Honey and Water; nor did any of "the Patients ſuſtain any Injury by it. In a Retention of the "Menſes, after a moderate Evacuation of Blood from the "Vein in the Ancle, I always found Caſtor exhibited with "Penyroyal, or Calaminth, an effectual Emmenagogue, with-

"out

" out hurting the Patient. It alſo evacuates the Lochia; and " for all theſe Purpoſes it is to be drank in Honey and Water. " But by Patients, whoſe Abdomens are ſo diſtended, as ſcarce " to admit of a Cure, by ſuch as labour under Gripes, or a " Hiccup, proceeding from cold viſcid Humours, or thick and " flatulent Spirits, the above-mentioned Ingredients are to be " moſt advantageouſly drank in Oxycrate. As Caſtor is bene- " ficial, exhibited internally, ſo it is advantageous, when ap- " ply'd externally with Sicyonian, or old Oil. It ought by it- " ſelf to be rub'd into thoſe Parts which ſtand in need of a " greater Degree of Heat. The Steam of it, when laid upon " Coals, is alſo beneficial in moiſt and cold Diſorders of the " Lungs, if drawn in in Inſpiration. But it is better in Le- " thargies and Cataphoras, accompanied with a Fever, not " to uſe any of the above-mentioned Oils, but rather to " anoint the Head and Neck with Oil of Roſes." *Paulus Ægineta*, in *Lib.* 7. *Cap.* 3. more conciſely delivers the ſame Sentiments. *Alexander Trallian*, above all other Medicines, recommends Caſtor to lethargic Patients, in *Lib.* 1. *Cap.* 14. where he makes the following Obſervations. If the Diſorder is malignant and inveterate, ſhave off the Hair, and anoint the Head with ſuch Subſtances, as may exaſperate and vellicate the Skin, in Conjunction with Caſtor. Let the Patient alſo have a Draught, in which Caſtor is an Ingredient. Let theſe Meaſures be taken an Hour before the Acceſſion; for it attenuates, heats, and cheriſhes the Body, which was become cold, and almoſt dead. I know, ſays he, many labouring under a Lethargy, who, by this Remedy alone, have eſcap'd Death. It is alſo beneficial, when exhibited by itſelf; but it is ſtill more ſo, in Conjunction with Oxymel. If the Patient is full of recrementitious Humours, it ought to be exhibited with ſome purgative Medicines, eſpecially Scammony. But one Scruple of Scammony, or a little more or leſs, according to the Strength of the Patient, is a ſufficient Quantity for two Scruples of Caſtor. *Hippocrates de Morb. Mul. Lib.* 1. among other Medicines, recommends Caſtor for promoting the Purgations of Child-bed Women; and in his Book *de Natura Muliebri*, he recommends it for provoking the Menſes. In his Treatiſe *De Morb. Mul. L.* 1. he preſcribes it for expelling the Fœtus. Hence in his Work *De Morb. Popul.* he affirms, that Caſtor allays Pains of the Head ariſing from the Uterus, becauſe it removes thoſe Diſorders of the Uterus, that is, Suppreſſions of the Menſes, which are generally accompanied with Head-akes. That among the antient Phyſicians the Empirics made frequent Uſe of Caſtor, may be ſeen in the Preface. *Actuarius*, in his *Meth. Medend. L.* 6. *C.* 9. informs us, that Caſtor is a powerful Remedy in all inveterate Diſorders. *Vegetius*, *L.* 3. *C.* 24. ſays, that in his Days the Farriers uſed the Powder of Caſtor internally, mix'd with Clyſters, and in Ointments, for Cattle ſeiz'd with Spaſms of the Nerves. From what has been ſaid, 'tis ſufficiently evident, that the Antients acknowledg'd the heating Quality of Caſtor. This ſeems to be evident, from *Hippocrates*, *Epidem. L.* 5. where we have an Account, that the Wife of *Aſpaſius*, in a violent Pain of her Teeth and Jaw, perceived her Pain mitigated by keeping Caſtor and Pepper in her Mouth. Now 'tis known, that acrid, heating, and almoſt cauſtic Subſtances, generally prove beneficial in Caſes of this Nature. This ſame Doctrine is confirmed by this, that, according to *Aldrovandus*, *Avicenna* affirms a Mixture of Sweet-flag and Pepper to be an excellent Succedaneum to Caſtor; and ſays, that a Dram of Caſtor, mix'd with Wine, is an excellent Medicine, where ſtimulating Subſtances, and ſuch as put the Humours in a Commotion, are requir'd, in order to expel the Poiſon convey'd by the Bites of venomous Animals. The Diſorders againſt which Caſtor is uſed by the Moderns, are at Length recounted by *Ettmuller*: He, therefore, recommends it in painful Diſorders of the Nerves and Head; in Dulneſs of the Senſes; in Lethargies, and drowſy Diſorders; in Palſies, and Apoplexies; in Epilepſies, and all convulſive Diſorders, whether external or internal; as alſo in Aphonies and Vertigos; and the Reaſon he aſſigns for its Efficacy in theſe Caſes is, that it rouſes the torpid and languiſhing animal Spirits. He alſo aſſerts, that it is an excellent carminative Medicine in flatulent Colics, hyſteric Diſorders, and the Fits with which they are attended. He recommends it likewiſe in Caſes where the Primæ Viæ are loaded with peccant Acids; in a Tinnitus Aurium; in a convulſive Aſthma; in Epilepſies, ariſing from Diſorders of the Uterus; and in other Indiſpoſitions of that Organ; but more particularly for expelling the Fœtus and Secundines; provoking the Menſes, when either entirely ſuppreſs'd, or flowing with Difficulty; and various Diſorders of the Abdomen; for alleviating the Pains of Women after Child-birth; and for evacuating the Lochia. He alſo thinks, that Caſtor is ſingularly beneficial, not only as a Preſervative againſt Small-pox, Meaſles, and exanthematous Diſorders, but alſo in promoting their Eruption. He affirms, that nothing is more conducive to the Cure of lethargic Diſorders than Caſtor, when a Vomit is previouſly exhibited, or when it is taken with proper Purgatives, ſuch as Scammony. Externally, according to the ſame Author, a Sponge dipt in Vinegar, in which Caſtor is diſſolv'd, and apply'd to the Noſtrils, rouſes lethargic Patients, and thoſe who are rendered drowſy by the narcotic Steams ariſing from Coals, Ale, or Wine-cellars. In Palſies, griping and flatulent Pains of the Abdomen, ſuch as the Colic, and in hyſteric Diſorders, it is frequently apply'd externally to the Parts affected. Hence alſo it is generally added to thoſe Clyſters intended to ſtimulate and make a Revulſion in apoplectic and epileptic Diſorders. In a Tinnitus, and the like Diſorders of the Ear, it is an excellent Remedy, if wrapt up in Cotton, and introduced.

Rondeletius, in his Book *De Ponderibus*, affirms, that Caſtor is an excellent Remedy in the moſt violent Diſorders of the Ears. *Hoffman*, in his *Clavis Schrod.* recommends the following Medicine in Spaſms, and aſſures us, that it will not diſappoint the Hopes of the Phyſician.

> Take of the beſt Wine burnt, half an Ounce, and infuſe in it two Drams of Caſtor cut down. The Method of uſing this Remedy is to anoint the Spine with it.

According to the ſame Author, Water diſtil'd from Swallows, with an Addition of Caſtor, is of ſingular Service when apply'd externally in a Tremor of the Parts. *Borelli*, in his *Obſervat. Medico-phyſicæ*, *Cen.* 1. *Obſ.* 52. affirms, that the above-mentioned Mixture, recommended by *Trallian*, of Scammony and Caſtor, exhibited in two Doſes, and drank in Oxymel, exerts the deſired Effect in the Cure of a Lethargy. And *Foreſtus*, in his *Obſervat. Medic. L.* 10. *Obſ.* 92. *in Schol.* aſcribes a ſurpriſing Efficacy to Caſtor, in Palſies of every Kind. In the *Acta Medicorum Berolinenſium*, *Dec.* 2. *Vol.* 10. we are told, that Caſtor is a Medicine ſingularly powerful in the Cure of Diſeaſes incident to Women. But *Hoffman*, in his Treatiſe *De prudenti Virium Medicamenti Exploratione*, tells us, " That " for ſeveral Ages paſt Caſtor has been thought an antihyſteric " Specific, as if in a Moment it ſooth'd and quell'd the Com- " motions of the Uterus. But," continues he, " if this Re- " medy was poſſeſs'd of ſuch ſignal Virtues, why does this Diſ- " order prove ſo obſtinate and chronical, as to afflict the miſe- " rable Patients for ſeveral Years? It is certain, that by the " Subtilty of its Effluvia, and its lenitive ſulphureous Quality, " it ſooths the Spaſms, and conſequently alleviates the Pains: " But this happy Effect laſts only for a ſhort time; for it by no " means removes the Cauſe, which is deep-ſeated in the Nerves, " and particularly rooted in the Hypochondria; ſo that quite " different Meaſures are to be taken, if we would remove this " obſtinate Diſorder." From what has been ſaid, we ſee the Antients recommended Caſtor in the ſame Diſorders for which the Moderns preſcribe it; for it conſiſts of ſtimulating, and conſequently heating and drying Parts, and is of an alcaline Nature. It therefore appears to be a Remedy excellently adapted to the Cure of thoſe cold Diſeaſes which ariſe from Acidity, too great a Relaxation of the Solids, and a languid State of the pituitous Humours. But where the Veſſels require an additional Stimulus, and where Obſtructions, ariſing from the preceding Cauſes, call for inciding and reſolving Medicines, Caſtor proves an excellent Remedy. For this Reaſon it is beneficial in Cachochymies, and hypochondriac and hyſteric Diſorders, which depend upon the languid State of the Veſſels, and circulating Fluids. But Caſtor proves prejudicial to Patients for whom heating Medicines, and ſuch as increaſe the Motion of the Fluids, are improper. So far is it from being beneficial to all Patients promiſcuouſly, who labour under the ſame Diſeaſe. Hence 'tis obvious in what Senſe it may be call'd cephalic, antipoplectic, antiepileptic, antiparalytic, carminative, uterine, antihyſteric, antihypochondriac, nervous, arthritic, and antiſpaſmodic. According to *Stenzelius*, in his *Toxicologia*, Caſtor is neither an uterine, nor an antiſpaſmodic Specific, but a reſolvent antiacid Medicine, equally beneficial to Men and Women, who labour under preternatural Relaxations of the Solids, or an acid and ſerous Dyſcraſy. From theſe Conſiderations we are to account for the various Effects, ſometimes ſalutary, and ſometimes hurtful, produc'd by the promiſcuous Uſe of Caſtor in Diſorders of the Head, Uterus, and Inteſtines. *Hippocrates* is, therefore, to be underſtood in a limited Senſe, when in the ſeventh Book of his Epidemics he tells us, that Caſtor removes Pains of the Head ariſing from Diſorders of the Uterus. *Hoffman de Remed. benign. Abuſu*, tells us, that not only Phyſicians, but the common People, and Nurſes, know how celebrated a Medicine Caſtor is, ſince in all convulſive and ſpaſmodic Diſorders they have recourſe to it as to an infallible Arcanum. It is well known, that a promiſcuous and indiſcriminate Exhibition of the Preparations of Caſtor has produc'd very unlucky Conſequences. Thus they have been known exhibited in hyſteric Diſorders, where, indeed, by their Means, the Cardialgia and Spaſms of the Præcordia at firſt ſeem'd to be diminiſh'd, but they continued the longer. But as ſoon as the *Primæ Viæ* have, by mild and balſamic Laxatives, been clear'd of the peccant Load of Humours, the Pains have forthwith ceas'd. It is alſo known, that Caſtor, exhibited frequently and copiouſly to Women in Child-bed, has left a conſiderable

Torpor of the Head, and render'd their Sleep uneasy and turbulent. Since, from what has been said, 'tis obvious, that those are in an Error who seek for a specific Virtue in Castor, not only against the Diseases of Women, but also against any Disorders whatever, and since 'tis certain, that the unseasonable Exhibition of this Medicine has produced rather bad than good Effects in the human Constitution, we must conclude, that *Zwelfer* runs counter to Experience, when in the *Pharmacopœia Regia* he asserts, that the Smell and external Applications of Castor are beneficial to hysteric Women; but that this Medicine rather proves hurtful, when exhibited internally. *Hoffman*, in his *Clavis Schroder.* affirms, that *Zwelfer*'s Assertion is contradicted by Experience, since 'tis certain, that in hysteric, or rather hypochondriac Fits, nothing is more efficacious than Castor, both internally and externally used. But each of these Authors may have had Experience on his Side; for hysteric Fits, or spasmodic Contractions of the Uterus, are remov'd by Substances, whose Smell is fetid, and disagreeable to Nature. Castor, apply'd to the Nostrils in the Paroxysm, performs its Office, by deriving the Spirits from the Part contracted. Nor in this Case can the Use of Castor be said to be hurtful to those, for whom the Use of heating Medicines internally would be improper, since the Stimulus convey'd to the Nerves by the Smell lasts little longer than the immediate Application of the Medicine. But if Castor was internally exhibited to such Patients, it would prove hurtful, by rarefying the Humours too much, throwing them into Commotions, and producing dangerous Evacuations of Blood, by which *Francus*, according to *Marius*, in his *Castorologia*, observ'd Abortions to be caus'd. From Cases of this Kind *Zwelfer* probably drew his Sentiment, that Castor was prejudicial to hysteric Patients. It were to be wish'd, that he had wrote less generally; since, when speaking of the *Pilulæ de Cynoglossa anodynæ*, he leaves out the Castor; because, says he, "It is a Composition intended not for one Disorder, or for hysteric Affections alone, but for many other Diseases, in which Castor is improper. such as an immoderate and too long continued Discharge of the Menses, in which Case Castor rather does Harm than Good." In the mean time, when Women, subject to hysteric Fits, suffer by a languid and inactive Mucus, the internal Use of Castor is not altogether improper for them; for, as we have already observ'd, it is an excellent Remedy in Diseases arising from a cold Cause, by stimulating, heating, and resolving. Besides, *Bartholine de Medicina Danorum Domestica* observes, that some Women are reliev'd by the Smell of Castor, who are injur'd by its internal Use. And according to *Schulzius*, in his *Prælectiones*, the illustrious *Stahl*, and the other Authors there quoted, every-where almost condemn the internal Use of Castor. Besides the Methods of using Castor externally already related, it is also mixed with Ointments and Plaisters. It is also exhibited in Powders by way of Errhine. It is moreover exhibited internally in Powder, in Pills, sometimes in Electuaries, and in a liquid Form; in Essences, for Instance, and Spirits. The largest Dose is one Dram. Castor, according to *Marius*, in his *Castorologia*, is apply'd externally to the Head for strengthening the Memory, because it opens Obstructions, and by procuring a free Circulation of the Humours thro' the Vessels, assists the Secretion of the Spirits. Castor, according to the same Author, is used for destroying Lice; because either by its Smell, or its Acrimony, it kills them. This Medicine seems to be rank'd in the Class of Antidotes, because, by heating, it increases Perspiration, which is serviceable either by expelling the poisonous Matter, or by resisting the malignant Miasmata, and hindering them from easily insinuating themselves into our Bodies. Castor is said to correct Opium, because it infringes its Virtues; for, as has already been observ'd, it resists a Propensity to Sleep. It is mixed with Purgatives, in order to promote their Operation, and with a View to incide and evacuate thick Phlegm; for when exhibited by itself in a pretty large Dose, it operates as a Purgative. But the principal Use of Castor, when mix'd with Cathartics, is to moderate the Virulence of the more drastic Sorts, and to make them act with less Violence. Thus Castor, mix'd with white Hellebore, renders its Operation, both as an Emetic and Cathartic, much milder than it is without it.

Avicenna and *Matthiolus* agree, with some other Authors, that Castor, when grown old, black, and putrid, becomes poisonous, insomuch that it brings on Madness, attended with a swell'd Tongue, and a raging Fever, which frequently puts an End to the Patient's Life in one Day. The Remedies for this Disorder are, to provoke Vomiting by plentiful Draughts of Hydromel and Butter; and afterwards to take Diamoron, or Juice of Lemon or Citron with Sugar. The parch'd Seeds of Coriander, taken in the Quantity of two Drams, are also recommended as an Antidote to this Poison.

If we reflect, that when Castor, which is an unctuous animal Substance, putrefies, it must necessarily grow rancid, alcaline, and highly acrimonious, we shall have some Reason to believe, that, thus circumstanc'd, it may act as a Poison; and, in such a Case, it seems, that Acids, together with Substances capable of obtunding such an Acrimony, as Butter, should be a proper Remedy. Hydromel, therefore, and Butter, with the Acids mentioned above, appear, in this Case, to be capable of doing much Service.

The Axungia Castorei is a soft unctuous Substance, contain'd in two Bags situated just below the Follicules which contain the Castor. It is esteem'd emollient and penetrating, and consequently proper in Cases where indurated Substances are to be soften'd, and Obstructions open'd. For this Reason, according to *Ettmuller*, it is used in Disorders of the Brain, in Palsies, and the Atrophies arising from them; in Tremors of the Joints, and other painful Disorders of the Nerves; for these Intentions the Parts affected are anointed with it. For the same Reason the Abdomen is order'd to be anointed with it in convulsive Disorders, Colics, hysteric Fits, and Gripes after Childbirth. In the *Memoires de l'Academie Royale des Sciences*, for the Year 1704. we are inform'd, that the *Indian* Women anoint their Hair with it by way of Ornament.

Spirit of Castor.

Take the best *Russia* Castor, four Ounces; Flowers of Lavender, one Ounce; of Sage, Rosemary, each half an Ounce; Cinnamon, six Drams; of Mace and Cloves, each two Drams; Spirit of Wine, three Quarts: Digest, and draw off the Spirit in a Retort with a Sand-heat.

This is exactly in the former Dispensatory of the College; and is a much better Medicine for many Purposes, than the Tincture of Castor, because it is much pleasanter in taking, both to the Sight and Taste, but it is not so much used. It is also better for the Aromatics, which make it an extraordinary Cephalic, and good in all Distempers whose Seat is upon the Nerves; unless in hysteric Cases, and then the Tincture may be preferable, because it is most fetid. This Spirit may be given from five to thirty or forty Drops in any convenient Vehicle, either to Children in Convulsions of any Kind, or to grown Persons in Epilepsies, Palsies, Head-akes, and all Complaints from the same Origin; and, according to the Exigence of the Case, it may be repeated two, three, or four times a Day.

Tincture of Castor.

Take *Russia* Castor, half an Ounce; Spirit of Castor, half a Pint: Let them digest ten or twelve Days; then decant the clear Tincture, and keep for Use.

The Remainder, which is thick, of this Tincture, may be kept for the compound Bryony-water; as indeed may all the Skins, and membranous Parts, which are left in powdering, making proper Allowance for Strength. There are few so honest to make this with the Spirit of Castor, but generally do it with Spirit of Wine. It is good in all Intentions as the Spirit, and given in the same Doses; but it is somewhat more unpalatable, and gives any aqueous Vehicle a disagreeable milky Hue. *Quincy's Dispensatory.*

The *Tincture of Castor*, in the *Edinburgh Dispensatory*, is prepared in a somewhat different manner from the preceding, and is order'd to be made thus:

Take of *Russia* Castor, an Ounce and an half; Salt of Tartar, two Drams; rectified Spirit of Wine, a Pint: Digest them together, in a gentle Heat, for four Days; and afterwards strain off the Tincture.

The Addition of the Salt of Tartar is here well suited to unlock the resinous Texture of the Castor; by which means the Menstruum will take up much more of the Ingredient than otherwise; and not leave so large a Bottom, as when Spirit of Castor, if ever that be applied for this Purpose, or Spirit of Wine alone, is used to extract the Tincture.

Compound Oil of Castor.

Take of Castor, Storax, Galbanum, Euphorbium, Opopanax, Cassia-wood, Saffron, Carpobalsam or Cubebs, Spikenard, and Costus, of each three Drams; Cyprus, Schœnanth, long and black Pepper, Savine, and Pellitory, of each two Drams and an half; of ripe Oil, four Pounds; of Canary, two Pounds: Boil all these, excepting the five first, after due Preparation for that Purpose, gently in the Oil and Wine, until the Wine is evaporated. In the mean while dissolve the Galbanum, Opopanax, and Euphorbium, first beaten small, in Part of the same Wine, which is to be kept on Purpose. After they are strained, let them be carefully mixed, by putting them to the Oil pressed out, and standing over the Fire, deliberately while hot, and briskly stirring them about with a wooden Spatula. Lastly, stir in the Storax and Castor powdered.

This

This is aſcribed to *Jacobus de Manlitis*, and is in the *Auguſtan* and firſt Diſpenſatory of the College; but this ſomewhat varies, both in the Proportions of Ingredients, and in the Manner of Preparation, yet the Alterations are of no great Conſequence, eſpecially as the Compoſition hath of late been but little, if ever, wrote for, or made.

Castor Pills.

Take *Ruſſia* Caſtor, one Dram, Salt of Amber, half a Dram, Balſam of Peru, a ſufficient Quantity to make into twenty-four Pills.

Theſe are good in all nervous Diſtempers in either Sex, whether the Origin be in the Head or Uterus: Five may be taken two or three times in a Day, and continued as there is Occaſion. *Quincy's Diſpenſatory.*

CASTRATIO. Caſtration.

The Buſineſs of our Art is to reduce Bodies from a preternatural to their natural Senſe; but Caſtration profeſſes the contrary. However, becauſe we are ſometimes compel'd by our Superiors againſt our Will, to perform this Operation, we ſhall here very briefly give ſome Directions how it may be done. There are two Ways of Caſtration, one by Colliſion or Cruſhing, and the other by Exſection. The firſt is performed on Infants, who are placed in a Veſſel of warm Water, in order to relax their Bodies; which being ſufficiently done, the Teſtes are compreſſed and cruſhed with the Fingers, till they are quite diſſolved, and are no longer perceivable by the Touch. In the Method by Exſection, the Child is placed on a Table in a reclining Poſture, when the Surgeon takes hold of the Scrotum, together with the Teſtes, with his Left Hand, and having diſpoſed them in a right Situation, he makes two ſtrait Inciſions with a Knife, one near each Teſticle; the Teſtes ſtarting forth, he firſt ſtrips them of their Integuments, and then cuts them off, leaving only a very ſmall Continuity of the natural Veſſels. This Method is preferable to Colliſion; for thoſe who have ſuffered Caſtration by Colliſion are ſometimes inclined to libidinous Embraces, ſome Part of the Teſtes, as it is probable, remaining after Colliſion. *P. Ægineta, Lib.* 6. *Cap.* 68.

The Operation of Caſtration was formerly, in *Europe*, much more frequent than at preſent; but, in the *Eaſt*, it is yet much in Vogue, either as a Puniſhment, or for the Convenience of great Men, whoſe Jealouſy will not permit Perſons poſſeſſed of their Virility to approach their Women.

Some there have been, whoſe Profuſion of Enthuſiaſm, and Minuteneſs of Underſtanding, have prevailed on them to undergo this Operation voluntarily, thereby paying no great Compliment either to their Continence or Religion. *Origen* is ſaid to have been one of theſe; but I hope it is not very likely, that our modern Devotees ſhould follow his Example, who ſeem to be neither more nor leſs attached to Pleaſures, than their leſs oſtentatious Neighbours.

At preſent Caſtration is never performed, unleſs in the utmoſt Exigence; generally when an incurable cancerous Diſorder in the Teſticle, or a Sarcocele, renders its Extirpation indiſpenſably neceſſary.

Mr. *Sharp* has given a diſtinct Account of the Method of performing this Operation in a Sarcocele, and has taken Notice of ſome Circumſtances neceſſary to be conſidered, in order to form a Judgment when it is proper to be perform'd, and when not. *Le Dran* has, alſo, given a remarkable Caſe relative to this Subject.

But before I proceed to give a farther Account of Caſtration, I muſt remark, that *Ætius, Tetrabibl.* 4. *Serm.* 1. *C.* 122. informs us, that Caſtration ſtops the Progreſs of a Leproſy; and, upon the Authority of *Archigenes*, that Eunuchs are ſeldom ſeiz'd with this filthy Diſtemper. If the laſt related Circumſtance is true, it lays a Foundation for a Suſpicion, that the antient Leproſy is more nearly ally'd, than is generally allow'd, to the Pox of the Moderns.

This is one of the moſt melancholy Operations in the Practice of Surgery, ſince it ſeldom takes Place but in Diſorders, into which the Patient is very ſubject to relapſe, *viz.* thoſe of a Scirrhus, a Cancer; for under moſt of the Symptoms deſcribed as rendering it neceſſary, it is abſolutely improper; ſuch as a Hydrocele, Abſceſs of the Teſtis, an increaſing Mortification, or what is ſometimes underſtood by a Sarcocele; of which laſt it may not be amiſs to ſay a Word. In the utmoſt Latitude of the Meaning of this Term, 'tis receiv'd as a fleſhy Swelling of the Teſticle itſelf, call'd likewiſe Hernia Carnoſa; or in ſome Inlargements, ſuch as in a Clap, more frequently Hernia Humoralis; but, generally ſpeaking, is conſidered as a fleſhy Excreſcence, form'd on the Body of the Teſtis, which becoming exceedingly hard and tumefied, for the moſt part, is ſuppoſed to demand Extirpation, either by burning away the Induration, or amputating the Teſticle: But this Maxim, too precipitately received, has, I apprehend, very much miſguided the Practitioners of Surgery.

In order to conceive better of the Diſtinction I am going to make, it muſt be remembered, that what is called the Teſticle, is really compoſed of two different Parts; one glandular, which is the Body of the Teſtis itſelf; and one vaſcular and membranous, known by the Name of Epididymis, which is the Beginning of the Vas Deferens, or the Collection of the Excretory Ducts of the Gland.

Now it ſometimes happens, that this Part is tumefied, independent of the Teſticle, and, feeling like a large adventitious Excreſcence, anſwers very well to the Idea moſt Surgeons form of a Sarcocele; but not being aware of the different Nature and Texture of the Epididymis, they have frequently confounded its Diſorders with thoſe of the Teſticle itſelf, and equally recommended Extirpation in the Induration of one or the other. But without tiring the Reader, ſays *Sharp*, with particular Hiſtories of Caſes relating to this Subject, from diligent Inquiry I have collected, that all Indurations of the glandular Part of the Teſticle, not tending to Inflammation and Abſceſs, generally, if not always, lead on to Scirrhus and Cancer; whereas thoſe of the Epididymis ſeldom or never do. It is true, in ſpite of internal or external Means, theſe laſt often retain their Hardneſs, and ſometimes ſuppurate, but without much Danger in either Caſe. 'Twill not be hard to account for this Difference of Conſequences, from Tumors of ſeemingly one and the ſame Body, when we reflect, how much it is the Nature of cancerous Poiſons to fix upon the Glands, and how different the Epididymis is from a Gland, tho' ſo nearly in the Neighbourhood of one.

I would not have it ſuppoſed from what I have ſaid, that the Epididymis never becomes cancerous; I confeſs, ſays he, it may, ſo may every Part of the human Body: But I advance, that it rarely or never is ſo, but from an Affection of the glandular Part of the Teſticle firſt, which indeed ſeldom fails to taint, and by degrees to confound it in ſuch a manner, as to make one Maſs of the two.

Before we caſtrate, it is laid down as a Rule to inquire, whether the Patient has any Pain in his Back, and in that Caſe to reject the Operation, upon the reaſonable Preſumption of the ſpermatic Veſſels being likewiſe diſeaſed; but we are not to be haſty in this Determination; for the mere Weight of the Tumor, ſtretching the Cord, will ſometimes create the Complaint. To learn the Cauſe, then, of this Pain in the Back, when the ſpermatic Cord is not thickened, let your Patient be kept in Bed, and ſuſpend his Scrotum in a Bag-truſs, which will relieve him, if diſorder'd by the Weight only; but if the ſpermatic Cord is thickened or indurated, which Diſeaſe, when attended with a Dilatation of the Veſſels of the Scrotum, is deſcribed by the *Latins* under the Name of *Ramex*, (though it is more now known by the *Greek* Appellations Circocele and Varicocele) the Caſe is deſperate, and not to be undertaken.

But ſuppoſing no Obſtacle in the way to the Operation, the Method of doing it may be this: Lay your Patient on a ſquare Table of about three Foot four Inches high, letting his Legs hang down, which, as well as the reſt of his Body, muſt be held firm by the Aſſiſtants. Then with a Knife begin your Wound above the Rings of the abdominal Muſcles, that you may have Room afterwards to tie the Veſſels, ſince, for want of this Caution, Operators will neceſſarily be puzzled in making the Ligature; then carrying it through the Membrana Adipoſa, it muſt be continued downwards, the Length of it to be in proportion to the Size of the Teſticle. If it is very ſmall, it may be diſſected away without taking off any Part of the Scrotum; but *Sharp* is not very fond of this Method, becauſe ſo much looſe flabby Skin is ſubject to form Abſceſſes afterwards, and very frequently grow callous. If the Teſticle, for Inſtance, weigh twenty Ounces; having made one Inciſion about five Inches long, a little circularly, begin a ſecond in the ſame Point as the firſt, bringing it with an oppoſite Sweep to meet the other in the inferior Part, in ſuch a manner as to cut out the Shape of an Oval, whoſe ſmalleſt Diameter ſhall be two Inches: After this, diſſect the Body of the Tumor, with the Piece of Skin on it, from the Scrotum, firſt taking up ſome of the Blood-veſſels, if the Hæmorrhage is dangerous. Then paſs a Ligature round the Cord, pretty near the Abdomen; and if you have Space between the Ligature and Teſticle, a ſecond about half an Inch lower, to make the Stoppage of Blood ſtill more ſecure. The Ligatures may be tied with what is called the Surgeon's Knot, where the Thread is paſſed thro' the Ring twice: This done, cut off the Teſticle a little underneath the ſecond Ligature, and treat your Patient as in other freſh Wounds.

Sharp ſays, he once caſtrated a Man, whoſe Teſticle weighed above three Pounds, where ſome of the Veſſels were ſo exceedingly varicous and dilated, as nearly to equal the Size of the humeral Artery; however, he took up two or three of the moſt conſiderable, and purſued the Operation, cutting away near Three-fourths of the Skin, by which means he avoided a dangerous Effuſion, as, by dividing the Veſſels before they were much ramified, he had fewer Ligatures to make:

make: The Succeſs anſwered the Deſign, and the Patient ſurvived the Operation and Healing of the Wound; but the cancerous Humour, falling on his Liver ſome time after, deſtroy'd him. In large Tumors, ſuch as the laſt-mentioned, it is very much to be advis'd to cut away great Part of the Skin; for, beſides that the Hæmorrhage will be much leſs in this Caſe, and the Operation greatly ſhortened, the Skin, by the great Diſtention, having been render'd very thin, will, great Part of it, if not taken away, ſphacelate, and the reſt be more prone to degenerate into a cancerous Ulcer.

It may be obſerv'd, ſays our Author, I do not, in order to avoid wounding the ſpermatic Veſſels, recommend pinching up the Skin before the Inciſion, and afterwards thruſting the Fingers between the Membrana Adipoſa and the Teſticle, to tear the one from the other; the firſt is not dextrous, and the other is cruel; and both of them, in *Sharp*'s Opinion, are calculated to prevent what there is little or no Danger of. *Sharp.*

Authors ſay, that when the ſpermatic Veſſels are ſwelled above the Ring of the Muſculus Obliquus in a Sarcocele, Caſtration ought not to be performed. This Law ſhould not be general; for we have ſeen many who have been cured by making a Ligature higher than the Ring, when the ſpermatic Veſſels were neither ſtuffed nor ſwelled above it. It depends upon a Number of Obſervations to inſtruct us, and to ſtate how far we may carry our Ligature with Safety.

Since we can trace the ſpermatic Veſſels, between the Coats of the Peritonæum to their Origin, we have Permiſſion, I think, ſays *Le Dran*, to make the Ligature above the Swelling, be it as high as it will. But two Things require a particular Attention: Firſt, if the Ligature is made very high, an Inflammation of the Peritonæum, and conſequently of the whole lower Belly, muſt be apprehended after the Operation, which deſtroys the Patient. Secondly, if the Swelling of the ſpermatic Veſſels extends very high, ſuppoſe the Patient recovers by the Operation, he periſhes ſome time after, becauſe that Part of the ſpermatic Veſſels which remains ſound, will tumefy in the End, and render the Diſtemper incurable. Mr. *Marechal* told us at the Hoſpital, that he had often ſeen it, and this is to the Purpoſe of our preſent Patient. The following Obſervation may be of ſome Uſe in parallel Caſes.

On the 6th of *April* 1726. a Man was brought to the Hoſpital, who had the Right Teſticle and the ſpermatic Veſſels very much tumefied for nine Months, at which Time his Diſtemper began, as he ſaid, by a Strain. This Teſticle grew hard, and gradually increaſed, till it was bigger than a Man's Fiſt. The ſpermatic Veſſels were ſwelled above four Fingers Breadth beyond the Ring of the Obliquus Externus, and were as thick as a Man's Thumb.

To avoid performing an Operation which ſeemed to be dangerous, I ordered emollient Cataplaſms to be applied to it, for the Space of three Weeks, anointing the Teſticle, and ſpermatic Veſſels, with Unguentum Neapolitanum, and fomenting them with emollient Decoctions. Mr. *Burette*, Phyſician of the Hoſpital at that time, neglected no internal Medicines, that might diſſolve or mollify the Hardneſs; but all our Care was uſeleſs. In three Weeks, I felt a Fluctuation in the Body of the Teſticle, which I opened, in Hopes that, after the Evacuation of the Pus, the ſpermatic Veſſels might relax with greater Eaſe. I found about an Egg-ſhell full of purulent Seroſity, ſcattered between the Teſticle, and the Membranes of the Scrotum, and white Pus formed in the Body of the Teſticle. The Wound was dreſſed the firſt time after the uſual Method, and the Cataplaſms were continued.

The Tumefaction of the ſpermatic Veſſels diminiſhed one Half, but the Wound took an ill Turn, a Fungus ariſing within it in the Shape of a Carcinoma; a Fungus in which the Body of the Teſticle was incloſed. Mr. *Marechal* being come to the Hoſpital, Meſſieurs *Guerin*, *Gerard*, and *Morand junior*, came with him, and examining the Diſtemper together, we concluded, that, ſince the Patient would certainly die, it was better to hazard an Operation, whoſe Event was uncertain, than ſuffer him to periſh without attempting the Cure; and therefore I performed it.

When I had divided the Ring, and the Muſcles of the Abdomen along the ſpermatic Veſſels, whoſe Magnitude diſcovered their Progreſs, I made a Ligature upon them, four Fingers Breadth above the Ring, as high as the Spine of the Os Ilion, where the Hardneſs ended.

The Patient being dreſſed, we examined that Part of the ſpermatic Veſſels I had taken off, which was as thick as a Man's Finger in its whole Extent, hard, and of different Colours, ſo that the Artery was not to be diſtinguiſhed from the Veins.

The Patient was twice bled the Day of the Operation, and again in the Night; but, notwithſtanding this, an Inflammation ſeized the Abdomen, with excruciating Pains, and he died on the ſixth Day.

I opened the Body, and found an inflammatory Inflation throughout the whole Abdomen, and the ſpermatic Veſſels varicous above the Ligature, but without Hardneſs.

REMARK.

This varicous Swelling may make us preſume, that if the Patient had fortunately recovered, the Remainder of the ſpermatic Veſſels might have grown hard in time; which Mr. *Marechal* declared he had ſeen ſeveral times. *Le Dran.*

CASTRENSIS, *στρατιωτικὸς, στρατευματικὸς*, military, or belonging to the Camp, is an Epithet of ſome contagious and epidemic Diſeaſes, eſpecially Fevers, mentioned by *Helmont de Febr. c.* 10. *n.* 7. and called by him, not improperly, *endemic*, in which the Patients ſuffer not ſo much from an Effervescence of Heat, as a malignant Crudity contracted from bad Diet, and an Abuſe of the Non-naturals. *Willis de Febr. c.* 14. reckons them among peſtilential Diſtempers. *Johan. Valent. Willius*, a *Daniſh* Phyſician, has wrote a Treatiſe expreſly on theſe Fevers, printed *Hafn.* 1676. *4to.*

CASUS. A very equivocal Word; ſometimes it ſignifies the ſame as *Symptoma*, *σύμπτωμα*, a Symptom; ſometimes it means any thing fortuitous, in which Senſe it is oppoſed to *Art* or *Providence*, and is called in *Greek* *τύχη*, or *τύχης ἔργα*, "Fortune, or a Work of Fortune;" it bears alſo the Senſe of the Word *αὐτόματον*, which is uſed by *Hippocrates de Arte*, and *Galen* in *Prognoſt. Hippoc.* and ſignifies *ſpontaneous*, or what happens without any Deliberation or Conſultation.

CASUS is alſo the ſame as *πτῶσις*, a Fall from an Eminence; in *Paracelſus Paragr. Lib.* 1. *Cap.* 13. it ſignifies *a preſent Diſtemper*; and, laſtly, it frequently means the ſame as an entire Hiſtory of a Diſeaſe, or empirical Obſervation, which is uſually called *Caſus Medicinalis*, a medicinal Caſe or Obſervation. *Caſtellus.*

CATABLEMA, *καταβλημα*, in *Hippocrates*, *Lib. de Artic.* is the outermoſt Fillet, which ſecures the reſt of the Bandage, as it is explained by *Galen* on the Place, and alſo in his *Exegeſis.*

CATACERASTICOS, *καταχερασικὸς*. The ſame as EPICERASTICOS, which ſee.

CATACHLOOS, *καταχλοος*, from *χλόη*, Graſs, or green Herb, is expounded by *Galen* in his *Exegeſis* *ἄγαν χλοώδη*, "of "a very green Colour." The Place he ſeems to regard, is in *Lib.* 7. *Epid. Cap.* 15. where *καταχλοα* is apply'd to *ὑποχωρήματα*, "Stools:" But it is to be obſerved, that, for *καταχλοα*, moſt read *καταχολα*, "very bilious." Thus alſo, inſtead of *γλισχρόχροα*, *Erotian* reads *γλισχρόχολα*, and *ὑδατόχολα* is often read for *ὑδατόχλοα* or *ὑδατόχροα.*

CATACHRESIS, *καταχρησις*. The ſame as ABUSUS, which ſee.

CATACHRISTON, *καταχριστὸν*, from *καταχρίω*, to anoint, in *Hipp. de Morb. Mul. Lib.* 1. is a Medicine apply'd by way of Unction.

CATACHYSIS, *κατάχυσις*, from *καταχύω*, to pour upon; an Affuſion. The Word is uſed by *Hippocrates*, 5 *Aph.* 21. where he ſays, that a plentiful *Affuſion*, *κατάχυσις*, of cold Water in the midſt of Summer, recals Heat into the Parts under a Tetanus, provided the Patient be young, and of a good Habit of Body.

CATACLASIS, *κατάκλασις*, from *κατακλάω*, to break, to diſtort, ſignifies Breaking or Diſtorſion in general, but is particularly ſpoken of the Eye. Thus *ἐπανάκλασις ὀμμάτος*, *Lib.* 6. *Epid. Sect. Aph.* 19. is explained by *Galen* to be an Affection of the Eye, *ὅταν διαστρέφηται τὰ βλέφαρα*, "when "the Eyelids are diſtorted" [See CAMPYLON]. And *καταγλάσιες τῶν ἄρθρων*, in the preceding Aphoriſm, ſignify Diſtorſions of the Joints, when they are not well adjuſted, but are either involuntarily contracted and interfolded, or relaxed and thrown abroad in a looſe and diſorderly manner. *Foeſius.*

CATACLEIS, *κατάκλεις*, Subclavicle, is a cartilaginous Bone, or the Cartilage ſeated where the Scapula joins with the Clavicle. *Galen Lib. de Oſſibus, Cap.* 14. ſays, it is only found in Man. In another Place, he calls it the firſt ſmall Rib of the Thorax. *De Diſſect. Muſc. Cap.* 12.

CATACLINES, *κατακλινὴς*, from *κατακλίνω*, to lie down as in a Bed. One, who, by reaſon of Weakneſs, and the Violence of a Diſtemper, keeps his Bed. The Word *κατακλινὴς* ſignifies the ſame as *κατεσκελιμένος*, *κλινήρης*, and *κλινοπετὴς*, *Clinicus*; and is oppoſed to *τὸ ὀρθοσάδην ἐνοχλεῖσθαι*, "to be "ſo gently ſick, as to be able to keep upon one's Legs." *Lib.* 1. *Epid.*

CATACLYSMA, *κατάκλυσμα*, from *κατακλύζω*, to waſh. The ſame as CLYSTER, which ſee.

CATACLYSMI, *κατακλυσμοὶ*, are Embrocations. *Cœlius Aurelianus*, in many Places, expounds *Cataclyſmi* by *Illiſiones Aquarum*, "Daſhings of Water."

CATACORES, *κατακορὴς*, in *Hippocrates*, ſignifies full, abundant, ſatiated; and, when apply'd to Evacuations by Stool, means purely or intenſly bilious. Thus *κατακορέστερα μᾶλλον τῆ κοιλίῃ*, *Lib. de Rat. Vict. in Morb. acut.* "(the Excre-

"ments)

" ments) are more bilious than they ought to be," or " co-" lour'd and ting'd with pure Bile to an immoderate Degree." And ſo *Galen* explains the Words by ἰκανῶς ἀχρὴς, χολώδη, τὰ πυῤῥὰν ἢ ξανθὴν ἔχοντα ἢ παχεῖαν χολὴν, " purely bilious " to an Exceſs, containing a red, yellow and groſs Bile." So, in *Coac.* τὰ καλαχρέα, expreſs'd alone, without the Addition of Humour or Colour, ſignify Excrements deeply ting'd with Bile, or purely bilious.

CATÆONESIS, καταίονησις, from καταιονέω, to irrigate; Irrigation, by a plentiful Affuſion of Liquor on ſome Part of the Body, which is uſed when the Patient is for ſome Reaſon obliged to abſtain from the Bath. It differs from Embrocation, as *Gorræus* ſays, only in that, after a *Cataeneſis*, we cover the Part with Wool or Linen, or ſome other Thing, which is not done after Embrocation.

CATAGLYPHE, καταγλυφὴ, from γλύφω, to cut in Wood or Metal. An Excavation, Hole, or Pit. The Word is uſed in *Hippoc. de Art. & de Morb.*

CATAGMA, κάταγμα, a Fracture, is defin'd by *Galen* a Solution of Continuity in a Bone. And, in his ſecond Commentary on *Hippoc. de Art.* he ſays, " That ἕλκος is a Solution " of Continuity in the Fleſh, as a *Catagma*, or Fracture, is of " that of a Bone; but when it happens in a Cartilage, there is " no proper Name for it; tho' *Hippocrates*, by a Catachreſis, " or Abuſe of the Name, improperly calls it alſo *Catagma.*"

CATAGMATICA, καταγματικὰ, from κάταγμα, a Fracture, are Remedies in Surgery for the Cure of Fractures.

CATAGOGE, καταγωγὴ, in *Hippoc. Lib. 7. Epid.* is what we uſually call Region, including the circumjacent Parts; as when he ſays μέσον δ' ὀμφαλοῦ καὶ χόνδρου καὶ ταύτην τὴν καταγωγὴν ἀπλωμένην τῇ χειρὶ τοιοῦτος παλμὸς ἦν, &c. " So great a " Palpitation might be felt about the Region of the Umbilicus " and the Chondrus," (the Cartilage of the Breaſt) &c.

CATALENTIA. A Word coin'd by *Paracelſus*, to ſignify a kind of Epilepſy. *Caſtellus.*

CATALEPSIS, κατάληψις, from καταλαμβάνειν, to occupy, detain, ſeize, or interrupt. This has many Significations. *Galen* uſes it to expreſs the Perception or Knowledge of a Thing, in which Senſe it was uſed by the *Stoics*. It alſo ſignifies the Retention of the Breath, ſuch as happens when a Perſon ſtrains in order to procure a Stool; or a Retention of any Humour which ought to be evacuated. Another Signification is, the Interception of the Blood in the Veins by Bandage, as it happens in making a Ligature, before Bleeding. It is alſo a Term belonging to Bandages, and imports a laying hold, or fixing of the Bandage to ſome particular Part, that the reſt of the Bandage may be retained.

But Catalepſis ſignifies a Diſtemper, which *Cælius Aurelianus* tranſlates *Apprehenſio*, and *Oppreſſio*, informing us, that *Hippocrates* and *Diocles* call'd it by the Name of *Aphonia*, and *Antigenes* by that of *Anaudia.*

Medicinal Writers are not agreed, whether the Catalepſis and Catoche are one and the ſame Diſorder, or different from each other. Some look upon the Catoche to be the ſame as the Coma Vigil; but moſt Authors, by Catoche and Catalepſis, underſtand the ſame Diſorder. But there is a manifeſt Difference betwixt the Catalepſis and a Tetanus; for in the latter all the Limbs are fix'd and immoveable, but in a Catalepſis they are indeed fix'd, but are eaſily flexible, and remain in whatever Poſition they are plac'd.

This Diſtemper occurs very ſeldom, and, as is ſaid, generally in Winters intenſely cold. The Fits ſeize the Patients at Intervals, and laſt for ſome Hours; tho' *Foreſtus* gives an Inſtance of one in a young Man, which continued for three Days.

It is ſeldom preceded by any Signs ſignificant of its Approach. *Henricus ab Heer*, however, tells us of a Monk, who, before the Attack of this Diſeaſe, was ſeiz'd with a Stiffneſs of his Neck; and *Foreſtus* relates the Caſe of a Prieſt, who previouſly perceiv'd a dull Pain in the poſterior Part of his Head.

Observation I.

In diſſecting Subjects who have died of a Catalepſis, we have found the larger Veins running ſtrait from the poſterior Part of the Head to the Sinciput, full of a coagulated thick Blood, and a ſerous Matter lodg'd in the poſterior Part of the Brain. And, indeed, the antient Phyſicians were of Opinion, that in this Diſorder the poſterior Parts of that important Organ were more particularly affected. *Galen*, in his Commentaries on the Prorrhetics of *Hippocrates*, makes Mention of a Schoolfellow, who ſurviv'd the Attack of this Diſorder; for Diſeaſes of every kind are ſometimes more, and ſometimes leſs violent. *Jacotius, Comm. ad Aphor. 7. Lib. 2. Coacarum.*

Observation II.

Secretary Vaſco, in the Decline of a Fever accompanied with a Flux, when a Diſcharge of well concocted Urine promiſed a certain Recovery, was ſeiz'd with a Catalepſis, of which he died in one Day's time.

Upon laying open his Body, his Lungs and Liver were found corrupted; a reddiſh kind of Serum was found in the poſterior Part of his Brain, and a coagulated Blood in the large Vein which runs along the Middle of the Head. *Scoliagraphus ad Caput 9. Lib. 1. Hollerii de Morbis intern.*

Observation III.

A certain Youth was firſt ſeiz'd with a gentle Fever, and afterwards with a Phrenitis and Catalepſis, upon which his Eyes became fix'd and rigid.

Upon opening his Head the Veins appeared varicoſe, and turgid with Sanies and black Blood. The medullary Subſtance of the Brain, which, in its natural State, is ſoft and friable, was become dry; and the Meninges were found exceſſively dry.

Observation IV.

A Merchant of *Liege* was put in Priſon by a Creditor; but, obtaining Bail, was ſet at Liberty, returned home, and indulg'd himſelf in an Exceſs of Melancholy. A few Days after, he was ſeiz'd with an acute Fever, which, however, was not accompany'd with a Delirium. When the Fever left him, being ſeized with a ſlight Madneſs, which at laſt degenerated into one of the raging Kind, there was a Neceſſity for binding him. He ſhook with ſuch Violence the Shackles in which his Hands were confin'd, that it was thought he would have broken them to Pieces. Having ſeiz'd his Wife's Necklace in his Teeth, he not only tore it, but, in a manner, reduced it to Powder. Having long uſed melanagogue Medicines at ſtated Times, and ſlept for many Nights, he ſeemed to reſume the Exerciſe of his Reaſon ſo far, that he was thought to be perfectly recovered. Twenty Months, however, after his Impriſonment, he became fooliſh, like a Child, tho' he was then forty-one Years of Age; and the three laſt Fingers of his Left Hand were ſo crook'd inwards, that no Art could extend them. By purging his Head, and applying heating and moiſtening Oils to the Region of the Medulla Spinalis, he recover'd the Uſe of his Fingers; but, ſoon after, all the Fingers of the ſame Hand were incurvated, became ſtiff, and, as in a cataleptic Patient, could not be extended by any means. Soon after, he loſt the Uſe of his Right Arm, and both his Legs; was deprived of his Speech, and lay immoveable. However, by means of various Ointments, Fomentations, and Gargariſms, he recover'd the Uſe of his Tongue; but for two Years after, till he died, he could not form an articulate Sound, but made an indiſtinct Noiſe, like a Child half a Year old, and had his Victuals given him by the Hand of another. His Body, in the mean time, was ſufficiently ſoluble, his Reſpiration very free, and his Pulſe exceedingly good; till at laſt, about the End of the fourth Year, he dy'd.

Being call'd to the Diſſection, I deſir'd that the Brain ſhould be firſt inſpected, which, upon laying open the Cranium, was obſerv'd to be very dry, hard, and, on the Surface, friable, when touch'd with the Fingers. It was alſo every-where ting'd of a yelloviſh Lemon-colour, about the Depth of a Finger's Breadth. About the Ventricles and Baſe it was ſofter, and more moiſt, but the Colour was ſomewhat vitiated. The Rete Mirabile was depreſs'd; the Origins of the Nerves were dry, and more ſlender than in their natural State. Nothing uncommon was obſerv'd in the Thorax and lower Belly. *Henr. ab Heer. Obſerv. Medic. 3.*

The Signs of an approaching Catalepſis are ſome of them common to it with a Lethargy, as a lazy Indiſpoſition, and Slowneſs of Motion; the Patient makes no Complaint of being at all affected with any Diſorder, is ſlow in anſwering what is ſaid to him, and inſenſibly falls into a too long and profound Sleep. But the proper Signs which diſtinguiſh the Approach of this Diſeaſe are, an intenſe Redneſs of the Cheeks, a continual Fever, a Flux of the Spittle, a high and full Pulſe, with a Conſtipation of the Belly, or, on the contrary, an immoderate Looſeneſs. When the Diſeaſe is formed, and the Patient actually labouring under it, he lies perpetually on his Back, his Neck diſtended, his Cheeks red; he is in a Fever, ſpeechleſs, oppreſs'd with a Torpor or Dulneſs of the Senſes, and he lies with his Eyelids open, and his Eyes fix'd, as in thoſe who earneſtly behold an Object, or in an Ox who has receiv'd the felling Blow; Tears alſo fall from his Eyes, as tho' he were ſenſible, and in Pain; a Subſultus, or Palpitation, affects his maxillary Muſcles, his Lips, Eyebrows, Fingers, and Hands; he is frequently moleſted with frequent and violent Hiccoughs; his Pulſe is high, humid, and full; he is very much afflicted with Coſtiveneſs; and is neither able to ſtretch forth his Limbs when drawn together, nor draw them in when extended. In ſome there is an Inflation of the Belly, as it were, from Wind, which increaſes gradually towards the Stomach; ſometimes it ſeems to proceed from Humour, or from Food, and is attended with a Rumbling of the Inteſtines: The Teeth are vehemently ſet, and ſometimes there is a Stridor, or Gnaſhing; and, in the Height of the Fit, the Teeth part aſunder, and leave ſome Diſtance between them: The Patient lies with his Mouth open and relaxed, the Spittle running out at the Corners, and ſometimes down his Throat with a Noiſe. Whatever Liquid is taken into the Mouth, or involuntarily receiv'd, floats about there; and the Patient very frequently draws up and contracts

his Lips, and fetches a Sigh, as if he were profoundly ſorrowful: If any one moves his Fingers before his Eyes, the Patient twinkles, and follows the Motion of the Hand with his Sight; and, if he begins to grow better, he turns his full Sight with Attention to the Object; and, being call'd, looks about, and falls into Tears, ſaying nothing, but ſeeming, by his Countenance, willing to ſpeak: He is delighted with pleaſant Smells, and the continual breathing of ſweet Odours; but can by no means endure any thing which ſmells rank or ſtrong, but ſhews his Averſion to it as far as he is able: He is ſenſible of ſweet and bitter Things when touched with his Tongue, and feels when he is prick'd: If his Arm be extended by any one, he draws it in again; and, if teaz'd, trembles, and grows red in the Face: Towards the End of the Fit, and Approach of Health, he often falls into a copious and hot Sweat, and relapſes: If the Diſeaſe increaſes, there is an extraordinary Heat of the Superficies of the Body, the Reſpiration is more profound, the Eyes are diſtorted, the Chin drawn down, and fix'd, the Hands contracted, and the maxillary Muſcles, by a ſpaſmodic Affection, reduc'd to a laughing Poſture; there is an extremely hot Sweat, and ſometimes Eruptions of various Colours, and like thoſe round Pimples which the *Greeks* call *Ionthi*, (ἰονθοι) on the Breaſt and Face, with a ſudden Loſs of Strength from the Violence of the Diſorder; a Stertor, which the *Greeks* call (βρυγχος), a cold Numbneſs, a pale Countenance, and at laſt Suffocation, and Danger of Death. *Cœlius Aurelianus*, *Acut. Lib. 2. Cap.* 10.

This Deſcription, in ſome Things, agrees with the more modern Accounts of a Catalepſis; but, as it diſagrees in ſome reſpects, I ſhall give its Characteriſtics from *Hoffman*.

The Paroxyſm of a Catalepſis generally attacks the Patient ſuddenly in this Manner: He remains fix'd in whatever Poſture he happens to be in when ſeiz'd, whether ſtanding, ſitting, or lying: If his Eyes are ſhut, they generally remain ſo; but as the Diſtemper generally comes on in the Day-time, the Eyes are moſt frequently open, and immoveably fix'd, as it were, upon one Object, and cannot be made to wink, though touch'd or rub'd with an Handkerchief. Mean time the Limbs are capable of being mov'd and bended, but remain in whatever Situation they are put in: All manner of Senſation is aboliſh'd; for the Patient neither ſees, hears, nor feels, even though pinch'd hard, or prick'd: The involuntary Actions are, notwithſtanding, carry'd on regularly; thus the Pulſe is natural, and Reſpiration eaſy; and, as *Forreſtus* obſerves, whatever is put into the Mouth is ſwallowed down: Sometimes the Abdomen and inferior Ribs are convuls'd, according to the Reports of *Foreſtus*, *Sylvius*, *Platerus*, and *Dolæus*: At the ſame time the Anus is ſo contracted, that it will not admit of the ſlendereſt Pipe, as *Henricus ab Heers* remarks. Mean time, as *N. Piſo* reports, the Face continues florid: At laſt they begin to ſigh deeply, and then come to their Senſes; and then give ſurpriſing Accounts of what they have heard and ſeen, as if they were reviv'd from a Trance. When out of the Paroxyſm, they eat very little, or perhaps nothing at all.

In the *Hiſtoire de l' Academie Royale* for 1738. we have a remarkable Inſtance of a Catalepſis, which will give a better Idea of the Diſtemper than any general Deſcription, and which I ſhall therefore inſert.

In the Year 1737. during *Lent*, a certain Lady, of about forty-five Years of Age, came from *Veſoul* to *Beſanſon*, to ſolicit a Law-ſuit of ſuch Importance, that the Loſs of it would have completed her Misfortunes, which had already made too deep an Impreſſion on her. Agitated with the moſt uneaſy Thoughts, ſhe was never abſent, either from thoſe who had the Management of her Buſineſs, or from the Churches, where, by her Devotion, ſhe endeavoured to intereſt Heaven to her Cauſe. In theſe religious Edifices ſhe was ſeen proſtrating herſelf before all the Altars, one after another, with ſuch an Air of Sanctity, as to become remarkable in the Eyes of every one preſent. She ſlept little, and eat ſcarce any thing at all, either becauſe ſhe had loſt her Appetite, or becauſe ſhe piouſly denied herſelf the common Neceſſaries of Life, in order to give the more liberal Alms; a Circumſtance on which, ſhe imagined, the Succeſs of her Cauſe depended.

During this State of Things ſhe was informed, that the Inclinations of the Court were not very favourable to her Intereſt; and about Five o'Clock on that Evening immediately preceding the Day fixed for paſſing the Sentence, ſhe fell into a Diſorder which was taken for an Apoplexy. Accordingly Mr. *Attalin*, Profeſſor of Medicine at *Beſanſon*, and Mr. *Vacher*, Surgeon to the Hoſpitals of that City, were brought to her Relief with all Expedition.

Theſe two Gentlemen found the Lady ſeated in an Arm-chair, incapable of Motion, with her Eyes lifted upwards, fixed, and ſparkling; her Eye-lids open, and without Motion; her Arms elevated, and her Hands joined, as if ſhe had been in a Trance: Her Countenance, which was before pale and ghaſtly, was now become more florid, gay, and beautiful: Her Reſpiration was free and equal, and the Muſcles of her lower Belly played with Eaſe: Her Pulſe was ſoft, ſlow, and ſufficiently full, almoſt reſembling that of Perſons in a ſound Sleep: Her Members were pliant, moveable, and capable of being bended any way, without making the leaſt Reſiſtance; but this unhappy Circumſtance was the diſtinguiſhing Characteriſtic of her Diſorder: Her Members were too obedient, but forgot to move out of the Situation in which they were plac'd.

Upon drawing down her Chin her Mouth became open, and remained in that State: Firſt one, and then the other of her Arms was raiſed up, but they did not fall down again: They were turned backwards, and then elevated ſo high, that the ſtrongeſt Man would not have been able to hold his Arm long in that unnatural Poſture, which, however, hers retained as long as the By-ſtanders pleaſed. They raiſed her on her Feet, in order to make the ſame Experiments on her Legs they had done on her Arms, and with a View to put both, at one and the ſame time, in Poſtures the moſt difficult to be retained. We may readily ſuppoſe, that an ardent Deſire to diſcover the Cauſe of the Diſorder, and a Principle of Curioſity, natural on ſuch Occaſions, muſt have laid a Foundation for various and whimſical Conjectures in the Spectators. The Patient was always like yielding Wax, which ſucceſſively aſſumes any Figure at Pleaſure, and always retains the laſt. Mr. *Attalin* ſays he believes ſhe would have ſtood on her Head, with her Feet upwards. But what is ſtill more ſurpriſing is, that however her Body was inclin'd, it always preſerved a perfect Equilibrium. In a Word, ſhe appeared like a Statue of Wax, whoſe Feet are fix'd to its Pedeſtal, in order to prevent its falling.

She appeared inſenſible; ſhe was ſhak'd, pinch'd, and tormented; ſhe had a Chafing-diſh with Coals put under her Feet; and the By-ſtanders bawl'd into her Ears, That ſhe would gain her Cauſe; but no Signs of Life appear'd, for her Diſorder was a confirm'd Catalepſis.

Mr. *Attalin* order'd Mr. *Charles*, his Fellow-profeſſor of Medicine, to be call'd, and the Lady was blooded in the Foot by Mr. *Vacher*; after which they went to Supper, and came very ſoon back to their Patient. Upon their Return they found her recovered from her Diſorder, which had laſted three or four Hours; and ſhe greatly ſurpriſ'd them, by making a pretty long, well-pronounc'd, and coherent Speech, in which ſhe gave a pathetic Hiſtory of her Misfortunes, related the whole State of her Cauſe, and ſum'd up all, with moral Reflections ariſing naturally from the Subject; and with Prayers to God, not previouſly compoſed, but poured forth in an extemporaneous Manner.

At the Expence of Truth they began to encourage her as much as poſſible, with reſpect to the fatal Cauſe which had been the woful Source of her Misfortune. Then they examin'd her carefully with reſpect to every thing ſhe perceived to happen during her Paroxyſm.

She ſaw nothing, but ſhe ſometimes heard, and that ſo diſtinctly, that ſhe knew ſome Perſons by their Voices. She was ſo far from remembering her being blooded, that ſhe even doubted of the Fact when ſhe ſaw the Bandage apply'd to her Foot. The Chafing-diſh with Fire, which, in all Appearance, ought to have made a much more ſenſible Impreſſion on her than a human Voice, did not, in the leaſt, affect her. In a Word, tho' ſhe had been violently tormented, ſhe had not the ſmalleſt Remains either of Pain or Wearineſs.

Whilſt they were thus entertaining themſelves with their Patient, they perceived, that her Diſcourſe was now-and-then interrupted by ſmall Sighs, and that, in theſe Moments, her Eyes became fixed and immoveable. Nothing, in the mean time, was neglected, in order to prevent the Paroxyſm with which ſhe was threatened. She immediately recovered, and continu'd to ſpeak, but without reſuming her Diſcourſe where ſhe left off. She began another, tho' ſhe was put in mind on what Subject ſhe had been talking, and what particular Circumſtance ſhe had inſiſted on. This Accident happen'd every time this ſmall Prelude of a Paroxyſm interrupted her Diſcourſe. The Idea of what ſhe was to have ſaid was entirely baniſhed from her Mind, and another preſented itſelf in ſo forcible a manner, that ſhe could not reſiſt its Impreſſions.

At an Hour's End, however, her Paroxyſm return'd in all its Violence; and the Symptoms of a Catalepſis were the ſame, or, perhaps, of a more diſtinct and characterizing Nature than before. When this ſecond Paroxyſm was at an End, the Patient, ſeated in an Arm-chair, began to ſpeak for an Hour and an Half, in the ſame Tone and Strain ſhe had done after her firſt Paroxyſm; but, at laſt, her natural and pertinent Diſcourſe was ſucceeded by extravagant Jargon, accompany'd with hideous Shrieks and Howlings; and ſhe was attack'd by a violent Phrenſy, of which the Catalepſis was only the unlucky Prelude.

All the Remedies, employ'd by the ſkilful Phyſicians who had the Charge of her, prov'd ineffectual for the three or four Days ſhe remain'd at *Beſanſon*, for which Reaſon ſhe was ſent home to *Veſoul*; and, what is no leſs ſurpriſing than her Diſeaſe itſelf, ſhe there remains in a State of perfect Health, and has never ſince had a Relapſe. But we are not as yet ſufficiently

acquainted

acquainted with the animal Œconomy, and its myſterious Laws, to account for ſo ſurpriſing Phenomena as theſe. *Hiſtoire de l'Academie Royale des Sciences, Anno* 1738.

Borelli, in *Cap.* 2. *Hiſt.* 54. and *Marcus Marci*, in *Philoſ. Reſt.* affirm that this Diſorder is more incident to Women than to Men, eſpecially that Species of it which is accompany'd with a ſort of *Trance* or Enthuſiaſm; for Women have more ſoft, tender, and ſenſible Nerves than Men; for which Reaſon they are not only highly ſuſceptible of immoderate Commotions of the nervous Syſtem, but alſo a favourable Foundation is laid for cheriſhing all the violent Impreſſions and Paſſions of the Mind, together with the Diſorders ariſing from an ungovern'd and diſorderly Fancy. In Caſes where there is a melancholic Habit, and where an unbounded Force of Imagination prevails, this Diſeaſe moſt generally appears; eſpecially if, according to *Nicolaus Piſo*, and according to Experience, whoſe Sanction is ſtill more ſacred and venerable, a cold Regimen, an unfavourable Seaſon of the Year, and a cold Climate, concur.

That the Cauſe of a Catalepſis is lodged in the poſterior Part of the Head, is not only obvious from the Diſſections of deceaſed Patients, and the Pains of the poſterior Part of the Head, and Nape of the Neck, which ſometimes precede the Paroxyſm, but alſo from the unanimous Voice and Conſent of Phyſicians. But, in accounting more particularly for the Cauſe of the Symptoms, they have run into various obſcure and perplex'd Hypotheſes. Some affirm, that the animal Spirits are ſo fix'd and concentrated, that they are retarded and hinder'd in their Motion; but this can by no means be conceived to be true, with reſpect to theſe highly ſubtile and penetrating Bodies. Others have advanced Hypotheſes ſtill more abſurd and ridiculous; but, without ſpending Time to recount them, I rather think, that the immediate Cauſe of a Catalepſis conſiſts in a Hindrance of the Influx of the thin and fine nervous Fluid into the Nerves ſubſervient to Senſation and voluntary Motion; whereas this Influx is carried on in its natural, and, in ſome meaſure, a more impetuous manner in the Nerves ſubſervient to the vital and mechanic Actions. But, how this Influx into the former Claſs of Nerves is intercepted, we are now to inquire: If, therefore, we conſider, that, in cataleptic Patients, all the Powers of Senſation, and all the animal Functions, entirely ceaſe, 'tis highly probable, that the Influx of the nervous Fluid muſt be principally intercepted in that Part, from which all the nervous Fibres in the Body draw their Origin. This Place is call'd the *Senſorium Commune*, in which we muſt alſo fix the primary Seat of the Soul; for tho' this intelligent thinking Principle cannot, in conſequence of its immaterial Nature, be, ſtrictly ſpeaking, included in Space; yet, ſince it is abſolutely certain, that it maintains the ſtricteſt Union and Correſpondence with the Body, and has a great Influence upon the Senſes and animal Functions, it is neceſſary, that, with reſpect to the Operations, which it performs, by means of the nervous Fluid, in a manner unknown to us, we ſhould aſcribe a certain Space to it, in which it may perceive all the Changes of the Fibres, and commodiouſly perform all the Actions ſubjected to the Determination of the Will.

But the *Senſorium Commune* is neither, according to *Des Cartes*, in the Pineal Gland, nor, according to *Lanciſi*, in his *Diſſert. de Sede Animæ cogitantis*, the Corpus Calloſum of the Brain. But, with later and more accurate Anatomiſts, we place it in the Medulla Oblongata, and that which conſtitutes the Baſis of the Brain; for the nervous Ducts, ariſing thence, borrow their external Coat from the *Pia Mater*, which is interwove with a large Number of Veſſels, and ſurrounds the Medullary Portions of the Brain, and are thus diſtributed thro' all the Parts of the Body ſubſervient to Senſation, and voluntary Motion. Into theſe nervous Ducts the ſubtile Fluid is originally carried along with the Blood to the Head, thro' the Carotid and Vertebral Arteries, then ſecreted in the Cortical Subſtance of the Brain, after the cruder Parts are abſorb'd by the Veins, and is at laſt impell'd with a certain Force thro' the Medullary Region; ſo that, by its Aſſiſtance, certain determinate and ſpontaneous Motions follow certain particular Thoughts; and, on the contrary, certain Ideas ſucceed certain particular Motions of the Body.

As, therefore, when the Influx of this fine Fluid is duly, and in a proper Quantity, carried on, all the Senſes entire, and the animal Functions duly perform'd, we are in Health, and awake; ſo when this Influx is leſs, we are ſaid to be aſleep; and when it is entirely intercepted, we are deſtitute of all Senſation, and voluntary Motion. Now every Interception of this Influx is produced either by a Palſy, or a ſpaſmodic Conſtriction of the ſmall nervous Fibres; for an Obſtruction of the Nerves is by no means the Cauſe, ſince, in a Catalepſis, a Palſy of the ſmall nervous Fibres cannot ſtop the Influx of the fine Fluid into the Nerves, becauſe the Paroxyſms return at Intervals, and under them the Face is red; but 'tis otherwiſe in lethargic Diſorders, ariſing from a paralytic Cauſe. In a Catalepſis, therefore, the Cauſe, preventing the Influx of the animal Spirits into the Nerves, is a ſpaſmodic Conſtriction of the ſmall nervous Fibres at their Origin, before they penetrate the Pia Mater; and hence alſo ariſe all the other Symptoms.

For this Reaſon, therefore, all the Senſations, and all the animal Functions, ceaſe: But, as there are no Spaſms in the Parts ſubſervient to theſe, the Reaſon is obvious, why the Members of them, incapable of Motion, may be bended at Pleaſure, and remain immoveable in the Situation in which they are put; but, at the ſame time, all the Motions we call mechanical remain entire. For 'tis certain, from anatomical Diſcoveries, that as the Nerves, ſubſervient to Senſation, and voluntary Motion, draw their Origin from the Medullary Subſtance of the Brain; ſo, on the contrary, the vital Functions, which are by no means ſubjected to the Determination of the Will, are perform'd by the Nerves ariſing from the medullary and inferior Part of the Cerebellum, according to an Experiment related by the celebrated *Vieuſſens*, in his *Neurograph. Lib.* 1. *Cap.* 20. We have already obſerved, that, in a Catalepſis, thoſe ſmall Fibres, which, ariſing from the Brain, furniſh the Nerves ſubſervient to ſpontaneous Motion, are conſtricted; but thoſe diſtributed from the Cerebellum, for the Preſervation of Life, remain ſound, and in their natural State: Hence the Palpitation of the Heart, and the Pulſation of the Arteries, continue, the Face becomes red, and the Reſpiration is natural. In the mean time, ſince the Influx of the nervous Fluid into the Organs ſubſervient to Senſation, and voluntary Motion, is hinder'd, it eaſily happens, that this nervous Fluid is impel'd from the Cerebellum in a larger Quantity, and with a greater Impetus, into the Parts which perform the vital Actions: Hence it is we are to account for the obſtinate Coſtiveneſs, and the convulſive Motions of the Breaſt and Abdomen.

It now remains, that we account for the Trances or Viſions which cataleptic Patients frequently fancy themſelves to have been in; for generally, when the Paroxyſm is over, they talk of wonderful Joys, or tragical Apparitions, heavenly Viſions, and the Company of Angels. They alſo attempt to predict future Events, and pretend to have acquired the Spirit of Prophecy. Various memorable Inſtances of this Kind are to be met with in the Works of Phyſicians. Nor, in theſe Caſes, muſt we aſcribe any Influence to the Devil; or ſuppoſe, that the Soul is removed from the Body to any other Place, or even to Heaven itſelf. There is no Neceſſity, on theſe Occaſions, for having recourſe to preternatural Cauſes; nor have we any thing to do with the devout Trances of St. *Paul*, and other holy Men; for we only talk of thoſe Trances which happen in diſorder'd Conſtitutions. If, therefore, we conſider, that cataleptic Patients are generally of a melancholic Habit, have lively Imaginations, and their Thoughts generally employ'd upon ſacred Objects, ſuch as God, Angels, and eternal Life. If, alſo, as we are taught by Experience, and the Example of Dreams, we ſuppoſe, that the more the Soul is abſtracted from the Perception of external Objects, and the Exerciſe of the vital Motions, the more intenſely it indulges the Workings of Fancy; it naturally follows, that the ecſtatic Viſions of cataleptic Patients are only the Effects of an intenſe Fancy, whilſt the Mind, being free from a Commerce with external Objects, recals paſt Ideas, from a Compariſon of which ſhe may alſo happen to predict Futurities. But let us return to conſider the remote and ſecondary Cauſes, which contribute to the Production of a Catalepſis.

Among theſe, the moſt conſiderable is a Peccancy of the thick and viſcid Humours, which the Antients diſtinguiſh'd by the Epithet *Melancholic*; and which, moving with Difficulty in the Head and Brain, and ſtagnating principally in the Baſis of the Brain and Pia Mater, prove an effectual Cauſe of the Conſtriction of the ſmall nervous Fibres: Hence hyſteric Women, and hypochondriac or melancholic Men, are not only more ſubject to a Catalepſis than others; but alſo the Diſſection of thoſe who die of this Diſorder informs us, that the Veſſels in the poſterior Part of the Brain have been fill'd with a thick coagulated Blood, and that a ſerous Colluvies has been found extravaſated in the Brain itſelf. Hence 'tis alſo obvious, why a Catalepſis ſometimes enſues a Suppreſſion of ordinary and ſtated Evacuations of Blood. Nor is the Reaſon leſs plain, why that Boy, mention'd by *Aetius* in *Tetrabibl.* 2. *Serm.* 2. *Cap.* 4. who lay ſtiff and congeal'd for three Days, was at laſt immediately recover'd by a plentiful Effuſion of Blood from his Noſtrils. Thick Humours will ſtill more effectually contribute to the Production of a Catalepſis, if a violent Expanſion and Exeſtuation of them concur; ſince, by this means, the Veſſels of the Brain and Pia Mater are more diſtended. Hence it may be conceived, why this Diſorder is produced by intermittent Fevers prepoſterouſly ſuppreſs'd, or treated with Volatiles, according to *Dodonæus*, *Obſ. Med.* 44. by indulging too liberally the Uſe of generous Wine, according to *Platerus*, *Lib.* 1. and by Drunkenneſs, or an Exceſs of Paſſion, according to *Dolæus*, in *Encyclop. Medic.* Nor ought we to forget, that as Worms of the Inteſtines produce the moſt violent Diſorders, ſo they ſometimes lay a Foundation for a Catalepſis, according to *Marcellus Donatus*, *Lib.* 2. *Cap.* 7.

Beſides,

Beſides, a great Regard is to be had to the Violence of the Paſſions, by which, as Authors inform us, a Conſtriction of the nervous Fibres in the Brain, with a ſubſequent Catalepſis, is produced, the Diſorder bearing a Proportion to the Violence of the Paſſion. *Tulpius*, in *Lib.* 1. *Obſ. Cap.* 21. gives us an Account of a young Man, who became cataleptic upon a Woman he loved refuſing to marry him, but recover'd upon obtaining her Promiſe. *Rondeletius*, *Lib.* 1. gives us an Account of a Girl, who, being forced to marry a Man ſhe did not love, was afflicted with ſuch Grief, that ſhe became cataleptic; and was ſeiz'd with a Paroxyſm when ſhe ſaw her Huſband, heard of him, or even thought upon him. *Henricus ab Heer. Obſerv.* 3. gives us an Account of a Man of a melancholic Habit, who, by indulging himſelf in an Exceſs of Grief, became cataleptic. *See Obſerv.* 4. *above*. It is alſo confirm'd, by the Accounts of ſkilful Phyſicians, that this Diſorder is ſometimes produced by too intenſe Application of Mind, and profound Meditation, eſpecially if a cold Habit, and other accidental Cauſes, concur. Inſtances of this Kind are to be met with in *Galen*, *Comment. in Hippocr. Zacutus Luſitanus*, *Lib.* 1. *Hiſtor.* 42. and *Fernelius in Pathol. Lib.* 5. *Cap.* 2. Profound ſacred Meditations, eſpecially when accompanied with ſpiritual Contrition for paſt Sins, highly contribute to the Production of this Diſorder, complicated with a Trance. See *Sennertus in Praxi. Herfelt. Tr. Philoſoph. Hominis. Auguſtinus de Civitate Dei*, *Lib.* 14. *C.* 24.

Among cataleptic Patients we may alſo reckon thoſe who are, as it were, congeal'd and ſtruck with an intenſe Cold. The Reaſon of this is, that the Cold has a Power of violently bracing up the Surface of the Body, which it immediately ſurrounds. Upon this Conſtriction the Humours are carried in a larger Quantity to the internal Parts, and are principally accumulated in the Head, ſtagnate in the Veſſels of the Brain, and diſtend them: Hence they produce a Stricture of the nervous Fibres ariſing from the Brain, which is the Origin of a Catalepſis, attended with an Abolition of all the Senſes. The intenſe Cold continuing, and by that means its Effects, already mention'd, remaining in the Body, there at laſt happens an Extravaſation of Blood or Serum in the Head, by which the Cerebellum is often compreſs'd in ſuch a manner, that the nervous Fluid cannot enter the vital Organs; and hence Death enſues. As fatal Caſes of this Kind almoſt daily occur, ſo, in *Foreſtus*, *Lib.* 10. *Obſ.* 41. we have a great Number of them, where we are told, that, during the intenſe Cold of the Winter, many Soldiers, ſtanding on their Watch, were found dead. Others, ſitting on their Horſes, with the Reins ſtill in their Hands, were taken off congeal'd; and at laſt the Horſes themſelves became incapable of Motion, and died *(This Diſorder, however, ſeems very different from a Catalepſis)*.

If we conſider the accidental Cauſes which generally bring on the Paroxyſms of a Catalepſis, the moſt conſiderable of them are violent Commotions of Mind, Grief, Terror, Joy, Fear, and Sadneſs; as alſo the ſeeing hideous and diſagreeable Objects. Authors inform us, that ſome have been congeal'd by the Recital of certain Words, or the ſinging Pſalms; and I myſelf, ſays *Hoffman*, ſaw a Woman, who, upon hearing ſome Words, expreſſive of an ardent Love to her Redeemer, was ſeiz'd with a Catalepſy; and a certain Clergyman, according to St. *Auſtin*, upon hearing the Cries of the Diſtreſs'd, was ſeiz'd with his Paroxyſm. According to *Nicolaus Piſo*, *L.* 1. *C.* 13. a cold Air, living in high mountainous and cold Places, the Winter-ſeaſon, and coarſe Aliments, contribute very much to the Generation of this Diſorder.

As to the Prognoſtics of a Catalepſis, if it is produced by the Paſſions of the Mind, or profound Meditations, it does not threaten a very great and mortal Danger: But, on the contrary, when it proceeds from a thick, viſcid, and impure Blood, or from a Suppreſſion of accuſtom'd Evacuations of Blood, it is highly dangerous; for it either terminates in Melancholy, or is chang'd into an Epilepſy, as *Marcellus Donatus*, *Cap.* 8. informs us from *Benivenius*; or, laſtly, it terminates in a violent Apoplexy, and kills the Patient. Nor is the Congelation, brought on by Cold, of leſs Danger; ſince, if ſeaſonable Relief is not afforded, ſudden Death enſues.

In the Cure of this terrible Diſorder, two curative Intentions are principally to be regarded. The firſt is to relax the ſpaſmodic Stricture of the ſmall nervous Fibres in the Brain. The ſecond is cautiouſly to remove the material or ſecondary Cauſes which contribute to the Production of this Conſtriction. As the former Intention is principally to be anſwer'd during the Paroxyſm, ſo the latter is rather to be purſued when the Patient is out of it.

During the Paroxyſm itſelf, eſpecially when violent, little Advantage is to be reap'd from Medicines. But we are, notwithſtanding, to uſe all poſſible Means to alleviate the ſpaſmodic Strictures, and rouſe the Patients, who ſeem to be awake whilſt they are aſleep; for this Purpoſe we ought to apply to the Noſtrils either volatile urinous Spirits, or highly penetrating Acids, ſuch as Wine-vinegar, or ſtrong Vinegar of Rue, or Spirit of the Cryſtals of Copper, which is only a concentrated Spirit of diſtil'd Vinegar (ſee ACETUM); for theſe Acids are of a far more penetrating and efficacious Quality than any volatile Salt. Nor will it be improper to apply nervous and antiſpaſmodic Oils, prepar'd by boiling, to the Nape of the Neck, and poſterior Part of the Head, after the Hairs are ſhaved off. This Species of Remedy is commended by *Foreſtus*, *Lib.* 10. *Obſ.* 42. Strong Clyſters may alſo be injected, if the Anus is not ſo ſhut up as to admit nothing. And, laſtly, eſpecially when the Diſorder proceeds from too large a Quantity of Blood, and too violent a Conveyance of it to the Head, and when the Veins of the Face are turgid with Blood, under the Paroxyſm, a Scarification of the Noſtrils, or the introducing a notch'd Probe, and vellicating the Parts with it, till an Effuſion of Blood happens, promiſe conſiderable Relief.

It is not ſafe to make farther Attempts during the Paroxyſms; but the Intervals between them are the proper Time for endeavouring, as far as may be, the Removal of the material and mediate Cauſes. If this Diſorder, which is ſo rare and uncommon, has its Original from Melancholy, and ſuch as is of the hypochondriac or hyſteric Kind, as is moſt frequently the Caſe, where groſs and viſcid Humours ſtagnate, or move with Difficulty in the Veſſels of the Brain, we are to have recourſe to proper Remedies for ſubduing this Diſeaſe, which correct the Thickneſs of the Blood, and reſtore a free Circulation. Among theſe Remedies, beſides Clyſters and gentle Laxatives, are to be reckon'd Phlebotomy, repeated at proper Seaſons, with Motion and Exerciſe of the Body, and the right Uſe of the Non-naturals. Waſhings of the Feet, and Bathing, are principal Remedies, as well as drinking of mineral Waters; or, inſtead of them, Whey impregnated with the Salt of the *Sedlitz* Waters.

If the Diſeaſe be maintain'd by a Plethora, or a Redundance of Blood and Humours, occaſion'd by a Suppreſſion of the natural Evacuations of the Hæmorrhoids, or Menſes, or an Omiſſion of thoſe artificial Diſcharges by Bleeding or Scarification, which were habitual, we are to lay hold of the Opportunity, during the Intervals of the Paroxyſms, for recalling or reſtoring theſe Evacuations, or at leaſt to diminiſh the exceſſive Quantity of Blood by opening a Vein. For this Purpoſe, Veneſection in the Feet is juſtly preſcrib'd; after which, if the Quantity of Blood is ſo large as to lay a Foundation for ſuſpecting an Apoplexy in the very Paroxyſm, the Veins of the Noſtrils are to be open'd, by thruſting a Probe up them. If the Patient's Body is lax and ſpongious, Scarifications may be ſubſtituted; or if a Propenſity to a hæmorrhoidal Diſcharge is perceived, which is indicated by Pains about the Os Sacrum, and the Inteſtinum Rectum, or if a Suppreſſion of this Diſcharge contributes to this Diſorder, it is again to be promoted, as *Nicolaus Piſo* juſtly adviſes, in *Lib.* 1. *Cap.* 13. For this Purpoſe, after having ſufficiently fomented the Anus, the Application of Leeches is proper.

If there is a Suſpicion of Worms, Anthelminthics are to be preſcrib'd: But of theſe ſuch as are acrid, and vellicate the already irritated Inteſtines, the more acrid Purgatives, for Inſtance, Preparations of Vitriol, Acids, Mercurials, Preparations of Aloes, and much more Preparations of Copper, are to be avoided like Poiſon. It is far more proper to exhibit Pills which are compoſed of leſs acrid and corroding Ingredients, ſuch as the Extract of Tanſey, Worm-ſeed, Rhubarb, Myrrh, Aſa-fœtida, and the Panchymagogus Crollii, mix'd up in equal Quantities. Theſe Pills are of ſingular Efficacy.

When the Cauſe of a Catalepſis reſides principally in the Mind, either rack'd with violent Paſſions, deeply fix'd on certain Ideas and Meditations, or agitated with the Workings of Conſcience, Medicines are, in theſe Caſes, of little or no Service. The Phyſician is only to endeavour, by proper Means, to remove the material Cauſes, if any ſuch concur to the Production of the Diſorder. We are alſo to endeavour to baniſh from the Mind ſad and melancholy Ideas, which, to it, are like Scourges and Tortures to the Body, by the facetious and agreeable Converſation of Friends; nor are Idleneſs and Eaſe, thoſe great Encouragers of profound Meditation, to be too much indulged. A Change of Air is, in theſe Caſes, a valuable Remedy; ſince, by it alone, I have ſeen this obſtinate Diſorder removed. By this laſt Remedy the Caſe related above, from the Memoirs of the Royal Academy, was cured.

Thoſe who are congeal'd with Cold, and have as yet ſome Signs of Life remaining, are to be removed to warmer Places: But they muſt not be too warm, leſt the Blood, driven to the internal Parts, ſhould of a ſudden exeſtuate, and be extravaſated. It is alſo proper, in ſuch Caſes, to cheriſh the Body with gentle Frictions, that the external Parts, which are conſtricted, may be relax'd, and the Humours again invited to them. Then, rouſing the Patients, their Feet are to be put in very warm Pediluvia, which are of ſingular Service, partly by relaxing the Skin, and partly by reſtoring the equable Circulation of the Juices. The Strength of the Patient is alſo to be recruited by Cordials, and a Draught of generous Wine.

Practical

Practical Cautions and Admonitions.

It ought carefully to be obſerved, that, during the Paroxyſm, volatile oleous Salts, the ſtronger apoplectic Balſams, and the hoter Liquids, are carefully to be abſtain'd from, if the Catalepſis ariſes from an Orgaſm, Expanſion, or Stagnation of the Humours; for, in this Caſe, the Blood is put into a more violent Commotion, and it is to be dreaded, leſt an Extravaſation and Apoplexy ſhould enſue. It is more adviſeable, in theſe Caſes, to uſe the ſtronger Acids, and to anoint externally with nervous, anodyne, and antiſpaſmodic Oils and Balſams. But if the ſpaſmodic Conſtriction of the ſmall Fibres of the Brain is brought on by the Paſſions of the Mind, Fear, Grief, or intenſe Meditation, then volatile oleous Salts are of Service, both internally and externally.

As in all violent Diſorders of the Head, ariſing from too large a Quantity of Blood, thrown into ſtrong Commotions, and too plentifully convey'd to the Head, ſuch as Head-achs, Deliriums, Convulſions, and Epilepſies; ſo alſo, in a Catalepſis, when ariſing from the like Cauſe, a Detraction of Blood is of ſingular Service, by thruſting a Probe into the Noſtrils. Nor was this Operation unknown to the Antients; and the Words of *Aretæus*, in his ſeventh Book, are very remarkable: "In theſe Caſes, ſays he, 'tis neceſſary, that Blood be extracted from the internal Parts of the Noſe; for a pretty long Inſtrument is to be thruſt up, which they call *Cateiadion*; or that which is call'd *Storyne*; or, if the Surgeon has none of theſe at hand, he muſt take a Gooſe's Quill, cut off the thick Part, and notch its nervous Part in the Form of a Saw, and introduce it as far as the *Oſſa Ethmoidea*, ſo call'd from their Reſemblance to a Sieve, and then twiſt it with both Hands, that the Parts may be lacerated and torn by its Teeth, by which means the Blood flows eaſily and plentifully; for ſmall Veins terminate in the Noſtrils, whoſe Subſtance is ſoft, and eaſily cut."

When a Catalepſis is produced by the Workings of the Imagination, it eludes and baffles the Force and Efficacy of Medicines. But Travelling, and Change of Air, afford the moſt certain Relief; for 'tis ſcarce credible, how great Virtue and Efficacy, for the Cure of Diſorders of the nervous Syſtem and Spirits, there is in Travelling, eſpecially into Places where the Air is wholſome, and, as *Celſus* adviſes, contrary to that which produced the Diſeaſe; for the Air is that important and fine Element, which, by its elaſtic ethereal Portion, mixing with the Blood and lymphatic Juice, not only ſupplies the moving ſolid Parts with Senſation and Motion, but, according to *Galen*, has ſomething divine in it in the Cure of Diſeaſes. Beſides, Travelling is attended with this Advantage, that the Ideas which uſed to diſturb the Mind are by its means baniſh'd, and ſucceeded by others of a more pleaſant Kind, to which it gradually habituates itſelf. It has alſo frequently been obſerv'd, that this Diſorder has been carried off ſpontaneouſly, by Length of Time; for, as we advance in Age, the nervous Fibres become ſtronger, and the Mind more firm.

As for Preſervation, it may be obtain'd by carefully avoiding the accidental Cauſes which contribute to the Production of this Diſorder. And ſince Cold is ſingularly hurtful in this reſpect, it is not only carefully to be guarded againſt, but, if our Situation will allow us, we muſt remove from cold and mountainous Places, to thoſe where the Air is more mild. Let the Regimen be proper, and every thing that is acid, or can communicate a Coldneſs to the Stomach, be avoided in Food. Let Solitude be ſhun'd, and a Choice made of agreeable Company, in order to baniſh Care, Grief, and Thoughtfulneſs, from the Mind. It ought to be carefully obſerv'd, about the Winter-ſeaſon, that material Cauſes are not left in the Body, which may bring on the Diſorder. For this Purpoſe the Primæ Viæ are to be kept free from Sordes, and the Quantity of the Blood is to be diminiſh'd by proper Veneſection, and frequent Exerciſe.

CATALOTICA, in *Caſtellus* and *Rieger*, is by Miſtake for CATULOTICA, which ſee.

CATALYSIS, κατάλυσις, from κατὰ, and λύω, to diſſolve, or deſtroy. It implies a Reſolution of the Limbs, that is, a Palſy; or a univerſal Reſolution or Decay, ſuch a one as happens frequently before the Death of the Patient. Or it imports what we expreſs by Diſſolution, that is, Death.

CATAMENIA, κατάμηνια, from κατὰ, and μὴν, a Month; the ſame as MENSES, which ſee.

CATAMOSAS, κατάμοσας, is expounded by *Galen*, in his *Exegeſis*, καθεὶς ἕνεκα τοῦ ζητῆσαι, "Who has let down ſome-"thing, for the ſake of making a Search;" and he ſays, "The "Word is made ἀφὰ τὸ μαίεύειν, which is, to inquire or inveſtigate; as is alſo the Word *Catamatumenos*, καταμαίεμενος." This laſt Word ſeems to be taken from *Hippocrates*, *Lib. de intern. Morb.* tho' we find not there καταμαίεμενος, but καταμαιεύμενος,, and καταμαπόμενος; for which, perhaps, ſome Copies might with *Galen* read καταμώσας. *Foeſius.*

CATANANCE. *Candy-lion's-foot.*

The Characters are;

The Cup of the Flower is ſquamous, and of a Silver Colour; the Florets, which are round the Margin, are much larger than thoſe in the Middle of the Flower; the Seeds are wrapt up in a leafy or downy Subſtance, with the Cup or outer Covering.

1. *Catanance*; *quorumdam.* Lugd. 1190. *Catanance Dalechampii, flore Cyani, folio Coronopi.* J. B. 3. 26. *Chondrilla cærulea, Cyani capitulis.* C. B. P. 130. *Chondrilla Seſamoides dicta, flore completo.* H. Eyſt. Æſt. o. 5. F. 4. Fig. 2. *Cicherium cæruleum, coronopi foliis anguſtis, caliculis ſquammatis, argenteis.* M. H. 3. 55. BASTARD-SUCCORY, or LION'S-FOOT, with BUCK'S-HORN LEAVES.

There are two Species of Seſamoides mention'd and deſcrib'd by *Dioſcorides*; but his Deſcriptions are ſo ſhort and obſcure, that, as to the greater Seſamoides, it remains a Doubt to this very Day what Plant he means by it; ſome taking it for Helleborе, others for Reſeda, and others for Thymelæa. There are various Opinions alſo about the leſſer Seſamoides; but the Plant agrees beſt with the Deſcription of *Dioſcorides*. *Dale.*

The leſſer Seſamoides has a Stalk a Span long, with Leaves like thoſe of the Coronopus, only leſſer, and more hairy. On the Tops of the Stalks ſtand little Heads of purpliſh Flowers, which are white in the Middle. The Seed is like that of Seſamum, bitter and yellow. The Root is but ſlender.

An Ounce of the Seed, taken in Hydromel, purges Bile and Phlegm by Stool; apply'd, by way of Cataplaſm, with Water, it diſcuſſes Tubercles, and œdematous Swellings. It grows in rough Places. *Dioſcorides, Lib.* 4. *Cap.* 153.

2. *Catanance*; *flore luteo*; *latiore folio*, T. 478. *Stœbe Plantaginis folio.* Alp. Exot. 284. *a.*

3. *Catanance*; *flore luteo*; *anguſtiore folio*, T. 478. *Stœbe Plantaginis folio, anguſtifolia.* H. Cath. *a. a. Boerhaave's Index alter Plantarum.*

CATANGELIE, κατάγγελίν. See CACANGELIA.

CATANTIA, κατάντιν, in *Hippoc.* κατ' ἰητρεῖον, is explain'd in *Galen's Comment.* to be the Declivity of the Members, as of the Arms and Legs when they hang down. *Foeſius.*

CATANTLEMA, κατάντλημα, from ἀντλάω, to draw or pour Water. A kind of Lotion, by Infuſion of Water. *Moſchion de Morbis Mulierum.*

CATANTLESIS, κατάντλησις, a Lotion with hot Water expreſs'd out of Sponges, recommended by *Marcellus Empiricus*, *Cap.* 1. for hot running Ulcers of the Head.

CATAPASMA, or CATAPASTUM; alſo DIAPASMA, EMPASMA, and SYMPASMA, Words of the ſame Import, from πάσσω, to ſprinkle. With the antient *Greek* Phyſicians they ſignify'd any dry Medicine reduced to Powder, in order to be uſed by way of Inſperſion on the whole Body, or any Part of it. Their various Uſes are mention'd by *Paulus*, *Lib.* 7. *Cap.* 13. where he ſays, that ſome of them are appropriated to Ulcers, others to the Skin: Of the firſt Sort, ſome fill up Cavities with Fleſh, others repreſs Excreſcences; ſome cicatrize, others are cauſtic and corroſive, and others ſtop Hæmorrhages: Of thoſe which are apply'd to the Skin, ſome are deterſive and mundificative, others attenuate and diſcuſs. Catapaſms, therefore, may conſiſt of Medicines of different Kinds, according to the Intention of the Phyſician; as, for Inſtance, of Dryers, Aſtringents, Abſtergents, Acrids, Corroſives, and others. *Pliny*, *Lib.* 21. *Cap.* 19. tells us, that Diapaſms, made of Roſes, were uſed to reſtrain Sweat, and to dry the Body after bathing: And *Dioſcorides*, *Lib.* 1. *Cap.* 21. ſays that a Diapaſm was made of the Wood of Agallochum, with which they ſprinkled the Body, in order to prevent Sweating; Powders which they put in their Drinks were alſo called Diapaſms. But this Name *Diapaſm*, according to *Pliny*, *Lib.* 13. *Cap.* 2. was particularly given to ſuch Powders as were in Requeſt on account of their grateful Smell. And *Oribaſius* ſhews, from *Antyllus*, that *Empaſmata*, ἐμπάσματα, were uſed in order to reſtrain Sweat, or any other Evacuation by the Pores, or for ſcarifying the outer Skin, or to provoke an Itching. Catapaſms were ſprinkled on Ulcers, but Diapaſms were prepared for the ſake of Smelling, and were apply'd to the Armpits, and the Inſide of the Thighs, to remove their rank Scent. *Cœlius Aurelianus*, *Morb. Acut. Lib.* 2. *Cap.* 38. informs us, that *Sympaſmata*, συμπάσματα, was a Name for ſuch Powders as, being endu'd with an acrimonious Quality, were ſprinkled on the Body, in order to procure Heat: And, *Tard. Paſſ. Lib.* 3. *Cap.* 5. he ſays it was a Name given to thoſe Aſperſions or Sprinklings which were invented on account of Itchings.

CATAPASMUS, κατάπασμός. A Term uſed by *Cœlius Aurelianus*, probably by a Miſtake for ſome other Word. It implies, according to him, a Rubbing of the poſterior Part of the Shoulders and Neck downwards (*devexo Curſu*).

CATAPHORA, κατάφορά. The ſame as COMA. See LETHARGUS: It is deriv'd from κατάφέρω, which, among other Significations, implies to render ſleepy.

CATASTUS *Lapis*. The ACHATES, which ſee.

CATAPHRACTA, κατάφρακτα. The Name of a Bandage deſcribed by *Galen*. It comes under the Armpits, round the

Neck, and croſſes upon the Breaſt and Shoulders; and is deſign'd to fix Dreſſings upon thoſe Parts.

CATAPLASMA, *καταπλασμα*. A Cataplaſm. It is an external, topical, ſoft kind of Medicine, of the Conſiſtence of pretty thick Panada, and prepared of Ingredients of different Virtues, according to the Intention of the Phyſician. Hence there are different Sorts of Cataplaſms, with reſpect to the Matter of which they conſiſt, as emollient, reſolvent, diſcutient, ſuppurative, corroborating, anodyne, and antiſeptic Cataplaſms. And, becauſe Cataplaſms are very frequently uſed in Caſes where Emollients are requir'd, hence *Malagma*, from *μαλάσσω*, to ſoften, and *Cataplaſma*, were ſynonymous Terms, even tho' the former were not compoſed of Emollients, but of Aſtringents, or any other Sorts. *Le Clerc* ſays, that Cataplaſms were a ſort of Medicine in Uſe among the Antients, of a thinner Conſiſtence than their Cerates, and compoſed of Powders or Herbs, macerated or boil'd in Water, or ſome other Liquor, with an Addition ſometimes of Oil. *Hippocrates*, for a Quinſey, directs a Cataplaſm made of Barley-meal, boil'd in Wine and Oil. Cataplaſms were apply'd with an Intention of mollifying and reſolving a Tumor, or of maturating an Abſceſs, almoſt after the ſame manner as Cerates. There were alſo cooling Cataplaſms, prepared of the Leaves of the Pear-tree, Olive-tree, Fig-tree, or Oak, boil'd in Water. The ſame Author informs us, that the Cataplaſm of the Antients was a ſoft Compoſition, made after different manners, ſometimes with Oil and Honey, and ſome Powders, as of Linſeed, Seed of Fenugreek, and ſuch others; ſometimes with Herbs boil'd in Water, or ſome other Liquor; and ſometimes they were prepar'd ſimply of Water, Oils, and Flour: They were alſo made of Bread boil'd in Water, of Bran, of Figs, or of Leaven and Oil. Beſides thoſe uſed in mollifying, maturating, or reſolving an Abſceſs, there were alſo aſtringent, cooling, and aperitive, beſides other ſorts of Cataplaſms.

The ſtrongeſt of all theſe Cataplaſms were thoſe made with Muſtard pounded, or other Subſtances yet more acrimonious, as Cantharides, mix'd with Crums of Bread, or dry'd Figs macerated in Water, and reduc'd to a Pulp. Theſe Cataplaſms excited a Redneſs in the Part, and ſometimes Bliſters, and took off the Skin. This ſort of Cataplaſm they call'd *Sinapiſmus*; and it was of Service in long and cold Diſtempers, and in Stupefaction of the Senſes. Thus far *Le Clerc*. In *Italy* the Followers of *Pythagoras* and *Eraſiſtratus* made more Uſe of Cataplaſms in the Cure of Diſeaſes, than did other Phyſicians, as *Schulzius* obſerves in his *Hiſt. Med.*

Cataplaſms are commonly applied hot or lukewarm, roll'd up in Linen Cloths, which, by means of the Oils which are added, preſerve Heat for a conſiderable time; for which End alſo ſome, upon theſe, apply a Swine's or Ox's Bladder, and ſometimes on the Top of all apply an earthen Tile. As for other Cataplaſms, which take their Names from the Part to which they are apply'd, or from their Effects, or ſome other Circumſtance, conſult the proper Articles, as, for Inſtance, ANACOLLEMA, FRONTALE, EPICARPIUM, EPISPASTICUM, and VESICATORIUM. But, as we are here ſpeaking of Cataplaſms in general, we are to obſerve, that ſome are prepared by boiling over a Fire, others not; whence they are diſtinguiſh'd into crude and boil'd: Of the former are green Plants bruiſed, and reduced to a Pulp, or dry'd, and reduced to Powder, and mix'd with a ſufficient Quantity of ſome crude or prepar'd Oil, or other convenient Liquor. Cataplaſms are prepar'd by means of Fire and Boiling, when the bruiſed or pounded Plants are boil'd in a ſufficient Quantity of ſome Liquid to a Softneſs, and then paſſed thro' a Strainer, which is not always neceſſary, if the Plants be well bruis'd and boil'd. When this is done, they add a ſufficient Quantity of Mucilage, Meal and Fat, Oil, Butter, Ointment, Leaven, Bread, Honey, and boil it over again to the Thickneſs of Pap. It may be boil'd in any Liquid, whether it be Water, Oil, Milk, Whey, Wine, Beer, Vinegar, or any other, according to the Diſcretion of the Phyſician. But it would be abſurd to prepare Cataplaſms by Decoction of Species whoſe Virtue conſiſts in their volatile Parts, becauſe they evaporate in Boiling; whereas, on the other hand, nothing can be more proper than to prepare them by Decoction of mucilaginous Subſtances, ſuch as are in the Claſs of Emollients, becauſe they are ſoon ſoften'd and reduc'd to a Pulp; for which Reaſon alſo green Vegetables are prefer'd to what are dry'd. It would be convenient alſo, when Cataplaſms are to be prepared of Milk, with an Intention of mollifying, to obſerve the Advice of *Foreſtus*, which is, in the firſt Place, not to boil them too much, but, rather than commit ſuch an Error, make them without Boiling, becauſe Milk is inſpiſſated by Decoction, and the thin Parts of it are diſſipated; ſecondly, that you chuſe the neweſt and richeſt Milk that can be had. When the Pulp is prepared, it may frequently be neceſſary to mix it firſt with dry Ingredients, as Powders; ſecondly, with liquid and ſoft Subſtances, as Fat of Animals, Butter, expreſs'd or prepar'd Oils of Vegetables, Ointments, the Yolk or White of an Egg, and other like Things; thirdly, with diſtil'd Oils, Eſſences, Tinctures, Elixirs, or Spirits: All theſe are to be mix'd in ſuch a Proportion as not to deſtroy the pulpous Conſiſtence of the Cataplaſm. The common Rate of Allowance is, for one Pound of Pulp, three Ounces at moſt of dry Ingredients, or Powders, and Liquids under the ſecond Head before-mention'd, and three Drams at moſt of ſpirituous Subſtances mention'd under the third. The Phyſician, who preſcribes the Cataplaſm, determines the Weight or Quantity of the Ingredients for preparing the Pulp according to the Intention he has in View: He next declares whether he would have them reduc'd to a Pulp by Decoction, or only by pounding them; and, laſtly, appoints the Quantities of the other Things which are to be mix'd with the Pulp, if he judges them neceſſary. If he thinks fit to add ſome hard Things, as reſinous or gummy Subſtances, he orders them to be diſſolv'd or macerated in ſome Menſtruum, that they may the more conveniently be mix'd; and the ſame Method is to be taken with Balſamics, as Turpentine, for Inſtance. When Dungs of Animals are to be taken, their Conſiſtence, with reſpect to Dryneſs, Humidity, or Softneſs, ſhews whether they are to be mix'd with dry or liquid Subſtances, in order to receive the due Form of a Cataplaſm. For it is to be obſerv'd, as *Joubert* would have us take notice, that a Cataplaſm is of a thicker Conſiſtence than an Ointment, and is nearly a Medium between an Ointment and a Plaiſter. Sometimes Electuaries, Extracts of Vegetables, Leaven of Bread, and the like ſoft Bodies, Pulps of Fruits, inſpiſſated Juices, Balſams, and the like, are us'd inſtead of Cataplaſms, either in their crude State, and unmix'd, or elſe alter'd by an Addition of other liquid, ſoft, or dry Subſtances, in ſuch a Quantity as to render the Whole of a due Conſiſtence. If the Phyſician happens to be at an Uncertainty whether, by Addition of this Variety of Ingredients, which are call'd *Acceſſories*, the Medicine will acquire a juſt Conſiſtence, to prevent his being laugh'd at by the Apothecary ſtrictly obſerving his Directions, or giving him Occaſion to add Things of his own Head, which would not agree with the Intention, it is a receiv'd Cuſtom, at the End of the Formula or Preſcription, to name ſome Liquid or Species, which is not dangerous in its Application, by exceeding a little in Quantity, and order it to be taken without determining the Proportion, but with a *Quantum ſufficit*, or ſo much as is neceſſary to give a due Conſiſtence to the Medicine. Sometimes, after the Cataplaſm, we find a Liquor preſcrib'd, which is to be brought to the Patient in a ſeparate Veſſel, and the Cataplaſm to be ſprinkled with it before Application, either for the ſake of its grateful Smell, or to exalt the Virtue of the Remedy, or to ſupply it with Moiſture, or for any other End which the Phyſician may have in View. The Quantity of the Cataplaſm is generally determin'd by the Part or Place to which it is to be apply'd, tho' ſeldom leſs than half a Pound is preſcrib'd, when prepar'd by Decoction.

CATAPLEXIS, *καταπληξις*, from *πλήσσω*, to ſtrike. It ſeems to imply any ſudden Stupefaction, or Deprivation of Senſation, in any of the Members or Organs.

CATAPOSIS, *κατάποσις*, from *καταπίνω*, to ſwallow down. Deglutition; or, according to *Aretæus*, the Inſtruments of Deglutition. Hence alſo

CATAPOTIUM, *καταπότιον*, or *κατάποτον*. A Pill. See PILULA.

CATAPSYXIS, *κατάψυξις*, from *ψύχω*, to refrigerate. A Refrigeration without Shivering, either univerſal, or of ſome particular Part.

CATAPTOSIS, *κατάπτωσις*, from *καταπίπτω*, to fall down. It implies ſuch a Falling down as happens with reſpect to apoplectic or epileptic Patients; or the ſpontaneous Falling down of a paralytic Limb; or it ſometimes imports a degenerating from a healthy to a morbid State.

CATAPUTIA *Major*. See RICINUS.

CATAPUTIA *Minor*. See LATHYRIS.

CATARACTA. A Cataract, a Diſeaſe of the Eye. The Words by which the Antients expreſs'd what we call a Cataract, were *ὑπόχυμα*, or *ὑπόχυσις*, and *γλαύκωσις*, or *γλαύκωμα*.

The *ὑπόχυμα*, or *ὑπόχυσις*, is defin'd by ſome, as the Author of the *Medicus* tells us, a Flux of Humour about the Pupil, which concretes, and either wholly intercepts the Sight, or renders it dim and obſcure. In the *Definitiones Medicæ* alſo, which Treatiſe, as well as the *Medicus* before-mention'd, is aſcrib'd to *Galen*, a *ὑπόχυμα* is defin'd a Concretion of an aqueous Humour, which is more or leſs an Impediment to the Sight: And *Paulus*, *Lib.* 6. *Cap.* 21. makes an *ὑπόχυμα* to be a Concretion of a dull Humour within the Cornea, near the Pupil of the Eye, which intercepts or obſcures the Sight. *Celſus* alſo, *Lib.* 6. *Cap.* 6. ſays that a *Suffuſion*, which the *Greeks* call *ὑπόχυσις*, ſometimes ſeats itſelf oppoſite to the Pupil of the Eye.

Γλαυκάσεις, and *γλαυκώματα*, (*Glaucedines*) in *Hipp. Aph.* 31. *Lib.* 13. are ſaid to be familiar to old Men, and are cauſed, as *Galen* ſays on the Place, by the Dryneſs of the Organs.

A *γλαύκωσις*, in *Ætius*, *Tetrab.* 2. *Lib.* 3. *Cap.* 50. is ſaid to be a Change of the cryſtalline Humour to a glaucous or

ſky Colour, with a Dryneſs and Concretion. And there is another kind of γλαύκωσις, or *Glaucedo*, conſequent upon a Suffuſion, when the Humour near the Pupil is very firmly congealed and dry'd; and this is what is generally meant by the Word, when uſed by the Antients; and this Diſeaſe they thought incurable. *Galen*, *Lib.* 10. *de Uſu Part.* defines a γλαύκωσις to be a Dryneſs and Concretion of the cryſtalline Humour.

Mr. *de Saint Yves*, a celebrated *French* Oculiſt, has given the ſubſequent Account of a Cataract.

Of a Cataract in general.

Authors do not agree about the Nature of Cataracts. Some think the cryſtalline Humour is affected; others will have it to be a Membrane formed by the Thickening of the aqueous Humour, which adheres to the Edge of the Pupil, and intercepts the Rays of Light.

This Diverſity of Opinions muſt not be imputed to the Obſtinacy of their Authors; it may, with greater Preſumption, be aſcribed to the few Occaſions they have had of undeceiving themſelves; for, if this Matter be carefully examined, we ſhall find both cryſtalline and membranous Cataracts; we may even eſtabliſh as many Species of Cataracts of the cryſtalline Humour, as there are Alterations of which that Humour is ſuſceptible.

As to membranous Cataracts, I remark two Sorts: The firſt proceeds from an Opacity of the Membrane, which covers the Socket of the vitreous Humour which lies behind the Cryſtalline. The ſecond Sort is ſubſequent to Inflammations of the Choroides. In theſe Inflammations a Matter like Pus is extravaſated into the aqueous Humour; this Matter grows dry, and forms a ſort of membranous Body. A third Sort of Cataract may be added, which is cauſed by an Opacity of the Membrane which covers the fore Part of the Cryſtalline, provided this Membrane can be thus affected, whilſt the cryſtalline Humour remains uninjured, of which Experience has not hitherto convinced me; neither am I ſatisfied, as to that Sort which is ſaid to be cauſed by a Congeſtion or Inſpiſſation of the aqueous Humour. I have, it is true, often ſeen an Opacity, in a ſmall Portion of the Membrane, which covers the fore Part of the Cryſtalline, without the Loſs of Sight, becauſe the cryſtalline Humour itſelf, and the reſt of that Membrane, remained ſound.

Thoſe who have never ſeen any but membranous Cataracts, have been as much miſtaken as thoſe who knew none but cryſtalline Cataracts. In order to give a more clear Idea of the different Species of a Cataract, I ſhall divide them into true, doubtful, and falſe Cataracts.

Of a true Cataract.

Moſt Moderns define a true Cataract to be the cryſtalline Humour affected, and not a Membrane formed in the aqueous Humour, as the Antients deſcribed it. I adhere to the Moderns; numberleſs Experiments have evidently ſhewn the Error of the latter. We ſtill ſee many perſiſt in the Opinions of thoſe learned Men, who were not infallible: They poſtpone a Conviction from ocular Demonſtration, and manifeſt Experiments, to the Reaſons advanced by thoſe Authors in Behalf of their Opinion.

I was a long time of their Opinion, that a Cataract, curable by the Operation, was a Membrane formed in the aqueous Humour. But two Reflections have entirely undeceived me. The firſt is on the Manner in which a Cataract is formed, from its Beginning to its full Maturity. My ſecond Reflection is on the Reſult of the Operation which this Diſeaſe requires. When a Cataract begins, it lies in ſo deep, that it can ſcarcely be diſtinguiſhed; thence I conclude, if it was a Membrane, or Inſpiſſation of the aqueous Humour, and it was ſituate in the poſterior Chamber of the Eye, behind the Iris, it might be eaſily perceived, neither would it appear to lie ſo far within. Three or four Months after, more or leſs, the Patients complain of a Diminution of their Sight. When we examine their Eyes, we perceive a Whiteneſs very deep on the Inſide, without any apparent Dimneſs or Inſpiſſation of the aqueous Humour; this ſeems to ſhew, that it is the cryſtalline Humour which begins to grow opake. By obſerving the Patient's Eyes, from time to time, we ſenſibly perceive the Cryſtalline advance towards the Hole of the Pupil; and the Sight leſſens gradually, till the Cataract comes near the Pupil, which it cloſes, as a ſort of Curtain drawn before a Window, which leaves room for ſome Light to enter the Chamber, though Objects cannot be diſtinguiſhed thro' it.

This Reflection ſeems of Force ſufficient to evince, that a Cataract is not a Membrane produced in the aqueous Humour, nor an Inſpiſſation of that Humour; were it ſo, it would remain in the ſame Place where it had its Origin, neither would it change its Situation, as I have ſhewn it does in its Beginning, in its Progreſs, and in its Maturity.

My ſecond Reflection is taken from the Operation of the Cataract: For when the Eye is pierced, and the Needle thruſt in, it happens ſometimes, that it enters into the Middle of the Body which forms the Diſeaſe, tho', at the ſame time, it was directed in ſuch a manner, that it could not penetrate to the Place where the Cryſtalline is naturally ſituated; yet, when the Cataract is depreſs'd, and the Needle is raiſed, there appears, thro' the Hole of the Pupil, an opake Body, in the Form of the cryſtalline Humour, adhering to the End of the Needle. Were this Body a Membrane, it would be flat or plaited, and not of a convex Figure: From theſe Circumſtances, we may conclude it is the Cryſtalline which is depreſſed in this Operation, together with the Membrane which retained it in the vitreous Humour, before it was affected; for, if it could any way get looſe from that Membrane, it would fall of its own Accord to the Bottom of the Eye; but, as it cannot, it muſt neceſſarily remain always attach'd to the Membrane which covers it.

That a Cataract is ſeated in the cryſtalline Humour, I ſhall give another convincing Proof, deduced from an Experiment made on the Eye of a Man, who died at the Hoſpital of the Name of *Jeſus*: He had undergone the Operation for the Cataract, in the Hands of Mr. *Woolhouſe*. I deſired M. *Mery*, of the Royal Academy of Sciences, to come thither, and examine the Eye: He drew the Eye, on which the Operation had been performed, out of the Orbit, opened it, and found the cryſtalline Humour placed in the Bottom of the Globe of the Eye, at the poſterior and inferior Part of the Pupil, to which Place the Operator had depreſſed it. This proves ſufficiently, the Seat of a Cataract is in the cryſtalline Humour. In the Sequel of this Treatiſe, all things will appear to corroborate theſe Proofs. Whoſoever deſires to be further informed, let him conſult the Works of *Briſſeau* and *Heiſter* on this Subject, who have detected the Error into which the Antients were led, for want of fully examining this Matter.

Theſe new Opinions engaged the Members of the Royal Academy of Sciences to make ſeveral Experiments, in Search of the Truth; and, ſince that time, ſeveral of them have abandoned the Error of the Antients, as may be ſeen in their Memoirs.

A true Cataract is, then, an Alteration of the cryſtalline Humour, which loſes its natural Tranſparence, becomes opaque, and at length hinders the Rays of Light reflected from luminous Bodies to paſs to the Bottom of the Eye, there to make their Impreſſion; by which means there is no Sight, till the Cataract is either depreſſed by the Operation, or falls ſpontaneouſly by its Weight, as I obſerved in the two following Caſes.

The firſt happened to one M. *Barthelemy*, Dean of the Account-office; he was about threeſcore and ten Years old, and lived in *Rue de la Ceriſaye* in *Paris*; his Cataract fell of its own Accord, and was lodged in the Place where it is uſually depreſs'd to by the Needle, ſo that he could ſee as well as People do, after the Operation for the Cataract has been well performed.

The ſecond Inſtance happened, in *Rue de Richelieu*, to an old blind Bitch, belonging to the Counteſs of *Chamillart*. They were ſurpriſed one Day, that this Bitch, contrary to Cuſtom, could ſee enough to guide herſelf: As I went frequently to that Houſe, to viſit the Abbot *de Guide*, for whom I had couched a Cataract, they ſhewed me the Bitch; in one of her Eyes I perceived a Cataract half depreſſed, ſo that a ſufficient Quantity of Light paſſed to the Bottom of her Eye, and enabled her to ſee.

After having, as it were, demonſtrated the Cryſtalline to be the Seat of true Cataracts, we muſt now ſhew, that the different Alterations of that Humour conſtitute the different Sorts of true Cataracts.

I admit three Sorts of Alterations of the cryſtalline Humour in true Cataracts. In the firſt, the Cryſtalline becomes ſoft, and, as it were, mucilaginous. In the ſecond, the Cryſtalline grows hard and dry. In the third, the inner Part of the Subſtance of this Humour becomes purulent, whilſt the outward Strata, and the Membrane which covers it, ſerve as a Purſe or Cyſtis for this Matter.

The Situation of true Cataracts is various: Sometimes they advance towards the Pupil, till they are full ripe; then they lie on the inner Circumference of the Iris. At other times, tho' the Cryſtalline is looſed from the Socket of the vitreous Humour, ſtill it advances very little towards the Pupil, but remains in the Middle of the poſterior Chamber, where the Cataract ripens. Perſons attacked with this laſt Species do not entirely loſe their Sight; and, tho' their Cataracts be full ripe, they can perceive Objects but in a very confuſed Manner, becauſe ſome Rays of Light paſs to the Bottom of the Eye, about the Circumference of the Cataract.

Authors have eſtabliſhed two particular Sorts of true Cataracts by the Names of the Milky and the Cheeſy, but, in this, they were miſtaken; for theſe pretended Species of Cataracts are only the different Degrees of Alteration, which the Cryſtalline muſt undergo, before it arrives to a full Ripeneſs; for which Reaſon they are ſeldom found, but when the Cataract is couched too ſoon.

Cataracts from the Birth require a long Time to ripen. Beſides, as Children have not Reſolution enough to bear the Needle

Needle to their Eye, they often cauſe their Eyes to be damaged, and their Sight deſtroyed. I have ſeen a like Accident happen to a Merchant's Daughter in *Rue de Thevenot*: At the Age of ſeven Years ſhe had a Cataract couched by M. *Gerrard* the elder; for which Reaſon I let Children alone, till they are ten or twelve Years old, leſt I ſhould meet with the ſame Misfortune.

Sometimes the Centre of a Cataract from the Birth is petrified; there is ſomething in the Middle of the Body of the Cataract, about the Bigneſs of a Pin's Head, hard and concreted like a Stone. A Noiſe is even heard, when the Needle, in the Couching, touches that Place, as if it rubbed againſt a ſmall Pebble-ſtone. This does not hinder the Patient from recovering his Sight, after the Cataract has been couched.

Of doubtful Cataracts.

I call that Cataract a doubtful Cataract, in which the Succeſs of the Operation is as uncertain, as the Uſe of topical Remedies. I admit four Sorts: The firſt is a kind of Membrane, which appears, and is formed, after a purulent Matter has been extravaſated into the aqueous Humour. In the Sequel of this Treatiſe, I ſhall diſtinguiſh this Sort by the Name of a Membranous Cataract. The ſecond Species is called Filamentous, from the great Number of Filaments which compoſe it. The third is a diſplacing of the Cryſtalline from a Stroke received in the Eye. The fourth is an Alteration of the Membrane which covers the Bottom of the Socket in the vitreous Humour.

Of a Membranous Cataract.

I have already obſerved a membranous Cataract to be the Conſequence of an Ophthalmy of the Choroides and Uvea; their obſtructed Veſſels emit a whitiſh Pus into the aqueous Humour; this Pus, by its Viſcidity, adheres to the Circumference of the Pupil, and there appears like a fine Cloth. When this Matter is not very copious, it does not entirely cloſe the Pupil; in this Caſe, if the Fluxion ceaſes, before it has damaged the Bottom of the Eye, it leaves a ſufficient Paſſage for the Light to make its Impreſſion, ſo that the Patients ſee a little, but their Sight is weak; but if the Fluxion reaches to the Bottom of the Eye, and deſtroys the Action of the Fibres of the Retina, the Sight periſhes. I had an Inſtance of this in the Perſon of M. *Vilvandé*, who had been attacked by a violent Defluxion on both his Eyes; one of them periſhed by an Abſceſs, and the other was ſeized with a membranous Cataract, which had deſtroy'd his Sight. M. *Woolhouſe* promiſed to reſtore it, by couching the Cataract. This Patient came afterwards to conſult me; but, as I found the Cataract complicated with a Gutta Serena, I aſſured him the Operation would be of no Service to him. Still he perſiſted to engage me to undertake it, and, as I was ſatisfied it would not ſucceed, I would not perform it, but in Preſence of another Oculiſt. M. *Bailly* the elder was called; he, in Complaiſance to the Patient, told him, if the Operation did not reſtore his Sight, it would not injure his Eye.

I performed the Operation, in Preſence of this dextrous Oculiſt; the Cataract was well depreſſed, Objects were preſented to him, but he could not ſee any of them, tho' the Pupil ſeemed very clear. When the Bottom of the Eye is not damaged, there remain certain Openings in this Cataract, thro' which the Patients can ſee. I ſhall relate two Inſtances. A Woolen-draper, of the City of *Beauvais*, came to *Paris* to be cured of an inveterate Defluxion on both his Eyes, which hindered him from diſtinguiſhing Objects, becauſe there was a whitiſh Humour placed in the Pupils; a Fortnight after, the Fluxion went off, and his Sight began to return by degrees; for the Matter in the Hole of the Pupil ſpent itſelf, and the Patient, by degrees, could ſee again to read. His Sight, however, continued weak, becauſe the Iris had been contracted by a Part of that whitiſh Matter, and left but a ſmall Space for the Entrance of the Rays of Light into the Eye.

There is alſo another kind of Effuſion of whitiſh Matter into the aqueous Humour, which places itſelf behind the Hole of the Pupil, and there remains till the Defluxion ceaſes. I have ſeen this Caſe, in one M. *Lomery*; I attended him, in the Year 1713. when he had a violent Defluxion, neither could he ſee at all with the diſtempered Eye. There appeared, behind the Hole of the *Pupil*, a ſort of purulent Cataract, which, as ſoon as it attain'd a certain Conſiſtence, fell to the Bottom of the Eye, with which he could ſee very well afterwards.

Theſe Examples ſhew a membranous Cataract has three different Places of Situation: 1. When it cloſes the entire Pupil, and adheres to its Circumference. 2. When the Cataract, tho' adherent, ſtops only Part of the Hole of the Pupil. 3. When the Matter, which forms the Cataract, floats in the aqueous Humour, behind the Iris, without ſticking to it; and, when the Defluxion goes off, it falls commonly to the Bottom of the Eye; for if it adheres to the back Part of the Pupil, it forms a membranous Cataract.

From what I have now ſaid it is plain, that I admit of membranous Cataracts, which proceed from Abſceſſes of the Choroides or Uvea, which diſcharge their Matter into the aqueous Humour. The more liquid Part of this extravaſated Matter mixes with the aqueous Humour, whilſt the more ſolid Part gathers together, and ſettles in the ſeveral Places I have mentioned. If this Matter remains behind the Iris, it will form a Cataract like a Membrane, without engaging the Cryſtalline; and this I call a membranous Cataract. The Succeſs of the Operation, in this kind of Cataract, is not to be doubted, provided the Defluxion, which cauſed the Abſceſs, has not deſtroyed the eſſential Parts of Viſion, which yet happens but very ſeldom. This Species of Cataracts is very rare; for which Reaſon I aſſert, that almoſt all Cataracts, in which the Operation ſucceeds, conſiſt in an Alteration of the Cryſtalline.

Thoſe who aſſert, that none but membranous Cataracts are reliev'd by the Operation, have not hitherto given any convincing Proof of their Opinion. Had they opened an Eye, and found the Cryſtalline entire, after the Death of a Perſon on whom a Cataract of this Sort had been couched, and who had ſeen, after the Operation, his Cryſtalline remaining without any Alteration, they would have ſome Foundation to defend their Aſſertion; and they might juſtly claim our Aſſent, could they produce ſeveral Experiments of this Sort well atteſted. They have only given us a Diſſection of ſome Eyes, on which the Operation had never been performed; whereas the contrary Opinion, which maintains, that almoſt all Cataracts proceed from an Alteration of the Cryſtalline, is confirmed by an infinite Number of well atteſted Experiments, made on the Eyes of Perſons who had undergone the Operation, and ſaw, from that time, to their Death; when their Eyes were opened, the Cryſtalline was found depreſs'd, together with the Membrane which covers it.

We have alſo ſeveral Experiments made on Perſons who lived many Years after the Couching of their Cataracts, where the Body, which had been depreſſed, having paſſed thro' the Hole of the Pupil into the anterior Chamber of the Eye, was taken out, by an Inciſion made in the Cornea Tranſparent; and, upon Examination, it appeared to be the Cryſtalline which had paſſed thro' the Pupil, the Patients having afterwards ſeen perfectly to read with Cataract Spectacles.

Of a Filamentous Cataract.

I reckon this Species amongſt the doubtful Cataracts, altho' it ſeems to be a true Cataract. It is very properly called filamentous; for, in the Couching of it, the Needle ſeems to draw off numberleſs ſmall Filaments. This Cataract cannot be cured by the Operation; for theſe Filaments cannot be broke. I think this Remark neceſſary, in order to precaution any one who may meet with a Caſe of this Nature, which is very rare, not to be ſurpriſed at it.

Of Cataracts proceeding from Strokes.

Some Oculiſts are of Opinion, that Cataracts, from Strokes received on the Eye, or the adjacent Parts, are incurable; but I have ſeveral Experiments of the contrary. I ſhall here mention one, in the Perſon of a Man, named *Conſtantine*, living in *Paris Rue du Verbois aux Carnaux*: He had been ſhot, ſixteen Years before, in both his Eyes. The ſmall Shot, which had penetrated between the Membranes, came out, from time to time, ſpontaneouſly, for the Space of three or four Years which intervened, from the time he received the Shot, to the time of the Operation. By the Violence of the Stroke, the Globe of the Eye was ſunk. The Cryſtalline, together with its Membrane, was looſed, and advanced towards the Pupil, to which it ſeemed to adhere on the Side of the little Angle, where one of the ſmall Shot had penetrated the Iris at its Union with the Cornea Tranſparent; the Pupil itſelf became oblong on that Side. The Iris had no Movement, either of Dilatation or Contraction; yet this Man could perceive, on that ſame Side, the Shade of a Hand placed between his Eye and the Light. This determined me to perform the Operation, about twelve Years ago; ſince which time, he has ſeen with that Eye, as well as if the Cataract had proceeded from an inward Cauſe. What is more ſurpriſing, after he had been ſhot in this manner, he loſt the Sight of his other Eye, tho' nothing appeared in the Humours, that could darken it; and, a Year after the ſaid Operation, the Sight of it was reſtored, without any Application.

When the Eye receives a violent Stroke, the Cryſtalline is looſed immediately, and, in two or three Days, it becomes opaque, ſo that the Patients can only juſt perceive the Light.

Theſe Cataracts have three different Situations: 1. When the Cryſtalline, already looſed by the Stroke on the Eye, advances towards the Pupil. In this Caſe, if it grows dry before it touches the Iris, it falls of its own Accord, and the Patients can ſee again, without any Operation; but, when placed behind the Iris, if then it adheres to the Iris, the Operation is neceſſary. This is the ſecond Place of Situation for theſe Cataracts, when the Cryſtalline advances, and adheres to the Pupil. The third Place is, when the Cataract paſſes altogether into the anterior Chamber, and is placed between the Cornea

Tranſparent

Tranſparent and the Iris; from whence it muſt be taken out, in the manner that ſhall be deſcribed in the Sequel of this Treatiſe.

Of a Cataract, cauſed by a Defect in the Membrane, which covers the Socket of the Vitreous Humour.

I reckon, amongſt doubtful Cataracts, thoſe cauſed by a Defect in the Membrane, which covers the Bottom of the Socket in the vitreous Humour. In this Sort, the Sight is not altogether loſt, it is only weakened: In this Caſe there appears, thro' the Hole of the Pupil, a Whiteneſs which is thin and flat, and ſeems to be the Membrane, which covers the Bottom of the Socket of the vitreous Humour, degenerated. It often aſſumes the Form of a Star, leaves ſome Intervals without Opacity, and ſome opaque; ſo that this Opacity, which affects only the concave Part of the Socket, propagated from the Centre to the Circumference, appears like a Star. In this Diſeaſe, the Cryſtalline is not looſed, and the Sight, tho' weak, ſubſiſts.

Of falſe Cataracts.

Thoſe Cataracts are called falſe, in which Remedies afford no Relief, and in which the Operation is intended only to remove the Deformity, or Pains, which attend them. I reduce them to two Sorts, the Glaucoma, and the ſhaking Cataract.

Of a Glaucoma.

That Diſeaſe is called Glaucoma, in which the Cryſtalline is of the Colour of Sea-water. I am convinced, by my own Practice, that it is only of that Colour in its Beginning; for, afterwards, it becomes whitiſh, or greyiſh. There are various Opinions concerning this Diſeaſe, both as to its Origin and Situation. Some have judged it to be ſimply a Depravation of the Cryſtalline; and others, of the vitreous Humour. I have found, by an Inſpection of Eyes afflicted with this Diſeaſe, a ſort of Depravation in the Cryſtalline, which was conſequent to a Palſy of the viſual Nerves, which firſt appears by a Dilatation of the Pupil.

The Signs of a Glaucoma, in its Beginning, are a Smoak and Miſts, which ſeem to paſs before the Patient's Eyes, and confuſe their Sight. They ſtill can ſee Objects, but imperfectly, and only at the Corner of their Eye, becauſe ſome Fibres remain not totally obſtructed. The Sight decays by degrees, and the Patients can only juſt diſtinguiſh the Light; then the Cryſtalline begins to degenerate, loſes its Tranſparence, and, at firſt, aſſumes the Colour of Sea-water. As it grows more ſolid, it changes its firſt Colour, appearing like a Cataract, ſometimes of one Colour, and ſometimes of another, as I have already obſerved. This is what I call a Glaucoma, which differs from a true Cataract, by its Complication with a Gutta Serena. A Glaucoma begins ſometimes after the Criſis of a Fever, in which the morbific Matter is remov'd to the Eye, and cauſes an Inflammation in all the Membranes, except the Conjunctiva, which is but ſlightly affected; the Patients feel an acute Pain in the Bottom of the Eye, and in the Temples; a Gutta Serena follows this Fluxion, and a Glaucoma enſues.

Sometimes the ſolar Rays, falling ſuddenly and violently upon the Eye, produce this Diſeaſe; as I ſaw, in the Year 1717. happen to a Commander of the Order of *Malta*: He had ſuffered for a long time, from ſuch an Accident, violent Pains in his Head and Eye, which were followed by a Glaucoma.

This Diſeaſe is ſometimes produced by a viſcid Humour, which creates Obſtructions in the Bottom of the Eye, and in the Cryſtalline, by which a Gutta Serena, and a Cataract without Pain, are formed, to which a Glaucoma ſucceeds.

Old People are deemed ſubject to this Diſeaſe, becauſe their Cryſtalline appears dry, which hinders them from ſeeing Objects perfectly, tho' they can diſtinguiſh them. I ſaw two Perſons, who had their Cryſtalline ſo opaque, that they ſeemed to have true Cataracts, and in Appearance they could not ſee; theſe Perſons, however, were able to read.

I do not take this Dryneſs of the Cryſtalline to be a Glaucoma, becauſe the eſſential Parts of the Sight remain ſound, whilſt the Cryſtalline grows dry: In this State, the Light penetrates to the Bottom of the Eye, finding a Paſſage round the Cryſtalline; ſo that the Patients, notwithſtanding this Opacity of their Cryſtalline, can ſee and diſtinguiſh Objects ſufficiently to read Writing. This Diſeaſe reſembles a Cataract, more than a Glaucoma. If theſe Perſons be attacked with a Gutta Serena, which may come very ſuddenly, the Pupil will be dilated; and a Glaucoma, according to my Definition, will be formed.

The Prognoſtic of this Diſeaſe is very fatal; for, when it is once formed, Remedies are of no Service; and, when one Eye is afflicted with it, the other is in great Danger.

When this Diſeaſe proceeds only from the Dryneſs of the Cryſtalline, as in old Men, the Sight continues often all their Lives. 'Tis to theſe old Men, Eye-bright Wine, and other Preparations of that Herb, ſo much recommended by the Antients, are very ſerviceable.

Of a Shaking Cataract.

I ſhall ſay very little of the ſhaking Cataract; for this Diſeaſe is incurable, and the Operation ſerves only to remove the Deformity of the Eye, and to abate the Pains. The Cryſtalline becomes like Plaiſter, and reſembles that of a fried Whiting: It rolls from one Side to the other, according to the different Movements of the Eye; for this Body adheres to ſome Ciliar Fibres, which keep it ſuſpended in the Middle of the poſterior Chamber. In Proceſs of Time, theſe Fibres break; then the Cryſtalline, having no Support, paſſes, upon the leaſt Motion, into the anterior Chamber; from whence it muſt be drawn out, in the manner which ſhall be taught, in treating of the Operation for Cataracts.

Of the Cauſes of Cataracts.

Cataracts proceed from internal or external Cauſes. Thoſe who have hitherto wrote of this Diſeaſe, have not explained, in a ſatisfactory manner, how it is formed. My Opinion is as follows:

The firſt Thing, which happens in the Formation of a Cataract from an internal Cauſe, is the Thickening and Viſcoſity of the nutritious Juices, which flow into the Veſſels of the Membrane that fixes the Cryſtalline in the vitreous Humour, and into the Veſſels of the Cryſtalline. Theſe Juices, by their Viſcidity, ſtop the Chanels through which they paſs; then the Nouriſhment, neceſſary to preſerve the Tone and Spring of theſe Veſſels, cannot be duly ſupplied, the Veſſels, which ſhould convey it, being obſtructed; for which Reaſon, the Fluids, which arrive at laſt, not finding free Paſſage and Room to circulate, they ſtagnate, and grow acrid; thence enſues a total Diſſolution of all the Subſtance of the Cryſtalline. Hence Abſceſſes, and purulent Cataracts. If there be not a total Diſſolution of the Cryſtalline, this Humour loſes Part of its Fluidity, and is looſed, together with the Membrane which incloſes it, from the vitreous Humour. Afterwards it acquires a hard Conſiſtence; as it grows more ſolid, it advances towards the Hole of the Pupil, and is puſhed forward by a Seroſity collected behind it, whether it be the aqueous Humour which glides into that Place, or whether the vitreous Humour furniſhes it, as the anterior Cells of the vitreous Humour appear principally filled with it. That a Seroſity is gathered between the affected Cryſtalline and the vitreous Humour, ſeems to be proved by this, that in couching a Cataract, if any Portion is looſed, it is puſhed with Violence into the anterior Chamber of the Eye, as if it was violently forced by ſome Humour flowing from the Back to the Fore-part.

Wherefore I think, in the Beginning of Cataracts from an internal Cauſe, there is a Diſſolution of the Cryſtalline, by which it grows ſoft, and becomes more or leſs fluid; for, when we attempt to couch a Cataract, before it is full ripe, the Needle paſſes thro' it, as thro' a thick Cream, and can never depreſs it; whereas, in the ſound, natural State of the Cryſtalline, the Needle meets with a Reſiſtance. We muſt then conclude, from this Difference, that the Cryſtalline, at firſt, becomes ſoft; and that there is a Diſſolution of it in the Beginning of a Cataract.

It muſt not, however, be ſuppoſed, that all Cataracts are occaſioned by a Diſſolution of the Cryſtalline; for, in ſome, it grows hard and dry. This laſt Sort of Cataract may be couched in a ſhort time after it is formed.

It is very difficult to explain, how the Cryſtalline acquires this Conſiſtence, in ſo ſhort a time; yet it is not ſurpriſing, ſince it becomes like Plaiſter in the ſhaking Cataract.

The Colour of the Cryſtalline, in this Species of Cataract, approaches the Brightneſs of Quickſilver, ſomewhat inclining to the Colour of Window-glaſs. I cannot compare it, on account of its Conſiſtence, to any thing better than to Talc; for, in couching, when it is preſſed by the Needle, it breaks off in Scales, as that Subſtance does; this does not hinder the Succeſs of the Operation.

The external producive Cauſes of Cataracts are Strokes received on the Eyes, and the adjacent Parts; as alſo Falls, which give a great Shock to the Head; Strokes received about the Orbit, which cauſe a great Concuſſion in the Eye; Strokes in the Middle of the Globe, which make the Cornea bend inwards, and which divide the poſterior and lateral Parts of thoſe Membranes, which incloſe the Humours of the Eye; ſo that the Membrane, which joins the Cryſtalline to the vitreous Humour, is lacerated, and, by its Rupture, occaſions the Looſing of the Cryſtalline.

Theſe Accidents come either by ſmall Shot, as in the above-mentioned Caſe of the Man called *Conſtantine*; or they happen by an infinite Number of other Means too tedious to deſcribe. I ſhall relate ſome Caſes: One of them happened ſix Years ſince, at the *Hôtel* of *Aſturias Rue de Sepulchre* in *Paris*, to a young Nobleman.

One of his Friends had ſtruck him undeſignedly, in the Middle of his Eye, with the End of a ſmall Switch. I was not called, till the Day after the Accident; I found the Cryſtalline looſed and floating in the aqueous Humour; it was already become opaque, though neither Scratch or Wound appeared on the Outſide of the Eye. He could only juſt diſcern the Light, with that Eye. Boys, who throws Squibs in the Streets, often cauſe Cataracts in Peoples Eyes, as they go along: There is ſomething, about the Bigneſs of a Pea, in the Squibs to ram them; when this Part ſtrikes the Eye, it produces a Cataract by looſing the Cryſtalline, in the beforementioned manner. About four Years ago, a like Accident happened, in the *Rue de la Mortellerie* in *Paris*, to a Corn-merchant's Son, about twelve Years old. The Cryſtalline was inſtantly looſed, appeared opaque and whitiſh, the next Day after the Stroke.

The Stab of the Point of Sciſſars may inſtantly looſe the Cryſtalline; a few Days ſince, a like Accident befel a young Girl, twelve Years old.

The Point of her Sciſſars had ſtruck and penetrated the Cornea Tranſparent; the next Day, when I examined her Eye, I found the Cryſtalline looſed and opaque.

A Pin, or any thing which can prick the Globe of the Eye, may produce a Cataract, as happened, laſt Winter, in the Community of the Nuns of St. *Genevieve quay de la Tournelle:* As one of them was ſhaking her Apron, a Pin run into her Eye, at the Place the Puncture is made in couching a Cataract. It entered very deep, and had pricked the Cryſtalline; violent Pains enſued, and, when they were alleviated, I diſcovered a Cataract to be formed.

I ſaw another Inſtance of a Cataract, proceeding from the Blow of an edged Weapon on the Middle of the Pupil. The Cryſtalline was looſed from the vitreous Humour, and placed in the poſterior Chamber of the Eye, at the Place where true Cataracts lie; the Point of the Weapon paſt through the Cornea, penetrated to the Cryſtalline, and wounded it, ſo that the Cataract was join'd to the Wound of the Cornea, by the Intervention of a whitiſh Matter, which flowed from the Cryſtalline. Three Years after the Stroke, the Patient applied to me: I examined his Eye, found the Parts in the Bottom to be ſound, and that he would ſee, if his Cataract was couched; for which Reaſon, I paſſed the Needle to it: The upper Part of the Cataract gave way, and was depreſſed; but, as I obſerved it firmly adhered to the Cornea Tranſparent, and that it drew the Cornea with it, I could not break it with my Needle, and ſo could not depreſs it below the Adherence. At that Time, I made uſe of the round Needle: Had I then, as I now have, a Needle edged and flat, I could have cut the Adherence with its Edge, and perfectly ſucceeded. It may, perhaps, be objected, that theſe Sorts of Cataracts which come by Strokes, and looſen the Cryſtalline, are only a whitiſh Juice extravaſated into the aqueous Humour, by the Rupture of ſome Veſſels of the Globe, and placed behind the *Iris*; ſo that I am miſtaken in ſuppoſing this whitiſh Juice to be the Cryſtalline.

To this I anſwer: The Diſtinction is eaſily made, provided the Blow has not tore ſome of the Blood-veſſels; for, if the Eye be inſpected, a few Days after the Blow, the Cataract may be ſeen, through the Hole of the Pupil, of a round convex Form as the Cryſtalline is; it has even ſome Conſiſtence, which it would not have, if it was only a whitiſh Juice extravaſated.

Beſides, this whitiſh Juice cannot be diſcharged into the aqueous Humour, but by the Rupture of ſome Veſſels, ſo that it ought to be mixed with Blood; but, in order to prove this Cataract is not occaſioned by a whitiſh Juice poured into the aqueous Humour, it is never mix'd with Blood. Indeed, when the Veſſels, or Membranes, are torn by a Blow which has looſed the Cryſtalline, ſome Blood appears in the aqueous Humour, but never any is ſeen in the Cryſtalline, as there ſhould be, if what I take to be the Cryſtalline is only a whitiſh Juice; for, when this Blood is diſperſed by proper Remedies, the Cataract is ſeen floating in the aqueous Humour, without any Tincture of Blood. We muſt therefore conclude, that this Sort of Cataract is not occaſioned by that pretended Juice, and that it is certainly the Cryſtalline looſed from its Socket; for it often falls ſpontaneouſly to the Bottom of the Eye, in the ſame Place to which the Operation reduces it; and then the Patients cannot ſee to read, but with Cataract-Spectacles; which is a manifeſt Proof, that it is the Cryſtalline which is looſed, ſince theſe Spectacles are deſigned to ſupply its Place.

This Account of a Cataract, from an external Cauſe, appears to be very rational. When the Cryſtalline Humour is detach'd from its Place, and the Veſſels, which ſupply it with Nouriſhment, conſequently broke, it is manifeſt, that it muſt very ſoon become opaque.

Of the Signs of Cataracts.

When a Cataract begins, and the Chanels of the Cryſtalline Humour are obſtructed, the Light, which enters the Eye, falling on the obſtructed Veſſels, makes a Shadow in that Part of the Eye, on which the Rays of Light ſhould fall; hence thoſe Flies and Cobwebs in the Air before the Patient's Eyes floating here and there, according to the Motions of the Eye; theſe Shadows aſſume different Figures, according to the Number of the obſtructed Veſſels of the Cryſtalline, and according to their different Diſpoſitions, as the Appearance of Hairs, Duſt, Cobwebs, and Flies.

It is difficult to know a Cataract in its Beginning; for the preceding Signs are almoſt the ſame with thoſe of other Diſeaſes of the Eyes; for theſe Flies, or Shadows, may be formed by the Relaxation of the Veſſels of the Retina: As they are, in ſome Places, ſeparated from the Choroides, the Light cannot make its Impreſſion on thoſe Parts, ſo that a Sort of Shadow is form'd on the Choroides.

There is likewiſe a falſe Suffuſion, attended with the Appearance of an infinite Number of Atoms in the Air; but the Sight is not ſhortened, in either of theſe Diſeaſes.

Theſe are the certain Signs of a beginning Cataract: The Patients perceive, in a ſhort time, the Sight of their diſeaſed Eye to grow much ſhorter; they cannot ſee as diſtinctly at a Diſtance, as they could before their Eye was attacked; they find their Sight ſenſibly diminiſh every eight Days.

But, as ſoon as the before-mentioned Diſſolution of the Cryſtalline ſupervenes, the Whiteneſs and Opacity may be perceived to ſink into the poſterior Chamber of the Eye, where the Cryſtalline is lodg'd; then the Inſpection of the Eye clearly ſhews the Cataract, which could not be known before, but from the Account the Patient gave of the Diminution and Weakneſs of his Sight.

Having now related the Signs by which a Cataract may be known, we muſt propound thoſe which diſtinguiſh the different Degrees of its Maturity. Theſe Signs are three in Number: Firſt, When the Cataract appears, in every Part, of an equal Opacity; for, when the Opacity is not equal, looking thro' the Hole of the Pupil, ſome Places appear more ſolid and opaque than others.

The ſecond Sign is: The Patient being placed with his Back to the Light, and an Object preſented to him, if he can diſtinguiſh it, his Cataract is not full ripe, unleſs it be one of thoſe Cataracts, in which the Cryſtalline remains in the Middle of the poſterior Chamber of the Eye.

The third and moſt certain Sign is: Let the Operator examine the diſeaſed Eye expoſed to the Light; if he finds the Cryſtalline of an equal Opacity, let him cloſe the Patient's Eyes with his Thumbs, then rub the upper Lid of that Eye which has the Cataract, and, keeping the other Eye ſhut, let him open the Lids; if he finds the Light, which falls on the Pupil, makes the Iris contract, and, tho' expoſed to the ſame Light, it dilates to the Half, or the Quarter, of that Degree to which it was contracted, he may be aſſured the Cataract is ripe. I do not know any Author who has deſcribed the Signs, by which a membranous Cataract may be diſtinguiſhed from that Sort produced by the Depravation of the Cryſtalline Humour; yet this Diſtinction is very neceſſary, to prevent the miſtaking one for the other in the Operation. The Diſtinction may be thus made: If it be a membranous Cataract, it will appear flat, and a Hollow may be ſometimes perceived in the Middle of it; whereas, in that produced by the Cryſtalline, if you look through the Hole of the Pupil, you may diſtinguiſh a lenticular Form, more elevated in its Middle, than in its Circumference.

It is not ſufficient to have deſcribed the Signs which ſhew the Maturity of a Cataract; it is likewiſe neceſſary to ſpeak of thoſe, by which we may be aſſured the Patients will ſee, after the Cataract is couched. Theſe Signs are taken from the Diſpoſition of the Eye, and the Nature of the Cataract. The firſt Point is to examine, whether the Organs of Viſion are ſound and well diſpoſed: This may be known by the Facility the Iris has of contracting and dilating, as we have already obſerved; for, if there be no Motion in the Iris, it is a certain Sign the Patient will not ſee, tho' the Cataract be couched, except it was occaſioned by a Blow which wounded the Iris; for then, if the Hand be placed between the Eye and the Light, the Patient ſees the Shadow of the Hand; and, when the Hand is withdrawn, if he perceives a certain Glaring of the Light, it is a Proof, that the Bottom of the Eye is ſound.

As to the prognoſtic Signs deduced from the Eye: In caſe the affected Eye be either bigger, or leſs, than the ſound Eye, it is a bad Sign; for the exceſſive Size of the Globe clearly ſhews, that whatever is extravaſated in the Eye, and has reduced it to that preternatural State, has likewiſe done Violence to the eſſential Parts of Viſion; and that the Eye is attacked with a Gutta Serena, through the Lengthening of its Nerves.

On the contrary, if the Globe be emaciated, it is alſo a bad Sign; for the Diminution of the Globe proves, that the nervous Parts have been moiſtened by a ſharp, ſaline Juice, which has decayed them, and intercepted the Courſe of the Spirits to the Eye. As to the prognoſtic Signs drawn from the Cataract, they are two-fold; ſome regard its Age, and ſome its different Colours.

With reſpect to the Age, we muſt obſerve, as the membranous Cataracts grow old, they become adherent, either to all the poſterior Parts of the Iris, or only to ſome Points of its Circumference. On this Difference depend the Changes which then happen to the Pupil; ſuch are certain preternatural Colours, or Wrinkles, which may be ſeen in it.

The Difficulty, or rather Impoſſibility, of deſtroying theſe Adherences, engaged ſeveral Oculiſts to lay the Operation entirely aſide, though it is very practicable, by cutting theſe Adherences with an edged Needle.

Let the Cataract of the Cryſtalline be ever ſo old, it never adheres to the Iris: Indeed, it comes ſo very near it, that it deſtroys almoſt all its Movement. Of whatever Age a Cataract be, the Operator may ſafely undertake to couch it, (tho' ſeveral Authors have aſſerted the Impoſſibility of Succeſs) provided he has Dexterity enough to cut the Fibres which oppoſe its Depreſſion, without damaging the Parts to which they adhere.

It does not ſeem improper to ſay ſomewhat of Barr'd Cataracts. We call that Sort a Barr'd Cataract, which has its Fore-part croſs'd by one or more Fibres: Theſe Fibres are variouſly placed. As theſe Cataracts ſeldom attain to a Conſiſtence; which will admit of their being ſurely couch'd, there is often found in the Body of them a whitiſh, and ſometimes a yellowiſh Matter; which runs out inſtantly in the Operation, and, mixing with the aqueous Humour, renders it turbid. This Matter commonly acquires a certain Conſiſtence, and, remaining in the aqueous Humour, it obſtructs the Paſſage of the Rays of Light, as much as it did before it was couch'd: Then, if it does not fall ſpontaneouſly to the Bottom of the poſterior Chamber, a ſecond Operation, ſix Weeks after the firſt, is neceſſary, in order to depreſs this new Sort of Cataract, which then will have a Conſiſtence ſufficient to bear the ſecond Application of the Needle.

As to the Colours of Cataracts, I am convinced, from Experience, of whatever Colour they are, that the Operation always ſucceeds, provided they have the Signs of Maturity, and there is a good Diſpoſition of the Eye. It may, however, be obſerved, that, of all Colours, the Blue-grey ſucceeds beſt; thoſe of a Sky-colour'd White, thoſe of a ſhining Silver Colour, ſomewhat inclining to that of Window-glaſs, and the White, approaching that of Sea-water, are to be preferr'd, in the next Place. The Aſh-colour'd, thoſe of a leaden Colour, the Reddiſh, or Cheſnut-colour'd, or thoſe of a ſnowy White, are difficult, and dubious in their Succeſs; as are likewiſe thoſe which have their Fore-part cover'd with Blood-veſſels.

The falſe Cataracts, in which the Operation ſerves only to remove the Deformity, are thoſe which are white, and like Plaiſter, or which reſemble white poliſh'd Ivory, or a Hail-ſtone.

Mr. *Sharp* differs, in ſome reſpects, from *St. Yves*, in his Sentiments relative to a Cataract. As this is a Subject of ſome Importance, it may be of ſome Service to the Reader to know wherein they diſagree, and wherein they are of the ſame Opinion.

The Mathematicians having obſerved, in thoſe who have been couch'd, that the Defect of Sight, remaining after the Operation, anſwers nearly to what, in Optics, the removing the cryſtalline Humour would occaſion, have endeavour'd to prove, that the Operation muſt, in conſequence, be the depreſſing that Humour, and leaving the Eye to perform its Function afterwards with the aqueous and vitreous Humours only; which, wanting the Denſity of that Humour, will not refract the Rays ſufficiently to re-unite them on the Retina; whence Patients, after their Cure, are obliged to uſe convex Glaſſes, as Subſtitutes for the depreſs'd cryſtalline Humour.

Petit, a moſt accurate Anatomiſt of *Paris*, has, from a critical Examination of the Figure of the Eye, argued againſt the Poſſibility of a Film's Exiſtence in the poſterior Chamber, by reaſon of the Smallneſs of that Chamber, or Proximity of the cryſtalline Humour to the Back of the Iris; and, again, from the Impracticability of diſlodging ſuch a Film, without offending the ſound cryſtalline Humour.

Laſtly, and what is more certain, Anatomiſts have frequently diſſected the Eyes of Perſons under this Diſorder, after their Death; and have found it to be always an Opacity of the cryſtalline Humour, agreeable to the Definition of a Glaucoma; ſo that, by conſequence, we muſt underſtand the Words *Cataract* and *Glaucoma* as ſynonymous Terms, ſince they are, in Fact, but one and the ſame Diſeaſe.

In deſcribing the Nature of a Cataract, it has been hitherto a poſitive Maxim, laid down by Oculiſts of every Nation, that there is one certain Stage of the Diſtemper, in which only the Operation is proper; and this State of the Diſeaſe is ſaid to be the Maturity of the Cataract. They have compared it to the Ripeneſs of Fruit, and have ſuppoſed a regular Change in the Conſiſtence of the cryſtalline Humour, from the Moment it is affected. They ſay the Diſeaſe, upon its firſt Invaſion, gradually liquefies the Humour; and that, after its Arrival to the utmoſt Period of Liquefaction, it then begins to acquire various Degrees of Tenacity, till at laſt it becomes perfectly hard, or, as they ſtyle it, horny: That the Skill of the Surgeon diſcovers itſelf by fixing on that Time for the Operation, in which the Fluidity of the Cataract is no Obſtacle to the Depreſſion of it, from its Want of Reſiſtance to the Needle, nor its Hardneſs, from the Elaſticity of its connecting Fibres, which, not being thoroughly broke, immediately return it to its former Poſition.

This, in a few Words, is the general Doctrine; but I think, the regular Alteration of the Denſity of the cryſtalline Humour is very much to be doubted; and, for my Part, I cannot help poſitively excepting to the Rule here laid down, having not only ſeen Cataracts, of twenty or thirty Years Growth, often, upon the Touch of the Needle, prove ſoft and milky, but alſo many Inſtances, in which a due Degree of Conſiſtence occurr'd after four or five Months, I may venture to ſay Days, when the Cataract was the Conſequence of a Blow or Puncture; both which Caſes ſo little correſpond with this ſuppoſed Change, that they ſeem not only to overthrow it, but to imply, that the Cataract, after it has acquir'd its total Degree of Opacity, may frequently, if not generally, continue in the ſame State of Tenacity to the Life's End. And tho' I will not take upon me to affirm, that Cataracts come always very early to their greateſt Conſiſtence, yet this we may ſafely deduce from theſe Obſervations, that, whenever they become entirely opaque, we may properly undertake the Operation; which has been my Method of Practice hitherto, nor do I find any Reaſon to lay it aſide.

Since, then, the Glaucoma is no other Diſeaſe than the Cataract, we muſt, at once, diſcard the Diſtinction of theſe two Diſtempers as merely imaginary; and, from what has been ſaid with regard to the Conſiſtence of a Cataract, that, whatever it be, the Removal of the Humour is the ſole End of the Operation, the Diſtinction of a true and falſe Cataract will appear equally frivolous, and conſequently moſt of the Subdiviſions compriſed under this laſt, ſuch as the Bag, the Milky, the Purulent, the Doubtful, the Membranous, the Fibrous, the Shaking, and many more in the Books on this Diſeaſe; the greateſt Part of which are Names that puzzle the Memory, without informing the Underſtanding, and, indeed, have not a ſufficient Foundation in Nature; but owe their Diverſity of Character more to the Imagination of Writers, than any real Variety in the Diſeaſe.

The general Criterion of the Fitneſs of Cataracts for the Operation is taken from their Colour: The Pearl-colour'd, and thoſe of the Colour of burniſh'd Iron, are eſteem'd proper to endure the Needle. The White are ſuppoſed milky, the Green and Yellow horny and incurable. The black Cataract is deſcrib'd by moſt Authors; but, I dare ſay, it has been miſtaken for a Gutta Serena, where, no Diſeaſe appearing, the Pupil ſeems black, as in a natural State of the Eye: And, as to the green one, I have not, as I remember, in a great Number of Cataracts, met with a ſingle Inſtance of it; but poſſibly it may be in Nature; and one would, indeed, imagine the Deſcribers of it could not be miſtaken, in what muſt have been ſo evident.

The Depreſſion of a Cataract, of any Colour, would be the Cure, if that alone was the Diſtemper of the Eye; but it generally happens, that the yellow ones adhere to the Iris ſo firmly as to become immoveable: Beſides, when they follow in conſequence of a Blow, which is often the Caſe, either the Cells of the vitreous Humours are ſo much diſturb'd and broken, or the Retina affected, that a great deal of Blindneſs will remain, though the Cataract be depreſs'd, and that one Cauſe removed.

To judge whether the Cataract adheres to the Iris, if you cannot at once diſtinguiſh it by your Sight, ſhut the Patient's Eye, and rub the Lids a little; then, ſuddenly opening it, you will perceive the Pupil contract, if the cryſtalline Humour does not prevent the Action by its Adheſion: And when this is the Caſe, in any Kind of Cataract, the Operation can hardly be adviſed; tho' I once did it, with Succeſs, on a Perſon who had been blind thirty Years. It is the only Trial I ever made on a Cataract I ever knew to be adherent; and I ſhould not have been tempted then, but that it look'd very firm, and I thought the Adheſion ſlight, as in Fact it proved.

Another Conſideration of the greateſt Moment, before undertaking the Cure, is to be aſſured of the right State of the Tunica Retina, which is very readily learnt, where there is no Adheſion of the Cataract, from the Light falling between the Iris and cryſtalline Humour; which, if the Eye is not ſenſible of it, is a certain Indication of another Malady, and abſolutely forbids the Operation. Generally this Cataract takes its Riſe from Head-achs, Convulſions, and nervous Diſorders.

The Operation of the milky Cataract has been, by ſome Writers, falſly ſaid never to ſucceed. Of this there are two Sorts, ſome which are almoſt uniformly ſoft, and admit the Needle thro' them as thro' Water, conſequently are immoveable; and others where the Humour is liquefied, and contain'd in its own Membrane, now pretty much thicken'd by the Diſeaſe, which laſt frequently does well; for, upon breaking the Membrane, the Fluid burſts out, and precipitates; and the

Membrane

Membrane itſelf, if it is not depreſs'd, in Proceſs of Time, ſhrinks into a ſmall Compaſs, or waſtes quite away.

Whether the whole Cataract, after its ſubſiding, continues to lie at the Bottom of the Eye, or is quite waſted by being ſeparated from its Veſſels, I have never had an Opportunity of knowing poſitively, by diſſecting one that has been couch'd; but, by what we ſee of thoſe, that have not been totally depreſs'd below the Pupil, and continue in that State for ever after, we may ſuppoſe, that they only waſte a little. I know one Inſtance of a Woman, whoſe Cataract, after couching, became quite looſe in the Eye, and, in an erect Poſture, ſunk to the Bottom; but, by ſtooping the Head forward, ſhe could bring it quite over the Pupil. *Sharp.*

Of what is to be done before the Operation of the Cataract.

As I have deſcrib'd the Nature of a Cataract, its different Cauſes, the Signs of its Maturity, and thoſe which foretel the Succeſs of the Operation, it now remains to examine, whether the Patient be in a Condition to undergo the Operation; for, if he has a Head-ach, Fever, or any other Diſorder, they muſt be remedied before it. Above all, you muſt avoid undertaking it too ſoon; for ſome Cataracts are four Years, others five, before they are full ripe. The Misfortune is, Perſons afflicted with this Diſeaſe are deſirous to ſee, and have not Patience to wait ſo long a Time. There are likewiſe Operators, who, for the ſordid Love of Money, couch them as they find them, ripe or not ripe. They flatter the poor Patients with the Hopes of reſtoring their Sight ſpeedily: Theſe are eaſily ſeduced by the pleaſing Bait; and the Deſire of Gain prevails with the Operator, who prefers his preſent Intereſt to his future Reputation, and hazards a doubtful Operation, leſt he ſhould loſe his preſent Practice.

A Cataract is like a Fruit which muſt be ſuffer'd to ripen on the Tree: If it be gather'd, before it is ripe, the Stalk muſt be broke; but, when it is full ripe, it is eaſily pluck'd from the Tree, and ſometimes falls of its own Accord. If the Operation be anticipated, or perform'd before the Cataract is full ripe, the Needle either paſſes without Succeſs through the Body, which is to be depreſs'd, by reaſon of its Softneſs, or the Ciliar Fibres are not dry enough to be broke with Eaſe by the Needle, ſo that they are forcibly tore: This violent Motion is communicated to the reſt of the Eye, and brings on a terrible Inflammation, which often deſtroys the Sight. Tho' this Accident ſhould not happen, we are ſtill oblig'd to a ſecond Operation, in order to depreſs what remain'd after the firſt. The Operation for the Cataract is of ſome Importance, and may have fatal Conſequences. Its Succeſs requires a great Dexterity in the Operator, and an entire State of Mind and Body in the Patient: He muſt be prepared, before the Operation, by Bleeding, Bathing, cooling Broths, and gentle Purges.

The moſt temperate Weather muſt be choſe, as the Spring and Autumn Seaſons; but the Spring is preferable, becauſe a fine Seaſon follows, which is otherwiſe with reſpect to Autumn. I know this Operation may be perform'd at any Time of the Year; but the Time I propoſe is always the moſt convenient for the Patients.

A fine ſerene Day muſt be choſen; for moiſt Weather is bad for the Patients, the Glandula Lacrymalis then furniſhing a great Diſcharge of Seroſity, which draws very obſtinate Defluxions to the Eye.

Thunder is likewiſe very prejudicial, in the firſt Days of the Operation, on account of the violent Emotion it excites in the Humours of the Eye.

Of the Manner of performing the Operation for the Cataract.

All the before-mention'd Precautions being obſerved, the well Eye muſt be cover'd with a Compreſs, kept on by a ſimple Bandage: Let the Patient be placed fronting the Light; the Operator muſt be ſeated directly before him, and ſomewhat higher. They muſt be both ſo placed, that the Head of the Operator may not ſhade the Eye which has the Cataract: Let him put the Patient's Legs between his own, in order to be very near him; let an Aſſiſtant, placed behind the Patient, lay his Left Hand on his Head, and his Right under his Chin (ſuppoſing the Operation is to be perform'd on the Left Eye); then, leaning the Patient's Head on his Breaſt, let him hold it firm, that the Patient may not give it any Motion. Let the Operator raiſe the upper Eye-lid with the Fore-finger of his Left Hand, and let him keep the lower Lid down with his Thumb; then let him take his Cataract-needle, which muſt be flat and edged, for Reaſons to be given hereafter; let him hold it in his Right Hand, almoſt in the ſame manner a Writing-pen is held, ſo that his middle Finger may bear on that Part which is diſtant, about a Finger's Breadth from the End of the Handle. Afterwards let him lay his Ring Finger and his little Finger on the Temple of that Side he is to operate on, deſiring the Patient to turn that Eye towards his Noſe; then let him make his Puncture in the White of that Eye, about half, or, at moſt, a Line's Diſtance from the Cornea Tranſparent, avoiding the Blood-veſſels on the Conjunctiva, and turning the Point of the Needle from the Iris, to hinder its being injured. As ſoon as the Point of the Needle, which ought to enter horizontally, on account of its double Edge, has pierced the Membranes, let him direct it ſtrait towards the back Part of the Cataract, without turning his Needle round. He muſt then puſh it forwards, till the Point arrives beyond the Middle of the Pupil, which may be known by preſſing the back Part of the Body of the Cataract with the Point of the Needle: And, to avoid damaging the Membrane of the vitreous Humour, he muſt likewiſe direct the Point of his Needle towards the Body of the Cataract. Afterwards let him raiſe the Point of his Needle to the upper Part of the Cataract, which he muſt gently depreſs below the Pupil, as near as he can to the back Part of the Iris. He muſt then raiſe his Needle, without drawing it out; and, to be aſſured, that all the Inſertions of the Cataract are deſtroy'd, let the Patient cough, and, if the Cataract ſprings up again, it muſt be inſtantly depreſs'd; if it does not riſe again, let him turn the Point of his Needle down, and preſs once more on the Body of the Cataract, avoiding pricking the Membrane of the vitreous Humour; for, if this Humour ſhould be looſed, the Loſs of Sight may enſue. Let him cloſe the Eye-lids, and draw out his Needle gently.

If the Operation is to be perform'd on the Right Side, the Left Hand muſt be uſed. The Aſſiſtant muſt likewiſe place his Hands in a Manner contrary to that we have deſcrib'd.

When the Operation is finiſh'd, let a Compreſs be wetted in a Mixture of common Water, juſt warm'd, ten Parts, Spirit of Wine, one Part; let the Compreſs be ſqueez'd, that ſome of this Mixture may drop on the Puncture: Let the Compreſs, and another over it, be laid to the Eye. The ſound Eye muſt be dreſs'd in the ſame manner. Theſe Compreſſes muſt be kept on by a ſimple Bandage, which muſt lie only on the upper Part of the Compreſs which is on the Eye-brows. Let the two Ends of the Rollers be pinn'd to the Patient's Night-cap.

The Patient muſt be put to Bed, with two or three Pillows at his Back, to keep him raiſed, and, as it were, ſitting up. The Bed-curtains, Window-curtains, and Window-ſhutters, muſt be ſhut, to hinder the leaſt Light from coming into the Room: He muſt be left quiet, neither muſt he ſpeak to any one. The Compreſſes muſt be ſprinkled, every Hour, with the ſame Mixture warm'd; and, at this Time, the Light muſt be placed behind the Patient, ſo that it may not affect his Eyes. Three Hours after the Operation, let him take Broth; and, three Hours after the Broth, let him loſe ſome Blood. For three Days he muſt live after this manner, taking Broth every three Hours. About the fourth Day he may eat a ſtronger Soop, and continue it to the ſeventh or eighth Day, when he may be allow'd to return to Meat.

The Compreſſes muſt be taken off the Eye Morning and Evening; and ſome of the Mixture of Water and Spirit of Wine, warm'd, muſt be put into the Eye. About the fifth Day, the Dreſſing may be removed from the Eye which was not couch'd, provided no Accident has happen'd to the other: If the Patient can ſee with that Eye, let a dry Compreſs be laid to it for five Days; but, if he cannot ſee with it, let it be expoſed to the Air, without applying any thing to it.

Nine Days after the Operation, the Eye, which was couch'd, may be cover'd with a dry Compreſs, pinn'd to the Cap. That the Eye may be accuſtom'd to receive the Light under the Compreſs, a ſmall Light muſt be admitted into the Patient's Chamber, ſuch as may ſuffice for People to ſee each other; and the Eye muſt be habituated gradually to the Light.

Some Perſons cannot remain lying on their Backs: In this Caſe, I have them placed, with their Feet raiſed on a Stool, in an eaſy Chair, ſurrounded with Curtains, and there they remain four or five Days: Then I order them to lie down, when they can keep in Bed, letting them ſit up, or lie down, as they find themſelves wearied by the ſame Situation. Some are ſo heated by lying on their Backs, that, were they kept long ſo, they would have a Fever, which might draw fatal Defluxions to the Eye; for which Reaſon, I deſire them to riſe in four-and-twenty Hours, and order them to be placed in an eaſy Chair by their Bed-ſide, with the Bed-curtains drawn round them. Care muſt be had, in lifting them up and down, that they always keep their Head raiſed, and that they make no Efforts in theſe Removals.

The Needles, for the Operation of the Cataract, are different; they are either flat or round. The flat ones enter better, and with more Eaſe, into the Eye. Some would have them edged, like thoſe which Surgeons uſe. I have invented a very convenient Sort; their Point is like that of a Lancet; their Edge is not above the Length of a Line, from whence it ceaſes to be flat, and becomes round. The Point muſt make the Aperture as wide as is neceſſary, for the Needle to be puſh'd forwards, or drawn back, in the Orifice, without any Impediment from the Membranes, as we are ſometimes oblig'd to do, in order to depreſs ſome Parts of the Cataract, which lie more or leſs remote in the Eye.

Of the Manner of Operating, when the Cataract lies in the Chamber of the aqueous Humour.

When a Cataract has paſs'd into the anterior Chamber of the aqueous Humour, a particular Operation muſt be perform'd; but, before I explain the Method of doing it, I ſhall ſhew by what means a Cataract may paſs thro' the Hole of the Pupil, and be lodged between the Iris and the Cornea Tranſparent.

Three Sorts of Cataracts paſs thro' the Hole of the Pupil: In the firſt, the Conſiſtence of the Cryſtalline is ſoft; in the ſecond, it is hard and concreted, like a Stone; in the third, it is partly ſoft, and partly petrified. When it is ſoft, the aqueous Humour, which lies behind this Body, thruſts it forwards, and fixes it in the Pupil, after the Manner I have deſcrib'd, when I treated of Cataracts in general: But, when this Body is hard, as in the ſhaking Cataract, it paſſes at once thro' the Hole of the Pupil, upon the leaſt Effort made in bending the Head, for Inſtance, in blowing a Fire, *&c.* This laſt Caſe may happen in a Cataract which has been couch'd three or four Years.

When you deſign to perform this Operation, to draw out the Cryſtalline which has paſs'd in the foregoing manner, the Patient muſt be ſeated in a Chair, with his Eye fronting the Light: Open both his Eyelids, with your Thumb and Fore-finger; then, with a ſharp-edged Lancet, divide the Cornea Tranſparent, a little below the Middle of the Pupil. You muſt continue your Inciſion tranſverſly, from one Side of the Cornea to the other, in ſuch a manner, that you do not leave, of each Side, above half a Line's Breadth of the Cornea Tranſparent undivided. Then introduce a fine ſmall Scoop thro' the Orifice, convey it behind the Cryſtalline, and, with it, draw out that Humour thro' the Inciſion made in the Cornea. Lay a Compreſs, moiſten'd with ſome proper Defenſative, to the Patient's Eye, and dreſs the Eye, as in a true Cataract: Afterwards let the Patient be carried to his Bed, and laid on his Back. His Head muſt be raiſed a little. The next Day you will find the Wound cicatrize, and form a Scar no broader than a Hair. Altho' I have perform'd many of theſe Operations, I ſhall, however, confine myſelf to three Examples, one of each Sort of Cataract which is lodged in the anterior Chamber of the Eye.

The firſt was in the Year 1707. in the Preſence of M. *Mery*, a Member of the Royal Academy of Sciences: I perform'd it on a Merchant of *Sedan*; he came to *Paris*, on account of a ſhaking Cataract, which had paſſed, thro' the Hole of the Pupil, into the anterior Chamber of the aqueous Humour. The Cataract, by preſſing very much the Iris, occaſion'd violent Pains in his Head, attended with want of Sleep, for three Months before. At that Time I never had heard of the like Operation; but, reflecting that I often open'd the Cornea, to diſcharge the Matter of an Abſceſs lodg'd behind it, I concluded I might ſafely do the ſame, on account of a ſolid Body; and I operated in the ſame Manner. The Body which I drew out of the Eye altogether reſembled Plaiſter: I order'd the Patient to lie on his Back: The next Day I return'd thither, along with M. *Mery*; and we were inform'd, that the Patient ſlept very well, which he had not done for a long time before. The Wound was cicatrized, and the aqueous Humour, which had run out in the Operation, was entirely repair'd.

The ſecond Caſe was in the Year 1708. M. *Petit*, a famous Surgeon, and now a Member of the Royal Academy of Sciences, perform'd the Operation on a Prieſt. His Cryſtalline, upon ſome Effort he had made, ſome Years after the Couching of a Cataract, had paſs'd thro' the Hole of the Pupil, and was lodg'd between the Iris and the Cornea Tranſparent. M. *Petit*, who had this Prieſt under his Care, deſir'd me to be preſent at the Operation; at which M. *Mery* aſſiſted likewiſe. M. *Petit* made a Puncture in the Cornea with his Needle, then ſlit it with his Lancet, and took out the Body thro' the Aperture. It was found to be the Cryſtalline. The Prieſt was, ſoon after, perfectly cur'd. I met him in *Paris* a Year after the Operation, and have ſeen him read very well with Cataract-ſpectacles. This Fact, tho' related to the Academy of Sciences, was, however, conteſted by M. *Woolhouſe*, who pretended, in one of his Writings, that the Prieſt abſconded, leſt he ſhould be ſeen and examin'd by him. I hope he will excuſe my citing his Name; for I think myſelf oblig'd to juſtify the Truth, as being one of the ocular Witneſſes of this Operation. M. *Mery* had this, and the preceding Caſe, inſerted in the Memoirs of the Royal Academy of Sciences for thoſe Years.

My third Experiment was in the Year 1716. on a poor Man living in the Suburbs of *St. Germain Rue Caſſette*: He had receiv'd a Hurt in his Eye, the Cryſtalline was loos'd, and had paſs'd thro' the Hole of the Pupil, between the Iris and the Cornea Tranſparent. I made an Aperture in the Cornea, thro' which I drew out this Body, which was partly like the White of an Egg, and partly concreted, like a Stone; it adher'd to the Cornea; I cut the Adherency, and took out the Cryſtalline, which held by one of the longer ciliary Fibres, which I cut with my Sciſſars as low as poſſible. The Operation ſucceeded perfectly, and the Patient was ſoon cur'd.

How to prevent the Accidents which attend the Operation of the CATARACT.

It muſt not be ſuppos'd, that this Operation is always perform'd without any bad Accidents, whether they ariſe from the Difficulty of depreſſing the Cataract, or from ſome Motion the Patient gives his Eyes, in the time of the Operation. There are, it is true, ſome Operations, in which a ſlight Preſſure, with the Flat of the Needle, on the Body of the Cataract, ſeparates the ſame, and it falls almoſt of its own accord, as a Nut full ripe, which is eaſily ſeparated from its Huſk. There are likewiſe ſome Operations liable to very great Difficulties. The firſt Caution is, to prevent the Extravaſation of Blood; for, as the Needle is introduc'd, ſome of the Veſſels ſpread on the Conjunctiva may eaſily be open'd. This Blood ſlides into the anterior Chamber, mixes with the aqueous Humour, and renders it turbid: This makes the Operation more difficult to the Operator.

When this Accident happens, you muſt endeavour, with all Speed, to depreſs the Cataract, before the Blood has fill'd all the Chamber: In which Caſe you muſt withdraw your Needle, and leave off working at that time, leſt you ſhould damage the Patient's Eye, by operating when you cannot ſee into it.

The ſecond Difficulty is, when the Cataract is of that Species call'd a milky or cheeſy Cataract; for the Needle paſſes eaſily thro' it, and divides the Body of the Cataract into ſeveral Parts of a different Conſiſtence: If theſe Parts are ſolid enough, they may be depreſs'd by moving the Needle, and preſſing them down gently; but if theſe Parts are too ſoft, you muſt lay aſide the Operation, leſt, by over-fatiguing the Eye, you bring on other bad Symptoms. This ſecond Inconvenience always occurs, when the Cataracts are not full ripe. I have couch'd, with Succeſs, Cartaracts of five-and-twenty Years ſtanding. This proves the Miſtake of ſome Oculiſts, who tell their Patients, in order to engage them to undergo the Operation before they are full ripe, that, if they wait any longer, their Cataract will become adherent, and then it cannot be couch'd: A bad Precaution, which has render'd the Operation uſeleſs to many Patients!

The third Difficulty is, when, in couching the Cataract, nothing is found, but a Cyſtis fill'd with Matter; as ſoon as the Needle preſſes this Cyſtis, it opens, and diſcharges into the aqueous Humour a whitiſh Pus, which dims it, and hinders the Operator from ſeeing the Membrane which incloſ'd this Matter, ſo that he cannot finiſh the Operation. He muſt, notwithſtanding, move his Needle in the ſame manner as if he had a Cataract to couch; and he muſt endeavour to place the Cyſtis below the Pupil. Tho' the Patient cannot ſee clearly, let him draw out his Needle. The more ſolid Part of the Matter falls to the lower Part of the Eye; the more fluid Part reproduces a ſort of Membrane, which adheres to the poſterior Circumference of the Iris, about the Place where the Iris joins the Choroides. Six Weeks, or two Months after, a ſecond Operation is to be perform'd, in order to depreſs it; then the Patients can ſee again.

I perform'd two ſuch Operations on both the Eyes of Father *Saunnier*, a Canon Regular of *St. Genevieve*. The firſt was in the Year 1713. ſome Days after *Eaſter*; in that Eye I depreſs'd the Cyſtis, which contain'd a purulent Matter. A great Quantity of whitiſh Matter was diſcharg'd into the aqueous Humour, and obſcur'd it: This, however, did not hinder me from depreſſing the ſolid Body which incloſ'd the Matter. This purulent Matter became more ſolid, and form'd a ſort of fine Membrane. Six Weeks after I couch'd his Eye a ſecond time, and the Patient ſaw very well after this ſecond Operation. I perform'd my ſecond Operation in the Year 1715. for, as I met with this Accident in the former, I was in hopes, that, by delaying the Operation for two Years, the Cataract would acquire more Solidity: The ſame thing, however, happen'd in the Operation; and I was oblig'd to perform a ſecond Operation, which had likewiſe very good Succeſs.

We may infer, from what has now been obſerv'd, that, in deferring the Operation in this Species of Cataract, we muſt not wait till they come to a full Ripeneſs. After the firſt Operation the fluid Part, which was extravaſated in the aqueous Humour, forms a ſort of Membrane, which we are oblig'd to depreſs ſix Weeks after.

The fourth Difficulty is, when, in depreſſing a Cataract, it enters into the anterior Chamber of the Eye, paſſing through the Hole of the Pupil. This happen'd to me, in an Operation I perform'd on a Woman in the *Rue St. Honore*: Mr. *Petit* aſſiſted. As ſoon as I preſſed the Cataract with my Needle, a glutinous Matter empty'd itſelf into the aqueous Humour, and was carry'd, with great Violence, into the anterior Chamber of the Eye, between the Iris and the Cornea Tranſparent. I continu'd to operate as long as I could; but not being able to bring back the glutinous Matter which had flow'd into the anterior Chamber, I was forc'd to draw out my Needle. Some Months after, all that Matter, which had ſubſided between the Iris and the Cornea Tranſparent, repaſs'd thro' the Hole of the Pupil into the poſterior Chamber; and, in ſome time after, all that fluid

Part was ſunk below the back Part of the Iris; then the Patient could ſee clear, tho' ſhe had not immediately after the Operation.

Whatever paſſes, during the Operation, thro' the Hole of the Pupil, if it be of ſufficient Solidity, the Point of the Needle, which is already in the Eye, muſt be puſh'd thro' the Hole of the Pupil, without touching the Iris; then pierce that Body of the Cataract with the Point of your Needle, bring it back to the poſterior Chamber, and lay it where it is uſually plac'd.

A fifth Difficulty occurs, when the Cataract adheres to certain Filaments, and ſprings up again, after it is depreſs'd, as ſoon as the Needle is raiſed, and returns to its firſt Place. When this happens, you muſt raiſe your Needle a little, pierce the Body of the Cataract with it, and puſh it to the Side oppoſite to the Puncture. By this Method, the Filaments, on that Side the Needle enters, are broke, and the Cataract is depreſs'd: Neither can it riſe again; for the few remaining Filaments, which adhere on the oppoſite Side to the Body of the Cataract, have not Strength ſufficient to raiſe it, nor to reſiſt the Weight of the Cataract, which draws them down.

The Caſe, now related, happens often in the Operation; for, when the Needle preſſes the Cataract, the Filaments, to which its upper Part adheres, break eaſily, whilſt thoſe on both Sides only give way; ſo that, as ſoon as the Needle ceaſes to preſs down the Cataract, it riſes by means of theſe lateral Filaments, which at firſt had only given way: Wherefore, as I have already obſerved, when you pierce the Body of the Cataract, puſh it as far as you can to the oppoſite Side, afterwards preſs it down, then bring it towards the Puncture, not drawing back your Needle, but raiſe the Handle of it, ſo that the Point, which is in the Body of the Cataract, may reduce it below the Pupil, where it ſhould be plac'd.

It happens ſometimes, when the Needle is raiſed, that the Body of the Cataract ſticks to its Point: In this Caſe turn the Point down, and raiſe a little your two Fingers, which reſt upon the Temple, and give a light dextrous Blow with them on the Temple: As this cauſes a Shaking in the Needle, it makes the Body, which hangs to it, fall off its Point.

It muſt be obſerv'd, that all theſe Adherences of the Cataract, which render it ſo difficult to be couch'd, are ſome ciliary Fibres adhering to the Iris, and to the Membrane which covers the Cryſtalline; they are call'd, by M. *Antoine*, the *Concomitants of a Cataract*.

As to the manner of breaking to Pieces, and, as it were, mincing a Cataract with the Needle, this is a very pernicious Method, and never to be practis'd, but when you are miſtaken in the Maturity of the Cataract.

The foregoing Diſcourſe ſhews this Operation is not eaſy to be perform'd; it requires a ſteady light Hand; the Operator muſt be prudent, and cautiouſly reſolute; beſides knowing how to depreſs the Cataract, he muſt likewiſe have Skill to handle his Needle, according to the various Accidents which may occur; for, of twenty Cataracts which one may couch, two ſhall ſcarce be found entirely alike.

When the Needle is in the Eye, Care muſt be had not to draw it with Violence forwards; for that Motion damages the Parts of the Bottom of the Eye, and cauſes very great Defluxions. The Operator muſt be very attentive to the different Motions the Patients ſometimes give their Eyes, in order to guide his Needle according to theſe Motions; otherwiſe he may pierce the Iris, cut the Fibres of its Circumference, and, in a Word, deſtroy the Patient's Eye.

Thoſe Gentlemen who admit only of membranous Cataracts, ſay it is of great Conſequence to know the exact Seat of the Cataract: They aſſert likewiſe, that thoſe who are of a contrary Opinion, damage the ſound Cryſtalline, when they introduce the Needle to perform the Operation, and that the Patient's Sight is in great Danger of being loſt. To this I anſwer, firſt, That we very ſeldom meet with membranous Cataracts; and, of a hundred one may couch, there ſhall hardly be found one or two without an Alteration of the Cryſtalline. In the ſecond Place, if the Method I propos'd, to introduce the Needle into the Eye, be follow'd, it is impoſſible to prick the Cryſtalline, unleſs it be alter'd, or to damage the vitreous Humour, and of conſequence, to do any Injury to the Eye; for the Needle is introduc'd upon the Aponeuroſes of the Muſcles, at a ſmall Diſtance from the Cornea Tranſparent; and, as ſoon as it has pierc'd the Membranes, the Handle of the Needle is turn'd towards the little Angle: By this Method the Point of the Needle bears directly behind the Cataract, without coming near the Cryſtalline, unleſs it be diſtemper'd. Hence I conclude, whether the Cataract be membranous, or not, it does not concern the Operator, whilſt he directs his Needle in the Manner I have already deſcrib'd; for the Eye is in no Danger, as thoſe Gentlemen pretend, who allow only of membranous Cataracts.

Having explain'd all the Accidents which happen during the Operation for the Cataract, I muſt ſubjoin a Word or two concerning thoſe Cataracts which are ſubject to become membranous: I find three Sorts of them, the *milky*, the *cheeſy*, and the *purulent*.

The milky Cataract contains a Body partly ſolid, partly fluid. The firſt is eaſily depreſs'd by the Operation, but the Needle paſſes thro' the fluid Part, which often forms a new Pellicle, which muſt be depreſs'd by a ſecond Operation, when it has acquir'd ſufficient Solidity. As the Parts of the cheeſy Cataract are more ſolid, the Operation is more ſucceſsful than in the preceding; but they are both unripe Fruits. If there remains any fluid Part, which does not yield to the Needle, it will generate a Membrane, as the foregoing.

The third Species is a purulent Cataract; for, as I have already obſerv'd, when the Needle preſſes it, in order to couch it, a great Quantity of purulent Matter diſcharges itſelf into the aqueous Humour: This Matter is of a whitiſh or yellowiſh Colour; neither is the Cryſtalline to be found in its proper Coat. This Sort of Cataract never comes to full Maturity.

Of the Means to remedy the Accidents ſubſequent to the Operation for the CATARACT.

The firſt Accident which follows the Operation for the Cataract is, the Extravaſation of Blood; for, as the Needle is introduc'd, ſome Blood-veſſels are prick'd: This Blood flows into the anterior Chamber, there ſtagnates, and dims the aqueous Humour. In order to diſperſe it ſpeedily, bleed a Pigeon under the Wing, and drop ſome of the Blood into the Eye upon which the Operation is perform'd: This muſt be continu'd three Days, Morning and Evening: You muſt likewiſe take care to bathe the Eye with Water and Spirit of Wine, applying Compreſſes, wetted in the ſame, to the Eye. I prefer this Mixture of Water and Spirit of Wine to a Collyrium made of Plantain and Roſe-waters, with the White of an Egg and Alum; for Compreſſes, wetted in this Collyrium, grow hard and uneaſy to the Eye, whereas they are always ſoftiſh, when moiſten'd in the firſt.

The ſecond Accident is the Weeping, or Flux of Seroſity, furniſh'd to the Eye, after the Operation, by the Glandula Lachrymalis. This Accident is more or leſs dangerous, according to the Nature of this Seroſity; for, if it be ſharp, it brings on a Defluxion, ſometimes very violent, with ſevere Pains in the Head, on the Side on which the Operation was perform'd: Theſe Pains ſeem to be fixed in the Dura Mater, by the Place which the Patient complains of, which is, all along the inner Part of the Os Parietale, beginning towards the Sutura Coronalis.

I have a long time ſearch'd after the Cauſe of ſo acute a Pain in this Place; the moſt probable which occur'd to me is, the Continuity of the Nerves of the Eye to the before-mention'd Parts, by which the Inflammation is communicated to this Membrane. To prove my Aſſertion, I ſay the ſame Accidents happen in violent Ophthalmies; hence I infer it is no Fault of the Operation, as ſome pretend, who ſuppoſe theſe Pains proceed from ſome Nerves being prick'd by the Needle. Were it ſo, this Accident would not happen in other Defluxions of the Eyes, which are not caus'd by any Operation or Puncture.

When this Accident is attended with a Pulſation in the Ear, ſuch as the Pulſation of an Artery, it is a certain Sign, that the Wound cauſed by the Puncture ſuppurates inwardly, inſtead of ſuppurating in the outward Parts of the Eye. In this Caſe the Conjunctiva and the common Membrane, together with the Eyelids, are tumefy'd, and advance between the Eyelids, ſometimes to the Thickneſs of one's little Finger. If this Eminence be pale, it is cauſed by a Seroſity, and may eaſily be diſperſed by ſcarifying it with a Lancet. If the Tumor be red, it proceeds from an Infarction in the Blood-veſſels, which ſuppurates in the Interſtices of the Membranes of the Globe, and afterwards fixes between the Iris and the Cornea Tranſparent.

As ſoon as the Flux appears, the Patient muſt be let Blood in the Arm, in the Neck, or Foot, if requiſite; Leeches muſt be applied about the Eye, and to the Temples; a Bliſtering-plaiſter muſt be laid to the Nape of the Neck: All this muſt be done with the greateſt Diſpatch, in order to prevent the Suppuration and entire Loſs of the Eye.

The third Accident after the Operation is, when there is an inveterate Defluxion, and the Hairs of the lower Eyelids are revers'd; for, as the Operation requires the Patient's Eye ſhould be kept cover'd a long time, the Skin of the Eyelid is relax'd, by which means the Cartilage is turn'd inwards: Then the Diſeaſe call'd Trichiaſis enſues, which is the Inverſion of the Cartilage of the Eyelids, ſo that the Points of the Eyelaſhes bear upon the Conjunctiva and the Cornea Tranſparent; the continual Friction of the Eyelaſhes brings on Defluxions, and produces obſtinate Ulcers in theſe Membranes, if not prevented by the following Remedies. I ſhall relate one Example:

M. *de St. Leon*, Major of *Bauchain*, came to me in the Month of *July* 1718. and had undergone the Couching of a Cataract in the Month of *October* 1717. He had a violent Defluxion with Ulcers on his Eye, and acute Pains in the upper Part of his Head, above the Eye, and in his Temple, on the Side where the Operation had been perform'd.

I began by bleeding him; afterwards I apply'd, to the Nape of his Neck, the potential Cautery pulveriz'd, and in a ſufficient Quantity,

Quantity, to make an Eſchar the Breadth of a Crown-piece. I kept this Ulcer open two Months; and, as he was of an hot Conſtitution, I ordered him to drink the Mineral Waters of *Paſſy* for eighteen Days. I performed the Operation of the Trichiaſis. After the Operation, the Eye-laſhes ceaſed to fret the Eye, the Fluxion and Pains in the Head went off; in ſhort, he was ſo well cured, in two Months time, that he could ſee again with his Eye, which he had not done for ten Months before.

The fourth Accident is, when, after the Cataract has been couched, it ſprings up again, either whole, or only a Part of it. In the firſt Caſe, provided the Cataract, when couched, was full ripe, it falls down ſpontaneouſly; but, if only a Part of the Cataract was fluid, it adheres to the back Part of the Iris, and will not ſubſide, without a ſecond Operation.

Sometimes no Part of the Cataract riſes up; but very often the Patients can ſee, at firſt, after the Operation; their Sight continues the ſame to the twelfth or fifteenth Day; afterwards it decreaſes, and the Patients complain they ſee Filaments, or Threads, paſs before their Eyes. The Reaſon of this is, that in depreſſing the Cataract, it was ſeparated either at the Middle, or at the Extremity, of the ciliary Fibres, on the Side they are joined to the Membrane of the Cryſtalline. As theſe Fibres are inſerted in the great Circumference of the Iris, whence they have their Origin, and, uniting together behind the Hole of the Pupil, they preſent theſe Threads to the Patient's Sight, which is partly diminiſhed by them; neither can he ſee, as well as he ſhould, after the Couching; the Operator, not perceiving this, at firſt, thinks his Operation well performed, as it really is, with regard to him. In all theſe Caſes, where any Part of the Cataract remains behind the Pupil, if the Sight be much weakened by it, a ſecond Operation is neceſſary, in order to depreſs that Part. This ſecond Operation is more dangerous and painful than the firſt; becauſe the Pellicle, formed by the remaining Part of the Cataract, adheres to the back Part of the Iris, ſometimes by two or three Filaments, which muſt be cut. This requires the greateſt Dexterity; for theſe Inſertions commonly bend, and give way to the Needle; ſo that as ſoon as the Needle is raiſed, the Pellicle ſprings up, and returns to its firſt Place. We are often obliged to puſh this Pellicle with the Needle, thro' the Hole of the Pupil, into the anterior Chamber, there to pierce it, and from thence bring it back into the poſterior, ſtill puſhing it towards the great Angle. In ſhort, the ſame Movements of the Needle muſt be obſerved, which were deſcribed, when we treated of that Species of Cataract which riſes upon being depreſs'd.

The fifth Accident, which follows the Operation of the Cataract, is incurable, becauſe the Sight is loſt. It proceeds from a Defluxion which falls on the Optic Nerve and the inner Membranes of the Eye; then the Parts grow dry and decay, as appears evidently from the Contraction of the Pupil, and from the Patient's not ſeeing the Light. *Saint-Yves.*

Sometimes a Cataract, which the *Greeks* call *Hypochyſis*, ὑπόχυσις, forms itſelf before the Pupil of the Eye, the Part by which it diſcerns Objects; which Diſorder, when grown mature and inveterate, muſt be removed by manual Operation. Sometimes a Cataract, in its Beginning, as is evident from certain Obſervations, is diſcuſs'd by medicinal Remedies, as by Bleeding in the Forehead or Noſtrils, cauterizing the Veins in the Temples, Apophlegmatiſms, Suffumigations, and anointing the Eyes with acrid Medicines. The moſt proper Diet for the Patient is ſuch as attenuates Phlegm. *Celſus, Lib.* 6. *Cap.* 6.

I look upon this Advice of *Celſus* to be the more worthy of Notice, as few among the Moderns, except *Heiſter*, have paid ſo much Regard to it as it ſeems to deſerve. It is not eaſy to conceive how the Humours of the Eye ſhould be able to preſerve their Tranſparency for many Years, as we find they do, unleſs they were, like other Parts of the Body, perpetually ſupply'd with proper Juices from Veſſels deſtin'd to their Service; and if this is the Caſe, the adventitious Opacity of the Cryſtalline, or any other Humour, muſt ariſe from ſome Defect in thoſe Juices, or perhaps from the Veſſels which ſhould ſupply them being render'd impervious, or being turgid, and too much diſtended with Juices improper for affording the requiſite Supply. In a recent Cataract, therefore, or where there is only a Tendency to one, whatever is capable of attenuating the Juices, of unloading the diſtended Veſſels, and of deriving a Portion of their Juices to diſtant Parts of the Body, appears to be capable of doing conſiderable Service, however little they are to be depended on in a confirm'd Cataract. Reaſoning, in Phyſic, is of ſome Importance, when ſupported by Experience, however little it is to be regarded without this Touchſtone of Truth. The Experience of *Celſus* is greatly in favour of what I have ſaid; and I think I can affirm from my own, that I have known Cataracts at leaſt prevented, by Treatment not much unlike that which *Celſus* recommends.

A Diſeaſe, or a Blow, ſometimes occaſions a Concretion of the Humour under the two Coats of the Eye, at the Place where there is a Vacuity, which hardening by degrees, darkens, by its Oppoſition, the interior Part by which Viſion is exerciſed. There are ſeveral Kinds of this Diſorder, ſome of which are curable, others incurable. If the Cataract be ſmall, immoveable, of the Colour of Sea-water, or bright Iron, and admits of ſome Senſe of Light by its Sides, there are Hopes of a Cure. If it be great, if the Black of the Eye have alter'd its natural Figure, if the Colour of the Cataract be azure, or like that of Gold, if it ſlides, and is moveable from Side to Side, it is ſcarce ever known to be removed. It is generally of a bad Kind, when it proceeds from a ſevere Diſtemper, a great Pain of the Head, or a violent Blow. Aged Perſons, who are naturally dim-ſighted, without the Acceſſion of a Diſeaſe, are improper Subjects for an Oculiſt, and ſo are Children; but the Time of Life between Childhood and old Age is a proper Seaſon for undertaking the Operation. A ſmall Eye too, or a hollow one, do not favour the Performance of this Work. Some Maturity alſo is requir'd in the Cataract itſelf; for which Reaſon we muſt wait till it ſeems to be paſt its State of Fluidity, and grown to a ſort of hard Concretion.

For three Days before the Operation, the Patient is to live on ſlender Diet, and to drink Water, and the Day before it abſolutely to faſt. After this, he is to be ſeated in a lightſome Room, againſt the Light, in a Chair oppoſite to the Surgeon, who muſt ſit a little higher. Behind muſt ſtand an Aſſiſtant, to hold the Head of the Patient, and keep it immoveable, for a ſlight Motion might occaſion a perpetual Loſs of Sight; and to render the diſeaſed Eye alſo the more immoveable, the other is to be ſecur'd from Motion, by binding Wool upon it. The Operation on the Left Eye is to be performed with the Right Hand; on the Right Eye with the Left Hand. Then the Needle, which ought to be ſharp, and not too ſlender, muſt be introduced, and directed, in a ſtrait Line, thro' the two outer Coats, in the middle Diſtance between the Black of the Eye and the Corner next the Temple, oppoſite to the Middle of the Cataract, in ſuch a manner as not to hurt a Vein. And the Surgeon has no Cauſe to introduce his Inſtrument in a timorous manner, becauſe it is receiv'd in a void Space, to which it is eaſy for him, however unexperienced, to know when he has penetrated, by his meeting with no farther Reſiſtance. Having penetrated thus far, the Needle is to be inclined to the Cataract, and there gently to be turned, ſo as by degrees to depreſs it below the Region of the Pupil, where it muſt be compreſſed with ſome Force, that it may ſettle in theſe lower Parts; and if it there reſts, the Cure is completed. If it returns once and again, it muſt be cut more with the Needle, and ſeparated into more Parts, which are depreſſed ſingle with more Eaſe, and are leſs incommodious by their Breadth. This done, the Needle is to be drawn out in a ſtrait Line; and the White of an Egg in ſoft Wool is to be apply'd to the Place, with a Bandage, to check the Inflammation.

The Patient now requires Reſt, Abſtinence, Unctions with gentle Medicines, and Food, which laſt may be deferred till the next Day; and ought, at firſt, to be liquid, that the Jaws may not be exerciſed; but afterwards, when the Inflammation is at an End, ſuch as is proper in the Cure of Wounds, with this neceſſary Caution, that the Patient is to drink nothing but Water for a conſiderable time. *Celſus, Lib.* 7. *Cap.* 7. *Tit.* 14.

As this uſeful Operation requires a very great Dexterity, and much Knowledge, it may not be amiſs to give a farther Deſcription of it from *Heiſter*.

As to the Cure of a Suffuſion or Cataract, it may be attempted either by Medicines, or the Needle. Some, I know, reject the Treatment of a Cataract by Medicines, as vain and inſignificant; and yet I cannot but recommend it to a young Phyſician, as a ſafe and effectual way, at leaſt in ſome Caſes: For we are well aſſured, that there have been Inſtances, not only in later Times, but near two thouſand Years ago, of Perſons afflicted with a Cataract, who either by the Benefit of Nature, or the Aſſiſtance of Medicines, have, contrary to all Expectation, been freed from that Diſorder (ſee the Quotation above from *Celſus*). But by what Methods theſe Medicines are to be accommodated to the different Cauſes of the Diſeaſe, and the Age or Habit of the Patient, we leave to the Judgment of Phyſicians; our preſent Deſign, in this Work of Surgery, being to direct the Surgeon in the Cure of this Diſtemper by manual Operation with the Needle, and other Inſtruments.

But before we ſet about this Work, we cannot forbear ſeriouſly recommending to all Cultivators of the Art of Surgery the Study of that noble and incomparable Art of curing a Cataract by the Operation of the Hand, and perſuading them to reſcue it out of the Hands of Mountebanks and Strollers, who talk on all Occaſions of the ſtrange and almoſt inſuperable Difficulties and Niceties attending this Operation, tho' we ſee it frequently perform'd with Succeſs by ſkilful Surgeons, and ſometimes even by the Strollers themſelves. And, to ſpeak the Truth, that noble Operation for the Cure of a Cataract is uſually perform'd with far more Safety than opening a Vein, which yet is a thing practiſed by the very Barbers Apprentices: For in couching a Cataract there is very little Fear of pricking a Nerve, Tendon, or

or any dangerous Artery, as it ſometimes happens in Veneſection; beſides, in attempting Phlebotomy, oftentimes no Vein appears, eſpecially in fat and corpulent Perſons, where it is often very difficult to find a Vein, and make a right Inciſion therein; whereas, in the Operation for a Cataract, the Place where the Inſtrument is to be introduced, is always ſufficiently manifeſt. However, leſt any ſhould think us of Opinion, that this Operation may be ſafely perform'd by the Hands of aukward and unexperienced Surgeons, Apprentices, and Mountebanks, it will not be amiſs briefly here to enumerate the Qualifications which are requir'd in a Surgeon to make him a good Oculiſt. Firſt of all, he muſt have a thorough Knowledge of the Structure of the Eye, from the Study of Anatomy, that he may not commit any Blunder, nor hurt any thing thro' Ignorance. Secondly, he muſt know exactly what ought to be done, and after what Method every thing belonging to the Operation may moſt fitly be performed; for which End nothing can be more adviſable, than to be often preſent, as a curious Spectator, at the Performance of this Operation by ſkilful Surgeons. A third Qualification for an Oculiſt is an intrepid Mind joined with a ready, able, and ſteady Hand, which never tremble, and a clear and ſharp Sight. Fourthly, he muſt be able to uſe his Left Hand as well as his Right, that he may be equally dexterous at couching the Right Eye with his Left Hand, as the Left Eye with the Right. And, laſtly, he muſt have exercis'd himſelf in repeated Performances of this Nature on the Eyes of Animals and dead Men, before he ventures to practiſe upon living Perſons.

For the more ſucceſsful Performance of this Operation there are two Things principally to be regarded antecedent thereto. The firſt is to chuſe the fitteſt Seaſon, and not attempt it till after a due Preparation of the Patient. The moſt convenient time for the Operation is in temperate and moderately warm Weather, as it uſually is in Spring and Autumn. In the ſecond Place the Surgeon muſt be mindful to fix upon a remarkably clear and ſerene Day for the Performance. As to the Time of the Day, the Forenoon is uſually choſen; not but that the Afternoon may be proper enough, and even ſometimes preferable; as, for Inſtance, with reſpect to Patients of a puſillanimous Temper, who are not ſo ſubject to faint after a moderate Dinner, as when faſting; and we cannot be too careful in preventing an Accident which is moſt likely to be the Ruin and Diſappointment of the Operation. The more lightſome the Room is, the more convenient it is for the Purpoſe, provided too great a Splendor of the Sun's Rays be avoided. For too ſtrong a Light ſtriking upon the Eye immediately cauſes the Pupil to contract, which prevents the Surgeon from accurately diſcerning the Needle, or whatever elſe may occur within the Eye. With reſpect to the Preparation of the Patient, he is not only to obſerve a careful Regimen in his Diet and Way of Living for ſome Days before the Operation, but ought, at the ſame time, to have his Body evacuated of noxious Humours by proper Cathartics, and to have the Redundance of his Blood diminiſh'd, by opening a Vein, leſt a violent Inflammation, tormenting Pains, or perhaps the Suppuration and Deſtruction of the whole Eye, which has ſometimes happen'd, ſhould be the Conſequences of the Operation. At the Approach of the Day appointed for the Performance, the Belly is to be evacuated by a Clyſter, unleſs it be already in a ſoluble State, as it ought to be. And, laſtly, to prevent fainting under the Operation, which may throw an inſuperable Difficulty in the Way of the Surgeon, and be an Impediment of the moſt pernicious Conſequence to the Work, it ſeems adviſable, if the Time appointed be in the Forenoon, to let the Patient take ſome Food, or at leaſt ſup ſome ſtrengthening Liquor, or Broth, before the Operation. But nothing is more effectual, either for preventing or removing any bad Symptoms after the Performance, than procuring to the Patient ſound and agreeable Sleep by ſome anodyne Emulſion, which reſtores both Strength to the Body, and Tranquillity to the Mind; and prevents the depreſſed Cataract from eaſily riſing again.

The Surgeon is never to undertake the Operation by himſelf, but is to uſe the Help of at leaſt two Aſſiſtants, one of whom is to hold the Patient's Head, during the Operation, as is repreſented *Tab.* 38. *Fig.* 1. A. and the other is to ſtand in Readineſs to reach the Needle, or whatever elſe is neceſſary for the right Performance of the Work. For this Purpoſe, and to come off with Succeſs in the Undertaking, there is firſt and principally requir'd a good convenient Needle, which ſome uſe with the Help of what they call a *Speculum Oculi* (ſee *Tab.* 38. *Fig.* 15. and 16.).

There are great Varieties of thoſe Inſtruments for the Eye, which they call couching Needles, which are accommodated for couching a Cataract. The Figures of thoſe which are moſt in Uſe are repreſented *Tab.* 38. *Fig.* 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11. the beſt of which, in my Opinion, are thoſe repreſented at 5, 6, and 10. which have all a Point ſomewhat broad and ſharp, and not unlike a Tongue, or a Grain of Barley; and particularly that at 6. has its Point fulcated, and conſequently is much better accommodated for couching the Cataract than the others, which are furniſh'd with thinner or narrower Points, or large, but blunt ones; for when they are too ſlender and ſharp, as thoſe are at *Fig.* 2. and 4. A. they eaſily tear the Cataract; and when they are too blunt, as is that at *Fig.* 8. they will not perforate the Eye without much Difficulty. It is no Wonder, therefore, that ſome Surgeons have adviſed the Uſe of two Needles in the ſame Operation, one ſharp-pointed, (*Fig.* 7. and 9.) for perforating the Eye; and another with a broad blunt Point, (*Fig.* 8.) for depreſſing the Cataract after Perforation. But it is eaſier to write of the Uſes of two Needles, than to accommodate them to Practice, without injuring the Eye. However this be, all poſſible Care is to be taken, that the Inſtruments be extremely well poliſh'd, by rubbing them upon a Piece of woolen Cloth or Leather, before they are apply'd to the Eye, leſt, through ſome Ruſt or Roughneſs, they ſhould not without Difficulty penetrate the Eye, or greatly hurt and lacerate it. M. *Freytage* very much recommends the Uſe of hooked Needles, by which membranaceous Cataracts may be extracted out of the Eye; but if they are really inſtrumental to this Purpoſe, it is Pity he has not given us the Delineation of theſe Needles.

That no unneceſſary Obſtacle may retard the Surgeon in his Proceedings after the Operation, all things which may be of any Service towards the Dreſſing are very carefully to be provided beforehand. There muſt be in Readineſs (1.) ſome refrigerating Collyrium, which may conveniently be prepared of the Water of Plantain, or Blue-bottle well beaten with the White of an Egg, to which ſome add a ſmall Quantity of Alum, or prepared Tutty, or Saffron, or Camphire. Others uſe common Spirit of Wine for a Collyrium. M. *St. Yves* recommends before all a Liquor compoſed of ten Parts of lukewarm Water, and one of Spirit of Wine. (2.) There muſt be ready at hand a ſoft Compreſs of folded Linen, large enough for covering the whole Eye. And (3.) a Fillet, about three Yards long, and two Inches wide; or a Handkerchief, folded up in the Form of a Triangle, to bind up the Eyes of the Patient after the Operation. (5.) And, laſtly, you muſt be provided with *Hungary* Water, Vinegar, or ſome other ſtrengthening Medicine, to be apply'd to the Patient's Noſtrils, if he ſhould, as it ſometimes happens, faint under, or ſoon after the Operation.

There now remains no more to do, before the Surgeon enters on his Work, but to fix and ſecure the Patient in the moſt convenient Poſture. He muſt be placed, therefore, almoſt againſt the Light, in a Chair lower than ordinary, as is repreſented *Tab.* 38. *Fig.* 1. E. and oppoſite to the Surgeon C. who muſt ſit in a Chair a little higher than the other D. If one of the Eyes be ſound, or at leaſt not quite blind, it muſt be cover'd and bound up with a Handkerchief, or broad Fillet, and render'd immoveable, leſt the Patient, in moving it, ſhould, at the ſame time, as it naturally happens, move the diſeaſed Eye, and ſo expoſe it to be wounded by the Needle. For the ſame Reaſon you muſt be very careful to admoniſh the Patient, that, if he ſhould recover his Sight on a ſudden, in the very Operation, as it ſometimes happens, he muſt make no Exclamation or Exultation of Joy, as Perſons in ſuch a Circumſtance are ſubject to do, but to ſit quiet and immoveable, as much as may be, becauſe the leaſt Motion may endanger the Loſs of his Sight for ever. For the more commodious Performance of the Operation, the Patient is to be ſituated in his Chair, after ſuch a manner as to fix his Hands upon the Knees, and his Legs between the Legs of the Operator; and ſometimes the Legs of the Patient are elevated and firmly held by the Aſſiſtants, that he may not be able to riſe before he is permitted. Behind his Back, as we obſerved, muſt ſtand an Aſſiſtant, who is to hold the Head of the Patient with the greateſt Care and Addreſs, his Left Hand placed on the Sinciput, or Top of the Head; and his Right Hand on the Chin, in order to fix it upon his own Breaſt, and render it quite immoveable; for the leaſt Motion of the Head is attended with the Danger of perpetual Blindneſs, as we are aſſured by woful Experience.

All things being thus diſpoſed in their proper Situation, the Patient muſt be order'd to open his Eyelids as wide as poſſible, and to turn his Eye inwards towards his Noſe, that a pretty large Portion of the White of the Eye may appear at the leſſer Canthus, or Corner of the Eye next the Temple. Then the Surgeon, with the fore Finger and Thumb of his Left Hand, ſuppoſing it to be the Left Eye, which is the Subject of his Operation, dexterouſly opens wide the Eyelids, (ſee *Fig.* 1. and 14.) and by that means renders the Eye at the ſame time fixed, and in a manner immoveable. Some recommend the Speculum Oculi, (*Fig.* 15. or 16.) or ſomething like it, for this Purpoſe; but this Expedient, in my Opinion, is more likely to hinder than forward the Operation; however, if any one be accuſtom'd to the Uſe of it, or promiſes himſelf great Aſſiſtance from it, I am not againſt his uſing it. Next the Surgeon takes the Inſtrument, or Needle, handed to him by an Aſſiſtant, in his Right Hand, holding it betwixt his Thumb and fore and middle Fingers, in the ſame manner as we uſually hold a Pen in writing (ſee *Tab.* 38. *Fig.* 1. and 14.). He then places the two hinder Fingers of the ſame Hand upon the Patient's Cheek,

Cheek, by which means that Hand is ſecur'd from eaſily ſhaking, and render'd more firm and ſteady in its Work, than if it were free and unſupported. With this Precaution, the Operator now proceeds to enter the Needle into the White of the Eye, near the middle Diſtance between the Cornea Tunica, and the leſſer Canthus, (See Fig. 14. A.) cautiouſly directing it in a ſtrait Line, through the Coats directly oppoſite to the Middle of the Cataract, to avoid wounding the Blood-veſſels.

As ſoon as the Needle has penetrated through the Coats into the Eye, which is known by its finding no more Reſiſtance, it is immediately to be inclined towards the Cataract (ſee *Tab.* 38. *Fig.* 14. B.); and as ſoon as you have taken hold of the upper Part of the Cataract with the Needle, you muſt endeavour gently to depreſs it below the Region of the Pupil, whether it be a preternatural Membrane, or an Opacity of the cryſtalline Humour; for as yet we have no evident Marks, by which we can diſtinguiſh one Caſe from the other as to outward Appearance, except thoſe with which we are furniſh'd from the Obſervations of Mr. St. *Yves*. If the Cataract deſcends with the Needle, which it will ſometimes do, when it is mature and hard, at the firſt Stroke, it will be convenient to keep it down for a while, in order to its Settlement below the Pupil; and if, upon elevating the Needle, it ſtill reſts in that Situation, your Operation is well performed, and the Needle is to be drawn out of the Eye in a ſtrait Line as it enter'd. If the Cataract returns, or riſes again, as it very often happens, you muſt depreſs it with the Needle a little more ſtrongly, and keep it down a little longer till it ſettles below the Pupil. M. *Freitage* adviſes, in ſuch a Caſe, the introducing of a hooked Needle, by which the Cataract, which is, according to him, generally a Pellicle, may be laid hold of and extracted, as he has frequently ſeen it done, he ſays, by his Father. But as we have no clear Deſcription either of the Needle or Method of Extraction, and it is to be doubted, whether this Needle, in extracting the Pellicle, will not lacerate the Coats of the Eye, the Retina, Choroides, and Selerotica, for I ſee not what ſhould hinder it, I cannot as yet agree to his Advice.

When the Cataract adheres pretty ſtrongly, it is often a difficult Taſk to diſengage and depreſs it entire. When this, therefore, happens, it is to be divided with the Needle, and each of the divided Parts afterwards is carefully to be depreſs'd with the ſame Inſtrument. The Method of Operation is the ſame, when, during our Attempts to depreſs a Cataract, it either ſpontaneouſly, or by ſome Cauſe, breaks, and is divided into Pieces; for that the Sight has ſometimes been reſtor'd by this means, has long ago been obſerv'd by thoſe ſkilful Authors *Celſus*, *Guillemeau*, *Paré*, *Barbet*, *Briſſeau*, and others; and I myſelf have twice had an Opportunity of obſerving the ſame Thing. If the Cataract adheres ſo firmly to the Tunica Uvea, as that it can hardly be ſeparated therefrom, it is proper to make a Perforation in the Middle of the Cataract; for thus the Rays may paſs thro' it to the Bottom of the Eye, and a certain Degree of Sight is, by this means, ſometimes reſtored to the Patient. In a Caſe of this Nature, the Succeſs is in all Probability greateſt, when the cryſtalline Humour is pretty thin; for ſome time ago I found it, in a certain Subject, ſo diminiſh'd in Thickneſs, as ſcarce to exceed that of one's Nail, and at the ſame time it adher'd ſtrongly to the Tunica Uvea. But in Caſes where the Cataract is as yet found too ſoft, *Briſſeau* thinks it more adviſeable to withdraw the Needle, and defer the Operation for ſome time, till the Cataract is become ſufficiently ripe, than, by performing upon an unripe Cataract, to fruſtrate the End of the Operation, and for ever deprive the Patient of his Sight. When the Right Eye is blind in conſequence of a Cataract, the Surgeon muſt follow the ſame Method of Operation, but in ſuch a manner, as to hold the Eye in his Right, and the Needle in his Left Hand; after which, he is to apply the Needle, and couch the Cataract in the manner already directed; for, in the great Canthus, the Needle cannot be commodiouſly apply'd to the Right Eye, with the Right Hand, by reaſon of the Contiguity of the Noſe. I had a Needle preſented me by a Friend, with which he pretends the Operation may be perform'd by the Right Hand on the Right Eye, in the large Canthus, when the Surgeon is not very dextrous with his Left Hand. This Needle, on account of its Novelty, I have exhibited in Plate 38. Fig. 17. in which A. repreſents the Needle itſelf, B. the Handle, and C. the particular Degree of Inflexion, neceſſary to accommodate it to the Noſe. When a ſufficiently ripe Cataract is found in both Eyes, after performing the Operation on the one, and applying proper Dreſſings, we may immediately proceed to treat the other in the ſame manner. But when the Operation on the one has been long protracted, we are not to make any Attempt on the other, till ſome time after, when the Symptoms excited by the former Operation are gone off, leſt the Patient ſhall be too violently tormented, or fall into a Deliquium.

Having already directed in what manner the Operation is to be performed, we ſhall now give a ſuccinct Account of what is to be done after it. It is cuſtomary with the common Oculiſts and Quacks, after withdrawing the Inſtrument from the Eye, to hold before the Patient two of their Fingers extended, or a Glaſs full of Water, red Wine, or Ale, aſking them what kind of Object they ſee, and what particular Colour it is of. When they give pertinent Anſwers to the Queſtions aſk'd, and are able quickly to diſtinguiſh one Object from another, it is concluded, that the Operation is ſucceſsfully and happily performed; tho' this Trial ſeems not only improper, but alſo prejudicial to ſkilful Surgeons, ſince by it the weak and diſorder'd Eye is too much exercis'd, by which means the Cataract, now depreſſed, is eaſily driven upwards again. It, therefore, ſeeems more adviſeable, immediately after the Operation, to apply a Compreſs, dipt in ſome of the Collyriums already directed, to the Eye on which the Operation has been perform'd, and to ſecure it with a proper Bandage or Fillet, leſt the Rays of the Light ſhould act too forcibly on the Retina. But in this Caſe both Eyes muſt be ſecur'd with the Bandage, tho' the Operation has only been performed on one of them, leſt, by the Motions of the ſound Eye, the other ſhould, at the ſame time, be agitated or incommoded: For when this happens, there is a Danger, leſt the Cataract ſhould either be elevated and return again, or that greater Inflammation, or ſome other unlucky Symptom, ſhould be brought on.

Having duly applied the Dreſſings, the next Thing to be done, is to lay the Patient upon a Bed, in the moſt proper and commodious Poſture. He muſt therefore be laid upon his Back, and have his Head ſupported and kept erect by Pillows: He muſt alſo remain in a State of profound Reſt for eight Days, and abſtain from Food of hard Digeſtion, from talking loud, from ſneezing, from violent coughing and laughing, till the Cataract is obſerv'd to be ſecurely lodg'd in the inferior Part of the Eye. For if the Patient ſhould indulge himſelf in any of theſe, 'tis to be dreaded, leſt, by the unſeaſonable Commotions of the Head, the Cataract ſhould again break forth, and be elevated. 'Tis alſo to be obſerv'd, that no Surgeon, however ſkilful and ſagacious, can certainly affirm, that a Cataract, when depreſs'd, will remain in that State; yet, ſtill the miſerable Patients have this Comfort, that if it ſhould aſcend, there are ſome Hopes left, that it may again be depreſs'd by another Operation, and that their Sight may by that means be reſtor'd. Thus the celebrated *Antony Maitre-Jean*, in his Book *de Morbis Oculorum*, *Cap. de Cataracta*, informs us of a Man, who having the Operation perform'd in the Autumn, his Cataract return'd, but was happily and effectually depreſs'd next Spring by a ſecond Operation. The ſame Author informs us, that there are Inſtances of Patients, in whom the Cataract has again been elevated after a previous Suppreſſion, but that they have ſoon after perceiv'd it to ſubſide and fall down of its own accord; and I myſelf remember to have once ſeen an Inſtance of this kind. But *Freitage*, if we may give Credit to him, in his *Diſſert. de Cataracta*, affirms, that his Father extracted them by means of a hooked Needle.

Some Hours after the Operation, Veneſection is highly proper, leſt a violent Inflammation ſhould ſeize the affected Eye. Upon this Occaſion, as much Blood muſt be taken away as the Strength and Conſtitution of the Patient will admit of. For this Reaſon, leſt the Patient ſhould ſuffer by a Diſcharge of too much Blood at one time, or by the Inflammation, 'tis neceſſary, as in other violent Inflammations, to repeat Veneſection at different times. The Collyriums above recommended, and the internal Medicines preſcribed in Caſes of this Nature, by ſkilful Phyſicians, are not in the mean time to be neglected. I have frequently obſerved a Vomiting to ſeize the Patient an Hour or two, and ſometimes next Night, after this Operation is performed. *Freitage* alſo, in his *Diſſertatio de Cataracta*, informs us, that he had an Opportunity of obſerving the ſame Symptom in a certain Patient. This Symptom is, in my Opinion, to be accounted for from a certain Irritation of the Nerves; but, for the moſt part, it ſoon ceaſes of its own Accord. 'Tis ſurpriſing, that this Phenomenon ſhould be adverted to by ſo few, ſince 'tis generally a bad Prognoſtic; for by the Efforts made in Vomiting, the depreſſed Cataract generally riſes again. Towards the Evening of that Day, on which the Operation is performed, 'tis cuſtomary to exhibit a narcotic Emulſion, that the Patient may have as ſound a Repoſe as poſſible; for when he is awake, it is greatly to be dreaded, leſt, as it generally happens, the Cataract ſhould again riſe, by the reſtleſs and uneaſy Toſſing of the Body from one Poſition to another. The Food and Regimen ought to be entirely the ſame, as are directed in other ſevere Wounds and Inflammations; for, in theſe Caſes, conſiderable Inflammations are generally accompanied with the higheſt Danger. If the Patient is coſtive, an emollient Clyſter is proper, in order to evacuate the excrementitious Matter which incommodes the Patient, without depreſſing the Spirits, or exciting violent and unnatural Efforts. Nor is the Patient to be ſuffered to get out of Bed, in order to eaſe Nature, for ſome Days after the Operation; but he is to have a Veſſel

adapted to this Purpoſe; for the leſs the Head is allowed to remain in a State of Reſt, the greater is the Danger, leſt the Cataract ſhould riſe and ſpring up again.

As to the Method of Dreſſing, the following Directions are to be obſerv'd. Towards the Evening of the Day, on which the Operation is perform'd, the Bandage is to be looſed as gently as is poſſible, and a freſh Compreſs, dipt in the above-mentioned Collyrium, to be laid on and ſecur'd with a Bandage, apply'd in the manner already directed. On the ſubſequent Days, the Dreſſings ought to be renew'd twice a Day at leaſt, that is, at Morning and Evening. The Dreſſings may alſo be charg'd three or four times a Day, when the Heat is very intenſe, becauſe in that Caſe the Compreſſes generally become ſoon dry. Upon every Removal of the Dreſſings, two Things are principally neceſſary to be obſerv'd. The Surgeon muſt not only carefully examine whether any remarkable Inflammation appears, but he muſt alſo take care, that too ſtrong a Light is not ſuffer'd to ſtrike on the affected Eye, leſt, by that means, it ſhould be conſiderably injur'd. If the Eye is in a good State, or if only a ſlight Inflammation appears, the ſame Method of Dreſſing is to be continued for eight Days; for, in theſe Caſes, an Inflammation does not generally happen after the eighth Day, at which Time 'tis proper to remove the Bandage, and allow the Patient a faint Degree of Light, provided the Curtains of the Bed are drawn, and the Eye defended by a Piece of black or green Silk hanging before it. If every Thing is in a right State, the Patient may, after the tenth Day, ſafely venture gradually to get out of Bed, and walk up and down in his Chamber, provided the above-mentioned Piece of Silk be kept before the Eye, and the Window-curtains are drawn. If, after this, Things proceed happily, the Cure will be ſoon completed, and the Patient may be gradually accuſtomed to his former Method of Life: But if any other troubleſome Symptoms occur, the Patient is to be kept in a State of Reſt till they are remov'd.

But that the Surgeon may, with the greater Skill and Judgment, remove the Accidents ſometimes ſubſequent to this Operation, we ſhall here particularly conſider thoſe which moſt generally occur. Firſt, then, when during the Operation any Quantity of Blood is diſcharged in the Eye, and renders the aqueous Humour turbid and cloudy, the Operation is to be perform'd with all poſſible Expedition, leſt there ſhould be a greater Diſcharge; and the above-mentioned Collyrium is carefully to be apply'd, ſince, by this, expert Surgeons have obſerv'd ſlight Perturbations of the aqueous Humour to be digeſted and remov'd. But the Danger is far greater, when a large Quantity of the diſcharged Blood is mix'd with the aqueous Humour; ſince, in this Caſe, 'tis ſcarce poſſible, but that a Hypopium [which is a Collection of Pus under the Tunica Cornea] or ſome other Diſorder, muſt induce a perpetual Blindneſs. In this deplorable Caſe, however, 'tis proper, that a large Quantity of Blood ſhould be taken from the Patient, and Bags prepared of Sage, Roſemary, Hyſſop, and Fennel, boil'd in Wine, frequently apply'd warm to the affected Eye; for theſe are of ſingular Service, except in Caſes where the Diſorder is entirely deſperate. Secondly, when, during the Operation, the aqueous Tumor itſelf is diſcharg'd, in conſequence of which, the Tunica Cornea collapſes, we have no great Occaſion to be in Pain with reſpect to the Recovery of the Eye, ſince, in a few Days, the Humour is generally reſtor'd, and the Eye returns to its natural Form. Thirdly, when, after the Operation, any Inflammation appears, nothing is to be omitted which can contribute to remove it. If it ſhould happen to be only ſlight and gentle, the Medicines above recommended will prove ſufficient for ſuppreſſing it: But if it ſhould happen to be pretty violent, beſides theſe Medicines, 'tis neceſſary the Patient ſhould drink Water, and, at proper Intervals, have Blood taken either from his Arm, Foot, or Neck. His Temples muſt alſo be very frequently anointed with camphorated Spirit of Wine; Clyſters alſo, and Veſicatories, together with the internal Medicines preſcrib'd againſt Inflammations, are to be carefully and judiciouſly exhibited.

From what has been ſaid I think it ſufficiently obvious, that my Doctrine, which fixes the moſt general Seat of the Cataract in the Cryſtalline Humour, is of the moſt extenſive Uſe, not only with reſpect to the Diagnoſtics, Prognoſtics, and Cure, but alſo with reſpect to the proper Conſtruction and Application of the Inſtruments adapted to couch the Cataract; for as ſoon as it was obſerved, that a Cataract was almoſt always owing to an Opacity of the cryſtalline Humour, and very rarely to the Formation of a preternatural Tunic, *Briſſeau* accurately judg'd, that thoſe Needles were by far the moſt proper for depreſſing them, whoſe Points are ſomewhat broad and corner'd, like that repreſented in *Tab.* 38. by *Fig.* 6. *Letter* C. For by uſing the ſmall Needles of the antient Surgeons, whether made of Gold, Silver, Steel, or Iron, it is ſcarce poſſible, but that the deprav'd cryſtalline Humour, or any other noxious Matter, muſt, during our Attempts to depreſs them, be lacerated or cut. *Briſſeau*'s lately invented Needle, *Fig.* 6. is not only broad and corner'd, but alſo ſharp and acuminated, that it may the more readily penetrate into the Eye. The Handle A. B. is an Octagon, one of whoſe Sides, repreſented by E. E. is mark'd with Lines, or in ſome other manner, with a View to know the corner'd Part of the Needle from the other during the Operation; for by this means we may almoſt infallibly determine, whether the flat or ſharp Part of the Inſtruments, apply'd to the Eye, touches the Cataract. The Protuberance D. is added to this Inſtrument, principally to diſcover, with Eaſe and Accuracy, how far the Inſtrument has penetrated into the Eye.

Some Surgeons, thinking the principal Cauſe of a Cataract to be a certain preternatural Coat growing in the Eye, have chiefly us'd ſuch Inſtruments as they judg'd proper for the total Extraction of this membranous Cataract thro' the Wound made with the Needle, leſt, as it often happens, the Diſeaſe, when once cured, ſhould again return. The firſt kind of Inſtruments, therefore, they us'd, were ſmall Pipes, or perforated Needles, which they apply'd to the Eye, and by their means endeavour'd to ſuck out the preternatural and foreign Coat. To the ſecond kind belongs the particular Needle, ingeniouſly form'd like a ſlender kind of Forceps, and delineated in *Tab.* 2. *Fig.* 28. 29. 30. of which ſee the Explication, under the Article Acus. To the third kind belong the hooked Needles of *Freitage*, and the ſlender Hooks which they paſs'd thro' a ſmall Pipe, introduc'd into the Wound of the Eye, in order to ſeize and extract the preternatural Coat. But that Attempts of this kind are vain and uſeleſs, tho' the Inſtruments ſhould be never ſo artfully made, is confirm'd, not only by our having ſhewn the Falſhood of that Opinion, which places the ordinary Cauſe of a Cataract in the Production of a preternatural Coat in the Eye, but alſo by the concurring Teſtimonies of the moſt ſkilful Surgeons, who unanimouſly declare, that the Operations perform'd in theſe manners are never crown'd with Succeſs. Unleſs *Freitage* had more accurately deſcrib'd his Method, delineated his Needles, and ſhewn how the Laceration of the Eye was to be prevented, I cannot help thinking, that he wrote rather to indulge a wanton Genius, than to ſupport an important Truth.

It is here alſo to be obſerv'd, that when the Cataract, as it frequently happens, falls thro' the Pupil itſelf, it is proper cautiouſly to make an Inciſion in the inferior Part of the Tunica Cornea; and warily introducing a ſmall Hook, or proper Probe, to extract the Cataract, which is ready, as it were, to fall on the Cornea.

Taylor, in the eleventh Chapter of his Treatiſe of the Cataract and Glaucoma, has deſcrib'd a new Method of couching the Cataract by the Needle, which is as follows. He places the Patient in the uſual manner, ſecures the affected Eye with a *Speculum Oculi*, and afterwards with a Knife, Biſtory, or Lancet, makes a ſmall longitudinal Inciſion thro' the Membranes of the Eye to the vitreous Humour, about half a Line below the ordinary Place. Then he directly paſſes a ſlender plano-convex Needle into the Eye thro' the Inciſion, with the convex Part of it turn'd upwards to the inferior Part of the cryſtalline Humour. After this, he gently elevates the Point of the Needle a little, till he perceives a faint Reſiſtance from the cryſtalline Humour lying above it, and obſerves its Motion thro' the Pupil. When, from theſe Signs, he knows, that the Apex of the Needle is immediately under the Capſula of the cryſtalline Humour, he thruſts it downwards to the Bottom, in order to divide the vitreous Humour, and prepare a Space for the Reception of the cryſtalline Humour, which is afterwards to be depreſs'd: After this, he withdraws about two Lines of the Needle, and introduces it into the inferior Part of the Coat of the cryſtalline Humour, the Situation of which he carefully obſerves. This Part of the Coat, he ſays, he divides or opens with the Needle, without hurting the ciliary Ligament; that thro' this Aperture, or Diviſion of the Coat, the cryſtalline Humour may be afterwards depreſs'd. By this Motion or Action of the Needle, as he informs us, he endeavours, at the ſame time, to enlarge the Space intended for the Reception of the cryſtalline Humour: Then, in order to couch and ſuppreſs the opaque cryſtalline Humour itſelf, he withdraws about three Lines of the Needle, that the cryſtalline Humour, now diſengag'd from its Coat, may, as it were, ſpontaneouſly fall thro' the Aperture made below, into the Space before prepar'd for it. Then he elevates the Point of the Needle, and carefully directs it to the ſuperior Part of the cryſtalline Humour, which he cautiouſly lays hold of, and depreſſes to the Bottom or inferior Part of the Eye, where the Space for its Reception was before prepar'd: Then he withdraws the Needle as gently as he can. He affirms, that by this means the Tunica Uvea, and Ciliary Ligament, are not injur'd, but remain in their natural State. This is certainly a Circumſtance of great Importance, ſince, in the common Method of Operation, this Ligament is always lacerated. Tho' the Author's own Account of this Operation is more full and particular, yet I think I have ſelected the moſt material and important Circumſtances, which ought to be carefully adverted to, and cautiouſly imitated by every ſkilful Oculiſt: But

there are others so superfluous and minute, as hardly to be understood by most; and they can never be accurately observed, in the Operation, even by the Author himself. To this it is, perhaps, owing, that the most terrible Symptoms, severe Pains, violent Inflammations, and Abscesses of the Eyes, without a Restitution of Sight, follow his Operations for the Cataract. But the Advantages and Disadvantages of this Method must, like other Things of the same Nature, be determin'd by Time and Experience. *The younger* Heister *publish'd the Case of a Person of* Amsterdam, *who was couch'd by* Taylor, *with remarkably ill Success. I have not the Book, so can give no farther Account of it.*

How to couch the shaking Cataract, or the crystalline Humour become opaque, and fluctuating behind the Pupil, which requires another Method of Operation, he informs us, in two distinct Chapters, the Sum of which is nearly as follows. He introduces his Needle into the Eye of the Patient, in the manner already describ'd. Then he directs the Point to the anterior and superior Part of the vitiated crystalline Humour, which, taking care, at the same time, not to hurt the Ciliary Ligament, he lays hold of with the plain Surface of the Needle, and depresses to the Bottom of the vitreous Humour.

In some Species of Cataracts, which he calls *false*, he maintains, that not only the crystalline Humour itself, but also its Coat, is become opaque and vitiated; and, after having depress'd the opaque crystalline Humour itself, he shews us, at great Length, in two Chapters, how he separates its Coat from the Ciliary Ligament, and depresses it. In two other Chapters he gives us an Account of the Operation for the *Glaucoma*, to which Word he affixes a new and uncommon Idea, meaning by it such an Opacity, and Increase of the crystalline Humour, as that it reaches, together with its vitiated Coat, near the Edges of the Pupil. In this Case, he informs us, that the Cure is to be attempted almost in the Manner now directed. But, since the Antients distinguish'd a Glaucoma from a Cataract by its deep Situation in the Eye, and its being pretty far removed from the Pupil, Mr. *Taylor*'s Signification of the Word is by no means to be embraced, since we cannot properly affix new Ideas to antient Words. I am rather inclin'd to think, that what he calls Glaucomas ought, on account of their Vicinity to the Pupil, to be class'd among the Species of Cataracts.

We must here also observe, that Cataracts, which have spontaneously pass'd the Pupil, may sometimes be extracted thro' an Incision made in the Tunica Cornea. But I am inform'd, by a Correspondent in *England*, that *Taylor* there boasted, that he could extract Cataracts, as yet lodged behind the *Tunica Uvea*, thro' an Incision made in the *Tunica Cornea*. But whether, in reality, he is capable of doing so, I have not, as yet, got certain Information. *Heister.*

I shall conclude the Accounts of this curious Operation, with what Mr. *Sharp* says upon the Subject.

Having placed your Patient in a convenient Light, and in a Chair suitable to the Height of that you yourself sit on, let a Pillow or two be placed behind his Back, in such a manner, that, the Body bending forward, the Head may approach near to you: Then, inclining the Head a little backward upon the Breast of your Assistant, and covering the other Eye, so as to prevent its Rolling, let the Assistant lift up the superior Eyelid, and yourself depress a little the inferior one: This done, strike the Needle thro' the Tunica Conjunctiva, something less than one Tenth of an Inch from the Cornea, even with the Middle of the Pupil, into the posterior Chamber, and gently endeavour to depress the Cataract with the flat Surface of it. If, after it is dislodg'd, it rises again, though not with much Elasticity, it must, again and again, be push'd down: If it is membranous, after the Discharge of the Fluid, the Pellicule must be more broken and depress'd: If it is uniformly fluid, or exceedingly elastic, we must not continue to endanger a terrible Inflammation by a vain Attempt to succeed. If a Cataract of the Right Eye is to be couch'd, and the Surgeon cannot use his Left Hand so dexterously as his Right, he may place himself behind the Patient, and use his Right Hand.

I have not recommended the Speculum Oculi, (which we cannot however well do without, unless the Patient resolutely determines to hold the Eye still) because, upon the Discharge of the aqueous Humour thro' the Puncture, the Eye, being somewhat empty'd, more readily admits of the Depression of the crystalline Humour, than when press'd upon by the Instrument.

As to the Method of treating the succeeding Inflammation, (when it happens, for sometimes there is none) I can advise nothing particular, but to refrain from those Collyria that are charged with Powders; for the thinner Parts, flying off, leave a gritty Substance in the Eye, which must be pernicious. Bleeding, and other gentle Evacuations, are found absolutely necessary. The Use of cool Applications, externally, is most easy to the Eye; but, after all, there will sometimes ensue a troublesome Ophthalmy, which, with the Uncertainty there always is of Success, after the Operation, have deterr'd most Surgeons from undertaking it, and, till lately, from studying the Nature of the Disease. But, I fancy, the Operation will come into greater Repute, when more generally practised by Men of good Character; for it is less the Difficulty, than the Abuse of it by Pretenders, has brought it into Discredit. *Sharp.*

I must apprise the Reader, that the Needles for the couching a Cataract, are, by Mistake, represented twice; once in *Tab.* 2. and again in *Tab.* 38. See the Explication of these under the Article Acus.

CATARIA.

The Characters are;

It shoots up one single Stalk, running into many Branches on both Sides. The Galea, or Crest, of the Flower is erect, roundish, bifid; the Beard, or Lip, divided into three Segments, the middle one excavated, large, and elegantly crenated on the Edges; the other two Segments, like Wings, inclosing the wide Orifice of the Lips.

1. *Nepeta, Mentha Cataria*, Offic. *Nepeta major vulgaris*, COMMON GARDEN-NEP, Park. Theat. 38. Raii Synop. 3. 237. *Nepeta*, Riv. Irr. Mon. Dill. Cat. Giss. 126. Buxb. 233. Rupp. Flor. Jen. 191. *Mentha Cattaria*, J. B. 3. 225. THE GREATER OR MOST COMMON NEP, OR CATMINT, Raii Hist. 1. 548. *Mentha Cattaria sive Nepeta*, Chab. 415. *Mentha Cattaria vulgaris & major*, C. B. Pin. 228. Hist. Oxon. 3. 414. *Mentha felina sive Cattaria*, Ger. 554. NEP OF CATMINT, Emac. 682. Mer. Pin. 77. *Mentha felina, vel Cattaria*, Merc. Bot. 1. 50. Phyt. Brit. 74. *Cataria major vulgaris*, Tourn. Inst. 202. Elem. Bot. 171. Boerh. Ind. A. 174. NEP. *Dale.*

Catmint has tall square hoary Stalks, pretty much branch'd, having, at the Joints, two pretty large softish Leaves, in Shape like those of Dead-nettle, whitish and hoary underneath, and green above, set on long Foot-stalks. The Flowers grow on the Tops of the Branches, in long handsome whorl'd Spikes of white Flowers, galeated and labiated; the Galea is cut into two, and the Labella into three Sections; they are set in open five-corner'd Calyces, in which grow the Seed. The Root is white and woody, and spreads much. It grows in Lanes and Hedges, and flowers in the Summer Months. It has a strong Scent, between Mint and Penyroyal. It is call'd *Catmint*, because the Cats are very fond of it, especially when a little flaccid and wither'd; for, then, they will roll themselves on it, and chew it in their Mouths, with great Pleasure. It consists of warming and attenuating Parts, somewhat like Penyroyal, and, like that, is of great Service in opening Obstructions of the Womb, and helping the Green-sickness; as also Hysteric Fits, and Vapours. It promotes the Birth and Lochia; and, by some Authors, is commended against Barrenness. *Miller's Bot. Off.*

Catmint is aromatic, acrid, bitter, and gives no Tincture of Red to blue Paper; which shews it to contain an aromatic oily volatile Salt, in which the urinous Part predominates, in the same manner as in the artificial oily volatile Salt. This Plant, taken as Tea, or infused in Wine, is very aperitive, emmenagogic, and cures the Vapours. *Tabernæmontanus* says, that, being boil'd in Wine and Honey, it cures the Jaundice, and a violent Cough. It is usually employ'd in Washes for the Feet, for the Green-sickness. *Martyn's Tournefort.*

Boerhaave takes Notice of seven more Species of the *Cataria.*

2. *Cataria*; *quæ Nepeta*; *minor*; *folio Melissæ Turcicæ.* H. C. b.

3. *Cataria*; *angustifolia*; *major.* T. 202.

4. *Cataria*; *angustifolia*; *major*; *flore cæruleo-purpurascente.*

5. *Cataria*; *Lusitanica*; *erecta*; *folio Betonicæ*; *tuberosâ radice.* T. 202.

6. *Cataria*; *Lusitanica*; *erecta*; *folio Betonicæ*; *tuberosâ radice*; *flore albo.* Ind. 70. b. H.

7. *Cataria*; *quod Horminum*; *spicatum*; *flore & odore Lavendulæ.* Bocc. Rar. 39. Vaill. b.

8. *Cataria minor*; *vulgaris.* T. 202. *Boerhaave's Index alter Plantarum.*

CATARRHECTICUS, καταῤῥηκτικὸς, derived from ῥήγνυμι, to break, is an Epithet apply'd, by *Hippocrates*, to Substances of a penetrating and dissolving Nature; as, for Instance, to Wine of fine Parts, because it has a diuretic Quality; to Oxymel, and the Peplium. *Hippoc. de Ratione Victus in Acutis.*

CATARRHEUMA, καταῤῥευμα, derived from ῥέω, to flow, is the same as Catarrhus, a Defluxion.

CATARRHEXIS, καταῤῥηξις, from ῥήγνυμι, to break, is a violent and copious Eruption or Effusion. Thus κοιλίης καταῤῥῆξις, *in Coac.* is a plentiful and urgent Evacuation, or Flux of the Belly, which, in *Epid. Lib.* 4. *Ægr.* 25. is call'd simply καταῤῥηξις. The Verb καταῤῥήγνυμι, is often used by *Hippocrates* in the same Sense, when he speaks of the Belly, and sometimes to express the Rupture and Effusion of Tumors. The same Verb, when spoken of the more humid and lax Parts of the Body, as the Veins and Breasts, signifies to sink, subside, or become flaccid; as, in *Lib.* περὶ φύσ. παιδ. where he says,

ſays, Ἐι τε μαζοὶ ἐς τ' ἄλλα μέλεα ὑπόσα ὑγρότερα καταῤῥέψαντος τοῦ γυναικῶν "The Breaſts of Women, with their other more "humid Parts, ſink and become flaccid," ſpoken of the State of Women after their Child-bed Purgations.

CATARRHOECUS, καταῤῥοικὸς, from ῥέω, to flow, in *Hippoc. Aph.* 24. *Lib.* 5. ſignifies *exciting Diſtillations*; and is there apply'd to cold Subſtances, as Ice and Snow. It is alſo uſed paſſively, and apply'd to Diſeaſes proceeding from Diſtillations.

CATARRHOPIA, καταῤῥοπὴ, from ῥοπὴ, an Inclination, of ῥέπω, to incline, to tend, ſignifies a Propenſity or Inclination downwards; as ANARRHOPIA, on the contrary, imports a Tendency upwards; and both theſe Words are uſed by *Hippocrates* in the Beginning of his Book of *Humours*.

Catarrhopa Phymata, καταῤῥοπα φύματα, *Epid. Lib.* 6. *Sect.* 1. *Aph.* 12. "Tubercles tending downwards," are explain'd by *Galen*, in his Comment on the Place, to be ὅσα κατὰ τὴν κάτω χώρην τὴν κορυφὴν ἑαυτῶν ἴσχει τῆς ἐμπυήσεως "Such as "have the Apex or Top of their Suppuration depreſs'd," in Oppoſition to τὰ ἀπεξία ἐς κορυφώδεα, "thoſe with a ſharp and "elevated Top," in the ſame Aphoriſm.

Catarrhopos Splen, καταῤῥοπὸς σπλὴν, according to *Galen*'s Explication, is a Spleen verging downwards, with a Declivity, *Epid. Lib.* 6. *Sect.* 2. *Aph.* 30. and its lower Part bloated, or which has a Propenſity downwards, or propels the Humours to the inferior Parts.

Καταῤῥοπὸς ὑγιὴς, in *Lib. περὶ χυμῶν*, is a Remiſſion or Decline of a Diſeaſe, and oppoſed to παροξυσμὸς, the Paroxyſm or Fit.

CATARRHUS, καταῤῥοὸς, καταῤῥέες, κατάῤῥοος, from ῥέω, to flow, *in Aphoriſm.* 38. *Lib.* 7. implies a Diſtillation or Defluxion from the Head upon the Mouth and Aſpera Arteria, and thro' them upon the Lungs. So *Galen*, *Com.* 2. *in Prog.* ſays, that καταῤῥέες is a Defluxion of a thin and crude Humour, from the Brain, upon the Mouth and Palate; and is comprehended by *Hippocrates* under a κόρυζα, *Coryza*. And, in his Comment on *Aph.* 12. *Lib.* 3. he ſays, that κάταῤῥοαι was a common Name, among Phyſicians, for Diſtillations from the Head, thro' the Aſpera-Arteria, upon the Lungs. Sometimes καταῤῥέες ſignifies any Defluxion from the Head, by the Veins, upon the inferior Parts, as in the laſt-mention'd Aphoriſm. Defluxions of this Kind, after the fiftieth Year, and a ſudden Expoſing of the Head to the Sun's Rays, or taking a great Cold, produce an Apoplexy, or Palſy in ſome Part of the Body, according to *Hippocr. de Aere, Locis, & Aquis*; and theſe are the καταῤῥέες συντόμως ἀπόλλυντες, "the Defluxions which ſoon kill "the Patient," mention'd in that Aphoriſm; or which, according to the Book before quoted, produce ſudden Death, or a Reſolution of the Right Side. *Celſus*, *Lib.* 2. *Cap.* 1. renders κατάῤῥοαι *Diſtillationes*; and *Cœlius Aurelianus*, *Tard. Paſſ. Lib.* 2. *Cap.* 7. calls καταῤῥοὴν *Influxio*. *Hippocrates* alſo, *in Coac.* ſpeaks of a καταῤῥέες ῥωτιαῖαι, "a Defluxion on the Spi- "nal Marrow;" and καταῤῥοαὶ φλεγματώδεες ὀφθαλμοὶ, *Lib.* 2. *Epid.* are Eyes affected with pituitous Defluxions.

The frontal Sinuſes, the large Cavities in the ſuperior Jaw, call'd the Antra Highmoriana, all the Cells of the Os Sphenoides, and the Noſtrils, are lin'd with a thick ſoft Membrane, furniſh'd with an almoſt infinite Number of arterial Veſſels, round glandular Bodies, and excretory Veſſels, which are continually pouring out a thin Lymph. The Fauces and Mouth are full of Glands, and their excretory Ducts: The Aſpera Arteria alſo, and its various Ramifications, are lined with a Membrane containing Glands, whoſe excretory Ducts open into their Cavities. When too large a Quantity of ſerous Humours are diſcharg'd from all or any of theſe, the Diſorder hence ariſing is term'd a Catarrh, or, as it is more uſually call'd, a Cold. If 'tis attended with a Fever, as it almoſt always is in ſome Degree, it is call'd a catarrhous Fever.

The Antients, unacquainted with the glandulous Structure of the Parts ſubject to a Catarrh, apprehended, as is obſerved above, that the Humours flow'd from the Head upon theſe Parts. The Moderns have ſometimes preſerved the Term *Defluxion*, tho' they have diſcover'd the Error from whence it acquir'd this Appellation.

The Catarrhus ſuffocativus is a violent and ſuffocating Cough, either excited by an exceſſive Catarrh, by the Rupture of a Vomica in the Lungs, by a Polypus driven from the Heart into the Pulmonary Artery, and ſometimes a ſpaſmodic Conſtriction of the Nerves, as it happens in ſome Hyſteric Caſes.

Pertinent to this are the following Remarks of *Hoffman*.

Tho' a convulſive Aſthma, and a *Catarrhus ſuffocativus*, bear a near Reſemblance to each other in ſeveral reſpects, yet they are different in others; for this latter Diſorder is a Species of Palſy, affecting the Pairs of Nerves ſubſervient to Reſpiration, attacks the Patient unexpectedly, and is accompanied with a great Uneaſineſs, Stertor, and rattling Noiſe in Reſpiration; the Countenance is red and tumid, and the Patient is in Danger of being ſuffocated. But a convulſive Aſthma is more periodical, and of a chronical Nature; whereas the Catarrhus ſuffocativus is juſtly rank'd among acute Diſorders. In it there is alſo a perpetual Afflux of Matter perceived by the Patient, a Symptom which does not accompany the Aſthma. It is alſo accompanied with a greater Loſs of Strength than a convulſive Aſthma. But the Catarrhus ſuffocativus is principally incident to old Perſons, Patients of weak Conſtitutions, and ſometimes to Children; eſpecially when exanthematous Eruptions, Small-pox, Meaſles, ſcald Heads, Achors of the Face, Itches, and other Diſorders of this Kind, have been unſkilfully driven back to the internal Parts. *Hoffman.*

A Palſy of the Nerves, ſubſervient to Reſpiration, and which are diſtributed to the Bronchia, intercepts the Breath, and induces what we call a Catarrhus ſuffocativus. *Ibid.*

Polypous Concretions in the Pulmonary Veſſels often prove the Cauſes of a violent and fatal Spitting of Blood, of a Catarrhus ſuffocativus, of a convulſive Aſthma, and of a Dropſy of the Thorax. *Ibid.*

In Subjects who have died of an Aſthma, and *Catarrhus ſuffocativus*, polypous Concretions are generally found in the Veſſels more immediately communicating with the Heart and Lungs. This is confirm'd by the Obſervations of ſeveral Authors of Credit. Thus *Greiſelius*, in *Miſc. Nat. Curioſ. An.* 1720. *Obſ.* 74. tells us, that, in all the Patients he had diſſected, who died of a Catarrhus ſuffocativus, which often cuts the Patient ſuddenly off, he found callous glutinous and viſcid Bodies in the Heart. *Ibid.*

Of a Catarrhous Fever.

Among the lymphatic and ſerous Fevers, that generally diſtinguiſh'd by the Epithet *Catarrhous* is one, in which, by an increaſed Motion of the Solids and Fluids, the Serum, become ſuperfluous and impure in conſequence of an obſtructed Perſpiration, is evacuated, as it were, in a critical and ſalutary manner; eſpecially thro' the glandulous Organs of the Fauces, Noſtrils, and Bronchia.

This Diſorder generally ſeizes the Patient towards the Evening, and begins with a chilling Coldneſs of the Skin, a Refrigeration of the Extremities, eſpecially of the Feet and their Soles, a Coſtiveneſs, a Stimulus to diſcharge the Urine, which is nevertheleſs evacuated in a ſmall Quantity, a Weakneſs of the Head, a Languor of the whole Body, an increaſed, but, as it were, a falſe Appetite, a Thirſt, a Difficulty of Deglutition, a Stimulus in the Larynx, and a Heat of the Noſtrils and Fauces. Theſe Symptoms are ſucceeded by a Sneezing, a Heavineſs of the Breaſt, nocturnal Heats, a quick and increas'd Pulſe, a violent Cough, a Coryza, a Heat of the Fauces, diſturb'd Sleep; in the Morning, an Eruption of Sweat, a Heavineſs and Torpor of the whole Body, together with a Loſs of Appetite.

The immediate Cauſe of theſe Symptoms is an acrid or cauſtic Serum or Lymph, lodged in the glandular Coats, and producing an Inflammation in them, accompanied with Pain, Tumor, and Redneſs. This happens in the whole Region of the Noſtrils, Palate, and Fauces, the whole Aſpera Arteria, and the Bronchial Ramifications; as alſo in the Œſophagus itſelf, the Stomach, and Inteſtines; for that all theſe Parts are affected, at one and the ſame time, is ſufficiently confirm'd by the Hoarſeneſs, the Cough, the Spitting of a viſcid Matter, the Sneezing, the Heavineſs of the Breaſt, the Nauſea, which is ſometimes ſo violent as to produce a Vomiting, the Heat of the Præcordia, the Gripes of the Belly, and the ſubſequent ſalutary Flux.

This Serum is principally produced by an Obſtruction of Perſpiration; and hence it happens, that, during the vernal and autumnal Equinoxes, this Fever moſt generally begins to rage; for, at theſe Seaſons, the conſiderable Viciſſitudes and Changes of Weather, from hot to cold, from dry to moiſt, and *vice verſa*, affect the Surface of the Body in ſo different manners, that the Evacuations, neceſſary for the Preſervation of Health, are greatly diſturb'd.

For the ſame Reaſon, Catarrhs moſt generally ſeize thoſe who are forced to ſudden Changes of Air, and go from a hot to a cold, or from a cold to a moiſt Place; thoſe who incautiouſly expoſe themſelves to autumnal, nocturnal, cold, and moiſt Airs; thoſe who lay aſide their Winter Apparel too ſoon in the Spring, or begin to wear it too late in the Autumn; as alſo thoſe, who, during the Equinoxes, having been blooded, or ſeiz'd with any copious critical Hæmorrhage, imprudently expoſe themſelves to the free and cold Air.

This is alſo the Reaſon why Perſons of ſpongious, lax, phlegmatic, and ſanguine Habits, Infants, Children, and Women, are more frequently ſeiz'd with catarrhous Fevers, than Adults, Men, and Perſons of a more robuſt and bilious Habit of Body: As alſo, why thoſe are more generally ſubject to them, who indulge themſelves in Watching; who wantonly run into Surfeits or Exceſs; and who, having over-heated their Bodies with Wine or Brandy, afterwards expoſe themſelves to the cold and moiſt Air.

In thoſe Patients alſo, who, after the prepoſterous drying up of an Achor, Tinea, or Itch, or who, after an unſkilful and palliative Cure of a Coryza, or Cough, fall into catarrhous Fevers,

vers, no other Cauſe of the Diſorder can be ſuggeſted, than the Repulſion of the acrid and corroding Serum, which tends to bring on an Inflammation, from the Surface of the Body to the internal Parts.

But 'tis not to be doubted, that there is ſometimes in the Air ſuch a ſubtile cauſtic Matter, which, being received in Inſpiration, inſinuates itſelf into the glandulous Parts, thro' which it paſſes, excites Pain, Tumor, and Redneſs, and brings on a catarrhous Fever. This acrid Matter in the Air is certainly very ſoon generated in the Beginning of the Spring, when, in conſequence of the Thawing of the Snow and Ice, the Ground is overflow'd with an effete Water, which, ſtagnating and becoming putrid, diffuſes many noxious Effluvia into the Air. Hence it alſo happens, that, at this Time, Fevers of this Kind are for the moſt part epidemical.

But that Catarrhs, and catarrhous Fevers, are contagious, and affect thoſe who are near the Patients, or are diſpos'd for the Reception of the Diſorder, is owing principally to this, that they are produc'd by a Peccancy of the Lymph, juſt as in all other Diſeaſes of a contagious Nature, which are known to be produc'd by a Corruption, Vapidneſs, or Putrefaction of the Lymph.

When a benign catarrhous Fever ſeizes a Patient, the Phyſician, who is acquainted with theſe things, can eaſily diſtinguiſh it, by a Compariſon of the different Symptoms, from the other Species of Fevers which daily occur, ſuch as thoſe of the ſlow, hectic, quotidian, double tertian, and triple quartan Kind.

He will alſo eaſily perceive a Difference betwixt theſe Diſorders of the glandular Coats in the Fauces and Noſtrils, ariſing from a Lues Venerea and Scurvy, and thoſe produç'd by a Catarrh; for, in the former there is only a Corroſion and Ulceration, by the cauſtic lymphatico-ſerous Matter, without a Fever; whereas, in the latter, beſides the Corroſion, there is ſomething of an inflammatory Nature, ariſing from a Stagnation of the more ſubtile Part of the Blood, with a Fever.

The Difference will alſo be obvious betwixt a catarrhous Fever, and that which accompanies a Rheumatiſm; ſince, in the former, the internal glandular Coats are affected, and an Evacuation ſucceeds; whereas, in the latter, the external Coats of the Muſcles are only affected, and the Diſorder is not terminated by a critical Evacuation.

But 'tis ſomewhat more difficult to diſtinguiſh a benign catarrhous Fever from one of the malignant Kind, eſpecially at the Beginning, on account of the many Symptoms they have in common with each other: But the latter differs from the former in this, that it gives a more violent and ſudden Shock to the Strength, produces a perpetual Watching, which is ſucceeded by a diſorderly and uneaſy State of Mind; and that it is more contagious, and, for the moſt part, accompany'd with petechical Eruptions and Spots.

The larger the Quantity of the impure Blood and Serum is, the more violent are the Symptoms, and the longer the Diſorder is protracted; as is ſufficiently evident in ſcorbutic Patients, and in Caſes where the Matter of the Purple Fever remains pent up in the Body.

In hypochondriac Patients, beſides the Protraction of the Diſeaſe, in conſequence of the weaken'd Tone of the Stomach and Inteſtines, and the Propenſity to flatulent and ſpaſmodic Strictures, ſeveral violent Symptoms generally appear, eſpecially an Uneaſineſs at the Præcordia, a Difficulty of Breathing, and a Reſtleſneſs, accompany'd with an Inflation, and heavy kind of Pain in the Hypogaſtrium.

Thoſe who abound in Blood, who lead intemperate Lives, who drink liberally of the worſe Sorts of Wine, and are fond of acid and ſaline Aliments, feel a Heat towards the Evening, are afflicted with a dry, but ſevere, Cough, and their Sleep is diſturb'd and interrupted.

Women alſo, who from Frights, or any other Cauſe, labour under a Suppreſſion of the Menſes, are, during this Fever, afflicted with an Uneaſineſs of the Præcordia, accompany'd with frequent Faintings, a conſiderable Weakneſs of the whole Body, a Senſe of Heat and Cold, alternately ſucceeding each other, in the Skin; and theſe Symptoms are exaſperated principally in the Night-time.

But this Fever is of itſelf benign, free from Danger, if ſkilfully treated; and, for the moſt part, the Patient is cur'd, and all his Wearineſs remov'd, in ſeven, or, at moſt, fourteen Days. Beſides, other Diſorders of the Head, Cephalalgias eſpecially, and Hemicranias, are happily carry'd off by a ſucceeding Catarrh, and a Diſcharge from the Noſtrils.

In the Beginning, a catarrhous Fever is often immediately carry'd off by an Increaſe of Perſpiration: In others, after ſome Days, either by a plentiful Expectoration of a viſcid Matter, or by a liberal Diſcharge of a mucous Serum from the Noſtrils: In ſome alſo by frequent Stools; and in others, whoſe Urine was before thin, and diſcharg'd in a ſmall Quantity, by having that Fluid evacuated copiouſly, and ſo heavy as at leaſt to contain double the Quantity of ſolid Matter it did in its natural State.

The Methods of Prevention *and* Cure.

In order, therefore, to prevent the Attacks of Catarrhs, I adviſe all thoſe things to be avoided, by which I have already ſaid they might be brought on; and, in the Spring and Autumn, let the Patient be ſeaſonably blooded, let him eat moderately, let his Perſpiration be kept free and uninterrupted, and let him uſe proper Exerciſe: But, in thoſe who are young, and of a lax moiſt Conſtitution, and for that Reaſon, according to *Hippocrates*, *Sect.* 6. *Aph.* 2. frequently affected with catarrhous Defluxions, and rheumatic Pains, I have often, with Succeſs, order'd the Patient, for forty Days, to drink a Decoction prepar'd of China-root, Sarſaparilla, the Bark of Saſſafras, Raiſins, and a little Cinnamon, injoining him, at the ſame time, to uſe no Food beſides roaſted Fleſh, toaſted Almonds, and Biſcuit. He muſt alſo, in order to keep his Body ſoluble, frequently uſe Ptiſans prepar'd with Manna; and, when the Cure is finiſhed, he muſt daily take ſome Medicine capable of corroborating the Stomach, before Dinner, in Water or Wine.

In the Cure of catarrhous Fevers, theſe three Intentions are principally propos'd: Firſt, that the ſaline Acrimony of the acrid Lymph ſhould be obtunded and corrected; ſecondly, that the diſturb'd and interrupted Perſpiration, which is the primary Cauſe of the ſerous Congeſtion in the internal Parts, ſhould be reſtored, and reduc'd to Order; and, thirdly, that the Evacuation of the thick and viſcid Mucus ſhould be promoted, and its Generation for the future prevented.

The Acrimony of the Lymph is not only corrected by the abſorbent Bezoardic Powders, but alſo by all moiſtening and oleous Subſtances, ſuch as Oil of ſweet Almonds, Sperma Ceti, Cream, Emulſions of Almonds, or Pine-nuts with white Poppy-ſeeds, Water-gruel, Decoctions of Turneps and Barley, Broth of Capons and Hens, with the Yolks of Eggs. Among ſweet Subſtances, Liquorice, and Infuſions of it; *Spaniſh* Juice, and the Juice of Figs and Raiſins. If the Acrimony is too ſubtile and corroding, the gentler Anodynes are to be uſed; among which, the beſt are Preparations of Poppies, Saffron, the Pilulæ Wildeganſii, the Diacodium of *Montanus*, and the Pilulæ de Styrace, the Compoſition and Uſe of which are both antient and highly approv'd of, as appears from *Trallian. Lib.* 5.

As for promoting the Excretions, eſpecially that by the Skin, the moſt ſalutary of all the others, this Intention is anſwer'd by warm Infuſions of the Herbs, Paul's Betony, and Hyſſop, the Roots of Liquorice, Flowers of Elder, and the Seeds of Fennel and the wild Poppy: The more fix'd diaphoretic Powders are alſo advantageouſly exhibited, eſpecially with pectoral and antiſpaſmodic Waters: Nothing alſo contributes in a more ſalutary Manner to the Evacuation of the Serum thro' the Skin, than Motion and Exerciſe, which *Hippoc. Lib. de Inſomn. Sect.* 4. and *de Victu acut.* highly extols for promoting a Diaphoreſis in the Morning, after Friction. *In feveriſh Diſorders, however, it muſt always be uſed with Caution, being ſeldom or never proper.*

The viſcid Matter remaining in the Glands of the Fauces is to be evacuated by Pectorals, Figs and Raiſins reduc'd to a kind of Syrup, with Spirit of Wine burn'd upon them, and the pectoral Balſam of *Meibomius*; as alſo by the pectoral Elixir prepar'd of Gum Ammoniac, Myrrh, Liquorice-root, Elecampane, Saffron, Gum Benjamin, and Oil of Aniſe; the ſolvent Quality of which may be ſtill heighten'd by an Addition of the Tincture of Tartar, or of the vinous Spirit of Sal Ammoniac. But, for reſolving and attenuating the Phlegm ſtagnating in the Cavities of the Noſtrils, nothing is more effectual than the dry volatile Salt of Sal Ammoniac, impregnated with a few Drops of the pure, ſweet, and unadulterated Oil of Marjoram, and frequently apply'd to the Noſtrils.

Concerning the Application of theſe Remedies in general, we are to obſerve, that, in the Morning, it is expedient to promote Perſpiration, by drinking warm Infuſions of Herbs, Broths, and the Uſe of the correcting Bezoardic Powders; but, towards the Evening, Medicines of an anodyne and demulcent Nature are to be exhibited. But the particular Method of Cure conſiſts partly in an Alleviation of the Symptoms, and partly in a proper Exhibition of the Medicines, with reſpect to the Doſe and Order. The Exhibition is alſo to be accommodated to the particular State and Diſpoſition of the Patient. But of this we ſhall ſpeak more fully in the following Obſervations.

Cautions *and Clinical* Observations.

Catarrhous Diſorders, as well as all other feveriſh Indiſpoſitions, are to be treated in a very mild and gentle Manner; and the Patient is to be kept moderately warm, either in Bed, or by means of a Fire. He is, therefore, to abſtain from Medicines which are too hot, draſtic, and productive of Commotions, as alſo from a hot Regimen, becauſe, by theſe, the acrid Matter is put into Commotions, and a fervid Diſpoſition convey'd to the Parts: On the contrary, all refrigerating Subſtances, Acids, and whatever may diſturb or obſtruct Perſpiration, are carefully to be avoided; Opiates alſo, and Preparations of the *Theriaca*, are to be us'd with the greateſt

Caution, especially when the Head is weak and heavy, or when the Patient is old or costive.

The Diet is to be spare, and the Drink tepid and wholsome. The most proper is a Decoction of excorticated Barley, with Shavings of Hartshorn, Raisins, and Liquorice-root; but Wine and Brandy, on account of their stimulating Acid, and the Spirit they contain, which increases the Heat, are of no Use in this Species of Fever. In the Decline of the Disease, however, when the Excretions are begun, it has been observ'd, that good Wine, pretty liberally drank, has prov'd beneficial, because it promotes the Circulation of the Blood, and maintains an equable Perspiration.

When the Effervescence is violent, and a Fervor of the internal Parts perceiv'd, a few Grains of Nitre may be advantageously mix'd with the Bezoardic Powders, and Emulsions must be plentifully drank.

When, during this Disorder, the Fœces are indurated, and the Patient costive, besides Water-gruel, Decoctions of Manna, Prunes, and Raisins, nothing is more proper than emollient Clysters. Ten or twelve Grains of the Pilulæ Aleophanginæ or Becherianæ, with four Grains of the Pilulæ de Styrace, taken at Bed-time, are of singular Service, because they not only render the Body soluble, but moderate the violent dry Cough.

If, in the Decline of the Fever, the Cough is too moist and obstinate, and the Matter producing it too copious, a Derivation and Evacuation of the pituitous Humours, by Stool, are excellently promoted by two or three Ounces of a Decoction of Manna in Water of Paul's Betony. The Pilulæ Balsamicæ Becheri, as also the Pilulæ Ruffi, prepar'd of equal Quantities of Aloes, Myrrh, and Saffron, are of considerable Service in Cases of this Nature.

But, in the Beginning of a catarrhous Fever, purgative Medicines, especially those of the more acrid Kind, are highly improper, because they invite the acrid serous Humours to the Intestines, excite Gripes and a Flux, and put the Patient in Danger of being seiz'd with a slow Fever: And, in a young Woman of a plethoric Habit, I knew an Inflammation of the Stomach brought on by an Exhibition of Mercurius Dulcis, with Resin of Jalap.

When the Cough is violent and racking, it is to be allay'd with recent Oil of sweet Almonds, mix'd with Syrup of Maidenhair, as also with the following Electuary:

Take of the Oil of sweet Almonds, three Drams; of Sperma Ceti, one Dram; of white Sugar-candy, and Syrup of Violets, each an Ounce; of Saffron, one Scruple; of the Oils of Anise, Mace, and Sassafras, each six Drops: Mix up into an Electuary, of which a small Quantity is to be taken frequently.

When, in Women labouring under a Suppression of the Menses, the above-enumerated Symptoms appear, the Body is to be render'd soluble by Clysters, and Diaphoretics must be exhibited, in order to promote the Circulation of the Blood towards the Surface of the Body. In this Case we may advantageously add one Grain of Saffron, or a few Grains of the Flowers of Sulphur, to the Bezoardic Powders; but the Patient must abstain from all expectorating and sweet Substances.

The Symptoms which happen to hypochondriac Patients, arising principally from a preternatural Inflation of the Stomach, are most commodiously remov'd by emollient and carminative Clysters, as also by carminative Essences, in Conjunction with Pectorals.

When, after the Fever, the Lungs remain so relax'd as to produce too copious an Expectoration, we may, to the Bezoardic Powders, add a few Grains of the Bark of Cascarilla, or a few Drops of my Balsam of Life may be exhibited towards Night.

Venesection, seasonably instituted, under a proper Regimen, is of singular Service for preventing the frequent Attacks of Catarrhs in plethoric Patients; but, during the catarrhous Fever, it is entirely to be abstain'd from; for, in this Case, we are taught by Experience, it protracts the Disorder.

In a violent and long-continu'd Cough, sweet Pectorals, and incrassating Medicines, exhibited in too large Quantities, dispose the Patient to Cachexies, and phthisical Disorders, not only by impairing the Appetite, and digestive Faculty, but also by weakening the Tone of the Lungs.

Tho', according to *Hippocrates*, in the third Section of the sixth Book of his *Epidemics*, those who are afflicted with Headachs, Heaviness, and Hoarseness, when seiz'd with a catarrhous Fever, are less subject to Relapses, when the Disease terminates naturally with a Defluxion; yet, lest a Foundation should be laid for some other Disorder, I would, with the same *Hippocrates*, advise the recovering Patients to have a due Regard to their Food, and the State of their Stomach; and, in order to carry on a due Perspiration, to continue for some time the Use of their Infusions in the Morning. *Hoffman.*

CATARTISMUS, κατάρτισμος, (from καταρτίζω, a Verb, used by *P. Ægineta* to signify the Reducing of a Luxation; and deriv'd from ἄρτιος, entire) is, as *Galen* says, a Translation of Bones from a preternatural to their natural Situation.

CATASARCA, κατάσαρκα. The same as ANASARCA, which see.

CATASCEUE, κατασκευὴ, in *Galen*, *Lib.* 3. *de San. tuend. Cap.* 2. a Term in Use among the Athletæ, or Wrestlers, and signifies, as he says, that complete Course of Exercises perform'd by the Athletæ, their Bodies being prepar'd for them, which sometimes lasted a whole Day. *Galen* also uses the Term *Comment.* 2. in *Lib. de R. V. I. A.* to express the organical Structure of the human Body.

CATASCHASMOS, κατάσχασμος, deriv'd of σχάζω, signifying, among other various Senses, to scarify, and to open a Vein. Scarification. *Castellus.*

CATASEISIS, κατάσεισις, from σείω, to shake, is properly a Concussion, but seems to mean a Distention or Extension, *Lib.* περὶ ἄρθρων, *Cap.* 24. So ἀνασείειν is expounded, in *Suidas*, by ἐκτείνασθαι, to extend, to shake off; and, in *Hesiod*, ἀσπίδ' ἀνασείσασα may be render'd, "She extended or shook "her Buckler." *Foesius.*

CATASTAGMOS, κατάσταγμος, deriv'd from στάζω, to distil, was the Name which the *Greeks*, in the Time of *Celsus*, had for a *Distillation. Celsus*, *Lib.* 4. *Cap.* 4.

CATASTALAGMOS, κατασταλαγμὸς, στάλαξις, from σταλάζω, to distil, means the same as the preceding. *Castellus.*

CATASTALTICUS, κατασταλτικὸς, from καταστέλλω, to restrain, of στέλλω, to contract: An Adjective in frequent Use, and signifying *styptic*, *astringent*, *repressing*. It is sometimes, thro' Ignorance of the *Greek*, barbarously wrote *Castalticus*. The simple Word *Stalticus*, σταλτικὸς, bears the same Meaning.

CATASTASIS, κατάστασις, from καθίστημι, to constitute, of ἵστημι, to stand, signifies, in general, the Constitution, Habitude, State, or Condition, of any thing. The Word is frequently used by *Hippocrates*, to signify the Constitution of the Air or Seasons, or the Nature of a Disease; and he means by it in general, as *Galen* explains him, the essential Nature, or Form, ἰδέαν, of Things. It is spoken also of the Colour and external Habit of the Body, *Prorrhet.* 2. and, in *Lib. de Fract.* it signifies the Reducing of a Luxation, where κατάστασις is expounded by *Galen* καθέδρυσις, "A Restitution to, and "Reposition in, the proper Place."

CATASTEMA, κατάστημα, of the same Derivation and Signification generally as the former; but is more particularly used to express the Clothing, Air, Motion, and external Habit, of the Body. In *Galen's Exegesis* it is expounded a Leaning or Resting upon, and quoted from the second of the *Epidemics*; but no such Word is found in that Book. The Verb καταστῆσαι is there also expounded by ἀποσπᾶσθαι, "to slip, or fall down;" but (*Lib.* 1. περὶ γυναικ.) καταστήσειε signifies to be moderated, check'd, repress'd, being us'd to express the Effects of a cooling and astringent Medicine upon Bile.

CATASTOLE, κατάστολὴ, in *Lib.* περὶ εὐσχημ. signifies a plain and modest Dress, long Garments; κατάστολὴ is expounded by *Hesychius*, περιβολὴ, "Clothing, Vesture;" by *Suidas*, στολὴ, a Gown, or long Robe.

CATATASIS, κατάτασις, from κατατείνω, to extend, or to place. It has, in *Hippocrates*, two Significations, one of which is, the Extension of a fractur'd or dislocated Limb, in order to replace it; the other is, the actual Replacing it in a proper Situation.

CATATRIPSIS, κατάτριψις, from τρίβω, to rub, signifies the Attrition or Friction of Machines. *Hippocrates* applies it to the Organs of the human Body.

CATAUDESIS, καταύδησις. Vociferation.

CATAXA, κάταξα. *Aetius* and *Actuarius* express by this raw Silk, or Silk before it is dy'd.

CATE. A Name by which the Terra Japannica, or Catechu, is sometimes call'd.

CATECHESIS, κατήχησις, from κατηχέω, to instruct by Word of Mouth. It implies Instruction, or Directing by Word of Mouth, in *Hippocrates*.

CATECHU. Japan Earth. See TERRA JAPANNICA.

CATEIADION, κατειάδιον, a very long Instrument, which was introduc'd into the Nostrils, in order to provoke an Hæmorrhage, in the Cure of the Cephalalgia, or Head-ach. It is mention'd by *Aretæus*, *de Curat. Morb. diut. Lib.* 1. *Cap.* 2.

CATELLUS. A Puppy. Puppies were used by the Antients as a Part of Diet; and are by Authors directed to be laid upon various Parts of the Body when in Pain. See CANIS.

CATHÆRESIS, καθαίρεσις, from αἱρέω, to take away, implies any sort of Detraction or Subtraction of a Part of the Body, by any kind of Evacuation whatever.

CATHÆRETICA, καθαιρετικὰ, of the same Derivation as the preceding. Catheretics, that is, Remedies which consume superfluous Flesh. *Celsus* distinguishes these, which he calls *Rodentia*, from Caustics, which he calls *Crustam inducentia*. See CORRODENTIA.

CATHARMA, κάθαρμα, from καθαίρω, to purge, imports the Excrements purg'd off from any Part of the Body, as the Stomach,

Stomach, Inteſtines, or Bladder. It alſo ſignifies any thing ſacrificed by way of Expiation, with a View of averting a preſent or impending Judgment of Heaven.

CATHARMOS, *καθαρμὸς*, of the ſame Derivation, implies Purgation by Medicines; or an Expiation, that is, the Cure of a Diſorder by ſuperſtitious Ceremonies, or Sacrifices. The Cure of the King's Evil by the Royal Touch, if there was ſuch a thing, might be ſaid to be perform'd by a CATHARMOS.

CATHAROS, *καθαρὸς*, is uſed by *Hippocrates* to expreſs pure, or unmix'd; and, in this Senſe, is apply'd to the Excrements. Sometimes it imports clear, limpid, or not turbid, and is an Epithet to Urine. It alſo ſignifies Clearneſs of Viſion, or a Reſplendence of the Eye, when apply'd to that Organ.

CATHARSIS, *κάθαρσις*, Purgation, whether natural or artificial. It implies Evacuations of all Sorts of offending Humours, diſcharg'd by any Way whatever, as by the Mouth, Anus, Uterus, urinary Paſſage, Pores of the Skin, *&c.* Catharſis alſo ſignifies the menſtrual Purgation, and that of the Lochia.

CATHARTICA, *καθαρτικά*. Purging Medicines, as now generally underſtood; but it alſo implies Medicines which excite Vomiting, or Emetics.

Hippocrates was of Opinion, that particular Cathartics purg'd off, or attracted, as he expreſſes it, particular Humours: Thus, ſays he, a Medicine which purges the Bile, firſt attracts the Bile; but if it is too ſtrong, or if its Operation continues too long, finding no more Bile to act upon, it purges the Phlegm, after that the black Bile, and then the Blood. This is what I apprehend Phyſicians mean, when they ſay there are ſuch things as elective Purges, that is, Purges which act upon one Humour, and not upon another. Others deny the elective Faculty of Purges, becauſe they cannot give any Reaſons why a cathartic Ingredient ſhould act upon one Humour more than another, which, however, will determine nothing in this Diſpute: 'Tis certain, that amongſt Simples in general, ſome are inclin'd to act upon one Gland, Organ, and Part of the Body, whilſt others are diſpoſed by their Nature to act upon others. Thus the Operation of ſome is determin'd to the Kidneys, that of others to the Liver, Teſticles, or ſalival Glands. Theſe, therefore, may be ſaid to be elective, with reſpect to the Humours ſeparated in thoſe particular Glands. As to Cathartics, ſuppoſing they only acted upon the Stomach and Inteſtinal Tube, we may readily comprehend, that ſome Kinds may act upon the Glands ſituated in the Stomach, and deſtin'd to ſecrete a Juice uſeful in the Digeſtion of the Aliment, whilſt others operate principally on the Liver, Pancreas, or Inteſtinal Glands, which laſt may poſſibly be of various Kinds, and deſtin'd to ſeparate diſtinct Fluids. In this Senſe, then, Purges may, without any Impropriety, be ſaid to be elective.

The cathartic Simples known to *Hippocrates*, and by him employ'd in Medicine, were generally ſuch as operated both by Vomit and Stool, or at leaſt with much Violence downwards; ſuch were the white and black Hellebore, as Authors generally repreſent them: But with reſpect to the black I muſt remark, that the Plant which we make uſe of under that Name, is poſſeſs'd of but a very weak cathartic Virtue. Beſides theſe, he made uſe of the Grana Cnidia, ſuppos'd to be the Seeds of the Thymelæa; and by others, thoſe of the Mezereon; the Cneorum or Cneſtrum, which is the Thymelæa, or, perhaps, the Mezereon, or elſe the Thymelæa minor; the Peplium and Peplus, different Species of the Tithymalus; the Thapſia; the Juice of the Hippophaes; Elaterium; Colocynthis; Scammony; the Lapis Magneſius; the Cnicus, ſuppos'd to be what is uſually call'd the Carthamus. *Hippocrates* alſo takes notice of a white Poppy, different certainly from what is now call'd by that Name, and which ſome take for the Papaver Spumeum, others for the Peplus.

As theſe Purgatives were, for the moſt part, highly draſtic, our Author always uſed them with the utmoſt Precaution. He never, for Inſtance, exhibited them, during the Dog-days; neither did he purge pregnant Women, except in caſe of that Turgeſcence of the Humours, which we ſhall afterwards mention; and even then he tells us, that 'tis dangerous before the fourth and after the ſeventh Month of Geſtation. *Hippocrates* muſt, for the ſame Reaſons, have abſtain'd from purging Children and old Perſons, or at leaſt have done it very rarely.

The principal or moſt frequent Uſe he made of Purgatives was in chronical Diſorders; but in acute Diſeaſes, he was much more circumſpect in uſing them. Among all the feveriſh Patients, and others labouring under acute Diſorders, whoſe Caſes he gives us in his Epidemics, there are very few to whom he exhibited purgative Medicines; and he obſerves, that in certain acute Diſeaſes the Exhibition of Purgatives has produc'd very bad Effects.

Some may poſſibly conclude from this, that *Hippocrates* abſolutely rejected the Uſe of Purgatives in acute Diſorders; but 'tis obvious, from other Paſſages of his Works, that he was not of this Opinion; for he really exhibited purgative Medicines in acute as well as chronical Diſeaſes, tho' not ſo often. He thought, for Inſtance, that Purging was proper in Pleuriſies, when the Pain is under the Diaphragm; and, in this Caſe, he gave black Hellebore, or Peplium mix'd with Laſerpitium. In various Paſſages he affirms, that Purgatives may be exhibited in acute Diſorders, provided the following Precautions are uſed.

The principal Rule *Hippocrates* lays down, with reſpect to Purging, is, that *we ought only to evacuate the* concocted Humours, but not ſuch as are ſtill crude; and that we ought not to purge in the Beginning of the Diſeaſe, except when there is a violent Effervescence of the Humours, which rarely happens. By the Beginning of the Diſeaſe *Hippocrates* underſtood all the Time that intervened betwixt the firſt and the fourth Day. He was not the firſt who obſerv'd, that the Patient became worſe by carrying off the Humours, or Purging, before that Time; for the *Egyptian* Phyſicians had made the ſame Obſervation, and *Hippocrates* might have learn'd it from *Democritus*, who travel'd for a great while thro' *Egypt*; or from ſome *Egyptian*, ſuppoſing that his Predeceſſors the *Aſclepiadæ* had not made the ſame Obſervation; or his own Sagacity, and Attention to Caſes, might have ſuggeſted it to him.

This ſeems to be contradicted by the twenty-ninth Aphoriſm of the ſecond Section, where we are told, that in the Beginning of Diſeaſes we muſt move, that is, purge, what we think ought to be purg'd. This Aphoriſm has, in all ſucceeding Ages, employ'd the Wits of Phyſicians, to reconcile it with the former. *Galen* endeavours to vindicate *Hippocrates*, by making the Word *move* to ſignify the Exhibition of all the Remedies neceſſary for the Relief of the Patient, among which he reckons, in a particular manner, Veneſection and Purging; ſo that the Movement or Purging here ſpoken of, is rather produc'd, according to *Galen*, by the former than the latter of theſe Remedies; though the ſame Author acknowledges, that Purges may ſometimes, tho' more rarely, be exhibited in the Beginnings of acute Diſeaſes. This Explication of *Galen*'s might be admitted, if there was not a third Aphoriſm which explains this, and which appears contrary to the Senſe of *Galen*; for in the twenty-fourth Aphoriſm of the firſt Section, we are told, that we muſt rarely purge in acute Diſeaſes; and that it muſt be done in the Beginning, after having carefully examin'd the State of the Patient. *Galen* endeavours to reconcile the apparent Contradiction between this Aphoriſm and the other, by ſaying, that it is in chronical Diſeaſes we muſt always wait for the Concoction of the Humours before we purge; but that, in acute Diſorders, we may purge in the Beginning, when there is an Effervescence or Turgeſcence of Humours; and he adds, that the Rareneſs of this Caſe induces *Hippocrates* to adviſe Phyſicians carefully to examine the State of the Patient before exhibiting Purgatives.

It appears, that *Hippocrates* ſometimes exhibited Purgatives in the Beginning of acute Diſeaſes; and, beſides the Aphoriſm already quoted, he elſewhere expreſly affirms, *That we ought to purge in the Beginning of Fevers, when the Urine of the Patient is turbid; but that we ought to abſtain from it when it is clear.* It muſt, however, be confeſs'd, that he rarely put this Method in Practice, whatever the State of the Patient might be. The ſmall Number of Patients labouring under acute Diſtempers, to whom, as we learn from his Epidemics, he exhibited Purgatives, is a Proof of this.

In his Book *De Ratione Victus in Acutis*, he gives us this important Advice, which relates to the firſt quoted Aphoriſm. "Thoſe," ſays he, "who endeavour, by a purgative Medi-
"cine, to reſolve or diſſipate Inflammations formed in any
"Part, derive nothing from the particular Part where the In-
"flammation is, by reaſon of the Tenſion, and becauſe the
"Diſorder is as yet crude. On the contrary, they fuſe or cor-
"rupt what remains ſound and uncorrupted in the Part." But to return to the true or apparent Contradictions in the Aphoriſms already quoted: It would be no ſurpriſing thing, that there are Contradictions in them, if, as *Galen* ſuppoſes, it was true, that ſome of them were ſpurious; we might from thence infer, that ſome of theſe now mentioned are of the ſpurious Kind, tho' *Galen* does not own, that they are.

Beſides, *Hippocrates*, in the ninth Aphoriſm of his ſecond Section, adviſes the Phyſician, before Purging, to attenuate the Patient's Humours, and diſpoſe them for Evacuation, by diluting them ſufficiently, that they may paſs off with the greater Eaſe.

The preceding Criticiſm, relative to the imaginary Contradictions in the Aphoriſms above quoted, are Mr. *Le Clerc*'s, an Author of great Judgment, which, however, he does not ſeem to have ſhewn in theſe Remarks; for I can perceive no Shadow of a Contradiction in them. In the Aphoriſm firſt quoted, which is the twenty-ſecond of the firſt Section, the Precept laid down amounts to this: Purge off, ſays he, and move the concocted Humours, but not thoſe which are crude; in conſequence of this Maxim, Purging, in the Beginning of an acute Diſtemper, muſt be improper, becauſe at that time the Humours are generally crude: If, however, there is a great Effervescence or Turgeſcence of Humours, which does not often happen,

happen, Purging may be allow'd, in order to diminish their Quantity, and moderate the Symptoms thence arising.

This is, perhaps, one of the most important Doctrines in the Art of Healing, not only with respect to Purging, but to all other artificial Evacuations whatever, unless those which are calculated to moderate the Symptoms, and clear the Primæ Viæ of Impurities. For if, with *Sydenham*, we consider an acute Distemper, as the Instrument made use of by Nature, that is, the vital Powers, to remove something which interferes with the regular Circulation of the Blood; and suppose this Obstacle to be a Part of the vital Juices concreted, and stagnating in the Vessels, it is evident, that, in such a Case, the usual Quantity of Humours must circulate in a smaller Space, than when the Vessels were all pervious and unobstructed; hence the Blood must return to the Heart more frequently than when the Vessels are unobstructed, the Heart must, for this Reason, contract more frequently, the Blood must move with more Velocity, the Attrition betwixt the Solids and Fluids, and consequently the Heat, must be increas'd. The Mass of Blood, therefore, acting upon the Matter concreted, and stagnating in the Vessels, with a greater Velocity and Force, must contribute to its Resolution, that is, to the rendering it fluid, and capable of circulating in the Vessels, and being carry'd out of the Body. The increas'd Heat, also, carries on the same End; for, as is observ'd under the Article ALBUMEN, the Serum of the Blood, when concreted, will, in a particular Degree of Heat, resolve spontaneously. Here, then, the vital Powers raise Motion and Heat, as the most effectual Means of resolving the coagulated and obstructing Humours.

From what has been said, 'tis evident, that whilst the offending Humours are in a State of Concretion and Stagnation, 'tis in vain to attempt their Discharge by Cathartics, which defer, says *Hippocrates*, till evident Signs appear of their Concoction, that is, till they are resolv'd and attenuated, either spontaneously, or by Art, sufficiently to be carried off by the Intestinal Glands, which cannot happen whilst the Disease is in its Vigour.

In the second quoted Aphorism, which is the twenty-ninth of the second Section, the Word which Mr. *Le Clerc* interprets *purge*, is *κίνει*, move, and may signify any Attempt whatever to remove the Cause of the Disease, as well as Purging. It means, therefore, no more than this: When it appears necessary to attempt any thing for the Relief of the Patient, whether by Bleeding, clearing the Primæ Viæ of Impurities by gentle Laxatives, provoking the Stomach to discharge its Contents, by exhibiting large Quantities of mild Fluids, by Clysters, Fomentations, Baths, *&c.* do it in the Beginning; but in the Vigour of the Disease it is prudent to rest.

The third Aphorism is the twenty-fourth of the first Section, and by no means contradicts either of the former. For the Doctrine it conveys amounts to this: In acute Diseases, especially in the Beginning, seldom exhibit drastic Purges, and never without due Consideration. I have said drastic Purges, because these are certainly what are meant by *Hippocrates*.

Thus we see Mr. *Le Clerc*, as well as many others, have been lavish of their Criticisms, without any apparent Necessity.

Hippocrates asserted that, with respect to the Choice of Purgatives, it was necessary to give Medicines which purge Bile to Persons of bilious Habits, and such as labour under bilious Disorders; in pituitous Disorders, such as purge Phlegm; in melancholic Indispositions, such as purge Melancholy, or black Bile; and in Dropsies, such as purge Water. He added, that we knew whether a Purgative evacuates what it ought to have done, by the subsequent good or bad State of the Patient. If the Patient becomes well, 'tis a Sign, that the Medicine has effectually evacuated the peccant Humour. On the contrary, if he becomes worse, *Hippocrates* is of Opinion, that whatever Quantity of Humours is discharg'd, yet still the particular Humour, which occasions the Disorder, is retain'd; for he did not think, that the Advantage of a Purge bore a Proportion to the Quantity of Matter it evacuated, but to its Quality, and the Effects it produc'd.

But when he had an Intention to solicit the Humours from the most remote Recesses of the Body, he used the most drastic Medicines; and white Hellebore, which is class'd among the Purgatives, was principally employ'd by him on this Occasion. But, in his first Book *De Diæta*, he orders it particularly for melancholic Patients, and such as were mad. From the great Use made of this Medicine by all the antient Physicians, came the Proverb, *To stand in Need of Hellebore*, to imply that any one had lost his Senses. He also exhibited it in Defluxions, which, according to him, come from the Brain, and fall upon the Nostrils and Ears, or which fill the Mouth with Saliva, or produce obstinate Head-achs, a Weariness or preternatural Heaviness, or a Weakness of the Knees, or any Swelling of the whole Body. He also prescribed it for phthisical Patients, in Conjunction with a Decoction of Lentils; for those afflicted with that Species of Dropsy call'd Leucophlegmatia, and in other chronical Disorders. But we do not find, that he used it in those of the acute Kind, except in a *Cholera Morbus*, in which, as he tells us, in the fifth Book of his Epidemics, he exhibited Hellebore with Success. In this Disorder the Patient vomits too much; but the Vomiting is remov'd by an Emetic, as it sometimes happens.

Some took this Medicine fasting, but most us'd it after Supper; and the Reason why *Hippocrates* prescribed it after Meals was, probably, that it might mix itself with the Aliments, and by that means, losing some of its Acrimony, act with less Violence on the Stomach. He also sometimes gave Sesamoides, with an Intention to vomit; and sometimes he exhibited it in Conjunction with Hellebore. We must also observe, that in some Cases he used a Species of Hellebore, which he calls *μαλθακὸς ἑλλέβορος*, soft or sweet Hellebore. This may possibly have been a particular Preparation of Hellebore corrected, in order to render its Action less violent.

When *Hippocrates* had only an Intention to keep the Belly open, or procure an Evacuation of the Excrements contained in the Intestines, without soliciting the Humours from other Parts, he principally employed some Simples, such as the Herb Mercury, or Cabbage, the Juice and Decoction of which he ordered his Patients to drink. With the same Intention he prescrib'd Whey, the Milk of Cows and Asses, with an Addition of a little Salt. This he sometimes ordered to be boil'd. He also sometimes exhibited a large Quantity of Asses Milk alone, in order to render the Body soluble. In one Passage of his Treatise *De Ratione Victus in Acutis*, he prescribes sixteen *Heminæ*, a Measure nearly equivalent to our Half-pint. In the seventh Book of his Epidemics, we find an Instance of a young Man to whom he exhibited nine Heminæ in two Days; a much smaller Quantity than the former. We may also affirm, that as the Time of taking the sixteen Heminæ is not specified in the former Passage, we may suppose, that this Quantity of Milk was design'd for more than one Day.

Hippocrates also sometimes seems to make mention of certain Hypocatharses, or Demipurgatives. But the Word he uses is equivocal, and may equally signify an incomplete Purging, as some Commentators explain it, and a Purging by the Anus, or an ordinary Purging, in Opposition to a Vomiting, which is a Purging by the Mouth.

Hippocrates also used Suppositories and Clysters, in order to render the Body soluble. The Suppositories were compos'd of Honey, the Juice of the Herb Mercury, Salt, Nitre, the Powder of Coloquintida, and other acrid Ingredients, in order to irritate the Anus, into which they were introduced either round as a Ball, or in an oblong round Form, almost like one's little Finger, and made longer or shorter, according to the Necessity of the Patient. The Clysters prescrib'd by *Hippocrates* were Milk, and unctuous Ingredients, mix'd with Decoctions of Chiches, or Sea or Salt-water. At other times he used a Decoction of Blites, or other Herbs of a like Nature, in which he dissolv'd Honey, Oil, and Nitre, or other Ingredients, according as his Design was to attract, scour, irritate, or correct, and, in a Word, as the several Diseases he treated requir'd. The Quantity of the Liquor amounted to four Heminæ, which seems to imply, that this Quantity serv'd for several Clysters, repeated after each other.

Cicero de Natura Deorum, L. 3. says, that the third *Æsculapius*, Son of *Arsippus* and *Arsinoe*, invented Purging. But the first Instance in History of the Exhibition of a Cathartic, is in the Daughters of *Prætus*, who were purg'd by *Melampus*, and by this means cur'd of Madness; see the Preface.

Erasistratus was of Opinion, that those Evacuations which are caus'd by Cathartics, proceed from the Blood, and the solid Parts of the Body, which are, as it were, fus'd; insomuch that Cathartics make, instead of evacuating, Humours. Scammony, for Example, changes the Blood to Bile; the Flowers of Brass convert it into Water; the Grana Cnidia, and Carthamus, change it into Phlegm.

Asclepiades was of the same Opinion, and said, that those who found a Cure, immediately upon an Evacuation by Purging, did not recover, because some particular Humour was taken away, but because the Plenitude of the whole Habit in general was diminish'd. He thought also, that Plenitude was not the immediate, tho', perhaps, it might be the antecedent, Cause of Diseases, or a Causa per Accidens. For this Reason he seldom made use of Purges; but thought Clysters sufficient, which he made use of in most Distempers; however not so frequently as other Physicians.

All the Methodics were utterly against Purging; and *Cælius Aurelianus* is of their Party. However, he allows of it in a Dropsy. He prescribes Euphorbium given with Mulsum, in the Quantity of two or three Cochlearia, or diluted with the Yolk of an Egg. He prescribes also a Decoction of Squills.

N. B. Amongst the Antients there were two Kinds of Cochlearia: The greater, which contain'd a Dram; and the lesser, which contain'd a Scruple.

Plutarch was an Enemy to Purges.

We are obliged to the *Arabians* for the whole Tribe of milder Purges.

The *Arabians* not only found out milder Purges than the *Greeks* made uſe of, or were acquainted with, but, when they gave the old rough ones, it was in a ſmaller Quantity.

As Purging is of very great Importance, it will be proper to enter upon a full and thorough Examination and Inquiry into the Nature and Cauſes of inteſtinal Excretion. A Diſcourſe on this Head cannot be thought improper for this Place, becauſe many are too ſubject to deſpiſe this Kind of Evacuation, and others profeſs to ſet a much higher Value on Diſcharges by the urinary Paſſages, or by means of Clyſters.

Peyer, who firſt diſcover'd the inteſtinal Glands, aſcribes to them the Function of ſupplying a Humour for diluting and elaborating the Chyle; and ſuppoſes them to be the Source from whence ſuch vaſt Diſcharges follow, upon the Exhibition of a Cathartic. Some deny, that ſo great Plenty of Humours can be excreted from theſe Glands, either naturally, or by the Aſſiſtance of Art; and the Reaſon why they doubt how this can be effected by natural Excretion, ſeems to be their being at a Loſs to comprehend, how a Cathartic can derive ſo vaſt a Quantity of Excrements from little more than this one ſingle Source. But this Doubt may very eaſily be ſolved, by reducing the Matter to a Calculation.

By the ſtatic Laws of *Sanctorius*, Evacuations by Stool, compared with thoſe made through the Pores of the Skin, are as one to ten; wherefore, in the Space of four-and-twenty Hours, the Proportion will be as four Ounces, ſix Drams, one Scruple, four Grains, to forty-eight Ounces; or four Scruples, ſixteen Grains, to forty-eight Scruples in an Hour. In cold Countries, where Perſpiration is leſs, the Diſcharges by Stool may, perhaps, riſe a little higher. This laſt-mention'd Evacuation is, by thoſe who diſpute upon theſe Subjects, injudiciouſly confounded with that Excretion which is made by the Glands; but, to a Perſon who attentively conſiders both, they will appear vaſtly different. The Contexture of the Skin, and the Inteſtines, appears to be nearly the ſame, and both are interſperſed with Glands, which, tho' not very evident to the naked Eye, are eaſily diſcern'd by Help of the Microſcope. And Nature has wiſely provided for the more commodious Exerciſe of this Excretion by the Inteſtines, in furniſhing their Coats with vaſt Numbers of Blood-veſſels. The Skin, taken at a middle Rate, contains about two thouſand ſix hundred and forty ſquare Inches in Surface; and the Inteſtines, which are almoſt thirty Feet in Length, and, taken one with another, near four Inches in Compaſs, conſtitute a Cylinder, whoſe Surface amounts to one thouſand four hundred and forty ſquare Inches; ſo that the Superficies of the Inteſtines amounts to more than half that of the Skin; but, becauſe the Inteſtines are not ſo thick ſet with Glands as the Skin, let the Superficies, from whence any Humour is evacuated, be reckon'd as one to four. If, thro' the Skin, then, in the Space of an Hour, forty-eight Scruples perſpire, the Inteſtines will diſcharge twelve. Nor ſhall we be ſcrupulous in admitting ſo plentiful an Efflux of Lymph from the Inteſtines, if we conſider, how much wider the Orifices of the excretory Veſſels are in the Inteſtines than in the Skin, which is manifeſt from the Glands themſelves, which are much larger in the Inteſtines than in the Skin.

According to this Eſtimate, then, it appears, that theſe Glands are both ſufficient and accuſtom'd to ſupply far greater Quantities than what are diſcharged by Stool. But, ſince the Recrements of the Aliments make a great Part of the Stools, or rather the greateſt Part of them, becauſe they are ſolid, it would be eaſy to ſhew, that this Matter, which is thus derived from the Glands of the Inteſtines, is ſo far from being wholly evacuated this Way, that far the greater Part of it returns with the Chyle into the Lacteal Veſſels, and is reſtor'd to the Blood-veſſels, exactly in the ſame manner as Lymph uſes to return from the Parts of the lower Belly. It is certain, then, and confirm'd by Experiments, that, whenever Chyle is wanted to ſupply the Lacteal Veſſels, they are quite fill'd with this Lymph expreſs'd from the Glands.

The Want of due Attention to this Diſtinction has led *Pitcairn* into an Error, who, when he reaſons about the moſt commodious Way of Evacuation, makes the Proportion of cuticular Secretion to ventral, or by the Belly, greater than that of a hundred to one. For the Inteſtines, being vellicated by the continual Irritation of a Cathartic, diſcharge not only the Recrements of the Aliment, but whatever is excreted from the Glands; ſo that, from this one Cauſe only, the Belly diſcharges four times as much when excited by a Cathartic, as it does in its natural State.

Cathartics exert their Force principally two Ways, either by irritating the Coats of the Inteſtines with a kind of Stimulus, or communicating a ſwifter Motion to the Blood: The ſtronger Cathartics work both Ways. By their Stimulus Cathartics are enabled not only to expreſs a greater Plenty of Lymph from the Glands, but to invite the Humours in ſuch a manner towards them, as to render their Paſſage, thro' their excretory Ducts, more eaſy than thro' thoſe of any other Glands in the Body: Hence there is a greater Conflux of thoſe Humours to theſe Parts, or, which is the ſame Thing, the Celerity of the Blood is augmented in theſe Places, almoſt after the ſame manner, and with a like Effect, as the Skin, when corroded by a Veſicatory, diſcharges Serum. Cathartics which inſinuate themſelves into the Blood, cauſe it to circulate with greater Quickneſs; becauſe they not only increaſe the Stimulus, but attenuate and diſſolve the groſs and tenacious Humours. That this is Fact, appears from the Heat which is excited by Cathartics; and the Pulſe, which is ſtronger, fuller, and ſwifter, indicates the ſame Thing.

How great an Acceſſion is made by this Increaſe of Velocity in the Blood to the ventral Evacuations, will eaſily appear from the following Calculation. The Meſenteric Arteries, which ſupply the Inteſtines, are of a Size, in proportion to that of the Baſe of the Aorta, as one to ten. Since it is certain, then, from Experiments, that the Aorta receives an Influx of four thouſand Ounces of Blood every Hour, thoſe Arteries will, in the ſame time, convey four hundred Ounces to the Inteſtines; ſome alſo may be carry'd thither from a Branch or two of the Cœliac Artery. The natural Excretion made from thence amounts to no more than twelve Scruples. For the ſake of Calculation, let us ſuppoſe the Motion of the Blood to be increaſed to double its Velocity, as the Pulſe demonſtrates it really is, by a ſtrong Cathartic; the Meſenteric Arteries will every Hour ſupply the Inteſtines with eight hundred Ounces of Blood; and, in the ſame Space of Time, the Glands will excrete nearly twenty-four Scruples; for every Secretion, ſuppoſing an Equality in other Circumſtances, is to be eſtimated from the Velocity, as its only Standard. If the Velocity be increaſed to triple its former Degree, which, conſidering the Stimulus, is no abſurd Suppoſition, eſpecially at the Mouths of the Glands, there will be an Efflux of thirty-ſix Scruples; and if the Diameters of the excreting Veſſels be in like manner doubled, as no doubt they really are, when the Cathartic is a little ſtronger than ordinary, the glandular Excretion of the Inteſtines will amount to one hundred forty-four Scruples, which is twelve times the Quantity deſign'd by Nature; ſo that, by this way of reckoning, in the Space of eight Hours, while the Cathartic is operating, the Glands may be drain'd of forty-eight Ounces.

But, when we make an Eſtimate of the Diſcharges excited by purgative Medicines, the Bile is not to be neglected, but brought into the Account. If, therefore, in the Space of one Hour, there be an Influx of two Drams of Bile into the Inteſtines, by the Force of Nature alone, as is ſhewn by Dr. *James Keil*, a Man much experienced in theſe Matters, a Cathartic will exhauſt the Liver of ſix Ounces, ſuppoſing, as before, a triple Velocity in the Motion of the Blood, without the leaſt Enlargement of the Diameters of the Veſſels: Hence it is, that, in Evacuations of this Kind, prepared by Art, the Stools are generally bilious. And here it is to be obſerved, with reſpect to Bile, that the more haſtily and plentifully it flows, the more diluted it appears. We find, then, by thus reckoning, that, without including the Recrements of the Aliment, or the pancreatic Juice, the Quantity of Matter, which may be diſcharged by a Cathartic, amounts to four Pounds and a half; but, if the Veſſels be at the ſame time enlarged, the Efflux of Humours will be much more copious, as being in a duplicate Ratio of the Diameters. This being the Truth of the Caſe, it appears how vain it is to expect the ſame Effects from Clyſters, which may be convenient enough to cleanſe and waſh the Belly from Fœces, but are incapable of evacuating Bile, or, in any manner, affecting thoſe Glands which are principally ſeated in the Ileum.

And thus, when the Inteſtines are deeply affected with ſome Diſtemper, when the Purging is too violent, the Motion of the Blood too ſwift, or the Mouths of the Veſſels too much dilated, this Excretion by the Glands is augmented to a much higher Degree: For Example, in the Cholera Morbus, where an incredible Quantity of Humours is attracted, and diſcharged by means of that Stimulus, with which the Inteſtines are continually irritated from Summer-fruits, or ſome other Crudities. That the Mouths of the Glands may be diſtended to much larger Dimenſions than what are allotted them by Nature, is evident enough, not only from what they call the *ſymptomatical* Flux of the Belly, but alſo from the *critical* one, which often carries off the Matter, which, by means of a Cold, was thrown upon the Lungs and Fauces, in ſuch a manner as to prove of equal Benefit with Perſpiration; for, in this Caſe, that Redundance of Humours, which ought to have been eliminated thro' the Skin, ſeeks a Paſſage thro' theſe Glands; and, where it is obtain'd, ſuch Evacuation muſt doubtleſs be ten times as great as that of the natural Lymph.

This Excretion by the Inteſtines proceeds by ſo conſtant a Law of Nature, and is found to be ſo neceſſary for the due Elaboration of the Chyle, that if theſe Glands ſhould happen to be obſtructed, or grow callous, there will ſucceed either an incurable Coſtiveneſs, or the Cœliac Paſſion, which latter is more eſpecially the Conſequence of ſuch a Diſorder, as appears

from Diſſections. But when this Obſtruction of the Glands endures but for a ſhort time, or ſome Portion of them happens to be cloſed up with glutinous Humours, ſo that the Lymph, which is ſo neceſſary for the Comminution and Elaboration of the Aliment, cannot be obtain'd in a ſufficient Quantity, there ariſes that Species of the Cœliac Paſſion which admits of a Cure, and is diſtinguiſh'd from the chylous Flux, which, properly ſpeaking, derives its Original from an Obſtruction of the Lacteal Veſſels.

If we carefully examine into the Uſe of the Glands, and the Lymph which they ſecrete, we ſhall fully diſcover the Cauſe of this Diſeaſe; nor do I think it can be more clearly ſhewn, from any Argument, how much the Study of Anatomy conduces not only to the right underſtanding of the Theory, but to the ſucceſsful Practice of Medicine, than the Knowledge of *Pyerus's* Glands. If we conſult the Writings of the antient Phyſicians, we ſhall eaſily find, how erroneouſly, not to ſay abſurdly, they imputed the Cauſe of the Cœliac Paſſion either to a cold and moiſt Diſtemperature, or to a Weakneſs of the retentive Faculty. But Anatomy has ſcatter'd theſe Miſts, and, by diſtinctly explaining the Fabric of the Inteſtines, clearly ſhewn, that this Diſeaſe owes its Original to an Interception, at leaſt in Part, of the Humour which uſed to be diſcharged from the Glands. Thoſe Remedies, therefore, which gently irritate the Belly, and deterge the Mouths of the Glands, are found to have the greateſt Efficacy in this Diſeaſe; and thus a more perfect Inſight into the Nature of the Diſtemper leads us the neareſt and readieſt Way to the Cure. And as the Antients were defective in their Knowledge of the Diſeaſe, ſo they proceeded by wrong Methods in the Cure, which they carry'd on wholly by Aſtringents; for any one may ſee, that they embraced this Method, becauſe it was agreeable and correſpondent to that Opinion which made the Cauſe of the Diſeaſe to conſiſt in a Sort of Atony, ἀτονία, or Imbecillity of the Inteſtines. But if we ſhould carry on the Cure by ſuch Means, and make uſe of none but aſtringent Medicines, as was the Practice of the Methodics, inſtead of deterging, we ſhould more and more obſtruct the Glands, and take the ready Way not to relieve the Patient, but to confirm the Diſeaſe.

But, to put an End to this Diſquiſition, we have now ſufficiently explain'd by what Contrivance, and Laws of Nature, and for what Ends and Purpoſes, this glandular Secretion is perform'd. Theſe Things, being well underſtood, will enable us to comprehend the Reaſon of what Lord *Bacon* very judiciouſly obſerved concerning Catharties. "We confi-"dently aſſert, he ſays, that frequent and repeated Purgations "are of much greater Efficacy, towards lengthening out the "human Life, than Exerciſe and Sweating. For it is very "certain, that not only Humours, and excrementitious Va-"pours, but, together with them, good Juices and Spirits, "which are not eaſily repair'd, are exhaled and diſſipated by "Sweat and Perſpiration; whereas in Purges, unleſs they be "immoderate, the Caſe is otherwiſe; for they operate princi-"pally upon the Humours." Thus he ſpeaks, according to his Manner, as a Philoſopher; but one, who accommodates the Ratiocinations of Anatomy to the Subject, will eaſily perceive, that the Uſe of Cathartics does not only open and cleanſe the Mouths of the Lacteals, but free the Glands from groſs Humours, with which they are frequently obſtructed; ſo that they are preſerved in a State of affording a conſtant and perpetual Supply of Lymph for the Preparation of the Chyle, on which all Nutrition, and Life itſelf, depend. By this means, therefore, Care is taken, during Health, not to conſume what ſhould be our Reſource and Support under Sickneſs. *Freind Comment. in Hippocrat. Epidem.*

Hoffman thus gives his Sentiments, as to Cathartic Medicines.

As, among the ſeveral Claſſes of Medicines, none more effectually contribute to the Preſervation of Health, and the Cure of Diſeaſes, than what we commonly call Evacuants; ſo, among the ſeveral Species of Evacuants, none are of greater Importance than thoſe which eliminate and diſcharge the recrementitious and peccant Matter, contain'd in the Body, by Stool. The Medicines of this Kind are either mild and gentle, or ſtrong and draſtic. Thoſe which ſafely, mildly, and, without doing any Injury to the Stomach and nervous Syſtem, render the Body ſoluble, are call'd *Lenitive* or *Laxative Medicines*, which the *Greeks* call'd *Eccoprotics*. Thoſe, on the contrary, which evacuate the Contents of the Inteſtines in a more efficacious and forcible manner, come under the Denomination of *Purgatives*. Of the former Kind, the principal are, among vegetable Subſtances, Manna, Rhubarb, Caſſia, Agaric, Tamarinds, Sena-leaves, Aloes, Buckthorn-berries, Raiſins, Polypody, Peach-flowers, thoſe of the *Egyptian* Thorn; as alſo the Flowers and Seeds of Violets. Among Salts, common Salt, Borax, and Nitre; as alſo thoſe obtain'd from medicinal Springs, ſuch as thoſe of *Epſom*, *Egra*, and *Sedlitz*, and the *Caroline* Springs. Among Subſtances ſupplied by the Animal Kingdom, Milk, eſpecially that of Aſſes, Whey, and the Saccharum Lactis. Among chymical Preparations, the Terra foliata Tartari, vitriolated Tartar, Cream of Tartar, Salt prepar'd of Alum and Salt of Tartar, the eſſential Salt of Wood-ſorrel, the Magneſia, Sal Polychreſtum, Aurum Fulminans, Mercurius Dulcis, Flowers of Benjamin; as alſo ſome compound Medicines, ſuch as the Pilulæ de Succino Cratonis, the Pilulæ Aleophanginæ, the Pilulæ Marocoſtinæ, and the Pilulæ Tartareæ Schrœderi, the Eſſence, the Extract, and the Syrup of Rhubarb, the ſolutive Syrup of Roſes, the laxative Water of *Vienna*, and *Thomſon's* purging Elixir, beſides many others.

Theſe gentle Laxatives, without greatly diſturbing or weakening the periſtaltic Motion of the Stomach and Inteſtines, not only evacuate the Fœces, but, when exhibited in pretty large Doſes, copiouſly diſcharge the Serum from the Glands of the Inteſtines. Nor, like the more draſtic Purgatives, do they operate by an acrid ſubtile and cauſtic Salt, which proves noxious to the nervous Parts; but by an innocent and harmleſs Kind of Subſtance, which, however, is of a fine ſaline and ſtimulating Nature, and which, like that of Emetics and Purgatives, evaporates, and is loſt, by long boiling, as is obvious from Manna, Rhubarb, Aloes, and Sena-leaves, which, for this very Reaſon, are more properly infuſed than prepared by Decoction. But theſe Laxatives act either by a certain ſaline, ſtimulating, but mild Principle, ſuch as Manna, Caſſia, Raiſins, and Polypody, or by a certain ſubtile, ſulphureous, bitteriſh, and earthy Salt, ſuch as Aloes and Rhubarb, or by an acid Salt, which vellicates the Fibres, ſuch as Tamarinds, Cream of Tartar, and Salt of Wood-ſorrel; or they act by means of a neutral Salt, ſuch as Nitre, Borax, Sal Gemmæ, the Digeſtivum Sylvii, the Arcanum Duplicatum, vitriolated Tartar, Salts obtain'd from medicinal Waters, and the eſſential Salts of Herbs; or they operate by means of a certain calcarious and bitteriſh Salt, ſuch as the Salts of *Sedlitz*, *Epſom*, and *Egra*; or, laſtly, they act by means of a calcarious Earth, ſuch as the Magneſia, which, being diſſolved by the Acid of the Primæ Viæ, is converted into a neutral acrid and ſtimulating Salt.

Practical Corollaries.

Theſe highly ſafe laxative Medicines, which are of ſingular and uncommon Uſe in the Cure of many Diſorders, and, for that Reaſon, by ſome diſtinguiſh'd by the Epithet *Benedicta*, (bleſſed) were little known to the Antients, in whoſe Works we find not the leaſt Mention of Aloes, Rhubarb, Tamarinds, Sena-leaves, and Agaric, but only of Caſſia and Polypody, among the gentler Purgatives. *Dioſcorides* was the firſt who wrote any thing concerning Rhubarb and Aloes; and, from him, *Pliny* and *Galen* took what they have deliver'd concerning theſe Medicines: But Manna, Tamarinds, and Sena-leaves, were firſt known to the *Arabian* and *Egyptian* Phyſicians. But tho' all Laxatives agree in this, that they render the Body ſoluble, without Danger, Violence, or Commotion; yet, in Practice, they ought neceſſarily to be diſtinguiſh'd according to the Differences of Diſeaſes, and the various Conſtitutions of Patients. Manna, for Inſtance, Caſſia, Raiſins, and Polypody, are exhibited with ſingular Advantage in Diſorders of the Breaſt, ſuch as a Cough, a Spitting of Blood, a Pleuriſy, and a Phthiſis; as alſo in thoſe Diſeaſes which ariſe from a ſaline, acrid, and ſcorbutic Serum, ſuch as Gouts, Rheumatiſms, Itches, and Purple Eruptions. In theſe Caſes the above-mention'd Medicines are preferable to others, becauſe they not only diſcharge the inteſtinal Fœces, but, at the ſame time, allay and correct the ſaline Acrimony of the Fluids. Gentle Acids, ſuch as Tamarinds, Cream of Tartar, Salt of Wood-ſorrel, as alſo the eſſential Salts obtain'd from nitrous Herbs, Sal Polychreſtum, and antimoniated Nitre, are highly proper in hot Climates, and in the Summer-time, for Patients of choleric Habits; as alſo in Diſorders ariſing from too large a Quantity of Bile, and thoſe attended with a preternatural Heat; in continued, double, and Summer Tertians; as alſo in a *Cauſus*, attended with an inſatiable Thirſt. In theſe Caſes the Medicines now-mention'd are preferable to others, not only on account of their evacuating Quality, but alſo becauſe they check the inteſtine Motion of the ſulphureous Parts of the Blood, and correct the exorbitant Acrimony of the Bile. In Diſorders ariſing from a Defect of Bile, and the Want of a balſamic Sulphur in the Blood, ſuch as Cachexies, and almoſt all chronical Diſorders, which are attended with an Inſpiſſation of the Juices, and an Infarction of the Viſcera, bitter Laxatives, ſuch as Preparations of Rhubarb, and of Aloes, duly corrected, are juſtly preferable to all other Medicines. But in Diſorders ariſing from tough and viſcid Humours lodged in the *Primæ Viæ*, and producing Want of Appetite, Diſtentions of the Hypochondria, Eructations, and Flatulencies, all neutral Salts, whether chymically prepar'd, or the native Salts of medicinal Springs, exhibited in a pretty large Doſe, and with a ſufficient Quantity of ſome proper Liquor, effectually render the Body ſoluble, and diſcharge the thick and viſcid Recrements. When an Acid, as it generally happens in hypochondriac and melancholic Patients, as alſo thoſe labouring under quartan Fevers, abounds in the Habit, and eludes the Force of the moſt acrid Purgatives, in this Caſe, beſides Preparations of Manna, the Magneſia is ſingularly beneficial, which, as it is entirely diſſolv'd by Spirit of Vitriol,

and

and passes into a neutral Salt of a bitterish Taste, and purgative Quality; so it assumes the same Virtue and Nature when it meets with an Acid in the Stomach. But, on the contrary, when a dissolvent Liquor is wanting in the Body, it operates little or none, and proves more hurtful than beneficial.

Aurum Fulminans and Mercurius Dulcis are, indeed, generally class'd among the Laxatives, but their Use is not altogether safe; for when Aurum Fulminans is thoroughly edulcorated, its Operation is either very languid, or absolutely none at all. On the contrary, when it is richly impregnated with salino-nitrous Spiculæ, it indeed renders the Body soluble, because, in consequence of its Gravity, it strongly adheres to the Coats of the Stomach and Intestines; but, in delicate Patients, it excites violent Gripes, Flatulencies, and other troublesome Symptoms. Besides, it proves highly prejudicial, where there is a large Quantity of acido-corrosive Humours, or caustic Bile, lodg'd in the Stomach or Duodenum. *Mercurius Dulcis*, which alone, and without the Assistance of Purgatives, does not generally operate as a Purge, assumes, upon an Accession of corrosive Bile into the Duodenum, its original deletericus Quality, and proves prejudicial to the nervous System. And tho' this Medicine is almost universally recommended for expelling Worms, yet, as mercurial Preparations are highly hurtful to Children, and as I have observ'd violent Symptoms, and a considerable Weakness, produc'd by them, I would not, even with this Intention, have them exhibited, except with the utmost Caution, and in Conjunction with a proper Method and Regimen. Many, in order to heighten the purgative Quality of Aurum Fulminans, mix neutral Salts with it, such as the Arcanum Duplicatum, or vitriolated Tartar. Nor is it to be denied, that half a Dram of either of these Salts, triturated with two Grains of Aurum Fulminans, acquires a metalline Taste, and, by stimulating the Intestines, eliminates their Contents; but this Effect is rarely produc'd by it without Gripes. But we are, above all Things, to take care, that the Mercurius Dulcis be not triturated along with Salts, especially those of an alcaline Nature, or Sal-ammoniac, since by this Method of Preparation its corrosive Quality is again rous'd, by which it acts upon the glandular and nervous Systems, and often excites a troublesome Salivation.

All the Salts above enumerated, especially those of the neutral and bitterish Kind, when half an Ounce or an Ounce of them is exhibited for a Dose, in a sufficient Quantity of some proper Liquor, are possess'd of a singular Virtue in rendering the Body soluble, without any Commotion of the Blood, or Loss of the Appetite and Strength. And they may be at once more safely and efficaciously us'd than the drastic Purgatives obtain'd from the vegetable Kingdom; especially in Diseases and Constitutions where a large Quantity of thick and viscid Humours is lodg'd in the *primæ Viæ*, or in the Vessels. Hot and cold Medicinal Springs, generally call'd *Acidulæ*, and which are singularly efficacious, both for the Prevention and Cure of chronical and obstinate Disorders, derive their aperient, detersive, and purgative Qualities, from the aqueous, but much more from the saline Principle they contain.

Among Flowers of a laxative Quality, the most considerable are those of the *Egyptian* Thorn, Peaches, Violets, and Roses; but they ought to be recent, and to be only infus'd, but not prepar'd by way of Decoction. These are most advantageously exhibited with sweet Whey, or Asses Milk, especially in the Spring; and the Patient, especially when delicate and tender, ought every Morning, for some Weeks, to drink about half a Pint of such a medicated Draught, in order to purify his Blood; for both Whey and Asses Milk are possessed of a certain laxative Quality, as *Celsus*, *Lib.* 2. *Cap.* 12. informs us in the following Words: "There are, says he, certain Diseases, in "which purging by Milk is highly proper." And a little after he subjoins, "The Antients, after adding a little Salt to "the Milk of Asses, Cows, or Goats, boil'd it, and, removing "the coagulated Parts, ordered their Patients, in certain "Cases, to drink the remaining Whey."

Laxative Preparations of Aloes, whether of the hepatic or succotrine Kind, are Medicines of uncommon Efficacy, if the Aloes is, by a proper Method, previously freed from its prejudicial sulphureous and volatile Principle, and from its Resin, which firmly adheres to the Coats of the Intestines. But even after these Precautions, the Dose must be small, and mix'd up with bitter Extracts, and mild balsamic Ingredients. For this Reason, the Pills perhaps accidentally invented by *Becher*, and upon his Model since prepar'd of more proper Powders, may be advantageously prescrib'd, not only with an Intention to render the Body gently soluble, but also in order to restore and corroborate the Tone of the Intestines, which, being weakened in many Diseases, is still more impair'd by the Use of drastic Purgatives. And tho' these Pills produce but faint and almost insensible Effects in Patients of robust Constitutions, and such as abound with Blood, yet their Operation is more speedy and considerable in Persons naturally delicate, or such as are weakened by the Shock of a Distemper; as also in Childbed Women, or those whose monthly Evacuations are irregular or obstructed. For Patients whose Digestion is weak, when recovering from any Disorder, they are also highly proper, for correcting and evacuating the crude Juices; as also for hypochondriac Persons, whose Stomachs continually throw up acid Crudities. On the contrary, Preparations of Aloes exhibited in large Doses, and without proper Correctors, throw the Blood into violent Commotions; for which Reason plethoric Patients, those of delicate Constitutions, and such as are subject to Evacuations of Blood, ought entirely to abstain from them, because, when preposterously exhibited, they are attended with this particular Disadvantage, that they excite very painful blind Hæmorrhoids, and drive the Blood to the Region of the Loins, and the Parts contained in the Pelvis. But among the several Pills in which Aloes is an Ingredient, in Conjunction with other proper Ingredients, besides those of *Becher*, the Pilulæ Tartareæ Schrœderi, the Pilulæ Aleophanginæ, the Pilulæ Marocostinæ, the Pilulæ de Succino Cratonis, and the Pilulæ Solenandri, are not to be robb'd of the Encomiums due to their Efficacies and Virtues.

But the Contents of the Intestines are evacuated in a far more efficacious and powerful manner, by what we call strong *Purgatives*. Of this Class, the most considerable are the Roots of black and white Mechoacan, of Jalap, black and white Hellebore, common Flower-de-luce, Bryony, and Esula. The Herbs, Soldanella, Gratiola, Purging-flax, Coloquintida, Purging Nuts, the Seeds of the Cataputia, Turbith, the middle Bark of Elder, Gamboge, wild Cucumber, and Scammony, together with the Shop-preparations of these; such as the Trochisci Alhandal, the Extracts of Coloquintida, and Esula, the Panchymagogum Crollii, sulphurated Diagrydium, the Pulvis Cornachini, and the Countess of *Warwick*'s Powder.

The Principle by which these drastic Medicines operate, is of a highly virulent Nature, and the fine caustic and inflammatory Salt, which in a very small Dose attacks the nervous Membranes, not only of the Stomach and Intestines, but also of the whole Body, in the same manner Poison does, acts with Violence on these Membranes, and generally excites spasmodic Constrictions, an Uneasiness of the Præcordia, Cardialgias, and Gripes, accompanied with frequent Stools, Hiccups, Inflammations of the Stomach and Intestines, Coldness of the Extremities, and sometimes Convulsions; for that the Salt contain'd in these Purgatives is highly subtile and active, and diffuses its Virtue thro' the whole Mass of Humours, is sufficiently obvious from this, that a Child is purg'd by the Milk of the Nurse who has taken such a Purgative. And sometimes, by the external Application only of Purgatives, violent and formidable Fluxes have been brought on. Thus *Heurnius*, in *Comment. in Aph. Hippocratis*, informs us, that the Antients purged themselves by washing their Feet in a Decoction of Hellebore. *Walæus*, *de Meth. Medend.* informs us, that a Piece of Hellebore, us'd for cleansing an Issue, excited a Vomiting, and prov'd purgative. Any Ointment, in which Coloquintida is an Ingredient, laid upon the Navel, purges not only Children, but also Adults. But the caustic and inflammatory Nature of strong Cathartics is sufficiently obvious from this, that, when externally apply'd, they burn the Skin, and excite Blisters like a Vesicatory: The Juice of the Esula consumes Warts, and the Essence extracted from drastic Purgatives, such as Jalap, Mechoacan, and Scammony when swallow'd, burns and corrodes the Fauces and Œsophagus, and excites hot Pustules and Aphthæ. And certainly the virulent and poisonous Quality of drastic Purgatives is sufficiently evinc'd by the Experiments of *Wepfer*, who, in his *Tract. de Cicuta aquatica*, informs us, that he gave various Purgatives in a certain Quantity to Whelps, immediately after which, Vomitings, Convulsions, and at last Death, ensued. Upon dissecting these Animals, the Stomach and small Intestines were found inflam'd, and mark'd with red Spots, just as if they had taken Arsenic: And what deserves our Attention is, that, according to the express Words of the Author, the same Phenomena are exhibited, and the same Effects produc'd, by the Resin of Jalap, so much us'd in our own Days.

Since, therefore, the Operation of the more acrid and drastic Cathartics is so violent, dangerous, and sometimes fatal, the prudent, rational, and cautious Physician ought scarce ever to prescribe them. 'Tis sufficiently confirmed by Experience, that in all Ages greater Havock, or more terrible Consequences, have not been produced by any Medicine, than by drastic Purgatives preposterously and unskilfully exhibited; and I myself, says *Hoffman*, who have practis'd Medicine forty-five Years and upwards, have observ'd numberless Instances of Patients, who, by the Use of drastic Purgatives alone, have either contracted incurable Disorders, or died. None of the Shop-preparations so quickly and powerfully impair the Strength, change the Pulse, injure the Stomach, or prejudice and disturb the natural Strength thereof, and the Intestines, as acrid and drastic Purgatives. I know several Patients, who, by a frequent and repeated Use of these, have brought on themselves Dropsies, hypochondriac Disorders, Inflammations of the Stomach, accompanied with Fevers which have prov'd mortal, Dysenteries, a Cho-

a Cholera Morbus, and ſometimes a Palſy of the Right or Left Side. The Antients, indeed, to whom the mild Laxatives, and the Uſe of the Salts, were in a great meaſure unknown, frequently preſcrib'd theſe draſtic Purgatives; and *Hippocrates* himſelf purg'd his Patients principally with Elaterium and Hellebore: But if we carefully look into their Works, we find, that they did not exhibit theſe draſtic Purgatives, except in Caſes where the Danger of the Patient render'd them neceſſary; and, even then, they made their Patients drink Milk before and after the Exhibition of the Elaterium, to the Virtues of which they attributed a great deal; and they corrected the Hellebore with an Admixture of Mulſum, Oil, or Milk. Beſides, they did not promiſcuouſly uſe theſe Medicines, but accurately diſtinguiſh'd in what Diſeaſes they were proper, and in what not. And *Hippocrates*, eſpecially in *Lib. de Purgantibus*, expreſly diſcharges the Uſe of them in all Fevers and inflammatory Diſorders. Beſides, that the bad Conſequences produc'd by draſtic Purgatives, were not unknown to the moſt ſkilful of the antient Phyſicians, is ſufficiently obvious, from the Precepts and Maxims every-where occurring in their Works. This is aſſerted in expreſs Words, in the thirty-ſeventh Aphoriſm of the ſecond Section, where we are told, that "thoſe who are in a State of perfect Health, are ſpeedily "reduced to a deplorable Condition by being purg'd:" And in the ſixteenth Aphoriſm of the fourth Section, *Hippocrates* confirms the ſame Truth. *Heurnius*, in his Attempt to demonſtrate the Truth of this Aphoriſm, adds, "I have ſeen ſound "and healthy Perſons, to whom a ſimple purgative Apozem "of Fumitory and Sena-leaves, raſhly exhibited, has proved "fatal." *Celſus* alſo, in *Lib.* 1. *Cap.* 3. informs us, that as Purgatives are ſometimes neceſſary, ſo, when frequently uſed, they prove dangerous. And, in the twelfth Chapter of his ſecond Book, he has theſe Words: "Purgatives generally hurt "the Stomach, weaken the Patient, and are never properly "preſcrib'd, except in Diſorders unaccompanied with a Fever." *Dioſcorides*, in *Lib.* 4. *Cap.* 178. declares himſelf of the ſame Sentiments, and affirms, that Purgatives are highly prejudicial and unfriendly to the Stomach. But *Campegus*, in a particular Book, has treated of the poiſonous and hurtful Quality of Purgatives in a more full and circumſtantiate manner, than any who went before him. *Helmont* alſo, and his Followers, as alſo *Bontekoe*, did not ſcruple to call Purgatives mortal Poiſons. *Montanus*, *Crato*, and *Solenander*, Men well acquainted with the healing Art, were much afraid of preſcribing them; but frequently us'd Pills prepar'd of bitter Extracts, Gums, and Aloes. But the draſtic Purgatives are in a particular manner hurtful and injurious to Patients of weak Conſtitutions, Children, and old Perſons; to thoſe who are recovering from a Diſeaſe, whoſe Stomachs are weak, or whoſe nervous Syſtems are ſubject to diſorderly Motions. Nor is there any Medicine more prejudicial to Men of choleric and delicate Conſtitutions, after the uneaſy Shocks of Grief and Sorrow, than draſtic Purgatives, by the Uſe of which I have known ſeveral Patients cut off in conſequence of an Inflammation of the Stomach, and a ſubſequent Cholera. They who are ſubject to hæmorrhoidal Colics, hypochondriac and hyſteric Spaſms, ought alſo carefully to abſtain from draſtic Purgatives, unleſs they are in Love with Pain, and fond of Miſery. This Species of Medicines is alſo highly prejudicial to Children, eſpecially when ſtruggling with the Pangs of a difficult Dentition.

But however terrible the Conſequences to be dreaded from the Uſe of Purgatives are, yet as Poiſon, carefully and circumſpectly exhibited, becomes a Medicine, as is obvious from Mercurials and antimonial Emetics, ſo there are alſo ſome, tho' very few, Caſes, where ſtrong and draſtic Cathartics are properly preſcrib'd: In that Species of Dropſy, for Inſtance, call'd Anaſarca, eſpecially when it does not ariſe from an Induration, or a ſcirrhous State of the Viſcera and Glands, but from a ſudden Stagnation of Water, in conſequence of a Suppreſſion of the menſtrual or hæmorrhoidal Diſcharges, or from too great Voracity in or after a Diſeaſe. I have ſeen a few Ounces of the Juice of common Flower-de-luce, as alſo Gamboge, Elaterium, and Extract of Eſula, ſucceſsfully exhibited with half a Pint of Milk. The Doſe may alſo be ſeveral times repeated, as the State of the Patient ſhall require; for, by this means, a ſurpriſing Quantity of Water is not only diſcharged by the Anus, but alſo, in Women, from the Uterus; and I remember two Inſtances, in which theſe draſtic Purgatives evacuated only a ſmall Quantity of Excrements, but excited a very copious and ſalutary Diſcharge of Urine; for hydropic Patients, in conſequence of the relax'd and torpid State of the inteſtinal Fibres, are the better able to bear theſe draſtic Purgatives; and theſe Fibres require a ſtrong and powerful Stimulus to excite and rouſe them to their proper excretory Motions. Theſe acrid and draſtic Purgatives may alſo be properly preſcrib'd in paralytic Reſolutions of the Limbs, lethargic Diſorders, and Caſes where the languid State of the Patient requires an efficacious Medicine, as alſo in Madneſs; agreeably to which, *Celſus*, in the twelfth Chapter of his ſecond Book, informs us, that "black Hellebore is properly exhibited to thoſe who abound "with black Bile, who are melancholy mad, or whoſe Nerves "are, in any Part of the Body, become paralytic." I have alſo found from Experience, that violent Pains of the Os Iſchium and Os Coccygis, which now-and-then affect the Thighs, have been reliev'd by draſtic Purgatives, which, by procuring ſeven or eight briſk Stools, have remov'd that Load of bilious and ill-concocted Juices, which was the Cauſe of the Diſorder.

Men of robuſt Conſtitutions, who live in the more Northerly Climates, and uſe Aliments which are coarſe, and of hard Digeſtion, may, if Neceſſity requires it, have the draſtic Purgatives exhibited to them; but the Doſe muſt be very ſmall, either in Powder, in Conjunction with Salts, ſuch as Cream of Tartar, or vitriolated Tartar, with an Addition of a few Grains of diaphoretic Antimony. Or let the Extract of black Hellebore, the Trochiſci Alhandal, Scammony, Reſin of Jalap, or other Subſtances of a like Nature, be reduc'd into the Form of Pills, together with ſuch Things as allay and correct their virulent Quality; ſuch as Cinnibar, Vitriol of Mars, Saffron, Caſtor, Salt of Amber, Amber, and Myrrh, with which, if we mix a proper Doſe of the Extractum Panchymagogum Crollii, which contains pretty acrid Purgatives, we have Pills which excellently anſwer the Intention, where a briſk and acrid Stimulus is requir'd. 'Tis, however, always to be remembered, that where a ſtrong Evacuation is requir'd, 'tis far more proper to excite it by an increaſed Doſe of the more gentle Purgatives, than to force it by thoſe which are highly acrid and virulent. *Hoffman.*

Our Countryman *Quincy*, in his Pharmaceutical Lectures, lays down the following Rules relative to Cathartics.

It may be convenient to obſerve, with relation to Cathartics, that the groſſer the Forms are, in which they are admitted into the Body, the ſtronger and quicker are their Operations; but the more they are divided and broke in their conſtituent Parts, by their reſpective Preparations, the further will they paſs into the Body in the Courſe of Circulation, and be longer before their Operations are diſcernible. Thus Emetics, eſpecially the ſaline ones, of which kind moſt in Practice now are, by a further Diviſion and Comminution in Preparation, ceaſe to be perceiv'd in the Stomach, or to operate by Vomit; but carry their Efficacies into the Inteſtines, and work by Stool. The ſame Procedure, ſtill further continued, will paſs them into the Blood, and intitle them to the Diſtinction of Diuretics; and a yet further Progreſs in the ſame Management will convey many of them, eſpecially thoſe of the ſulphureous Kind, into the minuteſt Veſſels of the whole Body before they are perceived.

There is another Way of changing the Seat, wherein the ſame Medicine ſhall operate, by Mixtures which reſtrain its Efficacies in one Part, and leave it in its full Force to operate in others.

Of the ſaline Cathartics, beſides thoſe produc'd by ſome Proceſſes of the Chymical Pharmacy, there are few, except Manna; and as there is nothing requir'd in the Management of that, but plain Solution in any aqueous Vehicle, we ſhall proceed to thoſe Materials which require more Labour; and of theſe common Salt moſt naturally comes in our Way firſt.

The ordinary Production of this is ſufficiently known: The Foundation of moſt of its Medicinal Preparations is a Spirit, which the Chymiſts make by various Ways; but the moſt material Circumſtance in them all is previouſly drying the Salt by the Fire or Sun, and mixing it with three or four times its Quantity of ſome brittle earthy Subſtance, as broken Tobacco-pipes, Brick-duſt, or the like; which facilitates the Separation of its Parts, and makes it riſe eaſier by the Fire, which ſuch heavy Materials are very unfit to do without theſe kind of Helps. But this being too corroſive, of itſelf, for a Medicine, it is dulcify'd with a Mixture of Spirit of Wine, which, at firſt, heats and ferments with it; whereby its Points are both broken ſmaller, and cover'd by thoſe of the Spirit, ſo that it becomes a ſafe Medicine, and ſo far from ſtimulating too much in the firſt Paſſages, that it paſſes them unfelt, and, operating in the next Stage of Circulation, proves a Diuretic. The ſame Management thus far holds good with Nitre, Vitriol, and all like ſaline Subſtances.

But we have a noted Cathartic in the Shops, of which this is the Baſis, under the Title of *Sal Glauberi*. *Lemery*, indeed, teaches to make it with Sal Ammoniac and Oil of Vitriol; but, as good Huſbandry is allow'd to take Place, where a Medicine doth not ſuffer by it, our Chymiſts make a Spirit of Salt, by adding to it Oil of Vitriol, and drawing them over together; the Reſiduum of which, diſſolv'd, filtred, and duly evaporated, cryſtallizes into that Form wherein we meet with it in the Shops.

For like Intentions, there hath lately been contriv'd a Salt, from the mineral purging Waters, made alſo by Evaporation, Filtration, and Cryſtallization. It was firſt intitled *Sal Mirabile*, or *Sal Catharticum amarum*; but it is now ſo ſcandalouſly counterfeited, that it is little elſe than common Salt diſſolv'd, and re-cryſtalliz'd.

Tartar affords a good many Medicines of different Intentions, according to its different Management in Preparation. The moſt in Uſe is the Cremor Tartari, which is made by diſſolving it, as far as it is capable, in boiling Water; for, after Filtration, it will ſhoot into the Form we meet with in the Shops.

The Fitneſs of theſe for extemporaneous Forms is chiefly determin'd by the Quantities of them neceſſary for a Doſe. Manna, *Sal Glauberi*, and the *Sal Catharticum amarum*, beſt ſuit a Diſſolution in large Quantities of Liquor, to be taken down at ſeveral Draughts, as when People purge with the common mineral Waters; for, being diſſolv'd in Liquor, little enough in Quantity to be taken at once, as in ordinary Draughts of about three Ounces, they will, when cool, ſhoot again into Cryſtals in the Phial: An Error frequently committed with Manna. Indeed, where only a Dram or two of theſe are added, in Conjunction with other Cathartics, in this manner, they will not only well enough admit of it, but are found alſo to quicken and facilitate the Operation of other things, eſpecially if they be of the gummy or reſinous Kind. Thus ſome obſerve the common Infuſions with Sena, Rhubarb, and the like Materials, not only to operate better for a ſmall Mixture of theſe Salts, but alſo that their Tinctures are, by their Aſſiſtance, much improv'd, in the ſame manner as from the fix'd Salt of Tartar.

In Boluſes, Electuaries, or any Form where they reſt long upon the Palate in paſſing down, they are very irkſome, beſides the inconvenient Bulk they occaſion, when given in Quantity ſufficient to anſwer any conſiderable End; tho', in ſome ſolutive Electuaries, they may be order'd, where a ſmall Doſe only at a time is requir'd; but the Cremor Tartari generally obtains in ſuch Preſcriptions.

But theſe Materials, likewiſe, are much better given in liquid Forms than in any other, and that too with large Quantities of Liquor, becauſe their Intentions are very often to break away Obſtructions which occaſion colic and nephritic Pains; which, in moſt Caſes, they more effectually do, by being plentifully diluted, eſpecially when their Operation is deſir'd in the remoter Paſſages, as by Urine; tho' very weak Stomachs are ſubject to throw all theſe Things up again, becauſe of the nauſeous Roughneſs they carry along with them.

In Glyſters, deſign'd for quick Operation, theſe are very ſuitably added, becauſe of the Stimulus they carry along with them; for which Reaſon Sugar, common Salt, or Sal Gemmæ, are ſometimes order'd.

Too frequent Repetitions of the Medicines under this Diſtinction have been obſerv'd, in many Inſtances, to do Harm, by fouling the Glands, occaſioning great Thirſt, and ſometimes Fevers of the worſt Kind, beginning with Rigors, and other Appearances of Intermittents, but terminating in the moſt aggravated Symptoms; and on this Account too do they require large Dilution, and that with Gruel and Broths rather than thinner Liquors.

Thoſe Cathartics come next in courſe, which are reſinous; by which Diſtinction is meant ſuch as yield their Medicinal Virtues only to ſpirituous Liquors, or, at leaſt, are manag'd with ſuch Liquors to the beſt Advantage.

That of moſt Note, which occurs under this Diſtinction, is Jalap, a due Attention to the Texture and Management of which will alſo inform us in what is neceſſary with others of ſimilar Properties, as the Turpeth, Hermodactyls, and the like.

The moſt black, brittle, heavy, and ſhining Jalap, moſt abounds with Reſin, and is therefore to be choſe for this Proceſs, which is order'd by infuſing one Pound of the Root in three Pounds of Spirit for a Day or two, in a cloſe Veſſel; and, pouring that off, more Spirit is to be put on, as long as it will receive any Tincture; then exhale the ſeveral Portions together till a fourth Part only remains, to which put ſome common Water, and the Reſin will fall to the Bottom.

The Conveniency of this Management conſiſts in leſſening the Bulk of a neceſſary Doſe, a few Grains this way anſwering in Efficacy to a much larger Quantity of the Root itſelf; and this gives an Opportunity for that empirical Form call'd purging Sugar-plums, with others of a like Kind, where ſo ſmall a Mixture of theſe Materials, as ſhall hardly alter Sugar, in Smell, Taſte, or Colour, will be ſufficient for a Purge to ſuch as they are generally adminiſter'd to, which are commonly young Children.

But all the Advantages of this Management with the reſinous Drugs of greateſt Value ſubject them to be moſt grievouſly adulterated by our Chymiſts and wholeſale Dealers. The moſt common Trick with the Reſin of Jalap is, mixing it with as much black Reſin as they dare venture upon, without hazarding a Diſcovery by its Effect in the Operation. I have been told, that they put frequently two Parts of the latter to one of the former: But where there is Reaſon to ſuſpect ſuch Dealing, the Fraud may be diſcover'd by infuſing it afreſh in rectify'd Spirit, becauſe that will again take up the genuine Reſin of Jalap, but leave the other untouch'd.

Other Ways I have been inform'd of, whereby this is counterfeited without any Aſſiſtance from Jalap, as with an high Extract of a Malt Decoction, mix'd with Gamboge; but ſuch a Mixture will ſoon diſcover itſelf in Water, by diſſolving therein; which the genuine Reſin will not do. There are, indeed, Reſins within this Reſtriction, capable of being diluted with Spirit of Wine only, with which this, and other cathartic Reſins may be adulterated, that cannot be detected by theſe Tryals, as the *Reſina Guaiaci*; but they generally come too dear to anſwer the Ends of Gain; and, if ſuch Mixture ſhould be ſuſpected, it may be pretty eaſily known by the Taſte; the *Reſina Guaiaci*, or any other of the like Kind, occaſioning a Heat upon the Palate, or giving ſome particular Reliſh of the Materials whence it is obtain'd, different from what is in the genuine Jalap. But our Medicine-merchants are not contented only with this Sophication of the Reſin, but alſo, when that is genuinely made, they dry the Reſiduum or Fœces of the Tincture, powder it, and, mixing it with a little freſh Root, ſell it in the Shops for true Powder of Jalap.

But the Conveniencies of this Proceſs with reſinous Subſtances, which are purging, hardly balance the Inconveniencies from thence ariſing; becauſe common Experience proves how much Cathartics of the like Texture do, by adhering to the Membranes and Fibres of the Stomach and Bowels, occaſion moſt grievous Nauſeouſneſs, Gripings, and ſometimes manifeſt Convulſions, which is the Reaſon, that, in extemporaneous Preſcription, their Tenacity and adheſive Properties are generally prevented by a Mixture of Sugar, Salt of Tartar, or any other like Subſtances of oppoſite Textures.

When the reſinous Parts, indeed, of Cathartics are taken up by ſpirituous Liquors, and given without Precipitation in Tincture, as in the *Elixir Salutis*, *Tinctura Sacra*, *Rhabarbari*, or the like, they are not ſo liable to theſe Inconveniencies, but are diluted, and ſeparated enough to paſs only with gentle Irritations; and this way, likewiſe, they have the Advantages which were before taken notice of in the repeated Comminutions of the ſaline Purgers, of being convey'd further into the Habit, and anſwering Purpoſes of Moment, which can be no ways effected by Operation only in the firſt Paſſages: So that by almoſt the ſame Contrivance as a ſaline Cathartic is chang'd into a Diuretic, is a reſinous Cathartic chang'd into a Sudorific; the former, by a further Comminution, being fitted, by its Weight, to paſs away by Urine, as the other, upon like Changes, is diſpos'd, from its Levity, to go off with the higher Secretions, and paſs, in a great meaſure, thro' the cutaneous Pores. The Intention, therefore, very much directs the manner of Preparation: Where the firſt Paſſages want cleanſing chiefly, and an End can be obtain'd by ſtirring up uncommon Commotions in them, the more groſs and undivided the reſinous Cathartics are adminiſter'd, the more certainly will they anſwer; but when the Seat of a Diſorder is more remote, and the Efficacy of a Medicine is there wanted, theſe will ſooner anſwer in ſpirituous Vehicles, and under ſuch Management as divides and dilutes their conſtituent Parts.

The moſt material Circumſtance in Practice with reſinous Cathartics in Tincture is, that they be given only to Perſons who can diſpenſe with the Strength of the Vehicle, which then need not be diluted with any thing aqueous, unleſs juſt at the time of Exhibition; becauſe the Parts wherein the chief Virtues conſiſt will precipitate, and be loſt by remaining at the Bottom, or come ſo undivided into the Stomach, as to give all the Diſturbances before-mention'd concerning the groſſer Reſins unprepared.

As to the ordinary Contrivance of giving reſinous Subſtances with Salt of Tartar, Sugar, or Things of a brittle Texture, to divide and ſeparate their Parts, it very naturally returns us to the Examination of theſe Drugs, before their Reſins are drawn out, and to conſider them in Mixture with thoſe other Principles with which they are naturally blended.

From the Experiments made upon Jalap by Monſ. *Bolduc*, it appears, that after its reſinous Parts are taken out by Spirit, it yields an Extract with Water, which proves purgative, but in a much lower Degree, and carries alſo its Efficacies far enough to operate by Urine. This demonſtrates, that in this Drug, beſides its Reſin, is contain'd an earthy Salt; and that qualifying and correcting its Reſin with Sugar, Tartar, or the like, is but bringing it back again, as far as poſſible, to the Condition in which Nature firſt afforded it; and the ſame Monſ. *Bolduc* tells us, that a large Experience had convinc'd him, that the natural Root is a better Purger than any of its Preparations. From the Whole, however, we may conclude with ſome Certainty, that the reſinous Parts operate with the moſt Strength and Roughneſs, and chiefly ſpend their Force in the firſt and larger Paſſages; and that the ſaline and more earthy Parts, which are diſſolvable only in aqueous Vehicles, carry into the Bowels only ſome gentle Irritations, and paſs further into the Habit, before their Efficacies diſappear. And this is ſufficient to direct us in the Management of this Drug, whether by Tincture with Spirit, by Infuſion with Water, in its Reſin, or in Subſtance, according as the Intention requires its rougher or gentler Operation, in the firſt or more remote Paſſages.

The ſame is a Rule to us with all other Cathartics of like Principles and Texture; but, in Rhubarb, this Difference is

remarkable in the Root itſelf without any Preparation: That which is bright, light of Texture, moſt fragrant, and ſound, contains leſs Sulphur, or Reſin, in proportion to its earthy and ſaline Parts, than that which is heavy, tenacious, and fetid; and, therefore, we find it milder in its Operation, more grateful to the Stomach, and better to anſwer the Intentions of an Aſtringent, a Diuretic, or an Alterant; and the other more to nauſeate the Stomach, and to operate more ſtrongly as a Purge in the firſt Paſſages: But this is more notorious in its Preparations by Tincture or Infuſion. The latter, which takes out principally its ſaline and earthy Parts, operates much gentler, and with much leſs Nauſeouſneſs and Gripings, than the former; as every one may experience with the common extemporaneous Infuſions of it, and its Tincture, which is made with a ſpirituous Liquor, and kept in the Shops.

But it being before obſerv'd of ſome Reſins, that the more ſpirituous the Liquors in which they are diſſolv'd, the better and gentler do they go through the firſt Paſſages, and carry their Operation into remote Parts, it may be neceſſary to take notice, that the Subſtances commonly paſſing under this Denomination are of different Degrees of Subtilty; ſo that, altho' all of them are diſſolvable in Spirit, yet ſome of them are ſo groſs in their own conſtituent Parts, or ſo intimately blended with ſomewhat viſcid and tenacious, that they will not admit of equal Degrees of Comminution and Diviſion by ſuch Solution. The moſt ſubtile, therefore, only, and the moſt pure, are capable of the firſt aſſign'd Effect, and the more groſs of the latter. And this Difference is both remarkable in the Things themſelves, and in their Tinctures: The firſt are from Subſtances hard and brittle, whence the Tinctures are bright and tranſparent; whereas the latter are from Materials that are yielding and glutinous, giving Tinctures that are more thick, turbid, and commonly fetid. The Textures of Jalap and Rhubarb, as well as their reſpective Tinctures, very remarkably juſtify this Diſtinction.

And this brings us to a Claſs of Simples which is not ſtrictly of the reſinous or ſaline Kind, but wherein thoſe two Principles ſeem to be ſo blended, that neither of them can conveniently be ſeparated pure by any Menſtruum, but require rather a Management whereby both are retain'd, and the groſs, droſſy, and uſeleſs Parts only are rejected; and theſe commonly come under the Denomination of Gums, or inſpiſſated Juices.

Amongſt the Cathartics of this Texture the Gamboge is moſt remarkable; and with this the Author before-mention'd hath made ſeveral Experiments, tending chiefly to ſhew, that this Gum doth not, of itſelf, properly diſſolve in Water, but flows with it only into a kind of milky Subſtance; that its moſt reſinous Parts may be taken up by Spirit of Wine, which he found to operate more roughly than the Gamboge itſelf; and that the Reſiduum, after ſuch a Tincture, would give ſomething ſaline to Water, which, being exhaled to an Extract, was little, or not at all, purgative by Stool, but prov'd diuretic. The Intention, therefore, is principally to direct the manner of Preparation with this Drug; though, indeed, it is ſeldom given in any other manner than is preſcrib'd in the Compoſition of the Pills bearing its Name in the *New Diſpenſatory* of the College, or by itſelf, divided only with Salt of Tartar, and corrected with a ſmall Quantity of ſome of the aromatic or carminative eſſential Oils; but its grievous Roughneſs, and Violence of Operation, make it ſeldom preſcrib'd, but to robuſt Conſtitutions, and in obſtinate Caſes.

Scammony, in like manner, will flow conſiderably with Water into a milky Fluid; but the much greater Part of it is taken up by Spirit of Wine, which being again precipitated with Water, like the Reſin of Jalap, is intitled in the Shops *Reſin of Scammony*. It is ſubject to the like Adulterations with Reſin of Jalap, which are diſcoverable alſo by the ſame Means. What hath been obſerv'd, likewiſe, in regard to the Exhibition and Operation of that, is applicable to this; but there is ſomewhat ſo peculiarly adheſive in the Scammony itſelf, that it is not reducible to Powder without firſt rubbing the Mortar with a ſmall Portion of Oil, and continuing to do ſo as often as it begins to adhere to it. And to this ſame Property, without doubt, is owing its Roughneſs of Operation, as was before obſerv'd, of others of like Texture and Diſpoſition.

Aloes comes under the like Notice, both in Preparation and Uſe, from a Similitude in Properties. The coarſer Sort, commonly call'd Hepatic or *Barbadoes* Aloes, is moſt of the gummy Kind, and very fetid and adheſive, which makes it loathſome to the Stomach, and occaſions it to operate with great Roughneſs and Gripings; but the ſuccotrine Aloes, which is more brittle, fine, ſweet, and diſſolvable in Spirit, works with Gentleneſs in the firſt Paſſages, and may be extended in its Operations, by Means already-mention'd, to the moſt remote Stages of Circulation.

Thus much may be ſufficient to obſerve in general, with relation to the Simples of this Diviſion, as they are diſtinguiſh'd into ſaline and reſinous, and the particular Management due to them as ſuch, with the particular Advantages or Diſadvantages hence ariſing in their Operations. As to thoſe of a mix'd Kind, where their Principles are not eaſily ſeparated, or anſwer no Intention in Separation ſo well as in Conjunction, but yet require ſome Preparation, to clear them of any groſſy or uſeleſs Parts, the beſt Way ſeems to be to diſſolve and make Extracts from them, both with ſpirituous and aqueous Vehicles, and afterwards mixing thoſe Extracts together; for this not only preſerves the Medicinal Virtues of the Whole, but, as far as the ſaline Parts moderate the Operations of the reſinous, it alſo preſerves the beſt and moſt natural Correctors ſuch Materials can admit of.

In the Colocynth, which is a principal Ingredient in many of the officinal Cathartics, there ſeems, by Monſ. *Bolduc*'s Account, to be a pungent Salt, wrapt up in a few reſinous or gummy Parts; and, by the Experiments he made with the Extracts by ſpirituous and aqueous Liquors, it appears, that the ſaline Extracts operate with leſs Violence than the reſinous, as has been already obſerv'd of moſt purging Simples. But the ſaline Parts in this Drug ſeem to have a more than ordinary Subtilty, as well as Pungency, ſo that, when ſeparated, they have Efficacy enough to operate, as ſoon as ever they come into the Body, and will not, as was before obſerv'd of the ſaline Parts of other Cathartics, go thro' the firſt Paſſages unfelt, and carry their Operations into the next Stage of Circulation, and prove diuretic.

But notwithſtanding the Subtilty or Volatility of this Salt, and that which is extremely bitter in the Colocynth, yet nothing purgative or bitter will paſs from it over the Helm, ſo that there muſt have been ſome Error in thoſe Experiments, which Monſ. *Bolduc* produces to prove the contrary.

The Roughneſs and Gripings with which this Drug, by itſelf, operates, hath been the Occaſion of many Contrivances to mitigate its Efficacies; but the *Trochiſci Alhandal* is the only one that concerns our Practice; and, in this, it is loaded only with mucilaginous Gums, whereby its Irritations are made leſs ſenſible to the Coats of the Veſſels: But even this Preparation is ſo little in Eſteem, that it is hardly ever preſcrib'd in Practice; ſo that into moſt or all the officinal Compoſitions, where it is concern'd, it enters only as Nature hath produc'd it; and, in that manner, the Pulp only is directed, on a Suppoſition, that its purgative Faculties reſide only in that; tho' ſome are of Opinion, that the Seeds are alſo purgative, and that ſome greater Portion of Oil contain'd in them proves a Corrector to the ſaline Parts, and makes the Whole operate gentler. But, be this as it will; thoſe who ſtudy Profit in their Compoſitions, more than the Good intended to be done with them, make no Scruple of uſing Pulp and Seeds together, and even the latter for the former.

Agaric ſeems to be much of the ſame Texture with the Colocynth, and to contain ſome Portions of a ſtimulating Salt, in a ſpongy, gummous, or viſcid Subſtance, tho' in a much leſs Degree than the other, it being able to do little elſe, than to give a Loathing and Sickneſs to the Stomach: However, the officinal Diſpenſatories, and even that of our College, give a Form of Troches and Pills wherein it is the chief Ingredient, and from whence they have their Titles; but neither are in Eſteem enough ever to be made, or aſk'd for.

The Cataputia and Elaterium contain a very pungent cauſtic Salt, which makes their Operations extremely hazardous, inſomuch that they are ſeldom met with but in the Hands of Empirics, or in Caſes of great Danger and Obſtinacy. The Euphorbium alſo, which exceeds in the ſame Qualities, is now quite rejected in all internal Uſe.

The Myrobalans, which make a Part of this Diviſion, ſeem to owe their Medicinal Virtues to a ſmall Portion of the ſaline Principle; as do likewiſe the Tamarinds, Caſſia, and other Fruits of the like Kind; but they are too weak in their Efficacies to be depended on in Caſes of Moment, and are, therefore, only made uſe of as Auxiliaries to others of more vigorous Operations, except only where common Lenitives are requir'd.

The black Hellebore, by Monſ. *Bolduc*'s Experiments, yields a great deal of a ſaline Extract with Water, which proves only diuretic; and but very little to a ſpirituous Menſtruum, which is reſinous, and proves cathartic: All which ſufficiently demonſtrates, that the Intention of the Preſcriber ought to determine its particular Management; and that, as it is generally deſign'd for a Deobſtruent, and to operate much further than in the firſt Paſſages, it ought to be open'd by a Menſtruum that will not fail of taking up its ſaline Parts: A rectify'd Spirit, therefore, is too high for this Purpoſe, and one ought to be choſen of a middle Nature, as a ſtrong Wine, or a low Spirit, which will unite with both its reſinous and ſaline Parts. For an Extract, indeed, a double Proceſs, as before-mention'd, with Spirit and Water, and then mixing them together, is beſt; but as for Tincture, ſuch a Mixture would grow turbid, and precipitate; and, therefore, the Virtue is much better drawn out at once with a middle Menſtruum between theſe Extremes.

As for what concerns the extemporaneous Preſcription of theſe Materials, there is little or no Difficulty, becauſe moſt of them are in ſuch officinal Forms as ſerve to anſwer the general Intentions

tions of Cathartics, which require no other Care in Preſcription, but to adjuſt the Doſes neceſſary for every Exigence and Conſtitution.

All the ſtronger Cathartics are beſt ſuited to be given in Pills, not only on account of their Naufeouſneſs, both to Smell and Taſte, in any other Forms, which is beſt concealed in this; but alſo becauſe thus they gradually unfold themſelves to the Stomach, and are not ſo ſubject to be thrown up again by Vomit. Some of them, indeed, ſucceed well enough in Tincture, as was before obſerved, concerning the Materials which compoſe the *Elixir Salutis*, *Elixir Proprietatis*, *Tinctura Sacra*, and the like; but all the Cathartics of a lax Texture, and whoſe Doſe in Subſtance exceeds the ordinary Bulk of a Bolus or Pills, as Flowers, Herbs, and ſome Roots, are moſt conveniently ordered by way of Infuſion, as in the common Infuſions of Sena, Rhubarb, *&c.* and of theſe Infuſions ſome may be made ſtrong enough to admit of boiling into a Syrup, with a proper Quantity of Sugar, without exceeding a convenient Meaſure for a Doſe, as the *Syrupus de Cichoreo cum Rhabarbaro*, *Syrupus de Rhabarbaro ſimplex*, and the like; but theſe are not much eſteemed, unleſs for Children, to whom their Sweetneſs is ſome Inducement to take them. Some cathartic Syrups are likewiſe made from the expreſſed Juices of ſome of this Claſs, as the *Syrupus de Spina Cervina*, and *Syrupus è Succo Roſarum Damaſcenarum*; but only theſe two, which are thus made, are of any Eſteem.

There are ſome officinal Electuaries, of which the Materials of this Diſtinction are the Baſis; but the extreme Bitterneſs or Naufeouſneſs of moſt of them either renders them very unſuitable in this Form, or their Doſes cannot be duly adjuſted; ſo that they are ſeldom truſted to, in this manner, eſpecially thoſe of moſt Efficacy in Operation; altho', indeed, lenitive Compoſitions, where there is no great Exactneſs of a Doſe required, may be thus well enough ordered. Where, therefore, this Form is moſt eligible for taking, the Proportion for a Bolus of one Doſe only is much the ſafeſt to truſt to.

There are ſome officinal compound Powders from this Claſs, but few of them are of any great Eſteem, both on account of their being liable to decay in this Form, and their Inconveniency for taking; their ſufficient Doſes in Draughts being very unſightly and troubleſome, or in a Bolus of too large a Bulk, to get down at once, unleſs it be ſome of the ſtronger Sort, as the *Pulvis Cornachini*, or *Pulvis Comitiſſæ Warvicenſis*; but neither of theſe will ſuit with Draughts, becauſe their purgative Ingredients being reſinous, they are ſubject to run into Lumps, which are not eaſily ſeparable in an aqueous Vehicle, or by the Force of the Stomach itſelf.

Reſins, then, are to be extracted in the way of Tincture, with a high Menſtruum, and precipitated by Water; they are greatly capable of Sophiſtication. Reſinous purgative Subſtances, exhibited without a Diviſion of their Particles by ſome other Body, greatly adhere to the Inteſtines, and occaſion violent Gripings; and therefore the moſt pure and ſubtile ſucceed beſt in Tincture made with Spirit, where a Perſon can diſpenſe with the Strength of the Vehicle. Where the ſaline and reſinous Principles are united, their Virtues are beſt obtain'd in an Extract made both with a ſpirituous and aqueous Menſtruum. The ſtrong Cathartics are beſt given in Pills. *Quincy's Prælectiones Pharmac. Sect.* 3. and 4.

With reſpect to purging in acute Diſeaſes, it has been much controverted by Phyſicians, whether the Exhibition of Cathartics is ſalutary or otherwiſe. Thoſe who maintain the latter are terrified with chimerical Apprehenſions, leſt the Humours ſhould be drawn, as they expreſs it, from the Circumference of the Body to the Centre; and farther inſiſt upon it, that Purging decreaſes Perſpiration, which they imagine the only proper Evacuation by which the Diſtemper ought to be carried off. That Perſpiration is decreas'd by the Operation of a draſtic Purge, is confirm'd by ſome Paſſages in *Sanctorius*, which it is not my preſent Buſineſs to examine, as it ſeems of but very little Importance whether Perſpiration is decreas'd or not, or whether the Humours are in the Circumference or Centre, provided Purging contributes to the Cure of the Diſtemper more effectually than any other Evacuation. I have been more than once ſurpris'd with Reaſonings of this Kind, from People who have ſpoken well of *Sydenham*, and his Practice; and who had read his Works, to however little Purpoſe.

Whoever examines the Caſes which occur in Medicinal Writers, from the Time of *Hippocrates* to this Day, repreſenting the ſpontaneous Termination of acute Diſeaſes, will find more of theſe carry'd off by plentiful Stools, than any other Way, except by critical Sweats. And this may inſinuate, that when the vital Powers fail of relieving the Patient this way, an artificial Evacuation of the ſame Kind may frequently prove ſalutary.

Dr. *Freind*, in his ſeventh Commentary on the Epidemics of *Hippocrates*, tells us, that the Doctrine of Purging in Fevers is ſo abſtruſe, and beſet with ſo many Difficulties, that he declines laying down Rules relative thereto. I believe, however, that many Phyſicians of the moſt diſtinguiſh'd Character will agree with me in one Rule, which is, that Purging, either in a greater or a ſmaller Degree, can never be improper in thoſe Fevers which are uſually epidemic or intercurrent in our Climate, provided Stools are wanting, and Bleeding has preceded; for nothing is more ſtrongly inſiſted on by *Hippocrates* and *Sydenham*, than the Neceſſity of Bleeding previous to the Exhibition of a Cathartic or Emetic.

It muſt be confeſs'd, that with reſpect to Cathartics in Fevers, much muſt be depended upon the Judgment of the Phyſician; for a Medicine is like a Pencil, which, in the Hands of an Artiſt, almoſt rivals the Works of Nature; but when directed by the Unſkilful, does Miſchief by every Attempt to mend.

Purges in Fevers are exhibited either in full Doſes, in the Beginning, in order to put an End to the Diſorder at once, and carry it off by the Evacuations they cauſe; or they are given in minute Doſes, one Fourth perhaps of the uſual Quantity, with a View of cooling, and moderating the Symptoms, keeping the Primæ Viæ clean, relaxing the Solids, and even of promoting the cutaneous Diſcharges, which laſt Effect they will frequently produce. But in both Caſes the more lenient Cathartics only are to be uſed, becauſe the more draſtic are ſo far from anſwering the ſalutary End propos'd, that they do infinite Prejudice.

The Practice of *Sydenham*, which he recommends in his *Schedula Monitoria*, is an Evidence of the Efficacy of Cathartics exhibited in full Doſes, for the Cure of the Fever he there deſcribes; and he ſeems to regret his Neglect of them in other Fevers. That this may appear in its full Light, I ſhall tranſcribe his Deſcription of this Fever, and the Method of Cure, which with him was attended with Succeſs.

This Fever, from the juſteſt Obſervation I could make, was generally accompanied with theſe Symptoms. Intervals of Heat and Cold ſucceeding each other, and frequently a Pain in the Head and Limbs; a Pulſe not much unlike that of a healthy Perſon; the Blood taken away, commonly reſembling pleuritic Blood; a Cough generally, which, with the other Concomitants of a mild Peripneumony, goes off ſo much the ſooner, as the Diſeaſe comes on at the greater Diſtance from Winter; ſometimes a Pain in the Neck and Throat in the Beginning of the Illneſs, but not ſo violent a one as in the Quinſey; tho' the Fever be continual, yet it often increaſes towards Night, as if it were a double Tertian or Quotidian; lying always in Bed, tho' with few Clothes on, is dangerous; for the Fever being thereby tranſlated to the Brain, a Coma or Phrenitis ſoon ſucceeds. And, to ſpeak the Truth, there is ſo great a Tendency to a Phrenitis here, that it frequently comes on ſpontaneouſly on a ſudden, without any ſuch Occaſion, but riſes not to ſuch a Height as it does in the Small-pox, and other Fevers, the Patient being rather quietly than furiouſly delirious, and talking wildly between whiles. Petechiæ frequently appear, occaſioned by an unſeaſonable Uſe of Cordials, and a hot Regimen; and young Perſons, of a warm Conſtitution, are ſeiz'd with purple Spots, which are certain Signs of a conſiderable Inflammation, both in this, and all other Kinds of acute Diſeaſes; and ſometimes ſuch Spots as are term'd miliary Eruptions, come out all over the Surface of the Body, appearing much like the Meaſles, only they are redder; and, when they go off, do not leave branny Scales behind them, as in that Diſeaſe. Tho' theſe Eruptions ſometimes come out ſpontaneouſly, yet they are frequently driven out by the Warmth of the Bed, and by Cordials. The Tongue is either moiſt or dry, according to the Regimen which hath been uſed; when dry, it is brown in the Middle, and white round the Edges; but, when moiſt, it is white and foul. Sweat, likewiſe, depends upon the Regimen; for if that be over-heating, it is in a manner viſcous, eſpecially about the Head; and tho' it flows plentifully and univerſally, affords little Relief; whence it follows, that ſuch Sweats are only ſymptomatical, not critical. The raiſing a Sweat by Medicines in the Beginning of the Diſtemper, ordinarily tranſlates the morbific Matter, if not to the Head, at leaſt to the Limbs. But when the Fever has ſeized the Head, and the Phrenitis prevailed, the feveriſh Signs vaniſh; only the Pulſe beats ſometimes quick, and ſometimes ſlow; at length, however, when the Spirits are exceedingly hurried by wrong Management, the Pulſe becomes unequal, with Startings of the Tendons, and Death ſoon follows.

In order to the Cure, I firſt direct ten Ounces of Blood to be taken away from the Arm; and in Effect, tho' the Blood in this Fever generally reſembles pleuritic Blood, yet it does not well bear repeated Bleeding. But if a difficult Reſpiration, a violent Pain in the Head in Coughing, and other Symptoms of this Kind, ſhew the Tendency of this Diſeaſe to a baſtard Peripneumony, Bleeding and Purging are to be repeated, till the Symptoms entirely diſappear, as we have elſewhere hinted.

In the Evening I lay a Bliſter between the Shoulders, and next Morning exhibit this lenitive Cathartic.

Take of Tamarinds, half an Ounce; the Leaves of Sena, two Drams; Rhubarb, a Dram and an half: Boil them together in a ſufficient Quantity of Spring-water to three Ounces; in the ſtrained Liquor diſſolve Manna, and ſolu-

tive

five Syrup of Roſes, each an Ounce: Mix all together for a Draught, to be taken early in the Morning.

I order this Draught to be given three times, interpoſing a Day between each Purgation; and the following, or a like Opiate, to be given at Bed-time, after the Operation.

Take of the diſtil'd Water of Cowſlips, two Ounces; Syrup of white Poppies, an Ounce; freſh Lemon-juice, two Spoonfuls: Mix the Whole for a Draught.

This I do to prevent a Coma's coming on, from the Diſturbance of the Spirits, which Purging often occaſions, by the Tumult it raiſes in the Blood and Juices of Perſons in Fevers; which Symptom yields to Opiates, tho' they ſeem to promote it. For this Reaſon, as I durſt not venture to give a Purge in the comatous Fever of 1673. I perſiſted in the Uſe of Clyſters, being fully convinc'd that Purgatives did then immediately cauſe a Coma, which might, perhaps, have been prevented, if I had thought of adminiſtring an Opiate after the Operation of a Cathartic.

But on the intermediate Days of Purging, an Opiate muſt not be given at Bed-time, for fear of checking, or entirely ſtopping, the Operation of the Purgative to be taken the next Day, which uſually happens, though it be given late. It is a Rule with me, in this or any other epidemic Fever, to forbear Purging in the Beginning or State of the Diſeaſe, unleſs Bleeding hath been previouſly uſed, a Neglect of which hath been of fatal Conſequence to abundance of Perſons, eſpecially to Children, as I have elſewhere obſerved by way of Caution.

It muſt, nevertheleſs, be remark'd, that tho' the above-mentioned Evacuations ought in general to be uſed, in the Cure of this Fever; yet young Perſons, or eſpecially Children, frequently recover after being blooded and purged once; and require no more Purging, the Fever being conquer'd by the firſt Cathartic; whereas, on the contrary, it is ſometimes neceſſary to purge oftener than we have intimated above: For it happens, tho' not frequently, that the Patient relapſes in a few Days, after recovering by this Method, on account of a freſh Supply of febrile Matter; which, however, is ſoon carried off, by repeating the Purgative a fourth time. But a Return of this Fever, when it is treated by this Method, ſeldom happens, unleſs it be cauſed by Aphthæ, ſucceeding the former Fever, now come to their Height; which Fever is, in reality, only ſymptomatical, and often accompanied with Hiccups at Intervals, which continue alſo ſome Days after the Fever is gone off; and, at leaſt, ceaſes ſpontaneouſly, as the Patient recovers Strength; which is well worth Notice, inaſmuch as the Hiccup, happening at the Declenſion of this Fever, is no way dangerous, unleſs ſeveral Medicines be over-officiouſly, and without any Neceſſity, adminiſter'd; in which Caſe it proves fatal. But both the Aphthæ and Hiccup, or either of them, if they do not go off ſpontaneouſly, but prove obſtinate, readily yield to the Bark; an Ounce of it being made into an Electuary or Pills, with a ſufficient Quantity of the Syrup of red Poppies, and taken at proper Intervals, drinking a Draught of Whey after every Doſe. I have found this the ſureſt Medicine in this Caſe, provided it be not rendered ineffectual by the Patient's keeping his Bed, which too often happens.

On the intermediate Days of Purging, I ſometimes preſcribe the following, or the like Remedies.

Take of the Conſerve of Wood-ſorrel, and of Hips, each an Ounce; Conſerve of Barberries, half an Ounce; Cream of Tartar, a Dram; Syrup of Lemons, enough to make them into an Electuary: Of which the Quantity of a Nutmeg is to be taken thrice a Day, with ſix Spoonfuls of the following Julap after each Doſe.

Take of the diſtil'd Waters of Purſlain, Lettuce, and Cowſlips, each three Ounces; Syrup of Lemons, an Ounce and an half; Syrup of Violets, an Ounce: Mix the Whole together for a Julap: Or,

Take of Spring-water, a Pint; the diſtil'd Water of Roſes, Lemon-juice, and fine Sugar, each four Ounces: Let them be deſpumated over a gentle Fire. Let three Ounces of it be taken at Pleaſure.

I add no Spirit of Vitriol to any of theſe Medicines, tho' it is very cooling, by reaſon of its remarkable Stypticity; whence it is improper in all Diſeaſes requiring to be cured by Purgatives, to ſay nothing here of the mineral Nature of this Spirit.

It frequently happens, eſpecially in the Declenſion of this Fever, that the Patient, when treated in this manner, ſweats now-and-then ſpontaneouſly, in the Night, which greatly abates all the Symptoms; but notwithſtanding, as ſuch Sweats are not to be depended upon, the above-mentioned Method muſt by no means be diſcontinued, becauſe, if thoſe Sweats ſhould be promoted longer, the Fever, which had been in ſome meaſure check'd by the preceding Purgatives, will increaſe again. For, if the Sweat be prolonged beyond that Space of Time, wherein the febrile Matter, prepared by due Concoction, is entirely carried off, the following Sweats will do nothing but raiſe a freſh Inflammation. Hence, tho' theſe Sweats, which flowed ſpontaneouſly, might, perhaps, be critical, with reſpect to the Expulſion of the febrile Matter, fitted to be carried off, yet the ſubſequent Sweats may be only ſymptomatical, and ſo do more Miſchief than Good. In ſhort, the gentle Warmth of the Bed in the Night fortunately favours the Sweat which flows ſpontaneouſly at that time; and, for this Reaſon, the Patient ſhould have no more nor thicker Clothes laid on him, than he uſually had when in Health; he ſhould forbear all heating Medicines, lie later than ordinary the next Morning, and afterwards purſue the Methods of Cure above delivered.

The Diet, in this Caſe, ſhould be Water-gruel or Barley-water, and now-and-then a roaſted Apple upon Occaſion; and after the ſecond Purge, weak Chicken-broth. I order Small-beer to be drank cold for common Drink; and the White Decoction, made by boiling an Ounce of burnt Hartſhorn in three Pints of Spring-water, afterwards ſtraining off the Liquor, and ſweetening it with fine Sugar.

I have elſewhere obſerved, that when the Patient hath been twice purged, there is no Neceſſity to reſtrain him from eating Chickens, and the like Food of eaſy Digeſtion; this Indulgence being allowable on account of Purging, which otherwiſe could not be granted. Again, after the laſt Purge, provided the Fever be ſomewhat abated, and not yet entirely degenerated into an intermittent Fever, three or four Spoonfuls of Canary may be given every Morning, and after Dinner, and again in the Evening, for ſome Days; which may promote the Recovery of the Patient's Strength, and prevent the Fever Fits.

As this Kind of Fever is more ſubject to ſeize the Head than any I ever yet ſaw, and cannot be removed without great Difficulty and Danger, I adviſe my Patients to lie without their Clothes only in the Night; but if they are ſo much debilitated by the Diſeaſe, that they cannot ſit upright, I allow them to lie down upon the Bed, or a Couch, with their Clothes on, and the Head a little high; neither do I ſuffer a greater Fire to be kept in the Room, than they were uſed to whilſt in Health.

This Regimen is not only to be ſtrictly purſu'd from the Beginning, in all that have this Fever, except in Women ſeiz'd with it a few Days after Delivery, but muſt be indiſpenſably injoined, when the Patient is attacked with a Phrenitis, Petechiæ, purple Spots, or any other Sign of a violent Inflammation occaſioned by an over-heating Regimen. For, in this Caſe, neither Bleeding, nor covering the Patient thinly in Bed, nor the Uſe of any Kind of cooling Liquors, will remove the Fever, without ſitting up in the Day-time; inaſmuch as the Heat of the ſurrounding Air, included in the Bed by the Coverings, puts the Blood into an exceſſive Motion, and the ſupine Poſture of the Body hurries it violently to the Head. But in this Fever, when a Phrenitis comes on from ill Management, it cannot be removed immediately; neither is it ſafe to attempt the Cure by repeated Bleeding and Purging, beyond the Limits preſcribed; whereas it will at length go off at its own time, and ſpontaneouſly, by means of the above-mentioned Method. Nothing, however, promotes the Removal of this Symptom more than ſhaving the Head; and therefore I always order it, without applying a Plaiſter, but only a Cap thick enough to ſupply the Loſs of the Hair, or at leaſt to keep the Head warm. By this means the Brain is greatly cool'd and refreſh'd, ſo as by degrees to be able to overcome the Heat occaſioning the Phrenitis.

What hath been ſaid of the Phrenitis is alſo applicable to the Coma ſucceeding this Fever; in which the febrile Matter, as it happens in that Diſorder, is tranſlated to the Head, whence, except the Whiteneſs of the Tongue, no Signs of a Fever appear, ſo that the Patient ſeems perfectly free therefrom. In this Diſorder, therefore, as well as in the former, the Uſe of Purgatives, Sudorifics, Bliſters, and the like Remedies, inſtead of proving effectual, do much Hurt; for ſuch Evacuations oftener kill than cure here. Having, therefore, previouſly uſed the general Evacuations of Bleeding and Purging, the Cure of this Diſorder, tho' it may terrify the Attendants, is to be truſted to Nature and Time. For tho' the Patient ſhould be affliſted with a Stupor for ſome Days, he will, nevertheleſs, at length recover his Health, provided he be not conſtantly kept in Bed, but is ſuffered to riſe in the Day-time, and lie down on the Bed, or a Couch, with his Clothes on. In the mean time, however, it is proper to ſhave the Head; and, towards the Declenſion of the Diſtemper, to give three or four Spoonfuls of *Canary* twice a Day.

The Phyſician muſt not be diſcourag'd from making the above-ſpecified Evacuations, tho', upon feeling the Pulſe, he ſhould perceive a Starting, and a convulſive Motion of the Body, becauſe both Bleeding and repeating Purging are abſolutely required, and do Service in ſome nervous Diſeaſes.

It ſometimes happens in Women ſubject to hyſteric Complaints, when the Cure hath been attempted by the Evacuations above

above ſpecified, that the Fever continues even after Bleeding and repeated Purging. And in this Caſe its Continuance is manifeſtly owing to the Diſturbance of the Spirits, occaſioned by the Evacuations; and, conſequently, if there be no Signs of a Peripneumony or Inflammation about the vital Parts, the curative Indications are only to be level'd at quieting the tumultuary Motion of the Spirits; for which Purpoſe a ſufficiently powerful Opiate muſt be given every Night, and hyſteric Medicines taken twice or thrice a Day. Of this Kind are Pills made of Galbanum, Aſa fœtida, Caſtor, and ſimilar Ingredients, and Julaps of the ſame Nature. Furthermore, to recruit the Strength, and ſuppreſs the Vapours, it is neceſſary to allow ſuch Food, both of the ſolid and liquid Kind, as is moſt palateable.

We have already obſerved, that this Fever, in the preceding, but eſpecially in the current Year, increas'd every Day towards Night, when a Fit came on like that of an Intermittent. The Phyſicians, therefore, who had learnt from Experience, that all ſuch Fevers as did in the leaſt intermit, and thoſe frequently which did not, throughout the Courſe of Years, from 1677. to the Beginning of the Year 1685. certainly yielded to the Peruvian Bark, failed not to treat this Fever with the ſame Medicine. But however rational this Procedure was, it nevertheleſs did not ordinarily ſucceed ſo well as in the foregoing Years: For, having made the ſtricteſt Search I could into this Matter, I found, that tho' the Bark was given in great Plenty, yet it ſo ſeldom cured the Diſtemper, that I ſhould rather aſcribe the Patient's Recovery to ſome happy Termination of it, than to the Efficacy of the Medicine; ſo entirely it ſeem'd to have loſt the effectually curative Virtue it was poſſeſs'd of in the Years above ſpecify'd, at leaſt, with reſpect to the Fever under Conſideration, which reſembles a Quotidian.

If a Child be ſeized with this Fever, two Leeches muſt be applied behind each Ear, and a Bliſter between the Shoulders; and it muſt be purged with an Infuſion of Rhubarb in Beer. And if the Fever ſeems to intermit after Purging, give a Julap made with the Peruvian Bark.

It is further to be noted, that tho' Children are as ſubject to this Kind of Fever, as grown Perſons, and conſequently ought to be cured by the ſame Method; yet leſs Blood muſt be taken away according to their Age, to which Purging likewiſe ought to be adapted, and perhaps need not be ſo often uſed; the Diſtempers of Children and young Perſons frequently yielding to the firſt or ſecond Purge. Nevertheleſs, it ſhould be well conſider'd, whether the Fever which is treated in this manner does certainly belong to this Conſtitution, or is of a different Kind; which ought likewiſe to be attended to with the ſame Exactneſs in Fevers of all other Conſtitutions.

But to return to the Fever under Conſideration, which is that of the preſent Conſtitution: It muſt be carefully obſerved, in this Kind of Fever, in the ſame manner as in the Rheumatiſm, and ſeveral other Diſtempers, only curable by Evacuations, that if we obſtinately perſiſt in the Uſe of the above-mention'd Evacuations, till the Symptoms go quite off, the Diſeaſe will often prove fatal: For it is not uncommon to find ſome ſlight Symptoms remain a while, even after the Diſorder vaniſhes, which, notwithſtanding, do not endanger a Relapſe, inaſmuch as they go off by degrees ſpontaneouſly, as the Patient recovers. In Effect, theſe Symptoms are frequently nothing more than the genuine Product of the repeated Evacuations, order'd to cure the Diſeaſe, and partly occaſion'd by the Emptineſs, proceeding from the ſlender Diet uſed throughout the Courſe of the Cure; all which, when they affect ſuch Subjects as are much debilitated, and in a manner worn out with Diſtempers, give Riſe to Vapours, as in Women, and proceed from the Weakneſs and low State of the Animal Spirits. For this Reaſon, therefore, after uſing ſuch Evacuations as are ſufficient to remove the Diſeaſe, a judicious Phyſician ought to forbear the unreaſonable Uſe thereof, and wait a while to ſee what Time will contribute to this End, which frequently proves the beſt and moſt ſucceſsful Phyſician, in conquering theſe ſlight Symptoms; and I have, indeed, often known them go off in the Declenſion of ſuch a Diſeaſe, without any thing more than an Opiate, taken two or three Nights ſucceſſively.

The Method juſt recommended is the beſt, that I have ever try'd in curing this Fever; and, if it fails of effectually curing, it at leaſt brings it to intermit, and then it always yields to the Bark. But as Purging, as it is here directed, in order to cure this Fever, may perhaps ſeem detrimental to ſome Perſons, I aſſert, from Experience, that nothing cools ſo much, and ſo ſurely, as Purging after Bleeding, which ſhould be firſt uſed in all Caſes. For tho' a Purge, whilſt it operates, may, for the preſent, raiſe a greater Commotion in the Blood and Juices than there was before, and of courſe increaſe the Fever, yet that Miſchief will be much over-balanced by the immediately ſubſequent Benefit: For Experience ſhews, that Purging, after Bleeding, checks a Fever ſooner and better than any other Remedy whatſoever, inaſmuch as it carries off the foul Humours whence the Fever originally proceeded, which, ſuppoſing them not to have been vitiated before, are at length inflam'd and inſpiſſated by the Heat of the Fever, and ſo contribute to render it more laſting; and likewiſe, as it makes way for an Opiate, which operates with more Speed and Safety, than if the morbid Humours, which might otherwiſe leſſen its Virtue, had not been expel'd by Purging.

Whereas, on the contrary, that Method which conſiſts in carrying off the febrile Matter thro' the Pores of the Skin, is not only leſs certain, but more troubleſome and tedious, as prolonging the Diſeaſe ſeveral Weeks, and brings the Patient's Life into imminent Danger; and, though he is at length ſo happy as to eſcape Death, reduces him to the Mortification of taking a Multitude of Medicines, during the long Continuance of the Fever, to remove thoſe Symptoms which proceed from ill Management, by attempting to cure it by an extremely hot Regimen, and heating Medicines, which, of its own Nature, requires the cooleſt of both Kinds. And thus, while Men of unſound Judgment tie themſelves up to follow Rules of Art, as they are falſly term'd, deſpiſing the contradictory Teſtimony of their Senſes, and perplexing the Cure by their Hurry and Apprehenſions, they change a Diſeaſe, which, of itſelf, goes off in a little time, and eaſily yields, into a laſting and difficult Diſorder.

For theſe Reaſons, therefore, I hope I may, with due Confidence, aſſert, that the Method of Cure above deliver'd, which conſiſts in Bleeding and Purging, is the moſt effectual one to conquer moſt Kinds of Fevers. Sweating is, indeed, properly ſpeaking, Nature's Method of expelling the febrile Matter, and beſt adapted to the End, whenever Nature, unaſſiſted, firſt digeſts the morbid Matter, and, after it is ſufficiently concocted, carries it off gently thro' the Pores; which ſucceſsful Manner of curing Fevers by Nature having been often obſerved by practical Phyſicians, the *Theoriſts* thence took Occaſion to make this Rule, That all Fevers may and ought to be cured only by Sweating.

But, admitting this Concluſion, it is manifeſt, that Art, how nearly ſoever it may ſeem to imitate Nature, cannot always certainly cure Fevers by Sweat: For Art is unacquainted with the Manner of duly preparing the morbific Matter for Expulſion; and tho' this were no Secret, yet there are no certain Signs indicating its due Preparation; whence the fitteſt Time of raiſing a Sweat muſt neceſſarily likewiſe be unknown. And, ſure, none but an obſtinate Perſon will deny it highly dangerous to excite Sweat inconſiderately, before the due Concoction of the febrile Matter, as the tranſlating the unconcocted Matter to the Brain muſt increaſe the Diſtemper. Beſides, the judicious Aphoriſm of *Hippocrates*, *viz.* "That concocted, and "not crude Matters, are to be evacuated," ſeems to relate more to Sweating, procured by Art, than to Purging: For a Man muſt be but little converſant in the Practice of Phyſic, not to know, what Numbers of Perſons are injured every Day by old Women, and unſkilful Pretenders to Medicine, by this prepoſterous Uſe of Sudorifics; it being cuſtomary with them, when a Perſon complains of Chilneſs, and a Pain of the Head and Bones, which are the general Fore-runners of a Fever, to put him to Bed immediately, and uſe their utmoſt Endeavours to promote Sweat. But this ill-timed Attempt is ſo far from preventing the Fever, which might perhaps have gone off ſpontaneouſly, or upon taking away a little Blood, that, on the contrary, it is much increaſed thereby, and becomes a laſting and inveterate Diſeaſe.

It is further to be obſerved, that as thoſe Sweats, which appear ſpontaneouſly in the Beginning of the Fever, are entirely ſymptomatic, and not at all critical; ſo thoſe, likewiſe, which are forced out at this time by Sudorifics, generally forward the Cure no more than the former, which avail nothing to this Purpoſe. Again, as the proper Time of promoting Sweat is not known, ſo neither can we tell how long we ſhould perſiſt in this Way; for, if the Sweat be continued beyond the due Time, that is, longer than is requiſite to carry off all the morbific Matter, the Waſte of thoſe fluid Particles, which ſhould ſerve to dilute and allay the Heat of the Blood, will be a Means of prolonging and increaſing the Fever: Hence, therefore, the Precarioufneſs of this Method appears; whereas, on the contrary, the Phyſician hath it in his Power to regulate the other Method, which conſiſts in expelling the febrile Matter by Bleeding and Purging, as he ſhall judge moſt convenient. Furthermore, this Method deſerves the Preference, for this Reaſon, becauſe it will do no Miſchief, tho' it ſhould fail of curing; whereas Sudorifics are pernicious, unleſs they complete the Cure: For the Heat, ariſing from a conſtant Confinement to Bed, as well as the Cordials, always uſed in this unhappy Regimen, confound the Œconomy of Nature, excite convulſive Motions of the Limbs, and bring on other Symptoms of an entirely anomalous Nature. Theſe Symptoms cannot be deſcrib'd, becauſe they do not properly come under the Hiſtory of the Diſeaſe; but are produced by an additional Tumult and Confuſion, by which Nature is often oppreſs'd, when we attempt the Cure of a Diſorder in this manner. All theſe anomalous Symptoms are generally attributed to a certain Malig-

nity, the particular Nature of which is not as yet aſcertain'd.

The Invention of the Term, *Malignity*, has been far more deſtructive to Mankind than that of Gun-powder. For, as thoſe Fevers are principally intitled malignant which are found moſt inflammatory, hence it is, Phyſicians have recourſe to certain Cordials and Alexipharmics, in order to expel the imaginary Poiſon by the Pores; for ſo it muſt be call'd, unleſs they had rather trifle about Words, than propoſe, in earneſt, what may be underſtood; and, upon the ſame Foundation, they have adapted the warmeſt Regimen and Medicines to thoſe Diſeaſes which chiefly requir'd the reverſe. We have, indeed, an evident Proof of this in the Cure of the Small-pox, which is one of the moſt inflammatory Diſeaſes, as well as of other Fevers; Phyſicians having, perhaps, been led into this Miſtake by the Petechiæ, purple Spots, and the like Symptoms, which, in moſt Subjects, proceed originally from an additional Inflammation of the Blood, already overheated by the Fever; becauſe they ſeldom come out ſpontaneouſly, except in the Beginning of the Plague, or that Sort of confluent Small-pox, attended with the higheſt Inflammation. In this Kind, indeed, the purple Spots ſhew themſelves in different Parts of the Body, intermix'd with the Eruptions, at their coming out; and are accompanied, at the ſame time, with a Flux of Blood from the Lungs, or urinary Paſſages, and a Cough, if the Fever be ſo high as to put the Blood into a very tumultuary Motion, and cauſe it to burſt the Veſſels, and empty itſelf into the Cavities of the Body. And tho' the purple Spots, in this Fever, proceed not from ſuch a conſiderable Heat of the Blood as that which occaſions ſuch Bleedings; yet they are produced by the ſame Inflammation, with this Difference only, that it is not ſo violent; and, when accompanied with ſuch a Flux of Blood, (the only Symptom in the Small-pox which hitherto baffles the Art of Medicine) eaſily yield to a cooling Regimen.

But if it be inferr'd, that there is ſome Malignity in the Caſe, not only from the purple Spots, but alſo from finding the Symptoms of the Fever milder ſometimes than ſhould ſeem agreeable to Nature, whilſt, notwithſtanding, the Patient is more debilitated than could be expected for the Time; I anſwer, that all theſe Symptoms proceed from Nature's being in a manner oppreſs'd, and overcome by the firſt Attack of the Diſeaſe, ſo as not to be able to raiſe regular Symptoms, adequate to the Violence of the Fever, all the Appearances being quite irregular: For the Animal Œconomy being diſorder'd, and in a manner deſtroy'd, the Fever is thereby depreſs'd, which, in the true natural Order, generally riſes high. I remember to have met with a remarkable Inſtance of this, ſeveral Years ago, in a young Man I then attended; for tho' he ſeem'd in a manner expiring, yet the outward Parts felt ſo cool, that I could not perſuade the Attendants he had a Fever, which could not diſengage and ſhew itſelf clearly, becauſe the Veſſels were ſo full as to obſtruct the Motion of the Blood. However, I ſaid, that they would ſoon find the Fever riſe high enough upon bleeding him. Accordingly, after taking away a large Quantity of Blood, as violent a Fever appear'd as I ever met with, and did not go off till Bleeding had been uſed three or four times. And this may ſuffice, with reſpect to theſe Particulars.

But if the Reaſons alleged be not ſufficient to prove the Validity of my Sentiments of this Matter, yet, if Experience teaches me, that this Fever does not readily yield to Sweating, it is enough for my Purpoſe, ſince it is not Reaſoning, but Experience, that ſhews what Sort of Fevers will yield to, and ought to be cured by Sweat, and what Kind by other Evacuations. And, indeed, no judicious Perſon, who is ſufficiently acquainted with the Nature of Men and Things, would haſtily embrace the Sentiments of another Perſon, tho' of the greateſt Authority, in Matters of mere Speculation, not demonſtrable by any certain Experiment. A Man of this Character ſhould reflect, that there is ſo much Difference and Subtilty in Arguments, that tho' a Theory may be propoſed by a Perſon, which ſhall appear to be founded upon ſuch ſolid Reaſonings as to command the Aſſent of all that are preſent; yet, ſoon after, another Perſon of great Abilities, perhaps, coming to conſider the Hypotheſis which ſeem'd ſo well eſtabliſh'd, ſhews its Inconſiſtencies, and clearly proves, by more cogent Arguments, that it is no more than an imaginary Notion, not the leaſt Trace of it being diſcoverable in Nature, and ſubſtitutes a new, and ſeemingly more probable, and artful Hypotheſis in the room of it; which, notwithſtanding, meets the ſame Fate as the former, as ſoon as ſome third Perſon, as much ſuperior in Parts to the ſecond, as he was to the firſt, ſtands up to oppoſe it. And there will be no End of the Diſpute, till we come at length to him who is arrived at the Height of human Knowledge; but the great Difficulty of finding this Perſon, and diſtinguiſhing him from the reſt of Mankind, will ſoon appear to any one, who is not ſo extravagantly vain as to lay Claim to the Character himſelf. For as it is no improbable Suppoſition, that there is an almoſt infinite Number of Beings in theſe vaſt Orbs placed above us, in different Parts of the Firmament, poſſeſs'd of much more Penetration than weak Men; ſo it is not certainly known, whether the Brain, which is the Repoſitory of Thought, may not be ſo form'd by Nature, that Mankind cannot ſo clearly diſcover what is abſolutely true, as what is beſt adapted to their Nature. But we ſhall ſay no more to thoſe Phyſicians, who regulate their Practice more by idle Speculations, than Experience derived from the ſolid Teſtimony of the Senſes.

But if it be objected here, that this Fever frequently yields to a quite oppoſite Method to that I have laid down, I anſwer, that the Cure of a Diſeaſe, by a Method which is attended with Succeſs only now-and-then, in a few Inſtances, differs extremely from that practical Method, the Efficacy whereof appears both from its recovering greater Numbers, and from all the practical Phenomena happening in the Cure. Thus, for Inſtance, abundance of Perſons have recover'd of the Small-pox, notwithſtanding their having been treated by a hot Regimen, and heating Medicines; and, on the contrary, ſeveral have recover'd by the oppoſite Method. Now, by what means is this Diſpute to be decided? And which of the two Methods is to be preferr'd? The ſureſt Way of judging, in this Caſe, I take to be this: If, in purſuing the former Method, I ſhould find, that the more I heat the Patient, the more I increaſe the Fever, Reſtleſſneſs, Delirium, and other Symptoms; and, on the contrary, if it ſhould appear, upon being moderately cool'd, that he is ſo much the calmer and freer from the Fever, and other Symptoms; and further, that, by keeping the fleſhy Parts in ſuch a Degree of Warmth as beſt ſuits with the Riſing and Suppuration of the Puſtules, they grow larger and fuller, than by keeping him over-hot; having, I ſay, thus ſtated both Caſes, I conceive it cannot be doubted which Method merits the Preference.

So likewiſe, if I find, in the Fever under Conſideration, that the more the Patient is heated, the more he is diſpoſed not only to a Phrenitis, purple Spots, Petechiæ, and the like Symptoms; but further, that the Fever, by this Procedure, is attended with all Sorts of irregular and violent Symptoms; and, on the other hand, if it appears, that another Patient, by treating him according to the Method here propoſed, is quite free from theſe Symptoms; Reaſon ſhews, that the latter Method of Practice is much the beſt, tho' both the Subjects recover by ſuch different Treatment. But if more Patients recover by this Method than the other, the Diſpute is ſo much the more eaſily determin'd; which, however, I ſhall decline affirming, for fear of ſeeming too partial to my own Opinions. *Sydenham.*

Thus we ſee, that the great *Sydenham*, an Author much more frequently praiſed than imitated, is fully of Opinion, that Fevers, at leaſt ſuch as he deſcribes, are moſt commodiouſly and effectually cur'd by Purging; and it is moſt certain, that Sweats, extorted by heating Cardiacs or Cordials, are always prejudicial, however beneficial a Diaphoreſis may be, when ſpontaneous, critical, and brought about by the vital Powers.

I have been the more prolix upon this Subject, becauſe I obſerve the pernicious Cuſtom of exhibiting warm Medicines, with a View of forcing Sweats, ſtill perſiſted in by many, tho' the Theory, which gave Riſe to it, is long ago exploded; whilſt the ſalutary Exhibition of Purges is in a great meaſure neglected. If my own Experience could add any Weight to the Opinion of *Sydenham*, I could, with great Truth, affirm, that, in moſt of the epidemical Fevers which are incident to our Climate, Bleeding and Purging, to a proper Degree, generally reduces them, and that in a few Days, either to a Termination or Intermiſſion; and, in the laſt Caſe, Purging is an excellent Preparative for the Bark. And I have ſeen great Numbers of Caſes, where, when the miſerable Patient had been heated, and, as it were, parch'd, by the continual Uſe of Cardiacs, without any ſubſequent Diaphoreſis, the Exhibition of a Purge has removed the moſt threatening Symptoms, and been follow'd by a ſpontaneous and critical Diaphoreſis.

As to the other Method, mention'd above, of adminiſtring Purges in minute Doſes, it is principally of Uſe when a Fever is too far advanced, and a Patient too much reduced to admit of one in a full Doſe. Thus I have known Rhubarb given in the Quantity of ſeven Grains or more, and repeated at proper Intervals, till a ſufficient Number of Stools were procur'd, and the Patient greatly relieved. Upon theſe Occaſions, it is very remarkable, that the Urine is generally tinged manifeſtly by the Rhubarb, a Sort of yellow Oil of Rhubarb floating on the Top of it. Now, as the Rhubarb is given in ſuch a Quantity as not to be carried, by reaſon of its Stimulus, immediately thro' the Inteſtines, it is highly reaſonable to believe, that it is carried into the Blood, where it exerts very ſalutary Effects, by reſolving Obſtructions, and ſtimulating more or leſs every Gland of the Body, to the great Relief of the Patient.

CATHEAUTONPERAS, *καθ' ἑαυτὸν πέρας*. The Name by which the *Macedonians* call'd the Month, in the Beginning of

of which the Winter Solſtice happened. *Galen*, *Com.* 1. *in Epid.* 1. *Tit.* 1.

CATHECTICE, καθεκτικὴ, from κατέχω, to retain. An Adjective commonly join'd with δύναμις, and ſignifying, with it, the *Retentive Faculty*. *Galen. de Fac. Nat. Lib.* 3. *Cap.* 6.

CATHEDRA, καθέδρη, in *Hippocrates*, ſignifies the Anus.

CATHEMERINOS, καθημερινὸς, from ἡμέρα, a Day. The ſame as AMPHEMERINOS, which ſee.

CATHESTECOS, καθεστηκὼς, from καθίστημι, to eſtabliſh, ſettle, ſignifies conſtant, ſettled, or ſtay'd; and is apply'd by *Hippocrates*, in his *Aphoriſms*, to the Age of Man, and Seaſon of the Year. A Thing is ſaid to be conſtant, when it preſerves its Nature unchanged, or when it is arrived at its Height, and is upon the Point of declining. *Cathеſtecos* is alſo an Epithet for a ſtrict and regular Diet, in *Plutarch*'s *Precepts of Health*.

CATHETER, καθετὴρ, from καθίημι, to introduce.

A Catheter, according to *Galen*, *Lib.* 5. *Meth. Med. Cap.* 5. and according to *Paulus Ægineta*, *Lib.* 6. *Cap.* 59. is an oblong, hollow, crooked Inſtrument, or Tube, uſed by Surgeons in the Diſorders incident to the Bladder. It always retain'd the common Name of *Catheter* among the *Greeks*; but among the *Latins*, as we ſee in the twenty-ſixth Chapter of the ſeventh Book of *Celſus*, it was call'd *Fiſtula*, and had the Epithet *Aenea* beſtow'd on it, from the Matter of which it was form'd.

CATHETERISMUS. The Introduction of the Catheter into the Bladder.

Tho' the Introduction of the Catheter thro' the Urethra into the Bladder is often look'd upon as a thing attended with no Difficulty by unſkilful Surgeons, yet various Cauſes and Obſtacles concur to render the Operation generally ſo difficult, that it does not always ſucceed, even in the Hands of the moſt ſkilful and expert Surgeons, who have had long and frequent Practice in this Way. The Uſe of the *Catheter*, both in Men and Women, becomes neceſſary principally for two Reaſons. The firſt Reaſon then is, that, in Men who ſeem to be afflicted with the Stone in the Bladder, we may certainly diſcover whether that is really the Caſe, or not; for the other Signs of the Stone, ſuch as a Pain in the Bladder, a difficult Diſcharge of the Urine, a Strangury, or an Iſchury, are often found to prove fallacious, ſince they may ariſe from an Inflammation, an Abſceſs, or Ulcer of the Bladder, or from a Tumor ſituated about its Neck. The other Reaſon which renders the Uſe of the Catheter neceſſary is, that when Patients are, from any Fault of the Bladder, afflicted with a Difficulty of diſcharging their Urine, or a total Suppreſſion of it, which the *Greeks* call'd λυχεία, the Urine contain'd in the Bladder, and exciting Pain, a preternatural Diſtention of the Bladder, and other troubleſome Symptoms, may, by means of this Inſtrument or Tube, be drawn away. *Hildanus*, in *Cent.* 2. *Obſ.* 65. informs us, that, at one Time, ſix Pounds, Apothecary's-weight, of Urine, were taken from the Bladder of a certain Patient; and that an old Man had his Bladder diſtended ſo much, that it reach'd very near his Navel, and his Abdomen was render'd tumid, like that of a pregnant Woman. *Panarolus*, in *Pentecoſt.* 1. *Obſ.* 27. informs us, that, in a Bladder diſtended to the Navel, he ſaw about twenty Pints of Urine. Now, unleſs the Bladder be ſeaſonably freed from this Load, 'tis to be dreaded, that the Patients will be afflicted with the moſt acute and racking Pains, an Inflammation or Gangrene of the Bladder, and with Convulſions; or, if theſe ſhould frequently recur, that they ſhould fall Sacrifices to their Diſorder. Not that the Uſe of the Catheter is abſolutely neceſſary, or even proper for the Cure of every Iſchury, or Difficulty of making Water; for when, from any Fault or Obſtruction of the Kidneys and Ureters, the Urine is retain'd, the Uſe of a Catheter is entirely ſuperfluous, becauſe, in this Caſe, the Urine is not lodg'd in the Bladder. The Phyſician is, therefore, on ſuch an Occaſion, to attempt the Removal of the Diſorder by proper Medicines. When the Urine is ſuppreſs'd, and, at the ſame time, lodg'd in the Bladder, which is principally known from the Pain and Swelling about the Pubes, whether this Suppreſſion ariſes from Cold, or from too long a Suppreſſion of the Urine from a culpable Modeſty, or any other Cauſe, by which the muſcular Fibres of the Bladder are diſtended, and loſe their Power of Contraction, or from a ſpaſmodic Contraction of the Neck of the Bladder, we are not, in theſe Caſes, to have immediate recourſe to the Uſe of the Catheter, becauſe it cannot, for the moſt part, be introduc'd without exciting Horror, and even Pain, in the Patient. Proper Medicines, therefore, and ſuch as are contrary to the Cauſe of the Diſorder, are firſt to be tried; and, when theſe prove ineffectual, the Catheter is to be uſed. Accordingly, *Fabricius ab Aquapendente*, in his *Operat. Chirurg.* recommends Oil of Capers as a Specific, eſpecially in Children; others preſcribe Oil of Scorpions, apply'd warm, or before a Fire, to the Region of the Bladder; and I myſelf, ſays *Heiſter*, have obſerv'd happy Effects produc'd by roaſted Onions apply'd to the Pubes. Sometimes a gentle Preſſure of the Abdomen by the Hand, eſpecially when the Diſorder proceeds from a Relaxation of the Bladder, promotes a Diſcharge of the Urine. Sometimes alſo this Species of Diſorder is cur'd by Suction: In Children, for Inſtance, the Nurſe or Midwife, and, in Adults, the Surgeon, or any other Perſon, is to take the Penis of the Patient in his Mouth, and ſuck out the retain'd Urine. But when the Diſorder ariſes from a violent Inflammation in the Neck of the Bladder, Relief is ſo little to be expected from the Catheter, that it cannot be ſafely introduc'd into the Bladder, by reaſon of the Narrowneſs, Inflammation, and violent Pain of its Neck; for, if the Inſtrument ſhould be forcibly introduc'd whilſt the Inflammation is violent, it is to be dreaded, leſt ſome of the internal Parts ſhould be lacerated or broken, a violent Hæmorrhage excited, the Pain and Inflammation increaſed, and a Gangrene, or Death itſelf, brought on. On the contrary, when the Inflammation is leſſen'd by Veneſection, reſolvent Cataplaſms, and proper Clyſters, the Catheter is often ſucceſsfully introduc'd, and Relief afforded. The Inſtrument alſo, of which we now ſpeak, is very properly and ſucceſsfully us'd,

Firſt, When, by reaſon of any Stone lying internally on the Sphincter or Neck of the Bladder, the Urine cannot be diſcharg'd.

Secondly, When a preternatural Weakneſs of the Bladder hinders the Urine from being diſcharg'd in the ordinary manner, and when other Remedies prove ineffectual, as frequently happens in very old Perſons, and Women weaken'd by difficult Labours, and ſometimes in ſuch as have been expos'd to Cold.

Thirdly, When, by too long a Retention of the Urine, either from a Principle of Modeſty, or any other Cauſe, the Bladder is ſo diſtended, and conſequently weaken'd, as to become inſufficient for diſcharging its Contents. By a Diſorder of this Nature the celebrated Aſtronomer *Tycho Brahe* is ſaid to have loſt his Life.

Fourthly, The Catheter is properly us'd, when any Mucus, or coagulated Blood, or glutinous Pus, or Particles of corrupted Fleſh, ſuch as thoſe which generally ſtick in the Neck of the Bladder, in caſe of Ulcers or Wounds of the Kidneys, or after Diſcharges of bloody Urine, block up the Paſſage of the Urine.

Fifthly, and laſtly, The Uſe of a Brazen or Silver Catheter ſeems abſolutely neceſſary, when a Caruncle, a Tubercle, an Abſceſs, or a large and hard Cicatrix after an Abſceſs, ariſe in the Urethra, or about the Neck of the Bladder; and when the Proſtatæ are ſo inflam'd, or by a Scirrhus, an Abſceſs, or any other Cauſe, render'd ſo tumid, as to prevent the Diſcharge of the Urine. But, becauſe the Catheter cannot, for the moſt part, be introduc'd without Difficulty and Pain, it ought never to be us'd till milder Remedies have prov'd unſucceſsful. In the laſt Months of Pregnancy alſo, when the Child preſſes ſo upon the Urethra, as to prevent a Diſcharge of Urine, and ſometimes in a Prolapſus Uteri producing an Iſchury, the Introduction of the Catheter is abſolutely neceſſary.

The Catheter is generally introduc'd with far greater Eaſe into Women than into Men, becauſe the former have naturally not only a ſhorter, but alſo a larger and more direct Urethra, than the latter: It is, however, generally very difficult to introduce it even into Women, unleſs the Surgeon, from an anatomical Acquaintance with the Structure of the Parts, perfectly knows the external Mouth of the Urethra, together with its Poſition and Direction; for, in the Beginning of the Vagina, there are ſeveral Pits or Holes which may eaſily impoſe on the Surgeon. But, that he may readily find the Mouth of the Urethra, or the Paſſage of the Urine, it is abſolutely neceſſary he ſhould carefully examine that Part which is ſituated directly within the Lips of the Pudenda, and lies about a Finger's Breadth below the Clitoris (See *Tab.* 56. *Fig.* 2, D.); for here a ſmall kind of Cicatrix, as it were, or Hole, diſcovers the urinary Paſſage. But the Method of performing this Operation, which, by *Paulus Ægineta*, is elegantly ſtyl'd *Catheteriſmus*, is as follows: The Woman muſt be laid upon her Back, either on a Bed or a Table: Then, her Thighs being carefully ſeparated from each other, the Surgeon is, with one Hand, to diſtend the Lips of the Pudenda, or order another to do it; and, with the other Hand, he is, as cautiouſly as poſſible, at the Orifice above ſpecify'd, to introduce into the Bladder a Silver or Brazen Catheter, repreſented in *Tab.* 48. by *Fig.* 1. or 2. This Inſtrument ought to be ſeven, eight, or nine Inches long, as thick as a ſmall Gooſe's Quill, and about its Extremity, repreſented by B. it muſt be anointed with Oil before the Operation is attempted. When it is duly introduc'd, upon pulling out the Wire, A. from the Catheter, the retain'd Urine is diſcharg'd thro' the Holes, B. when the Inſtrument is us'd in order to give Relief in a difficult Diſcharge of the Urine: But if the Catheter is introduc'd into the Bladder with a View to diſcover a Stone, it is proper to turn it gently every Way, carefully obſerving, at the ſame time, whether any Noiſe is made, or whether the Inſtrument touches any hard Body in the Bladder; for, when any thing of this kind is perceiv'd, we may juſtly conjecture, that there is a Stone lodg'd in the Bladder: But, when a Hardneſs alone is perceiv'd, without any Noiſe, the Diſorder is ſometimes only a Tumor or Scirrhus. As to the Structure and Form of Catheters themſelves, we muſt obſerve,

that,

that, for Women, they are generally us'd ſtrait, or, at leaſt, very little incurvated, like that repreſented in *Tab.* 48. by *Fig.* 1. But I do not think this Form at all neceſſary, ſince thoſe deſign'd for Men, variouſly incurvated, made of different Lengths for different Patients, and repreſented in *Tab.* 48. *Fig.* 2, 3, 4, and 5. may be equally commodiouſly uſed by Women. Upon a Diſcharge of the Urine procur'd by this means, the Diſorder is often, tho' not always, remov'd; but when, after it is once evacuated, a Difficulty of diſcharging it ſtill remains, the Operation muſt be repeated as often as the Neceſſity of the Patient calls for it; or the Catheter may be left introduc'd, till the Bladder is reſtor'd to its former Vigour, and becomes capable of diſcharging its Contents at Pleaſure. For this very Reaſon I would adviſe Women in Labour, as ſoon as they perceive any Difficulty in diſcharging their Urine, to procure an Evacuation of it with ſuch a Catheter, leſt, if the Labour ſhould be too long protracted, the Bladder ſhould be ſo diſtended, its Tone ſo weaken'd, and its Nerves ſo debilitated, as afterwards to admit of no Cure.

We have already obſerv'd, that it was a more difficult Taſk to introduce a Catheter into Men than into Women; for, in the former, the Urethra is generally ſo winding and long, that unleſs the Surgeon is previouſly acquainted, from an anatomical Knowledge of the Parts, with its Figure and Poſition, (for which ſee *Tab.* 50. *Fig.* 1. E. D.) is Maſter of certain Dexterities he has ſeen obſerv'd by other ſkilful Surgeons, and has himſelf frequently attempted the Operation on Subjects, he generally has no great Succeſs in introducing the Catheter. Tho' theſe particular Dexterities are better learn'd by having them exhibited to the Eye, than by having them deſcrib'd in Words; yet, for the ſake of Beginners, we ſhall ſuccinctly lay down the moſt important Directions, with reſpect to the Application of the Catheter. The Surgeon, then, for the Uſe of Men, muſt have ſeveral Catheters in Readineſs. *Celſus*, in the twenty-ſixth Chapter of his ſeventh Book, requires only three, which he orders to be neither too ſlender, nor too thick: But I would adviſe him to have ſeveral of theſe Inſtruments, four at the very leaſt, ſome long, ſome ſhort, ſome ſlender, and ſome thicker; but, at the ſame time, the Whole of them muſt be ſmooth, and well poliſh'd. See *Tab.* 48. *Fig.* 2, 3, 4, and 5. That repreſented by *Fig.* 2. may be us'd for a Boy, almoſt to the ſixth Year of his Age; that by *Fig.* 3. till the twelfth Year of his Age; that by *Fig.* 4. till the ſixteenth; and that by *Fig.* 5. is to be us'd for Patients farther advanc'd in Years. The longeſt of thoſe deſign'd for Men *Celſus* order'd to be fifteen Inches in Length, and the ſhorteſt nine, a Length ſufficient even for Men; whereas thoſe of the middle Kind were to be of various intermediate Lengths. Some would have their Catheters very ſlender, imagining that, in conſequence of their being ſo, they are the more eaſily introduc'd into the Bladder; but this is a falſe Piece of Practice, ſince theſe ſlender Catheters eaſily inſinuate themſelves into, and ſtop in the Corrugations and Foldings of the Urethra, which often occur in old Men, and which would be more commodiouſly paſs'd over by thicker Catheters. This *Hildanus* confirms by two Inſtances, in which neither he himſelf, nor the Lithotomiſt, could introduce a ſlender Catheter into the Bladder, but eaſily introduc'd one as large as a Swan's Quill. *Rauvius* has aſſerted the ſame, and Experience has convinc'd me of the Truth of it. The beſt Catheters are thoſe made of Silver, well poliſh'd, incurvated in a certain Degree, and, for the ſake of Strength, that they may not bend more than is neceſſary, containing within them the Silver Wires repreſented by the Letters A. A. A. *&c.* When the Operation is to be perform'd, the Patient is to be laid upon his Back, either on a Bed, or on a Table: Then the Surgeon, ſtanding on the Right Side, is to take the Patient's Penis in his Left Hand, and raiſe it upwards; and, with his Right Hand, he is to take hold of the Handle, C. of a Catheter juſtly proportion'd to the Size of the Patient, anointed with Oil at its other Extremity, and ſo gently to introduce it into the Urethra. This Catheter he is to introduce in ſuch a manner, that the convex Part of it ſhall be turn'd to the Abdomen, (See *Tab.* 50. *Fig.* 3.) and it is to be convey'd as far as the lower Part of the Os Pubis. After this the Handle of the Catheter is, by a certain gentle Dexterity, to be turned on the Left Hand, towards the Abdomen of the Patient, ſo that the concave Part of the Catheter may be turn'd to the Abdomen, as in *Fig.* 4. Then the Point of the Catheter, B. is to be firſt gently depreſs'd below the Os Pubis, and then cautiouſly preſs'd upwards into the Bladder; and, upon retracting the Wire, A. the retain'd Urine enters the Holes, B. B. and is diſcharged from the other Extremity at the Handle; and, when the Whole is evacuated, the Catheter is to be taken out. The Catheter may ſometimes alſo be commodiouſly introduc'd when the Patient is ſitting in a Poſture ſomewhat reclin'd, or ſtanding and leaning to a Wall; in which Caſes the Surgeon, ſtanding before, or on either Side of the Patient, introduces the Catheter in the manner already deſcrib'd. Beſides, this Operation is commodiouſly perform'd, tho' moſt of the modern Authors ſeem to make no mention of it, by placing the Patient on his Back, either on a Bed or a Table, whilſt the Surgeon, ſtanding on his Left Side, takes his Penis in his Left Hand, and reclines it a little towards the Navel: Then he is to introduce the Catheter, with its concave Part to the Abdomen, into the Urethra, as far as the Os Pubis; and by moving the Handle, ſo as to deſcribe an Arch, towards the Knees, without that Dexterity of turning it under the Arch of the Os Pubis, he gently forces it into the Bladder. This Method of applying the Catheter often ſucceeds more eaſily than the others, eſpecially with Surgeons little accuſtom'd to Operations of this Kind. But, in all theſe Methods, the Surgeon is to proceed cautiouſly, prudently, and gently, leſt, by the Application of too great Force, the Urethra ſhould be raſhly lacerated by the Catheter, and, by that means, violent Pains, ſevere Hæmorrhages, dangerous Gangrenes, and Death itſelf, be brought on; for I have known Diſorders of this Kind excited by unſkilful and raſh Surgeons. Sometimes, when the Urine is once evacuated, the entire Diſorder is remov'd, and the Patient reſtor'd to Health; and ſometimes the Operation is to be repeated at Intervals, if the Patient cannot ſpontaneouſly diſcharge his Urine; and I have known ſome Patients who ſoon learn'd to introduce the Catheter themſelves. For as by means of this Inſtrument the Cauſe of the Retention of Urine is not always remov'd, but only a dangerous Symptom; ſo the Cure of the former is to be attempted by itſelf, whether it be an Inflammation, too great a Relaxation of the Bladder, Caruncles, or the Proſtatæ become too tumid. By reaſon of the Inflammation of the Neck of the Bladder, the Catheter cannot often be introduc'd into it at the Beginning; whereas it finds a more eaſy Acceſs when the Inflammation is leſſen'd by Veneſection, and the Exhibition of proper Medicines. When, upon introducing the Catheter into the Bladder, the Urine is not quickly diſcharg'd, as it ſometimes happens, the Abdomen is to be gently preſs'd, or rub'd with the Hands, by which means the deſir'd Effect is generally produc'd, or the Urine may alſo be extracted by Suction. If the Catheter ſhould be ſtopt by that Caruncle of the Proſtatæ, which Anatomiſts call the *Caput Gallinaginis*, as it ſometimes happens, it is not to be forcibly thruſt forwards, for fear of hurting ſome of theſe Parts; but it is rather to be retracted a little, and then gently thruſt forwards, by which it often paſſes over this Caruncle, and enters the Bladder. If a venereal Caruncle in the Urethra prevents the Introduction of the Catheter, it is to be broke thro' by it.

When the Catheter is introduc'd into the Bladder in order to diſcover a Stone, it is proper diligently to move it up and down in all Directions; for, as ſoon as any hard Body makes a Reſiſtance to the Inſtrument, and a Noiſe and Crackling, as it were, are perceiv'd internally, we have no great Reaſon to doubt, that a Stone is lodg'd in the Bladder; but, if none of theſe Circumſtances are perceiv'd, we may probably conjecture, that there is no Stone, or, at leaſt, we may doubt of its Exiſtence. In like manner, when the hard and ſonorous Body, which, with great Difficulty, we could reach with the Catheter, vaniſhes, as it were, and is no more to be perceiv'd, this is a Sign, that the Stone is but ſmall, or has fallen into ſome Pit or Receptacle of the Bladder, ſuch as are now-and-then obſerv'd. See *Tab.* 53. *Fig.* 1. and 2. But 'tis a Sign, that a larger Stone is lodg'd in the Bladder, if, upon moving the Catheter, it immediately ſtrikes upon ſome hard and ſonorous Subſtance. Moreover, if the Catheter ſlips eaſily, and without Interruption, on the Surface of this Body, the Stone muſt neceſſarily be ſmooth: If the contrary happens, and if, at the ſame time, the Urine is bloody, we conclude, that the Surface of the Stone is rough, and beſet, as it were, with Spiculæ. If, on the contrary, this Matter is with Difficulty remov'd from its Place, or if a diſtinct Sound is perceiv'd, we conclude, that the Stone is large and hard: But, if the Matter eaſily yields to the Inſtrument, if the Sound is leſs acute, the Urine ſandy, and carrying along with it ſmall Scales, as it were, we, according to the Obſervation of *Celſus*, conclude, that the Stone is ſoft.

But leſt theſe Patients ſhould be rack'd with continual and additional Pains, in whom there is a Neceſſity for repeating this Operation again and again, either in conſequence of the Weakneſs of the Bladder, or a Stone internally blocking up its Neck; or in conſequence of the Urethra collapſing immediately as the Catheter is drawn out, as ſometimes happens; and ſince the Operation cannot, for the moſt part, be performed without Pain and Trouble; ſome modern Surgeons, among whom *Solingen* was, perhaps, the firſt, have, for relieving the Difficulty of Urine, adviſ'd the Uſe of a Silver flexible Catheter, made of ſmooth Silver-wire twiſted in a particular manner, ſee *Tab.* 48. *Fig.* 6. For this Inſtrument may, eſpecially when the Penis is ſmall, without any Trouble, be left in the Bladder for ſome Days, or till, being reſtor'd to its former Vigour, it no longer requires a Catheter for evacuating its Contents, provided the Inſtrument be ſecur'd with proper Ligatures about the Abdomen. But, as it is generally very difficult to introduce flexible Catheters into the Bladder, it is, for the moſt part, neceſſary previouſly to introduce into the Urethra an ordinary Catheter, and to leave it for ſome time there,

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in order to enlarge the Paſſage, thro' which the flexible Catheter is afterwards to be convey'd into the Bladder. But leſt this Paſſage ſhould unfortunately collapſe, we are to take care, as ſoon as the inflexible Catheter is drawn out, dexterouſly to introduce the flexible one into the Bladder, and leave it in it till the Difficulty of diſcharging the Urine is either remov'd, or at leaſt creates the Patient a very ſmall Degree of Trouble. *Helmont*, in the third Chapter of his Book *De Lithiaſi*, entirely rejects Silver and Brazen Catheters of every Kind, as too ſevere and painful; and recommends a new flexible one of Leather, invented by himſelf, and ſewed up in the Form of a Pipe; and he flatters himſelf with the Thoughts, that this Contrivance, in conſequence of its Softneſs, creates no Pain. But by this very Thing he ſeems to convince the World, how little he has been converſant in chirurgical Operations; ſince, by ſoft Catheters of this Kind, the Intention muſt either be not at all, or at leaſt leſs commodiouſly anſwered. Thus alſo *Fabricius ab Aquapendente*, in his *Operat. Chirurg.* informs us, that he prepared and uſed a flexible Catheter of Horn; and others have prepar'd the like Inſtruments of other Subſtances. But thoſe made of Silver are found moſt commodious, and therefore univerſally uſed by the greateſt modern Surgeons, not only becauſe they have a due Degree of Strength, but alſo becauſe they are capable of being well poliſh'd, and ſuſceptible of receiving the particular Figure and Degree of Curvature neceſſary for their being eaſily and commodiouſly introduced into the Bladder.

Some, as *Nuck* and *Salingen*, order ſeveral Holes to be made in the crooked Part of the Catheter, that the Urine may be diſcharg'd with the greater Eaſe. But two at its Extremity are ſufficient, ſince by their means the Urine is, for the moſt part, conveniently diſcharg'd; for a larger Number of Holes, eſpecially when the *Corpus Spongioſum* of the Urethra, rendered too tumid by a Congeſtion of Blood, inſinuates itſelf into them, rather hinder the Introduction of the Catheter into the Bladder, eaſily lacerate the Corpus Spongioſum, and by that means excite various troubleſome Symptoms. For this Reaſon Mr. *Petit*, a celebrated Surgeon, recommends another Species of Catheter, with no Holes at all in its Sides; and for extracting the Urine, gives it the Preference to all others (ſee *Tab.* 48. *Fig.* 7.). This Catheter has a Perforation at its Extremity, A, ſtopt up with the oblong Globe, B. But when the Inſtrument is introduced into the Bladder, the Handle of the Wire, C. is preſs'd inwards; by which means the Globe, B. is forced out of the Catheter, in the manner repreſented by the Letter D. in the adjacent Figure; by which means the Urine is capable of paſſing thro' the Catheter. This Intention is, however, generally well enough anſwered by the common Catheters. Laſtly, Catheters are uſeful, when, in various Diſorders of the Bladder, we intend to inject ſome Subſtance into it; in which Caſe, by adapting a Syringe, or the Bladder of an Animal, to the other Extremity of the Catheter, any Liquor, proper for the Diſorder, may be injected into the Bladder, as *Paulus Ægineta*, in the fifty-ninth Chapter of his ſixth Book, obſerves. An Abſceſs of the Neck of the Bladder, preventing a Diſcharge of the Urine, is alſo ſometimes broken by the Catheter, and the Diſorder by that means remov'd. *Henricus Meibomius* has publiſh'd a Diſſertation on this Operation, intituled *De Catheteriſmo*. *Heiſter*.

CATHIDRYSIS, καθίδρυσις. The reducing of a Thing to its proper Place. The Verb καθιδρύσαι is uſed by *Hippocrates*, in the ſame Senſe, *Prorrhet.* 2.

CATHIMIA, in the ſpagirical Language, ſignifies, 1. a ſubterraneous mineral Vein, whence Gold and Silver are digged. 2. Concretions in the Furnaces of Gold and Silver. 3. Gold. 4. Spuma Argenti. 5. Soot that adheres to the Walls in burning of Braſs. *Rulandus*. It is the ſame as CADMIA, which ſee.

CATHMIA *affidia*. The *Cathimia* of Silver, which is of the Colour of Litharge, that is, burnt Lead. *Cathmia* is the Spuma Auri, Æris, et Argenti; and there is alſo the *Cathmia Ferri*. *Rulandus*. See CADMIA.

CATHOCHITES. The ſame as CATOCHITES, which ſee.

CATHODOS, κάθοδος, and in the *Ionic* Dialect κάτοδος, (from κατὰ, a Prepoſition frequently adding the Signification of *downwards*, to the Word with which it is compounded, and ὁδὸς, a Way) is a Deſcent; thus κάθοδος ἐπιμηνίων, *Hippoc.* περὶ παθ. is a Deſcent of the Blood, in order to the Formation of the CATAMENIA.

CATHOLCEUS, καθολκεὺς, an oblong Fillet, which came over the whole Bandage of the Head called *Periſcepaſtrum*, and held it firm. *Galen. de Faſciis*. See PERISCEPASTRUM.

CATHOLICUS, καθολικὸς, from κατὰ and ὅλος, the Whole, univerſal, a boaſting Epithet of ſome Medicines, pretended to cure all Diſtempers, and moſt liberally beſtow'd by the Chymiſts on their Noſtrums.

CATHYGROS, κάθυγρος, from κατὰ and ὑγρὸς, humid, exceſſively humid, is an Epithet apply'd by *Hippocrates*, *Aph.* 62. *Sect.* 5. to the Uterus, who reckon'd ſuch a State of it among the Cauſes of Barrenneſs.

CATHYPNIA, from ὕπνος, Sleep, is a profound Sleep. *Blancard*.

CATIAS, κατίας, in *Paulus*, *Lib.* 6. *Cap.* 74. is an Inciſion-knife, uſed in extracting the dead Fœtus; and alſo in opening an Abſceſs of the Uterus. It ſeems to be derived from καθίημι, to introduce, for which *Paulus* uſes κατίημι, and κατίεται for καθίεται, according to the *Ionic* Dialect.

CATILLIA. The Weight of nine Ounces. *Johnſon*.

CATILLUS CINEREUS, or OBRUSÆ CATILLUS. See CAPELLA. *Blancard*.

CATIMIA. The ſame as CADMIA. *Rieger*.

CATINUM *Alumen*, is Pot-aſh.

CATINUS FUSORIUS. See CRUCIBULUM.

CATISCHON, κατίσχων, in *Lib.* 6. *Epid. Sect.* 8. *Aph.* 33. is one who is coſtive, or not eaſily purg'd, and is there oppoſed to ὁ βραχὺ καθαιρόμενος, "one who is ſoon purged."

CATMA. Filings of Gold. *Rulandus*. *Johnſon*.

CATOBLECTA *Animalia*. Animals furniſhed with Civet. *Caſtellus*.

CATOBLEPAS, or CATOBLEPON, κατωβλέπων. A wild Beaſt found in *Ethiopia*, which *Pliny* takes Notice of. It is fabled to kill, like the Baſiliſk, by its Look.

CATOCATHARTICA, from κάτω, downwards, and καθαίρω, to purge, Medicines which operate by Stool, by way of Diſtinction from *Anocathartica*, thoſe which purge upwards, that is, Emetics.

CATOCHE, κατοχὴ, κάτοχος. The ſame as CATALEPSIS, which ſee.

CATOCHEILON, κατόχειλον. The inferior Lip.

CATOCHITES, from κατέχω, to retain. A Stone found in *Corſica*, ſaid to attract and retain the Hand when laid upon it. *Pliny*, *Lib.* 37. *Cap.* 10.

CATODON, from κάτω, below, and ὀδὼς, a Tooth. A Name of the Sperma-ceti Whale, ſo call'd becauſe furniſh'd with Teeth only in the inferior Jaw.

CATOECIDIOS, κατοικίδιος. Domeſtic, familiar, eaſy to be made or procur'd. *Hippocrates* applies it to Extenſions neceſſary for replacing luxated Limbs, in his Book *de Articulis*.

CATOMISMOS, κατωμισμὸς, from κάτω, under, and ὦμος, the Shoulder, a putting under of the Shoulder. A Method of reducing a luxated Shoulder, which is thus deſcribed by *P. Ægineta*, *Lib.* 6. *Cap.* 114. A luſty young Man, taller than the Patient, or at leaſt higher, [by the Advantage of Place] is to ſtand at the affected Side, and to put his Shoulder under the Armpit of the Patient as he is ſtanding, and, lifting him up, is to ſtretch out his Arm, and draw it down to his own Belly, ſo that the Patient hangs with the reſt of his Body above the Ground, behind the Man who raiſed him; if the Patient be light, a ſlender Boy is to hang on him. And thus while the Patient hangs with his Arm and Body in equal Poiſe, the other Perſon's Shoulder, which bears their Streſs, forces the luxated Bone into its proper Place.

CATOPTER, κατοπτὴρ, from ὄπτομαι, to ſee. It ſignifies a *Speculum Ani*. See SPECULUM.

CATORCHITES, κατοχίτης. A ſort of Wine, whoſe Preparation and Virtues are deſcribed by *Dioſcorides*, *L.* 5. *C.* 41. as follows: *Catorchites*, which ſome call *Scytites*, is made in *Cyprus*, after the ſame manner as Palm-wine, [ſee PALMEUM VINUM] but with this Difference, that in making of *Catorchites*, ſome, inſtead of Water, put an equal Meaſure of a Dilution of Huſks of newly preſſed Grapes. For the Preparation of this Wine they make Choice of black Caricæ, or dry'd Figs, of the ſort which they call *Chelidonian*, or *Purple*; theſe they macerate; and after ten Days Maceration draw off the Liquor, and make a ſecond, and after that a third Affuſion of the Dilution of Grape-huſks. At due Diſtances of Time, they make a fourth and a fifth Affuſion, which, turning acid, ſerve for Vinegar.

This Wine is of fine Parts, flatulent, bad for the Stomach, and cauſes a Decay of Appetite; but is good for the Belly, provokes Urine and the Menſes, and procures Plenty of Milk. However, it generates bad Blood, and brings on an Elephantiaſis, as does alſo Zythus.

Some to fifty-four Gallons of Liquor put ten Pounds of Salt, others nine Gallons of Brine, with an Intention of rendering it leſs ſubject to corrupt, and more proper for the Belly. Some lay Thyme and Fennel in the Bottom, and upon them the Figs; then ſpread another Lay of the ſaid Herbs, and proceed thus alternately with a Lay of Fruit, and then of Herbs, till they have filled the Veſſel.

CATORETICA, κατωρέλικα, from κάτω, downwards, and ῥέω, to flow. Purgative Medicines. *Catoterica* imports the ſame.

CATOXYS, κάτοξυς, very acute.

CATROBIL. Earth. *Rulandus*.

CATTU-SCHIRAGAM. The *Malabar* Name for the *Scabioſa Indica Arborea*.

This is a Shrub of a Man's Height, growing in ſundry Places; the Root is ſhort, ſtrait, and of a bitteriſh Taſte; the Trunk round, and an Inch thick, with a watry-green Bark,

and a reddiſh Wood; the Leaves oblong, narrow, ſharply mucronated, and of a very bitter Taſte; the Flowers are ſmall, cluſter'd, of a faint purple-red Colour, and without Smell. The Seeds, which are contain'd in great Numbers within foliaceous Heads, are of an oblong round Form, ſtriated lengthwiſe, and its lower Part cuſpidated, with the Cuſpis, or Point, inſerted into the Baſe of the foliaceous Head; each of them has its Top ſurrounded with a Tuft of pretty long, whitiſh, and yellowiſh Hairs, from the Middle of which proceeds a ſmall Flower, with a greeniſh Pedicle. The Shrub bears Flowers once a Year, in the rainy Seaſon.

Bruiſed, and boiled in Oil, it makes a good Fomentation for Puſtules. The Head, rubbed with the expreſſed Juice, relieves the Patient under a Fever proceeding from Choler. The Seeds powder'd are drank in warm Water for the Cough, and Flatulencies, and to kill Worms in Children. They alſo eaſe Pains in the Belly, provoke Urine, and, mixed with warm Water, are good to anoint Parts affected with the Arthritis, or Pains contracted by Cold. *Raii Hiſt. Plant.*

CATULOTICA, *καθυλωτικὰ*, from *οὐλὴ*, a Cicatrix; Remedies, which, by their eating Quality, wear away groſs Cicatrices, and render the Place ſmooth and clear. *Galen. de Dynamidiis.*

CATULUS. In Botany, a Catkin. See IULUS. In Zoology, a Puppy. See CANIS.

CATUS.

Felis, Catus, Offic. *Catus domeſticus & ſylveſtris*, Schrod. 5. 28c. Schw. Quad. 79. *Felis*, Aldrov. de Quad. Digit. 564. Jonſ. de Quad. 126. Charlt. Exer. 20. *Felis, Catus*, Mer. Pin. 169. *Felis domeſtica ſeu Catus*, Raii Synop. A. 170. *Catus ſeu Felis*, Geſn. de Quad. Digit. 317. THE CAT. *Dale.*

The Fat, Blood, Head, Dung, Skin, and Secundines, are uſed in Medicine. The Fat of a wild Cat heats, mollifies, diſcuſſes, and is of great Service in Affections of the Joints. The Blood cures a Herpes. The Head of a black Cat incinerated is an excellent Medicine for Diſeaſes of the Eyes, as the Unguis, Nubecula, Albugo, and other Diſorders. The Dung cures an Alopecia, and helps the Gout. The Skin is worn to heat the Stomach, and contracted Joints. And the Secundine is hung about the Neck, to preſerve the Eyes from Diſorders. *Dale.*

CAVA *Vena.* The large Vein which receives the refluent Blood, and conveys it to the Heart. See VENA.

CAVALAM. A *Malabarian* Plant; call'd alſo *Arbor ſiliquoſa Malabarica pluribus ad ſingulos flores Lobis.* I find no medicinal Virtues attributed to it.

CAUCAFON. A Name for the *Moly Indicum.*

CAUCALIS. A Plant of which *Boerhaave* mentions twelve Sorts. The Characters are;

The Petals are unequal, and in the Shape of a Heart; the Seeds are oblong, and ſulcated longitudinally, with denticulated, and, as it were, aculeated Ridges.

1. *Caucalis; arvenſis; echinata; magno flore.* C. B. P. 125. M. H. 3. 308.

2. *Caucalis; major; daucoides; Tingitana.* M. U. 65. M. H. 3. 308. a.

3. *Caucalis; Monſpeliaca; echinata; magno fructu.* C. B. P. 153. M. U. 33. M. H. 3. 308.

4. *Caucalis*, Offic. *καυκαλὶς*, Dioſc. *Caucalis lato Apii folio*, Hiſt. Oxon. 3. 307. C. B. Pin. 152. *Caucalis arvenſis echinata latifolia ejuſd.* Raii Hiſt. 1. 466. Synop. 3. 219. Tourn. Inſt. 323. Elem. Bot. 273. Boerh. Ind. A. 63. *Caucalis altera ſeu ſecunda*, Ger. 868. *Caucalis Apii foliis, floribus rubris*, Merc. Bot. 1. 28. Phyt. Brit. 24. *Caucalis Apii foliis, flore rubro*, BASTARD PARSLEY, WITH RED FLOWERS, Ger. Emac. 1021. Mer. Pin. 23. *Caucalis ſeu Echinophora tertia λεπτόφυλλος purpurea col. ejuſd. Caucalis arvenſis latifolia purpurea*, BROAD-LEAV'D BASTARD PARSLEY, WITH RED FLOWERS, Park. Theat. 920. *Caucalis Anglica flore rubente*, Ejuſd. *Lappula canaria latifolia ſive Caucalis*, J. B. 3. 80. Chab. 393. *Echinophora ſemine magno*, Rivin. Irr. Pent. Buxb. 99. Rupp. Flor. Jen. 223. BASTARD PARSLEY.

It grows wild in the Fields, and flowers in *June* and *July*. It is either eaten raw, or boil'd as a Pot-herb; and is ſaid, by *Dioſcorides*, to provoke Urine.

5. *Caucalis; Douci Sylveſtris folio; echinato magno fructu.* Botan. Monſp. App. 292. a.

6. *Pſeudo-ſelinum*, Offic. *Caucalis minor floſculis rubentibus*, Ger. Emac. 1022. Raii Hiſt. 1. 468. Synop. 3. 219. Merc. Bot. 1. 27. Phyt. Brit. 24. Mer. Pin. 23. *Caucalis*, Rivin. Irr. Pent. Dill. Cat. Giſſ. 136. *Caucalis minor flore rubente*, SMALL BASTARD PARSLEY, WITH RED FLOWERS, Park. Theat. 921. Hiſt. Oxon. 3. 308. *Caucalis ſemine aſpero, floſculis rubentibus*, C. B. Pin. 152. Boerh. Ind. A. 63. Buxb. 60. *Caucalis rugaris*, Rupp. Flor. Jen. 224. *Anthriſcus quorundam ſemine aſpero biſpido*, J. B. 3. 83. Chab. 402. *Daucus annuus minor, floſculis rubentibus*, Tourn. Inſt. 308. HEDGE PARSLEY.

It grows in Hedges and Thickets, and flowers in *July* and *Auguſt*. The Seed provokes Urine, and the Menſes.

7. *Caucalis; Segetum; minor; Anthriſco biſpido ſimilis.* Raii Syn. 113.

8. *Caucalis; Daucoides; Syriaca; altiſſima; folio Paſtinacæ Sylveſtris; flore albo.* H. Mauroc. 43. b.

9. *Caucalis; Orientalis; altiſſima; folio Ferulæ.* T. Cor. 23. b. H.

10. *Caucalis; Africana; folio minori Rutæ.* Ind. 15. a.

11. *Caucalis; Sylveſtris, folio Chærophylli.* Flor. 2. 18.

12. *Caucalis; nodoſo, echinato, ſemine.* C. B. P. 153.

Boerhaave's Index alter Plantarum.

CAUCALOIDES, *καυκαλοειδὲς*. This is in *Moſchion, de Morbis Mulierum*, the Patella, ſo call'd from its ſuppoſed Similitude to the Flower of the Caucalis.

CAUCIUM, *καύκιον*. A certain Weight mentioned by *Nicolaus Myrepſus, Sect.* 10. *Cap.* 19. But his Commentators cannot tell what Weight it is.

CAUDA. A Tail. The Tails of Animals conſider'd as Aliment are, by *Galen*, repreſented as hard of Digeſtion, and crude. *Cauda*, alſo, ſignifies the Os Coccygis.

In *Rulandus*, *Cauda Vulpis rubicundi* is Red-lead.

In Botany, *Cauda Equina* is the EQUISETUM, which ſee.

The *Cauda Muris* is a Species of *Ranunculus.*

The *Cauda Porcina* is the PEUCEDANUM.

CAUDATIO, in *Blaſius*, is an Elongation of the Clitoris.

CAUDEX, *Stipes, Truncus, κορμὸς, στέλεχος*. Trunk, Stock, Stem, is that Part of a Tree, or Shrub, which is between the Root and Branches, and generally riſes up from the Root tapering, till it ſpreads itſelf into Branches. Through the Trunk is the Juice convey'd for the Nouriſhment of all the other Parts of the Plant. This Part in Herbs and Under-ſhrubs is called *Caulis*, or *Thyrſus*, *καυλὸς*, the Stalk, and ſometimes *Scapus*, and, in ſome Kinds, *Calamus, Calmus*, which may be ſeen in their proper Places. The Trunk conſiſts of all thoſe Veſſels and Parts which are in the Root, and is therefore by *Linnæus*, in his *Fundamenta Botanic.* called ſimply the *Root above Ground.* For this Reaſon Water and Air, which are contiguous to this Part of the Plant, and apply'd to its whole Surface, enter it by the bibulous Veſſels of the Bark, and penetrate into its interior Parts, and into the very Root itſelf. The Uſe then of the Trunk to the Plant is to diſtribute the Humour which it receives from the Root, or by Application to its Superficies, to the Parts produced from it, which are the great and ſmall Branches, Leaves, and the reſt.

CAVERNA. A Cavern. It is by ſome Authors applied to the Female Pudenda.

CAVIARIUM. The pickled Spawn of a Sturgeon. See STURIO.

CAVICULA or CAVILLA. The Ankle. *Schneider* ſays the Os Cuneiforme was called Cavilla; by *Haly-Abbas.*

CAULEDON, *καυληδὸν κάταγμα*. A Species of Fracture, when the Bone is broken tranſverſly, ſo as not in the leaſt to cohere in any degree, the fractur'd Parts receding from each other, and ſliping ſideways, ſo as not to lie directly againſt each other, in the manner of a Stalk, *καυλὸς*. *Galen.*

CAULIAS, *καυλίας*. An Epithet for that Juice of the Silphium which flows from the Stalk, by way of Diſtinction from that which flows from the Root, and is call'd *ῥιζίας.*

CAULIS. A Cabbage. See BRASSICA.

Caulis, alſo, ſignifies a Stalk. Hence ſuch Plants as have a true Stalk are call'd *Cauliferous.*

The Penis, alſo, and the Vagina, are ſometimes call'd by the Name of *Caulis.* See CAUDEX.

CAULOTON, *καυλωτὸν*. An Epithet of the *Beta*, Beet.

CAUMA, *καῦμα*, from *καίω*, to burn, ſignifies the Heat and Sultrineſs of the Atmoſphere, or of the Body in a Fever, or of an inflam'd Part, or any other violent Heat.

CAUNGA. A Name for the ARECA, which ſee.

CAUSA. A Cauſe. Whatever produces a Diſeaſe is call'd the Cauſe thereof. This operates either by inducing a new State of the Solids and Fluids; or by taking away ſomething which is abſolutely requiſite to the Exerciſe of ſome Function.

If a Cauſe pre-exiſted in ſome meaſure in the Body before the Effect produc'd, it is call'd an internal Cauſe; but if it exiſted out of the Body, and by its Application to it produc'd the Diſeaſe, it is call'd external.

Internal Cauſes generally injure, firſt, the Humours, and then the ſolid Parts; whereas the external Cauſes affect the Solids, and, in conſequence of that, the Humours; and this holds univerſally, unleſs, perhaps, in ſome few Diſeaſes produc'd by Poiſon, or Contagion.

The immediate or proximate Cauſe is that, which, taken all together, immediately conſtitutes the preſent Diſeaſe; this is always adequate and ſufficient to the Formation of the Diſeaſe, whether ſimple or complicated. The Preſence of this conſtitutes and continues the Diſeaſe; and the Abſence of it removes the Diſorder, being very little different from the Diſeaſe itſelf. The Inveſtigation, therefore, of this, is extremely uſeful, and very neceſſary.

The

The remote Cauſe is that which changes the Body in ſuch a manner, as to diſpoſe it for the Reception of a Diſeaſe, upon the Acceſſion of another Cauſe; but it is never adequate or ſufficient to produce a Diſeaſe alone; nor would the other Cauſe, the Acceſſion of which is neceſſary, be ſufficient for the Production of the Diſeaſe, by itſelf, but both muſt concur. The Buſineſs of Phyſic, therefore, is to eradicate both theſe together, which, in Conjunction, conſtitute the proximate or immediate Cauſe.

The remote Cauſe, inherent in the Body, is call'd Prediſponent, Antecedent, and by the *Greeks* προηγεμένη and conſiſts principally in Temperament, Plethora, and Cacochymy.

The Cauſe, whoſe Acceſſion to the remote Cauſe excites, and in Conjunction with it forms, the Diſeaſe, is call'd the Procatarctic Cauſe, or the πρόφασις, or Occaſion of the Diſeaſe. It is ſometimes internal, ſometimes external. Theſe *Boerhaave* reduces to four Claſſes.

Firſt, The *Ingeſta*, or Things entering the Body, ſuch as the Air, Aliments, Drink, Medicines, Poiſons; ſuch Things as enter by the Pores of the Skin and Noſtrils, by the ſeveral Paſſages of the Mouth, Lungs, Oeſophagus, Stomach, Inteſtines, and Pudenda of Women, whether in a viſible or inviſible manner; whether by Steam, Draught, Deglutition, Clyſter, or Injection.

Secondly, The *Geſta*, or Things acted, as Motion of the Whole, or any Part of the Body; Affections of the Mind; Reſt, both of Body and Mind; Sleeping and Watching.

Thirdly, Things retain'd, or excreted, whether ſalubrious, recrementitious, or morbid.

Fourthly, Things apply'd to the Body, as Air, Vapours, Fomentations, Clothes, Liniments, Ointments, Plaiſters, together with whatever wounds, contuſes, or corrodes.

This Diviſion of the Non-naturals, as they are call'd, is different from that of all other Writers of Inſtitutes, who divide them into ſix Claſſes. 1. Air. 2. Meat and Drink. 3. Motion and Reſt. 4. Affections of the Mind. 5. Things retain'd and excreted. 6. Sleep and Watching. See NON NATURALIA; and that Part of the Preface which gives an Account of *Galen*'s Syſtem.

CAUSIS, καῦσις, from καίω, to burn. A Burn. See AMBUSTA.

CAUSODES *Febris*, καυσώδης πυρετός, a burning Fever. The ſame as CAUSUS, which ſee. *Celſus*, *Lib.* 2. *Cap.* 8. renders καυσώδης in *Hippoc. Aph.* 58. *Lib.* 4. by *Febris ardens.*

CAUSOMA, καύσωμα, πύρωσις, in *Hippocrates*, is a burning Heat and Inflammation. *Gorræus.*

CAUSTICA. Cauſtics.

Cauſtic Medicines or Cauteries, derive their Name from the *Greek* Word καίω, to burn; becauſe, when for chirurgical Purpoſes they are apply'd to any live Part of the Body, they burn it to a hard Cruſt or Eſchar; for this Reaſon they are alſo call'd Eſcharotic Medicines. Of this Kind are all thoſe Subſtances which operate like Fire, by deſtroying the Veſſels of the Part to which they are apply'd, ſo that the Fluids are diſcharg'd under the dry'd and burnt Solids, ſo as to form a kind of Cruſt. To this Claſs of Medicines belong, firſt, what we commonly call Actual Cauteries, ſuch as Fire itſelf, any Metal, which, when ignited, is not fuſ'd, and in a Word, every burning or kindled Subſtance, ſuch as the Moxa, the woolly Subſtance which adheres to the Leaves of Mullein, Cotton, Hemp, and Wood, which are applied in that particular Form, which beſt ſuits the Place on which their Operation is intended. Theſe actual Cauſtics are, by ſome, peculiarly call'd Cauteries, and are generally us'd of Iron. Hence *Celſus*, when ſpeaking of the Cauteries of this Kind, calls them *Ferramenta candentia*, red-hot Irons, and theſe are ignited more or leſs, according as the Part is to be burned more or leſs deep. Other Subſtances are alſo claſs'd among the actual Cauteries, ſuch as the Nucleus of the Olive, boiling Oil or Water, and melted Sulphur or Lead; but theſe are ſcarce us'd in modern Practice. Theſe Medicines act upon the Part, which they burn into a Cruſt, firſt by heating the Humours, which, being rarefied by the great Heat, burſt the Veſſels which contain them, and, their fineſt and moſt aqueous Parts flying off, the Part is left dry and incruſtated. *Heiſter* gives the following Directions with reſpect to the Uſe of actual Cauteries. "We "are, ſays he, to chuſe an Inſtrument, which, in Bulk and "Figure, is accommodated to the Part affected; and whilſt "the Patient is preparing for the Operation, and putting him-"ſelf in a proper Poſture, it is to be put into the Fire. We "are alſo carefully to defend the adjacent Parts againſt the "Effects of Aduſtion, leſt new and unneceſſary Pains ſhould "be produc'd. And this is the Reaſon, why, in carious "Bones, the Fleſh is carefully to be remov'd and preſs'd back "by the Fingers of an Aſſiſtant, before the Application of "the Cautery. When the Inſtrument is ſufficiently hot, it is "to be ſtrongly applied to the Part affected, till the Diſorder "appears to be entirely extirpated. But that this may be "done with the greater Succeſs, eſpecially in carious Bones; "Cancers, and Effuſions of Blood, 'tis neceſſary to have a "ſufficient Number of Cauteries in Readineſs, that what can-"not be extirpated by one, may be eradicated by a ſecond or "third."

Secondly, Potential Cauſtics are the ſtrongeſt Corroſives, ſuch as Butter of Antimony, Lapis Infernalis, corroſive ſublimate Mercury, fix'd and volatile alcaline Salts, Quick-lime, Oil of Vitriol, Spirit of Sea-ſalt, and Aqua-fortis, all of which may be apply'd, either in the Form of a Poultice, of an Ointment, or with Lint. The Cauſtics of this Claſs act by virtue of the acrid Salts they contain, which, being pungent and inciding, deſtroy the Coheſion of the Membranes which conſtitute the Veſſels; as alſo in conſequence of the Rarefaction they excite in the Humours, by diſſipating their fine aqueous Particles, they produce an Eſchar, by drying up the Part. And becauſe it is of the Nature of Salts, not to act before Solution, it is requir'd, that potential Cauſtics ſhould be in a liquid Form; or, if they are ſolid and dry, it is neceſſary, that the Part, on which they are to act, ſhould be moiſt.

Petit, in the Hiſtory of the Royal Academy of Sciences, gives the enſuing Account of the Operation of Cauſtics and Aſtringents.

It may poſſibly be thought, that what we call Aſtringents are only Medicines of an emplaſtic Nature, or ſo many Plaiſters which ſhut up the Mouths of the open Veſſels; but Mr. *Petit*, the Phyſician, has, by a conſiderable Number of Experiments, convinc'd himſelf, that they are real Aſtringents; and that they conſtrict the ſeveral Orifices to which they are apply'd. They conſtrict theſe Orifices, by abſorbing the Fluid contain'd in them; which being done, the Sides of the emptied Veſſels, by their natural Spring, approach each other; which they can do ſo perfectly, as even to come into immediate Contact, and thereby ſtop up the Mouths of the weeping Veſſels.

This will appear to be an inconteſtable Truth, if Aſtringents, apply'd to Pieces of Fleſh, leſſen their Bulks; but 'tis certain, that they have leſſened their Bulk, if they have diminiſhed their Weight. This Mr. *Petit* found by all his Experiments, excepting a few trivial Circumſtances, which we ſhall not diſſemble, and which even confirm the general Reaſoning. He always took the ſame Quantity of Beef or Mutton, that is, ſixteen Drams, which he put into different Aſtringents, ſo as to cover the Whole of it. He always ſuffer'd it to remain in the Aſtringent for four Days in a pretty hot Summer. Every Evening he took it out a little in order to weigh it, but put it in again as ſoon as ever he had done, and by the Sum total of the four different Weighings, he found how much the ſixteen Drams had loſt.

Thoſe Aſtringents, which in equal Times diminiſh moſt of the Weight of equal Quantities of Fleſh, are inconteſtably the ſtrongeſt, becauſe they have abſorb'd more of its Moiſture, dry'd it more thoroughly, and render'd its Spring much ſtronger. Beſides, by conſidering what their Effects have been, whether greater or leſs, during every one of the four Days their Action laſted, we may be enabled to form a Judgment of the Quickneſs or Slowneſs of this Action.

There is ſtill a Circumſtance of Importance to be adverted to, and that is the Corruption or Non-corruption of the Fleſh, which is to be judg'd of by its Smell. The Corruption proceeds from a Diſunion of the Principles, which form'd the Particles, or minute conſtituent Parts of the Fleſh. Humidity favours this Diſunion; Drying and Conſtriction are oppoſite to it. Hence it plainly follows, that a good Aſtringent ought to leave the Fleſh, if poſſible, dry, and without a diſagreeable Smell.

There are Aſtringents of three Kinds; Earths, as the *Boles*, *ſeal'd Earth*, *Plaiſter of Paris*, and *Lime*. Secondly, The Juices of Plants, or Gums and Reſins, as the Juice of *Aloes*, and of the *Egyptian Thorn*, *Storax*, *Benjamin*, and *Gum Arabic*. Thirdly, Salts, as *Sea-ſalt*, *Alum*, and *the Vitriols*. We may add to theſe a fourth Sort, with which the Animal Kingdom ſupplies us, as the Spider's Web, Crabs Eyes, and others of the like kind. Upon all theſe Sorts of Aſtringents Experiments were made by Mr. *Petit*, and their Effects compar'd in a large Detail, of which we ſhall only mention the general Reſult.

All Aſtringents commonly act more forcibly during the two firſt Days, than they do on the two following ones; and more on the very firſt, than on the ſecond Day. Their Action is generally diminiſhed, rather than increas'd, by Time.

The ſtrongeſt of the earthy Aſtringents took only five Drams from the ſixteen Drams of Fleſh.

They always leave it with ſome Degree of a diſagreeable Smell, which is ſtill leſſen'd in proportion to the Weight they have diminiſhed, or, which amounts to the ſame, the Quantity of Humidity they have abſorb'd.

Vegetable Aſtringents are generally more ſtrong than thoſe of the earthy kind. A Gall abſorb'd ſix Drams and nineteen Grains of the Humidity, without leaving any bad Smell about the

the Fleſh; a Caſe not very common with this Species of Aſtringents.

All Gums are great Aſtringents.

Saline Aſtringents have generally no more Force than the beſt of the Vegetable Kind; but yet ſurpaſs them in point of Goodneſs; that is, tho' they abſorb no more Humidity, yet they more effectually preſerve the Fleſh from Corruption, and ſcarce ever leave it ill-ſmel'd. Practice has alſo added her Sanction, and declar'd in Favour of Vitriol.

Theſe ſaline Aſtringents have a Property peculiar to themſelves, which ſeems oppoſite to the Properties of all other Aſtringents; for they often augment, rather than diminiſh, the Weight of Fleſh; but it is to be remember'd, that this only happens during the laſt Days, and that they always begin to act by diminiſhing the Weight. After they have abſorb'd a Part of the Moiſture of the Fleſh, this Moiſture, with which they are impregnated, diſſolves ſome of their Salts; and theſe Salts, being put into Motion, and ſupported by this Vehicle, enter the Fleſh, join with it, and augment its Weight. Every body knows that Salts prevent Corruption; thus theſe ſaline Aſtringents, not only dry the Fleſh like other Aſtringents, by drawing forth its Moiſture, but they likewiſe embalm it, as it were, with a foreign Matter; but they neceſſarily require a certain Time before they can furniſh that Matter, after which it is eaſy to ſee what will happen, according as they ſhall yield more or leſs Moiſture than they abſorb'd.

We may alſo perceive, that this Accident cannot happen, but when the Salts are not much entangled, but are diſpos'd to a free and eaſy Diſengagement of themſelves; for we have not here a Principle ſufficient for a ſtrong Action, ſince we have only the Moiſture of the Fleſh, and of a Fleſh too that is deſtitute of Life. The ſame Aſtringents would act much more forcibly upon the Parts of a living Animal, which are animated and actuated by their natural Degree of Heat.

Acid Spirits, ſuch as thoſe of Salt and Nitre, Oil of Vitriol, for Mr. *Petit*'s Curioſity led him to try every thing, would in a manner boil Fleſh, and reduce it to a Paſte, if they were us'd pure, and without Moiſture: They muſt, therefore, be lower'd and weaken'd by a great deal of Water, and then they are obſerv'd to augment the Weight of the Fleſh.

As to Cauſtics, when Fire is apply'd to the open Extremity of a Veſſel, its Sides, as ſoon as they feel it, retire, ſhrivel inwards, approach ſo near each other, as to come into Contact, and by that means ſtop up the Veſſel. The external Parts of theſe Sides, which ſuffer the Action of the Fire, feel its greateſt Force, becauſe they are moſt expos'd to it; by which means their Texture is totally alter'd, their Fibres deſtroy'd or confounded to ſuch a Degree, as that they are now no more than a kind of ſhapeleſs Callus, which has no Connection with the animal Life; a dead Fleſh, which, being independent of every other Part, very ſoon falls off of itſelf, and is call'd an *Eſchar*.

Hot Iron, melted Lead, and boiling Oil, may be employ'd; but, as they are very painful, other Subſtances have been found out, which produce the ſame Effect, but in a milder way; becauſe, without being actually made hot, they contain a latent Fire, which will in time diſplay itſelf. Theſe are call'd potential Cauteries, in Contradiſtinction to thoſe of the actual Kind. *Oil of Vitriol*, *Spirit of Nitre*, and *Aqua Regia*, are potential Cauſtics in a liquid, and the Lapis Infernalis is one in a ſolid Form.

The ſubtile or ethereal Matter, or, as other Naturaliſts call it, the Matter of the Fire, makes up all Cauſtics, as well actual as potential, but with this Difference, that in the potential ones, which are originally made by Fire, the Fire for the moſt part cuts out certain Paſſages and Roads for itſelf, which it again takes as ſoon as it is agitated, and put in Motion: Whereas, in Cauteries of the actual Kind, the Fire does not make itſelf Roads or Paſſages which remain; for which Reaſon, when they are cold, they retain no Traces of the former Action of the Fire, and can only produce their Effects when they are hot or burning.

The natural Heat of any living Part, to which a potential Cauſtic is apply'd, join'd to its Humidity or Moiſture, diſſolves and puts in Motion the active Salts of the Cauſtic. The ethereal Matter which had heretofore lain in a manner dormant, begins to circulate with all its Vigour, in the Roads which it had before ſtruck out for itſelf; and thus becomes equivalent to an actual Fire, without the ſame Exceſs of Impetuoſity.

It is a Confirmation of this Theory, that potential Cauſtics do not act forcibly enough upon dead Bodies to produce that Eſchar, which is their laſt Effect upon living Bodies. Carcaſes retain no longer that Degree of Heat which is neceſſary to produce a great Motion in Cauſtics. *Van Helmont* was the firſt who aſſerted this Fact, which Mr. *Petit* afterwards proved by Experiments, which ſet it in a fairer and more open Light.

He diſtinguiſhes potential Cauteries into three Sorts. The firſt act only on Fleſh when the Skin is taken off from it. The ſecond on both Skin and Fleſh. The third upon the Skin only. The two firſt are *Eſcharotics*, or induce an *Eſchar*; the third produces no ſuch Effect. *Hungarian* or Cyprus Vitriol, Arſenic, corroſive Sublimate, *&c.* are of the firſt Kind. Aqua Regia, Oil of Vitriol, Lapis Infernalis, *&c.* belong to the ſecond Claſs. Theſe, in fine, of the third and laſt Sort, of which Cantharides are the moſt us'd, deſerve only the Name of *Veſicatories*, on account of the Bladders or Veſicles they raiſe on the Skin. They rarefy both the Lymph and Air contain'd in thoſe little Veſſels of the Skin, whoſe Orifices terminate at the Epidermis, or Scarf Skin, which covers them. This violent Rarefaction raiſes the Epidermis, under which a Cavity is form'd, which is forthwith fill'd with dilated Air, and the Lymph pour'd forth from thoſe little Veſſels which are now burſt aſunder. The Epidermis, or Scarf Skin, being ſeparated from the true Skin, ſoon becomes dry, and eaſily comes off, which is equivalent and analogous to Eſchars produc'd by other Cauſtics. *Hiſt. de l'Acad. Royale*, *A.* 1732.

Potential Cauſtics are diſtinguiſh'd from one another, not only by their Salts, which are more or leſs acute, and conſequently do more or leſs, more ſpeedily or ſlowly, penetrate and diſſolve the Texture of the Solids, but alſo with reſpect to the Nature of the Salt, which in Solution acts upon the Humours, either by condenſing or diſſolving them; to ſay nothing of the Quantity in which Cauſtics of this Kind are apply'd, tho' the greater their Quantity, the longer they continue their Action, and the more they extend it both in Breadth and Depth, till all the ſaline Subſtance be perfectly diſſolved, and ſufficiently diluted, by the Humours of the Veſſels, or become abſolutely inert; for it is to be obſerv'd, that ſolid Cauſtics act more ſlowly, but longer, than liquid. *Ettmuller*, *Tom.* 2. ſays, "That potential Cau-"teries are diſtinguiſh'd, with reſpect to the Nature of their "corroſive Salts, into alcaline and acid. To the firſt belong "all lixivial acrimonious Salts, and among theſe, in a more "particular manner, the coagulated Salt, obtain'd from the "Lixivium of Soap-boilers; as alſo thoſe Salts, which, beſides "other Subſtances, have quick Lime for an Ingredient. This "Species of Salt, preſerv'd in a warm and dry Place, that it "may not be diſſolv'd by the Moiſture of the Air, is highly "extol'd by *Ludovici*, who informs us, that no Cautery is "either more ſafe or efficacious. Theſe alcaline Cauteries, "however, are not ſo properly and commodiouſly us'd, be-"cauſe, by their Diſſolution, they putrify the Part to which "they are applied, and ſoon after produce a black Spot, and "a fetid Cruſt, reſembling a beginning Gangrene. Acid "Salts, on the contrary, more or leſs concentrated, operate "more ſpeedily, ſince they only corrode, and by corroding "wound the Part more deadly: Hence they induce firſt a red, "and then a white Eſchar. But, among theſe Acids, the "moſt conſiderable is Silver diſſolv'd in Aqua-fortis, which, "by Inſpiſſation alone, yields a Powder of a whitiſh dark Co-"lour, call'd *Lapis Infernalis*, of which the Bulk of a com-"mon Pea is to be laid on the Part to be cauteris'd, apply-"ing a Plaiſter over it. Thus this Powder, in conſequence "of the Aqua-fortis, concentrated in it, begins to operate "like the Biting of Fleas. This ſame Powder is to be uſed "for the fungous Excreſcencies of Ulcers, which it mortifies "and corrodes. The beſt Cautery, next to this, is Butter of "Antimony, incloſed in the Cavity of a Quill." *Elias Camerarius*, in *Eph. N. C. D.* 3. *a.* 5. *o.* 212. orders the Lapis Infernalis to be prepar'd in the ſame manner directed by *Ettmuller*. The *Emplaſtrum Cauſticum Andromachi* is the Lixivium of Soap-boilers, with the excorticated Grains of Rice and Wheat diſſolv'd in it. *Heurnius* beſtows uncommon Praiſes on his Cautery, made of a Lixivium of Soap alone, boil'd into a black Subſtance, and then calcin'd into a Stone. In order to make the Mineral Cauſtic of *Angelus Sala*.

> Take of the ſtrongeſt Aqua-fortis four Ounces, and of the Oil of Vitriol one Ounce, place them in a Matraſs in Balneo Mariæ, and diſtil off the Phlegm; add of ſublimate Mercury, or Sal-ammoniac, two Drams. The Solution obtain'd is to be kept in a well-ſtopt Phial for Uſe.

This Preparation is ſaid to be a Specific againſt peſtilential Tumors, Cancers, callous Fiſtulas, Gangrenes, and all fungous Excreſcencies of the Fleſh. It is to be applied upon a Pledget, and where 'tis neceſſary, a defenſative Plaiſter muſt be laid round it. It is commended, becauſe it quickly, and without great Pain, produces a ſoft and eaſily ſeparable Eſchar. *Tenzelius* thinks the arſenical Magnet deſerves the ſame, if not greater Encomiums, becauſe it operates without producing an Inflammation or painful Corroſion; and that, for this Reaſon, it is highly proper for Patients of Diſtinction, or of a delicate Turn. But, according to *Bartholine*, the Cauteries prepar'd of ſublimate Mercury are highly dangerous, and produce Inflammations and Pains of the Parts, ſo that in the Hands of a great many Surgeons they produce terrible Effects, unleſs when corrected with Camphire. The ſame Author, in his *Hiſtoriæ Anatomicæ*, *Cent.* 5 *Hiſt.* 36. informs us, that the *Daniſh* Surgeons

geons think the Aſhes of the *Fraxinus*, or common Aſh-tree, a highly ſafe Ingredient in their Cauteries. Theſe Aſhes they prepare in the following manner:

Removing the external rough Bark, they take the middle Bark, which, when cut in Pieces, they dry and burn. The Aſhes, when paſs'd thro' a Sierce, they put into a ſmall Bag of worn Linen Cloth, which they immerſe in warm Water till it is thoroughly warm: After this the Bag is immediately applied to the deſtin'd Part, and cover'd with Plaiſters.

The Operation is ended in the Space of four or five Hours; and the Eſchar falls off in as many Days. No Pain, nor any other Symptoms, are produced. But this Cautery is attended with two Diſadvantages; the one is, that the Bark ought always to be recent; and the other is, that it diſſolves and ſpreads far. A Cautery, prepar'd of Aqua-fortis and Orpiment, is ſo efficacious and commodious, that I have been ſurpris'd, ſays *Bartholine*, at its Operation. Quick-lime alſo, when it can be had, operates as a Cauſtic, if it is mix'd with Soap, and included in a perforated Piece of Leather. They who deſire a Cauſtic in a dry Form, may commodiouſly uſe one prepared of a Piece of Silver, diſſolved in Aqua-fortis, and evaporated in a proper Veſſel over a Fire. Other Cauteries conſiſt of common Coal; but the Pain, attending the Uſe of theſe, is to be dreaded. *Bartholine*'s potential Cautery, which acts ſpeedily, and without any conſiderable Pain, is, in his *Ciſta Medica Hafnienſis*, order'd to be prepared in the following manner:

Take of white Tartar, calcin'd, one Part; of the Aſhes obtain'd from the Stalks, Trunk, and Knots of the Oak, each two Parts: Diſſolve them in a ſufficient Quantity of the Lixivium of black Soap, and make into a Stone, according to Art.

Barbette, in his *Surgery*, extols his Cautery, which operates without exciting any Pain, and which is prepared in the following manner:

Take of crude Sulphur, white Arſenic, and crude Antimony, each two Ounces: To the Sulphur, melted by itſelf over a gentle Fire, and ſtir'd with a Spatula, add the Antimony and Arſenic, reduced to a Powder. Let them be mix'd till they incorporate with the Sulphur, and become red. Then take of this Mixture, one Ounce; and of the Caput Mortuum of Vitriol, half an Ounce: Mix up into a Powder, to be ſix times waſh'd with Spirit of Wine, and dry'd for Uſe.

According to *Hoffman*, in his Annotations on *Poterius*, the beſt and ſafeſt potential Cautery is the Infernal Stone. Liquid Cauteries, ſuch as the Butter of Antimony, and concentrated Spirit of Vitriol, operate leſs ſucceſsfully, by reaſon of their diffuſing themſelves unequally. So various are the Materials of potential Cauteries, and the Methods of compoſing them ſo different, that it is no Wonder, if many, obſerving the happy Effects of their own Compoſitions, keep them as Secrets to themſelves; ſince human Nature has, in all Ages, been ſo mercenary, that Men keep the Arts, in which they excel others, as ſo many Myſteries. There are various Forms of potential Cauteries, exhibited under different Titles, in the ſeveral Diſpenſatories; but theſe we ſhall not here enumerate, becauſe any one may have recourſe to them at Pleaſure.

The celebrated *Heiſter*, in his Surgery, gives Directions for making an excellent cauſtic Stone, in the following manner:

Take of Pot-aſh, and the ſtrongeſt Quick-lime, equal Quantities, of each, for Inſtance, ſix Ounces; or, of Pot-aſh, one Pound, and of Quick-lime, ſix Ounces; which, when pounded ſeparately, are to be mix'd. Then, putting them in a large Glaſs or Pot, a large Quantity of Water is to be pour'd upon them; and they are to ſtand for an Hour or two, till they are ſufficiently incorporated with each other: Then what is colliquated is to be ſeparated from the ſubſiding Maſs, ſtrain'd thro' a Linen Cloth, and condenſed in an Iron Veſſel over a Fire. After which this conſiſtent Maſs, being put into a Crucible, is to be fuſed over a briſk Fire, till it aſſumes the Conſiſtence of Oil. Then it is to be pour'd into a Veſſel or Mortar; and, before it is entirely cold, it is either to be cut in Pieces, or broken, and kept for Uſe, in a cloſe ſtopt Glaſs, in a dry Place.

From this Glaſs we take what is ſufficient for opening an Abſceſs, and apply it either whole, or groſly pounded in a Mortar, ſecuring it on the Part affected. If any moiſt Subſtance is laid upon the Cauſtic, it generally operates, and corrodes the ſubjacent Parts ſooner, in the Space of an Hour or two, for Inſtance; but, when it becomes old, it generally loſes its corroſive Quality. *Albucaſis*, in the firſt Part of his Surgery, and the forty-third Chapter *de Methodo Cauterizandi in Sciatica*, orders a potential Cauſtic in a liquid Form, under the Name of a *Sharp Water*, to be prepared in the following manner:

Take of Alcali, or the fix'd Salts of Kali, and of unſlaked Lime, each equal Parts: Triturate both, and put them in a new Pot, whoſe inferior Part is perforated with a ſmall Hole; then place under the Bottom of the Pot another glaz'd Pot, and pour upon the Alcali and Lime as much freſh Water as may riſe a Digit above them: Then compreſs them well with your Hand, and leave the Pot till the *Sharp Water* be deſcended into the lower Part of the glaz'd Pot. After this, take and pour all the Water upon more Lime, and let it diſtil anew. By this means you will obtain a Water of a very ſtrong Sharpneſs, of Uſe in many Operations of Medicine, and in cauteriſing of Amputations.

The *Cauſticum Holoſericum*, in the *Pharmacopœia Bruxellenſis*, is prepared of

Aſhes of the Stalks and Pods of Beans, and Aſhes of the Wood of Oak, of each one Pound and a half; Pot-aſh, half a Pound; Quick-lime, two Pounds; and Roch-alum, two Ounces: Mix the Aſhes and Pot-aſh, and put them into a large glazed Veſſel, full of clear River Water, in which ſlake the Lime. Let them macerate for two Days, ſtirring them now-and-then with a Stick, that the Lixivium may be the more acrid; and then add the Roch-alum pulverized: This being diſſolved, ſtrain it thro' a Linen Cloth ſo often till it be ſufficiently clarify'd. Boil this Lixivium in a glaz'd earthen Pot, over a pretty large Fire of Coals, continually ſtirring it, till the Humidity of the Water be almoſt evaporated: Towards the End, let the Fire be ſuffer'd to decay, till the Lixivium concretes into a ſaline Paſte, which is to be made into little Balls, of the Bigneſs of a Lentil or Pea, to be uſed in cauteriſing: Let them be repoſited in a warm Place, in a Glaſs Veſſel, well ſtopp'd, that the Air may not melt them.

The Cauterium ὁλοσηρικὸν (*Holoſericum*) of St. *Ambroſe*, as it is call'd, in *Bauderon*'s *Pharmacopœia*, is made of Aſhes of the Stalks and Pods of Beans, and Aſhes of the Wood of Oak, each three Pounds; with four Pounds of Quick-lime. Theſe two laſt Cauteries take their Name (*Holoſericum*, purely ſilken) from the Gentleneſs of their Operation, which is ſaid to be almoſt without Pain; whence alſo they are call'd, in *French*, *Cauteres de Velours*, "Velvet Cauteries." One like theſe, according to *Cardan*, quoted by *Schottus* in his *Focoſeria*, is made of a very ſtrong ſaponaceous Lixivium, Quick-lime, and Oak-aſhes, with an Addition of Vitriol. *See Cardan de Subtilitate, Lib. 7.* How to prepare one with leſs Trouble, call'd the *Indolent Cautery* of *Platerus*, of only a ſaponaceous Lixivium and Quick-lime, ſee under CALX. It is a great Queſtion, ſays *Wedelius*, in his *Medicamentorum Facultates*, whether there be an indolent Cautery; and, comparatively ſpeaking, it may be anſwer'd in the Affirmative; for Cauteries which are of an active Quality, and ſpeedily corrupt the Part, excite little or no Pain; ſuch is a Cautery of Cryſtals of Silver, prepared with Aqua-fortis. We experience the ſame thing in our Bodies, not only externally in a Gangrene and Sphacelus, where, on the Principles of Mechanics, we may very rationally ſuppoſe the Action of ſome ſuch cauſtic and corroſive Salt; but alſo internally, in the indolent Dyſentery, where there is a ſudden Acceſſion of Acrimony to ſo high a Degree, as to cauſe a total Deprivation of Senſe, in which Caſe nothing but abſolute Death can be expected.

The Lunar Cauſtic is in the *Edinburgh Diſpenſatory*, and, by *Boerhaave*, call'd *Lapis Infernalis*; for the Preparation of which ſee the Article ARGENTUM. But the *Lapis Infernalis*, or *Septicus* of the *London Diſpenſatory*, is a very different Thing, and order'd to be thus prepared:

Let the ſtrong Lixivium, which is uſed in making Soap, be boil'd in a Pan to the Hardneſs of a Stone; taking care, however, that all the Liquid does not exhale, and dry away: When it is cold, cut it in ſmall Pieces, and keep it in a Glaſs, cloſe ſtopt, for Uſe.

Another Way of making the *Lapis Infernalis* is this:

Take of Vitriol, calcined to Redneſs, two Ounces; of Sal Ammoniac, one Ounce; of Tartar, calcined to a Whiteneſs, and Quick-lime, each three Ounces: When they have been melted together, pour upon them the Lixivium of Fig-tree, Spurge, or Soap-lees, and paſs it thro' them till almoſt all the Matter is waſh'd away with it. Let the ſtrain'd

ſtrain'd Liquor be boil'd, in an earthen Veſſel, to a Conſumption of its Humidity; and what is left be put into a Glaſs, well ſtopp'd, to be kept for Uſe. *London Diſpenſatory.*

Boerhaave's Method of preparing the *Lapis Septicus*, or Potential Cautery, is ſomewhat more diſtinct.

Take Lime, made of burnt Stones, that is quite freſh, very dry, ſolid, not affected by any Moiſture, nor as yet cleft aſunder; of this put one Part into a clean Iron Pot, and lay upon it two Parts of the pureſt Pot-aſh; in ſuch a manner, that the Lime may be cover'd all over with this Alcali. Let theſe be then left together in the Pot, with a Cloth flung over them, till the Lime begins to crack, and ſplit aſunder. When you obſerve this, add four times their Weight of Water, and boil them for the Space of one or two Hours. When the Fœces are ſubſided, pour off the Liquor, and let it be ſtrain'd thro' *Hippocrates*'s Sleeve, made of thick Linen Cloth, till it at laſt paſſes thro' as limpid as pure Water. Put this Lixivium into a large Iron Ladle over the Fire, and, taking care that it don't boil over, evaporate it till it becomes perfectly dry. Then increaſe your Fire till the Ladle grows red-hot, and, as ſoon as ever the Salt has done ſmoking, it will melt. When it is in this State, pour it out upon a hot Braſs Plate; and, whilſt the Matter continues very ſoft, make it ſmooth, and cut it into ſuch Pieces as are fit for chirurgical Uſes. Let theſe be put into a very dry, hot, ſtrong Glaſs Bottle, by the Fire-ſide, and inſtantly ſtop it with a choice dry Cork: Let the Mouth of the Bottle be then dipt in melted Pitch, and be very accurately ſecured, that no Moiſture may poſſibly get thro' it, which is attracted by the Alcali, prepared in this Manner, with an incredible Power, even thro' Corks and Bladders: But, if you obſerve theſe Cautions, it may be kept pure for Years. When you want to take a Bit out for Uſe, it muſt be done in a dry hot Air, or near a good Fire, and then the Bottle muſt be immediately ſtopt again, as before.

REMARKS.

1. This Salt, from the truly igneous Virtue of the Lime attracted into the fix'd igneous Alcali, acquires a moſt acute and quick corroding Power, which was neither in the Alcali nor the Lime, when they were ſeparate. The Acrimony of it exceeds that of all other Salts hitherto known; for if you cut a round Hole in a ſticking Plaiſter, and apply this to the human Body, and then put a Bit of this Salt upon the Skin in the Vacuity, and cover it over with another Plaiſter, that it may not fall off, it will, in a very ſhort time, conſume the Skin, and the Membrana Adipoſa; and hence it is valued by the Surgeons, for what they call their Potential Cautery, above all others.
2. If almoſt any Parts of Animals are thrown into a freſh Lixivium of this Salt, whilſt it is boiling, they will, in a ſhort time, be converted into a liquid Matter; as will likewiſe moſt vegetable Subſtances, and the Sulphurs of Foſſils. A poor Man, unfortunately falling into a boiling Copper of ſuch a Lixivium, had his Clothes, and all the ſoft Parts of his Body, conſumed, ſo that there was found nothing of him left, but his Bones: Hence this Lixivium is of incomparable Service, where the Parts are gangrenous to a great Depth, and almoſt ſphacelated, as it diſpoſes them to a happy Separation; but it requires the prudent Application of a ſkilful Surgeon.
3. This Salt melts with a pretty moderate Fire, and then it runs like Wax. By this eaſy Fuſion, therefore, it is capable, without the Aſſiſtance of an intenſe Fire, of diſſolving a great many Bodies, which, otherwiſe, are not diſſolved without Difficulty, as Myrrh, Gum Sandarach, and others. The antient Chymiſts wrote a great deal about the Art of making Alcalis melt in the Fire like Wax; and hence they called the Operation *Ineration*. Might they not mean the Proceſs we have juſt now deſcrib'd? Certainly the Salt, produced by it, has this Property.
4. If Lime is firſt ſlaked, or extinguiſh'd, either in the Air, or with Water, as almoſt all old Lime is, or is converted into a fine Powder; then, if it is thus managed with a fix'd Alcali, it will not produce this acrid Kind of Salt. This Salt, when it is once melted in the Air, or is kept by a good while, not carefully ſtopt, loſes this ſingular Virtue; and then it depoſits a large Quantity of inactive ſtony Fœces, which did not appear before: Hence, therefore, we learn, that Fire communicates to inert Stone, and Shells of Fiſh, an Acrimony, that is not eaſily procurable in any other manner. When a native vegetable Salt, therefore, from a natural, ſoft, ſaponaceous one, is converted into a fix'd Alcali, does it not acquire this Acrimony from the Fire?
5. The Salt, thus prepared, obtains this ſingular Property, that it becomes vaſtly diſpoſed to a Union with the expreſs'd and diſtil'd Oils both of Vegetables and Animals, and thus to form a Soap. And this ſeems to ariſe from its being render'd ſo exceedingly penetrating, that it becomes capable of intimately dividing theſe Oils, and uniting with them, which, without the Aſſiſtance of this ſharp Lime, can ſcarcely be effected conveniently: Nor, without the Lime, would the Alcali run ſo eaſily in the Fire; for that melts with a great deal of Difficulty.

The Uſe of Cauteries, eſpecially actual ones, is of very great Antiquity, as we may learn from *Hippocrates*, who relates, that, among the *Scythian Nomades*, may be found many burnt in their Shoulders, Arms, Wriſts, Breaſts, Hips, and Loins; that, living in a flat Country, abounding with Meadows, in a humid Air, and drinking the Water of diſſolved Ice and Snow, and, beſides, uſing no bodily Exerciſe, they become unable to bend a Bow, or throw a Dart, by reaſon of the Weakneſs of their Shoulders, occaſion'd by an Exceſs of Moiſture; but after they are burnt, and the Joints by that means freed from their ſuperfluous Humidity, they grow more robuſt in Body, and ſtronger and more pliable in their Joints. We read, in the ſame Author, that it is cuſtomary for the Wives of the *Scythian Sarmatæ*, who live about the Lake *Mæotis*, to burn off the Right Breaſt of their Female Infants with a Copper Inſtrument, heated in the Fire; leſt it ſhould be a Hindrance to them, when adult, and engaging with the Enemy on Horſeback, in drawing the Bow, and throwing the Dart. *See* Hippocrates *of Air, Water, and Situations, under our Article* AER. What *Herodotus* relates of the *Libyans*, a Nation of *Africa*, is alſo worthy of Obſervation. The *Libyans*, he ſays, who live by feeding of Cattle, have a Cuſtom, whether obſerved by all or moſt of them I am not certain, which is to burn the Veins on the Crown of the Head of their Sons, when four Years old, with greaſy Wool: Some burn the Veins of the Temples. The Reaſon they give for this Practice is to prevent Defluxions of Phlegm from the Head; and they attribute their healthful and ſound Conſtitutions to the Obſervation of this Cuſtom; and, indeed, the *Libyans* are, of all People that are known to us, the ſoundeſt in their Bodies. If the Boys be ſeiz'd with Convulſions, under the Operation, they have found out a Remedy for them, which is, to ſprinkle on them the Urine of a Goat. *Herodotus, Lib.* 4. *Helmont*, therefore, ſeems to be in the right, when he ſays, that Catarrhs invented Cauteries; but he is miſtaken, when he ſubjoins, that Cauteries were an Invention of the Schools of Phyſicians, ſaying, "What God has "made entire, that it might be in its beſt and moſt perfect "State, Phyſicians have attempted to rectify by inflicting "Wounds, and keeping them open; ſo that to be often "wounded, and to preſerve a Diſſolution of the Continuity of "Parts, is a Precept for Health among the Schools. It is a "Wonder, that Phyſicians have not preſcrib'd Wounding as "one Means of Health, as well as Cauteries, which are con"ſtant and durable Wounds." Among the *Turks* and *Arabians*, when they are affected with a Pain of the Head, or a Defluxion upon any Part of the Body, they cauteriſe with a hot Iron, Tinder, or burning a Linen Cloth, without conſulting a Phyſician, as we are inform'd by *Belon* in his Obſervations, and in *Thevenot*'s Travels. It was an uſual Practice in *Egypt*, among the *Egyptians*, and eſpecially the *Arabian* Horſemen, who lived in Tents, and others who inhabited the Deſerts, in the Time of *Proſper Alpinus*, as himſelf obſerves in his *Medicina Ægyptiorum*, to apply a Cautery for the Cure of various Diſeaſes. You may ſee Multitudes, he ſays, who ſhew, by their Eſchars, that they have been cauteriſed in many Places; as, for Inſtance, in ſeveral Parts of the Head, as the Sinciput, Occiput, and other Parts, on the Temples, behind the Ears, on the Neck, Breaſt, Sides, Hypochondria, under the Navel, on the Spine of the Back, and the Articulations of the Arms, Hands, Legs, and Feet. And he aſſures us, that all the Inhabitants of that Country regard Burning as a choice Secret in the Cure of many Diſeaſes, which reſiſt other Remedies. But they make no Uſe, he ſays, of Iron, Gold, or any other heated Metal, or Box-wood, for this Purpoſe, but Cotton, or Linen Cloth, ſet on Fire. Thus, when they intend to cauteriſe any Part of the Body, they take a Piece of Linen, a Cubit long, and three Fingers in Breadth, and a due Quantity of Cotton, which they roll up in the Linen, and tie with a ſilken Thread, in the Shape of a Pyramid, the broad End or Baſe of which they apply to the Place which is to be cauteriſed, taking care that it ſhall adhere well to the Skin: They then ſet Fire to the Head, or leſſer Extremity, and ſuffer it to burn till the Linen and Cotton be totally conſumed, continually touching the Fleſh round about with Iron, all the while the Skin is burning, in order to prevent an Inflammation from the Heat; obſerving alſo, in the making up of this pyramidal Maſs, to leave a Hole or Paſſage in the Middle, for the ſake of ventilating the Fire: After Burning, they apply Marrow of Bones to the Place till the Eſchar falls off. The Uſe of this

Remedy

Remedy is very common in this Country, for many Sorts of inveterate Pains in the Knees, and other Joints and Parts of the Body, which owed their Riſe to a Defluxion of cold Humours, or a ſimple cold Diſtemperature, or a flatulent Spirit, either generated in the Part itſelf, or tranſlated thither from elſewhere. This Way of Burning or Cauteriſing cures theſe inveterate Pains, corrects every Imbecillity of the Parts, diſſolves groſs Humours, diſcuſſes Flatulencies, heats the Joints, and, by potently drying, corroborates them. It is no Wonder, then, that they uſe this Remedy with good Succeſs, in all obſtinate Pains of the Joints, and eſpecially in the Sciatica; in which Caſe they cauteriſe often not only upon the Joint, but alſo upon the Thigh. It is of no leſs Service in the Gout in the Feet or Hands, before the Generation of Tophi; for they cauteriſe the Joints, and the incumbent Veins, when the Pain ſeizes the Joint of the great Toe; and cauteriſe the Joint between the Thumb and fore Finger, by which means the Paſſages are render'd too narrow for the Flux of the Humours to the infirm Joints, and conſequently the Patient is leſs ſubject to the Gout. Thus the *Egyptians*, by cauteriſing, correct the Laxneſs and Debility of the Joints, and procure Strength to them, by which they are enabled to reſiſt the Influx of the Humours: Cauteriſing, therefore, is a moſt approved Remedy to be applied to all Parts, which are affected with Defluxions of Humours. But it is the Cuſtom to cauteriſe not only the Parts moleſted with a Defluxion, but alſo the Parts from which the Humours are tranſmitted; for which Reaſon they uſe frequent Cauteriſings of the Head, in all Defluxions or Diſtillations, as they are call'd, from that Part upon the Breaſt or Lungs, cauteriſing the Sinciput, the Crown of the Head, the Occiput, and behind both Ears. They practiſe the ſame in long-continued Lippitudes, and other inveterate Diſtempers of the Eyes, in Epilepſies, Palſies, Apoplexies, Vertigos, Madneſs, Stuffings of the Head, Stupor, Decay of Reaſon, and immoderate Sleep. They cauteriſe the Temples under violent Pains of the Eyes, Ears, and Teeth, occaſion'd, as they ſuppoſe, by Diſtillations from the Head. They cure periodical Pains of the Teeth, with Laxneſs and Putrefaction of the Gums and Teeth, by Cauteries, applying them both to the Parts whence the Humours are tranſmitted, and to thoſe which, by their Weakneſs, are diſpos'd for their Reception. For this Reaſon they find cauteriſing the Breaſt to be of Service in an Aſthma proceeding from cold, groſs, and viſcous Humours moleſting and clogging the Lungs and Aſpera Arteria; and for ſuch Patients as are affected with malignant Diſtillations from the Head upon the Thorax, or Spitting of Blood, from an Eroſion of ſome Vein by the ſame Humours, they cauteriſe both the Head and Breaſt; for thoſe who labour under a Phthiſis and Suppuration, whence they are call'd *Empyi*, they only cauteriſe ſome Parts of the Breaſt. Many, labouring under a Suppuration, have been reſtor'd to Health by three or five Applications of the Cautery to the Breaſt and Back; for the Pus continually diſcharged itſelf by the Wounds till it was all evacuated; and this Method is none of the moſt dangerous, becauſe the Pus is diſcharged ſlowly and inſenſibly. *Dominicus a Rege*, aged forty Years, living in *Cairo*, was affected many Years with a troubleſome Aſthma, and had try'd a Multitude of Remedies to no Purpoſe; at length, being almoſt exhauſted, and coming into a Conſumption, he reſolv'd, as his laſt Refuge, to have recourſe to the *Egyptian* Remedy of cauteriſing the Breaſt with a triple Cautery: After the Operation, he kept the Ulcers open for a conſiderable time, and, by that means, recover'd his Health. They uſe the ſame Remedy for a cold and moiſt Stomach, which is moleſted with Flatulencies, and a Defluxion of Humours: They cauteriſe alſo very ſucceſsfully in caſe of an indurated and refrigerated Liver and Spleen. In a Dropſy they cauteriſe in many Parts, particularly in three Places under the Navel, keeping the Ulcers open, that the Water may diſcharge itſelf that Way; others apply a Cautery to the Stomach, Spleen, and Liver, as well as under the Navel. In moſt Caſes they uſe Cauteriſing as aforeſaid; tho' they often apply alſo Corroſives, or potential Cauteries, ſome uſing them under the Ankle-bones, others above the Knee, both on the Inſide and Outſide, keeping the Ulcers open for ſome time. Some cauteriſe or veſicate the Legs in the ſame manner, and from the Veſicles produce Ulcers, by which they gradually make a thorough Evacuation of the Water.

By this manifold Cauteriſing they cure the Aſcites, with the Hernia aquoſa and carnoſa. In hydropical Caſes it cannot ſeem ſtrange, that the Patient ſhould receive Benefit from Cauteries, both actually and potentially drying, becauſe the Water is, by ſuch means, conſum'd; but I have often ſeen the Hernia carnoſa cur'd by them, as well as all ſorts of cold œdematous and ſcirrhous Tumors; and I am aſſur'd, that even a Scirrhus, which is generated of groſs Phlegm, is remov'd by the ſame Remedy. In Pains of the Back, Loins, Neck, and of all the Joints, the common Remedy is a Cautery, apply'd to the Spine of the Back, Loins, Neck, or other Parts where the Pain is ſeated. For Swellings, proceeding from crude and pituitous Humours, a Cautery is their chief Remedy; which they aſſert alſo to be proper for the Poor, becauſe it is a ſpeedy Cure for many Diſeaſes. To conclude, Burning or Cauteriſing is the boaſted Remedy of theſe People, which they prefer, before many others, in the Cure of inveterate Diſeaſes. Thus far *Alpinus* of the practical Uſe of Cauteries in *Egypt*. Among the *Arabians*, the Uſe of actual Cauteries is very common for thoſe Parts of the Body in which they feel any Pain, as we are inform'd by the Chevalier *D'Arvieux*: And *Kæmpfer* writes, that the *Chineſe*, *Japoneſe*, and other *Aſiatic* People, make uſe of actual Cauteries in almoſt all Diſtempers. Theſe Cauteries are of various Kinds, according to the Difference of the Diſeaſe; but they reject the Uſe of hot Irons. The ſame Author ſhews us, that, among ſome of theſe Nations, Cauteriſing is of very antient Date, and was practis'd before the Invention of Medicine itſelf, or any other Part of Surgery. The Matter with which they cauteriſe is generally the *Moxa*. This they make up, with their fore Fingers, into the Shape of a Cone, about an Inch in Height, and ſomewhat leſs at the Baſe, which they apply to the Part affected, ſometimes wetting it with Spittle, to make it ſtick the better: Then, with a very ſlender burning Stick or Rod, they ſet Fire to the Top of the Cone, and ſuffer it to burn out; after which they apply another to the ſame Place, and repeat the Operation as often as the Intention of the Phyſician, or Operator, ſhall require. The illuſtrious Author acquaints us, that he has ſeen no Part of the Body more mark'd with theſe Combuſtions of Moxa than the Back, on both Sides of the Spine, down to the Loins, ſo that you would ſwear, that ſome of their Backs, eſpecially in *Japan*, had been under the Executioner's Laſh, ſo many Marks, and deep Eſchars of Ulcers, were there to be ſeen on both Sexes. *Kæmpfer's Amœnitates Exoticæ*. Nor were the *Americans* ignorant of the Uſe of actual Cauteries for Pains in any Part of the Body; for they cauteris'd the Part affected with a burning Piece of Wood. In *Tuſcany*, and ſome other Countries of *Italy*, as *Mercurialis*, in his *Variæ Lectiones*, informs us, it is an antient Cuſtom to cauteriſe the Boys, while ſucking at the Breaſt, or, when a little bigger, with a hot Iron, in the Occiput, as a Preſervative againſt phlegmatic Diſeaſes, and eſpecially the Epilepſy. And *Linnæus* aſſures us, that the chief and laſt Remedy, and which ſeldom fails, among the Inhabitants of the *Swediſh Lapland*, who have no Phyſicians, for all Pains, which are not attended with any remarkable external Inflammation, as the Head-ach, Tooth-ach, Pleuriſy, Colic, and Pain of the Back, is an actual Cautery, made of the Wood of an old Birch-tree.

From the Premiſſes we are doubtleſs convinc'd, that the Method of curing many Diſeaſes by Cauteries has been approv'd by the Experience of many Nations, for a long Courſe of Time, from the remoteſt Ages. From Men the Uſe of the Cautery ſeems to be tranſplanted to brute Animals, and to make a Part of that Care and Medicine which they require; if we may reaſon from *Vegetius*, who, *Lib.* 1. *Cap.* 28. calls the Cautery *Neceſſima Cura*, the laſt Thing to be try'd upon a diſeaſed Animal, the Benefits of which Operation I ſhall here tranſcribe from that Author; and tho' they are ſpoken with regard to Quadrupeds, I doubt not but they will be agreeable enough to the Sentiments of thoſe who have dedicated their Time and Service to the Cure of thoſe Diſtempers which afflict the human Body. "Burning," ſays *Vegetius*, "conſtringes Luxations, "attenuates Inflations, dries up Humidities, diſſolves Coagu- "lations, extirpates Cancers, eaſes inveterate Pains, reſtores "thoſe Parts of the Body which are alienated from their natu- "ral State, let the Cauſe be what it will, to a due Order, "and puts an effectual Stop to the Growth of all Excreſcences: "For, when you have made a Breach in the Skin with the hot "Iron, every Corruption is concocted and maturated, and, "being diſſolv'd by the Benefit of the Fire, is diſcharg'd, with "the Humour, through the Paſſages which are made, by which "means the Diſeaſe is cured, and the Pain removed; and "when afterwards the Wound is cicatriz'd, the Place is ren- "der'd more tenſe and robuſt, and the Skin almoſt indiſſo- "luble."

If we conſult thoſe Authors who have ſpent their Time to very good Purpoſe in furniſhing themſelves with an Hiſtory of Medicine from the Writings of the Antients, we ſhall have little Room to doubt, that Cauteries were frequently uſed, in many Diſtempers, by the antient Phyſicians of all Sects, *Greeks*, *Latins*, and *Arabians*, from whom the Knowledge of Medicine was convey'd down to us. *Barchuſen*, in his *Collecta*, ſays, that of Phyſicians who uſed Burning in the Cure of Diſeaſes, the firſt ſeems to have been *Euriphon Cnidius*, whom *Cœlius Aurelianus* reckons among the moſt antient Inventors of Medicine; and it is ſuppos'd, that he was the Author of the *Cnidian Sentences*, mention'd by *Hippocrates*. This Perſon lived an Age before *Hippocrates*, or, at leaſt, was cotemporary with him, but older. Thus *Barchuſen*. And *Schulzius*, in his *Hiſteria Medicinæ*, rightly obſerves, that *Hippocrates* was not much apprehenſive of Danger in the Uſe of Cauteries. *Le Clerc*, *Hiſtoire de la Medicine*, *p.* 472. ſeems to be of Opinion, that Cauteries were rejected by the Methodics, becauſe according to *Cœlius Aurelianus*, they were cruel and ſuperfluous; but that

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Author ſpeaks only of a certain Caſe, which is the Cephalæa, or an obſtinate Pain of the Head. But *Celſus* recommends the Uſe of Cauteries in many Caſes. *Albucaſis*, a very eminent *Arabian* Writer, in his Book of Cauteries, ſeems to be in a Rapture, when ſpeaking of the divine and ſecret Virtue of Fire. He gives an Account of fifty Diſtempers in which they may be of Service, and in which he actually experienc'd the Method himſelf: And it is certain, that by this Operation, however painful and terrible, great Cures have often been done. He lays down all the Directions for applying them; but he ſays, that thoſe only who have a good Inſight into Anatomy, and know exactly where the Nerves, the Tendons, the Veins, and Arteries lie, ſhould apply them; and, therefore, he adviſes great Caution in this reſpect, and relates the Hiſtory of one who was kill'd, in the Sciatica, for want of this Circumſpection, by cauteriſing the Inſtep, and hurting the Tendons there: And for this very Caſe he deſcribes a Cautery, terrible, he ſays himſelf, to behold, and, therefore, not often us'd by him, yet, however, of very great Efficacy; and, accordingly, he recommends it, in Caſes of Extremity, to his Diſciples. We ſee how much more familiar the Practice of the Cautery was with the *Arabians*, than even with the *Greeks*; and we may the leſs wonder at it, ſince the Way of Burning, by the potential Cautery, had been commonly us'd by that Nation, and had the Name of *Uſtio Arabica* given it many Ages before, as *Dioſcorides* informs us in the Hiſtory of Goats-dung, which was the Material they apply'd. Thus far Doctor *Freind*; from whoſe Words it appears alſo, that, in the Uſe of Cauſtics, there is need of Caution; for Illuſtration of which, give me Leave to quote *Albertus Bottonus*, a celebrated Profeſſor of Medicine in the Univerſity of *Padua*, in the ſixteenth Century, who, in his Book of Womens Diſeaſes, has theſe Words: Cauteries, ſays he, are the Materials of a Remedy, which ſenſibly evacuates, and is indicated by the Humour, which is daily and inſenſibly generated, and, not having its uſual Paſſage, is preternaturally detained within the Body, and, cauſing an Alteration in the ſame, the Symptoms are continually augmented, both in Number and Greatneſs, till the Phyſician, finding other Remedies ineffectual, has recouſe to Cauteriſing; by which means the offenſive Matter, which was gradually collected, may find a proper Vent by which it may be diſcharged. Cauteries are of ſuch general Uſe in our Times, that, in all groſs and ſtubborn Diſeaſes, recourſe is had thereto, as to the laſt and ſureſt Remedy; but as to the Succeſs of ſuch a Practice, let thoſe who have experienc'd it ſpeak for themſelves. For my own Part, I am aſſur'd, that many who have us'd this Method have been ſo far from obtaining the good Succeſs they expected from it, that they have been oblig'd to relinquiſh it. Beſides, this kind of Remedy cannot be adminiſter'd without Danger, ſince we know, by ſad Experience, that it has frequently occaſion'd a Gangrene, and prov'd more fatal to the Patient than the Diſeaſe itſelf could have been. There are various Reaſons to be given, why ſuch an extraordinary Method of Cure has been attempted; one of which may be, the Impatience of the Sick, which incapacitates them for attending on the ſlow and hidden Ways of Digeſtion by which Nature operates in ſubduing the Diſeaſe. A ſecond Reaſon, probably, is the Fault of the Phyſician, who, tho' he ought to regard himſelf as the Aſſiſtant of Nature, neglects to obſerve her Motions, which, if duly attended to, would preſerve him from Error in all his Operations, and direct him in the Way mark'd out for him, and point out the Paſſages by which Nature attempts to diſcharge herſelf of the offenſive Matter; and, if ſuch Paſſages are found to be convenient, ſhe is to be aſſiſted in her Efforts by the Phyſician: But, by the violent making of unſeaſonable Breaches and Drains, we often compel Nature not only to an Evacuation of crude Matter, but to diſcharge it by ſuch Ways as ſhe has neither Ability nor Inclination to attempt. In ſuch a Caſe we not only impede Nature in rightly carrying on her Operations, and provoke her to an Evacuation before a due Digeſtion be made, but direct her Courſe to inconvenient, and oftentimes oppoſite Places, and by violent Means; and if this be the Conſequence, we receive more Injury than Benefit from the Application of a Cautery. Beſides, it often happens, that the Phyſician, who, with all his Art, can do no better, in ſome Caſes, than conjecture, is ignorant of the Situation of the Matter which is to be evacuated; and, if this be unknown, he muſt, of neceſſity, be ignorant of a convenient Place by which it may be diſcharged. Thus, for Inſtance, if we would apply a Cautery with an Intent to make a Derivation, we ought to chuſe a Place near the affected Part; but, if we deſign a Revulſion, we are to find out a Place more remote, but ſituated in a ſtrait Direction with the Part affected. But if we have no perfect Knowledge of the Place where the offenſive Matter is generated, we muſt, of conſequence, remain in Ignorance of the Nearneſs and Remoteneſs, the direct or oblique Diſtances, of other Places with reſpect thereto; whence it comes to paſs, that the Phyſician is diſappointed of his End, and the Patient ſuffers double Miſery during Life.

By the Accounts of Cauteries which we meet with in Authors, it appears,

Firſt, That there is ſcarcely a Diſeaſe in which Burning, or the Uſe of Cauteries, has not, at ſome time or other, been thought ſeaſonable, as well by Phyſicians, as by the *Egyptian*, and other barbarous People; with this Difference, that theſe latter had recourſe to Cauteriſing as a ready and familiar Remedy, but the former never us'd it, before they had in vain try'd other Means. Secondly, That theſe Nations, and the antient Phyſicians, except the *Arabians*, made more uſe of actual than potential Cauſtics. Thirdly, That Men ſeem to have been taught the Uſe of Burning by fortuitous Caſes; and that Nature, now-and-then, takes Occaſion to invite us to imitate her Work; in Compliance with which, the Phyſician directs the making of Fontanels, which are no other than artificial Ulcers, and are pretty well procur'd by Cauſtics. They who recommend Cauteries for the Formation of Ulcers, by whoſe continual Diſcharge of purulent Matter Health may be obtain'd or preſerv'd, ſeem to have Nature declaring in favour of their Opinion, when ſhe labours to expel a Diſeaſe by ſpontaneous Ulcers or Abſceſſes, either by Derivation into a neighbouring Part, or Revulſion to Parts more remote from the Seat of the Diſorder. *Heurnius* commends Cauteries as an excellent Precaution againſt the Peſtilence, aſſuring us, that, by their Benefit, Multitudes of Perſons, who have the Care of thoſe who lie ſick of the Peſtilence, eſcape free and uninfected: They cauteriſe themſelves, he ſays, in many Parts of their Bodies. He adds, that Cauteries are only a Preſervative againſt, but no Cure for, the Peſtilence; for, before it can exert its Virtue, which is after ten Days, the Patient is carried off by the Diſtemper. We have a memorable Obſervation in *Riverius*, which demonſtrates, that the Matter of a Diſeaſe may, by means of ſpontaneous Abſceſſes, and artificial Ulcers, be diverted into remote and oppoſite Parts. A Man, he ſays, who had a long while laboured under a Pain of the Loins, all Remedies proving ineffectual, at laſt dy'd. A little before his Death, among other Means that were us'd, he had a Cautery apply'd to his Thigh, four Fingers Breadth above the Knee, from which, when the Eſchar or Cruſt fell off, there flow'd about half an Ounce of a ſort of Sanies, after which the Cautery every Day diſcharg'd an Ounce or more of true laudable Pus. The dead Body being diſſected, the Lungs were found to be purulent, which was the principal Cauſe of his Death; and in the Loins was diſcovered a large Abſceſs, from whence proceeded that long and obſtinate Pain with which the Patient had been afflicted. From this Abſceſs to the Cautery was traced a Duct, through which ſome Pus flow'd. This is a ſignal Inſtance of the Care and Induſtry of Nature in eliminating the Cauſes of Diſeaſes, for which End ſhe had form'd this Duct at the Abſceſs of the Loins, in order to evacuate and cleanſe it thro' the cauteris'd Part, which, however, ſhe had not Strength to accompliſh, but ſunk under the Work. *Mermannus*, in his *Conſultationes*, ſays he has found, by long and general Practice, that it is ſafer to apply Cauteries to the Arms than to the Legs; that Perſons who have corpulent Bodies, and big Bellies, but weak and ulcerous Legs, which are ſubject to an Eryſipelas, or Inflammations, are no ſafe or proper Subjects for a Cautery. To direct us in our Practice, let us obſerve a few Things from *Mercurialis*. Cauteries, ſays he, ſeem invented by Phyſicians, in Imitation of Nature, who, when ſhe works with a Deſign to free the Patient from ſome chronical or acute Diſeaſe, is accuſtom'd either to expel the morbific Matter out of the Body; which kind of Abſceſs *Hippocrates*, *Epid.* 2. and elſewhere, calls κατ' ἐκρύσιν, or to depoſit it on ſome more ignoble Part, which he calls an Abſceſs, κατ' ἀπόθεσιν· and the Event, in both Caſes, is generally happy, when the Abſceſſes fall upon the inferior Parts, or, at leaſt, below the Seat of the Diſeaſe. A Phyſician, therefore, who would follow the Conduct of Nature, muſt cauteriſe in the inferior Parts, or, at leaſt, below the Diſeaſe. He adds, that old Age ought not to deter the Phyſician from the Uſe of Cauſtics; for the Spirits are ſo far from being weaken'd or diſſipated thereby, that they are the more excited, and the natural Heat is increaſed.

But let us hear the principal Objections againſt Fontanels. *Helmont* the Father, diſputing againſt the Uſe of Cauteries in Catarrhs, for preparing a new Emunctory by which Nature might free itſelf, ſays, that by raiſing a Fontanel we obtain not an Expurgation of a malignant Humour from the Body, but only a Diminution of the Blood, ſucceſſively converted into Pus, which is generated in the Ulcer. Of the ſame Opinion is the celebrated *Albinus*, who, in his Diſcourſe on Fontanels, after totally rejecting the Uſe of Cauteries, concludes in the Words of *Helmont*, *Conſulto claudantur Fontanellæ*, "Be adviſed, and dry up your Iſſues."

But omitting Authorities, *Helmont* himſelf grants, that Cauteries may do the ſame Service as may be expected from a continual and inſenſible Diminution of the oppreſſive Redundance of the Blood by Fontanels, and may, therefore, on Occaſion, be of Benefit to corpulent Perſons, great Eaters, plethoric Bodies,

Bodies, and those who lead a sedentary Life; but then he calls them only palliative Medicines; and tho' he allows they may now-and-then be of Service in Catarrhs, yet the Reason of this, he says, is not because they evacuate the descending Matter of a Catarrh, or divert it another Way, but because they diminish the Mass of the alimentary Blood and Humours.

That, in an artificial Ulcer, or Fontanel, the good Humours which flow thither are converted into Pus, cannot be deny'd, it being a thing evident to all who know, that, in every wounded Place, a Conflux of Liquids, in Conjunction with the half-mortify'd Fibres, generates Pus: And that the Pus, which distils from Fontanels, is no other than the Aliment corrupted, *Rodericus a Castro* proves by Experience and Observation, which shew, that an Arm or Leg, in which is a Fontanel, are much more extenuated than the other; for which Reason *Ettmuller* seems to be in the right, when he prescribes opening of Fontanels in excessively fat and unwieldy Bodies. I will allow also, with *Hoffman*, that these artificial Ulcers are rather a Preservative against a Distemper, and conduce more to a palliative than a perfect and radical Cure. But that all Fontanels, without Exception, should be dried up at once, is contradicted by Experience, which assures us, that as old Ulcers, too speedily heal'd, without due regard to the Temperament of the Blood and Humours, induce a Cachexy, slow Fever, and different kinds of spasmodical Affections, in Bodies abounding with ill Humours; so a too sudden Suppression of a Flux, by means of Fontanels, produces much the same Effects; and one experimental Proof, as *Hoffman* says, is worth a hundred of the most plausible Reasons. The before-mention'd *Rodericus a Castro* also, after a long Ratiocination against Fontanels, adds, "I "would not have any think, that I am absolutely against the "Use of Fontanels; I only condemn their Frequency, and "promiscuous Use; for I must confess, that I have myself, "on Occasion, open'd Fontanels, with very great Benefit to "the Patient." He then proposes the Cases in which he judges a Fontanel would be convenient; as, first, With respect to the Quality of the offensive Matter, when the same is vaporous or pituitous, or, at least, fluid and diluted; secondly, With respect to the Quantity, when the Disease is very oppressive, and requires Vent at every Part; thirdly, When the usual Passages for the natural Evacuations are stopt up; and, lastly, When the nervous and muscular Systems are affected with wandering Rheums.

Cauteries are also of Use whenever it shall be found proper to act by determining the Humours to or from any Place requir'd; to which Case belongs their Application, in order to stop the Progress of a Sphacelus, where, by opening a Passage for the Effusion of the sound Humours, we prevent their Communication with those which are corrupted. Their Efficacy is also evident in opening Abscesses, in the Extirpation or Separation of useless and corrupted Substances, in mitigating Pains, in quickening the Nerves, in drying and strengthening the Parts, and in stopping Hæmorrhages. To these Cases, I suppose, may be reduc'd all the various Actions of caustic Remedies. Their Usefulness in opening Abscesses, in Extirpation of useless Parts, as Warts, for Instance, and Separation of corrupted Parts, as in a carious Bone, is obvious from Experience, as they destroy the Part to which they are apply'd: But that they should ease Pains, by suppressing Motion that proceeds from the Nerves, and is thence communicated to the whole Body, and, again, that they should excite Motion in the System of the Nerves, seem, at first Sight, to be contradictory Effects: We must therefore observe, that when a Cautery is apply'd to a pain'd Nerve, it immediately renders it insensible by its Destruction. That an exquisite Pain is excited by the Application of the Cautery, cannot be deny'd; but as soon as the Virtue of the Thing apply'd ceases to act, the Pain ceases with it, the Motion, which was the Cause of the former Pain, ceasing with the Destruction of the Part moved. Caustics do not, indeed, in themselves, or immediately, act upon the Cause of the Pain, when wandering in the Vessels, or settled in the Humours, but they remove its Effect on a particular Part. Wherefore *Sydenham*, speaking of the Cure of the Gout by Burning, says that such a Remedy may contribute something towards the Mitigation of the Pain, by attracting and dissipating the most subtile and spirituous Part of the morbific Fomes deposited in the Joints. But Cauteries may be also conceiv'd to exert their Influence by stimulating the Vessels, in exciting a new Pain, and, by that means, communicating Motion to the peccant Humours, compelling them to take new Courses, and so relinquish the Part affected; or in resolving, by the excited Motion, tenacious viscous Humours, and rendering them more fluid; or, lastly, by diminishing the Conflux of the Humours, by destroying some of the smaller Vessels.

Having thus explain'd the anodyne or sedative Effect of Caustics, it is easy to comprehend, at the same time, how they are qualify'd to answer, upon Occasion, that other Intention of causing Commotions in the nervous System, in cold Bodies, which require a strong Stimulus: We understand also the Cause why intermitent Fevers may be cur'd by Caustics; and why, and at what Season, it is proper to apply them, in order to provoke the Menses, by deriving the Humours towards particular Places, stimulating the inert Vessels, and exciting a brisk Motion in the Humours. For these Reasons *Amatus* advises the Use of Cauteries in a cold Catarrh, but will not permit it in a hot one, except in the Intervals of the Disease; "Because," says he, "a Cautery increases the Inflammation, and renders "the Matter more fluxile, sharp, and acrimonious, as we have "experienc'd." *Cent.* 2. & 5. That Cauteries may excite Motions of considerable Moment in the Body, appears from an Observation of *Hildanus*, where he says, that a caustic Oil, apply'd to the cancerous Breast of a Woman big with Child, had, besides other dismal Symptoms, almost caused an Abortion. But how can Caustics be said to be Strengtheners? It is answer'd, they work such an Effect, first, by dissipating Humidities, drying, exciting Heat, and stimulating the Solids; and, secondly, because, when the Crust is removed, and the Ulcer consolidated, the Cicatrix which is induc'd, proceeding from the Vessels which before were broken, and are now render'd juiceless, hard, and callous, causes a Rigidness of the Part, from a Coalition of the Vessels, and a greater Constriction of the Skin. Hæmorrhages from the smaller Vessels, which is the last Effect that remains to be accounted for, are stopt by the Action of Cauteries, as it causes a Crispation and Corrugation of those Vessels by Adustion and Constriction.

Since an imprudent or unseasonable Use of the most approv'd Remedies disappoints the Expectation of the Physician, it cannot seem strange, that Cauteries should sometimes fail of having the desired Effect; and, moreover, that the fatal Symptoms, which have often succeeded their Application, are sufficient to persuade us, that they are of the Number of those Remedies, which a prudent Physician never has recourse to, but in Cases of Necessity. In their Application great Care is required in chusing a proper Place: Let the Nerves, and Tendons of the Muscles be avoided; nor let a considerable Vein or Artery be cauterised, without urgent Indication, for fear of exciting a Gangrene, or a great Hæmorrhage. Suffer not your Cautery to penetrate too deep, and make too great an Eschar; for this is not only terrible and painful, but hurtful to the Nerves, and succeeded by great and continual Pain, and other dismal Symptoms; and, by the great Suppuration, the Body is exhausted and weaken'd. In cancerous Tumors, Cauteries are seldom or never to be used; and *Hippocrates* pronounces Cauterising unseasonable at some Seasons of the Year. [*See his Treatise of Air, Water, and Situations, under our Article* AER]. But *Albucasis* directs a Cautery to be used at any Time of the Year, "Because some mortal Disorder may require "speedy Help by this Remedy; and particularly under urgent "and violent Pains, which will admit of no Delay, and where "more Danger is to be apprehended from the Malignity of "the Disease, than from the painful, tho' transient, Action of "a Cautery."

Whether actual or potential Caustics are to have the Preference, Authors are not agreed; and it seems hardly possible to give a general Determination of the Question, because of the Variety of Cases, in which sometimes one, sometimes the other, may be required. *Fienus*, *Lib.* 3. *Cap.* 17. prefers actual Cauteries, where a hard and solid Cicatrix is intended to be produced. *Claudinus*, *Lib.* 2. *Sect.* 1. *C.* 7. approves of the actual Cautery in two Cases; first, if it be a noble and principal Part, or, at least, one which wants to be corroborated, that requires the Operation, on which account none but an actual Cautery ought ever to be applied to the Head: The other Case is, when the Part requires to be speedily evacuated, cleansed, and dry'd. *Vesalius* is of the same Opinion; and so is *Bottonus*, *Gynæc. T.* 2. "For actual Fire, he says, will perform "without Pain, and with the greatest Speed and Safety, Ef-"fects which cannot be expected otherwise." *Scultetus* disapproves of potential Caustics, because they operate slowly, and generally with a great deal of Pain; and cannot be applied with Safety, because we have no exact Knowledge of their Virtues, and therefore find them sometimes more or less efficacious than we expected. *Hildanus* gives the following Reasons, why, in the Cure of a Gangrene and Sphacelus, an actual Cautery is, by good Authors, preferr'd before a potential one: (1.) Because Fire, as *Albucasis* observes, is something simple, and void of extraneous Qualities, for which Reason it leaves nothing behind it but Heat, and an Empyreuma; whereas, on the contrary, a potential Caustic, especially Arsenic, Sublimate, and the like, have, and leave behind them, a malignant Quality in the Part affected. (2.) Because Fire has its Action determin'd: Thus, a red-hot Iron operates no farther than the Surgeon pleases; whereas the Operation of a potential Cautery is not in the Power of the Surgeon, but in the Quality of the Medicine. (3.) An actual is preferr'd to a potential Caustic, for this Reason, that, because of the Vehemence of the Fire, it operates in a Moment; but a potential Caustic, whose Virtue and Power of Burning are only potential, operates slowly: Now a Gangrene, being a very acute Distemper, and giving no Respite, is to be treated with the most speedy Remedy, which is a red-hot Iron. (4.) The Redundance of excrementitious Humours in the Gangrene and

and Sphacelus, requires a Remedy which is hot in the higheſt Degree; ſuch a one is red-hot Iron, but not a potential Cautery, eſpecially Arſenic; for, tho' it be hot, it leaves a corrupt Humidity, as *Avicenna* calls it. (5.) Since the Part, which labours under a Gangrene, is extremely weaken'd, and from the Redundance of excrementitious Humours relax'd, it requires a drying and ſtrengthening Remedy: Now an actual Cautery moiſtens both dries and corroborates, but a potential Cautery moiſtens and debilitates, both on account of the Malignity it communicates to the affected Part, and of its Operation, which is both ſlow and painful; ſo that the Pain procures a greater Conflux of Humours, which more and more relax and debilitate the Part. But the Pain of the actual Cautery is only momentary; for, as ſoon as the burning Iron is removed, it ceaſes, eſpecially if an Anodyne be applied. Thus far *Hildanus:* And the very learned *Fabricius ab Aquapendente*, after the Example of *Hippocrates*, prefers actual Cauſtics for cauteriſing the Joints, becauſe the others cauſe no Corrugation or Criſpation of the Skin, nor ſtrengthen the Joint, as does Fire. *Proſper Alpinus*, *Med. Ægypt. Lib.* 3. ſays, that potential Cauſtics can by no means ſtrengthen the Parts, becauſe of their poiſonous Nature, which deſtroys the natural Heat. Patients of a tender Conſtitution ſeldom admit actual Fire; the Application of which, however, is not more dreadful and cruel, than powerful and effectual; for the very Sharpneſs of the Pain which it cauſes, cannot but produce ſome ſurpriſing Revulſion. But potential Cauſtics exert their Influence in a milder, but ſlower manner, and with ſome ſort of Delay. The Strength and Force, however, of potential Cauſtics is very various, according to the different Subſtances of which they are made, and the different Manners in which they are prepared; or, according as a greater or ſmaller Quantity is applied to the Part. "Many, ſays the "ingenious Dr. *Freind*, in his *Hiſtory of Phyſic*, *Vol.* 2. prefer "the actual to the potential Cautery, becauſe the Eſchar it "produces, ſeparates ſooner than that produced by the other; "but, becauſe the Application of the former ſeems cruel and "barbarous, we uſe the latter more frequently, that we may "indulge People in their Delicacy, and Averſion to Pain: In "conſequence of which very Circumſtance, an Ulcer may "more commodiouſly be made deep at Pleaſure. But *Glandorp*, who has very accurately handled this Subject, ſo highly extols the actual Cautery, that he ſays, he would rather "ſubmit to have ſix Fontanels made by it, than one by the "potential Cautery, which, in a Courſe of fourteen Years "Practice, he only uſed twice." *Johannes Heurnius*, in *Tom.* 1. pronounces a red-hot Iron a highly ſafe Cautery. Cuſtom, the mercileſs Tyrant of the Skilful in every Profeſſion, often obliges the Surgeon to uſe the potential, rather than the actual Cautery; and then he thinks it left to his Judgment to chuſe, from the *Materia Medica*, ſuch as is moſt likely to anſwer his Intention, produce the deſign'd Effect ſooneſt, and leave the leaſt unſeemly Cicatrix. But Experience is the moſt faithful Director of his Choice in this Particular. That, beſides the *Arabians*, the barbarous Nations, and antient Phyſicians, made more Uſe of the actual than of the potential Cautery, we have already ſeen. But ſince the Subſtances, by means of which live Fire may be applied to any Part of the Body, are various, it now remains, that we ſay ſomething concerning the Differences between actual Cauteries. *Hippocrates* cauteriſed ſometimes with crude Flax, ſometimes with a red-hot Iron, ſometimes with a Piece of Box-wood, and at other times with the *Fungus*, according as he intended to cauteriſe more or leſs deeply. In cauteriſing the bony Parts of the Body, he uſed the Fungus; but, to the fleſhy and more muſcular Parts, he applied the Iron, as has already been ſaid. We have before obſerved, from *Proſper Alpinus*, that the *Egyptians* have a Method of Cauteriſing with Doſſils of Flax and Cotton; and the ſame Author informs us, that many barbarous Nations cauteriſed only with Doſſils of Flax boil'd, wrapt up together, and kindled. We muſt not here forget to enumerate the Reaſons and Arguments which this Author uſes, in order to perſuade the Rich, that the *Egyptian* Method of Cauteriſing is preferable to that of the *Europeans*, perform'd by means of Irons: "For, "ſays he, tho', in the Opinion of ſome, their Practice may "poſſibly ſeem trifling, when, in order to cauteriſe, they uſe "Doſſils of Flax and Cotton, wrapt up in a pyramidal Form, "kindling the ſmaller Extremity, and laying the Baſe on the "Part to be cauteriſed; yet, I think, they have very good "Reaſon for this Piece of Practice; for they do not uſe Iron, "or any other Metal, ignited, in order to cauteriſe, but the "Subſtance, already mention'd, kindled; becauſe the Fire, "when lodged in a more porous Subſtance, acts upon, changes, "and reſolves the Parts more gently, and produces a ſmaller "Pain in the Integuments, whilſt they are cauteriſing: Hence "the Method of Cauteriſing is not ſo terrible among them as "among us; for, by any ignited Metal, the moſt intolerable "and intenſe Pain is excited, which miſerably racks the Patients; for which Reaſon our Countrymen deſervedly abhor "this cruel Kind of Remedy. I, therefore, think their Method preferable to that in which the hot Iron is uſed, ſince, "by the former, the Reſolution of the Parts is more mildly "made, and a ſmaller Inflammation brought on; eſpecially in "Parts where Nerves and Tendons occur, which are in Danger of being hurt by a too ſtrong and intenſe Fire. But "there is ſtill another Advantage attends this Method of Cauteriſing, which is, that, by laying the Baſe on the Part to "be cauteriſed, and kindling the Apex, which is at a conſiderable Diſtance from it, they ſeem, at firſt, as if they did "not intend to cauteriſe the Part. But the Reverſe of this "happens in cauteriſing with the Iron, and lays that Method "under a very great Diſadvantage, ſince Nature is often either "unable to bear ſudden Changes, or is conſiderably hurt by "them. But by their Method, the Part is gradually warm'd, "and ſo diſpoſed for the Action of the Fire, that the Pain is "leſs, when it comes to act immediately upon it. Two Advantages, then, attend this Method of Cauteriſing uſed by "the *Egyptians*; the firſt is, that the Part itſelf is more mildly burnt; and the ſecond is, that it is previouſly and gradually diſpoſed for the Action of the Fire: By this means "the *Egyptians* ſubmit to the Uſe of the actual Cautery, with "far leſs Dread and Horror than Patients in *Europe* do." *Martianus*, in his Annotations on *Hippocrates*, informs us, "That he has found, from Experience, that all theſe Methods of Cauteriſing are good; and that they only differ in "this, that the more denſe and compact the Subſtance, which "receives the Fire, is, the more deeply it burns and cauteriſes; for which Reaſon this Subſtance ought to be varied, "according to the Nature of the Place affected, and the Sex, "Age, and Conſtitution of the Patient." As *Hippocrates* himſelf did not acquaint us with his Method of Cauteriſing with crude Flax, and the Fungus, *Martianus* gives us the following Directions, with reſpect to this Particular. "Crude Flax, "ſays he, is to be tightly wrapt up in the Form of a Pyramid, the Largeneſs of whoſe Baſe is to be indicated by the "Part to be cauteriſed; only we muſt not forget, that the "Burning will be ſomewhat broader than the Baſe of the Pyramid. This, when kindled at the Top, is to have its Baſe "applied to the Part, and to remain there till the whole Pyramid is conſumed; for the Fire, gradually approaching "the Skin, cauteriſes the Part; and what ſeems ſurpriſing is, "that it produces this Effect almoſt inſenſibly, and without "Pain. When the Fire was extinguiſh'd, *Hippocrates* applied boil'd Leeks to the Part cauteriſed, till the Eſchar "fell off. The Moderns apply Butter and Cabbage, by "which means the Ulcer may be kept open at Pleaſure. "Cauteries of this Kind were ſometimes prepared by *Hippocrates* of that Species of Fungus, which is by ſome uſed "as Tinder." *Fabricius ab Aquapendente*, in his *Chirurg.* thinks, "That *Hippocrates*, by crude Flax, means twiſted "Flax, not boil'd, or a Rope made of crude Flax, twiſted, "ſuch as the Matches for diſcharging Cannon, which, when "kindled, keep the Fire; only this laſt Sort of Match is "boil'd." The learned *Le Clerc*, in his *Hiſtoire de la Medicine*, thinks, that, by crude Flax, *Hippocrates* meant new Linen Cloth, which had not been waſh'd in any Lixivium, a Method ſtill practiſed among the *Egyptians*. The ſame Author alſo obſerves, that, in the *Egyptians* Method of making Cauteries of flaxen Bags, fill'd with Cotton, we ought not only to conſider the Action of the Fire burning the Part to which it is applied; but alſo of the acrid cauſtic Oil dropping upon it, from the flaxen Bag, whilſt it is burning. The Cotton, according to him, ſerves only to kindle and keep alive the Cloth. This he remarks in Oppoſition to *Sydenham*, who informs us, that the Method of curing the Gout in the *Eaſt Indies*, by kindling the Moxa on the Part affected, agrees with that perform'd with crude Flax, in the manner of *Hippocrates*, imagining, that there is no Difference between the Flame produced by Flax, and that produced by the Moxa. I ſhall put an End to this Article with the celebrated Words of *Hippocrates*, in *Aph.* 85. *Sect.* 7. "What "Medicines do not heal, the Knife heals; what the Knife "does not heal, that the actual Cautery heals; and what the "actual Cautery does not heal, is juſtly eſteem'd incurable."

CAUSUS, καῦσος, from καίω, to burn. A burning Fever, one of the continual Kinds, and attended with a burning Heat, and moſt intenſe Thirſt. Its original Cauſe and Symptoms are deſcribed by *Hippocrates*, *Lib. de Rat. Vict. in Morb. Acut.* in the following manner: Καῦσος δὲ γίνεται, &c. "A Cauſus "ariſes in the Summer, when the Veins, being parched and "dry'd by the Fervor of the Seaſon, attract to themſelves an "acrid and bilious Ichor. It generally happens after a long "Journey, and long Thirſt, when the dry'd Veins attract to "themſelves hot and acrimonious Rheums. Under this Diſorder the Tongue is rough, dry, and very black, the Parts "about the Belly are affected with a biting Pain, the Excrements are very liquid, and of a pale Colour; there is a vehement Thirſt, want of Sleep, and ſometimes a Delirium."

To

To these Symptoms he adds, *Lib. περὶ παθῶν*, "a Colour "somewhat bilious, and bilious Spit, with a Refrigeration of "the external Parts, and a vehement Heat of the internal." And a little after he adds, "This Disease arises from a Com- "motion of Bile settled in the Body." He gives much the same Description in his second and third Books of Diseases, and in his Book of *critical Days*; from all which it appears, that a sort of igneous and burning Heat, with a vehement and unquenchable Thirst, are the distinguishing Properties of this Fever, as *Galen* also writes in many Places, particularly in his second and third Comments on the third Book of the *Epidemics*, and in his fourth Comment on the Book of *Regimen in acute Diseases*. The Author of the *Definitiones medicæ*, much to the same Purpose, says, "A Causus is attended with a great "Inflammation, and a Restlessness of the Body, together with "a Dryness and Blackness of the Tongue, and a Desire of "cold Water."

There are two Species of a *Causus* mentioned by *Hippocrates*, one genuine, the other spurious, as *Galen* hints, *Com. 4. R. V. I. A.* "I find," says he, "that when the Patient labours "under a burning Heat, and unquenchable Thirst, Physi- "cians call it a burning *Causus*. And, if this be the Case, "then are we to call the Disease, when the Heat is not burn- "ing, and the Thirst but moderate, simply *Causus*, tho' it "be not, in a perfect and exquisite Degree, a *Causus*; but, "being only half that Distemper, may, for the sake of Com- "pendiousness in Learning, be called a *spurious Causus*. And "as we usually give such Appellations to tertian Fevers, so we "may accustom ourselves to speak of two Kinds of the *Causus* "*Fever*, as there are of *tertian Fevers*, one perfect and genu- "ine, the other spurious, which is attended with some of the "genuine Symptoms, but not all." *Hippocrates*, *Lib.* 1. *Epid.* expressly reckons a *Causus* among the Kinds of continual Fevers.

Frederic Hoffman, *in his* Medicina Rat. Syst. *gives the following Account of this Species of Fever.*

Among the Moderns, all those Fevers, whether of the acute or continued Kind, which begin with a shivering Coldness, and are afterwards accompanied with a violent Heat, Thirst, Uneasiness, and Quickness of the Pulse, are call'd burning Fevers. *Hippocrates* also, the great Founder of the Healing Art, deduces the Origin of all Fevers, from the Bile more or less vitiated or exalted. Nor does he make any mention of sanguine Fevers, or Synochas, but thro' the Whole of his Works calls almost all Fevers, whether continued or inflammatory, whether simple or complex, whether putrid or malignant, as also Synochas, by the common Name of burning Fevers. But that there is a very considerable Difference between these Fevers, is sufficiently obvious from an accurate Attention to the Approach of their several Symptoms, their various Terminations, and the different Methods of Cure requisite in each.

A burning Fever, therefore, by the *Greeks* call'd *καῦσος*, is, properly and strictly speaking, that Species of Fever which is accompanied with a burning and intense Heat of the whole Body, and an insatiable Thirst, whilst at the same time the Patient's Tongue is parched, furrow'd, and black. All the Antients specify these two Accidents as the most distinct and infallible pathognomic Signs of a Causus; for which very Reason they have also call'd it a hot and a burning Fever. Thus *Hippocrates*, in his Book *De Affectionibus*, gives us the following Account of this Disorder: "The Heat," says he, "is "very intense, the Thirst insatiable, the Tongue rough and "black, the Colour somewhat bilious, and the Spit bilious." But *Aretæus*, a faithful and exact Relater of the Histories of Diseases, in the fourth Chapter of his second Book *Acut.* gives us a fuller Description of this Disorder in the following Words: "The Heat, in all the Parts of the Body, is highly intense and "penetrating; but more particularly the Breath appears, as "it were, to be heated by a Fire. The Air is eagerly in- "spired by the Patient, he is excessively desirous of Cold, his "Tongue is parched, his Lips and Skin rough and dry, his "Extremities cold, and his Urine highly bilious. He is also "incapable of Sleep, and his Pulse is frequent, small and "weak. His Eyes are clear, shining, and reddish, and his "Face is of a preternatural Colour. As the Disease increases, "all these Symptoms become greater and more violent. The "Pulse becomes very small and frequent, the Heat intolerably "intense and burning. The Patient is seized with a Deli- "rium, and knows nobody. His Thirst is increased, and he "is fond of handling all cold Objects, such as the Walls, the "Bed-clothes, the Floor, and Water. The Backs of his "Hands are cold, but his Palms very hot, and his Nails livid. "His Respiration also is frequent, and a dewy Sweat breaks "forth about his Forehead and Neck." But as the accurate *Lommius*, in his *Observationes Medicinales*, is more full and circumstantiate in enumerating the Symptoms and Prognostics of this Disorder, we shall here translate what he says on this Subject. A Causus, says he, is known by a burning Heat of the Body, which is more violent internally than externally. The Patient is sometimes afflicted with an obstinate Watching, and sometimes seiz'd with a profound Sleep. His Tongue is dry, foul, rough, blackish, and a bitter Taste is perceiv'd. He breathes with the greatest Difficulty; his Stomach begins to be rack'd with a pungent Pain; his Appetite is lost; his Thirst becomes violent; and the Heat about his Præcordia intense. Some Patients have their Bodies soluble, and others are costive. The Persons labouring under this Disorder are restless, bear it with Impatience, and are frequently seiz'd with Deliriums. This Species of Fever, as it is highly violent, so it generally terminates soon; for when, from the Beginning, it is accompanied with good Signs, it generally terminates on the fourth Day; nor does it continue longer with any than the seventh. It terminates either with a Vomiting, a Flux, an universal Diaphoresis, or an Hæmorrhage of the Nose. As this Disorder is seldom incident to old Men, so it proves highly prejudicial to them, when they are seiz'd with it. Young Persons are more frequently subject to it, and generally escape better. A Causus or burning Fever is frequently chang'd into an Inflammation of the Lungs; and when this happens, the Death of the Patient is not far off. Both in this Disorder, and in other continued Fevers, great Danger is indicated when a Jaundice appears before the seventh Day, or when the Patient shivers before the Concoction of the Matter. But the Danger is still greater, when the Strength is much impair'd; when, after the Shivering, the Patient does not become warm; when he is afflicted with a continual Watching, or a constant Drowsiness; when he becomes delirious; when his Voice is intercepted; when he becomes deaf, or when he is seiz'd with a great Pain of the Neck. These Symptoms are more particularly dangerous in Patients who are growing delirious.

The Danger is also great when the Patient, endeavouring to take any thing in his Hands, trembles; when his Thirst is insatiable, when his Body is highly squalid, or when his Tongue being blackish, and his whole Mouth dry, he has no Thirst; when his Mouth is preternaturally ill-smell'd; when a Hiccough happens, especially after Purging, or after an immoderate Effusion of Blood. In Children the Danger is indicated to be great, when no Excrements are discharged, when the Patient sleeps none, but often changes Colour, and weeps without Interruption; for Convulsions are subsequent to these Symptoms. When, in Conjunction with an intense Pain of the Head, the Præcordia are drawn inwards, and an Effusion of Blood from the Nose does not happen; or when this Disorder is either not accompanied with, or, if accompanied with, not removed by bilious Stools, Gripes, nor a Pain in the Hips or Knees; for, in either Case, the Patient is very subject to a Delirium; when acute Pains in the Viscera are attended with Convulsions; when the Præcordia are pain'd, or the Patient is in a profound Sleep; when a burning Heat, or a gnawing Pain, in the Stomach are attended with bilious Stools; where a total Retention of the Excrements is accompanied with a continual Pain of the Head; all these are dangerous Symptoms. When the Urine also appears like Water, as it generally does under a Delirium; if such Urine continues to be discharged for a considerable time together, it portends Death.

The Danger is equally great, when the Urine is red, thick, turbid, and fetid; when it is evacuated at short Intervals, and in small Quantities; when it is discharged with Difficulty; when it appears concocted unseasonably, or is evacuated contrary to the Patient's Inclination; when the Patient does not perceive the Violence of the Disorder, in consequence of his being delirious: When, upon the first Approach of the Fever, a profuse Sweat breaks out; when the Patient begins to grow delirious; or when any Part of the Body becomes paralytic; and, lastly, when the Paroxysm is violently increased on the third Day.

We now come to specify those Prognostics, which, in a Causus, indicate certain and unavoidable Death, which we know will soon be the Fate of the Patient, if the Disease is violent, and the Strength greatly impair'd; and more especially if, at this time, a Delirium or a Rigor happen; if the delirious Patient speaks none at all, provided he is on no other account deprived of the Use of his Speech; if, being very weak, his Eyebrows, his Eyes, or his Nostrils, are distorted; if, at this Juncture, the Patient neither sees nor hears; or if, when his Speech is lost, he lies with his Eyes winking, without a Hæmorrhage from the Nose, or a Vomiting happening, in order to carry off the Disorder. The Danger is also the greater, if the Patient breathes with the utmost Difficulty. The Fate of the Patient is equally deplorable, if the Tears trickle from his Eyes; if they are sunk, prominent, or darken'd; if they roll about in an indeterminate manner; if they are dull or distorted; if their Whites become preternaturally large, and their Blacks small; or if their Blacks are hid under the superior Eyelids, and the Whites appear red, and pale or black Veins are discover'd in them; when a Substance, like a Spider's Web, covers the entire Eyes; or when the natural Mucus remains in the Extremities of their Angles; if, during Sleep, the Eyelids are not entirely closed; or when they are excessively pale, unless the Paleness

Paleneſs is produced by a Flux; or when one of the Eyes is leſs than the other. To theſe we may add, that the Danger is unavoidable when one of the Ears is ſeiz'd with an acute Pain, which Symptom generally carries the Patient off within ſeven Days, eſpecially if the Patient is young. But old Patients, becauſe their Pain and Fever are not ſo intenſe, are generally thought to be in a ſafer State.

If, in conſequence of the Fever, there is a Grinding of the Teeth; if they appear livid, black, and extremely dry; and if at the ſame time, in the Beginning of the Diſeaſe, the Tongue is firſt dry, then rough, and afterwards black and foul; if the Patient lies with his Mouth gaping, and ſleeps continually; or if he ſeems as if he would be ſuddenly ſuffocated; if he can neither drink nor ſwallow his Saliva, tho' at the ſame time there is no Tubercle in his Fauces; if he turns his Neck with great Difficulty, or if it is ſo diſtorted, as to render his Deglutition uneaſy; if his Breath is cold, and his Pulſe obſcure, thick, and interrupted; if his Thirſt, which was before great, is remov'd, whilſt, at the ſame time, his Fever is equally violent, and his Tongue equally dry and black; if a Vomiting of Blood happens, or a Vomiting of various fetid Subſtances of different Colours; if his Fingers pick the Flocks of the Bed-clothes, or pull involuntarily the Borders thereof, or catch at ſome Object on the adjacent Walls; if the Extremities of his Fingers and his Nails are livid or blackiſh, tho' their growing blackiſh is no deadly Sign, provided the Patient's Strength is able eaſily to bear the Diſeaſe, and if other apparent Signs of Recovery enſue, for then the Patient's Health is reſtor'd, but the black and corrupted Parts fall off. It is alſo a fatal Sign when the Abdomen becomes tumid, eſpecially after the Exhibition of a Purgative; or when the Belly, being diſtended with Flatulencies, cannot diſcharge them; when, in the Beginning of the Fever, yellow Bile is diſcharg'd; when the Excrements are liquid, and at the ſame time black or pale, or pinguious or fetid; when the Patient is entirely coſtive, and ſeiz'd with a ſudden Palpitation of the Heart, and a Hiccup; when the Urine begins to be intercepted, or to be diſcharg'd black, thick, or fetid; or when the Urine, which was before good, ſuddenly exhibits bad Signs; or when, thro' the whole Courſe of the Diſeaſe, the Urine remains like that of Perſons in Health; when Blood is diſcharg'd inſtead of Urine; or when the Bladder is pain'd or hard. It is an equally fatal Sign, when, in the Beginning of the Diſeaſe, the Extremities become cold, and cannot again be render'd warm; when, at the ſame time, that the Extremities are cold, the internal Parts of the Body are ſcorched with an intenſe Heat, or when the Patient is inſatiably dry; when the febrile Heat ceaſes all on a ſudden, and without a manifeſt Cauſe; when Sweats and Deliquiums happen, at the ſame time that the Strength is much impair'd; when the Patient lies on his Back, contracts his Knees, and ſlips towards the Foot of the Bed; when he uncovers and ſpreads his Arms and Legs, at the ſame time that they are not preternaturally hot; when the Pain lodg'd in the inferior Parts of the Body ſuddenly ceaſes, in conſequence of its being transferr'd to the Viſcera; when any Ulcer, under which the Patient labour'd before the Fever, or an Ulcer ariſing during the Fever, becomes dry and livid; when there is an Eruption of Puſtules all over the Body, if at the ſame time a purulent Abſceſs does not appear; when, upon the Appearance of an Abſceſs near the Ear, it does not come to Maturity, no Hæmorrhage happening from the Noſe, nor thick Urine being diſcharg'd in large Quantities; when a cold Sweat ariſes, and the Patient is ſeverely afflicted on the fourth and ſeventh Days; when, on the eleventh Day, he perceives no Criſis; or when, on the critical Days, he becomes cold without Sweats enſuing; when a Rigor happens, and often returns, and at the ſame time the Diſorder is not alleviated by that means. The Patient never fails to die, when the Temples become ſunk, the Noſtrils ſharp, the Eyes hollow, the Ears cold, languid, and the Extremities hanging a little down; when the Skin about the Forehead is hard and tenſe; when the Countenance of the Patient is pale like a Corpſe, or black, or manifeſtly alter'd by the Diſorder.

But to return to the judicious *Hoffman*, from whom the former Part of this Article is taken: Theſe burning Fevers are widely different from other Fevers of the continued Kind; for in a Synocha, whether ſimple, complex, or cacochymical, the Burning is not ſo intenſe, nor the Thirſt ſo inſatiable, but the Heat is milder, and accompanied with a kind of Moiſture. Synochas are principally incident to plethoric Perſons, thoſe of a lax Habit, and ſuch as live delicately, eſpecially in the Spring, and in temperate Climates. But a Cauſus principally attacks lean Perſons, thoſe of delicate or bilious Conſtitutions, and generally rages in hot dry Weather long continued, eſpecially in hot Climates. Beſides, in a burning Fever, contrary to what happens in other continued Fevers, the Countenance becomes yellow, and the Patient is either ſeiz'd with a Vomiting, or an Inclination to it, and a Loathing of Food. A high-colour'd Urine, deeply ting'd with Bile, is diſcharg'd, and fetid bilious Excrements are evacuated in large Quantities. Burning Fevers, and ſuch as ariſe from an Acrimony, or too large a Quantity of Bile, have this peculiar to themſelves, different from other continued inflammatory, ſanguine, and malignant Fevers, that, on the odd Days, and about the third Day, they are augmented, but are ſomewhat leſs intenſe on the even Days; which is alſo to be obſerv'd in the continued Tertians, thoſe of the choleric Kind, as alſo in thoſe which the Antients call'd Tritæophyæ, which, on the third Day, are exaſperated without any periodical Shivering or cold Fit, like that which happens in the Hemitritæa, or Semitertian. Add to this, that the Fevers, accompanied with a Redundance either of pure or impure Blood, are generally terminated on the fourth Day by a Diaphoreſis, or a large Hæmorrhage, accompanied with a Redneſs of the Face; whereas burning Fevers terminate about the ſeventh Day, after a Shivering, which proves critical, either by a Diaphoreſis, or ſymptomatical by a fatal Inflammation of the Stomach, Duodenum, and Parts to which the biliary Ducts reach. And, laſtly, with reſpect to the Method of Cure, there is a Difference; for the ardent Fevers are greatly mitigated by Draughts of cold Liquor, which does not happen in other continued and inflammatory Fevers, much leſs in thoſe of the malignant and putrid Kind. Veneſection is highly neceſſary in thoſe Fevers which ariſe from Blood ſtagnating in the large Veſſels, as alſo in inflammatory Fevers, eſpecially ſuch as ſeize thoſe Parts and Viſcera which moſt abound with Blood. But in genuine and intenſe burning Fevers, this Evacuation is ſo far from being neceſſary, that it is rather hurtful.

Theſe true and violent burning Fevers formerly were, and ſtill are, moſt frequent in *Aſia*, *Greece*, *Egypt*, and *Italy*: For this Reaſon the great Founders of Medicine, *Hippocrates*, *Galen*, and *Aretæus*, have copiouſly and accurately laid down the Prognoſtics and Method of Cure proper in this Diſorder. But in our temperate Climate they rarely occur; and when they do, they are owing to a too liberal Uſe of ſtrong Wine, hot Summers, an obſtructed Perſpiration, or an intenſe and violent Exerciſe, either of the Body or Mind. In our Climates ſanguineous burning Fevers, or bilious Synochas, and choleric Fevers, are more frequent.

What we commonly call bilious Synochas, are ſuch as attack the Patient without any conſiderable previous Horror and Rigor, but with an intenſe Heat, Thirſt, Watching, Uneaſineſs, and Reſtleſſneſs, in Patients of ſanguineo-choleric Habits, and ſuch as abound with a hot and bilious Blood; and theſe Fevers either terminate in a ſalutary manner, or prove mortal, on the odd or critical Days, after a previous Rigor. They terminate in a ſalutary manner either by a Diaphoreſis, or, for the moſt part, by an Hæmorrhage from the Noſe; for theſe are the Species of burning Fevers, concerning which *Hippocrates*, *Lib.* 1. *Epid. Com.* 2. obſerv'd, that all thoſe recover'd, who had either had an Hæmorrhage from the Noſe, or any other Part; whereas theſe died who had no ſuch Evacuation. But when theſe Fevers prove fatal, they either terminate in an Inflammation of the more noble Parts, ſuch as the Membranes of the Brain, the Lungs, the Stomach, and Inteſtines; or in a mortal Syncope, in conſequence of the Blood being collected, ſtagnating, and becoming grumous, in the Right Ventricle of the Heart.

Another Species of a complete burning Fever incident to our Countrymen, is what we call the bilious Fever, which ſeizes the Patient with an intenſe Heat, Thirſt, Uneaſineſs, a Vomiting, or continual Inclination to vomit, bilious Stools in large Quantities, a Coldneſs of the Extremities, an internal Heat, and a Cardialgia. But this Species of Fever is juſtly diſtinguiſh'd into that of the more and leſs acute Kind; in the former, the Symptoms are far more violent. The Stools, and Matter diſcharg'd by Vomit, are bilious, and in large Quantities; the Patient is ſeiz'd with a Cardialgia, attended with a Syncope, and generally this Diſorder proves mortal before the ſeventh Day, by a violent Inflammation of the Stomach and Duodenum, the Signs of which are a violent and fix'd burning Heat about the Præcordia, a Coldneſs of the Extremities, Reſtleſſneſs, and Uneaſineſs, a Hiccup, and a copious Eructation of the Bile and Saliva, a yellow Colour of the Countenance, a cadaverous Face, commonly known by the Epithet *Hippocratic*. Some of theſe Fevers are not ſo acute, but longer protracted, and ſometimes remitting, or appearing evidently intermittent; they are every Day, or every third Day, exaſperated with Vomitings, Uneaſineſs, and cold Fits, for which Reaſon they may be juſtly call'd quotidian, or continued Tertian Fevers. Theſe, unleſs ſpeedily remov'd by proper Medicines, readily degenerate into ſlow Fevers, and excite long Diſorders of the Stomach, heavy Pains, Eructations, and Inflations, in conſequence of the deeper or more ſuperficial Corroſion of the Stomach by the pungent bilious Juices.

As to the Cauſes and Generation of theſe Fevers, that Species which is highly burning, and in which the Patient is ſeized with a violent and intenſe Heat, a Dryneſs of the Tongue, and an inſatiable Thirſt, in which the Parts, both internal and external, are parch'd and dry'd, has no other Cauſe, than a quick Commotion and Agitation of the Blood and Humours, in conſequence of the ſmaller Veſſels of the fibrous and vaſcular Compages of the Body being partly obſtructed, and partly

ſpaſmodically

ſpaſmodically conſtricted: By the reciprocal Attrition of the Solids with the Fluids, the inteſtine Motion of the ſulphureous Parts is alſo increas'd, from which ariſes an inflammatory Heat, which diſſipates and waſtes the Fluids, whilſt, at the ſame time, it parches and burns the Solids. But in Perſons of a plethoric Habit, and ſuch as are full of Juices, in conſequence of the Softneſs and Laxity of the Fibres, the Heat is milder and leſs intenſe, the Fever leſs burning, the Dryneſs of the Skin and Fauces not ſo violent, nor the Thirſt ſo inſatiable. In that Species of burning Fever which we call'd bilious, there is a quicker Motion of the Fluids, not only on account of the Redundance of the ſalino-ſulphureous Parts in the Juices, and ſome of the ſmall Veſſels being rendered narrow and obſtructed, but alſo the large Quantity of bilious Juice, ſecreted in the Liver, and carried into the Duodenum and Stomach, by its Acrimony and Pungency, irritates, corrodes, and inflames the nervous Coats: From this ariſe the Symptoms peculiar to this Fever, ſuch as a Heat, Uneaſineſs, a Cardialgia, a Nauſea, a Retching to vomit, together with violent Diſcharges of bilious Matter by the Mouth and Anus.

All Things, therefore, which heat the Blood, and generate ſulphureous Particles in it, or which hinder or retard its free Circulation thro' the ſmaller Veſſels, contribute to the Production of burning Fevers: Hence thoſe are more ſubject to them than others, who are of a bilious and firm Habit, who indulge themſelves in the Uſe of ſpirituous Liquors, who are frequently under the Influence of exorbitant Paſſions, eſpecially that of Anger, or who uſe too violent Exerciſe. Hence alſo the Reaſon is to be deduc'd, why in hot Climates, and the Southern Parts of the World, intenſe burning Fevers happen; as alſo, why, in our own Country, after long-continued Heats in a dry Summer, ſucceeded by a cold Autumn, bilious Fevers, bilious Diarrheas, Dyſenteries, double and continued Tertians, not only frequently happen, but rage epidemically. But an obſtructed Perſpiration, and the violent Sallies of Anger, principally contribute to the immediate Production of this Fever, in thoſe who have a natural Diſpoſition and Tendency towards it; for when the Juices abound with hot ſulphureous Particles, and when the Diſſipation of theſe, thro' the ſmall exhaling Veſſels, is intercepted, either by a denſe and cold Air, or by imprudently expoſing one's ſelf to the Cold, they remain in the Habit, raiſe an inteſtine Motion of the Fluids, and excite a Fever. The Effect of violent Anger on the Body is ſuch, that it induces an intenſe Motion, and a rigid ſpaſmodic Stricture, not only in the whole nervous and vaſcular Syſtems, but alſo acts in a particular manner upon the nervous biliary Ducts, and, by greatly increaſing their periſtaltic Motion, expreſſes the bilious Juice from the Whole of theſe Ducts, and forces it copiouſly and impetuouſly into the Cavity of the Duodenum; and, whilſt it ſtagnates in this winding Duct, it produces an Effervescence, by being mix'd with the ſalival Juice, and acid Crudities; and by that means acquires a pungent and almoſt cauſtic Quality, as is obvious from its green æruginous Colour; reſembling that produc'd by a Mixture of Bile with ſome acid corroſive Spirit, ſuch as Oil of Vitriol, and Aqua-fortis.

In the Method of Cure, we are carefully to diſtinguiſh between the various Species of burning Fevers, and to have a due Regard to the Conſtitution of the Patient; for when a violent burning Fever ſeizes a Patient of a bilious lean Habit, and not very full of Blood and Juices, Veneſection is improper. Nor is it to be us'd in bilious Fevers, either of the acute Kind, or ſuch as appear intermittent, and are accompanied with numerous Vomitings and Stools, an Uneaſineſs of the Præcordia, and a Coldneſs of the Extremities. But when a Plethora is join'd to that burning Fever which is frequent among our Country-men, and which the Antients properly called a bilious or putrid Synocha, a ſeaſonable Veneſection, adapted to the Strength and Condition of the Patient, and the Diſtention of the Veſſels, is highly neceſſary; for when a due Evacuation of Blood is made, the Violence of the Fever, and its ſeveral Symptoms, is not only much abated, but alſo a ſpeedy and favourable Termination is to be expected. On the contrary, Experience teaches us, that Women in a particular manner, and ſuch as abound with Blood, are in conſiderable Danger, if Veneſection has been omitted in the Beginning of the Diſeaſe; for then Nature herſelf attempts the Diſcharge of the ſuperfluous Blood, eſpecially from the Noſtrils, which, if it does not happen at a proper and critical Time, does not produce the deſir'd Effect, ſince a Stagnation of the Blood in the Veſſels of the Brain enſues, and induces a highly dangerous Phrenitis of the Membranes of the Brain.

After Veneſection, we are carefully to endeavour to remove the intenſe Heat of the Body, together with the inſatiable Thirſt and Dryneſs of the Fauces, by ſuch Medicines as fix and correct the violent Agitation of the ſulphureous Particles, relax the ſpaſmodic Conſtriction of the Fibres, dilute the Humours ſtagnating in the ſmall Veſſels, render them capable of a free Circulation, and remove Obſtructions, that an equable and free Circulation of the Fluids, thro' the proper Parts and Veſſels, may be promoted. For this Intention the Antients unanimouſly recommended drinking cold Water. *Hippocrates*, in his Book *de Affect. Sect.* 2. in burning Fevers, orders the frequent Exhibition of cold Draughts by little and little. And *Aretæus*, in *Lib.* 2. *Cap.* 4. *Acut.* has the following Words: "If the Patient labours under a bilious Vomiting, a Tenſity, "a Loathing of Food, Uneaſineſs, and Loſs of Strength, then "two or three Glaſſes of cold Water are to be exhibited, in "order to render the Stomach ſtrong; for cold Water eaſily "becomes warm in the Stomach." *Galen* alſo, in *Meth. Medend. Lib.* 9. *Cap.* 5. beſides Veneſection, highly commends cold Draughts, adding this for a Reaſon, "Becauſe "they extinguiſh the Fever, and render Nature ſtrong and "vigorous, in order to expel, by the Anus, and by the cutaneous Pores, whatever is faulty and peccant in the Habit." *Celſus* is of the ſame Opinion; for, in *Lib.* 3. *Cap.* 7. he uſes the following Words: "If a burning Fever is not at its greateſt Height before the fourth Day, and is attended with an "inſatiable Thirſt, cold Water is to be exhibited copiouſly, "and in as large Quantities as the Patient deſires. After this, "the Patient is to be cover'd with many Bed-clothes, and laid "in a proper Poſture for Reſt, and generally after a long-continued Thirſt and Watching, after drinking much Water, "and an Alleviation of the Heat, a ſound Sleep ſeizes the "Patient, by which a copious Diaphoreſis is promoted, and "preſent Relief afforded." But he ſubjoins theſe Cautions: "But in thoſe only in whom, beſides the Heat, there are no "Pains, no Swelling of the Præcordia, no Obſtructions, either of the Lungs or Fauces, no Ulcer, no Faintings, and "no Flux, the Exhibition of cold Water is proper. But a "Patient, who is afflicted with a gentle Cough under this Species of Fever, ought neither to drink liberally, nor uſe "Draughts of cold Water." *Proſper Alpinus*, in *Med. Meth. Lib.* 2. tells us, "That in violent continent Fevers, "all the *Egyptian* Phyſicians uſed to exhibit large Draughts of "cold Water, becauſe that Liquor concentrates the natural "Heat to ſuch a degree, that the Thirſt and Heat forthwith "ceaſe; by which means the whole Body is corroborated, and "the Water is digeſted: For the moſt part, the Uſe of cold "Water in theſe Caſes excites profuſe Sweats, ſometimes bilious Vomitings, a plentiful Diſcharge of Humours by Stool, "and a copious Evacuation of Urine. It is ſurpriſing, continues he, that ſuch a Medicine ſhould prove effectual againſt "theſe Fevers; for they generally terminate by the Evacuations excited by cold Water." The ſame Author, *de Med. Egypt. Lib.* 4. *C.* 15. informs us, that this was not only the Practice of the *Egyptian* Phyſicians; but that it was accounted a Specific. "Some, ſays he, in Synochas and burning Fevers, "reckon a large Quantity of the Water of Angarii, which "is a Species of Cucumber, exhibited for many Days alone, "a Specific. Others, in the Height of the Diſorder, exhibit "large Draughts of cold Water, after which, they cover the "Patient with many Bed-clothes, in order to procure a Diaphoreſis, by which means I underſtand a great many have "been cured."

Both Reaſon and Experience concur to ſhew us, that the high Opinion the Antients entertained concerning the Efficacy of cold Water in burning Fevers, was not altogether without a Foundation; for unleſs the Stomach and other internal Parts are inflam'd, and when there is no Anxiety, with a Coldneſs of the Extremities, nor a Contraction of the Pulſe, and a Defect of Blood, Draughts of good cool Water, tho' not intenſely cold, exhibited in large Quantities, but not all at once, are of ſingular Service; for the cold Liquor corrects and obtunds the too violent Motion of the ſulphureous and ethereal Particles in the Blood, braces up the relax'd Fibres, and reſtores a due Degree of contractile Force and Elaſticity, to ſuch as are too violently diſtended. Nor are any bad Conſequences to be dreaded from the cold Water, becauſe, by entering the Body ſucceſſively, it becomes tepid by the internal Heat. This Tepidity, join'd with the Moiſture, is ſingularly beneficial in relaxing the ſpaſmodically conſtricted Fibres, and rendering the Fluids, ſtagnating in the capillary Veſſels, fit for a due Circulation, by which means a Diaphoreſis, a plentiful Diſcharge of Urine, and Evacuations by Stool are promoted. But ſince, in the Northern Climates, ſuch pure and light Water is hard to be found, the Water uſed for this Purpoſe muſt be corrected by boiling, or an Admixture of proper Ingredients. *Hippocrates*, in burning Fevers, recommends a Decoction of Water and Barley. And *Aretæus*, in a bilious Fever, recommends a Mixture of Milk and Water. The cold Draughts found moſt beneficial for Patients in our Climate, are principally Juleps, prepar'd of Spring-water, Lemon-juice, and Sugar; as alſo Ptiſans of the Shavings of Hartſhorn, Scorzonera-root, and Syrup of the Juice of Lemons, or Julap of Roſes and Spirit of Vitriol. Water alſo, boil'd with a Piece of Bread in it, is an excellent Drink for this Purpoſe. To this Claſs of Liquors we may alſo refer ſweet Whey, or that which is acidulated with Lemon-juice, as alſo the temperate Mineral Springs, ſuch as the *Selteran*, *Antonian*, and *Wildungenſian* Springs.

This Exhibition of cold Water, thus ſtrenuouſly recommended by Hoffman, *is no new Practice. It is treated of at large in* Lommius's *Treatiſe on Fevers.*

For obtunding and correcting the cauſtic Acrimony of the bilious Juices, ſtagnating in the Stomach and Duodenum, eſpecially in bilious Fevers, the moſt effectual Medicines of the compound Kind are the *Pulvis Marchionis*, and particularly the abſorbent Powders, with which are conveniently mixed the more light earthy Subſtances, Crabs-eyes, Mother of Pearl, prepared Shells, calcin'd Horns and Bones, and, according to *Langius* and *Crato*, *Muſcovy* Glaſs. Nitre is alſo of ſingular Efficacy for extinguiſhing the Heat, and checking the inteſtine Motion; for which Reaſon it may be very advantageouſly mix'd with theſe Powders. But theſe correcting Powders muſt be diluted with a ſufficient Quantity of a proper Liquor, and be exhibited frequently, and at proper Intervals. Nor are diluting and attenuating Medicines leſs beneficial, ſuch as Emulſions of Almonds, and the Four cold Seeds, eſpecially thoſe of the Gourd, with Waters diſtilled from Flowers of a paregoric Quality, ſuch as thoſe of Elder, Roſes, Bugloſs, Cowſlips, Limes, Lily of the Valley, as alſo black Cherry-water. This Intention is alſo anſwer'd by Jellies of the Shavings of Hartſhorn, Milk mix'd with Water, Oil of ſweet Almonds, ſweet Whey, as alſo Broth, prepared of Fowls bruiſed and boiled in a cloſe Veſſel. Theſe Medicines are highly beneficial for removing the Inflammation of the nervous and membranous Parts, which generally proves fatal in theſe Diſeaſes: But they muſt be exhibited in a due Order, at proper Times, and in juſt Doſes; in a Word, the following Cautions muſt be obſerved with reſpect to their Uſe.

Practical Cautions *and* Observations.

As in the Cure of all acute Fevers, ſo more eſpecially in thoſe of the burning and inflammatory Kind, the beſt and ſafeſt Method is, thro' the whole Stages of the Diſeaſe, to proceed calmly and gently, and carefully to abſtain from every thing both in Diet and Medicine, which may contribute to increaſe the Diſeaſe, or retard its Cure. *Celſus*, in the ſeventh Chapter of his third Book, gives us an excellent Caution with reſpect to this Particular, in the following Words: "The "Patient, ſays he, is to be laid in a ſufficiently large Room, "that he may breathe a free and open Air: Nor is he to be "loaded with a large Quantity of Clothes, but only to be "cover'd with ſuch as are light. The Leaves of the Vine, "dipt in cold Water, may alſo be laid over his Stomach, in "order to prevent his being rack'd with an immoderate Thirſt;" for a moderate and equal Heat does more in theſe Fevers for the Correction, Reſolution, and Evacuation of the morbific Matter, than any other Medicine whatever. But nothing is more prejudicial, than to increaſe the Heat by the Warmth of the Room, or an Abſtinence from Drink, ſince, by this means, the Strength is impaired, the due Secretion of the peccant Humours from the vital Juices retarded, and the Moiſture neceſſary for the free Circulation of the Blood and Humours, and for relaxing and opening the obſtructed or conſtricted capillary Veſſels, conſumed. For this Reaſon, the frequent drinking of warm Infuſions in burning Fevers, is ſo far from proving beneficial, that they often prove hurtful. But ſtill more Injury is done by ſuch Medicines as heat the Blood, throw it into a Commotion, and excite an actual Diaphoreſis. For this Reaſon, *Celſus* juſtly commends a large Room, and the Acceſs of a pure Air; for, as the ſubtile, ethereal, and elaſtic Subſtance in the Air, is the genuine Support of the elaſtic, vital, and ſyſtaltic Force of the Veſſels, and of the Strength of the Parts, ſo the Air, when tainted with many moiſt and corrupted Effluvia, and conſequently depriv'd of its Elaſticity, is prejudicial to Perſons in a ſound State of Health, and much more to ſuch as are indiſpos'd. Nor do I think, that any other Reaſon needs be aſſign'd, why ſo many of the Vulgar die of acute Fevers, whoſe Conſtitutions are otherwiſe able to overcome the Shocks of the Diſtemper, than that they lie in little, low, and often overheated Apartments, in which, eſpecially when there is a Number of Patients, the Air they breathe is ſickly, and impregnated with noxious Exhalations.

But as Nature herſelf is the beſt Phyſician in continued Fevers, her Motions are carefully to be adverted to. Theſe are principally exerted by the Rigor which proceeds from the ſpinal Marrow, with a Senſe of Cold and Shivering, and happens at ſtated times, eſpecially on the odd Days, the Half of the fourth Day, the ſeventh, the eleventh, and the fourteenth; for this Rigor is only a ſpaſmodic Affection of all the nervous Syſtem, by which the Blood and Humours are driven, with a certain Violence, from the Surface of the Body towards the internal Parts, the Heart, the Brain, and the larger Veſſels; for which Reaſon the Extremities are cold, but the internal Parts are too much filled and diſtended with Blood. Hence the Pulſe is contracted, there is an Uneaſineſs about the Breaſt, and the Face, together with the Veſſels of the Head, is ſwelled. But if, after this Rigor, the Humours driven inwards are, by an equal Force, and an enlarged Syſtole of the Heart and Arteries, again driven towards the Surface of the Body, the Force of the Diſeaſe, and the morbific Cauſe, are often at once carried off and removed, either by a copious and univerſal Diaphoreſis, or by a Diſcharge from the Noſtrils. Thus a Rigor which is ſalutary, is juſtly, for that Reaſon, called critical; and, after it happens, the Pulſe is equable and ſoft, the Circulation of the Blood carried on in a due manner, the Strength recruited, and the Patient rendered capable of enjoying his natural Reſt. But when the ſyſtaltic Force of the Heart and Arteries is not ſo ſtrong, as again to drive out the Blood, the Rigor is ſymptomatic, and of the bad Kind; for then the Body neither grows warm again, nor the Pulſe equal; nor is there a Diſcharge of Blood from the Noſtrils, nor an univerſal Diaphoreſis, but only a partial and cold one about the Head and Neck; nor are the Body and Mind recruited, nor does the Patient become capable of his natural Reſt. The Blood rather remains pent up internally in the ſmall Veſſels, and in the Brain occaſions a Phrenitis and Convulſions about the Heart and Lungs, a violent Uneaſineſs of the Præcordia, a Difficulty of Breathing, and a Fainting, which is generally ſucceeded by Death on the ninth Day. Sometimes alſo theſe Rigors happen on the critical Days; but theſe are in like manner ſymptomatical, and prognoſticate an unlucky Termination. Theſe Motions, therefore, of Nature, as they are productive either of Death or Health, ought to be carefully attended to by the Phyſician; for on this depends, not only the whole Art of forming right Prognoſtics, and exhibiting Medicines ſeaſonably, but alſo the Whole of Practice. This excellent Ground-work of obſerving the Motions of Nature was always kept in View by *Hippocrates*, and carefully inculcated by his faithful Interpreters *Hieronymus Mercurialis* and *Duretus*. But very few of the Moderns ſeem to be acquainted with it.

When Nature thus reſolves to exert extraordinary Efforts, the Phyſician is to wait and direct nothing: The Patient is alſo entirely to abſtain from Aliments, and the Body is only to be preſerv'd in an equable and moderate Warmth. But if the Force of Nature alone is not ſufficient for expelling the Blood, and promoting the Secretions, ſhe is ſkilfully to be aſſiſted internally, either by temperate Analeptics and Diaphoretics, or externally by Medicines of a deriving and diſcutient Quality; for the happy and ſeaſonable Time of acting and exhibiting Medicines is never of more Importance, than in dangerous and acute Diſorders.

When, after a Rigor, a Head-ach proceeding from a Plethora happens, with a beginning Commotion of Mind, and when a ſmall Quantity of Blood drops from the Noſtrils, I uſe an Epithem prepared of Vinegar and Roſe-water, Camphire diſſolv'd in Spirit of Roſes, Nitre, and Oil of Rhodium, applied cold, not only to the Temples, but rather to the whole Head ſhav'd. This Medicine produces the happieſt Effects by refrigerating, diſcuſſing, and reſiſting Inflammation. This ſame Epithem is of ſingular Service for alleviating the Anxiety, removing the Uneaſineſs, and facilitating the Reſpiration, if it is laid over the Præcordia with a Linen Cloth, conſiſting of three Folds. But the moſt immediate Relief for a Phrenitis is to be expected from opening the Veins of the Noſtrils, whether by a Scarificator, or the Intruſion of the Point of a Straw, taking care to render the Legs and Thighs at the ſame time warm by Friction, and exhibiting internally a diſcutient, diaphoretic, and analeptic Mixture, with diſtil'd Vinegar, Waters of Cinnamon, Roſes, Carduus Benedictus, and the Mixtura Simplex, Cinnabar, Crabs-eyes, and the Bezoardicum Minerale.

In order to allay the Thirſt, and moiſten the parched Tongue and Fauces, I have obſerved no Medicine more efficacious, than half a Dram of the beſt Nitre diſſolv'd in a Pint of ſweet Whey; for this drunk frequently cold, and in ſmall Draughts, ſurpriſingly allays the preternatural Heat. The Mouth alſo and Fauces are now-and-then to be waſh'd with Water, in which a ſufficient Quantity of Nitre, and the Rob of Mulberries has been diſſolv'd. This may alſo be exhibited as a Gargariſm. But I can never approve of Injections by a Syringe, becauſe, by their violent Attrition, they generally increaſe the Pain and Inflammation. Beſides, in order to remove any Inflammation which threatens a Quinſey, this Linctus, gently ſwallow'd, is of ſingular Service.

> Take of Conſerve of Roſes, one Ounce; of the beſt Nitre, fifteen Grains; and of Camphire, three Grains. Diſſolve all in one Dram of the Oil of ſweet Almonds.

Tho' the Exhibition of Purgatives, during burning Fevers, is proved to be highly dangerous, both from Reaſon and Experience, yet 'tis proper the Patient's Body ſhould be always ſoluble under the Diſeaſe itſelf; therefore this Intention is beſt and moſt properly anſwer'd by Suppoſitories and Clyſters, prepar'd only of Milk, Honey, and a little Nitre. But when a Criſis and due Concoction are form'd, which may be diſcovered from the Sediment of the Urine, it is expedient to render the Body ſoluble by the milder Laxatives, ſuch as Preparations

tions of Manna, Tamarinds, Rhubarb, Raiſins, and Tartar, that the peccant Juices in the *Primæ Viæ*, generated by the Diſeaſe itſelf, may be evacuated, leſt they ſhould lay a new and freſh Foundation for the like Diſorder.

As Hoffman *gives his Opinion againſt Purging, in the Sorts of Fevers here mentioned, I have not ſuppreſs'd it, in order to favour what I have ſaid concerning purging in Fevers, under the Article* CATHARSIS, *to which I muſt refer the Reader.*

The drinking cold Water, a Practice ſo highly extol'd by the Antients, is of ſingular and uncommon Efficacy in this Diſeaſe, and therefore deſerves the greateſt Attention and Regard of the Phyſician. But as we have already directed, when and in what Caſes it is to be us'd, we ſhall only here obſerve, that it is never to be exhibited in large Draughts at one time, but ſucceſſively and frequently; never in the Beginning of the Diſeaſe, but ſome Days after its firſt Attack; never in the Time of the Paroxyſm, or whilſt the Rigor laſts, or the Pulſe is ſmall and intermittent; in a Word, never till the Plethora is firſt remov'd: But it may be ſafely us'd when the Extremities are hot, and the Pulſe equal, quick, and large.

If the Fever is bilious, acute, and highly dangerous, by reaſon of the bilious and corroſive Juices preying upon the nervous Coats of the Stomach and Inteſtines, ſome ſpeedy and efficacious Remedy is neceſſary. In this Caſe, it is adviſeable to exhibit the abſorbent and correcting Powders frequently, and in larger Doſes than uſual, in Conjunction with diluting and lenitive Liquors. For anſwering this Intention, I always recommend the following, as a Medicine of approv'd Virtue.

> Take of the Powders of Crabs-eyes, Mother of Pearl, uncalcin'd Hartſhorn, *Muſcovy*-glaſs, or calcin'd Talc-ſtone, of each one Dram; and of Nitre, one Scruple; of which the Patient is, every Hour, to take one Dram, in two Ounces of an Emulſion of Almonds, to which two Drams of the Oil of ſweet Almonds have been added.

But for checking the violent bilious Evacuations, my Anodyne Mineral Liquor is of ſingular Efficacy, eſpecially if it is impregnated with a few Drops of the Oil of Mace, and exhibited in any fluid Vehicle, or only in cold Water; for, becauſe it ſtops the too quick ſyſtaltic or periſtaltic Motion of the biliary Ducts, a ſmaller Quantity of the bilious Juice is by that means thrown into the Duodenum, and, conſequently, the too copious Diſcharge of it is ſtopt.

I myſelf, ſays *Hoffman*, have known ſeveral Inſtances of a Cholera Morbus and Dyſentery ſpeedily remov'd by theſe Medicines, exhibited ſeaſonably, and in proper Doſes. *Frederic. Hoffman. Medicin. Rational. Syſtemat.* See FEBRIS.

CAUTERISATIO. Cauteriſing.

CAUTERIUM, καυτὴρ, καυτήριον, from καίω, to burn. A Cautery either actual or potential. See CAUSTICA.

CAVUS. Hollow. Many Parts of the Body are call'd by the Name of *Cava*, as is explain'd under the Article COILA, which ſee.

CAYMANES. The *Weſt Indian* Crocodile, or Alligator. See CROCODILUS.

CEANOTHOS. A Name for the *Carduus Vinearum repens*. See CARDUUS.

CEASMA, κέασμα, from κεάζω, to ſplit, or divide. A Fiſſure, or Fragment. *Heſychius.*

CEBI *Gallinæ*. The broil'd Liver of a Hen. *Caſtellus* from *Paulus Bagellardus de Morbis Puerorum.*

CEBIPIRA *Braſilienſibus*. Marcgr. *Cebipira Guacu*, and *Cebipira Miri*. Piſon. Call'd alſo *Arbor Braſilienſis Floribus ſpecioſis ſpicatis, Pericarpio ſicco*. Of the Bark, which is bitter and aſtringent, Baths and Fomentations are prepar'd, which are eſteem'd excellent againſt Diſeaſes ariſing from Cold, Tumors of the Feet and Belly, and thoſe Pains of the Limbs which the *Portugueſe* call *Curimentos*.

As it is aſtringent, and ſomewhat acrimonious, it is good in the Itch, Ring-worm, and cutaneous Diſorders of the like Kind.

CEBUS. A Species of Monkey. *Caſtellus.*

CECIS, κηκὶς. A Gall of the Oak. See QUERCUS.

CECRYPHALOS, κεκρύφαλος, and κεκρύφαλον. Properly a Net, in which the Women bound up their Hair, as it occurs in *Hippocrates*. It alſo ſignifies that Stomach, in ruminating Animals, which lies next before the Omaſum.

CEDMATA, κέδματα. Inveterate Defluxions of Humours on the Joints, eſpecially that at the Hip, where the Os Femoris is articulated into the Acetabulum. Theſe are frequently mention'd by *Hippocrates*. Sometimes alſo Defluxions on the genital Parts are call'd by this Name.

CEDRELÆUM. Oil of Cedar, as *Pliny* ſays, made of the Fruit of the Cedar, *malis Cedri*. *Bellonius* obſerves, that there is a Diſtinction betwixt the Cedrelæon and the Oleum Cedrinum. See CEDRIA.

CEDRELATE.

This Name, according to *Bellonius*, is derived from ἐλάτη, the Fir-tree, and κέδρος, the Cedar. Among Botaniſts it ſignifies the great Cedar, a Tree of ſo immenſe a Bulk, as to exceed not only all the reſiniferous and coniferous Trees, but alſo all the other Trees in the World.

CEDRIA.

This is ſometimes call'd the Pitch, and ſometimes the Reſin, of the Cedar, flowing from the great Cedar; ſo that, properly ſpeaking, it is nothing but the crude Tears of the Cedar. Some affirm, that this Subſtance is different from the *Cedrium*, or Oil of Cedar, which is of a more liquid and oleous Conſiſtence: But, by Authors, it is promiſcuouſly call'd *Cedria*, *Cedrium*, and κεδρέλαιον, κεδρεΐαν, κεδρίαν, κέδρινον, according to *Gorræus*, in *Definit.* *Pliny*, in the fifth Chapter of his twenty-fourth Book, informs us, that the great Cedar yields a Pitch call'd *Cedria*; and, according to *Bellonius*, *Galen* gives various Names to this Subſtance, calling it ſometimes the Reſin, ſometimes the Tears, ſometimes the Pitch, of the Tree, and ſometimes Cedria; for he calls that which flows immediately from the *Cedar-tree*, *Reſin*, or *crude Tears*, in order to diſtinguiſh it from that which is boil'd and prepar'd. According to *Salmaſius*, the *Arabians* call the Oil of Cedar *Ketran*, or *Alketran*; and we, by a Corruption of that Word, commonly give the Name of *Cedrinum* to that Species of Pitch which is us'd for Ships. The *Greeks* call'd this Subſtance ζώπισσον, and ἀπόχυμα; and it is often mention'd by the Farriers, and other medicinal Writers among the *Greeks*: It was Pitch mix'd with Wax, in order to be laid on Ships, and differ'd much from the Cedria, which is the *Ketran* of the *Arabians*. Many of the *Greeks* confound the κεδρέλαιον and the κεδρεία· but, in the Opinion of others, theſe are different Subſtances. The κεδρεία is the Pitch of the Cedar-tree, whereas the κεδρέλαιον is an Oil obtain'd from the Pitch, which ſwims above it in boiling, and is collected with Wool. *Dioſcorides*, in his Deſcription of the Cedar-tree, plainly makes this Diſtinction. What, in the Pitch of the Cedar-tree, was call'd κεδρέλαιον, was, in other kinds of Pitch, call'd πισσέλαιον. This was, as it were, the Serum of the Pitch, which, in boiling, floated on its Surface, and was received in clean Wool, ſpread upon the common Maſs. The Name πισσέλαιον is alſo applicable to the Cedrelæum, inaſmuch as this Oil is obtain'd from the Pitch of the Cedar-tree. And *Pliny* informs us, that the Piſſelæon is made of the Juice of the Cedar-tree, or the κεδρεία. *Dioſcorides*, in the eighty-ninth Chapter of his firſt Book, ſpeaks of the Cedria in the following manner: "That Cedria is beſt which is thick, pellucid, and "of a nauſeous Smell, which, when pour'd out, does not "ſpread, but runs into Drops, and which has a Power of pre"ſerving dead Bodies, and corrupting ſuch as are alive; for "which Reaſon it is by ſome call'd *the Life of the Dead*. In "conſequence of its remarkably heating and drying Quality, "it alſo corrupts Cloths and Skins. It is of ſingular Service, "as an Ingredient, in Collyriums, and Preparations for the "Eyes; for, when the Eyes are anointed therewith, it ren"ders the Sight clear, and removes Films and Specks. It "kills the Worms of the Ears, when dropt into them with "Vinegar. It removes a Noiſe and Ringing of the Ears, when "pour'd into them, in Conjunction with a Decoction of Hyſſop. "When put into hollow Teeth, it breaks them, and alleviates the "Pain. It produces the ſame Effect when the Mouth is "waſh'd with a Mixture of it and Vinegar. If the Genitals "of Men are anointed with it before Venereal Intercourſe, it "prevents Conception. In Quinſeys, the Parts affected are to "be anointed with it; and it is of Service in Inflammations of "the Tonſils. It deſtroys Nits and Lice, if the Parts are "anointed with it. It affords Relief in the Bites of the Ser"pent call'd Ceraſtes, if it is laid on the Part affected, in Con"junction with Salt. When exhibited in Raiſin-wine, it is of "Service to Patients who have drank the Poiſon of the Sea"hare. It proves beneficial in an Elephantiaſis, when either "us'd internally as a Linctus, or externally by way of Oint"ment. It deterges Ulcers of the Lungs; and, if a Cyathus "of it is taken, thoroughly cures them. Given by way of "Clyſter, it kills Aſcarides and other Worms, and expels the "Fœtus. The Oil is ſeparated from the Cedria whilſt it is "boiling, by ſpreading Fleeces of Wool above the Steam of it, "as in the Pitch; and its Virtues are the ſame in all reſpects. "It has this peculiar to it, that it cures the Scab of Quadrupeds, "Dogs and Oxen, if the Parts affected are ſtrongly anointed "with it. It alſo kills the Tykes lodg'd in their Fleſh; and "cicatrizes the Wounds they have received by being clip'd." The Reaſon why *Dioſcorides* affirm'd, that it corrupts Skins, was, according to *Bellonius*, that it was formerly kept in the Skins of Animals, whereas in the Eaſtern Nations it is now kept in Bottles. *Pliny* comments, in the following manner, upon the Virtues of the Cedria, laid down by *Dioſcorides*: "It "corrupts Garments, and kills Inſects; for which Reaſon I "think it improper to uſe it in Quinſeys; as alſo in Diſorders "ariſing from Crudities, which ſome, in conſequence of its "Taſte, have adviſed. In Tooth-achs, I ſhould alſo be afraid "to waſh the Mouth with it and Vinegar; or to drop it into "the Ears, in order to remove a Dulneſs of Hearing, or kill "the Worms lodg'd in them. It is a fabulous Report, that it

"prevents

" prevents Conception, or procures Abortion, if the Genitals " are anointed with it. I ſhould not ſcruple to uſe it, by way " of Ointment, in a Phthiriaſis and ſcurfy Diſorders. It is alſo " order'd to be drank, in Raiſin-wine, againſt the Poiſon of " the Sea-hare; but it is much more properly uſed, as an Oint- " ment, in the Elephantiaſis." If we compare this Paſſage of *Pliny* with what he ſays in the eleventh Chapter of his ſixteenth Book, it appears, that *Pliny* advanc'd this not properly concerning the Cedria, which he calls Pitch, but concerning the Juice of the Cedar-tree, which he calls *Cedrium*, than which the former is thicker. In the mean time, whoever conſiders that, in the former Paſſage, *Pliny* aſcribes ſome of the Things which *Dioſcorides* wrote concerning the Cedria alone, to the Cedria, and others of them to the Juice of the Cedar-tree, will be ready to ſuſpect, that, in the Days of *Pliny*, the ſame Thing was ſignify'd by the Names Cedria and Cedrium; or that this Author confounded the Cedria with the Cedrium, which, *Dioſcorides* ſaid, was a Fluid, flowing like Water in a Pipe, whereas the Cedria was a thicker Liquor. Beſides, *Bauhine* is juſtly ſurpris'd, that *Pliny* did not find Fault with the Juice of the Cedar-tree in Ulcers of the Lungs, as he did in Quinſeys and Crudities, ſince, according to *Galen*, the Cedria not only irritates Ulcers, and excites Phlegmons, but is alſo of a ſeptic Quality.

Hippocrates, in his Treatiſe *De Morb. Muliebr. Lib.* 1. for promoting the Conception of Women, orders the Uſe of a Peſſary, prepar'd of about ſix Drams of Cedria, mix'd with four Drams of the Fat of Beef. According to *Proſper Martianus*, in his Annotations on *Hippocrates*, we have no Reaſon to wonder, that *Hippocrates* ſhould recommend the Cedria for promoting Conception in Women, tho', according to *Dioſcorides*, it prevents it, if the Genitals of Men are anointed with it; for, as much as the Conſtitution of a Woman differs from that of a Man, ſo much may the Effects of one and the ſame Medicine in a Woman, differ from thoſe it produces on a Man, becauſe the Conſtitution of a Woman is cold and moiſt, whereas that of a Man is rather hot and dry. For this Reaſon it is that the Barrenneſs of Women frequently ariſes from Coldneſs and Humidity, whereas the Vigour and Capacity of Men depend upon contrary Qualities. This Opinion not only prevails among the Vulgar, but was alſo receiv'd by *Hippocrates*, who, when the monthly Evacuations were duly made, and the Mouth of the Uterus in its natural Situation, always with an Intention to promote the Conception of Women, preſcrib'd Medicines compoſed of Simples of a heating and drying Nature, which would prove highly prejudicial to Men. *Hippocrates*, in his Book *De Sterilitat.* has an Eye to this Diverſity of Conſtitutions, when he adviſes a Woman, who has Intercourſe with a Man with a View to Conception, to abſtain from Food, but orders the Man to be nouriſh'd with proper Aliments. Becauſe the Cedria is of a highly heating Quality, it may remove Sterility, by correcting the Coldneſs of the Uterus, when it remains in the Pudenda of Women, whereas the anointing the Man's Genitals with it may ſo overheat and dry the ſeminal Matter, in its Emiſſion, as to render Conception impoſſible. If the Uterus is exulcerated by Child-birth, or an Inflammation, he orders us to deterge the exulcerated Part by an Injection of Butter, the Oil of Cedar, and a little Honey. This ſame Remedy he alſo preſcribes in Ulcers of the Pudenda, and inveterate Ulcers of the Uterus. In order to make the Injection, he takes the Fat of a Gooſe and Reſin, to which, when melted, he adds a ſmall Quantity of the Oleum Cedrinum and Honey. But, in order to expel the dead Fœtus, he orders Galbanum, wrapt up in a Linen Cloth, and dipt in the Oleum Cedrinum, to be uſed by-way of Peſſary. *Celſus*, in the eighteenth Chapter of his fifth Book, gives us the *Malagma* of *Numenius* for the Gout, and other Indurations of the Joints, in which Cedria is alſo an Ingredient. *Scribonius Largus*, in his Work *De Compoſitione Medicamentorum*, gives us the Form of a Medicine of the Conſiſtence of Honey, and compoſed of Vinegar, Alum, and Cedria, for rubbing the Teeth in the Tooth-ach. What the Cedria is, and how it is produc'd, are Points warmly diſputed by different Authors; but thoſe of the greateſt Note are agreed, that it is a native Reſin, obtain'd from the *Cedrus Major*, which is the Cedrus Magna, or *Libani conifera*. See the Article LARIX ORIENTALIS. Some ſubſtitute, in the room of the Cedria, the Gum of the Juniper-tree, others the Oil of Juniper, others Piſſelæon, the Tears of the Fir, Ladanum, and the Juice of the Birch. See AMBRA.

CEDRINUM *(Vinum)*, κέδρινος οἶνος. Cedar-wine.

Cedrinum, Juniperinum, Cupreſſinum, Laurinum, Pineum, Abiegnum, all theſe ſorts of Wines are prepared after the ſame manner, which is as follows:

They take thin Pieces of the Wood, newly cut from the Tree while the Fruit was upon it, and expoſe them to the Sun, or lay them in a Bath, or by a Fire, in order to obtain their Juice by Exſudation. A Pint of this Juice they mix with ſix Pints of Wine, and let it ſtand for two Months. They then pour it into another Veſſel; and, after expoſing it for ſome time to the Sun, ſet it aſide for Uſe. Obſerve that all factitious Wines muſt have their Veſſels quite full, otherwiſe they will grow ſour; and that medicated Wines are not good for Perſons in Health.

All theſe Wines are heating, diuretic, and gently aſtringent; but the Laurinum, or Bay-tree Wine, is remarkably heating.

Cedar-wine is alſo prepar'd of the Fruit of the greater Cedar, by mixing half a Pound of the bruis'd Berries with ſix Pints of Muſt. This is to ſtand in the Sun forty Days, and then to be ſtrain'd off, and put into Veſſels. *Dioſcorides*, *Lib.* 5. *Cap.* 45.

CEDRIS. The Fruit of the great Cedar. *Dioſcorides* ſays they are heating, and prejudicial to the Stomach; but are good in Coughs, Convulſions, Contuſions, and Stranguries: Taken with bruis'd Pepper, they provoke the Menſes. *Dioſcorides*, *Lib.* 2. *Cap.* 105.

CEDRITES, κεδρίτης. *Cedrites* is thus prepar'd:

They take the Pitch or Roſin which diſtils from the great Cedar, and waſh it in fair Water; and then put one Cyathus (one Twelfth of a Pint) into each Ceranium, (a Meaſure containing nine Gallons) filling it up with Muſt.

This ſort of Wine alſo heats, attenuates, is good for an old Cough, not attended with a Fever, for Pains of the Breaſt and Sides, the Gripes, Ulcers of the Belly and Inteſtines, an Empyema, the Dropſy, and Hyſterics. It is effectual alſo againſt Worms, and in Rigors. It cures the Bites of venomous Creatures, kills Serpents, and eaſes Pains in the Ears, if inſtil'd into them. *Dioſcorides*, *Lib.* 5. *Cap.* 47.

CEDRO. The Citron-tree.

CEDROMELA. The Fruit of the Citron-tree.

CEDRONELLA. Baum. See MELISSA.

CEDRUS. The Cedar.

The Characters are;

The Leaves are ſquamous, like thoſe of the Cypreſs; the Flowers amentaceous, conſiſting of many minute Petals, furniſh'd with many Apices; the Fruit is a Berry, which grows remote from the Flower on the ſame Plant, which is full of angulated Stones, containing an oblong Seed. *Boerhaave Index alter.*

Boerhaave mentions two Species of Cedar;

1. *Cedrus folio Cypreſſi; major; fructu flaveſcente*; C. B. P. 487. *Cedrus, Lycia, retuſa Bellonio dicta.* J. B. 1. 300. *Oxycedrus, Lycia.* Dod. p. 853. *Juniperus, major, Dioſcoridis.* Cluſ. H. 38. *Thuyæ genus quartum.* Lugd. 61. *Sabina, baccifera.* Lob. Ic. 220. 2. H.

This is a Shrub, rarely ſurpaſſing the Length of a Man in Height, with a crooked uneven Trunk, ſending off many Branches, and cover'd with a rough Bark. Its Leaves are fleſhy, and four of them are mutually connected in a continu'd Series, like thoſe of the Cypreſs. Its Flowers are yellow, like thoſe of the common Juniper; but ſituated on the Extremities of the Leaves, as in the Cypreſs and Thuia, or Arbor Vitæ. Theſe Flowers are ſucceeded by a round Fruit as large as a Myrtle-berry, and which is firſt green, and then of a purple Colour. It becomes ſomewhat ſoft as it ripens, and has a Taſte and Smell reſembling that of the Juniper-berry. It has three, four, or more, oblong and ſtriated Seeds, which contain a whitiſh kind of Medulla, whoſe Smell reſembles that of Roſin. It flowers in the Spring; and, like the Juniper, bears its Fruit a great while before it arrives at Maturity. This Shrub firſt ariſes from a Seed; and, whilſt it is yet tender, its Leaves are entirely diſſimilar, and reſemble thoſe of the Juniper, only they are ſomewhat ſhorter and ſofter: But, when it is three or four Years old, its Leaves become round, and begin to reſemble thoſe of the Cypreſs; ſo that the inferior Branches are ſometimes obſerv'd to carry pungent and pointed Leaves, whereas thoſe on the ſuperior Branches are obtuſe and round. Unleſs this Metamorphoſis is diligently adverted to, we may be eaſily impoſed upon, and induc'd to believe, that the young Shrub is a Plant of a different Species from that which is old and full-grown. It grows on the Coaſts of the *Tuſcan* Sea, in the maritime Parts of *Languedoc*, and in great Abundance about *Marſeilles* and *Avignon*; it is alſo produc'd in *Greece*, and delights in cold and ſhady Places.

It is ſaid to be of a heating and diuretic Quality, like common Juniper; and 'tis commonly reported, that the Steam of it, when kindled, baniſhes Serpents. According to *Dioſcorides*, the Berries are moderately heating, aſtringent, and beneficial to the Stomach. When exhibited in Draughts of proper Liquors, they are highly efficacious againſt Diſorders of the Breaſt, Coughs, Inflations, Gripes, and the Wounds inflicted by Serpents. They provoke Urine, and for that Reaſon are proper for Patients afflicted with Ruptures, Convulſions, and hyſteric Fits. The Leaves contain a certain Degree of Acrimony, for which Reaſon either they themſelves, or their Juice, may properly be drank in Wine againſt the Bites of Vipers; or the Part affected may be anointed with the ſame Preparation. The

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Country-people of *Provence*, in *France*, apply the Leaves bruis'd to Carbuncles, in order to put a Stop to their Increase: They also use the Tops of the Trees, if we may believe *Garidel*, for Ropes and Slings to their Waggons and Carts. From the Berries, or the recent Wood, boil'd in Must, is prepar'd the *Vinum Cedrinum*, or Cedar-wine, according to *Pliny*, in the sixteenth Chapter of his fourteenth Book. *Dale* informs us, that he saw an Author who expressly affirm'd, that, in *Carolina*, this Tree yielded a Gum so like the true Olibanum, that when he accidentally mix'd some Particles of it with Olibanum brought from *Europe*, they so much resembled other each, that they could neither be separated nor distinguish'd. Hence he concludes, that this is the Tree which produces the Olibanum.

2. Cedrus; folio Cypressi; media; majoribus baccis. *C. B. P.* 487. *Cedrus, Phœnicea, altera Plinii & Theophrasti.* Lob. Ic. 221. *Thuya, Massilienſium.* Lugd. 59. *Juniperus ex Goâ.* H. L. *Cedrus ex Goâ, vulgò. Sabina, Goënſis.* Raii H. 1916. *Juniperus, Caroliniana, Thuyæ ramulis fuſis & compreſſis, odoratior.* Plukn. Phyt. T. 40. F. 9. H.

Boerhaave makes the great Cedar of *Libanus* to be a Species of the *Larix*. It is thus distinguish'd by Botanic Authors:

CEDRUS, Offic. Chab. 71. *Cedrus Libani*, Ger. 1161. THE GREAT CEDAR-TREE OF LIBANUS, Emac. 1352. *Cedrus conifera foliis Laricis*, C. B. Pin. 490. Raii Hiſt. 2. 1404. *Cedrus conifera*, Jonſ. Dendr. 315. *Cedrus magna, ſive Libani conifera*, J. B. 1. 277. *Cedrus magna conifera Libani*, Park. Theat. 1532. *Larix Orientalis, fructu rotundo, obtuſo*, Tourn. Inſt. 586. Elem. Bot. 458. Boerh. Ind. A. 2. 180. CEDAR OF LIBANUS. *Dale.*

What we find mention'd in Scripture of the lofty Cedars, can be no ways applicable to the Stature of this Tree; since, from the Experience we have of those now growing in *England*, as also from the Testimony of several Travellers, who have visited these few remaining Trees on Mount *Libanus*, they are not inclin'd to grow lofty; but, on the contrary, extend their Branches very far: To which the Allusion made by the Psalmist agrees very well, when he is describing the flourishing State of a People, and says, *They shall spread their Branches like the Cedar-tree.*

Rouwolf, in his Travels, says, there were not, at that Time, (*i. e. Anno* 1574.) upon Mount *Libanus* more than 26 Trees remaining, twenty-four of which stood in a Circle; and the other two, which stood at a small Distance, had their Branches almost consumed with Age: Nor could he find any younger Trees coming up to succeed them, tho' he look'd about diligently for some. These Trees (he says) were growing at the Foot of a small Hill, on the Top of the Mountains, and amongst the Snow. These, having very large Branches, commonly bend the Tree to one Side; but are extended to a great Length, and in so delicate and pleasant Order, as if they were trim'd, and made even, with great Diligence; by which they are easily distinguish'd, at a great Distance, from Fir-trees. The Leaves (continues he) are very like to those of the Larch-tree, growing close together in little Bunches, upon small brown Shoots.

Maundrel, in his Travels, says, there were but sixteen large Trees remaining, some of which were of a prodigious Bulk; but that there were many more young Trees of a smaller Size: He measured one of the largest, and found it to be twelve Yards six Inches in Circumference, and yet sound, and thirty-seven Yards in the Spread of its Boughs. At about five or six Yards from the Ground it was divided into five Limbs, each of which was equal to a great Tree. What *Maundrel* hath related, was confirm'd to me by a worthy Gentleman of my Acquaintance, who was there in the Year 1720. with this Difference only, in the Dimensions of the Branches of the largest Tree, which, he assured me, he measured, and found to be twenty-two Yards Diameter. Now, whether Mr. *Maundrel* meant thirty-seven Yards in Circumference of the spreading Branches, or the Diameter of them, cannot be determined by his Expression; yet neither of them well agree with my Friend's Account.

Monsieur *Le Bruyn* reckons about thirty-five or thirty-six Trees remaining upon Mount *Libanus*, when he was there; and would persuade us, it was not easy to reckon their Number (as is reported of our *Stonehenge* on *Salisbury* Plain). He also says, their Cones some of them grow dependent; which is abundantly confuted by the above-mention'd Travellers, as also from our own Experience: For all the Cones grow upon the upper Part of the Branches, and stand erect, having a strong woody central Style, by which it is firmly annex'd to the Branch, so as, with Difficulty, to be taken off; which central Style remains upon the Branches after the Cone is fallen to Pieces, so that they never drop off whole, as the Pines do.

The Wood of this famous Tree is accounted Proof against all Putrefaction of Animal Bodies: The Saw-dust of it is thought to be one of the Secrets used by those Mountebanks who pretend to have the embalming Mystery. This Wood is also said to yield an Oil, which is famous for preserving Books and Writings; and the Wood is thought, by my Lord *Bacon*, to continue above a thousand Years sound. It is also recorded, that, in the Temple of *Apollo* at *Utica*, there was found Timber of near two thousand Years old. And the Statue of the Goddess, in the famous *Ephesian* Temple, was said to be of this Material also; as was most of the Timber-work of that glorious Structure. *Miller's Dictionary.*

CEDUE. The Air. *Rulandus.*

CEDURINI. A Word made use of by *Paracelsus* in his Treatise *de Vita longa*; but he does not explain the Meaning of it; nor do I know, that any body has found it out.

CEIRIÆ, κειρίαι. Flat Worms. *Galen.*

CELASTRUS. The Staff-tree. See ALATERNUS.

CELATUS *Aer* is Air stagnating in Wells, or close Buildings, neither warm'd by the Sun, nor agitated by the Wind.

CELE, κήλη. A Hernia, or Rupture of any Kind.

CELERY.

Under the Article APIUM we have observed, that some Authors were of Opinion, that the Celeri, or Seleri, by the *English* call'd *Celery*, was only the *Apium Palustre*, improved by Culture. But others, with greater Justice, affirm, that the former is entirely different from the latter; since there are various Species of the Celeri not only distinct from the *Apium Palustre*, but different from each other. *Ray* is of Opinion, that the Celery arising in the *English* Gardens, from the Seeds imported from *France* and *Italy*, in a few Years degenerates into the *Apium Palustre*, on account of the Coldness and Inclemency of the Air; so that they who would have it genuine, must, when this Change happens, have recourse to these Countries for fresh Seeds. This Plant is possess'd of the same Virtues with the *Apium of the Shops* (which see). Those who are fond of Venereal Intercourses, love Brandy distil'd from the Seeds of the Celery. The Root, which is externally white, like a Turnep, and the interior Part of the Stalk, when well wash'd, and cut into Slices, are used as a Salad; and thought an uncommon Delicacy in the Winter, and latter End of the Autumn. The Manner of preparing them is with Oil and Pepper, and many add Salt and Vinegar. The Root is also boil'd with Flesh and Fish, in order to render them more delicious. Some are also fond of the Seeds preserved with Sugar.

CELIFOLL. The same as CORIFOLIUM, which see.

CELIS, κηλὶς. A Spot, or any Mark, upon the Skin.

CELLA. A Cell. In Anatomy, a great many small Cavities of the Body are call'd Cells.

Cells, in Botany, are those Partitions or hollow Places in the Husks or Pods of Plants, in which the Seed is contain'd.

CELLULA. A small Cell.

CELLULOSA MEMBRANA. The Cellular Membrane, call'd also *Membrana Adipoſa*. This Membrane is of a vascular Contexture, and forms innumerable Cells, communicating with each other, in which the Fat is lodged. These Cells are capable of a prodigious Distention, by a very small distending Force. In a Consumption they are so much wasted, that the least Traces of them are not perceptible. When, in an Emphysema, they are distended with Air, they swell to an enormous Bulk; as also in an Anasarca, when fill'd with Water. This Membrane invests all the moveable Parts of the Body, and, by its Interposition betwixt the internal Part of the Skin and external Surface of the Muscles, renders the Skin moveable, whilst the Muscles are at Rest. Hence where the Muscles, which are most in Motion, are situated, there this Membrane is found to be naturally thickest, and most replete with Fat; as is visible on the Breast, Abdomen, Back, Loins, Buttocks, Thighs, Legs, Shoulders, Arms, Temples, and Neck. But in those Parts where the Muscles are very small, or their Action inconsiderable, it is furnish'd with so little Fat, that most Anatomists have deny'd, that in those Places it is to be found. Thus, in the Head, Eyelids, Face, and Scrotum, they affirm, that there is no such thing; but, however, erroneously; for in these Parts it really exists, but is less, in Proportion, as the *Elevator Palpebræ ſuperioris*, and *Corrugator Frontis*, is less than the *Glutæi*. But as this Membrane separates the Muscles from the Skin, so it lies betwixt the Muscles, and separates every individual Muscle of the Body from every other Muscle, that they may move upon each other without Difficulty: It forms also Vaginæ for the Tendons of the Muscles, that they may readily move backwards and forwards, without any Hindrance. It farther accompanies the Heads and Tendons of the Muscles to their Origins from, and Insertions into, the Bones; where it is expanded upon the external Periosteum, Bones, and Ligaments of the Joints, which it involves, and insinuates itself to the Viscera under the Meninges, Pleura, and Peritonæum. Besides the Involucrum, or Covering, which the Cellular Membrane gives to each Muscle, as above-mention'd, every individual muscular Fibre is cloth'd with a Production thereof; by the Intervention of which every Fibre is

separated, and distinct from every other Fibre. This Membrane, therefore, on account of its incredible Expansion, and the Communication of its Cells with each other, carries on an Intercourse between the Parts of the Body the most remote from each other; betwixt the Skin, for Example, and the Marrow of the Bones; for, as it reaches from the Skin to the external Periosteum, and as the Matter which forms the Marrow is convey'd to the Bone, and a Portion of it reconvey'd back again, by the Vessels of the Periosteum, the Way is obvious how these remote Parts may communicate. *Boerhaave* says, he is convinced of this Structure, and these Uses, of the Membrana Cellulosa, by incontestable Experiments; and that the Knowledge of it is indispensably necessary, both for understanding and curing an Inflammation, Suppuration, Gangrene, Scirrhus, Cancer, Atheroma, Steatoma, Meliceris, Sphacelus, and Dropsy.

Boerhaave thinks, that this Membrane is the Part principally affected in the Venereal Disease.

Cheselden says, that the Cells of this Membrane communicate, throughout the whole Body, so much, that, from any one Part, the Whole may be fill'd with Air. I have seen two Cases, says he, where the Wind-pipe being cut, and the external Wounds being closely stitch'd by injudicious Surgeons, the Air, which escaped at the Wound of the Wind-pipe, getting into the Cells of the Membrana Adiposa, blew up the upper Part of the Body like a Bladder. The like Accident I have seen from a broken Rib, where, I suppose, the End of the Rib had prick'd the Lungs. All these Persons died. In these Cells the Water is contain'd in an Anasarca, which, from its Weight, first fills the depending Parts, as the Air, in the former Cases, did the upper Parts; and, when these Cells are very full, the Water frequently passes from them into the Abdomen; and, after tapping, tho' the Limbs were ever so full, they will almost empty themselves in one Night's time. This Membrane is the usual Seat of Impostumations and Boyls, in both which Nature, uninterrupted, always corrodes a Hole in the Skin; from whence we may learn, that the best Way of opening any Impostumation is by a Hole, and that too as near the time of its breaking naturally as may be, that Nature may make the utmost Advantage of the Discharge. There is sometimes a large kind Boyl or Carbuncle in this Membrane, which first makes a large Slough, and a Number of small Holes thro' the Skin, which in time mortifies, and casts off; but the longer the Slough is suffer'd to remain, the more it discharges, and with the more Advantage to the Patient; at the latter End of which Case the Matter has a bloody Tincture, and a bilious Smell, exactly like what comes from Ulcers in the Liver; and both these Cases are attended with sweet Urine, as in a Diabetes. *Cheselden.*

CELSA, in *Paracelsus*, imports a certain Flatus or Vapour, confined within the Integuments, and seeking a Passage thro' them. He means, I suppose, the same which the Vulgar calls the Beating of the Life-blood.

CELSUS. A celebrated medicinal Author, in great Esteem both for the Elegance of his Style, and his Doctrine, *See the Preface.*

CELTIS. The *Nettle-tree.*

The Characters are,

The Flower is shaped like a Rose, polypetalous, and furnish'd with many short Stamina: The Ovary, which is fork'd, becomes a round Berry, full of a roundish Seed. *Boerhaave's Index alter Plantarum, Vol. 2.*

Boerhaave takes notice of three Species of this Plant.

1. CELTIS, Offic. *Celtis, Lotus Arbor*, Mont. Ind. 39. *Celtis fructu nigricante*, Tourn. Inst. 612. Elem. Bot. 485. Boerh. Ind. 2. 231. *Lotus Arbor*, Ger. 1308. Emac. 1493. Park. Theat. 1522. Raii Hist. 2. 1483. *Lotus fructu Ceraſi*, C. B. Pin. 447. *Lotus Arbor fructu Ceraſi*, J. B. 1. 229. Chab. 16. *Lotus domeſtica*, Jonſ. Dendr. 90. THE NETTLE-TREE.

It grows in *France* and *Italy*. The Fruit, which is used in Medicine, is astringent, and binds the Belly; but has least of these Qualities when ripe. The Decoction thereof is good for a Dysentery, and for Women labouring under an immoderate Flux of the Menses. *Dale.*

2. Celtis; fructu nigricante; folio variegato. *H.*

3. Celtis; Africana; procera; fructu flavo. *H. Boerhaave's Index alter Plantarum, Vol. 2.*

CEMBRO, *ſive Pinus cui Oſſicula fragili Putamine.* J. B. *Pinus ſylveſtris montana tertia*, C. B. *Pinus ſylveſtris altera fructifera, Tæda Arbor forte*, Park. *Pinus ſylveſtris ſecunda*, Ger.

This is a Species of Pine, which, *Ray* informs us, grows in the Country of the *Grisons*, where the Inhabitants eat its Fruit. I find no particular Virtues ascrib'd to it.

CEMENTATIO, or COEMENTATIO. See CALX, and COEMENTUM.

CEMENTERIUM. An Aludel. *Rulandus.*

CEMENTUM. See COEMENTUM.

CENCHRAMIS, κεγχραμὶς. A Grain or Seed of the Fig. When *Hippocrates*, in his Treatise of the *Diseases of Women*, directs Figs to be used for a Pessary, he orders them to be boil'd till the Seeds drop out.

CENCHRIAS, κεγχρίας. A Serpent, call'd also *Ammodytes*, of which *Ætius* gives the ensuing Account: This Animal is a Cubit in Length, at most, being never represented larger by Description nor Delineation. It is of a sandy Colour, mark'd with black Spots over it: Its Tail is very hard, and fork'd at the Top; and some give it the Name *Cenchrias*, from the Hardness of its Tail, which, in that respect, resembles *Cenchros*, κέγχρος, Millet. It has wider Jaws than the Viper; and, tho' it be like it in many other respects, may be most easily distinguish'd by the Colour, for the Viper is yellowish.

The Bite of this Serpent is generally follow'd by speedy Death: If the Patient survives a while, Blood flows from the Wound, and the Place swells; in a little time after, Sanies is discharged, which is follow'd by a Heaviness of the Head, and a Lipothymy, and Death, in the Space of three Days, where the Symptoms are the most favourable; tho' some have surviv'd to the seventh Day. The Bite of the Female is the most speedily mortal.

The Method of Cure is, first, by common Remedies, as by Cupping, and Scarifying all round the Place, Constriction of the Parts above the Bite, and making Incisions in the Wound. Peculiar Medicines are Mint, drank in Hydromel; Castor, Casia, and the Juice of Mugwort, taken in Water: The Patient is also to take Theriaca; and the same is to be apply'd to the Wound. Drawing Plaisters are also to be used; and afterwards Cataplasms proper for Nomæ, or spreading Ulcers. *Aetius, Tetrab. 4. Serm. 1. Cap. 25.*

The Bite of the Cenchrias is like that of the Viper, and is succeeded by a Tumor like an hydropical one; after which the Flesh putrefies, and falls off, the Patient is seiz'd with a Lethargy, and falls into a profound Sleep. *Erasistratus* says, that the Liver, Bladder, and Colon, are affected; for, in Dissections, these Parts are found to be corrupted.

Outward Applications, proper for the Bite of this Serpent, are the Seeds of Lettuce, Linseed, bruised Savory, wild Rue, with Mother of Thyme, and Hasta Regia, or King's-spear, bruised together. The Patient must immediately take two Drams of the Root of Centaury, or of Birthwort, in a Quarter of a Pint of Wine: Nasturtium also, and Gentian, are proper in the like Case. *P. Ægineta, Lib. 5. Cap. 16.*

CENCHRITES, or ACONTIAS, is a Serpent, two Cubits in Length, of a tapering Figure, of a green Colour, especially about the Belly, so as to resemble Millet; whence it is, by some, call'd *Cenchrias* (*see the preceding Word*); and, they say, it is more robust than usual when Millet is in Flower. When it prepares to bite, it stretches itself out, and throws itself like a Dart upon the Object where it aim'd to do a Mischief, and inflicts a Wound after this manner.

The Bite of this Serpent is succeeded by all the Symptoms consequent upon the Bite of the Viper, and even worse; such as the Putrefaction and Falling-off of the Flesh, and a more deplorable Death. The Remedies, in this Case, are the same as those prescribed against the Bite of the Viper. *Aetius, Tetrab. 4. Serm. 1. Cap. 27.*

The same medicinal Virtues are attributed to the Flesh of these Serpents, as to that of the Viper.

CENCHROS, κέγχρος, Millet. See MILIUM. The Seeds of Millet are sometimes, in *Hippocrates*, called κεγχρίδες.

Hence κεγχρώδεις ἱδρῶτες, Miliary Sweats, or Sweats which break out in Drops as large as the Seeds of Millet. And τρηχύσματα κεγχρώδεα, Miliary Asperities, or Miliary Eruptions, which *Hippocrates*, in the Beginning of his second Book of *Epidemics*, describes as attending a certain epidemical Fever, with these Circumstances, that they did not cause much Itching, that they appear'd upon Women only, and that all who had them recover'd.

Sir *David Hamilton* has wrote a Treatise expressly upon the Miliary Fever, an Account of which Disorder see under the Article MILIARIS *Febris.*

CENEANGIA, κενεαγγείη, from κενὸς, empty, and ἀγγεῖον, a Vessel. Any Inanition of the Vessels. It is used to express Abstinence, or Fasting, with a View of emptying the Vessels.

CENEBRIA, κενέβρια. An Epithet for Flesh, importing the Flesh of Animals which die of themselves, Carrion.

CENEONES, κενεῶνες, from κενὸς, empty. The Flanks; the Space on each Side, betwixt the spurious Ribs and the Os Ileum.

CENIFICATUM, or CINIFICATUM, Calcin'd. *Rulandus.*

CENIGDAM. See CENIPLAM.

CENIOTEMIUM. A purging Remedy, effectual in Venereal Disorders, which *Paracelsus* mentions, without saying what it is. It is supposed to be some mercurial Preparation.

CENIPLAM, *Cenigdam, Cenigotam*, or *Cenipolum*. *Rulandus* says, this is a Name for a chirurgical Instrument, with which the Cranium is open'd in an Epilepsy.

CENOSIS, κένωσις, from κενὸς, empty. Evacuation. In *Hippocrates*, κένωσις muſt be diſtinguiſh'd from κάθαρσις, the former importing a general Evacuation of all the different Sorts of Humours together, by any means whatever; the latter, an Evacuation of ſome particular Humour, when offenſive with reſpect to its Quality.

CENTAURIUM *majus*. The greater Centaury.

The Characters are;

It has a perennial Root; the Leaves are not prickly, but ſerrated on the Edges; the Flower-cup is ſquamous, and void of Prickles; and the Flower of a large and beautiful Size. *Boerhaave Index alter.*

Boerhaave mentions nine different Sorts of this Plant.

1. Centaurium; majus; Orientale; erectum; glaſti folio; flore luteo. *T. Cor.* 32. *Cemmel. Rar.* 39. *Ic. & Deſcr.*

2. *Rhaponticum falſum*, Offic. *Rhaponticum folio Helenii incano*, C. B. 117. *Rhaponticum Enulæ folio latiore*, Park. 156. *Rha Capitatum Lobelii*, Ger. 316. Emac. 393. *Centaurium majus*, *Rha Capitatum folio Enulæ ſubtus incano & hirſuto*, J. B. 3. 41. Rai Hiſt. 1. 331. Chab. 345. Hiſt. Oxon. 3. 132. *Centaurium majus folio Helenii incano*, El. Bot. 355. Tourn. Inſt. 449. Boerh. Ind. A. 143. RAPONTIC.

This is cultivated in ſome Botanic Gardens; the Root is thick, oblong, and denſe; brown externally, and when cut tranſverſly, of a yellowiſh Colour internally. It is of a bitteriſh and ſomewhat acrid Taſte, ſubaſtringent, and of a pretty grateful Smell. *Dale.*

3. Centaurium; majus; folio Helenii, anguſtiore. *T.* 449.

4. Centaurium; majus; Alpinum, luteum. *C. B. P.* 117. *Prodr.* 56. *M. H.* 3. 132.

5. Centaurium; folio Cinaræ. *Corn.* 72.

6. *Centaurium majus*, Offic. Chab. 344. *Centaurium magnum*, Ger. 436. Emac. 546. Rai Hiſt. 1. 329. *Centaurium majus vulgare*, Park. 469. *Centaurium majus folio in lacinias plures diviſo*, C. B. Pin. 117. Tourn. Inſt. 449. Boerh. Ind. A. 144. *Centaurium majus juglandis folio*, J. B. 3. 38. Hiſt. Oxon. 3. 131. GREAT CENTAURY. *Dale.*

The great *Centaury* has a large Root, of a reddiſh Colour on the Outſide, running deep into the Ground: From which ariſe many large long Leaves, green above, whitiſh and hoary underneath, deeply cut into ſeveral Sections, which are ſerrated about the Edges; tho' ſometimes they are whole, and not cut in at all, but only ſerrated. The Stalks grow to be five or ſix Feet high, thick, and divided into ſeveral Branches, on which grow ſmaller and more divided Leaves; at the End of them come forth large round ſcaly Heads, out of which ariſe a Cluſter of fiſtular purpliſh Flowers, which afterwards turn into Down, incloſing ſhining longiſh Seed.

It grows in ſome of the mountainous Parts of *Italy*, and flowers in *July*.

The Root, which is the only Part uſed, is drying and binding, and good for all kinds of Fluxes; ſtops Bleeding either at the Noſe or Mouth, or any other Part; and is of great Uſe to heal Wounds; taking its Name, ſays *Pliny*, from the Centaur *Chiron*, who cured himſelf of a Wound he receiv'd by one of the Arrows of *Hercules*, by the Uſe of this Plant. It is very rarely uſed. *Miller's Bot. Off.*

The Root is long, ſtrait, and thick; of a reddiſh-brown Colour externally, but of a lighter red internally; of a ſweetiſh and ſubacrid Taſte. It has the Reputation of opening Obſtructions in the Liver, and corroborating that Part. It is alſo uſed in Hernias.

7. Centaurium; majus; flore exalbido. *Ind.* 54.

8. Centaurium; majus; alterum; laciniatum; purpuraſcens flore. *H. R. Par.*

9. Centaurium majus; folio molli, acuto laciniato, flore aureo magno; calice ſpinoſo. *Boerhaave's Index alter Plantarum.*

Dale mentions another Species of the CENTAURIUM MAJUS, which is the

Rhaponticum, J. B. 2. 989. Chab. 310. *Rhaponticum ſiccatum*, Ger. 317. Emac. 395. *Rhaponticum genuinum*, Park. 155.

It is not much unlike the *Rhaponticum falſum*, either in Appearance, or Virtues.

CENTAURIUM MINUS. The leſſer Centaury.

The Characters are;

The Leaves are conjugated; the Flower-cup long, tubulous, pentagonal, quinquefid, with ſharp-pointed Segments; the Flowers monopetalous, pentapetaloidal, Funnel-ſhaped, perforated at the hinder Part, furniſhed with five Stamina, and diſpoſed almoſt in the Shape of an Umbella; the Fruit is generally oval, cylindrical, or conical, producing a long Tube, when ripe, cleaving into two Parts, divided into two diſtinct Cells, which are full of numerous little Seeds. *Boerhaave's Index alter.*

Boerhaave takes Notice of four Sorts of the leſſer Centaury.

1. CENTAURIUM MINUS, Offic. C. B. Pin. 278. SMALL PURPLE CENTAURY, Rai Hiſt. 2. 1092. Synop. 3. 286. Chab. 447. Boerh. Ind. A. 223. Tourn. Inſt. 122. Elem. Bot. 102. Dill. Cat. Giſſ. 127. Buxb. 60. *Centaurium minus vulgare*, THE ORDINARY SMALL CENTORY, Park. Theat. 272. Merc. Bot. 1. 28. Phyt. Brit. 25. *Centaurium minus flore purpureo*, J. B. 3. 353. *Centaurium minus rubrum*, Hiſt. Oxon. 2. 566. *Centaurium parvum*, Ger. 437. Emac. 547. Mer. Pin. 24. CENTAURY. *Dale.*

The common ſmall *Centaury* ſeldom grows to be above a Foot high, full of ſquare Stalks, having two oblong round-pointed Leaves, ſet on without Foot-ſtalks at each Joint. The Flowers grow Umbel-faſhion, many together, on the Tops of the Branches, conſiſting of a ſimple Leaf apiece, cut into five Petala, laid open like a Star, with ſeveral ſmall yellow Stamina in the Middle, ſtanding in a long hollow Calyx; they are of a beautiful red Colour. The Seed is very ſmall, included in a ſlender Seed-veſſel. The Root is ſmall and ſticky, periſhing every Year.

It grows in Fields, and dry Paſture-grounds; and flowers in *June* and *July*.

Centaury is of a very bitter Taſte, and of an aperitive cleanſing Faculty, opens Obſtructions of the Liver and Spleen, provokes Urine and the Menſes, helps the Jaundice and intermitting Fevers, ſtrengthens the Stomach, and deſtroys Worms; outwardly it is uſed in Fomentations, againſt Swellings and Inflammations.

Officinal Preparations are only an Extract. *Miller's Bot. Off.*

The Leaves and the Flowers are intolerably bitter; and, for all that, they give a conſiderably Tincture of red to blue Paper; which makes us conjecture, that the Salt of this Plant is not very different from that which is natural in the Earth, which is very bitter. We have the ſame Reaſon to believe, that the Salt of the ſmall *Centaury* is mixed with a conſiderable Quantity of Sulphur and Earth; but in ſuch a manner, that the Sal Ammoniac is more diſengaged in it, than the other Principles. The Salt which is found in the Aloes, in the Jeſuit's-bark, and Ipecacuanha, is much of the ſame Nature; for theſe Subſtances, which are very bitter, give a red Colour to the Solution of Tourneſole; that is, the Aloes, a beautiful red, and the two others a gride-lin: Thus it is no Wonder, that the ſmall *Centaury* ſhould be febrifugous, laxative, and aperitive; that it ſhould kill Worms, and re-eſtabliſh the Functions of the Primæ Viæ. They infuſe a Handful of the Tops of this Plant in a Glaſs of White-wine; but as the Infuſion is very bitter, it is better to make the Extract of *Centaury*, and give a Dram of it; or mix it with as much Powder of Jeſuit's-bark, chiefly for intermitting Fevers, when there are Obſtructions in the Bowels; for in theſe Caſes the Patients are cured without any Return. The Infuſion or the Decoction of the ſmall *Centaury* is vulnerary, deterſive, and very reſolvent, if applied externally. *Martyn's Tournefort.*

2. Centaurium; minus; flore albo. *H. Eyſt. Vern.* 0. 5. *F.* 8. *Fig.* 3. *C. B. P.* 278. *J. B.* 3. 353. *H. R. Par.*

3. Centaurium; minus; caryophylloides; Africanum; ſempervirens. *Par. Pat. Prod.* 321.

4. Centaurium; luteum; perfoliatum. *C. B. P.* 278. *J. B.* 3. 355. *M. H.* 3. 565. *Boerhaave's Index alter Plantarum.*

CENTIMORBIA. A Name of the NUMMULARIA, which ſee.

CENTINERVIA. Plantain. See PLANTAGO.

CENTINODIA. A Name for the POLYGONUM, which ſee.

CENTRATIO. A Term employ'd by *Paracelſus*, to expreſs the degenerating of a ſaline Principle, and contracting a corroſive and exulcerating Quality. Hence *Centrum Salis* is ſaid to be the Principle, or Cauſe of Ulcers. *Caſtellus.*

CENTRION, κέντριον, from κεντέω, to prick. An Epithet for a Plaiſter in *Galen*, calculated againſt Stitches in the Side.

CENTRUM. The Centre, in the chymical Language, imports the principal Reſidence, Foundation, or Source of any thing: And alſo that Part of a Medicine in which its greateſt Virtues reſide.

CENTUM CELLIS, in *Rhodius's* Notes to *Scribonius Largus*, ſignifies the Town now call'd *Civita Vecchia*, formerly famous for excellent Chalybeate Waters.

CENTUNCULUS, the ſame as the ALSINE, which ſee. *Blancard* ſays it is the GNAPHALIUM.

CEPA. The Onion.

The Characters are;

The Root is bulbous, tunicated; or conſiſting of Coats, orbicular; the Leaves fiſtulous; the Stalk fiſtulous, ſwelling into a Belly, which is turbinated on both Sides; the Flowers hexapetalous, and collected into a ſpherical Head or Corymbus; the Style of the Flower becomes a roundith Fruit, tricapſular, full of roundiſh Seeds. *Boerh. Index alter P.*

Boerhaave takes notice of ten Sorts of Onions.

1. *Cepa*, Offic. *Cepa vulgaris*, C. B. Pin. 71. Elem. Bot. 304. Rai Hiſt. 2. 1116. Hiſt. Oxon. 2. 383. *Cepa alba & rubra*, Ger. 134. Emac. 169. Park. Parad. 512. *Cepa vulgaris*;

garis floribus & tunicis candidis & purpurascentibus, Tourn. Inst. 382. Boerh. Ind. A. 2. 144. Rupp. Flor. Jen. 123. Buxb. 62. *Cepa rubra & alba, rotunda & longa*, J. B. 2. 547. *Cepa vel Cæpe*, Chab. 200. ONIONS. *Dale.*

This is a well-known Root, having a large round flat Body, cover'd with a thin reddish Skin, and compos'd of several Coats one over another, with a Bunch of small Fibres at the Bottom; the Stalk grows to be about two Feet high, with a few green hollow fistular Leaves, and at the Top a kind of round Umbel, of numerous small six-leav'd Flowers, succeeded by three square black Seeds. The whole Plant is of a strong, and, to many, an offensive Smell, making the Eyes water upon peeling or cutting. It is cultivated in Gardens; the Root only is used.

Onions are of great Use in the Kitchen, being not only put into Sauces, and Pottages, but eaten as Food. They are somewhat windy, but otherwise very wholsome for those who abound with cold and moist Humours, and are helpful against Coughs and Diseases of the Breast; beaten into a Cataplasm with a little Salt, they are a very good Remedy to fetch out the Fire in Burns or Scalds, when the Skin is not off. *Miller's Bot. Off.*

We are convinc'd by Experience, that Onions, especially when externally apply'd, are possess'd of very singular medicinal Virtues; for nothing is of greater Efficacy in softening hard Tumors, and maturating venereal Buboes, than roasted Onions, especially when apply'd in Conjunction with Figs. They also afford a speedy Relief, if applied to the Pubes of Children labouring under a total Suppression of Urine. There is also in all the various Species of Garlicks and Onions, a certain subtile caustic Salt, of a highly penetrating and blistering Quality, which, when applied immediately to the nervous Parts, excites violent Pains, and sometimes an Inflammation. According to *Caspar Hoffman*, in the fifth Book of his *Institut. Med.* the Juice of Onions, entering Wounds, prevents their Consolidation; and taints Knives and Instruments, as it were, with a gentle Poison; which deserves to be adverted to, that we may guard against the Consequences. But Onions are daily used internally, without producing any bad Effects. *Hoffman de Præstantia Remed. Domestic.*

2. Cepa; vulgaris; floribus & tunicis candidis. *C. B. P.* 71. *M. H.* 2. 383. THE WHITE SPANISH ONION.

3. Cepa; oblonga. *C. B. P.* 71. *Dod. p.* 687. *M. H.* 2. 383. THE STRASBURGH ONION.

4. Cepa radicis tunicâ buxeâ. *K.*

5. *Cepa ascalonica*, Offic. *Cepa ascalonica*, Matth. 1. 556. Hist. Oxon. 2. 383. Tourn. Inst. 382. Elem. Bot. 304. Boerh. Ind. A. 2. 144. Rupp. Flor. Jen. 123. *Cepa ascalonica sive fissilis*, J. B. 2. 551. Chab. 200. *Cepa sterilis*, C. B. Pin. 72. *Cepa ascalonica sive ascalonitides*, Park. Parad. 513. *Ascalonitides*, SCALLIONS, Ger. Emac. 170. BARREN ONIONS, ESCHALOTS.

The Root of this is employ'd for culinary Uses. It is esteem'd heating, drying, inciding, aperient, provocative. It excites an Appetite, and destroys Worms in the Intestines. *Dale.*

6. SCHOENOPRASSUM, Offic. Ger. 139. Emac. 176. Park. Theat. 870. *Porrum sectivum junciforium*, C. B. P. 72. *Prorum junciforium*, Offic. Comm. Plant. Usual. 65. *Porrum sectivum & Schœnoprassum quorundam*, J. B. 2. 553. Raii Hist. 2. 1117. Chab. 200. *Cepa sectilis*, Rupp. Flor. Jen. 123. *Cepa sectilis juncifolia perennis*, Hist. Oxon. 2. 383. Tourn. Inst. 382. Elem. Bot. 304. Boerh. Ind. A. 2. 144. CIVES or CHIVES.

It agrees in Virtues with Onions.

7. Cepa; fissilis; Matthioli. *Lugd.* 1539. *C. B. Pin.* 72. CIBOULE.

8. Cepa; sylvestris; tenuifolia; prolifera & florifera. See ALLIUM SYLVESTRE.

9. Cepa; Lusitanica; foliis capillaceis; minima; flore purpurascente. *T.* 385.

10. Cepa; Alpina; palustris; tenuifolia. *T.* 385. *Boerhaave's Index alter Plantarum.*

CEPÆA. Base Orpine. See SEDUM.

CEPASTRUM. *Dale* includes under this Title the *Allium sylvestre*, Crow-garlick. See ALLIUM. The *Cepa Ascalonica*, Eschalots, and the *Schœnoprassum*, Chives. See CEPA. These, he says, agree with the *Cepa*, with respect to their fistulous Leaves, and strong Smell; but disagree as to their Roots, which are proliferous; and their Stalks, which are not bellied like those of the *Cepa*.

CEPHALÆA, κεφαλαία. A sort of Head-ach. See CEPHALALGIA.

CEPHALALGIA, κεφαλαλγία, from κεφαλὴ, the Head, and ἄλγος, Pain. A Head-ach.

CEPHALÆA, κεφαλαία, and *Cephalalgia*, are Affections of the Head, which differ in Degree; for a *Cephalæa* is an inveterate and obstinate *Cephalalgia*, according to *Aretæus*, *Lib.* 1. *Cap.* 2. *de Caus. & Sign. Chron. Morb.* where he says, "A "sudden Pain of the Head, from any transient (πρόσκαιρος) "Cause, tho' it may last for several Days, is call'd a *Cephalalgia*; but if the Pain be grown inveterate, and accustom'd "to make long and frequent Returns, and becomes more and "more violent, and difficult to cure, we call it a *Cephalæa*."

The Author of the *Definitiones Medicæ* says, "A Cephalæa "is an Affection of the Head, causing an intolerable Pain at "certain Periods of Time, attended with a Ringing in the "Ears, and Redness of the Eyes, a Distention of the Veins "in the Forehead, and a red Colour in the Face."

As Dissections of Persons who have died of severe Head-achs, which have been related by Authors, are too numerous to be inserted in this Place, we shall here abridge some of the most curious and important Observations relating to *Cephalalgias*, collected by the celebrated *Bonetus*; taking care, at the same time, not to omit any Circumstance of Moment, nor to pass over any Phenomenon which has the least Tendency either to inform the Judgment, or direct the Practice, of the Surgeon and Physician.

OBSERVATION I.

A certain Merchant, about forty Years of Age, of a melancholic Habit, and deeply involved in the Cares of the World, was, during the Dog-days, seiz'd with a violent Pain of his Head, which some time after oblig'd him to keep his Bed.

I, being call'd, order'd Venesection in the Arms, the Application of Leeches to the Vessels of his Nostrils, Forehead, and Temples, as also to those behind his Ears; I likewise prescrib'd the Application of Cupping-glasses, with Scarification, to his Back: But, notwithstanding these Precautions, he dy'd on the fourth Day, without the Appearance of any fresh Symptom. If any Surgeon, skill'd in Arteriotomy, had been present, I should have also order'd that Operation.

Upon opening the Cranium, the Vessels of the Meninges and Brain were found somewhat livid, and so turgid with Blood, that the Cranium scarce seem'd capable of containing the Brain. In the anterior Part of the Brain, near the Forehead, there was found a small Abscess, about the Bulk of a Nut, full of Serum, and yielding to the gentlest Touch.

OBSERVATION II.

A certain Lady of Distinction, who had for several Years been subject to spasmodic Disorders, began at last to complain of a violent Pain, and Sense of Weight, in her Head; and happening, about the Beginning of the Night, to awake out of a sound Sleep, she was seiz'd with a convulsive Fit, which suddenly degenerated into a fatal Apoplexy.

Upon laying open her Cranium, the Vessels of the Meninges and Brain were distended, and turgid with Blood; whereas in dissecting the other Parts of her Body, scarce any Blood at all was discharg'd. Upon removing the Dura Mater, thro' the Pia Mater, which is slender and pellucid, was discover'd a limpid Water, filling the Corrugations and Sinuses of the Brain, and, as it were, overflowing its whole Substance. The Plexus Choroides had been so long immers'd in this Water, that it appear'd discolour'd, half corrupted, and, as it were, boil'd. *Willis Pathol. Cerebri, Cap.* 10.

OBSERVATION III.

A certain Man, after complaining for two Years of a Pain in his Head, at last fell a Victim to his Disorder.

Upon opening his Cranium, the Dura Mater was found eat out into Holes in several Places, especially in the Bregma, under the Sagittal Suture, where it is join'd with the Coronal. Thro' these Holes there flow'd a black, and almost concreted Blood, with which also the Vessels distributed on the external Surface of the Dura Mater, and those running thro' the Pia Mater, were distended. The Substance of the Cerebellum was become entirely flaccid, and much softer than the Brain itself. *P. Pavulus, Observat. Anat.* 8.

OBSERVATION IV.

A certain Lady apply'd to the Physicians for the Cure of a Fluor Albus. A few Days after this Application she was seiz'd with a violent Pain of the Side, accompany'd with a Fever. The Physicians agreed, that she labour'd under a Pleurisy and Peripneumony, and accordingly prescrib'd for her. The celebrated *Duretus*, who was one of those who attended her, predicted that if a Pain and Itching of the Head succeeded, the Death of the Patient would be unavoidable, because, in that Case, the Matter producing the Peripneumony would be transfer'd to the Head. Next Day the Symptoms he mention'd appear'd, and the Patient dy'd a few Hours after.

Her Body was open'd, in order to discover whether this Prediction was just, and whether there had been a Translation of the Humour from the Pleura to the Head. Accordingly, upon laying open her Cranium, we found all the Parts within the Pia Mater and Brain stuffed with Pus. *Ambroise Paré, Lib.* 24. *Cap.* 68.

OBSERVATION

Observation V.

A certain Man, afflicted with a long-continu'd Head-ach and Watchings, was at laſt ſeiz'd with a ſlight Delirium, and dy'd of a Convulſion.

Upon opening his Cranium there was an Abſceſs found, full of a fetid and corrupt Pus. *Sebaſtianus Naſus. Meth. Med. Part. 2. Quæſt.* 16.

Observation VI.

Willis, in his *Anatomy of the Brain*, *Cap.* 9. informs us, that he had frequent Opportunities of opening the Heads of thoſe who, during their Lives, had been much ſubject to Head-achs. In theſe Subjects, hard by the longitudinal Sinus, where the Seat of the Pain was, the Pia Mater was found growing to the Dura Mater for a conſiderable Space, often for two Fingers Breadth. By this Coalition a rough and unequal Tumor is rais'd, in which the Mouths of the Veſſels are entirely obſtructed, ſo that the Blood, tho' in a violent Effervescence, can have no Acceſs to the adjacent Sinus.

Observation VII.

A certain Monk had labour'd under a Head-ach for ten Years, and every Year us'd above three Pounds of *Philonium* for alleviating the Pain: But his Diſorder aroſe from Venereal Abſceſſes, Tophs, and a Caries of the Bone; for, upon applying the Trepan, his Head was found full of Phlegm, and the Cranium corrupted, ſoon after which he dy'd.

An Inſtance ſomewhat analogous to this we find in the *Prælectiones Practicæ* of *Hercules Saxonia*.

A certain Woman, afflicted with a ſcald Head, was at laſt, by the Uſe of certain Lotions, freed from her Diſorder; upon which ſhe was ſeiz'd with a Head-ach, and a continu'd Fever. I, being call'd to her, told her, that I was not in the leaſt ſurpris'd at her Fate. But as her Symptoms neither yielded to the Methods of Derivation, Revulſion, nor Evacuation, ſhe dy'd thirty Days after.

Upon opening the Cranium, the entire Half of the Brain, on the Right Side, was found entirely putrid, and ſtuffed with a yellowiſh Ichor, which reſembled Urine.

Observation VIII.

A certain Perſon, by the Blow of a Horſe's Foot, receiv'd a Wound in the Head, which ſcarce reach'd the Cranium: Immediately after, he complain'd of an intenſe Pain of his Head and Neck. Upon opening the Cranium, we found Half of the Brain putrify'd. In the lateral and middle Ventricles we found a large Quantity both of Pus and Water, ting'd of a reddiſh Colour. The Dura Mater was, however, entire, and apparently unaffected.

Observation IX.

A certain rakiſh Fellow, after labouring for a great while under the Lues Venerea, and its ſeveral concomitant Symptoms, was at laſt afflicted with a moſt cruel and racking Head-ach, which, notwithſtanding all the Methods uſed for his Recovery, afflicted him ſo violently, both in the Night and Day-time, but eſpecially during the former, that he made ſeveral Attempts to lay violent Hands on himſelf. His vital and animal Powers at laſt failing, in conſequence of the intenſe Pain, he dy'd.

Upon laying open his Cranium, and freeing it from the Dura and Pia Mater, nothing of the Brain was found in the whole Cavity of the Cranium, but only a certain mucous Subſtance, and an indigeſted Phlegm, which ſcarce fill'd a fourth Part of the Cavity of the Cranium.

Observation X.

A certain Woman was, for twenty-five Years, rack'd with an intolerable Head-ach, which, when ſhe began to chew her Aliments, or expoſed herſelf to an inclement Air, was ſo increas'd, eſpecially in the Right Side, that Torrents of Tears burſt from her Eyes, and, by her Cries, ſhe diſturb'd not only the Family in which ſhe liv'd, but alſo the Neighbourhood. In vain did ſhe implore the Aſſiſtance of ſeveral Phyſicians, for the Removal of her Diſorder. Death, however, at laſt put an End to her Miſery.

Upon opening her Cranium we found, firſt, under the Pia Mater, a large Quantity of limpid Water; ſecondly, the Ventricles of the Brain fill'd with a ſimilar Liquor; thirdly, in the pineal Glands ſeveral ſmall and rough Concretions of Sand, ſome of which, in conſequence of their Bulk, deſerved the Name of Stones; fourthly, the carotid Arteries ſo indurated, that externally they ſeem'd to have acquir'd a ſtony Texture; but upon opening them we found, that a callous ſtony Subſtance adher'd to their Sides. Thro' the Middle of theſe Arteries there was ſtill left a kind of Paſſage for the Blood. *Regner de Graaf*, in *Miſcel. Curioſ. Ann.* 1670.

Observation XI.

A certain young Man was afflicted with a long-continu'd Head-ach, of ſo obſtinate a Kind, that it would not yield to the Force of any Remedies. After his Death ſcarce were the ſmalleſt Traces of Sutures to be obſerv'd in his Cranium, the Bones of which appear'd, as it were, to be one continu'd Subſtance. This Circumſtance was univerſally concluded to be the Cauſe of his Diſorder, ſince, in conſequence of the Obliteration of the Sutures, there was no Paſſage left for theſe thick Steams and Vapours which prov'd the Cauſe of his Pain. *Columb. Anat. Lib.* 1. *Cap.* 5.

Observation XII.

A certain Lady of Diſtinction, who had long labour'd under a pungent Head-ach, which reſembled the Pricking of Needles or Darts in the Part affected, and which was ſometimes more, and ſometimes leſs violent, at laſt fell a Sacrifice to her Diſorder.

Upon opening her Cranium there was found, under the Dura Mater, near the torcular Herophili, a certain indurated ſtony Matter, reſembling a ſmall rocky Protuberance, unequal, rough, with many Points, variegated, as it were, with Appearances like Cats Claws, the Images of Shell-fiſhes, and ſeveral other Figures, and adhering ſtrongly to the Dura Mater. Between the Inequalities of this Protuberance ſmall Veins were diſtributed, which moiſten'd this Subſtance. Above the Pia Mater there was a certain mucous Humour found. *Cattierus, Obſerv. Medic.* 15.

The *Cephalæa* frequently proceeds from Refrigeration, or Cold, or, on the contrary, from the Heat of the Sun's Rays, or from long want of Sleep; and Women are more ſubject to this Diſorder than Men, becauſe they are ſo much employ'd about the Care of their Hair. The Patient labouring under this Diſeaſe is affected with a violent Pain of the whole Head, or of one Half thereof, which is uſually call'd *Hemicrania*, or only of the Temples, which kind of Pain they call *Crotaphos* (from κρόταφος, a Temple). The Pain extends itſelf alſo to the Roots of the Eyes, the hinder Part of the Head, and the Neck, as far as the Spine of the Back, in ſuch a manner, that, when the Patient attempts to ſit down, he is ſeiz'd with a Vertigo and Dimneſs of Sight, a Sickneſs at the Stomach, and Vomiting of Bile. Under an Exacerbation of this Diſorder the Eyes become red and prominent, and the Eyelids cloſed to avoid the Light; Tears flow, there is a Loathing of all Food, a Dulneſs of Sight, a Ringing in the Ears, and a Thickneſs of Hearing, long and frequent Watchings, Tooth-ach, and, at the Beginning of the Paroxyſm, a Diſtillation of a few Drops of Blood from the Noſe, not at all relieving the Patient.

In this Caſe, if the Pain affect the whole Head, the Patient is to lie on his Back; if only Half of the Head be affected, he muſt lie on that Side; for the Pain is, in ſome meaſure, mitigated by the kindly Warmth, and gentle Compreſſion, of the Bed. If the Diſeaſe increaſes, there follows an Alteration of the Countenance for the worſe, a Lowneſs of the Pulſe, and a Dulneſs of all the Senſes.

In ſome Subjects this Diſeaſe is acute, and attends a Fever; in which Circumſtance the Heads of our Sects have beſtow'd a proper Name upon the Pain, and call'd it *Cephalalgia*. In others it comes within the Liſt of chronical Diſtempers, is without a Fever, and returns at certain Periods of Time upon the Patients, who are only afflicted with a Pain of the Head, which Diſorder the Antients call'd *Cephalæa*.

Some place the Seat of this Diſeaſe in the Membrane of the Brain, others in the Pericranium; ſome make the Skin of the Head, others the Muſcles of the Temples and Cheeks, call'd *Siagones*, to be the Parts affected: But we place the Diſorder ſometimes in only ſome of theſe Parts, according to the Extent of the Pain; ſometimes in all of them, in proportion to the Influence of the Cauſes which bring on the regular Return of the Diſeaſe. Again, as the Remiſſions or Mitigations are more or leſs perfect, ſo are the Intervals longer or ſhorter, and the Reliques of the Diſtemper more or leſs, againſt the Return of the Fit. Regard is alſo to be had to the Paroxyſm in the Time of the Fit; alſo to the Variety of Exacerbations, which are ſometimes continu'd, ſometimes return at Intervals of one or two Days, or thoſe which we call typical, periodical, and hemitritaical Periods, according to their reſpective Times. *Cælius Aurelianus, Morb. Chronic. Lib.* 1. *Cap.* 1.

The Head-ach is a very painful Senſation in the nervous Membranes of the Head, proceeding from various Cauſes, and frequently attended with a Variety of troubleſome Symptoms, according to its different Degree and Situation.

This Pain affects different Parts of the Head, for which no other Reaſon can be aſſign'd, than that the Cranium, both internally and externally, is furniſh'd with diſtinct nervous Membranes. On the external Surface of the Cranium occurs that fine, but ſufficiently ſtrong, and exquiſitely ſenſible, Membrane which immediately ſurrounds it, and which, in its anterior, intermediate, and poſterior Parts, receives many ſmall Arteries from the external Carotid, and ſmall Ramifications of Nerves from the Vertebræ of the Neck, and the Seventh Pair of the Brain. But the Pericranium coheres with the Muſcles contiguous to the Cranium, and, by means of the Sutures, with the

the exterior Lamina of the Dura Mater. In this Membrane, that is, the Pericranium, we place the moſt common and frequent Seat of an Head-ach, which is, among other Circumſtances, demonſtrated to be true, by the external Application of Medicines calculated to alleviate Pain; as alſo by Scarifications, Setons, Cauteries, and Veſicatories. Nor muſt we here exclude the common Integuments or Skin, eſpecially its internal Part, which is contiguous to the Pericranium, from which it may be ſeparated, and thro' which are diſtributed ſeveral Blood-veſſels. This is the principal Seat of that Species of Pain which is dull, heavy, and accompany'd with a Senſation of Preſſure; whereas that which is more acute has its Seat in the Pericranium.

Nor is the interior Membrane, which ſurrounds the Brain, and is call'd the Dura Mater, exempted from Pain. This Membrane is form'd of highly tendinous and nervous Fibres, conſiſts of two Laminæ, receives Ramifications from the Fifth and Seventh Pairs of Nerves, and is furniſh'd with three ſmall Arteries, the firſt of which ariſes from the internal Carotid, and is diſtributed to the anterior Part of the Dura Mater; the ſecond ariſes from the external Carotid, enters the Cranium by a Perforation proper to itſelf, and goes to the middle Part of the Dura Mater; and the third ariſes from the external Branch of the internal Vertebral Artery, enters the Cranium by the Perforation for the internal Jugular Vein, and is diſtributed to the poſterior Part of the Dura Mater. Here the Seat of the Pain is leſs frequent, but much more dangerous; for if the Blood ſhould ſtagnate long in the Veſſels of this Membrane, or, by its Quantity or Acrimony, prejudice their moving Force, it generally brings on ſome violent Diſorder of the Head, ſuch as a Phrenitis and Convulſions in acute Diſeaſes, eſpecially if the Pain is attended with Pulſation; and, in chronical Diſorders, it lays a Foundation for Palſies, Hemiplegies, and lethargic Indiſpoſitions.

The other ſlender Membranes which immediately ſurround the Brain, ſuch as the Pia Mater, and the Arachnoides, which rather appears to be the external Membrane of the Pia Mater, forming a cellular Interſtice, thro' which the Veſſels penetrate, do not, in my Opinion, ſeem to be the Seat of any Pain or uneaſy Senſation, becauſe they are deſtitute of tenſe, nervous, and elaſtic Fibres, and have no conſpicuous Ramifications of Nerves in them. Laſtly, that fine and exquiſitely ſenſible Membrane, which ariſes from the Tunica Pituitaria, and covers the Sinus of the Os Frontis, is frequently the Seat of the moſt acute and intenſe Pain.

Pains of the Head are widely different from each other, according to the Parts in which they are ſeated, as alſo according to their Degrees and Durations; for this Reaſon Authors have aſſign'd different Names to different Species of Head-achs. If the Pain is ſlight, and affects only a Part of the Head, it is call'd *Cephalalgia*; but if it is more intenſe and durable, and affects the whole Head, it is call'd *Cephalæa*, which *Galen* beautifully deſcribes in the following Words: "A Cephalæa," ſays he, "is a laſting Pain of the whole Head, which is with "Difficulty remov'd, and which, by the ſlighteſt Accidents, "is ſo increas'd, that the Patient can neither endure any Noiſe, "any loud Voice, the Splendor of the Light, or any Motion, "but ſeeks Retirement from Noiſe, and a dark Chamber, on "account of the intenſe Pain: For ſome imagine, that they "are beaten with a Mallet, others that their Heads are contus'd "and diſtended, and in ſome few the Pain reaches to the Roots "of the Eyes; ſo that, in this Species of Pain, we have no "Reaſon to doubt but the whole Membrane of the Head is "ſeverely affected."

It often happens, that the Pain affects only one Side of the Head, whilſt the other remains ſound and unaffected, which Species of the Diſorder is by the *Greeks* call'd *Hemicrania*. Sometimes it alſo happens, that the Pain is fix'd in the Crown of the Head, and confin'd within a certain Space, ſcarce exceeding the Largeneſs of a Gooſberry, or an Imperial, which is a Coin much about the Bulk of our Half-guinea. This Species of the Diſorder is peculiarly incident to Women, eſpecially ſuch as are hyſteric, and is diſtinguiſh'd by the Name of *Clavus*. Sometimes a highly acute Pain ſeizes the Forehead, and Parts about the Eyebrows. Sometimes it is lodg'd only in the Sinciput, and at other times in the Occiput. Sometimes it affects the Crown of the Head near the vertical Suture, and at other times it rather affects the Temples. Nor is the Pain, or uneaſy Senſation, always one and the ſame; for one Species of it is acute, another pungent, and another lancinating: One reſembles that of a Contuſion, another is accompany'd with a Senſe of Weight and Preſſure. Some Pains are of the conſtrictory, and others of the violently hot and inflammatory Kind; whereas others are accompany'd with a Senſation of Cold, ſuch as that which principally ſeizes Women in the Crown of the Head, and occaſions their complaining of a Piece of cold Ice, as it were, being apply'd to it.

In general, the Cauſe of every Pain of the Head is to be deduced from an Interruption of the free and equable progreſſive and circular Motion of the Blood thro' the Blood-veſſels, diſtributed thro' the Integuments of the Head, the Pericranium, and Dura Mater. No Phyſician has more exactly, or in a more mechanical manner, deſcrib'd the Cauſe and Origin of Pains of the Head, than *Hippocrates*, who, in the thirteenth Section of his Book *de Flatibus*, beautifully delivers his Sentiments in the following Words. "As the Motion of the Blood, "ſays he, in the Head, is perform'd thro' very narrow Paſ"ſages, the Redundance and Confinement of this Fluid ex"cite Pain; for as the Blood is naturally hot, when it is im"pel'd by any Force, it cannot quickly paſs thro' this nar"row Chanel, ſince it meets with many Hindrances and "Obſtructions, for which Reaſon there is a Pulſation about "the Temples." This Paſſage ſeems to inſinuate, that *Hippocrates* was not an entire Stranger to the progreſſive Motion of the Blood from the Arteries to the Veins; for he calls the Obſtacles, which hinder the free Conveyance of the Blood, *Obſtructions*, which are produc'd by a want of a due Impulſe in the Vaſa revehentia, by which means the Motion of the Blood becomes ſlower and more languid. This ſeems alſo to be confirm'd by the Diſſections of thoſe who have died of violent and ſevere Cephalæas; for, according to *Bonetus*, *Wepfer*, *Pechlinus*, and others, in Subjects of this Kind, the Sinuſes of the Brain, as alſo the internal and external jugular Veins, have been found ſtuffed with a thick and mucous Blood, and ſometimes with ſpurious polypous Concretions, which I myſelf, ſays *Hoffman*, have alſo often obſerv'd in thoſe who died of the Epilepſy; for if a larger Quantity of Blood is convey'd to the Head, than the Veins are able to carry back with the ſame Degree of Celerity, the arterial Veſſels, eſpecially thoſe of the capillary and ſmaller Kind, are violently diſtended by the Congeſtion of the Blood, and the Membranes of the Brain are render'd remarkably tenſe, by which means the Pain, and uneaſy Senſation, are excited.

It is alſo to be obſerv'd, that various Species of Pains are produc'd, according to the different States and Conditions of the Blood, whether the Fault conſiſts in its Redundance, its thick and glutinous Quality, or in its being impregnated with an highly acrid Serum; for when it ruſhes too impetuouſly, and in too large a Quantity upon the Membranes, which principally happens in plethoric Patients, young Perſons, and in Caſes, where accuſtom'd Diſcharges of Blood from the Noſe are ſuppreſs'd, a Pain generally ſeizes the whole Head, which then becomes hot, red, and tumid. The Veſſels ſwell, and their Pulſation becomes ſtrong, eſpecially about the Neck and Temples; the Noſtrils become parch'd and dry, a violent Heat ſeizes the Fauces, and the Patient is tormented with Thirſt. The Antients ſaid, that this Species of Diſorder was produc'd by a hot Cauſe.

When the Blood, collected in the Veſſels of the Head, abounds with a large Quantity of effete Serum, either from an Obſtruction or Suppreſſion of a Coryza, or Running at the Noſe, a Pain ariſes, eſpecially in the Forehead, of the heavy and dull Kind, attended with a Senſation of Preſſure; and ſometimes the Patient's Head becomes, as it were, ſo weighty and heavy, that he can ſcarce lift it up. It frequently happens, that in the Integuments of the Head, eſpecially on the Crown, there ariſe Tumors, in which the Finger leaves an Impreſſion, whilſt the Patient's Pulſe, in the mean time, is languid, and his Complexion livid. This Species of Diſorder was long ago obſerv'd by *Celſus*, in the ſecond Chapter of his fourth Book, where the following Words occur: "Beſides "theſe, there is another Species of Pain which may laſt for "a great while, in which the Humours inflate the Skin, "which becomes tumid, and yields to the Preſſure of the Fin"ger." The Antients affirmed, that this Species of Pain was produced by a cold Cauſe.

A worſe, and more obſtinate Species of Pain, is that which ſeizes thoſe deeply affected with a Lues Venerea, when a ſerous, acrid, and cauſtic Matter is firmly rooted in the Pericranium, and, ſometimes rendering the Cranium itſelf carious, with Difficulty admits of a Cure, and ſcarcely yields to the Force of Medicines. That Species of Pain is generally of the ſame Kind which ariſes from a ſaline-cauſtic Matter driven to the Habit, and afterwards endeavouring to return to the Surface of the Body, as in the Courſe of my Practice I have often obſerved in arthritic Pains, Gouts, Itches, Eryſipelas of the Head, and Gutta Roſacea. In the Small-pox and Meaſles, before the peccant Matter is, by the Force of Nature, driven into the Surface of the Body, or, which is ſtill worſe, when this Matter is repelled, there often ariſes, in Children, a violent Pain of the Head, accompanied with a Fever, a Delirium, and an Epilepſy; in which Caſe, when a ſmall Quantity of cauſtic Matter creates the Pain, the Symptoms are rather to be accounted for from a preternatural Stricture of the Membranes, than from their Diſtention, which is rather produced by a Redundance of Serum and Blood.

There often ariſes in the Head a Pain ſo fixed, ſo laſting, ſo intolerable, ſo acute and intenſe, as to diſturb the animal and rational Powers, to deprive the Patient of Sleep, to hinder Digeſtion, to create a Nauſea and Loathing of Food, and often

to bring on the moſt violent Diſorders of the Head and Nerves, ſuch as a Vertigo, Dimneſs of Sight, Cataracts, Blindneſs, Ringing of the Ears, Convulſions, and Epilepſies. This violent and intenſe Pain, by drawing the other nervous Parts of the Body into Conſent, excites alſo Vomitings, Coſtiveneſs, and a Coldneſs of the Extremities. It alſo makes the Patient's Countenance reſemble that of a dying Perſon. Theſe Circumſtances we find more adverted to by the Antients; for *Celſus*, in the ſecond Chapter of his fourth Book, uſes the following Words: "The Marks of a Cephalæa are a ſtrong "Horror, a paralytic State of the Nerves, Dimneſs of Sight, "Alienation of Mind, Vomiting, Loſs of Speech, Coldneſs "of the Body, and Deliquiums."

As for the Cauſe and Origin of a Head-ach, we muſt not forget, that this may be a natural Imbecillity of the nervous Parts of the Head, convey'd from Parents to their Children; for the weaker any Part is, or the more it is depriv'd of its due Tone and Elaſticity, the more eaſily and readily it receives and retains any foreign Humour; and hence ariſes a Stagnation of the Fluids, and a Diſorder of the nervous Parts. I have often known a hereditary Head-ach convey'd to Children by Parents of weak Heads. I have alſo ſeen Inſtances, in which long Griefs, unſeaſonable Venery, intenſe Lucubrations and Application of Mind, too frequent Veneſection, and immoderate Hæmorrhages, have ſo weaken'd the Head, that, not only violent Pains, but alſo other terrible Diſorders of the Head have enſued.

Nor ought we to exclude, from the Number of the remote Cauſes productice of this Pain, Cold, which, as it is prejudicial to all the nervous Parts when afflicted with Pain, and hinders a free Tranſpiration thro' the cutaneous Pores, ſo it proves in a particular manner hurtful, when admitted to the bare Head, or when the Head is not ſufficiently guarded againſt the nocturnal Cold; or when the Head, becoming warm by long Speaking, violent Exerciſe, the Influence of the Sun, Paſſion, or large Quantities of ſpirituous and intoxicating Liquors, is ſuddenly expos'd to the Cold in rainy Weather, and more eſpecially in the Night-time.

We muſt alſo advert to this, that a Cephalalgia is often no more than the concomitant Symptom of a Diſeaſe. Thus it frequently accompanies continued and intermittent Fevers, and more eſpecially thoſe of the quartan Kind. No Caſe occurs more frequently in Practice, than a violent Pain in the Head, when the Menſes are either juſt about to make an Eruption, or are diſcharg'd immoderately; for in this Caſe, the ſpaſmodic Strictures of the lower Belly exert their Influences on the Head. Thoſe who have the Misfortune of a bad Digeſtion, or labour under what we call the hypochondriac Paſſion, are frequently afflicted with Head-achs: for when the *Primæ Viæ* are encumber'd with a Load of peccant Humours, and when the Spaſms and Flatulencies ariſing thence, convey too large a Quantity of Humours to the Head, the preternatural Congeſtion of theſe Humours produces Diſtentions of the Veſſels, by which the nervous Coats are hurt, and Pain created. It is alſo certain, that a Hemicrania is frequently produc'd by a Fault of the Stomach, whilſt, in conſequence of a bad Digeſtion, many Crudities are generated, which, mixing with the Chyle, are convey'd thro' the thoracic Duct to the Heart, and being thence convey'd to the Head, before their Evacuation thro' proper Emunctories, they excite periodical Pains, which generally ſeize the Patient when the Digeſtion is finiſh'd: Or undigeſted Humours, contain'd in the Stomach, may immediately affect the Nerves thereof, and cauſe a Head-ach.

We alſo obſerve, that Children are pretty ſubject to Head-achs, not only becauſe at this Age a leſs exact Regimen is obſerv'd, and the Stomach is generally loaded with Sweat-meats, unripe Fruits, Cheeſe-cakes, and Aliments prepar'd of Milk; but alſo becauſe Worms, to the Generation of which Children are much diſpos'd, lay a Foundation for this Diſorder, whilſt the putrid and corrupt Humours, convey'd to the Head along with the Chyle, deprive the moving and elaſtic Membranes of their natural Tone and Strength. It muſt alſo be obſerv'd, that this Pain does not continually, and without Interruption, afflict the Patient, but has ſometimes its lucid Intervals, in which, to the great Comfort of the Patient, it remits, or entirely ceaſes, but returns again at certain ſtated Hours, Days, Months, and even Years. This is a certain Indication, that the Cauſe of the Diſorder is lodg'd in the more remote Parts, eſpecially in the Stomach and Viſcera of the Abdomen; by any Fault of which, when the free Circulation of the Blood thro' the whole Body, but more eſpecially thro' the Head, is obſtructed, a Head-ach is excited. This Phenomenon I have principally obſerv'd, in Men who either are, or have formerly been, ſubject to hæmorrhoidal Diſcharges, or who are diſpos'd to hypochondriacal Diſorders.

A Cephalalgia is not always free from Danger; for if the Cauſe of the Pain is ſituated within the Cranium, and lodg'd in the Membranes of the Brain, and if the Pain is intenſe, continued, accompanied with a Fever, and deſtructive of the Patient's Sleep, a Phrenitis frequently enſues. But if a Head-ach ariſes ſuddenly in hypochondriac Patients, and ſuch as are diſpos'd to Melancholy, eſpecially after the Sallies of ſome violent Paſſion, deprives the Patient at once of his Sleep and his Appetite, and is accompany'd with a Dulneſs of Hearing, and an internal Pulſation of the Veſſels without a Fever, Madneſs generally follows. When a ſudden and highly acute Pain of the Head is follow'd by a ringing Noiſe of the Ears, a Difficulty of Walking, a Weakneſs of the Knees, a Slowneſs and Interruption of Speech, it is a Sign of an approaching Apoplexy or Hemiplegy, which, however, more ſeverely afflicts the oppoſite Side, than than which is paralytic, ſince the latter is no longer ſuſceptible of Pain. Nor are we to forget, that frequent Head-achs in young Perſons prognoſticate future arthritic Diſorders, or Gouts.

Curatory Indications.

As the Cauſes of this Diſorder are various, they ought to be carefully diſtinguiſh'd and inquir'd into, becauſe, in removing them, the whole Method of Cure in a great meaſure conſiſts. But, in general, the Intentions of Cure in this Diſorder are theſe following.

Firſt, if the Blood and Humours are impetuouſly convey'd to the Head, and remain there, they are partly to be deriv'd to the more ignoble Parts, and partly to be diſcuſs'd by proper Remedies.

Secondly, The ſpaſmodic Strictures of the Membranes of the Head, generally produc'd by an acrid cauſtic Matter, are to be relaxed, that the Fluids, whoſe progreſſive Motion thro' the Membranes was by their means hindered, may now circulate with the greater Freedom.

Thirdly, The material Cauſe of the Diſorder, which is peccant with reſpect to its Quality, is to be corrected, and gently evacuated thro' proper Emunctories. And,

Laſtly, In order to prevent a Relapſe, the whole Head and nervous Syſtem are to be corroborated by proper Remedies, and more eſpecially by a well-choſen Diet and Regimen.

If the Cauſe of the Pain is too large a Quantity of Blood violently propelled to the Head by the Spaſms of the lower Parts, no Remedy affords a more inſtantaneous Relief than Veneſection, which ought to be inſtituted as near the Part affected as is poſſible, in order to make the more effectual Derivation, under the Tongue for Inſtance, in the Forehead, or in the external jugular Veins, or by the Application of Leaches behind the Ears; but with this Caution, that if the Body is plethoric, or too turgid with Blood, a Vein is to be previouſly opened at the Ancles, and the next, or the ſecond Day after, a Vein is to be breath'd about the Head. I alſo think it adviſeable, before this Step is taken, to evacuate the Contents of the Inteſtines; which is commodiouſly, and to the great Relief of the Patient, effected by the common Family Clyſters, or by Infuſions of Manna and Rhubarb, with an Addition of ſome aperient Salt, ſuch as Cream of Tartar, or the Sedlitz Salt.

In order to check the too violent Orgaſm, and tumultuous Commotion of the redundant and effervescent Blood, it is proper to exhibit a gently diaphoretic and correcting Mixture, prepar'd of the Waters of Lime-flowers, Lilies of the Valley, Elder, black Cherries, with an Addition of a proper Quantity of diaphoretic Antimony, purify'd Nitre, calcin'd Hartſhorn, Cinnabar, and Syrup of white Poppies. Externally a diſcutient and correcting Epithem is to be apply'd, with a double Linen Cloth, to the Forehead and Head. The Epithem, for this Intention, may be prepar'd in the following manner.

Take of the Vinegars of Roſes and Rue, each an Ounce and a half; of the Spirit of Roſes, two Drams, in which ſix Grains of Camphire have been diſſolv'd; of purified Nitre, two Scruples; of the Oil of Rhodium, fifteen Drops.

Or the following Emulſion may be uſed with conſiderable Succeſs.

Take of the Kernels of Peaches, and of bitter Almonds, each half an Ounce; of white Poppy-ſeeds, two Drams; of the Waters of Roſes, Elder-flowers, and black Cherries, each two Ounces: Make into an Emulſion, to which add of Nitre half a Dram, of Camphire five Grains, diſſolv'd in Oil of ſweet Almonds. Mix all together.

But another, and quite different Method of Cure is neceſſary, if a Pain, which generally continues for a conſiderable time, and is accompanied with a Torpor and Senſe of Weight, is produc'd by a Quantity of viſcid and peccant Serum ſtagnating within or without the Veſſels of the Membranes of the Brain, in which Caſe neither Veneſections, nor the milder Laxatives, are ſufficiently efficacious; ſo that it is proper to exhibit ſome more efficacious Medicines, which have at once a Power

Power of diſſolving the thick and glutinous Humours, and expelling the Contents of the Inteſtines. Both theſe Intentions are excellently anſwer'd by the following Pills.

Take of pure Gum Ammoniac, Sagapenum, the beſt Myrrh, roſated Aloes, Extract of black Hellebore, Reſin of Jalap, Mercurius Dulcis, and prepar'd Cinnabar, each half a Dram; of the Extract of Saffron, of the Powder of Caſtor, and of the Salt of Amber, each fifteen Grains: Make up into a Maſs; out of every Scruple of which make twelve Pills, ſix of which may be taken at Night, and the other ſix next Morning.

The Patient is at this time to abſtain from all Aliments, except weak Broths. When three Days are expir'd, the ſame Remedy may be repeated. When the peccant Serum is, by means of theſe Pills, ſufficiently evacuated, we are to have recourſe to ſuch Medicines as corroborate the Veſſels, reſtore the Tone, and are, at the ſame time, diuretic. For anſwering theſe Intentions I have often, ſays *Hoffman*, uſed with ſingular Succeſs the following Mixture.

Take of the acrid Tincture of Antimony, four Parts; of the Eſſence of Amber, of the Spiritus Bezoardicus Buſſii, or of Spirit of Tartar, and my Anodyne Mineral Liquor, each two Parts: Mix all together.

A Doſe of this Mixture may be exhibited twice or thrice a Day, for a Week or longer, as the State of the Patient ſhall require; for I have obſerv'd, that ſuch Medicines as, by corroborating the languid Fibres, reſtore and rouſe their moving and elaſtic Force, and at the ſame time promote a Diſcharge of Urine, are of ſingular Service in that Species of Cephalalgia, which ariſes from an Extravaſation of Serum between the Cranium and its Integuments, or even in the Brain itſelf. Beſides theſe Medicines, I, in this Species of Head-ach, with *Celſus*, recommend Labour and Exerciſe ſufficient to promote a Diaphoreſis, and ſtrong Friction, together with ſuch Aliments and Liquors as provoke Urine.

If by theſe means the Pain is not remov'd, we muſt have recourſe to external Applications, among which, Veſicatories are of the higheſt and moſt conſiderable Service, becauſe they procure an Elimination of the peccant ſtagnating Humour. For this Purpoſe I generally uſe Melilot Plaiſter, with every Ounce of which a Dram of Cantharides is mix'd, adding at the ſame time a few Grains of Camphire. The Breadth of a Dollar, or Crown-piece, of this Plaiſter, may be applied to the Nape of the Neck, and continued at Pleaſure, taking care to renew it at proper Intervals: By this means, a remarkable Quantity of ſerous Humour is evacuated without incommoding the Patient. But in a violent Pain of the Head, and in Caſes where, in conſequence of the Serum ſtagnating under the Integuments of the Cranium, there is a Tumor, which is not only viſible, but alſo painful upon being touch'd, *Wepfer*, after ſhaving the Head, apply'd a Veſicatory to the Whole of it; the Effect of which was, that, without raiſing Bliſters, a large Quantity of viſcid Serum was evacuated, which Kind of Remedy we find uſed with Succeſs by *Riverius* in an obſtinate Head-ach.

It ſometimes happens, that only a particular Place is ſeized with an unuſually intenſe Pain, ariſing from a peccant Matter ſecurely and deeply rooted in the Membranes, in which Caſe *Cheſneau*, a celebrated *French* Phyſician, in his Obſervations, highly extols the Uſe of the *Ranunculus pratenſis*, as a Veſicatory. He informs us concerning this Plant, that its Leaves reſemble thoſe of the Anemone, and that, when chewed, it bites the Tongue very ſeverely. He orders its Leaves, when bruis'd, to be apply'd to the Part affected, which is, at the ſame time, to be cover'd with a perforated Plaiſter. This Herb ſeems to produce nearly the ſame Effect with the Moxa, which, in this Species of Head-ach, is highly eſteem'd by the moſt ſkilful Phyſicians. But in Caſes of this Nature, I myſelf, ſays *Hoffman*, have with great Succeſs, after having ſhaved the Part affected, apply'd to it the dry volatile Salt of Sal Ammoniac, mix'd with an equal Quantity of the Flower of Muſtard, becauſe the peccant Humour, in conſequence of its being deeply ſeated, requires proportionably ſtronger Diſcutients.

But when the Head-ach ariſes from a prepoſterous Suppreſſion of a Coryza, or a Mucus retained in the Cavities and Sinuſes of the Noſtrils, it is proper frequently to apply to the Noſtrils the Sal Anglicanum, which is the dry volatile Salt of Sal Ammoniac, exalted with ſome cephalic Oil, ſuch as that of Lavender or Marjoram; or to ſnuff up the Noſtrils, as an Errhine, a gently ſternutative Powder, prepar'd of Marjoram, Betony, the true Marum, Flowers of Benjamin, and Powder of Cloves.

But when a long-continued and intolerable Head-ach is produc'd by a corrupted and deprav'd State of the Serum and Blood, as happens in the Lues Venerea and Scurvy, it is neceſſary to attack the Cauſe of the Diſorder, by Medicines adapted to the reſpective Cures of theſe Diſeaſes. This Intention is principally anſwered by Decoctions of the Woods, with crude Antimony, if the corrupted Humours are previouſly diſcharged by Stool, by means of the above ſpecify'd Pills. Abſtinence, alſo, for a Day or two, is of ſingular Service in this Caſe, as alſo Exerciſe ſufficient to promote a Diaphoreſis. It is alſo ſerviceable in this obſtinate Diſorder, which ariſes from an impure Serum, to provoke Sweat by ſome proper Medicine, which Intention is excellently anſwered by the following Powder.

Take of native Cinnabar, of Ceruſs of Antimony, or Bezoardicum Minerale, of the volatile Salt of Vipers, or of Hartſhorn, and of pure Nitre, each ten Grains; and of Camphire, half a Grain, for a Doſe; drinking after it a Draught of any Decoction, proper for purifying the Blood.

A Hemicrania, eſpecially of the periodical Kind, has its Cauſe generally conceal'd in the Primæ Viæ; when, for Inſtance, the Stomach and Duodenum are ſtuffed with a Load of peccant Humours, theſe muſt be evacuated by mild and gentle Emetics. It is alſo ſometimes highly neceſſary to render the Body ſoluble, and diſcharge the peccant Matter by Stool, that a Derivation of the noxious Humours may be made from the Head. After this, ſtomachic Elixirs, and ſuch Medicines as reſtore and ſtrengthen the Tone of the Stomach and Inteſtines, are to be exhibited. But if the Head-ach ariſes from an immoderate Diſcharge of the Menſes, or Hæmorrhoids, we are prudently to uſe ſuch Medicines, as are adapted to reduce theſe ſalutary Evacuations to their due and natural State.

Cautions *and* Clinical Obſervations.

Having thus given Directions for the Cure of a Cephalalgia, it is not unneceſſary to ſubjoin ſome Cautions and Obſervations relating to the ſame Subject. When the Pain, eſpecially in the Sinciput and Frontal Sinuſes, is ſo highly acute and intenſe as conſiderably to impair the Strength, and endanger the Life, of the Patient, the Removal of the Cauſe of the Diſeaſe is by no means to be firſt attempted; but ſome Relief is rather previouſly to be afforded, becauſe, when the Patient's Strength is gone, the Efforts of the Phyſician are of no Uſe. The Pain is ſometimes ſo exceſſively intenſe, as to bring on more terrible Symptoms; ſuch as continual Watchings, Faintings, Fevers, Inflammations, and Alienation of Mind. In this Caſe both internal and external Medicines are, with all Expedition, to be preſcrib'd, for the Alleviation of the Pain. Among the internal Medicines, I generally prefer, to all others, the *Pilulæ Wildeganſii*, mix'd with native Cinnabar; as alſo the *Pilulæ Starkei*: But the Body is always to be render'd ſoluble, by a Clyſter, before the Uſe of Anodynes. Among external Applications, I find none more ſafe and efficacious than a thick Liniment, prepared of the following Ingredients in this manner:

Take of the expreſs'd Oil of Nutmegs, half an Ounce; of the Reſin of Storax, and of the Reſin of the Bark of Caſcarilla, each one Dram; of the Extract of Saffron, and *Peruvian* Balſam, each half a Dram; and of the Oil of *Rhodium*, twelve Drops: Mix up into a thick Liniment, which is to be laid upon a ſmall Piece of Leather, as large as an Imperial, which is about the Size of a Half-guinea, and applied to the Temples.

When the Violence of the Pain is abated by the internal Exhibition, and the external Application, of Anodynes, it is proper to give a gentle Cathartic; after which the Phyſician is to have recourſe to other Medicines, adapted, by their Nature and Qualities, to remove the Cauſe of the Diſorder, whatever it may happen to be. When a highly acute, and ſcarce tolerable Pain, remains fix'd for a long time in the Cavities of the Noſtrils, and the bony Sinuſes of the Head, which Species of Pain is produced by a ſmall Quantity of extravaſated Blood or Humours, lodged under the Membrane which covers theſe Sinuſes, it is not only proper to alleviate the Violence of the Pain by the above-mention'd Medicines, but we muſt alſo endeavour to leſſen the Impulſe of the Blood, by the Violence of which the Pain is increaſed. This Intention may be commodiouſly anſwer'd by Scarification of the Noſtrils, a Practice uſed by the *Egyptian* Phyſicians; or, if we intend a more ſpeedy and compendious Method of Relief, we may thruſt a ſtrong Straw ſuddenly and forcibly up the Noſtrils, till a Hæmorrhage enſues.

But if the corroſive and acrid Humour, extravaſated under the Membrane of the Pericranium, begins to render the Bone carious, then, after all other Remedies are tried to no Purpoſe, we muſt have recourſe to Inciſion; which, in this Caſe, as well as in a Paronychia, ariſing almoſt from a like Cauſe, affords a very ſingular and ſurpriſing Relief. But if the Caries has reach'd to the Diploe, and the internal Lamina of the Cranium, the only

only Relief is to be expected from the Operation of the Trepan.

We must observe, in general, that, in the Cure of all Head-achs, from whatever Cause they may proceed, we are to begin with the Injection of a Clyster, and Venesection, if a Plethora requires it; but the Body is always to be render'd soluble before this last Step is taken. After this, we are to have recourse to other proper Remedies, both of the internal and external Kind. When the Plethora is removed, it is often proper, for the sake of a more effectual Derivation of the peccant Matter from the Part affected, to open the Frontal Vein; in performing which Operation the celebrated *Heurnius*, *in Notis ad Aph.* 68. *Hippocratis*, *Sect.* 5. gives us a Caution worthy of our Attention, which is, before the Operation, to apply a Ligature about the Neck, that the Vein may become turgid; which is afterwards to be cut obliquely, taking care not to wound the Pericranium.

It is confirm'd, by the Testimonies of the most skilful Physicians, that Arteriotomy in the Temples has often afforded the most instantaneous and efficacious Relief, when all other Methods have been used in vain. Nor would I detract from the Excellence and Advantages of this Method, tho' I never prescrib'd it. I am, however, of Opinion, that, by opening the external Jugular Vein, the obstructed Circulation of the Blood in the Head is more effectually restored, and the stagnating extravasated Humours, on which the Pain depends, more commodiously removed and eliminated; since by this means the arterial Blood is, with a greater Degree of Celerity, convey'd into the evacuated Vein. When Physicians advise the opening of the Temporal Vein, this Operation is most safely and commodiously perform'd by the Ear, near the Articulation of the Jaw-bone.

In all Head-achs, where the Patient's Strength will not admit of Venesection, and where the Quantity of the Blood is too small, Foot-baths of the temperate Kind, which are always beneficial in this Disorder, may be used with Success, in order to derive the Blood and Humours to the inferior Parts. Pretty strong Frictions of the Feet and Legs, with Cloths, are not to be disapproved of: Neither, in this Case, do Substances which render the Parts red and inflamed, such as Shavings of Horse-radish, mix'd with Salt, and applied to the Feet, want their proper Use.

Epithems actually cold are, in this Case, to be applied with the greatest Care and Circumspection; for I myself, says *Hoffman*, know Instances of Patients, who in Fevers, especially of the exanthematous Kind, Small-pox, Measles, and Purple Fever, when Nature happily endeavours to throw off the peccant Matter in the Form of Exhalations thro' the cutaneous Pores, have by the Application of cold Epithems, in order to remove Head-achs, had a perpetual Blindness brought on; as also Cataracts, and Inflammations of the Eyes. Nor, in removing this Pain, is it always proper to use a Variety of Topics; the Application of which is sometimes more dangerous, and requires more Skill and Judgment in the Physician, than the Use of internal Medicines. Nor, in this Case, are all Medicines equally proper for all Patients indiscriminately; since one is able to bear what may prove highly prejudicial to another.

Under the Paroxysm itself, I have found the Pain considerably alleviated by a few Drops of my anodyne Liquor, dropt upon Sugar, reduced to a Powder, and exhibited frequently. In the Intervals of the Paroxysms, in order to corroborate the Head, or to prevent the Return of the Disorder, I can, from Experience, recommend my *Balsamum Analepticum Vitale*, either applied to the Temples, and Crown of the Head, or moderately snuffed up the Nose; or a few Drops of it, dropt upon Sugar, may be taken in any proper Infusion by way of Tea.

When too great an Effervescence, or a preternaturally accelerated and tumultuous Motion of the Blood, is the Cause of the Head-ach, Purgatives and Evacuants are by no means to be used; but rather Medicines of a refrigerating and correcting Quality, with which Intention I generally recommend the drinking cold Water alone, and Preparations of Nitre. And, certainly, the Caution of *Hippocrates*, with respect to this Matter, is of the utmost Importance; for, in his Book *de Ratione Victus in Acutis*, he advises us, "to purge none of those who "are afflicted with Head-achs, in consequence of too violent "Exercise, Running, Travelling, Hunting, or any other se-"vere Labour." *Hippocrates*, in this Passage, intends to inform us, that, when the Head-ach arises from a hot and fervid State of the Blood, Purgatives are by no means to be used.

It frequently happens, that a Cephalæa attends an hypochondriac Melancholy, in Conjunction with a depraved Digestion, Leanness of the Body, Depression of the Spirits, and a vitiated Colour of the Complexion; in which Case, Venesection, Baths of good Water, proper Exercise, a prudent Use of medicinal Waters, Broths, especially those prepared with the Juice of Succory, Goats Whey, chalybeated, or impregnated with the Juice of Succory, are, of all other Things, the most effectual.

As in all other Disorders of the Head, so also in Head-achs, the following Regimen is recommended by *Hieronymus Mercurialis*, *in Consultat. Tom.* 1. *Consult.* 107. the Whole of which, as an excellent Method of Prevention, we shall here translate; "The Inclemency of the Air, says he, to which the Patient "has not been accustom'd, is to be avoided as much as possi-"ble; or guarded against by proper Garments, and warm "Rooms. The Patient is to sleep moderately, and never till "two Hours after Meals. He is to sleep always with his Head "raised high. He is to exercise his Body and his Mind equal-"ly, and by turns, lest the one should outdo the other either "in Labour or Rest. He is not to allow an Excess of Care, "Thoughtfulness, or Study, to dull and flatten the natural "Heat of his Constitution. He must keep his Body as solu-"ble as possible, if it is not already so; for nothing has a "more immediate Tendency to affect the Head, and lay a "Foundation for vertiginous Disorders, than the Fœces long "retain'd, and pent up in the Intestines. Debauches and "Surfeits are highly prejudicial to him, which he must there-"fore avoid; and abstain from the daily Use of strong and "generous Wines. He must also abstain from thick, pin-"guious, and flatulent Aliments, such as Pulses and Pot-"herbs, Fish, and Dishes prepar'd with Spices, like those used "by the *Germans*, lest his Disorder should be daily increased." *Hoffman Medicina Rationalis Symptomat. Vol.* 2.

As many Species of Head-achs are symptomatical, we must refer their Cure to those of the Distempers which they accompany. But it must be remark'd, in general, that Head-achs are greatly relieved by Pains in the Feet, arising spontaneously: This has given a Hint to Physicians to try the Effect of Pain in these Parts, procur'd artificially, by stimulating Applications; which has been found, by Experience, to answer very well the Intention. From a Parity of Reasoning, promoting a Discharge of Blood from the Hæmorrhoidal Veins has been experienced, and found of great Service.

A particular Method of Cure, for that Species of Head-ach proceeding from a Collection of Matter contain'd in the *Antrum Maxillæ superioris*, is recommended, I think, by *Cowper*. It consists in drawing one of the *Dentes Molares*, the Bottom of whose Socket is only separated from this Cavity by a thin bony Lamina, which is readily perforated; and by this means a Drain is made for the Matter, which, when confin'd, causes the Head-ach.

This Species of Head-ach is frequently attended with a Tumor on one Side of the Face, upon the *Antrum*, which subsides after the Operation, of which I have seen Instances.

Relative to this, *Drake* gives the two following remarkable Cases.

A young Gentleman became my Patient, who had labour'd under an Apostemation in the Antrum Maxillæ superioris, between four and five Years: I had seen him about a Twelvemonth since, when I told him where the Seat of his Disease was, and the way I would take to cure him, which he unluckily neglected. And notwithstanding the Arguments used by an ingenious and learned Physician, as well as against his own Inclinations, he was at that time prevail'd with to defer drawing his Tooth, (which I propos'd to him) till Time, with the Increase of his Malady, and a late Instance of Success I had in the like Case, on a Person of the first Rank in Sense as well as Quality, had convinc'd him of the Necessity of doing it: By this time the Matter had of itself made way by the farthest Dens Molaris of the Left Side, insomuch that, before the Tooth was drawn, I pass'd a Probe by the Side of it into the Antrum. The Day after the Tooth or Stump (for the greatest Part of it was moulder'd away) was taken out, an ordinary Spoonful, at least, of the worst colour'd and scented Pus flow'd at the Socket, on holding his Head back: I then syring'd it with a proper Injection, which was continued daily; and, in three Days, he told me, he had very little Use for his Handkerchief, which he used to change five or six times in a Day, for three or four Years before. On visiting him, the seventh Day, he told me, to his Admiration, he was not only freed of the Flux at his Nose, and violent Pains in his Head, particularly in his Eyes, but restor'd (as he expres'd it) to a perfect Tranquillity of Health.

An elderly Gentleman, who, for a long time, labour'd under a Discharge of a great Quantity of fetid Matter from his Nose, after I had told him how he might be relieved, was by others laugh'd out of the Project, (as they call it) till, at length, the Thing itself convinced him of the Truth of what I told him. When he consulted me again, which was several Months after I first saw him, he then sent for a Tooth-drawer to take out the Tooth I should direct: Tho' the Operator attempted it with proper Dexterity, not only the Tooth, which appear'd sound, (but was not so) on which he applied his Instrument, but the next Tooth also, with their Alveoli or Sockets, came away all together. This frighten'd the Tooth-drawer; but I shew'd him it was none of his Fault, but that the corrosive Matter, which had been so long suffer'd to lie on the Bone, had rotted it. In doing this, the Patient did not complain of

Pain, and was relieved of the Discharge at his Nose (the Matter finding a ready Passage at the Breach); but was afterwards pursued with extravagant Pains in his Face, and that Side of his Head; and, at length, after some Months, fell into convulsive Disorders, and died.

On opening his Head, I found the upper Part of the Antrum carious, and Part of that Bone moulder'd away; but the Caries did not stop there, a Sinus being made thro' the Tract of the Foramen Lacerum; the opposite Part of the Os Sphenoides was also perforated, and the Dura Mater laid bare, and not perforated; but, on the contrary, it was inflamed, and very much thicken'd, on that Side the Head. I found an Apostemation in the cortical Substance of the fore Part of the hinder Lobe of the Brain of the same Side, tho' cover'd with the Pia Mater, in which was about an Ounce of fetid Matter. *Drake's Anatomy, Vol.* 2.

CEPHALARTICA. Remedies which purge the Head. *Blancard.*

CEPHALE, κεφαλή. The Head. See CAPUT.

CEPHALICUS, κεφαλικός. Cephalic. Appertaining to the Head. Thus the Vein mark'd M. in *Tab.* 6. *Fig.* 1. is call'd the cephalic Vein, because Bleeding in that Vein was supposed to relieve the Head.

Thus, also, Remedies for Disorders of the Head are peculiarly styl'd *Cephalica*, Cephalics. Under this Denomination are comprehended all those Medicines which have a particular Relation to the Brain; so that cephalic Remedies, in general, are such as promote the Secretion and Distribution of the Spirits. This Intention is answer'd by all such Substances as procure a free Circulation of the Humours thro' the Vessels of the Brain: Hence Cephalics are different, according to the Diversity of Causes which may happen to obstruct or hinder the Circulation of the Humours in the Brain. If the Cause is of the cold and mucous Kind, the Cephalics to be prescrib'd must be of a heating, stimulating, fragrant, and aromatic Quality. If, on the contrary, the Disorder arises from an Excess of Heat in the Body, the Cephalics to be exhibited must be of a cooling and refrigerating Nature. Thus Correctors, universal Evacuants, and other Medicines, deserve to be dignified with the Epithet *Cephalic*, when they have a Tendency to weaken or remove the Cause which produces any particular Disorder of the Head. Since, therefore, different Disorders of the Head draw their Origins from opposite Causes; those must certainly be in a palpable Error, who only give the Title of Cephalics to heating and volatile Substances, which have often been found to prove hurtful in Disorders of the Head. The various cephalic Remedies are, therefore, to be taken from the general Titles or Classes of Medicines opposite to the morbific Cause. Cephalic Medicines are either internal, when, for Instance, they are exhibited by the Mouth, in order to produce their Effects by the general Circulation of the Fluids; or by way of Clysters, which often produce the most happy Consequences, by making a Revulsion from the superior and more noble Parts; or they are such as are applied externally to the Head, to which Class belong Errhines, proper Liquors for washing the Head, medicated Caps, and other Remedies commonly call'd Topics; the Materials of which are also used against the Disorders of other Parts of the Body. With respect to cephalic Topics in general, we must observe, that the Head is less capable of bearing moist than dry Applications; because the former, by distending or relaxing the Vessels, produce Congestions of Humours, which prove hurtful and prejudicial to the Brain. Nor do moist Preparations, applied to the Head, ever answer any valuable Purpose, except in those Cases alone where the Disorder arises from an Excess of Heat and Dryness, or from an inflammatory Disposition in the Head; for, in this Case, agreeably to the antiphlogistic Method, moistening Fomentations and Epithems, applied to the Head, Neck, and Throat, generally produce happy Effects; since, by this means, the Water, insinuating itself into the Pores of these Parts, renders them more pervious, so that the Blood passes more freely thro' them, and consequently presses less forcibly on the Brain; and, because the external Carotid Artery is distributed to all the Parts of the Head, the Blood is directed to some other Quarter, in consequence of the Relaxation of these very Parts. Decoctions, then, of the Flowers of Marshmallows, Mullein, and other Emollients, or moderately warm Oxymel, or Water and Elder-vinegar, are proper, for Instance, in Deliriums, according to *Boerhaave*, *Aph.* 702. in Comas, *Aph.* 706. in obstinate Watchings, *Aph.* 709. in a Phrenitis, *Aph.* 781. in an inflammatory Quinsey, *Aph.* 809. and in a Hydrophobia, *Aph.* 1143. *N.* 5. In Wounds of the Head and Pericranium, we must not, according to *Hoffman*, in his *Annotat. ad Poter*, 17. use oleous or pinguious Substances and Ointments; because, by obstructing the Pores, they bring on violent Inflammations. But, in their room, we must substitute either dry Substances, such as the Powders of *Florentine* Orris, Mastich, or Amber, or Honey, with an Admixture of a small Quantity of *Peruvian* Balsam. In other Disorders of the Head, such as Pains arising from a cold Cause, medicated Bags, stuffed with heating Ingredients, such as Sage, Marjoram, Frankincense, and Salt, are generally used with Success. The Patient's Head is also to be washed with a Lixivium, in which Ingredients of a heating Quality have been boil'd, since these are highly proper for attenuating the obstructing Matter, and corroborating the Brain.

Sennertus, in his *Institutiones Medicinæ*, informs us, "That, "tho' Liquors for washing the Head are by some absolutely con- "demn'd and rejected, yet they are not altogether useless, "since they open the Pores of the Skin, that the Fumes pent "up in the small obstructed Vessels may be exhal'd. But they "must not be us'd when the Patient labours immediately under "a Catarrh, or a Head-ach; for they are more properly, and "with greater Success, apply'd in the Intervals of these Disorders. As for the Method of using them, the Head must be "wash'd either in the Morning, or an Hour before Supper; "and, when it is sufficiently wash'd, it must be dry'd with "moderately warm Linen Cloths. Washing of the Feet is "also proper, not only with a View to remove the sordid Matter "collected about them, but also to derive the Humours from "the Head." *Campegius*, in his *Campus Elysius Galliæ*, gives us the following Cautions with respect to the Use of heating medicated Bags: "Let them," says he, "be apply'd "after a considerable, but gentle Evacuation, and at the "Height, or in the Decline, but not in the Beginning or In- "crease of the Disease, nor before a gentle Evacuation is made, "lest, by their hot and attracting Influences, they should draw "the Humours to the Head, and, by that means, do more "Harm than Good." *Cheyne*, in his Treatise *De Infirmorum Sanitate tuenda*, tells us, that the greatest Advantages accrue to the Eyes, Ears, and whole Head, from shaving it frequently, and bathing it daily in cold Water, mixed with a few Drops of Lavender or Hungary Water. The Benefit, says he, arising from this Method, abstracting from the Pleasure it affords, are only known and reliſh'd by such as have experienc'd them. To rub the Head, after it is shav'd, proves an instantaneous Cure for a Cephalalgia, a Stuffing of the Head, and a Weakness of the Eyes, arising from a weak and relax'd State of the nervous Fibres: And as, by every fresh Evacuation of the Humours, their Quantity is not only lessen'd, but also their recrementitious Parts deriv'd thither; so the more frequently the Head is shav'd, the larger Quantity of Humours is discharg'd, so that the frequent Shaving of the Head and Beard is like a perpetual Fontanel or Vesicatory. From frequently washing the Skin of the Head with Soap and Water, and then shaving it, arises another considerable Advantage, which is, cleansing the Mouths of the cutaneous Pores from the Scurf and Scales which block them up; by which means a free Discharge is procur'd to the perspirable Matter, which, when retain'd, proves highly prejudicial to the Head and Brain. Then, by plunging the Head in cold Water, and carefully washing it, the Scales of the Cuticula are closely brac'd up, and hinder'd from gaping in an unseemly manner, and so that too large a Quantity of the perspirable Matter should be discharg'd, and that they may the better resist the Influence of the external Cold, by which means Persons of an infirm State of Health suffer very considerably; for which Reason I would advise all valetudinary Persons to shave every Day, or every other Day, or, at least, as often as they conveniently can, and then to wash their Heads with cold Water. *Celsus*, in the fourth Chapter of his first Book, gives the following Directions with respect to the Management of the Head: "The Person," says he, "who has a weak Head, provided "his Digestion is good, ought gently to rub it with his Hands "in the Morning, never, if possible, to keep it cover'd, nor "to shave it close to the Skin. It is also proper he should shun "the Influences of the Moon, especially before her Conjunction with the Sun. He must also take care not to go "abroad immediately after Meals. If he has Hair, he must "daily comb it, and walk much, but neither in the House, "nor in the Sun. He must also, in a particular Manner, shun "the Heat of the Sun after Meals, or the Use of Wine. He "must rather anoint than bathe; and when he does anoint, it "must never be before a violent Fire, where there is an Eruption of Flame, but sometimes before a gentle Fire, where "the Coals are live and clear. If he intends to use a Bagnio, "he must first sweat a little, cover'd with Cloths, in the *Tepidarium*, where he must also be anointed; thence he must go "into the Sweating-room. When he has sweated, he must not "go into the Bathing-cistern, but pour large Quantities of "Water, first moderately warm, and then cold, upon his "Head and whole Body; but he must pour it longer upon his "Head than upon the other Parts of his Body. Then he must "rub his Head for some time, and, last of all, wipe himself, "and anoint. *Nothing is so beneficial to the Head as cold "Water:* He, therefore, who has an infirm Head, ought, "during the Summer, daily to plunge it in a pretty large "Vessel of Water; and tho' he should anoint without bathing, "or cannot endure the Influence of the Cold over his whole "Body, yet he ought always to pour cold Water upon his "Head. When he has not an Inclination to have the Water "touch any other Parts of his Body, he must bend his Head "downwards;

" downwards, that it may not reach his Neck, and that the " Eyes and other Parts of the Face may partake of the common " Benefit; he is every now-and-then to apply it to these Parts " with his Hands as it runs down. He must necessarily use a " spare Diet, and such as is of easy Digestion; and, if his " Head is prejudic'd by fasting, he may also eat in the Middle " of the Day; but, if he sustains no Injury by fasting, it is " more advisable to eat only once a Day. For his ordinary " Drink, 'tis more proper he should use mild diluted Wine " than Water. It is also proper, that, when his Head begins " to ake violently, he should have a Place proper for Repose, " to betake himself to. Wine or Water, us'd continually by " themselves, are not proper for him, since they only prove " Medicinal when us'd alternately. He must neither write, " read, nor dispute, after Supper, at which time profound Me- " diration is also hurtful: But, of all other Circumstances, " Vomiting is most prejudicial to one in this State." From what has been said we see, that there are two principal Classes of Cephalics; and these are Medicines either of the refrigerating or cooling, or of the warming and heating Kind. For since, as *Riverius* justly observes, the Brain is sometimes attack'd with cold, and sometimes with hot Disorders, the Medicines calculated for its Relief must also be of two Kinds, in order to remove the several Indispositions to which it is subject. " Heating " Medicines," says the now-quoted Author, " not only heat " and dry the Brain, but also incide and attenuate the Phlegm " contain'd in it; whereas those of a refrigerating Quality " partly correct the hot Intemperature of the Brain, and partly " inspissate the acrid saline Phlegm, and other serous Humours, " which produce violent Defluxions." To these two Classes of refrigerant and heating Medicines we may refer what *Hoffman*, in his *Annotat. ad Poter.* proposes in the following Words: " Two Kinds of Medicines are principally proper in Disorders " of the Head, which arise either from an irregular and deful- " tory Motion of the Spirits, or from Obstructions of the " Nerves and Vessels of the Brain. Of the former Kind are " Anodynes, which, by their grateful Exhalations, stop the " tumultuous and disorderly Motions of the Spirits; such as the " Flowers of the Cowslip, of the Lime, of Piony, of the " *Egyptian* Thorn, of Elder, of Roses, of Violets, of the " wild Poppy, and of Lilies of the Valley; as also odorous " and scented Substances, such as Musk, Castor, Amber, and " Saffron. To the latter Class belong such Substances as con- " tain a subtile oleous Salt, of which Kind are all oleous Sub- " stances, and volatile Spirits obtain'd from Animals; as also " Marjoram, Rue, Lavender, Valerian, white Aloes Wood, " garden and wild Rosemary, Cardamoms, Cubebs, Mother " of Thyme, Basil, Amber, Ambergrise, and *Peruvian* Balsam: " All which, boil'd with Water or Wine, or infus'd in any " proper Menstruum, prove excellent Medicines for Disorders " of the Head." But such Substances as relax the too much constricted Vessels, (in consequence of which Constriction a brisker Motion of the Humours, and a greater Heat in the Body, are procur'd) retard the accelerated Motion of all the Humours.

As to what we call cephalic Specifics, which, by a peculiar Virtue, act upon the Head, and remove its Disorders, without influencing any other Parts of the Body, and are consequently indiscriminately proper in all Indispositions of the Head, from whatever Cause they may arise, we must, in this Affair, be cautious in passing our Judgment, since some maintain, that there are really such Medicines, whilst others deny the Fact, and engage the opposite Party with Experience, the most conclusive of all Arguments. *Wedelius*, in his *Centuriæ Exercitationum Medicarum*, *Cent.* 1. *Dec.* 7. informs us, that Hyssop was the cephalic Specific of *Hippocrates*, as appears from his Book *De Morbo Sacro*, compar'd with what he has said concerning Hyssop. But this Plant can only be proper in one Species of Epilepsy; when, for Instance, it is produc'd by a Redundance of Phlegm, concerning which Species *Hippocrates* treats in that Work. In this Case, indeed, heating and drying Medicines are proper: Hyssop then is a Plant of this Kind; and *Wedelius* himself informs us, that it abounds with a volatile oleous Salt. *Hippocrates* also, in his Work *De Diæta*, *Lib.* 2. informs us, that Hyssop is hot, and evacuates Phlegm. *Forestus*, *Obs. Med. Lib.* 9. *Obs.* 52. acquaints us with a very singular, and, I believe, inexplicable, cephalic Virtue in Vervain, which he observ'd in a Patient, who, for several Nights, had been afflicted with a violent and universal Pain of his Head, every Hair of which dropt with Sweat; for after all other Medicines, generally thought most efficacious, had been us'd in vain, the Patient, whilst fast asleep, was miraculously cur'd, by hanging a Piece of green Vervain bruis'd about his Neck: But the Author informs us, that the Vervain must not be remov'd, till, becoming dry, it falls away of its own accord.

CEPHALINE, κεφαλίνη. That Part of the Tongue which is next the Root, and nearest the Fauces. *Gorræus.*

CEPHALOIDES, κεφαλοειδής. Shap'd like a Head, or having a Head. It is apply'd to those Plants which are call'd capitated.

CEPHALONOSOS, κεφαλονόσος, from κεφαλή, the Head, and νόσος, a Disease. The Term is apply'd to a malignant epidemical Fever, frequent in *Hungary*, thence call'd *Febris Hungarica*.

CEPHALO-PHARYNGÆUS. A Muscle of the Pharynx. See PHARYNX.

CEPHALOPONIA, κεφαλοπονία, from κεφαλή, the Head, and πόνος, Pain. A Head-ach.

CEPHALOS, κέφαλος. A Fish, call'd also Mugil. A Mullet. See MUGIL.

CEPHALOTOS, κεφαλωτός. Capitated. See CAPITATÆ.

CEPHALOTROTOS, from κεφαλή, the Head, and τιτρώσκω, to wound. Wounded in the Head.

CEPINI. Vinegar. *Rulandus.*

CEPULA, κέπουλα. Large Myrobalans. *Nic. Myrepsus*, *Sect.* 9. *C.* 83.

CERA, κηρός. Bees-wax.

The best Wax is yellowish, somewhat pinguious, well scented, and smelling something like Honey, pure, and produc'd in *Crete* or *Pontus*. The next in Value is what is white, and of a naturally fat Substance.

All Wax is heating, mollifying, and moderately incarning. It is mix'd in forbile Liquors, as a Remedy for a Dysentery; and ten Bits, of the Size of a Grain of Millet, swallow'd, prevent the Curdling of Milk in the Breasts of Nurses. *Dioscorides*, *Lib.* 2. *Cap.* 105.

Certain Balsams appear, in a very small Quantity, upon the Surface of the Leaves of some Plants, where they are inspissated by the Heat of the Sun, as seems manifestly to appear in Rosemary: There are also often found in other Plants certain very minute Globules, rising from the open seminal Tufts in the main Part of the Flower. These can scarce be collected by any human Means; but I have sometimes found, upon frequently cohobating Spirit of Wine upon Rosemary-leaves, an unexpected and ungrateful Taste or Smell of Wax, fouling the Spirit, which before was good; and upon viewing these Leaves with a Microscope, I thought I discover'd little waxy Risings of the Surface; and, upon handling them considerably, I evidently found Wax gradually sticking to my Fingers. Wax, therefore, appears to be a certain Species of Turpentine, which the fat Juices of Plants, when heated by the Sun, sweat out upon the Surface, or produce within the Cavities of the flowery Tufts. This the Bees collect, roll up into little Balls, and carry between their hind Feet to their Hives, where it is wrought into the Cells of their Combs; and from hence, after the Honey is separated from the drossy Parts, it is procur'd for human Uses. It is generally yellow, and not ungrateful either in Taste or Smell. It becomes hard, and almost brittle, in the Cold, but grows soft, and dissolves, with Heat.

Process upon BEES-WAX.

Half fill a Glass Retort with fine Wax, cut into Pieces small enough to enter the wide Mouth thereof; then pour clean Sand upon it, so as to fill the Retort; which is now to be gently warm'd till the Wax melts, and sufficiently imbibes and mixes among the Sand: Set the Retort in a Sand-furnace, apply a Receiver, and distil with a gradual Fire. There usually first comes over a little tartish Water, of a disagreeable fetid Odour, along with a little Spirit. When, with the gentle Heat of 214 Degrees, nothing more ascends, change the Receiver, and raise the Fire, by which means there will gradually arise a thin Oil, of a whitish Colour, and concrete, like Butter, in the Receiver. When this ceases, apply a violent Fire of Suppression, upon which the whole Body of the Wax will soon come over into the Receiver, and there appear in a solid Form, like Butter; having lost the hard brittle Nature of Wax, and melting oily. So much Sand should be here mix'd with the Wax as to prevent its explosive Swelling, as would otherwise happen in the Boiling.

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It is hence manifest, that the whole Body of Wax is volatile, with a certain Degree of Fire; in which respect, therefore, this Substance agrees with Camphire, though Camphire be much more volatile. Hence we see also, that Wax, which is wholly inflammable, may exist in a hard, and almost brittle Form, when dissolv'd in hot Water, then forc'd thro' a Linen Strainer, and poured into shallow metalline Moulds, so as to form little Cakes, these being exposed to the open Air and Sun, and frequently sprinkled with pure Water, the Wax is thus blanch'd or whiten'd; and tho' it now also wholly consumes in Flame, yet it is almost as brittle as Glass, so as to seem a very different thing from Oil. Inflammable vegetable Oils, therefore, may exist under the various Forms of Oils, Balsam, Rosin, Pitch, dry Tears, Wax, and Butter. And hence we see the Fire can make true liquid Oils from Bodies which appear'd not to be

Oils

Oils before; as we evidently see in the Distillation of Colophony and Wax: And this Conversion of Wax into Butter is durable; for it does not return to hard Wax again in a very long time, but constantly remains a soft Butter, even in the greatest Cold. I have kept this Butter of Wax above twenty Years, in a Glass cylindrical Vessel, whose wide Mouth was only loosely covered with Paper; yet, in all this time, it did not return into Wax; whereas the most liquid Oil of Turpentine soon grows thick; so that the different Effects of Fire upon the bare oily Parts of Plants are surprising: Consequently no certain Rules can hence be laid down for the Action of Fire upon Oils. Camphire, which is a pure inflammable Oil, becomes Camphire again, and not a liquid Oil, after being raised by the Fire. The Butter of Wax, thus prepar'd, affords an extremely soft anodyne Unguent, agreeable to the Nerves, highly emollient, and relaxing; and, when rub'd upon the Parts, proves serviceable in Contractions of the Limbs, and successfully preserves the Skin from Roughness, Dryness, and Cracking, in the Cold, or the Winter: It also proves excellent in the sharp Pains of the Hæmorrhoids. *Boerhaave's Chymistry.*

The BUTTER *of* WAX *turned into a liquid Oil, upon repeated Distillation by the Retort.*

Melt the Butter of Wax, over a gentle Fire, to a liquid Oil; then pour it thro' a Funnel, first well heated, into a Glass Retort, also well heated beforehand, so as to half-fill the Retort, with Care to prevent any of the Butter from sticking to the Neck thereof, because in that Case the gross Matter would fall into the Receiver, which should here be avoided. Set the Retort in a Sand-furnace; lute on a clean Receiver, and distil cautiously, managing the Fire, so that one Drop may follow another, at the Distance of six Seconds; when nothing more comes over with this Degree of Heat, raise the Fire, and distil as before, and continue in this manner increasing the Fire with the same Caution, so long as any Butter remains in the Retort; and by this means all the Butter will come over, scarce leaving any Fœces behind; and a thickish Oil, not much diminished in Quantity, be found instead of Butter in the Receiver. If this Oil of Wax be again distilled in like manner, it always becomes more liquid, soft, transparent, and thin, so as at length to resemble a subtile limpid Oil: And the oftener the Distillation is repeated, the more mild and gentle, yet the more penetrating, the Oil becomes.

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Hence it appears, that the Action of the Fire more and more attenuates certain oily Bodies of Plants; yet without rendering them acrimonious, but, on the contrary, always milder, tho' at the same time more penetrating; for this last Oil of Wax is an incomparable Remedy for the Diseases of the nervous Papillæ in the external Skin, and has scarce its Equal in curing fissur'd Lips in the Winter, fissur'd Nipples in the Women who give Suck, and in the cracking of the Skin of the Hands and Fingers, being sometimes gently anointed thereon. It is also serviceable in discussing cold Tumors arising on the Face or Fingers in the Winter; and curing contracted Tendons, and the Rigidity of the Limbs thence arising, being used along with Baths, Fomentations, and Motion; for it has a singular Virtue in thus restoring Flexibility to the Parts. Being frequently rubbed upon the Abdomen, it prevents Costiveness; and is therefore excellent in effectually curing the Diseases of Children. *Boerhaave's Chymistry, Vol.* 2.

From this Account of Bees-wax it is evident, that it is not so improper an Ingredient in the *Lucatellus*'s Balsam, as some believe.

CERÆÆ, κεραῖαι. The Cornua of the Uterus. *Ruffus Ephesius, C.* 31.

CERAGO. The Aliment of Bees. *Castellus.*

CERAMICE, or CERAMITIS, κεραμικὴ, or κεραμῖτις, join'd with γὴ, Earth, signifies Potters Clay. *Hippocrates*, in his Book *De internis Affectionibus*, orders, in an Erysipelas of the Lungs, this Earth to be apply'd cold, by way of Cataplasm, to the Body. It is not very clear, whether he means the whole Body, or the Region of the Lungs only. He also takes notice of this Earth in his first Book *De Morbis*; and in his third Book *De Morbis*, he mentions it as a refrigerating Topic for the Head-ach.

CERAMIUM, κεράμιον. A *Greek* Measure, the same which the *Latins* call'd *Amphora*. It contains about nine Gallons.

CERAMOS, κέραμος. A Tile.

CERANITES, κερανίτης. The Name of a Pastil or Troche, mention'd by *Galen.*

CERANTHEMUS, κηράνθεμος, or κηράνθεμον. Bee-glue, or Bee-bread. See PROPOLIS, and AMBRA.

CERARE. To incorporate, or mix. *Rulandus.*

CERAS, κέρας. A Horn. See CORNU.

CERASIATUM. The Name of a purging Medicine in *Libavius*, so call'd because the Juice of Cherries is one Ingredient therein.

CERASION, κεράσιον. A Cherry. See CERASUS.

CERASIOS. A Name given by *Mesue* to two Ointments, which he calls the greater and the less. *Castellus.*

CERASMA, κέρασμα, from κεράννυμι, to mix. A Mixture of cold and warm Water, when the warm is pour'd into the cold. *Castellus* from *Galen.*

CERASTES, κεράστης, κεραστῆς, from κέρας, a Horn, is a Serpent, a Cubit in Length, or two Cubits when longest, of a sandy Colour in the Body, and near the Tail void of Scales. At the Head it has two Eminences like Horns, and the Parts about the Belly are cover'd with Scales orderly disposed, which, as the Serpent creeps along, make a rustling Noise like Hissing; this Animal never creeps directly, but obliquely.

The Bite of this Serpent causes a Tumor like the Head of a Nail, and an Efflux of Sanies of the Colour of Wine, or blackish, especially from the Margin, as it usually happens in Wounds from Blows or Sugillations.

The same Symptoms which are consequent from the Bite of the Viper affect those who are bit by this Serpent, but to a more vehement Degree, tho' the Patient generally survives to the ninth Day. The Remedies are the same, as those prescribed against the Bite of the Viper. *Aetius, Tetrab.* 4. *Serm.* 1. *C.* 28.

Lemery seems to have copy'd *Aetius* in his Account of this Serpent: And adds, that it is prepared for Medicinal Uses like the Viper; that it contains a great deal of volatile Salt and Oil; and that it is sudorific, resists Poisons, purifies the Blood, and is good in the Small-pox, Plague, Leprosy, and Itch.

CERASUS. The Cherry-tree; so call'd from *Cerasus*, a City of *Pontus*, from whence they were imported to *Rome* by *Lucullus*, and thence propagated into *Britain*, as *Pliny* informs us.

The Characters are;

The Leaves are considerably large, and shining; the Calyx, or Flower-cup, is very hollow, consists of one Leaf, is crowned with a quinquefid Crown, expanded, when come to Maturity, retorted; the Flower is like a Rose, pentapetalous, the Petals growing out of the Spaces between the Segments of the Calyx; it is also furnished with no fewer than thirty Stamina. The Ovary, which has a long Tube in the very Bottom of the Calyx, becomes a pulpous, roundish, or Heart-shaped Fruit, surrounding a stony Shell of a round Figure, which incloses a Kernel of the same Shape; the Fruit has a very long Pedicle. *Boerhaave Index alter, Vol.* 2.

Dioscorides represents Cherries in general, as keeping the Belly open when eaten fresh, but as binding when dry. The Gum of the Cherry-tree, he says, taken in Wine and Water, cures a chronical Cough, improves the Complexion, sharpens Vision, and excites an Appetite, *L.* 1. *C.* 157.

Boerhaave, in his Work before quoted, informs us, that the Industry of the Gardeners has multiply'd the Species of Cherries to above forty-four. But the Cherries principally taken notice of in Medicine are the following.

Cerasus rubra, Offic. *Cerasus*, Mont. Ind. 39. *Cerasus vulgaris*, Ger. 1319. THE COMMON ENGLISH CHERRY-TREE, Emac. 1502. *Cerasus Anglica*, Park. Theat. 1517. *Cerasus sativa*, Jonf. Dendr. 92. *Cerasa sativa rotunda, rubra & acida, quæ nostris Cerasa sativa*, C. B. Pin. 449. Raii Hist. 2. 1537. *Cerasus sativa fructu rotundo rubro & acido*, Tourn. Inst. 625. Elem. Bot. 496. *Cerasus acida rubella*, J. B. 1. THE RED CHERRY-TREE. *Dale.*

This Tree grows hardly so high as the black Cherry-tree, spreading its Branches more abroad; the Flowers and Leaves are much alike, but the Fruit is much larger, of a red Colour, and a sharper Taste.

These are reckon'd more cooling than the black, quenching Thirst, are grateful to the Stomach, and whet the Appetite; they are seldom used in Physic. The Gum is accounted Lithontriptic, and good for the Stone and Gravel, *&c.* *Miller's Bot. Off.*

They are cooling, drying, and astringent, and corroborate the Heart and Stomach; hence they are useful in allaying feverish Heats and Thirst; the Kernels are good to break the Stone. *Dale* from *Schroder.*

These Cherries are esteem'd a very salutary and agreeable Fruit. The Juice of them, when perfectly ripe, is saponaceous, and highly resolvent; and if taken in large Quantities, and these frequently repeated, especially when boil'd or bak'd, it is capable of curing many obstinate chronical Distempers, and taking away the obstructing Matter by a salutary *Diarrhœa.*

Cerasus acida nigricantia, Ind. Med. 32. *Cerasus fructu acido serotino, succi sanguinei*, Tourn. Inst. 625. Rupp. Flor. Jen.

Jen. 167. *Cerasus fructu acido succi sanguinei*, Elem. Bot. 497. *Cerasa acidissima sanguineo succo*, C. B. Pin. 450. *Cerasa acida nigricantia solidiora tardius maturascentia*, J. B. 1. 221. Raii Hist. 2. 1538. THE MORELLO-CHERRY.

The Fruit preserved, and the Rob of the inspissated Juice, are used, and agree in Virtues with the red Cherry. *Dale.*

Cerasus nigra, Offic. Ger. 1323. THE COMMON BLACK CHERRY-TREE, Emac. 1505. Park. Parad. 571. Mer. Pin. 25. Phyt. Brit. 25. *Cerasus major ac sylvestris, fructu subdulci, nigro colore inficiente*, C. B. Pin. 450. BLACK CHERRY-TREE. MAZZARDS, Raii Hist. 2. 1538. Dill. Cat. Giss. 45. Buxb. 62. Tourn. Inst. 620. Elem. Bot. 497. *Cerasus sylvestris fructu nigro*, J. B. 1. 220. Raii Synop. 3. 463. THE BLACK CHERRY-TREE.

This grows to be a pretty tall Tree, whose Branches are cover'd with roundish sharp-pointed Leaves, serrated about the Edges. The Blossoms or Flowers precede the Leaves, growing several together upon long Foot-stalks, of single white Leaves, cut into fine Parts, with several Stamina in the Middle set upon the Rudiments of the Fruit, which grows to be roundish, less than the red Cherry, having a hard Stone in the Middle, cover'd with a pleasant Pulp, yielding a purple Juice. This Tree grows wild in several Parts of *England*; and is likewise planted in Gardens for the Fruit. It flowers in *April*; the Fruit being ripe in *July*.

Black Cherries are accounted cordial and cephalic, and useful in all Diseases of the Head and Nerves, as Epilepsies, Convulsions, Palsies, and the like. They are commended by some for the Stone, Gravel, and Stoppage of Urine.

Officinal Preparations are only the distil'd Water, which is of more Use in the modern Practice than any other simple Water whatever. *Miller's Bot. Off.*

See AQUA.

The Stones of black Cherries with their Kernels bak'd, and powder'd, are said to be extremely diuretic.

It is also said, that the Kernels of these yield by Distillation an Oil equally poisonous with that of the Laurel. Hence the black Cherry-water has, contrary to all Experience so far as I can learn, got into some Disrepute.

Padus, Offic. *Padus Theophrasti*, Dill. Cat. Giss. 66. *Padus Germanica folio deciduo*, Rupp. Flor. Jen. 108. Buxb. 149. *Cerasus Avium*, Merc. Bot. 2. 18. Phyt. Brit. 25. *Cerasus Avium nigra & racemosa*, Ger. 1322. Emac. 1504. Mer. Pin. 24. Raii Hist. 2. 1549. Synop. 3. 463. *Cerasus racemosa sylvestris fructu non eduli*, C. B. P. 451. Tourn. Inst. 626. Elem. Bot. 497. Boerh. Ind. A. 2. 244. *Cerasus racemosa sylvestris*, Jons. Dendr. 93. *Cerasus avium racemosa*, Park. Theat. 1517. BIRDS CHERRY.

It grows in rocky and mountainous Places, and the Fruit is used to hang about the Necks of Children, as a Cure for the Epilepsy. *Dale.*

Mahaleb, Offic. *Macaleb Gesneri*, Ger. 1211. CORAL PRIVET, Emac. 1397. *Machaleb Germanicum*, THE ROCK WILD CHERRY OF AUSTRIA, Park. Theat. 1519. *Cerasus sylvestris*, Ind. Med. 32. *Cerasus sylvestris, Mahaleb*, Mont. Ind. 39. *Cerasus sylvestris amara Mahaleb putata*, J. B. 1. 227. Raii Hist. 2. 1549. Tourn. Inst. 627. Elem. Bot. 497. *Cerasus sylvestris amara, Arabum Mahaleb putata*, Chab. 16. *Cerasso affinis*, C. P. Pin. 451. Jons. Dendr. 93. ROCK CHERRY.

It grows in rocky Mountains, and the Kernels are used, which are of a heating and emollient Quality. *Dale.*

CERATIA, κεράτια. The Carob-tree. See CAROBA.

CERATIO. The smearing any thing over with Wax. But in the chymical Language it implies the reducing any Substance to such a State, as to be susceptible of a Fusion like that of Wax, whether the Body to be thus alter'd is naturally too hard and coherent to admit of such a Fusion, or whether it is too volatile to bear it; or it is a Mollification of a hard and not fusible Substance, so as to make it capable of Liquefaction. In the Alchemical Sense it imports the fixing of Mercury with something which flows like Wax, and detains it.

CERATITES. The Fossil Unicorn. A Stone in the Shape of a Horn.

CERATITIS, κερατῖτις. *Marcellus Empiricus* says this is the Sea-violet. But *Pliny* informs us it is a Name of the *Papaver Corniculatum*, *L.* 20. *C.* 19.

CERATIUM, κεράτιον. The Fruit of the Carob-tree. See CAROBA.

It also signifies a Carat, a sort of Weight. See CARATA.

CERATOGLOSSUS. The Name of a Muscle of the Tongue. It arises fleshy from three different Places. Its first Origin is broad and carneous from the Cornu of the Os Hyoides; this is properly the *Ceratoglossus*. Its second Head comes from Part of the Basis of this Bone, and is named *Basioglossus*. The third Beginning is derived from the cartilaginous Appendage of the Hyoides, which some call *Chondroglossus*. These three unite, and their Fibres, running in the same Direction, are inserted broad and thin near the Root of the Tongue laterally.

Its Use is to draw the Tongue obliquely to one Side; but if both act at once, the Tongue is pulled directly backwards into the Mouth. *Douglas.*

CERATOIDES, κερατοειδής. A Name for the Tunica Cornea of the Eye.

CERATOMALAGMA, κερατομάλαγμα. A Cerate. See CERATUM.

CERATONIA. The Carob-tree. See CAROBA.

CERATOPHYLLON. An aquatic Plant, of which two Sorts are taken notice of.

1. *Ceratophyllon læve, aquis immersum Hydroceratophyllum, folio lævi, octo cornibus armato*, Act. Ac. R. Sc. Par. 1719. Pag. 20. Vaill. 32.

Observed by Dr. *Manningham* and Dr. *Dillenius* in the Ditches, by the Way-side, from *Chichester* to *Selsey*. *Syn. Stirp. Brit. Ed.* 3. 135.

2. *Ceratophyllon asperum, aquis immersum. Hydroceratophyllum, folio aspero, quatuor cornibus armato*, Act. Ac. Sc. Par. Ann. 1719. Pag. 20. *Millefolium aquaticum cornutum* 2. Raii Hist. 191. *Equisetum sub aqua repens foliis bifurcis*, Flor. Pruss. 67. Common in standing Waters. *Martyn's Tournefort.*

I find no Medicinal Virtues attributed to them.

CERATUM. A Cerate. What the Antients call'd a Cerate was somewhat thicker in Consistence than their *Acopon*, and Cerelæon, and softer than a Plaister, according to *Galen*; but *Paulus Ægineta* informs us, that the *Acopon* was of a middle Consistence betwixt the Cerate and Plaister. The Cerate was made of Oil and Wax, to which Powders were sometimes added. The general Rule as to the Proportion was, to put twelve Parts of Wax, four Parts of Oil, and one of Powder, into the Composition. But Cerates were sometimes made without any Wax at all, and of unctuous Ingredients and Powders only.

Amongst the Moderns Cerates are prepar'd of oily or fat Substances, Gums, Resins, Balsams, and Powders, united together with a proper Proportion of Wax, to which sometimes Mucilages, and various Sorts of Juices, are added, in such a manner, as that the Composition may be more thick than an Ointment, and more soft than a Plaister. The Rule laid down by Authors is to take eight Parts of Oil, Fat, or Juices, four of Wax, and one or two of Powders. Others order three Ounces of Oil to half an Ounce of Wax, and two or three Drams of Powder. But as in warm Weather Oils and unctuous Substances are more fluid than in cold, a proper Allowance is to be made for this. The Method of making a Cerate is, to melt the fusible Ingredients over the Fire, and then to stir in the Powders till the Mixture grows cool. Sometimes a Cerate is made by adding eight Parts of any Ointment to two or three of Wax; and sometimes by lowering a Plaister by the Addition of a sufficient Quantity of Oil. A Cerate is generally directed to be spread on Linen or Leather, and to be apply'd to the Part intended to be reliev'd; and they are used for all manner of Intentions, as to relax, mollify, digest, cicatrize, contract, &c.

Quincy says, that a Cerate differs from an Ointment only in obtaining an higher Consistence. There are but two Prescriptions now given by the College under this Title, the first a Cooler, the other a moderate Detergent; but they are so readily made, that they are hardly any-where kept.

Ceratum Album: The white Cerate.

Take of the whitest Wax, four Ounces; of Oil of sweet Almonds, five Ounces; of the finest Sperma-ceti, one Ounce; of Cerus washed in Rose-water, one Ounce and an half; of Camphire, half an Ounce: Make them into a Cerate, S. A.

Ceratum Citrinum: The yellow Cerate.

Take of yellow Resin, half a Pound; of Sheeps-suet, four Ounces; of the best Turpentine, two Ounces: Let them be melted by a gentle Fire; then give a little Boil, and strain so as to make a Cerate.

There are several under this Title in the old officinal Dispensatories, and especially those of our College; but they are all so troublesome of Composition, so inelegant, and so little used, that they are thrown out, and these two only added new, which are both easy to make, and cleanly to use. But the chief Reason why this Class is so much reduced, seems to be the Conveniency of providing for all the Intentions they are suited for by extemporaneous Prescriptions, so that there is no Occasion to trouble the Shops with them till they are called for. *Quincy's London Dispensatory.*

Turner's Cerate, or *Ceratum e Lapide Calaminari*, is described under the Article CADMIA.

CERAUNIA, *sive fulminaris Lapis*, Offic. *Ceraunius*, Boet. 480. Worm. 74. Charlt. Foss. 30. De Laet. 155. Aldrov. Mus. Metall. 606. Schw. 372. Kentm. 30. *Ceraunia vel Ceraunias*, Gesn. de Lap. 61. THUNDER-STONES.

This is a Stone of a pyramidal Figure, either black or brown. Authors make this different from the *Lapis Belemnites*. It is principally found in *Germany*.

The Women superstitiously rub their Knees and Breasts with these Stones, in case of Tumors or Defluxions on those Parts. It is also esteemed good for the Dropsy and Jaundice. But I don't know that Experience attests any of these Virtues.

CERAUNO-CHRYSOS. A Name for the *Aurum Fulminaris*. *Johnson*.

CERBERUS *Triceps* is the *Pulvis Cornachini*. In the chymical Language it imports a triple Mercury, from Salt, Quicksilver, and Vitriol. *Castellus* from *Libavius*.

CERCHNALEOS, κερχναλέος. Any thing which causes Wheezing or Hoarseness.

CERCHNOS, κέρχνος. A Wheezing, or hoarse Noise made in Respiration, on account of some Disorder in the *Larynx*, or *Aspera Arteria*, or both. The Word is frequently us'd by the *Greek* Medicinal Writers in this Sense.

CERCIO.

This, according to *Johnston*, is an *Indian* Bird as large as a Starling, of different Colours, almost always shaking its Tail. The Inhabitants teach it to talk, and it is more docile than the Parrot; there are no Medicinal Virtues attributed to it. *Lemery des Drogues*.

CERCIS, κέρκις. It signifies a Pestil, an Instrument to pound any thing with; or the Bone in the Arm call'd the *Radius*.

CERCOPES, κέρκωπες. Artful Cheats and Impostors, a Set of People who are represented by *Galen* as much conversant in the Stews in *Rome*. There is a sort of People among us in low Life, who seem to be their Successors; these are Retainers to the Brothels, who at once act the Part of Bullies, Pimps, Intendants of Health, and Cullies; and who are attach'd to these Scenes of Debauchery, partly by their vicious Inclinations, and partly by the Necessity they lie under of eating, which, perhaps, without this sort of Complaisance might be attended with some Difficulty.

CERCOPITHECUS. A Monkey.

CERCOSIS, κέρκωσις. A Disease of the Clitoris, which consists in its preternatural Inlargement.

CERDAC. Mercury. *Rulandus*.

CEREA. Ear-wax.

CEREALIA. All Sorts of Corn with which Bread is made, so call'd from *Ceres*, who was thought by the Heathens to have taught Mankind the Uses of Corn.

CEREBELLUM. The posterior Part of the Brain.

CEREBRUM. The Brain.

The Name of Brain is given to all that Mass which fills the Cavity of the Cranium, and which is immediately surrounded by two Membranes, called *Meninges* by the *Greeks*, and *Matres* by others, because they were commonly of Opinion, that these Membranes were the Origin, and, as it were, the Mother of all the other Membranes of the Body.

This general Mass is divided into three particular Portions; the Cerebrum or Brain, properly so called, the Cerebellum, and Medulla Oblongata: To these three Parts, contained within the Cranium, a fourth is added, which fills the great Canal of the Spina Dorsi, by the Name of Medulla Spinalis, being a Continuation of the Medulla Oblongata.

The Cerebrum, properly so called, is a kind of medullary Mass, of a moderate Consistence, and of a greyish Colour on the outer Surface, filling all the superior Portion of the Cavity of the Cranium, or that Portion which lies above the transverse Septum. The upper Part of the Cerebrum is of an oval Figure, like half an Egg cut lengthwise, or rather like two Quarters of an Egg cut lengthwise, and parted a little from each other. It is flatter on the lower Part, each lateral Half of which is divided into three Eminences called Lobes, one anterior, one middle, and one posterior.

The Substance of the Cerebrum is of two Kinds, distinguished by two different Colours; one Part of which is softest, being of a greyish or ash Colour; the other, which is more solid, being very white. The ash-coloured Substance lies principally on the outer Part of the Cerebrum like a kind of Cortex, from whence it has been named the Cortical Substance, or Cineritious. The white Substance occupies the inner Part, and is named Substantia Medullaris, or simply Substantia Alba.

The Cerebrum is divided into two lateral Portions, separated by the Falx, or great longitudinal Septum of the Dura Mater. They are generally termed Hemispheres, but they are more like Quarters of an oblong Spheroide. Each of these Portions is divided into two Extremities, one anterior, and one posterior, which are termed the Lobes of the Cerebrum, between which there is a large inferior Protuberance, which goes by the same Name; so that in each Hemisphere there are three Lobes, one anterior, one middle, and one posterior.

The anterior Lobes (*Tab.* 12, A A.) lie upon those Parts of the Os Frontis, which contribute to the Formation of the Orbits, and of the frontal Sinuses, commonly called the anterior Fossæ of the Basis Cranii. The posterior Lobes (*Tab.* 12. B B.) lie on the transverse Septum; and the middle Lobes, in the middle or lateral Fossæ of the Basis Cranii.

Each lateral Portion of the Cerebrum has three Sides, one superior, which is convex; one inferior, which is uneven; and one lateral, which is flat, and turned to the Falx. Thro' the whole Surface of these three Sides we see Inequalities or Windings like the Circumvolutions of the Intestines, formed by waving Streaks or Furrows very deep and narrow, into which the Septa or Duplicatures of the Pia Mater insinuate themselves, and thereby separate these Circumvolutions from each other, which are represented *Tab.* 7.

Near the Surface of the Cerebrum, these Circumvolutions are at some Distance from each other, representing serpentine Ridges; and in the Interstices between them the superficial Veins of the Cerebrum are lodged, between the two Laminæ of the Pia Mater, from whence they pass into the Duplicature of the Dura Mater, and so open into the Sinuses.

These Circumvolutions are fixed through their whole Depth to the Septa or Duplicatures of the Pia Mater, by an infinite Number of very fine vascular Filaments, as may be seen by pulling the Circumvolutions a little asunder with the Fingers.

When they are cut transversely, we observe, that the medullary Substance lies in the Middle of each Circumvolution, so that there is the same Number of internal medullary Circumvolutions as of external cortical ones; the first representing white Laminæ invested by others of an ash Colour; but the cortical Substance is, in many Places, thicker than the medullary.

The anterior and middle Lobes of the Cerebrum on each Side are parted by a deep narrow Sulcus, which ascends obliquely backward, from the Temporal Ala of the Os Sphenoides to near the Middle of the Os Parietale; and the two Sides of this Division have each their particular Ridges and Circumvolutions, which gives a very great Extent to the cortical Substance. This Sulcus is termed Fissura Magna Sylvii, or simply Fissura Cerebri.

Having cut off the Falx from the Crista Galli, and turned it backward; if we separate gently the two lateral Parts, or Hemispheres of the Cerebrum, we see a longitudinal Portion of a white convex Body, which is named Corpus Callosum. It is a middle Portion of the medullary Substance, which under the inferior Sinus of the Falx, and also a little toward each Side, is parted from the Mass of the Cerebrum, to which it is simply contiguous from one End of that Sinus to the other; so that at this Place the Edge of the Inside of this Hemisphere only lies on the Corpus Callosum, much in the same manner, as the anterior and posterior Lobes lie on the Dura Mater. Both Extremities of this medullary Body terminate by a small Edge bent transversely downward.

The Surface of the Corpus Callosum is covered by the Pia Mater, which runs in between the lateral Portions of this Body, and the lower Edge of each Hemisphere. Along the Middle of its Surface, from one End to the other, there is a kind of Raphe, formed by a particular Intexture of Fibres, which cross each other; for though these Fibres appear to be transverse, yet they are really a little oblique, and those which come from the Right Side, intersect those that come from the Left. This Raphe is made more perceivable, by two small medullary Cords which accompany it on each Side, and adhere closely to the transverse Fibres.

The Corpus Callosum becomes afterwards continuous on each Side with the medullary Substance, which, through all the remaining Part of its Extent, is entirely united with the cortical Substance, and, together with the Corpus Callosum, forms a medullary Arch or Vault, of an oblong or oval Figure. To perceive this, the whole cortical Substance, together with the medullary Laminæ mix'd with it, must be cautiously and dexterously cut off in the same Direction with the Convexity of the Cerebrum. After which, we may observe a medullary Convexity, much smaller than that which is common to the whole Cerebrum, but of the same Form; so that it appears like a medullary Nucleus of the Cerebrum, especially when we consider it together with the medullary Substance of the inferior Part or Basis of the Cerebrum. And from thence M. *Vieussens* took Occasion to name this Nucleus the Centrum Ovale.

Under this Arch are two lateral Cavities, much longer than they are broad, and very shallow, separated by a transparent medullary Septum, of which hereafter. These Cavities are generally named the anterior superior Ventricles of the Cerebrum, to distinguish them from two other smaller Cavities which are situated more backward, as we shall see presently; but the Name of lateral or great Ventricles given them by *Steno*, is more proper than either of the other two.

The lateral Ventricles are broad, and rounded at those Extremities, which lie next the transparent Septum. They go from before backward, contracting in Breadth, and separating from each other gradually in their Progress. Afterwards they bend downwards, and return obliquely from behind forward in a Course, like the Turning of a Ram's Horn, and terminate almost under their superior Extremities, only a little more backward and outward.

At the Place where they begin to bend, in order to run downward,

downward, and then backward, there is on each Side a particular Elongation, which runs from before backward, and terminates in a triangular pointed Cavity turned a little inward, the two Points resembling Horns. These Ventricles are everywhere lined with a thin Membrane.

The transparent Partition, or Septum Lucidum, as it is commonly called, lies directly under the Raphe or Suture of the Corpus Callosum, of which it is a Continuation, and a kind of Duplicature. It is made up of two medullary Laminæ, more or less separated from each other by a medullary Cavity, sometimes filled with a serous Substance. This Cavity, in some Subjects, reaches a great Way backwards; and, I am inclin'd to think, communicates with the third Ventricle, of which hereafter.

The Septum Lucidum is united by its lower Part to the anterior Portion of that particular medullary Body, called improperly the Fornix with three Pillars, because of some Resemblance it is thought to bear to the Arches of antient Vaults. It is in Reality nothing but the Corpus Callosum, the lower Side of which is like a hollow Cieling with three Angles, one anterior, and two posterior; and three Edges, two lateral, and one posterior. The lateral Edges are terminated each by a large semicylindrical Border, like two Arches, which, uniting at the anterior Angle, form, by their Union, what is called the anterior Pillar of the Fornix; and as they run backward separately toward the two posterior Angles, they have then the Name of the posterior Pillars.

The anterior Pillar, being double, is larger than either of the posterior; and the Marks of this Duplicity always remain. Immediately below the Basis of this Pillar, we observe a large, white, short, medullary Rope, stretched transversely between the two Hemispheres, and commonly called the anterior Commissure of the Cerebrum. It is to this Pillar that the Septum Lucidum adheres; but it has no total Adhesion below, and therefore the two lateral Ventricles communicate with each other. The posterior Pillars are bent downward, and continued thro' the lower Portions of the Ventricles all the Way to their Extremities, resembling a Ram's Horn, which is a Name which has been given to them. They diminish gradually in Thickness during this Course, and at their Outsides they have each a small, thin, flat, collateral Border, to which the Name of Corpora Fimbriata is owing.

The inferior Surface of the triangular Cieling, which lies between the Arches, is full of transverse, prominent, medullary Lines; for which Reason the Antients called it Psalloides and Lyra, comparing it to a stringed Instrument, something like what is now called a Dulcimer.

The Fornix being cut off and inverted, or quite removed, we see, first of all, a vascular Web, called Plexus Choroides, and several Eminences more or less covered by the Expansion of that Plexus. There are four Pairs of Eminences which follow each other very regularly, two large, and two small. The first two great Eminences are named Corpora Striata; and the second, Thalami Nervorum Opticorum. The four small Eminences are closely united together; the anterior being called Nates, and the posterior, Testes; but it would be better to call them simply, anterior and posterior Tubercles. Immediately before these Tubercles, there is a single Eminence called Glandula Pinealis.

The Corpora Striata got that Name, because, in scraping them with the Knife, we meet with a great Number of white and Ash-colour'd Lines alternately disposed, which are only the transverse Section of the medullary and cortical Laminæ, mixed together in a vertical Position in the Basis of the Cerebrum, as appears evidently by Incisions made from above downward. These two Eminences are of a greyish Colour on the Surface; oblong, roundish, pyriform, and larger on the fore than the back Part, where they are narrow and bent.

They lie in the Bottom of the superior Cavity of the lateral Ventricles, which they resemble in some measure in Shape, their anterior Parts being near the Septum Lucidum, from which they separate gradually as they run backward, and diminish in Size. They are in reality the convex Bottoms of the Ventricles, and it is at the lower Part of the Interstice, between the largest Portions of them, that we observe the great transverse Cord, named the anterior Commissure of the Cerebrum, which I mentioned already in describing the anterior Pillar of the Fornix Callosus. This Cord communicates more particularly with the Bottom of the Corpora Striata, by a Turn toward each Side.

The Thalami Nervorum Opticorum are so named, because these Nerves arise principally from them. They are too large Eminences placed by the Side of each other, between the posterior Portions or Extremities of the Corpora Striata. Their Figure is semispheroidal, and a little oval; and they are of a whitish Colour on the Surface; but their inner Substance is partly greyish, and partly white; so that, in cutting them, we see Streaks of different Colours, like those of the Corpora Striata.

These two Eminences are closely joined together, and at their convex Part they are so far united, as really to become one Body, the whitish outer Substance being continued uniformly over them both. This Substance is very thin, and falls to Pieces only by the Weight of the lateral Parts of the Brain when taken out of the Cranium. Therefore to learn the Structure of these Eminences, they must be examined *in Situ*, and even there they must be handled very gently.

Immediately within this whitish common Substance, these two Eminences are closely contiguous till about the Middle of their Thickness; and from thence they separate insensibly toward the Bottom, where, by the Space left between them, a particular Canal is formed, named the third Ventricle, one Extremity of which opens forward, the other backward, as we shall see hereafter. Some Anatomists have mistaken the superficial Connection of these Eminences for the Pons Varolii.

At the Bottom, these two Eminences are elongated downward toward both Sides, into two thick, round, whitish Cords, which separate from each other like Horns, by a large Curvature; and afterwards by a small Curvature, turned forward in an opposite Direction to the former, and representing the Tip of an Horn, they approach each other again. The Size of these Ropes diminishes gradually from their Origin to their anterior Reunion.

The Tubercles are four in Number, two anterior, and two posterior; adhering together, as if they made but one Body tuated behind the Union of the Thalami Nervorum Opticorum. They are transversely oblong; the anterior being a little more rounded, and broader or larger from before backward, than the posterior. Their Surface is white, and their inner Substance greyish. The Names of Nates and Testes given to these Tubercles are very impertinent, there being no Resemblance between them and the Things from whence these Names are taken. I should like to call them Quadrigemina; that Term being used by Anatomists on another like Occasion, to express four small Muscles lying near each other, and inserted round the great Trochanter of the Os Femoris.

Directly under the Place, where the Tubercles of one Side are united to those of the other Side, lies a small middle Canal, which communicates by its anterior Opening with the third Ventricle, which belongs to the Cerebellum, as we shall afterwards see.

Where the convex Parts of the two anterior Tubercles join these posterior convex Parts of the Thalami Nervorum Opticorum, an Interstice or Opening is left between these four Convexities, which communicates with the third Ventricle, and with the small middle Canal. Instead of the ridiculous Name of Anus, which has been given to this Opening, it may be called Foramen Commune Posterius, to distinguish it from another which shall be mentioned hereafter, by the Name of Foramen Commune Anterius.

The Glandula Pinealis, *Tab.* 12. *Fig.* 2. *f.* is a soft greyish Body, about the Size of an ordinary Pea, irregularly round, and sometimes of the Figure of a Pine-apple, situated behind the Thalami Nervorum Opticorum, above the Tuberecula Quadrigemina. It is fixed like a small Button to the lower Part of the Thalami, by two very white medullary Pedunculi, which at the Gland are very near each other, but separate almost transversely toward the Thalami.

It seems to be mostly of a cortical Substance, except near the Foot-stalks, where it is something medullary. The Foot-stalks are sometimes double, as if they belonged to the two anterior Tubercles. This Body adheres very close to the Plexus Choroides, by which it is covered, as we shall see hereafter; and it therefore requires some Dexterity to separate it from the Glandula, without altering its Situation, or breaking the Pedunculi. This Gland has been often found to contain Gravel. Below the Glandula Pinealis there is a medullary transverse Cord, called the Posterior Commissure of the Hemispheres of the Cerebrum.

Between the Basis of the anterior Pillar of the Fornix, and the anterior Part of the Union of the Optic Thalami, lies a Cavity or Fossula named Infundibulum. It runs down towards the Basis of the Cerebrum, contracting gradually, and terminates in a strait Course, by a small membranous Canal, in a softish Body, situated in the Sella Sphenoidalis, named Glandula Pituitaria. The Infundibulum opens above, immediately before the Optic Thalami, by an oval Hole, named Foramen Commune Anterius, and consequently communicates with the lateral Ventricles.

At the lower Part of the Thalami Nervorum Opticorum, or Beds of the Optic Nerves, directly under their Union, lies a particular natural Canal, called the third Ventricle of the Cerebrum. I call it a natural Canal, that we may not mistake for it an accidental Fissure, which lies between the Thalami in a Brain, taken out of the Cranium, as I have already said.

This Canal opens forward into the Infundibulum, under the Foramen Commune Anterius, by which it likewise communicates with the lateral Ventricles. It opens backwards, under the Foramen Commune Posterius, between the Thalami and

Tubercula Quadrigemina, oppoſite to the ſmall middle Canal which goes to the Cerebellum.

The Plexus Choroides is a very fine vaſcular Texture, conſiſting of a great Number of arterial and venous Ramifications, partly collected in two looſe Faſciculi, which lie one in each lateral Ventricle, and partly expanded over the neighbouring Parts, and covering in a particular manner the Thalami Nervorum Opticorum, or Beds of the Optic Nerves, Glandula Pinealis, Tubercula Quadrigemina, and the other adjacent Parts, both of the Cerebrum and Cerebellum, to all which it adheres.

In each lateral Portion of this Plexus we obſerve a venous Trunk, the Ramifications of which are ſpread thro' the whole Extent of the two Portions. Near the Glandula Pinealis theſe two Trunks approach each other, and uniting behind that Gland, they open into the Torcular, or fourth Sinus of the Dura Mater. When we blow into one of theſe Trunks toward the Plexus, the Air paſſes into all its Ramifications; and in ſome Subjects theſe two Veins form one Trunk, which opens into the Sinus.

The ventricular or looſe Portions of the Plexus often appear to contain a great Number of Tubercles like Glands, which in the natural State are extremely ſmall, but grow bigger in Diſeaſes. To be able to examine them as we ought, the looſe Portions muſt be made to ſwim in clear Water, and be there carefully expanded; then, by the Help of a Microſcope, we may ſee theſe Tubercles in the natural State, like ſmall Folliculi, or little Bags more or leſs flatted.

Beſides this vaſcular Web or Plexus of the Septum Lucidum; the Sides of the Fornix, of the Eminences, Ventricles, Canals, and Infundibulum, are all covered by a very fine Membrane, in which, by Injections or Inflammations, we diſcover a great Number of very fine Veſſels. This Membrane is in a manner a Continuation of the Plexus, and that ſeems to be a Detachment from the Pia Mater. By the ſame means we likewiſe diſcover an extremely thin Membrane on the Inſides of the Duplicature of the Septum, though in ſome Subjects theſe Sides touch each other.

The pituitary Gland is a ſmall ſpongy Body lodged in the Sella Sphenoidalis, between the ſphenoidal Folds of the Dura Mater. It is of a ſingular kind of Subſtance, which ſeems to be neither medullary nor glandular. On the Outſide it is partly greyiſh, and partly reddiſh, and white within. It is tranſverſely oval or oblong, and on the lower Part, in ſome Subjects, it is divided by a ſmall Notch into two Lobes, like a Kidney-bean. It is covered by the Pia Mater as by a Bag, the Opening of which is the Extremity of the Infundibulum; and it is ſurrounded by the ſmall circular Sinuſes, which communicate with the Sinus Cavernoſi.

Cerebellum.

The Cerebellum is contained under the tranſverſe Septum of the Dura Mater. It is broader laterally, than on the fore or back Sides, flatted on the upper Side, and gently inclined both Ways, anſwerable to the Septum which ſerves it as a kind of Tent or Cieling. On the lower Side it is rounder, and on the back Side it is divided into two Lobes, ſeparated by the occipital Septum of the Dura Mater.

It is made up like the Cerebrum, of two Subſtances, but it has no Circumvolutions on its Surface. Its Sulci are pretty deep, and diſpoſed in ſuch a manner, as to form thin, flat Strata, more or leſs horizontal, between which the internal Lamina of the Pia Mater inſinuates itſelf, by a Number of Septa equal to that of the Strata.

Under the tranſverſe Septum, it is covered by a vaſcular Texture, which communicates with the Plexus Choroides. It has two middle Eminences called Appendices Vermiformes, one anterior and ſuperior, which is turned forward; the other poſterior and inferior, which goes backward. There are likewiſe two lateral Appendices, both turned outward. They are termed Vermiformes, from their Reſemblance to a large Portion of an Earthworm.

Beſides the Diviſion of the Cerebellum into lateral Portions, or into two Lobes, each of the Lobes ſeems to be likewiſe ſubdivided into three Protuberances, one anterior, one middle or lateral, and one poſterior; but they are not in all Subjects equally diſtinguiſhed, either by their Convexity or Limits; but they may always be diſtinguiſhed by the Direction of their Strata, thoſe of the middle and anterior Protuberance being leſs tranſverſe than in the poſterior.

When we ſeparate the two Portions or Lobes, having firſt made a pretty deep Inciſion; we diſcover, firſt of all, the poſterior Portion of the Medulla Oblongata, of which hereafter; and in the poſterior Surface of this Portion, from the Tubercula Quadrigemina, all the Way to the poſterior Notch in the Body of the Cerebellum, and a little below that Notch, we obſerve an oblong Cavity, which terminates backward like the Point of a writing Pen. This Cavity is what is called the fourth Ventricle.

At the Beginning of this Cavity, immediately behind the ſmall common Canal which lies under the Tubercles, we meet with a thin medullary Lamina, which is looked upon as a Valve between that Canal and the fourth Ventricle. A little behind this Lamina, the Cavity grows wider towards both Hands, and then contracts again to its firſt Size. It is lined interiorly by a thin Membrane, and ſeems oftentimes to be diſtinguiſhed into two lateral Parts, by a kind of ſmall Groove, from the Valvular Lamina, to the Point of the Calamus Scriptorius.

This Membrane is a Continuation of that which lines the ſmall Canal, the third Ventricle, Infundibulum, and the two great Ventricles. To be able to ſee the fourth Ventricle in its natural State, in which it is narroweſt, it muſt be laid open while the Cerebellum remains in the Cranium; and, in order to that, the Os Occipitis muſt be ſawed very low down.

On each Side of this Ventricle the medullary Subſtance forms a Trunk, which expands itſelf in form of Laminæ through the cortical Strata. We diſcover theſe medullary Laminæ according to their Breadth, by cutting the Cerebellum in Slices almoſt parallel to the Baſis of the Cerebrum; but if we cut one Lobe of the Cerebellum vertically from above downward, the medullary Subſtance will appear to be diſperſed in Ramifications through the cortical Subſtance. Theſe Ramifications have been named Arbor Vitæ, and the two Trunks from whence theſe different Laminæ ariſe, are called Pedunculi Cerebelli.

We cannot go on with the Deſcription of the other middle Parts of the Baſis of the Cerebellum, before that of the middle Parts of the Baſis of the Cerebrum, becauſe theſe two Kinds of Parts are united, and jointly form the Medulla Oblongata. *Winſlow* ſays, he ſhall only add here, that the Strata of both Subſtances of the Cerebellum are not always of the ſame Extent, in the ſame Portions or Protuberances of each Lobe. This appears merely by viewing the convex or outer Surface of the Cerebellum; for there we ſee, at different Diſtances, ſome cortical Strata ſhorter than others, and likewiſe that the Extremities of the ſhort Strata diminiſh gradually in Thickneſs, till they are quite loſt between two long ones.

If we make a ſmall Hole in the external Lamina of the Pia Mater, over one of the Lobes of the Cerebellum, without touching the inner Lamina, and then blow into the cellular Subſtance, by which theſe two Laminæ are connected, thro' a ſmall Pipe introduc'd into the Hole, the Air will gradually ſwell that Subſtance, and ſeparate the Strata more or leſs equally from each other, through their whole Extent; and we ſhall ſee, at the ſame time, the Diſpoſition of all the membranous Septa, or Duplicatures of the internal Laminæ of the Pia Mater, with the numerous Diſtribution of the fine Blood-veſſels which run upon it, eſpecially after a lucky Injection, or in an inflammatory State of theſe Membranes.

Medulla Oblongata.

The Medulla Oblongata is a medullary Subſtance, ſituated from before backward in the middle Part of the Baſis of the Cerebrum and Cerebellum, without any Diſcontinuation, between the lateral Parts of both theſe Baſes; and, therefore, it may be look'd upon as one middle medullary Baſis, common to both Cerebrum and Cerebellum, by the reciprocal Continuity of their medullary Subſtances, thro' the great Hole in the tranſverſe Septum of the Dura Mater; which common Baſis lies immediately on that Portion of the Dura Mater which lines the Baſis of the Cranium. The Medulla Oblongata is, therefore, juſtly eſteem'd to be a third general Part of the whole Maſs of the Brain, or as the common Production, or united Elongation, of the whole medullary Subſtance of the Cerebrum and Cerebellum.

To prevent, however, falſe Ideas either in viewing ourſelves, or in ſhewing to others, the Medulla Oblongata thus inverted, it is very neceſſary often to call to mind, that all which appears ſuperior in that Situation is inferior in the natural State.

The lower Side of the Medulla Oblongata, in an inverted Situation, preſents to our View ſeveral Parts, which are, in general, either medullary Productions, Trunks of Nerves, or Trunks of Blood-veſſels.

The principal medullary Productions are theſe: The Branches of the Medulla Oblongata, which have likewiſe been nam'd Crura Anteriora, Femora, and Brachia Medullæ Oblongatæ, and Pedunculi Cerebri: The tranſverſe Protuberance, call'd likewiſe Proceſſus Annularis, or Pons Varolii: The ſmall or poſterior Branches, call'd Pedunculi Cerebelli, or Crura Poſteriora Medullæ Oblongatæ: The Extremity or Cauda of the Medulla Oblongata, with two Pair of Tubercles, one of which is nam'd Corpora Olivaria, the other Corpora Pyramidalia: And to all theſe Productions we muſt add a Production of the Infundibulum, and two medullary Papillæ.

The great Branches of the Medulla Oblongata are two very conſiderable medullary Faſciculi, the anterior Extremities of which are ſeparated, and the poſterior united; ſo that, taken both together, they repreſent a *Roman* V. Theſe Faſciculi are flat, much broader before than behind; their Surfaces being compos'd of ſeveral longitudinal and diſtinctly prominent medullary Fibres. Their anterior Extremities ſeem to be loſt at the lower

lower Part of the Corpora Striata; and it is for that Reaſon that they are look'd upon as the Pedunculi of the Cerebrum.

The tranſverſe, annular, or rather ſemiannular Protuberance, is a medullary Production, which ſeems, at firſt Sight, to ſurround the poſterior Extremities of the great Branches; but the medullary Subſtance of this Protuberance is, in reality, intimately mix'd with that of the two former. *Varolius*, an antient *Italian* Author, viewing thoſe Parts in an inverted Situation, compar'd the two Branches to two Rivers, and the Protuberance to a Bridge over them both; and from thence it has the Name of Pons Varolii. Its Surface is tranſverſely ſtreak'd, and it is divided into two lateral Parts, by a very narrow longitudinal Depreſſion, which does not penetrate into its Subſtance.

The ſmall Branches of the Medulla Oblongata are lateral Productions of the tranſverſe Protuberance, which, by their Roots, ſeem to encompaſs that medullary Portion in which the fourth Ventricle, or Calamus Scriptorius, is form'd. They form, in the Lobes of the Cerebellum, on each Side, theſe medullary Expanſions, a vertical Section of which ſhews the white Ramifications commonly call'd Arbor Vitæ; and they may be juſtly enough ſtyled Pedunculi Cerebelli.

The Extremity is no more than the Medulla Oblongata contracted in its Paſſage backward to the anterior Edge of the great Foramen of the Os Occipitis, where it terminates in the Medulla Spinalis; and in this Part of it ſeveral things are to be taken notice of: We ſee, firſt of all, four Eminences, two nam'd Corpora Olivaria, and the other two Corpora Pyramidalia. Immediately afterwards it is divided into two lateral Portions, by two narrow Grooves, one on the upper Side, the other on the lower. They both run into the Subſtance of the Medulla, as between two Cylinders, flatted on that Side by which they are join'd together.

When we ſeparate theſe Ridges with the Fingers, we obſerve a crucial Intertexture of ſeveral ſmall medullary Cords, which go obliquely from the Subſtance of one lateral Portion into the Subſtance of the other. M. *Petit*, Member of the Royal Academy of Sciences, and Doctor of Phyſic, is the Author of this Diſcovery.

The Corpora Olivaria and Pyramidalia are whitiſh Eminences, ſituated longitudinally near each other on the lower Side of the Extremity or Cauda, immediately behind the tranſverſe or annular Protuberances. The Corpora Olivaria are in the Middle, ſo that the Interſtice between them, which is only a kind of ſuperficial Groove, anſwers to the inferior Groove of the following Portion.

The Corpora Pyramidalia are two lateral Eminences depending on the Olivaria. *Willis* gave the Name of Pyramidalia to what I have call'd Olivaria, after the late M. *Du Verney*, in his Treatiſe of the Organ of Hearing. Theſe four Eminences are ſituated on the lower Half of the Medulla; which muſt be remember'd, becauſe, in all Figures and Demonſtrations, theſe Parts are repreſented as ſuperior, which in their natural Situation are inferior. Thus theſe Eminences are under the fourth Ventricle, and under the Pedunculi Cerebelli.

The Tubercula Mamillaria, which are ſituated very near the Production of the Infundibulum, have been taken for Glands, probably becauſe of their greyiſh inner Subſtance, which, however, does not ſeem to be any ways different from that of ſeveral other Eminences of the Medulla Oblongata; and, for that Reaſon, I chooſe rather to call them, from their Figure, Tubercula Mamillaria than Papillæ Medullares.

Theſe Tubercles ſeem to have ſome immediate Relation to the Roots or Baſes of the anterior Pillar of the Fornix; ſo that they might be nam'd, according to *Santorini*, the Bulbs of theſe Roots, tho' they appear to be likewiſe partly a Continuation of other Portions of the cortical and medullary Subſtance, of a particular Texture.

The Beak or Tube of the Infundibulum is a very thin Production from the Sides of that Cavity, and it is ſtrengthen'd by a particular Coat given to it by the Pia Mater. It is bent a little from behind forward, toward the Glandula Pinealis, and afterwards expands again round this Gland.

The Membrana Arachnoides, or external Lamina of the Pia Mater, appears to be very diſtinctly ſeparated from the internal Lamina, in the Interſtices between all theſe Eminences on the lower Side of the Medulla Oblongata, without any viſible cellular Subſtance between them. The internal Lamina adheres much more to the Surface of theſe Interſtices than to that of the Eminences. The external Lamina is, as it were, buoy'd up by the Eminences, and equally ſtretch'd between their moſt prominent Parts, to which it ſticks very cloſe; and, in this reſpect, the Roots, or great Cornua of the optic Nerves, may be reckon'd among theſe Eminences.

We muſt obſerve, in general, concerning the Eminences of the Medulla Oblongata, that thoſe which are medullary on their Outſides or Surfaces, are interiorly either entirely cortical, or partly cortical and partly medullary, or form'd by a ſingular Mixture of theſe two Subſtances, which ſtill remains to be unfolded, as well as many other Particularities obſervable in examining the internal Structure of the Brain.

From this common Portion of the Cerebrum and Cerebellum ariſe almoſt all the Nerves which go out of the Cranium, thro' the different Foramina by which its Baſis is perforated. It likewiſe produces the Medulla Spinalis, which is no more than a common Elongation of the Cerebrum and Cerebellum, and of their different Subſtances; and, therefore, the Medulla Oblongata may juſtly be ſaid to be the firſt Origin or primitive Source of all the Nerves which go out thro' the Spina Dorſi, and conſequently of all the Nerves of the human Body.

Medulla Spinalis.

The Medulla Spinalis is only an Elongation of the Extremity of the Medulla Oblongata; and it has its Name from its being contain'd in the bony Canal of the Spina Dorſi. It is, conſequently, a Continuation, or common Appendix, of the Cerebrum and Cerebellum, as well becauſe of the two Subſtances of which it is compos'd, as becauſe of the Membranes by which it is inveſted.

Under the Article Spina Dorsi there is mention'd a ligamentary Tube, which lines the inner Surface of this bony Canal from the great occipital Foramen to the Os Sacrum, repreſenting a very long flexible Funnel. There are alſo mention'd the yelloviſh, and very elaſtic Ligaments, which lie in the great poſterior Notches of all the Vertebræ, and adhere very cloſely to the above-mention'd ligamentary Tube.

The Dura Mater, after it has lin'd the whole internal Surface of the Cranium, goes out by the great occipital Foramen, and forms a kind of Funnel in its Progreſs downward thro' the bony Canal of the Vertebræ. As it goes out at the occipital Hole, it joins the Beginning of the ligamentary Funnel already mention'd, and adheres very ſtrongly to it. That Portion of the Pericranium, which terminates exteriorly at the Edge of the great Foramen, joins the Funnel likewiſe, which, by all theſe Acceſſions, becomes very ſtrong, and capable of reſiſting the greateſt Violences.

This Adheſion of the Dura Mater to the ligamentary Funnel is gradually diſcontinu'd below the firſt Vertebra; and from thence the Dura Mater forms a ſeparate Tube, which runs down in the bony Canal all the Way to the Os Sacrum, the Capacity of it anſwering to that of the Canal; but it does not adhere cloſely to the Sides, as it does to that of the Cranium. It is ſurrounded by a ſlimy Subſtance, which, near the lower End of the Canal, reſembles Fat.

The ſpinal Marrow is made up of a cortical and medullary Subſtance, as the Cerebrum and Cerebellum; but with this Difference, that the Aſh-colour'd Subſtance lies within the other; and, in a tranſverſe Section of this Medulla, the inner Subſtance appears to be of the Figure of an Horſe-ſhoe, or of the Os Hyoides; the convex Side being turn'd forward, and the Extremities or Cauda backward.

The Body of the Medulla Spinalis runs down all the Way to the firſt Vertebra of the Loins, where it terminates in a Point. The Size of it is proportionable to that of the bony Canal, ſo that it is larger in the Vertebræ of the Neck than in thoſe of the Back. It is a little flatted on the fore and back Sides; ſo that we may diſtinguiſh in it two Sides, one anterior, the other poſterior; and two Edges. It is likewiſe, in a manner, divided into two lateral Halves, by a Groove which runs along the Middle of each Side, being a Continuation of thoſe in the Extremity of the Medulla Oblongata.

Each lateral Portion ſends off from both the fore and back Sides, between the Grooves and the Edges, at different Diſtances, flat Faſciculi of nervous Filaments turned toward the neareſt Edge. The anterior and poſterior Faſciculi, having got a little beyond the Edge of the Medulla, unite in Pairs, and form on each Side a kind of Knots, call'd Ganglions by Anatomiſts, each of which produces a nervous Trunk. Theſe Ganglions are made up of a Mixture of cortical and medullary Subſtances, accompany'd by a great Number of ſmall Blood-veſſels.

The Dura Mater, which inveſts the Medulla, ſends out, on each Side, the ſame Number of Vaginæ as there are Ganglions and nervous Trunks. Theſe Vaginæ are Productions of the external Lamina, the internal Lamina, which is very ſmooth, and poliſh'd on the Inſide, being perforated by two ſmall Holes very near each other, where each Vagina goes off, thro' which Holes the Extremities of each anterior and poſterior Faſciculus are tranſmitted; and, immediately after their Paſſage through the internal Lamina, they unite.

The triangular Spaces left between the two anterior and poſterior Faſciculi, and Edge of the Medulla, are fill'd from one Extremity to the other by an indented Ligament, very thin and ſhining, having the ſame Number of Indentations as there are Pairs of Faſciculi. It is fix'd, at different Diſtances, to the Edge of the Medulla, from whence it ſends Filaments to the internal Lamina of the Dura Mater, by which the anterior Faſciculi are diſtinguiſh'd from the poſterior.

The Membrana Arachnoides is here very diſtinct from the internal Lamina of the Pia Mater, ſo that by blowing through a Hole made in the Arachnoides it will ſwell from one End to the other, like a tranſparent Gut. The internal Lamina, call'd in this Place ſimply the Pia Mater, adheres very cloſely to the Medulla Spinalis, and ſends many Productions and Septa thro' its Subſtance. When we blow thro' a Hole made in the Pia Mater, thro' the Subſtance of one lateral Portion of the Medulla, the Air penetrates thro' the Whole; and the Pia Mater, which covers the other lateral Portion, is ſeparated from it.

The Membrana Arachnoides adheres more cloſely to the Pia Mater at the lower than at the upper Part, being, in a manner, ſuſpended by the indented Ligament, which runs along both Edges of the Medulla, and is fix'd by a Filament to the internal Lamina of the Dura Mater, in each Interſtice between the nervous Faſciculi, as has been already ſaid. It alſo gives off Elongations, in the ſame manner as the Dura Mater, to each nervous Trunk or Rope, as we ſhall ſee hereafter.

The NERVES *of both* MEDULLÆ, *from their Origin to their going out of the* CRANIUM.

The Nerves ariſe either from the Medulla Oblongata or Spinalis; they go out in Faſciculi diſpos'd in Pairs; ten Pairs are reckon'd to belong to the Medulla Oblongata, of which nine go out thro' the Foramina of the Cranium, and the tenth ariſes from the Extremity of this Medulla, as it paſſes through the great occipital Hole; and, laſtly, about thirty Pairs are reckon'd to belong to the Medulla Spinalis, of which ſeven paſs thro' the lateral Notches of the Vertebræ Cervicis, twelve thro' thoſe of the Back, five thro' thoſe of the Loins, and five or ſix thro' the anterior Holes of the Os Sacrum, and one at the Sides of the Os Coccygis.

My Deſign is here principally to mention ſome particular Obſervations about the Nerves, while they remain within the Cranium, the reſt of their Courſe thro' the whole Body is ſufficiently deſcrib'd under the Article NERVUS; and it would not be amiſs, if the Reader firſt of all reviews that Article, before he peruſes this.

The firſt Pair of Nerves that ariſe from the Medulla Oblongata are the Olfactory, *Tab. 7. a. a.* antiently call'd Proceſſus Mamillares. They are two very flat and ſoft medullary Ropes, each ariſing firſt by medullary Fibres from the Outſide of the lower Part of the Corpora Striata, between the anterior and middle Lobe, on each Side of the Cerebrum, and afterwards by another Filament more internally, and by a third which is more poſterior, and very long. They run under the anterior Lobes of the Cerebrum, being lodg'd in two ſuperficial Grooves in the Baſis of theſe Lobes, and lying immediately on the Dura Mater, from the Clinoide Apophyſes to the Os Ethmoides.

They are firſt of all conſiderably incurvated from without inwards, or towards each other; and, having reach'd near the back Side of the Os Ethmoides, they run for a ſmall Space parallel to, and at ſome Diſtance from, each other; backward they are very thin, but they gradually increaſe in Bulk, in their Courſe forward toward each Side of the Criſta of the Ethmoidal Bone, where they terminate in elongated Papillæ, the Subſtance of which appears to be ſofter and leſs white than that of the Ropes.

Theſe Papillæ lie on the two Sides of the Lamina Cribroſa, and ſend down a nervous Filament into each Hole of that Lamina. At the ſame Place the Dura Mater ſends off the ſame Number of Vaginæ, which inveſt and accompany the nervous Filaments, and their Ramifications on the internal Parts of the Noſe.

The ſecond Pair, or optic Nerves, *Tab. 7. b. b.* ariſe from the Eminences call'd Thalami Nervorum Opticorum. The internal Carotids run upon the Outſides of theſe Nerves, immediately after their Union, and before they paſs thro' the Foramina Optica.

Beſides their Origin from the Optic Thalami, theſe Nerves have likewiſe a kind of Communication with the Tubercula Quadrigemina Anteriora by very fine Filaments, one Extremity of which is loſt in the Tubercles, the other in the Roots of the great Arches or Bodies of the optic Nerves. The internal Structure of theſe Nerves ſeems to change at their Entrance into the optic Holes, as we ſhall ſee in another Place.

The Union of theſe Nerves, by the ſmall Curvatures of their Cornua, is very difficult to be unfolded in human Bodies. This Union is commonly found to be very cloſe, but, in ſome Subjects, it ſeems to be no more than a ſtrong Adheſion; in others, to be partly made by an Interſection, or Croſſing of Fibres. They have been found quite ſeparate; and, in other Subjects, one of them has been obſerv'd to be very much alter'd, both in Size and Colour, thro' its whole Paſſage, the other remaining in its natural State.

The third Pair, call'd Nervi Motores Oculi Communes, Oculares Communes, and Oculo-muſculares, *Tab. 7. c. c.* ariſe from the Union of the anterior Edge of the great tranſverſe Protuberance, with the two great Branches of the Medulla Oblongata. They pierce the Dura Mater behind the lateral Parts of the poſterior Apophyſis of the Sella Sphenoidalis, and paſs afterwards, each in the neighbouring Sinus Cavernoſi, by the Side of the carotid Artery, and all the Way to the broad Portion of the ſuperior orbitary Fiſſure, where they divide in the manner ſpecify'd under the Article NERVUS.

The fourth Pair, call'd Nervi Trochleares, Muſculares Obliqui Superiores, and moſt commonly Pathetici, *Tab. 7. d. d.* are very ſmall and tender, and, in Proportion, very long. They ariſe each behind the Tubercula Quadrigemina, and from the lateral Part of the valviform Expanſion, at the Entry of the fourth Ventricle. From thence they take their Courſe forward, all the Way to the Edge of the anterior Extremities of the tranſverſe Sinus, where, on each Side, they enter the Duplicature of the Dura Mater, and, advancing into the Sinus Cavernoſi, they accompany the third Pair to the ſuperior orbitary Fiſſure.

The fifth Pair, call'd Nervi Innominati, or Trigemini, *Tab. 7. f. f.* are at firſt large Trunks, ariſing chiefly from the lateral and poſterior Parts of the great tranſverſe Protuberance, and a little from the Corpora Olivaria and Pyramidalia. They run down obliquely forward on the Extremity of the upper or anterior Side of the Apophyſis Petroſa, very near the Side of the Sella Sphenoidalis, where they enter the Duplicature of the Dura Mater and Sinus Cavernoſi.

At their Entry into the Sinus they form a kind of flat irregular Ganglion, from which ſome Filaments are ſent off to the Dura Mater; and, immediately afterward, each of them is divided into three great Branches, one ſuperior or anterior, one middle, and one inferior or poſterior. The firſt Branch, which may be term'd Ocularis or Ophthalmicus, accompanies the Nerves of the third and fourth Pairs to the ſuperior orbitary Fiſſure. The ſecond, call'd Maxillaris Superior, goes out by the ſuperior Maxillary Hole; and the third, nam'd Maxillaris Inferior, by the inferior maxillary Hole. As the great Trunk of this Nerve runs down, it perforates the Membrana Arachnoides, which, at this Place, forms a kind of Cieling.

The ſixth Pair, nam'd Motores Oculorum Externi, Oculares or Ophthalmici Externi, and Oculo-muſculares Externi, *Tab. 7. g. g.* are ſmall Nerves, but ſtill not ſo ſmall as the fourth Pair; and I have ſometimes found them double. They ariſe partly from the oblong inferior Eminences immediately behind the tranſverſe Protuberance, and partly from this Protuberance; and, paſſing immediately under it, they pierce the Dura Mater behind the occipital Symphyſis of the Sphenoidal Bone.

They run on each Side of the Duplicature of the Dura Mater to the cavernous Sinus; and, having enter'd that Sinus, each of them accompanies the firſt Branch of the fifth Pair to the ſuperior orbitary Fiſſure. In this Courſe they communicate with the firſt Branch juſt mention'd, and are increaſed on the fore Part by a Filament or two, which ariſe from the great ſympathetic Nerve, and run up with the Carotid.

The ſeventh Pair, nam'd Auditorii, *Tab. 7. b. b.* ariſe from the lateral and poſterior Part of the tranſverſe Protuberance, near the Pedunculi of the Cerebellum, by two Cords, one ſmall and ſolid, the other large and ſoft, which, from thence, is call'd Portio Mollis, and the firſt Portio Dura, or, as I have nam'd it, Nervus Sympatheticus Minimus. The two Nerves on each Side accompany each other very cloſely all the Way to the internal Foramen Auditorium.

The eighth Pair, named Par Vagum, Nervi Vagi, or Sympathetici Medii, *Tab. 7. i, i, i, i,* ariſe from the poſterior Extremities of the large Branches or Crura of the Medulla Oblongata, from the tranſverſe Protuberance, and from the anterior Part of the inferior oblong Eminences behind the tranſverſe Protuberances, by numerous Filaments, which all together make a broad Band on each Side, which runs toward the Foramen Lacerum, where it pierces the Dura Mater, and goes out thro' the anterior Part of that Hole; having been firſt joined by a nervous Portion, that runs up from the Medulla Spinalis thro' the great Occipital Foramen, by the Name of Nervus Acceſſorius Octavi Paris, or Nervus Spinalis. This additional Nerve goes out with that of the eighth Pair, thro' the Foramen Lacerum, lying behind it; but diſtinguiſh'd from it by a membranous Septum.

The ninth Pair, call'd Nervi Hypogloſſi Externi, Hypogloſſi Majores, and commonly Guſtatorii, ariſe each from the lateral Part of the Extremity of the Medulla Oblongata, between the oblong inferior Eminences, by ſeveral Filaments, which, uniting together, form commonly two ſmall Ropes on each Side, which pierce the Dura Mater ſeparately; and, preſently afterwards, form one Rope, which goes out of the Cranium thro' the anterior Condyloide Hole.

The tenth Pair, call'd Nervi Suboccipitales, ariſe under the ninth Pair, chiefly from the anterior, and a little from the lateral Part of the Extremity of the Medulla Oblongata, oppoſite to the poſterior Part of the Condyloide Apophyſis of the Occipital Bone, by a ſingle Plane, or Faſciculus of ſmall Filaments, which pierce the Dura Mater directly from within outward, at the ſame Place where the Vertebral Arteries perforate it from without inwards.

The Nerves form'd by the lateral Union of the anterior and poſterior Filaments of the Medulla Spinalis go out of the bony Canal of the Spina Dorſi, toward each Side, thro' the intervertebral Holes, thro' the anterior Holes of the Os Sacrum, and the lateral Notches of the Os Coccygis; and from thence they have the general Name of Nervi Vertebrales. They are divided in the ſame manner as the Vertebræ, into ſeven Pair of Cervical Nerves, twelve Pair of Dorſal, five Pair of Lumbar, and five or ſix Pair of Nervi Sacri.

As the Spinal Marrow, which furniſhes all theſe Nerves, ſeldom goes lower than the firſt or ſecond Vertebræ of the Loins, the Situation of the Faſciculi of nervous Filaments muſt be different from that of the Holes thro' which they paſs; and ſeveral of theſe Faſciculi, both anterior and poſterior, muſt be longer than the reſt. This we find, from Experience, to be the Caſe in the following manner.

The Faſciculi of nervous Filaments of the Medulla Spinalis, which produce the Cervical Nerves, run more or leſs tranſverſely toward each Side, from their Origin to their Paſſage thro' the intervertebral Holes. The Faſciculi, which form the Dorſal Nerves, run a little obliquely downward, from their Origin to the intervertebral Holes; and thoſe which form the Lumbar Nerves, run down more and more longitudinally, from the Medulla to the Holes by which they go out.

Therefore the Cervical Faſciculi are very ſhort in the Spinal Canal; the Dorſal Faſciculi are longer; and the Faſciculi, from the Loins and Os Sacrum, very long. It muſt likewiſe be obſerved, that the Faſciculi of the four loweſt Pairs of the Cervical Nerves, and firſt Pair of the Dorſal Nerves, are broader, and more compounded, than the following; becauſe the Brachial Nerves are a Continuation of theſe. The Filaments belonging to the Lumbar Nerves, and thoſe of the Os Sacrum, are likewiſe very broad, and made up of numerous Filaments, as being the Roots of the large Nerves which go to the lower Extremities. The Dorſal Filaments are very ſmall.

The Cervical and Lumbar Faſciculi are not only broader, and made up of more Filaments, than the Dorſal, but alſo ſituated much cloſer to each other; the Lumbar Faſciculi being ſtill more ſo than the Cervical; whereas in the Dorſal a conſiderable Interſtice is left between the Faſciculi.

Theſe Lumbar Faſciculi, from their Origin to the Extremity of the Os Sacrum, form, thro' the whole Canal of the Lumbar Vertebræ, and of the Os Sacrum, a large Bundle of nervous Ropes, call'd by Anatomiſts, Cauda Equina, becauſe of ſome Reſemblance which it bears to a Horſe's Tail, eſpecially when taken out of the Canal, and extended in clear Water.

Tho' the Medulla Spinalis ends at the firſt Vertebra of the Loins, the Vagina of the Dura Mater, by which it is inveſted, is continued thro' the reſt of the bony Canal, all the Way to the Extremity of the Os Sacrum, and involves the great Bundle, or Cauda Equina; the Cords of which pierce it on each Side, nearly oppoſite to the Places where they paſs thro' the intervertebral Holes, and the anterior Holes of the Os Sacrum.

This Vagina of the Dura Mater being ſeparated from the Canal of the Vertebræ, and the lateral Elongations, which ſerve for particular Vaginæ to the Cords, being cut off, it preſently ſhrinks up, and contracts in the ſame manner as all the other elaſtic Parts of the human Body: For Inſtance, as an Artery does, when cut tranſverſely, ſoon after Death. Therefore its true Length muſt be taken while it is *in Situ*, and likewiſe the true Situation of the lateral Elongations.

From all this a Concluſion may be drawn of great Importance, not only in anatomical and philoſophical Inquiries, but alſo for underſtanding local Diſeaſes, Wounds, *&c.* which is, that, when we have Occaſion to conſider any particular Nerves near the Vertebræ of the Back or Loins, or near the Os Sacrum, we muſt remember, that, in the Spina Dorſi, the Origin of theſe Nerves is not even with their Paſſage out of the Spine, but proportionably higher. If, for Inſtance, we inquire about any of the loweſt Nervi Sacri near the Os Coccygis, we muſt not ſtop at the Extremity of the Os Sacrum; but trace its Origin as high as the laſt Vertebra of the Back, or firſt of the Loins.

The Membrana Arachnoides accompanies the original Faſciculi, ſeparately, to their Paſſage thro' the lateral Elongations of the Dura Mater, forming a kind of Duplicature, Breaks, or Diſcontinuations, between the Cords which run in the Vagina of the Dura Mater. The internal Lamina of the Pia Mater, or the Pia Mater ſimply, as it is here reckon'd, adheres very cloſely both to the Faſciculi, and Filaments of which they are compoſed.

Among the original Productions of the Nerves of the Medulla Spinalis, we ought ſtill to reckon the Formation of the Nervi Acceſſorii of the eighth Pair, or of thoſe that I call Sympathetici Medii. They ariſe from the lateral Parts of this Medulla by ſeveral Filaments, about the third and fourth Vertebræ of the Neck, and ſometimes lower. And, ſays *Winſlow*, if my Memory does not fail me, I once traced them to the Middle of the Back. They run up on each Side, between the anterior and poſterior Ranks of the nervous Faſciculi, increaſing gradually in Size, by the Acceſſion of new Filaments from the poſterior Faſciculi.

Having reach'd above the firſt Vertebra of the Neck, they have a kind of Adheſion or Communication with the neighbouring Ganglions of the Nervi Suboccipitales, or thoſe of the tenth Pair. Above this Adheſion they receive two Filaments each, from the back Side of the Medulla; and afterwards continue their Courſe towards the great Occipital Foramen. As they enter the Cranium, they communicate with the Nerves of the ninth and tenth Pairs; and at the Foramen Lacerum they join thoſe of the eighth Pair, with which they return out of the Cranium.

In the poſterior Part of the Medulla Spinalis, near its lower Extremity, there is in ſome Subjects a longitudinal Depreſſion, in which ſeveral tranſverſe Fibres are ſituated; which tho' *Winſlow* has not examined any further, he thought it proper to mention this Obſervation, as he ſays he found it in his Anatomical Common-place Book.

Blood-veſſels *of the* Brain *and* Medulla Spinalis.

The Arteries which ſupply the Cerebrum, Cerebellum, and Medulla Oblongata, come partly from the Carotids, which enter the Cranium thro' the Canals in the Apophyſes Petroſæ of the Temporal Bones, and partly from the Vertebrals, which enter by the great Occipital Foramen, and ſend off the Arteriæ Spinalis into the Canal of the Spine for the Medulla lodg'd there.

All theſe Arteries are divided into ſeveral Branches, which ſend out a great Number of Ramifications, diſtributed thro' both Subſtances of the Brain, and thro' the whole Extent of the Pia Mater. The Dura Mater, both of the Cerebrum and Cerebellum, has Arteries peculiar to it.

The internal Carotid, on each Side, enters the Cranium by the great Canalis Petroſus, in an angular and winding Courſe. The inner Surface of this Canal is lined by a Production common to the Dura Mater, and inferior Pericranium; to which the Artery adheres only by a looſe filamentary Subſtance, in which the plexiform Filaments run, which belong to the great ſympathetic Nerve, commonly call'd the Intercoſtal.

Having paſs'd thro' the bony Canal, it immediately bends upward, towards a Notch in the ſphenoidal Bone, and thro' the Notch it enters the Cranium. Immediately after this, it penetrates the Cavernous Sinus on the Side of the Sella Sphenoidalis, where having form'd a third Curvature, it goes out from it, from below, upwards, and is bent a fourth time round the anterior Cliniode Apophyſis, from before backward. By this Courſe, it is in a manner bath'd in the Blood of the Cavernous Sinus, together with the third, fourth, fifth, and ſixth Pairs of Nerves.

After this fourth Curvature, the internal Carotid having now reach'd the Side of the Infundibulum, and conſequently being very near its Fellow, theſe two Arteries communicate ſometimes by a very ſhort tranſverſe arterial Production. At this Place each of them divides into two principal Branches, one anterior, the other poſterior; and ſometimes into three, in which Caſe there is a middle Branch between the two former.

The anterior Branch runs firſt of all forward under the Baſis of the Cerebrum, ſeparating a little from the ſame Branch of the other Carotid. They approach each other again under the Interſtice between the two olfactory Nerves, communicating by a very ſhort Anaſtomoſis, and ſending ſmall Twigs to that Pair of Nerves. They afterwards ſeparate, being each divided into two or three Branches.

The firſt Ramification of the anterior Branch goes to the anterior Lobe of the Cerebrum. The ſecond, which is ſometimes double, is inverted on the Corpus Calloſum, to which it gives Ramifications, as alſo to the Falx of the Dura Mater and middle Lobe of the Cerebrum. The third, which is ſometimes a diſtinct Branch, ſometimes only an additional Branch to the ſecond, goes to the poſterior Lobe of the Cerebrum. This third Branch is ſometimes ſo conſiderable, as to deſerve to be reckon'd the middle Branch of the three principal ones.

The poſterior Branch communicates firſt of all with the vertebral Artery of the ſame Side, and then is divided into ſeveral Branches on the ſuperficial Circumvolutions of the Cerebrum, and between theſe Circumvolutions all the Way to their Bottom. The anterior, and middle Branches when there are three, diſtributes the ſame Kind of Ramifications to the Circumvolutions and to their Interſtices.

All theſe different Ramifications are in the Duplicature of the Pia Mater, from which they receive a Kind of additional Coats, and the Capillaries being diſtributed upon it in a reticular manner, afterwards penetrate the cortical and medullary Subſtance, in which laſt they terminate inſenſibly.

The vertebral Arteries enter thro' the great occipital Foramen, having firſt pierc'd on each Side the Elongations of the Dura Mater, at the ſame Place where the Suboccipital Nerves, or thoſe of the tenth Pair, pierce it, as they go out; the Arteries in this Place lying above the Nerves.

At their Entry into the Cranium, they ſend each ſeveral Ramifications to the Cauda of the Medulla Oblongata, and to the Corpora Olivaria and Pyramidalia, which Ramifications are diſtributed on the Sides of the fourth Ventricle, produce the Plexus Choroides, are ſpread on the whole Surface of the Cerebellum, inſinuate themſelves between the Strata, always inveſted by the Duplicature of the Pia Mater, and are at length loſt in both Subſtances of the Cerebellum.

Afterwards the two vertebral Arteries turn toward each other, for the moſt part immediately under the poſterior Edge of the tranſverſe or ſemiannular Protuberance of the Medulla Oblongata, where they unite, and form one common Trunk. This Trunk paſſes directly from behind forward, under the Middle of the great Protuberance, and partly in the middle Groove of the convex Surface of that Protuberance, at the anterior Edge of which it terminates.

In its Paſſage thro' the Groove, this Trunk ſends off ſeveral ſmall Branches on each Side, which ſurround tranſverſely the lateral Portions of the Protuberances, being partly lodg'd in the ſmall lateral Grooves of theſe Portions. Theſe lateral Branches are afterwards diſtributed to the neighbouring Parts of the Cerebrum, Cerebellum, and Medulla Oblongata.

This common or middle Trunk of the vertebral Arteries, having reach'd the Edge of the great Protuberance, is divided again into two ſmall Branches, each of which ſoon communicates with the Trunk of the internal Carotid on the ſame Side. Inſtead of this Bifurcation, the two laſt or moſt anterior lateral Branches, ſend each ſometimes a ſmall Branch forward, which form the Anaſtomoſes with the internal Carotids.

The principal Arteries of the ſpinal Marrow, call'd commonly Arteriæ Spinales, are two in Number, one anterior and one poſterior, lodg'd in the Grooves, by which the Medulla is divided into lateral Portions on both Sides. They ariſe from the vertebral Arteries, a little above the great occipital Foramen, where theſe Arteries ſend each a ſmall Branch downward: as ſoon as they enter the Cranium; and having got under the Extremity of the Medulla Oblongata, they ſend off two other Branches backward.

The firſt two Branches, uniting ſoon after their Origin, form the Arteria Spinalis Anterior, which runs down within the Canal of the Vertebræ, along the anterior Groove of the Medulla. The other two ſmall Branches are inverted on the Sides of the Medulla Oblongata, and from thence running backward, they unite much in the ſame manner with the firſt two, and form the Arteria Spinalis Poſterior, which runs down along the poſterior Groove of the Medulla Spinalis.

The two ſpinal Arteries, in their Courſe downward along the Medulla, ſend off on each Side lateral Ramifications, by which they frequently communicate with each other; and likewiſe with the vertebral Arteries of the Neck, with the Intercoſtals; and ſometimes they are in a manner ſplit for a little Way, and then unite again.

The Veins of the Cerebrum and Cerebellum may in general be look'd upon as Branches, not only of the longitudinal Sinus of the Dura Mater, and of the two great lateral Sinuſes, but alſo of all the inferior Sinuſes of that Membrane; in all which Sinuſes the Veins terminate by different Trunks. Their principal Ramifications accompany all the cortical Circumvolutions of the Cerebrum, and Directions of the Strata of the Cerebellum, running always in the Duplicature of the Pia Mater. The Veins of the Plexus Choroides, in general, are of the Number of thoſe already mention'd.

The Veins of the Medulla Spinalis are Branches partly of the ſuperior Extremities of the two vertebral Veins, partly of the two venal Ropes, termed Sinus Venoſi, which run down both Ways laterally on the anterior convex Side of the Production of the Dura Mater, and form, at different Diſtances, reciprocal Communications, by ſemiannular Arches, as by ſo many ſubordinate Sinuſes. The two longitudinal Sinuſes communicate likewiſe in their Paſſage with the vertebral Veins, in the ſame manner as the neighbouring Arteries.

Uſes of the Brain, and of its Appendages in general.

We are obliged to the great *Malpighi* for the firſt and beſt Inſtructions concerning the Manner of examining the Structure of the Brain, eſpecially that of the two Subſtances of which it is made up, and for putting us in a Condition to be able to conjecture ſomething about its Uſes. The Experiments and Obſervations of that illuſtrious and faithful Searcher into Nature, having been repeated by ſeveral excellent Philoſophers, and confirm'd by comparative Anatomy, leave us no room to doubt, but that the Brain is a ſecretory Organ, or, as it is called by Anatomiſts, a Gland.

It is to no Purpoſe to diſpute about Words, when we are agreed as to the Things themſelves. Anatomiſts have, for many Years paſt, underſtood by the Word *Gland* an Organ fitted to ſeparate ſome particular Fluid from the Maſs of Blood, as univerſally as they mean by the Word *Muſcle* all Sorts of fleſhy Fibres capable of Contraction; and this laſt Term might be cavil'd at, and rejected, as juſtly as the other.

The whole Matter of Secretion muſt be own'd to be very obſcure; but it is to be hoped, that the Brain and Liver will ſome time or other lead us ſo far into the Knowledge of it, as, at leaſt, to be able to diſtinguiſh Truth from Falſhood.

The greyiſh or aſh Colour of the cortical Subſtance is not the Effect of a particular Mixture of Red and White; at leaſt, we have no Experiment to prove it. The Blood, indeed, gives this Subſtance a ſlight reddiſh Caſt; but the aſh Colour, which ſeems to be the Characteriſtic of the Structure of theſe ſecretory Organs, is not owing to that.

We learn from M. *Ruyſch*'s Anatomical Injections, that the cortical Subſtance is principally compoſed of Veſſels; that, by making theſe Veſſels ſwim in a clear pellucid Liquor, their Extremities repreſent an infinite Number of fine Bruſhes, or vaſcular Tufts; and that his Injection fills even the ſmalleſt Filaments of theſe Tufts. He tells us likewiſe, that in theſe laſt Filaments the Structure is alter'd; and that, by the Mechaniſm of this Change, the Functions attributed to Glands may be perform'd.

But ſtill theſe Injections and Preparations do not unravel the Myſtery, neither is the Exiſtence of theſe Pencils or Tufts ſufficiently demonſtrated; for they are only the laſt Extremities of the ſmall Arteries macerated in Water, or ſome other Liquor, after being injected, and then artfully ſeparated from the other eſſential Parts of the Organ.

In the firſt Place, they are ſeparated from the venous Extremities, which muſt anſwer to theſe Tufts, in what manner ſoever that be brought about. Secondly, they are ſeparated from the membranous Filaments of the Pia Mater, which, in the natural State, tie theſe arterial Extremities to each other, and give them a different Diſpoſition from that of Tufts or Pencils. Thirdly, by this Preparation the arterial Extremities are ſeparated from their Connections with the medullary Subſtance, which both Experiments and comparative Anatomy ſhew to be fibrous.

It is no ways ſurpriſing, that theſe Capillary Extremities, thus ſtript, ſhould float looſely and freely, when moved in a Fluid, and that they ſhould put on the Appearance of Pencils or Tufts, being, in this State, only the truncated Extremities of ſmall Veſſels. When we conſider theſe Circumſtances attentively, we find ourſelves obliged to return to the ſmall glandular Bodies and Folliculi of *Malpighi*: And, at the ſame time, we muſt acknowledge, that *Ruyſch*'s fine Injections have diſcover'd theſe minute Bodies to be of a vaſcular Texture, the Structure of which we are ſtill ignorant of.

In a Word, *Malpighi* has diſcover'd the glandular Tubercles and Folliculi, without deſtroying their natural Connections. *Ruyſch* has diſcover'd a conſiderable Part of their Structure, by deſtroying their Connections. We are, therefore, very much beholden to both theſe illuſtrious Anatomiſts; and it is only by joining their Obſervations to each other, that we can ever be able to form an Idea of the ſecretory Organs, which will anſwer all the Phenomena concerning the different Secretions in the human Body.

The infinite Number of theſe ſmall ſecretory Cluſters ſtrain or filtre the Maſs of Blood, carried to them by the numerous Ramifications already mention'd, and ſeparate from it an exceſſively fine Fluid; the remaining Blood being convey'd back, by the ſame Number of venous Extremities, into the Sinuſes of the Dura Mater; and from thence into the Jugular and Vertebral Veins.

This ſubtile Fluid, commonly call'd Animal Spirits, Nervous Juice, or Liquor of the Nerves, is continually forced into the Medullary Fibres of the white Portion of the Cerebrum, Cerebellum, Medulla Oblongata, and Medulla Spinalis; and, by the Intervention of theſe Fibres, ſupplies and fills the Nerves, which are a Continuation of them.

All the nervous Ropes, as they paſs thro' the Foramina of the Cranium and Vertebræ, are accompanied by particular Elongations of the Pia and Dura Mater. Thoſe of the Dura Mater ſerve them for Vaginæ, in their Paſſage thro' the bony Openings. Thoſe of the Pia Mater not only accompany and inveſt each nervous Rope, but alſo form internal Septa between all the Filaments, of which each Rope conſiſts. It is known, from many Experiments, that the Nerves are the primitive or original Organs of all Muſcular Motion, and of all Animal Senſation; and that theſe two Functions depend in general on the Brain; but we are ignorant of the Nature of this Dependence, and of the particular Uſes of the medullary Fibres, of the nervous Fluid, and of the membranous Productions which accompany the Nerves.

Neither is there any thing certain in what has been ſaid concerning the Deſign, or particular Uſes, of the ſuperficial Conformation of the Cerebrum and Cerebellum; or of the different Configuration of their Turnings, Circumvolutions, Eminences, Depreſſions, Expanſions, and various Folds. It may be affirm'd, in general, that, by this Structure, the Extent of the ſecretory Organ of the nervous Fluid is increaſed very conſiderably,

derably, and the particular Functions of each nervous Rope diſtinguiſh'd; and likewiſe their general and reciprocal Correſpondence, both in regard to the Exquiſiteneſs of the Organs of Senſation, and the Activity of the Organs of Motion.

The Falx of the Dura Mater hinders one Portion of the Cerebrum from preſſing on the other, when we lie on one Side. The tranſverſe Septum ſerves for a Tent to the Cerebellum, and defends it from a mortal Compreſſion, which it muſt otherwiſe be liable to from the Cerebrum, eſpecially when we walk or jump.

The Septum, and Productions of the Pia Mater, connect and ſtrengthen all the Circumvolutions, Diviſions, and Ridges of the Cerebrum and Cerebellum, and ſuſtain, in a general and almoſt incomprehenſible manner, all the Branches and Ramifications of the Blood-veſſels, all the medullary Filaments, and all the Elongations and Ropes that depend on theſe.

A Diſſertation on the Anatomy of the Brain, by M. Steno, *read in the Aſſembly held at M.* Thevenot's *Houſe, in the Year* 1668.

Gentlemen,

Inſtead of promiſing, that I ſhall ſatisfy your Curioſity in what relates to the Anatomy of the Brain, I begin, by publicly and frankly owning, that I know nothing of the Matter. I wiſh I were the only Perſon under a Neceſſity of talking in this manner, becauſe I might, in time, become acquainted with what others know; and it would be a great Bleſſing to Mankind, if this moſt delicate Part, which is liable to ſo many dangerous Diſeaſes, were as well underſtood as the Generality of Anatomiſts and Philoſophers imagine it to be. In this, few imitate the Sincerity of *Sylvius*, who never talks poſitively concerning the Brain, tho' he has been at more Pains about it, than any Man that I know. The Number of thoſe who think every thing eaſy is infinitely the greateſt, and they give us the Hiſtory of the Brain, and Diſpoſition of its Parts, with the ſame Confidence and Aſſurance, as if they had been preſent at the Formation of this ſurpriſing Machine, and had been let into all the Deſigns of the Great Architect. Though the Number of theſe poſitive Gentlemen be very great, and though I cannot pretend to anſwer for the Sentiments of all the reſt, I am nevertheleſs very much convinc'd, that they who ſearch for ſolid Knowledge, will find nothing ſatisfactory in all that has been written about the Brain. It is very certain, that it is the principal Organ of the Soul, and the Inſtrument by which it works very wonderful Effects. The Soul, which imagines it can penetrate into every thing without it, and that nothing in the World can ſet Bounds to its Knowledge, is nevertheleſs utterly at a Loſs to deſcribe its own Habitation, and is no-where more to ſeek than at Home. We need only view a Diſſection of that large Maſs, the Brain, to have Ground to lament our Ignorance. On the very Surface you ſee Varieties which deſerve your Admiration; but when you would look into its inner Subſtance, you are utterly in the dark, being able to ſay nothing more, than that there are two Subſtances, one greyiſh, the other white, which laſt is continuous with the Nerves diſtributed all over the Body; that the greyiſh Subſtance ſerves in ſome Places for a Cortex to the White, and that in other Places it ſeparates the white Filaments from each other.

If we are aſked what theſe Subſtances are, in what manner the Nerves are joined in the white Subſtance, or how far their Extremities penetrate into it; all we can do is to own our Ignorance, except we are reſolv'd to increaſe the Number of thoſe who prefer the Applauſe of the Public to Sincerity and Truth. For, to ſay that the white Subſtance is only an uniform Body like Wax, without any Art concealed in it, would be to think too meanly of this great Maſter-piece of Nature. We are ſure, that where-ever there are Fibres in the Body, they always obſerve a certain regular Order, more or leſs complex, in proportion to the Functions for which they are appointed. If this Subſtance is every-where fibrous, as it appears in many Places to be, you muſt own, that theſe Fibres are diſpoſed in the moſt artful manner, ſince all the Diverſity of our Senſations and Motions depends upon them. We admire the Contrivance of the Fibres of every Muſcle, and ought ſtill more to admire their Diſpoſition in the Brain, where an infinite Number of them, contained in a very ſmall Space, each execute their particular Offices without Confuſion or Diſorder.

The Ventricles or Cavities of the Brain are no leſs unknown than its Subſtance. They who place the animal Spirits there, think they are as much in the right, as they who make them the Receptacles of the Excrements; but they are both equally puzzled, when they are deſired to explain the Origin of theſe Spirits and Excrements. Theſe may come from the Veſſels found in theſe Cavities, as well as from the Subſtance of the Brain; and it is equally difficult to determine how they get out.

Among thoſe who place the animal Spirits in the Ventricles, ſome make them paſs from the anterior to the poſterior Ventricles, there to meet with the Entrances into the Nerves, while others affirm, that theſe Entrances are in the anterior Ventricles. Some imagine, that the Excrements of the Brain are contained in the Ventricles, becauſe they think they ſee ſomething like Excrements there; but they own, that there is as ready a Paſſage for them from the Brain down to the Medulla, as into the Infundibulum; and ſuppoſing they go into the Infundibulum, they may be carried from thence into the Sinuſes of the Dura Mater; and there is ſome Reaſon to believe, that they may have an immediate Paſſage into the Eyes, Nares, and Mouth.

We are ſtill more uncertain about what relates to the Animal Spirits. Are they Blood, or a particular Subſtance ſeparated from the Chyle by the Glands of the Meſentery? Or may they not be derived from a lymphatic Serum? Some compare them to Spirit of Wine, and it may be doubted whether they are not the Matter of Light. Our common Diſſections cannot clear up any of theſe Difficulties.

The true Manner of diſſecting the Brain is as little known as its Subſtance. I need not mention the Method of cutting it into Slices, becauſe it is owned by every body, that nothing can be learned that way. The ſecond Method of unfolding all the Plicæ is ſomething more artful; but it only ſhews us the outer Surface of what we want to know, and even that very imperfectly.

The third Method of unfolding the Plicæ, and ſeparating the two Subſtances, goes no farther than the Surface of the Medulla. Theſe three Methods have been differently combined; and they may be ſtill more diverſify'd, according as they are executed longitudinally, tranſverſely, or in any other manner.

As for my own Part, it is my Opinion, that the true Method of diſſecting would be to trace the nervous Filaments through the Subſtance of the Brain, to ſee which Way they paſs, and where they end; but this Method is accompany'd with ſo many Difficulties, that I know not whether we may hope ever to ſee it executed without a particular manner of preparing. The Subſtance of the Brain is ſo ſoft, and the Fibres ſo tender, that they can hardly be touch'd without breaking. Since, therefore, Anatomy has not hitherto arriv'd to that Degree of Perfection, as to make the true Diſſection of the Brain, let us, without flattering ourſelves any longer, freely acknowledge our Ignorance, that we may not firſt deceive ourſelves, and others afterwards, by promiſing to ſhew them the true Structure of this Organ.

I ſhould tire your Patience inſtead of entertaining you, were I to mention particularly all the Diſputes that have aroſe about the Brain: Books are but too full of them; and therefore I ſhall only relate the principal Miſtakes which ſtill ſubſiſt amongſt Anatomiſts, and which may be corrected by Anatomy; and they may be reduced to theſe Heads. Some pretend to ſhew Parts in the Brain as ſeparate, which are only a Continuation of the ſame Subſtance; and others would perſuade us, that theſe Parts touch each other without any Connection, though they are viſibly joined together by Filaments or Veſſels. Some ſituate the Parts in the manner which is moſt agreeable to the Syſtems they have framed, without conſidering that they are quite otherwiſe ſituated by Nature. They ſhew you the Pia Mater, for Inſtance, in Places where it never was; and do not ſee the Dura Mater in Places where it is viſible; and in caſe of Need, they will make the very Subſtance of the Brain paſs for a Membrane.

I have too good an Opinion of Men of Learning in general, to believe that they do this with a Deſign to deceive others; but the Principles which they have eſtabliſhed, and the Method of Diſſection to which they have accuſtomed themſelves, oblige them to it. All Anatomiſts would demonſtrate the Parts the ſame way, if they made uſe of the ſame Method; and therefore we ought not to be ſurpris'd, if their Syſtems are very ill founded.

The Antients were ſo far prepoſſeſs'd about the Ventricles, as to take the Anterior for the Seat of common Senſation, the Poſterior for the Seat of Memory, that the Judgment, which they ſaid was lodg'd in the Middle, might more eaſily reflect on the Ideas, which came from either Ventricle. I would only aſk thoſe who are ſtill of the ſame Opinion, to give us the Reaſon why we ſhould believe them; for there is nothing ſatisfactory in all that has been hitherto ſaid in favour of it; and as that fine arched Cavity of the third Ventricle, where they placed the Throne of Judgment, does not ſo much as exiſt, we may eaſily ſee what Judgment is to be pronounced on the reſt of this Syſtem.

Willis is the Author of a very ſingular Hypotheſis. He lodges common Senſation in the Corpora Striata, the Imagination in the Corpus Calloſum, and the Memory in the cortical Subſtance: But without being at Pains to enter into the Detail of his whole Hypotheſis, we need only make the following Remarks upon it. He deſcribes the Corpus Striatum, as having two Sorts of Striæ, one aſcending, the other deſcending; and yet, if you ſeparate the Cortical from the white Subſtance, you will perceive, that theſe Striæ are all of the ſame Nature,

that is, that they are part of the Subſtance of the Corpus Calloſum, which runs toward the Medulla Spinalis, parted into different Lamellæ by the Intervention of the Aſh-colour'd Subſtance.

How can he then be ſure, that theſe three Operations are perform'd in the three Bodies which he pitches upon? Who is able to tell us, whether the nervous Fibres begin in the Corpora Striata, or if they paſs through the Corpus Calloſum all the Way to the cortical Subſtance? We know ſo little of the true Structure of the Corpus Calloſum, that a Man of a tolerable Genius may ſay about it whatever he pleaſes.

M. *Deſcartes* knew too well how imperfect an Hiſtory we have of the human Body, to attempt an Expoſition of its true Structure; and accordingly, in his *Tractatus de Homine*, his Deſign is only to explain a Machine capable of performing all the Functions done by Man. Some of his Friends have indeed expreſs'd themſelves on this Subject differently from him; but it is evident from the Beginning of that Work, that he intended no more than what I have ſaid; and in this Senſe, it may juſtly be ſaid, that M. *Deſcartes* has gone beyond all the other Philoſophers. He is the only Perſon who has explain'd mechanically all the human Actions, and eſpecially thoſe of the Brain. The other Philoſophers deſcribe to us the human Body itſelf. M. *Deſcartes* ſpeaks only of a Machine, but in ſuch a manner, as to convince us of the Inſufficiency of all that had been ſaid before him, and to teach us a Method of inquiring into the Uſes of the Parts with the ſame Evidence, with which he demonſtrates the Parts of his Machine call'd a Man, which none had done before.

We muſt not therefore condemn M. *Deſcartes*, though his Syſtem of the Brain ſhould not be found altogether agreeable to Experience. His excellent Genius, which ſhines no-where more than in his *Tractatus de Homine*, caſts a Veil over the Miſtakes of his Hypotheſes, eſpecially, ſince even *Veſalius* himſelf, and other Anatomiſts of the firſt Rank, are not altogether free from ſuch Miſtakes. And ſince we can forgive theſe great Men their Errors, who paſs'd the greateſt Part of their Lives in diſſecting, why ſhould not *Deſcartes* meet with the ſame Indulgence, who has happily employ'd his Time in other Speculations?

The Reſpect which I and all the World owe to ſuch ſuperior Geniuſes, would have inclined me to continue only to admire this Treatiſe, as containing the Deſcription of a fine Machine invented by the Author, if I had not met with ſeveral Perſons who would make us believe, that it is a faithful Relation of the moſt ſecret Springs of the real human Body. Since theſe Perſons are not convinced by *Sylvius*'s repeated Demonſtrations, that M. *Deſcartes*'s Deſcriptions do not agree with what appears in diſſecting the human Body, I find myſelf oblig'd to point out ſome Parts of his Syſtem, without relating the Whole; in which they may ſee, if they have a Mind to be inſtructed, the vaſt Difference there is between *Deſcartes*'s imaginary Machine, and the real Machine of the human Body.

The Glandula Pinealis has lately been the Subject of the greateſt Diſputes touching the Anatomy of the Brain; but before I enter upon that Matter, or endeavour to determine the Place where it lies, I muſt firſt give *Deſcartes*'s own Opinion in his own Words, contain'd in the following Paſſages.

" The Surface of the Glandula Pinealis has a Relation to " the inner Surface of the Brain.

" In the Concavity of the Brain, the Pores are directly op- " poſite to thoſe of the ſmall Gland.

" The Spirits run from all Sides of the Gland into the " Concavities of the Brain.

" The Gland may perform its Functions, though it be in- " clined ſometimes to one Side, and ſometimes to the other.

" The ſmall Tubes on the Surface of the Concavities are " always turned to the Gland, and may eaſily be turned to- " ward the different Points of this Gland."

From all theſe Paſſages, it is certain, that he believed the Glandula Pinealis to lie entirely in the Cavities of the Brain. And though in ſome other Places he ſays, that it is ſituated at the Entry of theſe Cavities, yet we are not to think, that this is contrary to what he advances in the Paſſages here quoted; for as it is but a very ſmall Body, it may lie either at the Entry, or in any other Place of the Cavities, and yet ſtill be within them, which he declares to be his Opinion, in many other Places.

We are now to examine, whether this Opinion be not contrary to Experience. It is very certain, that the Baſis of this Gland reaches immediately from the Paſſage of the third Ventricle to the fourth; but the poſterior Part, that is, one Half of the Gland, may evidently be perceiv'd to be altogether without the Cavities, by only removing the Cerebellum, and one or both of the Tubercles of the third Pair, with Dexterity and Care; upon which the poſterior Part of the Gland will be brought into View, and yet no Paſſage will appear, by which the Air, or any other Fluid, can paſs into the Ventricles.

To prove that the anterior Part of the Gland is not in the lateral Cavities, we need only look upon them, after they have been opened either in *Sylvius*'s Way, or in that of the Antients; for the Subſtance of the Brain will always be found to lie between theſe lateral Cavities and the Gland. The ſame Thing may be demonſtrated without cutting the Subſtance of the Brain, by ſeparating from its Baſis the Part which contains theſe Cavities; for the Gland will then appear to be ſo far out of the Cavities, that it can have no manner of Relation to them, being hindered by the Inſertions by which this Part is fix'd to the Baſis. The Antients knew very well, that the Fornix is not continuous with the Baſis of the Brain, but that it forms a third Cavity on its under Side, and by forcing in Air through the Fiſſure, between the Tubercles of the ſecond Pair, we raiſe the Fornix, and thus by breaking the Filaments, which connect it to the Baſis, a large Cavity is form'd; from whence ſome have imagined, that when the Spirits ſwell the Cavities, the Fornix riſes, and that all Sides of the Surface of the Gland are turned toward the Cavities.

I ſay ſome have imagined this, becauſe though the Fornix be rais'd in the manner already ſaid, only the anterior Surface of the Gland can be turned toward the lateral Cavities; but no Preparation whatever can turn the poſterior Surface toward the poſterior Ventricles. But if the Brain has ſuffer'd no Violence, either in opening the Cranium, forcing in Air, or by any other Method, the Cavity of this third Ventricle will be found very narrow at the Middle, and to contain nothing but the great Vein which forms the fourth Sinus, and the glandular Bodies, which accompany this Vein.

I own that behind this Fiſſure, and immediately below its poſterior Opening, there is a Cavity lined on the fore and lateral Parts, by that Part of the Plexus Choroides which runs up toward the fourth Sinus, and at the back Part, cloſ'd by the Glandula Pinealis, the anterior Portion of which is perfectly continuous; and when the Fornix is remov'd, this Cavity remains entire under the firſt, in the Shape of a Kind of inverted Horn.

What *Deſcartes* ſays, that the Glandula Pinealis may perform its Functions, though it inclines ſometimes to one Side, ſometimes to another, Experience ſhews to be groundleſs; becauſe it is ſo hedged in between all the Parts of the Brain, and ſo fix'd to them on all Sides, that it cannot be mov'd in the leaſt without Violence, and without breaking the Fibres by which it is connected. It is eaſy to ſhew likewiſe, that M. *Deſcartes* has not repreſented it in its true Situation, which is neither perpendicular, as he repreſents it, nor inclined forward, as other very great Anatomiſts believe; but its Point is always turned toward the Cerebellum, and makes nearly half a right Angle with the Baſis.

The ſuppoſed Connection of this Gland with the Brain, by means of Arteries, is likewiſe groundleſs; for the whole Baſis of the Gland adheres to the Brain, or rather the Subſtance of the Gland is continuous with that of the Brain, tho' the contrary be affirm'd by *Deſcartes*.

The Hypotheſis of Arteries meeting round the Gland, and from thence running up to the great Euripus, as it is call'd, is of great Moment in *Deſcartes*'s Syſtem, becauſe the Separation and Motion of the Spirits depend upon it. But, if we can believe our Eyes, this is no more than a Collection of Veins from the Corpus Calloſum, from the interior Subſtance of the Brain, from the Plexus Choroides, from different Places of the Baſis of the Brain, and from the Gland itſelf; the Office of which Veins is to carry back the Blood from the Brain to the Heart, and not to bring it from the Heart to the Brain. Some have thought, that M. *Deſcartes* deſign'd to carry the Nerves to the Gland; but he never had any ſuch Intention.

Such of M. *Deſcartes*'s Friends who look upon his Man only as a Machine, will be ſo good as to believe, that I do not here ſpeak againſt his Machine, the Contrivance of which I have always admired; but as for thoſe who pretend to demonſtrate, that M. *Deſcartes*'s Man is made like other Men, Anatomical Obſervations may eaſily convince them, that this is a fruitleſs Attempt. And if they ſhould plead the ſame Experience on their Side, we may readily anſwer, that there is nothing more common than not to perceive the Miſtakes we commit in diſſecting the Brain, as will evidently appear in the Sequel of this Diſſertation.

Diſſections or Preparations being liable to ſo many Miſtakes, and Anatomiſts having hitherto too readily form'd Syſtems, and moulded theſe ſoft Parts in the manner that was moſt agreeable to each, we cannot be ſurpriſed to find ſo little Exactneſs in their Figures. But this Want of Accuracy in the Figures is not owing to bad Diſſections only: The Ignorance of Drawers has contributed very much, and the Difficulty of expreſſing the ſeveral Eminences and Depreſſions of the Parts, and of underſtanding what the Anatomiſts principally inſiſt upon, furniſhes them with a never-failing Excuſe. The beſt Figures of the Brain are thoſe of *Willis*; but even theſe contain a great Number of egregious Miſtakes, and they want many Things to perfect them. In the third Figure he repreſents the

Superior

Superior or Pineal Gland like a round Ball; and consequently, according to this Figure, the Apex of that Gland cannot be said to be turn'd either forward or backward. Besides, we see here nothing of the Substance of the Brain on the fore Side of the Gland, and which goes from one Side to the other; all which the Figure would make us believe to be annihilated. Behind the Gland a Space appears on the Basis of the Brain, between the two Tubercles of the third Pair, which, in the natural State, has a quite different Appearance. The thin Expansion of the white Substance of the Cerebrum, which is continued to the Middle of the Cerebellum, where it is very thick, is quite wanting; as also the Origin of the Nervi Pathetici, which go out from this Expansion. He likewise represents the second Pair of Tubercles as distinct, which commonly adhere to each other. The under Side of the Fornix appears to be uniform, which is, nevertheless, of an uneven, and very elegant, Structure. When we cut the Corpus Striatum transversely, we see Radii very different from what they are exhibited in *Willis*'s eighth Figure. The white Radii appear there to be continuous with the fore Part of the Corpus Striatum, which nevertheless is of an Ash-colour'd Substance, and, as it runs in between the white Radii, does not appear, in that Method of Dissecting, to adhere to any other Body whatever.

In the third Figure the Infundibulum has no Resemblance to Nature. The Nervi Motores Oculorum are strait, and not oblique as they ought to be; neither do we see the true Origin of the Filaments of which these Nerves are compos'd, from the Basis of the Brain. The Pons Varolii might have been better and more distinctly express'd; and the anterior Roots of the Fornix are not separated as in the seventh and eighth *Figures*, but touch each other at the upper Parts, and form an acute Angle. The Line mark'd G. G. G. in the seventh *Figure*, appears to be a continu'd Line, tho' the Part between the Roots of the Fornix, which is represented, has no Connection with the Extremities; and, in the same *Figure*, the Glandula Pinealis is connected to the Substance of the Brain by two Funiculi. I need say nothing of the *Figures* of *Vesalius*, *Casserius*, &c. for since these, which are the latest and best, are so very imperfect, we may easily imagine how little Regard is to be paid to the others.

I have seen but three Figures of *Varolius*, which express, in a wretched Manner, the best Observations that ever have been publish'd on the Brain. I don't know whether the Figures of the first Edition at *Padua* in 1573. may not be better than those which I have seen publish'd at *Franckfort* in 1591. and again in *Bauhinus*'s Anatomy. Among *Bartholinus*'s Figures there are three, which represent the Brain dissected after *Sylvius*'s Method; but the Author himself owns, that they are faulty. But, to pass over many other Mistakes in all these Figures, there is not one amongst them which represents truly the Situation of the Glandula Pinealis, the Duct of the third Ventricle, the Plexus Choroides, the Ramifications of the Veins contain'd in the lateral Cavities, the Distribution of the Arteries, the Concourse of the Veins which form the fourth Sinus, or the numerous glandular Bodies lodg'd there.

From all this you see how the Brain has been hitherto dissected, how little Knowledge has been gain'd from these Methods of Dissection, and how falsely the Figures represent the Parts which they are design'd for. It is easy to conclude from hence, how little Regard is to be paid to the Systems built on these bad Foundations, in framing of which the Authors, by an unaccountable sort of Misfortune common to this with all other Arts, have employ'd obscure Terms, Metaphors, and Comparisons, all of them so ill chosen as to be equally puzzling to those who have made some Progress in this Science, and those who begin to learn it. Besides, the greatest Number of these Terms are so low, and so unworthy of the most noble Part of the Body of Man, that I am at a Loss whether I ought most to wonder at the bad Turn of Thought of those who first made use of them, or at the Indolence of their Successors, who continue still to retain them. What Necessity could there be to employ the Words Nates, Testes, Anus, Vulva, and Penis, which, in their common Signification, have no Relation at all to the Parts express'd by them in the Anatomy of the Brain? And, accordingly, what one Author calls Nates, another calls Testes, *&c.*

The third Ventricle is a very equivocal Term. The Antients understood by this Word a Cavity under the Fornix, which they believ'd to be separated from the Basis of the Brain; and they have represented it with three Legs, that it might support the Brain which lies upon it. *Sylvius* calls the third Ventricle a Canal found in the Substance of the Basis of the Brain, between the Infundibulum and the Passage which goes under the two posterior Pairs of the Tubercles of the Brain, towards the fourth Ventricle. Some Anatomists, having separated the Bodies of this second Pair of Tubercles, take the Space between them, which is owing to their manner of Dissection, for the third Ventricle, which is, consequently, sometimes the Fissure above, and sometimes the Canal below; and some will have it to be the Space between the Fissure and Canal, which is likewise owing to the Rupture of the Parts. We have, therefore, three third Ventricles, the second of which alone is the true one; the first and third arising entirely from the Methods of preparing the Parts. To these a fourth third Ventricle might be added, if the small Fissure under the Fornix could be look'd upon as a Passage between the two anterior Ventricles and the fourth; but it is so small, and so full of the Vessels and Glands of the Plexus Choroides, that I doubt very much whether there can be any Communication that Way between the anterior and posterior Ventricles, especially since *Sylvius*'s third Ventricle is sufficient for that Purpose, and likewise answers the Design so perfectly well, that whatever goes from the lateral to the posterior Ventricle, must first of all fill the Infundibulum and this Canal.

Two Glands are reckon'd to belong to the Brain; tho' we know not if either of them resembles Glands in any thing more than in Figure; and even that, when well examin'd, will be found to be different from what it is in the rest. The superior or Pineal Gland is not like a Pine-apple, either in Brutes or in Man; and it is not known whether the inferior or pituitary Gland acts in any respect on the Pituita.

The Plexus Choroides represents a vascular Texture, in which the Veins are seen very distinct from the Arteries, and the Distribution of each may be traced separately. The Name of Fornix gives the Idea of an arched or vaulted Part, which, however, is not to be found but when look'd for in a proper Manner. The Corpus Callosum, in the common Signification, means the white Substance of the Brain, which comes into View when the two lateral Parts are separated; but as it entirely resembles the rest of the Substance of the Brain, there can be no Reason for giving a particular Name to one Part of this Substance.

There are but two Ways of coming at the Knowledge of a Machine; either to be taught the whole Contrivance of the Maker, or to take it quite to Pieces by itself, and as it stands in relation to the rest. These are the only true Ways of learning the Contrivance of any Machine; but the Generality of Inquirers have thought, that they had better guess at it, than be at any Pains to examine it thoroughly. They have satisfy'd themselves with observing its Motions, and on these Observations they have built Systems which they believ'd to be true, because, by their Help, they imagin'd they could explain all the Effects in different Manners; and that the Senses alone are capable of informing us whether our Ideas be conformable to Nature. As the Brain is a Machine, we must not flatter ourselves, that we can discover the Contrivance of it by any other means than we made use of for knowing other Machines; and we have no Way left but to take it to Pieces, and to consider what every Part of it is capable of in a separated and in an united State. In this Search we may truly say, that few Anatomists have discover'd any great Degree of Curiosity. Chymistry has, in all Ages, found both private Men and Princes ready to erect Laboratories; but few have pursued Anatomy with equal Ardour. This Neglect is not owing to Princes, among whom many have had Curiosity enough for such an important Part of Knowledge, to build magnificent Theatres, which they have often honour'd with their Presence: But the Dissectors, being always willing to appear complete Masters of this Science, never had the Sincerity to own, that any thing still remain'd to be known; and, to conceal their Ignorance, have contented themselves with demonstrating what was to be found in the Writings of the Antients.

Anatomists might have Reason to blame me, if I did not shew, by a farther Explanation, that they are not so much in the wrong as I seem to insinuate, by saying, that they do not apply themselves sufficiently to anatomical Inquiries. They that study Anatomy are generally either Physicians or Surgeons, who, being both oblig'd to visit their Patients, have too little Time left for Study, after they have attain'd to a tolerable Degree of Reputation. But they ought not to undertake the Cure of a Body, the Make of which they do not know, that is, they ought not to endeavour to rectify a Machine, till they are previously acquainted with its Nature. Others, who do not visit sick Persons, but have no other Business but that of teaching Anatomy in public Schools, do not look upon themselves as more oblig'd to pursue anatomical Inquiries than the practising Physicians and Surgeons. The Design of their Profession is to teach to those who are to practise Physick and Surgery, the Descriptions left us by the Antients of the Structure of the human Body; and when they have clearly demonstrated all that is contain'd in the Works of the Antients, and their Hearers have as distinctly understood them, they both imagine, that they have done their Duty. The Bounds of those different Professions of Teaching and Practising have been so very ill settled, that the true Knowledge of the human Machine, though the most necessary Branch, is neglected, as belonging neither to the Anatomist, Physician, nor Surgeon.

To make the necessary Inquiries for the Discovery of Truth, a Man's whole Time must be taken up; and Professors of Anatomy, who are oblig'd to make public Demonstrations, which employ

employ a great deal of Time and Labour, cannot be proper for this Study, for the Reasons already given, and for the following, which are no less evident.

First, There is so much Time and Application required to examine each Part as it ought, that every thing else must be laid aside, and we must mind nothing but that. Physicians and Surgeons cannot comply with this because of their Practice, nor Professors because of their public Demonstrations. Whole Years may sometimes be necessary to discover what may afterwards be demonstrated to others in the Space of an Hour. I do not question but that *Pecquet* was a great while in carrying the Chyle from the Mesentery to the Subclavian Vein; and perhaps I should not be believ'd, were I to mention what Difficulties I found before I could shew the true Insertion of *Pecquet*'s Duct, of which *Bilsius* had given us a Figure; whereas, at present, they may be both prepar'd and demonstrated in half an Hour.

Secondly, Though Anatomists open a thousand Bodies in the Schools, it is by mere Accident, if they discover any thing new: They are oblig'd to demonstrate the Parts as describ'd by the Antients, and, in doing this, it is necessary they should follow a certain Method; whereas Inquiries admit of no settled Method, but must be pursu'd in every manner that can be thought of. In the Schools every thing must be remov'd that lies in the way of the Part which they want to shew; but, in particular Searches, no Part must be cut off till we have first examin'd it; and if any such thing were attempted in public Dissections, the Demonstrator would be look'd upon as ignorant, and the Spectators would be often in the right to complain of Loss of Time, because he would not always be sure to find what he proposed to shew them. It is evident from these Considerations, that Professors have not hitherto been oblig'd to make Inquiries in Anatomy, and even that it is impossible for them to do it, were they ever so willing; so that it is not their Fault, that greater Progress has not been made in that Science.

Anatomy in general has, we see, been manag'd hitherto with very little Success; and the Inquiries into the Brain have succeeded less than any others, because they have not been made with that Care and Diligence which the Difficulty of the Subject requires. Let us now consider the true Method, and examine if any Person has hitherto found it.

Bilsius apply'd himself to Anatomy, without having study'd the Writings of the Antients; and I make no Question but that he would have made a greater Progress, if, after having learn'd all that is good in these Writings, he had employ'd his Time and Application in making new Discoveries. We must own, that the Works of our Predecessors contain very fine Experiments, which we might still have been ignorant of, if they had not handed them down; and they have sometimes told us Truths, which their Successors, for want of sufficient Application, have not been able to see. It must, however, be own'd, that all that both Antients and Moderns have told us about the Brain is so uncertain, that the Books which contain the Anatomy of this Organ may be said to be chiefly a Collection of Doubts, Disputes, and Controversies; but still a great Advantage may be made of their Labour, and even of their Mistakes. I here speak of the Authors who have dissected; for as for those who only copy the Works of others, the best that can be said of them is, that it may sometimes be proper to read their Books by way of Diversion. But they would have deserv'd a great deal more Commendation, and been more useful to those who dissect, if they had given us only an exact Relation of all that Anatomists have wrote about the Brain; if they had explain'd, according to the Laws of a true Analysis, all the different Ways of accounting for the animal Actions mechanically; or if they had made an exact List of all the Propositions found in these Writings, distinguishing those which are founded on Facts and Experience, from those which contain Reasonings and Conclusions drawn from the former. None of these Methods have hitherto been pursu'd by the Compilers, and, therefore, we must confine ourselves to the original Authors.

The first thing to be consider'd is the History of the Parts; and in this we ought precisely to determine what is true and certain, that we may be able to distinguish that from what is false and uncertain. Neither is it sufficient, that we ourselves are satisfy'd about any thing; the Evidence of our Demonstrations ought to be so clear as to oblige every body else to assent to them; for otherwise the Number of Disputes would rather increase than diminish. Every Anatomist, who dissects the Brain, demonstrates from Experience what he advances. This soft and pliable Substance so readily yields to every Motion of his Hand, that the Parts are imperceptibly form'd in the same manner as he had conceiv'd them before Dissection; while the Spectator, who often sees two contrary Experiments made on the same Part, is either puzzled very much to know which he ought to embrace, or oblig'd to reject both to make himself easy. Therefore, to prevent this Inconvenience, it is absolutely necessary to carry Dissections the Length of a convincing Certainty, which, though very difficult, is very far from being impossible. For I would not have you imagine, from what I have said, that I believe there is nothing certain in Anatomy, or that all who follow that Study make the Parts appear as they have a mind, without any Danger of being discover'd: You may, indeed, justly doubt if Parts, which are shewn you separated, were ever united; but it would be impossible to shew them united together, if they were not naturally so. To clear up any Doubt that might arise on this Subject, and to be certain whether the Parts which are shewn you were naturally join'd, or not, you need only examine them in their natural State, without using any kind of Violence, but allow those whom you have a mind to convince, to do all that is in their Power to shew, that they are united. We may come at the same Degree of Certainty in other Circumstances, and particularly when we inquire into the Situation of Parts, provided we touch nothing without having first examin'd it, and set down every Moment what we touch. In order to this, we must not only be very attentive to the Part which we examine, but also reflect on all that we did before we reach'd it, to see if these Operations may have chang'd it from its natural State in any respect: For, by often handling more exterior Parts, we may easily affect those which lie within them; and when these come in Sight, we are subject to imagine, that they are naturally such as they then appear, without considering how far we may have alter'd their Situation and Connection with other Parts. The most famous anatomical Dispute, which this Age has produc'd, may serve for an Example of what I say. They who deny the Continuation of the Glandula Pinealis with the Substance of the Brain, and the Adhesion of the Fornix to the Basis of the Brain, would not talk so positively concerning a Matter of Fact, if they did not believe it to be prov'd by incontestable Experiments and Observations. But, in making these Experiments, they must necessarily have forgot the Changes which happen in separating the exterior Parts, and that they destroy all the Connections by which the Dura Mater adheres to the Cranium; and I have often observ'd, that, in raising the superior Part of the Cranium, the Middle of the Dura Mater continu'd still to adhere to it, even after I had open'd it sufficiently to thrust in three Fingers between the separated Parts of the Cranium. Now, how can the Dura Mater be thus raised without making the interior Parts, to which it is fix'd, suffer Violence? The Glandula Pinealis adheres to the fourth Sinus, which is connected with the Falx, so that the Dura Mater cannot be rais'd at that Place without affecting the Gland. This Falx receives likewise all the Veins which pass between the Fornix and the Basis of the Brain, and by which these two Parts are connected. There is a pretty strong Connection between the upper Part of the Brain and the Dura Mater; and, when that Membrane is rais'd, the Brain must follow it; and the fourth Sinus, being carry'd upward, breaks the Connection between the Fornix and the Basis. I have many times been deceiv'd about this, when I first began to dissect the Brain; and I us'd to wonder why these Connections were not always sensible: But observing afterwards, in Horses, Sheep, Cats, *&c.* where that Part of the Dura Mater which separates the Cerebrum from the Cerebellum is ossify'd, that I destroy'd a great many of the inner Parts in extracting this Bone, I began to perceive the Cause of this Mistake, and that it was not an easy Matter to separate the Cranium as it ought. The common Way is to divide the Cranium by a circular Section, to remove the upper Segment; but if this Segment were again divided by a Section perpendicular to the former, it would be much more easily remov'd without doing any Violence to the Brain; for Scissars, Saws, and Forceps, cannot be handled without shaking and disordering the Parts. A small circular Saw might be contriv'd, which would not shake the Parts very much, especially if it were turn'd upon a proper Axis, plac'd between two pointed Pillars. This Saw might likewise be employ'd for several other Purposes in separating the Cranium; but if any Liquor could be discover'd to dissolve or soften the Bones in a small Space of Time, this would be by far the best Way of separating the Cranium.

It is not sufficient to be continually attentive; we must likewise make use of different Methods of Dissection, which are so many different Proofs of the Truth of our Operations, in order to satisfy ourselves, and to convince others.

This will appear a very strange Doctrine to those who believe, that there are stated Laws for the Dissection of every Part, and that the anatomical Administrations, taught us by the Antients, ought to be inviolably observ'd, without any Change or Addition. I own, that the Antients might have given us unalterable Rules for the Dissection of each Part, had they been sufficiently acquainted with them themselves; but as they certainly knew less about many Parts than we do, they were, at least, as unfit as we are to prescribe Rules, which can never be fix'd or constant till more Discoveries have been made. It will here be objected, that some Method must be follow'd in dissecting the Parts already known. This I readily grant, and also, that the Method of the Antients is to be made use of till a better is found out; but I would not have that Method look'd upon as perfect and unalterable. The principal Reason why a great many Anatomists

tomiſts have remain'd in their Miſtakes, and why they have gone no greater a Length than the Antients in Diſſection, is, becauſe they believe, that every thing has been already taken notice of, and that there is nothing left for the Moderns to do; and as they have look'd upon the antient Laws as inviolable Rules in Diſſection, they ſpent their whole Lives in demonſtrating the ſame Parts in the ſame Manner; whereas Anatomy ought to be confin'd by no Rules, every new Diſſection requiring a different Method. The Advantage of proceeding in this manner is, that if we miſs of new Diſcoveries, we are, at leaſt, put in a Condition to find out any Miſtakes which may have happen'd in former Diſſections, eſpecially in controverted Points, in which the Spectators ought to have the Liberty of preſcribing the Rules of Diſſection.

This Method of Diſſection makes, indeed, but a very ſmall Shew, and a Man cannot well diſplay his Learning at the ſame time that he acknowledges his Ignorance; but, as for my own Part, I much rather chuſe to own what I do not know, than to impoſe upon my Readers antient Opinions, which will, ſome time or other, be demonſtrated to be falſe. We have ſeen great Anatomiſts expos'd to this Mortification; and we ſtill ſee many who believe, that more Regard will be paid to their Stiffneſs and Poſitiveneſs in Opinion, than to ocular Demonſtration. I wiſh theſe Gentlemen much Joy of their Self-conceit, while I endeavour to follow the Laws of Philoſophy, by which we are taught to ſearch after Truth in ſo cautious a manner, as never to believe we have found it, till it brings Demonſtration along with it.

I cannot prove to you the Neceſſity of often-changing the Methods of Diſſection better than by the two following Examples. It is a confirm'd Experiment, that, by blowing into the Beginning of the Fiſſure under the Fornix, the Fornix is ſeparated from the Baſis, and a conſiderable Cavity left between them; and the ſame thing happens when we ſeparate the Cranium with Violence, as I have already ſaid. This is ſo evident, that both the Diſſector and the Spectators are fully convinc'd of it; but if any Perſon ſhould ſtill be in Doubt, there is no other Way to clear it up but to endeavour to demonſtrate this Cavity in another manner: For, if it be natural, we muſt always find it the ſame, in whatever manner we look for it; but if, by any other Method, we find, that it is wanting, and that the Parts between which it ought to lie are connected together, without leaving any void Space between them, you ought, from that Moment, to be convinc'd of the Falſity of the former Demonſtration, and that it was the Force of the Air to which the Appearance of a Cavity was owing.

If the Brain is diſſected according to the Method of *Varolius* or *Willis*, after having taken it out of the Cranium, you will commonly ſee the ſecond Pair of Tubercles ſeparated at the Middle of that white Subſtance which lies before the Glandula Pinealis, and which is very often broken. When we make the Diſſection, leaving the Brain in the Cranium, we ſee both the Tubercles and the white Subſtance entire; and then we ſee plainly, that the Cauſe of the firſt Miſtake was owing to the Weight of the lateral Parts, which break thoſe in the Middle.

Having made a true and exact Plan of the Parts of the Brain, having obſerv'd the Miſtakes, and the Cauſes of the Miſtakes, and having ſettled the true Method of demonſtrating theſe Parts, with all the neceſſary Precautions, the next Step is to expreſs, by good Figures, all that we have diſcover'd; for we had better be without Figures than not have them true and faithful. When we cannot have recourſe to the Originals, the Repreſentation ſerves to keep us in mind of them; and many Perſons never have an Opportunity of ſeeing the Parts in any other Way, their Averſion to Blood hindering them from ſatisfying their Curioſity by examining dead Bodies; and, therefore, if the Figures are not true, they give falſe Ideas to thoſe who would learn Anatomy by their Help, and puzzle others, who make uſe of them only to refreſh their Memory.

We ought, therefore, to leave nothing undone to procure exact Figures, in order to which a good Drawer is as neceſſary as a good Anatomiſt. We muſt likewiſe apply ourſelves very particularly to ſee in what manner we ought to diſſect and diſpoſe the Parts, ſo as to exhibit all that is to be ſeen in the Brain, there being Difficulties peculiar to this Organ. The other Parts require only a Preparation to complete the Figures we deſign; whereas the Brain, never ſo well prepar'd, ſubſides before the Figure can be taken; and we muſt have ſeveral freſh Subjects, before one Figure can be finiſh'd. To this, perhaps, it is owing, that no anatomical Figures are ſo imperfect as thoſe of the Brain.

I have hitherto ſaid nothing of the Uſes of the Parts, nor of the animal Actions, as they are call'd, becauſe it is impoſſible to explain the Movements of a Machine, till we know the Contrivance of its Parts. A reaſonable Man muſt, in his own Mind, laugh at thoſe poſitive Anatomiſts, who, having made a long Harangue about the Uſe of Parts, the Structure of which is altogether unknown to them, give this as the only Reaſon of all they advance, that God and Nature do nothing in vain. They deceive themſelves in the Application of this general Maxim; and the Part which they raſhly judge to have been made by God for one End, is afterwards diſcover'd to have been made for another. We had, therefore, much better own our Ignorance, be more reſerv'd in our Deciſions, and not undertake, upon ſuch ſlight Conjectures, to explain Matters which are, in their own Nature, ſo difficult.

All that I have hitherto mention'd is but a very ſmall Part of what ought to be done, in order to acquire the Knowledge of the Brain. We ought, moreover, to examine the Heads of all Animals, and in all the different States of each Animal. In the Fœtus of Animals we ſee how the Brain is gradually form'd; and what could not be ſeen in a ſound healthy Brain, may, perhaps, be diſcover'd in one that is diſeas'd.

In living Animals we ought to conſider every thing that may cauſe the leaſt Alteration in the Actions of the Brain, whether the Cauſes be external, as from Liquors, Wounds, or Medicines; or internal, as a great Number of Diſeaſes reckon'd up by Phyſicians. There is likewiſe this Advantage attending the Diſſection of the Brains of Animals, that we may manage them as we pleaſe. We may learn to trepan, or to perform any other Chirurgical Operation, upon them; we may examine whether the Brain has any Motion in theſe Operations, and whether the Application of any Medicines to the Dura Mater, or to the Subſtance or Ventricles of the Brain, may not produce ſome particular Effects.

We might likewiſe make different Trials without opening the Cranium, by applying Medicines externally, by mixing them with the Food, and by Injections into the Veſſels, in order to diſcover what diſturbs the animal Actions, and what is moſt proper to reſtore them when diſordered.

The Brain is different in different Animals; and this is another Reaſon why we ſhould examine them all. The Brains of Birds and Fiſhes are not at all like that of Man; and even in Animals where there is the greateſt Likeneſs to the human Brain, I have always found a very great Variety. Whatever this Difference be, it may always afford us ſome new Light, and teach us what it is abſolutely neceſſary we ſhould know. In ſome Animals the Fibres are more eaſily ſeen than in Men; and the Parts which in the human Brain are mixed and joined together, are ſometimes diſtinct and ſeparate in Animals; and we often meet with the Subſtance more or leſs ſolid, and the Size and Situation different.

I need not inſiſt any longer on this Subject, becauſe I believe we are all convinced, that we are indebted to the Diſſection of Animals for almoſt all the new Diſcoveries of this Age; and that there are many Parts which would never have been found in the human Brain, if they had not firſt been obſerved in Animals.

What I have hitherto ſaid concerning the Inſufficiency of all the Syſtems of the Brain, concerning the want of a true Method in diſſecting it, concerning the infinite Number of Inquiries that ought to be made about it in Man, and in Brutes, in all their different States, concerning the Barrenneſs of all the Writers on this Subject, and concerning the Precautions that muſt be uſed in handling theſe tender Parts, ought certainly to undeceive thoſe who ſatisfy themſelves with what they find in the Books of the Antients. We muſt always remain in Ignorance, if we ſit down with what the Antients have taught us, and if Men capable of ſuch Inquiries do not contribute their Labour, Induſtry, and Study, in order to arrive at the Knowledge of Truth, which is the principal Aim of all who ſearch for it ſincerely. *Winſlow's Anatomy.*

Before we proceed to conſider the Brain as an Aliment, and as a Medicine, we muſt obſerve, that the Subject of our Diſcourſe is that ſoft whitiſh Subſtance which is contained within the Cranium, and has ſome Reſemblance to Marrow, comprehending under the Term *Brain* both the fore Part call'd by Anatomiſts, in a ſtrict Senſe, *Cerebrum*; and the hinder Part, which goes under the proper Name of *Cerebellum*. One Thing more we would premiſe, as worthy of Obſervation, which is, that by Authors, who trouble not themſelves with anatomical Terms of Art, the Brain, that is, the *Cerebrum* and *Cerebellum* in Conjunction, is called *Cerebellum*, when they ſpeak of the Brains of ſmall Animals, as Birds, or little Pigs.

Athenæus, Lib. 2. Cap. 24. writes, that the Antients abſtain'd from eating Brains out of a religious Motive, becauſe it was ſituated in the Head, the Seat of almoſt all the Senſes. And *Plutarch, Sympoſ. 8. Probl. 9.* reckons the Brain among ſuch Things as were neither to be eaten nor taſted at firſt, but which afterwards was eſteem'd a great Delicacy in Food. *Bulenger, de Conviviis, Lib. 2. Cap. 24.* tells us, that the Brains of Birds cleanſed from the Fibres, and drawn out thro' the Neck, were in high Eſteem. And *Apicius*, who was ſo famous for his Proficiency in the Art of gratifying the Appetite, *Lib. 2. Cap. 1.* where he treats of making Sauſages, preſcribes boiled Brains for an Ingredient; and in *Lib. 4. Cap. 2.* you have an Account of the Brains which were to enter the Compoſition of the ſeveral Diſhes. In our Times the

Brains of ſome Animals, as of Calves, Kids, and Hares, are reckon'd among the greateſt Dainties. But they are not approv'd by Phyſicians, who regard them as a pituitous kind of Food, of groſs and vitiated Juice, difficult of Concoction, noxious to the Stomach, and exciting a Nauſea; but if they are well boiled, they afford abundance of Nutriment. The wiſeſt Way therefore is wholly to abſtain from them, unleſs you have very ſtrong Viſcera, or ſeaſon them with Spices, to promote Concoction. There is a fat and unctuous Humidity in Brains, which gives the Stomach a great deal of Trouble to digeſt it; for which Reaſon the drier the Brain of Animals is found to be, the better it is accounted, as the Brains of Birds, if compar'd with thoſe of other Creatures; and thoſe of Mountain-birds, in Compariſon of thoſe of Water-fowl. They are ſuppoſed to generate good Blood, and by that means to provoke venereal Inclinations. *Vitellius*, that eminent Glutton, had the Brains of Pheaſants and Peacocks ſerved up in his famous, noble, and coſtly Diſh; and *Heliogabalus* diſtributed ſix hundred Heads of Oſtriches to his Gueſts, that they might pick out the Brains, and eat them. The Brains of Hens and Capons are now eaten; and ſome commend the Brain of Sparrows as an Incentive to Venery. *Ludovici Nonnii Diæteticon, L. 2. C. 36. Averrhoes* and *Rhaſis* affirm, that the human Brain is more effectually ſtrengthened and corroborated by eating the Brains of Animals, than by the Uſe of any other Subſtance, becauſe ſimilar things corroborate each other. Hence *Foreſtus*, in his *Obſervat. Med. L. 9. Obſ. 32. Schol.* orders Patients who have receiv'd Blows on the Head, attended with a Diſcharge of Blood from the Ears and Noſtrils, to eat the Brains of Hens and caſtrated Kids. Various Medicinal Virtues are by different Authors aſcrib'd to the Brains of particular Animals. The Brain, for Inſtance, of a Hare boil'd, triturated, and eaten, is ſaid to be beneficial in the difficult and uneaſy Dentition of Children; and ſome affirm, that, when chew'd, it proves ſerviceable in Tremors. *Dioſcorides* affirms, that the Brain of a Cock, drank in Wine, is an effectual Medicine againſt venomous Bites, and that it checks Eruptions of Blood from the Membranes of the Brain. The Brain of a Camel, according to *Galen*, when dry'd and drank in Vinegar, cures epileptic Patients. The Brain of a Weaſle is ſaid to produce the ſame Effect; and that of Swallows, mixed with Honey, is by ſome ſaid to be an effectual Medicine in Cataracts. The Brain of a Sheep, prepared in the ſame manner, affords a ſurpriſing Relief in the difficult Dentition of Children, according to *Paulus Ægineta*, in the third Chapter of his ſeventh Book. According to *Joſephus Lanzonius*, the Brain of a Cat is claſs'd among Poiſons, becauſe, when eaten, it excites a Vertigo, Stupidity, and ſometimes Madneſs. As to the particular Virtues belonging to the Brains of particular Animals, they are ſpecified under the reſpective Names of the Animals themſelves. But we ſhall here conſider the Medicinal Uſe and Virtues of the human Brain. According, therefore, to *Ettmuller*, the human Brain is an infallible Specific in Apoplexies and Epilepſies. When ſubjected to Diſtillation, it yields a large Quantity of Water and Oil. But becauſe it has an empyreumatic Smell, when diſtil'd by the Retort, it is better firſt to diſtil it in *Balneo Mariæ*, and afterwards to expreſs the Oil from the remaining Maſs. This Oil is an excellent Analeptic; and the Water obtain'd in this manner is by *Bartholetus* highly commended againſt Loſs of Memory; for it is of a highly cephalic and anodyne Quality; for which Reaſon it is an excellent Remedy, when mix'd with Oil, for anointing contracted Tendons and Nerves. This Water will be ſtill ſo much the better, if it is diſtil'd with aromatic and cephalic Flowers. The human Brain, of itſelf, generally yields but a ſmall Quantity of Spirit. But if it is cut into Pieces, and kept till, in conſequence of a commenc'd putrefactory Motion, its Oil is reſolv'd, and if Spirit of Lilies of the Valley be added to it, then ſubjected to Diſtillation, and rectified, it yields an urinous and oleous Spirit, of ſingular Service in Epilepſies, and Loſs of Memory. Hence 'tis obvious, why *Schroder* gives the Title of *Aqua Antepileptica* to that diſtil'd from the human Brain, with the Water of Lilies of the Valley, Lavender, Primroſes, and Malmſey-wine; and why the ſame Author dignifies with the Name of an excellent Antiepileptic, the Oil diſtil'd by a Glaſs Retort in a Sand-heat, from the Subſtance of the Brain, mixed with common Salt. The ſame Author gives the Title of *Aqua Aurea* to a Spirit of the human Brain, prepar'd of the Brain of a ſound and young Man, who dies a violent Death, together with all its Membranes, Arteries, and Veins, as alſo the whole ſpinal Marrow, ſhaken together, with the cephalic Waters of the Lime, Piony, Betony, black Cherries, Lavender, and Lilies of the Valley. It is to ſtand in Infuſion for ſome time, and then to be ſubjected to repeated Diſtillations; and the elixiviated Salt prepar'd of the calcin'd Fœces is to be added to it. Its Doſe for an Epilepſy is, according to *Hartman*, from one Scruple to four. When ſubjected to a chymical Analyſis, the human Brain yields much the ſame Subſtances as are obtain'd from other Parts of Animals, when treated in the ſame manner, which are poſſeſs'd of the ſame Virtues with other volatile urinous Salts. But I leave it to be determin'd by others, whether the Opinion of the antiepileptic Virtues of the Brain is not founded upon Superſtition, becauſe the Spirits are ſaid to be generated in the Brain.

CEREFACTIO ſeems to import the ſame as CERATIO.

CEREFOLIUM. The ſame as CHÆREFOLIUM, Chervil, which ſee.

CEREIBA *Braſilienſibus*, Marcgrav. *Mangue ſeu Mangles prima Species*, Piſon. *Arbor Braſiliana foliis ſalicis, in quibus ſal concreſcit, floribus tetrapetalis*, Raii.

A ſmall Tree, which grows in *Braſil*, like a Willow. What is remarkable in it is, that when the Sun ſhines upon it, a ſort of Salt concretes upon the Leaves, which, during the Night, and in cloudy Weather, diſſolves into a Dew. I find no Medicinal Virtues attributed to it.

CEREIBUNA, *Mangue*, 2 *Species*, Piſon. Another Species of the preceding Plant, not diſtinguiſh'd for any Uſe in Medicine.

CERELÆUM, κηρέλαιον. The ſame as *Ceratum*; but in ſome modern Authors it imports the Oil of Wax, or *Butyrum Ceræ*, deſcrib'd under the Article CERA. *Galen* diſtinguiſhes betwixt the Cerate and the Cerelæum, informing us, that the *Cerelæum* and *Acopón* are the moſt liquid of any Compoſitions of this Kind, and next to theſe the Cerate.

CEREVISIA. Drink made of any ſort of Corn.

CEREUS. The *Torch-thiſtle*.

The Root is perennial, ſmall in reſpect of the Plant, and abounding with Fibrils. The Plant has no Leaves, is thorny, and angulous; its Stalk is either ſtrait or inflected, continuous, or articulated. The Angles of the Alæ are ſet with Thorns, which proceed like Rays from one Centre, reſembling Stars. The innermoſt Part of the Stalk is of a ligneous Subſtance; the outer Part is white, fungous, and cover'd with a coriaceous Membrane. The Calyx is long, ſquamous, and has its upper Part furniſhed with very long Rays, ſurrounding the Summit of the Ovarium. The Flower at the End of the Fruit conſiſts of very numerous Petals, narrow below, and ſpreading above; and is adorn'd with many Stamina, and a beautiful Pointal. The Ovarium at the End of a Pedicle makes the Body of the Calyx, is furniſhed with a very beautiful Tube, and becomes a Fruit like that of the prickly Pear-tree, conſiſting of a ſoft fleſhy Subſtance, cover'd with a hairy viſcid Membrane, and containing a Multitude of Seeds.

Boerhaave mentions thirteen Species of this Plant.

1. Cereus; erectus; altiſſimus; Syrinamenſis. *Par. Bat.* 116. *Spinis fuſcis*, H. R. D.

2. Cereus; erectus; altiſſimus; Syrinamenſis. *Par. Bat.* 116. *Spinis albis*, H. R. D.

3. Cereus; maximus; fructu ſpinoſo, rubro. *Daduſ. Par. Bat.* 113. THE GREATEST TORCH-THISTLE, WITH RED PRICKLY FRUIT.

4. Cereus; erectus; fructu rubro, non ſpinoſo. *Par. Bat.* 114.

5. Cereus; erectus; fructu rubro, non ſpinoſo; lanuginoſus, lanugine flaveſcente. *Par. Bat.* 115. THE UPRIGHT TORCH-THISTLE, WITH YELLOW DOWN AND RED FRUIT WITHOUT SPINES.

6. Cereus; erectus; craſſiſſimus; maximè anguloſus; ſpinis albis, pluribus, longiſſimis, lanugine flavâ. *H. R. D.* THE LARGEST UPRIGHT TORCH-THISTLE, WITH LARGE ANGLES, AND WHITE SPINES, HAVING A YELLOW DOWN ON THE TOP.

7. Cereus; erectus; gracilis; ſpinoſiſſimus; ſpinis flavis; polygonus; lanugine alba palleſcente. THE LESSER UPRIGHT TORCH-THISTLE, WITH MANY ANGLES, AND YELLOW SPINES, WITH A WHITE DOWN ON THE TOP.

8. Cereus; erectus; gracilior; ſpinoſiſſimus; ſpinis albis; polygonus. *H. R. D.* THE LESSER UPRIGHT TORCH-THISTLE, WITH WHITE SPINES.

9. Cereus; erectus; quadrangulus; coſtis alarum inſtar aſſurgentibus. *Ind.* 181. THE FOUR-CORNER'D UPRIGHT TORCH-THISTLE.

10. Cereus; ſcandens; minor; trigonus; articulatus; fructu ſuaviſſimo. *Par. Bat.* 118. THE LESSER TRIANGULAR, CREEPING, JOINTED TORCH-THISTLE, WITH THE SWEETEST FRUIT, COMMONLY CALL'D IN BARBADOS THE TRUE PRICKLY PEAR.

11. Cereus; ſcandens; minor; polygonus; articulatus. *Par. Bat.* 120. THE LESSER CREEPING JOINTED TORCH-THISTLE, WITH MANY ANGLES.

12. Cereus; minimus; articulatus; polygonus; ſpinoſus. *H. R. D.* THE LEAST PRICKLY JOINTED TORCH-THISTLE, WITH MANY ANGLES.

13. Cereus; erectus; polygonus; ſpinoſus; per intervalla compreſſus quaſi in articulos. *H. R. D. Boerhaave's Index alter Plantarum, Vol. 1.*

M.

M. *Juſſieu*, in the Memoires of the Royal Academy for 1716. gives a long Account of this Plant.

CERIFICATIO. The ſame as CERATIO.

CERINTHE, *Honeywort.*

The Characters are;

The Leaves are glaucous or green; the Flower monopetalous, Bell-ſhaped, tubulated, multifid, with its Edges ſometimes open, ſometimes cloſed. The Calyx contains a tetragonous Pointal, which becomes a Fruit, conſiſting of two roundiſh Shells, divided into two Seed-veſſels, incloſing for the moſt part an oblong Seed. *Boerhaave*, *Index alter.*

Boerhaave takes notice of eight Species of this Plant.

1. Cerinthe quorundam major, verſicolore flore, *J. B.* 3. 602. *Tourn. Inſt.* 80. *Boerh. Ind. A.* 195. *Cerinthe*, Offic. *Cerinthe major*, Ger. 431. Emac. 538. Raii Hiſt. 1. 506. *Cerinthe major flore luteo & rubro*, THE GREATER YELLOW AND RED HONEYWORT, Park. Theat. 520. *Cerynthe veteribus*, *Cerinthe quorundam*, Chab. 520. *Cerinthe, ſeu Cynogloſſum montanum majus*, C. B. Pin. 258. Hiſt. Oxon. 3. 445. HONEYWORT.

Dale ſays, that nothing certain is related with reſpect to the Virtues of this Plant.

2. Cerinthe; quorumdam; major; flore ex rubro-purpuraſcente, *J. B.* 3. 603. *Cluſ. H.* 168. THE LARGE HONEYWORT, WITH REDDISH PURPLE FLOWERS.

3. Cerinthe; quorumdam; major; ſpinoſo folio; flavo flore. *J. B.* 3. 602. THE LARGER HONEYWORT, WITH PRICKLY LEAVES, AND YELLOW FLOWERS.

4. Cerinthe; quorumdam; minor; flavo flore. *J. B.* 3. 603. *Cluſ. H.* 168. THE LESSER HONEYWORT, WITH YELLOW FLOWERS.

5. Cerinthe; flore verſicolore ex luteo & albo. *a.*

6. Cerinthe; flore verſicolore ex albo & rubro. *a.* HONEYWORT, WITH RED AND WHITE PARTY-COLOUR'D FLOWERS.

7. Cerinthe; flore verſicolore ex albo & purpureo. *a.* HONEYWORT, WITH PURPLE AND WHITE PARTY-COLOUR'D FLOWERS.

8. Cerinthe; folio non maculato, viridi. *C. B. P.* 258. HONEYWORT, WITH DEEP GREEN LEAVES, WITHOUT SPOTS.

CERINTHOIDES.

The Characters are;

The Leaves are glaucous and ſmooth; the Calyx conſiſts of one Leaf, is tubulated, pentagonal, divided into five Lobes; the Flowers are ſmall, tubulous, quinquefid, not ſtellated; the Seeds are ſmooth.

Cerinthoides; argentea; flore pulchre cœruleo. *Bugloſſum marinum incanum, flore cæruleo.* H. L. T. 135. *Cynogloſſum, maritimum, procumbens, lævæ, purpuro-cæruleum.* Flor. 2. 62. *Cynogloſſum, procumbens, glaucophyllum, maritimum, noſtras, floribus purpuro-cæruleis, ſeminibus lævibus*, Plukn. T. 172. Fig. 3. *Cynogloſſum, perenne, maritimum, procumbens, foliis glaucis, brevioribus*, M. H. 3. 450. *Echium marinum*, Phytol. Britann. Raii Synopſ. 120. H. *Boerhaave's Index alter Plantarum.*

CERIO. A Diſeaſe of the Head, call'd *Favus*. See ACHOR.

CERION, κηρίον. Honey-comb. *Hippocrates*, in many Places, recommends a Decoction of Honey-combs with Water, as a proper Drink in Fevers. It alſo ſignifies that Diſorder which the *Latins* call *Favus*. See ACHOR. *Ceria*, or *Ceriæ*, alſo ſignifies flat Worms bred in the Inteſtines.

CERITUS or CERRITUS, mad, enthuſiaſtic, from the Goddeſs *Ceres*, who was ſuppos'd to affect People in this manner. It may be tranſlated, drunk with Malt Liquor.

CERNUA, ὀρφός. A kind of Fiſh mention'd by *Galen*. It is not certain to what ſort of Fiſh this Name belongs, tho' ſaid by ſome to be the Ruff.

CEROBER. Water. *Rulandus.*

CEROMA, κήρωμα. A Cerate. See CERATUM.

CERONEUM. A Cerate. See *Blancard.*

CEROPISSUS, κηρόπισσος. A Plaiſter made of Pitch and Wax.

Of this ſort of Plaiſter the Antients made their *Dropaces*; it was uſual with them to ſpread a certain Quantity of this Plaiſter on Cloth or Leather, and apply it to ſome Part of the Body, and then take it or pull it off again, and apply it afreſh, frequently renewing the Application and Removal of the ſame, in order to induce a Redneſs on the Part, with an Intent to attract the Humours, or the Juices which ſerve to nouriſh the Part, outward, or to open the Pores. To render this Plaiſter the more efficacious, they ſometimes added to it acrimonious Powders, as of Pellitory of *Spain*, Pepper, Salt, or Sulphur; the Dropax was alſo uſed to make the Hair fall off, or to pull it off from any Part.

CEROTUM. The ſame as CERATUM.

CERRUS. The ſame as *Ægilops*, or Holm-oak. See ÆGILOPS.

CERVARIA. A Name for the SESELI ÆTHIOPICUM. *Blancard.*

CERVICALIS. Belonging to the Neck. The Veins and Arteries of the fore Part of the Neck are diſtinguiſh'd by this Epithet.

CERVICARIA. Throatwort. See CAMPANULA.

CERVICULÆ *Spiritus* is, according to *Rulandus*, the Spirit of the Bone of the Stag's Heart.

CERVIX. The Neck, that Part of the Body which is ſituated betwixt the Head and Breaſt. But it is apply'd figuratively to other Parts. Thus there is the Neck of the Bladder, and the Neck of the Uterus.

The Neck in general is divided into the anterior Part or Throat, and poſterior Part or Nape. The Throat begins by an Eminence, and terminates by a Foſſula. The Nape begins by a Foſſula, which, as it deſcends, is gradually loſt. The Neck contains the *Larynx*, a Part of the *Trachea Arteria*, the *Pharynx*, a Part of the *Oeſophagus*, the *Muſculi Cutanei*, *Sterno-maſtoidæi*, *Sterno-hyoidæi*, *Thyro-hyoidæi*, *Omo-hyoidæi*, *Splenicus*, *Complexus*, the *Muſculi Vertebrales*, which lie upon the firſt ſeven Vertebræ, and a Portion of the *Medulla Spinalis.*

The Arteries which go to the Neck are theſe:
Arteriæ Carotides, in general.
Arteriæ Carotides externæ.
Arteriæ Carotides internæ.
Arteriæ Vertebrales.
Arteriæ Cervicales.

The Veins belonging to the Neck are theſe;
Venæ Jugulares, in general.
Venæ Jugulares externæ.
Venæ Jugulares internæ.
Venæ Cervicales.
Venæ Vertebrales.

The Nerves diſtributed to the Neck are theſe:
Nervi Sympathetici minimi, or the Portio Dura of the Auditory Nerves.
Nervi Sympathetici medii, the Eighth Pair.
Nervi Acceſſorii Octavi Paris.
The Ninth Pair.
Nervi Suboccipitales, or the Tenth Pair.
The Seven Cervical Pairs.
Nervi Sympathetici Maximi.

Winſlow's Anatomy.

With reſpect to the Neck, two Things come under our preſent Conſideration. The firſt is the wry Neck; the ſecond, Wounds in this Part.

There are ſufficient Inſtances of Perſons who have their Neck bent in ſuch a manner, as to make them incline their Head to the Right or Left Side (ſee *Tab.* 42. *Fig.* 12.). This Diſorder is by *Tulpius*, perhaps in Imitation of *Horace's Stes Capite obſtipo*, called *Caput obſtipum*, and is ſince called ſo by others. This remarkable Blemiſh or Defect may be brought with a Child into the World, or it may proceed from other Cauſes; when it is born with the Child, it ſeems hardly poſſible to be cur'd, becauſe the Vertebræ of the Neck are in that Caſe either incurvated by Nature, or elſe, by their long perverted Situation, are by degrees diſtorted ſo much, as to admit very little Hopes of a Cure. And therefore we have the more Reaſon to be ſurpris'd at thoſe extraordinary Cures, which *Tulpius*, *Meekren*, and *Roonhuyſen*, as they themſelves aſſure us, have perform'd upon young Perſons of twelve, ſixteen, eighteen, and even twenty-three Years of Age, who were born with wry Necks, and yet had them, after ſo long a Space of Time, reſtor'd to their juſt and natural Poſition. But when ſuch a Misfortune happens after Nativity, in Puberty, or in adult Age, it then proceeds either from a Burn in the Neck, and too great a Conſtriction of the Skin on either Side, or from a ſpaſmodic and ſtrong Contraction of one of the maſtoide Muſcles, repreſented (*Tab.* 42. *Fig.* 12. A. A.) which, by little and little, becomes dry and indurated; or it may be owing to a preternatural Relaxation of one of thoſe Muſcles, in conſequence of which, it will be extremely difficult to prevent the ſtronger Antagoniſt Muſcle from contracting the Head and Neck to the oppoſite Side; or laſtly, according to the Opinion of *Roonhuyſen*, it may proceed from ſome preternatural Ligament drawing the Head downwards. If, then, this Diſtortion or Wryneſs of the Neck be occaſioned by any or either of theſe Cauſes, it ought by no means to be look'd upon as deſperate, and abſolutely incurable, eſpecially if it be of no long Standing, and in a young Subject.

The Method of Cure is as follows: If the Diſorders be recent, and occaſion'd by corrupt or ſuperfluous Humours, commonly call'd Defluxions or Catarrhs, Heat, and mild Sudorifics, are generally very ſerviceable. If it proceeds from other Cauſes, as particularly the Contraction of a Muſcle, or the Conſtriction

Conſtriction of the Skin by a Burn, we muſt endeavour by the frequent Uſe of Fomentations and Ointments, with emollient Oils and Plaiſters, to mollify and relax by little and little the contracted Parts, while the Head is to be held inclined to the oppoſite Side by a convenient Bandage. *Nuck* and *Sorengen* recommend the Uſe of a proper Inſtrument, (*Tab.* 42. *Fig.* 13.) compos'd of a Kind of Steel Arch (B. B.), and a very ſoft Band or Collar (A.). This Collar is to be put about the wry Neck, and a Cord being put through the Ring (C.), the Patient is to be ſuſpended by it ſeveral times in a Day, for a Quarter of an Hour together, or ſo long as he can conveniently bear it. If theſe Remedies prove of little Service, which, as we are aſſur'd by *Tulpius* and *Roonbuyſen*, very frequently happens, or if the Diſorder be grown too inveterate, we muſt proceed to the Operation.

If the Diſorder then be owing to a Conſtriction of the Skin from a Burn, it will be neceſſary to make one, two, or more tranſverſe Inciſions in the contracted Parts of the Skin, taking all due Care to avoid wounding the jugular Vein. Theſe Inciſions are to be fill'd with Lint, in order to dilate the Skin, and treated with ſome digeſtive Ointment, like other Wounds, while Care is to be taken, at every Dreſſing, to draw the bended Head at a juſt Diſtance towards the contrary Side, by a proper Bandage, till the Wounds being fill'd up with new Fleſh, the Skin is prolong'd, and the Head by that means acquires an eaſy and proper Poſition.

If the Wryneſs or Diſtortion of the Neck proceeds from a too great Aſtriction or Contraction of one of the maſtoide Muſcles, or ſome preternatural Ligament, they are to be divided by a tranſverſe Inciſion, with a crooked Knife, in their loweſt Part near the Clavicle or Sternum; but due Care muſt be taken to avoid every conſiderable Vein and Artery, the wounding of which might occaſion a dangerous Hæmorrhage. To ſtop the Effuſion of Blood, the Wound is immediately to be fill'd with Lint, and afterwards, by means of ſome digeſtive Ointment, or Oil of Hypericum, or (Balſam of Copaiva,) which laſt is recommended by *Roonbuyſen*, to be gradually conglutinated with a large Cicatrix. *Tulpius*, *Meekren*, and *Roonbuyſen*, give us Relations of Caſes which occur'd to them, in which, after cutting the preternatural Ligament or Tendon, the inclin'd Head ſtarted back with ſurpriſing Celerity, and with a ſort of Impetus, into its natural Poſition. In the Management of the Cure it ſeems neceſſary, tho' omitted by the forementioned Authors, to uſe a Bandage for holding up the Head, till the Conglutination is perfected, or till the Neck has recover'd its right Situation. They who deſire more particular Obſervations on this Subject, may conſult *Tulpius*, eſpecially *Lib.* 4. *Cap.* 58. *Meekren*, *Cap.* 33. and *Roonbuyſen*, *Obſerv.* 22. and 23. But the more modern *French* Surgeons, which ſeems ſurpriſing, mention not a Word neither of this Diſeaſe, or its Cure. *Heiſter*, *Chirug. Vol.* 2.

The Operation is thus perform'd, according to *Sharp*.

The Operation of cutting the wry Neck is very uncommon, and is never to be practis'd, but when the Diſorder is owing to a Contraction of the maſtoide Muſcle only, as it can anſwer no Purpoſe to ſet that Muſcle free, by dividing it, which is all that is to be done, if the others of the Neck are in the ſame State, and more eſpecially if it has been of long Standing from Infancy, becauſe the Growth of the Vertebræ will have been determined in that Direction, and make it impoſſible to ſet the Head upright.

When the Caſe is fair, the Operation is this. Having laid your Patient on a Table, make a tranſverſe Inciſion thro' the Skin and Fat, ſomewhat broader than the Muſcle, and about one third of its Length from the Clavicle; then paſſing the probed Razor with Care underneath the Muſcle, draw it out, and cut the Muſcle. The great Veſſels of the Neck lie underneath, but I think, when we are aware of their Situation, there is no great Danger of wounding them. After the Inciſion is made, the Wound is to be cram'd with dry Lint, and always dreſs'd ſo as to prevent the Extremities of the Muſcles from reuniting, to which End they are to be ſeparated from each other as much as poſſible, by the Aſſiſtance of a ſupporting Bandage for the Head, during the whole Time of the Cure, which will generally be about a Month. *Sharp's Surgery.*

Wounds *of the* Neck.

Wounds in the Neck are certainly no leſs troubleſome and dangerous, than Wounds in the Breaſt and Abdomen; whence it is ſurpriſing, that there ſhould be found, among the Profeſſors of Surgery, ſome who in their Writings treat not at all, or at leaſt very ſlightly, of Wounds of this Kind.

There is a great Variety of Wounds in the Neck: Some affect only the outward Skin and Fleſh, and are therefore leſs afflictive and dangerous; but the moſt terrible, and indeed incurable, Wounds, are thoſe which are inflicted on ſome of the larger Veins or Arteries, ſuch as the jugular and vertebral Veins, or the Carotides; or where the Aſpera Arteria, Fauces, Medulla Spinalis, the Nerves which deſcend by the Neck, ſuch as the Par Vagum, the Nervi intercoſtales and diaphragmatici, receive a Wound; or where ſeveral of theſe Parts happen to be wounded at the ſame time.

The Nature of a Wound in the Neck, and which are the injur'd Parts, may be diſcover'd by the Eye, or by conſidering the Place where the Wound was inflicted, with the Aſſiſtance of Anatomy, or by obſerving the conſequent Symptoms. From this Diagnoſtic the Prognoſtic will eaſily and naturally follow; for whoever is thoroughly acquainted with the Condition of a Wound, will find no great Difficulty in determining the Event of it. When therefore only the Skin and Fleſh are injur'd, we have no Reaſon to be apprehenſive of any ill Conſequence; but when the Parts of the Neck are Partakers of the Injury, and have a very conſiderable Share in the ſame, there is but too much Reaſon to be concern'd for the Safety of the Patient, becauſe theſe Parts are of abſolute Neceſſity to Life itſelf, tho' even in this Circumſtance, where the Wound is very ſmall, it is ſometimes known to be cured.

Wounds of the Arteries in this Part are ſeldom or never cured; for in this Caſe the Patient uſually bleeds to Death, before a Surgeon can be call'd to his Aſſiſtance; tho', to ſpeak the Truth, the Preſence and Induſtry of the Surgeon are found to be of little or no Service; for it is extremely difficult to ſtop the Effuſion of Blood in this Part, not only on account of the Largeneſs of the Arteries here ſituated, but from the Impoſſibility of making a Ligature upon the wounded Veſſels, ſtrong enough to ſuppreſs the vehement Efflux of the Blood.

A Wound of the external Jugular is not attended with much Danger, if a Surgeon be call'd in time; for not only the Hæmorrhage may be ſtopp'd by a gentle Compreſſion, as appears by the frequent Practice of Blood-letting in this Part, but alſo a Wound made in that Vein cloſes up, and is conglutinated in a kind of ſpontaneous manner. But, on the contrary, Wounds of the internal Jugulars are very dangerous, both on account of their extraordinary Size, which uſually exceeds that of a Finger, and alſo from the Deepneſs of their Situation, which renders it extremely difficult to make Ligatures upon them. And tho' there be ſome Surgeons, who, being perſuaded by the Force of theſe Reaſons, have preſumed to declare all Wounds of the internal Jugulars incurable, I can by no means agree with them, that it is perpetually ſo. On the contrary, I am of Opinion, that where the Wound in theſe Veins is not very large, and a Surgeon is ready at hand, before the Patient is too far exhauſted and debilitated by the Hæmorrhage, it is not impoſſible to ſave Life, and effect a Cure. But after what manner thoſe Kinds of Wounds are to be treated, we ſhall teach below.

Wounds in the Aſpera Arteria are almoſt all pronounced incurable, or abſolutely mortal, by Profeſſors and Writers of Surgery. I am ſo far from intending to contradict them in this their Sentiment, that I ſhall rather endeavour to ſupport it in ſuch Caſes, where the Aſpera Arteria is wholly divided, or is wounded within the Thorax, or, as it uſually happens, when the Carotids and Jugulars are alſo cut through. But, on the other hand, if it be only wounded in the fore Part, and the neighbouring Veſſels before-mentioned remain entire, it will admit in good meaſure of a Cure, as is moſt certainly evident, from Examples within the Compaſs of our own Obſervation, and others every-where to be met with.

The Patient is in a very dangerous Condition when the Oeſophagus is much wounded, or entirely divided, becauſe not only the Paſſage of Aliment is intercepted, but the Part is ſo ſituated, that it can ſcarce be wounded without injuring ſome of the adjacent Nerves and Arteries; and, beſides, the Treatment of ſuch a Wound is commonly very difficult and troubleſome to the Surgeon. But when the Oeſophagus is the only Subject of the Wound, and the Opening but ſmall, a Cure may doubtleſs ſometimes be performed.

All Wounds of the Medulla Spinalis are extremely dangerous, and principally when they are inflicted about the Neck. It is no Wonder, therefore, that we have ſcarce an Inſtance of one recovering from a conſiderable Wound of this Kind. The Reaſon of this will readily appear, if we conſider, that ſeveral Nerves, which are abſolutely neceſſary to the vital Functions, proceed from this Part; that the vertebral Veins and Arteries can hardly avoid being wounded at the ſame time, and that ſuch Wounds are by their Situation render'd almoſt incapable of being rightly treated, by conveying the proper Remedies for ſtopping the Blood, and cleanſing the Part. Nor are Wounds of the larger Nerves of the Neck leſs to be dreaded, becauſe they are ſeldom or never inflicted without depriving the nobler Parts of the Breaſt and Abdomen, to which they are aſſiſtant, of all Senſe and Motion.

The Treatment of Wounds in the Neck differs according to their various Natures. When only the Skin and Fleſh are divided, the Cure is to be manag'd after the ordinary way of treating ſlight Wounds. When the external Jugular is wounded, Application of pretty thick Bolſters, with a Bandage, is generally all that is requir'd; for the ſame Methods, which we uſe after Bleeding in that Vein, are ſufficient.

If the internal jugular Vein happens to receive a Wound, which is known to be but ſlight by the moderate Effuſion of Blood, the Hæmorrhage may eaſily be ſtopt, by filling the Wound with Pledgets of Lint, or the orbicular Fungus, which they call *Crepitus Lupi*, or *Boviſt*, laying over them ſquare Bolſters, and ſecuring the Whole with a Bandage drawn as tight as the Situation of the Part will permit. For as an Hæmorrhage is much more eaſily ſuppreſs'd in a Vein than in an Artery, ſo the principal Part of the Cure in this Caſe conſiſts in the accurate Compreſſion of the wounded Veſſel, which is generally ſucceeded by a ſpeedy Conglutination. Sometimes it happens, that this Dreſſing of the Wound, which we have here directed, has no Effect; in this Caſe the wounded Vein muſt be compreſs'd by an Aſſiſtant with his Finger, or by a new chirurgical Inſtrument, repreſented in *Tab.* 26. *Fig.* 2. or ſome other like it, till the Hæmorrhage be entirely ſtopt; and this Compreſſion muſt ſometimes be continued for a Day or two. The ſame Method is to be obſerv'd for Wounds of the vertebral Veins. The Blood being ſtopt, the Dreſſings are not to be remov'd till the third Day, and then a vulnerary Balſam and Plaiſter may be apply'd to heal the Wound.

When the internal jugular Vein receives a large Wound, the Patient generally dies in a very ſhort time with the Loſs of Blood. But if a Surgeon happens to be preſent, or comes the next Inſtant, I would adviſe him immediately to apply Bolſters to the Place, and to compreſs them with his Finger, and then to enlarge the Wound by Inciſion upwards lengthwiſe, till, by Help of a crooked Needle, he can make a ſtrong Ligature upon it; after which he may fill up the Wound, and treat it after the Manner mentioned in the preceding Paragraph: By this means, tho' the Courſe of the Blood through that Veſſel be entirely cut off, yet the Life of the Patient may be ſaved, as I am ſatisfy'd from a Multitude of Experiments made upon Dogs, who were able to live without any remarkable Inconvenience after the Tying of their internal jugular Vein; it is better therefore to try this doubtful Remedy than none at all.

A Wound in the carotid Artery is attended with yet greater Danger than one in the internal jugular Vein; but, if a Surgeon be at hand when the Wound is receiv'd, I think he ſhould attempt to cure it by the ſame Method as the other. The Cure of this Kind of Wound is more likely to ſucceed in the upper and middle Part of the Artery, than in the lower. But if the Trunk of the Artery be not divided, but only one or two of its Branches near the Head, the Wound is to be fill'd up with Lint, dipt in ſome ſtyptic Liquor, if you have it ready; and upon this you are to lay Bolſters one above another, increaſing in Largeneſs to the uppermoſt, ſecuring all with a tight Bandage, and ordering an Aſſiſtant to compreſs the Part for ſome time with his Hand. By this Method I have ſucceſsfully ſtopt a violent Stream of Blood, almoſt as big as a Finger, flowing from a Branch of the carotid Artery, which I have divided in extirpating very large, tumid, ſcirrhous, parotid, or ſubmaxillary Glands. But in theſe Caſes it is neceſſary to be obſerv'd, that the Dreſſings are not to be remov'd till the third or fourth Day, in order to avoid a new and violent Hæmorrhage, which otherwiſe uſually happens, as I myſelf have experienc'd.

As to the Treatment of Wounds in the Aſpera Arteria, the Surgeon's principal Care, after cleanſing the Wound of the Blood, ſhould be to unite the divided Parts, by means of ſticking Plaiſters, or, where the Wound is large, by making two Sutures with a crooked Needle. This done, he is to dreſs the Part with ſome vulnerary Balſam, ſticking Plaiſters, and Bolſters, and to ſecure all with a firm Bandage, adviſing the Patient to keep his Head always bending forward: By this Method the wounded Part will, very probably, by degrees be conglutinated, eſpecially if the Wound be inflicted by Puncture, or by a cutting Inſtrument. But if a Piece of the fore Part of the Aſpera Arteria be taken off by a Bullet, a Suture then ſeems improper: Wounds of this Kind, as I have learnt by Obſervation, are more readily healed and cured by the Uſe of a digeſtive Ointment, or vulnerary Balſam, the Head being kept bending forward. If the Aſpera Arteria be intirely divided, and the lower Part of it contracts itſelf, and ſinks to ſuch a Depth as that it cannot be laid hold on, and united to the upper Part, the Caſe is deſperate, and Death unavoidable.

When the Oeſophagus is wounded, the greateſt Part of what the Patient eats or drinks comes out at the Wound, which is often ſucceeded by the Hiccough and Vomiting. If the Oeſophagus be entirely divided, the Patient muſt die; but where it is only perforated in ſome Part, the moſt effectual Method is to dreſs the Wound with ſome vulnerary Balſam, and endeavour to unite it by ſticking Plaiſters, adviſing the Patient to a ſtrict Abſtinence for ſome Days, or at leaſt to be very ſparing of Food, and inſtead thereof, preſcribing nouriſhing Clyſters prepar'd of good Broths and Milk. But when the Neceſſities of Nature require Nouriſhment by way of the Mouth, the Wound ſhould immediately be well cleans'd afterwards, leſt ſome Reliques of the Food ſhould adhere to the Place, and putrefy, which might be ſucceeded by bad Symptoms; this done, the Wound is to be bound up again, and treated as before, till it be healed.

If any Part of the Medulla Spinalis happens to be wounded, the ſafeſt Method is to dreſs the Wound with Balſam of Peru, or Eſſence of Myrrh and Amber, or Spirit of Maſtich, or ſome Medicine of the like Nature, mix'd with Honey of Roſes, ſpread upon Lint, and apply'd warm. The Event muſt be left to God, and a good Conſtitution; for ſlight Wounds in theſe Parts are now-and-then healed, but large Wounds bring with them inevitable Death.

Wounds of the large Nerves, belonging to the Neck, are almoſt conſtantly ſucceeded by a ſpeedy Death; but where the Wound is but ſlight, the Cure may probably be beſt accompliſh'd by the ſame Method, as we preſcrib'd for Wounds of the Medulla Spinalis. *Heiſter*, *Chirurg.*

CERUMEN. Ear-wax.

The *Cerumen*, or *Marmorata Aurium* of the *Latins*, and the κυψελὶς, the κυψέλη, and the ὦτων ῥύπος, correſpond to what in *Engliſh* we call the Wax of the Ear, which is that natural Excrement collected in the Meatus Auditorius, and diſcharg'd from the Glands of theſe Parts thro' the Membrane which lines them. It is fluid on its firſt Diſcharge, but by its Continuance it becomes thicker, more ſolid, viſcid, of the Conſiſtence of Clay, and of a bitter Taſte. It is by ſome rank'd in the Claſs of Medicines, eſpecially that Species of it which is obtain'd from the human Ears, and which is us'd both internally and externally. Thus *Paulus Ægineta*, in the third Chapter of his ſeventh Book, informs us, that the Wax of the Ears cures Fiſſures of the Skin about the Roots of the Nails; and *Pliny*, in the fourth Chapter of his twenty-eighth Book, acquaints us, that the Wax of the Ears cures Bites inflicted by Men; and immediately ſubjoins, that it cures the Bites of Scorpions and Serpents, if apply'd immediately to the Part affected. *Helmont* affirms, that it affords great Relief in Punctures of the Nerves. *Ettmuller* ſays, that the ſame Obſervation is confirm'd by the Experience of others; he alſo recommends the Wax of human Ears, as an excellent Vulnerary, either by itſelf, or in Conjunction with Balſam of Sulphur, or Peruvian Balſam, if laid upon Wounds, eſpecially of the recent Kind, made by Puncture in the nervous Parts. He alſo affirms, that, in Conjunction with the expreſs'd Oil of Walnuts, it is an excellent Deterger of Wounds; or,

Take of the Wax of the Ear, two Ounces; of Sugar of Lead, one Dram: Mix them up into a Liniment, with a ſufficient Quantity of the expreſs'd Oil of Walnuts.

This ſame Author informs us, that this Wax, when boil'd with expreſs'd Oil of Walnuts, is an excellent vulnerary Balſam for the Cure of recent Wounds. And *Agricola*, in his *Chirurgia parva*, tells us, that he has an Ointment which ſoon proves highly effectual, and performs ſurpriſing Cures in Inflammations, Tumors of the Joints, and Suppurations. The Compoſition is this following.

Take of the Wax of the Ears, three Drams; of the Sugar of Lead, two Drams; and of the expreſs'd Oil of Haſel, a ſufficient Quantity: Mix all together, and if it is wanted of a thicker Conſiſtence, it may be inſpiſſated over the Fire.

Internally half a Dram of the Wax of the Ears, taken in any proper Liquor, is ſaid to be a Specific for the Colic. In the *Eph. N. C. Vol.* 2. we have an Account of an old Printer, who, after having us'd Spectacles for a great while, at laſt acquir'd a clear Sight, and laid them aſide; which happy Change he attributed to his daily anointing the internal *Canthi* of his Eyes, and his Eyelids, with the Wax of the Ears. *Serenus Samonicus* recommends the Wax of Cattles Ears for the Cure of a Furunculus or Boil. The Bitterneſs of the Wax of the Ears, and its being of ſuch a Conſiſtence, as if it was compos'd of Wax and Oil, are Circumſtances which leave us no Reaſon to doubt of its being of a ſaponaceous, abſtergent, and cleanſing Quality, and conſequently of a vulnerary Nature. I ſhall here conclude with the Words of *Pauli*, in his *Diſſertatio de Medicamentis e Corpore humano deſumptis*. Tho', ſays he, this unuſual and naſeous Medicine were of ſo much Worth and Excellence, that nothing could be objected againſt it; yet there are many Remedies already approved, and more pleaſant in themſelves, by which the Intentions, with which this Medicine is preſcrib'd, may be equally well anſwer'd; for who doubts of the ſalutary Effects produced by Sperma Ceti in the Colic? Or who doubts, that the Balſam of *Peru*, or *Capivi*, are excellent Vulneraries? Not to mention other Things exhibited, with greater Applauſe, by the more cleanly and ſkilful Phyſicians. See AURIS.

CERUSIANA. The Name of a compound Medicine, mention'd and deſcrib'd by *Galen*, in his Treatiſe *de Compoſ. Medicam. S. Loc. L.* 7. *C.* 5.

CERUSSA, Ψιμύθιον. *Dioſcorides.*

Ceruſſa & ſandix, Offic. *Ceruſſa*, Aldrov. Muſ. Metall. 164. Worm. 131. Charlt. Foſſ. 54. Matth. 1351. *Plumbum album, quibuſdam.* CERUSE, WHITE LEAD. *Dale.*

It is of a cooling Quality, ſtops Perſpiration, mollifies, fills, and attenuates: It gently repreſſes Excreſcences, and induces a Cicatrix; for which Purpoſes it is made an Ingredient in Cerates, gentle Plaiſters, and Troches; but it is of the Number of thoſe Things which are of a deadly Quality. *Dioſcorides, Lib.* 5. *Cap.* 103.

Its Uſe is only external; being poiſonous, internally exhibited. See PLUMBUM.

CERUSSEA *Urina.* White Urine, which looks as if Ceruſs had been mix'd with it. *Paracelſus* looks upon it to be a Sign of Death, or of conſiderable Obſtructions in the Liver.

CERVUS. The Stag.

The *Cervus* of the *Latins*, and the ἔλαφος of the *Greeks*, import what in *Engliſh* we call the Stag or Hart, the Male of the red Deer. To give a Deſcription of this Animal, is unneceſſary; and, to give its natural Hiſtory, inconſiſtent with our Deſign. We ſhall, therefore, only conſider what Aliments, and what Medicines, are obtain'd from it. The Horns, then, of the Stag or Deer, whilſt as yet young, tender, ſprouting, and not become hard, are reckon'd a Delicacy by ſome Perſons of a particular Taſte. Theſe are prepared in different manners; ſometimes boil'd, for Inſtance, and ſometimes cut down into Pieces, and fry'd in a Frying-pan. *Petrus Caſtellanus*, in his κρεωφαγία, *L.* 2. *Cap.* 3. affirms, that a ſurpriſing Efficacy is aſcrib'd to theſe Horns againſt all Kinds of Poiſon; and he himſelf does not deny them an alexipharmic Quality, but thinks they do not deſerve the Name of an Aliment, becauſe they cannot prove more nutritive than any other Cartilage. But, in my Opinion, *Melchior Sebizius*, in his *Manuale*, is in the right, when he pronounces the Man miſtaken, "who "judges this a ſalutary Aliment; for theſe ſprouting Horns are "glutinous, thick, tough, viſcid, and earthy. Their Smell "and Taſte alſo, in ſome meaſure, reſemble thoſe of Funguſes."

The Fleſh of this Animal is accounted nearly like Beef; and, according to *Celſus*, in the eighteenth Chapter of his ſecond Book, it is of a highly nouriſhing Quality. According to *Hippocrates*, in his ſecond Book *de Diæta*, the Fleſh of the Hart is of a drying Quality, does not paſs eaſily off by Stool, but provokes Urine. Elſewhere, in his Work *de Morbo Sacro*, he claſſes the Stag's Fleſh among thoſe which excite violent Diſorders in the Inteſtines. *Pliny*, in the thirty-ſecond Chapter of his eighth Book, informs us, that the Fleſh of the Stag is ſo far from generating Fevers, that it prevents them: For, "ſays he, I know ſome Women of Diſtinction, who, habi-"tuating themſelves to taſte it every Morning, have, by that "means, lived to a great Age, without the Attacks of Fe-"vers. This they think ſo much the more effectual and in-"fallible, if the Animal is kill'd only by one Wound." *Johannes Bruyerinus*, in his Treatiſe *de Re Cibaria, L.* 13. *Cap.* 23. pronounces this Aſſertion of *Pliny*'s a fatal Miſtake; and affirms, that the Fleſh of the Stag is not only very hard, and yields bad Juices, but alſo, that it is of difficult Digeſtion, and generates black Bile; for which Reaſon it renders the Bodies of thoſe who eat it diſpoſed not only to violent Fevers, but alſo to other terrible Diſorders; in conſequence of which, they who are careful of Health will uſe it rarely. *Simeon Sethi* not only affirms, that the Fleſh of Stags yields bad Juices, is of hard Digeſtion, and generates Melancholy; but alſo cautions us to abſtain from it in the Summer, becauſe theſe Animals, at that Time, frequently feed upon Vipers and Serpents, and are conſequently poiſonous, and hurtful to the Conſtitution. But *Melchior Sebizius*, in his Treatiſe *de Alimentorum Facultatibus*, informs us, that this Aſſertion is contrary to Experience; and that their Fleſh is better in the Summer than in the Winter, becauſe, in the former Seaſon, they are better nouriſh'd than in the latter; and that it may be eaten with Safety. It is frequently uſed in the Entertainments of the Nobility, and Perſons of Diſtinction, who delight in Hunting; eſpecially that of the Calves, which is moiſter, ſofter, finer, of a more eaſy Digeſtion, of a more agreeable Taſte, and not at all unwholſome. Next to the Fleſh of theſe, is that of the Animals when they are three Years of Age. The Part of the Deer principally in Uſe, among the more delicate People, is that towards the Back and Loins. The Fleſh of the caſtrated Deer, before the Eruption of the Horns, is the beſt; ſince it is temperate, both with reſpect to Heat and Dryneſs. Some prefer the young Calves, when ſucking, to thoſe which are older. The Fleſh of the Stag is prepared in various manners; for, according to *Sebizius*, in his Treatiſe *de Alimentorum Facultatibus*, it is either boil'd or roaſted, or put into Paſties, or ſtew'd. To uſe the Words of *Caſtellanus*, in his κρεωφαγία, I can by no means approve of the Curioſity of ſome Perſons of Diſtinction, who think young Calves of the red Deer, cut out of the Bellies of their Mothers, a Delicacy; for, in my Opinion, they have too much of a diſagreeable Mucor to be eaten, without producing a Loathing; and they abound with a Juice ſo crude, that they cannot be eaſily digeſted, and converted into a ſalutary Aliment. Beſides, the Stag's Fleſh, in the Months of *Auguſt* and *September*, when the Animal is at Rut, is ungrateful, and ſmells ſtrong, like that of Goats, as *Ariſtotle* long ago obſerved. The Fleſh of old Deer is not a laudable Aliment, becauſe it is dry, and of difficult Digeſtion, creates Obſtructions, promotes the Generation of a melancholic Juice, and diſpoſes to Fevers. In weak Conſtitutions it creates Diſorders of the Inteſtines, becauſe it is of difficult Digeſtion. But why *Hippocrates* affirm'd, that the Fleſh of this Animal provokes Urine, is what cannot be accounted for.

If we conſider, that the Food of Deer is only Vegetables and Water, we ſhall readily perceive, that the Fleſh of this Animal cannot be highly alcaleſcent, unleſs render'd ſo by much Exerciſe and Heat. A Stag which is ſhot, therefore, muſt be a leſs alcaleſcent Animal, than one which is hunted. It is remarkable, that the Legiſlator of the *Jews* orders the Throat of a Stag to be cut, that it may bleed ſufficiently; probably with a View to leſſen the Tendency to an alcaline Putrefaction, which the Fleſh of Deer contracts after much Motion.

Many medicinal Preparations are obtain'd from this Animal. Thus, in the Works of the Antients, we read, that almoſt every Part of it is effectual againſt Poiſons; and the Moderns have generally given into the ſame Opinion, except with reſpect to its Tail alone; the Extremity of which, in a particular manner, is accounted poiſonous; and, when eaten, is ſaid to excite the moſt cruel Symptoms, ſuch as intolerable Diſorders of the Præcordia, and frequent Faintings, by which it ſpeedily proves fatal to the Patient, unleſs a Vomiting be quickly excited, and the Theriaca, together with Abſorbents, exhibited. But this Opinion, concerning the poiſonous Nature of the Tail, ſeems to have drawn its Origin from an Error of the Antients, who imagin'd, that the Bile of the Stag was lodg'd in its Tail. *Ettmuller*, in his *Opera Medica*, *T.* 1. thinks the Whole of the Stag is deſervedly accounted alexipharmic and diaphoretic; and that all the Preparations of it are poſſeſs'd of the ſame Qualities. *Muſitanus*, in his *Pyretologia*, affirms the ſame thing, in expreſs Words. Hence *Cardan* aſſerts, that the inſpiſſated Tears of the Stag, when tied to any Part of the Body, prove effectual againſt Poiſons. *Agricola* affirms the ſame concerning the Tooth of the Stag; but others aſcribe this Virtue to the Hoof of one of its Right Feet. According to *Sextus*, a *Platonic* Philoſopher, if a Man is cloath'd with a Stag's Skin, he is Proof againſt Poiſon. It is alſo aſſerted, in the *Theatrum Sympatheticum*, that the Bone of the Stag's Heart, wore about any Perſon, defends him againſt the Bites of venomous Animals. *Baricellus*, in his *Hort. Genial.* declares himſelf of the ſame Opinion. *Ælian* alſo, and *Mizaldus*, affirm, that Serpents never approach the Place where the Fat of the Stag is kept. And *Dioſcorides*, in the ſixty-ninth Chapter of his ſecond Book, informs us, that thoſe who are anointed with the ſame Subſtance have no Reaſon to dread the Bites of Serpents. The ſame Author alſo affirms, in the fifty-ſecond Chapter of the ſame Book, that Serpents are baniſh'd by the Smoak of crude Hartſhorn. In the thirty-ninth Chapter of the laſt-quoted Book, he tells us, that thoſe who are bit by Vipers receive Relief by the Penis of the Stag, triturated and drank in Wine. *Guainerius*, after the Exhibition of Bezoar, and Preparations of the Theriaca, orders the Bites or Stings of venomous Animals to be tightly tied up with a Thong of Hart's Skin; for, ſays he, this Skin is of ſingular Efficacy againſt Poiſons.

Whether the Accounts relating to the Enmity between the Stag and Serpents are juſt or fabulous, or whether the Stag, in conſequence of its Longevity, is poſſeſs'd of any peculiar Virtues for procuring long Life, and preventing Diſeaſes, are Points we ſhall not take upon us to determine; ſince we have not the Sanction of Experience to vouch our Aſſertions in either of the Caſes. Forbearing, therefore, to ſwell the Article with various Conjectures, and the Authorities of the Learned on theſe Subjects, we ſhall only conſider thoſe Parts of the Animal which have any medicinal Uſes aſcrib'd to them; omitting, at the ſame time, their alexipharmic Qualities, of which we have already treated. But, that what follows may be the better underſtood, we muſt obſerve, that the Juices of the Stag, as well as of other Animals, have a Tendency to an alcaline Putrefaction; which is ſtill heighten'd, becauſe, in conſequence of their Swiftneſs, their Bodies are much exerciſed.

As to the medicinal Virtues aſcrib'd to the Tail of this Animal, *Xenophon*, in the fifth Chapter of the nineteenth Book of the *Geoponica*, informs us, that if we anoint the Teſticles and Pudenda of any Animal with the Stag's Tail calcin'd, and triturated with Wine, it quickens the Deſire of Venery in that Animal; which, again, is allay'd by anointing the ſame Parts with Oil: And the ſame Effects are alſo produced in Men, by theſe Methods. *Rieger* is of Opinion, that not only the Tail,

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but alſo any other Part of the Stag, as well as of any other Animal, when not ſo thoroughly calcin'd as to deſtroy the whole Oil, in which Caſe the Aſhes are entirely inſipid, may, by its Acrimony, irritate the Fibres, and procure that Degree of Rigidity requiſite for a due Erection; whilſt, at the ſame time, the Wine, by its ſtimulating Quality, contributes to the Production of the Effect. The Tail of this Animal is not, however, kept in the Shops.

Johnſton, in his *Hiſtoria Naturalis de Quadrupedibus*, informs us, that *Rhaſis* recommends the Brain of the Stag in Pains of the Hips and Sides; as alſo for the Cure of Fractures. In conſequence of its pinguious and unctuous Nature, it may be proper for external Uſe, where the Intention is to mollify the Parts. But, as we have great Plenty of ſuch mollifying Medicines, the Brain of this Animal is not kept in the Shops.

Pliny, in the fourteenth Chapter of his twenty-eighth Book, informs us, that the Runnet of the Calf of the red Deer, boil'd with Lentils and Beets, and uſed as an Aliment, is of ſingular Service in Diſorders of the Inteſtines. It is alſo recommended for ſtopping immoderate Diſcharges of the Menſes, and reſolving coagulated Milk. *Scribonius Largus*, in his Work *de Medicamentorum Compoſitione*, recommends it againſt an Epilepſy. It is not, that we know of, uſed in Medicine at preſent; and, as it is an acrid ſtimulating Subſtance, it can only be properly uſed in Caſes, where, by its reſolvent Quality, it may produce ſome happy Effects.

They who aſcribe medicinal Virtues to the Whole of the Stag, claſs its Heart among the moſt conſiderable and efficacious of the cordial Medicines. But the Preparations from this Part of the Animal are rarely uſed, becauſe other Medicines, of equal Virtues, are more eaſily obtain'd.

The Bone of the Stag's Heart is more highly recommended for medicinal Uſes than the Heart itſelf. This Subſtance, according to *Veſalius*, is nothing but the Tendons of the Muſcles of the Heart, about the Origin of the Aorta, and Pulmonary Vein, which in old Harts degenerate, firſt, into a cartilaginous, and then into a bony Hardneſs. This Bone ſeems properly to be ſituated between the Valves of the Root of the Vena Cava, and the Origin of the Aorta, as it were in the Middle of the Septum. Some affirm, that, in freſh-kill'd Stags, this Subſtance is ſoft and flexible, like a Cartilage; but that, when it is for ſome time expoſed to the Air, it aſſumes the Hardneſs and Texture of a Bone. Theſe Bones ought to be of a beautiful white Colour, and not too large, leſt they ſhould be ſuch as are obtain'd from old Oxen; with Bones of which Kind the genuine Bones of the Stag's Heart are often mix'd. This Bone is recommended againſt Poiſons, and for procuring Longevity. It is reported, that, in conſequence of its alexipharmic Quality, it affords an inſtantaneous Relief to pleuritic Patients, if uſed frequently thro' the whole Courſe of the Diſorder. The Reaſon aſſign'd for this is, that it is impregnated with a pretty large Quantity of volatile Salt, by which it contributes to open the Obſtructions of the ſmall Veſſels in the Pleura. It is generally thought to be appropriated, in a particular manner, to Diſorders of the Heart; for which Reaſon it is made an Ingredient in Medicines of a cordial and comforting Nature. It is generally recommended as a Specific againſt Abortion, when exhibited with Grains of Chermes, and in a proper Vehicle. Half a Dram of it is generally exhibited in Powder. *Hildanus* thinks it better when calcin'd, than when crude. It is externally recommended, as an Amulet, in violent Hæmorrhages; for the ſtopping of which it is alſo put into the Patient's Drink; or the Powder of it is blown into his Noſtrils. But as Bones of this Kind are not only found in Stags, but alſo ſometimes in Oxen, and in old Men, *Ettmuller* thinks the particular Virtues, aſcrib'd to this Bone, ſpurious; and imagines, that they have drawn their Origin from a fooliſh Suppoſition of the Heart's being the Seat of the Principle of Life, and of its being poſſeſs'd of a peculiar Degree of Eminence, above the other Parts, on that account. *Stahl*, in his *Ars Sanandi cum Expectatione*, *Satyra Harveana*, juſtly obſerves, that the Bone of the Stag's Heart does not differ from the other Bones of that Animal, in any other reſpect, than that it is in the ſingular Number: We may, therefore, juſtly affirm, that this Bone is poſſeſs'd of no higher medicinal Virtues than the Bones and Cartilages of other Animals. Hence, when reduced to a Powder, it may, in conſequence of its abſorbent Quality, deſtroy Acidities in the Stomach and Inteſtines; and even for anſwering this Intention, according to *Ludovici*, it is ſo far from ſurpaſſing, that, in many Caſes, it does not come up to Crabs-eyes, or calcin'd Hartſhorn. They who prepare Jellies from this Bone, obtain a Subſtance poſſeſs'd of the ſame Virtues with the Jellies obtain'd from the Bones either of the Hart, or of other Animals. If other Ingredients are added, the Effects of the Jelly are to be judged of from the Natures of theſe Ingredients. The Method of preparing a Jelly from the Bones of the Stag's Heart may be ſeen in *Schroder's Pharmacopœia*. Patients, therefore, only ſuffer on account of the Dearneſs, but not of the Effects, of the Medicine, when the Apothecaries, inſtead of the Bone of the Stag's Heart, uſe the Trachea of an Ox in their Compoſitions, as *Matthiolus ad Dioſcor. L. 2. C. 52.* informs us they uſed to do; or when they ſubſtitute in its room the Bones found in the Hearts of Oxen, as *Hildanus* informs us the Apothecaries, for the moſt part, did; or when, in its ſtead, they uſe a pliant flexible Bone, taken from the Head of a Sheep, as *Amatus*, in *Dioſcor.* informs us was cuſtomary among the *Venetians*.

That the Skin of the Stag is effectual againſt Poiſons, has been already obſerv'd. It is alſo recommended againſt Strangulations of the Uterus. *Joel* affirms, that a Belt, made of the Skin of the Stag, kill'd when copulating with the Female, is found, from Experience, to be poſſeſs'd of ſingular Virtues. When applied to the Loins, it is ſaid infallibly to promote the Expulſion of the Fœtus. *Burrhus*, according to *Ettmuller*, recommends Stockings of it againſt the Gout; and he himſelf order'd a Coat to be made of it for a certain Prince. The Shavings of this Skin, taken off with a Pumice-ſtone, and triturated with Vinegar, are ſaid to be proper for anointing an Eryſipelas. The ſame, when put in Beds, is ſaid to be a Remedy for an involuntary Diſcharge of the Urine. We can ſee no Reaſon for extolling the Effects of this Skin ſo highly; nor can we affirm, that they anſwer the Expectations of the Patients, ſince we are perſuaded, that the Opinion of theſe Virtues originally aroſe from an ill-grounded Notion, that all the Parts of the Stag were of ſingular Service in Medicine, and uſeful for many curative Intentions.

The Penis of the Stag, according to *Ettmuller*, is of ſingular Uſe in Medicine: But the Stag muſt be kill'd in the Time of Coition; for, by this means, it is of the greateſt Efficacy in ſtimulating to Venery, when a Dram of it is exhibited in the Form of a Powder, with a poach'd Egg, and a ſmall Quantity of generous Wine. *Solenander* alſo informs us, that it proves a very powerful Stimulus to Venery. But, if the Stag is kill'd in the Act of Copulation, its Penis is of no Uſe againſt a Dyſentery, but rather proves prejudicial. But if the Stag is kill'd at any other time, its *Penis* is an excellent Remedy againſt Dyſenteries and Pleuriſies, either in the Form of a Powder, or ſhaved down. The Doſe is from half a Dram to a whole Dram, in ſome Water appropriated to Pleuriſies and Dyſenteries, adding a little Laudanum Opiatum; or the Shavings of this Penis muſt be boil'd, and the Decoction given to the Patient; or a Jelly muſt be prepared from them, after the Exhibition of which the Patient is to expect a Sweat. In the abovemention'd Diſorders, when frequently repeated, they are of ſingular Uſe; and are very properly added to Antidyſenteric Electuaries. The Penis of this Animal, according to *Bartholine*, in his *Hiſtoriæ Anatomicæ Cent. 6. Hiſt. 50.* is highly proper againſt Colics, and hyſteric Diſorders. Externally, the Penis, reduced to a Powder, and anointed on the Teſticles, in Conjunction with Wine, proves a ſingular Stimulus to Venery. Others commend the Uſe of it againſt a Difficulty of diſcharging the Urine; as alſo in Diſcharges of bloody Urine, the Plague, and for promoting Deliveries. When exhibited in Wine, it is ſaid to be good againſt the Bites of venomous Animals. According to *Welſchius*, in his *Hecatoſteæ*, *Obſ. 75.* a certain Phyſician happily cured Dyſenteries, and Hæmorrhages, only with a Powder, prepared of the Penis and Teſticles of this Animal; adding either a little common Sugar, or red Sugar-candy, which takes its Colour from the Sanders uſed in its Preparation. I am of Opinion, that the Veracity of ſo great Authors is not to be call'd in Queſtion, provided theſe Accounts are founded on their own Experience, and not on the Reports of others. But Reaſon convinces us, that no other medicinal Virtues are to be expected from the Penis of the Stag, than what are owing to the abſorbent drying Quality of its Powder, or the mucilaginous and gelatinous Nature of its Decoction; ſo that a Suſpicion remains, that the Effects produced are owing to the Subſtances taken in Conjunction with this Penis, ſuch as generous Wine, and poach'd Eggs, Things which greatly ſtimulate to Venery. It is not improbable, that the medicinal Virtues attributed to the Penis of the Stag draw their Origin from the groundleſs Opinion of the Antients, that the Whole of the Stag was uſeful for many medicinal Purpoſes. And as for its proving a Stimulus to Venery, I ſuſpect this Opinion is owing to the ſalacious and hot Diſpoſition of the Animal.

The Tears of the Stag, which are the Sordes collected in the greater or interior Angle of the Eye, reſembling indurated Wax, or rather the indurated Wax of the Ears, and which ſmell ſomewhat rank, like the Sweat of the Animal, are recommended for their drying, corroborating, aſtringent, and diaphoretic Qualities. They are alſo ſaid to be good againſt Poiſons, and contagious Diſeaſes; and to be proper in difficult Labours, and for expelling the dead Fœtus. The Doſe is ſaid to be three or four Grains.

According to *Franciſcus Joel*, half a Scruple of this Subſtance, drank in generous Wine, is proper for expelling all Kinds of Poiſons by Sweat. *Avenzoar*, a celebrated *Arabian* Phyſician,

Phyſician, in his *Abhomeron*, *Lib.* 1. *Tract.* 13. *C.* 6. informs us, that he cured a Jaundice, produced by taking ſome poiſonous Subſtance, by an Exhibition of the Weight of three Grains of Barley of this Subſtance, with five Drams of Gourd-water. When worn by way of Amulet, and frequently applied to the Noſtrils, it is ſaid to be a *Panacea*, or univerſal Medicine. At preſent this Subſtance is not uſed for medicinal Purpoſes; and *Ludovici*, in his *Pharmacopœia*, affirms, that, when exhibited in a large Quantity, its Virtues are not ſo conſiderable, as to render ſo nauſeous a Remedy preferable to other more pleaſant, and more eaſily obtain'd, Medicines. The Fable on which the remarkable Virtues, attributed to the Tears of the Stag, are founded, is, by *Avenzoar*, deliver'd in the following Words: "That Species of Bezoar is more genuine and uſeful than the "others, which, in ſome Parts of the *Eaſt*, is produced near "the Eyes of the Stag, in the following manner. The large "Stags of theſe Countries ſometimes eat Serpents, in order to "ſtrengthen themſelves; and, before they receive any Injury "from them, run to the freſh-water Rivers, into which they "plunge themſelves, till the Water riſes very near their "Mouths. This they are taught by Nature. They do not "drink any of the Water; for, if they did, they would quick-"ly die: However, they continue in it till their Eyes begin "to ſhed Tears, which become viſcid, and coagulated under "their Eyelids; and which, in Proceſs of Time, become as "large as a Cheſnut, or Haſlenut. But, when they perceive "the Poiſon entirely diſcharg'd, they come out of the Water. "Theſe Tears, when indurated like a Stone, fall off by "Friction, are afterwards found by Men, and accounted a "more perfect and uſeful Bezoar than any other." Hence we underſtand the Reaſon, why theſe Tears are by ſome call'd the Stone or Bezoar of the Stag. *Scaliger*, in his *Exercitationes*, relates another Fable; and accounts for the Origin of theſe Tears from the Longevity of the Animal, in theſe Words: "Before, ſays he, a Stag is an hundred Years old, it produces "no Tears; but, when it is arrived at this Age, there is "form'd, at the Canthus of the Eye, a Subſtance, which ad-"heres to the Bones, and which is harder than a Horn. Its "prominent Part is round, remarkably ſhining, of a yellow "Colour, and mark'd with ſmall black Veins. It is ſo ſmooth "as almoſt to eſcape the Touch; and ſhrinks in ſuch a man-"ner, that it almoſt appears to move itſelf. It is a preſent "Remedy againſt Poiſons; and is advantageouſly exhibited, "with a little Wine, to ſuch as are ſeiz'd with the Plague; "and by its means ſuch a Diaphoreſis is excited, that one "would think the whole Body in Danger of being diſſolved." What Kind of Stone the learned Author here deſcribes, we leave others to determine. We ſhall only obſerve, that ſome Men, celebrated for their Learning, have adher'd to one or other of theſe Opinions above-mention'd, concerning the Production of this Stone. But *Scribonius Largus*, in his Treatiſe *de Medicamentorum Compoſitione*, ſeems to be more in the right, when he calls the Tears of the Stag thoſe rank Sordes, found, when the Animal is taken, in that Corner of the Eye which is next to the Face. Theſe Sordes, he informs us, are gather'd by the *Sicilian* Huntſmen, on account of their Virtues againſt the Bites of Serpents. The celebrated *Harderus* has diſcover'd a peculiar Lachrymal Gland in the Stag, which other Animals want. This Gland has no Communication with the *Glandula Innominata*, nor with the common Lachrymal Gland, both of which are found in the Stag. It is ſituated in the inferior Part of the Orbit, and is furniſh'd with a large Number of Veſſels. By an excretory Duct, peculiar to itſelf, it diſcharges the ſecreted Lymph; and this it does in ſo much the greater Quantity, becauſe it is much larger than the *Glandula Innominata*, and the common Lachrymal Gland. He thinks it probable, that the Lymph, thus diſcharged and inſpiſſated, conſtitutes that Subſtance commonly call'd the Tears of the Stag. See the *Acta Eruditorum Lipſiæ*, for the Year 1694. By what has been ſaid, I do not intend to call the Veracity of thoſe Authors into Queſtion, who affirm, that the Tears, either of a Man or a Stag, may ſometimes happen to aſſume a ſtony Conſiſtence; but theſe are uncommon Accidents; whereas we only here ſpeak of the common Tears of the Stag, or thoſe indurated Sordes, which reſemble the Wax of the Ears.

The Marrow of the Stag, or that ſoft and pinguious Subſtance contain'd in the Cavities of the Bones, is by ſome thought preferable to the Marrows of other Animals, for alleviating Pains, and healing malignant Ulcers. *Dioſcorides* informs us, that thoſe who are anointed with it are Proof againſt Poiſons. And *Ovid*, in his *Art of Love*, tells us, that it was formerly uſed as a Paint or Varniſh for the Face. When this Marrow is old, it becomes rancid, acrid, inflammatory, corroſive, and of a cauſtic Quality: But, when recent, it is of a mild and oleous Nature, and conſequently proper for ſoftening indurated Parts, and moiſtening ſuch as are dry. Hence we know when its Uſe is proper, either externally, for anointing any Part affected, or when exhibited by way of Draught; or when injected, by way of Clyſter, in Gripes of the Inteſtines. *Galen*, for provoking the menſtrual Diſcharge, order'd it to be included in a thin and clean Linen Cloth, and put into the Pudenda of Women, with a Thread at it, in order to pull it out; probably becauſe ſuch a Medicine, by its ſoftening Quality, may prove beneficial where the Mouth of the Womb is preternaturally conſtricted, dry, or indurated; ſince by this means, when the Humours are juſt about to be diſcharg'd, the leſs Reſiſtance may be made to them. *Hippocrates*, in his firſt Book *de Morb. Mul.* for this Purpoſe, orders to anoint the Mouth of the Womb with the Marrow of a Gooſe or Stag, triturated with Ointment of Roſes, and Womens Milk. As emollient and lenitive Subſtances are beneficial in Ulcers which are either dry, or abound with a corroſive Acrimony, the Reaſon is obvious why *Hippocrates*, in the laſt-quoted Book, claſſes the Marrow of the Stag among the Medicines proper for Exulcerations of the Mouth of the Womb. From what has been ſaid, we cannot aſſign a Reaſon why thoſe anointed with it ſhould be Proof againſt Poiſons. If, therefore, we are ſo idle as to believe, that the medicinal Virtues of any Subſtance depend upon Fables, we muſt have recourſe to the Enmity between the Stag and Serpents, in order to account for this wonderful Phenomenon. As for its Uſe in adorning the Skin, I am of Opinion, that it is proper, when other medullary or pinguious Subſtances are ſo; that is, when a Dryneſs or Fiſſures of the Skin are to be remov'd. The Preference ſeems to have been given to the Marrow of the Hind, the Female of the Stag, above that of the Male, becauſe Women, when they us'd this Subſtance as a Medicine, were not allow'd to take it from the Male Stag. But this calls rather for the Laughter, than the ſerious Regard, of a rational Creature. The Marrow of this Animal is not kept in many Shops; nor, indeed, are we at any Loſs on this Account, ſince we can more readily have the recent Marrows of other Animals, almoſt daily kill'd everywhere for the Uſe of Kitchens. When us'd as an Aliment, this Marrow is of difficult Digeſtion; and, when eaten plentifully, is highly injurious; but, when it is duly digeſted, it is very nouriſhing.

As for the medicinal Virtues of the *Elaphopila*, or Hairs collected in the Stomach, and ſometimes in the Inteſtines, of the Stag, ſee the Article ÆGAGROPILÆ. We muſt only obſerve, that this Subſtance is form'd of the Hairs which the Animal, in licking itſelf, ſwallows down; and theſe Hairs are render'd compact and firm by the Filaments of the Vegetables the Animal eats, and the Juice contain'd in the Stomach.

The Lungs of the Stag, when us'd as an Aliment, are ſaid to be of eaſy Digeſtion. But, beſides, the Lungs of this Animal, eſpecially when young, are accounted a valuable Medicine in ſome Caſes; for if we may believe *Pliny*, in the twelfth and ſeventeenth Chapters of his twenty-eighth Book, the Lungs and Oeſophagus of this Animal, dry'd in the Smoak, beat with Honey, or daily taken in Wine, are good againſt a Cough and Phthiſis. We can aſſign no other Reaſon for this, than that Stags, eſpecially when young, by their Swiftneſs demonſtrate the Goodneſs of their Lungs. But the other medicinal Virtues, aſcrib'd to the Lungs of this Animal, are no more to be depended on than this, if we may believe *Johnſon*, in his *Hiſtoria Naturalis de Quadrupedibus*.

As to the Blood of the Stag, when dry'd, it is ſaid, that, when infus'd in Clyſters, it cures Ulcers of the Inteſtines, and inveterate Fluxes; and that, when drank in Wine, it is effectual againſt Poiſons. It is alſo commended againſt the Gout and Pleuriſy. The Doſe is from half a Scruple to a Dram. But notwithſtanding the high Encomiums beſtow'd thereon, it is poſſeſs'd of no other medicinal Virtues than the Blood of other Animals.

That the Suet of the Stag baniſhes Serpents from thoſe who are anointed with it, as *Dioſcorides* informs us, ſeems to be founded on the Perſuaſion, that the Stag, and all its Parts, are poſſeſſed of a Quality, whereby they reſiſt Poiſon. This Suet is alſo ſaid to be good for ſoftening Tumors, conglutinating Wounds, curing Chilblains, and alleviating Pains, even thoſe of the Gout. It is alſo ſaid to be good for Hernias, Excoriations of the Perinæum, and Freckles and Exulcerations of the Face. It is a proper Ingredient in Clyſters intended for the Cure of Fluxes and Dyſenteries. The Oil diſtil'd from this Suet is ſaid greatly to alleviate arthritic Pains, if the Part affected is frequently anointed with it every Day. According to *Hoffman*, in his *Clavis Schroder.* when laid upon a Linen Cloth, melted at the Fire, and apply'd to the Gums, it ſurpriſingly alleviates Tooth-achs, and extracts the Worms which create the Pain. According to *Ettmuller*, "The Suet of the Stag is an excellent conſolidating "Medicine in ſuperficial Excoriations. In a Falling-down of the "Anus, let the Part be anointed with it warm, and gently put up. "It is alſo an excellent Medicine for an Intertrigo, or Galling of "the Skin; as alſo for Fiſſures of the Hands and Feet produc'd by "Cold; for it is of a more penetrating and reſolvent Nature than "any other pinguious Subſtances. Dr. *Neſter* put one Drop of "Stags Suet in the Urine of any Patient who was thought to "be dangerouſly ill. If this Drop ſubſided in the Urine, he "pronounc'd the Caſe deſperate; and, if it floated, he pro-

"gnoſticated

" gnoſticated a Recovery." *Hippocrates*, in his Book *De Morb. Mul.* ordered melted Stags Suet, mix'd with Oil of Roſes, to be laid upon Wool, and put into the Pudenda, in child-bed Women, when the Lochia were not diſcharg'd. The ſame Author, in the laſt-quoted Book, recommends this Suet as a proper Ingredient in Peſſaries againſt Exulcerations of the Uterus; and when, in order to provoke the menſtrual Diſcharge, acrid Peſſaries have been us'd, he orders theſe to be laid aſide, and the Suet of the Stag, melted in Wine, to be apply'd. From what has been ſaid we may infer, that in Caſes where ſuch Subſtances as ſoften, moiſten, and correct Acrimony are proper, Stags Suet, when recent and mild, but not when old and rancid, may be advantageouſly us'd, both internally and externally, like any other Subſtances of a mild and oleous Nature.

As for the Ankle-bone of the Stag, or that ſmall ſquare Bone protuberating above the Hoof, the Powder of it is by ſome highly commended againſt Dyſenteries, Colics, and the Stone; but I think they are in the right who aſſert, that it does not differ in Virtues from the other Bones of the Animal.

But the Part of a Stag moſt celebrated in Medicine is the Horns, of which Authors give the following Accounts.

Vinegar, in which crude Hartſhorn has been boil'd, is, by *Dioſcorides*, *Lib. 2. Cap.* 63. ſaid to remove the Pain attending Dentition, if the Gums are waſh'd with it. Vinegar alone is a fit Medicine for allaying and removing Pains; but whether it receives any additional Virtues from the Hartſhorn, muſt be aſcertain'd by manifold Experience. *Pliny*, in the thirty-ſecond Chapter of his eighth Book, informs us, that the Smell of kindled Hartſhorn is beneficial to epileptic Patients. The Filings of Hartſhorn are ſometimes us'd in the time of the Plague, in order to correct and purify the Air; but they are ill adapted to that Deſign, becauſe they do not reſiſt the putrefactive Corruption of the Atmoſphere, which is at that time requiſite, but rather ſeem to promote it by their alcaleſcent Nature. Theſe Shavings, reduc'd to a Powder, which is call'd prepar'd Hartſhorn, is, according to *Ettmuller*, highly proper in ſeveral Caſes, eſpecially when an Acid in the Primæ Viæ is to be abſorb'd, and a gentle Diaphoreſis promoted. But its diaphoretic Virtue is only granted by thoſe who believe the whole Stag to be poſſeſs'd of an alexipharmic Quality. From this Perſuaſion the Country-people, when labouring under malignant Fevers, make themſelves a Powder of the Shavings of Hartſhorn, macerated and well ſoak'd in a Lixivium of Marſh-trefoil, prepar'd with its own Water and Salt, and then dry'd. By the Uſe of this Powder the Patients are recover'd, not ſo much by the Virtues of the Hartſhorn as by means of the Lixivium. *Willis, de Morbis Caſtr.* informs us, that he compos'd a Powder, for the ſame Purpoſe, of the Shavings of Hartſhorn, with an Admixture of the Roots of Devil's-bit, Swallow-wort, Tormentil, the Leaves of Marſh-trefoil, and Nitre. It is juſtly extol'd for its antiacid Virtue. But the mucilaginous, gelatinous, and tenacious Nature of Hartſhorn, even when reduc'd to a Powder, renders it of difficult Digeſtion by weak Stomachs; and, if it wanted this tenacious Quality, it would be more abſorbent than it really is. That Phyſicians, therefore, might not be reduc'd to a Neceſſity of preſcribing it crude, other Preparations of it are brought into the Shops. Theſe are of two Kinds, obtain'd either with or without Fire. The Preparation by Fire, call'd calcin'd Hartſhorn, is no more than common Hartſhorn, calcin'd till it becomes white, ſpongious, friable, and eaſily reduc'd to a Powder. This is afterwards to be levigated on a Marble, pouring upon it, now-and-then, ſome proper Water, ſuch as that of Roſes; and, when it is dry, it is kept either in the Form of a fine Powder, or in that of Troches. It is alſo ſometimes call'd, by way of Excellence, Hartſhorn prepared. The ſame Subſtance is produc'd when we take the Caput Mortuum, which remains after the Diſtillation of the Spirit, the Oil, and the volatile Salt, and calcine it to a Whiteneſs. With reſpect to this, *Hildanus*, in *Tract. de Gangræna*, accuſes the Negligence, or rather the Ignorance, of ſome Apothecaries, who, inſtead of calcining their Hartſhorn in Crucibles, or other proper Veſſels, burn them among the open Coals. But this Method, as it is more eaſy and commodious to the Apothecaries, ſo 'tis more loathſome and prejudicial to the Patient; for Coals contain a malignant and peſtilential Vapour in them; and the Hartſhorn, whilſt burning among theſe Coals, and whilſt the Aſhes every-where adhere to it, may very eaſily derive ſomething of a malignant Nature from the Coals. *Dioſcorides*, therefore, gave a good Method of calcining Hartſhorn, when he order'd it to be put in a coarſe earthen Veſſel, cover'd up with Clay, put into a Furnace, and burn'd till it becomes white. Calcin'd Hartſhorn is generally recommended againſt Putrefaction, for ſtopping Fluxes and Hæmorrhages, for killing Worms, and exciting a Diaphoreſis. It is alſo recommended for provoking the Menſes, for curing the Jaundice, Spittings of Blood, Ulcers, and Defluxions of the Eyes. It is alſo recommended for Dentifrices, and againſt Pains of the Bladder, in Conjunction with Tragacanth. Some abſolutely reject calcin'd Hartſhorn, affirming that by the Calcination it is reduc'd to a dead Earth, and deſtitute of all medicinal Virtues. *Ettmuller*, in his firſt Volume, tells us, " That it is a pure dead Earth, " which, either as an Alexipharmic or Diaphoretic, produces " no Effect at all, except, perhaps, in a very remote and acci- " dental Manner, by powerfully abſorbing the Acids of the " Primæ Viæ, rendering them inſipid, or changing them, and, " by that means, preventing their Action on the Parts of the " the Body. But in Diarrheas, and a Laxity of the Inteſtines, " by abſorbing the Humidity, it produces good Effects, and " may, therefore, be properly exhibited in acute Diſorders, " attended with Fluxes, Hæmorrhages, Vomitings, and a " Cholera. Where an Acid abounds in the Inteſtines, it is " alſo properly preſcrib'd; for it powerfully abſorbs Acidities, " and various acrid Humours." It is alſo properly exhibited for expelling Worms of the Inteſtines, eſpecially thoſe of Children. Doctor *Michaelis*, for an antidyſenteric Powder, calcin'd, in a Crucible, Hartſhorn with Antimony, both of which were levigated. Hartſhorn calcin'd, with Antimony, was frequently us'd by *Hartman*, in an epidemic Dyſentery; but he adds Gold to it at the ſame time. *Muſitanus*, in his *Pyretologia*, informs us, that calcin'd Hartſhorn is only a dead Calx, and thinks, that if at any time the Exhibition of it promotes a Diaphoreſis, this Effect is owing to the Quality of the Waters with which it is exhibited, ſuch as that of Carduus, for Inſtance, or to the Bed-cloths with which the Patient is cover'd. *Clauderus*, in *Ephem. N. C. D.* 2. *a.* 4. and *Morley*, in *Collect. Leyd.* affirm that calcin'd Hartſhorn is poſſeſs'd of no other Virtues than what it has in common with other abſorbent Subſtances, ſuch as Crabs-eyes and Coral. *Foreſtus*, indeed, in his *Obſervat. Med. Lib.* 6. *Obſ.* 4. *Schol.* aſſerts, that in certain malignant Fevers, epidemically raging, and attended with a Flux, and a large Number of Worms, nothing was ſo beneficial as calcin'd Hartſhorn; but he cautiouſly ſubjoins ſome Claſſes of Abſorbents, which, he ſays, he found as effectual in the Cure of the ſame Diſeaſe. I am of Opinion, that, in the Calcination of the Horns, or other hard Parts of Animals, there is a Burning of the phlogiſtic Part, an Expulſion of the Moiſture, and an Evaporation of the volatile Salt into the Air. Theſe Bodies muſt, by a Deſtruction of the Coheſion of their Parts, become friable, and deſtitute of Water, Oil, and Salt; ſo that I think it obvious, that calcin'd Hartſhorn is not poſſeſs'd of any other Virtue than what may be aſcrib'd to other dry, earthy, and abſorbent Subſtances. Hence *Welſchius*, in his *Curationes Propriæ*, does not, in all Caſes, think the Uſe of this Medicine proper, becauſe, by its drying Quality, it may produce bad Effects. But that it is a mere earthy Body, deſtitute of ſaline and oleous Parts, may appear from this, that the like Subſtance is obtain'd from the Caput Mortuum, when ſubjected to Calcination, after the Diſtillation of the Spirit, the volatile Salt, and the Oil. 'Tis now obvious, that *Hoffman*, in his *Acta Laboratorii Altdorfini*, when he has told us, that *Martin Rulandus* us'd calcin'd Hartſhorn for preparing Decoctions, judges rightly when he adds, " This Method may " be follow'd at preſent, if the Patient deſires an inſipid " Decoction, juſt as the celebrated *Sereta*, in his Treatiſe on " a malignant Camp-fever, order'd one Dram of diapho- " retic Antimony to be mix'd with Spring-water, and " exhibited with a View to quench Thirſt, and extinguiſh " the febrile Heat." From what has been ſaid, we perceive the Reaſon why *Scribonius Largus*, in his Treatiſe *De Medicamentorum Compoſitione*, beſtows ſo large Encomiums on a Medicine compounded of Hartſhorn, cut into Slices, calcin'd in an earthen Veſſel, cloſe ſtopt, to white Aſhes, and then mix'd with white Pepper and Myrrh, not only for removing preſent, but preventing future, Pains of the Colon. For, if the Diſorder is produc'd by a cold Cauſe, a viſcid Mucus, or a redundant Acid, this Medicine by no means appears improper, on account of the Power of abſorbing Acidities, lodg'd in the calcin'd Hartſhorn, and in conſequence of its ſtimulating, reſolvent, and heating Qualities, ariſing from an Addition of the Myrrh and Pepper. But for what Reaſon calcin'd Hartſhorn ſhould be accounted attenuating, as the Antients imagin'd, I can by no means comprehend. That the Antients thought ſo, is obvious from a Paſſage in the firſt Book of *Hippocrates de Morb. Mulier.* where, for ſuch Women as do not conceive on account of the Fatneſs and Thickneſs of the Mouth of the Uterus, he orders the Application of a Medicine compos'd of calcin'd Hartſhorn, and double the Quantity of Barley-meal, mix'd up with Wine. Calcin'd Hartſhorn ſeems to be recommended for a Dentifrice, becauſe it is an earthy rough Subſtance, eſpecially when not reduc'd to too fine a Powder. In conſequence of this, when rub'd on the Teeth, it cleanſes them. It ſeems proper to be exhibited in thoſe kinds of Jaundice where an Obſtruction is form'd in the Duodenum by an acid Matter, which, diſtending it too much, blocks up the common biliary Duct, where it terminates in that Inteſtine. This Species of Diſorder frequently occurs in Children; and is reliev'd by calcin'd Hartſhorn, or any other abſorbent Medicines, eſpecially in Conjunction with reſolvent Salts. Tho' *Franciſcus Joel* affirms, that it is proper in all Hiccoughs indiſcriminately, yet it is of no Efficacy, except when the Diſorder ariſes from

an acrid vellicating Matter, adhering to the moſt nervous Part of the Stomach, where its ſuperior Orifice communicates with the Diaphragm. Hartſhorn prepar'd without Fire, which is alſo call'd Hartſhorn philoſophically or ſpagirically prepar'd, is made by ſuſpending, by a Thread, Hartſhorn cut in Pieces in the Neck of a Still, from which Brandy, or ſome cordial Water, ſuch as that of the Carduus Benedictus, or of common Carduus, is diſtil'd, that by this means the Hartſhorn may be penetrated, and render'd white and friable, by the aſcending Vapours. When dry'd after this Proceſs, it is either kept in that State, or reduc'd to Troches, with ſome proper Water. This Preparation, by the Steam of the Liquors ſubjected to Diſtillation, is, in the *Collect. Leyd.* call'd a Fumigation of Hartſhorn. This philoſophical Manner of calcining it was caſually found out at *Dreſden* in *Saxony*, probably about the Middle of the laſt Century, by one *Caſpar Pantzerus*, an Apothecary, and a Native of *Pruſſia*, whilſt, in order to digeſt ſome Medicine, he put a Piece of Hartſhorn into the Beak of the Alembic, and, upon taking it out, he found it ſo ſoft as ſcarcely to exceed the Hardneſs of Cheeſe. At preſent it is alſo prepar'd by boiling it in a ſufficient Quantity of common Water, till it becomes ſoft, ſomewhat friable, and till the exterior blackiſh Coat is capable of being ſeparated with a Knife, after which the white Subſtance in the Middle is dry'd, and preſerv'd for Uſe. *Hoffman*, in his *Acta Laboratorii Altdorfenſis*, orders the Water, in which it is boil'd, to be impregnated with ſome alcaline Salt, that it may the ſooner become ſoft. He alſo obſerves, that the Hartſhorn, thus prepar'd, may aſſume a rediſh Colour, if it is boil'd in a cloſe Veſſel in Lime-flower-water. Hartſhorn, thus prepar'd without Fire, is recommended for the ſame Purpoſes with that which is calcin'd; and the former is prefer'd to the latter by ſome, who, thinking it poſſeſſed of greater Virtues, preſcribe it in ſmaller Doſes. When thus prepar'd, it has the ſame drying and abſorbent Qualities, and may be preſcrib'd for the ſame Intentions with the burn'd Hartſhorn; only it is leſs abſorbent, becauſe it ſtill retains ſomewhat of its gelatinous Subſtance. *Schulzius*, in his *Prælect.* tells us, "That many Phyſicians aſcribe little or nothing to this Preparation, ſince it is "depriv'd of its gelatinous Part, on which its Virtues muſt "neceſſarily depend. But that its gelatinous Subſtance is not en"tirely deſtroy'd, is experienc'd by thoſe who put the Powder "of it into Waters, which, by that means, ſoon become mu"cilaginous, and unfit for keeping long. There are alſo ſome "celebrated Phyſicians, who recommend it, as having a tempe"rating, antiſpaſmodic, and, in ſome meaſure, a diaphoretic "Quality, and uſe it very much in theſe ſeveral Intentions. "But, above all others, a certain Phyſician, *Eph. N. C. D.* "2. *a. b.* gave this Medicine alone the higheſt Encomiums, as "an efficacious Cure for malignant Fevers." But it may be juſtly ſuſpected, that the critical Sweat, by which the malignant Fever is carry'd off, may be excited only by drinking the Water of Carduus Benedictus, with which the Hartſhorn is exhibited. Some alſo call that *Hartſhorn philoſophically prepar'd*, which is calcin'd with an Addition of Brick-duſt by way of Cementation: But this is nothing more than Hartſhorn burnt. As for the various Preparations of Hartſhorn in the ſeveral Diſpenſatories, and the Cenſures paſſed upon them, we ſhall not here give them a Place: But it muſt be obſerv'd, that, in all theſe Preparations of the Hartſhorn, it is depriv'd of its volatile Salt, and the abſorbent earthy Powders only remain.

Decoctions of the Shavings of Hartſhorn, in common Water, may prove beneficial, where the Acrimony of the Humours is to be corrected, where dry Parts are to be moiſten'd, and where Thirſt is to be allay'd; but they are more proper in Diſorders ariſing from Acidities, than in ſuch as ariſe from an alcaleſcent State of the Juices. Theſe Decoctions ought to be weak for Perſons of tender Conſtitutions, and ſomewhat ſtronger for thoſe of a more hardy and robuſt Make; for they are of a gelatinous Nature, and not to be digeſted without ſome Difficulty. *Hoffman*, in the twenty-third Chapter of his *Off. Paral.* tells us, "That they who are of Opinion, that Hartſhorn cures "malignant and peſtilential Fevers, either put it in the Pa"tient's Drink, or boil it in Barley-water, which they "take to be diuretic. But," ſays he, "I would willingly "know, whether for this Purpoſe we are to uſe crude or cal"cin'd Hartſhorn. All uſe that which is calcin'd, except "*Saxonia*, who declares in favour of that which is crude, be"cauſe it retains the Properties of the Hartſhorn, which, in "Calcination, are deſtroy'd. Some Subſtances we calcine in "order to render them more mild, ſuch as Braſs, and Cadmia; "and others are calcin'd with a View to render them more "acrid, of which Kind is Hartſhorn. They who will not be"lieve, that it aſſumes an acrid Quality, in conſequence of "its Calcination, may be convinced of this Truth by ſprin"kling ſome of it in any Wound they have received. That "the Barley-water may, therefore, acquire a drying Quality, "they uſe calcin'd Hartſhorn in the Compoſition. But I am "of Opinion, that the Diſcharge of Urine is not enlarged by "the Hartſhorn, but by the Water, which proves cheriſhing "to the Kidneys, eſpecially when drank in a large Quantity."

As for the various Methods of preparing the Jellies of Hartſhorn, either in the Kitchens or the Shops, it would be too tedious to recount them here. The ſingular Virtues of Subſtances of this Kind are enlarged upon by *Ettmuller*, in the following Words: "The Jelly, extracted by boiling, is no"thing but that Quinteſſence, or nutritive Juice, of the Stag, "by which it is nouriſh'd. It is poſſeſs'd of alexipharmic as "well as antifebrile Virtues, if half an Ounce, or between "ſix Drams and an Ounce, of it is diſſolved in half a Pint or "a Pint of Ale, or of ordinary Drink. It is alſo an excellent "and eaſily prepared Medicine againſt the Heat and Malignity "of Fevers, and other Diſorders; as alſo, for the Expulſion "of any peccant Matter, which may happen to be lodged in "the Body. It is alſo of a temperate analeptic Nature, fit "for correcting the acrid Juices in the Body, allaying the Ef"ferveſcences ariſing thence, and mitigating the natural Heat. "Hence, in continued Fevers, nothing is more uſual than "large Doſes of the Jelly of Hartſhorn, both in alterative and "alexipharmic Juleps, and in the Patient's common Drink: "For this Jelly is nothing but a volatile Salt, concentrated by "a ſpermatic Mucilage. It is either ſimple, for the Uſe of "hectic and phthiſical Patients, for promoting the Eruption of "the Small-pox, purple and petechical Fevers; or it may be "ſprinkled with diſtil'd Vinegar, or acidulated with Lemon"juice; in which Form it is more proper, in Caſes where "there is a preternatural Heat, and Ebullition of the Maſs of "Blood."

It muſt be carefully obſerved, that the Jelly of Hartſhorn is no more than its Decoction, ſo inſpiſſated, that, when expoſed to the Cold, it aſſumes a Conſiſtence capable of being cut with a Knife; that it is richly impregnated with the Subſtance of which the Horn was originally form'd, and conſequently contains Parts fit for nouriſhing the Perſon who uſes it; as alſo, that it is proper for lubricating the exaſperated and dry Fibres, and for correcting the too fluid State of the Juices. Hence it happens, that, in conſequence of its glutinous Quality, it ſometimes produces deſirable and happy Effects in Diarrhœas and Dyſenteries. But it muſt be obſerved, that it proves uneaſy to weak Stomachs, when exhibited in large Quantities, by its glutinous Quality; for which Reaſon it ought to be exhibited to the Sick in a diluted Form, ſuch as that of the Decoction. Secondly, we muſt obſerve, that, in conſequence of its alcaleſcent Nature, it is proper in Diſeaſes where an acid Acrimony is to be corrected. But as many feveriſh, hectic, and phthiſical Patients ſuffer too much from an alcaleſcent State of the Juices, acidulated Jelly of Hartſhorn may ſo much the more ſafely be exhibited to them: As, on the contrary, Hartſhorn-jelly, with an Addition of Aromatics, is proper in Diſorders ariſing from a peccant Acid. For this Reaſon *Welſchius*, in his *Curationes propriæ*, for feveriſh Patients, generally preſcrib'd this Jelly, prepared with Lemon-juice. The medicinal Uſes of the Jelly of Hartſhorn may, I think, be determin'd, from what has been ſaid: But, at the ſame time, I am of Opinion, that it is poſſeſs'd of no higher alexipharmic or analeptic Virtues, than what may be juſtly attributed to the Jellies prepared from the Parts of other Animals. Nor, in order to eſtabliſh the alexipharmic and diaphoretic Virtues of this Jelly, would I have recourſe to an urinous Spirit, and a volatile Salt, concentrated in it; for theſe may, by Diſtillation, be obtain'd from the Jelly itſelf, as well as from the crude Hartſhorn. But we cannot hence infer, that any Matter acts on our Bodies by virtue of theſe Subſtances, obtain'd from the Jelly by the Violence of the Fire in the chymical Veſſels. When other Subſtances are added to the Jelly, the Nature and Qualities of theſe are alſo to be regarded, in forming a Judgment of the Effect generally produced. Thus, for Inſtance, it may be affirm'd, concerning the Jelly of Hartſhorn, in which excorticated ſweet Almonds are bruiſed, ſo as to form a kind of Emulſion, that it is highly nutritive, and corrects every Kind of Acrimony, in conſequence of the mild balſamic Oil contain'd in the Almonds, if they are recent, and not old and rancid.

As the Water diſtil'd from Hartſhorn is taken no notice of by the Compilers of our Diſpenſatories, but is a Medicine much uſed by the *French* Phyſicians, we ſhall here give the various Methods of preparing it, directed in ſome of the moſt celebrated Diſpenſatories. In the *Diſpenſatorium Brandenburgicum*, therefore, and the *Pharmac. Pariſ.* it is prepar'd by Diſtillation from the young and tender Horns of the Stag. According to *Ettmuller*, "It is an excellent Medicine againſt "Palpitations of the Heart; and a good Vehicle for exhibiting "to Children, Infants, and Adults, alexipharmic Medicines "in Fevers, and other Diſorders of a malignant Nature. It "is proper for promoting the Eruption of the Small Pox and "Meaſles; as alſo for curing Epilepſies, either by itſelf, or "mix'd with other proper Medicines. This Water is uſed "with Succeſs by Child-bed Women, when ſeiz'd with the "purple Fever; as alſo in immoderate Fluxes of the Lochia, "Dyſenteries, and Scurvy." Others alſo recommend it for promoting the Expulſion of the Fœtus. But it is poſſeſs'd of ſcarce any other Virtues than thoſe of common Water; for

these young and tender Horns, as also all the other Parts of other Animals, as *Zwelfer* justly observes, only send forth, by way of Sweat, an elementary Water or Moisture possess'd of very inconsiderable Virtues; and which, tho' impregnated with an empyreumatic Smell, cannot, from that Circumstance, be thought to possess so very powerful Qualities. The *Aqua Cornu Cervi e tenellis cum vino*, in the *Dispensatorium Brandenburgense*, receives, besides the tender Horns, stimulating and alexipharmic Medicines, entire Citrons, Astringents, and other Substances, which, in Distillation, do not yield their Virtues: All these are distil'd with Wine, and Water of Germander. It is said to be alexipharmic and cordial, which Qualities it more justly claims than the preceding Water, not on account of the Hartshorn, but of the aromatic, spirituous, and heating Ingredients. *Schulzius*, in his *Prælectiones*, passes his Judgment upon them both in the following Words: "They are supported upon a groundless and implicit Opinion, the worst of "Foundations. Some fond Abettors of Antiquity, however, "ascribe a great deal to Compositions of this Kind. As there "is no Necessity for envying these Men their Nostrums, they "may be at Liberty to enlarge at Pleasure the Class of "Cordials and Alexipharmics. Of the simple Water, a few "Ounces may be exhibited for a Dose; and of that prepared "with Wine, one Ounce is sufficient." Both these Waters are now in Disuse, because better and more judicious, or at least as good, Compositions are to be had with more Ease. They may, indeed, be used as Vehicles for other Medicines, that the Apothecary may have no Reason to complain of sustaining a Loss on account of their being discarded. The *Aqua Typhorum Cervi*, in the *Pharmacopœia Argentoratensis*, is distil'd with Wine alone. This Preparation is by some commended as an Alexipharmic, and good against burning and malignant Fevers. A few Spoonfuls may be given for a Dose. What rises in the Alembic seems to be simple Spirit of Wine, as may be also known from its Virtues and Properties. The *Aqua Cornu Cervi Citrata, Waldschmidii*, in the *Pharmacopœia Argentoratensis*, is prepared of the Shavings of Hartshorn, distil'd with entire Citrons, and some distil'd Waters of Vegetables, commonly call'd alexipharmic or stimulating, with an Addition of the Water of Sorrel. This Preparation is accounted analeptic, and proper for allaying preternatural Heats. It is also said to be alexipharmic. A Spoonful of it may be exhibited at a time; or it may be mix'd with other proper Liquors. From what is before said, 'tis obvious, that whatever Virtues these Waters possess are owing to the Waters used in Distillation, and not to the Hartshorn.

I now proceed to the Spirit, Salt, and Oil of Hartshorn.

Boerhaave, whom I shall follow, in order to avoid Repetitions, has given the Method of procuring volatile alcaline Salts from all Animal Substances, of which Hartshorn is the most frequently used, under one Article. The Example he gives is in the Hoofs of Horses. But I must remark, that by Hartshorn, in Medicine, the Horns of any Deer are implied, whether the red or fallow.

Take the Parings of Horses Hoofs, whilst at Grass, as they are cut off by the Farrier, and steep a sufficient Quantity thereof in Water, that they may be cleansed, and afterwards dry'd: Put them into a Glass Retort, so as to fill it almost to the Neck; set the Retort in a Sand Furnace; apply a very capacious Receiver, and lute the Juncture with a Paste of Linseed-meal; distil with slow Degrees of Fire. There will first come over a limpid aqueous Liquor in dewy Drops: Continue the same Heat so long as this Liquor distils; then pour it out, and keep it apart; apply the Receiver afresh, and raise the Fire, till white Clouds begin to rise; at which time an unctuous Spirit will come over in oily Veins: Continue this Degree so long as it will bring any thing over: There will be now some Signs of a saline Matter. Increase the Fire again, and, along with the unctuous Spirit, there will come over a volatile alcaline Salt, shooting up in little Lumps, together with an Oil: Continue this Fire till scarce any thing more rises; then increase it to the utmost; at length, raising a Fire of Suppression, a somewhat more fix'd volatile Salt, along with a very thick red Oil, will now come over; at which time the Feces, fusing, will run into a Mass, which swells and rises up to the Neck of the Retort. Now let the Operation cease, and take away the Receiver before the Retort is thoroughly cold, otherwise the volatile Salt will in a great measure go back into the Retort: Keep the Productions in a well-stopt Glass, for they are exceedingly volatile. The remaining Feces are very sharp, light, spongy, as also fetid and bitter; and, if calcin'd in an open Fire, afford a little Quantity of white, insipid, and considerably pure Earth.

If Hartshorn, which has been kept for many Years, and is now grown exceedingly dry, be broke into large Pieces, and put into an Iron Pot, set in a Furnace, and fitted with a large earthen Alembic-head, which works with two Beaks, each fitted to a capacious Receiver, and the Distillation be carefully perform'd with Degrees of Fire, nearly all the same Matters will be obtain'd; that is, a fat, oily, alcaline Spirit, a volatile Salt, a light Oil, a Salt somewhat more fix'd, and a gross pitchy Oil: There will remain behind a solid black Coal, which does not easily dissolve by Fire, but remains brittle; and, when reduced to Powder, and given upon an empty Stomach, it proves an excellent Medicine for destroying Worms.

The recent Bones of Animals, clear'd as much as possible from their Fat, and treated in the same manner, afford the same Substances; only abounding with more of a highly fetid nauseous Oil, which infects every thing it touches. Horns, Nails, Hoofs, Hair, and Silk, afford the same.

REMARKS.

As a greater or less Quantity of Water is drawn from all these, even the driest Bodies, it shews, how intimately Water may adhere to the other Principles of Animals, and be consolidated therewith into an extremely hard and dry Form, so as to remain fix'd for a great Number of Years; and at length be released again by the means of Fire. This principally appears when the fluid Spirit is separated from its volatile Salt and Oil; for, then, a considerable Quantity of fetid Water is procur'd: And hence it appears, that the most perfectly inodorous Bodies may, by the bare Force of Fire, acquire many Degrees and Kinds of fetid Odours; whilst each Part, separate from the rest, has a peculiar Odour, which it tenaciously retains for a very long time. And the same holds true of the Variety of Tastes produced from an insipid Body; for the Water, Spirit, Salt, and Oil, have each their particular Odour. Again, from a solid Body we have various Fluids, which concrete together again with the greatest Difficulty: We have several also, which are volatile from fix'd Bodies; and there remains, from so large a Bulk, but little Earth, which is firm and fix'd. And as the same Principles are obtain'd both from the Solids and Fluids, tho' always more Earth from the Solids, we hence see the common Nature of both, and, therefore, that the Solids are composed of the Fluids; but the larger Bones, calcin'd to perfect Whiteness, both in their Surface and Substance, with a clear and violent Fire, still retain the former Size and Figure; yet, if afterwards exposed to the Action of the Fire, in a close Vessel, they afford no Water, Salt, Spirit, or Oil, but remain crumbly; yet so as, if dipt into Water or Oil, they again acquire a Tenacity. So, likewise, if Horns, Bones, or the like Parts, be strongly boil'd for a long time in Water, with a repeated Change of the Water, and a separate Reservation of the former Decoctions; and this be continued till the Water comes off pure, after boiling with the Bone; and all these Decoctions be inspissated to a thick coagulated Mass, without burning, so as to appear almost like Horn in the Cold; then this Mass, so prepared from Hartshorn, Ivory, Bones, or Flesh, will, by Distillation, afford all the Principles, in the same manner as the other Subjects of this Process. But the horny or bony Matter, remaining after this thorough Decoction, affords so much the less Salt, Oil, and Spirit, the more Jelly was obtain'd by the boiling; from whence it seems, that all the saline, spirituous, and oily Matter proceeded only from the Juices; whilst the last Solid is a mere simple Earth, which can scarce cohere together; and containing, after having suffer'd the utmost Violence of the Fire, no fix'd Salt; but always affording, when burnt to Whiteness, a kind of Ashes proper for making the Refiners Tests. And, when Bones are treated in *Papin*'s Digester, I have found, by repeating the Operation, that they remain almost wholly terrestrial after boiling. And this has shew'd me, that scarce any observable Difference could be found in these Productions, let the Animal Subject be what it would; except only in respect of the Oil, which abounds more plentifully in one Part than in another. The Oil, in the Distillation, acquires a perfectly intolerable fetid Odour, which infects all the Things it touches with an abominable Taste and Smell, not to be got out. And hence the solid Substances, thus distil'd, afford these Productions; the more infected and disagreeable, the more Oil they contain: And hence it is, that Hartshorn, which is less unctuous, affords a less nauseous Oil and Spirit than Ox-bones, which are full of Marrow; but, except this single Difference, they can scarce otherwise be distinguish'd; for all these Spirits and Salts, purified from their Oil, become the same thing; nor could I ever find any Difference betwixt these Productions, yielded by different Animals; for Horses Hoofs, the Horns of Oxen and Stags, Ivory, Tortoise-shell, Hair, and Silk, afford all the same. Whence it is of little Importance from what Subject these Things are produced, only with respect to the Oil, as above explain'd. I could never find, that the Spirit of human Blood, Hartshorn, Horses Hoofs, or raw Silk, differ'd in any thing, but the Oil. *Helmont*, I know, recommends the

saline

saline Spirit of human Blood before all others, because it cures the Falling-sickness: And, in *England*, *Goddard*'s Drops, distil'd from Silk, are prefer'd to others of the same Kind; but I have long observed, that these Differences are seldom found, with any Certainty, in the Practice of Physic. This is evident, that all the Matter, capable of affording these Principles by Distillation, may be extracted by dissolving Animal Solids in boiling Water; whilst what remains, after a thorough Boiling, will afford little thereof: In these, therefore, almost insipid and scentless Decoctions, all that Matter lies conceal'd, which affords Salts, Spirits, and Oils, by Distillation. These Salts, therefore, of Animals could not be render'd alcaline or volatile, by so long and repeated a boiling. It is also certain, that the Air, Water, and Sun, at length deprive the Bones exposed thereto of all that Animal Matter, which, in Distillation, would afford Water, Oils, Salts, and Spirits; and in old Bones, grown perfectly white, is found, upon committing them to Distillation, nothing of these Principles, but only a simple Earth, Putrefaction having carried away the rest. It is an agreeable Experiment to boil an Animal Muscle, or, for Example, an Ox's Heart, so long in several Waters, till at last the Water comes off as pure as it was put on; then, gently squeezing the Water out of the Heart with the Hand, and repeating this several times, and boiling it in fresh Water, the external thin Membrane being taken off, that the Fat also may be resolved and separated in the Boiling, there will thus be, at length, obtain'd a perfectly solid, dry, and incorruptible Muscle, exhibiting all the Fibres; especially if hot Water has been first injected with a Syringe thro' the Coronary Vessels, so as perfectly to wash out the Blood from the Veins and Arteries; for thus the mere Skeleton of the Muscle will be obtain'd.

Rectification of animal alcaline Salts, Spirits, and Oils.

Take the entire Production of the Process describ'd above, and put it into a large Glass Body, to be hereafter kept for this Purpose; apply a large capacious Head, with its Pipe cut in the wide Part, so that the Salt may easily pass into the Receiver; otherwise it would there stop, block up the Pipe, and forcibly throw off the Head. Set the Vessel in a Bath Furnace, with a continued Heat of an hundred and fifty Degrees, so as first to bring over what will rise with this Degree: A fat, volatile, alcaline Spirit thus comes over, along with a white solid Salt. When no more ascends, change the Receiver, and keep this Liquor, with its volatile Salt, apart; and if the Salt, by shaking, does not dissolve in its Spirit, it is a Sign, that the Spirit, being pour'd out, and kept separate, is as strong and rich as can any way be procur'd: Let it therefore be kept for its particular Uses, in a close stopt Glass, under the Title of Spirit of Hartshorn, Spirit of human Blood, *&c.* And let the Salt also, which would not dissolve in this Spirit, be preserv'd under the Title of the volatile oily Salt of Hartshorn, or of whatever other Subject it was procur'd from.

Urge the Remainder with the Heat of boiling Water, and there will come over another Spirit more slowly than the former, together with a light Oil floating thereon, and some Quantity of volatile Salt; continue this, till no more rises, with the same Degree of Heat; and again, keep this aqueous, oily, and saline Liquor separate; a gross fetid Oil will now remain at the Bottom of the Vessel.

Thus we obtain, from the above-mention'd Substances, a Water which is neither oily nor saline at first, as we saw in the Beginning of the preceding Process; next, an alcaline oily Spirit; thirdly, a volatile oily Salt; fourthly, a volatile Oil, with an oily Alcali a little more fix'd, and a fetid Water; fifthly, a more fix'd Oil than could be separated by a Heat of two hundred and thirteen Degrees.

If the first Spirit be again distil'd in a fresh Glass, with a hundred Degrees of Heat, the Salt is thence obtain'd purer, and almost in a solid Form. And if the Operation be continued, till the Salt sublimed begins to dissolve by the subsequent Liquor, an aqueous Fluid will remain at the Bottom, with an Oil floating thereon: So that these Spirits consist of an extremely light Water, Oil, and Salt united together; whence they again resolve into these three. This Spirit, therefore, is a volatile saponaceous Lixivium; and the remaining Water and Oil may be so separated, by a fresh Distillation, that the Water shall remain tasteless, tho' fetid, and the Oil almost without Mixture; all the Salt being separated with the more volatile Oil: And hence we may understand the Nature of these Spirits. But the Salt, separated by this Sublimation, from its Spirit, is always oily, tho' less so than the former, and therefore much whiter; because upon each Rectification it leaves a yellow, and sometimes a red Oil behind, which gave it the Colour. Hence we know, that the Salts of Animals once render'd volatile and alcaline, by Putrefaction, the Admixture of a fix'd Alcali, or the Force of Fire in Distillation, thereby become and remain more volatile than pure Water, and the most volatile Oil; and hence, that the Water, so deserted, manifests the Oil it conceal'd before, as being united with its Alcali into a kind of Soap, soluble in Water: And now, when the Alcali is separated, the Oil will no longer continue mix'd with the Water, but floats apart.

Let the Oil, which remains after the Depuration of the Spirits, be pour'd to that remaining at the Bottom, as above-mention'd, and mix'd therewith; then pour warm Water to them, and shake them together; whereby the Salt, which might chance to remain fix'd with the Oil, will be dissolv'd in the Water; and hence the caustic Sharpness of the Oil will be got out, and the Oil itself be render'd more mild; let this saline Water be pour'd off, that the Salt may afterwards be separated from it by Sublimation. Then let these Oils be put into a Glass Body, and with the Heat of boiling Water be freed from their aqueous Moisture, till no more thereof will arise; then put the Oils into a Retort, and distil with a gentle Heat, into a capacious Receiver, gradually increasing the Fire to the highest Degree Sand will give it, till nothing more comes over; and thus the Oil will become more thin, limpid, and fetid: A black Earth remains behind in the Retort; and if the Oil, once drawn off, be a second time return'd, and distil'd upon its own black Feces, it again becomes more pure, limpid, thin, and less fetid; again leaving more Earth behind; and this happens upon numberless Cohobations. But I have scarce found any End in the Operation; for I have formerly, according to the Direction of *Helmont*, in his *Aurora Medicinæ*, endeavour'd, with great Patience, to prepare the oily diaphoretic Medicine he there prescribes; and he directs the Purification of these Oils by Distillation, so often repeated, till at last they leave no earthy Feces behind. I, therefore, distil'd Oil of Hartshorn in the manner above-mentioned, and cohobated it a number of times, but always found a black feculent Matter left behind; so that I at last lost a Part of the Oil, and gained a great Quantity of Earth, and still found more Earth at the Bottom of the Retort. But thus I obtain'd a very penetrating, and not ungrateful, Oil. Whence I conceive, that *Helmont*, perhaps, never brought the Experiment to a Conclusion, in the manner he directs it; and that the illustrious Mr. *Boyle*, with greater Veracity, affirms in his Treatise concerning the Transmutability of the chymical Principles, that, by many continued Cohobations, at length almost the whole Quantity of these Oils is converted into Earth, with a constant Loss of that Acrimony which remains in the Oil after the Salt is wash'd out. In the mean time, it is worth the while to cohobate these Oils fifteen times over; for thus they will become thin, pellucid, penetrating, and volatile, almost like Spirit, of a penetrating Taste and Odour, and will strangely enter all the Parts of the Body. They are anodyne, soporiferous, and resolving, good in Fevers, and grateful to the Nerves, and cure Intermittents by being rub'd externally along the Back-bone, before the cold Fit. Their Dose is from twenty to thirty Drops. And thus these Oils are reduc'd to a very large Quantity of Earth, and a very small one of true Oil: And thus the greater Part of them at length nearly acquire the same Nature, and afterwards can scarce be distinguish'd from one another; so that all distil'd Animal Oils, thoroughly depurated from the other Principles, seem to be one and the same thing, from whatever Animal they were obtain'd. See ANIMAL.

The volatile Salts of Animals are depurated several Ways, so as to render them at last perfect, and without Mixture. 1. Take a large cut Glass Body, and put into it the volatile Salts to be rectify'd; apply a Glass Head with a capacious Receiver, and distil with a gentle Sand-heat; the Salt will rise into the Head and the Neck of the Glass; continue the Operation till no more rises. Let the Salt be taken out, and kept in a close Glass; an Oil, and a fetid Substance, will be left behind. But in this Method some Oil always rises with the Salt; tho' it may, by Sublimation, be in a great measure left behind, and the Salt be obtain'd the purer. And thus the Salt of Urine, White of Eggs, Blood, Horns, and Bones, are made to appear as the same Thing: For by repeated Sublimation I have brought them to such a Likeness, that I could scarce distinguish between them; and this always the less, the oftener the Sublimation was repeated: Whence it may appear, that all the Difference of these volatile Salts depends wholly upon the empyreumatic Oil adhering thereto; which, when perfectly separated, leaves them all alike: But the Salt, whiten'd by this Operation, grows yellow with keeping; the Oil, that was conceal'd, thus again manifesting itself. This those Chymists find, to their Disadvantage, who prepare Salt of Hartshorn for Sale; where an agreeable and permanent Whiteness is principally requir'd. I have therefore found the following Method more successful. 2. Put the Salt, obtain'd by the preceding Sublimation, into a tall Glass Body, and immediately throw thereon four times its Weight of pure, hot, dry Chalk, reduc'd to fine Powder, so as every Way to cover the Salt; then imme-

immediately lute on a dry Alembic-head, which the larger it is, and the wider its Pipe, the better; lute on a Receiver, and diſtil with a tepid Heat only, in Water: All the Salt will thus riſe white, pure, alcaline, and volatile, whilſt nearly all the Oil is detain'd in the dry and thirſty Chalk. In the mean time, this Addition of Chalk will not change the Nature of the Salt, but only keep back its Oil, and thus ſeparate it from that Foulneſs; and the Salts, thus prepar'd, may be long kept without changing, eſpecially if, before Sublimation, they were well ground with the Chalk: But in that Caſe much of them would be loſt, or fly off into the Air in the grinding, and the Remainder would preſently diſſolve by attracting the Moiſture of the Air. Laſtly, if, when the Salt is thus depurated, by means of Chalk, as much pure Spirit of Sea-ſalt be mix'd therewith, as ſuffices to ſaturate it perfectly, and the Sal-ammoniac, thus produc'd, be diſſolv'd in Water, perfectly filtrated, and inſpiſſated into a Salt, and this Salt be diſtil'd with a fix'd Alcali, a pure, ſolid, white, alcaline Salt riſes, which is the moſt genuine that can be procured, and perfectly free from Oil. When volatile, alcaline, oily Salts are, by theſe three Methods, reduc'd to their utmoſt Purity, there appears no ſenſible Difference between them, whether they are ſpontaneouſly generated in the Subject, or produc'd by Putrefaction, or by Fire; and they are obtain'd perfectly in the ſame Form from Birds, Land Animals, and amphibious Creatures, Fiſh, Reptiles, ſubterraneous Animals, alcaleſcent Vegetables, and Soot; for as they all, when depriv'd of their Spirit and Oil, afford the ſame Species of Sal-ammoniac, along with the Spirit of Sea-ſalt, ſo this Sal-ammoniac, being afterwards reſolv'd by fix'd Alcalies, affords the ſame alcaline Salt and Spirit of Sal-ammoniac. Hence, therefore, pure volatile Alcali is but one Thing in Nature, when obtain'd pure; but the Difference found in it always depends upon the Admixture of ſome other Principle, eſpecially the Oil adhering thereto, which is very different in different Subjects, altho' the principal Difference of the Oils is owing to a very ſmall Quantity of Spirit. Hence we ſee, that the Water, Earth, and Salt of Animals, when by the means above-mentioned reduc'd to their utmoſt Simplicity, are perfectly the ſame without any Difference; ſo that the peculiar Characteriſtic of each is principally lodg'd in the Oil alone; the Oil alone being diſtinguiſh'd by its Spirit, which when perfectly taken away, Oils themſelves alſo become wonderfully alike. This preſiding Spirit, therefore, conſtitutes the true Difference in Animals; and theſe are the ultimate and ſimple Effects of a chymical Analyſis. If the Artiſt here endeavours to proceed further, he will be in Danger of loſing his Subject; the Particles whereof are now ſubject to fly away; for when the Principles are thus purify'd, they do not greatly cohere together; tho', by differently uniting with one another, they form a prodigious Variety of Compounds.

REMARKS.

The chymical Properties and Virtues of this pure, volatile, alcaline Salt, are principally theſe. 1. It makes an Effervеſcence with all the known Acids, as ſtrong and as durable as a fix'd alcaline Salt; cloſely joins the Acid with itſelf, and retains it ſo as to form a compound Salt according to the Nature of the Acid. And thus, when fully ſaturated, it increaſes $\frac{32}{98}$ in its Weight. Whence we may underſtand the requiſite Proportion for making the Balance betwixt an Acid and an Alcali, and how much of either may be again expected upon the Reſolution of theſe compound Salts. But as ſoon as the Point of Saturation is exactly gain'd, the Action of the Salt, ſo produc'd, is neither to be eſtimated from the Acid or the Alcali of the Compoſition, but from the new Nature the compound Salt has acquir'd. And hence the Error of thoſe may be eaſily confuted, who conceive that the Virtues of compound Salts are ſuch as they obſerve in the Parts produced by a Separation. 2. This Salt, actuated with the Heat of a healthy Body, preſently inflames, burns, and cauſes a gangrenous Eſchar, and therefore perfectly deſtroys all the Parts of the human Body to which it is ſo apply'd, as that its Motion, ariſing from the Heat, may be driven in upon the Part. Thus, if a Scruple of the pure volatile Salt of Hartſhorn be laid upon the Skin, and covered with an adheſive Plaiſter, it will in half a quarter of an Hour raiſe a black Carbuncle, as if a Piece of hot Iron had been there applied; and the Colour, Pain, Heat, and Hardneſs of the Skin, are alſo the ſame as they would be in that Caſe; and it reſolves the Humours into a thin, ſanious Liquor. 3. It is the moſt moveable Body of any hitherto known, as exceeding even Alcohol in Volatility: For, if Alcohol, Water, and this Salt be put together in a tall chymical Glaſs fill'd with an Alembic-head, and a ſmall Degree of Heat be applied, the Salt will riſe by itſelf into the Head long before the Alcohol; the Alcohol will next follow, and the Water at laſt with Difficulty. And thus this Salt flies off from every heating Point, and, if laid upon the warm Hand, it preſently flies away without hurting the Hand, as in this Caſe its Reaction is not great upon the heating Body; wherein it greatly differs from the fix'd alcaline Salt, which adheres by its Weight. But when theſe volatile alcaline Salts are received into the Veſſels of the Body, and there actuated by the vital Heat, and the Force of the circulating Fluids, they act very powerfully by a ſharp, ſtimulating, and corroding Virtue, eſpecially upon the more ſenſible fine Fibres of the nervous Syſtem, which they excite to greater Motion; and at the ſame time thinning the Humours, promote Perſpiration, Sweat, Urine, and Saliva. They likewiſe frequently prove ſerviceable upon receiving their volatile Exhalation, along with the Air, into the Noſtrils; for thus they irritate the Membrana Pituitaria of the Noſe, Mouth, Jaws, Lungs, and, by irritating thereof, diſſolve the viſcous Phlegm, which may adhere thereto, provided they be uſed with Caution. 4. Theſe Salts, therefore, are proper, and have very good Effects, in aqueous, acid, and auſtere Diſtempers of the Humours, as alſo in Torpidity of the nervous Syſtem, and diſorderly Motions of the Spirits, ruſhing irregularly and involuntarily into particular Muſcles. And hence they excellently cure hypochondriacal, hyſterical, epileptical, and ſpaſmodical Diſorders. Being diluted with Water, and receiv'd in the Form of Vapour into the Vagina Uteri, they are eſteem'd one of the moſt immediate Remedies, when prudently apply'd, for promoting the Menſes, if requir'd. But they prove poiſonous in alcaline and putrid Diſorders, where the Humours are diſſolv'd, and the Body already too much agitated. They may alſo be externally apply'd, by way of a Cauſtic, for the making of Iſſues, the extirpating of Warts, and taking off Styes upon the Eyelids. The Method of uſing this Salt in theſe Caſes, is by laying it upon a little Pellet of Lint, and applying it to the Part; then covering it with an adheſive Plaiſter, and leaving it thus, till it may be thought to have performed its Office. *Boerhaave's Chymiſtry.*

The volatile Salt of Hartſhorn is by ſome ſo highly extol'd, as almoſt to be pronounc'd an univerſal Medicine in Epilepſies, Apoplexies, Lethargies, Vertigoes, and, in a Word, all the Diſorders incident to the Brain. The ſame Virtues are aſcrib'd to it in the Cure of hyſteric Fits, in opening Obſtructions of the Viſcera, in removing all Fevers, Diſorders of the Kidneys, and the Bladder, the Plague, and the fatal Effects of all Poiſons. It is no leſs extol'd in rendering the Body ſoluble when coſtive, and reducing it to a due State when it runs into the oppoſite Extreme; as alſo in provoking the Menſes, and at the ſame time giving a ſeaſonable Check to them, when they flow immoderately. According to *Ettmuller*, *Moebius* informs us, "That the volatile Salt of Hartſhorn, duly exhibited, not "only excites a Diaphoreſis, but alſo a Vomiting." It is given internally, mix'd with other Subſtances, either in the Form of Powders, Pills, or Potions. When put into a narrow-mouth'd Glaſs, it is applied to the Noſtrils for opening their Obſtructions, created by a viſcid Lymph. It is alſo us'd in the ſame manner for recovering and animating apoplectic, epileptic, and hyſteric Patients. If the Virtues of this Medicine are really ſo great as is pretended, and if it is indiſcriminately proper in all the above-mention'd Diſorders, there would ſcarcely be a Neceſſity for any other Medicine in the Shops, beſides thoſe of the refrigerating, emollient, and emplaſtic Kind, ſince the Effects produc'd by all the others might be expected from the volatile Salt of Hartſhorn alone.

The rectify'd Spirit of Hartſhorn, according to *Ettmuller*, "is very much us'd in the Cure of Fevers, and acute ma"lignant Diſorders, in exciting a Diaphoreſis, and removing "Epilepſies. It penetrates the whole Body, corrects Malig"nity by its alexipharmic Quality, and expels it by a Dia"phoreſis. It corrects vicious Acids, and promotes the Erup"tion of Puſtules, Spots, Small-pox, and Petechiæ. Some "account it an univerſal Medicine, and certainly nothing is "more proper in the Increaſe of malignant Diſorders." *Ludovici*, in his *Pharmacopœia*, calls it a highly penetrating alexipharmic in moſt malignant Diſorders, and an excellent Cephalic in thoſe of the vertiginous and lethargic Kind, when apply'd to the Noſtrils. *Schulzius*, in his *Prælectiones*, tells us, that it is exhibited internally from ten to thirty Drops, and that robuſt Countrymen ſometimes take a Dram of it in Brandy. It is of an aperient, antiſpaſmodic, and ſedative Quality. In Conjunction with a proper Regimen, it is highly diaphoretic; but when it has not the Advantage of this, it rather proves diuretic. In *Eph. Nat. Curioſ. Dec.* 3. *a.* 1. *o.* 91. we are told, that, after the fruitleſs and ineffectual Uſe of other Means, it happily cur'd a malignant epidemical Fever, which rag'd after a moderately warm and rainy Winter; for the Patients, after the Exhibition of it, were immediately freed from the Delirium, and convulſive Motions, with which the Diſorder was accompany'd. *Spleiſſius* informs us, that it produc'd a ſurpriſing Effect upon a Woman, who, in conſequence of an intemperate Method of Living, labour'd under Indigeſtion, Loathing of her Food, Reſtleſſneſs, and Loſs of Strength: At laſt,

laſt, being ſeiz'd with ſuch a violent fainting Fit, that her Caſe was judg'd deſperate, half a Dram of the Spirit of Hartſhorn was exhibited to her, without her perceiving it; immediately after which ſhe roſe up, vomited Worms, and was in a ſurpriſing manner ſnatch'd from the Jaws of Death. *Hoffman*, in his *Acta Laboratorii Altdorfenſis*, recommends its Uſe by way of Ointment in the Cure of malignant, phagedenic, and cancerous Ulcers. He alſo orders a Mixture of it with ſome proper Decoction, to be injected into Fiſtulas by means of a Syringe.

Sydenham recommends two, three, or four Drops of Spirit of Hartſhorn, in a Spoonful or two of black Cherry-water, or of ſome proper Julap, five or ſix times repeated, as an excellent Remedy againſt thoſe feveriſh Diſorders, to which Children are ſubject whilſt breeding their Teeth. But to Adults it may be given in the Quantity of fourſcore Drops or more, if exhibited with a View of anſwering any Intention.

I ſhall ſay no more of the Virtues attributed to the Salt and Spirit of Hartſhorn, which are by ſome celebrated with extravagant Encomiums, becauſe their genuine Efficacy is ſpecify'd in the preceding Quotation from *Boerhaave*. Mean time I am abundantly ſenſible, that great Numbers of tender People do themſelves infinite Prejudice by habituating themſelves to take large Quantities of Hartſhorn-drops, and thoſe frequently repeated, as this Cuſtom paves the Way to Drams, exceſſive Diſorders of the nervous Kind, and in the End Death. And it may be remark'd, that it is no new thing for a Medicine of great Importance, when duly apply'd, to become deleterious by an improper, or too frequent Uſe. But if the Salt or Spirit of Hartſhorn happens to be adulterated, which is generally the Caſe, the Conſequences of taking it may happen to be much worſe. *Quincy*, a pretty good Judge of Subjects relating to Pharmacy, obſerves, That theſe Preparations have hitherto ſtood in the Front of nervous Medicines; but the wicked Sophiſtications of our Chymiſts have debaſed them into diſregard, and almoſt expel'd them out of Practice. To give the Spirit an uncommon Pungency and Quickneſs of Smell, which is all they want to recommend it to Sale, a Way has been found to quicken it with Lime, and urinous Volatiles; and they have been ſo hardy herein as to own it, and give it a Place in their Catalogue, of *Spiritus Cornu Cervi cum Calce*, Spirit of Hartſhorn with Lime. And now the Fraud is ſo far improv'd, that they will make it without any Hartſhorn at all, but with Bittern, that is, the Brine which they get from the Salters, Urine, and Lime, which will raiſe a ſtrong-ſcented Spirit; and this theſe very honeſt Men give ſome Scent and Colour to, with a little of the fetid Oil of Hartſhorn, and put off for what is genuine; or without that Oil, for Spirit of Sal Ammoniac. So that from eight and ten Shillings *per* Pound, which the genuine Medicine deſerv'd, theſe Gentlemen, to oblige a good Cuſtomer, can afford it now for as many Pence. But a curious Perſon may pretty eaſily diſcover this Cheat, by the rancid urinous Smell of the ſophiſticated Sort, and its whitening the Inſide of a Glaſs in which it is long kept. The volatile Salt too, which is now ſold in the Shops for that of Hartſhorn, is a perfect Cheat, and more a Cauſtic than a Cordial, by the Quantity of Lime and urinous Salt that is thrown up with it; whereas that which is carefully to be collected in the Diſtillation of the Spirits, about the Top and Neck of the Receiver, is truly an animal volatile Salt, ſoften'd with ſuch a Portion of a highly ſubtiliz'd Oil, as renders it an admirable and agreeable Medicine; but this is never to be met with, or made uſe of, unleſs the Phyſician will be at the Trouble of attending the Laboratory, or find a Perſon honeſt enough to make it on Purpoſe for him: For one Dram of this genuine Salt may be ſtretched out into one Pound of that uſed in the Shops.

With reſpect to Salt of Hartſhorn, the Doſe is from three to twelve, fifteen, or twenty Grains. But there are greats Error committed in the common Practice in its Preſcription, by putting it either into Forms which it will deſtroy, or which will make it loſe its Volatility before it gets to the Patient. In Pills it will not lie, no more than any other Volatiles, but will rarefy them into ten times their proper Bulk. Boles likewiſe it will puff up in like manner, and ſoon make its Eſcape; and in Powder, wherein it is often order'd, in a very ſmall time it is not better than a Calx, or ſo much Powder of Lime. There is therefore no Form to preſerve its Virtues in, but by diſſolving it with ſome proper Vehicles into Draughts.

Liquor Cornu Cervi Succinatus.

For preparing this celebrated Medicine, equal Quantities of the volatile Salts of Hartſhorn, and of Amber, are to be diſſolved in rectified Spirit of Hartſhorn, till the Liquor is ſaturated; then they are to be digeſted in a cloſe-ſtopt Glaſs Phial, placed in a gentle Bath-heat, till they are intimately united; then they are to be diſtil'd from a Retort, with the Junctures carefully luted, and placed in a moderate Sand-heat; after which, Cohobation is to be frequently repeated. In the *Diſpenſatorium Brandenburgenſe* four Ounces of the Spirit of Hartſhorn are directed for one Ounce of the volatile Salts of Hartſhorn and Amber. Thus the volatile Salts aſcend with the Spirit, and conſtitute the *ſuccinated Liquor of Hartſhorn*.

The remaining Caput Mortuum, when calcin'd to Whiteneſs, is of a double Uſe; for, firſt, it powerfully abſorbs any Acids lodg'd in the Primæ Viæ, and by that means accidentally, or very remotely, promotes a Diaphoreſis. Secondly, it is ſomewhat aſtringent, and for that Reaſon may be commodiouſly exhibited in acute Diſorders, accompanied with a Flux.

This Liquor was firſt brought into Uſe by Dr. *Michaelis*, a celebrated Practitioner at *Leipſic*; and *Ettmuller* informs us, that by a thouſand Experiments, both on old and young, on Men and Women, it has eſtabliſh'd to itſelf a juſt Reputation, as an approv'd Medicine. The ſame Author highly recommends a Doſe of twenty or thirty Drops of it in curing Catarrhs by a Diaphoreſis; he alſo affirms, that it is an excellent Analeptic, eſpecially when exhibited to Children, in order to correct Acidities, and incide or attenuate viſcid Crudities. *Hoffman*, in his *Acta Laboratorii Altdorfenſis*, informs us, that it is highly beneficial in Epilepſies, Apoplexies, lethargic Diſorders, convulſive Aſthmas, and other ſpaſmodic Diſorders, eſpecially thoſe incident to Children. *Konigius* tells us, that *Ettmuller* found this Liquor highly beneficial in various Diſorders of the Lymph; and that he himſelf had found it ſo in Diſorders of the Head, eſpecially in thoſe Patients who are of a hot Conſtitution. To uſe the Words of the learned *Faginus*, in his Notes on the *Diſpenſatorium Brandenburgenſe*, "Various and "ſufficiently excellent Virtues are commonly aſcrib'd to this "Liquor, eſpecially in catarrhous Diſorders, and ſuch as draw "their Origin from a Redundance of Mucus or Serum, on account of its remarkably reſolvent, diſcutient, and corroborating Quality; nor, when exhibited with theſe Intentions, "is it a deſpicable Medicine, provided it is only adminiſter'd "prudently, and rather to thoſe of a phlegmatic, than of a "ſanguine Conſtitution. It is proper for alleviating ſpaſmodic "Pains, inciding and reſolving particular Congeſtions of Blood, "eſpecially thoſe of long ſtanding; for by a prudent Uſe of "it alone, we read, in the *Annales Phyſ. Med. Wratiſlav. An.* "1722. *M. Februar. Claſſ.* 4. *Artic.* 17. that a violent and "highly obſtinate Hemicrania was happily and effectually re"mov'd. But even in Caſes of this Kind it is to be cautiouſly "and ſparingly uſed, leſt Symptoms as bad, or perhaps worſe "than the original Diſorder, ſhould be brought on by its Uſe; "an Inſtance of which we find in the ſaid Annals, *Ann.* "1724. *M. Aug. Claſſ.* 2. produc'd by an unſeaſonable and "too large Doſe of this Medicine." With the preceding Caution, therefore, we aſſent to what *Schulzius*, in his *Prælectiones*, affirms concerning it; which is, that it is an excellent Diaphoretic, a powerful Diuretic, and at the ſame time a valuable Antiſpaſmodic, and well calculated for checking convulſive and epileptic Motions, eſpecially in Children. To Infants one or two Drops make a ſufficient Doſe. To Children, three, five, or ſix, may be exhibited; whereas Adults may bear twenty, twenty-five, or thirty. If with the Compilers of the *Auguſtan Diſpenſatory*, for compoſing the ſuccinated Liquor of Hartſhorn, we diſſolve one Part of the ſuccinated Salt of Hartſhorn in three Parts of black Cherry-water, we obtain a Medicine of the ſame Virtues, which may be exhibited in a larger Doſe, becauſe it is more diluted and weak; for if we inquire into the Compoſition of this Remedy, 'tis obvious that it conſiſts of volatile Salts of two Kinds united together; the alcaline Salt, for Inſtance, of the Hartſhorn, and the acid Salt of the Amber. Hence *Konigius* concludes, that the ſuccinated Liquor of Hartſhorn is only of an ammoniacal Nature; for Sal Ammoniac is compoſed of a volatile alcaline Salt, and the acid Part of common Salt; and becauſe, according to him, Amber is the Produce of the Sea, he concludes that a Liquor of this Kind may be prepared in an extemporaneous Manner, by mixing the volatile Spirit of Hartſhorn well dephlegmated, that it may not again ſtand in need of being quicken'd with the volatile Salt of Hartſhorn, with the Spirit of common Salt: Hence an Effervеſcence being produc'd, a Liquor analogous to the Nature of an ammoniacal Salt is obtain'd. This Liquor is of ſingular Efficacy not only in the Diſorders of Children, but alſo in nephritic Pains. Beſides, if Spirit of Hartſhorn, or its volatile Salt, is mixed with Spirit of Nitre, and an Addition made of the *Eſſentia Theriacalis*, or the *Spiritus Bezoardicus*, a Medicine is obtain'd, which is of ſingular Efficacy in acute Diſorders, and internal Inflammations. But this Author's Aſſertions muſt be confirm'd by the Experience of others, before we give our Aſſent to his Opinion. Beſides, it may be juſtly doubted, whether Amber is produc'd by the Sea-ſalt.

CESTREUS, κεστρεύς. The Mullet.

CESTRITES *Vinum*, κεστρίτης οἶνος. Wine impregnated with Betony. *Dioſcorides*, *L.* 5. *C.* 54. gives the Method of preparing it. The Virtues may be known from thoſe of Betony.

CESTRUM, κέστρον. Betony.

CETACEUS. Cetaceous. Thoſe ſort of Fiſh are call'd by this Appellation, which are very large, and which bring forth a perfect Animal, inſtead of Spawn. Or the cetaceous Fiſhes are thoſe, which, like viviparous Animals, reſpire by means of Lungs, generate, conceive, bring forth young, and nouriſh them with Milk.

CETE, or CETUS. The Parmaſitty Whale. See BALÆNA.

CETERACH. See ASPLENIUM.

CEVADILLA, Offic. Monard. 343. *Cevadilla Hiſpanorum*, Ind. Medic. 33. *Cevadilla ſive Hordeolum cauſticum Americanum*, Park. Theat. 1625. *Hordeum cauſticum*, C. B. Pin. 23. Theat. 467. Raii Hiſt. 2. 1246. *Yizcuimpatli, ſeu Canis interfector vel Hordeolum*, Hernand. 307. INDIAN CAUSTIC BARLEY. *Dale.*

Ray informs us from *Monardes*, that the Seeds of this Plant are ſo extremely burning and cauſtic, that they may be uſed in Gangrenes and putrid Ulcers, inſtead of the actual Cautery or Sublimate. The Seed powder'd and ſprinkled in Ulcers kills Worms, which ſometimes breed therein, and cleanſes them.

Dale ſays it is the ſeminal Capſula which is uſed. It is brought from *Mexico*.

CEVILLUS, or *Ludus, Paracelſi.* This is a Stone mention'd by *Paracelſus*, and *Helmont*. See LUDUS.

CHAA. The Plant of which Tea is the Leaves.

CHACEF. An Earthen Pot. *Rulandus.*

CHÆROPHYLLUM.

The Characters are, in every reſpect, the ſame as thoſe of the Myrrhis, except that the Seeds are not ſtriated.

Boerhaave mentions four Species of this Plant.

1. *Chærophyllum ſativum*, C. B. Pin. 152. Raii Hiſt. 1. 430. Tourn. Inſt. 314. Elem. Bot. 264. Boerh. Ind. A. 70. Buxb. 63. *Chærophyllon*, J. B. 3. 75. Chab. 393. *Cerefolium vulgare*, Park. Parad. 494. Ger. 882. *Cerefolium vulgare ſativum*, Ger. Emac. 1338. *Cerefolium ſativum*, Mor. Umb. 46. Hiſt. Oxon. 3. 303. *Cerefolium officinarum ſive Chærophyllon, Tournefortii*, Rupp. Flor. Jen. 228. CHERVIL.

F. Hoffman affirms, that Chervil is good for reſolving coagulated Blood; and that it is uſed in Broths with good Effect, as a Promoter of Expectoration in an Aſthma; that it is vulnerary, reſolvent, diuretic, and emmenagogue.

This is a ſmall, low, umbelliferous Plant, with winged Leaves, ſmaller and finer than Parſley; its ſlender chanel'd Stalks riſe not much above a Foot high, beſet with the like Leaves, but ſmaller, and bearing at their Tops ſmall Umbels of five-leav'd little white Flowers, whoſe Petala are cut in two, and ſucceeded by long, ſmooth, round Seed, thicker at the Bottom, and ſharper pointed at the Top. The Root is ſmall, periſhing yearly. It is ſown in Gardens.

Chervil is much of the Nature of Parſley, being aperitive and attenuating, good for the Stone and Gravel, and to provoke Urine and the Menſes. It is more uſed as a Sallad-herb, than for any phyſical Uſe. *Miller's Bot. Off.*

2. Chærophyllum ſylveſtre perenne, Cicutæ folio, *Tourn. Inſt.* 314. *Elem. Bot.* 264. *Boerh. Ind. A.* 70. *Cicutaria vulgaris*, Offic. J. B. 3. 71. Chab. 404. Raii Hiſt. 1. 429. Synop. 3. 207. *Cicutaria alba*, Merc. Bot. 1. 29. Phyt. Brit. 28. Mer. Pin. 26. *Cicutaria alba Lugdunenſis*, Ger. Emac. 1038. *Cerefolium ſylveſtre*, Dill. Cat. Giſſ. 51. Rupp. Flor. Jen. 228. Rivin. Irr. Pent. *Cerefolium ſylveſtre perenne ſeminibus lævibus nigris*, Mor. Umb. 46. Hiſt. Oxon. 3. 303. *Chærophyllum ſylveſtre*, Buxb. 64. *Myrrhis ſylveſtris*, Park. Theat. 935. *Myrrhis ſylveſtris ſeminibus lævibus*, C. B. Pin. 160. WILD CICELY COW-WEED.

Tragus, being perſuaded it was the Myrrhis of *Dioſcorides*, adviſes the Uſe of it for the Suppreſſion of the Terms; but *J. Bauhine* relates a melancholy Story of two Families, that had eaten the Roots of this Plant inſtead of thoſe of Parſnips. *Martyn's Tournefort.*

The Roots of this Plant are poiſonous, cauſing Difficulty of Breathing, Torpors, and Madneſs. This is, perhaps, the Root, which is often in *England* miſtaken for Parſnips, and are uſually call'd by the Country People Madnips.

3. Chærophyllum; paluſtre; latifolium; flore albo. *Myrrhis, paluſtris, latifolia alba. T.* 315.

4. Chærophullum; paluſtre; latifolium; flore albo. *Myrrhus, paluſtris, latifolia, rubra. T.* 315. *Boerhaave's Index alter Plantarum.*

CHAFAR *Alpini.* A ſort of *Egyptian* Melon.

CHAITA, χαίτα. The Mane of a Quadruped properly, but uſed to expreſs the Hair of the Occiput by *Ruffus Epheſius.*

CHALASIS, χάλασις, from χαλάω, to relax. Relaxation.

CHALASTICOS, χαλαστικός. Relaxing. Thus *Chalaſtica Medicamenta*, are Medicines which relax Parts which are too tenſe. They differ but little from Emollients.

CHALAZA, χάλαζα, Chalazion, χαλάζιον, ſignify properly a Hail-ſtone. But they import alſo a Diſeaſe to which Swine are very ſubject, in which the Fleſh is found full of ſmall Tubercles like Hail-ſtones. *Chalaza* alſo is the Name given by Naturaliſts to a white knotty kind of String at each End of an Egg, formed of a Plexus of the Fibres of the Membranes, whereby the Yolk and White are connected together.

But the moſt common Diſorder call'd by this Name is one of the Eyelids, which conſiſts in a Tubercle like a Hail-ſtone. The Eyelids are ſubject to ſeveral Sorts of Tubercles, much of the ſame Nature, but diſtinguiſh'd by their Similitude to particular Things. Thus that which is like a Grain of Barley is call'd *Crithe*; and that which is hard like a Stone, is call'd *Lithiaſis.*

The Crithe or Barley-corn is a Tumor of various Sizes; it grows in different Parts of the Eyelids; 'tis commonly call'd a Stye. When it is ſmall, it comes only on the Edge of the Eyelids, or very near it, between the Cilia; but when it is larger, it ſpreads towards the Middle of the Lid. In their Beginning an Inflammation commonly accompanies theſe Tumors: When they do not ſuppurate, their Matter is concreted, and they become Wens, which are ſometimes ſoft, and ſometimes very hard. Though they are not very troubleſome, eſpecially when they are without Pain; yet there is no one who would not wiſh to be rid of them. This Diſeaſe is ſubject to Variations; for ſometimes it diſappears awhile, and afterwards it returns in a few Days. The Cure of this Diſeaſe is ſuited to the different Circumſtances which attend it. If there is an Inflammation, the Pap of a roaſted Apple, laid in the Form of a Plaiſter, or Poultice, ſoon diſperſes it, and ſometimes only abates the Tumor. If it hardens, and becomes concreted, apply the *Emplaſtrum Diabotanum*, or that of the *Abbot de Grace.* See EMPLASTRUM.

If it does not diſperſe by theſe means, it muſt be opened with the Point of a Lancet. Seldom any Matter is found in it; for often it is only a kind of hard Fleſh, which muſt be conſumed by a liquid Cauſtic; afterwards let the Plaiſter of the *Abbot de Grace* be laid on, and let the concreted Fleſh be touch'd ſeveral times with the liquid Cauſtic, till it be entirely waſted. Great Care muſt be had not to put too much Cauſtic at a time, leſt the Eyelid ſhould be pierced, and the ſound Part beyond the Tumor be conſumed.

If the Crithe comes on the lower Eyelid, it is generally more on the Inſide than on the Outſide; it is eaſily ſeen, if the Eyelid be turned down. It is cured by conſuming it with the Lapis Infernalis, provided the following Method of removing it be not preferable.

The Eyelid being turned down, paſs a crooked Needle, threaded with Silk, through the Tumor; when the Needle is through, let the Operator take in one Hand the two Ends of the Silk to raiſe the Tumor, whilſt, having a Lancet in his other Hand, he makes an Inciſion with it in the Membrane which covers the Tumor towards the Edge of the Eyelid; then let him lay by his Lancet, take a Pair of ſtrait Sciſſars, and, introducing one Side of them into the Orifice, let him, with the other Side, which muſt be directed on the Side of the Globe of the Eye, cut the Tumor, as near its Baſe as he can. The Wound is, for the moſt part, healed in eight Days with a Collyrium made of Water ten Parts, to one Part of Spirit of Wine. There are likewiſe other little Tumors, which come on the Edges of the Eyelids, and by reaſon of their Whiteneſs and Hardneſs are called *Chalazæ.* Their Size is not always the ſame; if they are large, they may be ſeparated from the Eyelid by a Lancet, with which an Inciſion is to be made in the Skin which covers them; then, with a ſmall Scoop, the Body of the Tumor is to be drawn out. Both theſe Sorts of Tumors will come out equally, if, inſtead of an Inciſion, the Skin which covers them is touched once or twice by the Lapis Infernalis, which will conſume it.

Beſides theſe, there is another ſort of Tumor which grows on the Eyelids, called Lithiaſis or Gravel-ſtone; they are generated by a concreted Humour, which changes, as it were, to little Pebbles, or Grains of Sand. They are cured in the ſame manner as the foregoing Tumors. *Saint Yves.*

CHALBANE, χαλβάνη. Galbanum.

CHALCANTHUM. Vitriol. See VITRIOLUM.

CHALCEDONIUS, Offic. De Laet. 76. Geſn. de Lap. 79. *Chalcedonius*, Boet. 238. *Chalcedonius, alias Carchedonias*, Charlt. Foſſ. 34. *Chalcedonius, ſeu Carcedonius*, Worm. 98. THE CHALCEDONY, a ſort of precious Stone.

As to its medicinal Uſes, it is, by ſome, thought ſerviceable againſt all Diſorders ariſing from black Bile, ſuch as Sadneſs, Melancholy, and the unaccountable Dread of Demons and Spirits. Thoſe brought from the *Eaſt Indies*, which are moderately pellucid, and variegated with whitiſh milky Streaks, if hung about the Breaſt, are ſaid to generate abundance of Milk. Some Authors alſo are ſo ridiculouſly ſuperſtitious and whimſical, as to promiſe Victory to the happy Combatant who wears the Chalcedony-ſtone about him. Its true and genuine medicinal Virtues ſeem to conſiſt in its abſorbent Quality, when it is reduc'd to a fine Powder, and exhibited like the other earthy and abſorbent Powders. But becauſe the Apothecaries have other Subſtances

Subſtances of the ſame Virtues, and, at the ſame time, far more eaſily prepar'd, it is rarely preſcrib'd by the Moderns.

Chalcedonius is alſo the Name of a Medicine deſcrib'd by *Galen*, and directed by him to be infus'd into the Ears, in inveterate Diſorders of that Part. *Galen. de Comp. Pharm. Secundum Locos, Lib. 3. Cap. 1.*

CHALCEION, χαλκεῖον. This, according to *Boerhaave*, is the *Pimpinella*; *Spinoſa*; *ſeu Sempervirens.*

CHALCIDICA *Lacerta.* A ſort of Serpent, ſo call'd from its Reſemblance in Colour to the Chalcedony. Its Bite is ſucceeded by a pellucid Tumor, which has a kind of ſhining Blackneſs at the Margin. Drank in Wine, it cures its own Bite, according to *Paulus Ægineta, Lib. 7.* It is alſo call'd *Seps.*

CHALCITIS, Offic. Matth. 1365. Worm. 26. Aldrov. Muſ. Metall. 340. Charlt. Foſſ. 11. Kentm. 15.

As the *Miſy*, *Sory*, *Chalcites*, and *Melanteria*, are generally found in the ſame Mines, Authors uſually treat of them together, whoſe Examples I ſhall follow.

The χαλκῖτις of the *Greeks* takes its Name from χαλκὸς, Braſs, and is commonly deſcrib'd to be a metalline Recrement, of the Colour of Braſs, diverſify'd with oblong ſhining Veins, and produc'd in the ſame Ores which give Birth to the *Sory* and the *Miſy*. Betwixt theſe two Subſtances it holds a middle Rank, not only with reſpect to its Bed, but alſo with reſpect to its Conſiſtence; for, according to ſome, the Sory is thinner, and the Miſy thicker; and, according to others, the Sory is thicker, and the Miſy thinner, than the *Chalcitis*. According to *Galen*, the undermoſt Bed is of a Texture ſtony, and conſiſts of Sory: Over this lies the ſecond Bed, which is Chalcitis, and reſembles an Efflorescence; and the uppermoſt Bed is that of the Miſy, which reſembles Verdegriſe; but, in Proceſs of Time, the Chalcitis is converted into Miſy, and the Sory into Chalcitis. According to *Pliny*, "That Stone is call'd Chal-" citis, from which the Braſs itſelf is obtain'd. It differs from " the Cadmia in this, that the former is cut from Rocks above " the Ground, whereas the latter is only obtain'd from ſuch as " lie conceal'd under it. The Chalcitis alſo becomes immedi-" ately friable, and aſſumes a ſoft Texture, in Appearance like " that of concreted Down. There is alſo another Diſtinction " between the Cadmia and the Chalcitis, which is, that the " latter contains three kinds of Subſtances, Braſs, Miſy, and " Sory; for it has oblong Veins of Braſs. That is thought " beſt, whoſe Colour reſembles that of Honey, has ſlender " Veins, is friable, and not of a ſtony Nature. That which " is recent is alſo accounted beſt, becauſe, when old, it be-" comes Sory." According to *Dioſcorides, Lib. 5. Cap.* 115. " that Species of the Chalcitis is beſt which reſembles Braſs, " is friable, not ſtony, recent, and variegated with oblong and " ſhining Veins. This Subſtance is of an abſterſive heating " Nature, and cicatrizes Ulcers. It removes the tough and " viſcid Matter which ſticks in the Eyes, and their Corners. " In a Word, it is among the Number of the gently corroding " Medicines. It is an effectual Medicine againſt an Eryſipelas " and Herpes. In Conjunction with the Juice of Leeks, it ſtops " Hæmorrhages from the Womb and Noſtrils. The Powder " of it cures Diſorders of the Gums, ſpreading Ulcers, and " Tumors of the Tonſils. When calcin'd, and triturated " with Honey, it proves an excellent Medicine for Diſorders " of the Eyes. It removes and deſtroys Calloſities and Rough-" neſs of the Eyelids. It cures Fiſtulas of the Eyes, when " put into them by way of Collyrium. Of the Chalcitis is " prepared a Medicine diſtinguiſh'd by the Epithet *Pſoricon.* " For this Purpoſe we muſt take two Parts of the Chalcitis, " one of the Cadmia, and triturate the Whole in Vinegar. " But this Medicine muſt be bury'd in Dung, in an earthen " Veſſel, for forty Days, during the Appearance of the Dog-" ſtar, that it may become more acrid, which the Chalcitis " itſelf alſo does by the ſame Method. Others prepare the " ſame Medicine, by triturating equal Portions of theſe two " Subſtances in Wine. The Chalcitis is to be calcin'd in a new " earthen Veſſel, plac'd over live Coals. It is cuſtomary to " calcine the moiſter Kinds of the Chalcitis till it does not riſe " in Bubbles, and is become perfectly dry; but the other Kinds " may be taken off the Fire when they have aſſum'd a florid " Colour, reſembling that of Blood or Minium. The Sordes " appearing on the Surface muſt be blown off; or it may be " calcin'd upon Coals, blowing them all the time, till it aſ-" ſumes a paliſh Colour; or, putting live Coals under the " Veſſel, it is to be ſtir'd about till it flames, and changes its " Colour." 'Tis obvious, that the Antients reckon'd the Chalcitis among the abſtergent, drying, acrid, cauſtic, or eſcharotic Medicines. The Variety of Compoſitions, in which, according to *Scribonius Largus*, they us'd this Ingredient, is a ſufficient Proof of this. That it was apply'd to the ſame Purpoſes by their Farriers, we may find in the twenty-ſixth Chapter of the ſecond Book of *Vegetius.* *Foreſtus*, in his *Obſervat. Chirurg. Lib. 7. Obſ. 12. Schol.* recommends the calcin'd Chalcitis for drying Ulcers. At preſent torrefy'd Chalcitis is an Ingredient in the *Theriaca Andromachi*, and in the *Emplaſtrum Diachalcitees Galeni*, which is alſo call'd Diapalma. But, becauſe the Chalcitis is not generally known, the Moderns, for the moſt part, uſe white Vitriol, either calcin'd or crude, or the Vitriolum Martis, in its ſtead; which laſt *Schulzius*, in his *Blancardi Lexicon renovatum*, prefers for making the Theriaca. Whether the Chalcitis is a proper Ingredient in the Theriaca, is much diſputed; but, in my Opinion, it is not neceſſary in that Compoſition, as will appear from conſidering what kind of Subſtance it properly is. *Matthiolus ad Dioſcor. Lib. 2. Cap.* 78. ſeems to have been the firſt who hinted at its true Origin, in the following Words: "It is obvious," ſays he, "to every one, " from common Experience, that all Vitriol of every Kind, in " Proceſs of Time, degenerates into Chalcitis:" For it is a Species of metallic Recrement, call'd *Atramentum Rubeum*, generated of the Pyrites ſoften'd in Water, which has Iron, either pure, or mix'd with Braſs, aſſociated with it, and which is continually more and more diſſolv'd and divided till it appears friable. This Recrement conſiſts of moiſt and aqueous Particles leſs temperate, and with a ſmaller Portion of Sulphur, or ſulphureous Acid, than Vitriol. In Conſiſtence and Colour it differs from Sory and Miſy, is of an acrid, acid, and aſtringent Taſte, of a penetrating nauſeous Smell, and diffuſes an ungrateful Odour. From it are often obtain'd, in the Smelting-houſes, Braſs, Cadmia, Pompholyx, Spodium, and Diphryges. That Species of Chalcitis is by ſome eſteem'd the moſt genuine, which conſiſts of beautiful purple-colour'd Pieces: But for Uſe 'tis no Matter of what Colour it is; for what is imported into *France* for Sale from *St. Chriſtophers*, is, according to *Pomet*, of a greeniſh Colour, like that of imperfectly calcin'd Vitriol. According to the learned *Henckelius*, we ought rather to inquire after the Elixiviation of the Vitriol, of what Nature it is, whether it partakes of Iron or Copper, that we may be the better able to judge for what medicinal Purpoſes it is moſt proper. Hence 'tis obvious, that they are in the right who call Chalcitis the Colcothar, or Caput Mortuum of Vitriol; as alſo thoſe who claſs it among the vitriolic Minerals, or crude and impure Vitriols. Hence the Reaſon is alſo obvious, why it is by ſome accounted a Species of Vitriol, and why *Boerhaave* calls it Vitriolum Rubrum, becauſe, for Inſtance, it is a Compoſition of the Acid of Sulphur and Iron, in which there is, perhaps, a ſmall Admixture of Braſs. But it is more properly call'd the Colcothar of Vitriol than entire and perfect Vitriol, becauſe it wants a cryſtalline Form.

The Miſy is thus diſtinguiſh'd:

Μίσυ Dioſcoridis. *Miſy*, Offic. Matth. 1365. Worm. 26. Aldrov. Muſ. Metall. 341. Charlt. Foſſ. 11. Kentm. 15. *Dale.*

The choiceſt *Miſy* comes from *Cyprus*, reſembles Gold, is of a hard Subſtance, and, when broken, glitters like Gold, and ſhines with a Star-like Splendour.

It is calcin'd in the ſame Manner, and has the ſame Virtues, as Chalcitis, only Miſy produces no Pſoricon: As to their Qualities, Miſy and Chalcitis differ only with reſpect to Intenſeneſs and Remiſneſs. The *Egyptian* Miſy is prefer'd for its Strength, but is far inferior to the *Cyprian* in its ophthalmic Virtues. *Dioſcorides, Lib. 5. Cap.* 117.

Geoffroy ſays it ſeems to be nothing but an Efflorescence of Chalcitis.

The Sory is thus diſtinguiſh'd:

Σῶρυ Dioſcoridis. *Sory*, Offic. Matth. 1365. Worm. 26. Aldrov. Muſ. Metall. 341. Charlt. Foſſ. 11. Kentm. f. 15. *Dale.*

Some have miſtaken *Sory* for Melanteria; but they are of different Kinds, tho' not much unlike: But *Sory* is the ſtronger-ſcented, and creates a Nauſea. It is produc'd in *Egypt*, and ſome other Countries, as *Africa*, *Spain*, and *Cyprus*; but the *Sory* which bears the higheſt Price is what comes from *Egypt*, and, when broken, appears of a blacker Colour, is full of Perforations, of a fattiſh Subſtance, aſtringent, of a ſtrong Smell and Taſte, and ſubverts the Stomach. That *Sory* which does not ſparkle like Miſy when it is broken in Pieces, is reckon'd of another Kind, and of little Virtue.

It is calcin'd, and has the ſame Virtues, as the Miſy and Chalcitis. Put into a hollow Tooth, it eaſes the Pain thereof; it alſo faſtens looſe Teeth. Infuſed in Wine, it helps the Sciatica; and clears the Skin of Pimples, if rub'd thereon with Water. It is an Ingredient alſo in Medicines which make the Hair black. Generally ſpeaking, this and almoſt all other Drugs are ſtronger before they are calcin'd than afterwards, except Salt, Lees of Wine, Nitre, Quick-lime, and the like, which are of little Efficacy when crude, but have their Virtues much improv'd by Calcination. *Dioſcorides, Lib. 5. Cap.* 119.

Geoffroy ſays the *Sory* of the *Greeks* is a foſſil Subſtance, thicker and more compact than *Chalcitis*, which emits Sparks by Attrition, and is of a ſpongy Texture, full of Holes, of a viſcid Texture, black Colour, aſtringent, nauſeous Taſte, and of a ſtrong hurtful Smell. This Deſcription agrees very well with a Subſtance which the *Turkiſh* Women make uſe of to take off Hairs from their Bodies, call'd by them *Ruſma*, which is deſcrib'd by *Bellonius* to be a Foſſil, almoſt like Excrement in Appearance,

Appearance, but lighter, and of a black burnt Colour like Pitch, found in ſome Mines in *Gallo-Græcia*. The Way of uſing it is this:

They reduce it to a fine Powder, and, mixing with it an equal Quantity of Quick-lime, they macerate it in Water, in an earthen Veſſel. When the Women are to go into the Bath, they lay it on ſuch Parts as they want to have ſmooth, and let it remain for about as long as is requir'd to boil an Egg. Then, finding by the Touch, that the Hairs are looſen'd, and ready to fall off, they waſh the Part with warm Water, and the Paſte and Hairs come off together. Our Barbers uſe Orpiment and Quick-lime for the ſame Purpoſe. *Geoffroy.*

The Melanteria is thus diſtinguiſh'd:

Μελαντηρία Dioſcoridis, *Melanteria*, Offic. Matth. 1365. Worm. 26. Aldrov. Muſ. Metall. 341. Charlt. Foſſ. 11. *Melanteria*, *Atramentum nigrum*, Offic. Schw. 385. *Atramentum nigrum*, *ſeu ſutorium*, *Græcis Melanteria*, Kentm. fol. 14. *Dale.*

Melanteria is ſometimes found in the Entrance of Copper-mines, where it concretes like Salt. Another Sort, which has an earthy Quality, is gathered from the uppermoſt Surface of theſe Mines. There is alſo a foſſile Kind found in *Cilicia*, and in ſome other Countries.

The beſt *Melanteria* is of the Colour of Sulphur, ſmooth, equable, pure, and which, touch'd with Water, immediately turns black. It has the ſame cauſtic Quality as Miſy. *Dioſcorides*, *Lib.* 5. *Cap.* 118.

All theſe foſſile Subſtances are now rarely found in Apothecaries Shops, being to be had no-where elſe than in *Cyprus*, *Aſia Minor*, or *Egypt*. They are cauſtic, and burn to an Eſchar, and are, in ſome degree, aſtringent. *Chalcitis* was us'd in the Theriaca in *Andromachus*'s Time; but, as it can ſeldom now be had, Colcothar, or Vitriol calcin'd to a Redneſs, is ſubſtituted for it. *Geoffroy.*

CHALCOS, χαλκός. Braſs. See Æs.

CHALCUS, χαλκοῦς. A Weight of about two Grains, the ſame as Æreolum.

CHALCUTE. Burnt Braſs. *Rulandus.*

CHALEPOS, χαλεπός. Difficult, dangerous.

CHALICRATON. A Mixture of Wine and Water, ſo call'd from χαλὶς, an old Word which imports pure Wine, and κεράννυμι, to mix.

CHALINOS, χαλινός. That Part of a Bridle which is put into the Mouth of a Horſe; but it is us'd to expreſs that Part of the Cheeks, which on each Side is contiguous to the Angles of the Mouth.

CHALYBS. Properly Steel, but us'd in Medicine to ſignify Iron; for Steel, that is, Iron harden'd, is not ſo proper for medicinal Uſes as Iron itſelf. *Sydenham* even ſays, he was inform'd, that the Ore of Iron, as taken out of the Mine, was more effectual in the Cure of Diſtempers than Iron itſelf, which I have ſome Reaſon to believe to be true. Steel, then, properly ſo call'd, is of no farther Uſe in Medicine, than as it affords Chirurgical Inſtruments.

CHAMA, Offic. Charlt. Exer. 65. Bellon. de Aquat. 403. *Ab altero tantum latere ferè naturaliter hiantibus*, Liſt. Hiſt. Conch. 3. n. 258. *Chama*, *alio nomine Glycymerides magna*, *hoc eſt*, *Chama magna dulcis*, Bonan. 106. n. 59. *Chama Glycymeris*, Aldrov. de Exang. 473. Rondel. 2. 13. Jonſ. Exang. Tab. 14. Geſn. de Aquat. 71. BASTARD-COCKLE.

It is found in the *Mediterranean* Sea. *Dioſcorides* ſays, that the Broth of this and other ſuch Shell-fiſh, made by boiling them in Water, is laxative, and keeps the Belly open. He adds, that it is uſually taken with Wine.

CHAMÆACTE, from χαμαὶ, upon the Ground, and ἀκτὴ, the Elder, Dwarf-elder, or Danewort. See Sambucus.

CHAMÆBALANUS *Leguminoſa* is the *Lathyrus*; *arvenſis*; *repens*; *tuberoſus*. See Lathyrus.

CHAMÆBATOS. The Dewberry. The ſame as the *Rubus*; *repens*; *fructu cæſio*. See Rubus.

CHAMÆBUXUS. A Name for the *Polygala*; *fruteſcens*; *folio Buxi*; *flore maximo*. See Polygala.

CHAMÆCEDRYS. The *Abrotanum Fœmina*. *Blancard.*

CHAMÆCERASUS. *Upright Honeyſuckle.*

The Characters are;

The Calyx is thin, long, and narrow; conſiſts of two Leaves, in the Middle of which is the Ovary. The Flower is monopetalous, tubulous in the lower Part, and bilabiated at the upper; its upper Lip multifid, the lower like a ſimple Tongue; It is ſeated on the Ovary; ſometimes two belonging to one Ovary; and is furniſh'd with five Stamina. The Ovary is ſometimes double on one Pedicle, ſhooting forth a long Tube between every Floſcule; and at laſt forms ſoft Berries, full of flattiſh and roundiſh Seeds. *Boerhaave Index alter.*

Boerhaave mentions three Species of this Tree:

1. Chamæceraſus; Alpina; fructu gemino, rubro, duobus punctis notato. *C. B. P.* 451. THE GREATER UPRIGHT RED-BERRY'D HONEYSUCKLE.

2. Chamæceraſus; montana; fructu ſingulari, cæruleo. *C. B. P.* 451. THE UPRIGHT BLUE-BERRY'D HONEYSUCKLE.

3. Chamæceraſus; dumetorum; fructu gemino, rubro. *C. B. P.* 451. THE UPRIGHT RED-BERRY'D, OR FLY HONEYSUCKLE. *Boerhaave's Index alter Plantarum*, *Vol.* 2.

They are all topiarian Plants, and not of any Uſe in Medicine, that I know of.

CHEMÆCISSUS. Ground-ivy. See Chamæclema.

CHAMÆCISTUS. Several Species of the *Helianthemum* are call'd by this Name. See Helianthemum.

CHAMÆCLEMA.

The Characters are;

The Root is very creeping, and the Stalks run into leſſer Shoots; the Leaves are thick, furrow'd, roundiſh, and crenated; the Galea erect, roundiſh, bifid; the Beard trifid. The Flowers grow on branched Pedicles, on both Sides of the Joints of the Stalks. *Boerhaave Index alter.*

Boerhaave takes notice of four Plants under this Name.

1. *Chamæclema*; *vulgaris*. Boerh. Ind. A. 172. *Hedera terreſtris*, *Chamæciſſus*, Offic. Merc. Bot. 1: 41. Phyt. Brit. 57. *Hedera terreſtris*, Ger. 705. Emac. 856. Raii Hiſt. 1: 567. Mer. Pin. 60. *Hedera terreſtris vulgaris*, C. B. Pin. 306. Park. Theat. 676. Hiſt. Oxon. 3. 409. *Chamæciſſus*, *ſive Hedera terreſtris*, J. B. 3. 855. Chab. 649. Buxb. 64. *Chamæciſſus*, Rivin. Rupp. Flor. Jen. 188. *Calamintha humilior folio rotundiori*, Tourn. Inſt. 194. Elem. Bot. 163. Dill. Cat. Giſſ. 45. Raii Synop. 3. 243. GROUND-IVY.

Ground-ivy has a great many ſmall creeping ſtringy Roots, from which ſpring ſquare weak Stalks, which, from their lower Parts, take Root again by ſmall Fibres. The Leaves grow in Pairs oppoſite to one another, being, as well as the Stalks, ſomewhat rough and hairy; they are roundiſh, hollow'd in next the Stalk, and indented about the Edges. The Flowers grow three or four together among the Leaves, labiated and galeated; the Galea cut in two, and the Lip into four Parts: They are of a bluiſh Colour, longiſh and hollow, ſet in a ſhort Calyx, which includes four ſmall long Seeds. It grows every-where in the Hedges and ſhady Places, and flowers in *April*. The whole Herb is us'd.

It is accounted a very good pectoral Herb, being much uſed for Coughs, Shortneſs of Breath, and other Diſorders of the Lungs; for which, a Tea made of the Leaves, and a Syrup of the Juice, is very beneficial. It is frequently put into Ale, which it refines and clarifies; and great Quantities of it are drank in Town, under the Name of Gill-ale, being reckon'd antiſcorbutic and aperitive, and good to provoke Urine, and cleanſe the Ureters. Some Authors commend it, ſteep'd in Brandy, as of great Service againſt the Colic.

The only officinal Preparation is a Syrup of the Juice, which is left out of the laſt Diſpenſatory. It is made by boiling up the depurated Juice with Sugar. This *Boerhaave* recommends much in the Chin-cough, Spitting of Blood, and againſt making bloody Urine. *Miller's Bot. Off.*

Pitcairn ſays, that Ground-ivy excels all Vegetables as a Remedy for a Conſumption.

The Leaves of *Ground-ivy* are bitter, a little aromatic, and give hardly any Tincture of Red to blue Paper; ſo that it is probable its Salts may, in ſome meaſure, reſemble vitriolated Tartar. This Salt is mix'd with a very little Sal Ammoniac, but with a great deal of Sulphur and Earth. It yields no concreted volatile Salt by Chymical Analyſis, but a little urinous Spirit: All the reſt which is obtain'd from it is Acid, Alcaline, Oil, and Earth; and theſe two laſt Parts are found in it in great Quantity.

Ground-ivy is very aperitive, deterſive, and vulnerary. *Camerarius* and *Cæſalpinus* commend it very much for provoking Urine, and expelling the Stone. *Simon Paulli* gave its Powder to drink, mixed with an equal Quantity of Sugar, and ſteeped in the diſtil'd Water of the ſame Plant. It conſolidates Ulcers alſo. It is given in Broths and Decoctions to thoſe that are phthiſical, or make purulent Urine. *Lobel* made uſe of it to prevent the Gout, and open the Bowels. An Extract, a Conſerve, and a Syrup, are prepared, by ſome, of the Leaves and Flowers of this Plant. *Martyn's Tournefort.*

2. Chamæclema; minus. LESSER GROUND-IVY.

3. Chamæclema; minus; flore purpureo.

4. Chamæclema; minus; folio variegato, aureo.

CHAMÆCRISTA. A Name given to two æſchynomenous Plants taken notice of by *Ray* from Breynius. The firſt is a Native of *Braſil*, and is called *Chamæriſta Pavonis Braſiliana*, *ſiliqua ſingulari*. The ſecond grows in *Curacao*, and is call'd *Chamæriſta Pavonis Americana ſiliqua multiplici*. I find no medicinal Virtues attributed to either of them.

CHAMÆCYPARISSUS. A Name for the *Abrotanum Fœmina*, Lavender Cotton. See ABROTANUM.

CHAMÆDAPHNE. A Name for the *Laureola*. According to *Boerhaave*, *Chamædaphne* is the *Laurus Alexandrina*, which he makes a Species of *Ruscus*.

CHAMÆDROPS, in *Paulus Ægineta* and *Oribasius*, is the same as CHAMÆDRYS, which see.

CHAMÆDRYITES, χαμαιδρύτης οἶνος. Wine which has had Germander (*Chamædrys*) infus'd in it. *Dioscorides*, *Lib.* 5. *Cap.* 51.

CHAMÆDRYS.

The Characters are;

It has an herbaceous Appearance; the Leaves resemble those of Oak, and are small and thick; the Calyx is tubulated; the Flower is like that of the TEUCRIUM.

Boerhaave takes notice of seven Sorts of the Chamædrys.

1. Chamædrys; major; repens. *C. B. P.* 248. *Dod. p.* 43. *M. H.* 3. 422. THE GREATER CREEPING GERMANDER.

2. Chamædrys; minor, repens, *C. B. P.* 148. *Hist. Oxon.* 3. 422. *Tourn. Inst.* 205. *Boerh. Ind. A.* 182. *Chamædrys, Trissago*, Offic. *Chamædrys*, Chab. 427. *Chamædrys vulgaris*, Park. Theat. 104. Raii Hist. 1. 527. *Chamædrys minor*, Ger. 530. Emac. 656. *Chamædrys vulgò vera existimata*, J. B. 3. 228. Elem. Bot. 173. GERMANDER.

Germander has a spreading creeping Root, which sends forth several square hairy Branches, scarce a Foot high, having two small Leaves at every Joint, on short Foot-stalks, about an Inch long, and half an Inch broad, cut in with several Sections, something resembling in Shape the Leaves of an Oak, somewhat hard and crumpled, green above, and hoary white underneath. The Flowers grow towards the Tops of the Branches among the Leaves, whorle-fashion, of a purplish-red Colour: They are labiated, the Lip turning upwards; but they want the Galea, having in its Place several Stamina standing erect. The Seeds grow four together in the hairy five-pointed Calyces. It grows with us only in Gardens, and flowers in *June* and *July*. The Leaves and Tops are used.

Germander is an Herb of warm thin Parts, opening Obstructions of the Liver, Spleen, and Kidneys, and of Use in the Jaundice, Dropsy, and Stoppage of Urine. It is a good Emmenagogue, and is commended by some as a Specific for the Gout, Rheumatism, and Pains in the Limbs. *Miller's Bot. Off.*

The Leaves of this Plant are bitter and aromatic. They give no Tincture of Red to blue Paper, which shews, that they contain Principles different from those of the small Centaury. The Salt of the Germander is not different from that which is natural in the Earth, which is a Mixture of marine Salt, Nitre, and Sal Ammoniac. It is acrid, very bitter, and very aperitive. It is probable, that what is found in this Plant has lost its Acrimony by the Mixture of a great deal of essential Oil, which renders the Germander aromatic. It is febrifugous, stomachic, aperitive, and diaphoretic. They infuse, cold, over Night, a Handful of its Leaves in a Glass of White-wine, with half a Dram of vegetable Salt; and give the Infusion to drink, fasting, for the Green-sickness. They prepare an Extract of the Leaves and Flowers, and give a Dram of it, with a Drop or two of the Oil of Cinnamon, and make an Infusion of the Leaves like Tea, principally for the Gout and Sciatica. They enter the Powder of the Prince of *Mirandola*, which passes for a great Specific in such Diseases. The Composition is as follows:

> You must dry, and reduce to a very fine Powder, an equal Quantity of the Leaves of Germander, Ground-pine, small Centaury, the Roots of the great Centaury, round Birthwort, and Gentian. Mix all these Powders, and keep them in a dry Place, and in a Box close shut, after having sifted them thro' a Search of Silk. Infuse a Dram of it all Night in half a Glass of good old Wine, or lean Broth. It is better to drink it in Substance, than to throw away the Feces, and drink only the simple Infusion.

They pretend, that this Powder must be used for a whole Year, every Day, either Evening or Morning, or every other Day, or, at least, once a Week. The Patient must take nothing else till three or four Hours after this Medicine: He must be purged, by the Advice of a Physician, in the Beginning of the Seasons, or oftener, if it is necessary: He must avoid Ragous, Milk Diet, and violent Exercises. This Powder also is excellent for intermitting Fevers, for the Dropsy, and for all Diseases where there are great Obstructions in the Bowels. The *Germander* is used in the *Venice* Treacle, *Hiera Diacolocynthidos*, Syrup of Mugwort, hydragogic Syrup of Mr. *Charas*, aperitive and cachectic Syrup of the same Author, compound Oil of Scorpions, *Unguentum Martiatum*, and in the Mundificative of Smallage. *Martyn's Tournefort.*

3. Chamædrys; foliis laciniatis. *Lob. Obs.* 209.

4. Chamædrys; folio pulchrè laciniato, majore, odorato; flore rubello. *b.*

5. Chamædrys; major; repens; flore albo. *C. B. P.* 248. *Var.*

6. Chamædrys; Hispanica; tenuifolia; multiflora. *H. R. Par. T.* 205. *H. R. D.*

7. Chamædrys; Hispanica; tenuifolia; latiori folio; multiflora. *H. R. Par. H. R. D. Boerhaave's Index alter Plantarum, Vol.* 1.

CHAMÆDRYS PALUSTRIS, ALLIUM REDOLENS. See SCORDIUM.

CHAMÆDRYS, FRUTICOSA, SYLVESTRIS, MELISSÆ FOLIO. See SCORDIUM.

CHAMÆDRYS FRUTESCENS. See TEUCRIUM.

CHAMÆDRYS SPURIA ANGUSTIFOLIA. See VERONICA.

CHAMÆDRYS SPURIA LATIFOLIA. See VERONICA.

CHAMÆFICUS. The *Ficus humilis*. C. B. P. See FICUS.

CHAMÆFILIX is the *Filix Marina Anglica*. *Parkinson.*

CHAMÆGENISTA is the *Genistella*; *herbacea*; *sive Chamæspartium*. J. B.

CHAMÆIASME *Alpina* is the *Sedum Alpinum* 4. *Clusii*. Ger. Emaculat.

CHAMÆIRIS. A Name for several Species of the IRIS, which see.

CHAMÆITEA is the *Salix pumila angustifolia recta*. The strait Dwarf-willow with narrow Leaves. *Park.*

CHAMÆLÆA. Widow-wail.

It has the Appearance of a Shrub, and the Leaves are like those of the Olive-tree; the Calyx is short, consists of one Leaf, and is indented in three Places; the Flower tripetaloidal, arising from the Base of the Ovary, whence three Stamina arise, in the Spaces between the Petals. The Ovarium, in the Bottom of the Calyx, is furnish'd with a long Tube, is of a triangular Shape, and, when ripe, consists of three Berries. The Seed is oblong. *Boerhaave*, *Index alter.*

Boerhaave mentions but one Species of this Plant.

Chamælæa; tricoccos. *C. B. P.* 462. *J. B.* 1. 584. *Chamælæa.* Dod. p. 363. H. *Boerhaave's Index Plantarum, Vol.* 1.

Ray informs us, that the Virtues of the *Chamælæa* are, in a great measure, the same with those of the *Laureola*, or Spurge-laurel; but, as it is dubious whether it is really the *Chamælæa* of the Antients, we shall not ascribe to it the Virtues which *Dioscorides* and *Pliny* attribute to that Plant. But, says *John Bauhine*, the Juice of the whole Plant is much used at present, especially at *Montpelier*, where, according to *Rondeletius*, the Apothecaries keep it expressed and inspissated; in Imitation of whom I have often, with great Success, exhibited one or two Drams of the recent inspissated Juice by itself, and oftener in Conjunction with other hydragogue Cathartics. But it does not produce so large a Discharge of the peccant Matter, nor operate with such a Degree of Violence, as the Spurge-laurel, the *German* Mezereon, and the Gratiola, generally do. Sometimes it operates little, or none at all, except when mix'd with some mild and gentle Cathartics. When exhibited to Children, it neither excites Gripes nor Vomitings, bnt only discharges Water and Serum. When apply'd to the Pubes and Abdomen of dropsical Patients, no Medicine is more effectual for provoking Urine; in which manner *Rondeletius* used it with Success.

The *Thymelæa*; *Lauri folio deciduo*; *sive Laureola fœmina*, Mezereon, or Spurge-olive, is sometimes also call'd *Chamælæa*. See THYMELÆA.

The Names of these Plants were confounded in the Days of *Dioscorides*.

CHAMÆLÆAGNUS. A Name of the *Myrtus Brabantica*, or *Gale*. See GALE.

CHAMÆLAITES *Vinum*, χαμαιλαίτης οἶνος. *Dioscorides*, *L.* 5. *C.* 79. Wine impregnated with the *Chamælæa*. It is not certain what the *Chamælæa* of *Dioscorides* is.

CHAMÆLARIX. The Name of a Plant which grows at the *Cape of Good Hope*. *Raii Hist. Plant.*

CHAMÆLEON, Offic. Charlt. Exer. 38. Caii de Animal. 80. Gesn. de Quad. Ovip. 3. Bellon. de Aquat. 55. Ejusd. Obs. ed. Clus. 125. *Chamæleon cinereus verus*, Aldrov. de Quad. Ovip. 670. Jonst. de Quad. 140. *Chamæleo*, Raii Synop. A. 276. THE CHAMELEON.

The Gall, Heart, and the Animal itself, are in Use. The Gall removes Suffusions. *Marcellus.* *Pliny* recommends the Heart against Quartans, and *Trallian* recommends it against Epilepsies and the Gout. *Dale.*

In Botany, the *Chamæleon Albus* is the *Carlina*, *acaulos*, *magno Flore*. See CARLINA. The *Chamæleon Niger* is the CARTHAMUS, (Bastard-saffron) which see.

CHAMÆLEUCE is, according to *Blancard*, the *Tussilago*, Colt's-foot.

CHAMÆLINUM. A Name for the *Linum Catharticum*, Purging Flax. The *Knawel*; *folio Alsines*; *glabro*; *flosculis plurimis*, is call'd, by *Tournefort*, *Chamælinum vulgare*.

CHAMÆMALUS. A kind of dwarf Apple-tree, call'd by *Gerard* the Paradise-apple.

CHAMÆMELUM.

The Characters are;

The Root is fibrous, the Calyx ſquamous, and expanded with a manifold Series of Leaves. The Flower is generally radiated, ſeldom naked, with radiated Petals, for the moſt part white, and a yellow Diſk. The Leaves are finely indented. In other things this Plant reſembles the *Bellis*. *Boerhaave*, *Index alter*.

The laſt-quoted Author mentions fourteen Sorts of Chamomile.

1. Chamæmelum; vulgare; Leucanthemum Dioſcoridis. *C. B. Pin.* 135. *Cod. Med.* 34. *Tourn. Inſt.* 494. *Elem. Bot.* 395. *Boerh. Ind. A.* 195. *Hiſt. Oxon.* 3. 35. *Dill. Cat. Giſſ.* 78. *Rupp. Flor. Jen.* 139. *Vaill. Bot. Par.* 34. *Chamæmelum vulgare*, Offic. Park. Theat. 85. *quoad iconatem*, Buxb. 65. *Chamæmelum*, Ger. 615. *quoad etiam iconatem*, & Emac. 753. Raii Synop. 3. 189. *Chamæmelum vulgare amarum*, J. B. 3. 116. Raii Hiſt. 1. 355. *Chamæmelum majus foliis tenuiſſimis, caule rubente*, Hort. Monſp. *Chamæmelum elatius, foliis obſcurè virentibus, ſemine nigro*, Pluk. Almag. 97. *Anthemis ſive Chamæmelum*, Chab. 362. *Chamomilla Officinarum*, Volck. Flor. Nor. 100. WILD OR DOG'S CHAMOMILE.

It is found in uncultivated Places, and amongſt Corn, and flowers in *June*. The Herb and Flowers are uſed. They are believed to be poſſeſſed of the ſame Virtues with the ſecond Species of Chamomile. *Dale*.

This Plant is bitter, aromatic, and gives a deep red Colour to blue Paper. It ſeems to contain ſome Sal Ammoniac, loaded with a great deal of Acid, and involv'd by a great deal of Sulphur and Earth. It is aperitive, diuretic, lenifying, and febrifugous. The Powder of its Flowers were us'd in *Dioſcorides*'s Time to cure intermitting Fevers. *Riverius* preſcrib'd it on the ſame Occaſions; and it is ſtill the common Febrifuge of the *Scotch* and *Iriſh*. The Infuſion of its Tops, with thoſe of Melilot, gives great Eaſe to ſuch as are tormented with a nephritic Colic, and Retention of Urine. It aſſwages the acute Pains of Women newly brought to Bed. *Simon Paulli* recommends a ſtrong Infuſion of Chamomile-flowers in Wine, taken by Spoonfuls, while a Hog's Bladder, fill'd with a Decoction of the Herb, is applied hot, and renew'd as Occaſion requires, in pleuretic Caſes. It is alſo uſed in lenifying and reſolving Clyſters, Fomentations, Cataplaſms, and Baths, for the Gout, Sciatica, and the Piles. The Oil of Chamomile, made by Infuſion, is very good in the ſame Caſes. A Liniment of an equal Quantity of Chamomile and Oil of St. John's-wort, with camphorated Spirit of Wine, in which a twice-folded Cloth has been dipt, and applied very hot to the affected Part, is good in Rheumatiſms. *Martyn's Tournefort*.

2. Chamæmelum; nobile; ſive Leucanthemum; odoratius. *C. B. P.* 135. *Tourn. Inſt.* 494. *Elem. Bot.* 395. *Boerh. Ind. A.* 109. *Dill. Cat. Giſſ.* 78. *Rupp. Flor. Jen.* 139. *Chamæmelum*, Offic. Ger. 616. Emac. 755. Mer. Pin. 25. Park. Parad. 289. *Chamæmelum vulgare*, Mer. Bot. 1. 28. Phyt. Brit. 26. Park. Theat. 85. Pharm. Edinb. 6. *Chamæmelum Officinarum*, Act. Reg. Par. An. 1720. p. 317. *Chamæmelum nobile*, Buxb. 65. *Chamæmelum odoratiſſimum, repens flore ſimplici*, J. B. 3. 118. Raii Hiſt. 1. 353. Synop. 3. 185. Hiſt. Oxon. 3. 35. *Chamæmelum Romanum ſeu Chamæmelum odoratiſſimum repens flore ſimplici*, Chab. 362. *Chamæmelum vulgarius odoratum*, Schw. 47. *Chamomilla Romana Officinarum*, Buxb. 65. CHAMOMILE.

The *Chamomile* which is uſed in the Shops ſeldom riſes very high, but creeps upon the Ground, with fine winged Leaves, cut into many thin ſlender Diviſions, among which grow the Flowers, upon long Foot-ſtalks, not growing together, but here-and-there one, conſiſting of broad white Petals, ſet about a yellow fiſtular Thrum, in which lie ſmall flat Seeds. The Root is compoſed of ſmall Strings, creeping and ſpreading in the Ground. The Leaves and Flowers have a ſtrong, not unpleaſant Scent, and a very bitter Taſte. It grows upon Heaths and Commons, flowering in *June* and *July*. We have a Species of this, which is planted in Gardens, and bears double Flowers, which, becauſe of their Beauty and Largeneſs, are moſtly uſed in the Shops; tho' many are of Opinion, that the ſingle Flowers are ſtronger, and of more Virtue, having a greater Quantity of the yellow Thrum, in which lies the Strength of the Plant.

Chamomile is a Plant of many Virtues, being ſtomachic, hepatic, nervine, emollient, and carminative; it ſtrengthens the Stomach and Bowels, helps the Colic, Jaundice, Stone, and Stoppage of Urine. It is good againſt quartan and other Agues. Outwardly it is uſed in Glyſters, in Baths, and Semicupia for the Stone, and Stoppage of Urine; alſo in Fomentations for Inflammations and Tumors. Outwardly applied hot to the Sides, it helps the Pains thereof. The Herb and Flowers are uſed.

Officinal Preparations are, the ſimple Water, the *Aqua Chamæmeli compoſita*, the diſtil'd Oil, and the Oil by Infuſion or Decoction. *Miller's Bot. Off.*

Morton, ſpeaking of intermittent Fevers, uſes theſe Words: "Doctor *Eliſha Coyſh* often proteſted to me, with the utmoſt "Appearance of Sincerity, that he had found Chamomile-"flowers, reduc'd to a fine Powder, exhibited in a proper Ve-"hicle, and uſed at due Intervals, as ſucceſsful and infallible, in "curing theſe Diſorders, as the *Peruvian* Bark itſelf. Whe-"ther the Author's Aſſertion was true or falſe, let others judge; "as for my own Part, I never made an Experiment of the "Efficacy of this ſimple Medicine; but by means of it, in "Conjunction with other Ingredients, I, in two Days time, "perfectly cured the Son of one Mr. *Barnard*, a Lawyer of "*London*, of that Species of Fever call'd Hemitritæa, after I "had not been able to free him from one Paroxyſm of the Diſ-"order by a long and copious Uſe of the *Peruvian* Bark. By "means of the ſame Secret, exhibited at proper Intervals, I, "in the Space of two Days, cured one Mrs. *Gumley*, an old "Gentlewoman, labouring under a tertian Fever, and who "had made a long, but fruitleſs, Trial of the Virtues of the "*Peruvian* Bark. By the ſame Medicine, and in the ſame "Time, I alſo perfectly, and without a Relapſe, cured the "Wife of Mr. *Royſton*, the King's Bookſeller, tho' almoſt "ſeventy Years of Age, after ſhe had for two Years laboured "under an intermitting Fever, which was ſometimes a tertian, "ſometimes a quartan, and ſometimes that Species call'd "Hemitritæa. I muſt confeſs, that I do not remember "to have made Trial of this Medicine upon any other Pati-"ents labouring under intermittent Fevers; for except in theſe "three Inſtances, I cannot call to mind any Patients in whom "the *Peruvian* Bark did not anſwer my Expectations. I "therefore thought it criminal and indecent to make wanton "Experiments upon Mankind, by preferring an uncertain and "little known Remedy to one whoſe Virtues were approved, "and ſufficiently aſcertain'd. I ſhall, however, for the ſake "of the Curious, give the Formula of this Medicine, that "they may, if they have a mind, make a Trial whether "it is an infallible Febrifuge; or, at leaſt, whether, as it hap-"pen'd in my Practice, it is able to ſupply the Defects of the "*Peruvian* Bark. The Powder itſelf is thus prepar'd:

> "Take of the Flowers of Chamomile, one Scruple, more "or leſs according to the Age of the Patient; of diapho-"retic Antimony, and Salt of Wormwood, each half a "Scruple: Mix up into a Powder, to be taken in a "Draught of Poſſet-drink, or any temperate Jalap; or "it may be exhibited in the Form of a Bolus, with Syrup "of Clove-gilly-flowers; or it may be reduced to the "Form of Pills with Mucilage of Gum Tragacanth, and "exhibited every ſixth Hour for two or three Days." *Morton's* Πυρετολογία.

No Simple in the *Materia Medica* is poſſeſs'd of a Quality more friendly and beneficial to the Inteſtines than Chamomile-flowers; for which Reaſon I have, inſtead of all other Ingredients, hitherto, with great Succeſs, preſcrib'd Chamomile-flowers for Clyſters, in all Diſorders which indicate their Uſe; adding, when there is a Neceſſity for it, Oil of ſweet Almonds; and, for Patients of the poorer Sort, Linſeed-oil, or Oil of Turnep-ſeeds; or, for evacuating the Fæces, a ſufficient Quantity of common Salt, which, for its ſtimulating Quality, is of more Service than the whole Train of laxative and purgative Extracts or Electuaries, which may be very well left out of Clyſters. Theſe Flowers make an excellent Cataplaſm for diſcuſſing, ſoftening, and maturating Abſceſſes. When boil'd in Milk, and put into a Bladder, either alone, or in Conjunction with the Flowers of Elder, Mallows, Yarrow, or Saffron, they are highly efficacious in alleviating Pains, and ſoftening Tumors, if the Bladder is applied to the Part affected. I have learn'd, from long Practice and Experience, that Brandy diſtil'd from the Tops of Yarrow, Chamomile-flowers, Aniſe-ſeeds, and *Ethiopic* Cumin, is of more Efficacy, in diſcuſſing Flatulencies, than any of the other ſo much extol'd carminative and antiſpaſmodic Preparations. *Hoffman de Præſtantia Remediorum Domeſticorum*.

For the Method of making the ſimple and compound Chamomile-water, ſee the Article AQUA.

Boerhaave repreſents the ſimple Water of Chamomile, prepared by repeated Cohobations, as effectual in curing tertian Agues.

The *Oleum Chamæmelinum*, in the *London Diſpenſatory*, is directed to be made by

> Infuſing four Ounces of bruiſed Chamomile-flowers in a Pound of Olive-oil, in the Sun: The Oil muſt then be preſs'd out, and freſh Flowers added, infuſed, and then preſs'd out again; and this muſt be repeated once more.

This Oil is eſteem'd a good Diſcutient, and is uſed externally in that Intention. It is alſo a frequent Ingredient in Clyſters.

The ſame Oil is directed to be made in a ſomewhat different manner in the *Edinburgh Diſpenſatory*.

Take

Take a Pound of the bruiſed Flowers of Chamomile, and three Pints of ripe Olive-oil: Put them into a Glaſs Veſſel, or one of glaz'd Earth; cloſe it well, and expoſe it to the Heat of the Sun for fifteen Days; then add four Ounces of the Juice of Chamomile; and boil the Whole gently, till the Juice is evaporated; and afterwards force out the Oil with a Preſs.

For the Way of making chymical Oil of Chamomile, ſee OLEUM.

Boerhaave ſays, the eſſential Oil of Chamomile, made into Pills with a Bit of Bread, and given two Hours before Meals, after faſting a conſiderable time, is a certain Cure for the Worms.

3. Chamæmelum; nobile; flore multiplici. *C. B. P.* 135. CHAMÆMELUM FLORE PLENO, Park. Theat. 85. Parad. 290. *Chamæmelum Anglicum flore multiplici*, Ger. 616. Emac. 755. *Chamæmelum repens odoratiſſimum perenne flore multiplici*, J. B. 3. 119. Raii Hiſt. 1. 353. *Chamæmelum Romanum*, Volk. 101. *Chamæmelum Romanum ſive nobile, flore multiplici*, Chab. 362. DOUBLE CHAMOMILE.

This is cultivated in Gardens, and is ſaid to be poſſeſs'd of the ſame Virtues as the preceding.

4. Chamæmelum; Leucanthemum; Hiſpanicum; magno flore. *C. B. P.* 135. *M. H.* 3. 35. *C. B. Pin. in Prodr.* 70. *a.* SPANISH CHAMOMILE, WITH LARGE FLOWERS.

5. Chamæmelum; Chium; vernum; folio craſſiori; flore magno. *T. C.* 37. SPRING THICK-LEAVED CHAMOMILE OF CHIO, WITH LARGE FLOWERS.

6. Chamæmelum; inodorum. *C. B. P.* 135.

7. Chamæmelum; fœtidum. *C. B. P.* 135. *Tourn. Inſt.* 494. *Boerh. Ind. A.* 109. *Dill. Cat. Giſſ.* 122. *Raii Synop.* 92. *Rupp. Flor. Jen.* 139. *Cotula fœtida*, Offic. Ger. 617. Emac. 757. Park. Theat. 86. Raii Hiſt. 355. *Chamæmelum caninum fœtidum*, Schw. 47. *Chamæmelum fœtidum, ſive Cotula fœtida*, J. B. 3. 120. Chab. 363. *Chamæmelum annuum præcox fœtidum ſemine aureo*, Hiſt. Oxon. 3. 36. MAY-WEED.

This Plant differs from Chamomile, in that it grows more erect. The Leaves are finer. The Flowers grow thicker together upon the Tops of the Stalks: Beſides, it is an annual Plant, and has an unpleaſant, ſtrong, ſtinking Smell. It grows frequently among Corn, and in waſte Places, and flowers in *May* and *June*.

This is a Plant but rarely uſed, tho' ſome Authors commend it as good againſt Vapours, and hyſteric Fits. Mr. *Ray* ſays, it was ſometimes made uſe of in ſcrophulous Caſes. *Miller's Bot. Off.*

This Plant is acrid and bitter: It ſmells like Bitumen, and gives a very deep Tincture of Red to blue Paper; which ſeems to ſhew, that it contains a great deal more fetid Oil than the *Chamæmelum vulgare*. The Fomentations of *May-weed* are very good for the Vapours, according to *Tragus*. They uſe it at *Paris* to aſſwage the Pain of the Piles. *Martyn's Tournefort.*

8. Chamæmelum; marinum. *J. B.* 3. 122.

9. Chamæmelum; maritimum; incanum; folio Abſinthii craſſo.

10. Chamæmelum; Orientale; incanum; folio Millefolii. *T. Cor.* 37. *H.* EASTERN CHAMOMILE, WITH HOARY YARROW-LEAVES.

11. Chamæmelum; montanum; folio Abſinthii; odore Parthenii. *H. C. H.*

12. Chamæmelum; Orientale; folio Abſinthii. *T. C.* 37.

13. Chamæmelum; luteum; capitulo aphyllo. *C. B. P.* 135. *M. H.* 3. 35.

14. Chamæmelum; maximum; Aſiaticum; nudum; humifuſum; folio craſſo. *Ind.* 36.

15. Chamæmelum; Orientale; foliis pinnatis. *T. Cor.* 37. *b. H.* EASTERN CHAMOMILE, WITH PINNATED LEAVES.

16. Chamæmelum; Æthiopicum; lanuginoſum. *Breyn. Cent.* 1. 73. *M. H.* 3. 36.

17. Chamæmelum; Æthiopicum; lanuginoſum; flore luteo. *a.* ETHIOPIAN WOOLLY CHAMOMILE, WITH A YELLOW FLOWER.

18. Chamæmelum; nobile; five Leucanthemum odoratius; nunquam florens.

Boerhaave's Index alter Plantarum, Vol. 1.

CHAMÆMESPILUS is the *Cratægus*; *folio oblongo, ſerrato, utrimque virente. Boerh. Index alter, Pars* 2.

The *Chamæmeſpilus Geſneri* is the *Meſpilus*; *folio ſubrotundo*; *fructu rubro. Ibid.*

CHAMÆMORUS, Offic. Ger. 1090. Emac. 1273. Raii Hiſt. 1. 654. Synop. 3. 260. *Vaccinia nubis*, Ger. 1630. Emac. 1420. *Chamæmorus Anglica*, Park. Theat. 1014. *Chamæmorus Vaccinia nubis*, Ejuſd. *Cambro-Britannica ſive Lancaſtrenſe Vaccinium nubis*, Ejuſd. *Chamærubus folio Ribes Anglica*, C. B. Pin. 480. Jonſ. Dendr. 273. *Rubus Alpinus humilis Anglicus, Vaccinia nubis, id eſt*, CLOUD-BERRIES, *vulgo dictus*, Pluk. Almag. 325. *Rubus paluſtris humilis*, Tourn. Inſt. 615. *Rubus Alpinus foliis Ribes*, Rupp. Flor. Jen. 115. *Rubo Idæo minori affinis, Chamæmorus*, J. B. 2. 62. Chab. 110. KNOT-BERRIES, CLOUD-BERRIES.

This is a Shrub which grows in many Parts of *Great Britain*, on the very Summits of the Mountains, in a rotten and boggy Soil. The Leaf is like that of the Mallow, Mulberry, or rather, according to *Ray*, like that of the Currant-tree. The Fruit is ſomewhat like the Mulberry, or Raſpberry, which is at firſt white and ſour, but by Maturity ſweet, but with a Degree of Tartneſs, and red, with a yelloviſh Caſt.

Ray thinks the *Chamæmorum Norwegicum Cluſii*, Park. to be the ſame Plant as the preceding. The Fruit is ripe in *July* and *Auguſt*.

The Inhabitants of *Norway* and *Finland*, ſays *Hoierus*, prepare every Year, after a coarſe manner, an Electuary of this Fruit againſt the Scurvy. They boil the Berries by themſelves, in an Earthen or Copper Veſſel, to a moderate Conſiſtence, without adding any Liquor; for the Fruit is ſo ſoft, and full of Juice, as not to require Irrigation by extraneous Liquids; tho' ſome, who are of nicer Palates than the reſt, pour on it ſome Mead, which is highly coveted by theſe Northern People. After it is thus boil'd, they diſpoſe of it in proper Veſſels; and, to preſerve it from being corrupted by the Air, pour over it melted Butter, which forms itſelf into a Covering. They are very careful to keep this in their Houſes, and eſteem it, as it really is, a noble and excellent Remedy againſt the Scurvy. It is almoſt incredible what ſurpriſing Cures are every Day perform'd by Help of this Medicine alone; and it muſt be confeſs'd, that neither Scurvy-graſs, ſo much in Requeſt hitherto, nor Brook-lime, nor Water-mint, nor Meadow-creſſes, nor other Things of that Kind, which are ſo much extol'd by the *Germans*, deſerve to be mention'd with it.

Some cure the Scurvy by a ridiculous, though ſucceſsful Method, which is as follows: They expoſe the Patients in ſome neighbouring Iſland which abounds with the *Chamæmorus*; and, leaving them by themſelves, never ſuffer them to return home before they have recover'd their Health. The Sick, thus left to ſhift for themſelves, and yet deſirous, as we may ſuppoſe, of Life, are obliged to feed on this Fruit, either as being the laſt Remedy which they can uſe for the Recovery of their Health, or to ſatisfy their Thirſt, with which they are very much tormented; and, while they thus feed to Satiety, they infallibly recover in a few Days. In the Winter, when this Method cannot be uſed, they have recourſe to their Electuary with the ſame Succeſs, not confining themſelves to any particular Doſe or Regimen. *Raii Hiſt. Plant.*

There is another Species of this, call'd *Chamæmorus altera Norwegica*. J. B. Cluſ. Park.

CHAMÆNERION. A Name for ſeveral Sorts of the *Lyſimachia*, as the *Lyſimachia, Chamænerion dicta, latifolia*, C. B. ROSE BAY-WILLOW-HERB.

Lyſimachia, Chamænerion dicta, anguſtifolia, C. B. THE NARROW-LEAVED CODDED LOOSE-STRIFE.

Lyſimachia, Chamænerion dicta, Alpina, C. B. Park. THE MOUNTAIN CODDED LOOSE-STRIFE.

CHAMÆORCHIS is the *Orchis*; *Lilifolia*; *minor*; *ſabuletorum Zelandiæ, & Bataviæ*. Boerh. Index A. Pars 2. P. 152.

CHAMÆPERICLYMENUM is the *Chamæceraſus*; *Alpina*; *fructu gemino, rubro, duobus punctis notato*. Boerh. I. A. Pars 2.

CHAMÆPEUCE. *Dioſcorides, L.* 4. *C.* 127. mentions the χαμαιλεύκη, *Chamæleuce*, which his Tranſlators call *Chamæpeuce*, for what Reaſon I cannot tell. The *Chamæleuce* is the *Tuſſilago*, Colt's-foot.

CHAMÆPITUINUM *Vinum*, χαμαιπιτύινος οἶνος, *Dioſcorides, L.* 5. *C.* 180. is Wine, in which the bruiſed green Leaves of the *Chæmepitys* have been infuſed. It excites Urine.

CHAMÆPITYS, χαμαιπίτυς.

The Characters are;

The Leaves are narrow and trifid; the Place of the Galea of the Flower is ſupply'd by little Teeth; the Beard, or lower Lip, is divided into three Parts, the middle Segment being again divided into two Parts: The Flowers grow in Whorles; but theſe conſiſt of very few Flowers, one or two at moſt on each Side, diſperſed here-and-there, in the *Alæ* of the Leaves.

1. Chamæpitys; lutea; vulgaris; five folio trifido. *C. B. P.* 249. *Tourn. Inſt.* 208. *Elem. Bot.* 177. *Hiſt. Oxon.* 3. 424. *Boerh. Ind. A.* 183. *Buxb.* 67. CHAMÆPITYS, *Iva arthritica*, Offic. *Chamæpitys ſive Iva Moſchata*, Chab. 430. *Chamæpitys Mas*, Ger. 421. Emac. 525. Mer. Pin. 26. *Chamæpitys, Iva Arthritica ſive Moſchata*, Merc. Bot. 1. 28. Phyt. Brit. 27. *Chamæpitys Officinarum*, Rupp. Flor. Jen. 178. *Chamæpitys vulgaris*, Park. Theat. 283. Raii Hiſt. 1. 573. Synop. 3. 244. *Chamæpitys vulgaris odorata, flore luteo*, J. B. 3. 295. GROUND-PINE.

Ground-

Ground-pine has a long woody ſingle Root, which ſtrikes deep into the Earth, with many Fibres. It ſends forth a great many Stalks, four or five Inches long, leaning towards the Earth, cover'd thick with Hairs: The Leaves ſtand ſo thick on the Stalks, two oppoſite to one another, that the Bottoms are hardly ſeen, the Tops of them being divided into three Parts: They are alſo very hairy. The Flowers are yellow and labiated, but have little or no Galea. They grow at the Joints, among the Leaves, ſet in Calyces that belly out round, each containing four Seeds. The whole Plant is of a ſtrong reſinous Scent; and the Stalks, being ſet thick with Leaves, appear like a ſmall Pine, whence the Name.

It grows in fallow Fields, and chalky Grounds, particularly in *Kent*, in great Plenty; and flowers in *June* and *July*.

The Leaves of Chamæpitys, drank in Wine, for ſeven Days together, cure the yellow Jaundice: Drank forty Days together, in Hydromel, they cure the Sciatica. They are preſcrib'd alſo for Diſtempers of the Liver, Difficulty of Urine, and as a Specific in Diſorders of the Kidneys: They alſo help the Gripes. The Inhabitants of *Heraclea*, in *Pontus*, uſe this Herb as an Antidote for thoſe who have drank the Decoction of Aconitum. The Decoction of the Herb, mix'd with Polenta, is made into a Cataplaſm for the aforeſaid Diſorders. Pulveriz'd with Figs, and made into Pills, it purges by Stool. Taken with Honey, Squama Æris, and Rozin, it alſo ſerves for a Purge. Made into a Peſſary, with Honey, it cleanſes the Uterus. It diſcuſſes Hardneſſes of the Breaſts, conglutinates Wounds, and reſtrains the Herpes, if made into a Cataplaſm, with Honey, for theſe Purpoſes. *Dioſcorides*, *Lib.* 3. *Cap.* 175.

The ſame Author informs us, that, in *Pontus*, it was call'd *Holocyron*, ὁλόκυρον; at *Athens*, *Ionia*, Ἰωνία; and in *Eubœa*, *Siderites*, σιδηρίτης.

Ground-pine is hot and dry, warming and ſtrengthening the Nerves, helps the Palſy, Gout, Sciatica, and Rheumatiſm, the Scurvy, and all Pains of the Limbs. It is a ſtrong Diuretic, opens Obſtructions of the Womb, and powerfully promotes the Menſes, and that ſo ſtrongly, that it is forbid to Women with Child, for fear of Abortion. *Miller's Bot. Off.*

This Plant is bitter, aromatic, and gives a faint red Colour to the blue Paper; by which it ſeems to contain ſome aromatic oily volatile Salt, loaded with a great deal of Sulphur and Earth; for, by the chymical Analyſis, the Ground-pine yields ſeveral acid Liquors, a little urinous Spirit, a great deal of Oil, and more Earth.

No Wonder, then, if this Plant reſtores the ordinary Courſe of the Spirits and Liquors in the Nerves and Capillary Veſſels; whence it is very good in nervous Affections. It is diuretic, emmenagogic, and diſſipates the Cauſe of the Gout. Drink its Infuſion in Wine, or make a Ptiſan of it, with Germander. The Juice enters *Nicolaus Salernitanus*'s Arthritic Pills. *Martyn's Tournefort.*

2. Chamæpitys Moſchata foliis ferratis an prima Dioſcoridis, *C. B. Pin.* 244. *Tourn. Inſt.* 208. *Elem. Bot.* 177. *Boerh. Ind. A.* 183. *Raii Hiſt.* 1. 574. *Chamæpitys altera*, Offic. *Chamæpitys Moſchata*, Cod. Med. 34. *Chamæpitys ſive Iva Moſchata Monſpelienſium*, J. B. 3. 425. *Chamæpitys, Iva Moſchata Monſpeliaca*, Ger. 422. Emac. 525. *Chamæpitys Anthyllis altera Herbariorum*, Park. Theat. 282. FRENCH GROUND-PINE.

It is often found in *France*, and flowers in *June*. The Herb is uſed. *Dale.*

Beſides the two preceding Species, *Dale* mentions a third.

3. *Chamæpitys tertia ſeu Mas*, Offic. *Chamæpitys odoratior*, Park. Theat. 283. *Chamæpitys incana exiguo folio*, C. B. Pin. 249. *Chamæpitys folio non laciniato*, J. B. 3. 297. *Chamæpitys folio non laciniato ſeu tertia Dioſcoridis Matthiolo*, Chab. 431. Raii Hiſt. 1. 574. *Chamæpitys tertia Dodonæi*, Ger. Emac. 532. ITALIAN GROUND-PINE.

This is common in *Italy*, where it flowers in *June*.

Dioſcorides ſays, that the two laſt are poſſeſs'd of the ſame Virtues as the firſt, but in a weaker Degree.

CHAMÆPLION. A Name in *Oribaſius* for the *Eryſimum*.

CHAMÆPYXOS. A Name for the *Pſeudo-chamæbuxus*, Park.

CHAMÆRAPHANUM. The upper Part of the Root of *Apium* is thus call'd by *Paulus Ægineta*, *L.* 7. *C.* 10.

CHAMÆRIPHES. A Name for the *Palma*; *humilis*; *Dactylifera*; *radice repente*, *ſobolifera*; *folio flabelliformi*, *pedunculo ſpinoſo*. Boerh. I. A. Pars 2. P. 169.

CHAMÆRODODENDROS. See ÆGOLETHRON.

CHAMÆROPS. A ſort of Palm, call'd *Palma*; *Chamærops*; *Plinii*. Boerh. I. A. Pars 2. P. 169. See PALMA.

CHAMÆRUBUS. A Name for the *Rubus*; *Alpinus*; *humilis*. Boerh. Index A. Pars 2. P. 60. See RUBUS.

CHAMÆSYCE. A Name given to ſome Species of the TITHYMALUS, which ſee.

CHAMÆZELOS, χαμαίζηλος. Low, depreſs'd. *Hippocrates.*

CHAMBAR. The ſame as *Magneſia*. *Rulandus.*

CHAMBELECH. An *Elixir*. *Rulandus.*

CHAMBROCH. Treſoil. *Caſtellus* from *Paracelſus.*

CHAMELÆA. See CHAMÆLÆA.

CHAMEUNIA, χαμευνία, from χαμαὶ, on the Ground, and εὐνὴ, a Bed. A lying on the Ground, or on any hard Place. *Galen.*

CHAMPACAM, H. M. *An Flos Indicus Champacca dictus* Bontii, *An Champe dicti flores Indici Garziæ*, I. B.

A large tall Tree, which grows in the *Eaſt Indies*, and bears very fragrant Flowers, twice a Year, but no Fruit, till much advanc'd in Age.

The dry'd Root, and its Bark, bruis'd, and mix'd with thick Milk, call'd *Dayr*, ſerve to maturate and break Abſceſſes; pulveriz'd, and given in warm Water, they provoke the Menſes, and expel the Fœtus. The Flowers bruis'd, and boil'd in Oil, make an Ointment for the Head-ach, diſeas'd Eyes, and the Gout; expos'd to the Sun in Oil, for forty Days together, they work the ſame Effect. The diſtil'd Water of the Flowers has a fine Smell, and chears the Heart. *Ray* thinks this Tree to be the *Champacca* of *Bontius*. *Raii Hiſt. Plant. p.* 1642.

CHANCRE.

Chancres are reputed among the firſt Symptoms which appear in the Venereal Diſeaſe, and *Antonius Muſa Braſavolus* obſerves, that the Puſhes on the Prepuce, Glans, or on both, are occaſioned by the Sharpneſs of Humours, which are ſtirred in time of Coition, and the malignant Quality of the Venereal Taint contain'd in the Vagina, or that flows from the adverſe Party. This being premis'd, it is certain the Chancres on the Frænum and Prepuce differ very much from thoſe on the Glans, and other Parts. For theſe are a ſort of Tumor with hard Edges, and the former riſe not above the Skin, but are likewiſe hard, and ſhed a watery Subſtance. They reſemble the Sores on the Inſide of the Lips, we commonly call Cankers; and all theſe Names vary little from thoſe of the *Greek* and *Latin*, firſt given them. Now, as both Kinds of Chancres are hard, their Liquors corroſive, and agree in many other Qualities obſerv'd about Cancers, they are properly enough ſaid to καρκινοῦσθαι. And the common Uſe of Cancers, and Carcimona, among *Greek* and *Latin* Authors, ſufficiently warrants the analogical Name given to theſe new Sores.

The Cure of Chancres, eſpecially of thoſe of the Frænum and Foreſkin, having greatly perplex'd and puzzled Authors, they did not ſufficiently attend to their Nature or Symptoms; by which means the Deſcription given of them has been obſcure, and their Names ill aſcertain'd. The corrupted Matter of the Gonorrhea, flowing out of the Penis, produces a Chancre; and if we reflect on their Hardneſs, and other Qualities, we muſt be perſuaded, that this acrimonious Matter either coagulates the Liquors of the Parts it is apply'd to, or diſſipates them; as we find Fire does, and renders the Parts harder; ſo that it bears ſome Analogy to Oil of Vitriol, Oil of Origanum, Lapis Infernalis, and other Cauſtics, or to Fire itſelf.

This ſingle Coagulation, or even Diſſipation of the Humours, ſufficiently explains the Chancres on the Frænum or Foreſkin, and other membranous Parts: But the Coagulation of the Liquors in the Glans, or their Obſtruction, contributes more eſpecially to produce the Chancres there, and to raiſe the Tumors that are obſerv'd in them, which are not to be ſeen in thoſe of the Foreſkin.

From conſidering the comparative Degrees of Corroſiveneſs in the Matter of a Gonorrhea, it is evident, that the Hardneſs of Chancres is not ſo much acquir'd by diſſipating the Humours, as it is by their being coagulated. This is manifeſt from the Uſe of a Medicine which has been invented ſome Years ago, but never before communicated to the Public; for the Liquors may be reſolv'd again by this Medicine, without any Pain, and the Chancre cured without any Loſs of Subſtance; whereas, when eſcharotic Medicines are apply'd, they deſtroy the Part with much Pain, and give Occaſion to Phyſicians to ſuſpect, that the productive Matter of Chancres had ſome Reſemblance to Fire in its Operation. *Cockburn*, by this Medicine, means that given below from this Author.

Now as Chancres are occaſion'd by the ſharp Matter of a Gonorrhea, which ſticks to the Glans or Foreſkin, the ſofteſt Nuts take the Infection moſt eaſily, and the Corroſion will be the ſtrongeſt when the Quantity is the greateſt. This is the common Caſe of Men, who have their Glans always cover'd with the Foreſkin; for they have the ſofteſt Glans, and their Foreſkin detains the Matter longeſt upon it; upon which Account both theſe Parts are moſt corroded with Chancres. By this Method of Reaſoning, we become eaſily appris'd how Chancres are communicated between the Sexes, in time of Coition; and the Way of their being form'd is a little more obvious, by what we often find when *Mercurius dulcis* is improperly

properly given, and when it is not duly clear'd from its corrosive Salts; for then such Sores, as the Chancres on the Foreskin, are produc'd in the Tongue and Cheeks.

Hence it follows, that we may easily determine when Chancres are as much Originals as the Gonorrhea itself; when they are Symptoms; and when they are independent of it, or are the Effects of the Pox; and all this by observing the Times wherein the Chancres appear, and other Circumstances, with respect to a Gonorrhea, and the times of Coition: A Difficulty so great at present, that it has eluded the Observation of the best Physicians, tho' they have been conversant in the Practice of every Part of the Venereal Disease. M. *Blegny* acknowledges all these different Kinds of Chancres I have mention'd, however surprising they will appear to some; and tho' he is not able to give us any Method whereby we may know them from one another, yet it is very proper to recite his Words. "We "know by Experience, says he, that some are affected with "Pains, Tetters, Warts, Ulcers, and Chancres, and yet, "after all, are far from being pox'd." He speaks, indeed, of finding something peculiar in them, whereby the one Sort may be known from the other, but he has not hitherto made that useful Discovery; tho' this Difference is become very plain from the foregoing Accounts. *Cockburn of a Gonorrhea.*

Astruc says, that Chancres are occasion'd as well by a latent Pox, as by a recent Contagion. And he tells us, that not only the Pudenda are liable to them, but likewise the other Parts by which the Contagion is admitted; as the external and internal Parts of the Anus in Catamites, the Nipples of the Breasts in Nurses; and in sucking Children, and those that receive the Poison by Kissing, the Lips, internal Cheeks, Gums, and Tongue.

He reckons the Seat of these Ulcers to be the sebaceous Glands.

He observes, that they seldom break out, if the Pudenda, immediately after a suspected Venereal Intercourse, are well wash'd with Wine, Water, or Urine.

When these Ulcers take an angular Shape, which is one Sign of Malignity, he says it is owing to the greater Degree of Virulence in the Venereal Poison, by which it spreads Corrosion more speedily thro' the neighbouring Parts.

In computing the Degrees of Malignity in these small Ulcers from their Situation, he says, those are more malignant, 1. That affect the Prepuce, than those which have their Seat in the Glans in Men: And in Women, those upon the Clitoris and Caruncule Myrtiformes, than those which appear upon the Labia Vulvæ or Nymphæ. 2. That of those which affect the Glans, those are more malignant which break out upon the Frænum or Corona, than those upon its Back or lateral Parts. 3. And that those are more malignant which break out on the Margin of the Prepuce, than those which appear upon its middle or lower Part.

He accounts for these different Degrees of Malignity, from the greater Sensibility of the Parts in which they are most malignant.

Where these small Ulcers are frequent, and of a malignant Kind, he says, that by inflaming the Parts, they produce a Phymosis, Paraphymosis, Crystallines, Carcinoma of the Glands, Gangrenes, and Sphacelus.

As for the Diagnosis, he says, these Venereal small Ulcers are easily distinguishable from those Excoriations which sometimes happen from Coition with a Woman, who is just under an acrid menstrual Discharge, or has lately had one, or from the mere Acrimony of the Patient's proper sebaceous Secretion; because these Excoriations are broad, irregular, without any Callosity, and only superficial; and besides, they easily dry up, either of their own Accord, or by vinous or vulnerary Lotions. Neither, says he, is there any great Difficulty in distinguishing them from those Ulcers, which sometimes, tho' seldom, break out upon the genital Parts, as well as the rest of the Body; because these Ulcers are broad, irregular, and deep, without any surrounding Callosity or Mucus at their Bottom.

As for the way of distinguishing Chancres proceeding from a recent Contagion, from those that take their Rise from an old Pox, tho' he owns there is no certain Rule to judge by here, yet if they appear upon the Frænum in Men, upon the Caruncule Myrtiformes, Nymphæ, or Clitoris, in Women, if they are numerous and malignant, and if they perform their Stages speedily, he says, there is Reason to suspect, that they proceed from a recent Infection: Since those which are the Effects of an old Pox are generally endow'd with opposite Qualities, and do not affect the fore-mention'd Parts more than the other Parts of the Pudenda.

Those Chancres, he says, which have their Seat within the Extremity of the Urethra, are frequently confounded with a Gonorrhea, tho' they may be distinguish'd by the following Symptoms: (1.) The Smallness of the Discharge. (2.) The Pain in Erection, not in the Perineum, but in the Extremity of the Penis. (3.) A Pain felt at the Root of the Glans. (4.) By examining the Ulcer with the Touch of a Probe, or a Wax-candle, in order to be able to judge of its State, whether callous or not.

As to the Cure, *Turner* says, That if there be only a simple Excoriation on the Glans or Prepuce, a Pledget of Diapompholygos may be sufficient; but if Ulceration, you must forward the Digestion, especially if there be Callosity, or Chancres, already form'd; at which times your red Precipitate of Mercury sprinkled thereon, with the Digestive over, may be convenient and proper also to deterge them. After which you need not be over-hasty to dry them up, till the Virulency is purged off, and corrected by Internals; lest, stifling the Venom here, it should shew itself after in other pocky Eruptions, and stand then in need of the Method of Cure for a confirm'd Lues. Again, if your Precipitate prove insufficient to correct the Virulency, and subdue the chancrous Excrescence, you may touch it with the Milk of corrosive Sublimate, or lay on a small Pledget express'd from the same; also a light Touch of the Butter of Antimony, or of the lunar Caustic, may be sometimes necessary: But if they still happen to improve in their Virulency, or grow more spreading and corrosive, whilst your Patient is purged with Mercurials, there is no better way of making Revulsion than by exhibiting eight, nine, or ten Grains (according to the Age, Strength, and Habit, as also Use to the like Medicines) of the Turpeth-mineral, in a Bole, with Conserve of Roses; and to repeat the same Remedy, if there be Occasion, at two or three Days Distance, twice or thrice, by which you will find the Chancre abate of its fretful Nature, and grow milder, and more manageable.

I shall not omit, says *Turner*, a Method which I have, of late Years, found always successful in overcoming these chancrous Ulcerations, either on the Glans or Præputium in Men, and the Labia, as well as Sinus Pudoris, in Women; and that is the smoking them with Cinnabar, thrown upon a hot Iron, or a common Heater, the Fume ascending thro' a Funnel, or a Seat perforated like the Close-stool, (which I make frequent Use of for such Purposes) all round the diseased Parts; one Dram of which Cinnabar I order to be sprinkled on at a time, every Day, and sometimes twice a Day, for a Week; the Iron, at the same time, being hot enough to raise a Flame with Smoak; but not so burning, or fiery red, as to make it instantly consume away in Flame alone. *Turner's Syphilis.*

Cockburn says, That, to bid an eternal Farewel to the long, tedious, and uneasy Practice of curing Chancres by Escharotics, he shall communicate a Method, whereby Chancres are cured in a very little time with great Easiness, without any Pain, Inflammation, Loss of Substance, or any Danger of extirpating the Member, or any Part of it. This Method does not require any Help from other Medicines for dissolving the Chancre, and healing the Part. It is done by an Ointment, not recommended on an Opinion or Persuasion, that it will succeed, but upon its Success for twenty Years past, the Efficacy whereof will sufficiently answer all the Expectation any Person can have of it, as it has already done to some Friends, to whom it was communicated some Years ago. The Method is short and easy, like the Medicine itself; for you are only to dress Chancres with this Ointment.

> Take of Quick-silver, as much as you please; and of Venice Turpentine, a sufficient Quantity; mix up into an Ointment.

It is very proper to relate the Success of this Ointment, in some other and harder Ulcers; which will be the more acceptable, because the Sore is as unknown in *Europe*, as the Cure of it by this Ointment, and evinces the Efficacy of it at the same time. This Account was sent me from my Cousin Dr. *Cockburn* in *Jamaica*; which therefore I will add in his Words: "I cannot say I have tried your Ointment on Chancres, but "I have made Trial of it on an Ulcer of the like Nature, "but in a worse Place; which Trial was made on a Negro "of my own, who had, what we call here, the *Crab-yaws*. "They are a Sort of Ulcers, which come upon the Soles of "the Feet, with hard callous Lips, so hard, that it is difficult to "cut them. The general Method has been to pare them deep, "and then to burn them with a hot Iron, or with some cor"rosive Powder; such as Roman Vitriol, or Verdegrise, "and after all, with little Success. This Boy had one of "these *Crab-yaws* on one Side of his Foot, where the Skin "was very hard, to which, after it was par'd, I apply'd your "Medicine; whereby all the Hardness was destroy'd in a few "Days, and his Foot is now soft and well. The Consequence "of this Experiment is very obvious, and forbids me to en"large upon it." *Cockburn.*

Astruc is of Opinion, that the Cure of such Chancres as proceed from an old Pox, is only to be expected from mercurial Unction, which he advises to be set about without Delay. And this he takes to be the best Method of managing, even in those which are owing to a recent Taint; but as few Patients will submit to that, in an Evil which appears so slight, he

he lays down the eaſier Method by repeated Veneſection, the Uſe of emollient Fomentations, and Anodynes; Mercurials, by way of Alterative, either externally or internally adminiſtred, till a Salivation approaches, then purg'd off, and repeated as often as is neceſſary. After which he adviſes the Uſe of ſudorific Decoctions of *China*, Sarſaparilla, Guaiacum and Saſſafras, boil'd with Antimony.

He recommends much the ſame Ointment as that deſcrib'd above from *Cockburn*, with an Addition of Lapis Calaminaris and Sulphur, in a ſlight Chancre.

Take Lapis Calaminaris, half an Ounce; Sulphur and Quickſilver, each a Dram; Turpentine, a ſufficient Quantity to divide the Particles of the Mercury, adding a ſmall Quantity of Hogs Lard.

In more obſtinate Chancres, *Aſtruc* adviſes the touching them ſlightly with the common or lunar Cauſtic; or rather the ſprinkling upon them the red or yellow Precipitate of Mercury, on which Spirit of Wine has been burnt, mix'd with an equal Quantity of Ceruſs in Powder; or elſe the white Precipitate of Mercury, mix'd with the Yolk of an Egg boil'd hard, and reduc'd to the Form of an Ointment with Honey. In order to eaſe the Inflammation, if troubleſome, he adviſes the Application of warm Milk; Decoctions of the Roots of Water-lilies, and Marſh-mallows; or Mucilage of the Seeds of Flea-wort, and Flax, extracted with Roſe-water, or freſh Cream; or the Yolk of an Egg, either alone, or beat up with Oil of Lilies; or the Unguentum Album Rhaſis; or Cataplaſms of the Crums of Bread. Theſe are to be repeated frequently, that the inflam'd Part may be perpetually kept moiſt, and relax'd by them.

The Falling off of the Eſchar is to be promoted by the Application of freſh Butter, the Yolk of an Egg, the common Digeſtive, or Baſilicon; or of Anodyne Topics, which promote Suppurations.

But whatever Value ſome may put upon the before-mention'd Remedies, the following Ointment, for ready and common Uſe, is to be prefer'd before them all. It is prepar'd of one Part of red Precipitate of Mercury, and ſix or eight Parts of Unguentum Baſilicon, well beat together in a Marble Mortar. This is a ſafer, as well as more effectual Medicine than the others; for the Acridneſs of the mercurial and corroſive Parts is ſo temper'd by the balſamic Parts of the Unguentum Baſilicon, that they imprint only a ſuperficial Eſchar, by a gentle Eroſion, without any Inflammation, and the ſuffering Part itſelf is, at the ſame time, ſo mollify'd by the Baſilicon, that the ſmall Eſchars thus made ſoon fall off by Bits, without any conſiderable Increaſe of the Ulcer.

Strong Eſcharotics are always to be avoided as moſt deſtructive; ſuch are all arſenical Preparations, corroſive Sublimate of Mercury, Oleum glaciale Vitrioli, Aqua Stygia, or Aqua-fortis, obtain'd from Nitre, Vitriol, Alum, or Sea-ſalt, by the Heat of the Reverberatory; the Aqua-mortua, or Secunda of the Goldſmiths, in which Silver has been firſt diſſolv'd, and afterwards precipitated by an Injection of Copper, with many other ſuch kind of Medicines, which imprint a deep Eſchar, and excite a great Inflammation.

If, after Deterſion and Mundification, there remain any ſmall Calloſities in the Ulcer, it is better to reſolve and diſcuſs them, by degrees, with ſlight and repeated Inunctions of mercurial or Neapolitan Ointment for a few Days, than to attempt their Conſumption by too free a Uſe of the ſtronger Catheretics, which would put the Patient to unneceſſary Pain, and do a conſiderable Injury to the Part, by enlarging the Ulcer.

As ſoon as the Margin of the Ulcer, after the Removal of the mucous Matter, and the mollifying of the Calloſities, appears ſoft, ſmooth, and of a roſy Colour, we muſt beware of the Uſe of Catheretics, which, by corroding, might prolong, and even dilate the Ulcer; and then we muſt employ only Traumatics, or Vulneraries, to favour the Growth of the new Fleſh, ſuch as *Arcæus*'s Balſam, or the ſimple Ointment of Baſilicon.

The Ulcer, being fill'd up and ſmooth'd by the increaſing Fleſh, is eaſily cicatriz'd by the Uſe of the ſame Remedies; or, if it be thought convenient, the Place may be ſprinkled with Powder of Tutty, Pompholyx, Ceruſs, or Turpentine boil'd to a Hardneſs and pulveriz'd; or dreſs'd with Elixir Proprietatis *Paracelſi*, which ſome extol as very effectual to this Purpoſe.

If the Diſeaſe, through the Careleſſneſs of the Patient, the Violence of the Remedies, ſome Error in Diet, the Uſe of Venereal Commerce, or any other Cauſe, happens to be exaſperated, by the Acceſſion of more formidable Symptoms, ſuch as an Inflammation of the Prepuce or Glans in Men, or of the Nymphæ, Caruncuiæ, or Clitoris, in Women, we are then to deſiſt from the Uſe of Eſcharotics, and attempt for ſome time not to make a perfect Cure, but employ only palliative Remedies.

The ſame Method is to be us'd for Venereal Ulcers, which ſometimes ariſe at the End of the Urethra, by inſtilling the ſame Remedies, Drop by Drop, in the ſame Order, and with the ſame Cautions, in the Part; or injecting them with a ſhort Syringe, or introducing them with a Probe, which ought to be repeated every Day, as often as, through the Declivity of the Place, or the Emiſſion of the Urine, the Part ſhall happen to be abſterged. But we muſt take care not to ſtop the Paſſage of the Urethra with a Tent, that it might retain the Ointment, as we have known it practis'd by ſome Surgeons to the great Injury of their Patients, by the Retention of the virulent Matter iſſuing from the Ulcers, which, corroding the ſound Parts, gradually increas'd the Diſeaſe.

During the whole Proceſs of the Cure, the Penis is to be ty'd up with a Fillet, in a ſupine Poſture, that the Declivity of the Way may give Occaſion to a freer Regreſs of the Blood, than can be expected from a prone or pendulous Poſition of the Penis, and conſequently that there may be leſs Danger of an Inflammation or Tumefaction. As to Diet, it will ſuffice to preſcribe ſuch as is of a tempering and moiſtening Quality, and moderate in Quantity, unleſs a Fever, Inflammation, or ſome other formidable Symptoms, ſhall require a ſtricter Abſtinence. *Abſtruc de Morb. Vener.*

Boerhaave give a very different Account of Chancres, and Venereal Ulcers, from all former Authors.

When a certain red Spot, ſays he, appearing upon the Glans or Prepuce, ſwells into a Tubercle, fill'd with a whitiſh, yellowiſh Matter, of the Conſiſtence of new Cream, like that almoſt void of Tenacity or Ropineſs to the Fingers, and which, when it dries upon the ſtiffened Linen, appears of a Colour between Green and Yellow; then the Diſeaſe always bodes unluckily, the Cure is not ſo eaſily perform'd, and the prudent Phyſician is now with Reaſon alarm'd. This Tubercle is what the Surgeons uſually call a Chancre; which I have always found to have its Seat in the unctuous Humour, which, in a natural and ſound State, fills that veſicular Texture, call'd by the Antients, the *Panniculus Adipoſus*, by the Moderns *Membrana Celluloſa*. See CELLULOSA MEMBRANA.

When, therefore, this contagious Poiſon, admitted by the Pores of the Cuticula, has made its Way thro' the Subſtance of the Skin into the Cells of the adipoſe Membrane, and there has mixed itſelf with the unctuous Maſs, then it poiſons, with its virulent Quality, this tenacious Oil: In this oily Lentor it is locked up, fomented, and, growing every Day more ſharp and active, by Heat, Motion, and Stagnation, above it corrodes and deſtroys the Skin and Cuticula, while all around and below it ſpreads its Poiſon thro' the pinguedinous Cells: Whence, in ſuch Caſes, there is always a wider Breach made in the Panniculus Adipoſus, than in the Skin which covers it. The Tubercle, thus occaſioned, riſing by degrees, attended with a Tenſity, and at laſt with Pain, breaks out at the moſt prominent Part, and throws out ſuch a Matter as I have already deſcribed. As often as this is wiped off, new Matter ſtill ſucceeds; the Ulcer runs Pus without Intermiſſion, nor does all this Suppuration ſeparate the affected from the ſound Parts. On the contrary, the ſame Venom, propagated thro' the neighbouring Parts, procures a conſtant Supply of new Pus; and in this manner the Ulcers, which always have their Seat in the Adipoſe Membrane, become larger by degrees; by a ſlow Progreſs they corrupt the common Teguments, and diſcover the Muſcles ſtript of their Involucra, tho' otherwiſe entire, and of a gloſſy Surface, and high-red Colour. The Lips of theſe Ulcers, in ſuch Parts as are covered with the Skin, never appear ſwoln or retorted, but contracted, ſmooth as if poliſh'd, and of a pale Colour; and the Matter which they diſcharge is ſo remarkably different from what other Abſceſſes yield, that one who is tolerably verſed in this Diſeaſe can, at firſt Sight, diſtinguiſh it from the Ichor and Sanies of all other Ulcers, and the Lymph of Cancers; for the Pus produced in this Diſeaſe ſhines like melted Tallow, it has ſcarce any ropy Lentor, its Colour is of a particular dirty White, and, at the ſame time, inclining to Green. It ſcarce diſcovers any Acrimony, by producing either Heat, or Pain, or Twinging; nor does it ſpread Deſtruction any further than thro' the cellular Membrane, which it reſolves into a putrid Maſs, but without any conſiderable Senſe of Pain. As often as an Ulcer of this Kind happens to heal up, the Skin of the Part, to its great Deformity, becomes attached to the ſubjacent Muſcles, a Cavity remains, the Muſcles continue immoveable, and the Part rigid, with an unſeemly livid reddiſh Colour. The new Teguments are very tenſe and dry, they ſcarcely permit any of the perſpirable Matter to paſs thro' them, and their violent Tenſity gives them a ſhining Appearance. After this Cure, unjuſtly reputed ſo, is performed, immediately the like Miſchief breaks out in ſome neighbouring Part, deſcribes the ſame Courſe, and leaves the ſame Marks behind it. Sometimes theſe virulent Ulcers are ſcattered thro' a great many different Places at once over the Body, which they at laſt conſume. I once ſaw, in a handſome young Nobleman, the whole Extent of the Back flay'd here-

here-and-there with Ulcers of this kind as broad as the Palm of one's Hand, while in ſome Places, between the Ulcers, the Skin remained entire, and appeared as if it had been cut into Girdles; ſo that, after the Cure was perfected, the remaining Scars afforded a very odd Proſpect of Deformity. In this Patient obſerved, that the naked Muſcles ſtill appeared extremely beautiful and lively; and, by a diligent Examination, I found, that the Ulcers had not dug inwards, nor ſpread their devouring Rage beyond the Tunica Pinguedinoſa; and that they had not I deſtroy'd the Skin itſelf, otherwiſe than by corroding the Veſſels under it, and ſo cutting off from it all freſh Supplies of nutritious Juices. From this Caſe I became acquainted with the ſingular Genius of this Diſeaſe: Here I ſaw it in the Shape wherein it firſt diſcovered itſelf in *Europe*, and agreeable to the Deſcription given by the oldeſt Authors on this Subject: I found out the Reaſon why, upon its firſt Appearance, it got the Name of the *Variolæ Hiſpanicæ*; but, at the ſame time, I was made ſenſible what a wide Difference there is betwixt this Diſeaſe, as it then appeared, and that which at this Day is ſo familiar to all the *Europeans*.

When you make an Attempt to cure an Ulcer of this Kind by ſuch Remedies as are found to be the moſt effectual againſt other Ulcers, your Pains will be to very little Purpoſe, unleſs you ſeparate at once all the tainted Fat with the Knife, or the actual Cautery, or Corroſives: But then, after, by corroſive Applications, you have burnt the Ulcer to a Cruſt, the Poiſon retained under the hard Eſchar exerts its Fury, diffuſes itſelf ſtill more and more, ſcatters its malignant Power through the neighbouring Parts, and often produces a very virulent Pox. Upon this Account, an unlucky Practice, which, at preſent, is ſo common among ſome Phyſicians, is greatly to be condemn'd. I mean the Cuſtom of touching thoſe ſmall Ulcers with the Lapis Infernalis, Aqua divina Fernelii, Aqua Vitrioli, Precipitate, and other Applications of the ſame Nature; from which the Tribe of Mountebanks, whoſe only Aim is to fill their Pockets, promiſe ſuch mighty Things: For Applications of this Kind produce an Eſchar, from which I have very frequently ſeen a Pox enſue. The moſt reaſonable Method of treating theſe Ulcers is by emollient, ſaponaceous, watery Fomentations, that they may be kept open as long as poſſible, may remain ſoft and perſpirable, ſo as to diſcharge, by the Mouths of the open Veſſels, the poiſonous Matter thus determin'd outwards, and facilitate its Egreſs. This, to be ſure, is the ſafe, this the effectual Method of healing thoſe malignant Exulcerations, as I have often found by Experience, after other Remedies have been repeated ſeveral times with very bad Succeſs. What naturally leads one to this Practice is, that a plentiful Running, in a virulent Gonorrhea, kept up, for a long time, by proper Methods, is the moſt effectual Preſervative hitherto known from a Pox; whereas, on the contrary, nothing ſo ſoon or ſo certainly occaſions a Pox, as an unſeaſonable Stop put to this Diſcharge.

By this time, I imagine, I have given a clear Account of the Nature of this Diſeaſe, while it is yet in a ſimple State; as alſo of the proper Method of Cure, which conſiſts entirely in diſcharging all the poiſonous Particles involv'd in the oily Maſs. This is eaſily accompliſh'd in a recent Taint, affecting only one Part; but when the Diſeaſe is become inveterate, when the Poiſon has widely diſperſed itſelf thro' the Habit, and has ſeiz'd the internal Parts, which lie beyond the Reach of Fomentations, it becomes a very difficult Taſk.

It is now neceſſary to take a View of thoſe Ulcers, when they have broke out in a Part that is not covered with the Skin. As there are a great many ſuch Parts in the human Body, I do not pretend to conſider each of them in this Condition; that would make ſufficient Materials for a large Volume: But let us ſuppoſe the Glans Penis, for Inſtance, to be affected with ſuch an Ulcer. From the Inflation of this wondrous Fabric in the Venereal Orgaſm, the nervous Papillæ are ſtretched and erected, ſo as to become ſuſceptible of the higheſt ſenſual Pleaſure. This Part conſiſts of the Corpus ſpongioſum Urethræ, produced as far as to the Orifice of this Canal, and thence reflected over the Extremities of the two Corpora ſpongioſa Penis to where it terminates, forming a riſing Limbus call'd the Corona Glandis. The proper Structure of the Glans is, therefore, principally compoſed of the ſame Subſtance with that of the Urethra. Hence, by the Torrent of arterial Blood ſtill pouring in, while its Return by the Veins is intercepted by the Action of the Muſculi Erectores, applied to the bulbous Part of the Urethra, below the Neck of the Bladder, this Fabric is brown up, ſtretched, and may be diſtended even to burſting; tho' this violent Tentigo only happens in the Venereal Action, when it is juſt upon the Criſis; ſo that, at this time, the Glans is highly inflamed: But, after the Exploſion of the Semen, this Part ſooneſt grows flaccid; and, as in that Inſtant it is become very bibulous, it eaſily ſucks into its empty'd Cells any penetrating Particles applied to its glowing Surface. Hence, in the firſt Place, we learn the Reaſon why the Contagion ſo frequently affects this Part; why the fungous Part of the Glans is often ſo turgid with the Venereal Pus already deſcribed, as that, upon Compreſſion, it ouſes out at its Pores; why Ulcers, formed in this ſpongy Fabric, conſuming its Structure, and melting it down into a Venereal Corruption, ſhall cauſe the whole mortify'd Glans to drop off, while the reſt of the Penis frequently remains entire. In the laſt Place, a Communication plainly appears, by means of the Corpus ſpongioſum Urethræ, to be continued all the Way from the Top of the Penis to below the Neck of the Bladder; and ſince one and the ſame cellular Body is continued all that Way, and the Surfaces of theſe Cells are conſtantly beſmear'd with a fat unctuous Moiſture, to preſerve them in a ſlippery expanſile State, we ſee plainly why an Infection received here proceeds in its Growth with ſo much Luxuriancy.

Beſides the Corpus ſpongioſum Urethræ, a numerous Series of ſenſible nervous Papillæ contributes to the Compoſition of the Glans. Theſe lie diſpoſed in regular Rows upon the Surface of the ſpongy Fabric, and conſtitute in ſuch a manner the Surface of the Glans, that the Extremities of theſe Nerves, which are the proper Organs of Pleaſure and Pain, lie upon one another, and are braced down by that very tender Membrane, which covers the Glans. Hence, when the Glans is bared of this external Involucrum, the looſen'd diſengag'd Papillæ ſtare outwards, and the whole Surface of this Part appears jagged and villous. Again, every one of theſe Papillæ is wrapt up, ſeparate from the reſt, in a ſubtle cellular Membrane. When, therefore, the Venereal Poiſon, after having made its Way thro' the thin external Membrane of the Glans, has alſo deſtroy'd the proper Involucra of thoſe Nerves, the Papillæ are now laid bare. But then what an intolerable Pain is raiſed! Such an exquiſite one, that there is ſcarce a more inſupportable Symptom attends the Venereal Diſeaſe. If then this ſlight cellular Texture be deſtroy'd by the acrid Poiſon, the unconfin'd Papillæ will begin to ſprout, and form Venereal Warts. This dreadful Symptom appears principally upon the Corona of the Glans, where the Papillæ are the moſt numerous. I have ſeen with Horror the Glans deformed, and become prickly like a Hedge-hog, and the Prepuce almoſt quite depriv'd of Motion, by thoſe dreadful Excreſcences: And it has frequently happened, in ſuch a Caſe, from an unſkilful Management, ſuch as the Fretting the naked, ſenſible, papillous Subſtance of the Glans, by acrid Applications, that the whole Body of the Penis has become moſt miſerably inflamed, bloated, and ſeiz'd with an exquiſitely painful Priapiſm. Wherefore the ſafeſt Remedies againſt this kind of Misfortune too, are emollient, moiſtening, relaxing, anodyne Applications, and ſuch things as ſolicit the Poiſon outwards. Theſe Remedies you will be obliged to have recourſe to, tho' late, when the Diſturbances, roused by corroſive Applications, are to be appeaſed. In thoſe Caſes I have perform'd by Milk and Marſhmallows what I could not by Quickſilver; and I have found the good Succeſs of Unguentum de Althæa, or Nutritum, where Ægyptiacum and mercurial Ointments were of nō Uſe.

The laſt Part which helps to conſtitute the Glans, is that forementioned fine Membrane in which it is inveloped. This is a Production of the Cuticula, which lines the internal Surface of the Præputium; whence it aſcends over the Corona Glandis, and gives a Covering to the whole Glans. It is likewiſe expanded over the external Surface of the Prepuce, and the Integuments of the whole Penis forming its Epidermis. And thus, by its means, an Intercourſe and Sympathy is carried on betwixt the Cuticula of the Penis and the Surface of the Glans. Hence it is, that malignant Ulcers of the Penis have ſometimes been known to have infected the Glans, and Diſorders of the Glans to have propagated their Contagion to the external Parts of the Penis. Here then we ſee one Inſtance of the wondrous and artful Mechaniſm, by which Nature produces ſo many different Miſchiefs by the ſame Poiſon, ſtill mixed with the oily Humours, but exerting itſelf upon different Parts of the Body.

If, therefore, the Contagion has been lately applied to a Part covered with the Cutis, let it be well chafed, for a long time together, with warm Wine, Honey, and Salt, mixed: After this let the Part be wrapt up in Cloths dipt in the ſame Fomentation, and kept conſtantly in an equal Heat. If the Infection has lodged there for any conſiderable time before the Phyſician was call'd, after the Part has been bathed with the ſame Fomentation very warm, let a Veſicatory, made up with Cantharides, be applied to it, with Cloths, dipt in the Fomentation, over all. After the Bliſter is cut, let the Diſcharge be kept up with Unguentum Aureum, or Tetrapharmicum, together with a very ſmall Quantity of red Precipitate, and over the Ointment too apply a Stupe of the ſame Fomentation. In this manner let the Ulcer be managed for twelve Days, or more; and if the Patient, in the mean time, abſtains from fat Meat, and every thing of a hot ſtimulating Nature, he need not be anxious about the Event.

If the Contagion is recent, and has ſeized a Part which is not covered with the Cutis, ſuch as the internal Surface of the Prepuce, the Glans, the Lips, or the Mouth; ſuppoſe either of the two firſt-mentioned Parts be affected, let the Penis, with the Prepuce drawn back, be bathed in a Fomentation of the ſame, or the like Materials. Baths for this Purpoſe cannot be of a too emollient Nature; for here the main Streſs of the

the Cure depends upon relaxing the Pores, so that the infecting Matter may be discharged by them. Those Parts, therefore, ought always to be kept perspirable, with warm, moist, emollient Applications; and such Remedies are to be used even after the infected Part is ulcerated; for while a free Discharge is thus procured to the morbid Matter, it will scarce make its Way inwards; and by this means the present Malady is cured, and Affections which would otherwise happen afterwards are prevented. In the mean time, hydragogue Purges, frequently repeated, are likewise conducive to the same Ends; and an emollient Balsam, compounded of Turpentine, the Yolk of an Egg, and crude Mercury, spread upon a Pledget, and applied to the Ulcer, is of great Service. In short, by this Method one may promise almost perfectly to remove this Mischief, which, when neglected, very often grows up to a most virulent Pox. Nor let any one wonder, that I should propose this simple Method of Cure, without giving inwardly so much as one Grain of Mercury, while it is the common Opinion of almost all that practise in this Disease, that nothing but Mercury can prevail against it, and that Mercury is the very thing that cannot be dispensed with in the Cure. Consider only, that hitherto I have put the Case, that the Infection is of very short Standing; that only one, and that an external Part is affected; and that the whole Fomes of the Disease lies in one small Ulcer. While the Case stands thus, I dare promise a perfect Cure from the Method already laid down; and I am absolutely certain, that this Method is sufficient. Wherefore I shall never be reconciled to the rash Practice of some, who, whenever they hear a young Fellow complain of any Venereal Disorder, at the first prescribe Mercury, which always gives the Constitution a Shock, and often a needless one.

But as the softer Sex are, in this Disease, for the most part, affected with the same kind of Ulcers, breaking out in the mucilaginous Sinuses within the Pudenda, here too nothing is of greater Use, while the Malady is yet in the State already describ'd, than to foment and bathe the Parts with emollient, relaxing, detergent, and antiseptic Liquors. Vinegar, Wine, Honey, and Salt, possess the two last-mention'd Qualities; for the two first I would chuse all the emollient Herbs. I have had the Pleasure to see a speedy Cure perform'd, by this Method, upon a great many Female Patients, while the Disease was of short Standing, and as yet unattended with other Symptoms. *Boerhaave's Preface to the Aphrodisiacus.*

CHANNA, χάννα, χάννη. A sort of Sea-fish, not unlike the Perch, whose Flesh, however, is said to be somewhat harder. There is another sort of Fish, not unlike this, call'd *Cannadella*, or rather *Channadella*, which, at *Marseilles*, is known by the Name of *Channa*. *Castellus.*

CHANTERELLA *flava, gelatinosa. Fungus gelatinus, flavus.* Vaill. 58.

This is about an Inch in Height, and about a Line or two thick; it usually grows in Clusters. The Stalks are a little flatted, and furrow'd on one Side; and their Surface is shagreen'd. The Head is usually angular, with the Centre sunk into a kind of Navel; and the Edges, which are turn'd down, are cut into three or four rounded Segments. The upper Surface of the Head is yellow, but more dirty and livid than the Stalks. When it decays, it turns into a greenish Jelly.

Under the Name of *Chanterella*, I comprehend those Fungi, whose Head is solid, that is, neither lamellated, nor porous, nor latticed, nor prickly, nor turning to Dust when ripe. *Martyn's Tournefort.*

CHAOMANTIA, amongst the enthusiastical Chymists, is the Art of making Presages from Observations on the Air.

CHAOS, in the Phrase of *Paracelsus*, imports the Air. It has also some other whimsical Significations among the Alchymists, of very little Importance.

CHAOSDA. An Epithet for the Plague, us'd by *Paracelsus.*

CHAOVA. The *Egyptian* Name for COFFEE, which see.

CHARA is a Genus of Plants describ'd, among many others, by M. *Vaillant*, in the Memoirs of the Academy of Sciences, for the Year 1719. as follows: The Flowers of all the Species grow upon the Leaves, and are imperfect, regular, monopetalous, and Hermaphrodite. The Ovary grows on the Top, where, by its Indenture, it represents the Figure of an antique Crown, whence it becomes a coronated Seed-vessel, solid, and monospermous, or containing a single Seed. The Leaves are simple, without Pedicles, and dispos'd in Circles about the Stalks at Intervals; those on which the Flowers grow are indented in such a manner, that the Segments are directly opposite, so as to form, by their Conjunction, the Resemblance of a Pair of Pincers, in every one of which is lodg'd an Ovary.

M. *Vaillant* distinguishes nine Species of the *Chara*, but I find no medicinal Virtues attributed to either of them. All these Species were before call'd by the Name of *Equiseta*, Horsetails.

CHARABE, or *Carabe*, Amber. See AMBRA.

CHARACIAS, from χάραξ, a Bulwark, or Fence. An Epithet given to some Plants, which require a Support, as the Vine. It is commonly join'd with the *Arundo Valiatoria*; and by *Dioscorides*, *L.* 4. *C.* 165. to the *Tithymalus Mas.*

CHARACTA, a Weight call'd a Carat. See CARATA.

CHARACTER, in Botany, is that Assemblage of Marks, by which every Species of Plants is distinguished from every other Species.

In Chymistry it imports a Mark importing some particular Thing, the Principal of which I have given *Tab.* 20. and 21.

Character also sometimes signifies an hereditary Disposition to some particular Disease.

CHARADRIUS, χαραδρεὺς. A Sort of Bird, of which *Ælian* fabulously relates, that the Sight of it cures a Person of the Jaundice. It is call'd also *Galgulus*, and *Hiaticula.*

CHARAMAIS. The *Turkish* and *Persian* Name for the AMBELA, which see.

CHARANTIA. The *Balsamina Mas*, or *Momordica.*

CHARCEDONIUS *Lapis.* The same as *Chalcedonius Lapis.*

CHARIEN, χάριον. The Name of a Plant, the Root of which, if applied to the Navel but a very short time, expels the dead Fœtus. I don't find, that it is precisely known what this Plant is. Some take it to be the *Tithymalus Characias.*

CHARISTOLOCHIA. A Name for the *Artemisia*, Mugwort.

CHARME, or *Charmis.* The Name of an Antidote mention'd by *Galen*, *Lib.* 1. *de Antidot. Cap.* 4.

CHARONIUS, χαρώνειος, Charonean. An Epithet for Caves, some of which are found in *Italy*, and in other Parts of the World, where the Air is so loaded with a poisonous Vapour, that Animals cannot live in them, even a few Moments.

CHARTA VIRGINEA. A Name for the AMNIOS.

CHASME, χάσμη, or χασμός. Oscitation, Gaping. *Hippocrates*, in his *Epidemics*, *Lib.* 2. informs us, that long Respiration is a Cure for continual Oscitation. I suppose he means deep Respiration, and drawing in the Air at long Intervals.

CHATE. The *Egyptian* Cucumber, call'd by *Boerhaave Cucumis*; *Ægyptius*; *rotundifolius.* See CUCUMIS.

CHAULIODONTA, χαυλιόδοντα. Those Animals are thus called, whose Teeth grow a great Length out of their Mouths, as the Boar and Elephant.

CHAUNOS, χαυνός. Soft, lax, yielding to the Pressure of the Fingers, fungous. It is applied by *Hippocrates* to Tumors, and to the Bones; and also sometimes to Urine, when it imports that which is aqueous and thin, and without any Sediment or Cloud; or perhaps that in which a kind of spongy Cloud appears.

CHEDROPA, χέδροπα. All Sorts of Corn and Pulse.

CHEILOCACE, χειλοκάκη, from χεῖλος, a Lip, and κακὸν, an Evil. Literally the *Lip-evil*; a Swelling of the Lips, to which the Inhabitants of Northern Countries, especially Children, are said to be very subject.

CHEILOS, χεῖλος. A Lip.

CHEIMETLON, χείμετλον, from χεῖμα, the Winter. A Chilblain. See PERNIO.

CHEIMIA, χειμία. Cold, Shivering.

CHEIMON, χειμών. Winter, or cold Weather.

CHEIR, χείρ. The Hand. See BRACHIUM.

CHEIRAPSIA, χειραψία, from χείρ, the Hand, and ἅπτομαι, to touch. Scratching. *Cœl. Aurelianus.*

CHEIRI, *Cheyri*, or *Keiri.* Wall-flower. It is the *Leucoium*; *luteum*; *vulgare.* See LEUCOIUM.

CHEIRIATER, χειριάτρος, from χείρ, the Hand, and ἰατρὸς, a Physician. A Surgeon.

CHEIRISMA, χείρισμα, or χειρισμός. A handling of any thing, or a manual Operation.

CHEIRIXIS, χείριξις. Surgery in general, or the Treatment of any Disorder, comprehending every thing which is done with a View of curing it.

CHEIRONOMIA, χειρονομία. An Exercise mention'd by *Hippocrates* in his Treatise *De Victus Ratione*, *L.* 2. which consisted in particular Gesticulations of the Hands.

CHEIZI, in the Phrase of *Paracelsus*, when, speaking of Minerals, imports Quicksilver; but, relative to Vegetables, it signifies their Flowers. Some interpret it the *Aurum Potabile*, others Antimony. *Rulandus.*

CHELA, χηλὴ, has many Significations in Medicine; for it imports a forked Probe, mentioned by *Hippocrates*, *Lib.* 2. *de Morbis*, used in extracting a Polypus of the Nose. But, in *Ruffus Ephesius*, *Cap.* 4. χηλαὶ, *Chelæ*, implies the Extremities of the *Cilia*, which touch each other when the Eyes are shut. But the most frequent Signification of *Chelæ* is Claws, particularly those of the Crab. *Chelæ*, further, signifies Fissures in the Heels, Feet, or Pudenda.

CHELIDON, χελιδών. The Swallow. See HIRUNDO. The Hollow also, at the Flexure of the Arm, is call'd by this Name.

CHELIDONIUM *Majus*. The greater Celandine.

The Characters are;

The Flower-cup conſiſts of two Leaves, which ſoon fall away. The Flower is tetrapetalous, cruciform, and ſoon falls off. The Petals grow round the Baſe of the Ovary, whence alſo ariſe many Stamina. The Ovary is furniſh'd with a Tube, and becomes a Pod, with one Seed-veſſel, which is bivalve, the Valves adhering to the Feneſtra, and contains many roundiſh Seeds. The Plant abounds in every Part with a gold-colour'd acrimonious Juice. *Boerhaave's Index alter, p.* 305. *Pars* 1.

Boerhaave mentions five different Sorts of this Plant.

1. Chelidonium; majus; vulgare. *Park. Theat.* 616. *C. B. Pin.* 144. *Hiſt. Oxon.* 2. 257. *Dill. Cat. Giſſ.* 56. *Tourn. Inſt.* 231. *Elem. Bot.* 198. *Buxb.* 68. *Boerh. Ind. A.* 305. *Mer. Pin.* 26. CHELIDONIUM MAJUS, Offic. Ger. 911. Emac. 1096. Chab. 484. Merc. Bot. 1. 28. Phyt. Brit. 27. Raii Hiſt. 1. 858. *Chelidonia*, J. B. 3. 482. *Chelidonium, ſive Chelidonia*, Rupp. Flor. Jen. 56. *Papaver corniculatum luteum Chelidonia dictum*, Raii Synop. 3. 309. CELANDINE.

The Root of this *Celandine* is pretty thick at the Head, divided into Branches, which fix themſelves pretty deep in the Earth; from which ſpring bluiſh-green wing'd Leaves, divided generally into five Parts, ſomewhat like Columbines, but longer, the Section at the End being the largeſt. The Stalks grow to be a Foot or more high, full of thick Joints or Knees, having two ſmaller Leaves at each Joint. The Flowers grow ſeveral together, upon a Foot-ſtalk three or four Inches long, each having a ſhorter of its own. They conſiſt of four ſmall yellow Leaves, included in Calyces of two hollow Parts; and after they are fallen, which they ſoon do, they are follow'd by pretty long narrow Pods, full of ſmall round ſhining black Seed. Every Part of the Plant, when broken, emits a yellow bitter acrid Juice. It grows among waſte Grounds and Rubbiſh, upon Walls and Buildings; and flowers in *May*.

Celandine is aperitive and cleanſing, opening Obſtructions of the Spleen and Liver; and of great Uſe in curing the Jaundice and Scurvy. Some reckon it cordial, and a good Antidote againſt the Plague. Some Quantity of it is put into the *Aqua Mirabilis*. Outwardly it is uſed for ſore Eyes, to dry up the Rheum, and take away Specks and Films; as alſo againſt Tetters and Ring-worms, and ſcurfy Breakings-out. *Miller's Bot. Off.*

Dioſcorides relates, that it was believed in his Time, that the Swallows, by the Application of this Herb, reſtored Sight to their young ones, whoſe Eyes had been put out. *Ariſtotle* was of the ſame Opinion; but *Celſus* juſtly rejected this Error, for Experience ſhews, that in leſs than an Hour an Animal ſees clearly, tho' the horny Coat of the Eye has been pierced, ſo that ſeveral Drops of the aqueous Humour came out. Celandine is bitter, acrid, and burning, eſpecially the Root, which yields more Orange-colour'd Juice than the other Parts of the Plant: It gives but a faint red Colour to blue Paper; and ſmells like rotten Eggs, which makes one believe, that its Juice is (if I may ſo ſay) phagedenic, ſomething like the Liquor which reſults from the Mixture of the Solution of Sublimate and Lime-water, or Milk which has boil'd ſome time with an acrid Salt.

Celandine, by a chymical Analyſis, yields a good deal of Salt, both fix'd and volatile; but it is involved in a great deal of Sulphur and Earth.

This Plant, taken inwardly, is very aperitive: The Infuſion of a Pugil of its Leaves, macerated cold, a whole Night, in a Glaſs of Whey, with one Dram of Cream of Tartar, is a good Remedy for the Jaundice and Green-ſickneſs: Some add to it an Ounce of the Syrup of Succory. For the Dropſy they infuſe, for twenty-four Hours, one Ounce of the Root of Celandine, and half an Ounce of Tincture of Steel, in a Pint of White-wine: They ſtrain the Infuſion thro' a Linen Cloth, and give the Patient three Ounces of it twice a Day. The following Preparation is very good for Vapours, and a Conſumption of the Lungs:

> You muſt put in Digeſtion, for eight Days, twelve Pounds of the whole Plant, gently bruiſed; three Dozen of Crayfiſh, cut ſmall; and two Pounds of Honey: Lute the Alembic, and diſtil theſe Ingredients *in Balneo Mariæ*.

This Water, being drank from two to four Ounces, is excellent for the Vapours. It abates the Inflammation of the Eyes, and dries up the Ulcers of thoſe Parts, as well as the Juice of Celandine, temper'd with Milk. It is applied, without Milk, to Webs in the Eyes, in order to eat them away. *Julian Paulmier*, a famous Phyſician of the Faculty of *Paris*, ſet a great Value on the Juice of the Root of this Plant, in the Plague. The Herb, bruiſed, cures Wounds: Some add to it the Leaves of the horned Poppy. *Martyn's Tournefort.*

2. Chelidonium; majus; foliis quernis; flore laciniato. *M. H.* 2. 257. GREATER CELANDINE, WITH LEAVES LIKE THE OAK, AND LACINIATED FLOWERS.

3. Chelidonium; majus; foliis & flore minutiſſimè laciniatis. *H. R. Par.* 49. GREATER CELANDINE, WITH FINE-CUT LEAVES AND FLOWERS.

This, *Boerhaave* ſays, is the *Othonna* of *Dioſcorides*. See AFRICANUS FLOS.

4. Chelidonium; maximum; Canadenſe; ἄκαυλον. *Corn.* 212. LARGE CANADA CELANDINE, WITHOUT STALKS.

5. Chelidonium; majus; vulgare. *C. B. Pin.* 144.

Boerhaave's Index alter Plantarum, Vol. 1.

CHELIDONIUM MINUS. The leſſer Celandine.

The Characters are;

It has a grumous, or glandulous, perennial Root: The Leaves are roundiſh; the Flower-ſtalks trail upon the Ground; at their Top they bear a Placenta, whoſe Baſe is ſurrounded by the Perianthium, which conſiſts of three Leaves, ſometimes of four, but ſeldom of five, which are always caducous. The Flower is roſaceous, expanded, conſiſting of five or more Petals, which ariſe from the very Bottom of the Placenta, within the Flower-cup, with a Multitude of Stamina, ariſing from the Bottom of the Placenta, between the Petals and the Ovary. The Placenta contains an Ovary of a globular Form, each of whoſe Cells, or Eggs, are furniſh'd with a crooked Vagina, which has a fungous Apex. *Boerhaave's Index alter.*

Boerhaave takes notice of four Species of the leſſer Celandine.

1. CHELIDONIUM; MINUS. Offic. Ger. 669. Emac. 816. Chab. 484. Park. Theat. 617. Raii Hiſt. 579. Synop. 3. 246. Mer. Pin. 26. Boerh. Ind. A. 29. *Chelidonium minus, ſive Scrophularia minor*, Merc. Bot. 1. 28. Phyt. Brit. 27. *Chelidonia rotundifolia minor*, C. B. Pin. 309. *Scrophularia minor ſive Chelidonium minus vulgo dictum*, J. B. 3. 468. *Ficaria*, Dill. Cat. Giſſ. 39. *Ficaria vulgaris*, Rupp. Flor. Jen. 127. Buxb. 110. *Ranunculus vernus rotundifolius minor*, Tourn. Inſt. 286. *Ranunculus præcox rotundifolius radice granuloſa*, Hiſt. Oxon. 2. 446. *Ranunculus Chelidonides rotundifolius præcox radice granulata*, Pluk. Almag. 314. *Ranunculus rotundifolius minor*, Hort. Monſp. 169. PILEWORT.

This ſmall Plant, beſides the ſlender white fibrous Root, which ſpreads and faſtens itſelf in the Ground, has ſeveral ſmall oval whitiſh Tubercles, ſomewhat reſembling the Piles, or the Swellings of the Hæmorrhoids, whence it takes its Name. The Leaves grow upon long Foot-ſtalks, ſmooth and ſhining, in Shape of Ivy-leaves, but leſs, rounder-pointed, and of not ſo firm a Texture, ſometimes ſpotted with whitiſh Spots. The Flowers grow upon pretty long Stalks inclining to the Earth, with a Leaf or two on them more angular, ſharper-pointed, and ſmaller, than the others: They conſiſt of eight or nine narrow ſharp-pointed Petala, of a ſhining yellow Colour, with a few yellow Stamina in the Middle, ſet about a greeniſh Head, which is compoſed of ſmall naked Seeds.

It grows in Meadows and moiſt Paſtures, and by Hedgeſides; and flowers in *April*.

This Herb, on account of its Signature, is accounted to be good for the Hæmorrhoids or Piles, to eaſe their Pain and Swelling, and ſtop their Bleeding, the Roots being taken inwardly, and an Ointment, made of the Leaves and Roots, applied outwardly. Some commend it for the Jaundice and Scurvy, eſpecially in the Mouth, to ſtrengthen the Gums, and preſerve the Teeth. *Miller's Bot. Off.*

It is alſo eſteem'd a good Remedy, either internally or externally uſed, for the Hernias in Children.

2. Chelidonium; minus; folio anguloſo, maculoſo.

3. Chelidonium; minus; flore pleno. *Camerar. Hort.* 40. THE LESSER CELANDINE, WITH DOUBLE FLOWERS.

4. Chelidonium; minus; folio majori, anguloſo.

Boerhaave's Index alter Plantarum, Vol. 1. *p.* 29.

CHELIDONIUS *Lapis*. A Stone, found, as is ſaid, in the Craw of a young Swallow. *Dioſcorides, L.* 2. *C.* 60. informs us, that, if you open young Swallows, you will find in the Craw ſome Stones: Of theſe, ſays he, take two, one of various Colours, and another of only one Colour; incloſe theſe, before they have touch'd the Earth, in a Piece of the Skin of a Heifer, or Stag; then tie them about the Arm, or Neck, and by this means you will relieve epileptic Patients, and generally reſtore them to Health. The ſuperſtitious Circumſtances, with which this Remedy is to be attended, render its Efficacy much ſuſpected; for, firſt, the young Swallows muſt be thoſe of the firſt Brood which the old Bird has had, a Thing very difficult to aſcertain. Secondly, the Stones muſt be taken out of the Craw during the Increaſe of the Moon. Thirdly, they muſt never touch the Ground. I don't know, that any Experiments have been made with theſe Stones, either to determine, or diſprove their Virtues; neither ſhould I think it worth the while.

CHELONE, χελώνη. A Tortoiſe. It imports alſo a Part of a chirurgical Machine, mention'd by *Oribaſius de Machinamentis, Cap.* 4. & 5. See TESTUDO.

CHELONE. A Plant, ſo call'd by *Tournefort*, in the *Memoirs of the Royal Academy of Sciences for* 1706. from the Reſemblance of its Galea to a Tortoiſe.

The Characters are;

It has a ſquamous, ſhort, green Calyx; the Flower is monopetalous, and bilabiated; the Galea reſembling the Shell of a Tortoiſe, with a bifid Apex, and a trifid Beard, extending beyond the Galea. From the inner and lower Part of the Flower ariſe four Stamina, with teſticulated Heads. The Ovary grows to the Placenta in the Bottom of the Calyx, within the Flower, is furniſh'd with a long Tube, and becomes a Fruit perfectly reſembling that of the Fox-glove, roundiſh, oblong, bicapſular, and full of Seeds, which are adorn'd with a ſmall foliaceous Fringe round the Edges. *Boerhaave's Index alter, Part* 1. *p.* 240.

Boerhaave mentions but one Species of this Plant, which is, Chelone; Acadienſis; flore albo. WHITE FLOWERING CHELONE OF ARCADIA.

Boerhaave Index alter Plantarum, Vol. 1.

CHELONIUM, χελώνιον. The convex Part of the Back, which is ſituated immediately under the Neck.

CHELONITES *Lapis*. A Name of the *Lapis Bufonites*.

CHELYS, χέλυς. The Breaſt; ſo call'd from its Figure, reſembling the Back of a Tortoiſe.

CHELYSCION, χελύσκιον, from the preceding Word, imports a ſhort dry Cough.

CHEMA, χῆμα. This, according to *Blancard*, *Lex. Renov. & Lem. Phar.* is the Name of a certain Meaſure ſometimes mention'd by the *Greek* Phyſicians, and which is thought to have contain'd about two ſmall Spoonfuls. But we muſt obſerve, that the *Athenians* had two *Chemas*, the larger of which weigh'd three Drams, and the leſſer two; which latter is equivalent to the thirtieth Part of the *Cotyle*, or Half-pint. It is not improbable, that, by the *Chema*, a certain Meaſure is denoted, containing as much as a certain Sea-ſhell, call'd *Chama*, holds. The determined Weight of this Quantity cannot be accurately aſcertain'd; in conſequence of the different ſpecific Gravities of different Subſtances: Juſt as, at preſent, the Word *Spoonful* is uſed in a vague and undetermin'd Senſe, eſpecially with reſpect to Subſtances, of which 'tis a Matter of Indifference, whether a little more or a little leſs be uſed.

CHEMIA, χημεία, is, by *Suidas*, defin'd ἡ τῦ ἀργύρε καὶ χρυσῦ κατασκευή. The Preparation of Silver and Gold. The Word κατασκευὴ ſeems to imply no more than the Separation of Silver and Gold from their Ores. *Suidas* adds, that the Emperor *Diocleſian* order'd all the Books he could procure, which treated on theſe Subjects, to be burnt; leſt the *Egyptians* ſhould by this Art grow rich, and be tempted to rebel.

It ſhould, at firſt Appearance, ſeem ſtrange, that a flat Country, like that of *Egypt*, which was never remarkable for abounding with Mines of Metals, ſhould be celebrated for the Skill of its Inhabitants, with reſpect to the Treatment of Metals. But, if we conſider the prodigious Riches of the antient *Egypt*, we may, perhaps, find Reaſon to ſuſpect, that it had ſome other Source of Wealth than the Fertility of the Soil. 'Tis not improbable, that the antient *Egyptians* carry'd on a Commerce into the inland Parts of *Africa*, where Gold Ore, or Gold Duſt, was found, and perhaps Silver; which Traffick, for political Reaſons, they might conceal from other Nations. As the Prieſts ingroſs'd all the Learning, as well as Wealth, of the Country, theſe were probably the Smelters and Refiners of their Ores; and the Method of treating them they would probably keep to themſelves, both for national and private Conſiderations. Hence, if they wrote upon the Subject, whatever they deliver'd was ſo involved in Allegory, and deſignedly obſcured, that nobody, but their own Order, could find out the Meaning.

It is even probable, that they pretended to the Art of converting baſer Metals, which they uſed in their Proceſſes, into real Gold, the better to conceal the true Sources of their Wealth. Now when Men of Learning, in after Ages, met with their Books, not being able to underſtand their true Meaning, and not knowing how to decypher them, they might take their Allegories in a literal Senſe, and thus believe, that there really was a Method of making Gold from other Metals. When ſuch a Notion, fooliſh as it was, had once begun to prevail, it was natural enough for the Avarice of Mankind to leave nothing untry'd for the Revival of ſo beneficial an Art, ſuppoſed to be loſt. This Miſtake was, probably, the Foundation for all thoſe Reſearches which have been made after the Tranſmutation of Metals; for I can never believe, that there ever was, in reality, any ſuch Art; the converting of one Metal into another being, in my Apprehenſion, attended with as much Difficulty as the converting a Thiſtle into a Cedar. The Miſtake was, however, very fortunate for Phyſic; becauſe the Experiments made on this account gave Occaſion to the Diſcovery of many important Remedies.

With reſpect to the Orthography of Chymiſtry, though a thing of no great Importance, ſome Controverſies have been raiſed upon this Subject, which it is not worth while to enter upon. I ſhall only remark, that the Derivation of the Word is utterly uncertain; and, therefore, I ſhall always make uſe of *Chymiſtry* as a Word already received in the *Engliſh* Language; tho' ſome, either out of an Affectation of Singularity, or too ſervile a Complaiſance to the celebrated *Boerhaave*, or to the *French*, have lately call'd it *Chemiſtry*, or *Chemy*; the laſt of which particularly appears to be a very trifling and idle Innovation.

Having given ſome Account of the Introduction of Chymiſtry into Medicine in the *Preface*, it remains, that I point out the Imperfections and Excellencies, the Uſes and Abuſes, of the Art; and give a Catalogue of the principal Authors who have wrote on chymical Subjects. The firſt of theſe I ſhall do by giving the Subſtance of an Oration, wrote by *Boerhaave* with this View. Mean time, thoſe who are inclined to be acquainted with the learned, but trifling Controverſies relating to the Antiquity of Chymiſtry, may conſult *Borrichius*, and *Conryngius de Hermetica Medicina*. See alſo our *Preface*.

The Art of Chymiſtry is, by ſome of no mean Reputation for Wiſdom and Gravity, exploded as ſubject to a Multitude of Errors, productive of very little uſeful, but conſuming a Man's Fortune, and reducing him to Beggary, and, in ſhort, as the Plague and Curſe of a rational Mind. There are others, on the contrary, who, from a natural Inclination to the Art, or convinced by Experiments, think, that nothing worthy of the Subject can be ſaid in Praiſe of Chymiſtry. But their Authority has but little Weight with good Judges, who know they are as much to be cenſur'd for their doting Fondneſs, as the former for their unreaſonable Deteſtation and Reproaches. Confeſſing, therefore, thoſe Errors which have been introduced by the Chymiſts into Arts and Sciences, I ſhall endeavour to prove, that theſe Errors are moſt effectually removed only by the Induſtry of the Artiſts in Chymiſtry.

With reſpect to the well-known Enthuſiaſm, and fabulous Turn, of the Chymiſts, there are ſome Cauſes to be aſſign'd, in the Nature of Things, why thoſe who firſt cultivated this Art were ſo extremely addicted to Fiction. Chymiſtry was formerly in the Hands of Miners, and Smelters of Metals, Men unacquainted with the liberal Sciences, debarr'd from all Commerce with the learned World, condemn'd to lead their Lives in Darkneſs under Ground, and to ſupport their wretched Beings with coarſe and hard Fare. Conſider theſe Men daily obnoxious to a thouſand Dangers, dreading what may happen, diſturb'd in Mind, and leading a very uneaſy Life. They tremble at the frequent Earthquakes, the rapid Torrents from the Mountains, at the Meteors and Damps, the Coruſcations of the groſs and ſulphurous Exhalations, the Reſoundings of the Caverns, and the ſubterraneous Bellowings. Under all this they have no wiſe or prudent Perſon to conſult, who might remove their vain Fears, and reſtore Light to their troubled Minds: Hence they give their Attention to ſuperſtitious Tales, and fabulous Stories, calculated to frighten as well as amuſe, and, by increaſing Melancholy, to change Fools into Madmen. He who chuſes ſuch Maſters as thoſe for his Tutors in any Art, had need of an uncommon Firmneſs of Mind to keep himſelf free from thoſe Errors and Vanities, with which they are corrupted: For ſuch is the Caſe with thoſe who give themſelves to learn an Art, that the Authority of a Maſter, a Fable propagated by Tradition, and a Frequency of Examples, ſeduce thoſe, who, in other reſpects, are very diſcreet, and ſkilful in diſtinguiſhing Fictions from Realities.

What made a fatal Addition to this Evil, of which we complain, was, that very learned Phyſicians, deſpiſing *Galen*, with the *Peripatetics* and *Arabians*, devoted themſelves wholly to the Chymiſts. For when they found, that the firſt entertain'd them, for the moſt part, with nothing but Words, the other with Experiments; that the former were ſtock'd with nothing but general Notions, and Speculations, form'd in the Brain; but that the latter gave ſenſible Proofs of their Art by outward Effects; admiring the Difference, they ran blindly into the Opinions, and embraced all the Ratiocinations of thoſe Teachers who had ſo agreeably entertain'd them. This gave Occaſion to the Revival of all thoſe old and abſurd Notions of the *Magi*, *Chaldæans*, and *Perſians*, that the Fire was God; with the fine and flattering Opinion of *Pythagoras*, concerning the Tranſmigration of Souls. Some, with *Epicurus*, aſſerted the Mind to be a ſmall Cloud of Corpuſcles, which were inviſible, on account of their Minuteneſs; others, with *Plato*, imagined Demons exiſting every-where. Some try'd the magic Arts of *Zoroaſter*; and you might obſerve the graveſt and principal Men among the Chymiſts, ſeriouſly teaching and inculcating, as real Verities, all the ingenious Fictions of the Poets concerning the Fauni, Satyrs, Genii, Nymphs, Pygmies, and Demigods, the Lords of the Woods, Mountains, Waters, ſubterraneous Places, and the Air. They impoſed on their Diſciples a Belief of the Sorceries, Faſcinations, and Inchantments of Shepherds and Swineherds, the vain Conjectures, and direful Prognoſtications, of Aſtrologers; the Amulets worn by barbarous Nations, Taliſmans, Genii confin'd by Seals within Metals,

tals, and Spirits infuſed by Inchantments into ſolid Bodies. No Wonder if theſe ſublime Doctors proceeded at laſt to violate what was ſacred, and treated the Pentateuch of *Moſes*, the Writings of *Solomon*, and the Revelation of St. *John*, as Deſcriptions of the Gold-making Art. There was nothing but what they debaubed with their Commentaries, Allegories, Emblems, Types, and Riddles; inſomuch that you can find no Paſſage in ſacred Writ ſo clear, ſo plain and explicit, which they did not pervert to a wrong Senſe; the fanatical Humour prevailing at laſt to ſuch a Degree, as to change the Hiſtory of Facts, and the Miracles wrought for Confirmation of the Goſpel, into the Precepts and Maxims of Alchymy. He who conſiders theſe Things cannot but be concern'd, and, being prompted by Indignation, may perhaps be ready to condemn the whole Art, and wiſh it exterminated. But if he will pleaſe to aſſume the Character of an impartial Moderator, and can have Patience to hear the Truth on both Sides, he will be convinc'd, that all this numerous Train of Errors and Abſurdities are very fairly condemned, exploded, and confuted by Chymiſts themſelves, and that from Arguments and Reaſons afforded by the Art of Chymiſtry. It would be endleſs to enter into Particulars, but I cannot forbear taking notice of an illuſtrious Chymiſt in the thirteenth Century, I mean *Roger Bacon*, an *Engliſhman*, who was excommunicated by the Pope as being guilty of Magic. This extraordinary Perſon knew ſo well how to reduce the Powers of Nature within the Rules of Art, as, by their Combination, to perform Things which far ſurpaſs'd the pretended Miracles of the Magicians. He demonſtrates, by Experiments, that human Induſtry, with an Inſight into Nature, can produce Effects, which they, with all their Charms, Sorceries, and Invocation of Demons, are unable to imitate. He very eaſily, and with admirable Ingenuity, expoſes the monſtrous and hurtful Superſtitions, Deliriums, and Enthuſiaſms of the Times in which he liv'd. He very judiciouſly and religiouſly diſtinguiſhes between the ſacred Myſteries of Piety, and the ridiculous Chimæras and Inventions of an unſettled Brain; between the corruptible Principles of the Body, and the celeſtial Origin of the Soul; between Nature and God. We admire ſuch a Man, living in the very Dawn of Chymiſtry, and have a Veneration for him to this Day. Another Chymiſt of the ſame Nation was the illuſtrious *Boyle*, who was ſurpaſs'd by none for Diligence or Succeſs in this Art. He ſpent his Life in ſoliciting Nature, and making Experiments; and with the greateſt Freedom and Goodnature oblig'd others, by communicating thoſe Diſcoveries, which himſelf alone, with incredible Pains, Danger, and Expence, had firſt made.

Boerhaave has, in this laſt Part of Mr. *Boyle*'s Character, I think, carry'd his Encomium too far; for whoever reads his Works will find, that tho' Mr. *Boyle* communicates ſome Things, yet he mentions others, which he informs us are to be done, without telling us how. And it is well known, that he conceal'd ſome of his moſt important Diſcoveries from all the World, except perhaps his own Workmen, from whom he could not always hide them.

The Changes which happen in Bodies are cauſed by Motion, which is infus'd into the vaſt corporeal Syſtem, and agitates the ſame. We are therefore to inquire into the Cauſes of this Motion, and by what means it may be excited, diverted, or ſtopt in Bodies. Theſe impulſive Powers are not within the Reach of Reaſon, unaſſiſted by the Obſervations of Effects evident to the Senſes. It will then be worth our Pains carefully to obſerve thoſe Motions, which ariſe from the Action of Bodies in the Vicinity of others, or to apply Bodies to Bodies, and again to remove them at a Diſtance from each other, while, by means of Fire, you excite in each Body a proper Motion, which is accounted the moſt effectual Method to diſcover the Virtues of Bodies. All this is the Work of Chymiſtry, which on that account muſt be acknowledg'd of great Service in the Bounds of Phyſics, there being none ſo well accommodated for diſcovering the Secrets of Nature; and yet it cannot be deny'd, but that it has been the Occaſion of great Errors in ſearching into the Nature of Things. The principal Error was, that as ſoon as the Chymiſts had found out, by Experience, the Action which was peculiar to ſome ſingle Body, they preſently regarded this Way of Nature as univerſal, and confidently aſſerted it to belong to all other Bodies in general. In this Point the Chymiſts ſeem'd to copy after that Philoſopher, who, obſerving the mutual Attraction between the Magnet and Iron, aſcribed the ſame to all other Bodies. From this fallacious Way of Reaſoning, the Doctrines of Ferments, Efferveſcences, oppoſite Salts, heating Sulphur, Fermentation, Putrefaction, Generation, Tranſmutation, Precipitation, became ſo univerſal, with an infinite Number of others deduced from them. How did the Face of Phyſics change, as ſoon as theſe few Actions were found out! None but theſe were admitted in explaining the Laws of Nature, and whatever could not be reconciled with it, was exploded; and in a little time the Notion ſo far prevailed, that all the Powers of Nature were circumſcribed within the narrow Limits of this way of Acting; and had not Chymiſtry itſelf ſet Bounds to this licentious way of Reaſoning, all Phyſics had been reduced to depend on a few Laws eſtabliſhed by the Chymiſts. But when Chymiſtry began in good Earneſt to make Improvements of Inventions, to try the ſame Methods upon different Bodies, and to try different Methods upon the ſame Bodies, there appear'd ſo great a Diſſimilitude in Bodies, and ſo much Diſagreement in the Operations, as would no longer ſuffer the vaſt and comprehenſive Nature of Things to be reſtrain'd within the Bounds of a few Examples. Men were then convinc'd, that there were in Bodies a Variety of Qualities, before unknown, but of mighty Efficacy, and productive of peculiar, but often very conſiderable Motions. We will illuſtrate this by an Example: Thoſe Vegetables which turn acid of themſelves, if kept in Veſſels, will be put in Motion only by the Warmth of the Air; and this Motion, if continu'd to a proper Length of Time, will change Part of the native Oil into volatile Spirits, which will bear to be mix'd with Water, but burn in the Fire. Again, the ſame Vegetable, by a Motion not much unlike the former, ſhall change the ſame Part of its Oil into acetous Spirits, which will mix with Water, but extinguiſh Fire. They call'd both Actions *Fermentation*; there was a remarkable Change of Elements, ſuch as they had never ſeen in any other Subject. Thus far Matters went ſmoothly; but here they fall into a looſe way of Arguing, while they warmly inſiſt, that there can be no true Change but by virtue of a Ferment, none without Fermentation. Having thus the Misfortune to overſhoot themſelves, tho' pleas'd and ſatisfy'd with their new Diſcovery, they take Occaſion from thence to form a Notion of a far more univerſal Ferment, of ſo mighty and extenſive Virtue, that the leaſt Particle of it, united with the proper Ferment of any Body whatſoever, ſhall impregnate it in ſuch a manner, as to aſſimilate and convert the Ferments of all other Things into its own Nature. Thus from the narrow Rounds of a ſingle Experiment, they dare expatiate and range over an Infinity of Things. Nor muſt we imagine, that this is true only in one Inſtance; for there is ſcarce a Subject of any Importance, in which they do not argue at the ſame Rate. Hence it is, that there are ſuch a Multitude of Sects among them, every one forming an univerſal Doctrine, peculiar to himſelf, and built upon his own private Experiments, ſo that you ſhall hardly find two of them agreeing in one Thing; while thoſe among them, who were bred up to the Studies of Literature, but wanted Experience, rejecting the Doctrines of the Schools, and longing after Certainty, after they had apply'd themſelves to Chymiſtry, were ſtill doubtful and fluctuating, and, among ſuch a Multiplicity of Opinions, knew not which of them to embrace. Chymiſtry groaned under ſo great a Load, but ſtill had Reſources within itſelf, and there found Means again to emerge and free itſelf. None of the Sciences came in to its Aſſiſtance, but it was forced to work out its own Deliverance. Nor will this ſeem extraordinary to one who conſiders, that the Application of ſome Bodies to others always produced new Appearances, different Actions, diſſimilar Effects, which could by no means be reduced to one univerſal Law common to all. Men were convinced from very noble, uſeful, and entertaining Inventions made by the Chymiſts, that there needed a vaſt Number of Obſervations, a very careful Examination of them, and a judicious and wary comparing of them one with another, in order to eſtabliſh an univerſal Mode, to which all the Actions of Nature are ſubjected; that there is nothing more fallacious, than from a Similitude in one Thing to explain and judge all the reſt; and that as it is uſual for a young Beginner to deduce the Cauſes of all Events from one ſingle Mode or Property, ſo mature Age, taught by Experience, takes up with true ſolid Wiſdom, whoſe Dictates to a Chymiſt are, that he proceed by ſlow Steps, with the greateſt Caution, and with the moſt ſolicitous Circumſpection and Attention to every Particular, before he preſumes to paſs his Judgment upon natural Things. Thus is Chymiſtry, by correcting Errors, adorning Truths, and amending Abuſes, become a certain, pure, moſt uſeful, and reputable Part of Learning. For the Truth of theſe Things I appeal to thoſe who ſhall compare *Homberg* with *Tachenius*; *Boyle* with *Helmont*; and the Writings of the vulgar Chymiſts with the *German* Miſcellanies, and the Memoirs of the Royal Academy of *Paris*.

Phyſics have ſo near a Relation to Medicine, that the Errors of the Chymiſts in the former communicate themſelves to the latter, corrupting not only the Theory, but the practical Part of Medicine. Give me Leave to point out the Original of ſo many Faults. The Chymiſts, by the artificial Means of a great Fire, with Veſſels and Inſtruments, excited different Kinds of Motions, by which Bodies, being mix'd or ſeparated in various Manners, aſſum'd different Forms, whence proceeded new Powers of acting undiſcover'd before. Now when theſe Bodies came to be examin'd by a chymical Proceſs, very many Kinds of Motion were diſcover'd, which no other Art was capable of producing, nor Nature, left to itſelf, had ever offer'd to Obſervation. The Artiſt had Reaſon to rejoice over

over his Invention; but the Pleaſure of the Succeſs dulled the Mind of the Inventor; he ventur'd to aſſert, and at length aſſum'd it for a moſt certain Truth, that the ſame obtain'd in the Nature of Things, and in the human Body; that ſuch Things as could not be produc'd in the Way of Art, but by the moſt intricate, moſt violent, and operoſe artificial Means, muſt reſult from the ſedate Motions of the human Body, and be nouriſh'd and maintain'd by the ſame; and that all Things in the Earth, Water, and Air, were furniſh'd with them. This was a moſt plentiful Source of Errors, and hence acrid alcaline, fix'd, and igneous Salts, were ſaid to prevail in the Bodies of Animals and Vegetables; and volatile, highly acrid, and alcaline Salts, to impregnate the mildeſt Humours of the human Frame, as well as the moſt ſolid Parts, and to lodge themſelves in the Teeth, and in the very Milk. Sometimes Acids were in higheſt Reputation, as being found not only in Foſſils and Vegetables, but particularly in Man in ſuch Quantities, as, by their corroſive Acrimony, to carry all before them. Hence the human Body was turned into a Chymiſt's Shop, or a Theatre, in which chymical Plays were acted, and Conflicts, Effervescences, Peace, Generation, Deſtruction, and various Effects of oppoſite Salts, were repreſented as on their proper Stage; and hence all Diſtempers were accounted for, and the curative Indications taken, in a manner too ridiculous to expatiate upon, tho' ſupported by the Authorities of *Sylvius de la Boe*, and *Tachenius*. It would be endleſs to recount all the Errors and Dreams with reſpect to Theory and Practice, which different Chymiſts gave into. What can be more whimſical than the Character of Antimony, which ſome of them repreſented as curing all Diſeaſes, for no other Reaſon, but becauſe, when fus'd with Gold, it deſtroys all the Impurities and baſer Metals mix'd with it? What more abſurd, and even contrary to his own Experience, than the Boaſts of *Paracelſus* with reſpect to his ſecret Medicine, by which he promis'd himſelf the Age of *Methuſalem?* What more ridiculous than the Extravagancies of the *Roſicrucians?* What more enthuſiaſtical and idle, than the Liquor propos'd by *Van Helmont*, and prepar'd, as he ſays, from the immortal Cedar of *Lebanon*, by Art of the wiſe Men, which would ſo enrich the vital Humours with its ſalutary Virtue, that by purging off all Sordes, and ſupplying all Deficiencies, with proper Recruits of invigorating Spirits, it would cauſe a Man to live for Ages in the conſtant Enjoyment of a crude and vigorous old Age? You would ſay I tranſgreſs'd the Bounds of Probability. But if I ſhould tell you of *Butler*'s Stone, which, by one ſlight Touch of the Top of it with the Tip of the Tongue, inſtantly cured the moſt obſtinate Diſeaſes; or of *Artephius*, by an electrical Virtue, attracting to himſelf the vital Spirits from a youthful Body, and perpetually ſuſtaining the vital Flame with its medicinal Exhalations, render'd it immortal as the veſtal Fires; and of many other vain, empty, fabulous Vanities of the Chymiſts, I ſhould exhauſt your Time and Patience. Yet theſe Things, abſurd and incredible as they are, became the Regard and Concern of Phyſicians; in Search of theſe, many of the wiſeſt and moſt learned among them devoted their Eſtates, Fame, Life, and Soul; and the Infatuation became ſo general, as hardly to admit Hopes of a Remedy. Chymiſtry itſelf, at laſt, furniſh'd us with the only proper Means for the Cure of thoſe Evils, to which itſelf had given Occaſion. *Libavius*, *Boyle*, *Bohnius*, and very many others, ſearching diligently into Things, and leaving nothing unexplor'd, came at laſt to demonſtrate, from Chymiſtry itſelf alone, that the Things which *Art* prepares, are quite foreign to thoſe which *Nature* effects; and conſequently that the Inſtruments which Nature uſes, and thoſe which Chymiſtry employs, are not to be conſidered as of one and the ſame Kind. For Nature, in Man, does not work by all thoſe Ways and Means which Chymiſtry uſes to bring about its Ends; and therefore the Actions exerciſed by the induſtrious Chymiſt are vaſtly different from thoſe by which Nature proceeds; and that we are not to argue from one to the other without good Evidence derived from elſewhere. Hence it appeared, that Chymiſtry often produces ſuch Effects as were never diſcover'd in the human Body, nor in any other Part of Matter; that it was wrong arguing from the Depuration of Metals, to the rendering a Man free from Diſeaſes. The World was convinc'd, that the Methods, by which the Life of Man ſupplies Matter for the Cauſes of Diſeaſes, are altogether inimitable by the Arts of Chymiſtry; and that Life and Health depend upon ſo many different, intricate, ſubtile, and tender Cauſes, that Chymiſtry was utterly incapable of performing the wonderful Things ſhe had promiſed on that Score. All theſe Errors, with an infinite Number of others, after Conviction from true Experience, were happily corrected, and expel'd the Bounds of Medicine; and now we have Reaſon to congratulate ourſelves on the flouriſhing State of Chymiſtry in *Europe*, which is no longer accounted a fallacious, but a very uſeful Art, and of the greateſt Service in Phyſics and Medicine; in Confirmation of which, beſides the Authority of the great Reſtorer of Learning, my Lord *Bacon*, and that ſagacious Chymiſt Mr. *Boyle*, hear the Teſtimony of a Man, in whom Nature ſeems to have ſet the Bounds of human Perſpicacity, I mean the incomparable *Newton*, who, tho' of the deepeſt Inſight of any mortal in Phyſics, yet demonſtrates the Laws, Actions, and Forces of Bodies as known by their Effects, all from Chymiſtry; and when he applies thoſe Forces, thus found, to the Explication of Phenomena, he does it all by the Help of Chymiſtry; which is a clear Proof, that without Chymiſtry the Nature and Properties of ſingle Bodies could ſcarce ever have been known by the moſt perſpicacious of Mortals.

Chymical Authors, *including* Alchemists *and* Metallurgists.

We have an Account of ſeveral *Greek* chymical Manuſcripts in the Emperor's Library at *Vienna*; that of the King of *France* at *Paris*; the *Elizabeth* Library at *Breſlau*; that of the Duke of *Saxe-Gotha*; and in the Libraries of the *Eſcurial*, and the *Bodleian*. Dr. *Shaw*, in his Tranſlation of *Boerhaave*'s Chymiſtry, has, by way of Note, given a Catalogue of theſe Writings, which the Reader may conſult; or *Fabricius*, in his *Bibliotheca Græca*, who takes notice of theſe Authors. Mean time it would be ſuperfluous to particularize them in this Place, becauſe they are not to be procur'd. I ſhall, however, give the Judgment of the learned *Reineſius*, on that Collection in the Duke of *Saxe-Gotha*'s Library.

The Judgment of the learned Reineſius, *concerning the Collection of* Greek *chymical Manuſcripts, in the Library of* Saxe Gotha, *A. D.* 1634.

The *Greek* Manuſcript Copy, tranſcrib'd from another Copy in the Library of *Ausbourg*, in the Year 1623. conſiſts of a Variety of Treatiſes, ſome of which bear the Names of their true and undoubted Authors, others are aſcrib'd to thoſe who knew nothing of them, and others again are nothing but Collections from various Authors. They all treat of what they call the *Divine Art*, of the Philoſophers Stone, or the Great Magiſtery, that is, how imperfect Metals may be brought to Perfection by Tranſmutation into Gold or Silver; alſo of the various Kinds of Veſſels and Furnaces, and the different Operations which are in Uſe among Chymiſts at this Day. There is alſo a brief Treatiſe of Weights and Meaſures, with a ſhort Account of the Manner of preparing *Polenta* from Barley; and how they make Beer, in *Egypt* he muſt be ſuppoſ'd to mean; alſo of the Degrees of Fire, Colours, and other common Operations belonging to Chymiſtry. And becauſe this Art was at all times communicated in allegorical Words, by Parables and Riddles, which *Zoſimus* calls λοξὰς γραφὰς, "figurative Writings," and *Stephanus*, ἀλληγορικὰς, allegorical," and was expreſſed and deſcribed by certain Characters and Signs, there is added a Lexicon, which ſhews what is meant by thoſe Words which in *Greek* Authors have a very different Senſe, and explains the Characters and Signs.

There is alſo a Manuſcript Copy taken from another, which, they ſay, is extant ſomewhere in *Italy*, and quoted by *Robertus Valenſis*, in his Book of the Verity and Antiquity of the chymical Art, and by *Geſner* in his *Bibliotheca*; or from that which is in the moſt Chriſtian King's Library, and quoted by *Iſaac Caſaubon* on the Annals of *Baronius*, and by *Salmaſius*, in his *Exercitationes Plinianæ*, whoſe Quotation anſwers Word for Word to this Manuſcript. And *John Dee*, a Doctor of Phyſic in *London*, who dedicated his *Monas Hieroglyphica* to *Maximilian*, King of the *Romans*, A. D. 1564. is ſaid to have had a Manuſcript Copy of the Phyſics of *Democritus*, with Notes by *Syneſius*, *Pelagius*, and *Stephanus*; which Treatiſe was tranſlated by *Pizimentius* into *Latin*, and printed at *Cologn*, A. D. 1574. with *Mizaldus*'s *Memorabilia*. But then theſe Writings are all or moſt of them tranſlated into *Latin*, and inſerted * in the *Theatrum Chymicum*, the *Turba Philoſophorum*, the *Aureum Vellus*, and other Books of that Kind. Tho' *Democritus*'s Phyſics and Magic are quoted by *Hermolaus Barbarus* on *Dioſcorides*; the Epiſtle of *Pſellus* to *Xiphilin* the Patriarch is cited by *Mylius*, in his *Baſilica Philoſophica*, and the Works of *Zoſimus*, the Praxis of *Stephanus*, and other Pieces, are cited by ſome or other; yet they were never printed in *Greek*, as far as I know, tho' they certainly deſerved it, becauſe they contain many valuable Things of Antiquity, and inform us of the Beginning of the Art at ſo long a Diſtance of Time. As to the reſt, becauſe they are very obſcure, and conſiſt merely of Fragments, they will conduce perhaps but little to the Promotion of Chymiſtry. In general, it may be ſaid of theſe Writings, that they were all compoſed by Monks, and other learned Men, firſt of *Alexandria*, and after ſome Diſtance of Time at *Conſtantinople*; were there collected into one Body, and brought from thence into *Italy* by the *Conſtantinopolitan* Exiles, who flock'd thither in great Number ſome time before, and at the Taking of

* *Fabricius* ſays, that very few, or none of them, can be found inſerted in thoſe Collections.

Conſtantinople by the *Turks*, *A. D.* 1454. and afterwards brought into *France*, and placed in the Royal Library.

That we may ſay ſomething in particular of the Writers whoſe Names are extant in this Collection, it is to be obſerved, that ſome of them were Heathens, others Chriſtians *; that they lived firſt at *Athens*, afterwards at *Alexandria* in *Egypt*, where Philoſophers were more eſteem'd than at *Athens* itſelf. For, before that Time, both there and in *Perſia*, the Art of making Gold was much ſtudied among *Jews*, *Chriſtians*, and *Heathens*, in the Reign of the Emperor *Diocleſian*, as *Suidas* informs us under the Word χημεία. And we are aſſured, that *Heliodorus*, whoſe Name is prefix'd to one of theſe Treatiſes, was an *Alexandrian* by Deſcent; and was, with his Brother *Ammonius*, placed by his Parents, *Hermias* and *Ædeſia*, with *Proclus* the moſt famous Philoſopher of thoſe Times, but later than *Theodoſius*. And poſſibly this Philoſopher, who was addicted to this Art, and had ſome Skill therein, might dedicate ſome Writing of that Nature to *Theodoſius* the Great; and it is probable, that this Emperor took great Delight in it, as well as many belonging to his Court, and among them *Eugenius*, to whom one Proceſs is aſcrib'd. The Names of *Archelaus*, *Hierotheus*, and *Theophraſtus*, are all fictitious; and the bad Poetry belongs all to one Author, being nothing but *Stephanus* verſify'd. It is certain alſo, that this *Heliodorus* before-mention'd was a Pagan of the *Platonic* Sect, but the Author of theſe Verſes a Chriſtian; and *Pappus*, to whom one Proceſs is inſcrib'd, was a Philoſopher of *Alexandria*, Author of the *Mathematical Collections*, and lived under the ſaid Emperor *Theodoſius*.

As to *Syneſius*, whoſe *Scholia* on the Phyſics of *Democritus*, and *Myſtica* to *Dioſcorus*, the Prieſt of the great *Serapis*, we have amongſt them; there was, it is true, a *Syneſius* in the Time of the *Theodoſii*, who ſtudied at *Athens* and *Alexandria*; and *A. D.* 410. was made Biſhop of *Cyrene* in *Libya*, and whoſe Works were publiſh'd by M. *Petau*, 1633. at *Paris*, with Notes. But this *Syneſius* cannot be thought the Author of the *Scholia*, becauſe they contain a very childiſh Error, concerning *Oſtanes* and *Democritus*, of which more below; whereas *Syneſius* was a very learned and judicious Perſon, as appears by his Writings, in which there is not the leaſt Footſtep of Chymiſtry, nor of his Familiarity with *Dioſcorus*. *Zoſimus*, a Philoſopher of *Alexandria*, wrote about the ſame Time, and has various brief Diſcourſes interſperſed throughout the Volume, which, however, cannot be all of them juſtly aſcrib'd to him; for in ſome there is mention made of Things unknown to the antient *Greek* Phyſicians, and which were brought in Uſe and named only by the *Perſians* and *Arabians*, ſuch as βειλεῦ, ναπὴρ, δένακας, and others. That this *Zoſimus* was the ſame with the Hiſtorian of that Name, can hardly be doubted; for tho', in his Treatiſe *ad Theoſebian*, he makes mention of the Creation, Incarnation, and Paſſion, yet he accommodates the *Platonic* Speculations, and the Fables of the antient *Egyptians*, taken out of the *Pœmander* of *Triſmegiſtus*, to his Art; and apply'd the prophetical Viſion of *Ezekiel*, concerning the diſperſed dry Bones, to his chymical Proceſſes. *Suidas* mentions *Zoſimus*, and ſays, that he wrote χημευτικὰ, and calls him an *Alexandrian* Philoſopher; and *Photius*, in his *Bibliotheca*, ſpeaks of his λόγοι χημευτικοί. In ſome Places of this Manuſcript he is call'd, perhaps from his Country, *Panopolita*.

Olympiodorus, whoſe Treatiſe is in this Manuſcript, wrote after *Zoſimus*; but *Salmaſius* ſeems to be miſtaken in placing him among the Writers of the laſt Ages of *Greece*, becauſe he never mentions *Stephanus*, who flouriſh'd about *A. D.* 620. and was ſkill'd in this Art; but frequently ſpeaks of *Zoſimus* and *Syneſius*, who lived a little before; whereas it is a received Cuſtom among Writers on theſe kinds of Subjects, to mention, and quote by Name, all their Predeceſſors in the ſame Art. I take this *Olympiodorus* to be the ſame with him of that Name who was born at *Thebes* in *Egypt*, and wrote a Hiſtory of his own Times from *A. D.* 400. to *A. D.* 425. and dedicated it to *Theodoſius* the younger. In *Folio* 182. he quotes *Hermes*, ἐν τῇ κυρανίδι βίβλῳ, which is the ſame with *Hermes*'s Phyſics, quoted by *Zoſimus*, *Lib.* 9. *de Chemia ad Theoſebian*. Now the Name *Kyranidum* ſignifies a Volume compil'd from many others; and becauſe the *Perſians* and *Arabians* compoſed this Book out of the magical Treatiſes of their own and other Nations, they call'd it *Curanon*; as the *Alcoran* is, by the later *Greeks*, call'd κυρανίον, that is to ſay, a Collection of divine Precepts. And we are told by *Suidas*, that *Diocleſian*, beſides aboliſhing the antient *Egyptian* Supputation of Time, order'd the Books of the *Egyptians*, which treated of the Art of making Gold, to be burnt, that he might deprive them of the Means of rebelling; and did the ſame, as far as his Power reach'd, by the Books of the *Perſians*, which treated of the ſame Art, that was, at that Time, very much cultivated in *Perſia*, and enabled that Nation frequently to be very troubleſome to the *Romans*.

Stephanus was a Chriſtian, as appears by his quoting the Evangeliſts and St. *Paul*. He lived in the Time of the Emperor *Heraclius*, and there is no Part in all the Collection, in which the Doctrines of the Antients are better explain'd.

As to *Democritus*, who is not only frequently mention'd in this Collection, but has, beſides, entire Treatiſes in it, as his Book of the Colour of Purple, and of making Gold, Silver, and Gems, there is an antient, indeed, but fooliſh Opinion, that he is the ſame with the Philoſopher of *Abdera*, who lived in the Time of the *Perſian* Monarchy. The *Pſeudo-Syneſius* ſays ſo in expreſs Words; and you may find the ſame in the *Greek* Chronicle of *Euſebius* †. But *Scaliger* thinks that Story to be none of *Euſebius*'s, but compoſed by *Panodorus* the Chronographer, an *Egyptian* Monk, who lived in the Time of the Emperor *Arcadius*; and being extracted by *Syncellus*, who tranſcrib'd that Author's whole Chronography, about the Year 792. was inſerted into that Collection. But it is very probable, that it was not written by *Euſebius*; for St. *Jerom* found no ſuch thing in that Author; and the Tale is moſt likely to be forged by an *Egyptian*, who thought it an Honour to his Nation to have it believed, that the moſt famous of the *Grecian* Sages ſhould be initiated in the *Egyptian* Myſteries. But this *Oſtanes*, as appears by a Fragment, *Fol.* 66. was a Chriſtian; and conſequently the *Democritus*, to whom theſe Works are aſcrib'd, could not be the Philoſopher of *Abdera*. And, tho' any one ſhould object, what I alſo believe, that this Fragment was falſly and abſurdly aſcrib'd to *Oſtanes*, yet it appears, from the Style, that the Book before-mention'd could never be the Work of ſo antient a Philoſopher. However, the Piece is of ſome Antiquity, and the Product of an Author who had a good Inſight into the Nature of Minerals, and was ſkilful in Medicine; and perhaps it was ſome Perſon of this Name, who, before *Conſtantine* the Great, ſaid to have been an Initiate of *Democritus*, in the Time of King *Sapor*, (the ſame who, in the Collection, *Fol.* 85. is call'd *Sophar*) went into *Perſia* with a Deſign to learn the ſacred Art. Now *Sapor* lived to the Year of our Lord 270. whence we may probably conjecture, that this *Democritus*, about *A. D.* 300. and conſequently the Third of that Name, might be making the Tour of *Egypt*. Perhaps, again, whatever is related by *Syneſius* and others of *Oſtanes* and *Democritus* is merely fabulous, and thoſe Pieces belong to other Authors, who, to gain Reputation to their Works, prefix'd to them the Names of thoſe antient Philoſophers, who were moſt celebrated for their Knowledge in the occult Sciences. Nor is it ſtrange, that, in ſo rude and ſimple an Age, theſe Writings ſhould be father'd upon that very antient natural Philoſopher *Democritus*, and ſhould paſs for genuine, ſince ſomething like it happen'd in the Time of *Pliny*, as appears, *Lib.* 24. *Cap.* 17. and *Lib.* 30. *Cap.* 1. And in *Laertius*'s Life of *Democritus*, *Gellius*, *Lib.* 10. *Cap.* 12. and *Columella*, *Lib.* 7. *de R. R.* we are inform'd, that the Memoirs of *Bolus Mendeſius de Re pecuaria* were falſly aſcrib'd to *Democritus*; ſo that many Perſons endeavour'd to recommend their own abſurd and monſtrous Conceits to the Public, under the celebrated Name of *Democritus*. The ſame thing happen'd to *Hermes Triſmegiſtus*; and Poets who lived five, ſix, or ſeven hundred Years after *Seneca*, prefix'd his Name to their Verſes.

The ſame Judgment is to be form'd of *Cleopatra*, whom theſe Writers make to be the Wife of one of the *Ptolemies*, Kings of *Egypt*, and *Stephanus* introduces talking with *Oſtanes*; for how can it be aſcrib'd to *Cleopatra*, or the antient *Geoponic* Writers, when it mentions the thirty Pieces of Silver, for which *Judas* betray'd our Saviour; and ſays, that *Job* labour'd under his Calamity ſeven Years and a half?

Michael Pſellus is known to have lived at *Conſtantinople*, *A. D.* 1080. and to have been one of the moſt learned Men

* As it appears, that the Compiler lived after the Emperor *Heraclius*, was a Chriſtian, and not only extracted and digeſted, from various Authors, what he thought fit, but alſo made Interpolations of his own, neither the Marks of Chriſtianity, nor of the Times, which we every-where meet with in his Collection, nor yet the quoting of the Authors, are a ſufficient Warrant to conclude any thing with Certainty, concerning the Age or Religion of thoſe, whoſe Names are prefix'd to the Extracts. Since, then, neither *Herodotus*, nor *Clemens Alexandrinus*, nor other antient Writers, who treat of the Learning of the *Egyptians*, nor even *Pliny* himſelf, make the leaſt Mention of Chymiſtry, I am entirely of Opinion, with *Conringius* and *Reineſius*, in Oppoſition to the very learned *Borrichius*, that whatever may be pretended in this Collection to be written by Names of the greateſt Antiquity, has, at moſt, no higher Original than the Times of *Diocleſian* and the *Theodoſii*. *Fabricius*.

† *Democritus*, the *Abderite*, was initiated into the *Egyptian* Myſteries by *Oſtanes* the *Mede*, ſent into *Egypt* by the *Perſian* King, to preſide in ſacred Offices, in the Temple of *Memphis*, with other Prieſts and Philoſophers, among which was *Mary*, a *Hebrew* Female Sage, and *Pammenes*. He wrote of Gold, Silver, Gems, and Purple, in a figurative manner. This *Democritus* and *Mary* were commended by *Oſtanes* for concealing their Art under a Multitude of ſubtle Ænigmas; but he blamed *Pammenes* for being too open and free in his Writings. *Chronicon Syncelli*.

of *Greece* in his Time, and wonderfully delighted with occult Arts and Sciences. He wrote a Multitude of Books, many whereof lie dormant in Libraries.

The Author of the *Lexicon* muſt be reckon'd among the Moderns, who lived about two hundred and fifty Years ago.

So far *Reineſius*. I now proceed to give ſome Account of the Authors, whoſe Works are more known; firſt remarking, that many Circumſtances, mention'd by *Reineſius*, ſeem to favour what I have ſuggeſted in the Beginning of this Article, relative to the Origin of the Notion of the Tranſmutation of Metals.

1. GEBER, call'd the *Arab*, but really a *Greek* by Country, according to *Leo Africanus*; having firſt been a Chriſtian, but afterwards turn'd Mahometan. He lived in the ſeventh Century, and wrote in *Arabic*.

This Author appears to have been the firſt great Reformer and Improver of Chymiſtry. His Hiſtory is very obſcure: The Name *Geber* ſignifies a great Man, and a King; whence he is commonly ſuppoſed to have been a Prince, and, as he wrote in *Arabic*, a Prince of *Arabia*. But neither his Perſon, nor the Time he lived in, is known with any tolerable Certainty.

He is ſuppoſed to have given the firſt Handle to an Inquiry after an univerſal Medicine, there being ſome Expreſſions in his Book, which might eaſily enough lead an unwary Reader to think he was acquainted therewith: As, *Gold, thus prepared, cures Lepras, cures all Diſeaſes*, &c. But we are here to obſerve, that, in his Language, the baſer Metals are leprous Men, and Gold a healthy one. When, therefore, he ſays, *I will cure ſix Lepers*, he means no more, than that he will turn them into Gold, which ſhall bear the Trial of Antimony. But, as he was no Phyſician, it is more than probable he never thought of any univerſal Remedy. After this Writer, we don't meet with any other of Diſtinction till the twelfth Century.

Golius, Profeſſor of the Oriental Languages in the Univerſity of *Leyden*, made the firſt Preſent of *Geber*'s Piece, in Manuſcript, to the public Library; and tranſlated it into *Latin*, and publiſh'd it in the ſame City in *Folio*, and afterwards in *Quarto*, under the Title of *Lapis Philoſophorum*. It contains abundance of curious and uſeful Things about the Nature of Metals, their Purification, Fuſion, and Malleability, with excellent Accounts of Salts, and Aquæ-fortes. Several of his Experiments are verified by the preſent Practice, and have paſs'd for modern Diſcoveries: The Exactneſs of his Operations is really ſurpriſing, except perhaps in what relates to the Philoſophers Stone.

His Works are theſe;

De Alchemia, vel Chimia; aut de inveſtigatione perfectionis Metallorum:

De Summa Perfectione Metallorum:

De Claritate Alchimiæ:

De Lapide Philoſophico:

De Teſtamento:

De Epitaphio:

De invenienda Arte Auri & Argenti. Boerhaave.

To theſe Dr. *Shaw* adds,

Geberi ſuper Artem Alchymiæ Libri VI. Or, *Geber*'s ſix Books on the Art of Alchemy; extant, in Manuſcript, in the *Bodleian* Library, Part of the Donation of *Elias Aſhmole*, Eſq;

De Alchimia Libri 3. *Argent.* 1529. *Fol.*

Geberis ſumma perfectionis magiſterii in ſua natura: Venet. 1542. 8*vo. Norib.* 1545. 4*to. c. Fig. Arg.* 1598. 8*vo.*

Chymia, ſeu traditio ſummæ perfectionis, & inveſtigatio Magiſterii: Lug. Bat. 1668. 12*mo.*

The Works of *Geber* are alſo publiſh'd in *Engliſh* by *Richard Ruſſel, London*, 1686. 8*vo.*

In the next Place might come AVICENNA, who lived in the eleventh Century; and who, as his Follower *Soranus* informs us, wrote a Book on Alchemy; but there are more chymical Pieces that go under his Name, *viz.*

Abohali, (i. e.) *Avicennæ liber de Rebus Alchymicis*; (i. e.) *Abohali*'s, or *Avicenna*'s Book on the Subject of Alchemy; extant, in Manuſcript, in the *Bodleian* Library, given by Sir *Kenelm Digby*; beſides another Copy given by *Elias Aſhmole*, Eſq;

Tractatus de Tinctura Metallorum. Franckfort. 1550. 4*to.*

Chemicus liber, porta elementorum dictus: Baſil. 1572. 8*vo.*

Mineralia, ſeu de congelatione & conglutinatione Lapidum: Publiſh'd with *Geber*'s *Summa perfectionis magiſterii in ſua Natura*; and other Pieces on the ſame Subject, *Venet.* 1542. 8*vo.* Alſo in the *Theatr. Chym. T.* iv. *p.* 986. And in *Manget's Bibl. Chym. T.* 1. *p.* 636.

The next Author is MORIENUS, a *Roman*, who lived as a Hermit at *Jeruſalem*. He wrote very gravely on the Tranſmutation of Metals, and is rank'd amongſt the pureſt Authors extant: His Works were tranſlated out of *Arabic* into *Latin*, ſo early as the Year 1182. according to *Boerhaave*.

Dr. *Shaw* adds to this,

Liber de Compoſitione Alchemiæ; extant in *Manget's Bibl. Chym. T.* 1. *p.* 509.

Liber de diſtinctione Mercurii aquarum: Found in Manuſcript in the *Bodleian* Library; given by *El. Aſhmole*, Eſq;

The next is ALBERTUS BOLSTADIUS, ſirnamed *Grotus*, commonly known by the Name of *Albertus Magnus*. He wrote upwards of twenty Volumes in *Folio*; and is ſaid to have been, at firſt, diſtinguiſh'd by his Dulneſs and Stupidity, inſomuch that he became the common Jeſt of his Fellow Students. At length, quite tired out, he reſolved to ſcale the Walls of the Convent, and run away. In this Attempt the bleſſed Virgin appear'd to him on the Wall, and there gave him that Underſtanding and Ability, which have ſince render'd him ſo famous. He was a *Dominican* Friar, and Doctor of *Paris*, flouriſh'd in 1236. and taught at *Cologne*, where he had *Thomas Aquinas* for his Pupil. He retired from his Biſhoprick to his Monaſtery at *Cologne* in 1263. and died in 1280. aged ſeventy-five. Father *L'Abbé* ſays, in his *Eloge*, that he wrote ſixty Volumes, moſt of them ſtill extant, many in Print, the reſt in Manuſcript. *Petr. Jammy* has publiſh'd an Edition of his Works, but not all, in twenty-one Volumes, *Fol. Lugdun.* 1651. The Liſt of Titles in each Volume is given by *Fabricius, p.* 113. *&c.* He was accuſed of Magic; but is defended by *Trithemius*, *Mirandula*, *Naudé*, and others. By a general Correſpondence with the Miners throughout *Germany*, he acquired uncommon Skill in Metallurgy. The Feaſt of the beatified *Albertus* is celebrated in the Churches of *Ratiſbon* and *Cologne*.

His Alchemiſtical Works are;

De Mineralibus & rebus Metallicis, Lib. v. *Oppenheimii*, 1518. 4*to. Argent.* 1541. 8*vo.*

Lilium floris de Spinis avulſum.

Speculum Alchemiæ de Compoſitione Lapidis, &c.

There is alſo a ſmall Piece of his upon Alchemy, intitled *de Alchymia libellus*; printed at *Baſil* in 1516.

Next, after *Albertus*, might come THOMAS DE AQUINA, a *Dominican*, born of the noble Family of the Counts of *Aquinas*, in 1234. He died in his Journey to the ſecond Council of *Lyons*, whither he had been ſummon'd by Pope *Urban* IV. in the Monaſtery of *Foſſa Nova*, not far from *Terracina*, in 1274. His Chymical Writings are,

Secreta Alchemiæ magnalia, de Corporibus ſupercæleſtibus, & quod in Rebus inferioribus inveniantur, quoque modo extrahantur:

De Lapide minerali, Animali & Plantali:

Theſaurus Alchemiæ ſecretiſſimus, quem dedit Fratri ſuo Reinaldo:

To which are added, *Johan. de Rupeſciſſa's Book of Light*; and *Raym. Lully's Clavicula & Apertorium*, publiſh'd by *Dan. Bronchuſius*, with a Preface by *Joh. Heurnius, Lug. Bat.* 1598. 8*vo.* It is in the *Theatr. Chym. T.* 3. *p.* 277.

Aurora, ſive Aurea Hora:

Commentarium ſuper turbam Philoſophorum brevioribus, ut dicitur: Extant in the ſecond Decad of the *Harmon. Chym. Philoſophica*, collected by *Joſ. Rhenanus. Francof.* 1625. 8*vo.*

He was ſucceeded by ROGER BACON, an *Engliſhman*, a Monk of *Weſtminſter*, but reſiding at *Oxford*, where he flouriſh'd about the Year 1226. He excel'd in Alchemy, Chymiſtry, natural Magic, Mechanics, Metaphyſics, Phyſics, and Mathematics. He died at *Oxford* in 1284. and was buried there among the *Franciſcans*. Such of his Works as have been handed down to us, are generally written in a clear eaſy Style, without Circumlocutions.

He was, beyond all Compariſon, the greateſt Man of his Time; and might, perhaps, ſtand in Competition with the greateſt that have appear'd ſince. 'Tis wonderful, conſidering the ignorant Age wherein he lived, how he came by ſuch a Depth of Knowledge on all Subjects. His Writings are compoſed with that Elegance, Conciſeneſs, and Strength, and abound with ſuch juſt and exquiſite Obſervations on Nature, that, among all the Chymiſts, we don't know his Equal.

He writ many Treatiſes, ſome of which are loſt, or lock'd up in private Libraries. What relate to Chymiſtry, are principally two ſmall Pieces, wrote at *Oxford*, which are now in Print, and the Manuſcripts to be ſeen in the public Library of *Leyden*, having been carried thither, among *Voſſius*'s Manuſcripts, from *England*. In theſe he attempts to ſhew, how imperfect Metals may be ripen'd into perfect ones. He adopts *Geber*'s Notion, that Mercury is the common Baſis of all Metals, and Sulphur the Cement; and ſhews, that it is by a gradual Depuration of the mercurial Matter, and the Acceſſion of a ſubtle Sulphur, that Nature produces Gold; and that if, during the Proceſs, any other third Matter happens to intervene, beſide the Mercury and Sulphur, ſome other baſer Metal will ariſe; ſo that, if we could but imitate Nature's Method, we might change other Metals into Gold.

Having compared ſeveral of Frier *Bacon*'s Operations with the modern Experiments of M. *Homberg*, made by Direction of

of that curious Prince the Duke of *Orleans*, we judge, that *Bacon* has deſcrib'd ſome of the very Things which *Homberg* publiſhes as new Diſcoveries. Thus, for Inſtance, *Bacon* teaches expreſly, that if a pure Sulphur be united with Mercury, it will produce Gold; on which very Principle M. *Homberg* has made many Experiments for the Production of Gold, deſcribed in the *Memoires de l' Academie Roy. des Sciences.*

His other phyſical Writings ſhew no leſs Genius, and Force of Mind. In his Treatiſe, *Of the ſecret Works of Art and Nature*, he ſhews, that a Perſon, who was perfectly acquainted with the Manner which Nature obſerves in her Operations, would not only be able to rival, but ſurpaſs her. In another Piece, *Of the Nullity of Magic*, he ſhews, with great Sagacity and Penetration, whence the Notion ſprung, and how weak all Pretenſions to it are. Admiration, the Parent of Magic, is the Off-ſpring of Ignorance, begot upon a vitiated Imagination: When weak Minds perceive an Effect, whoſe Cauſe is hid far in the Dark, they preſently have recourſe to a Demon to ſolve the Difficulty; for they fancy it muſt be the Effect of magical Art, or the Intervention of ſome ſupernatural Power. This popular Refuge of Ignorance the judicious Author deſervedly confutes, and ſhews, there is no ſuch thing as Magic; unleſs by that Word he meant a Knowledge of the Properties of Bodies, and the Methods of Nature; by a dextrous Application whereof many Things may be produced, more ſurpriſing than all the pretended Magic has ever effected.

Such was the Scope and Tendency of his Writings. What Reward he met with, is abominable to ſay: The Man, who had thus overthrown the idle Pretenſions of the Believers in Magic, was himſelf branded for a Magician, excommunicated, and impriſon'd.

His Works are printed in 8*vo.* and 12*mo.* under the Title of *Frater Rogerius Baco de Secretis Artis & Naturæ*, and in *Folio* at *London*. From a repeated Peruſal of them, we find our Frier was no Stranger to many of the capital Diſcoveries of the preſent and paſt Ages.

Gun-powder he certainly knew: Thunder and Lightning, he tells us, may be produced by Art; for that Sulphur, Nitre, and Charcoal, which, when ſeparate, have no ſenſible Effect, yet, when mix'd together in a due Proportion, and cloſely confin'd, and fired, they yield a loud Report. A more preciſe Deſcription of Gun-powder cannot be given in Words; and yet a Jeſuit, *Barthol. Schwartz*, ſome Ages after, has had the Glory of the Diſcovery. He likewiſe mentions a Sort of inextinguiſhable Fire, prepared by Art; which ſhews he was not unacquainted with Phoſphorus. And that he had a Notion of the Rarefaction of the Air, and the Structure of an Air-pump, is paſt Contradiction.

A Catalogue *of Frier* Bacon's *Writings.*

Tractatus duo de Chemia.
Speculum Alchemiæ.
Theſaurum Chymicum.
De ſecretis artis atque naturæ operibus, & de nullitate Magiæ.
Specula Mathematica.
Medulla Alchemiæ, in 8*vo.* *Ann.* 1608.
De Arte Chemia ſcripta.
Breviarium de dono Dei.
Verbum abbreviatum de Leone Viridi.
Secretum ſecretorum naturæ, de laude lapidis Philoſophorum.
Tractatus trium verborum.
Epiſtola de modo miſcendi.
Epiſtola ſecretiſſima de ponderibus.
Speculum ſecretorum.
Opus majus, ad Clem. IV.
Rog. Baconis epiſtolæ de ſecretis Operibus artis & naturæ, & de nullitate Magiæ. Opera Joh. Dee Londin. è pluribus exemplaribus caſtigata olim, & ad ſenſum integrum reſtituta. Nunc vero à quodam veritatis amatore in gratiam veræ Scientiæ emiſſa, cum notis quibuſdam, partim ipſius Joh. Dee, partim edentis. Cum reſponſione ad fratres Roſaceæ crucis illuſtres. Hamb. 1618. 8*vo.*

In his Works we find many elegant Diſcoveries in Mechanics, Natural Magic, and other Arts, which have been falſly attributed to later Authors, and were no leſs falſly charg'd on him as the Effect of Magic and Hereſy.

George Ripley, an *Engliſhman*, and Canon of *Bridlington*, lived in the Reign of *Edward* the Fourth, to whom, in the Year 1577. he dedicated his Book intituled *The twelve Gates*. His Writings are all very good in their Kind, being wrote in *Bacon*'s Manner, only more allegorical. As he was no Phyſician, he does not meddle with any Medicinal Preparations; but treats much of the Cure of Metals, which, in his Language, is the Purification and Maturation thereof. He purſued *Geber*'s and *Bacon*'s Principles very religiouſly; and maintained, for Inſtance, with new Evidence, that Mercury is the univerſal Matter of all Metals; that this, expoſed to the Fire with the pureſt Sulphur, will become Gold; but that if either of them be ſick or leprous, that is, infected with any Impurity, inſtead of Gold, ſome other Metal will be produc'd. He adds, that as Mercury and Sulphur are ſufficient for the making of all Metals, ſo of theſe may an univerſal Medicine, or univerſal Metal, be produc'd, for curing all the Sick, which ſome have inadvertently underſtood of an univerſal Medicine, efficacious in all Diſeaſes. 'Tis ſaid, that *Ripley* ſent an hundred thouſand Pounds, for ſeveral Years ſucceſſively, to the Knights of *Rhodes*, to enable them to defend themſelves againſt the *Turks*.

His Works are,
Duodecim Portæ.
Medulla Chimica.
A Piece on Alchemy, compoſed in *Engliſh* Verſe, and now preſerved in the Library of *Leyden*. His Works were publiſh'd together at *Caſſel*, in 8*vo.* 1649.
De Mercurio Philoſophorum; or, A Piece on the Mercury of the Philoſophers: And *Commentarium Hermeſii Philoſophi*, now in Manuſcript in the Library of *Leyden*.
Pupilla Oculi, with a Preface, preſerv'd in Manuſcript in the *Bodleian* Library, given by *Elias Aſhmole*, Eſq;
De Regimine ignium Philoſophorum, & quibuſdam probatiſſimis experimentis; that is, Of the Management of the Fires of the Philoſophers, together with ſome approv'd Experiments; found in Manuſcript in the *Bodleian* Library, part of the Donation of the ſame Perſon.

He was ſucceeded by Arnaldus de Villa nova, who was a *Frenchman*, and denominated *Arnaud de Ville Neuve*, from *Ville Neuve*, the Place of his Nativity. He was a celebrated Philoſopher, Phyſician, and Chymiſt, and thought to be deeply ſkilled in Alchemy. *Van Helmont*, a great Admirer of *Arnaud*, attributes to him the firſt introducing of Chymiſtry into Medicine. He was ſent by *Frederic*, King of *Sicily*, to cure Pope *Clement* the Fifteenth; but, being ſhipwreck'd in the Voyage, dy'd in 1313. and was bury'd at *Genoa*. The *Spaniards* maintain he was a *Catalan*. 'Tis certain he practiſed Phyſic at *Barcelona*, whence he acquir'd the Surname *Catalanus*. He was ſuſpected of Magic.

His Works are,
Roſarium.
Teſtamentum novum practicum.
De Alchemia.
Semita Semitarum.
To theſe may be added,
Roſa Novella.
Epiſtola ad Papam Pium.
Novus ſplendor, vel Lumen.
Flos florum.
De Furno Philoſophico.
De Secretis Naturæ.
De nova compoſitione Lapidis vitæ Philoſophorum.
De Principiis naturalibus, ad Clementem Papam.
Opus in Arte majore.
Beſides theſe, we have, of his Writings,
Speculum Alchemiæ, quo artis Chimicæ Myſteria, etiam Secretiſſima, luculenter enodantur & explicantur. Firſt publiſh'd by *Jer. Megiſerus. Francof.* 1602. 8*vo.* Afterwards, together with his other Chymical Works, by the ſame Editor. *Francof.* 1603. 8*vo.*
Opera, unà cum ipſius vitâ, à Symphor. Campegio deſcripta; ac tractatus de Lapide Philoſophorum. Lugd. 1530. 8*vo.*
Opera, cum Nic. Tawcelli annotationibus. Baſ. 1585. *Fol.*
Theſaurus Theſaurorum. The Treaſure of Treaſures. Preſerved in Manuſcript in the *Bodleian* Library, Part of the Donation of *Elias Aſhmole*, Eſq;
Tract. de Solutione dubiorum in Alchemia: Or, Of the Solution of Doubts in Alchemy. In Manuſcript, extant in the ſame Library. Given by Sir *Kenelm Digby*.

Raymund Lully, a *Spaniard*, born at *Barcelona* in the Year 1235. a Diſciple of *Arnaldus de Villa Nova*, died in *Africa* in 1315. He was one of the firſt who, in his Treatiſe intituled *De Quinta Eſſentia*, wrote of an univerſal Remedy for all Diſeaſes of the Body, and of the Philoſophers Stone.

This Author is ſaid by others to have been born in *Majorca*, and by ſome in *Minorca*, but ſprung from the noble Family of the *Lullies* in *Barcelona*. His Cotemporaries ſpeak of him as a Perſon eminently verſed in the Peripatetic Learning; which, indeed, appears from ſeveral of his Writings. He had the Addreſs to introduce a new kind of tranſcendental Art, call'd from him *The* Lullian *Art*, by virtue whereof a Man might diſpute whole Days upon any Topic in Nature, without underſtanding any thing of the Matter. But at length, perceiving the Vanity of his own Art, he quitted this barren Superfluity of Words, and went over to the other Extreme.

Upon applying himſelf to Chymiſtry, he ſoon began to preach another ſort of Doctrine; for, ſpeaking of that Art, he ſays it is only to be acquired by Experiment, and cannot be convey'd to the Underſtanding by idle Words and Sounds.

Lully, beſides what he did in the ſcholaſtic Way, writ ſeveral Volumes after changing his manner of Study: 'Tis difficult to ſay, how many; for it was a common Practice with his Followers to publiſh their Performances under their Maſter's Name. His

later

later Works are, beyond all Expectation, excellent; so that it may be doubted whether they were the Production of that Age. So full are they of the Experiments and Observations which occur in our later Writings, that either the Books must be suppositious, or the antient Chymists must have been acquainted with many things, which pass for the Discoveries of modern Authors. He gives plain Intimations of Phosphorus, which he calls the Vestal Fire, the Offa Helmontii, *&c.* and yet he must have liv'd two hundred Years before either *Helmont* or Lord *Bacon*.

He travel'd into *Mauritania*, where he is supposed to have first met with Chemistry, and to have imbib'd his Principles of the Art from the Writings of *Geber*; which Opinion is countenanced by the Conformity observable between them.

The *Spanish* Authors ascribe the Occasion of his Journey to a Passion he had for a Maid, nam'd *Eleonora*, who obstinately refus'd his Addresses. Upon inquiring into the Reason, she shew'd him a cancer'd Breast. *Lully*, like a generous Gallant, immediately resolves on a Voyage to *Mauritania*, where *Geber* had lived, to seek some Relief for his Mistress. But others say, that from thenceforward he devoted himself to Penance, and, among other pious Exercises, applied himself to the Conversion of Infidels, with a View to which he learned *Arabic* at thirty Years of Age. At his Solicitation, *James* King of *Arragon* founded a Seminary in *Majorca*, for the Education of Missionaries: After which he travel'd thro' *France*, *Germany*, and *England*; and was at last stoned to Death in *Africa* for preaching Christianity.

There are said to have been two *Raymund Lullies*; the one a Friar, and a Martyr, the other an Alchemist, and originally a *Jew*. 'Tis said there are above a hundred Chemical Manuscripts of *Raymund Lully* yet unpublished, preserved in the *Vienna* Library.

His principal Works are,

De Secretis Naturæ, seu quinta Essentia.

De Accurtatione Lapidis Philosophorum.

Codicillum, seu Vade mecum de formatione Lapidum pretiosorum. A Codicil, or Vade Mecum, of the making of precious Stones, now in Manuscript in the Library of *Leyden*.

Clavicula de Lapide Philosophorum.

Testamentum.

Apertorium.

Epistolæ ad Edvardum Regem Angliæ.

Lux Mercuriorum.

De Mercurio.

Speculum magnum.

Testamentum novissimum.

Epistolæ ad Robertum Regem Angliæ.

Aphorismi.

Epistolæ accurtationum.

De Investigatione occulti Secreti.

Exempla accurtationis.

All which Pieces are in Manuscript in the Library of *Leyden*.

A fair Copy of all *Lully*'s Chemical Works, transcribed in 1483. and 1484. in two Volumes, Fol. is preserved in the *Bodleian* Library, given by *El. Ashmole*, Esq; Some of these are in the *Theatr. Chym.* and *Manget's Bibl. Chym.*

JOHANNES DE RUPESCISSA, a *Franciscan*, died in Prison, about the Year 1375. He wrote many Pieces on Alchemy. *Paracelsus* censures him, as having advanced things false and ridiculous.

This Author is held as the Patriarch of the Chymists: His Writings are many, easy to be procur'd, and of great Weight. Besides his Theological Pieces, he wrote many Chymical ones; and had wrote more, as having a strong Chymical Taste, but that, like his great Predecessor *Bacon*, he was accus'd of Magic, and thrown into Prison; where he pined away, and died of Grief; by which means he was prevented from discovering many Secrets of Nature, which he was become Master of.

His principal Works are,

Liber Magisterii de Confectione veri Lapidis Philosophorum. Publish'd with other Pieces of Alchemy. Collected by *Gratarolus*. *Bas.* 1561. *Fol. T.* II. *p.* 126. In the *Theatr. Chym. T.* III. *p.* 189. and in *Mangeti Bibl. Chym. T.* III. *p.* 80.

Liber Lucis. Publish'd with the *Secreta Alchimiæ magnalia* of *Tho. Aquinas*, by *Dan. Branchuisius*. *Lugd. Bat.* 1598. 8*vo.* In the *Theat. Chym. T.* III. *p.* 284. and *Mangeti Bibl. Chym. T.* II. *p.* 84.

Rosarium Philosophorum. Extant in *Mangeti Bibl. Chym. T.* II. *p.* 87. & 119.

De consideratione quintæ essentiæ rerum omnium. Basil. 1597. 8*vo.*

ISAAC HOLLANDUS, and JOHN ISAAC HOLLANDUS, born at *Stolk*, a Village of *Holland*, wrote several Pieces on Alchemy, wherein they deliver many extraordinary Experiments.

Some say these were Father and Son; others, that they were Brothers. Whether, is not easy to determine; but certain it is they were both Persons of great Parts and Ingenuity, and wrote on the dry Topics of Chymistry with all the copious Eloquence of Orators. They seem to have lived in the thirteenth Century; but this is not assured. The whole Art of enamelling is their Invention, as is also that of colouring Glass and precious Stones, by the Application of thin metal Plates thereon.

Their Writings are in the Form of Processes; and they describe all the Operations to the most minute Circumstances. The Treatise of Enamelling is esteemed the greatest and most finish'd Part of their Works; all that relates to the necessary Fusion, Separation, and Preparation of the Metals, is here delivered. They write excellently of Distillation, Fermentation, Putrefaction, and their Effects, and seem to have understood at least as much of these Matters as any of the Moderns. They publish'd a small Treatise of the Philosophers Stone, which, they hold, may be prepared from any Body in Nature. They describe Ways of producing it from Lead, Blood, Sulphur, and Mercury, and other Matters. They furnish several Experiments on human Blood, which *Van Helmont* and Mr. *Boyle* have since repeated. *Paracelsus* has likewise borrowed freely from them. There goes a very large Work, in *Folio*, under their Name, *Of the Construction of Chymical Furnaces and Instruments.*

Their principal Works are,

De Lapide Philosophorum. Extant in the *Theat. Chym.*

Scientia Chimiæ.

De projectione infinita.

Opera Mineralia, sive de Lapide Philosophorum. Extant in the *Theat. Chym.* Also published at *Middelb.* 1600. 8*vo.*

Opera Mineralia & Vegetabilia. Arnheim. 1616. 8*vo.*

De Vino.

Opera Vegetabilia. Francof. 1666. 8*vo.*

Besides these, they also wrote

Manus Philosophica.

De Salibus & Oleis Metallorum.

BASIL VALENTINE is commonly said to have been a *Benedictine* Monk of *Erfurt*; tho' we are informed there never was any *Benedictine* Monastery at *Erfurt*; and both his Names seem apparently coin'd, the one from the *Greek*, the other from the *Latin*.

His Writings are much commended, and much sought; tho' there are some spurious Pieces tack'd to them. He wrote in *High Dutch*, and but few of his Pieces have been translated into *Latin*. In his Experiments, he may be depended on for his Exactness and Veracity; his Style is clear, open, and pure, except when he treats of his Arcana, and particularly of the Philosopher Stone, when he is as obscure as the rest.

He should seem to have been the first who applied Chymistry to Medicine; for, after every Preparation, he never fails to give some medicinal Use thereof. He it was, likewise, who first broached the Doctrine of the three Chymical Principles, Salt, Sulphur, and Mercury, which *Paracelsus* afterwards appropriated; and it might be shewn, that *Paracelsus*, *Helmont*, the elder *Lemery*, and many others of modern Fame, owe a great deal of what is valuable in them to this Author; so that it is not without Reason that he is judged the Father of the modern Chymists, and the Founder of the Chymical Pharmacy.

Van Helmont writ upon the Alcaheſt, or universal Menstruum; and *Zwelfer*, pretending to know his Secret, describes it as a Preparation of Vinegar and Verdegrise, distil'd till the Verdigrise disappears. But *Otto Tachenius* shews, that *Zwelfer* borrow'd the whole Process from a Book of *Valentine*'s, intituled, *Stan geist*, where, indeed, it is described in Terms plain enough: So the Sal Volatile Oleosum, which *Sylvius de le Boe* has long had the Credit of, and many other Secrets, which make a Figure in the modern Authors, are originally derived from *Basil Valentine*. See the PREFACE.

His Chemical Writings are;

Opus ad utrumque: Printed in the *Theatrum Chemicum.*

De magno Lapide antiquorum sapientium. Extant in *Mang. Bibl. Chym.*

Practica, una cum XII. *Clavibus, & Appendice.* Translated out of *High Dutch* into *Latin*, and publish'd with *Mich. Majerus's Tripos aureus. Francof.* 1618. Also with the *Musæum hermeticum reformatum & amplificatum. Francof.* 1677. and 1678. 4*to.* And in *Mang. Bibl. Chym.*

Apocalypsis Chymica: Erff. 1624. 8*vo.*

Currus triumphalis Antimonii, translated into *Latin*, and illustrated with a Commentary, by *Theod. Kerckringius. Amst.* 1671. 12*mo.*

Tractatus Chymico-philosophicus de rebus naturalibus Metallorum & Mineralium. Francof. 1676. 8*vo.*

Chymische Schrifften alle, &c. that is, all his Chymical Writings, both printed and manuscript, enlarged and amended, and divided into two Parts: In *High Dutch. Hamb.* 1677. 8*vo.* with Figures; and again, *Hamb.* 1717. 8*vo.*

Basil Valentine's last Will and Testament, with his manual Operations, and a Tract of Things natural and supernatural. *Lond.* 1671. 8*vo.*

PARACELSUS comes next on the Stage, of whom I have given a very ample Account in the PREFACE. I shall, therefore, give here only an Account of his Works.

1. His *Chirurgia Magna*, which he dedicated to *Hieron Bonerus*, Dictator of the City *Colmar*, *June* 2. 1528.
2. *Liber Apoſtematum*, which he dedicated to *Conrad. Wiſerum*, Conſul of *Colmar*, *July* 5. 1528.
3. *De Gradibus, Compoſitionibus & Tartaro.*
4. His *Great Surgery*, which he dedicated to the Emperor *Ferdinand* from *Munchrath*, *May* 7. 1536.
5. The ſecond Part, to the ſame Prince, *Aug.* 11. 1536.

In theſe he makes mention of ſeveral other Pieces publiſhed by him, *viz.*

6. *De Archidoxis.*
7. *De Sanationibus.*
8. *De ſanitate Microcoſmi & Elementorum.*
9. *De Generationibus Naturalium.*
10. *De Suppuratione.*
11. *De Signis.*
12. *De Characteribus & adeptis.*
13. *De Phlebotomia.*
14. *De Origine novorum Morborum.*
15. *De Magia.*

Beſides theſe, Dr. *Shaw* mentions,

1. *De Gradibus & compoſitionibus receptorum & naturalium*, *Lib.* VII. dedicated to Dr. *Eph. Clauſerus*, a Phyſician of *Zurich*. *Baſ.* 1526. 4*to.*
2. *Archidoxorum*, *Lib.* X. dedicated to the Students of *Zurich*. *Baſil.* 1527. 4*to.*
3. *Aur. Theophraſt. Paracelſi Archidoxorum, ſeu de Secretis Naturæ myſteriis, Libri* X. *quibus nunc acceſſerunt libri duo, unus de Mercuriis Metallorum, alter de Quinta eſſentia; manualia item duo, quorum primus Chemicorum verus Theſaurus; poſterius præſtantium Medicorum experientiis refertum eſt, ex ipſius Paracelſi autographo, Baſil.* 1582.
4. *Paramirica Opera*, dedicated to D. *Joach. Vadianus*, a Phyſician, 1531. *March* 5.
5. *De Natura Rerum*, *Lib.* VIII. dedicated to his Friend *John Winckeſteiner* of *Fribourg*, 1537.
6. *Opera omnia*, in two Volumes, *Folio*, *Latin.*
7. There is alſo an *Engliſh* Tranſlation of his *Archidoxa*, by *J. H. Oxon.* 1661. 8*vo.*

John Baptist Helmont appears next. He was born of a noble Family at *Bruſſels*, in the Year 1577. 36 Years after the Death of *Paracelſus*. He loſt his Father in 1580. and, being the youngeſt Child, applied himſelf, againſt the Conſent of his Mother, and without conſulting his Friends, to the Study of Phyſic. He finiſhed his Courſe of Philoſophy in the Year 1564. being in the 17th Year of his Age, when he was noted for a great Reader, having read *Galen* twice, *Hippocrates* once, and all the other Phyſicians, both *Greeks* and *Arabs*, with great Care, and even common-plac'd them. When going to *Lovain*, he was appointed, by the Profeſſors *Thomas Tyenus*, *Gerard Villers*, and *Hornius*, to read public Lectures on Surgery in the College of Phyſicians. In the 22d Year of his Age, being the Year 1599. he was created Doctor of Phyſic at *Lovain*, where he had begun to ſee thro' the Inſufficiency of the School-phyſic, long before he had diſcovered any better Medicines of his own. Happening to be troubled with a ſlight Itch, which he could not get rid of by the School-method, but which was eaſily removed by the means of Sulphur, he repented having ever devoted himſelf to the Study of Phyſic, conſidering the Nobleneſs of his Birth, and that none of his Family had hitherto ſtooped to ſuch a Profeſſion. On theſe Motives he threw it up, divided his Fortune among his Relations, and quitted his Country, with an Intention never to return. His Books, to the Value of 300 Crowns, he threw aſide; and, ſetting out for foreign Countries, rambled for ten whole Years, till, being inſtructed in Chymiſtry by a certain illiterate Perſon, he applied himſelf wholly to that Art; and having, in the Compaſs of two Years, obtained a few Chymical Medicines, he became capable of curing ſome Diſeaſes.

In the Year 1609. he married a rich, noble, and virtuous Wife, with whom he retir'd to *Wilwoord*, where he gave himſelf wholly up to the Purſuits of Chymiſtry. During his Noviciate in the Art, he tried many dangerous Experiments, which frequently hazarded his Life; and tho' he did not viſit Patients, and practiſe Phyſic for Gain, he aſſures us he cured every Year ſome Thouſands of ſick People. He ſpent fifty whole Years in Diſtillations. He was in high Eſteem with the Electoral Biſhop of *Cologne*, a Prince eminently ſkill'd in Chymiſtry; and was invited by the Emperor *Rodolph*, and two other Emperors, to the Court of *Vienna*; but he always refus'd. In the Year 1624. he publiſhed a Treatiſe, printed at *Liege*, *De Aquis Spadanis*, or, *Of the Spaw-waters*, and afterwards ſeveral other Pieces.

He was not able to cure two of his Sons, whom he loſt, of the Plague, nor his eldeſt Daughter of a Leproſy, though he practiſed on her full two Years; nor could he cure his Wife, nor his Maid, nor himſelf, of Poiſon. In *January* 1640. being the 63d Year of his Age, he was ſeized with a Fever, attended with a ſlight Shivering, which made his Teeth chatter, a pricking Pain about the Sternum, a Difficulty of Reſpiration, and a Spitting firſt of bloody Matter, then of pure Blood. For the Removal thereof he took Shavings of the Penis of a Stag, upon which the Pain grew leſs; then he took a Dram of Goats Blood, and the Spitting of Blood ſtopt for four Days, leaving only a ſlight Cough, with a moderate Expectoration; but the Fever ſtill remain'd, and was followed by a Pain in the Spleen, for which he took Wine boiled with Crabs-eyes; whereupon all the Symptoms diſappeared. In the Year 1643. he was ſeized with a Syncope, occaſioned by the Smoak of Charcoal, which he cured with Sulphur of Vitriol. On the 18th of *Nov.* 1644. he was ſeized with an Aſthma, attended with two Fits of a Pleuriſy; and, after languiſhing ſeven Weeks, died of a ſlight Fever, and extreme Weakneſs, on the 30th of *December* 1644.

Hence it is evident, that *Helmont* was not Maſter of the univerſal Remedy which he ſo often boaſts of; but, in chronical Caſes, he wrought extraordinary Cures, by means of violent Remedies, where the Conſtitution of the Patient was ſtrong enough to endure the Action thereof. But, for all their vain Promiſes of long Life, neither of them arriv'd at old Age.

During the Retirement of this Author at *Wilwoord*, he examined, with great Pains and Induſtry, all kinds of Bodies, both foſſile, vegetable, and animal, in a Chymical Way; and thus firſt furniſhed a new Body or Courſe of Chymical Knowledge. Here he made thoſe noble Experiments and Diſcoveries of Oil of *Sulphur per Campanam*, the *Laudanum Paracelſi*, Spirit of Hartſhorn, Spirit of human Blood, *Sal Volatile Oleoſum*, and others.

Having conceived a ſtrong Prejudice againſt the *Galenical* Method and Medicines, from his own ill Succeſs upon applying them in Practice, and finding Chymiſtry productive of ſo many, and much more powerful Remedies, he run counter, in every thing, to the *Galenic* School, and reduced the whole Art of Phyſic to Principles of Chymiſtry. With ſuch Views he began to write: His firſt Piece was of Spaw-water, printed at *Liege* in 1624. as before-mention'd, which procured him conſiderable Eſteem: There are ſeveral good Things in it, and but little of that Opinionativeneſs and Boaſting, which ſhewed itſelf in his later Works. He had it reprinted the ſame Year at *Cologne*, with new Experiments. In 1644. he publiſh'd his ſecond Piece, *De Humoribus*, a third *De Febribus*, and a fourth *De Litbiaſi*, which are all the Books he publiſh'd in his Life-time. Soon after the Publication of the laſt he died: So that the Suggeſtion of ſome eminent Chymiſts, that *Helmont* had changed his Sentiments, and had got quite other Things in View, appears without any Ground.

As he perceiv'd his Death approaching, he call'd for his Son, and gave him the following Charge: Take all my Writings, the crude as well as the finiſh'd ones; and join them together; to your Care I commit them; do with them what you think good. For ſo it has pleaſed Almighty God, who directs every thing to the beſt Purpoſes. This Son was a Perſon of deep Thought, but a little tainted with Enthuſiaſm; and in his Father's Life-time had ſtrolled about with a Gang of Gypſies. After the Father's Deceaſe, he acquitted himſelf of the Truſt, publiſhing them juſt as he found them, without any Regard to Order, Conſiſtency, or Correctneſs, and, beſides, truſted the Impreſſion principally to the Printer: So that we frequently find *Helmont* relating Things in one Place, which he contradicts in another. And, indeed, 'tis no Wonder we don't find the ſame Tenor throughout; for as Chymiſtry grew under his Hands, and as many new Views muſt turn up in forty or fifty Years, which he ſpent in gradually improving the Art, it is eaſy to conceive how there ſhould ariſe a Difference.

The Pieces publiſhed by himſelf are all excellent; that of the Stone is incomparable, and the beſt; that of Fevers is a valuable Work; and that of the Humours is a fine Piece. The Galenical Doctrine of the four Elements, four Qualities, four Degrees, and four Humours, with the Method of Cure by tempering theſe Degrees, are here clearly and directly prov'd to be falſe and inſignificant. The Treatiſe of the Plague, which is one of his poſthumous Pieces, has many good Things, tho' it does not come up to the Merit of the former. But the reſt are all ſo much inferior, that one would never ſuſpect them to have come from the ſame Hand.

The beſt Edition is that of *Amſterdam*, in 4*to. apud Elzevir.* In the *Venetian* Edition in *Folio*, there are ſeveral Pieces not *Helmont's*; and the ſame may be ſaid of that lately publiſh'd in *Germany*.

If his moſt ſolemn Proteſtations are of any Weight, he ſhould ſeem to have been poſſeſſed of the Univerſal Medicine; a Thing which he inculcates in almoſt all his Writings. His Notion of the Origin of ſuch an univerſal Remedy is very peculiar, and ſavours of that Enthuſiaſm, which was a Part of his Character. No Poiſon, ſays he, can act on a Carcaſe; there muſt be Life to produce an Effect: This Life he calls *Archæus*; and aſcribes both Knowledge and Underſtanding thereto. If now any heterogeneous Body happen to be preſent to the *Archæus*, it riſes into a Fervour, endeavours to expel

the hoſtile Matter, and in order to that, exerts all the Force of the Body. To cure any Diſeaſe therefore, is to pacify and compoſe this *Archæus*. The Thing required, therefore, is ſuch a Remedy as may readily calm, and put a Stop to, this unnatural Fervour upon all Occaſions: And this, ſays he, is the univerſal Remedy.

This Doctrine of *Helmont* would not be ſo abſurd, did he not aſcribe Underſtanding to his *Archæus*. Setting this aſide, the Principle which renders Poiſons deadly, and Remedies beneficial, is the Circulation of the Blood. No doubt but *Helmont* was appris'd of this before he died. For *Harvey* had publiſhed his Diſcovery ſome Years before; which *Helmont* could not but fall into, tho' he might chuſe to diſſemble the Matter, as it untwiſted a large Part of his Syſtem, which he might want Leiſure or Inclination to reform and model new.

From *Paracelſus* and *Helmont*'s Time, the Number of Chymiſts and chymical Writers grew immenſely; ſo that to rehearſe them all would be endleſs. In *Borelli*'s *Bibliotheca Chymica*, printed at *Heidelberg* in 1653. no leſs than four thouſand chymical Writers, already extant, are enumerated; and yet he mentions none but thoſe of his own Knowledge. Others, who took more Scope, found above double that Number at the ſame time. It may be added, that the Years elapſed ſince have produced more than all the Ages before.

Here, therefore, we muſt ſtop; the Field is too vaſt to enter on. We have conducted Chymiſtry from its Riſe to its State; its Progreſs is now at an End: We ſhall only here obſerve, that as it is not only a dark and intricate, but a dangerous Art; ſo he who enters on it, muſt proceed not only with Addreſs, but Caution. That Part, which relates to Metals, is remarkably dangerous: The ſingle Vapour of Arſenic may either immediately ſuffocate, or occaſion a Weakneſs for ever; and an Author who relates an Experiment, without expreſſing every Circumſtance thereof at large, is not only uſeleſs, but even dangerous. The Event of every Operation depends on theſe minute Circumſtances; and an Alteration in any one may not only prevent the Succeſs of the Whole, but even render it unexpectedly fatal. We proceed, therefore, to ſingle out of this vaſt Number thoſe we would recommend for their Exactneſs and Fidelity in teaching the fundamental Parts of Chymiſtry; and theſe we ſhall reduce into four Claſſes. The firſt Claſs includes the ſyſtematical Writers, or thoſe who have collected all the known Operations into a Body, and digeſted them in the Form or Order of an Art or Inſtitution, for others to learn by; commonly with ſome Addition of their own Reaſonings at the End of each Operation. The ſecond Claſs contains the metallurgical Writers. The third comprehends the Authors on Alchemy: And the fourth, thoſe who have apply'd Chymiſtry to the Uſes of Natural Philoſophy, Medicine, and other Arts.

Franciscus de la Boe Sylvius, Otto Tachenius, and their Followers, contributed ſtill further to the Introduction of Chymiſtry into Medicine; ſo as to render the latter entirely dependent, both as to Practice and Speculation, on the former.

From the Whole of what has been hitherto delivered, it appears moſt advantageous to a Student in Chymiſtry, to begin with peruſing the Authors who have reduced the Operations into the Form of Syſtems: The chief of which are the following.

Systematical Writers.

1. Oswaldus Crollius was a *Heſſian*, and Phyſician in ordinary to *Chriſtian* Prince of *Anhalt*. He was a Perſon of Learning, but a ſanguine Follower of *Paracelſus*; even in his Extravagances about aſtral Virtues, Signatures, Chiromancy, Phyſiognomy, Gnomes, Sylphs, Parallels, and Reſemblances of celeſtial and ſublunary Bodies; on which he endeavours to found the Art of Phyſic. And yet the chymical Proceſſes he deſcribes are generally faithful and exact. He dedicates his Book to the Prince of *Anhalt*, from *Prague*, 1608. It ſhews the Ways of preparing ſeveral chymical Medicines, which are now commonly known.

His Works are;

The original Title is, *Baſilica Chymica, Philoſophicam, propriâ laborum experientia confirmatam deſcriptionem & uſum Remediorum Chymicorum ſelectiſſimorum è Lumine Gratiæ & Naturæ deſumptorum continens*: At the End is added, the ſame Author's *Tractatus novus de ſignaturis rerum internis*, *Francof.* 1609. 4*to.* Reprinted in 1611. 4*to.* 1620. 4*to.* and 1622. 8*vo.* *Baſilica Chymica cum augmento J. Hartmanni*, *Lipſ.* 1634. 4*to.*

——— *Genev.* 1630. 1635. 1643. and 1658. 8*vo.*

2. Beguinus comes next. He was Almoner to the King of *France*, and publiſhed

Les Elemens de Chymie, *à Paris*, 1615. and 1624. 8*vo.* *à Rouen*, 1637. 8*vo.* *à Lyon*, 1665. 8*vo.*

Theſe were tranſlated into *Latin*, and illuſtrated with Notes, by *Jer. Barthius*, under the Title of *Tyrocinium Chymicum*, *Francof. O.* 1618. 8*vo.* Afterwards enlarged above one half with Notes, and ſelect Forms of Medicines by *Chriſtoph. Gluckradt Regiamont.* 1618. 8*vo.* Afterwards republiſh'd with the Notes of both theſe Editors, as alſo the Forms of Medicine, digeſted into one Syſtem, by *Jo. Geo. Pelſhofer*, *Wittenberg*, 1650. 8*vo.* Laſtly, illuſtrated with a new Comment, by *Gher. Blaſius*, *Amſt.* 1659. 12*mo.* Of which another Edition enlarged and corrected was publiſhed, *Amſt.* 1669. 12*mo.* This Work is alſo tranſlated into *Engliſh*, by *Richard Ruſſel*, under the Title of *Royal and practical Chymiſtry*.

3. Jo. Hartmannus. His Works are; I. *Opera omnia Medico-chymica, collecta & in unum Volumen congeſta, atque pluribus aucta à Conr. Jebrenio*, *Francof. M.* 1684. *Folio. Ibid.* 1690.

II. *Praxis Chymiatrica*, publiſh'd by *Jo. Michaelis*, and the Author's Son, *Everh. Hartmannus*, *Lipſ.* 1683. 4*to.* And with the Addition of three other Pieces, *Genev.* 1639. 8*vo.* and 1682. 8*vo.*

4. Christopher Glaser was Apothecary in ordinary to the King of *France*, and the Duke of *Orleans*; and gave public Lectures on Chymiſtry, and Chymical Preparations, in the Royal Gardens at *Paris*. His Book is candidly and clearly wrote, and contains a little Syſtem of chymical Proceſſes for making chymical Medicines in an eaſy and effectual Way. He keeps cloſe to the deſcribing of ſuch Operations as himſelf had frequently repeated, without intermixing any foreign Theory. The Book is ſhort, and fit for Beginners. The Original was printed at *Paris* in 8*vo.* 1688. It is alſo tranſlated into *Engliſh* by *Walter Harris*, M. D. under the Title of, *The Complete Chymiſt, or a new Treatiſe of Chymiſtry; teaching, by a ſhort and eaſy Method, all its moſt neceſſary Preparations. London*, 1677. 8*vo.* It was alſo publiſhed in *High Dutch*, under the Title of *Chemiſcher wegwiſer*, &c. *Jen.* 1710. 12*mo.*

5. Nicolas le Febure was Royal Profeſſor of Chymiſtry, and Apothecary to the Houſhold of King *Charles* II. He alſo flouriſhed in the Court of *France*, as Chymiſt to *Louis* XIV. The beſt Edition of his Works is that in 12*mo.* He is highly to be commended, both for delivering the Art, with all the Proceſſes, and preciſely noting all the minute Circumſtances. He is very faithful and accurate in relating his Experiments, and particularly careful in pointing out all the dangerous and fatal Proceſſes: But he has this Defect; that in his Reaſonings he has too much of the chymical Spirit, and talks too largely of the Virtues of his Medicines. Mr. *Boyle* quotes him under the Characters L. F. and mentions his *Ens primum of Balm*, whereby he pretended to reſtore Youth and Vigour to old worn-out Animals.

He publiſhed his *Traité de la Chymie* at *Paris* 1660. and 1669. 2 *Vol.* 8*vo.* and at *Leyden*, 2 *Vol.* 1669. 12*mo.* which was tranſlated into *Engliſh*, by *P. D. C.* Eſq; and printed at *London*, 1670. in 4*to.* under the Title of, *A complete Body of Chymiſtry, in two Parts: Containing whatever is neceſſary to be known in this Art, with the whole Practice of it.*

6. Lemery the Elder was born at *Rouen* in 1645. He acquir'd his firſt Notions of Chymiſtry from an Apothecary of the Place, to whoſe Care he was committed: But, not content with this, he went to *Paris*, and there applied himſelf to Monſ. *Glaſer*. Afterwards he travel'd for Improvement; and at the End of ſix Years, return'd to *Paris* an accompliſh'd Chymiſt. Here he exhibited his firſt Courſe of Chymiſtry in the Laboratory of his Friend M. *Martin*, Apothecary to the Prince of *Condé*; and afterwards open'd one of his own, which was ſoon reſorted to both by Natives and Foreigners: So that *Paris* was then the Seat of Chymiſtry.

He was the firſt who began to diſſipate the affected Obſcurities of Chymiſtry; reducing it to more ſimple and determinate Ideas, throwing out a deal of the Jargon, and accommodating it to the Taſte and Philoſophy of the Time.

In 1675. he printed his Courſe of Chymiſtry, which was receiv'd with great Applauſe, and tranſlated into ſeveral Languages. But he ſtill reſerved ſome of his Secrets; and is even ſaid to have contented himſelf with making ſeveral of the Operations more eaſy than they had been, without revealing the utmoſt Degree of Facility he was acquainted with.

In 1681. the religious Troubles coming on, M. *Lemery*, who profeſſed the Reformed Religion, was ſoon obliged to lay down his Courſes: Upon which the Elector of *Brandenburg* invited him to *Berlin*; but he declined it, and came over to *England*, where he was favourably received by King *Charles* II. But Matters not anſwering his Expectation here, he returned to *France*, and took the Degree of Doctor in Phyſic at *Caen*; but the Edict at *Nantz* in 1685. prohibiting the Practice of Phyſic to thoſe of his Religion, he was entirely ſtript of all Employment. Hereupon he embraced the *Roman Catholic* Faith, and thenceforward applied himſelf to Pharmacy; and in 1697. publiſhed two large Volumes, one of them intituled, *Pharmacopée univerſelle*, the other *Traité univerſel des Drogues ſimples*.

Upon the Revival of the Royal Academy in 1699. he was elected aſſociate Chymiſt; and ſoon after, upon the Death of M. *Bour-*

M. *Beurdelin*, Penſionary Chymiſt. Here he read his *Traité d' Antimonie* at ſeveral times: After which he began to droop under old Age, ſurrender'd his Place in favour of his Son, and died of an Apoplexy in 1715.

Account of his Works.

Nic. Lemery, Cours de Chymie, contenant la maniére de faire les Operations qui ſont en Uſage dans la Medicine, par une Methode facile, à Paris, 1675. 8*vo*. *Lyon*, 1724. 8*vo*. *Leyd.* 1716. 8*vo*. In *Latin*, *Gen.* 1681. 12*mo*. In *High Dutch*, *Dreſden*, 1697. 8*vo*. In *Engliſh*, by *Walter Harris*, M. D. ſecond Edit. *Lond.* 1688. 8*vo*. and fourth, tranſlated from the eleventh Edition of the *French*. The beſt Edition of the Original is that of *Paris*, in 8*vo*. 1713. which has many Things not in any of the preceding ones. It contains the principal Operations belonging to the three Kingdoms; all which are deſcribed with Candour and Accuracy. To each are added Notes, containing the phyſical Reaſons thereof: But his Reaſonings are not to be truſted. He is every-where minute in enumerating all the Circumſtances of the Proceſſes, and particularly where any Danger might ariſe.

This Performance of his has gone thro' many Editions in various Languages; and yet it is ill concerted for ſuch as ſtudy the Art: He begins with the very hardeſt Part, Metals. A great Number of his Proceſſes are merely calculated for the preparing of Remedies; and his View, throughout the Whole, is rather to furniſh the Shops with Medicines, than to inſtruct his Readers in the Knowledge and Grounds of Chymiſtry. But how hard is this, to make an Art a Drudge to Phyſic, which, in reality, is the principal Part of Natural Philoſophy!

Traité de l' Antimonie, contenant l' Analyſe Chymique de ce Mineral, & un Recueil d' un grand Nombre d' Operations, &c. *à Paris*, 1707. 12*mo*.

Beſides his Pieces above-mentioned, there are ſeveral Papers of his in the Memoirs of the Royal Academy of Sciences.

7. Le Mort was Profeſſor of Chymiſtry in the Univerſity of *Leyden*, whom *Boerhaave* immediately ſucceeded. He was a good practical Chymiſt, and explains the Operations of the Art diſtinctly, by means of the Art itſelf; of which he was a warm Patron, and zealous Defender. But many of his Proceſſes are ſuch as have long ſince been diſuſed. He will by no means allow of mathematical and mechanical Explanations in Chymiſtry, nor the Doctrine of Attraction; and is extremely ſevere upon a very learned *Engliſh* Phyſician, who attempted to explain the Operations of Chymiſtry by their Aſſiſtance. His Works are the following.

I. *Jac. le Mort Chymiæ veræ nobilitas & utilitas in Phyſica Corpuſculari, Theoria Medica, ejuſque Materia & ſignis ad majorem perfectionem deducendis.*

II. *Pharmacia Medico-phyſica, ratione & experientia nobilitata.*

III. *Chymia Medico-phyſica, Lugd. Bat.* 1696. 4*to*.

IV. *Metallurgia contracta:* To all which are added, *Collectanea Chymica Leydenſia*, &c. *Lugd. Bat.* 1696. 4*to*. *cum fig.*

V. *Jac. le Mort de Concordantiâ Operum Naturæ & Chymiæ. Lugd. Bat.* 1702. 4*to*.

VI. *Le Mort Facies ac Pulchritudo Chymiæ ab affectis maculis purificata, & ad veras naturæ & ſuæ artis leges exornata. Lugd. Bat.* 1712. 8*vo*.

8. Johannes Conradus Barchusen was Profeſſor of Chymiſtry at *Utrecht*; and deſerves well to be read, as he is an honeſt Writer, and ſufficiently accurate, and delivers good Matter in an excellent Manner; tho' his Reaſoning perhaps may be faulty. His *Elementa Chymiæ* are printed in 4*to*. and contain ſeveral particular Experiments, and manual Operations, no-where elſe to be met with.

His Works are,

I. *Jo. Conr. Barchuſen Pyroſophia, ſuccincte atque breviter Iatro-chemiam, rem Metallicam, & Chryſopœiam perveſtigans. Lugd. Bat.* 1698. 4*to*. *cum fig.*

II. *Acroamata, in quibus complura ad Iatro-chemiam atque Phyſicam ſpectantia jucunda rerum varietate explicantur. Traj. Bat.* 1703. 8*vo*.

III. *Elementa Chemiæ, quibus ſubjuncta eſt confectura Lapidis Philoſophici, imaginibus repræſentata. Lugd. Bat.* 1718. 4*to*.

Other ſyſtematical Authors are,

Zach. Brendelii Chymia in Artis formam redacta, ubi præter Methodum addiſcendi Encheireſes Chymicas facillimam, diſquiſitio curata de famoſiſſima præparatione auri potabilis inſtituitur. Jen. 1630. 12*mo*. *cum Præf. Wern. Rolfinchii. Jen.* 1641. 8*vo*.

P. Thibaut, Cours nouveau de la Chimie, 12*mo*.

In *Engliſh*, under the Title of, *The Art of Chymiſtry, as now practiſed. Lond.* 1668. 8*vo*.

A Complete Courſe of Chymiſtry, containing not only the beſt Chymical Medicines, but alſo great Variety of uſeful Obſervations. By George Wilſon. *The fourth Edition.* Lond. 1721. 8*vo*. This Book contains the chief Part of the chymical Preparations now in Uſe, with the Proceſſes faithfully deſcrib'd.

Car. de Maets Prodromus Chymiæ rationalis. Accedunt Animadverſiones in Librum cui Titulus Collectanea Chymica Leidenſia. Lugd. Bat. 1684. 8*vo*.

———— *Praxis Chymiatrica Rationalis. Lugd. Bat.* 1687. 4*to*.

———— *Chymia rationalis, Auctore T. P. Lugd. Bat.* 1687. 4*to*.

Mich. Ettmulleri Chymia rationalis ac experimentalis curioſa, ſecundum Principia recentiorum adornata, variiſque ac propriis experimentis, tam Chymicis quam Practicis, ut & Medicamentis nobilioribus referta, comite ſemper ratione, in ordinem redacta & edita per Joh. Chr. Anſsfeld. Lugd. Bat. 1684. 4*to*.

Staphorſt Officina Chymica Londinenſis, 1685. 8*vo*.

Chr. Love Morley, Collectanea Chymica Leydenſia, ſive Medicamenta Maetſiana, Marggraviana, & Le Mortiana, &c. *Lugd. Bat.* 1684. 4*to*. Reviſed by *Theod. Muyhens. Lugd. Bat.* 1693. 8*vo*. *Ant.* 1702. 8*vo*. In *High Dutch*, *Jen.* 1695. 8*vo*. This Book contains 600 Medicinal Proceſſes.

Antoine Deidier, Chimie raiſonée, ou l'on tache de decouvrir la Nature & la Maniére d'agir des Remedes les plus en Uſage en Medicine, & en Chirurgie. Lyon, 1715. 12*mo*.

Ern. Goth. Struve, Paradoxum Chymicum ſine Igne, (*id eſt*) *Operationes & experimenta Phyſico-chymico-pharmaceutica, ipſaque medicamenta Chymica, ignis ope parari ſolita, ſine igne exhibet. Jen.* 1717. 8*vo*.

M. Senac, doct. en Medicine, nouveau cours de Chymie, ſuivant les principes de Newton & de Stahl. Paris, 1723. 2 *Vol.* 12*mo*. *& ibid.* 1737.

Herman. Frid. Teichmeyeri Inſtitutiones Chemiæ dogmaticæ & experimentalis, in quibus Chemicorum Principia, Inſtrumenta, Operationes, & Producta, ſimulque Analyſes trium regnorum ſuccincta Methodo traduntur, &c. *Jen.* 1728.

Jo. Frid. Carthuſeri Elementa Chemiæ Medicæ dogmatico-experimentalis, unà cum Synopſi Materiæ Medicæ ſelectioris. Hal. Magd. 1736. 8*vo*.

Joan. Junckeri conſpectus Chemiæ theoretico-practicæ. Hal. Magd. 1730. 4*to*.

Joh. Helfrici Jungken Corpus Pharmaceutico-chymico-medicum univerſale, ſive Concordantia Pharmaceuticorum compoſitorum diſcordans, modernis Medicinæ practicis dicata. Ed. 3. prioribus longe auctior reddita, per Davidem de Spina. Franc. 1732. *Folio.*

Boerhaave in his Chymiſtry. *Lugd. Bat.* 1732. 2 *Vol.* 4*to*.

Metallurgical Writers.

1. Geber, who has been already mention'd.

2. George Agricola. He was born at *Glaucha*, a Town of *Miſnia*, in 1494. and dy'd at *Chemnitz* in 1555. His Work *De re Metallica*, reprinted ſeveral times in Folio, is a Proof of the Author's extraordinary Learning and Experience. By viſiting all the Mines, and converſing freely with the Miners in *Germany*, he acquir'd a thorough Knowledge of the whole Proceſs of Metals; and from him moſt of the following Writers have taken the greateſt Part of what they know. He wrote with the exacteſt Fidelity, and in an elegant *Roman* Style; ſo that we conſult him in Metallurgy upon all Occaſions.

In the firſt Part of Metallurgy, or the Diſcovery of Metals, he is the only Author: He deſcribes, with great Accuracy and Minuteneſs, all the Arts and Inſtruments made uſe of to diſcover Mines, and to know whether, in any given Glebe, there be Metal, and of what Kind: Nor is he defective in any of the other Parts. Several Authors have wrote Comments upon him, but he is clear enough without any.

His Writings are,

I. *De re Metallica, Lib.* XII. The beſt Edition is that of *Franckfort*, containing the Treatiſe *De re Fodinaria*, at the End. See below (No. IX.).

II. *Bermannus, ſive Dialogus de re Metallica. Baſil.* 1530. 8*vo*. *ab accurata auctoris recognitione & emendatione nunc primum editus, cum Nomenclatura rerum Metallicarum. Lipſ.* 1546. 8*vo*. and *Baſ.* 1549. 8*vo*. *ap. Froben.*

III. *De Ortu & Cauſis Subterraneorum, Lib.* V.

IV. *De Natura eorum quæ effluunt ex Terra, Lib.* IV. *Ven.* 1553. *Fol.*

V. *De Natura Foſſilium, Lib.* X.

VI. *De Veteribus & novis Metallis, Lib.* II.

VII. *Explication, in* High Dutch, *of the Terms uſed in Metallurgy. Baſ.* 1546. *Fol.* and 1558. *Fol.* The ſame, with the Addition of a copious Index; the Whole reviſed, diſtributed into Chapters, with the Arguments of each Chapter, and illuſtrated with marginal Notes, by *Jo. Sigiſridus*. To which are added, Obſervations upon metallic Matters and Names; from the Papers of *Geo. Fabricius*; wherein chiefly thoſe Particulars are treated of, which *Agricola* had omitted. *Witteb.* 1612. 8*vo*.

VIII. *De animantibus ſubterraneis liber. Baſ.* 1549. 8*vo*. and 1556. *Fol. ap. Froben. in certa Capita diviſus nonnullis Marginalibus exornatus, à Jo. Sigiſrido. Witteberg.* 1614. 8*vo*.

IX. *De re Metallica, Lib.* XII. *quibus Officia, Inſtrumenta, &c.* Twelve Books on the Subject of Metals, wherein the Houſes,

Houſes, Inſtruments, and Machines, with every thing belonging to metallic Affairs, are copiouſly deſcrib'd, and repreſented to the Eye by Figures, inſerted in their proper Places, with the *Latin* and *German* Names thereof. To which is added, the ſame Author's Book *De Animantibus ſubterraneis*, reviſed by himſelf. *Baſ.* 1561. *Fol.* To which, in a poſterior Edition, are added, *De Animantibus ſubterraneis, Lib.* I. *De Ortu & cauſis ſubterraneorum, Lib.* V. *De Natura eorum quæ effluunt ex Terra, Lib.* IV. *De veteribus ac novis metallis, Lib.* II. *Bermannus, ſive de re Metallica, Lib.* I. *Baſ.* 1657. *Fol.*

3. LAZARUS ERCKERN. He was Superintendent of the Mines in *Germany*, *Hungary*, *Tranſylvania*, *Tyrol*, *&c.* to three Emperors, whence he was furniſh'd with a complete Stock of metallic Knowledge.

He was an experienc'd, candid, and honeſt Writer; relates nothing but what he had himſelf ſeen, without a Word of Theory or Reaſoning; and every-where ſpeaks as if he were ſitting before the Furnace, and relating what paſſed.

He never fails enumerating every Circumſtance, and always in the moſt open artleſs Manner, and a clear eaſy Style, adding Figures for farther Illuſtration. His Book was wrote in *High Dutch*, and printed at *Francof.* 1694. in *Fol.* and is ſo much valued by the Curious, that Mr. *Boyle* laments his not underſtanding that Language, merely for the ſake of reading this Author: But it has been ſince tranſlated into *Latin*, with excellent Notes; ſo that this ſingle Work might almoſt ſuffice for the whole Art of Aſſaying.

The ſame Work is tranſlated into *Engliſh*, under the Title of *Fleta minor*; or, *The Laws of Art and Nature, in knowing, judging, aſſaying, fining, refining, and enlarging the Bodies of confined Metals.* To which are added, *Eſſays on metallic Words.* Illuſtrated with Sculptures. By Sir *J. Pettus. Lond.* 1683. *Folio.*

4. JOANNES RUDOLPHUS GLAUBER was a celebrated Chymiſt of *Amſterdam*, accounted the *Paracelſus* of his Time. He had travel'd much, and, by that means, attained to a great many Secrets. He wrote above thirty Tracts, in ſome of which he acted the Phyſician, in others the Adept, and in others the Metalliſt. He principally excel'd in the laſt; and yet, even here, he comes ſhort of *Agricola* and *Erckern*, in point of Fidelity, Simplicity, and Exactneſs; being ever forward to mix his own Speculations and Reaſonings along with Matters of Fact.

He was a Perſon of eaſy genteel Addreſs, and, beyond Diſpute, well verſed in Chymiſtry, being Author of the Salt ſtill extant in the Shops under the Title of *Sal Glauberi*; as alſo of all the acid Spirits made by means of Oil of Vitriol, *&c.*

He is noted for extolling his *Arcana* and Preparations, and is even ſaid to have traded a little unfairly with his Secrets: The beſt of them he would ſell at exceſſive Rates to Chymiſts and others, and afterwards ſell them over again, or make them public to increaſe his Fame, whence he was continually at Enmity with one or other.

It was this *Glauber* who ſhewed before the States of *Holland*, that there is Gold contain'd in Sand, and made an Experiment thereof to their Satisfaction; but ſo much Lead, Fire, and Labour, were employ'd in procuring it, that the Art would not bear its own Charges. However, he ſhew'd pretty clearly, that there is no Earth, Sand, Salt, Sulphur, or other Matter, but has its Share of Gold.

He was born about the Beginning of the ſixteenth Century: He laboured greatly in the pharmaceutical and phyſico-mechanical Chymiſtry, and made a Multitude of Experiments, which, if rightly underſtood and apply'd, might conduce very much to the Knowledge of the Compoſition and Analyſis of Metals, Sulphurs, and Salts.

He ſpent his whole Life in the Exerciſe of Chymiſtry, for the Practice of which he excel'd all thoſe of his Age. But he rarely ſaw the Uſe of his own Experiments, applying Paſſages of the antient Chymiſts to his own Productions, and thence vainly pretending to the Diſcovery of *Panacea*'s, the Philoſophers Stone, *&c.* He drew many into Snares, and expos'd the Art to Cenſure and Reproach.

In his Theory he is very confus'd; but whether, in the Practice, he be guilty of ſo many Falſhoods as ſome have charged him with, may be much doubted, eſpecially if we keep ſtrictly to his Experiments, without regarding the golden Promiſes he makes.

His Writings are theſe;

I. *Furni novi Philoſophici*, &c. in *High Dutch*, I. II. III. IV. and V. Parts. *Amſt.* 1648. 1650. 8*vo.*

II. *Annotationes, uber den appendicen*, &c. Annotations on the Appendix to the fifth Part of the Philoſophical Furnaces, containing ſeveral uſeful Secrets, *&c. High Dutch. Amſt.* 1650. 1661.

III. *La deſcription des nouveaux Fourneaux Philoſophiques, traduit par la Sieur du Teil, A Paris*, 1659. 8*vo.* In *Engliſh*, by *J. F. M. D. Lond.* 1651. 4*to.*

IV. *Operis mineralis, oder vieler kunſtlicken*, &c. A Deſcription of ſeveral profitable metallic Operations, *&c. High Dutch.* I. II. III. Parts. *Francof.* 1651. 8*vo.* and 1655. 4*to.*

V. *Operis mineralis pars* I. *ubi docetur*, &c. Tranſlated into *Engliſh* under the Title of *Glauber's Golden Art, to get Gold from Stones, Sand*, &c. 8*vo.*

VI. ——————— II. *Amſt.* 1652. 8*vo.*

VII. ——————— III. *Amſt.* 1652. 8*vo.*

VIII. *Grundliche warhafftige Beſchreiburg*, &c. A complete Account how to prepare Tartar in great Quantities from Wine Lees, *&c. Nurinb.* 1652. 8*vo.* In *Latin*, *Amſt.* 1655. 8*vo.*

IX. *Miraculum mundi, oder anſuhelicke beſchreibung*, &c. A complete Deſcription of the Wonders of Nature, Art, and Science, in the antient univerſal Menſtruum, or *Mercurius Philoſophorum*, &c. *High Dutch. Hanau*, 1651. 8*vo.*

X. *Pharmacopœæ Spagiricæ, oder grandlicher beſchreibung*, &c. 1, 2, 3, 4, 5, 6, and 7 Parts. *Nurinb.* 1654. 8*vo.* and *Amſt.* 1656. 1667. 8*vo.* Alſo in *Latin*, *Amſt.* 1656. 8*vo.* The I. II. and III. Parts, Appendix to the ſame. *High Dutch. Amſt.* 1667, 1668. 8*vo.* The firſt Part tranſlated into *Latin. Amſt.* 1669. 8*vo.*

XI. *Deſſ. Teutſchlands wolfahrt*, &c. The Proſperity of *Germany*, Part 1. concerning the Concentration of Wine, Corn, and Wood, *&c. Amſt.* 1656. 8*vo.*

XII. ——— ——— ——— 2, 3, 4, 5, and 6 Parts.

XIII. *Troſt de Sceſabrenden*; or, Conſolation of Seafaring Perſons. *Low Dutch, Amſt.* 1657. 8*vo.* In *Latin, ibid.* 1657. 8*vo.*

XIV. *Tractatus de Medicina Univerſali, ſive Auro potabili vero. High Dutch. Amſt.* 1657. 8*vo.*

XV. *Opera Chymica, Bucker und Schrifften*, &c. Firſt Part, *Francf. M.* 1658. 4*to.* Second Part, *Francf.* 1658. 4*to.*

XVI. *Tractatus de Natura ſalium. High Dutch*, 1658. 4*to.* In *Latin*, *Amſt.* 1659. 8*vo.*

XVII. *Explicatio uber mein Miraculum mundi. Amſt.* 1658. 8*vo.*

XVIII. *Oeuvres Minerales*, &c. *A Paris*, 1659. 8*vo.*

XIX. *Ander. Theil*; or, Second Part of the *Miraculum Mundi. Amſt.* 1660. 8*vo.*

XX. *Reichen-Scatz und Sammel-Kaſtens*, &c. A rich Treaſure, *&c.* I. II. III. IV. and V. Centuries. *Amſt.* 1660. and 1668. 8*vo.* The 1ſt and 2d Centuries in *Latin*, *Amſt.* 1660. and 1661. 8*vo.*

XXI. *Libellus dialogorum. Amſt.* 1663. 8*vo.*

XXII. *Explicatio, oder Anſslegung*, &c. An Explication of the Words of *Solomon*, *in Herbis, Verbis, & Lapidibus magna eſt virtus. High Dutch, Amſt.* 1663. 8*vo.* In *Latin*, *Amſt.* 1664. 8*vo.*

XXIII. *Libellus ignium, oder fever-buchlein*, &c. A Treatiſe of Fires, *&c. High Dutch. Amſt.* 1663. 8*vo.*

XXIV. *Novum lumen Chymicum. High Dutch. Amſt.* 1664. 8*vo.* In *Latin*, *Amſt.* 1664. 8*vo.*

XXV. *Von den dreyen anfangen der metallen*, &c. Of the three Principles of Metals, Sulphur, Mercury, and Salt. *Amſt.* 1666. 8*vo.* In *Latin*, *Amſt.* 1667. 8*vo.*

XXVI. *Kurtze erklarung uber die Holliſche Gottin*, &c. Explication of the infernal Goddeſs *Proſerpina*, Wife of *Pluto*; what the philoſophical Poets, as *Ovid*, *Virgil*, and others, mean by her; and how, by *Proſerpina*'s Help, the Souls of dead Metals are delivered from the Chemical Hell, *&c. Amſt.* 1667. 8*vo.*

XXVII. *De tribus lapidibus ignium ſecretorum, oder von den drey alleredelſten geſteinen*, &c. *High Dutch. Amſt.* 1667. 4*to.* and 1668. 8*vo.*

XXVIII. *De Elia artiſta. High Dutch. Amſt.* 1668. 8*vo.*

XXIX. *De Purgatorio Philoſophorum. High Dutch. Amſt.* 1668.

XXX. *Glauberus concentratus, oder laboratorium Glauberianum*, &c. *High Dutch. Amſt.* 1668. 8*vo.*———*Oder kern der Glauberiſchen ſchrifften*, &c. The Kernel of *Glauber*'s Writings, *&c.* In *High Dutch. Lipſ.* and *Breſl.* 1715. 4*to.* ———Tranſlated into *Latin*, under the Title of *Glauberus concentratus.*

XXXI. *De Igne ſecreto Philoſophorum. High Dutch. Amſt.* 1609. 8*vo.*

XXXII. *De Lapide Animali. High Dutch. Amſt.* 1669. 4*to.*

XXXIII. *Curieuſer tract von gebrauch*, &c. A curious Tract on the Uſe of Wines, Corns, and Woods. *High Dutch. Amſt.* 1686. 4*to.*

XXXIV. His Writings, tranſlated into *Engliſh*, by *Chriſt. Pack. Lond.* 1689. *Fol.*

XXXV. *Tract. de Signatura ſalium, metallorum & planetarum. High Dutch. Prag.* 1703. 8*vo.*

XXXVI. His whole Works, tranſlated into *Latin*, in ſeveral Volumes, 8*vo.*

5. Jo. JOACH. BECHER, of *Spire*. He was born about 1625. and firſt made Profeſſor of Phyſic, and then Firſt Phyſician to the Elector of *Mentz*, and afterwards to the Elector of *Bavaria*, and Counſellor to the Emperor. He was a Man of great

great Wit as well as Learning, and ſkill'd in all the Parts of Science, as appears by his numerous Writings upon medicinal, philological, political, and mathematical Subjects; but his principal Application was to Chymiſtry, of which he made great Uſe in illuſtrating Natural Philoſophy, and diſcovering the Principles and Compoſition of Bodies. He lived ſome time in *England*, and dy'd at *London* in 1682.

He appears to have been a warm, active, induſtrious Man, and a little too much tinged with alchemical Notions; but was almoſt the firſt Author who applied Chymiſtry to Philoſophy at large, and ſhew'd its extenſive Uſes in explaining the Structure, Texture, Compoſition, and Relations of Bodies.

His Theory is by many prefer'd to that of all other Chymiſts, as ſounder and deeper. He deduces all things from Water and Earth, as the only material Principles. The earthy Principle he ſhews to be of three Kinds; that is, he makes three Species of elementary Earths. This he chiefly effected in his *Phyſica ſubterranea*, where he has ſhewn great Acuteneſs in applying the principal and known Experiments to the framing a Theory in the way of experimental Reaſoning.

His Chymical Works are principally theſe:

I. *Inſtitutiones Chemiæ, ſeu Manuductio ad Philoſophiam hermeticam. Mogunt.* 1662. 4*to.*——The ſame with Notes, and other Improvements, publiſh'd by *J. Jac. Roſenſtengel. Franc.* 1705. 12*mo.* and 1716. 8*vo.*

II. *Oedipus Chimicus, obſcuriorum terminorum, & principiorum Chimicorum Myſteria aperiens & reſolvens. Amſt.* 1664. 12*mo.*

III. *Actorum Laboratorii Chymici monacenſis, ſeu Phyſicæ ſubterraneæ, Libri* 2. *Franc.* 1669. 8*vo. Lipſ.* 1681. 8*vo.*——The ſame, with Supplements from the Author's other Writings, collected by *Jo. Ern. Stahl. Lipſ.* 1703. 8*vo.*

IV. *Experimentum Chymicum novum, quo artificialis & inſtantanea Metallorum generatio & tranſmutatio ad Oculum demonſtratur. Francf.* 1671. 8*vo.* Alſo at the End of the *Phyſica ſubterranea.*

V. *Demonſtratio Philoſophica, ſeu Theſes Chymicæ, veritatem & poſſibilitatem tranſmutationis Metallorum in aurum evincentes*, &c. *Francof.* 1675. 8*vo.* Alſo printed at the End of the *Phyſica ſubterranea.*

VI. *Experimentum novum & curioſum de minera arenaria perpetua*, &c. 8*vo. Lipſ.* 1680. Alſo in the *Phyſica ſubterranea.*

VII. *Tripus Hermeticus fatidicus, pandens oracula Chymica, ſeu*, (1.) *Laboratorium portabile.* (2.) *Nitri & ſalis texturæ Anatomia.* (3.) *Alphabetum minerale, ſeu viginti quatuor Theſes de ſubterraneorum & Mineralium Geneſi, Textura, & Analyſi*, &c. *Francof. M.* 1689. 8*vo.*

VIII. *Concordantia Chemica.* In *High Dutch. Quarto.* Not tranſlated into *Latin*, that we know of. It contains many inſignificant and uſeleſs Proceſſes, but, at the ſame time, many curious and uſeful Experiments.

IX. *Metallurgia, oder natur-kundigung der metallen*; or, The Phyſiology of Metals. *High Dutch.* There have been a great many Editions of this Book.

6. Jo. Kunkel, born about the Year 1630. was firſt bred up to Pharmacy, then to Glaſs-making: He was afterwards Chymiſt to the Elector of *Saxony*, then to the Elector of *Brandenburg*, and laſtly to the King of *Sweden*. He applied himſelf to Chymiſtry upwards of fifty Years, whereby he arrived at a Pitch of Experience ſeldom met with. Having the Advantage of his Patrons Purſes for trying all manner of Experiments, beſides being Maſter of the Glaſs-works, he had Opportunities of making the moſt tedious Experiments without Charge: Withal he was very induſtrious, perſevering, and acute in noting the Phænomena of Proceſſes; but, for the theoretical Part, he was leſs happy, as not being verſed in Philoſophy and general Knowledge. His Doctrine of Principles is fluctuating and defective.

His Writings are theſe; *viz.*

I. *Obſervationes Chemicæ.* Firſt publiſh'd in *High Dutch*, 1676. and tranſlated into *Latin*, under this Title: *Johannis Kunkelii Elect. Sax. Cubicularii intimi & Chymici, utiles obſervationes, ſive animadverſiones de ſalibus fixis & volatilibus, auro & argento potabili, Spiritu Mundi & ſimilibus; item de Colore & odore Metallorum, Mineralium, aliarumque rerum quæ in Terra producuntur*, &c. *Primum ab Authore Germanice conſcripta, nunc vero Latinitate donata à Carolo Aloiſio Ramſaio. Londin. & Roterodam.* 1678. 12*mo.*——The ſame under the Title of *Philoſophia Chemica, experimentis confirmata. Amſt.* 1694. 12*mo.*

II. *On Phoſphorus. High Dutch. Lipſ.* 1678. 8*vo.*

III. *De acido & urinoſo, ſale calido & frigido*, &c. *Berl.* 1686. 8*vo.*

IV. *Art of Glaſs*; or, *Commentary on Ant. Neri.* In *High Dutch. Francf.* and *Lipſ.* 1689. 4*to*, A curious Work, which we expect to ſee ſoon in *Engliſh*, by a very able Hand.

V. *Collegium Phyſico-chymicum experimentale; ſive laboratorium Chymicum*, &c. *Hamb.* and *Lipſ.* 1722. 8*vo. High Dutch.* A poſthumous Work.

7. Olaus Borrichius. He was born in 1626. He was Phyſician to the King of *Denmark*, and public Profeſſor in the Univerſity of *Copenhagen*. He had travel'd much, was an excellent Scholar, and a great Operator in Chymiſtry. He is famous for the Diſpute he held with the learned *Conringius*, concerning the Knowledge of the *Egyptians*, and the Antiquity of Chymiſtry, its Inventors and Authors.

His Writings are,

I. *De Ortu & Progreſſu Chemiæ diſſertatio. Hafn.* 1668. 4*to.* And in *Mangeti Bibl. Chym.*

II. *Ol. Borrichii, Hermetis, Ægyptior. & Chemicor. ſapientia, ab Herm. Conringii animadverſionibus vindicata. Hafn.* 1669. 4*to.*

III. *Conſpectus Scriptor. Chemicor. illuſtr. Libellus poſthumus. Haun.* 1697. 4*to.* And in *Mang. Bibl. Chym.*

The famous Work of *Conringius* is the following:

IV. *Herman. Conringii de Hermeticâ Medicinâ libri duo, quorum primus agit de Medicinâ, pariterque omni Sapientiâ veterum Ægyptiorum: altero non tantum Paracelſi, ſed etiam Chemicorum Paracelſi laudatorum, aliorumque, potiſſimum quidem Medicina omnis, ſimul vero & reliqua Doctrina examinatur. Helmſ.* 1648. 4*to.* A ſecond Edition, corrected, and enlarged with an Apologetic againſt *Borrichius.* 1669. 4*to.*

Docimaſtica metallica. Haf. 1660. 8*vo.* and 1677. 4*to.* and 1680. 4*to.*

Other Metallurgical Authors are,

And. Libavius, of *Hall* in *Saxony*, who died in 1616. has wrote largely of the Nature and Examination of Minerals, ſo as to be even ſet on a Level with *Agricola* for the Hiſtory of Metals he publiſh'd.

Commentaria metallica.

Ars probandi Mineralia.

J. Webster's Hiſtory of Metals. *Lond.* 1671. 8*vo.*

Alonso Barba *trattato de l'Arte Metallico compueſto en Eſpanol. en Cordoua*, 1674. His long Reſidence at *Potoſi* in *Peru* had enabled him to make many Obſervations relating to the Mines. The ſame in *Engliſh*, by the Earl of *Sandwich. Lond.* 1674. 8*vo.*

Libro ſecundo de l'Arte metallico. En Cordua. The ſame in *Engliſh*, by the Earl of *Sandwich. Lond.* 1674. 8*vo.*

It was reprinted at *Lond.* 1738. in 12*mo.* with the Addition of a third Part, containing a Diſcovery of all ſorts of Mines, from Gold to Coal, by Mr. *G. Plattes*; and a fourth Part, intituled, *Houghton's complete Miner.*

Il Marchese, Marco Antonio *della tratta, della prattica minerale.* In *Bolog.* 1676. 4*to.*

M. Reaumur's Treatiſe of converting forged Iron into Steel, and to ſoften caſt Iron, ſo as to make Utenſils thereof equally perfect with thoſe of forged Iron. *Paris, An.* 1722.

Em. Swedenborg, *Member of the metallic College in* Sweden, *Prodromus principiorum rerum naturalium ſive novorum tentaminum Chymiam & Phyſicam experimentalem explicandi. Amſt.* 1721. 8*vo.*

——— *Principia rerum naturalium ſive novorum tentaminum Phænomena Mundi Elementaris philoſophicè expliçandi, cum figuris æneis*, 3 *Vol. Fol. Dreſd.* and *Lipſ.* 1734. This Book opens a new Scene in Natural Philoſophy, and is large upon the Buſineſs of Metals.

There is a curious metallurgical Book juſt publiſh'd, in *High Dutch*, by *Chriſtopher Andreas Schluter*, containing the whole Art both of Smelting and Aſſaying, as taken from the Works themſelves, and exhibited to the Eye by numerous beautiful Copper-plates, *Folio.* The Title of it is *Gruntlicher Unterricht*, &c. or, (1.) A fundamental Deſcription of mineral Works; ſhewing the genuine Way of explaining; with the ſeveral mechanical Structures and Furnaces thereto relating; with the Manner wherein they are practiſed at *Hartz*, and other mineral Works; particularly the various Methods of treating Gold, Silver, Copper, and Lead Ores, Sulphur, Vitriol, &c. (2.) The whole Art of aſſaying; containing the Ways of trying all ſorts of metallic Ores, refining of Silver, ſeparating it from Gold to Advantage, &c. (3.) A Set of Copper-plates for the two Parts, executed according to a Scale; with a proper Index to each Part. By *Chriſtopher Andrew Schluter*, Superintendent, at *Under-Hartz*, to his Majeſty of *Great Britain*, &c. *Brunſwick*, printed by *Frederic William Meyer*, 1738.

Alchemical Writers.

In the Alchemiſtic Branch the moſt approved Authors are,

1. Geber, whom, nevertheleſs, *Bernard*, Count of *Treviſa*, ranks among the ſophiſtical Authors.
2. Morienus.
3. Roger Bacon.
4. George Ripley.
5. Raymund Lully.

For the Characters and Writings of theſe five Authors, ſee above.

6. Bernard, Count of Trevisa, flouriſhed about the Year 1390. *Boerhaave* ſays he wrote in the Year 1453. He was intimate with *Thomas Bononienſis*, firſt Phyſician to *Charles* the Eighth, King of *France*, to whom he wrote an alchemiſtical Epiſtle, printed at *Baſil*, 1600. 8*vo.* and 1583. 8*vo.*

under

under the Title of *Bern. Com. Treviſa, de Chymico miraculo*, &c. This is extant in the *Theat. Chym. Urſell.* and in *Manget's Bibl. Chym.*

7. JOHN ISAAC HOLLANDUS, who, perhaps, was the ſame with,

8. ISAAC HOLLANDUS, who was poſterior to *Arnoldus de Villa nova*, but earlier than *Paracelſus*. He was ſo highly eſteemed by *Penotus*, that (being diſcovered in ſome Corner, in *Paracelſus*'s Time) he took him for *Elias*, the promis'd Artiſt, who is to reveal the Secrets of Chymiſtry.

9. BASIL VALENTINE.

For the Character of theſe three laſt-mention'd Authors, ſee above.

10. ARTEPHIUS and *Morienus* are uſually ſuppoſed prior to *Roger Bacon*; but the Age, or even Country where they liv'd, is not known. The former is firmly believed by the *Adepti* to have prolong'd his Life to a thouſand Years.

11. THEATRUM CHYMICUM, *in ſex Vol. diviſum. Argent.* 1613. 1622. 1661. 8*vo*. A Liſt of the Pieces contain'd in the ſeveral Volumes of this Collection, being one hundred twenty-three in Number, is given in *Endteri Catal. Libror. Med. Phyſ. Mathem. Norib.* 1695. 4*to*.

12. TURBO PHILOSOPHORUM, *ſive auriferæ artis antiquiſſimi Authores. 3 Vol.* 1510. 1562. 1610. 8*vo*. In it are contain'd thirty-two Pieces.

13. PARACELSUS. For an Account of him, ſee the PREFACE; and, for his Writings, ſee above.

14. IRENÆUS PHILALETHA. There are ſeveral alchemical Books publiſh'd under the Name of *Philaletha*. The firſt anonymous *Philaletha* is ſaid to have been an *Engliſhman*, and his true Name *Thomas Vaughan*; tho', in ſome of his Works, he calls himſelf *Irenæus*, and in others *Eugenius Philaletha*. He is famous for having rendered *Van Suchten*, *Sendivogius*, and *D'Eſpagnet*, clearer in his Writings; which are principally theſe:

I. *Introitus apertus ad occluſum Regis Palatium.*
II. *Brevis manuductio ad Rubinum Cœleſtem.*
III. *Fons Chemicæ veritatis.*
IV. *Metallorum metamorphoſis.*
V. *Vade mecum Philoſophicum.*
VI. *Experimenta de præparatione Mercurii Sophici.*
VII. *Nucleus Alchemiæ.*

But, tho' this Author is ſaid to write with great Clearneſs, yet his Followers differ widely from one another.

VIII. EUG. PHILALETHES, EUPHRATES, *or the Waters of the Eaſt, treating of the ſecret Fountain, whoſe Water flows from Fire, and carries in it the Beams of the Sun and Moon. Lond.* 1665. 8*vo*.

IX. *Anima magica abſcondita.* Publiſhed together with his *Anthropoſophia magica. Lond.* 1656.

X. *Secrets reveal'd; or, An open Entrance to the ſhut Palace of the King; containing the greateſt Treaſure in Chymiſtry.* By *Irenæus Philalethes, Coſmopolita*, who attained to the Philoſophers Stone, aged twenty-three Years. Publiſhed by *W. C.* Eſq; *Lond.* 1669.

XI. *Enarratio Methodica trium Geberi medicinarum, in quibus continetur Lapidis Philoſophici vera Confectio. Amſt.* 1678. 8*vo*.

XII. *A Collection of ten Treatiſes in Chymiſtry, concerning the Liquor Alcabeſt, the Mercury of the Philoſophers, and other Curioſities.* Written by *Irenæus Philaletha, Helmont, &c. Lond.* 1684. 8*vo*.

15. MICHAEL SENDIVOGIUS. He was Companion to *Alexand. Sidonius*, or *Serenus*, a *Scotch* Gentleman, who, being near the Point of Death, intreated two Things of him: To take care of the Publication of his Manuſcript; and to marry his Widow. *Sendivogius* perform'd both; but, in the Edition of his Works, ſuppreſs'd *Serenus*'s Name, and clapp'd his own in its Place. The Title of his Pieces are,

I. *Novum Lumen Chemicum.*
II. *Dialogus de Mercurio & Alchemia.*

In theſe he maintains, with great Strength of Reaſon and Experiment, that Sulphur and Mercury, united, are the Conſtituents of every Metal; by Sulphur meaning, with *Geber*, the Sun's Rays: However, his Writings ſhould be read with Caution, being full of vain Promiſes. His *Novum Lumen Chemicum* is done into *Engliſh*, and intituled, *A new Light of Alchemy, from Nature and manual Experience; with a Treatiſe of Sulphur.* To which are added, *Nine Books of the Nature of Things*, by *Phil. Theoph. Parac. Engliſh'd* by *J. F. M. D. Lond.* 1674. 8*vo*.

16. JOHN BAPTISTA VAN HELMONT; *Opera omnia. Amſtelod.* 1652. 4*to*. See an Account of this Author above.

Other Alchemiſtical Authors are,

JO. FRED. HELVETII *vitulus aureus, quem mundus adorat, & orat.* Treating of the rare Miracle of Nature, the Tranſmutation of Metals, and ſhewing how the whole Subſtance of Lead was, at the *Hague*, in a Moment's time, converted into pure Gold, by a ſmall Particle of the Philoſophers Stone. *Amſt.* 1667. 8*vo*. and *Hag. Com.* 1702. 8*vo*. Extant alſo in *Manget's Bibl. Chym.* It is alſo in *Engliſh*, under the Title of *Helvetius's Golden Calf, Lond.* 1670. 8*vo*.

De Alchymia, Opuſcula complura vet. Philoſoph. cum fig. Francof. 1550.

Four Treatiſes of the Philoſophers, by ALPHONSO, King of *Portugal*, *John Sawtre*, and *Florianus Randorf*, a *German*, *Lond.* 1652. 4*to*.

JO. SEG. WEIDENFELD, *four Books concerning the Secrets of the Adepts; or the Uſe of* Lully's *Spirit of Wine.* A practical Work, collected out of the Fathers of adept Philoſophy, reconciled together. *Lond.* 1685. 4*to*.

JAC. TOLLII, *fortuita, in quibus præter critica nonnulla, tota fabularis Hiſtoria Græca, Phœnicia, Ægyptiaca, ad Chemiam pertinere aſſeritur. Amſt.* 1687. 8*vo*.

——— ——— *Manuductio ad Cœlum Chemicum. Amſtel.* 1688. 8*vo*.

——— ——— *Sapientia inſaniens, ſive promiſſa Chemica. Amſt.* 1689. 8*vo*.

GABR. CLAUDERI *Schediaſma de Tinctura Univerſali, vulgo Lapide Philoſophorum, cum Petr. Jo. Fabri MS. res Alchymicorum obſcuras explanante, necnon Ad. Gottl. Berlichii diſſertatione de Medicina Univerſali, quin & Eman. Koenigii Epiſtola de elixirio Sophorum. Norib.* 1736. 4*to*.

Chymical IMPROVERS *of* NATURAL PHILOSOPHY *and* PHYSIC.

Among the Writers who have treated of Chymiſtry, with a View to Natural Philoſophy and Medicine, the Principal are theſe.

1. HELMONT.

2. The Honourable ROBERT BOYLE, Eſq; thro' all his Writings.

3. Jo. BOHNIUS, in his *Diſſert. Chymico-phyſicæ. Lipſ.* 1696.

He was Profeſſor at *Leipſic* in 1679. The Diſſertations above-mention'd, beſides an uncommon Reading, ſhew, that he had made a large Number of Experiments; and, as to his Reaſonings, nobody goes beyond him. His Treatiſe *de Acido & Alkali* is excellent; and has let much Light into the Affair.

4. The celebrated Dr. COX and Dr. SLARE, in ſeveral Papers in the *Philoſophical Tranſactions.*

5. M. HOMBERG.

M. *Homberg* was born at *Batavia* in the *Eaſt Indies*, in 1652. whence he came over with his Father to *Amſterdam*. He was ſent to *Jena* and *Leipſic* to ſtudy Law; but, neglecting this for what was more agreeable to his Genius, he applied himſelf to *Otto Guericke*, famous for the Invention of the Air-pump, the Hemiſpheres, *&c.* to learn Experimental Philoſophy.

From hence he went to *Padua*, where he ſpent a Year in the Study of Medicine, and particularly Anatomy and Botany. Afterwards he travel'd to *Bologna* and *Rome*; hence paſs'd into *France*, and thence into *England*, where he work'd ſome time with the great *Boyle*. From *England* he went to *Holland*, where he perfected himſelf in Anatomy under the famous *De Graaf*; and, laſtly, took the Degree of Doctor of Phyſic at *Wittembourg*.

Afterwards he made a Tour thro' *Germany* and the *North*; and likewiſe thro' *Saxony*, *Bohemia*, *Hungary*, and *Sweden*, to view the Mines. At *Stockholm* he ſtaid ſome time, and work'd in the King's Laboratory. His next Remove was into *Holland*, and thence into *France*, to pick up what had before eſcaped him.

From *Paris*, at the earneſt Deſire of his Father, he was upon the Point of returning to *Saxony*, to ſettle among his Friends; but M. *Colbert* ſending a Meſſenger to him in the King's Name, with very advantageous Offers to ſettle there, he accepted them after a ſhort Deliberation, and commenced Catholic in 1682.

In 1685. he went to *Rome*, and practiſed Phyſic there with good Succeſs; but in a few Years he return'd to *Paris*, and in 1691. was choſe a Member of the Royal Academy, and put in Poſſeſſion of its Laboratory. In 1702. he inſtructed the Duke of *Orleans* in Chymiſtry; the moſt magnificent and beſt appointed Laboratory, which Chymiſtry had ever known, being provided for this Purpoſe. The ſame Year his Highneſs procured M. *de Tſchirnhauſen*'s large Burning-glaſs from *Germany*, of which M. *Homberg* made a noble Uſe. He married a Daughter of the famous *Dodart* in 1706. and in 1715. died of a Dyſentery.

He never publiſh'd any expreſs Work, or Volume in form: His Eſſays, or *Elements of Chymiſtry*, were begun to be printed in the *Memoirs of the Academy*; and the reſt of them were found fit for the Preſs at his Death. There are likewiſe ſeveral leſſer Pieces on various Subjects, diſperſed throughout the ſame Memoirs, none of which but open new Views, and ſhine with their peculiar Light. His Way of expreſſing himſelf was ſimple, preciſe, and methodical; and he was as far from the natural Oſtentation of the Chymiſts, as from their Myſteriouſneſs and Obſcurity.

M. *Homberg* was a moſt expert and maſterly Chymiſt. He has diſtinguiſh'd himſelf by a great Number of general Experiments, as well as by his Reaſonings; which are always perfectly fine and clear, and conducted with mathematical Severity. Natural Philoſophy would have received conſiderable Improvement from him, had his Life been continued. He was a Perſon of great Genius, profound Skill, and indefatigable Induſtry. He was ſupported by the Duke of *Orleans*, late Regent of *France*, and perform'd Experiments at his Expence; which gave him an Opportunity of trying many Things out of the Reach of a private Perſon.

Steph. Franc. Geoffroy was born at *Paris* in 1672. His Father was an Apothecary, and his Mother a Surgeon's Daughter. His Father ſpared no Pains nor Expence in his Education, tho' he deſign'd him only for the Shop, as well knowing, that a large Share of Knowledge was required to arrive at any tolerable Perfection in Pharmacy. To the Study of Philoſophy in general, M. *Geoffroy* join'd private Courſes of Botany, Chymiſtry, and Anatomy.

In 1692. his Father placed him with an eminent Apothecary at *Montpelier*; and, during his Stay there, he diligently attended the Univerſity Lectures, in all the Branches of Medicine; but the *Materia Medica* was his favourite Study. In 1693. he paſs'd thro' the uſual Examination for Pharmacy with Applauſe; and now firſt imparted to his Father his Deſign of being a Phyſician, and obtain'd his Conſent. Accordingly the ſecond Son, whom his Father had deſign'd for that Profeſſion, was ſent into the Shop inſtead of his Brother, and is now one of the Chymiſts to the *French* Academy.

In 1698. Count *Tallard*, being appointed Embaſſador Extraordinary to *England*, took M. *Geoffroy* with him, as his Phyſician, tho' he had then taken no Degree in Phyſic. There he became acquainted with many of the learned Men of that Nation, and neglected no Means of making Improvements; and, in leſs than ſix Months, he was admitted a Member of the Royal Society. From *England* he paſs'd into *Holland*; and in 1700. travel'd into *Italy* with the Abbé *Louvois*, in Quality of his Phyſician; every-where making farther Obſervations, and increaſing his Stock of Knowledge. In 1699. he was made a Member of the Royal Academy of Sciences, and in that Capacity contributed, as far as his other Employments would allow, to its Ornament and Uſe.

In 1702. he took his Degree of Batchelor of Phyſic, and in 1704. that of Doctor, at *Paris*; after which he applied himſelf cloſely to his Studies, the better to fit him for Practice. In 1707. M. *Fagon*, Phyſician to the King, made him his Deputy, as Profeſſor of Chymiſtry in the Royal Garden; in which he acquitted himſelf ſo well, that in 1712. M. *Fagon* reſign'd the Charge up to him.

In 1709. the King made him Profeſſor of Phyſic in the Royal College, and here he dictated his curious and uſeful Lectures on the *Materia Medica*. In 1718. he drew up a Syſtem, or Table of the mutual Relations betwixt different Subſtances in Chymiſtry; which, if rightly underſtood, and carried on, might become a fundamental Law for Chymical Operations, and guide the Operator with Succeſs.

In 1726. he was elected Dean of the Faculty of Phyſic at *Paris*; and after the Expiration of two Years, the uſual Time of holding that Office, was continued in it by the unanimous Conſent of his Brethren. In the Beginning of the Year 1730. his Health began to decline, and he died on the 6th of *January* 1731.

He wrote a *Treatiſe of the foſſil, vegetable, and animal Subſtances, that are made uſe of in Phyſic*, &c. tranſlated from a manuſcript Copy of the Author's Lectures, read at *Paris*, by *G. Douglas*, M. D. 1736.

Beſides this, there are ſeveral other Pieces of his detach'd in the *Memoirs of the Royal Academy of Sciences*, and in the *Philoſophical Tranſactions*.

M. Geoffroy the Younger. In the *Memoirs of the Royal Academy of Sciences*.

M. Lemery the younger. In the *Memoirs of the Royal Academy of Sciences*.

6. George Ernest Stahl, born in 1660. at *Onold* in *Franconia*, took to the Study of Chymiſtry at Fifteen; and, from reading *Barnerus's Collegium Chymicum*, readily diſcover'd a fix'd alcaline Body in Nitre: With the Help afterwards of *Kunkel's* Books, and *Becher's Phyſica ſubterranea*, the ſeveral Experiments of which he not only carefully weigh'd and compared, but repeated, he arrived at a great Proficiency in the Art, and has publiſh'd ſeveral excellent Pieces on Chymiſtry; which ſhew, among other Things, (1.) The Generation of artificial Sulphur. (2.) The Analyſis of Vitriol, the Volatilization of the Acid of Vitriol, and its Reſtitution to its priſtine Fixity. (3.) The Preſence and Influence of a Phlogiſton in ſeveral Bodies. (4.) The Reſolution of Sulphur into a ſubtle Acid. (5.) The different Fixity of acid mineral Salts. (6.) The ſudden Deſtruction of Nitre by Deflagration. (7.) The genuine Foundation of vinous and acetous Fermentation. (8.) The Converſion of Spirit of Wine, and its artificial Ingreſs into Vinegar. (9.) The Tranſpoſition of Juice of Citrons into Wine. (10.) The Paſſage of all fermentable Bodies into an inſipid Earth. (11.) The Solution of Gold by Sulphur. And, (12.) of Iron by an Alcali.

His principal Chymical Writings are,

I. *Prodromus de indagatione Chymico-phyſiologica, &c.* 1683.

II. *Collegium Chemicum*, firſt deliver'd in 1684. in the way of Lecture, to the Students of *Jena*; ſeveral manuſcript Copies of which getting abroad, and there being nothing like it then extant, many uſed it as a Comment on *Becher*. This, at length, induced the Author to conſent to an Edition of it, which was publiſh'd under the Title of, *Fundamenta Chymiæ dogmaticæ & experimentalis. Norimb.* 1723. The ſame in *Engliſh*, under the Title of *Philoſophical Principles of Chymiſtry*, by *P. Shaw*, 1738. 8*vo*.

III. *Zymotechnia fundamentalis*, 1697.

IV. *Obſervationes Chemico-phyſicæ*, 1697. and 1698.

V. *Diſſert. de Metallurgiæ & Docimaſtiæ fundamentis*, 1697.

VI. *Animadverſiones ad artem tinctoriam fundamentalem & experimentalem.*

VII. *Opuſculum Chymico-phyſico-medicum. Halæ Magdeb.* 1715. Conſiſting of ſeveral Pieces, which had been occaſionally publiſh'd before, *viz.* (1.) *Prodromus de indagatione Chymico-phyſiologica.* (2.) *Zymotechnia fundamentalis.* (3.) *Obſervationes ſelectiores Phyſico-chemico-medicæ.* (4.) *Experimentum novum, verum Sulphur arte producendi.* (5.) *Spiritus Vitrioli volatilis in Copia parandi Fundamentum & Experimentum.* (6.) *Vitulus aureus*, &c.

VIII. *Specimen Becherianum*, annex'd to *Becher's Phyſica ſubterranæ*.

IX. *Diſſert. de elogiis vitrioli.*

X. *A Treatiſe on Sulphur, both inflammable and fix'd.* In *High Dutch.* 1708.

XI. *A Treatiſe on Salts.* High Dutch. 1723.

XII. *Commentar. in Metallurgiam Becheri*, 1723.

XIII. *Præf. in Concordantiam Chemicam Becheri*, 1726.

XIV. *Experimenta, obſervationes, animadverſiones*, 300 *numero, Chymicæ & Phyſicæ, qualium alibi, vel nulla, vel rara, nuſquam autem ſatis ampla, ad debitos nexus, & veros uſus, deducta mentio, commemoratio, aut explicatio, invenitur*, &c. *Berolin.* 1731. 8*vo*.

7. Frideric Hoffman was born at *Hall* in *Saxony*, in 1660. To him we are principally indebted for a juſt Method of analyſing mineral Waters. He firſt diſcover'd the Errors of the Antients on this Subject, and ſhew'd the true Ingredients of Waters by chymical Experiments. The chief Points are, that the predominant Salt in mineral Waters, as well as in hot Springs, is not acid, but alcaline; that neutral Salts, calcarious Earths, and irony Matters, with a moſt ſubtile volatile univerſal Acid, are contain'd in all mineral Waters. See his *Diſſertationes de Thermarum & Acidularum Uſu ac Abuſu*; with others on the ſame Subject, all which are abridged, and publiſh'd by *P. Shaw*, 1733. 8*vo*.

His other Chymical Writings are,

I. *Diſſertationes de Generatione Salium.*

II. ——— ——— *Nitri Natura.*

III. ——— ——— *Cinnabari Antimonii.*

IV. ——— ——— *Mirabili Sulphuris Antimonii fixati Efficacia.*

V. ——— ——— *de Mercurio, & Medicamentis Mercurialibus*, &c.

VI. *Annotationes & Additamenta in Poterii Opera. Franc. M.* 1698. 4*to*.

VII. *Obſervationum Phyſico-chymicarum, ſelect. Lib.* III. *Hal. Magd.* 1736. 4*to*.

Other Writers on Philoſophical Chymiſtry are,

Jac. Barneri *Chymia philoſophica perfecte delineata, docte enucleata, & feliciter demonſtrata*, &c. *Noriberg.* 1689. 8*vo*.

Jo. Freind, *Prælectiones Chymiæ, in quibus omnes fere operationes ad vera principia, & ipſius naturæ leges rediguntur. Amſt.* 1710. 8*vo*. and *Lugd. Bat.* 1734. 8*vo*. The ſame in *Engliſh* by *J. M.* with the Author's Defence of the Work againſt the Editors of the *Act. Erud. Lipſ. Lond.* 1712. 8*vo*.

Claude Bourdelin, Author of ſeveral Chymical Papers in the *Memoirs of the Royal Academy of Sciences*.

John Browne. Several Papers of his detach'd in the *Philoſophical Tranſactions*.

Du Clos, *Obſervations ſur les Eaux Minerales de pluſieurs Provinces de France, fait in l'Academie R. des Sciences. A Paris*, 1675. 12*mo*.

——— *Diſſert. ſur les principes des mixtes naturels, Amſt.* 1680. 12*mo*.

Car. Newman wrote ſeveral Pieces, which are detach'd in the *Philoſophical Tranſactions*.

Car. Musitani *Pyrotechnia Sophica*, &c. *Neap.* 1683. *Colon. Allobr*, 1701. 4*to*.

——— ——— *Opera omnia. Genev.* 1716. *Folio.*

Jo. Vigani *Medulla Chimiæ, Lond.* 1682. 8*vo. Gedan.* 1682. 8*vo. Jen.* 1687. 8*vo.*

And. Cassii *de extremo illo & perfectissimo naturæ opificio ac principe terrenorum sidere, auro; de admiranda ejus naturâ, generatione, effectibus, atque ad Operationes artis habitudine. Hamb.* 1685. 8*vo.*

Boulduc, Author of several Chymical Papers in the *Memoirs of the Royal Academy of Sciences.*

J. Juncker *conspectus Chemiæ-theoretico-practicæ in forma Tabularum repræsentatus; in quibus Physica, præsertim subterranea & Corporum naturalium principia, habitus inter se, proprietates, vires, & usus, itemque præcipue Chemiæ Pharmaceuticæ & Mechanicæ fundamenta, è dogmatibus Becheri & Stahlii potissimum explicantur. P.* 1. *Halæ Magd.* 1730. 4*to.* The second Part not yet publish'd.

Bibliothecarii Chemici.

Wilb. Grataroli *veræ Alchemiæ scriptores. Bas.* 1561. *Folio.*

Petri Borelli *Bibliotheca Chymica, seu Catalogus Librorum Philosophicorum, Hermeticorum, in quo quatuor Millia circiter auctorum Chymicorum, vel de transmutatione Metallorum, re minerali & Arcanis, tam manuscriptorum quam in lucem editorum, cum eorum editionibus usque ad annum* 1653. *continentur. Par.* 1654. 12*mo. Heidelb.* 1656. 12*mo.* The Authors are here enumerated in alphabetical Order, but not with due Distinctness nor Fulness.

Nath. Albinei, *Bibliotheca Chemica contracta, in qua continentur,* (1.) *J. Aur. Augurelli Chrysopœia utraque.* (2.) *Cosmopolitæ novum lumen Chymicum.* (3.) *Anonymi Galli enchiridion. Genev.* 1653. *and* 1673. 8*vo.*

——— ——— *— Bibliotheca Chemica contracta, continens tractatus quatuor. Genev.* 1653. *and* 1654. 8*vo.*

——— ——— *— Aureum vellus, oder guldene Schatz,* &c. *The Golden Fleece*; wherein are contain'd all the Writings of the most celebrated Authors in Alchemy, &c. *High Dutch. Hamb.* 1708. 4*to. Tom.* 2. *Bas.* 1604.

Will. Cooper, *Catalogue of Chymical Books, which have been written originally, or translated into* English, *in three Parts. Lond.* 1672. *and* 1675. 8*vo.* The third Part containing an Index of such Things, publish'd in the *Philosophical Transactions of the Royal Society*, as pertain to Chymistry, or the Study of Art in the Animal, Vegetable, or Mineral Kingdoms.

Jo. Jac. Mangeti, Bibliotheca Chymica, sive Collectio Scriptorum præstantissimorum Chemicorum, &c. *Francof.* 1702. 2 *Vol. Folio.*

Frid. Roth-Scholtzii *Bibliotheca Chemica, oder Catalogus von Chymischeren-buchern,* &c. First, second, third, and fourth Parts printed separately. *Norib.* and *Altorf.* 1725. 1728. It is alphabetical: We have only seen so much of it as extends to the Middle of H; whether any more have been since printed, we doubt. *Shaw's Notes to Boerhaave's Chymistry.*

I have above given my Opinion, that it is not possible to transmute one Metal into another. I must, however, confess, that there are some very well attested Facts, which much favour the Doctrine of Transmutation. These are collected in the *Miscellanea Naturæ Curiosorum, A.* 1. *Dec.* 1. *Observ.* 17. as follows:

It is still a Dispute, whether any other Gold, besides that which Nature prepares in the Bowels of the Earth, can be produced by Art, entirely similar to natural Gold, or much more noble than it, as the Philosophers by Fire, and the Adepts, would have it. There are a great many who absolutely deny it, and that for various Reasons, and from the Instances of so many Impostures; as of some who dip, into Solutions of Gold and Silver, wooden Sticks, with which they stir these Metals, and impregnate them therewith: Others mix powder'd Coals with Solutions of Gold and Silver: Others make an Ink of Gold and Silver, with which they inscribe, on Paper, the Matter to be reduced. Others, instead of Sand, sprinkle with Calx of Gold and Silver the Letters written on Paper: Others employ Crucibles, with a double Space between, the lower of which is full of Gold and Silver, and this they break in the Process; Others employ Sticks, internally hollow, and full of Gold and Silver: Others fill the Coals with Gold, and cover the Crucibles with them: Others secretly, and by Slight of Hand, throw in Gold and Silver: Others, instead of common Mercury, take an Amalgama of Gold; besides many other Methods, which Impostors have contrived, and which are rehearsed by *Crugnerus, Kircher*, and *Michael Mejerus*, who, in his *Examen of Chymical Cheats*, describes above twenty-nine other Impostures.

Such as deny the Transmutation, alledge the great Disagreement among Chymists themselves about its proper Matter; while some search for it in Sulphur; others in Vitriol; others in Mercury; others in Arsenic; others in an uncommon Mercury, such as the returning Sun in the Month of *March* diffuses every-where, and which is to be gather'd ripe in the Month of *October*; and some even in cheaper Materials: Hence *Kircher* would chuse the mean Way, and neither assert the Impossibility of Transmutation, nor even that it is perform'd in the manner Alchemists suppose, so as to be genuine, and much more noble and pure than the natural Gold; and he rejects that Operation of the Stone, which consists in Calcination, in the Separation, Conjunction, Putrefaction, Coagulation, Cibation, Sublimation, Fermentation, Circulation, and in fine, Projection of the four Elements: But against this Opinion of *Kircher*, *Solomon de Blawenstein*, as also *Valerianus Bonvicinus* have written with great Acrimony. But *Zwelffer* opposes *Kircher* with great Moderation. Many, on the contrary, assert the Transmutation as a Certainty; and they attempt to teach its Preparation. *Joh. Dan. Mylius* gives us a Catalogue of them from the *Arabs, Greeks, Spaniards, French, Italians, English*, and *Germans*. And *P. Borellius* enumerates their Writings.

It is not my Design to set up for Umpire in this Dispute; nor do I adduce the Testimonies of past Ages, and the Instances of *Raymund Lully, Arnoldus de Villa nova, Paracelsus, Sendivogius, Anton. Bragadinus* a *Venetian, Trevisanus, Turnheiserus*, and others, who are said to have made chymical Gold; seeing, in our curious Age, some very certain Experiments were made, outweighing the Reasons adduced to the contrary; and the presenting these to the Reader may, it is hop'd, be acceptable, as they are taken from authentic Accounts.

Dan. Sennertus says, that the other Metals may be reduced into Gold, a Thing that has been often prov'd in our Days; and what *Alexander Seaton*, a *Scotch* Man, has done at *Cologne, Basil*, and other Places, is very well known; on which Head may be seen the History of the Transmutation of Metals by *Ewaldus de Hogelande*, and the Writings of *Andr. Libavius*, which he publish'd in Defence of the Art of Transmutation.

To derogate from the Testimonies of so many excellent Persons, says *Cornelius Martinus*, of *Antwerp*, who in their Writings solemnly affirm, that they had seen with their very Eyes, and not only felt with their Hands, but that they had accomplish'd the Transmutation of one Metal into another, would seem to be acting the Part of an imprudent Person, and not that of a Philosopher. When, in a public Disputation, this *Cornelius Martinus* refuted by many Arguments the Notion of the Stone, a certain Nobleman, standing up in the Company, order'd Coals and Lead to be brought him; and in the Presence of *Martinus* and others, throwing a certain Tincture into the fus'd Metal, by means of it he transmuted the melted Lead into Gold; and upon this *Martinus* recanted his former Opinion.

Joh. Baptista Van Helmont confesses of himself; "I am "obliged to believe the Stone that makes Gold and Silver, be- "cause at different times, with my own Hand, I made the "Projection of one Grain, I think, upon some thousand "Grains of hot Quicksilver; and, to the Admiration of many "who were present, the Business succeeded in the Fire, as "Books do promise. That Stranger who gave me the Gold "(for he gave me about half a Grain, with which I trans- "muted nine Ounces and three Quarters of Quicksilver) had "at least so much of it, as was sufficient to transmute 200,000 "Pounds into Gold." He confirms the same Thing in his Treatise *de Vitâ æterna* towards the End; and more fully in his Treatise, intituled, *Demonstratur Thesis.*

In 1648. one Grain was sent to *Prague* to the Emperor *Ferdinand* III. with which three Pounds of Mercury were converted into Gold. The Story is more accurately told thus by others. The Nobleman, who in the Presence of his Imperial Majesty reduc'd, with one Grain of the Powder, Mercury into Gold, was call'd *Richthausen*, and whom the Emperor made a Baron, with the Title of *De Caos*. From this transmuted Gold his Imperial Majesty order'd to be struck a Medal with particular Inscriptions on each Side; on one Side, the Figure of a naked young Man, with a Sun instead of a Head, and his Right Hand lifted up holding *Apollo*'s Lyre, and, in his Left Hand hanging down, *Mercury*'s *Caduceus*, with this Device, *Divina metamorphosis exhibita Pragæ* 15 *Jan.* 1648. *in præs. S. Cæs. Maj. Ferdin.* III. On the Reverse, *Raris hæc ut hominibus nota est ars, ita raro in lucem prodit. Laudetur Deus in æternum, qui partem infinitæ suæ scientiæ abjectissimis suis creaturis communicat.* This Medal, afterwards found in the Emperor's Escritoire, was by the Emperor *Leopold* given to *Zwelffer* to be struck and grav'd in Brass, as *Zwelffer* himself testifies in his *Mantissa pharm. Spagyr.* where we have a Figure of it, as also in *Becher*'s *Oedipus Chemicus*. In what manner, and from whom this *De Caos* had the Powder, *Monconnys* gives an Account, (as the Electoral Bishop of *Mentz*, at the Diet of *Ratisbon* in 1664, had inform'd him) whose Words are to the following Purpose: "There liv'd one *La Busardiere* in the House of a certain "Nobleman (suppos'd to be the Count *de Schlick*) at *Prague*: "This Man, falling ill, and at the Point of Death, writ to his "Acquaintance *De Caos*, and begg'd of him to come to "*Prague*, as soon as possible; but the sick Man died some "Hours before *De Caos* came, and, after his Arrival, inquir-

" ing whether he had left any thing, the Maſter of the Houſhold " ſhews him a certain Powder, entruſted to his Care, tho' " he did not know its Uſe. This Powder was carried off by " ſtealth by *De Caos*, and with it he made ſeveral Projections; " the firſt of which was made in the Preſence of the late Em- " peror, who caus'd a Medal to be ſtruck of this Gold, on " one Side of which was the Character of *Mercury*, and, on " the Reverſe, the Day and Year it was ſtruck." Thus far *Monconnys*, who, in the Deſcription of the Medal, which he had not ſeen, differs from *Zwelffer*, who was an Eye-witneſs, and conſequently is of greater Credit in his Account of it.

Beſides, *Monconnys* was told at *Ratisbon* by Count *de Par*, Chamberlain to the late Emperor, that an unknown Perſon had offer'd the Emperor a little of a Powder that remain'd at the Bottom of a ſmall Box, which Powder, along with the Box, being put on a fus'd Maſs of equal Parts of Mercury and Silver, exhibited, with burning the Box, ſo ſtrong a Tincture, that, after that extraordinary red Maſs was broken and cut thro', it internally exhibited a great many red Veins like Blood; an Indication that the Powder was ſtill two ſtrong. After Re-fuſing that Maſs with the Addition of new Matter of the ſame Weight as at firſt, all that was converted into Gold was upwards of twenty-four Carats, in reſpect of Colour. This Perſon had receiv'd the Powder from another, and therefore he knew not the Secret of preparing it.

The ſame Count *de Par* told, that at another time a certain old Man came to the Emperor, and brought him a little of a certain Powder, and begg'd that it might be tried, becauſe he believ'd it would poſſibly be of ſome Uſe. The Emperor orders, that he ſhould return in three Days; and upon trying the Powder, eight Ounces of Mercury were converted into perfect Gold: Upon which the Emperor order'd to bring the Man, but by this time he was gone, and never after ſeen.

Strobelberger, an Apothecary at *Ratisbon*, told *Monconnys*, how a certain Merchant at *Lubeck* (who but little apply'd himſelf to merchandizing, but was Maſter of the Art of fixing and converting Lead into Gold) gave *Guſtavus*, King of *Sweden*, a Maſs of Gold of 100 Pound Weight, of which the King order'd to coin Ducats; and to diſtinguiſh them, on one Side was the King's Effigies, and on the Reverſe the Royal Arms, with the chymical Characters of Sulphur and Mercury on each Side: And from the above-mention'd Apothecary *Monconnys* had one of the Pieces. The Merchant, after his Death, tho' for many Years before he had given over Trade, and tho' he was never ſucceſsful in it, left an Eſtate of 17,000,000 Crowns. I myſelf had a Preſent made me of one of theſe Ducats by *Ludovicus de Schonleben*, and mark'd with the Characters of Sulphur and *Mercury*.

Georgius Fredericus de Greiffenclau, Archbiſhop of *Mentz*, order'd to coin Ducats from Mercury converted into Gold, and they are mark'd with the Character of *Mercury*.

Beſides the Projection, made by *De Caos* in the Preſence of the Emperor, he perform'd another before the Great Vicar of *Mentz*, and the Archbiſhop himſelf; and this, as the Elector himſelf told *Monconnys*, he effected with all the Precautions which Philoſophers uſually employ in ſuch an Operation: He took a ſmall Pill like a Lentil, prepar'd from that Powder with Gum Tragacanth, that, uniting together, they might the better cohere: He rolled this Pill in Wax, which he put into the Bottom of a Crucible, and laid upon it four Ounces of Mercury, and put it into a Fire of Suppreſſion. After a ſtrong Blaſt-heat for half an Hour, upon removing the Coals, the Gold was ſeen fus'd, yet with very red Rays, which are otherwiſe commonly green. He, therefore, thought that the Gold was ſtill too generous; and that, therefore, it was neceſſary to take it down by the Addition of Silver. The Elector himſelf threw in ſome Bits of Silver; and after a perfect Fuſion, when it was poured into the Ingot, there was a beautiful Maſs of Gold, but which was found ſomewhat acrid, the Cauſe of which *De Caos* aſcrib'd to the Smell of Braſs, which happen'd to be found in the Ingot; that, therefore, it was very proper to ſend it to the Mint to be run, after which it was very beautiful and ſweet: And the Warden of the Mint affirm'd, that he never ſaw a more beautiful Piece; that it was above twenty-four Carats; and what is greatly to be admir'd is, how that Acidity could be taken off by one ſingle Fuſion; and the Elector promis'd *Monconnys* a Bit of this Gold. *Becher*, in his *Oedipus Chymicus*, alſo confirms this very Thing: " The " ſame Perſon, ſays he, who gave the Tincture to the Em- " peror *Ferdinand*, repeated the ſame Thing ten Years ago at " *Mentz*, in the Preſence of the Elector and other great Per- " ſonages, in a pretty large Quantity: And this the Warden " of the Mint there, who coin'd Ducats of this Gold, can " teſtify."

The ſame Elector affirm'd, that, with one Grain of Powder, he had ſeen three Marks of Gold made from two Pounds of Mercury; and that, upon taking them out of the Crucible, as they were too high colour'd, by the Addition of three or four Drams of Silver they were all converted into Gold.

In what manner an unknown Perſon, meanly dreſs'd, and pretending to be born in the North of *Holland*, came *December* 27. 1666. to *Joh. Frederic Helvetius*'s Houſe at the *Hague*, and gave him a Bit of Powder, as big as a Rape-ſeed, with which, roll'd up in Wax, and thrown into ſix Drams of melted Lead, the Lead was tranſmuted into Gold, the ſame *Helvetius* relates in a Treatiſe intituled *Vitulus Aureus*. This Gold, put into the Hands of *Boreliu:*, General Aſſayer of the Mint in *Holland*, and examin'd, was found ſo extraordinary, that it ſtill tranſmuted ſome Part of the Silver thrown into the Gold in the Aſſay.

The Honourable Mr. *Murray*, in a Letter to *Monconnys*, dated *Auguſt* 17. 1664. likewiſe teſtifies, that Prince *Rupert* had it from the preſent Elector of *Mentz*, that the Projection of Gold was ſucceſsfully perform'd in his Preſence, and that the ſame Prince *Rupert* had in 1662. given to King *Charles* a large Piece of Gold, made at *Inſpruck* by the ſame Perſon, who gave the Powder to the Elector; and this Story Mr. *Murray* mention'd in the Preſence of *Monconnys*, as alſo the Aſſay he had made of the Gold by the King's Orders.

CHEMOSIS, χήμωσις (corruptly χόμωσις) from χαίνω, to gape, is a Diſeaſe of the Eyes, proceeding from an Inflammation, when the White of the Eye ſwells above the Black, and overtops it to ſuch a Degree, that there appears a ſort of Hiatus or Gap between them, whence it takes its Name. The Author of the *Definitiones Medicæ* defines it to be an Elevation of the Membrane which ſurrounds the Eye, and is called the *White*, being an Affection of the Eye like white Fleſh. *Galen*, *de Euphoriſtis*, calls it a red and carnous Inflammation of the Cornea Tunica. *Paulus*, *Lib.* 3. *Cap.* 22. ſays it is called a *Chemoſis*, when, through a vehement Inflammation, both the Eyelids are turned outwards in ſuch a manner, as ſcarce to cover the Eye, and the White of the Eye appears higher than the Black, and red, and occupies a good Part of the Black.

CHENALOPEX, χηναλώπηξ, from χὴν, a Gooſe, and ἀλώπηξ, a Fox. See VULPANSER.

CHENOCOPRUS, χηνόκοπρος, from χὴν, a Gooſe, and κόπρος, Dung, Gooſe-dung. It is very acrimonious, and of a reſolvent Quality, and commended in the Jaundice. Some Authors relate how a Monk cured all Patients labouring under a Jaundice, only by giving them in the Morning, for eight Days together, a Doſe of Gooſe-dung in Wine, for which Purpoſe he always fed two Geeſe, and made of their Dung a ſecret and precious Remedy to thoſe Multitudes of icterical People, who flock'd to his Houſe for a Cure. The beſt is reckoned to be the greeniſh, which is gather'd in the Meadows in the Spring-time, and, being dry'd with a moderate Heat, and pulveris'd, is given from half a Dram to a full Dram at a Doſe. *Ettmuller* ſays, that the Dung is more effectual, if the Geeſe feed before-hand upon anti-icterical Herbs. It is commended alſo in the Scurvy, being taken frequently in Wine, either in the Form of a Powder, or of a Decoction. Gooſe-dung is, beſides, a potent Diuretic, and therefore uſually recommended in hydropical Caſes. It is given internally alſo in intermitting Fevers, for the Cough, and in difficult Labours. But *Ludovicus de Pharmacia* ſays, there is generally but little Good to be expected from this ſordid Medicine.

CHENOPODIO-MORUS. Mulberry-blight.

The Characters are;

The Fruit is ſucculent, like the Mulberry or Strawberry.

The Species are,

1. Chenopodio-morus; major. GREAT MULBERRY-BLIGHT, COMMONLY CALL'D STRAWBERRY SPINAGE. *Atriplex*, *Mori Fructu*, *major*, *ſeu fragifera major*. M. H. 2. 606. *Spinachia*, *fragifera*, Aldin. H. Farneſ. 85. a.

2. Chenopodio-morus; minor. LESSER MULBERRY-BLIGHT, COMMONLY CALL'D BERRY-BEARING ORACHE. *Atriplex*, *Mori Fructu*, *minor*, *ſeu fragifera minor*. M. H. 2. 604. *Atriplex*, *ſylveſtris*, *Mori Fructu*. C. B. P. 119. *Atriplex*, *ſylveſtris*, *baccifera*. Cluſ. H. 135. a.

I find no medicinal Virtues attributed to theſe Plants.

CHENOPODIUM, CHENOPUS, χηνοπόδιον, χηνόπους, from χὴν, a Gooſe, and πούς, a Foot. *Gooſe-foot*.

The Characters are;

The Calyx is quadrifid, or quinquefid, with deep Inciſures, which produces eight or ten Stamina in the Bottom.

The Ovary is furniſh'd with a long, forked, expanded Tube, which, when ripe, becomes an orbicular flat Seed, inclos'd within a kind of quadrifid or quinquefid Star. The Leaves are large, ſinuous, or long.

Boerhaave takes notice of fourteen Species of the *Chenopodium*, beſides two more, which have Leaves like *Kali*.

1. Chenopodium; folio triangulo. See BONUS HENRICUS.

2. Chenopodium; Betæ folio. T. 506. *Blitum*, *minus polyſpermum à ſeminis copiâ*. C. B. P. 118. M. H. 2. 599. *Blitum*, *erectius*, *ſive* 3 *Tragi*. J. B. 2. 967. a.

3. Che-

3. Chenopodium; folio laciniato; comâ purpuraſcente. See ATRIPLEX.

4. Chenopodium; Pes Anſerinus; 1. Tabern. Ic. 427. T. 506. *Atriplex, dicta Pes Anſerinus.* J. B. 2. 975. *Atriplex, ſylveſtris, latifolia.* C. B. P. 119. M. H. 2. 604. *Pes Anſerinus.* Dod. p. 616. a.

This is eſteem'd a good Uterine and Antihyſteric; and is ſaid to provoke the Menſes, and to expel the dead Fœtus, and the Secundines.

5. Chenopodium; Pes Anſerinus; 2. Tabern. Ic. 428. T. 506. *Atriplex, ſylveſtris, latifolia, acutiori folio.* C. B. P. 119. M. H. 2. 604. *Atriplex, dictus Pes anſerinus, altera ſive rameſior.* J. B. 2. 976. a.

6. Chenopodium; folio ſinuato candicante. T. 506. *Atriplex, ſylveſtris, folio ſinuato, candicante.* C. B. P. 119. M. H. 2. 604. *Atriplex, ſylveſtris.* J. B. 2. 972. a.

7. Chenopodium; anguſtifolium; laciniatum; minus. T. 506. *Atriplex, anguſtifolia, laciniata, minor.* J. B. 2. 972. a.

8. Chenopodium; folio laciniato; coma vireſcente. T. 506. a.

9. Chenopodium; fœtidum. See ATRIPLEX OLIDA.

10. Chenopodium; Lini folio villoſo. FLAX-LEAV'D ORACHE, COMMONLY CALL'D SUMMER CYPRESS, OR BELVEDERE. T. 506. *Linaria, Scoparia,* C. B. P. 212. *Linaria, Belvedere dicta.* J. B. 3. 462. *Oſyris.* Dod. p. 101. *Herba Studioſorum.* Tabern. a.

11. Chenopodium; Ambroſioides; folio ſinuato. See BOTRYS.

12. Chenopodium; Ambroſioides; Mexicanum. See BOTRYS.

13. Chenopodium; Ambroſioides; Mexicanum; fruticoſum. *H.* 14.

14. Chenopodium; Stramonii folio, Juſſieu. *Atriplex, ſylveſtris, major, anguloſo folio.* Barr, Ic. 540. *Atriplex, Chenopodia, folio Daturæ.* H. R. Monſ. *Atriplex, odore & folio Daturæ, minori tamen,* Læl. Triumf. apud Frat.

Chenopodium with Leaves reſembling the *Kali.*

There are two Species of this,

1. Chenopodium; ſedi folio minimo; folio Kali; ſemine ſplendente; annuum. *Kali, minus, album, ſemine ſplendente.* C. B. P. 289. M. H. 2. 609. *Kali, album.* Dod. p. 81. *Kali, minus,* H. Eyſt. Æſt. 6. F. 1. Fig. 3. a.

2. Chenopodium; ſedi folio minimo; fruteſcens; perenne. *Kali, fruticoſum, minus, flore minore.* M. H. 2. 611. *Sedum, minus, fruticoſum.* C. B. P. 284. *Sedum, mininum, arboreſcens, vermiculatum, flore luteo.* J. B. 3. 695. *Sedum, minimum, arboreſcens, Lobelii.* Lugd. 1132. H. R. D. *Boerhaave's Index alter Plantarum, Vol. 2. p.* 90.

CHEOPINA. See CHOPINA.

CHERAMIS, χηραμὶς, is expounded by *Erotian* on *Hippocrates*, the Hollow of a Shell-fiſh call'd *Myax*; and it takes that Name, he ſays, from χηραμὸς, which ſignifies a hollow Place. It frequently occurs in *Hippocrates*, and ſeems not much different from the *Chema*, which, in *Galen's Exegeſis*, is expounded by it. *Cornarius* alſo, on a Place in *Hippocrates*, *Lib.* 1. περὶ γυναικ. explains *Cheramis* by the Meaſure of a *Chema*, and *Calvus* on another Paſſage in *Lib.* περὶ γυναικ. φύσ. expounds it by a Pugil. See CHEMA.

CHERAS. The Struma or Scrophula, a Tumor in which Kernels ariſe. *Johnſon.*

CHEREFOLIUM. See CHÆREFOLIUM.

CHERIO is nothing but the Heat or Cold of Things, which leaves the Subſtance, and paſſes into Nature. Take an Example in Camphire: This has its Coldneſs of its *Cherio*, for which Reaſon it is a preſent Remedy in Inflations; but in its primary and eſſential Qualities [*Subſtantia ſuarum primarum*] it is ſtill hot, in the ſame manner as Sulphur and Spirit of Salt, together with Mercurialis, and precious Stones and Herbs. Beſides, whatever Nature produces has its *Cherio*, that is, elementary, external, accidental Subſtances. It is oppos'd to *Relolleum*, which ſignifies the internal intrinſical Nature. *Paracelſus de Grad. et Compoſ. Lib.* 2. *Cap.* 3, 4. According to *Johnſon*, the *Cherio* is the occult accidental Virtue of the external Elements, and the unmodify'd Nature of Heat and Cold.

CHERIONIUM is that in which Nature cannot be alter'd: Thus Cryſtal, harden'd by Nature, cannot be melted, as that which is made by Art. *Johnſon.*

CHERMES & *Coccus Baphica*, Offic. *Chermes ſeu Coccus inſectorius*, Park. Theat. 1395. *Kermes ſive Chermes*, Ind. Med. 63. *Chermes, Grana tinctorum, Coccus Baphica, Coccus inſectorum*, Mont. Exot. 9. *Chermes, Kermes, Coccum inſectorium, Coccus Baphica, Granum tinctorium, Scarlatum*, Chom. 313. *Coccus ſeu Coccum ex Ilice*, Bram. Hiſt. *Cocci radicum*, p. 2. KERMES-BERRIES.

This Grain is found adhering to the Branches, but rarely to the Leaves, of that Shrub, which *Dioſcorides* calls the κόκκος βαφικὴ, and which is now commonly call'd *Ilex aculeata Cocci Glandifera.* The Grain itſelf is of a ſpherical Figure, as large as a Pea or Lentil, ſmooth, ſhining, and of a blackiſh-brown Colour.

The Names aſſign'd to this Subſtance amount to a pretty ſatisfactory Proof, that its firſt Inventors were not all of the ſame Opinion, with reſpect to its Origin, or whether it was an animal or vegetable Production; for *Kermes*, among the *Arabians*, ſignifies a ſmall Worm; and κοκκὸς, among the *Greeks*, whence the *Latins* borrow'd their *Coccum*, imports no more than a Grain or Kernel; for which Reaſon, among the later *Greeks*, inſtead of the Word κοκκὸς, σκώληξ, which ſignifies a Worm, is always ſubſtituted; for theſe Grains are full of ſmall Worms, the Juices of which are celebrated for dying Scarlet, a Colour ſo much admir'd in all Ages. Hence the Worm is taken for the Grain itſelf.

Pauſanias is, by *Cluſius*, in the firſt Book of his *Hiſt.* repreſented as uſing the following Words: "In the Fruit of "the *Coccus* there is a ſmall Animal form'd, which, when the "Fruit is ripe, ſallies forth into the Air, becomes immediate-"ly capable of flying, and nearly reſembles a Gnat. But "they gather the Fruit of the *Coccus* before the Conception "of the Animal, whoſe Blood it is which is uſeful in dying "Wool." According to *Salmaſius*, every Species of the *Coccum Tinctorium* is, by the *Greeks*, call'd σκωλήκιον, which ſignifies a *ſmall Worm*, becauſe it changes itſelf into that Kind of Inſect; tho', at the ſame time, each Grain contains a large Number of theſe Animalcules, ſo that it ſeems ſurpriſing how the Cuſtom prevail'd of calling the Worm itſelf the Grain, in which it is produced.

After the moſt diligent Scrutinies of the Naturaliſts into this Matter, 'tis now certain, that the Production of the *Coccum Tinctorium* is owing to a certain Inſect, or ſmall Worm; and that it is, in Reality, nothing but a certain Nidus or Follicle, fill'd with the numerous Progeny of that Animalcule.

Tho' Authors are now agreed upon this in general, yet they run into different Sentiments with reſpect to the Generation or Formation of this Animalcule in the *Coccus*. But as an Enumeration of their Opinions, with regard to this, is foreign to our Deſign, we ſhall make no farther Attempt that way.

Among the Antients, according to *Dioſcorides*, in *L.* 4. *C.* 43. the beſt *Kermes* was thought to be produced in *Galatia* and *Armenia*; the next, in Goodneſs, in *Aſia* and *Cilicia*; and the next to that, in *Spain.*

At preſent the Kermes is produced and gather'd in *Europe*, in the Countries adjacent to the *Mediterranean* Sea; but that found in *Languedoc*, in *Provence*, is accounted the beſt. That this Shrub was not, at all Ages, proper for producing Kermes fit for Uſe, was known in the Days of *Pliny*. But when that Author, in the forty-firſt Chapter of his ninth Book, affirms, that, when it is one Year old, the Juice is languid, and, when four, good for nothing, it is obvious, this Aſſertion extends only to the Plant itſelf, and not to the Grains, which are collected yearly, as *Salmaſius* would have it. The Monks, indeed, according to the *Cenſura in Antidotarium Meſuæ*, diſtinguiſh the *Coccum Tinctorium* from the *Kermes Grains*; which latter, they maintain, are found about the Roots of certain Herbs, but in greater Plenty about ſuch Roots of the *Pimpinella* as are old and thick, lying, as it were, on the Surface of the Ground. But ſince this erroneous Opinion, peculiar to theſe Monks, is ſufficiently confuted by *Matthiolus ad Dioſcor.* and by *Cæſius*, we ſhall make no more mention of it, but conſider to what medicinal Uſes *Kermes* are applied. But, before we enter directly upon the Execution of this Deſign, we ſhall pave the Way, by giving ſome Obſervations and Experiments, which have a Tendency to illuſtrate the Nature, and diſcover the Properties, of the Kermes-grain.

Firſt, then, Count *Marſigli*, in his *Hiſtoire Phyſique de la Mer*, informs us, that the internal Matter of the Coccum is poſſeſs'd of a bitter and aſtringent Taſte, like that of the Bark of the Shrub which produces it: Hence 'tis obvious, that the Juice of the Vegetable, by which the Animal is nouriſh'd, ſtill retains its original Nature and Qualities.

Secondly, in *Garidel's Hiſtoire des Plantes qui naſſent aux environs d' Aix*, and in the *Ephemer. Nat. Curioſ. Vol.* 3. we are told, that Pigeons are very fond of the Kermes-grains, and give them to their Young, to which they frequently prove mortal; whilſt the older Pigeons with Difficulty eſcape the ſame Fate, by the Advantage of a Diarrhea, the Matter of which tinges the Walls of the Dove-coat with a reddiſh Colour.

Thirdly, Count *Marſigli*, in the before-cited Work, affirms, that the Subſtance of the Kermes-grains, mix'd with Vitriol in the Proportion, which, in Galls, is neceſſary for making Ink, produces a Subſtance of a black Colour, proper for anſwering the Purpoſes of Ink. But it cannot be hence infer'd, that the *Coccum Tinctorium* is a Species of Gall; but only, that the vegetable Matter, fit for making Ink, did not loſe its original Quality in the Body of the Animal which it nouriſh'd.

Fourthly, the laſt quoted Author informs us, that, with Oil of Tartar *per Deliquium*, it changes its lateritious Colour into that of a beautiful Crimſon, little inferior to Scarlet. With Water of Quick-lime the ſame Colour may be obtain'd, as

with

with the Oil of Tartar. With Spirit of Sal Ammoniac it is changed into a beautiful red Colour; not entirely ſo red as thoſe produced by the other two alcaline Liquors.

Fifthly, the ſame Author affirms, that, when mix'd with Spirit of Vitriol and Sulphur, it does not, in the leaſt, change its lateritious Colour, nor produce any Fermentation. With Spirit of Nitre it changes its lateritious Colour into one ſomewhat yellowiſh, without any kind of Fermentation. In Spirit of Vinegar its natural Colour becomes a little darker, and ſoon after a Precipitation happens.

Sixthly, the above quoted Author tells us, that in a Decoction of Mallow-flowers, as alſo in an Infuſion of Tourn-ſole, the Kermes-grains produce no Change; nor does their Solution, when ſprinkled upon blue Paper, in the leaſt alter its Colour.

Seventhly, *Antonius Heyde*, in his *Obſervationes Medicæ*, *Obſ.* 75. informs us, that Rain-water is deeply tinged by theſe Grains, as is commonly known. Diſſolved Pot-aſh, mixed with this Tincture, renders it more deep and pellucid, no Particles at the ſame time ſubſiding. Aqua-fortis renders the Colour fainter, and the Liquor itſelf turbid; whilſt, at the ſame time, rediſh Flakes gradually ſubſide. A few Drops of this Tincture, pour'd into a Solution of ſublimate Mercury, produce a Secretion of rediſh Flakes, which are precipitated to the Bottom. The bluiſh Colour of the Tincture of Guaiacum is not changed by an Admixture of the Tincture of theſe Grains: Hence 'tis obvious, that this Tincture is deſtitute of acid Particles, which ſeems alſo to be confirm'd by the preceding Experiments.

Eighthly, the above-mention'd Count *Marſigli* informs us, that two Pounds of the pure Subſtance of the Kermes-grains, without the Huſks, were diſſolved in Rain-water, and ſet by a gentle Fire, in order to acquire a due Thickneſs, with a View to try whether a ſolid volatile Salt could be obtain'd from the Kermes-grains: But this Experiment was not crown'd with Succeſs, tho' the greateſt Diligence and Care were uſed in carrying on the Proceſs. Two Pounds more of entire and recent Kermes-grains were, therefore, put into a luted Retort, with a Receiver adapted to it. Four Hours, or a little more, after the Diſtillation was over, the Degrees of Fire being in the mean time punctually obſerved, they at firſt yielded a Kind of aqueous Liquid, which, when inſpiſſated, aſſumed a Colour reſembling that of Blood; and when the oleous Particles began to aſcend, the whole Glaſs was fill'd with ſmall Clouds, produced by a certain Spirit of the volatile Salt; which, when the Spirit became cold, was obſerved adhering to the Sides of the Receiver. The *Caput Mortuum*, remaining in the Retort, weigh'd three Ounces. The whole remaining Part of the Matter, except a ſma'l Quantity deſtroy'd by the Fire in the Courſe of the Proceſs, conſiſted of a Subſtance which was fluid, aqueous, oleous, and impregnated with a colliquated volatile Salt. When this Liquor had abſorb'd all the volatile Salt which adher'd to the Sides of the Veſſel, it diffuſed a pretty ſtrong urinous Smell, like that obſerved in Spirit of Hartſhorn, tho' not entirely ſo ſtrong. The whole Liquor, filtrated thro' a Paper, left behind it three Ounces of a browniſh-colour'd Oil. The Liquor, when clear, purged from its oleous Parts, and put into a Cucurbit, yielded, by Diſtillation, ten Ounces of a Spirit richly impregnated with volatile Salt, of a penetrating urinous Smell, and ſo ſtrong, that it ſeem'd, as it were, to conſiſt of nothing but volatile Salt. Upon continuing the Sublimation, another, but weaker, Spirit was yielded. The Spirit, impregnated with the volatile Salt, when mix'd with a Decoction of Mallow-flowers, gave it a greeniſh-yellow Tincture, like that produced by a Mixture of the Decoction of Mallow-flowers with Sea-water. Such a Change is alſo produced in it by any Subſtance of a perfectly alcaline Nature. The Caput Mortuum, when firſt calcin'd, and afterwards elixiviated, the Moiſture being evaporated to a Dryneſs, yielded only half a Dram of fix'd Salt: This ſmall Quantity of fix'd Salt yielded, ſeems to evince, that the vegetable Nature of the Juice, by which the Animalcule is nouriſh'd, is not changed into an animal Nature.

From theſe Experiments *Marſigli* concludes, that the Subſtance of Kermes-grains is richly impregnated with a volatile Salt of an alcaline Nature. Mr. *Geoffroy* alſo, upon diſtilling Kermes-grains by the Retort, obtain'd urinous and volatile Liquors; which, when pour'd into the Tincture of Turn-ſole, produced no Change, but tinged the Tinctures of Roſes and Violets with a greeniſh Colour. From one Pound of Kermes he obtain'd half an Ounce of pure concreted volatile Salt, and about a Dram or two contaminated with a yellowiſh Oil. A large Quantity of fetid Oil was yielded, which was not black, but of a deep-yellow Colour, and thick, like Butter. Hence he concludes, that the Principles of the Kermes can be more properly compared to nothing than to the Products yielded by crude Silk, when chymically examined.

As for the medicinal Virtues of the Coccum Tinctorium, *Dioſcorides*, in the forty-third Chapter of his fourth Book, deſcribes them in the following manner: This Subſtance is of an inſpiſſating Quality; and, when triturated with Vinegar, is highly proper for anointing Wounds, and cut Nerves. *Matthiolus*, from *Galen*, informs us, that the Granum Tinctorium is poſſeſs'd of an aſtringent, and, at the ſame time, of a bitter Quality, both of which dry without creating Pain; for which Reaſon it is proper in large Wounds, eſpecially thoſe of the Nerves; for which Purpoſe ſome triturate it with Vinegar, and others with Oxymel. *Pliny*, in the fourth Chapter of his twenty-fourth Book, informs us, that it is to be laid upon recent Wounds, triturated with Vinegar; upon the Eyes, when affected with Defluxions, triturated with Water; and to be dropt into inflamed Eyes. From theſe Paſſages it is obvious, that the Antients thought Kermes proper, in Caſes where the Uſe of aſtringent, and conſequently of inſpiſſating and repelling Medicines was indicated. The Moderns, with the *Arabians*, aſcribe a highly corroborating and cordial Quality to the Kermes. The Cloth dyed with theſe Grains, commonly call'd Crimſon or Scarlet Cloth, is alſo highly extol'd on account of theſe Qualities, and is, for that Reaſon, uſed not only for bringing forth the Meaſles, by wrapping the Patient in it, but alſo for corroborating the Heart, by the Application of Epithems, wrapt up in it, to the Region of that Organ. The Application of a Piece of this Cloth is alſo thought good for curing Venereal Buboes. *Schroder*, in his *Pharmacopœia*, informs us, that it is a common Practice to tie a ſilken Thread, of this Colour, about the Parts affected with an Eryſipelas, in order to remove that Diſtemper. *Simon Pauli*, in his *Quadripartitum Botanicum*, affirms, that the Eruption of the Meaſles is greatly promoted in Children by wrapping them up in this Cloth; and that he has ſeen it ſucceſsfully applied, by Men of Skill, to Venereal Buboes. For preventing Abortion, and ſtrengthening the Fœtus, ſome Women uſe, as an infallible Remedy, wearing a Belt of this ſort of Cloth, next their Skins, all the Time of their Geſtation. Others uſe the like Belt for ſuppreſſing an immoderate Flux of the Menſes and Hæmorrhoids. *Ludovici*, in his *Pharmacopœia*, inſinuates, that theſe external Applications are none of the beſt and moſt effectual. "To add, ſays he, the Knap of "ſcarlet Cloth to medicated Bags and Epithems, is a Practice "more oſtentatious than uſeful: To tie up bleeding Parts with "a ſcarlet Thread, or to ſolicit the Eruption of the Meaſles, "by wrapping the Patient in ſcarlet Cloth, ſeems a Practice "only worthy of ignorant Women." And *Hoffman*, in his *Clav. Schrod.* informs us, that, when ſcarlet Cloth is uſed for promoting the Eruption of the Meaſles, the Effect muſt rather be produced by the Force of the Patient's Imagination, than any expulſive Virtue lodged in the Cloth itſelf. Nor, according to *Lanzonius*, in *Eph. N. C. D.* 3. *a.* 1. *o.* 26. does a ſcarlet ſilken Thread, tied about the Part, remove the Eryſipelas. If we conſider, that the Principles which compoſe the animal Body have a Tendency to an alcaleſcent Diſpoſition; if alſo we conſider, that the Animalcules of the Coccum Tinctorium as yet retain ſome Properties of the Subſtance by which they were nouriſh'd, eſpecially the aſtringent Qualities peculiar to the Juice of the Shrub; we cannot deny, that the Kermes-grains contain very conſiderable Virtues, which is indicated by their bitter and aſtringent Taſte; in conſequence of which Quality it is corroborating, and calculated for removing the Laxity of the Fibres, and correcting the Peccancy of the aceſcent Humours. It is alſo obvious, that the ſaline alcaline Subſtances it yields in a chymical Diſtillation, are proper in Diſorders, where an Acid is to be corrected and ſubdued. Hence 'tis evident, whether we uſe the alcaline Salts produced by the Fire, or the unchanged Subſtance of the Grains, that the Preparations are only to be commended as excellent Corroboratives, and Cordials, in particular Caſes; but not in every Caſe indiſcriminately, and without having a regard to the predominant Fault in the Conſtitution. Hence the Reaſon is plain, why the Powder of Kermes-grains, in a poach'd Egg, with the Addition of a little Frankincenſe, or Maſtich, is ſucceſsfully uſed by the *Italian* and *Portugueſe* Women, for preventing a Miſcarriage; and why, according to *Cluſius*, the Powder of Kermes is properly exhibited to the Women of *Montpelier* in difficult Labours, and Loſs of Strength; for, by corroborating Medicines, Abortion is prevented, where Fibres, in a too lax State, are to be braced, that they may not loſe what ought to be retain'd. The Expulſion of the Fœtus, on the other hand, is promoted by increaſing the contractile expulſive Force of the Parts, which depends on the Corroboration of their conſtituent Fibres. As for the medicinal Virtues of Scarlet, or any other red Cloth, the deeper the Cloth is tinged with a ſtrong and lively Red, the more powerfully it reflects the Heat ſent from the Part to which it is applied. Hence its medicinal Effects are owing to its heating Quality, ſince it neither abſorbs nor diſſipates, but powerfully reflects the Heat it receives. The ſame is applicable to ſcarlet Silk Threads. See ALKERMES.

CHERMES *Mineralis*. See ANTIMONIUM.

CHERNIBION, χερνίβιον, in *Hippoc. Lib. 7. Epid.* signifies an Urinal.

CHERSA, call'd alſo *Fecula*, in ſome Authors ſignifies a Root reduced to a farinaceous Powder; which Way of Preparation ſome condemn as exhauſting the Virtues of the Drug, and rendering it good for nothing; but this is to be eſtimated in proportion as it conſiſts of more or leſs volatile or fixed Parts.

CHERSÆA, χερσαία. Earthy. An Epithet of one of the three Species of Aſps. See ASPIS.

CHERSYDRUS, χέρσυδρος, from χέρσος, Earth, and ὕδωρ, Water. An amphibious Serpent, ſo call'd, becauſe it lives firſt in watery Places, whence it is call'd *Hydrus*; after which it ſhifts its Habitation, and lives on dry Ground, and thence has its compound Appellation *Cherſydrus*. While it lives on Land, it is more poiſonous than ordinary; for, in moiſt and watery Places, from its plentiful Feeding on humid Aliment, its Poiſon is rendered leſs pure; but, when it becomes an Inhabitant of the Land, its Poiſon becomes purer and more exalted. It reſembles a ſmall land Aſp, only it has not ſo broad a Neck, which is the only remarkable Difference between the Cherſydrus and the Aſp.

The Bite of this Serpent, beſides the common Symptoms incident to thoſe who are bit by other venomous Serpents, ſuch as a Tumor, a continual burning Pain, a Lividneſs and Feculency of the Part wounded, a Vertigo, Faintneſs, with bilious and fetid Vomitings, induces alſo ſtrange and diſorderly Motions of the whole Body, particularly of the Belly; and the Patient dies within three Days.

The common Remedies, and theriacal Antidotes, are of Service in this Caſe; in particular,

> Take of Pills of Cypreſs, and of Myrtle-berries, each one Dram: Bruiſe them, and give them in Honey of Roſes, or Mulſum; and to the Place affected apply Quick-lime, and the like, with Oil. *Aetius, Tetrab. 4. Serm. 1. Cap. 35.*

Celſus, Lib. 5. Cap. 27. adviſes two Drams of Allheal (*Panacea*) or Laſer, or the Juice of Leeks, to be taken in half a Pint of Wine, and the Patient to eat plentifully of Savory. To the Wound he recommends the Application of Goats Dung, boil'd in Vinegar, or Barley-meal and Vinegar, or Rue or Cat-mint bruiſed with Salt, and Honey added thereto, which is alſo of equal Service againſt the Bite of the *Ceraſtes*.

CHERVA. Cataputia. *Johnſon.*

CHERUHUNDA. The *Solanum*; *fruticoſum*; *Indicum*; *Fructu rubro. Boerhaave, Index alter, Part 2.* See SOLANUM.

CHEUSIS, χεῦσις, from χέω, χεύω, or χύω, to pour out; ſo *Foeſius* reads the Word, *Lib. 6. Epid. Sect. 8. Aph. 23.* and underſtands by it a Liquation or Fuſion, that is, an Attenuation or Thinneſs of the Tears, to which πάχος, or Craſſitude, is oppoſed. He ſeems to be in the right; tho' all other Interpreters read γεῦσις, and take it for the Taſte.

CHEZANANCE, χεζανάγκη, from χέζω, to go to Stool, and ἀνάγκη, Neceſſity, ſignifies, in general, any thing that creates a Neceſſity of going to Stool; but particularly, in *P. Ægineta*, is the Name of an Ointment prepared of Honey and Alum, and boil'd till it be red, with which the Anus is anointed, and thereby a copious Evacuation of the Belly is procured, tho' not without Labour and Difficulty. This *Paulus* has taken from *Oribaſius, Synopſ. Lib. 3. Aetius* alſo, *Tetrab. 1. Serm. 3. Cap. 135.* gives the Name *Chezanance* to a purging Plaiſter applied to the Navel.

CHIA TERRA.

Terra Chia, Offic. Charlt. Foſſ. 4. Worm. 8. Aldrov. Muſ. Metall. 247. Matth. 1391. Calc. Muſ. 125. EARTH OF CHIOS.

Chuſe ſuch Earth as is whitiſh, inclining to an Aſh-colour, and like the Earth of *Samos*. It is cruſty and white, (*Oribaſius* reads λευκὴ, thin) but made up in Maſſes of different Forms, and has the ſame Virtues as the *Samian* Earth. It clears the Skin of Wrinkles, and brightens it, and cauſes a florid and lovely Colour not only in the Face, but over all the Body; and it is uſed in the Baths as a Smegma, to ſcour and cleanſe the Skin, inſtead of Nitre. *Dioſcorides, Lib. 5. Cap. 174.*

It is brought from the Iſland of *Chios* (*Scio*, in the *Archipelago*); and, among other things, is good for Ambuſtions. Terra Samia, or Cimolia alba, may be ſubſtituted in its ſtead. *Dale.*

CHIACUM COLLYRIUM, in *P. Ægineta, Lib. 7. Cap. 16.* is a Remedy for the Eyes, in which the dry Ingredients were bruiſed and prepared in *Aminæan, Falernian*, or ſharp *Chian* Wine.

CHIADUS, in *Paracelſus*, means the ſame as *Furunculus. Caſtellus.*

CHIASMOS, χιασμὸς, is the Concourſe or Meeting of any two Things under the Form and Figure of a Croſs, or the Letter X *Chi*, whence it is named. The Adverbs *Chiaſti*, χιαστὶ, and *Chiaſticos*, χιαστικῶς, ſignify the ſame thing: Thus the optic Nerves are ſaid to meet χιαστικῶς, ſo as to croſs each other. *Caſtellus.*

CHIASTOS, χιαστὸς. The Name of a Bandage in *Oribaſius*, ſo call'd from its reſembling a Croſs, or the Letter X.

CHIBOU. See ICICARIBA.

CHIFFIR, CHIFIR, according to *Libavius*, in the Preparation of the Philoſophers Stone, is call'd *Lapis Animalis*, as the Mineral is call'd *Chaos minerale*. But *Johnſon* ſays, that the *Chifir minerale* is by ſome interpreted Gold, but that he rather takes it to be any Sulphur of the metalline Kind. *Caſtellus. Johnſon.*

CHILIODYNAMON, χιλιοδύναμον, from χίλιοι, a thouſand, and δύναμις, Virtue. An Epithet of the Herb *Polemonium*, in *Dioſcorides, Lib. 4. Cap. 8.* beſtow'd upon it on account of its many Virtues. See POLEMONIUM.

CHILIOPHYLLON, χιλιόφυλλον, from χίλιοι, a thouſand, and φύλλον, a Leaf. The Herb Milleſolium.

CHILLI. A Species of *Indian* Pepper. See PIPER.

CHILON, χείλων, one who has great Lips, or, in one Word, *Labeo*. Thus, among the Species of Fiſhes under the Claſs of *Capitones*, ſome are call'd *Chilones*, that is, *Labeones. Caſtellus.*

CHIMALATH, CHIMALATL. See CORONA SOLIS.

CHIMETHLON, χείμεθλον. See PERNIO.

CHIMIA. The ſame as CHYMIA, or CHEMIA.

CHIMOLEA LAXA. An obſcure Term in *Paracelſus, de Morbo Gallico, Lib. 2. Cap. 4.* by which he intends to ſignify the Powder which is ſeparated from the Flowers of ſaline Ores.

CHIMUS. A Term in *Paracelſus*, the Meaning of which is not certain; only he ſays, that *Chimus, Realgar*, and *Gold*, are all one Ore, and yet have each of them a different Nature and Virtue; but, from what follows, we may infer, that by *Chimus* we are to underſtand the Droſs or feculent Maſs of the Ore. *Caſtellus.*

CHINA, Offic. Chab. 116. *China vulgaris Officinarum*, Ger. Emac. 1618. *China Radix*, C. B. Pin. 296. Ogilb. Chin. 1. 213. 2. 678. *China Radix Officinarum*, Park. Theat. 1578. *Chinæ Radix*, J. B. 2. 120. Raii Hiſt. 1. 657. Acoſt. Cluſ. Exot. 274. *China Orientalis ſeu Smilax aſpera Chinenſis* Lampatam *dicta in* MSS. Herman *Sankira, Smilax minus ſpinoſa fructu rubicundo, radice virtuoſa Chinæ dicta*, Kemph. Amœn. Exot. 781. CHINA-ROOT.

China-root is thick, tuberous, nodous, or full of Joints, light, ligneous, eaſily putrifies, is of a pale-red Colour on the Outſide, and white within, of a farinaceous and earthy Taſte, with ſomething of Aſtringency, but has no Smell. It is ſuppoſed to be the Root of a rough ſort of Smilax, call'd *Lampatam*, in *China*, where it grows plentifully; and, being exported from thence, is call'd *China*. They find alſo in *America*, and eſpecially in *New Spain* and *Peru*, a Root much like this, but more oblong, and ſomewhat redder on the Inſide; they call it *Weſt Indian* China, but it is inferior in Virtue to the *Eaſt Indian* China, which comes from *China*, or the neighbouring Countries.

This Root was firſt known in *Europe* in the Year 1535. according to *Thevet*, in his Coſmography; and *Veſalius* ſeems to agree with him, when he informs us, in his Epiſtle concerning the Root of China, that while he was at *Venice*, and employ'd by the principal Doctors and Profeſſors of Medicine in viſiting the Sick, this Root was imported thither, and that it was highly commended, and extraordinary Effects were expected from it. Now *Veſalius* was born in the Year 1513. and conſequently firſt entering upon the Practice of Medicine at *Venice* about the Age of two or three and twenty, when this Event happen'd, we muſt aſſign the Time of it about the Year 1535. or 1536. and the rather becauſe we are aſſured by *Andreas*, in his *Bibliotheca Belgica*, that, in the Year 1537. *Veſalius* was public Profeſſor of Anatomy at *Padua*.

The Decoction of this Root was prepared after the following Method for the Cure of the Venereal Diſeaſe:

> They took an Ounce of freſh China-root, free from Putrefaction, and cut it into Bits, or thin Slices, and let them macerate four-and-twenty Hours in ſix or eight Pints of Spring-water, lukewarm; after this they boil'd it in a pretty large Earthen Pot, with a Cover, over a ſlow Fire, to the Conſumption of one Third; then ſtrained the Decoction, and ſet it aſide in a Glaſs Bottle, ſtopped, keeping it in a tepid State for daily Uſe.

The Patient then, being firſt prepared by the Uſe of Evacuations, as Purgation, and Phlebotomy, if it was thought convenient, took a Draught of this Decoction warm, to the Quantity of ten or twelve Ounces, every Day, very early in the Morning, and compoſed himſelf in his Bed, well cover'd with Clothes, to ſweat for two or three Hours. After this, wiping off the Sweat, he was permitted to riſe out of his Bed, and, being well cloth'd, to walk about his Chamber; and after ten or twelve Days, if the Weather was mild, to walk abroad,

taking care to keep himself warm. As to Diet, he was indulg'd more Freedom, than if he had took a Decoction of Guaiacum; for he was allow'd to eat Chickens or Capons, roasted or boiled, without any Salt; but he was wholly to abstain from Wine, and to use nothing for his ordinary Drink but a warm Decoction of China-root. This Regimen was observ'd for four or five and twenty Days together, in which time the Cure was thought to be perfected. If the Patient was subject to be costive, they added some Leaves of Sena to the Decoction, or administered an emollient Clyster every other Day.

The Name and Grandeur of the Emperor *Charles* the Fifth soon brought this Medicine in Reputation; for this Prince, as *Vesalius* informs us, in his Epistle *De Radice Chinæ*, residing at *Brussels*, and labouring under the Gout, and an ill Habit of Body, and having made use of Guaiacum to no Effect, took a Resolution, of his own Head rather than the Advice of his Physicians, to try the Use of China-root, by which, if he did not obtain a perfect Recovery, he certainly found himself much better. Hence it came to pass, says *Vesalius*, that the neighing Physicians of *Germany*, understanding that the greatest Prince in the World had made use of China-root, fell into high Notions of this Remedy, and fancy'd themselves to be very deficient in their Art, if they did not know how to prepare and exhibit this Decoction; for which Reason they so extol'd the Virtues of it to their Princes as to put them upon inquiring at the Emperor's Court, and never cease soliciting, till they had obtained from the Court Physicians a full Account of its Administration.

But, to see the mutable Fortune of new Remedies, this Root of China, so much magnify'd for its Virtues, in a short time grew out of Repute. *Vesalius* himself, in the same Epistle, which was published in 1542. assures us, that he was firmly convinc'd by Experience, that a Decoction of China-root was far inferior to that of Guaiacum, for Excrescences and Tumors of the Bones, and malignant Venereal Ulcers. Of the same Judgment was *Cardan*, *Lib. de Radice Chynæ seu de Decoctis*, 1548. *Brassavolus*, *Tract. de Radicis Chynæ Usu*, 1551. *Francantianus*, *Lib. de Morbo Gallico*, 1564. *Palmarius*, *Lib. 1. de Lue Venerea*, 1578. but most expressly *Gab. Fallopius*, *Tract. de Morbo Gallico*, 1560. Let no Use, says he, be made of this Root in the Lues Venerea; for I have try'd it three or four times, and could effect nothing with it. And, indeed, it has been a generally receiv'd Opinion, for a considerable time past, that China-root is of Service in the Gout, Sciatica, œdematous Tumors, Strumæ, Imbecillity of the Stomach, Hemicranias, and in Ulcers of the Reins and Bladder, but to be of little Effect in the Lues; or if it be, perhaps, of any Use, yet to be far inferior in Virtue to Guaiacum. *Astruc. de Morb. Vener. p.* 112.

The *Eastern China-root* is of a yellowish-brown Colour on the Outside, and white or reddish-white within. It comes over in flattish Pieces, long, and full of Knots, of a firm, smooth, even Body when cut, of very little Taste.

This is the Root of a sort of *Smilax aspera*, described by *Acosta*, *Garcias ab Horto*, and others; and lately, in the *Museum Museorum* of *Valentini*, at the End of it, in the *India Literat. Epist.* 34. tho' *Commelin* makes it a Species of *Senecio*, in his *Catalog. Plant. usual.* and calls it *Senecio Asiaticus, Jacobeæ folio radice lignosa, China Officinarum*, which is not likely. It bears Leaves something like those of the occidental Sort, but more oval; the Stalk is more prickly, with several Tendrils or Claspers, and the Berries of a yellow Colour. The best comes from *East-India*.

China Occidentalis Pharmacop. *China spuria nodosa*, C. B. Pin. 297. Raii Hist. 1. 658. *Pseudo-china Radix*, Chab. 116. *Pseudo-china*, Ger. Emac. 1618. Park. Theat. 1579. *Pseudo-china Radix Clusii*, J. B. 2. 122. *Kabolossa Riribunnawel, Smilax Indica spinosa folio Cinnamomi; Pseudo-china quibusdam*, Mus. Zeylan. 22. *Smilax aspera, fructu nigro radice nodosâ magnâ lævi farinaceâ China dicta*, Cat. Jam. 105. Hist. Ejusd. 231. Tab. 145. *Jupicanga*, Pison. ed. 1648. p. 99. *Jupicanga vulgo Radix China*, Ejusd. ed. 1658. p. 257. *Olcacatzan seu Pahuatlanica China Mexicana*, Hern. 212. *Altera Olcacatzan seu Pahuatlanica*, Nieremb. 321. AMERICAN CHINA.

This is a Root which comes from *Jamaica* in long round Pieces, full of Knots or Joints, whitish without, and red within, of little or no Smell or Taste. It is a Root of a kind of *Smilax*, call'd by Sir *Hans Sloane*, in his *Catalogue of Jamaica Plants*, *Smilax aspera, fructu nigro, radice nodosa, magna, lævi, farinacea, China dicta*. It has long climbing Branches, a little prickly, with large, firm, nervous, roundish-pointed Leaves, not at all prickly. The Fruit, or Berry, is round and blackish, about as big as a Juniper-berry.

I have known some Physicians prefer this to the *Oriental China*, especially in scrophulous Cases, and in Consumptions, where there were any Suspicions of their arising from a scrophulous Cause. *Miller's Bot. Off.*

CHINENSE, *vel* Sinense Pomum. The China Orange. See Aurantium.

CHINISCI, in *Oribasius*, *Lib. de Machinament. Cap.* 4. are Pegs, such as are in a Harp, and serv'd instead of Fibulæ, or Braces, to fasten the Axes or cross Beams; for Ornament's sake they were carv'd in the Figure of a Goose's Head.

CHIOLI, in *Paracelsus*, *de Gallic. Ulcer.* means the same as *Furunculi*. See Furunculus.

CHIRAGRA, χειράγρα, from χεὶρ, the Hand, and ἄγρα, a Capture or Seizure. The Gout in the Hands. See Arthritis.

CHIRAPSIA, χειραψία, from χεὶρ, the Hand, and ἅψις, a Touching or Handling, in *Cœlius Aurelianus*, *Acut. Morb. Lib. 3. Cap.* 18. is express'd by *Manuum Contactus*, and apply'd to the Rubbing of a Place affected with the Itch, or a sore Eye.

CHIROMANTIA, χειρομαντία, from χεὶρ, the Hand, and μαντεύομαι, to prophesy or divine. The Art of divining by the Lines and Figures of the Hand.

CHIRONAX, χειρώναξ, from χεὶρ, the Hand, and ἀνάσσω, to command, in *Hippocrates* is a manual Artificer, or Handicraftsman.

CHIRONIUM, χειρώνιον, an Epithet of a malignant inveterate Ulcer, difficult to be cured, with a hard, callous, and tumid Margin, so call'd from *Chiron* the Centaur, who is said to be the first who knew how to cure them. It is also called *Telephium. Galen, M. M.*

CHIRONOMIA. See Cheironomia.

CHIROTECHNES, χειροτέχνης, from χεὶρ, the Hand, and τέχνη, an Art, is properly a manual Artist, and so is the same as Chironax before; but *Hippocrates* uses the Word for Artist in general; in which Sense, *Lib. de prisca Med.* he says a Physician is χειροτέχνης.

CHIROTRIBIA, χειροτριβία, from χεὶρ, the Hand, and τρίβω, to exercise, in *Hippoc.* παραγγελ. is the Qualification of being well versed in the Practice of Medicine.

CHIRURGIA, from χεὶρ, the Hand, and ἔργον, Work. Strictly manual Operation, that is, Surgery, the Part of Medicine which is employ'd in manual Operation.

As I have given some Account of the Progress of Surgery, together with Physic, in the Preface, it remains, that I give a Catalogue of Chirurgical Authors, having first inserted the ensuing Quotation, by way of Excuse for the long and many Extracts I have given from the antient Surgeons.

Dr. *Freind*, in his History of Physic, gives the Judgment of *M. C. Bernard*, whom he represents as an Honour to his Faculty and Country, on the antient and modern Writers in Surgery.

" If we inquire," says he, " into the Improvements which " have been made by the Moderns in Surgery, we shall be " forced to confess, that we have so little Reason to value our- " selves beyond the Antients, or to be tempted to contemn " them, as the Fashion is among those who know little, and " have read nothing, that we cannot give stronger or more " convincing Proofs of our own Ignorance, as well as our " Pride. I do not pretend, that the Moderns have not at all " contributed towards the Improvement of Surgery; that were " both absurd and injurious, and would argue as much Folly " as that which I am reproaching; but that which I am con- " testing for is, that it consists rather in refining and dressing " up the Inventions of the Antients, and setting them in a " better Light, than in adding many important ones of our " own. Whether it be, that the Art of healing external " Hurts, being principally the Subject of our Senses, was ear- " lier study'd, and therefore capable of being sooner brought " to a greater Degree of Perfection, than the other Branches " of Medicine; or that the Majority of the mere Professors " having been, for some Ages, illiterate and empirical, it hath " not been advanced and cultivated so as it might have been, " had they been better qualify'd than they generally were, and " do yet, for the greatest part, continue to be: For a Testi- " mony of which, that exceeding Paucity of good Writers " which occur in Surgery, when compared with those in most " of the other learned Arts and Sciences, is, in my Opinion, " sufficient; and yet, were they fewer, it would, in the " Judgment of these *Scioli*, be no great Detriment to the Art: " For the Folly of which Assertion, the best Excuse that can " be made seems to be, that, because some Methods of Pro- " ceeding in Surgery and Physic, which are incommunicable, " and to which every Man must be directed by his own Judg- " ment and natural Sagacity, not being to be found in those " Authors, whom these opinionated Practitioners have had the " Luck to consult, they are led immediately to despise all " Reading, as useless and uninstructive; especially that of the " Antients, who do not generally, I confess, write to Novi- " tiates and Fools, or to those who will be always such.

" But whoever hath been conversant in their Writings, and " hath the Opportunity and Capacity of comparing and judging " from his own Experience, will readily confess, that one " thing, which does not a little recommend the Reading of " them beyond most of the Moderns, is, that they are more " accurate in describing the Pathognomonics, and more just " and nice in distinguishing the Species of Tumors and Ulcers,

" than

" than our more refined Moderns are. If this Age hath par'd " away any rude and ſuperfluous Methods of Practice, as it " muſt be confeſs'd they have, it cannot be demonſtrated, that " they were all derived from the Antients, but were, in a " great meaſure, introduc'd by ignorant and barbarous Pro- " feſſors of a much later Date.

" There is no Queſtion, but that the principal Improve- " ments, which have theſe later Ages been made in Surgery, " are owing chiefly to the Diſcoveries which have been made " in Anatomy, by which we are better enabled to ſolve many " of thoſe Phenomena, which were before inexplicable, or ex- " plain'd amiſs; the moſt important Part, in the mean while, " (I mean the Art of Healing, to which all the others ought " to be ſubſervient) remaining very little better than the An- " tients left it.

" As an unconteſtable Proof of what I ſay, I appeal to all " thoſe Bodies of Surgery, which have been hitherto pub- " liſh'd by the moſt learned and celebrated of the Moderns, " being all manifeſt Tranſcripts from one another, and the beſt " of them from the Antients. But this may indeed be ſaid " in Defence of the Moderns in this Particular, that even " tranſcribing is not their Invention, though it be their Practice; " for *Ætius* and *Ægineta* have borrowed not a little of what " they have, from *Galen*; and *Marcellus Empiricus* more groſly " from *Scribonius Largus*, without ſo much as remembering " his Name among the reſt of thoſe Authors, to whom he " was leſs beholden.

" Among all the ſyſtematical Writers, I think there are " very few, who refuſe the Preference to *Hieron. Fabricius* " *ab Aquapendente*, as a Perſon of unqueſtion'd Learning " and Judgment; and yet is not he aſham'd to let his Readers " know, that *Celſus* among the *Latins*, (who, he tells us, is " *Mirabilis in omnibus*, and adviſes, in *Horace*'s Words, " *Nocturnâ verſare Manu, verſare diurnâ*) *Paulus Ægineta* " among the *Greeks*, and *Albucaſis* among the *Arabians*, " whom I am unwilling to place among the Moderns, being " in the Number of thoſe whom our modern Judges reject, " (either becauſe they never read him, or becauſe he had the " Misfortune to live ſix hundred Years ſince) are the Trium- " virate to whom he principally ſtands indebted, for the As- " ſiſtance he had receiv'd from them in compoſing his excel- " lent Book.

" But how many Operations are there now in Uſe, which " were unknown to the Antients? I fear, that upon a due " Inquiry, there would be more uſeful ones found to be " omitted or diſcontinued, than to have been invented by us." *Freind*'s *Hiſtory of Phyſic.*

Catalogue *of* Chirurgical Authors.

A.

Abeille, le parfait chirurgien d' armée, & le traité des Playes d' Arquebuſade, &c. 8vo. A Paris, 1696.

Academiæ Petropolitanæ commentarii. Petropoli, Tom. 1. 1728. 4. Tomus 2. 3. & 4. annis ſubſequentibus.

Acta Eruditorum Lipſienſia.

Acta Phyſico-medica acad. nat. curioſ. Vol. 1. 4to. Norib. 1727. & Vol. 2. 1730. Vol. 3. 1733. & Vol. 4. 1737. *In the three laſt there are many chirurgical Obſervations.*

Actuarii (Jo.) methodus medendi. See the Article Actuarius.

Aderlaſs-büchlein (neu vermehrtes) oder Bericht vom Aderlaſſen und Schröpffen. *In High Dutch*, 8vo. Norinberg, 1665. *This is a Treatiſe on Phlebotomy and Scarification.*

Adolphi (Chr. Mich.) trias diſſ. chirurgicarum, 1.) de Spina ventoſa; 2.) de Ligaturis dolorificis; 3.) de morborum per manuum attrectatum curatione, 4to. Lipſ. 1730.

——— de vinculis chirurgicis diſſert. 4to. Lipſ. 1730.

Æginetæ (Pauli) Opera. *This is an excellent Author. See the Article* Ægineta.

Aetii libri univerſi. *See the Article* Aetius.

Agricola (Jo.) *Chirurgical Inſtitutions. In* High Dutch, 12mo. Francof. 1638.

——— Wund-artzeney, vermehrt und verbeſſert, 8vo. Nürnb. 1674. *That is, Surgery improv'd and augmented.*

——— Neve Feldſcherer-kunſt, 12mo. Dreſd. 1716. *In* High Dutch, *that is, The new Surgery.*

——— (Georg.) de peſte, 8vo. Swinfurt. 1607.

Alberti (Mich.) Introductio in Univerſam Medicinam, 4to. Halæ, 1719.

——— diſſert. de Hydrocephalo, 4to. Halæ, 1725.

——— de Naſi Excreſcentia, 4to. c. fig. ibid. 1729.

——— de fœtus mortui cum ſecundinis extractione diſſert. 4to. ibid. 1737.

Albini (Bern.) diſſ. de Fonticulis, 4to. Franc. ad Viadr. 1681.

——— diſſert. de Paracenteſi Thoracis & Abdominis, 4to. ibid. 1687.

Albini (Bern. diſſert.) de Paronychia, 4to. *ibid.* 1694.

——— de Cataracta, 4to. c. fig. ibid. 1695.

——— de Partu difficili, ibid. 1696.

——— (Bern. Siegfr.) Index Supellectilis anatomicæ Raviane, cum Ravi vita & calculoſorum curatione, 4to. c. fig. Lugd. Batav. 1725.

Albrechti (Jo. Gunth.) diſſert. de Enematum, Evacuantium, Alterantium, ac Nutrientium uſu, 4to. ibid. 1698.

Albucaſis, chirurgorum primarii, Opera. *See the Article* Albucasis.

Alghiſi (Tomaſo) Lithotomia, 4to. ibid. 1708. c. fig. *In Italian.*

Alliot (J. B.) Traité du Cancer, 12mo. Paris, 1698.

Alpini (Proſp.) de Medicina Ægyptiorum, 4to. ibid. 1645. Lugd. Bat. 1719. 4to. *This Book contains many curious Particulars relative to the* Egyptian *Surgery.*

Alrutz (Jo. W.) Vade mecum, *with the chirurgical Obſervations of* George Clacius, 8vo. Hanoveræ, 1722. *In High-Dutch.*

Amand. (Pierre) Obſervation ſur la pratique des Accouchemens, 8vo. Paris, 1714.

Ammanni (Pauli) Medicina critica, 4to. Stadæ, 1677. *It contains many Things relative to Surgery.*

——— diſſ. de Reſonitu ſive Contrafiſſura, Lipſiæ, 1674. 4to. extat etiam in Paræneſi ejus ad diſcentes, 12mo. Lipſ. 1677.

——— praxis vulnerum lethalium, 8vo. Francf. 1690.

Andry (Nic.) Examen de divers points de l' Anatomie, de Chirurgie, de Phyſique, de Medicine, 8vo. Paris, 1725.

Anel. (Dominique) l' Art de Succer les Playes ſans de ſervir de la Bouche d' un Homme, c. fig. 8vo. Amſt. 1707.

——— Methode pour guerir les Fiſtules Lacrymales, 4to. Turin, 1713.

——— diſcours apologetiques pour la nouvelle Methode de guerir les Fiſtules Lacrymales, 4to. Turin, 1714.

Angelini (Facondini) Methodus pro venæſectione eligenda, 4to. Patav. 1649.

Anglici (Jo.) Praxis Medica, 4to. Aug. Vind. 1595. *In this there are many Things relative to Surgery.*

Anonymi Abhandelung von Erzeugung der Menſchen. *This is a Treatiſe of Midwifry in* High Dutch, *tranſlated from the* Low Dutch.

——— L' Art de Saigner, 8vo. à Paris, 1689.

——— The Birth of Mankind, with Figures, 4to. Lond. 1654.

——— Catechiſmus obſtetricum, *in High Dutch*, 12mo. Argentorat, 1722.

——— Charitable Surgeon, 8vo. Londin. 1708.

——— Chirurgia. *This is a* High Dutch *Book of Surgery with Inſtruments and Figures, taken from* Albucaſis, in Fol. Argentor. 1540.

——— Le Chirurgien charitable, par J. A. G. Maitre Chirurgien, 8vo. A Paris, 1656.

——— Chirurgus, Chymicus & Medicus curioſus, 8vo. Dreſd. 1719.

——— Der weitgereiſte und wohl practicirte Barbierer, 8vo. Ratisbonæ, 1709. *The practical Surgeon.*

——— Chirurgus expertus, 8vo. Hamb. 1689. Germanice.

——— Chirurgyns Gilde in Amſterdam, &c. *That is the Statutes, Laws, and Privileges relative to Surgeons in* Amſterdam. *In* Low Dutch.

——— Clyſmatica nova, Kiliæ, 4to. 1622. *The Author of this was* Jo. Dan. Major.

——— Collectanea Chirurgica, ann. 1721. & 1722. 8vo. Hanoveræ, 1722. *In High Dutch.*

——— Cyſtotomia Hypogaſtrica. *In Engliſh*, 4to. Lond. 1724.

——— Anſteckender Seuche, welche dieſes, 1713. Jahr in das Ertz-herzogthum Oeſtereich eingeſchlichen, gründliche nachricht, ſamt-denen benöthigten Hulff-mitteln, Ratisbonæ, 4to. 1713. *This is a Treatiſe on the Plague in* Auſtria, *which happen'd in* 1713. *wrote in* High Dutch.

——— Enchiridium Chirurgicum, 8vo. Patav. 1593.

——— An *High Dutch* Treatiſe on Iſſues, in 4to. ſine anno & loco.

——— Mediciniſches und Chirurgiſches Schatzkäſtlein, 8vo. Frf. & Lipſ. 1709.

——— l' Indecence aux Hommes d' accoucher les Femmes, & l' Obligation des Femmes de nourir leurs Enfans, 12mo. à Trevoux, 1708.

——— Journal de Medicine, ou Obſervations de plus fameux Medicins, Chirurgiens & Anatomiſtes de l' Europe, tirées de Journaux des Pais Etrangers, & Memoires particulieres, envoyéz à Monſ. de la Roque, 8vo. Paris, 1683.

——— Krebs Cur, (Bewehrte) *The Cure of Cancers*, 4to. Jena, 1717.

——— Libellus 1.) de Morbis Oculorum; 2.) De Herniis; 3.) De Tinea Capitis. 4) De dentibus & Ulceribus antiquis. Germanice, 4to. Argent. 1538.

Anonymi Medici antiqui Græci, 4to. Baſileæ, 1584.

——— Medicus, niſi Chirurgus, ſemiplenus vel nihil eſt, 4to. Magdeburgi, 1622.

——— Medicus Theoria & Praxi Inſtructus, ſive de internorum & externorum Morborum Curatione, 8vo. Genevæ, 1690.

——— Nouvelle Methode d' Operations de Chirurgie, 12mo. à Paris, 1693.

——— Nouvelles Decouvertes ſur toutes les Parties de la Medicine, 12mo. A Paris, 1679.

——— Obſervationes Medico-chirurgicæ de variis rebus Medicis & Chirurgicis. Germanice, 8vo. Aſcherſlebiæ, 1715.

——— The Midwives Catechiſm. In *High Dutch*, 12mo. Argent. 1722.

——— Obſtetrix Coburgiaca, 12mo. Hildburgſhuſæ, 1700. *In* High Dutch.

——— Saxonica, 8vo. Francof. & Lipſ. 1701. *In* High Dutch.

——— Operations de Chirurgie, 12mo. Paris, 1692.

——— Von Peſtilentialiſchen Druſen, Beulen und Carbunculen, 8vo. 1686. ſine loco. *That is, of peſtilential Tumors, Babos, and Carbuncles.*

——— Synopſis doctrinæ & Medicinæ Vulnerum, 4to. Wittebergæ, 1699.

——— Theatrum Sympatheticum ſive de Pulvere Sympathetico & Unguento armario, 4to. Norimberg. 1662.

——— Vade Mecum Anatomico-chirurgicum, 8vo. Hanoveræ, 1718.

——— Verhandeling van de Voortteeling en het Kinderbaren. *In* Low Dutch. *That is, A Treatiſe of the Generation and Birth of Man, with Figures*, 8vo. Amſterdam, 1688. *This Book was alſo publiſhed in* High Dutch, Francof. 1706.

——— Unterricht von Schwürigen, offenen Schenckln. *That is, the Method of curing old Ulcers of the Legs, by* D. D. K. *meaning* David Kellner, Nordhuſæ, 1688.

Aquapendente. See FABRICIUS.

Arantius (Jul. Cæſ.) de Tumoribus, 4to. Venet. 1587.

——— Commentarius in Libr. Hippocr. de Vulneribus Capitis, 8to. Lugd. 1579. & 1639. 12mo.

Arcæus (Franc.) de recta curandorum vulnerum ratione, 8vo. Antwerp. 1574. & 12mo. Amſt. 1658.

——— The ſame in *High Dutch*, intituled, Von den Wunden, &c. 8vo. *Nuremberg*, 1674. with Figures.

De Argellata (Petr.) Chirurgia, Fol. Venet. 1499. & 1531. cum Albucaſi.

L' Art de faire les Raports en Chirurgie, 8vo. A Paris, 1703.

——— de Saigner, 8vo. à Paris, 1689.

Aſtruc (Jo.) de Morbis Venereis, 4to. Lutet. Pariſ. 1736.

Augenius (Horat.) de Ratione Curandi per Sanguinis miſſionem, Fol. Francof. 1598.

Avicennæ Opera omnia. *See the Article* AVICENNA.

B.

Badilius (Valerius) de ſecanda Vena in Pueris, 4to. Veronæ, 1606.

Baieri (Jo. Jac.) Diſſertatio de Fræno linguæ, 4to. Altorf. 1706.

——— de Turundis, 4to. ibid. 1707.

Baldutius de Tumoribus, 4to. Venet. 1612.

Banyer (Henry) Microtechne; *or, Methodical Introduction to the Art of Surgery*, 8vo. Lond. 1717.

Barbette (Pauli) Chirurgia, 8vo. Amſtel. 1663. poſtea cum notis Muyſii, 12mo. ibid. 1693.

——— Opera omnia, cum Notis Mangeti, 4to. Genevæ, 1688. *The ſame in* High Dutch, *under the Title of* Mediciniſche, Chirurgiſche, und Anatomiſche Schriften, 8vo. Lipſ. 1718.

Barbierer (der weitgereiſte und wohl practicirte) *That is, the Surgeon well vers'd in Practice.* Regenſ. 1709. 8vo.

Bartholini (Th.) Aneuryſmatis diſſecti hiſtoria. Accedit Jo. Von Horn ejuſdem Argumenti Epiſtola, 8vo. Panormi, 1644.

——— — Hiſtoriæ Anatomicæ Centuriæ VI. 8vo. Hafn. 1654. 1657. & 1661.

——— — Epiſtolæ Medicinales, Centuriæ IV. 8vo. Hafn. 1663. 1667.

——— — de Inſolitis partus Humani viis, cui & Veſlingii Obſervationes Anatomicæ & Chirurgicæ junguntur, 8vo. Hafn. 1664.

——— Acta Medica & Philoſophica Hafnienſia, 4to. Hafn. Vol. 1. 1673. Vol. 2. 1675. Vol. 3, 4. 1677. Vol. 5. 1680. c. fig.

Bartiſch (Georg.) Ὀφθαλμοδουλεία ſive Augendienſt. *This is a* High Dutch *Treatiſe on the Diſorders of the Eyes*, Fol. Dreſdæ, 1583. *with Figures.*

Baſſius (Henr.) de Faſciis & Vincturis Chirurgicis. Germanice, 8vo. Lipſ. 1720. c. fig.

——— Commentationes in Nuckii Experimenta Chirurg. Germ. 8vo. Halæ, 1728.

——— Obſervationes Anatomico-chirurgico-medicæ, 8vo. Halæ, 1731.

Baſſius (Herm.) de Fiſtula Ani, 4to. Halæ, 1718. c. fig.

Bauhini (Caſp.) de Hermaphroditorum & Monſtroſorum partuum natura, 8vo. Oppenh. 1614.

Bautzmanni (Jo. Chr.) vernünftiges Urtheil von todlichen wunden. *This is a* High Dutch *Treatiſe on the Judgment to be found of mortal Wounds*, 12mo. Lipſ. 1717.

Bazzicalune (Aſcanius Maria) novum ſyſtema Medico-mechanicum, & nova Tumorum Methodus, 4to. Parmæ, 1701.

Becke (Dav. Vonder) de Procidentia Uteri, 8vo. Hamb. 1683. cum fig.

Becker. (Jo. Conr.) Παιδιατρία Inculpata ad Servandam puerperam, 4to. Gieſſæ, 1729.

——— (Jo. Frid.) de Fiſtula Urethræ virilis diſſert. 4to. Halæ, 1728.

Beckher (Dan.) de Cultrivoro Pruſſico Germ. 4to. Regiomonti, 1643. Latine, 12mo. Lugd. Bat. 1640.

Behrens (Rud. Aug.) Triga Caſuum memorabilium, (Chirurgici inprimis argumenti) 4to. Wolffenbutelæ, 1727.

——— de Cerebri vulnere non ſemper & abſolute Lethali, 4to. Franc. ad Moen. 1733.

Beieri (Godofr.) diſſ. de Arteriotomia, 4to. Jenæ, 1673.

Belloſte Chirurgien d' Hoſpital, 8vo. 1707.

Benevoli (Anton.) Lettera ſopra due oſſervationi fatte intorno alla Cateratta, 4to. Fiorez. 1722.

——— (Antonio) nuova propoſitione intorno alla Caruncula dell Urethra & della Cateratta glaucomatoſa, 8vo. ibid. 1724.

——— Manifeſto ſopra alcune accuſe contenute in uno certo Parere del Signor Pietro Paoli, Ceruſſeo in Lucca, 4to. ibid. 1730.

——— Giuſtificatione delle Replicate accuſe del Signor Pietro Paoli, 4to. ibid. 1732.

Berdoti (Leopold. Eman.) diſſ. de Paronychia, 4to. Baſil, 1731.

Berengarii (Jac.) Carpi de Fractura Cranii liber aureus, cum fig. 4to. Bonon. 1518. & Venet. 1535. idem 8vo. Lugd. Bat. 1639.

Berenger (N.) Traité des Deſcentes & dex Maux de Ventre, 8vo. A Paris, 1701. cum fig.

Bergenii (Jo. Georg.) diſſ. de Parotidibus, 4to. Franc. ad Viadr. 1717.

Berolinenſis Academiæ regiæ Miſcellanea, 4to. Berolini, 1710. cum continuationibus, variis poſtea annis Impreſſis.

Berolinenſium Medicorum acta, 8vo. Berolini, 1717. & ſeq. cum figur.

In the two laſt many Chirurgical Obſervations are interſpers'd.

Bertapaliæ Chirurgia, juncta cum Guid. de Cauliaco in arte Chirurgica, Fol. Venet. 1546.

Beverlini (Rud. Phil.) de Luxatione & Fractura Femoris, 4to. Altorf. 1719.

Beverovicii (Jo.) Exercitatio de Calculo, 12mo. Lugd. Bat. 1633. it. 1638. & 1641.

——— Exercitatio in Hippocratis Aphoriſmum de Calculo, 12mo. Lug. Bat. 1641.

——— *His Surgery in* High Dutch; *this is contain'd in his Works*, 8vo. Francof. 1671. *in* Fol. ibid. 1674.

Beynon (Eliæ) Barmhertziger Samariter Germanice, 12mo. Jenæ, 1684. *That is, The Good* Samaritan, *&c. with an Appendix concerning Midwifry.*

Bidloi (Godofr.) Exercitationes Anatomico-chirurgicæ, 4to. Lugd. Bat. 1708.

——— Opera Anatomico-chirurgica, 4to. ibid. 1715.

Biumi (Paul. Geronim.) Scrutinio teorico pratico di notomia e cirugia, 8vo. Mediolani, 1712.

Blancardi (Steph.) *Surgery. In Low Dutch*, 8vo. Amſterd. 1680. *In High Dutch*, Hanov. 1692.

——— Collectanea Medico-phyſica, 8vo. Amſtel. 1688.

Blegny (Nic.) Zodiacus Medico Gallicus, ſive Miſcellanea Medico-phyſica Pariſienſia, cum Tract. de Herniis & de Lue Venerea, 4to. Genev. 1680.

——— des Maladies veneriennes, 12mo. Amſt. 1696.

Blondii (Mich. Angeli) Scripta Chirurgica, in Theſauro Chirurgiæ Uffenbachii, in Fol. Francof. 1610.

Boccacini (Antonii) deſinganni Chirurgici per la cura della ferite, Ulcere, e ſeni, 8vo. Venetiis, 1713. 1714. 1715.

Bohnii (Jo.) de Officio Medici Duplici, Clinico & Forenſi, Lipſ. 1704.

——— de Renunciatione Vulnerum, 8vo. Amſt. 1710. & Lipſ. 4. 1711.

——— *His Surgery. In* High Dutch, 8vo. Brunſ. 1732.

——— diſſ. de Trepanationis difficultatibus, Lipſ. 1694.

——— ——— Revulſione Cruenta, ibid. 1704.

Bokelman (Andr.) & Bonaventura's Controverſies concerning the Extraction of the dead Fetus. In Dutch. Amſt. 1677.

Bolognini (Angeli) de Cura Ulcerum, fol. Frf. 1610. in Theſauro Uffenbachii.

Boneti (Theophil.) Sepulchretum ſive Anatomia practica, fol. Genevæ, 1679. 1700.

Bonham (Th.). The Surgeon's Cloſet, 4to. Lond. 1630.

Bontekoe (Cornel.) *His Surgery in* Dutch, 8vo. Gravenh. 1680. *and in* High Dutch, 8vo. Hannoveræ, 1682.
——— Grundſatze der Medicin und Chirurgie, 8vo. Aug. Vind. 1721. *That is, The Foundation of Phyſic and Surgery.*
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As I have not ſeen all theſe Authors, I cannot be anſwerable, that there are no Miſtakes. This Catalogue is taken principally from *Heiſter.*

CHIST. The Name of a Meaſure. See SEXTARIUS.

CHITON, χιτών. A Coat or Membrane. See MEMBRANA.

CHIVEF *Theveti*, J. B. *Ficui Nigritarum ſimilis, Fructu magno Meloni pari*, C. B. is deſcribed to be a cucurbitiferous Tree, with a fine green Leaf, exactly round, and of the Breadth of a *Louis d'Or*, and with a Fruit as big as a large Melon, very ſweet, and melting in the Mouth like Manna, and incloſing Seeds, like thoſe of our Cucumber, within a Rind, which is yellow when ripe. *Raii Hiſt.*

CHIVES are the fine Threads of Flowers, or the little Knobs, which grow on the Tops of theſe Threads.

Chives, tipt with Pendants, are the Apices of Flowers, having Farina hanging and ſhaking at their Points, as the Tulip.

CHIVETS. Theſe are the ſmall Parts at the Roots of Plants, by which they are propagated. *Miller's Dictionary, Vol.* 1.

CHIUM VINUM, χῖον οἶνον, *Chian* Wine, or Wine of the Growth of the Iſland of *Chios*, now *Scio*, is commended by *Dioſcorides*, *Lib.* 5. *Cap.* 10. as affording good Nouriſhment, fit to drink, leſs diſpoſed to intoxicate, endued with the Virtue of reſtraining Defluxions, and a proper Ingredient in ophthalmic Medicines. Hence *Scribonius Largus*, No. 26. 36. directs the dry Ingredients in Collyria for the Eyes, to be made up with *Chian* Wine.

CHLÆNA, χλαῖνα, in *Erotian* upon *Hippocrates*, is expounded by τὰ καινὰ ἱμάτια, "new Garments."

CHLIAROS, χλιαρὸς, tepid, lukewarm. *Galen*, on *Aph.* 37. *Lib.* 4. beſtows this Epithet on mild Fevers, in Oppoſition to acute. The ſame Author ſays, *M. M. Lib.* 1. *Cap.* 7. that χλιαρὸς, tepid, is a Medium between hot and cold.

CHLIASMA, χλίασμα, from χλιαίνομαι, to grow tepid, is a tepefactory or warming Fomentation of the moiſt Kind, as πυΐαι (*Pyriæ*) is of the dry Kind, and both are directed, *Lib.* 1. περὶ γυναικ. In *Lib. de Rat. Vict. in Acut.* they are call'd θερμάσματα (*Thermaſmata*); and, in the ſame Book, χλιάσμα]α are preſcrib'd in Pains of the Sides, to promote Concoction and Spitting.

CHLOE, χλόη, in the *Ionic* Dialect χλοίη, is the green Herb, or Graſs. Hence χλοώδης, and χλοιώδης, is a pale or faint Green; and χλόος, or χλοῦς, is a green Colour, inclining to Paleneſs, like that of withering Herbs. Χλοώδεα, *in Coac.* apply'd to Urine, ſignifies green, or a pale Green; and χλοώδεες, thoſe of a paliſh-green Colour, in the ſame Treatiſe, are call'd, *Lib. Prorrhet.* ἰκ]τεικαὶ, *Ictorici*, "ſick of the yellow Jaun-"dice." This Colour, *Galen*, *Lib.* 3. περὶ δυσπν. takes to be a Sign of a diſeaſed Liver.

CHLORASMA, χλώρασμα, from χλωρὸς, [*ſee the following Word*] is expounded, in *Galen's Exegeſis*, χλωείτης λαμπρὸν διαυγμένη, ἢ ἐπὶ τὸ ὑδαρῶδες ῥέπουσα· "A paliſh-green "Colour, ſhining with a ſort of Splendor, and inclining to a "watry."

CHLOROS, χλωρὸς, is a Word of an ambiguous Signification in *Hippocrates*. Sometimes it means a paliſh Green, ſometimes Pale, alſo a yellow and paliſh, and an herbaceous Green, according to its various Ways of Application, as appears from *Galen*, in many Places. Thus, in the Paſſage *Prorrhet.* 2. ἦσιν παχὺ ἢ χλωρὸν, "the Urine thick and pale," approaching to white, χλωρὸν is put inſtead of ὠχρὸν, "pale." *Celſus*, *Lib.* 2. *Cap.* 7. renders it, *Urinam viridem.* In *Coac.* ἕλκος χλωρὸν γινόμενον, "an Ulcer turning *Chloron*," is condemn'd. It is to be obſerved, that χλωρὸν, *in Progn.* is expreſs'd by ὠχρὸν, "pale." Again, *Aph.* 3. *Sect.* 5. *Lib.* 6. *Epid.* χλωραὶ, apply'd to γλῶτται, (Tongues) means the ſame as ὠχραὶ, that is, yellow and pale; or, as *Galen*, *Comment.* 5. *in Lib.* 6. *Epid.* explains the Word, ὑπὸ τῆς ὠχρᾶς χολῆς βαπτόμεναι, "tinged with pale Bile." *Celſus*, *Lib.* 2. *Cap.* 8. renders χλωρὸν πυὸν, in *Hippoc. Progn.* by *Pus pallidum*, as do almoſt all Interpreters, meaning by *pallidum* the ſame as *luteum*, "a pale Yellow;" or rather, as they endeavour to prove, what, in *Latin*, is properly call'd *galbum*, that is, a pale Colour, betwixt Yellow and Green. Χλωρὸς alſo means a green or herbaceous Colour; for, in *Aſia*, as *Galen* writes, *Com.* 2. *in* 6 *Epid.* Greens, Trees, and Plants, are call'd χλωρὰ, and Cattle, when turn'd to feed on Graſs in Spring, are ſaid χλωρίζειν. But χλωρὸς, ſpoken of Man, ſignifies a pale Green, or a Green a little inclining to Black, like the Colour of Cabbage or Leeks, and is what *Hippocrates*, *Prog.* condemns in a cadaverous Face; on which *Galen* writes, that the worſt Change of Colour is to a Black, but more moderate when alter'd to a χλωρὸν, by which Epithet the Antients ſometimes intended a pale Colour, ſometimes that Colour which the Vulgar mean when they call Cabbages and Lettuces χλωραὶ, which is a Colour blacker than a Red, and a ſort of Introduction to a Black and Livid, being the Effect of Cold as well as the Black. Thus

Galen,

Galen, *Com.* 1. *in Progn.* says, that χλωρὸν sometimes signifies Pale, sometimes a sort of Green, as when we call Cabbage χλωρόν. Again, *Com.* 2. χλωρὸν, he says, has a double Signification; under the first, it imports a Mixture of much pale Bile; the second implies a Mixture of æruginous Bile: And, *Com. in Prorrhet.* on these Words, σὺν αἵματι χλωρῷ σὺν ἰχῶρι ἐπεγένετο, "putrid Matter was voided at the Mouth, which Matter was "χλωρὸν," he says, Things of a pale and green Colour are call'd χλωρά. It is to be observed, that when χλωρὸς signifies *Green*, it is spoken of Things recent, not dry; and is apply'd to leguminous Plants before they are dry, or yet come to Perfection, as *Galen* observes on the Words ὄσπεια χλωρὰ, in *Hippoc. R. V. I. A.* So χλωρὸν σέαρ, *Lib.* 1. περὶ γονῆς. is recent Fat; and χλωρὸν δέος, in *Homer*, is a new Fear or Terror.

CHLOROSIS, χλώρωσις, from the preceding Word.

F. Hoffman, and most Authors, treat a *Chlorosis* as a Species of Cachexy. It properly signifies that Disorder, which Virgins fall into, for want of a due Menstrual Discharge; which we, preserving the Analogy of the *Greek* Name, call the *Greensickness*. See CACHEXIA.

By a *Cachexia* we understand a depraved and tumid State of the Body, attended with an unseemly and disagreeable Colour of the Skin. As this Disorder arises from a Redundance of peccant Serum, and a preternatural Weakness of the Tone of the Viscera, it of course remarkably disturbs and impairs all the several Functions of the Body.

The genuine and most distinguishing Characteristics of this Disorder, are these following: A whitish-pale Colour of the Skin, somewhat upon the green or the yellow Cast; a pretty full and tumid State of the Body, which appears cold and soft to the Touch, and is at the same time infirm and feeble. The Patient is afflicted with a Weakness of the Legs, a Difficulty of Breathing, especially in ascending Stairs, a Swelling and Inflation of the Feet, a Torpor, and Inactivity of Mind, an Oppression during Sleep, a Swelling of the Eyelids, a slow and soft Pulse, together with a white and turbid Urine.

Tho' the Name of this Disorder seems to have been unknown to *Hippocrates*, yet, in the thirty-fourth and fifth Paragraphs of his Book *De intern. Affection.* he not only makes evident Mention, but also gives a pretty full Description of it. But, among all the antient Physicians, *Cœlius Aurelianus* and *Aretæus* have most accurately enumerated the peculiar and distinguishing Symptoms of this Disease, and assign'd their respective and adequate Causes. The former of these Authors, in the sixth Chapter of his third Book, uses the following Words: "A Cachexia, or bad Habit of Body, arises either from the "Intemperance of the Patient, the unskilful Management of "the Physician in previous Disorders, a slow Recovery after "Diseases, Purgatives too often exhibited, a stony Hardness "of the Liver or Spleen, hæmorrhoidal Discharges, or Fevers "long protracted, Collections of purulent Matter, Vomitings "after Supper, and other Circumstances of a like Nature. "This Disorder is often the antecedent Cause of a Dropsy, or "of Eruptions and Spots on the Surface of the Body. The "Colour of cachectic Patients is pale and whitish, and some"times livid. The Patient, in consequence of his Weak"ness, is languid, slow, and inactive, and labours under an "œdematous Inflation. Some Patients are afflicted with a "Flux, accompanied with a gentle Fever, for the most part "latent, and which is exasperated towards Evening. The "Pulse is frequent and tense, the Food loath'd, and Wine "more eagerly coveted than at other times. The Urine also "is bilious, and the Veins distended."

Aretæus, in the sixteenth Chapter of his first Book *Chronic.* describes this Disease in the following manner: "Cachectic "Patients are afflicted with a Listlessness, and Sense of Weight "all over their Bodies: They become pale at certain Inter"vals. Their Abdomen is distended with Flatulences, their "Eyes hollow, their Sleep disturb'd, and follow'd by a Torpor. "In their Abdomen, and all the other Parts of their Body, "the natural Heat is weak and languid. Their Mind is de"jected, and unqualified for the due Exercise of any of its "Powers. A pruriginous Sweat breaks forth on their Bodies; "they breathe slowly, and their Pulse is languid, weak, and "frequent. The Disease is generally protracted for a long "time. Digestion is slow and weak. This Disorder arises "from a Suppression of the hæmorrhoidal Discharges, or of "accustom'd Vomitings, or from giving over such Degrees of "Exercise and Labour, as the Patient has formerly been ac"customed to."

What is call'd a Cachexia in general, in Girls, before an Eruption of the Menses, or in whom they flow too sparingly, comes under the Denomination of *Chlorosis*, which is also styled *the Virgins Disease*, and *the white Fever*. Concerning this *Hippocrates* principally treats in his Book *de Virginum morbis*; and it is, in reality, no more than a Species of Cachexy, since it discovers itself by the same Signs; for the Patient's Face becomes pale, and sometimes yellowish. There is an uncommon Paleness of the Lips. The Eyes are sunk, the Eyelids livid, and all the Members of the Body are seiz'd with a Lassitude. The Patient is also seiz'd with a Torpor of Mind, a Coldness of the Feet, a Heaviness, and Aversion to Motion, a Loss of Appetite, a Nausea, and Vomiting, turbulent Sleep, and a languid Pulse. The Urine discharged is also aqueous, and without Colour, but, in Process of Time, becomes turbid. This Disorder is also frequently attended, especially in ascending Stairs, with a Difficulty of Breathing; together with a Tremor and Palpitation of the Heart. A Swelling and Inflation of the Feet, Cardialgias, intermitting Head-achs, and fainting Fits, are sometimes also the concomitant Symptoms of the Distemper.

As to the immediate Cause of this Disease, and its several Symptoms or Accidents, it seems to consist in too great a Quantity of impure Blood, and of viscid and less spirituous Humours, collected in the Body, in consequence of the natural Tone, Vigour, and Strength of the solid Parts, especially of the Viscera subservient to Chylification, Sanguification, and Depuration, and of the Fluids, being considerably impair'd and weaken'd.

For, by reason of a Want of due Tone and Elasticity in the fibrous and vascular Parts, the Circulation of the Blood becomes more slow and languid: Hence the Secretions and Excretions, on the due State of which Health depends, are impair'd. By this means the excrementitious, viscid, bilious, saline, and serous Sordes, which ought to be evacuated, after their Secretion in the Liver and Kidneys, being in a great measure retain'd, render the Serum of the Blood, and the nutritious Juices, highly impure and peccant. In Process of Time the moving Fibres of the subcutaneous perspiratory Vessels are, in like manner, deprived of their due and natural Strength; by which means these Sordes are less successfully convey'd thro' the cutaneous Pores. Hence a pale-greenish or yellowish Colour of the Skin, accompanied with a certain Swelling of the Body, arises from a tinged Serum lodg'd in the reticular Substance, between the Skin and Cuticula, and the Nutrition of the Patient is entirely depraved. And since, under so peccant a State of the Blood and Humours, that subtile nervous Fluid, which by the Antients was call'd *Nature*, and by the Moderns the *Animal Spiriti*, and which conveys Vigour and Elasticity to the solid Fibres, and presides over the Animal Functions, is no longer supplied by a pure and duly qualified Blood and Lymph, but by such as are contaminated with a large Quantity of aqueous, viscid, and vapid Sordes, this Fluid must of course contract a considerable Taint, and have its Power and Energy both over the vital and animal Actions, remarkably impair'd and diminish'd. Hence 'tis not surprising, that this Disorder should be accompanied with an amazing Complication of Symptoms, such as an uncommon Sense of Weight, and Languor of the Body, Loss of Appetite, Drowsiness, Dejection of Mind, and Torpor of the Senses.

A naturally lax and spongeous Habit of Body, which consists in the Softness of the moving Fibres, the Smallness and Number of the Vessels, and the Slenderness of the Tendons, above all other Things, lays a Foundation for this Dyscrasy of the Blood and Humours, and the Cachexy arising immediately from it: For this Reason we observe, that Women are more subject to this Disorder than Men; and that it is more incident to Men of a sanguine and phlegmatic Constitution, than to others of a different Habit; for the sanguine and phlegmatic Habit is highly fit for generating a Redundance of Blood and Serum; and because, in Patients of this Kind, the Blood circulates slowly, it becomes thicker, more viscid, and fit to obstruct the small excretory Ducts, especially those of the Liver.

According to *Aretæus*, in the before quoted Passage, whose Authority is back'd in this Particular by daily Experience, an indolent State of Life, and a total Cessation from customary Labour and Exercise, may be justly reckon'd among the procatarctic Causes of this Disorder; because they contribute very considerably to the too plentiful Generation, to the Impurity, to the slow Circulation, and to the Stagnation of the Humours; as also to the Obstruction of the Vessels subservient both to Sanguification, and the Depuration of the Juices. These Misfortunes happen the more readily, if Aliments, especially of the inflating viscid Kind, sweet Meats, acid Substances, and such as are with Difficulty digested, are taken in a larger Quantity than the weak and exhausted State of the Patient is able to bear, digest, and convert into an useful and salutary chylous Juice; Hence arise large Quantities of acid and viscid Crudities, which prove the first Foundations of Impurity in the Mass of Blood; for that Proverb is no less just than common, That *an Error of the first Concoction*, which is perform'd in the *Primæ Viæ*, *is not easily rectified in the second*, which is perform'd in the Viscera subservient to Sanguification, and the Depuration of the Juices; much less in the third Concoction, which consists in the immediate Act of Nutrition.

An improper Regimen, with respect to Drinking, variously disposes both Women and Men to this Disorder; for Women generally

generally drink little, and ſometimes ſcarcely once in a Day. Now, in conſequence of the daily Excretions carried on in their Bodies, a large Quantity of Fluids is carried off from the Maſs of Blood and Humours. Unleſs this be reſtored, and ſupply'd afreſh, the Humours neceſſarily, and of courſe, become thick, unfit for circulating freely thro' the capillary Veſſels, and diſpoſed to form Infarctions and Obſtructions, which are the genuine and immediate Cauſes of a *Chlorоſis*. At preſent the liberal Uſe of rich Coffee is the principal Cauſe of a *Chlorоſis* in ſome Women, who, neglecting Exerciſe, or being habitually coſtive, drink it daily with large Quantities of Sugar; for by this means the Blood, already too thick, is impregnated with many ſulphureous, hot, and oleous Particles; and, unleſs there is a ſufficient Secretion of theſe Particles, along with the Bile, thro' the excretory Ducts of the Liver, both the Quality and Colour of the Lymph muſt neceſſarily be changed. Nor, in my Opinion, is there a Neceſſity for aſſigning any other Reaſon, why ſcorbutic purple Fevers rage ſo frequently in our Days. Men, on the contrary, tranſgreſs by drinking too large Quantities of ſpirituous Liquors, Wines, and ſtrong Ale, which, inſtead of rendering the vital Juices ſufficiently thin and liquid, rather coagulate them, and by that means contribute very much to the Production of this Diſorder.

A depraved, and more eſpecially a cold and moiſt, State of the Air, contributes not a little to the Production of this Diſeaſe; ſince, either by conſtricting or relaxing over-much the Surface of the Body, it obſtructs the ſalutary Work of Perſpiration, and by that means increaſes, at once, the Quantity and the Impurity of the Humours: Hence alſo we frequently obſerve this Diſorder produced by the long Continuance of a cloudy and turbid State of the Atmoſphere, eſpecially when the Winds blow from the Weſt. It is alſo more frequent in the Spring and Autumn than in any other Seaſon, and may be produced by living in moiſt or marſhy Places; as alſo by lodging or ſleeping in dank and low Rooms.

A Way is alſo paved to this Diſorder by the Paſſions of the Mind; the Influence and Power of which are ſo great, that by acting immediately on the nervous Parts, eſpecially the Stomach and Inteſtines, which are entirely nervous and membranous, they conſiderably impair and weaken the periſtaltic Motion, and natural Functions, of theſe Parts. Violent Terror, long Grief, or ſuppreſs'd Reſentment and Wrath, have a moſt direct Tendency to induce a Cachexy, or Chloroſis, becauſe they either too much increaſe, or retard and ſtop, the critical Evacuations of Blood, whether of the menſtrual or the hæmorrhoidal Kind.

Both daily Experience, and the Authority of ſkilful Phyſicians, confirm, that a Diminution of the otherwiſe ſalutary and critical Evacuations of ſuperfluous Blood, whether by the Anus, or the Uterus, proves the principal Cauſe, not only of a Cachexy in Men, and a Chloroſis in Women, but alſo of other very formidable and almoſt incurable Diſorders; for when the Blood is denied its uſual Paſſage thro' theſe Ways, either by means of Spaſms, or a preternatural Infarction of the Parts by thick and viſcid Humours, it ſtagnates, becomes vitiated, is corrupted, and regurgitates to the larger Veſſels and Viſcera, by ſpoiling the Tone and Functions of which, it often excites various and violent Symptoms in the more remote Parts. This Diſorder, incident to young Women about the Time of Puberty, derives its original Cauſe only from an Obſtruction of this Evacuation. This is beautifully accounted for by *Johannes Langius, in Epiſt. Medicin. Lib.* 1. *Ep.* 21. in the following Words: "At that Time, by the Influence and Inſtigation of "Nature, the menſtrual Blood flows from the Liver to the "Cavities and Veins of the Matrix. When this Blood cannot force its Paſſage, either on account of the narrow "Mouths of theſe Veins, which are alſo obſtructed by viſcid "Humours, or on account of its own Thickneſs, it again "regurgitates to the Heart, Liver, Diaphragm, and Veins of "the Præcordia, thro' the Ramifications of the Vena Cava, "and great Artery; a large Quantity of it is alſo convey'd to "the Head; and hence violent Symptoms about the Viſcera, "ſuch as a Difficulty of Breathing, a tremulous Motion of "the Heart, an Inflation of the Hypochondria, a Loathing "of the Aliments, and a Cardialgia." Theſe Symptoms ſeize not only Virgins, and young Women, but alſo married Women, and thoſe pretty far advanced in Years, at the Time when, according to the general Laws of Nature, the monthly Evacuation ought to ceaſe; or when, from any other Cauſe, it is ſtopt. In Men alſo a Suppreſſion of the hæmorrhoidal Diſcharge, which, by deſtroying the Strength and Tone of the Parts, fills the Veſſels with a Redundance of depraved Juices, contributes not a little to the Production of a Cachexy.

After enormous Hæmorrhages, whether from the Uterus, the Anus, or accidental Wounds, nothing is more common than the Production of chronical and highly obſtinate Diſeaſes, ſuch as a Cachexia, a Leucophlegmatia, an Anaſarca, œdematous Swellings of the Feet, or an Atrophy, attended with a preternatural Languor, and Loſs of Strength; for as the Functions of all the Parts, when perform'd according to the due and ſtated Order of Nature, depend upon a proper Quantity of well qualified Blood, and its free Circulation thro' all the Veſſels, and derive their Strength and Vigour from theſe Circumſtances; ſo it muſt naturally and neceſſarily follow, that, when this vital Fluid is almoſt exhauſted, the ſolid Parts and Viſcera muſt be remarkably weaken'd, and their Functions conſiderably impair'd and diminiſh'd. But no Parts are ſo much, or ſo immediately, affected by this Misfortune, as the Stomach and Inteſtines. The Weakneſs and Want of a due Tone in which, impairs the Digeſtion, and, in conſequence of the corrupted Aliments, creates Crudities, which, paſſing into the Blood-veſſels and whole Habit of the Body, not only render Nutrition imperfect and vitious, but alſo remarkably prejudice and prevent a due Diſcharge of the Functions, which ought to be perform'd by the ſeveral Viſcera ſubſervient to Sanguification, and the Depuration of the Juices, ſuch as the Liver, Spleen, and Kidneys. When the Quantity of Blood and Humours is too ſcanty, it alſo happens, that the ſmall and capillary Veſſels, eſpecially thoſe ſubſervient to the Secretion of the laudable and uſeful, and the Excretion of the vitious and peccant Juices, become impervious, collapſe, or have their Diameters leſſen'd, in conſequence of which their Functions are highly impair'd, a Circumſtance which proves the fruitful Source of Impurities.

Nor do I think any other Reaſon can be aſſign'd, than too great a Loſs of good and laudable Blood, why thoſe Patients in a particular manner, who, not being fully recover'd from chronical Diſeaſes, eſpecially Fevers and Deſenteries, but as yet remaining weak, eat a larger Quantity than the languid Action of the Stomach can digeſt, and convert into a laudable Chyle, are ſo much ſubject to Cachexies. This Diſorder alſo, according to the Dictates of Experience, and the joint Authorities of the moſt antient Phyſicians, frequently happens to thoſe who are too much weaken'd by the imprudent and prepoſterous Cure of Diſeaſes; ſuch as thoſe perform'd by the Uſe of draſtic Purgatives, or even the Uſe of Aſtringents for ſtopping violent Hæmorrhages, and ſuppreſſing the Paroxyſms of Fevers; for theſe Medicines are abſolutely of the worſt and moſt pernicious Quality, which too much exhauſt the Strength, in which the whole Energy of Nature is lodg'd. Among this Number we may juſtly reckon the draſtic Evacuants, and ſuch Medicines as conſtrict and block up the capillary Veſſels ſubſervient to the Excretion of the peccant, and the Depuration of the laudable Juices; ſince, by the Uſe of theſe Medicines, ignorant and unſkilful Phyſicians often bring on not only a Cachexia, but alſo other Diſorders, which prove as fatal to the Patients.

Becauſe there is a great Affinity betwixt a Cachexia and other Diſeaſes, we ſhall inquire wherein they agree, and in what reſpects they differ. Firſt, then, we muſt obſerve, that a Cachexia does not much differ from a Chloroſis, and a Fluor Albus, with reſpect to its Nature, but only with reſpect to the Sex of the Patient, and the Seat of the productive Cauſe, which in Men is lodg'd in the Stomach and Liver, but in Women is to be ſought for in theſe two Organs, and the Uterus, at the ſame time. Nor is there a leſs conſiderable Agreement between a Cachexia and a Cacochymia, ſince the latter, as well as the former, ſuppoſes a large Quantity of impure Juices in the Veſſels; only theſe ariſe rather from Intemperance, and a Fault of the firſt Digeſtion, than a deprav'd State of the other Viſcera, which remain in their natural Condition. Hence, from a violent Cacochymy, which conſiſts in a deprav'd Nutrition, a Tranſition is at laſt made to a Cachexy. We muſt alſo obſerve, that every pale and unſeemly Colour of the Countenance is not to be taken for an infallible and eſſential Characteriſtic of a Cachexy; ſince ſuch a State of the Countenance often remains after violent Diſeaſes; or ariſes from a Collection of peccant Humours in the Primæ Viæ, or from a Suppreſſion of Anger, or from Spaſms of the Stomach; but in theſe Caſes the Diſorder eaſily yields to proper Remedies. A Cachexia alſo bears a near Reſemblance to a Jaundice; for both Diſorders are accompany'd with a deprav'd Nutrition, a pale Colour of the Skin and Countenance, a Loſs of Strength, a Torpor of Mind, together with a Weakneſs and want of due Tone in the Stomach and Viſcera: Yet there is this Difference, that in a Jaudice theſe Symptoms draw their Origin from the Bile alone, regurgitating to the Maſs of Blood, in conſequence of the biliary Ducts being either obſtructed, or ſpaſmodically conſtricted; whereas, in a Cachexia, the Stomach, Spleen, Liver, and Kidneys, are at once ſeverely affected, ſo that when this Diſorder is violent, it degenerates into a black Jaundice, unleſs due Care be taken to prevent that unlucky Cataſtrophe by a ſeaſonable Cure. A Cachexy is alſo different from an Anaſarca and Leucoplegmatia, ſince in theſe there is a greater Inflation and Hardneſs of the inferior Parts, and after the Impreſſions of the Finger, Pits remain, which does not happen in a Cachexia, except when it approaches to a degree of theſe Diſorders. Nor are we to forget and overlook the Difference between a Cachexia and an Atrophy; for in both Diſeaſes the Fluids are highly impure, the Viſcera are depriv'd of their due

Tone, and the Nutrition is vitiated. But in an Atrophy the Body is daily more and more extenuated, and the Nutrition is entirely deſtroy'd; whereas in a Cachexy it is vitiated, but preternaturally copious: Hence the Body in a Cachexia becomes larger than it was in its natural State. Laſtly, a Cachexia is different from a Scurvy; for in every Scurvy there is a Cachexy, and an almoſt irreparable Dyſcraſy of the Humours, obſervable from the various Pains, Exulcerations, and Defedations of the Skin; but in a Cachexy this Dyſcraſy of Humours does not ariſe to ſuch a Height. And if theſe Symptoms ſhould happen to attend a Cachexy, it is call'd a ſcorbutic Cachexy.

As for the Prognoſtics of a Cachexy, I think we may lay it down as an uncontroverted Maxim, that cachectic Patients differ very conſiderably from each other; and are more or leſs eaſily cur'd, according to their Age, their Conſtitution, their Method of Life, and the greater or leſs Fault of their Humours and Viſcera. Thus, if we conſider the different Ages of Patients, old Perſons are more ſeverely afflicted with this Diſorder, than ſuch as are young, becauſe old Age itſelf is a Species of Cachexy; ſo that Patients, labouring under a Cachexy at this Period of Life, frequently fall into an Atrophy and Maraſmus. That Species of Cachexy, which is ſuddenly produced by Intemperance, and a deprav'd Digeſtion, after chronical Diſeaſes, is more eaſily remov'd, than that which makes gradual Advances in conſequence of a Fault of the Viſcera, or a ſcirrhous Obſtruction of the Liver or Spleen. Hence alſo a greeniſh, or ſomewhat blackiſh Colour of the Skin, which, for the moſt part, indicates a latent Injury done to the Viſcera, by an Admixture of corrupted Bile, prognoſticates a greater Danger than a pale Colour, which only indicates an Abundance of Phlegm. We muſt alſo obſerve, that the longer the Diſeaſe has afflicted the Patient, the greater Difficulty of Breathing it is accompanied with, the more tenſe and hard the Hypochondria are, and the more the Strength is impair'd; eſpecially, when the Patient is ſeiz'd with fainting Fits at certain Intervals, the Danger is proportionably greater. Nor does this Diſorder admit of an eaſy Cure, when it draws its Origin from a preceding, or a frequently returning, hæmorrhoidal Diſcharge. Beſides, there is no Diſeaſe which more readily degenerates into an Anaſarca, an Aſcites, an Atrophy, and a hectic Fever, than a Cachexy; eſpecially when, in the Beginning, due Care is not taken to remove it by proper Remedies. A Chloroſis, when ſkilfully treated, is neither very dangerous, nor of long Duration; but is either remov'd by a ſeaſonable Return of the menſtrual Diſcharge, or, in Virgins, happily cur'd by Marriage alone. But Women who labour long under a Chloroſis, either become barren, or bring a weak and languid Offspring into the World.

The Cure.

Having now inveſtigated the Cauſes of this Diſorder, we ſhall next lay down a proper Method of removing them, which, in my Opinion, conſiſts in the following Intentions: Firſt, to correct the crude, thick, and impure Blood and Juices; to evacuate them thro' proper Emunctories; and, in their ſtead, to promote the Generation of a fine Blood and Chyle: Secondly, to open and remove the Obſtructions of the Viſcera and capillary Veſſels, that a free and equable Circulation of the Blood may be reſtor'd thro' all the Parts of the Body, both internal and external: And, thirdly, to corroborate and reſtore the weaken'd Tone of the Stomach and Inteſtines.

But before the Phyſician attempts the Correction of the peccant Humours, he is to endeavour to cleanſe the Source, from which ſuch an Increaſe or Addition is deriv'd to the Humours. The Stomach then, and Inteſtines, conſtitute this Source, from which viſcid, mucous, and acid Crudities proceed, and which, by inciding and digeſtive Remedies, ought to be corrected and diſpoſed to Motion, that they may be eliminated with the greater Eaſe. This Intention is moſt effectually anſwer'd, by what we commonly call neutral Salts; ſuch as vitriolated Tartar, the Arcanum Duplicatum, a Solution of Crabs-eyes in Lemon-Juice, the Terra foliata Tartari, otherwiſe call'd *Tartarus Regeneratus*, Sal Polychreſtum, the Caroline and Egran Salts. *Tartarus Tartariſatus*, or Salt of Wormwood, may be us'd; theſe muſt be diſſolv'd in a ſufficient Quantity of Water, and exhibited; for theſe, often repeated or exhibited in a large Doſe, not only incide and attenuate, but alſo prove purgative, and effectually evacuate the Sordes lodg'd in the Inteſtines. If they ſhould happen not to anſwer this Intention, Evacuants are to be us'd, which may be prepar'd of equal Quantities, half a Dram, for Inſtance, of Myrrh, Gum Ammoniac, the Extracts of Rhubarb, Wormwood, Cinnabar, and the Panchymagogum Crolii, Amber, and the Salt of Amber; a Scruple of this may be exhibited for a Doſe. This Intention is alſo excellently anſwer'd by my balſamic Pills, which, at the ſame time, wonderfully reſtore and ſtrengthen the weaken'd Tone of the Stomach. Or if a Medicine in a liquid Form is more agreeable, an Infuſion in Wine may be prepared of the Roots of Burnet, wild Radiſh, Succory, Rhubarb, Agaric, freſh Orange-peel, the Tops of the leſſer Centaury, Cream of Tartar, and Currants. A ſufficient Quantity of this Infuſion is to be taken every Morning for ten Days. This Intention is no leſs effectually anſwer'd by half a Pint of the *Sedlitz* Waters, drank every other Day, with an Ounce of the Syrup of Peach-flowers, or the Syrup of Succory with Rhubarb, or the ſolutive Syrup of Roſes. If the Patient is too coſtive, it is adviſeable to render his Body ſoluble by a gentle evacuant Potion, which may be prepared in the following manner.

> Take of the beſt Manna, two Ounces; Cream of Tartar, one Dram; Rhubarb and purified Nitre, each half a Dram: Mix them in eight Ounces of Spring-water.

When the Primæ Viæ are thus purg'd, the Phyſician muſt endeavour to render the whole Maſs of Blood more pure and fluid, and to open the obſtructed Emunctories, that the Blood and Serum may be the more effectually depurated. This Intention is anſwer'd by Decoctions of the Roots of Sarſaparilla, *China*, Vipers Graſs, and Succory, as alſo by Decoctions of the Shavings of Saſſafras and Cinnamon. Theſe Decoctions are to be us'd weak for common Drink, but may be exhibited pretty ſtrong in Bed every Morning, in order to promote a free and briſk Perſpiration. It is alſo proper ſometimes in the Morning to promote a Diaphoreſis, which may be obtain'd, by taking forty Drops of the Eſſence of Amber and Burnet, with Tincture of Antimony and Spirit of Hartſhorn, mix'd in equal Quantities in a warm Decoction. Nor will it be improper, if the Caſe requires it, now-and-then to exhibit a Dram of the Tincture of Tartar in a proper Decoction, in order to excite a Diureſis.

But, above all Things, a particular Regard is to be had to the State and Condition of the Stomach, for reſtoring the Tone of which, the Stomachic Elixirs are, of all other Medicines, the moſt proper. The principal of theſe are, my balſamic Elixir, *mentioned in the Notes to* Poterius; Sal volatile Oleoſum, mix'd with Tincture of Tartar; the Stomachic Elixir, conſiſting of the Eſſences of Gentian and freſh Orange-peel; the balſamic Elixir, prepar'd of the Extracts of the leſſer Centaury; Carduus Benedictus, Wormwood, Gentian, Myrrh, Amber, Saffron, and freſh Orange-peel, prepar'd without a ſpirituous Menſtruum, but with a weak Lixivium of the Salt of Tartar. Theſe Medicines, us'd at Meals, or immediately after them, contribute much, not only to digeſt the Aliments, and procure a balſamic and ſpirituous State of the Chyle, but alſo to reſtore the natural and balſamic Quality of the Juices, and ſtrengthen the Tone of the Viſcera. But, for anſwering theſe Intentions, 'tis neceſſary they ſhould be us'd for a conſiderable time.

If the Diſorder is ſo highly obſtinate, as not to yield to theſe Medicines, we muſt have recourſe to proper mineral Waters, which are of ſingular Service in the Cure both of a Cachexia in Men, and a Chloroſis in Women. But this Intention I think is, among all others, moſt effectually anſwer'd by the *Pyrmont* Waters, by the Uſe of which, I have often known a Chloroſis, ariſing from an Obſtruction of the Menſes, cured in Patients, apparently of a very weak and tender Conſtitution. The *Spaw* Waters are poſſeſſed of the ſame Virtues; for ſince both of them are impregnated with a fine chalybeate Principle, they not only render the thick Juices fluid, and fit for Motion, and open the obſtructed Ducts of the Emunctories, but alſo, by increaſing the Tone and Strength of the Viſcera, excellently promote the Circulation of the Blood thro' all the Parts of the Body.

Beſides the above-mentioned Waters, which are richly impregnated with a chalybeate Principle, other chalybeate Medicines, in Conjunction with ſaline and balſamic Ingredients, when duly exhibited, are juſtly eſteemed efficacious and powerful Remedies for the Cure of a Cachexia and Chloroſis. But tho' there are various Preparations of Steel, both of the chymical and pharmaceutical kind, yet none ſeems preferable to the ſubtile Crocus, which is prepared of the coarſe Filings, not of Steel, but of Iron, ſprinkled with Rain-water, and expos'd to the Heat of the Sun. But 'tis adviſeable to exhibit this Medicine mixed with others, ſuited and adapted to the Nature of the Diſorder: For this Reaſon I generally add to it the Roots of Burnet and Arum, Cinnamon, Salt of Tartar and Sugar, with ſo much Succeſs, that I have often ſeen young Women cured by it, after they have labour'd for a great while under a Chloroſis, attended with a violent Head-ach, and other formidable Symptoms. The beſt Medicines of a liquid Form, for anſwering this Intention, are the *Tinctura Martis pomata*, the Tinctura Martis Cydoniata, that prepar'd with Lemon-juice, and above all, the *Tinctura Martis Zwelferiana*. The Efficacy of theſe Medicines is ſtill increas'd, if they are exhibited in a ſufficient Quantity of the above-mentioned Decoction,

coction, or in Broths, in which the aperient Roots of Dogs-graſs, Succory, Parſley, Sparrow-graſs, and Fennel, have been boiled.

Practical Cautions.

If ſpeedy Methods of Relief are neceſſary in any Diſorder, they are in a peculiar manner ſo in a Cachexia, ſince by Delays 'tis to be dreaded, leſt the Patient ſhould be thrown into an Atrophy, a Scurvy, or a Dropſy. When a Patient labours under a Cachexia, ariſing from a Suppreſſion of an accuſtom'd Evacuation of Blood, the Phyſician is, by proper Remedies, to attempt the Reſtitution of that Evacuation. With this View 'tis proper, if the Patient's Strength is not exhauſted by the Continuance of the Diſeaſe, to take away a ſmall Quantity of Blood at certain Intervals, every third Day for Inſtance. This Method of Relief was long ago recommended by *Hippocrates*, in the third Section of his Book *de Morb. Mulier.* and is in a peculiar manner ſalutary to thoſe, in whom the accuſtom'd menſtruous Diſcharges are ſuppreſs'd. Veneſection, on the other hand, is highly prejudicial to thoſe, who, abounding with a Maſs of peccant Humours, have, at the ſame time, but a ſmall Quantity of Blood contain'd in their Veins.

Beſides a prudent and ſeaſonable Veneſection, and proper Purging, in a Cachexia ariſing from an Obſtruction of the menſtrual or hæmorrhoidal Diſcharges, there is a ſingular Virtue lodg'd in the *Caroline* Waters, by a proper internal Uſe of which, I have often known theſe ſuppreſs'd Evacuations reſtor'd. But they are to be abſtain'd from, when the Diſorder draws its Origin from an immediate Diſcharge, either of the Menſes or the Hæmorrhoids.

The obſtructed Menſes, when Veneſection is properly inſtituted, and the Obſtructions of the Viſcera remov'd by mineral Waters, or chalybeate Medicines, ſometimes begin to flow again ſpontaneouſly. But if this ſhould not happen, it is neceſſary the Patients ſhould be put, for about an Hour's Time, into a pretty hot Bath, prepar'd with the Herbs Fever-few, Baum, Mug-wort, Penny-royal, and Savin, Flowers of Roman Chamomile, and of Sage, together with Bay-berries. A Bath of this Kind I have often found highly beneficial for attenuating the ſtagnating Humours, and evacuating the mucous and tenacious Part of the Serum thro' the Orifices of the Uterus.

Cachectic Patients are never to be treated with violent Medicines; for which Reaſon, all draſtic Purgatives and Sudorifics, as alſo immoderately hot Baths, are to be avoided, ſince, by their means, prejudicial Tranſlations of the peccant Humours to the more noble Parts are often produc'd.

As to the due Uſe of chalybeate Preparations, we muſt obſerve, firſt, That their Efficacy ought to be aſſiſted and promoted by ſufficient Motion and Exerciſe of the Body: Secondly, The Uſe of them ought to be perſiſted in for ten or fifteen Days, interpoſing, at the ſame time, every third or fourth Day, a gentle Purgative. Thirdly, A ſufficient Quantity of diluting Liquor, and an exact Regimen, are to be uſed at the ſame time.

We muſt obſerve with *Hippocrates* and *Platerus*, that, in pale and ſickly Girls, the Menſes have appear'd and continued regular, from the very firſt Night of their Marriage, after which a lively Colour, and a perfect State of Health, have enſued; for which Reaſon, we muſt in this Caſe recommend Matrimony, as the beſt and moſt proper Remedy.

The Feet, which in this Diſorder are cold and tumid, are to be kept well cover'd, and moderately warm. They are alſo to be tightly wrapt up in Linen Cloths, in order to redreſs their lax and flaccid State, and promote a briſker Return of the Fluids to the Heart. But, if they are become tumid to an uncommon Degree, medicated Bags, made up of Millet, Bran, and Salt, are to be applied to them. With reſpect to Foot-baths, we muſt obſerve, that they are not to be uſed when the Swelling is already form'd; in which Caſe, beſides the already mention'd Methods, Frictions with warm rough Linen Cloths are more properly apply'd.

As to the Regimen calculated, either for a preſervative or curative Intention, a moiſt and cold Air, as alſo low Chambers fill'd with dank Exhalations for ſleeping in, are highly prejudicial. Among Aliments, thoſe of difficult Digeſtion, ſuch as unripe Fruits, acid Subſtances, and Milk-meats, are carefully to be abſtain'd from. In this Diſorder Water alone is prejudicial for common Drink, for which Reaſon it ought to be corrected with good *Rheniſh* or *Moſelle* Wine. But we muſt obſerve, that a Cachexia is often produced and ſupported by eating too liberally; for which Reaſon Abſtinence, and a Care not to indulge the Appetite too much, are in this Caſe far more powerful and efficacious, than all the Medicines in the Shops. *F. Hoffman.*

What *Hoffman* has ſaid of the *Spaw* and *Pyrmont* Waters, holds true of our own chalybeate Waters, from which I have always obſerv'd greater Effects, when drank at the Fountain Head, with due Exerciſe, than from the *German* Waters drank at a great Diſtance from the Spring. See Cachexia.

CHNUS, χνῦς, in *Hippocrates*, *Lib.* 1. περὶ γυναικ. is fine or ſoft Wool, to which he compares an aqueous Spleen, on account of its Softneſs. Χνῦς, or χνοῦς, in *Heſychius*, is interpreted Chaff, and alſo Sound and Noiſe; in which latter Senſe we may underſtand the Word in *Lib. de intern. Morb.* where it is ſaid, that, in a Phthiſis, ὁ ἀναπνεῖ χνοῦς πίμπλαται, καὶ συρίζει ὡς διὰ καλάμου, "the Fauces are fill'd with Sound, and utter "a ſort of hiſſing Noiſe, as if it came through a Reed." But χνοῦς here may well enough be taken in its former Senſe, as *Caſtellus* obſerves, and import, that the Fauces ſeem to be ſtuffed and clogg'd with a woolly Subſtance, in ſuch a manner as to make the Sound before-deſcribed.

CHOA. See Chus.

CHOACUM *Emplaſtrum nigrum.* The black Plaiſter call'd *Choacum*, or *Choacon*, in *Celſus*, *Lib.* 5. *Cap.* 19. is compoſed of Spuma Argenti and dry Roſin, of each an hundred Drams; but the Spuma Argenti muſt firſt be boiled in a Pint and a Half of Oil.

CHOANA, χοάνη, is a Cavity in the Brain, like a Funnel, call'd alſo τύελος. *Caſtellus.* See Infundibulum.

CHOANOS, χοάνος, χόανον, χώνος. This laſt, in *Hippocrates*, ſignifies a Funnel. Thus, in his Book *De Corde*, he ſays, that the στόμαχος, "the Gula," ſerves as a χώνος, "a "Funnel," to receive whatever we pleaſe to put into it. χόανος, χόανον, ſignify a Veſſel of white Clay, uſed by Goldſmiths and Chymiſts in the Fuſion of Metals; we may call it a Furnace for melting or caſting of Metals. This appears from *Homer*, and his Commentators; and *Hippocrates*, in the Book before-mentioned, ſpeaking of the Auricles of the Heart, compares them to the Bellows, which Smiths adapt, χοάνοισι, "to "their Forges."

CHOCOLATA, SUCCOLATA. Chocolate. See Cacao.

CHOCUS. See Chus.

CHŒNICIS, χοινικὶς, χοινικιον. The Trepan, ſo call'd by *Galen* and *Ægineta*, and mention'd by *Celſus*, *Lib.* 7. *Cap.* 3. where he calls it Modiolus.

CHŒNIX, χοῖνιξ. An *Attic* or *Greek* dry Meaſure, containing three Cotylæ, or Heminæ, according to *Cleopatra*, that is, one Sextarius and a Half.

CHŒRADES, χοιράδες, from χοῖρος, a Swine. The ſame as *Strumæ*. See Struma.

CHŒRADOLETHRON, χοιραδόλεθρον, from χοῖρος, a Swine, and ὄλεθρος, Deſtruction, that is to ſay, Hogbane. A Name in *Aetius* for the *Xanthium*, or Louſeburr.

CHOIRAS, χοιράς. The ſame as Struma, which ſee.

CHOIROS, χοῖρος, ἢ χοῖρος. *Galen*, *Comm. in R. V. I. A.* ſays, that the Antients call'd by this Name particularly χοῖρον τὸν μικρὸν λίαν, "a very little Hog."

CHOIAC. The Name of the Month *December* in *Aetius*, *Tetr.* 3. *Serm.* 4. *Cap.* 48.

CHOLAGOGA. Χολαγωγὰ, among the *Greeks*, correſponded to what we call *Cholagogues* in *Engliſh*. The Medicines of this Claſs were ſo call'd from χολὴ, the Bile, and ἄγω, to drive out or evacuate. By Cholagogues the Antients meant no more than ſuch purgative Medicines as expel'd the internal Fæces, which reſembled the cyſtic Bile in their yellow Colour, and other Properties, ſuch as their Brightneſs, their Tenacity, and their Bitterneſs; but they ſeem to have err'd, firſt, becauſe by this means they excluded many things from the Claſs of Cholagogues, which really belong'd to it; for the hepatic Bile, before it is mixed with the cyſtic, in every reſpect reſembles Lymph. Secondly, becauſe they accounted ſome things Cholagogues, which were not really ſuch; becauſe many other Medicines diſcharge Fæces with the above-mention'd Properties, tho', at the ſame time, the ſmalleſt Quantity of Bile is not contain'd in them; ſuch as Caſſia, Manna, Aloes, and Tamarinds, by which the Fæces are tinged with a yellow Colour. It may juſtly be doubted, whether there really are ſuch purgative Medicines as act in a ſpecific and particular Manner upon the Bile; for, according to *Ettmuller*, Purgatives act as well upon the uſeful as the peccant Fluids of our Bodies, and one Purge is juſt as good as another: However, according to the various Circumſtances, we are taught by Experience to chooſe ſometimes one, ſometimes another; ſometimes one which is weak, and at other times one of a more ſtrong and draſtic Nature. Hence we underſtand, that not only Cholagogues, but alſo other Purgatives, evacuate Bile. We may, however, retain the Name Cholagogues for ſuch Purgatives as are generally uſed againſt Diſorders or Obſtructions of the Liver and biliary Ducts; in Students, for Inſtance, and Men of a ſedentary Life, in the Jaundice, ſometimes in Fevers, in a corroſive and burning Pain of the Inteſtines ariſing from an acrid Bile, and in Loſs of Apetite, ariſing from a pinguious Bile. *Actuarius*, in his *Meth. Medend.* tells us, that ſuch Subſtances as evacuate yellow Bile are to be uſed in Caſes where ſuch a Species of Bile is ſuſpected to be lodged in the Mouth of the Stomach, or diſperſed through the Syſtem of the Veins; in tertian Fevers alſo, and thoſe of the continued Kind, when decreaſing; in the Jaundice; and, in a Word, in all Diſorders in which a Redundance of yellow Bile

is

is ſuſpected. The Medicines evacuating yellow Bile are commonly reduc'd to two Claſſes. Under the firſt are contained ſuch things as, by attenuating the hepatic Blood, promote a more free and copious Secretion of the Bile; ſuch as the ſweetiſh acid Juices of ripe Fruits, the Juice of that Species of Lychnis call'd Saponaria, Caſſia, Honey, Tamarinds, Juice of white Roſes, Aloes, Scammony, Myrobalans, Rhubarb, Soaps, eſpecially thoſe conſiſting of a volatile alcaline Salt, and a volatile Oil, Elixir Proprietatis, moderately aromatic Syrups, ſuch as *Fernelius*'s Syrup of Mugwort, the Syrup of Jeruſalem Oak, that of the Five aperient Roots, that of Violets, the ſimple Syrup of Succory, the ſame with Rhubarb, the ſimple ſolutive Syrup of Roſes, the ſame with Sena. Theſe muſt be exhibited in Whey, Decoctions of Dandelion, or ſome other Decoction of a diluting Nature, in the Morning, upon an empty Stomach. Perhaps the beſt Cholagogue belonging to this Claſs is what is preſcrib'd by *Boerhaave* in his Chymiſtry, and which is prepared

Of two Drams of the Tincture of Scammony, well prepar'd with rectify'd Spirit of Wine, and mix'd with triple the Quantity of ſome of the above-mention'd Syrups.

The ſecond Claſs contains ſuch Subſtances, as, by giving a violent Concuſſion to the Abdomen and Diaphragm, derive both Species of Bile into the Inteſtines. This Effect is produced by the more draſtic Vomits and Purgatives, which ought not to be uſed till after the former have been try'd, and which are to be calculated for the Cure of Diſeaſes ariſing from black Bile.

There is ſome Reaſon to ſuſpect, that antimonial Medicines act more powerfully on the Bile than any other Remedies.

CHOLAS, χολὰς, rendered by *Gaza Cholago*, from *Ariſtotle*, *Hiſt. Animal. Lib.* 1. *Cap.* 13. ſignifies all the Cavity of the Hypochondria, or the Ilium, and is ſo call'd becauſe it contains the Liver, as the Strainer of the *Chole* or Bile, or from its Hollowneſs, *quaſi* κοιλάς.

CHOLE, χολή. See BILIS.

CHOLEDOCHUS, χοληδόχος, from χολὴ, Bile, and δέχομαι, to receive, is a common Epithet for the Gall-bladder, the hepatic Veſſels, call'd the πόροι χοληδόχοι, "biliary Ducts," and the common Gall-duct, which communicates with the Duodenum. *Caſtellus.*

CHOLEGON, χολαγὸν, χολαγὸν. The ſame as CHOLAGOGUM. See CHOLAGOGA.

CHOLERA, χολέρα. The Cholera. It is defin'd by *Paulus*, *Lib.* 3. *Cap.* 39. an immoderate Perturbation of the Belly, attended with a Diſcharge of Bile upwards and downwards, and proceeding from a continual Indigeſtion of Aliments. *Hippocrates*, *Lib. de R. V. I. A.* makes two Kinds of Cholera, the humid and the dry; but *Cholera* ſimply ſpoken, that is, without an Epithet, ſignifies the humid *Cholera* proceeding from acrimonious, bilious, and ſerous Humours, generated of a Corruption of acrimonious Food. Thus we are told, in the ſaid Book, that Goats Fleſh generates the *Cholera*, and that Swine's Fleſh is χολώδης *(Cholodes)*; that is, as *Galen* explains it, generates the *Cholera* by its Acrimony; for, as he ſays, in his *Comment.* this Diſorder proceeds from humid and acrimonious Aliment, which is ſoon corrupted, and by vellicating the Orifices of the Viſcera, which communicate with the Stomach, excites and attracts a Flux of Humours from the whole Body, which is diſcharged in bilious and acrimonious Stools and Vomitings. The dry *Cholera* proceeds from a Collection of acrimonious and flatulent Humours in the Stomach, by which the adjacent nervous Parts are vellicated and diſtended, in which reſpect it reſembles the humid *Cholera*. It is deſcribed by *Hippocrates*, in the Book before quoted, as attended with a Rumbling and Inflation of the Belly, a Pain of the Sides and Loins, and a Conſtipation of the Belly. In *Epid. Lib.* 5. this Diſeaſe is expreſs'd by τὰ χολερικὰ πάθεα, "Choleric Affections;" and, in the ſame Book, and *Epid.* 7. ſimply by τὰ χολερικά. *Celſus*, *Lib.* 4. *Cap.* 11. and *Lib.* 2. *Cap.* 1. calls this Diſeaſe *Cholera*, by Tranſlation from *Hippocrates*, *Aphor.* 30. *Lib.* 3. χολέρα, *Lib. de Inſomn.* and *Coac.* ſignifies alſo a critical Diſorder of that Nature, as when we are told in the laſt-mention'd Treatiſe, that the Fever call'd *Lipyria* admits of no Solution but by a *Cholera*; and that Women, who, before their Lying-in, are afflicted τρόπον χολερώδεα, after the Manner, or with the Symptoms, of a Cholera Morbus, have an eaſy Travail.

OBSERVATION I.

A certain Girl of twenty Years of Age died of a Cholera Morbus; and, diſſecting her Body, the mammary Veſſels were no-where to be found, tho' the moſt diligent Search was made for them. Many of the Parts contain'd in the Abdomen were changed; the Bottom of the Stomach, ſunk a Hand's Breadth below the ſpurious Ribs, was entirely deprived of the Benefit of the Omentum. Hence the Stomach being weaken'd, the Girl, whilſt alive, became ſubject to ſo violent Vomitings, that a preternatural Quantity of Blood was deriv'd to her Head, by which means the florid Colour of her Countenance remain'd after her Death. By the Violence of the Vomiting, the Ligaments of the Viſcera were alſo broken, and the Stomach was depreſſed, together with the Inteſtines. The Omentum reached below the Stomach to the Os Iſchium. The *Colon* was ſealed preternaturally deep; and whereas, in a natural State, it is diſtinguiſh'd by various Gyrations and Circumvolutions, here, by ſmaller Inflexions, it reſembled the Teeth of a Saw. In the Inteſtines there was a reddiſh Worm found, which ſufficiently denoted the cacochymic Habit of the Patient's Body. The Spleen was ſwelled to double its natural Bulk, and appeared chang'd from its uſual Figure to that of an oblong Globe. The *Ductus Cholidochus* was divided into many ſmall Ramifications, which, on account of their Narrowneſs, produced a Regurgitation of a large Quantity of Bile. Hence the troubleſome and fatal Vomiting of bilious Matter had its Origin. *Th. Bartholinus*, *Cent.* 2. *Hiſtor.* 81.

OBSERVATION II.

In Patients who, in four Days time, have died of a *Cholera Morbus*, I have found the whole Bile of the Body evacuated, the Liver ſcorch'd and dry, and the Gall-bladder highly turgid; but when compreſs'd, the Bile neither flow'd, nor dropt out. The Duct reaching directly from the Liver to the Inteſtines was dilated to the Bulk of one's little Finger. By this Circumſtance I knew, that the Bile was convey'd immediately from the Liver to the Inteſtines. *Riolanus Anthropogr. Lib.* 2. *Cap.* 10.

OBSERVATION III.

The large Quantity of Bile evacuated in a *Cholera Morbus*, and the Diarrhœas of Children, is acrid, and generally æruginous or green. In Patients who have died of theſe Diſorders I always found a large Quantity of this Species of Bile in the Gall-bladder, and little or none at all in the Stomach, which is an infallible Proof, that the Bile is convey'd from the Gall-bladder to the Inteſtines and Stomach, in which it is not originally generated. *Diemerbrook Anat. Lib.* 1. *Cap.* 5. Such a tumid State of the Gall-bladder, produced by a greeniſh Bile of a deep Colour, I obſerved in a Boy of ten Years of Age, who died of a *Febris Leipyria*, attended with an Inflammation of the Liver, whoſe extreme Lobes were become blackiſh, in conſequence of a preceding *Cholera Morbus*. The Gall-bladder was as large as a Hen's Egg, and turgid with a greeniſh olive-colour'd Bile. With the ſame Species of Bile the biliary Ducts were alſo diſtended; and the whole concave Part of the Liver was covered with this ill-qualify'd Bile, which, on account of its Viſcidity and Toughneſs, had there remained.

OBSERVATION IV.

A certain Perſon was ſeized with a ſudden Vomiting, and had ten Stools. Upon diſſecting his Body ſeveral Pieces of white Arſenic were found impacted in the Coats of his Stomach.

OBSERVATION V.

In diſſecting a certain Perſon of Diſtinction, we found the Ductus Choledochus, which naturally diſcharges its Contents into the Duodenum, had an Opening near the Pylorus, by which means it convey'd the Bile to the Stomach, as well as to the Inteſtines. From this Circumſtance proceeded his Nauſeas, Vomitings, and Coſtiveneſs; for Nature being deprived of the Bile, her natural Clyſter, failed, in conſequence of her expulſive Faculty being deſtroyed. Hence a Cholera Morbus ſuddenly put an End to the Life of the Patient. *Barthol. Cabrollius Obſervat. Anat.* 6.

There is a near Affinity between a *Dyſentery*, and that Diſeaſe, which from the copious Diſcharge of bilious Sordes, both by the Mouth and Anus, the *Greeks* call *Cholera*, which *Cœlius Aurelianus* calls *Felliflua Paſſio*, and which, by *Willis*, in *Pharm. Rat. Part.* 1. *Sect.* 3. *Cap.* 3. is denominated *Dyſenteria incruenta*, or an unbloody Dyſentery. It conſiſts in the periſtaltic Motion of the Stomach and Inteſtines being ſtimulated to a convulſive Contraction, by means of an highly acrid and cauſtic Matter, of various kinds, lodg'd in them; this Motion being in ſome meaſure inverted, and attended with an immoderate Diſcharge of bilious Sordes both by the Mouth and Anus.

But we muſt, in a particular Manner, take notice of the Difference between a *Cholera* and a dyſenteric Flux, ſince the former is juſtly claſs'd among the moſt acute Diſorders, and generally terminates in a few Days, at longeſt on the ſeventh; whereas a Dyſentery, unleſs highly malignant, is found to continue for a longer time. Nor is the dyſenteric Flux always attended with Vomitings, which only ſometimes happen in the Beginning or Height of the Diſorder, or when there is a concomitant Inflammation of the Stomach; whereas a Cholera is always accompany'd with a Vomiting; but it is not attended

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with ſo troubleſome a Teneſmus, or ſo frequent bloody Stools; nor, laſtly, does it, like a Dyſentery, prove contagious.

Nor is a Cholera leſs different from a bilious Diarrhœa; for tho' the Cauſes of theſe Diſorders are found to be nearly the ſame, they are, nevertheleſs, attended with different Symptoms, and afford different Prognoſtics; for as a bilious Diarrhœa is no more than a copious Diſcharge of bilious Sordes from the Anus, by the Force of the periſtaltic Motion of the Inteſtines ſpaſmodically conſtricted in its natural Courſe downwards; ſo, on the contrary, this Diarrhœa always attends a Cholera. But, beſides, in a Cholera there is a kind of Inverſion of the periſtaltic Motion, but more eſpecially of the Stomach and Duodenum, for which Reaſon this Diſorder is always accompany'd with Vomitings.

A Cholera is alſo to be diſtinguiſh'd into that which is dry, and that which is moiſt. The former is when the Stomach and Inteſtines are ſo diſtended with flatulent Vapours, that with the greateſt Uneaſineſs they diſcharge them copiouſly, either by the Mouth or the Anus. Of this Species of Cholera we have a remarkable Inſtance in *Act. Med. Berolin. Dec. 2. Vol. 3.* but this kind of the Diſorder does not at preſent come under our Conſideration. The moiſt *Cholera*, on the contrary, is ſuch a Diſorder as we have deſcribed above, and is either complicated with that Species of violent and inflammatory Fever, which the Phyſicians call *Cauſus*, or is found without a legitimate and regular Fever, tho' not without ſome Degree of Shivering, and irregular Returns of a hot Fit. This Species of the Diſeaſe is, for the moſt part, idiopathic, tho' it ſometimes alſo proves ſymptomatic, in the difficult Dentition of Children, according to *Sydenham*; in malignant Fevers, according to *Riverius*; in *Cent. 3. Obſ. 78.* and in that Species of Fever call'd *Leipyria*, which, according to *Hippoc.* in *Coac. Prænot. 123.* is not removed without a ſupervening Cholera. Theſe Diſorders are alſo frequently accompany'd with a bilious Flux.

Both theſe Diſorders are incident almoſt to the ſame ſort of Patients; that is, ſuch as are of a bilious, dry, and choleric Habit of Body; for Perſons of a more ſucculent, phlegmatic, and ſanguine Conſtitution, more frequently labour under a pituitous Flux. Thoſe Patients are in a particular manner ſubject to a Cholera, whoſe vital Juices are contaminated with a certain ſcorbutic Acrimony, or who have a Collection of acid Sordes lodged in the Primæ Viæ; ſuch as are generally hypochondriac, ſcorbutic, cachectic Patients, and ſuch as have the Misfortune of a fierce and wrathful Diſpoſition. This Diſeaſe principally rages in the Summer-time, and during ſultry Weather: It is alſo more frequent and violent in hot Climates, than in ſuch as are more mild and temperate. Hence *Bontius*, in his *Hiſt. Nat. Ind. Lib. 4. Cap. 6.* and *Thevenot*, in his *Itinerar. Part. 2. Lib. 2. Cap. 20.* inform us, that it is endemial among the Inhabitants of *India*, *Mauritania*, *Arabia*, and *America*.

As to the Hiſtory of the Diſeaſe, we muſt obſerve, that a Cholera generally ſeizes the Patient all on a ſudden; for tho' acid and nidorous Eructations, pungent Pains of the Stomach and Inteſtines, Cardialgias, and an Uneaſineſs of the Præcordia, frequently precede it, yet ſoon after the Patient is ſuddenly ſeiz'd with Vomitings, and a Diſcharge of the Excrements, at one and the ſame time. Firſt of all, the Remains of the Aliments are diſcharg'd; then bilious Humours, mix'd with a ſmaller or larger Quantity of Mucus, ſometimes yellow, ſometimes æruginous, ſometimes black, and generally highly acid, and almoſt corroſive, together with copious Eructations and Flatulences, and ſometimes Blood: Theſe are often, and at different times, diſcharged. Beſides, the moſt acute Pains, Contorſions, Corroſions, biting Pains, Inflations, and Rumblings, are perceived in the Inteſtines, eſpecially above the Navel, and the Patient is at the ſame time afflicted with a moſt violent Cardialgia. As the Diſorder increaſes, the Patient is ſeized with an inſatiable Thirſt; his Extremities become cold, his Heart begins to beat preternaturally, the Diaphragm is agitated by the Shocks of the Hiccough, the Diſcharge of the Urine is obſtructed, cold Sweats break out on the Body, violent fainting Fits, which often partake of the Nature of a Syncope, ſeize the Patient, and formidable Convulſions of the whole Body are brought on. This Diſorder ſoon terminates, for it generally ceaſes on the third, fourth, or, at moſt, on the ſeventh Day; nor does it ever continue longer, except when it degenerates into another Diſeaſe.

Among the Antients *Cœlius Aurelianus*, and *Aretæus*, have given the moſt diſtinct Account of the Cholera.

The firſt of theſe informs us, that the *Choleric Paſſion*, according to ſome, receives its Denomination from χολὴ, the Bile, and ῥοὴ, or rather ῥοὺς, a Flux, as it conſiſts in a Diſcharge of the Bile from the Mouth and the Anus. Others will have its Name deriv'd from the Quantity of the Humours diſcharg'd, which, they ſay, are not real Bile, but certain Fluids, which aſſume the ſame Colour. This Diſtinction, however, is frivolous and trifling, ſince 'tis not worth while to diſpute about the Etymology of this Diſorder. *Aſclepiades*, in his Book *De Finibus*, has defin'd the choleric Paſſion *A quick and ſpeedy Diſcharge of Humours from the Stomach and Inteſtines, drawing its Origin from a certain Concourſe or Obtruſion of Corpuſcles, and, as it often happens, from Indigeſtion.* Some, when explaining this Definition, obſerve, that the Words *quick* and *ſpeedy* are added in order to diſtinguiſh the *Choleric* from the *Cœliac Paſſion*, the Patients labouring under which are alſo afflicted with a ſimilar Diſcharge of Humours, which, however, is not made ſo ſpeedily, but generally requires a longer Time. They alſo think it was neceſſary to add the Words, *from a certain Concourſe or Obtruſion of Corpuſcles*, ſince ſome Perſons, upon their firſt going to Sea, are afflicted with ſuch a Diſcharge of Humours, which, however, is not produc'd by a *Concourſe of Corpuſcles*. They are alſo of Opinion, that it was proper to ſpecify, that it was frequently produc'd by Indigeſtion, ſince the *choleric Paſſion* may alſo ariſe from other Cauſes. Some of our Sect (the Methodic) have given the ſame Definition of this Diſorder, cutting off the Words *Concourſe of Corpuſcles*, and adding in their ſtead the Words *Raritas Viarum*, or the Rarity of the Paſſages. But, in my Opinion, 'tis ſuperfluous to enumerate the Cauſes of this Diſorder, ſince 'tis of far more Importance to know the Effects produc'd by theſe Cauſes.

I alſo account it ſtill more ſuperfluous to ſwell the Definitions of this Diſorder by an Enumeration of the antecedent Cauſes, ſince the *Choleric Paſſion* is not the only Diſeaſe which ariſes from Indigeſtion; and ſince Indigeſtion alone does not produce this Diſorder, which alſo takes its Riſe from other Cauſes of a particular and oppoſite Nature, none of which are pointed at, or ſpecify'd, in the preceding Definitions. Hence the Diſcharge of Humours in the *Choleric Paſſion* proceeds from ſome Fault not only of the Abdomen and Inteſtines, but alſo of the Stomach: For this Reaſon *Soranus* aſſerts this Diſorder to be a *Solution of the Stomach, Abdomen, and Inteſtines, accompany'd with inſtantaneous and ſpeedy Danger.* The antecedent Cauſes of this Diſorder may be ſaid to be the drinking too much Wine, the Exhibition of bad Medicines, the Uſe of hot Waters, or the Toſſing of a Veſſel, which throws Perſons unaccuſtom'd to it into violent Commotions. But we are ſaid to increaſe theſe antecedent Cauſes in proportion as we protract the Indigeſtion, by uſing too large a Quantity of Aliments, to which we are either unaccuſtom'd, or which are delicately prepared. An Acquaintance with theſe Circumſtances may, indeed, contribute to ſatisfy the Mind with reſpect to the Cauſes of the Diſorder, but is not at all ſubſervient, much leſs abſolutely neceſſary to the right Conduct of the Phyſician, or the Relief of the Patient. A Diarrhœa and a Reſolution of the Stomach bear a near Reſemblance and Affinity to this Diſorder. But the Followers of *Aſclepiades* inſtitute a Difference between the Choleric Paſſion and a Diarrhœa: The former, ſay they, is attended with a Diſcharge of Humours from the Stomach, whereas the latter is a Flux from the ultimate Parts. But we affirm, that in a Solution of the Stomach the Patient is only afflicted with a Vomiting, unattended with a Flux. When, on the contrary, the Patient labours under a Flux, not accompany'd with a Vomiting, this Symptom only denotes a Solution of the Belly alone, which is call'd a Diarrhœa. But, in the Choleric Paſſion, both theſe Symptoms, a Vomiting as well as a Flux, concur, together with other additional Symptoms. They alſo aſſert, that there are different kinds of Indigeſtion; and that, according to theſe Differences, either a Diarrhœa or the Choleric Paſſion are produc'd. But, according to the Followers of *Aſclepiades*, theſe Diſorders ariſe from the different Degrees of the Concourſe of Corpuſcles, which in a Diarrhœa is but ſmall, in conſequence of the Indigeſtion, but conſiderably greater in the *Choleric Paſſion*. They alſo aſſert, that theſe Diſeaſes differ with reſpect to the Time and Order of their Symptoms, ſince Indigeſtion is previous to the Approach of the Choleric Paſſion. But the Diſtinction between theſe two Diſorders is obvious and eaſy; for Indigeſtion is produc'd by the Corruption of the Aliments, tho' the Patients neither vomit, nor labour under a Flux, which the *Greeks* call *Rheumatiſmos*: But the Choleric Paſſion is a Diſorder accompany'd with a Vomiting and a Flux, even when the Aliments are not corrupted; for it is eaſy to conceive, that it may alſo ariſe from other antecedent Cauſes.

The Choleric Paſſion is generally preceded by a Heavineſs and Tenſion of the Stomach, Anxiety, Toſſing, Watchings, Gripes of the Inteſtines, accompany'd with that Species of Noiſe which the *Greeks* call *Borboriſmos*, (a Rumbling of the Guts) a Pain of the Belly, and a Diſcharge of Wind from the Anus, which affords no Relief, nidorous Eructations, a Nauſea, a preternatural Diſcharge of the Saliva, a Senſe of Weight about the Thorax, accompany'd with a Wearineſs of the Members. Upon the Approach of the Diſorder itſelf the Patient is ſeized with a continual Vomiting at firſt, as it frequently happens, of the corrupted Aliments, and of a yellowiſh Humour and Bile. Then the Matter evacuated reſembles the Yolks of Eggs, and afterwards appears porraceous and æruginous, and laſt of all black. The Belly is alſo thrown into a Commotion, accom-

pany'd with Pain; whilſt, at the ſame time, the Excrements are, like the Matter diſcharged by Vomit, frothy, and highly acrid. The Patient is alſo afflicted with frequent Retchings to vomit. As the Diſorder increaſes, an aqueous and thin Liquor, which ſometimes reſembles the Waſhings of Fleſh, is diſcharg'd by Stool. Along with theſe Humours are alſo generally evacuated whitiſh pituitous Strigments, and a thick Pulſe enſues, together with a Coldneſs of the Limbs, and a blackiſh Colour of the Countenance, a preternatural Heat, and even an inſatiable Thirſt, a quick Breathing, and a Contraction of the Limbs, together with a Tenſion of the Nerves, Calves of the Legs, and Arms. The Patient is alſo afflicted with a Riſing of the Præcordia, accompany'd with a Pain reſembling the Iliac Paſſion. Sometimes the Excrements are bloody, the Countenance emaciated and ſlender, the Eyes red, and, laſt of all, the Patient is ſeized with a Hiccough. This Degree of the Diſorder was by the Antients thought to be ſo acute, that it kill'd the Patient before the ſecond Day. But when it begins to take a favourable Turn, and become leſs violent, the Cold of the Body and Joints is leſſen'd, the Pulſe becomes manifeſtly higher, the Stools are ſmaller, and diſcharged at longer Intervals, and the Patient is gradually more and more relieved. Particular Paroxyſms are to be prognoſticated from Circumſtances ſubſequent to the Diſorder itſelf; for when the Patient is ſeiz'd with an Uneaſineſs and Toſſing, a Congeſtion of Humours to his Stomach, and a Contraction of his Limbs, we then predict the ſudden Approach of a Paroxyſm: But if, after the Vomiting, the Patient finds himſelf eaſier, his Stomach relieved, the biting Pain of his Belly alleviated, and all other Symptoms leſſen'd, we prognoſticate a Ceſſation of the Paroxyſm. Generally the Choleric Paſſion is highly intenſe and acute, and ariſes ſometimes from Solution alone, and ſometimes from a Solution accompany'd with a certain Degree of Stricture, as is obvious from the Pains of the Stomach, Belly, and Inteſtines, together with the Contraction of the Joints. In this Diſorder the Stomach, Belly, and Inteſtines, are more ſeverely and immediately affected; but, at the ſame time, all the other Members of the Body are drawn into Conſent. *Cœl. Aurel. Acut. Morb. Lib.* 3. *Cap.* 19, 20.

Aretæus deſcribes the Diſorder thus:

The *Cholera Morbus* is a Reflux of Matter from the whole Body upon the Stomach, Belly, and Inteſtines, being a very acute Diſeaſe. The Patient diſcharges his Stomach of all its Contents upwards by Vomiting, and all the Humidities of his Belly and Inteſtines by Stool. The Vomitings are at firſt aqueous, and the Fæces of a liquid Conſiſtence, and fetid, the Diſeaſe proceeding from continual Indigeſtion; when the liquid Matters are evacuated, the Stools become pituitous, and afterwards bilious. At firſt theſe Diſcharges are made with Eaſe and Freedom, but are afterwards attended with Gripes of the Belly, and racking Pains of the Stomach.

If the Diſeaſe increaſes, the Gripes are more ſevere, there is a Lipothymy, Reſolution of the Members, Reſtleſſneſs, with an Averſion to all Food; or, if any be received, it is thrown up again, with much Noiſe and Nauſea, ſatiated with yellow Bile, and the Stools are of a like Quality. The Patient is ſeiz'd with Convulſions, and Contractions of the Muſcles in the Legs and Arms; his Fingers are bent; he becomes vertiginous, and moleſted with the Hiccough; his Nails turn livid, with a general Refrigeration, Coldneſs of the extreme Parts, and a Rigor of the whole Body.

If this Diſorder takes a fatal Turn, the Patient falls into a Sweat, and voids black Bile upwards and downwards; he labours under a Suppreſſion of Urine from a Convulſion of the Bladder; nor, indeed, is there any Urine collected, the Humidities being diverted upon the Inteſtines; his Voice fails him; his Pulſe is very ſmall and frequent, as in a Syncope; he is continually retching to vomit, but brings up nothing; and is perpetually deſirous of going to Stool, as in a Teneſmus, but voids only a dry Matter, deſtitute of all Humidity. The Diſeaſe ends at laſt in a painful and miſerable Death, attended with Convulſions, Strangulation, and fruitleſs Retchings to vomit.

The Cholera Morbus is moſt frequent in the Summer; next to that in the Autumn; the Diſeaſe is rarely known in the Spring, and leaſt of all in the Winter. Young Perſons, and thoſe who are in the Flower of their Age, are moſt ſubject to this Diſorder; old Age is leaſt liable to it, Children being more commonly ſeized with it than aged Perſons, but without Danger of Death. *Aretæus de Cauſ. et Sign. Acut. Morb. Lib.* 2. *Cap.* 5.

In diſſecting Subjects who have died of a *Cholera*, the ſmaller Inteſtines, eſpecially the Duodenum, with the Right Orifice of the Stomach, are generally found gangrened internally, cover'd with Bile, and yellow externally, and the biliary Ducts too much relaxed, as we find in the Writers of Medicinal Obſervations, among whom we ſhall only mention *Dolæus*, in his *Encyclop. Med. Lib.* 3. *Cap.* 4. and *Bartholin.* in his *Hiſt. Anat. Cent.* 2. *Obſ.* 81. *Riolanus*, in his *Anthropol. Lib.* 2. *Cap.* 20. takes notice of the Gall-bladder being preternaturally large, and the Ductus Cholidochus remarkably diſtended, in a Subject who died of this Diſorder; and, in the *Act. Med. Berol. Dec.* 2. *Vol.* 8. we have an Account of a fatal Cholera, in which the Duodenum and Pylorus were internally gangren'd, and filled with a browniſh-black Subſtance, like that thrown up by Vomit, and which, when examin'd, was found to be nothing but Bile mixed with Blood. The Veins of the Stomach were turgid with Blood, the Gall-bladder highly flaccid, and the Omentum purs'd up towards the Stomach.

Hence 'tis obvious to every one, that, as the Seat of a Cholera is to be ſought for in the Stomach and Inteſtines in general, ſo 'tis in a more particular Manner found in the Duodenum, and biliary Ducts. Hence the whole nervous Syſtem is often drawn into Conſent. Nor can we reaſonably aſſign any other Seat of this Diſorder, if we conſider its material Cauſe; for the Matter thrown up by Vomit, and diſcharged by Stool, is almoſt always bilious, tho' in every Caſe the Bile is not alike unmix'd. This Matter is alſo ſometimes mixed with acid, pituitous, ſaline, and other foreign Humours, as alſo with Blood: Hence it aſſumes various Colours, and is ſometimes yellow, ſometimes green, and ſometimes black. This Commixture of the Bile cannot happen in any other Part than the Duodenum, ſince it is adapted to producing and cheriſhing ſuch acrid Sordes, partly on account of its winding Situation and Flexures, and partly on account of the Afflux of the Bile and pancreatic Juice to it from the Ductus Cholidochus.

The Vellication of the nervous Coat, which lines the Stomach and Inteſtines, produced by this cauſtic Matter, is the immediate Cauſe of a Cholera, as this Vellication is immediately ſucceeded by a convulſive Conſtriction of the Viſcera, which conſtitutes the Diſeaſe itſelf: For this Conſtriction, in Conjunction with the corroſive Quality of the peccant Matter, produces racking, pungent, lancinating, corroding, and biting Pains, together with a Cardialgia. In the Stomach and Duodenum this Conſtriction is perform'd upwards, and againſt the Order of Nature, whereas in the other Inteſtines it is perform'd downwards: Hence Vomitings, and Diſcharges of the Excrements by Stool, are produced at one and the ſame time. But as it is to be laid down as an invariable Maxim, that a larger Afflux of Humours is promoted to any Part of the Body which is vellicated; ſo in a Cholera the vital Juices flow more copiouſly to the Veſſels of the Stomach and Duodenum, as being primarily affected. Whilſt theſe Parts are ſpaſmodically conſtricted, the Juices conveyed to them cannot freely return thro' the Veins; hence they ſtuff them, and firſt diſcharge into the Cavity of the Part affected their more ſubtile Particles, which are generally acrid, ſerous, ſulphureous, and bilious: Hence the large Quantity of Humours diſcharged in a Cholera is to be accounted for. By a longer Continuance of theſe Humours the Veſſels are either broken, and diſcharge by Drops Blood, which, in Conjunction with the bilious Sordes, coagulates into a blackiſh Maſs; or their Contents ſtagnate, and they themſelves are ſeiz'd with a fatal Inflammation and Gangrene. At the ſame time the Influence of the Spaſms is convey'd and propagated to the adjacent Parts, in conſequence of the Conſent and Communication of Nerves. By this means the biliary Ducts are in a particular manner irritated to diſcharge their Contents into the Duodenum, and, the Spaſms ceaſing upon the Death of the Patient, theſe Ducts are found flaccid and relaxed. Beſides, if theſe violent Motions are conveyed to the Heart, they produce a Palpitation of it; if to the Diaphragm, a Hiccough; if to the urinary Bladder, a Dyſury; if to the Surface of the Body, a Coldneſs of the Extremities; and if to the Membranes of the Brain and Spinal Marrow, epileptic and convulſive Motions.

Having given ſome Account of the immediate Cauſes of this Diſorder, we now come to inveſtigate thoſe more remote and ſecondary Cauſes, by which the Matter, capable of exciting ſuch Commotions, is produced. This Matter, whether in a ſmall or in a large Quantity, muſt nevertheleſs be of a highly acrid and cauſtic Quality. This Matter, then, is produced, firſt, by Poiſons, whoſe Effects on the Body are ſo like the Symptoms of a Cholera, that to die of a Cholera, and to be poiſon'd, are almoſt the ſame Things. But 'tis certain, that all Poiſons operate by a highly acrid cauſtic Salt, which, when it enters the Body in a very inconſiderable Quantity, often excites a highly violent Vellication and Convulſion of the Stomach and Duodenum, and conſequently of the other Inteſtines. Hence the ſerous Humours are not only invited to theſe Parts, from the Maſs of Blood, but the Gall-bladder, receiving violent Shocks, pours forth its bilious Contents, which produce Vomitings and Stools of different Colours, according to the Humour before lodged in the Primæ Viæ. This melancholy and generally fatal Effect is produced principally by Arſenic; as alſo by ſublimate Mercury; Inſtances of which may be met with in *Hildanus*, *Decker*, *in not. ad Barbette*, and *Salmuth. Cent.* 1. *Obſ.* 10. I am alſo of Opinion, that all the Caſes of Dyſenteries, obſerved to be excited by Poiſons, ought to be aſcrib'd to a Cholera.

Of the like Quality with Poiſons are the more acrid Purgatives and Emetics, exhibited unſeaſonably, or in too large Doſes, ſince they alſo contain a highly acrid Salt. Their pernicious Effects are generally expreſs'd by the Names Hypercatharſis, or Hyperemeſis; which, when they meet together, as they generally do, conſtitute a perfect Cholera. Among theſe Subſtances are the greater and leſſer Spurges, the Seeds of Mezereon, and Glaſs of Antimony. *Rhodius, in Cent. 2. Obſ. 73.* obſerved a violent Cholera excited by the Exhibition of ill-prepared Antimonials; and *Foreſtus, in Lib. 28. Obſ. 44.* takes notice of the ſame Diſorder excited by Coloquintida.

Beſides, Aliments too ready to ferment, ſuch as are ſweet, pinguious, and eaſily corrupted, may excite a Cholera, if thick Ale, or Water, are drank after them; or if they are uſed by a Perſon of an impure Habit, in whoſe Stomach there is a Collection of bilious Sordes already lodged; for theſe Subſtances, uniting and fermenting with the Bile, generate an Acrimony of a more cauſtic Nature than Poiſon itſelf. To this Species of Aliments belong Melons, Pumpions, Cucumbers, Pine-apples, Peaches, Prunes, Grapes, Cherries, Cakes prepared with much Butter, Sweet-meats, Funguſes, the Spawn of the Barbel-fiſh, Muſt, new Wine, and Ale, and too fat Fleſhes: Thus *Fontanus, in Analect. Cap. 21. Exempl. 12.* informs us, that he knew an old Woman, who died of a Cholera, by drinking Ale after Cucumbers. *Guldenklee, in Lib. 3.* informs us, that the ſame Diſorder was produced by Peaches. And *Henricus ab Heer*, in his fifteenth Obſervation, tells us, that it was produced by an unſeaſonable Uſe of Milk.

Nor are we to exclude, from the Cauſes of a Cholera, violent Paſſion, which has a ſtrong Tendency to produce it, eſpecially if one flies into a Paſſion at Meals, or after eating Food which is ſubject to ferment; or if the Patient eats or drinks, or, which is worſt of all, takes an Emetic, or a Purgative, immediately after a Fit of Paſſion; for 'tis obvious to every one, that the Influence and Efficacy of Paſſion are highly prejudicial to the Primæ Viæ, and biliary Ducts, ſince they not only throw theſe ſolid and moving Parts into a Commotion, but by that means lay an effectual Foundation for an Efferveſcence of the Bile with any other Sordes, that may happen to be lodged there.

In the *Act. Med. Berol. Dec. 2. Vol. 1.* we have an Account of a Cholera produced by eating Cabbage, after a Fit of Paſſion. In the ſame Work, *Vol. 8.* we have an Account of a fatal Cholera produced by Paſſion. *Platerus* alſo, in his *Obſer. Lib. 3.* and *Borelli*, in *Cent. 2. Obſ. 27.* give us Inſtances of the ſame Kind. 'Tis no other Diſorder than a *Cholera* under which tender Infants often labour, not without Danger of loſing their Lives, upon their Mothers giving way to the Tranſports of Paſſion. This Diſorder proceeds from the Milk of the Mother, which aſſumes an Orgaſm by the Paſſion, produces an Efferveſcence with the Bile in the delicate Stomach of the Infant, corrodes the Inteſtines, and generally gives Occaſion to a fatal Inflammation.

The Cauſes already enumerated, if the Acrimony is not very great, and deeply ſeated in the Inteſtines, will only produce a bilious Diarrhœa; which may alſo be produced by other Cauſes, that generally do not excite a Cholera. We muſt, in a particular manner, obſerve, that a bilious Flux is ſometimes critical in bilious Patients, if a ſlight Error in Regimen, a Tranſport of Paſſion, or an Obſtruction of Perſpiration, have preceded. It alſo frequently ariſes ſpontaneouſly, eſpecially in the Summer-time, and, if duly treated, proves ſalutary. It alſo frequently happens, that this Species of bilious Diarrhœa proves critical in intermittent bilious Fevers, as are moſt of the tertian Kind, and affords conſiderable Relief.

There are alſo ſome procatarctic Cauſes, which, if they concur with theſe of the ſecondary and remote Kind, will the more certainly produce both a Cholera, and a bilious Diarrhœa. Among the procatarctic Cauſes of this Kind, is a hot and ſultry Conſtitution of the Atmoſphere, which, as it is able to throw the whole Juices of the Body into a violent Commotion, ſo it produces this Effect, in a particular manner, upon the Bile: Hence, in my Opinion, it is to be accounted for, why a Cholera is endemial among the *Indians* and *Arabians*, eſpecially in thoſe Parts where the Fruit call'd the Pine-apple is much uſed, which abounds with a fermenting and highly noxious Juice. Beſides, too great a Refrigeration of the Body, by repelling the acrid bilious Serum, diſpoſes to a Cholera. Hence *Schenckius*, in the third Book of his Obſervations, makes mention of a Cholera, which was produced by a Refrigeration of the Feet, in Conjunction with the Uſe of Muſt and Funguſes. We muſt alſo acknowledge, with *Sydenham*, that frequent Surfeits of Wine or Ale prove the Cauſes of a Cholera, in choleric Patients; ſince, in theſe, the Strength of the Stomach and Inteſtines is weaken'd, and various Crudities are generated in the Primæ Viæ, which, upon every ſlight Commotion of the Bile, excite the moſt terrible Diſorder in the Animal Œconomy.

It is to be remark'd, that, when vegetable Juices ferment in the Stomach and Inteſtines, or when Liquors, procured by Fermentation, renew their Fermentation in the ſame Organs, the Gas Sylveſtris, or incoercible Spirit, taken notice of under the Article ALCOHOL, is capable alone of ſtimulating theſe and the adjacent Viſcera, ſo as to produce a Cholera.

As for the Prognoſtics of the above-mention'd Diſorders, a Cholera is generally fatal; for, if we except a Plague, and peſtilential Fevers, no Diſeaſe is more acute, or kills the Patient ſooner, than a Cholera; eſpecially when it ſeizes either old Men, Children, or ſuch as are weaken'd by chronical Diſorders. The more cauſtic the Matter evacuated is, and the more intenſe the Thirſt and Heat, the greater the Danger is. And, according to *Hippocrates, in Lib. 4. Aph. 22.* if black Bile, mix'd with black Blood, be diſcharged, inevitable Death is prognoſticated. Death is alſo preſaged by Faintings, Convulſions, Hiccoughs, Coldneſs of the Extremities, together with cold Sweats. Nor is a happy Termination of the Diſeaſe to be expected, if, when the Excretions are ſuppreſs'd, the Symptoms continue. But there are ſome Hopes of a Recovery left when the Vomitings ceaſe, with ſubſequent Sleep and Relief, and if the Diſeaſe is protracted beyond the ſeventh Day. When a bilious Diarrhœa is ſhort, and not attended with violent Gripes, it proves ſalutary; and the Eruption of Flatulences prognoſticate, that it is near to a Termination. The Patient alſo, who, under this Diſeaſe, is free from Thirſt, and a preternatural Heat, is generally in no Danger. On the contrary, it is a bad Sign when the Appetite is loſt, whilſt at the ſame time the Body is preternaturally ſoluble; as alſo, when the Patient is afflicted with ſevere Gripes, deprived of Sleep, and his Strength greatly impair'd. When a ſemitertian Fever, which is by the *Greeks* call'd *Hemitritæa*, and is compounded of an acute inflammatory Fever, and an intermitting Tertian, the Paroxyſms happening thus alternately, is joined either to a Dyſentery, a Cholera, a bilious Diarrhœa, or bilious Vomitings, theſe Diſorders are accompanied with the higheſt Danger; but the beſt Sign is an Eruption of Flatulences from the Anus, by which we may pretty ſafely conclude, that the periſtaltic Motion of the Inteſtines is in ſome meaſure reſtored. In a Dyſentery *Hippocrates*, in his Days, obſerved, that an Eruption of Flatulences was a Sign of Recovery.

The Method of Cure, recommended by *Aretæus*, is thus.

In the Cholera Morbus it is not adviſeable to ſuppreſs the Evacuations, becauſe Crudities are diſcharged by them. We ought, therefore, if they proceed eaſily and ſpontaneouſly, to attempt nothing; if otherwiſe, to promote them by continual Exhibitions of warm Water, but in ſmall Draughts, to avoid fruitleſs [κενεὰ] ſpaſmodic Diſtentions of the Stomach. If the Patient be afflicted with the Gripes, or Coldneſs of the Feet, the Belly is to be fomented with hot Oil, in which Rue and Cumin have been boil'd, for the Diſcuſſion of Flatulences, and Wool is to be apply'd to the Part. The Feet alſo, being bath'd in the Oil, muſt be gently rub'd, and rather lightly ſtroked than hard preſs'd; and this Friction is to be extended up to the Knees, in order to recal the Heat into the Parts. This Method is to be follow'd as long as the bilious Vomitings and Purgings continue.

If the Belly has diſcharged all the Reliques of the old Food, and Bile comes to be voided, and there be alſo bilious Vomitings, with a Diſtention, Loathing, Reſtleſſneſs, and Imbecility, give the Patient about a Quarter of a Pint [κυάθους δύο ἢ τρεῖς] of cold Water, to ſtop the Looſeneſs of the Belly, reſtrain the Flux of the Humours, and cool the ardent Heat of the Stomach; and this is to be done as long as he continues to vomit up what he drinks; for the cold Water is ſoon heated in the Belly; and the Stomach, oppreſs'd with both Heat and Cold, diſcharges itſelf of the Water, but is perpetually thirſting for a cool Draught.

If the Pulſe be very low and languid, as well as quick and frequent, and Sweat appears in Drops upon the Forehead, Neck, and all over the Body; if the Flux of the Belly be not ſtopt, and the Vomitings continue, attended with Spaſms and Faintings, it will be convenient to mix, with the cold Water, a little ſweet-ſcented and aſtringent Wine, which, by its Fragrancy, may recal the Patient to his Senſes, corroborate him by its Strength, and yield Support to his Body by its nutritive Faculty; for Wine directly aſcends to the upper Parts, ſo as to put a Stop to Defluxions, and is of fine Parts, ſo as eaſily to diffuſe itſelf, and fly to the Aſſiſtance of oppreſs'd Nature, and by its Spirits recruits the decay'd Strength; for the better anſwering of this Purpoſe, ſome recent Flower [ἀλφίτων] of a delicious Flavour, may be mix'd with it. If the Symptoms be very preſſing, ſuch as a Sweat, with ſpaſmodic Affections, not only of the Stomach, but of the Nerves, a hollow Hiccough, Contraction of the Feet, a violent Flux of the Belly, with a Failure of the Sight, and a Pulſe ſcarce perceptible, in ſuch a State the Patient requires our utmoſt Aſſiſtance; and we are to let him drink freely of cold Water, mix'd with Wine, tho' not with too much of it, for fear of Inebriation, and injuring the

the Nerves, but with Crums of Bread ſopt in it. Beſides this, other Sorts of Aliment may be given, ſuch as aſtringent Apples, Services, Medlars, Quinces, and Grapes.

If the Patient vomits up every thing, and his Stomach can hold nothing, recourſe is to be had again to hot Meats and Drinks, for ſuch a Change has ſometimes ſuppreſs'd the Vomiting; but what is hot, ought to be ſo in an extraordinary Degree. If none of theſe Remedies give Relief, apply Cupping-glaſſes between the Shoulder-blades, and below the Navel; but continually change them, for, if they adhere long, they excite a Pain, and endanger the Raiſing of a Bliſter. Sometimes Geſtation, in a mild and temperate Air, has been of Service for reviving the Spirits, for retaining the Food in the Stomach, and for reſtoring a good Pulſe, and free Reſpiration.

If the Diſorder ſtill increaſes, let Epithems be apply'd to the Belly and the Breaſt, as it is uſual in a Syncope, particularly Dates ſoak'd in Wine, Acacia, and Hypociſtis, which may be mix'd with Cerate of Roſes, and then ſpread upon Linen, and apply'd to the Belly. And, for the Breaſt, a Plaiſter may be prepared of Maſtich, Aloes, the bruiſed Tops of Wormwood, with Cerate of Nard or Oenanthe, which is to cover all the Part. If the Feet and Muſcles be affected with a Rigor, anoint them with *Oleum Sicyonium*, *Unguentum Gleucinum*, [ſee SICYONIUM, GLEUCINUM] or old Oil, and ſprinkle them with Caſtor. If the Feet be cold, anoint them with Ointment of Limneſis [*Adarces*] and Euphorbium, and wrap them in Wool, rubbing and ſtretching them out with your Hands. Uſe the ſame Ointment about the Spine of the Back, the Tendons, and maxillary Muſcles.

If, upon the Uſe of theſe Remedies, the Sweating and Flux of the Belly be ſtopt, the Stomach retains the Food, the Pulſe becomes full and regular, the ſpaſmodic Affections ceaſe, a kindly Heat diffuſes itſelf over all the Parts, extending even to the Extremities, and the Patient falls into a Sleep, the general Concoctor of all Crudities, the ſecond or third Day he may bathe, and return to the Duties of his Calling. But if he continues to vomit up every thing that he takes, if his Sweating cannot be reſtrain'd, if his Body grows cold and livid, his Pulſe is almoſt gone, and he ſinks into a fainting Fit, the beſt Way for the Phyſician, in ſuch a Caſe, is to find ſome decent Pretence for a Retreat. *Aretæus de Curat. acut. Morb. Lib.* 2. *Cap.* 4.

As in all Diſeaſes, ſo more particularly in a Cholera, Delays are dangerous; for, according to *Celſus*, in the ſecond Chapter of his fourth Book, no Diſeaſe requires more ſpeedy Remedies; and, according to *Trallian*, in the fourth Chapter of his ſeventh Book, the ſmalleſt Delay is of the worſt and moſt fatal Conſequence. The ſooner, therefore, a proper Attempt is made to cure a Cholera, the Cure ſucceeds the more happily, which conſiſts principally in theſe three Intentions: Firſt, to correct and attemperate the peccant Matter, to diſpoſe it for an Evacuation, and, if neceſſary, to eliminate it by proper Methods. Secondly, to allay and ſooth the irregular and diſorderly Motions, by ſuitable Medicines. And, thirdly, to reſtore the impair'd and weaken'd Strength of the nervous Parts.

The firſt Intention of Cure, then, is to correct the peccant Humours, and aſſiſt their Excretion. But as theſe are various, and as either a large Quantity of bilious Crudities, or a ſmall Maſs of ſubtile and cauſtic Matter, are found to prove the Cauſes of ſo violent Diſorders, ſo the different Caſes require ſomewhat different Methods of Cure. When the Diſorder ariſes from eating too large a Quantity, or from the Uſe of ſuch Aliments as readily ferment, and are converted, with the Bile, into an highly acrid Mixture, Evacuation, when ſlow, is to be promoted; and we muſt be highly careful, not to ſuffer the Patient's Strength to be too much impair'd. Nor, in this Caſe, is it proper to exhibit actual Emetics and Purgatives; but to provoke a Vomiting by liberal Draughts of warm Water, mix'd with a conſiderable Quantity of freſh Butter, or any oleous and mucilaginous Subſtance. But 'tis proper to render the Body ſoluble by the Injection of an oleous and emollient Clyſter; for which Purpoſe, Whey is very proper. Broths made with young Fowls, liberally drank, are excellent for this Intention, and highly recommended by *Sydenham*. To theſe are to be added Abſorbents, earthy Subſtances, and ſuch as correct the peccant Acrimony, as the Powders of Crabs-eyes, of Sea-ſhells, Mother of Pearl, ſealed Earth, prepared Coral, Amber, the Species de Hyacintho, the bolar Earths, calcin'd Hartſhorn, and Mountain Cryſtal, which ſome recommend as a Specific, with the Addition of a ſmall Quantity of the *Theriaca Cæleſtis*. Whey is alſo poſſeſs'd of a ſingular Power of correcting the Acrimony, and extinguiſhing the Thirſt, with which the Patients are often cruelly tormented. The Antients alſo, eſpecially *Cœlius Aurelianus*, *in Morb. acut. Lib.* 3. *Cap.* 21. and *Trallianus*, *in Lib.* 7. highly extol the Drinking of Water, moderately cold; of the Efficacy and Uſe of which, *Borelli*, *in Cent.* 2. *Obſ.* 27. gives us an Inſtance; and I myſelf, ſays *Hoffman*, am convinced of the Truth of this from many Obſervations.

But when, in a Perſon otherwiſe ſound, a Cholera is produced by taking Poiſon, or by a Hypercatharſis or Hyperemeſis, and when the Cauſe of the Cholera conſiſts in a ſmall Quantity of highly acrid Matter, adhering to the nervous Fibres of the Stomach, Evacuations are neither to be ſtopt nor promoted; but the principal Buſineſs of the Phyſician is rather, in this Caſe, to attempt the Sheathing up the thin and cauſtic Humour; for anſwering which Intention, large Quantities of oleous, mucilaginous, and pinguious Subſtances are to be exhibited, ſuch as Oil of ſweet Almonds, Decoctions of Oats and Barley, with Shavings of Hartſhorn; as alſo Milk, which, in this Caſe, proves ſtill more efficacious when mix'd with ſome proper Abſorbent. The abſorbent Powders may alſo be exhibited alternately with acidulated Medicines, which ſurpriſingly contribute to break and blunt the Force of the Poiſon: Of this laſt Kind the principal are the Mixtura Simplex, the Spiritus Vitrioli dulcis, and the Spiritus Nitri dulcis.

After the Evacuation of the peccant Matter, to theſe are to be join'd, eſpecially if the Patient's Strength ſeems too much impair'd, antiſpaſmodic Medicines, and analeptic Specifics, obtain'd principally from the animal Kingdom; ſuch as the Liver of the Wolf dried, the Raſpings of the Stag's Penis, of the human Cranium, and of the Elk's Hoof; calcin'd River-crabs, and calcin'd human Bones; which, by the Obſervations of the moſt ſkilful Phyſicians, are known to be of ſingular Advantage for allaying the convulſive and ſpaſmodic Conſtrictions of the nervous Fibres, both in a Cholera and a Dyſentery; theſe, however, ſeem to act principally as Abſorbents. And as in moſt painful Diſeaſes, ſo more eſpecially in this, Anodynes are moſt ſafely us'd in Conjunction with Evacuants. Of this Kind are the Pilulæ de Styrace, the Pilulæ de Cynogloſſo, and the Pilulæ Starckianæ: And if there is any Suſpicion of a peccant Matter ſtill remaining, and if the Motions are exceſſively violent, the above-mentioned Pills may be mix'd with the Pilulæ Aloephanginæ, or with ſome other gentle Evacuant. To the abſorbent Powders, the Theriaca Cœleſtis, and the Extract of Caſtor, and Cinnabar, may be juſtly added. But my Anodyne Liquor, mix'd with the Oil of Mace, or the Tincture of Caſtor, is beneficial above all other Medicines, and deſerves uncommon Praiſes: Nor are external Paregories and Anodynes to be depriv'd of the Encomiums which are juſtly due to them. Of this Kind the principal are, the Ceratum Stomachale Maſtichinum Galeni, the Balſamum Embryonum, the Spiritus Theriacalis; Liniments prepar'd of the nervous Oils of Nutmeg, Wormwood, and Mint, *Peruvian* Balſam, Caſtor, and Camphire; Cataplaſms of Leaven, Vinegar of Rue, and Spirit of Wine, as alſo diſcutient and paregoric Bags. But when the ſpaſmodic Motions are very violent, and not at all proportion'd to the Bulk of the peccant Matter, there is not a more valuable or more efficacious Medicine for ſtopping them gently, and facilitating the remaining Part of the Cure, than expreſs'd Oil of Nutmegs, together with nervous Liniments apply'd to the Region of the Stomach. My Balſamum Vitæ alſo, apply'd to the Part affected, with folded Linen Cloths, is in this Caſe highly effectual.

When, by means of theſe Medicines, the peccant Matter, which nouriſh'd the Diſeaſe, is evacuated, and the ſpaſmodic Motions ſooth'd, we may with the greater Succeſs corroborate by proper Medicines the Parts weaken'd under this Diſeaſe, becauſe their Tone and Elaſticity are generally much impair'd. This Intention is anſwer'd by the Root of Caſcarilla, exhibited in Eſſence, in Powder, or in Extract; or by the *Peruvian* Bark reduc'd to an Electuary, with the abſtergent and corroborating Extracts, Eſſence of Orange-peel, mix'd with Eſſence of red Gentian and Amber. No inconſiderable Advantage is, alſo, to be reap'd from the external Uſe of rectified Spirit of Wine, or Hungary-water, or the Spirit of the Flowers of Roman Chamomile, mix'd with the diſtil'd Oil of Mint. But, when the Force of the Diſeaſe is ſubdued, the Patient is above all Things to obſerve a ſtrict Regimen, and guard againſt the Sallies of Paſſion; leſt by that means he ſhould again relapſe into a Cholera, in conſequence of the weak Tone of his Viſcera. Broths prepar'd with Veal, Fowls, the Roots of Succory, Parſley, Sparrow-graſs, Chervil, bruis'd Crab-fiſh, and Lemon-juice, are, of all others, the moſt proper Food; with theſe, alſo, chalybeate Tinctures may be uſed, in order to corroborate the Patient.

As for a bilious Diarrhœa, when it is moderate, and the Strength of the Patient entire, Medicines are ſcarcely neceſſary for its Cure. If it continues for any conſiderable Time, Clyſters are to be injected, and Preparations of Rhubarb us'd internally. When it happens to be exceſſively violent, the abſorbent Powders, in Conjunction with Mountain Cryſtal, are to be exhibited, in order to correct the Acrimony; my Anodyne Liquor is to be taken in Mint-water, to allay the Spaſms, and externally my Balſamum Vitæ is to be apply'd to the Abdomen.

Practical Cautions.

The hotter the Season, the Climate, and the Constitution of the Patient are, the more salutary the drinking cold Water proves in a Cholera; but, besides its internal Use, its external Application to the Stomach, a Practice follow'd by some of the Antients, we think unsafe, and full of Danger; because, by this means, a sudden Obstruction of the Evacuations may be brought on. Hence we are also to account for the Virtues of medicinal Waters, when drank for the Cure of a Cholera.

As in a Cholera arising from the taking Poison, or an acrid Purgative, Milk is of singular Service, by sheathing up the caustic Principle, and carrying it off with it; so when a Collection of too acid Sordes is present, or when its Excretion is too slowly carry'd on, Milk ought to be cautiously exhibited, or at least it ought to be mix'd with some Absorbent. Whey, on the contrary, will excellently answer the Purpose of common Drink; since it is of singular Use, not only in extinguishing the Thirst, but also in correcting the Acrimony.

Laxatives, exhibited internally, are very rarely proper in the Cure of a Cholera: But if Evacuation by Stool is indicated, this Intention is best answer'd by Clysters, or by Preparations of Rhubarb exhibited internally; for sweet Substances, Preparations of Manna, and laxative Syrups, however mild and gentle in other respects, are yet far from being proper in a Cholera: Corroborative and spirituous Liquors, exhibited before the peccant Matter is sufficiently evacuated, with an Intention perhaps to suppress the Vomitings, frustrate the Expectation of the Physician, since they are so far from producing this Effect, that they increase not only the Vomiting, but also the other Symptoms. With respect to Anodynes, and more particularly Oil of Henbane, we must observe, that they are by no means to be us'd when the Strength of the Patient is too much impair'd, or when he labours under an Inflammation of the Viscera, because in these Cases they may induce a fatal Sleep, and a Mortification.

As in dysenteric Patients, who are at the same time plethoric, Venesection contributes very much to prevent an Inflammation, and mitigate the Symptoms; so in the like Circumstances it is to be us'd in a Cholera, especially if the Patient's Strength is not exhausted. *Riverius*, in his *Prax. Med. Cap.* 9. highly recommends Venesection in this Disorder.

Neither a bilious Diarrhœa, nor one of any other kind, ought to be immediately and suddenly stopt, but the Humours are to be slowly and gradually corrected; for which Intention, a Scruple or half a Dram of gently toasted Rhubarb, with a few Grains of Nitre, is very proper, as it gently evacuates the peccant Humours, and afterwards corroborates the Viscera by slightly constricting their Coats; for by its more subtile Parts it opens, and by those of a more earthy Quality it contracts, both of which Properties it possesses when toasted.

In a Cholera, as well as a bilious Diarrhœa, half a Dram of the express'd Oil of Nutmegs, either by itself, or mix'd with one Grain of *Helmont*'s Laudanum Opiatum, and exhibited in Broth, is of singular Efficacy for correcting the Acrimony of the Humours. Weak Emulsions also, prepar'd of Almonds and white Poppy-seeds, with an Addition of the Syrup of white Poppies, and pure Spring-water, excellently answer this Intention.

When the Diarrhœa is highly obstinate, after the Use of toasted Rhubarb for some Days, it is proper to exhibit a Sudorific, consisting of one Grain of recent Theriaca, together with calcin'd Hartshorn, and of diaphoretic Antimony, and purify'd Nitre, each twelve Grains: A Cataplasm of Leaven, Vinegar, and Spirit of Wine, with an Addition of a few Drops of the Oils of Mint and Cloves, apply'd warm to the Præcordia, not only excellently corroborates the subjacent Parts, but also determines the Course of the Humours to the Circumference of the Body, and promotes the cutaneous Evacuation.

When a Cholera is excited by Arsenic, we must, with all Expedition, exhibit pinguious Substances, such as Oil of sweet Almonds, Linseed-oil, fresh Butter, and Oil of Olives, with moderately warm Water; for these Substances afford the most speedy Relief, not only because they excite a Vomiting, by which the greatest Part of the Arsenic is thrown up, but also because, by their means, the caustic Acrimony, which vellicates the nervous Fibres of the Stomach, is obtunded, and the spasmodically-constricted Parts relax'd.

When the Force of the Cholera or bilious Diarrhœa is subdued, it is still expedient for some time to use an emollient Diet, that, by this means, the vellicated and injur'd nervous Fibres of the Stomach and Intestines, may be in some measure sooth'd and render'd easy: For this Purpose sweet Milk, recent Butter, excorticated Barley, boil'd with Broth of Fowls or Milk, as also sweet Whey, are very proper.

When a Cholera is complicated with a Fever, Milk is not in that Case properly exhibited, since, in consequence of the Heat, it runs into a Coagulum; by which means greater Pains, Tensions of the Viscera, Head-achs, and Loathing of Aliments, are excited. For this Reason, that it may be safely exhibited to feverish Persons, especially Children, and young Persons, rather than those advanc'd in Years, *Trallian* orders a large Quantity of Spring-water to be mix'd with it, after which it is to boil up three or four times, and then be taken off the Fire. He also affirms, that Milk, when thus prepar'd, does not prove prejudicial to dysenteric Patients, even when labouring under a Fever.

In a Cholera and bilious Diarrhœa, especially that Species of it which is excited by the Transports of Passion, we are carefully, but more particularly about the Beginning, to abstain from Sudorifics, and a sudorific Regimen; since, by their means, violent rheumatic and arthritic Disorders are generally produced.

Riverius, in the thirty-third Observation of his first Century, gives us a very memorable Case in the following Words: "A certain Man, of a robust and bilious Habit of Body, was "seiz'd with a pretty violent bilious Diarrhœa, accompany'd "with a highly intense Thirst. Being call'd, I prescrib'd for "him Sal Prunellæ in his ordinary Drink, as also in Julaps, "prepar'd of the Waters of Lettuce and Purslain, and to be "taken thrice a Day, by which means he was recovered in "twenty-four Hours time." In Disorders of this kind, the Efficacy of Nitre or Sal Prunellæ is very considerable, as it not only corrects the Heat, but prevents Inflammation. *Frederic Hoffman.*

As *Sydenham*'s Method of treating a Cholera is excellent, and more frequently attended with Success than any other, I shall subjoin his entire Account of this Distemper.

This Disease was more epidemic in the Year 1669. than I ever remember to have known it in any other. It comes almost as constantly at the Close of the Summer, and towards the Beginning of Autumn, as Swallows in the Beginning of Spring. There is also an Indisposition caused by a Surfeit, which happens at any time of the Year, which, with respect to its Symptoms, resembles the Cholera Morbus, and yields to the same Treatment, and yet it is of a different Kind. The Cholera Morbus is easily known by the following Signs: 1. Immoderate Vomiting, and a Discharge of vitiated Humours by Stool, with great Difficulty and Pain; 2. Violent Pain and Distention of the Abdomen and Intestines; 3. Heart-burn, Thirst, quick Pulse, Heat and Anxiety, and frequently a small and irregular Pulse; 4. Great Nausea, and sometimes colliquative Sweats; 5. Contraction of the Limbs; 6. Fainting; 7. Coldness of the Extremities, and other like Symptoms, which greatly terrify the Attendants, and often destroy the Patient in twenty-four Hours. There is likewise a dry Cholera, occasioned by a Flatus, which passes upwards and downwards, without Retchings or Stools; but I remember to have seen only a single Instance of it, at the Beginning of the present Autumn, whereas the former Species was very common.

Much Consideration and Experience have taught me, that to endeavour, on the one hand, to expel the sharp Humours which feed this Disease by Purgatives, would be like attempting to extinguish Fire with Oil, as the most lenient Cathartics would increase the Disturbance, and raise new Tumults. And, on the other hand, to check the first Effort of the Humour in the very Beginning, by Opiates and other Astringents, whilst I prevented the natural Evacuation, and forcibly detained the Humour in the Body, would doubtless destroy the Patient by an intestine Commotion, the Enemy being pent up in the Bowels.

Let a Chicken be boil'd in about three Gallons of Spring-water, so that the Liquor may scarce taste of the Flesh. Several large Draughts of this are to be drank warm, or, for want of it, Posset-drink. At the same time, I order a large Quantity of the same to be given at several times, successively, by way of Clyster, till the Whole be taken in, and discharg'd by Vomiting and Stool. An Ounce of the Syrup of Lettuce, Violets, Purslain, or Water-lily, may be added to the Draughts and Clysters; but the Liquor will answer the End pretty well alone. The Stomach in this manner being often loaded with a large Quantity of Liquor, and its Motion, as it were, inverted thereby, and Clysters being frequently thrown in, the sharp Humours are either evacuated, or, their Acrimony being blunted, restored to their due Temper and Mixture.

When this Business is over, which requires three or four Hours, an Opiate completes the Cure. I frequently use the following; but any other may be substituted in its stead.

> Take of Cowslip-flower-water, an Ounce; Aqua Mirabilis, two Drams; Liquid Laudanum, sixteen Drops: Mix them together.

This Method of diluting the Humours is abundantly safer and quicker, than the ordinary one of treating this dangerous Disease, either by Evacuants, or Astringents; for Evacuants increase the Disturbance and Commotions, and Astringents detain the Enemy in the Bowels; so that, not to mention the

Trouble occasion'd by prolonging the Disease, there is Danger, lest the vitiated Humours get into the Blood, and cause a Fever of a bad kind.

But it must be carefully noted, that if the Physician be not call'd, till the Patient is exhausted by the Vomiting and Looseness having continued, for Instance, ten or twelve Hours, and the Extremities are become cold, he must then, omitting all other Remedies, have immediate Recourse to Laudanum, the last Refuge in this Disease, which is not only to be given during the Urgency of the Symptoms, but repeated every Morning and Night, after the Vomiting and Looseness are gone off, till the Patient recovers his former Strength and Health.

Tho' this Disease be epidemic, as we remark'd above, yet it very rarely lasts longer than the Month of *August*, wherein it began; whence one may take Occasion to consider the elegant and subtile Contrivance Nature uses in producing epidemic Diseases: For tho' the same Causes entirely remain, which may occasion this Distemper in several Persons towards the End of *September* as well as in *August*, namely, a Surfeit of Fruit, yet we find the same Effect does not follow; for whoever carefully attends to the Appearances of a legitimate or true Cholera Morbus, of which only we now treat, must acknowledge, that the Disease occasionally happening at any other time of the Year, tho' proceeding from the same Cause, and accompany'd with some of the same Symptoms, totally differs from that just mention'd; as if there lay conceal'd some peculiar Disposition in the Air of this particular Month, which is able to impregnate the Blood, or Ferment of the Stomach, with a kind of specific Alteration, adapted only to this Disease. *Sydenham.*

Hoffman, in his Account of a Cholera, having taken notice of one Sort caus'd by Poison, I must give the following remarkable Case from *Sydenham*, as it appears to insinuate a better Method of curing it, than that laid down by the former of these Authors.

About two Months since, a Person in my Neighbourhood desired me to visit his Servant, who had taken a large Quantity of Mercury Sublimate, being melancholy mad for Love, as I afterwards heard. The Poison had been swallow'd near an Hour when I came, and his Mouth and Lips much swell'd; he was extremely sick, had a burning Pain in the Stomach, and was almost kill'd with Heat. I order'd him to drink three Gallons of warm Water as quick as possible, and to take a large Draught of the same after each Time of Vomiting; and as soon as it appear'd, from the Gripings, that the Poison was going downwards, I likewise directed warm Water alone, to be plentifully thrown up by way of Clyster, in order to wash his Bowels. The Wretch complied, being now very desirous to live, and drank several Pints of Water more than I had directed. He told his Friends that were by, that the Water which first came up was very acrid, by reason of its being saturated with the poisonous Salt; but that it was less acrid after every Vomiting, till it length it became insipid; and the Gripes that succeeded, were remedied by injecting Water alone Glysterwise. By this single Method the Patient was recovered in a few Hours; only the Swelling of his Lips did not immediately fall, and his Mouth remain'd ulcerated; occasioned by the Particles of the Poison, which came up with the Water by vomiting; but these Symptoms yielded in four Days to a Milk Diet. I preferred Water to Oil, (which is generally used by the less Knowing without Success) and all other Liquors, because, being thin, it seem'd fitter to absorb the Particles of this poisonous Salt, than any other Liquor that was thicker, or already impregnated with the Particles of some other Body. *Sydenham.*

CHOLERICUS, χολερικὸς, signifies either a Person of a choleric Constitution, whose Humours abound with Bile, or one who labours under the Cholera Morbus. *Castellus.*

CHOLOBAPHINON, χολοβάφινον, is an Epithet of Copper, which resembles Gold in Colour. *Libavius, Art. Chym.* calls it *Æs Coronarium.*

CHOLOMA, χώλωμα, from χωλὸς, lame, maimed, *in Hippocr.* περὶ ἄρθ. signifies, according to *Galen*, any Distortion of a Member, or Depravation of it with respect to Motion. It is taken also in a particular Sense for Halting or Lameness of a Leg, as appears from 6 *Aph.* 80.

CHOLOS, χωλὸς, lame, like the preceding Word, has a general as well as particular Sense; hence χωλὴ χεὶρ, "a lame "Hand." *Hip. Prorrhet.* 2.

CHONDRILLA.

The Characters are,

The Root is perennial, and the Leaves are very finely jagg'd.

Boerhaave takes notice of four Sorts of Chondrilla.

1. CHONDRILLA PRIMA, Offic. Dioscor. *Chondrilla cærulea*, Ger. 224. Emac. 286. Buxb. 71. *Chondrilla cærulea altera Cichorei sylvestris folio*, C. B. 130. Buxb. Ind. A. 83. *Cærulea seu purpurea*, Park. 785. *Chondrillæ vel Chondrillæ*, Chab. 317. *Chondrillæ vel Chondrilla cærulea*, J. B. 2. 1019. Raii Hist. 1. 227. *Lactuca sylvestris perennis purpureo-cærulea, laciniato longo folio*, Hist. Oxon. 3. 59. *Lactuca perennis humilior flore cæruleo*, Tourn. Inst. 473. Elem. Bot. 376. GUM SUCCORY. *Dale.*

It grows in uncultivated Places in *Germany* and *Italy*, and flowers in Summer, according to *Dioscorides.*

Dale supposes this Herb to be the *Chondrilla prima* of *Dioscorides.*

There is a Gum found about the Branches like Mastich, of the Bigness of a Bean, which, bruised with Myrrh, and apply'd in Linen to the Quantity of an Olive, provokes the Menses. The Herb, with the Root, is bruised, and, with an Addition of Honey, made into Troches, which, diluted and mixed, will deterge the Alphi. This Gum also glutinates Hairs, and the fresh Root has the same Effect, if a Bodkin be wet with its Juice, and afterwards used about the Hair. Drank in Wine, it cures the Bite of a Viper; and the Juice boil'd, and drank with Wine, or alone, stops a Looseness. *Dioscorides, Lib.* 2. *Cap.* 161.

2. Chondrilla; altera; Cichorei sylvestris folio; flore albo. *C. B. P.* 130. *Lactuca, perennis, humilis, flore albo.* T. 474.

3. Chondrilla; altera; Cichorei sylvestris folio; flore carneo. *Lactuca, sylvestris, majore flore incarnato.* Flor. 2. 26. *Chondrilla, latifolia, laciniata, flore incarnato.* H. L.

4. Chondrilla; cærulea; laciniata; latifolia. *C. B. P.* 130. *Lactuca, perennis, humilior dentata.* Nissole. BLUE FLOWER'D GUM-SUCCORY, WITH BROAD CUT LEAVES. *Boerhaave's Index alter Plantarum, Vol.* 1.

Boerhaave takes notice of a Chondrilla, to which he attributes different Characters, which are,

The Seeds are oblong, narrow, and the Calyx in a manner fistular and cylindrical.

Boerhaave mentions five Species of this Plant.

1. Chondrilla; Sonchi folio; flore luteo-pallescente. *T.* 475. *Sonchus, lævis, laciniatus, muralis, parvis floribus.* C. B. P. 124. *Lactuca, sylvestris, murorum, flore luteo.* J. B. 2. 1004. Flor. 2. 26. a.

2. Chondrilla; Sonchi folio; flore purpurascente; major. *T.* 475. *Lactuca, montana, purpurocærulea, major.* C. B. P. 123. *Lactuca, sylvestris, purpurea*, J. B. 2. 1005. Flor. 2. 26. *Sonchus montanus, purpureus, τετραπέταλος.* Col. 1. 245. H.

3. Chondrilla; hieracii folio; annua. *T.* 475. THE ANNUAL GUM-SUCCORY, WITH HAWKWEED-LEAVES. *Hieracium, pulchrum.* J. B. 2. 1025. *Hieracium, montanum, alterum, λεπτομακρόφυλλον.* Col. 1. 248. a, b.

This Plant is annual, not bitter; the Leaves are very soft and glutinous; the Stalk is fistulous; the Semiflorets are yellow, and indented at the Extremity. It flowers about the End of *May*, and in *June*. *J. Bauhine*'s Figure is preferable to that of *Columna. Martyn's Tournefort.*

4. CHONDRILLA ALTERA, Offic. *Chondrilla viminea*, J. B. 2. 1021. Chab. 317. *Chondrilla (rectius Lactuca) viminea*, Raii Hist. 1. 223. *Chondrilla Cichoroides*, Dill. Cat. 119. *Chondrilla juncea*, Ger. 226. Emac. 288. *Chondrilla juncea viscosa arvensis, quæ prima Dioscoridis*, C. B. 130. Tourn. Inst. 475. Elem. Bot. 377. Boerh. Ind. A. 84. Buxb. 71. *Chondrilla viminalibus virgis*, Park. 788. *Lactuca sylvestris perennis lutea, juncea, viminalibus virgis*, Hist. Oxon. 3. 85. GUM-SUCCORY, WITH YELLOW FLOWERS. *Dale.*

It grows in sandy Places in *Germany*, *Italy*, and other Countries, and flowers in *July*. The Herb is used; and the Stalks and Leaves thereof, according to *Dioscorides*, are endu'd with the Virtue of Concoction, and the Juice reduces the disorder'd Hairs of the Eyelids to their proper and convenient Situation.

Dale takes this to be the Chondrilla Secunda of *Dioscorides* from his Description of it, as bearing an oblong Leaf, eaten about the Edges, spread upon the Ground, a Stalk full of Juice, with a slender, round, fresh, smooth, yellowish, and juicy Root; which Characters, he thinks, agree better with this Herb than with the bulbous Chondrilla of *C. Bauhine.*

5. Chondrilla; viminea; viscosa; Monspeliaca. *C. B. P. Prodr.* 68. *H. Boerhaave's Index alter Plantarum, Vol.* 1.

CHONDRILLOIDES.

The Characters are,

The Leaves are those of the Chondrilla, *C. B. P.* the Stalks spread themselves into numerous Branches, and the Calyx is squamous, and almost cylindrical. *Boerhaave's Index alter, Vol.* 1.

Boerhaave mentions but one Species of this Plant.

Chondrilloïdes; perennis; lutea. *Vaill. Boerhaave's Index alter Plantarum, Vol.* 1.

CHONDROS, χόνδρος. The same as ALICA, which see. It signifies also any grumous Concretion, as of Mastich or Frankincense; and is, besides, the *Greek* Word for a Cartilago; in *Hippocrates* particularly the *Cartilago Xiphoides.*

CHON-

CHONDROSYNDESMUS, χονδροσύνδεσμος, from χόνδρος, a Cartilage, and σύνδεσμος, a Ligament, is a cartilaginous Ligament. *Galen, de Temper. Lib.* 1. *Cap.* 9.

CHONE, χόνη. See CHOANA.

CHOPINO, CHEOPINA, a Chopine. A liquid Measure at *Paris*, containing, according to *Lemery*, fifteen Ounces and a half of Water; but *Penicher* and the *Dict. Trev.* make it to consist of sixteen Ounces. *Rieger.*

CHORA, χώρα, a Region, is by *Galen, de Usu Partium, Lib.* 8. *Cap.* 6. spoken particularly of the Cavities of the Eyes. The same Author frequently uses it to signify a void Space.

CHORDA, χορδή, properly a musical String or Cord, metaphorically signifies sometimes a Tendon; and by the Poets the Intestines are commonly called Chordæ. *Paracelsus, Lib.* 7. *de Orig. & Cur. Morb. Gal.* calls the Pudenda by the Name of *Chordæ*. A painful Tension of the Penis, in the Lues Venerea, goes also by this Name. See CHORDE.

CHORDAPSUS, χορδαψός, from the preceding Word, and ἅπτομαι, to touch, because the Intestines, in this Affection, feel to the Touch like stretched Cords, is the same as the *Ileus*, or Iliac Passion. See ILIACA PASSIO.

CHORDATA *Gonorrhœa*, is a Gonorrhœa attended with a painful Tension of the Penis. *Blancard.*

CHORDE, or CORDE. This is a Symptom attending a Gonorrhœa. It consists in a violent Pain during the Erection of the Penis, which on these Occasions is very frequent and involuntary. The Pain is perceived principally under the Frænum, and along the Duct of the Urethra; and the Penis is incurvated downwards.

Dr. *Cockburn*, in his Treatise of a *Gonorrhœa*, says, that this binding Pain, in the time of Erection, is a Symptom of such Difficulty, that Physicians have never attempted to explain it; and most of them have thought it the same with an Inflammation of the Frænum, contrary to all Experience, and antient Description. *Jodocus Lommius*, and some other good Authors, speaking of an Ulcer in the Urethra, say the Pain in Erection shews this Ulcer to be already form'd, which Pain affects the Penis in such a manner as if it were hard bound with a Cord (*ut veluti fune substringi videatur*). Now this Description agreeing perfectly well with the Chordé in *French*, and Corded in *English*, it must be a great Impropriety, in either of these Languages, to say, that one has a Cordee. But the Injury done to Practice is far greater, by suppressing so sensible and obvious a Symptom, and translating it to another Part; for hereby this proper Symptom is concealed, merely to avoid a Difficulty it were far better to confess; and Experience is forced to give way to Speculation, which ought not to be done upon any Account whatsoever.

Perhaps there is not a more surprising Phænomenon, than that any Part, having a Sore or an Ulcer in its very Substance, should give such a Feeling and Sensation, as if it were ty'd round with something, while its Parts are drawn from one another, as they are when its Bulk is increased. In Reason the contiguous Parts receding from one another should rather affect us with a tearing Pain, than with that of being bound round with a Cord.

But to increase the Paradox, the Sore is really inward in the very Urethra; but the Binding, the compressing Cause which hurts this sore Urethra, is really without, and therefore the Mystery is out. This Assertion is evident from the Course and Situation of the Urethra; for as it runs between the cavernous Substances of the Penis, and of its own outward Coat, it is always compress'd by them when they are inflated, more or less according to the Degree of their Inflation: Wherefore the sore and hurt Urethra is every-where compress'd on all Sides, and cannot give any other Sense of Pain than that of being hard bound round with a Cord. This Compression of the Urethra has already been observ'd to be so great, that it is with some Difficulty the Seed and Urine are express'd in times of a rigid Erection.

Hence we may know the Place of the Hurt, and how far it reaches, by this Pain in Erection.

The binding Pain in Erection, or the Cording of the Penis, being really a Squeezing of the corroded Urethra between the cavernous Bodies, and the Erection itself being often excited by the Stimulating of the Matter of a Gonorrhœa, the Cure of this Cording must be had by preserving the Urethra from being corroded, or by suppressing the Erection, whereby the Pressure of the Urethra will be prevented.

The first may be effected by mild Diuretics, softening Emulsions, and cooling Injections; but the last can only be perform'd by those means that give the most sudden Check to the Swelling of the Penis. If Men therefore recollect what happens to them in immerging themselves in cold Water, a River, the Sea, and far more in a cold Bath, they cannot be in any want of a ready Remedy on such Occasions. Cold Water thus infallibly answering our Expectations, we must not think of losing Time, when so speedy and effectual Means are at hand, in our Parts of the World especially. A Lady of Snow, St. *Francis*'s Mistress, is a certain Relief. However, to keep up to the Rule of our Method, I shall relate some of the Forms, which Authors recommend, though all of them tend to the same Purpose.

Though Women have no Glans or Frænum to be affected with the sharp Running, yet the Sphincter of the Vagina, Clitoris, and Lips themselves, are inflamed with the sharp Matter, after the same manner as are the mentioned Parts; and therefore the Method of their Cure must be the same, which is by such Medicines as allay the pressing Inflammation, and secure the Parts against their being corroded with the Sharpness of the Corruption; both which are to be attained by the following Medicines.

Take of tepid Milk, and the Water of red Roses, each one Ounce; of Sugar of Lead, one Dram and an half; and foment the Glans and adjacent Parts with the Mixture.

Take of Elder-flowers, and Bran, each one Handful; of white Lily-root, one Ounce; boil these in Frog-spawn-water, and new Milk, of each one Pint: To the strain'd Liquor, when tepid, add one Dram of the Balsam of Lead: Mix, and with the Mixture foment the swelled Parts.

Take of the Leaves of Sorrel and Elder-flowers, each an Handful; and of Wheaten Bread, two Ounces: Mix together, and with fresh Butter-milk make into a Cataplasm, to be apply'd to the inflamed Glans. *Cockburn, Of a Gonorrhœa.*

Turner, an Author so highly orthodox in Physic, that he seems to confider every Attempt to improve Medicine as an Injury done to himself, or his Profession, reasons much against this Account of a Chordé. With respect to Practice, speaking of the Application of cold Water, he says, "Yet how far such a "sudden Constriction of the Pores may contribute to the Shut-"ting in of the Poison, and fixing the malign Humour, we "are not surely appris'd; besides the Danger of Gangrene, in "case of very great Fluxion upon the Part, by retarding, if "not entirely checking, the Circuit of the Blood; so that if "any such Experiment were try'd to remove this Complaint, "I should prefer an Epithem dipt in Oxycrate, and apply'd to "the Pubes or Testicles of the Patient. But, indeed, I think "it better to forbear either, and purge off the Virulence, which "gave Rise thereto, by some brisk Mercurial Cathartic, "making Revulsion also between whiles with a Dose or two of "the Turpeth Mineral, and, on the intermediate Days, di-"recting some proper refrigerating and attemperating Emul-"sions, together with the nitrous, saturnine, or camphorate "Solutions." *Turner's Syphilis.*

It has been found by Experience, that rubbing a Mercurial Ointment into the Part affected, and along the Duct of the Urethra, has done considerable Service in this Complaint.

CHOREA SANCTI VITI. St. Vitus's Dance.

G. Horstius says, that he talked with some Women, who once every Year paid a Visit to the Chapel of St. *Vitus*, near *Ulm*, and there exercised themselves Day and Night in Dancing, being disordered in Mind, till they fell down like those in an Ecstasy. By this means they seem'd to be restored to their Health for a whole Year till the Return of *May*, when they were again seized with a Restlessness, and disorderly Motions of their Limbs, so as to be obliged, at the anniversary Feast of St. *Vitus*, to repair again to the same Chapel for the sake of Dancing. *Horst. Epist. Med. S.* 7. *de admirandis Convulsionibus.*

From this Tradition a sort of Convulsion, to which Girls are principally subject before the Eruption of the Menses, took its Name; tho', as it should seem, improperly, because the Disorder mentioned by *Horstius*, and what we call St. Vitus's Dance, appear to be very different.

Sydenham says, that St. Vitus's Dance is a kind of Convulsion, which principally attacks Children of both Sexes, from ten to fourteen Years of Age. It first shews itself by a certain Lameness, or rather Unsteadiness of one of the Legs, which the Patient draws after him like an Idiot; and afterwards affects the Hand on the same Side, which, being brought to the Breast, or any other Part, can by no means be held in the same Posture for a Moment, but is distorted, or snatched by a kind of Convulsion, into a different Posture and Place, notwithstanding all possible Efforts to the contrary. If a Glass of Liquor be put into the Hand to drink, before the Patient can get it to his Mouth, he uses a thousand odd Gestures; for, not being able to carry it in a strait Line thereto, because his Hand is drawn different Ways by the Convulsion, as soon as it has reached his Lips, he throws it suddenly into his Mouth, and drinks it very hastily, as if he only meant to divert the Spectators. As this Disorder appears to me to proceed from some Humours thrown upon the Nerves, which, by their Irritation, excite preternatural Motions, I conceive, that the curative Indications are to be wholly directed, first, to lessen those Humours by Bleeding and Purging; and, secondly, to strengthen the nervous System.

And,

And, to answer these Ends, I use the following Method: First, I order seven Ounces of Blood to be taken away from the Arm, or such a Quantity, whether more or less, as best suits the Age of the Patient: The next Day I exhibit half the Quantity, or a little more, of my usual lenitive Purge, of Tamarinds, Sena, Rhubarb, Manna, and Syrup of Roses (see CATHARTICA); and in the Evening I give the following Paregoric.

Take of Black-cherry-water, an Ounce; compound Piony-water, three Drams; Venice Treacle, a Scruple; liquid Laudanum, eight Drops: Mix them together for a Draught.

I order the Purge to be repeated thrice, with the Interposition of a Day between each Purgation, and the Opiate to be given always in the Evening after the Operation. Afterwards I prescribe Bleeding and Purging, as before; and thus I bleed and purge alternately, till the Patient has been blooded three or four times, and purged after every Bleeding, as often as the Strength will admit; for it is to be carefully observed, that there must be a sufficient Interval allowed between those Evacuations, to prevent the mischievous Effects therefrom. On the intermediate Days I prescribe the following Remedies:

Take of the Conserve of Roman Wormwood, and Orange-peel, each one Ounce; Conserve of Rosemary, half an Ounce; Venice Treacle, and candy'd Nutmeg, each three Drams; candy'd Ginger, a Dram; Syrup of Citron-juice, enough to make them into an Electuary, of which the Quantity of a Nutmeg is to be taken in the Morning, and at Five in the Afternoon, drinking after each Dose five Spoonfuls of the following Infusion:

Take of the Roots of Piony, Elecampane, Masterwort, and Angelica, each an Ounce; the Leaves of Rue, Sage, Betony, Germander, white Horehound, and the Tops of the lesser Centaury, each an Handful; Juniper-berries, six Drams; the Peel of two Oranges: Slice and infuse them without Heat in six Pints of Canary, and strain it off as you use it.

Take Rue-water, four Ounces; compound Piony, and compound Briony-water, each an Ounce; Syrup of Piony, six Drams: Mix them for a Julap, of which let four Spoonfuls be taken every Night going to Bed, with eight Drops of Spirit of Hartshorn. Apply a Plaister of Gum Caranna, spread on Leather, to the Soles of the Feet.

According as the Recovery advances, the Foot and Hand grow more steady, insomuch that the Patient can bring the Glass in a more direct Line to his Mouth, which certainly shews how much better he is. But though, in order to finish the Cure, I do not advise Bleeding more than three or four times at most, yet purgative and alterative Medicines are to be used till the Patient is quite well. And, because such as have once had this Disease are subject to a Relapse, it is proper to bleed and purge them for some Days, about the same Season the next Year, or a little earlier than it first began.

Sydenham informs us, he cured five Patients of this Distemper by the preceding Method.

Dr. *Cheyne* gives a somewhat different Method of Cure in St. Vitus's Dance. His curative Intentions are, first, to evacuate; secondly, to attenuate the Juices; lastly, to brace the relaxed Fibres.

St. Vitus's Dance is certainly a Mixture of paralytic and convulsive Disorders. It very often arises out of an Epilepsy, especially in young People, when the original Distemper is overcome, and a greater Degree of Strength is obtained; tho' sometimes it is only a Prelude to that severe Distemper, and may itself sometimes be an original Disease. *Cheyne's English Malady.*

When I treated this Distemper, says our Author, after the following Method, I never fail'd of a standing Cure, in all those that came under my Care, as some now living can witness. The Party being young, and otherwise healthy, (else a proper Method for a Cure of a Cachexy was premised) to answer the first Intention of the general Cure, I ordered a Vomit (generally I combin'd either the emetic Wine with an Infusion of the Ipecacuanha, or the emetic Tartar with the Powder of the Root, wherein the latter adds Certainty and Expedition, the former Force and Strength, to the Operation) to be repeated regularly on the same Day of the Week, for a considerable time, till the Distemper began to decline, and then I lengthen'd its Intervals, together with an anticachectic Diet, already explained. To answer the second Intention, I prescribed, for a Month or six Weeks, on all the intermediate Days, a large Dose of Æthiops Mineral, with *Bath* Waters to wash it down. And lastly, after this Course finished, to answer the third Intention, I gave an Electuary of the Bark, Orange-peel, Powder of Acorns, and Crocus Martis Astringens, to brace the Nerves inwardly; and ordered cold Bathing every other Day, for producing the same Effect outwardly; and the Cure seldom exceeded three Months. *Cheyne on the Gout and Bath Waters.*

CHOREGIA, χορηγία, from χορὸς, a Company of Dancers and Singers, and ἄγω, to lead, is properly the Office of the Master of the Plays or Revels, but is metaphorically used by *Hippocrates*, ἐν παρεσκευῇ. to signify all the Apparatus necessary to a Physician.

CHORION, χόριον, χόειον, χωρίον. The external Membrane of the Fœtus. See AMNIOS.

The Chorion is a pretty thick, strong, whitish Membrane, covered with a Multitude of Branches of Veins and Arteries. It is divisible into two Lamellæ, whereof the outermost is thick and opake, the inner thin and transparent. Those that deny the urinary Membrane, divide it into three. See AMNIOS. *Drake's Anat. Vol.* 1.

CHOROIDES, χοροειδὴς, from χόριον, the Chorion, and εἶδος, Likeness, is an Epithet of several Membranes, which, on account of the Multitude of their Blood-vessels, resemble the Chorion. Thus the Plexus Choroides is a Convolution of the Membranes of the Brain, consisting of an Assemblage of Veins and Arteries. It is also apply'd to a Portion of the Pia Mater, and the interior Coat of the Eye under the *Sclerotica*. See CEREBRUM, and OCULUS.

CHOSNOS, χόσνος, in *Hippoc.* περὶ καρδίης, signifies a Funnel; but *Hen. Steph.* rightly conjectures, that it ought to be read χώνος, and so it is the same as χόανος, CHOANOS, which see.

CHOUAN. A *French* Name for a small Seed of a yellowish-green Colour, pretty much resembling Worm-seed, but a little bigger and lighter, and in Taste a little salt and biting. It grows on an exotic low Plant, whose Flowers are cluster'd on the Top; and is brought from the *Levant*. It enters the Composition of the Carmine. See CARMIN. *Lemery des Drogues.*

CHOYNE. An *American* cucurbitiferous Plant, with Leaves like the Bay-leaves, and bearing a Fruit of the Bigness of a moderate Citrul, beautiful, but not eatable, of the Figure of an Ostrich's Egg, of which the *Indians* make Drinking-cups. *Ray, Hist.* 1732.

CHREMA, χρῆμα, in *Hippocrates*, signifies the same as πρῆγμα, that is, *Res*, or Thing.

CHRESTOS, χρηστὸς, from χρέομαι, to use, in *Hippocrates* signifies useful, good, wholsome, fit. It is an Epithet in common Use, and applied upon every Occasion: χρηστῶς, in *Erotian*, is expounded κάλως, "well."

CHRISIS, χρίσις, from χρίω, to anoint. An Anointing, or Inunction. See INUNCTIO.

CHRISTI MANUS, literally the *Hand of Christ*, is depurated Sugar, boil'd with Rose-water, and cast into Troches, with or without an Addition of prepared Pearls. *Castellus.*

CHRISTOPHORIANA. *Herb-Christopher.*

The Characters are,

The Flowers are naked, rosaceous, pentapetalous, stellated; the Petals very subject to fall off, surrounding the Base of the Ovary, and furnished with thirty Stamina. The Ovary is soft, like a Berry, almost oval, and full of a double Row of Seeds, which, for the most part, adhere to one another. *Boerhaave, Index alter, Vol.* 2.

Boerhaave takes notice of four Species of this Plant.

1. Christophoriana vulgaris; nostras; racemosa & ramosa. *H. M.* 2. 8. *Aconitum racemosum, an Actæa Plinio?* C. B. P. 183. J. B. 3. 55. 660. *Christophoriana*, Dod. p. 402. H. Eyst. Æst. 6. 10. F. 3. Fig. 1. COMMON HERB-CHRISTOPHER, or BANE-BERRIES.

2. Christophoriana; Americana; racemosa; baccis rubris. *M. H.* 2. 8. *Aconitum baccis rubris*, Corn. 77. AMERICAN HERB-CHRISTOPHER, WITH RED BERRIES.

3. Christophoriana; Africana; ranunculoides; foliis rigidis. *Herm. M. St. Ranunculus Æthiopicus, foliis rigidis, floribus ex luteo virescentibus.* H. A. 1. 1. *Sphondylii, sive Panacis, rigido hirtoque folio, planta Afra caustica.* Par. B. Prodr. 378. *Imperatoria, ranunculoïdes, Africana, enneaphyllos, Laserpitii lobatis foliis rigidis, margine spinosis.* Plukn. Phyt. T. 95. Fig. 2. Alm. 198. *Imperatoria, ranunculoïdes, Sphondylii hirsuto folio, minor.* Mantiss. 108. H.

4. Christophoriana; arbor aculeata, Virginiensis. Plukn. Phyt. T. 20. Fig. 1. *Angelica arboreſcens, spinosa.* H. A. 1. 89. *Arbor, Indica, Fraxini folio, cortice spinoso*, Raii H. 1798. *Angelica, arbor.* Vulgo. H. *Boerhaave's Index alter Plantarum, Vol.* 2.

CHRISTOS, χριστὸς, from χρίω, to anoint, signifies whatever is applied by way of Inunction. *Castellus.*

CHROMA, χρῶμα, in *Hippocrates*, signifies both the Colour of the Body or Skin, and the Superficies of the Body or Skin itself.

CHROMATISMUS, χρωματισμὸς, from the preceding Word, is a Colouring, or a natural or artificial Way of communicating a Colour. *Caſtellus.*

CHROMIS, χρὶς, χρὶμις, The Name of a Rock-fiſh good to eat, deſcribed by *Aldrovandus, de Piſc. L. 2. C. 11.*

CHRONICUS, or *Chronius*, χρονικὸς, χρόνιος, from χρόνος, Time. Chronical. Diſeaſes which continue a long time, generally without a Fever, are called by this Appellation, in order to diſtinguiſh them from thoſe which proceed with Rapidity, and terminate ſoon, which are call'd *Acute*.

If Health conſiſts in a free and uninterrupted Circulation of the vital Juices thro' the Veſſels, and a Diſeaſe in an Interruption of this Circulation, we may conceive, that an acute Diſtemper ariſes, when many and extenſive Obſtructions occupy a great Number of the Veſſels all on a ſudden; for then the uſual Quantity of Blood is impel'd thro' a ſmaller Space, and returns ſooner to the Heart; in conſequence of this the Contractions of the Heart are more frequent, the Velocity of the circulating Juices is greater, the reciprocal Action betwixt the Solids and Fluids is increaſed, and conſequently the Heat of the Body.

But when Obſtructions are form'd by Degrees, and by little at a time, however extenſive they may become ultimately, no ſuch ſudden Alteration is induced; but the vital Powers, perhaps, by diſcharging out of the Body a Portion of the ſuperfluous Juices, find a way of preſerving the Equilibrium betwixt the Solids and Fluids, and of adapting the circulating Fluids to the Capacity of the pervious Veſſels, without raiſing a Degree of Fever, ſufficient to impart the Name of Acute to the Diſorder.

Chronical Diſeaſes, then, may be ſaid to be produced in the Body, by ſome Peccancy in the Juices, either contracted inſenſibly, and by degrees, or elſe left by ſome acute Diſtemper ill cured.

This Peccancy, contracted inſenſibly, and by degrees, ariſes,

Firſt, from Things taken into the Body, as Air, Meat, Drink, Spices, Medicines, or Poiſons, which are of a Nature different from that of our Juices, and ſo ſtrong, as not to be capable of a due Aſſimilation by the Force of the vital Powers. This Peccancy of the Humours conſiſts,

1. In Acidity. See ACIDA.

2. In Auſterity, form'd by the Union of an Acid with terreſtrial Particles; ſuch as is diſcover'd in unripe Fruits, aſtringent Juices, auſtere Wines, and Things of the like Nature, which, by coagulating the Juices, and contracting the Diameters of the Veſſels, create Obſtructions. The Diſorders hence produced are to be cured by diluting Remedies, fix'd Alcalis, and ſaponaceous alcaline Medicines, perſiſted in for a long time, and exhibited with due Caution.

3. A pinguious aromatic Acrimony, produced by Meats, Drinks, or Spices, which are hot to the Taſte and Smell. Theſe produce Heat and Attrition, and injure the fine Capillary Veſſels: Hence alſo burning Pains, and Attenuation, Putrefaction, and Extravaſation of the Juices, with many other ſimilar Effects. This Species of Acrimony is cured by aqueous, farinaceous, gelatinous, and acid Medicines.

4. In a pinguious inert Acrimony, ariſing from a too liberal Uſe of the Fat of Land Animals, of Fiſh, or of oleous Vegetables. Hence Obſtructions, a bilious Rancidity, Inflammation, Corroſion, and the very worſt Sort of Putrefaction. This is cured by diluting, ſaponaceous, and acid Remedies.

5. In a ſalt muriatic Acrimony, generated by Sea-ſalt, and ſalted Aliments. This deſtroys the Veſſels, diſſolves the Fluids, and renders them acrid: Hence Atrophies, Diſſolutions of the Veſſels, and Extravaſations of their Fluids, which are, by means of the Salt, preſerved from a ſpeedy Putrefaction; but, inſtead of this, appear in Blotches, and other ſcorbutic Appearances. This Acrimony is cured by freſh Water, vegetable Acids, or a Lixivium of Quick-lime.

6. In an alcaline Acrimony. See ALCALI.

7. In a Viſcidity, or Glutinouſneſs.

Secondly, A Peccancy in the Humours may ariſe from too ſtrong an Action of the vital Powers upon the Things taken into the Body. See STRICTURA.

Thirdly, Such a Peccancy may ariſe from a ſpontaneous Degeneracy of our Humours, which generally happens, when they ſtagnate by any Cauſe whatever. See ACIDA, and ALCALI.

The Humours, in any Part of the Body, may be vitiated by acute Diſtempers ill cured. Thus,

1. Purulent Matter may be communicated to the Humours from an Abſceſs, and cauſe purulent and hectic Fevers, and other Diſorders. See ABSCESSUS.

2. Ichor may be communicated to the Humours from Ulcers, which may corrode and conſume the Solids, and affect the Fluids.

3. Putrefactions of the Viſcera may lay a Foundation for chronical Diſorders.

Acute Diſeaſes, ill cured, may alſo affect the ſolid and compound Parts of the Body, and produce chronical Diſtempers, by leaving Abſceſſes, Fiſtulas, Empyemas, Scirrhuſes, Cancers, and Caries, which, as they affect different Parts, produce various chronical Diſorders.

Many of theſe Cauſes, above recited, may concur to produce complicated chronical Diſeaſes, which are much more difficult of Cure as they are more complex. If, however, we are well acquainted with the particular Cauſes which lay a Foundation for the Diſtemper, the Method of Cure will be leſs intricate; and it will be found, that a leſs Variety of Medicines, than is generally apprehended, is ſufficient for the Cure of chronical Diſtempers, when they are by any means to be relieved, notwithſtanding the infinite Variety of Symptoms, which ariſe from the original Cauſe, tho', in itſelf, not very complex.

As particular chronical Diſtempers are treated of under their Names, it would be ſuperfluous to ſay more on theſe Diſorders in general.

CHROS, χρὼς. The *Ionians*, as *Galen* ſays, *Com. 2. in Lib. de Tract.* by this Term χρὼς, underſtood whatever is carnous in the Body, of which Kind are principally the Skin and Muſcles, and after them the Membranes and Viſcera; but they never call the Bones by this Name, nor the Cartilages, nor Ligaments.

CHRYSALIS, AURELIA, NYMPHA, are Names by which Naturaliſts call the Worm or Maggot, while it lies hidden under a pretty hard Pellicle; which is, for the moſt part, of a bright Yellow, or Gold Colour, (whence the Names *Chryſalis* and *Aurelia*) almoſt without Motion, till it comes forth a Butterfly, or ſome other winged Inſect. *Rieger.*

CHRYSALITES. A figured Stone, of a glittering Gold and Iron Colour, like the Ammonis Cornu, hard, and rough, with Multitudes of circular Striæ, and furniſh'd with three or four Circumgyrations, reſembling in ſome meaſure the *Chryſalis. Rieger.*

CHRYSANTHEMOIDES. Hard-ſeeded *Chryſanthemum*, and CHRYSANTHEMOIDES.

The Characters are;

The Leaves grow ſcattering; the Flower is like that of the ſmall Sun-flower. The Calyx is ſimple, divided at the Baſe in one of the Species, and ſquamous in the other. The Ovary becomes a Stone, containing a hard Kernel, each Flower producing an Ovary, as in others of a like Kind. *Boerhaave's Ind. alter, Vol. 1.*

Boerhaave mentions three Species of this Plant.

1. Chryſanthemoides; oſteoſpermon; Africanum; odoratum; ſpinoſum; & viſcoſum. *H. A. 2. 85. Chryſanthemi flore planta Afra, Baccifera, ramis in aculeum abeuntibus.* Par. Bat. App. *Chryſanthemum Africanum, fruteſcens, ſpinoſum.* Volk. 105. *Huic Calix ſimplex.* H. R. D. AFRICAN SWEET-SCENTED HARD-SEEDED CHRYSANTHEMUM, WITH PRICKLY BRANCHES, AND VISCOUS LEAVES.

2. Chryſanthemoides; oſteoſpermon; Africanum; arboreum; foliis populi albæ. *Chryſanthemum arboreſcens, Æthiopicum, foliis populi albæ.* Breyn. Cent. 156. M. H. 2. 23. *Chryſanthemoides Africanum, populi albæ foliis.* T. Mem. Ac. Reg. 1705. *Chryſanthemum bacciferum, populi folio, Africanum.* Ind. 278. *Huic Calix ſquamoſus triplici ſerie.* H. R. D. AFRICAN HARD-SEEDED TREE CHRYSANTHEMUM, WITH LEAVES LIKE THE WHITE POPLAR.

3. An Chryſanthemoides? quod Chryſanthemum ex Inſulis Caribæis Leucoji incanis & ſericeis foliis, argenteis, craſſis. *Pluk. Phyt.* 115. 4. *H. R. D.* HARD-SEEDED CHRYSANTHEMUM, FROM THE CARIBBEE ISLANDS, WITH THICK WHITISH LEAVES. *Boerhaave's Ind. alter Plantarum, Vol. 1.*

CHRYSANTHEMUM.

The Characters are;

The Root periſhes every Year. The Calyx is hemiſpherical and ſquamous; and the Rays of the Flower are, for the moſt part, of a Gold Colour. *Boerhaave, Index alter, Vol. 1.*

Boerhaave mentions ſeven Species of this Plant.

1. CHRYSANTHEMUM, Offic. *Chryſanthemum foliis Matricariæ*, C. B. 134. Raii Hiſt. 1. 340. Tourn. Inſt. 491. Elem. Bot. 393. Boerh. Ind. A. 105. *Chryſanthemum veterum ſeu majus folio valde laciniato*, Chab. 359. *Chryſanthemum majus folio valde laciniato flore croceo*, J. B. 3. 104. DIOSCORIDES HIS CORN-MARYGOLD.

It is cultivated, tho' but rarely, in Gardens; and flowers in Summer. The Flowers are uſed in Medicine; and, being bruiſed with Cerate, are ſaid to diſcuſs a Steatoma. *Dale* from *Dioſcorides.*

2. Chryſanthemum; folio Matricariæ; flore luteo, pleno. THE DOUBLE YELLOW CHRYSANTHEMUM, OR CORN-MARYGOLD.

3. Chryſanthemum; flore partim candido, partim luteo. *C. B. P.* 134. WHITE CORN-MARYGOLD, OR CHRYSANTHEMUM.

4. Chrysanthemum; folio Matricariæ; flore albo, pleno. *H. C. a.* THE DOUBLE WHITE CHRYSANTHEMUM, OR CORN-MARYGOLD.

5. Chrysanthemum; folio Matricariæ; floris radiis sulphureis, disco aureo. *a.*

6. Chrysanthemum; folio Matricariæ; flore magno, bullato, ferè nudo. *Chrysanthemum, Creticum, apetalon.* Bobarl. *An Chrysanthemum, Creticum, petalis florum fistulosis.* T. 491. *a.* THE QUILL-LEAVED CHRYSANTHEMUM, OR CORN-MARYGOLD.

7. Chrysanthemum; folio latiori Matricariæ; flore magno, sulphureis radiis, disco aureo. *a.*

8. Chrysanthemum; folio latiori Matricariæ; flore aureo. *a.*

9. Chrysanthemum; segetum; facie bellidis sylvestris; foliis glaucis, papaveris hortensis instar profundè incisis. *H. L.* 145.

Chrysanthemum segetum, Ger. descript. 604. Emac. 743. Raii Synop. 3. 182. Hist. 1. 339. *Chrysanthemum segetum vulgare glaucum*, Hist. Oxon. 3. 15. *Chrysanthemum segetum nostras*, Park. Theat. 1370. *Chrysanthemum folio minus secto glauco*, J. B. 3. 105. Tourn. Inst. 492. *Chrysanthemum arvense folio glauco dentato*, Rupp. Flor. Jen. 136. *Bellis lutea foliis profunde incisis majus*, C. B. Pin. 262. CORN-MARYGOLD.

It is frequent among the Corn: The Flowers are in Use, which are extol'd by the *Germans*, as an extraordinary Remedy for the yellow Jaundice. *Dale.*

10. Chrysanthemum; segetum; facie bellidis sylvestris; foliis glaucis, papaveris hortensis instar profundè incisis; minus. *H. L.* 145. *Bellis lutea, foliis profundè incisis, minus.* C. B. P. 262. a.

11. Chrysanthemum; folio glauco, minus secto; flore ex albo & luteo variegato. *a.*

12. Chrysanthemum; Bellidis majoris folio viridi. *Flor.* 1. 34. *Bellis, lutea, foliis subrotundis*, C. B. P. 262. *Chrysanthemum Myconi.* Lugd. 873. *Chrysanthemum, latifolium.* J. B. 3. 105. a.

13. Chrysanthemum; Bellidis majoris folio viridi; minus. *a.*

14. Chrysanthemum; pallidum; minimis imisque foliis incisis, superioribus integris & capillaribus. *Barr.* 1. 421. *Obs.* 1093. *a. Boerhaave's Index alter Plantarum, Vol.* 1.

CHRYSATTICUM. An Epithet of a sort of *Passum*, recommended by *P. Ægineta, Lib.* 3. *Cap.* 50. to be drank, with the Seed of Atriplex, for the Icterus, or yellow Jaundice.

CHRYSE, χρυσή. The Name of a Plaister in *P. Ægineta, Lib.* 7. *Cap.* 17. for recent Wounds. It consists of Frankincense, and plumous Alum, each two Ounces; Colophony, Rozin, each one Pound; Oil, three Ounces; Orpiment, two Ounces. The Orpiment to be triturated in Vinegar.

CHRYSISCEPTRUM. A Name, in *Blancard*, for the white *Chamæleon.*

CHRYSITIS SPODOS, χρυσῖτις σποδὸς, in the spurious Additions to *Hippocr. περὶ γυναικ. Lib.* 1. is the Ashes of Spuma Argenti, and recommended in ophthalmic Cases. *Chrysitis*, χρυσῖτις, in *Dioscorides, Lib.* 5. *Cap.* 102. is one of the three Species of *Spuma Argenti*, or Litharge, so call'd from its yellow Colour, resembling that of Gold.

CHRYSOBALANUS, χρυσοβάλανος. A Drug mention'd by *Galen, de C. M. S. L. Lib.* 8. *Cap* 3. but not certainly known to the Moderns. *Bauhine*, in his *Pinax*, supposes it, after others, to be the Nutmeg.

CHRYSOCALLIA. A Name in *Dioscorides*, as *Oribasius* reads it, instead of the vulgar *Chrysocome*, for the *Anthemis*, or *Chamæmelum.*

CHRYSOCERAUNIUS, χρυσοκεραύνιος. The same as Cerauniochrysos, or *Aurum fulminans.*

CHRYSOCHALCOS, χρυσοχαλκὸς. The same as *Aurichalcum. Rulandus. Johnson.* It is also called *Orichalcum.*

CHRYSOCOLLA. The same as Borax, which see.

CHRYSOCOME, χρυσοκόμη, from χρυσὸς, Gold, and κόμη, Hair, is a Name for many Species of the Helichrysum, which see.

CHRYSODENDRON. See Conocarpodendron.

CHRYSOGONIA, χρυσογονία, from χρυσὸς, Gold, and γίνομαι, to be made or generated of, is the aurific or Gold-making Seed, most perfectly concocted from a Solution of Gold; or the aurific Tincture, of a red Colour, endued with an admirable Fineness of Substance, and with a natural aurific Virtue, as the *Argyrogonic* is with an argentific one. *Theat. Chym. Vol.* 2.

CHRYSOGONUM, Offic. Park. Theat. 683. Raii Hist. 2. 1326. Hist. Oxon. 2. 285. *Chrysogonum Dioscoridis quibusdam*, J. B. 3. 489. Chab. 486. *Chrysogono di Dioscoride*, Pon. Ital. Bald. 141. *Leontopetalo affinis foliis Quernis*, C. B. Pin. 324. *Leontopetalon foliis costæ simplici innascentibus*, Tourn. Coroll. 49. RED TURNEP.

It grows in *Syria*; and the Root, which is the Part used in Medicine, is good against the Bites of Serpents, being endued with a digestive, drying, and heating Quality. *Dale.*

CHRYSOLACHANON. A Plant mention'd by *Pliny. Rieger* suspects it to be Mercury.

CHRYSOLITHUS, Offic. Charlt. Foss. 39. Mont. Exot. 14. *Chrysolithus Modernorum*, Worm. 106. *Topazius Veterum, quem recentiores perperam vocant Chrysolithon*, De Laet. 46. *Topasius Veterum*, Boet. 267. *Topazius*, Aldrov. Mus. Metall. 976. *Topasius, sive Chrysolithus*, Geoff. Prælect. 82. THE CHRYSOLITE.

This is a green diaphanous Gem, of a glittering Splendor, like Gold. It is found in *India*; and other Countries; and is endued with the Virtue of stopping Hæmorrhages, and of mitigating Bile, Anger, and Phrensies. *Dale* from *Boet.*

CHRYSOPASIUS.

Topasius, & Chrysopasius, Offic. *Topasius*, Charlt. Foss. 39. *Topazius Neotericorum*; *Veterum Chrysolithus*, Worm. 106. *Topazius*, Schw. 406. Kentm. 47. *Chrysolithus Veterum*, Boet. 210. De Laet. 49. Mont. Exot. 14. *Chrysolithos*, Schrod. 327. *Chrysolithos, sive Topasius*, Geoff. Prælect. 82. *Chrysolithus*, Vet. THE TOPAZ.

It is a diaphanous and pellucid Stone, of the Colour of Gold, and is supposed to be of a solar Nature from its Signature; for which Reason it is believed to strengthen the Mind against nocturnal Fears, to diminish Melancholy, to prevent troublesome Dreams, and to work other such good Effects. *Dale* from *Schroder.*

These Virtues are utterly superstitious.

CHRYSOPLYCIUS PULVIS. A sort of Powder mention'd by *Helmont, Nat. cont. Nosc. Tit.* 40. which, he says, procures Hardness to Lead, and Difficulty of Liquefaction to Tin and Mercury, but deprives Iron of both these Qualities.

CHRYSOPŒIA, χρυσοποιία, from χρυσὸς, Gold, and ποιέω, to make, is that Part of the spagirical or chymical Art, which teaches the making of Gold out of more imperfect Metals, by Help of the *Mercurius Philosophorum.*

CHRYSOPUS, χρυσοπὸς. A Name for the *Indian* purging Juice, otherwise call'd *Gummi Gotta. Castellus.*

CHRYSOS. See Aurum.

CHRYSOSPLENIUM, *Golden Saxifrage.*

It has a fibrous perennial Root: The Leaves are semiorbicular; the Cup of the Flower, which, according to *Tournefort*, is to be taken for a Flower, is divided into four, seldom into five Lobes. The Flower is apetalous, and furnish'd with eight Stamina, which grow round the Margin of the Ovary. The Fruit is a bivalve, fork'd, membranaceous Capsule, with only one Cell, containing many Seeds.

Boerhaave mentions two Species of this Plant.

1. Chrysosplenium; foliis amplioribus, auriculatis. *T.* 416. *Saxifraga, rotundifolia, aurea.* C. B. P. 309. *Saxifraga, aurea.* Dod. p. 316. J. B. 3. 707. H. Eyst. Hyem. F. 6. Fig. 5. *Alchimilla, rotundifolia, aurea, birsuta.* H. L. 14. H. GOLDEN SAXIFRAGE, WITH LONG-EAR'D LEAVES.

2. Chrysosplenium; foliis minoribus, subrotundis. *T.* 146. *Saxifraga, rotundifolia, aurea, minor, montis aurei.* H. R. Par. H.

Boerhaave's Index alter Plantarum, Vol. 2.

CHRYSULCA. An Epithet in *Helmont*, and some others, for Aqua Stygia, or Aqua Regia.

CHRYSUN, χρυσὸν, from χρυσὸς, Gold. An Epithet of two Collyria for the Eyes, and also of two Pessaries for the Uterus, in *Aetius.*

CHU, CHUS. A Measure. The same as Choa, which see.

CHYBUR, CHIBUR, in the Language of *Paracelsus*, is Sulphur. *Castellus.*

CHYLARION, χυλάριον. A Diminutive of χυλὸς, *Chylus*, Juice, or Liquor, and render'd by *Foesius*, in *Hippocr. de intern. Affect. Succatiuncula*, where he observes, that all the Copies, instead of χυλαείῳ, by a gross Mistake, read χαλαείῳ.

CHYLIFICATIO, CHYLOSIS, χύλωσις, χυλοποίησις. The Act of reducing the Aliment in the Stomach to Chyle. It is commonly call'd *Coctio prima*, "the first Concoction." See Chylus.

CHYLISMA, χύλισμα, from χυλίζω, of χυλὸς, Juice, in *Dioscorides, Lib.* 3. *Cap.* 125. signifies express'd Juice.

CHYLOSTAGMA *Diaphoreticum Mindereri*, call'd also *Aqua Theriacalis Bezoardica* in the *Ausburg* and *Strasburg* Pharmacopœias, is a Liquor distil'd from the *Theriaca Andromachi*, the *Mithridate* of *Damocrates*, and a pretty many other heating Vegetables, commonly call'd Alexipharmacs, with the Root of Tormentil, the Bark of Ash, the middle Rind of Elder, the Juices of unripe Walnuts, Limes, and Sorrel, and the Vinegars of Raspberries, Elder, Roses, and Rue. In the *Brandenburgh* Dispensatory, you have it under the Title of *Aqua Theriacalis composita seu Bezoardica*, but with some Alterations.

The

The *Aqua Theriacalis Bezoardica* of the *Copenhagen* Diſpenſatory ſeems deſign'd for an Emendation of the ſame. *Rieger.*

CHYLUS, χυλὸς, in general, ſignifies a Juice and Humour incraſſated by Heat, and of a middle Conſiſtence between humid and dry. But χυλὸς, in *Hippocrates*, is uſed ſimply to ſignify the Juice and ſorbile Liquor of Ptiſan or Barley, which Liquor they call ſtrain'd Ptiſan, being the expreſs'd Subſtance of the Barley; not what the *Latins* call *Cremor*, which is only the expreſs'd Water of the Barley. To χυλὸς is oppoſed *whole* and *entire*, that is, not ſtrain'd Ptiſan. See our Tranſlation of *Hippocrates de Rat. Vict. in Morb. acut.* under the Article ALCALI.

CHYLUS. The Chyle.

Aliments of every Kind, whether ſolid or fluid, are, not only in the Stomach, but alſo in the Duodenum, which is a Kind of ſuccedaneous Stomach, and in the Whole of the ſmall Inteſtines, by the Warmth of the Parts, and the Aſſiſtance of the gaſtric Lymph and Bile, diſſolv'd and converted into an alimentary Liquor called *Chyle*, which being ſecreted thro' the Inteſtines, from the recrementitious Maſs of Aliments, to be diſcharg'd by way of Excrements, is by a peculiar Mechaniſm convey'd to the Maſs of Blood.

That the Duodenum is a ſuccedaneous Stomach, is obvious from this, that it is ſufficiently large, and has a Flexure like that of the Stomach, by means of which, the Maſs of Aliments may be the longer retain'd in it. It is alſo furniſhed with Menſtruums, or ſolvent Liquors peculiar to itſelf; ſince not only a large Number of ſmall Glands detected by *Brinnerus*, and which diſcharge a menſtruous Lymph, are ſituated in it, but alſo becauſe the pancreatic Juice, mixing with the Bile, accompliſhes the farther Elaboration and Rectification of the Chyle.

The Chyle itſelf is a milky inſipid Liquor, conſiſting of oleous and mucilaginous Parts, and extracted from the diſſolv'd Aliments.

The Chyle is, as it were, a natural Emulſion; and as, in order to conſtitute this, a Mixture of oleous and aqueous Parts is requiſite, ſo, that Chyle conſiſts of the ſame Ingredients, is obvious from thoſe Parts, which in Milk, which is nothing but Chyle, are converted into Butter, Cheeſe, and Serum. And as every artificial Emulſion, prepar'd with Water and oleous Seeds bruis'd, is of a whitiſh Colour, which ariſes from the Oil reduc'd to ſmall Globules reflecting the Rays of Light; ſo alſo the Whiteneſs of the Chyle can hardly be aſcrib'd to any other Cauſe than this.

Boerhaave has ſet the Analogy betwixt Emulſions of Vegetables and Chyle in a very clear Light. He ſpeaks only of vegetable Subſtances; but if we reflect, that Animal Subſtances, taken by way of Aliment, are originally form'd from Vegetables, and, like them, conſiſt of Oil, Earth, Water, and Salts, (the laſt Volatile) we ſhall readily conceive, how the Organs of Digeſtion convert, alſo, Animal Subſtances into Chyle, or a ſort of Emulſion.

The Paſſage hinted at in *Boerhaave* runs thus.

1. If the oleaginous Vegetable Subſtances are reduc'd to a Powder, or bruis'd, and ground in a Marble Mortar with a Wooden Peſtle, and a little Water ſlowly and ſucceſſively poured upon them in the Grinding, that they may then come into a well-wrought Paſte, they will change into a white Maſs; which the longer it is ſo ground, the more uniform it becomes, and the better fitted for this Proceſs. 2. Then gradually add more fair warm Water, ſo as to make the Whole fluid, and continue the Triture without Intermiſſion, as before; whereby the Liquor, floating above the Matter, will begin to grow milky and unctuous: Let the Liquor now reſt a little, then pour it off by a gentle Inclination of the Mortar upon a thin Linen Strainer, that the finer Part may paſs thro' into a clear Veſſel. 3. To the groſs Part remaining behind in the Mortar, and in the Strainer, again add freſh Water, and grind and ſtrain as before, adding this ſecond Liquor to the former, and repeat this for ſeveral times, till the Liquor poured off gradually becomes leſs white, leſs thick and unctuous, and at length perfectly aqueous; at which Time but a very little of the Subject will remain in the Mortar, and that chaffy, poor, exhauſted, and inſoluble in Water, tho' aſſiſted by long Triture, appearing almoſt merely terreſtrial, without Salt, or the leaſt Signs of Oil: Whence, by this means, the Parts of Vegetables, fill'd with Oil, are divided into two diſtinct Kinds; the one diſſolvable by Water, the other not.

The Liquor, thus prepar'd, reſembles in many reſpects the Chyle of Animals, which is itſelf prepar'd from Vegetables in their Bodies, by chewing, ruminating, and the Action of the Stomach, before it is mix'd with the Bile in the Duodenum. The Thing appears plain from the white Colour, the mild Odour, the ſweet Taſte, the thick Unctuouſneſs, and the great Diſpoſition they both have to turn ſour. So likewiſe, if the Liquor, thus prepar'd, ſtand ſome time in a tall cylindrical Veſſel, it ſpontaneouſly ſeparates into a white, thick, and almoſt totally oily Part, which floats at Top, and into a thinner, tranſparent, bluiſh Liquor; which remains below, wherein it perfectly reſembles Milk, as dividing itſelf into Cream, and thin Milk. Again, if this Liquor be kept for ſome time in a warm Air, it turns ſour, and afterwards conſiderably ſharp; tho' without acquiring the proper Rancidneſs of an expreſs'd Oil, in which reſpect alſo it perfectly agrees with Milk, which acquires the like Acidity in ſuch an Air; without becoming rancid like pure Oil: Whence this farther Remark ſhould be made, that in acute Diſtempers, Emulſions may be given with greater Safety than expreſs'd Oils. But I could never, by any Art of Coagulation I have us'd, obtain a Curd from this Liquor, as Milk affords; whence there is this Difference betwixt the Milk of Vegetables and Animals. The Reaſon of the Difference betwixt expreſs'd Oils and Emulſions ſeems principally this, that the mealy Part in the Grinding being conſtantly in fine Particles interpoſed betwixt the pure Oil, the Parts of this Oil are ſo broke and ſeparated from one another, that its Tenacity being chang'd, it becomes miſcible with Water, and thence appears in the Form of Milk, which alſo conſiſts of a fat Subſtance diſſolv'd in Water; whereas, when a pure Oil is obtain'd by Expreſſion, the Parts thereof, being in Contact with each other, do not admit of Water, nor ſuffer it to be mix'd among them. Again, the large Quantity of Meal, intermix'd amongſt the Oil in the Emulſion, cauſes it to turn ſour, not rancid; and hence appears the Reaſon why the Liquor is white; for Whiteneſs always enſues, as often as Oil is intimately divided and mix'd with Water. If Oil be poured upon a Glaſs of Water, the two Liquors will remain tranſparent and ſeparate; but if ſhook briſkly together, they will unite in ſome meaſure, and, during that Union, the Mixture will appear perfectly white; but if now ſuffer'd to reſt, the Oil collects at the Top, the Water ſinks to the Bottom, and the Whiteneſs immediately vaniſhes: And the ſame Thing frequently happens in Animal Milk, diſtilled oleaginous Waters, and theſe Emulſions. It is alſo certain, that the Whiteneſs becomes greater, the larger the Quantity of Oil; and, in this Caſe, the Liquor ſooner grows rancid; but the leſs the Oil, the leſs white the Liquor, and the ſooner it turns ſour. In the Summer Emulſions will ſcarce keep ten Hours, but in the Winter longer. To conclude, this Method of making Emulſions gives Light to the Action of Maſtication; for all the Foods prepar'd from Corn, abounding with a latent Oil, and being ground by the Teeth in chewing, and mix'd with the Saliva, the longer they are thus acted upon in the Mouth, the nearer they approach to theſe Emulſions, and at length always turn white, when the Saliva, Salt, and Oil, are well ground together. The Operation, thus begun in the Mouth, is carry'd on in the Stomach, and more perfected in the Inteſtines, where the Matter ſtill retains the ſame Nature, except that new Juices are perpetually mixing themſelves therewith, and communicating their Properties; whereas, in our pharmaceutical Operations, there is no Addition but of Water alone. And hence we may underſtand the artificial Diſtinction between the firſt Chyle, and the Milk of Animals.

Hence we alſo learn the Origin of the Fat in Animals, which feed upon Vegetables; ſince Vegetables conſtantly abound with Oil, which may be prepared and extracted from them by chewing, ruminating, and the Power which the Body has of making the Chyle. 2. We hence ſee the Nature and Uſe of this Oil in Plants. 3. So likewiſe we learn the Manner, whereby a Liquor, extremely like Chyle and Milk, may be produced from Oil and Water mix'd and ground together in a certain manner, and hence perceive how the human Body acts in producing Chyle and Milk. 4. Hereby we are orderly led to conſider thoſe Oils call'd eſſential. 5. Phyſicians acquainted with theſe Particulars will not wonder, whence Men in Health, who uſe little Exerciſe, ſhould abound in Fat, even tho' they often uſe nothing but vegetable Food; ſince Expreſſion and Emulſion can ſo eaſily extract a large Quantity of Oil from Vegetables not apparently oily. 6. Hence we ſee the Origin both of Chyle and Milk; and, 7. The Nature of thoſe Principles which conſtitute them both; which are the Animal Juices, conſiſting of the Saliva, the fine anterior Dew, the Mucus of the Mouth, Jaws, Gullet, Stomach, and Inteſtines; and again, of thoſe aqueous, ſaponaceous, oily, and ſpirituous Matters, in the Liquors enumerated, which may be brought into the Form of an Emulſion, and expreſſed from the groſſer Parts, by the means of Maſtication, Deglutition, the Action of the Stomach, and the periſtaltic Motion. 8. Hence alſo may be eaſily deduced the phyſical Reaſon, why the Milk of Animals, prepared entirely from vegetable and tartiſh Food, is ſo ſubject to turn ſour, when out of the Body. Recent verdant Graſs, by being long maſticated, or ruminated, with a large Proportion of Saliva, begins even in the Mouth to aſſume the Form of Milk, and promote the Production of Fat: Whence Men uſually grow fat with Bread and Water, and Cattle with Water and Graſs.

Since the principal Element of the Chyle is an Oil, blended with a mild, gelatinous, and mucilaginous Subſtance, 'tis obvious that thoſe Subſtances afford the moſt copious and laudable

able Chyle, which are furniſhed with a mild, oleous, and mucous Juice, ſuch as the Fleſhes of Animals, and, in the Vegetable Kingdom, all the farinaceous Seeds.

Hence the Reaſon is plain, why a Man may live upon Water and Bread alone; for theſe Subſtances include, in a due Degree and Proportion, all the Ingredients of the Chyle and Blood. From this it alſo appears, why, in the Eaſtern Countries, Rice ſerves the Inhabitants inſtead of Bread, and why by the Uſe of Barley, Wheat, Oats, Peaſe, Beans and Chefnuts, not only Men, but every other Species of Animals, become fat. Hence alſo the Reaſon is obvious, why thoſe Aliments which are not of a temperate Quality, ſuch as acid, ſpirituous, and ſaline Subſtances, the Juices of many Vegetables, Herbs, Roots, with acrid and aromatic Subſtances, are improper for producing Chyle, and carrying on the Work of Nutrition.

The Chyle, extracted from the diſſolved Aliments, is ſtrained thro' the villous Coat of the ſmall Inteſtines, convey'd to the ſmall Mouths of the lacteal Veſſels, and poured into them.

This villous Coat, which is moſt conſpicuous in the Jejunum, is no more than a Congeries of a large Number of villous Subſtances, or ſmall Tubes variouſly interwoven with each other; and this Congeries is the Source and Origin of the lacteal Veſſels.

That the *Villi* of the Inteſtines are furniſh'd with Cavities obſervable by Microſcopes, is excellently demonſtrated by *Brunnerus*, in his Treatiſe *de Glandulis Inteſtinorum*. From the ſame Author we learn, that where there are inteſtinal *Villi*, there are alſo lacteal Veſſels; and that where the former of theſe are not to be ſeen, as in the Stomach for Inſtance, there the lacteal Veſſels are inviſible.

The villous Coat of the Inteſtines is not merely paſſive, but, in conſequence of the Afflux of the nervous Fluid and Blood, is furniſh'd with a certain Degree of Strength and Tone, or a Motion by which it is contracted and dilated; ſo that theſe ſmall villous Canals, and the Orifices of the lacteal Veſſels, may be either too much contracted, or too much relaxed.

In Spaſms and Gripes of the Inteſtines, as alſo upon the Uſe of acrid Purgatives, or corroſive Poiſons, this villous Coat is highly conſtricted; ſo that nothing, except a fine thin Fluid, is paſs'd thro' it, as is ſufficiently evinced by the Symptoms common to hypochondriac Patients, and by the Flatulences and Congeſtions of peccant Humours uſual in ſuch a Caſe.

The villous Coat, with which the ſmall Inteſtines eſpecially are furniſh'd, is that common Strainer, thro' which all the Liquor is convey'd from the *Primæ Viæ* to the Blood, and all the other Parts of the Body: Hence 'tis of the utmoſt Importance, that this villous Coat ſhould be in its due and natural State; for if the Mouths of the Veſſels are too wide and pervious, the groſs, feculent, and recrementitious Parts of the Chyle are convey'd to the Blood. If, on the contrary, they are too much contracted, the thin and watery Part of the Chyle is only convey'd to the Blood, whereas the more uſeful and alimentary Parts of it are kept back.

Since all the Chyle, and every other Fluid, muſt paſs to the Maſs of Blood thro' the minute capillary Veſſels of this villous Coat, and thro' the lacteal Veſſels, hence theſe Ducts, and other Orifices, ought to be open and pervious, but not obſtructed with any mucous Subſtance.

To obſtruct theſe ſmall Ducts of the villous Coat, thoſe Aliments greatly contribute, which are converted into a viſcid Coagulum, ſuch as hot Bread, farinaceous Subſtances, and Cakes not ſufficiently fermented, coagulated Milk, viſcid and compact Aliments, Fats, which eaſily run into a Coagulum, ſuch as that of Sheep; together with all Aliments and Medicines poſſeſſed of an aſtringent Quality.

Bountiful Nature has therefore wiſely appointed, that the Bile, in conſequence of its ſaponaceous and abſtergent Quality, and the Lymph, in conſequence of its being inceſſantly diſcharg'd from the Glands and glandular Coats, ſhould preſerve this villous Coat from being obſtructed by a thick and viſcid Mucus.

Hence the Reaſon is plain, why the drinking good Waters, warm Infuſions of Tea and Coffee, together with Decoctions of Herbs, is ſo highly beneficial, ſince the principal Advantage, attending the Uſe of theſe Liquors, conſiſts in this, that they keep this Coat free from Obſtructions, and preſerve its Ducts open and pervious. Hence alſo the Reaſon is obvious, why theſe Liquors, or any wholſome Water, drank copiouſly, when, in conſequence of the obſtructed Veſſels, they cannot find a free and eaſy Paſſage, excite Commotions, Flatulences, Uneaſineſs, and ſometimes Vomitings. Warm Fluids, however, drank in too large Quantities, and too frequently repeated, will relax the villous Coat, and prove highly prejudicial.

Thro' the villous Coat of the Inteſtines there is, firſt of all, ſecreted from the Aliments, a highly fine Fluid, which eaſily enters and paſſes thro' the ſeveral Ducts. Hence, after Meals, or drinking liberally, even of good Water, the Urine is firſt diſcharged purely aqueous and inſipid, but afterwards aſſumes a deeper Colour.

The more groſs and coarſe Parts of the Aliments, which are not adapted to the Mouths of the lacteal Veſſels, are not conveyed to the Blood; but, being retain'd in the Inteſtines, in conſequence of the Narrowneſs of the Lacteals, are diſcharged by way of Excrement.

If, in conſequence of the coſtive State of the Patient, the more groſs Parts of the Aliment remain for a conſiderable time in the Inteſtines, the more groſs ſaline and terreſtrial Parts, alſo, by the ſtrong Compreſſion of the Inteſtines, penetrate into the Blood.

But a Liquor is not only ſecreted in the ſmall, but alſo in the large Inteſtines, and convey'd into the Maſs of Blood thro' the abſorbent Veſſels.

When any one is preternaturally coſtive, the Fæces which were before diſcharged liquid, and of a fetid Smell, are now deſtitute of Moiſture, dry, and free from an ungrateful Smell; which is a ſatisfactory Proof, that this fetid Liquor has been ſeparated from them.

From what has been ſaid we may eaſily aſſign a Reaſon, why a coſtive State ſhould produce a Cacochymy, and render the Humours highly impure. That there is alſo a Secretion made in the large Inteſtines, is ſufficiently obvious from what we call nutritive Clyſters, prepared of *Peruvian* Bark; as alſo from antiſpaſmodic and corroborating Clyſters, prepared of nervous and cephalic Herbs, and calculated for Diſorders of the Head.

The Stomach and Inteſtines have a particular Motion, by which they are contracted and dilated. This Motion proceeds gradually from the ſuperior to the inferior Parts, and is by the *Greeks* called the periſtaltic Motion.

The principal Inſtruments, by which this Motion is carried on and performed, are the annular Fibres, with which the whole Inteſtines are ſurrounded, and wrapt up in a ſpiral Form: So that theſe Fibres are continued in an uninterrupted Courſe from the Oeſophagus to the Anus.

This Aſſertion may be confirmed by the following Experiment. Boil the Inteſtine of any Animal, and, after ſeparating the longitudinal Fibres along with the exterior Coat, the annular Fibres, in one continued and uninterrupted Series, may be ſeparated from the Inteſtine like a long Thread. Theſe annular Fibres, with the Aſſiſtance of the longitudinal, are the principal Inſtruments, by means of which the Contraction of the Inteſtines is produc'd.

The periſtaltic Motion of the Inteſtines, when in its natural State, is highly eaſy, gentle, and, as it were, of the undulatory Kind.

This eaſy and gentle Motion may be juſtly look'd upon as the wiſe and bountiful Appointment of Nature, leſt the Aliments, when concocted, ſhould be with too much Precipitation hurried into the Inteſtines, and too ſpeedily diſcharged, which happens in a Diarrhœa. Beſides, in conſequence of the gentle Contraction and Dilatation of the Inteſtines, only the finer and more ſubtile Portion of the Chyle is ſeparated from the Maſs of digeſted Aliments, and poured into the villous Ducts of the Inteſtines, and the Mouths of the lacteal Veſſels; whilſt, at the ſame time, the more groſs and feculent Parts are left, juſt as happens in all Percolations, where the Strainer, upon a gentle Compreſſion, only tranſmits the finer Parts of the Liquor, whereas, by a ſtronger and more forcible Compreſſion, its thick and turbid Parts are at the ſame time paſſed thro' it. But this Motion of the Inteſtines, ſubſervient to the progreſſive Motion and Expulſion of their Contents, is ſo eaſy and gentle, that it is not perceptible, except in the larger Animals, ſuch as Oxen and Horſes, when diſſected alive.

As every Impulſe, and progreſſive Motion of Humours, require a Cauſe or Principle ſufficiently qualified for producing a due Degree of Motion, ſo, with reſpect to the periſtaltic Motion of the Stomach and Inteſtines, we find a threefold Cauſe, the firſt of which is lodged in the Pharynx, the ſecond in the Pylorus, and the third in the Beginning of the Inteſtinum Colon.

By a ſtrong Contraction of the Pharynx, the Aliments taken are thruſt into the Cavity of the Stomach, thro' the Oeſophagus. Then by the right and inferior Parts of the Stomach, and by the Action of the Pylorus, the Contents of the Stomach are propelled thro' the ſmall Inteſtines, till they arrive at ſuch as are larger and more capacious, where, about the right Ileum, is the Beginning of the Colon, which conſiſts of very ſtrong, nervous, muſcular, and fibrous Membranes, and by whoſe Motion and Impulſe the Excrements are forced thro' the various Convolutions of the Inteſtines to the very Sphincter Ani.

The Motion of the Inteſtines, by means of which their Contents are propelled, or carried forwards, is ſufficiently ſtrong, ſince it overcomes a conſiderable Reſiſtance, and forces Quickſilver, almoſt the heavieſt of Mineral Subſtances, up and down, thro' all their various Convolutions and Windings, till it is diſcharg'd by the Anus; which we obſerve in thoſe afflicted with the

the Iliac Paſſion, who often receive conſiderable Relief by taking large Quantities of this metalline Fluid.

This Motion, whereby the Inteſtines are contracted and dilated, is ſucceſſive and reciprocal; for whilſt one Part of the Inteſtine is contracted, and render'd narrower, the Subſtance contain'd in it is puſh'd forward to the adjacent Part, which by that means is dilated, and, upon the Ceſſation of that Dilatation, is forthwith contracted again.

As, in order to preſerve the continual Circulation, and progreſſive Motion, of the Blood and Humours, ſuch is the Conſtruction of the moving Fibres in the Heart and Arteries, that their Dilatation or Diaſtole becomes the Cauſe of their Syſtole, which again produces their Diaſtole; ſo alſo the like Condition of moving Membranes and Fibres is obſerv'd in the Structure of the Inteſtines, ſo that their Dilatation produces their Contraction, and, *vice verſa*, their Contraction proves the Cauſe of their Dilatation.

If then the Contraction of the Inteſtines is the Cauſe of their Dilatation, and if, on the contrary, their Dilatation gives Birth to their Contraction, it follows, that by producing either a ſtronger Dilatation or Contraction, only in one Part of the Stomach and Inteſtines, the periſtaltic Motion in general muſt by that means be accelerated, and the Fæces of courſe the more ſpeedily evacuated.

Hence the Reaſon may be eaſily underſtood, why by a purgative Medicine, which is frequently lodg'd in one Part of the Inteſtine, and excites a painful Conſtriction, the Contents of the Inteſtines are as ſpeedily and forcibly diſcharged, as we obſerve them to be by acrid Humours in bilious Diarrhœas. Hence the Reaſon is alſo obvious, why, by drinking copiouſly of any Liquor which is impregnated with a ſtimulating, and eſpecially a ſaline Principle, the Contents of the Inteſtines are ſoon expel'd, as we obſerve in drinking hot and acidulated Waters.

As the Strength, Tone, and contractile Force of all the moving Parts of the human Body depend upon a free and uninterrupted Influx of the fine nervous Fluid, and the purer Part of the Blood, ſo the periſtaltic Motion of the Stomach and Inteſtines depends upon the ſame Cauſe.

All thoſe Medicines, which increaſe the Strength, which augment and reſtore the Vigour and Tone of the Parts, ſuch as Subſtances impregnated with a highly ſubtile, fragrant, oleous, and aromatic Oil; or ſuch as contain a ſubtile volatile Salt, or ſuch as abound with a mild and balſamic Reſin, are excellent Preſervatives of the Motion of the Inteſtines, and reſtore it when become too languid; whereas, on the contrary, Subſtances which impair the Strength, ſuch as fetid Medicines, Opiates, too powerful Refrigerants, Acids, and Aſtringents, greatly impair the Vigour of theſe Parts. But that the nervous Fluid is ſubſervient to the Motion of the Inteſtines, is, I think, obvious, becauſe the Paſſions of the Mind, which principally act upon this Fluid, may alſo alter, increaſe, or deſtroy the natural Motion of the Stomach and Inteſtines.

The periſtaltic Motion, therefore, of the Inteſtines is the principal Cauſe, both of the Secretion of the Chyle, and of its Conveyance thro' the Lacteal Veſſels.

Beſides, the progreſſive Motion of the Chyle to the Maſs of Blood is not a little aſſiſted, firſt, by what we call the Valvulæ Conniventes, large Numbers of which are obſervable in the ſmall Inteſtines, which, when a Compreſſion of the Parts is made, hinder the Chyle from ſlipping inſtantaneouſly by the Orifices of the Lacteals, and the inteſtinal Villi; for in theſe the Maſs of digeſted Aliments ought to remain for ſome time, that the Chyle may be the better expreſs'd from it, and convey'd purer and better into the Lacteal Veſſels. Secondly, to the more eaſy Reception of the Chyle into the ſmall Lacteal Veſſels, and Inteſtinal Villi, the Narrowneſs of their Diameters contributes not a little, which is illuſtrated by that Experiment, wherein we ſee, that ſubtile Fluids ſpontaneouſly enter ſmall and capillary Glaſs Tubes. Thirdly, the progreſſive Motion of the Chyle, and its Aſcent thro' the Lacteal Veſſels, and Thoracic Duct, is much aſſiſted by the ſemilunar Valves, with which they are furniſh'd; for theſe Valves conſiſt of ſlender and moving fleſhy Fibres, by whoſe Motion the Fluid is carried from one Valve to another. Theſe Valves are alſo ſo ſituated, that the Chyle and Lymph may be carried upwards in a progreſſive Motion; but cannot regurgitate, or have a retrograde Motion. Fourthly, the Progreſs of the Chyle is alſo aſſiſted and promoted by the Impulſe of the Fibres, of which thoſe remarkable conglobate Glands, ſituated in the Centre of the Meſentery, conſiſt.

The Progreſs of the Chyle thro' the Thoracic Duct, and Lacteal Veſſels, to the Blood, is conſiderably promoted by Reſpiration; in which there is a continual and ſucceſſive Compreſſion and Dilatation of the Muſcles of the Abdomen.

Since, in Inſpiration and Expiration, the ſtrong Compreſſion and Dilatation of the Abdominal Muſcles not only forces the Aliments from the Stomach and Inteſtines, but alſo promotes the Expreſſion of the Chyle, it is for this Reaſon prejudicial both to Digeſtion and to Health, after a liberal Meal, to talk too loud, or to uſe too violent Exerciſe. But, four or five Hours after, when the Digeſtion is finiſh'd, Motion and Exerciſe are ſo far from being hurtful, that they are rather beneficial, as, by increaſing Reſpiration, the Secretion and progreſſive Motion of the Chyle are more effectually promoted. *Hoffman, Tom.* 1.

The Courſe of the CHYLE *into the* BLOOD.

The Chyle being thus ſeparated from the Aliments, it is immediately propel'd into the Lacteal Veſſels, and by them convey'd to the Meſenteric Glands. Theſe Glands lie ſcatter'd thro' the Cellular Subſtance. In the natural State, theſe Glands are ſomething of the Figure of Lentils, or little round Beans; ſome of them being orbicular, others oval, but all of them a little flatted; and, in corpulent Subjects, we find them ſurrounded with Fat.

Theſe Glands are of the Number of thoſe that Anatomiſts call Glandulæ Conglobatæ, the Structure of which is not as yet ſufficiently known. They ſeem to be of a cellular Subſtance, ſurrounded by a very fine Membrane or Coat; on which, by the Help of Microſcopes, we diſcover an Intertexture of particular Filaments, which *Malpighi* believed to be fleſhy Fibres.

The niceſt Anatomical Injections have not hitherto given us any Satisfaction about theſe Particulars; for tho' they be made with all poſſible Care, they always fill the folliculous Texture of theſe Glands: And tho', by means of theſe Injections, we may diſcover a great many Veſſels, which were before inviſible, we are not a whit the nearer our Purpoſe; becauſe we cannot, by this Method, diſtinguiſh the Secretory, Excretory, and Blood-veſſels, from each other.

Beſides the Blood-veſſels, which are diſtributed in a reticular manner in the Meſenteric Glands, and beſides many nervous Filaments ſpread thro' them, we diſcover an infinite Number of ſmall Veſſels, of another Kind, running from Gland to Gland.

Theſe Veſſels are extremely thin and tranſparent, and furniſh'd on the Inſide with numerous Valves, which appear on the Outſide like little ſmall Knots, very near each other. They go out from each Gland by Ramifications, as by ſo many Roots, and, having form'd a ſmall Trunk, they are again divided, and enter ſome neighbouring Gland, by the ſame kind of Ramifications by which they went out from the former.

They are term'd Lymphatic Veſſels, becauſe, for the moſt part, they contain a very clear limpid, tho' mucilaginous Serum, call'd Lymph by Anatomiſts. But as they have likewiſe been obſerved to be fill'd with a white milky Fluid call'd Chyle, they have been call'd Vaſa Chylifera, or Venæ Lacteæ. They have the Name of Veins, becauſe their Valves are diſpoſed as thoſe of the ordinary Blood-veins; and becauſe the Fluid, which they contain, runs from ſmaller into larger Tubes.

I have always divided the Lacteal Veſſels into three Claſſes in the human Body, and ſometimes into four.

They derive their firſt Origin from the Tunica Villoſa of the Inteſtines, and chiefly from that of the ſmall Inteſtines, by a great Number of ſmall capillary Roots. From theſe Roots there ariſes, between the Coats of the Inteſtines, a Rete Mirabile, which ſurrounds almoſt the whole Circumference of the Inteſtinal Canal, between the muſcular and external Coat.

This reticular Texture of Lacteal Veſſels keeps cloſe to the external Coat, and leaves the Canal along with it, on the Side of the Meſentery, where it forms two Planes of Ramifications, plainly diſtinguiſh'd from each other by the cellular Subſtance, and adhering cloſely to the Inſide of the two Membranes of the Meſentery. In this ſeparate State they run on the Laminæ of the Meſentery, as far as the firſt Meſenteric Glands, where they unite again into one Plane. All this I reckon the firſt Claſs of Lacteals.

After this Union, the Lacteal Veſſels are diſtributed almoſt uniformly thro' the whole Extent of the Meſentery, from its Circumference to its Origin, or Adheſion to the Vertebræ of the Back, between the Meſenteric Glands, which they join, and form frequent Anaſtomoſes or Communications. This is the ſecond Claſs.

Having paſs'd thro' the Meſentery in this manner, the Ramifications begin to unite as they approach the Spina Dorſi; and conſequently their Number is leſſen'd, and their Size increaſed; and, having paſs'd the laſt Meſenteric Glands, they terminate about the Middle of the Adheſion of the Meſocolon in ſmall common Trunks, which receive a great Number of Lymphatic Veſſels from the Glandulæ Lumbares, and others below theſe. This is the third Claſs.

A fourth Claſs may be made of the Lacteal Veſſels of the great Inteſtines; of which I demonſtrated ſeveral, very full of Chyle, to the Royal Academy, in an human Colon. The late M. *Mery*, a Member of the ſame Academy, who was not eaſily convinced of any thing from Obſervations made by others, having ſeen that, with the End of my Finger, I could puſh the white Liquor uniformly into the Colon in ſeveral Places,

Places, seem'd at first to be satisfied; but, for his farther Conviction, he desired me to open one of these Vessels before him, with the Point of a Lancet, and to take out a Drop of the Liquor, which having laid upon the Nail of my Thumb, he was intirely convinced.

The Lacteal Vessels are not always apparent in human Subjects; but we may see them in those that die either a violent or sudden Death, soon after a Meal; and they remain visible, even in the Intestines, for a long time after Death, when a great Number of the Mesenteric Glands have become scirrhous, especially in Children.

It is the common Custom to demonstrate the Lacteals in living Animals, open'd about three Hours after a full Meal, especially of Milk. This is a very troublesome Way, and very often hinders us from seeing a great Part of this beautiful Phænomenon. It is much easier and better to kill the Animal, about an Hour after it has fill'd its Belly, or sooner, if the Food be liquid; and this is the Method which I have always used, with Success, in my private Courses.

The Lacteal Vessels of the third Class, or those that lie between the Mesenteric Glands and middle Adhesion of the Mesocolon to the Spina Dorsi, run down on the Body of the inferior Aorta, between the Extremities of the small Muscle of the Diaphragm, and terminate in a kind of Cistern, call'd by some *Receptaculum Pecqueti*, from M. *Pecquet*, a Physician at *Dieppe* in *Normandy*, who first demonstrated, by inconteſtable Experiments, this Receptacle, which had been long before discover'd by *Eustachius*.

The greatest Part of the Receptaculum Chyli lies behind the Right Portion of the inferior Muscle of the Diaphragm, on the Right Side of the Aorta, at the Union of the last Vertebra of the Back with the first of the Loins. It is a Kind of membranous Vesicle, the Conformation of which is various in human Subjects. Sometimes it is of an uniform long oval Figure, like the Vesicula Fellis: Sometimes it is divided by Strictures into several small roundish Bags, more or less flatted; and sometimes it surrounds the Trunk of the Aorta, like a Collar.

It is composed of very thin Coats, and its Cavity is divided by small Pelliculæ, or membranous Septa, the Disposition of which is irregular. It is principally round the lower Part of this Receptacle that the last Lacteal Vessels are inserted, some on the Sides, and some behind the Aorta; and they are accompanied by numerous Lymphatic Vessels. The upper Portion is contracted between the Aorta and Vena Azygos, and forms a particular Canal, which runs up thro' the Thorax, by the Name of Ductus Thoracicus. *Winslow, Sect.* 8. *Numb.* 208.

Ductus Thoracicus.

The Thoracic Duct is a thin transparent Canal, which runs up from the Receptaculum Chyli, along the Spina Dorsi, between the Vena Azygos and Aorta, as high as the fifth Vertebra of the Back, or higher. From thence it passes behind the Aorta toward the Left Hand, and ascends behind the Left Subclavian Vein, where it terminates, in some Subjects, by a kind of Vesicula; in others, by several Branches united together; and opens into the Back-side of the Subclavian Vein, near the Outside of the internal Jugular.

This Canal is plentifully furnish'd with semilunar Valves, turn'd upward. Its Opening into the Subclavian Vein, in the human Body, is, in the place of Valves, cover'd by several Pelliculæ, so disposed as to permit the Entrance of the Chyle into the Vein, and hinder the Blood from running into the Duct. It is sometimes double, one lying on each Side; and sometimes it is accompanied by Appendices, call'd *Pampiniformes*. *Winslow, Sect.* 9. *Numb.* 164.

CHYMATION. The Name of an *Oxyporium* (a penetrating Medicine of quick Passage) in *Marcellus Empiricus*, *Cap.* 20.

CHYMIA. The same as Chemia, which see.

CHYMIATRIA, χυμιατρεία, from χυμία, Chymistry, and ἰατρεία, healing, is the Art of curing Diseases by chymical Medicines. *Blancard.*

CHYMICOPHANTA, χυμικοφάντης, from χυμικὸς, a Chymist, and φαίνω, to appear, is a pretended Chymist. *Blancard.*

CHYMOLEA. See Kymolea.

CHYMOSUM, in *Paracelsus*, *Lib.* 2. *Paragraph.* 2. is a Term importing the same as *Chylus*.

CHYMUS, χυμὸς, Humour, Juice, and, in the common Signification of the Word, every Kind of Humour which is incrassated by Concoction; under which Notion it comprehends all the Humours fit or unfit for preserving and nourishing the Body, whether good or bad. It also sometimes imports the finest Part of the Chyle, when separated from the Fæces, and contain'd in the Lacteals and Thoracic Duct. In *Galen* it signifies the Gustatory Faculty or Quality in Plants and Animals.

CHYSIS, χύσις, from χύω, to fuse, or pour out. Fusion.

CHYTLON, χύτλον, according to *Erotian* on *Hippocrates*, is a plentiful Inunction with Oil and Water. *Foesius.*

CHYTRA, CHYTRINOS, CHYTRIDION, χύτρα, χύτρινος, χυτρίδιον, in *Hippocrates*, signify a Pot of Earth.

CIBAGE, *Pino similis orientalis*, C. B. *Pini Forma Cibage*, J. B. A Tree growing in the Eastern Countries, and resembling a Pine-tree. I find no Virtues ascrib'd to it. *Raii Hist. Plant.*

CIBARIUM. The same as *Cibus*, or Alimentum, which see.

Cibarius Panis, in *Celsus*, is coarse houshold Bread.

CIBATIO, in Chymistry, is the same as *Corporatio*, which see. *Castellus.*

CIBOULS, or CHIBOULS, are nearly ally'd to the Scallions, being a Sort of Onion, which forms no Bulb at the Root, and which is cultivated in Kitchen-gardens.

CIBUR, CHYBUR. Sulphur. *Rulandus.*

CIBUS. See Alimentum.

Cibus Albus.

The *Cibus Albus*, or white Aliment, is a Species of Jelly, which, in *Fuller's Pharmacopœia*, is prepared in the following manner:

Take four Pints of Milk, the Breast of a boil'd Capon, and blanch'd sweet Almonds, two Ounces; let them be beat, and a strong Expression made. Then let them boil over a gentle Fire, adding three Ounces of Rice-meal; and, when they begin to coagulate, add eight Ounces of white Sugar, and ten Spoonfuls of the Water of red Roses: Mix all well together.

This is a highly beneficial Aliment in Consumptions, Gonorrhœas, and all other Cases, where the Intention is to correct and allay the Acrimony of the Humours.

The *Spaniards* also give the Name of *Cibus Albus* to a certain *American* Fruit.

CICADA, Offic. Schrod. 5. 340. Aldrov. de Insect. 307. Jonst. de Insect. 22. Mouff. 127. THE BAULM CRICKET.

This Insect is common in *Italy*, but unknown in *England*. It is furnish'd with Wings, and is somewhat like a Cricket, very noisy, and living only on Dew. In the Kingdom of *Naples* innumerable Multitudes of these Insects are continually sucking and feeding upon the Ornus, or Dwarf Ash, with the rounder Leaf, from whose Wounds, by Exsudation, proceeds Manna. These Insects are used, when dry'd, in Colics; and are recommended to be eaten, roasted, in Disorders of the Bladder. The Ashes of these, burnt, are said to wear away the Stone.

CICATRICULA is a little white Speck, or Vesicle, in the Coat of the Yolk of an Egg, wherein the first Changes appear toward the Formation of the Chick.

CICATRISANTIA. See Epulotica.

CICATRIX, οὐλὴ, is a Seam or Elevation of callous Flesh, rising on the Skin, and remaining there after the Healing of a Wound or Ulcer, and is commonly call'd a *Scar*.

CICCUS, κίκκος, in *Hesychius*, is a kind of small Grasshopper, contemptible enough to give Occasion for a Proverb. Also a Species of wild Goose in *Aldrovandus's Ornithology*, *Lib.* 19. *Cap.* 10.

CICER ALBUM, Offic. *Cicer sativum*, C. B. Pin. 347. Ger. 1047. Emac. 1222. Raii Hist. 1. 917. Hist. Oxon. 2. 75. Elem. Bot. 309. *Cicer sativum album*, Park. Theat. 1075. *Cicer arietinum*, J. B. 2. 292. *Cicer*, *Cicer arietinum*, Chab. 143. WHITE CHICHES.

The Cicer is a kind of Pulse, which grows to be about a Foot and a half, or two Foot high, with round hairy Stalks, on which are set, in an alternate Order, long hairy pinnated Leaves, consisting of seven or nine small oblong round pinnated Pinnæ, serrated about the Edges, with an odd one at the End; but these Pinnæ do not always stand directly opposite. From the Bosom of the Leaves arises a single Flower, and sometimes two, which are small and white, less than Pea-blossoms, on long Foot-stalks, and are succeeded by short thick hairy Pods, each containing one or two Chiches, of a white Colour, bigger than Peas, but round like them, only somewhat sharp-pointed at one Side. They are sown in *Italy*, *France*, and other warm Countries, whence the Seed is brought to us. They flower in *June*, and the Peas are ripe in *July*.

The *Cicer nigrum* and *rubrum* differ in nothing from the white, but in the Colour of the Flower, which is purplish, and the Seed of a reddish Brown.

This is used to make up the Troches of Squills for the *Theriaca Andromachi*. *Miller's Bot. Off.*

They are cultivated in the Gardens of the Curious, and the Seeds are used in Physic. *Dale.*

White Chiches were much used in Food by the Antients, as they are at this Day by the *Italians*, who eat them both boil'd and crude, when green. They are esteem'd a flatulent Aliment; but are said to stimulate to Venery, to deterge, open, incide,

incide, digeſt, and to wear away the Stone; but are prejudicial when the Bladder or Kidneys are exulcerated. A Decoction of theſe is ſaid to be good in a Jaundice; to deſtroy Worms; to provoke the Menſes; to expel the Fœtus. In Cataplaſms they have the Reputation of curing Tetters, Ringworms, and Parotides; to diſcuſs inflam'd Teſticles, and conſolidate malignant Ulcers.

CICER RUBRUM & NIGRUM, Offic. *Cicer arietinum nigrum vel rubrum*, Park. Theat. 1075. RED AND BLACK CHICHES.

They grow in Gardens, and flower in *June*. The Seeds are uſed, and the Broth made of them helps the yellow Jaundice; the Decoction expels Worms, provokes the Menſes, brings away the Fœtus, and generates Milk. Applied in Cataplaſms, they cure the Pſora, Lichen, and Parotides, diſcuſs Inflammations of the Teſticles, and conſolidate malignant Ulcers. They are diuretic and lenitive, for which Reaſon a Decoction of them is accommodated to Diſorders of the Kidneys.

CICER SYLVESTRE, Offic. Ger. 1047. Emac. 1222. Raii Hiſt. 1. 935. *Cicer ſylveſtre majus*, Park. Theat. 1076. *Cicer ſylveſtre foliis oblongis biſpidis majus*, C. B. Pin. 347. *Cicer ſylveſtre multiflorum, radice craſſa, & folliculis brevibus ventricoſis hirſutis*, Chab. 143. *Aſtragalus; luteus; perennis; ſiliquâ gemellâ; rotundâ; veſicam referente*, Hiſt. Oxon. 2. 108. Boerh. Ind. A. 2. 54. Tourn. Inſt. 416. Elem. Bot. 329. *Glaux*, Rivin. Irr. Tetr. Rupp. Flor. Jen. 217. Buxb. 140. *Glaux altera perennis, folliculis turgidis*, R. H. p. 935. WILD CHICHES.

They grow wild in the Fields and uncultivated Places of *Italy*, and other Countries, and flower in the Summer. The Seed is uſed, which is of a heating, drying, deterſive, and aperitive Quality, and agrees in Virtues with the other Cicers.

Boerhaave makes this a Species of ASTRAGALUS.

CICERA TARTARI. Small Pills, compos'd of Turpentine and Cream of Tartar. *Blancard.*

CICERBITA, according to *Blancard*, is a Species of *Sonchus*.

CICERCULA. See LATHYRUS.

CICETHE, κικήθη, in *Erotian* upon *Hippocrates*, is expounded by κακοήθη, (*Cacoethe*) that is, of a bad Quality or Diſpoſition; but *Foeſius*, with good Reaſon, thinks there is a Fault in the Copy, and that inſtead of κικήθη, we ſhould read κακήθη, or κακήθεα.

CICHORIUM.

The Characters are,

The Flowers ſtand on ſhort Pedicles, proceeding from the Sides of the Stalks and Branches; and the Flower-cup contracts itſelf like a Capſula, containing angulated, wedglike, umbilicated Seeds.

Boerhaave takes notice of fourteen Species of this Plant, the eight firſt of which are annual, the reſt perennial.

1. Cichoreum; latifolium; ſive Endivia vulgaris. *Elem. Bot.* 381. *Tourn. Inſt.* 479. *Boerh. Ind. A.* 91. *Endivia, Scariola, Intybus*, Offic. *Endivia ſativa*, Park. 774. *Intybus ſativa*, Ger. 221. Emac. 282. Raii Hiſt. 1. 254. *Intubum*, Park. Parad. 495. *Intybus ſativa latifolia ſive Endivia vulgaris*, C. B. P. 125. Hiſt. Oxon. 3. 53. *Intybum ſativum latifolium*, J. B. 2. 1011. *Intybus vel Intybum*, Chab. 315. ENDIVE.

Garden Endive has pretty large, long, ſmooth, yellowiſh-green Leaves, broad and roundiſh at the End, and laciniated about the Edges, full of a bitteriſh Juice. The Stalk ariſes to be two or three Foot high, beſet with ſmaller and narrower Leaves; the Flowers are blue, and like thoſe of Succory, but ſmaller, growing on the Tops of the Stalks; and the Seed of it is pretty much like the Seed of Succory. The Root is long and ſlender, ſpreading but little. It grows in Gardens, flowering in *June*, the Root periſhing after the Seed is ripe.

Endive is much uſed as a Sallad-herb, eſpecially after the Leaves have been ty'd together, and blanched in the Earth. It is cooling and moiſtening, opening Obſtructions of the Liver and Spleen, and of Uſe againſt the Jaundice. It provokes Urine, and cools a hot Stomach. The Seed is one of the leſſer cold Seeds. *Miller's Bot. Off.*

2. Cichorium; latifolium; ſive Endivia vulgaris; floribus candidis. *T.* 479. *a.*

3. Cichorium; latifolium; ſive Endivia vulgaris. *T.* 479. *Intybus ſativa, anguſtifolia.* C. B. P. 125. M. H. 3. 53. *Intybum ſativum, anguſtifolium.* J. B. 2. 1011. *Flore cæruleo.* a.

4. Cichorium; anguſtifolium; ſive Endivia anguſtifolia; flore albo. *T.* 479. *a.*

5. Cichorium; criſpum. *T.* 479. *Intybus criſpa.* C. B. P. 125. M. H. 3. 53. *Intybum ſativum, criſpum.* J. B. 2. 1011. *Latifolium.* a.

6. Cichorium; criſpum; anguſtifolium. *a.* NARROW-LEAV'D CURL'D ENDIVE.

7. Cichorium; ſpinoſum; Creticum. *C. B. Prodr.* 62. *Cichorium ſpinoſum.* C. B. P. 126. J. B. 2. 1013. M. H. 3. 55. *Chondrillæ genus, elegans, cæruleo flore.* Cluſ. H. 145. 6. H.

8. Cichorium; degener; ex ſemine Cretici. *T.* 479. *a.*

9. Cichoreum; ſylveſtre; ſive Officinarum. *C. B.* 125. *Hiſt. Oxon.* 3. 55. *Tourn. Inſt.* 479. *Boerh. Ind. A.* 91. *Buxb.* 72. *Cichoreum agreſte ſylveſtre*, Offic. *Cichoreum ſylveſtre*, Raii Hiſt. 1. 255. Synop. 77. Ger. 222. Emac. 284. Park. 775. J. B. 2. 1007. Chab. 315. Dill. Cat. 159. WILD SUCCORY.

The main Difference between this and the *Garden Succory* is, its growing wild, and not riſing ſo tall, but having the Stalks more ſtubbed and twiſted. It grows in Lanes, and by Hedge-ſides, and flowers rather later than the *Garden Succory*.

The Virtues of the Wild are much the ſame with the Garden; ſome commend the diſtil'd Water of the Flowers to cool the Inflammations of the Eyes. *Miller's Bot. Off.*

Its Leaves and Roots are very bitter, full of Milk, and give a faint-red Colour to blue Paper: The Leaves ſtain it a little more; they are leſs bitter, and of a glutinous Taſte. The Salt which is in the Succory does not ſeem to differ from the natural Salt in the Earth, but is joined with a conſiderable Quantity of Sulphur and terreſtrial Parts.

Being analyſed, it yields a great deal of Oil and Earth, ſome acid Liquors, a little urinous Spirit, and ſome concreted volatile Salt.

The Dandelion yields much the ſame Principles; but it affords no concreted volatile Salt: Nevertheleſs their Virtues are pretty much alike.

Succory-roots and Leaves are aperitive, diuretic, and cooling: They ſeem to cool only by removing the too long obſtructed Humours in the Bowels. They are preſcribed in Broths, Ptiſans, Apozems, and Clyſters. The Juice procures Expectoration in Defluxions of the Breaſt. The Extract has the ſame Virtues, and purifies the Blood. The ſimple or compound Syrup is a good Aperitive, eſpecially if two Drams or half an Ounce of Tincture of Steel be mixed with one Ounce of it. The Conſerve of its Flowers is uſed on the ſame Occaſions, in aperitive Boluſes and Opiates; theſe Opiates are of great Service in the Cachexy, Dropſy, hypochondriac Diſorders, intermitting Fevers, and troubleſome Heats of the lower Belly. *Martyn's Tournefort.*

The famous *Eraſiſtratus* had a great Opinion of this Plant.

10. Cichorium; ſylveſtre; flore cæruleo; caule purpureo.

11. Cichorium; ſylveſtre; flore albo. *C. B. P.* 126.

12. Cichorium; ſylveſtre; flore roſeo. *C. B. P.* 126.

13. Cichorium; ſylveſtre; minus; folio magis laciniato; flore cæruleo tenuiter diſſecto; Jamaicenſe; caule & nervo folii viridi.

14. Cichorium; idem (13.); caule & nervo folii rubro. *Boerhaave's Index alter Plantarum, Vol.* 1.

CICHOREUM SATIVUM VERIS, Offic. *Cichoreum*, J. B. 2. 1007. C. B. 125. Ger. 220. Emac. 280. Parad. 497. Hiſt. Oxon. 3. 55. Buxb. 73. Raii Hiſt. 1. 255. GARDEN SUCCORY.

This has a thick taper Root, brown on the Outſide, and white within, full of bitter Milk. It grows deep in the Ground. The lower Leaves much reſemble thoſe of Dandelion in their Shape, and tooth-like Section; but they are much larger, and hairy. The Stalk ariſes to be a Yard or more in Height, ſtriated, hairy, and angular; having the Leaves ſet on without Foot-ſtalks, almoſt encompaſſing the Stalk, being ſharp-pointed at the End. Among theſe grow the Flowers, ſet on cloſe to the Stalk, ſeveral together, of a lively blue Colour, compoſed of ſeveral Rows of flat Petala, indented at the Ends. The Seed is brown and longiſh, and grows not in Down, like the Seed of Dandelion. It is planted in Gardens, and flowers in *June*. The Root, Leaves, Flowers, and Seed, are uſed. The Seed is one of the four ſmaller cold Seeds.

The antient Botanic Writers generally affirm, that Succory is cold; but its Bitterneſs manifeſtly ſhews it to be hot. However, it is aperitive and diuretic, opening Obſtructions of the Liver, and is good for the Jaundice. It provokes Urine, and cleanſes the urinary Parts of ſlimy Humours, that may ſtop their Paſſage.

The only officinal Preparation, taking its Name from Succory, is the *Syrupus de Cichorio cum Rhabarbaro. Miller's Bot. Off.*

Syrupus de Cichorio cum Rhabarbaro.

SYRUP *of* SUCCORY *with* RHUBARB.

Take of whole Barley, of the Roots of Smallage, Fennel, and Aſparagus, each two Ounces; of the Leaves of Succory, Dandelion, Endive, and Sow-thiſtle, each two Handfuls; of Lettuce, Liverwort, Fumitory, and the Tops of the Hop-tree, each one Handful; of Maidenhair, Wall-rue, Ceterach, Liquorice, Winter-cherries, and Dodder, each ſix Drams: Boil them in twelve Pints of Spring-water to eight Pints; and in the ſtrained Liquor diſſolve

dissolve and boil six Pounds of white Sugar, till it is of a Consistence for Syrup. S. A. Adding, towards the latter End, twelve Ounces of Rhubarb, and six Drams of Spikenard.

This continues the same as the College first received it into their Dispensatory. *Quincy's London Dispensatory.*

CICILIANA *seu* SICILIANA *Planta.* See ANDROSÆMUM.

CICINDELA, λαμπυρὶς.

Cicindela, Offic. Schrod. 5. 340. Mouff. Insect. 108. Charlt. Exer. 48. Mer. Pin. 201. Jonst. de Insect. 80. Aldrov. de Insect. 492. *Noctiluca terrestris*, Col. Ecphr. 1. 38. *Scarabæus* λαμπυρὶς *sordidè nigricans, corpore longo & angusto, seu Cicindela mas*, Raii Insect. 78. *Cicindela impennis seu fœmina*, Ejusd. 79. THE GLOW-WORM. *Dale.*

The whole Insect is used in Medicine, and recommended by some against the Stone. *Cardan* ascribes an anodyne Virtue to it.

Authors disagree much about Glow-worms, some affirming, that the flying Glow-worm differs from the reptile only in Sex, others asserting, that they differ in Species: Of the latter are *Julius Scaliger*, in his *Exercitations*, and Dr. *Richard Waller*, in *Philos. Transf. Numb.* 167. who say they have found flying Glow-worms to be of both Sexes, by seeing them in Coition. We cannot, indeed, doubt the Veracity of these Authors; however, the Experiments lately made by Mr. *Benj. Allen*, M. B. confirm the Opinion of *Vintimiglia*, in *Fab. Colomna*, and *Mouffet*, that the flying Glow-worms are Males, and the reptile Females; for that Gentleman, living at *Braintre*, often observed the flying Glow-worms in Coition with the reptile ones, but never could discover either flying or reptile in Coition with one another: Hence he justly concludes, as *Dale* also does, being convinc'd by his Experiments, that the flying Glow-worms are the Males, and the reptile ones the Females. *Dale.*

CICINUM *Oleum.* The Oil call'd *Cicinum* is thus prepared:

They take a convenient Quantity of ripe Seeds of the Palma Christi, (κεστρόων, *Ricinorum*) and dry them, like Grapes, upon Hurdles, in the Sun, till the Husks break, and fall off: Then, collecting the naked Seeds, they put them in a Mortar, pound them well, and afterwards remove them into a tin'd Pot, with Water, and boil them. When all their Juice is exhausted, remove the Pot off the Fire, and with a Shell take up the Oil, which swims at Top, and repositt the same for Use.

In *Egypt*, where they make great Use of it, they prepare it after a different manner; for, after cleansing the Seeds, they put them into a Mill, and grind them carefully; then removing the Meal in Baskets, they commit it to the Press. The Seeds are in their Prime, when they are just fallen out of their Husks.

CICINUM is good for Achors, Psora, and Inflammations of the Anus, for Obstructions and Distortions of the Uterus, to take off unseemly Scars, and to ease Pains in the Ears. It adds Efficacy to Plaisters; and, taken inwardly, purges watry Humours, and expels Worms. *Dioscorides, Lib.* 1. *Cap.* 38.

CICIS, κικὶς, in some Places of *Hippocrates* and *Theophrastus*, is put for κνικὸς, *(Cecis)* a Gall. *Foesius.*

CICLA. See BETA ALBA.

CICONGIUS. A Measure, according to *Blancard*, containing twelve Sextaries, or Pints.

CICONIA, Offic. Schrod. 5. 315. Bellon. des Oyse, 202. Aldrov. Ornith. 3. 291. Mer. Pin. 181. Gesn. de Avib. 230. Jonst. de Avib. 100. Charlt. Exer. 108. *Ciconia alba*, Raii Ornith. 286. Ejusd. Synop. Avib. 97. Will. Ornith. 210. THE STORK.

It is seldom found in *England.* The Parts used in Medicine, besides the whole Bird, are the Gall, Fat, Dung, and Craw. The Stork is a remarkable Alexipharmic, being supposed a most excellent Remedy for all kinds of Poison, and especially the Pestilence; and also for Affections of the Nerves and Joints. The Gall is recommended for Diseases of the Eyes; the Fat is good to anoint gouty and trembling Joints; the Dung, drank in Water, is supposed to cure the Epilepsy, and other Diseases of the Head; and the Ventricle, or Craw, dry'd and pulveris'd, is accounted an extraordinary Secret in Cases where Poison is concern'd. *Dale.*

CICUTA. Hemlock.

The Characters are,

The Root is fibrous, large, and thick; the Leaves are very small, and much divided; the Petals are bifid, in the Shape of a Heart, and unequal; the Seed is short, round, and much striated.

Boerhaave takes notice of two Species of this Plant.

1. Cicuta; major, *C. B. Pin.* 160. *Tourn. Inst.* 306. *Elem. Bot.* 255. *Boerh. Ind. A.* 56. *Buxb.* 73. *Rupp. Flor. Jen.* 229. *Mor. Umb.* 18.

CICUTA, Offic. Ger. 903. Emac. 1061. J. B. 3. 100. Dill. Cat. Giss. 116. Rivin. Irr. Pent. Raii Hist. 1. 451. Synop. 3. 215. Mer. Pin. 26. *Cicuta vulgaris*, Merc. Bot. 1. 29. Phyt. Brit. 27. *Cicuta major vulgaris*, Park. Theat. 933. Hist. Oxon. 3. 290. HEMLOCK. *Dale.*

Hemlock grows frequently to be a Yard and half or two Yards high, with smooth, round, hollow Stalks, spotted with black and purple Spots; it has many very large winged Leaves, which are divided into a great many smaller Fern-like Sections. On the Tops of the Branches grow large Umbels of white Flowers, of five small Leaves apiece, after which come round, deeply-furrow'd, whitish Seed. The Root is thick and woody. The whole Plant has a strong rank Smell. It grows in Fields, and by Hedge-sides, and among Rubbish, and flowers in Summer.

Whatever noxious and poisonous Qualities the *Hemlock* of the Antients was endued with, being that with which the *Athenians* used to put their Criminals to Death; 'tis certain, that the *Hemlock*, which grows in our Regions, (tho' it seems to agree well enough with the Description that *Dioscorides* gives of theirs) is of a less venomous and malignant Nature, several Persons having been known to have eaten some Quantity of the Root and Stalk.

Hemlock is used outwardly in Swellings and Hardness of the Liver and Spleen; for which the *Emplastrum de Cicuta cum Ammoniaco* is very useful, and is the only officinal Preparation we have from it. *Miller's Bot. Off.*

This Plant has an herby saltish Taste, smells of fetid Oil, and gives a very deep Tincture of Red to blue Paper; which makes us conjecture, that it contains a Salt resembling Sal Ammoniac, involved by a great deal of Oil and Earth. Pretty near the same Principles are found in the Apium. Its Leaves are very lenifying and resolvent; being boiled with Milk, they are apply'd with good Success to the Piles, and the Parts affected with the Gout. The Cataplasm of Hemlock-leaves, bruised with some Snails, and worked up with the four resolvent Meals, is excellent for the Inflammation of the Testicles, for the Gout, and Sciatica. The *Hemlock* Plaister is a good Resolver of scirrhous Tumors. This Plant is an Ingredient in the *Diabotanum* of M. *Blondel*, which is a very good Plaister to resolve Wens and scrophulous Tumors. *Martyn's Tournefort.*

Emplastrum è Cicuta cum Ammoniaco.

PLAISTER *of* HEMLOCK *with* AMMONIACUM.

Take of the Juice of Hemlock-leaves, four Ounces; of Vinegar of Squills, and Gum Ammoniacum, each eight Ounces: Dissolve the Gum in the Juice and Vinegar, and, after due Time standing together, strain them, and reduce to the Consistence of a Plaister. S. A. *Quincy's London Dispensatory.*

The *Cicuta Aquatica* is the PHELLANDRIUM, which see.

Hemlock taken internally, according to *Paulus Ægineta*, causes a Vertigo and Dimness of Sight, so that the Patient can scarcely see at all at any Distance. It also induces Hiccoughs, a sort of Madness, and a Refrigeration of the Extremities: Convulsions succeed, and Death, by an utter Interception of Respiration.

The Method of Cure is, immediately to bring it up by Vomit, and then to carry off what may have passed into the Intestines by a Cathartic Clyster. Then proceed to pure Wine, as the most effectual Remedy, which must be taken at Intervals, betwixt each Dose of which exhibit Cows or Asses Milk, or Wormwood, with Pepper and Wine; or else Castor, Rue, and Mint, with Wine, may be taken, and a Dram of Cardamoms, or Storax, or Pepper, with Nettle-seeds, in Wine, or the tender Leaves of Laurel; as also Sylphium, and its Juice, in Wine and Passum (γλευκεῖ); but sweet Wine (γλεῦκος) alone is sufficient. *Paulus Ægineta, Lib.* 5. *Cap.* 41.

Tragus recommends a Draught of Vinegar, as an excellent Antidote against the Poison of Hemlock.

Notwithstanding the Accounts which Authors give of the poisonous Quality of Hemlock, *Ray* mentions twenty Grains of the Root in Powder as a most effectual Diaphoretic in malignant Fevers, and Quartans, exhibited before the Paroxysm; but I should not advise its Use.

CICUTARIA. Bastard-hemlock.

The Characters are,

The Root is large and thick: The Stalks are thick, hollow, and jointed: The Leaves are like the greater Hemlock, but are thicker: The Seeds are long, thick, gibbous, and shap'd somewhat like a Half-moon, and very much chanel'd. *Miller's Dictionary, Vol.* 1.

Cicuta; minor; Petroselino similis. *C. B. Pin.* 160. *Hist. Oxon.* 3. 290. *Chom.* 781.

CICUTA MINOR, Offic. Mor. Umb. 18. *Cicuta minor ſive fatua*, Park. Theat. 933. *Cicutaria tenuifolia*, Ger. 905. Emac. 1063. Raii Hiſt. 1. 451. Synop. 3. 215. Mer. Pin. 26. *Cicutaria Apii folio*, J. B. 3. 179. Chab. 405. *Cicutaria fatua*, Mer. Bot. 29. Pnyt. Brit. 28. *Cynapium*, Rivin. Irr. P. Rupp. Flor. Jen. 223. Dill. Cat. Giſſ. 124. Buxb. 91. THE LESSER HEMLOCK, OR FOOLS-PARSLEY.

This Sort is of a ſmaller Growth than the preceding, and ſo like Parſley, that ſome unſkilful Perſons have gathered it, and uſed it as ſuch, by which ſeveral have ſuffered in their Health, and ſome have been deſtroy'd thereby. *Miller's Dictionary.*

The Virtues agree with thoſe of the preceding.

Cicutaria; latifolia; fœtida. *C. B. Pin.* 161. *Tourn. Inſt.* 322. *Elem. Bot.* 273. *Boerh. Ind. A.* 56.

SESELI PELOPONNENSE, Offic. *Seſeli Peloponeſiacum recentiorum*, Park. Theat. 907. *Seſeli Peloponenſe Matthioli ſive Cicutaria quorundam*, J. B. 3. 184. *Cicutaria maxima fœtida*, Chab. 405. *Cicutaria latifolia fœtidiſſima*, Raii Hiſt. 1. 451. Umb. 18. Hiſt. Oxon. 3. 291. *Cicuta latifolia fœtidiſſima*, Ger. 903. Emac. 1062. GREAT BROAD-LEAV'D HEMLOCK, OR BASTARD-HEMLOCK.

It grows plentifully in the Country of the *Griſons*. The Root and Seed is in Uſe.

Dale ſays, that this Plant is poſſeſs'd of the ſame Virtues as the *Seſeli Maſſilienſe*, according to *Dioſcorides*; but as Botaniſts agree, that this Plant is erroneouſly taken for the *Seſeli Peloponenſe* of *Dioſcorides*, we muſt not attribute the Virtues of the former to this.

Mr. *Juſſieu* takes notice of another *Cicutaria*, which is the *Cicutaria fœtidiſſima, foliis atrorubentibus.*

CIDRA *ſeu* POMACEUM. Cyder. See POMUM and POMACEUM.

CIGNUS. A liquid Meaſure, mention'd by *Rhodius, de Pond. & Menſ.* from *Avicenna*, and containing, as he ſays, the Weight of two Drams. *Caſtellus.*

CILIA, ταρσοὶ, are the extreme Parts of the Palpebræ; they are ſemicircular and cartilaginous, with Hairs inſixed in them, which by ſome are call'd CILIA. *Caſtellus.* See OCULUS.

CILIARE LIGAMENTUM, *ſive* PROCESSUS CILIARIS, is a Range of black Fibres, circularly diſpoſed, having their Riſe in the inner Part of the Uvea, and terminating in the prominent Part of the Cryſtalline, which they ſurround.

CILIARIS *Muſculus.* That Part of the *Muſculus Orbicularis Palpebrarum* which lies neareſt the *Cilia*, miſtaken by *Riolanus*, who gave it this Name, for a diſtinct Muſcle.

CILLO. A Name for one who is affected with a perpetual Trembling of the upper Eyelid; ſo call'd *à Cillendo*, i. e. *motitando*, from being in a continual Agitation. *Caſtellus.*

CILO, περικέφαλος, φοξός. One whoſe Forehead is prominent, and his Temples compreſs'd; that is, one who is beetle-brow'd. *Caſtellus.*

CIMENTATIO. The ſame as CÆMENTATIO, which ſee.

CIMEX, Offic. Schrod. 5. 341. Raii Hiſt. Inſect. 7. Charlt. Exer. 52. Aldrov. de Inſect. 534. Jonſ. de Inſect. 89. *Cimex domeſticus*, Mouff. de Inſect. 269. *Cimex lectularius quibuſdam. Cimices domeſtici impennes*, Mer. Pin. 202. THE WALL-LOUSE, OR BUG.

It is found in Beds, being a ſmall Inſect, of a rhomboidal Figure, and a dark-brown Colour, with ſix Feet, and a very tender Skin, ſo that it burſts with the leaſt Compreſſion, and emits a moſt offenſive Smell. *Dale.*

Given to the Number of ſeven, as Food, with Beans, they help thoſe who are afflicted with a quartan Ague, if they be eaten before the Acceſſion of the Fit; ſwallowed alone without Beans, they are good againſt the Bite of the Aſp; the Smell of them relieves under hyſterical Suffocations; drank in Wine or Vinegar, they expel Leeches; and pulveris'd, and introduc'd into the urinary Paſſage, they cure a Difficulty of Urine. *Dioſcorides, Lib. 2. Cap.* 36.

The Bites of Bugs are attended with ſo little Danger, that Phyſicians have not thought them of Importance enough to direct any Topic for their Cure. As they are very troubleſome, I ſhould apprehend, that anointing the Parts affected with Salad-oil, or Spirit of Wine, would afford ſome Relief. *Ætius, Tetrab. 4. Serm. 1. Cap.* 44. informs us, that a Decoction of the black Chamæleon, (ſee CARTHAMUS) if Beds are waſh'd with it, prevents the Generation of Bugs.

CIMOLIA ALBA, Offic. Matth. 1392. *Terra Cimolia*, Tourn. Voya. ad Angl. 1. 113. *Argilla alba*, Charlt. Foſſil. 1. *Cimolia Terra*, Calc. Muſ. 127. *Creta Fullonica*, Worm. 3. *Creta Cimolia*, Aldrov. Muſ. Metal. l. 245. *Terra Candida Saponaria ſive Fullonica*, Kentm. 1. TOBACCO-PIPE CLAY. *Dale.*

Dioſcorides ſays the Terra Cimolia is ſometimes white, and ſometimes of a purple Caſt, which laſt has an innate Fatneſs, and feels cold to the Touch, and which is the beſt. Both of them, diluted in Vinegar, diſcuſs Parotids, and other Tumors. Rub'd immediately upon recent Ambuſtions, they prevent Puſtules from ariſing on the affected Part. They repreſs Hardneſs of the Teſticles, and Inflammations in all Parts of the Body, and are good againſt an Eryſipelas. Upon the Whole, ſays he, they are of very extenſive Uſe, provided they are genuine, and not ſpurious.

The Cimolia Alba was very famous among the Antients. It acquir'd its Name from *Cimolus*, an Iſland near *Crete*, now call'd *Sicandre*, where it was found in great Plenty.

Tourneforte deſcribes the Cimolia Alba as a white, heavy, inſipid Chalk, abounding with ſmall Grains of Sand, which he thinks the ſame as that got about *Paris*, except that the Cimolia is fattiſh and ſaponaceous, whence it is call'd Terra Saponaria. The Inhabitants, he ſays, make uſe of no other Soap for waſhing their Linen; whence the Virtues attributed to it by *Dioſcorides* may be accounted for. I apprehend the *Cimolia Alba* is different from the common Tobacco-pipe Clay; but *Dale* informs us, that in *Cornwall* a ſort of Clay is found, which he calls *Steatites*, and which is uſed as a Soap. In the Shops this Earth, with the Mark of a Seal upon it, is call'd *Terra Sigillata Alba.* It is alſo ſometimes ſold for the *Terra Samia.*

Dale farther informs us, that the *Cimolia Alba*, which he ſeems to think the ſame as Tobacco-pipe Clay, is drying and aſtringent, either apply'd externally, or taken internally; and farther, that it is an excellent Medicine in either continual or intermittent Fevers; and that it was the grand Secret of Sir *Theodore Mayern*, in curing theſe Diſorders.

Cimolia purpuraſcens, Offic. Matth. 1392. *Smectis ſeu Terra Fullonica*, Mer. Pin. 218. *Smectis ſeu Terra Saponaria Anglica*, Worm. 4. *Smectis ſeu Terra Saponaria & Fullonica*, Charlt. 2. FULLER'S-EARTH. See CIMOLIA ALBA.

Dale ſays it is ſeldom or never uſed internally; but that, applied as a Topic, it is drying and aſtringent.

CINA CINÆ, or *China Chinæ.* A Name for the *Peruvian* Bark.

CINABARIS. See CINNABARIS.

CINÆDUS, κίναιδος. The Name of a Bird, whoſe Gall *Galen (de Comp. Medic. S. L. Lib. 4. Cap. 8.)* recommends for rubbing the Eyelids, when the ſuperfluous Hairs, in a Trichiaſis, are pull'd off. It is a Sea Bird, very difficult to be taken.

CINARA. The Artichoke.

The Characters are,

The End of the Pedicle is expanded into a very ſquamous and compact Body, whoſe large Scales are afterwards expanded very wide, the inferior carnous Parts of which are eſculent; within theſe grows a carnous, thick, eſculent Diſk, upon which grow ſmall Calyxes, containing Ovaries, to the aculeated Apex of which grow monopetalous, tubulous Flowers; the external of which are large and barren; the internal monopetalous, tubulous, and furniſh'd with Stamina and a Tube.

Boerhaave mentions ſix Species of the Cinara.

1. Cinara; hortenſis; foliis non aculeatis. *C. B. Pin.* 383. *Buxb.* 74. *Tourn. Inſt.* 442. *Cinara Scolymus*, Offic. *Cinara maxima alba*, Ger. 991. Emac. 1153. *Cinara, ſativa alba*, Park. Parad. 519. *Carduus domeſticus, capite majore cum ſpaſmis diſpanſis viridibus*, Hiſt. Oxon. 3. 157. *Carduus ſive Scolymus maximus non ſpinoſus*, Chab. 350. *Carduus ſive Scolymus ſativus non ſpinoſus*, J. B. 3. 48. Raii Hiſt. 1. 299. *Artiſchocus lævis*, Schw. 235. *Scolymus maximus non ſpinoſus*, J. B. ARTICHOKE.

The *Artichoke* has ſeveral large long Leaves, of a hoary or whitiſh Colour, deeply cut into ſeveral Laciniæ, ſometimes prickly, and ſometimes not. The Stalk is thick, ſolid, ſtriated, bearing at the Top one large round Head, compoſed of a great Number of large, broad, tough Scales, ending in a broad Point, with a Prick or Thorn in the Middle: From among theſe, when they begin to ripen, ſpring a great Number of fiſtular Flowers, compoſing a large blue Thrum, which turn into Down, containing large corner'd Seed in a ſhelly Cover.

Artichokes are accounted a pleaſant, wholſome, and very nouriſhing Food. The Roots are reckoned to be aperitive, cleanſing, and diuretic; good for the Jaundice, and to provoke Urine. *Miller's Bot. Off.*

The *French* and *Germans* eat not only the Heads, but alſo the young Stalks boil'd, and ſeaſon'd with Butter and Vinegar. The *Italians* ſeldom boil the Heads, but eat them raw, when young, with Salt, Oil, and Pepper.

Artichokes have the Reputation of promoting Venereal Inclinations to a very great Degree. The Stalks, preſerv'd in Honey, are ſaid to be an excellent Pectoral; but they ſhould be firſt blanched like Celery.

The common Leaves, boil'd in White-wine Whey, are much commended in the Jaundice, as is the Juice of theſe Leaves.

2. Cinara; ſpinoſa; cujus Pediculi eſitantur. *C. B. Pin.* 383.

3. Cinara; hortenſis; non aculeata; capite ſubrubente. *H. R. Par.* GARDEN ARTICHOKE, WITHOUT PRICKLES, AND REDDISH HEADS.

4. Cinara hortenſis; aculeata. *C. B. P.* 383. *Tourn. Inſt.* 442. *Elem. Bot.* 351. *Boerh. Ind. A.* 139. *Volck. Flor. Nor.*

110. *Rupp. Flor. Jen.* 150. *Cinara*, Cod. Med. 25. *Cinara ſylveſtris*, Ger. 991. Emac. 1153. Park. Par. 519. *Carduus ſive Scolymus ſativus ſpinoſus*, J. B. 3. 48. Raii Hiſt. 1. 299. *Carduus hortenſis foliis ſpinoſis*, Hiſt. Oxon. 3. 158. THE PRICKLY ARTICHOKE.

This is cultivated in Gardens, and is by ſome eſteemed only a Variety of the firſt Species.

5. Cinara Bœtica.

6. Cinara; ſylveſtris; Bœtica. *Cluſ. Cur. Poſt. in Fol.* 35. *Carduus Tingitanus, flore magno cæruleo, foliis atractylidis diviſurâ ſubincano, ſpinis duricribus horridis*, Pluk. Phyt. 81. 2. M. H. 3. 458. THE WILD ARTICHOKE OF BOETICA.

Beſides theſe, there are ſome other Plants which go by the Name of *Cinara*; as the

COSTUS NIGRA, Offic. *Cinara ſylveſtris Cretica*, C. B. 384. Park. 972. Raii Hiſt. 1. 300. Tourn. Inſt. 443. *Carduus Agriocinara Cretenſium, ex quo Coſtus nigra Officinarum*, J. B. 3. 52. Hiſt. Oxon. 3. 158. *Agriocinara Cretenſium*, Chab. 350. Append. 630. CANDY ARTICHOKE.

This grows principally in *Crete*, where the Heads are eaten raw by the Peaſants, like the common Artichoke. The Roots, according to *Bellonius*, are ſold for the true *Indian Coſtus* by the *French* Apothecaries.

SCOLYMUS SYLVESTRIS, Offic. *Scolymus Dioſcoridis*, Park. Theat. 973. *Cinara ſylveſtris*, Ejuſd. Parad. 519. Ger. 992. Emac. 1153. Raii Hiſt. 1. 300. *Cinara ſylveſtris latifolia*, 384. Tourn. Inſt. 442. Cod. Med. 39. *Carduus Scolymus ſylveſtris*, J. B. 3. 51. *Carduus ſive Scolymus ſylveſtris*; *Scolymus Dioſcoridis*, Chab. 350. *Carduus ſive Cinara ſylveſtris latifolia*, Hiſt. Oxon. 3. 158. WILD ARTICHOKE, OR CARDONET.

This grows in *Italy* and *France*. The Part in Uſe is the Flower, which is thought by the Vulgar to prevent Sterility, and preſerve the Fœtus in the Womb to the juſt Period of Maturity. The Flowers coagulate Milk.

CINAROIDES. A Name for the LIPIDOCARPODENDRON, a Shrub which grows near the *Cape of Good Hope*.

CINCLISIS, or CINCLISMOS, κίγκλισις, and κιγκλισμὸς, from κιγκλίζω, to ſhake or wag, as a Sea Bird, call'd the Wagtail, (κίγκλος) does his Tail. Theſe, in *Hippocrates*, ſignify a ſmall and frequently repeated Motion. Thus, in his Treatiſe *De Articulis*, he ſays, that there is but a ſmall Agitation or Motion (κιγκλισμὸς) at the Articulation of the Breaſt.

CINEFACTIO. A Chymical Term, importing the Reduction of a Body to Aſhes.

CINERARIA. A Plant, the ſame as the *Jacobæa Maritima*, C. B. P. 131.

CINERARIUM. The Aſh-hole of a Chymical Furnace.

CINERATIO. The ſame as CINIFACTIO, or INCINERATIO.

CINERITIUM. A Cupel.

CINERULA. A Name for Spodium.

CINETUS. A Name for the Diaphragm.

CINGULUM SANCTI JOHANNIS, in Botany, is the *Artemiſia*, Mugwort.

CINGULUM SAPIENTIÆ.

This Species of Belt or Girdle was invented by *Rulandus*, and is no more than a Woollen Cloth ſufficiently impregnated with Quickſilver kill'd with Hogs-lard. This is ſewed up in a Linen Cloth, which is apply'd immediately to the Skin, about the Hypochondria. It is uſed in the Itch, the Phthiriaſis, Ulcers, and in Caſes where there is no abſolute Neceſſity for exciting a Salivation; tho' it ſometimes produces that Effect, but rarely, unleſs it is too long worn, or too richly impregnated with the Quickſilver. The Patient's Body muſt always be kept warm, and defended from the Cold of the external Air; otherwiſe the Belt, which is of itſelf highly ſafe, becomes very dangerous. *Ettmuller* informs us, that, during its Uſe, the Acceſs of the external Cold endangers a Salivation, and that he knew a Patient, who, after a prepoſterous Uſe of this Belt, was ſeized with a violent petechical Fever. Hence we ſee the Reaſon why *Juncker*, in his *Conſpectus Chemiæ*, calls it the *Cingulum Stultitiæ*, or the Girdle of Folly. The ſame Author, in his *Conſpectus Therapiæ generalis*, affirms, "That it excites "violent Gripes, and other formidable Symptoms." *Hoffman*, therefore, juſtly aſks, Whether the mercurial Girdle, apply'd for nine Hours, as it generally is, to an itchy Patient, with Juice of Apples, or other Liniments, is a ſafe Remedy? And he thinks the Queſtion can only be anſwered in the negative, when it is not duly prepared, and when Univerſals have not been previouſly uſed. Thus a Man, whoſe whole Body was over-run with the Itch, and who was of a Cacochymic and melancholico-pituitous Conſtitution, neglecting other Remedies, immediately uſed a Girdle, in which pure Mercury was mixed with Fat; upon which ſo violent a Ptyaliſm was excited, that he run a Riſque of being ſuffocated by the Swelling of the Parts: He was, however, freed from Danger by liberal Veneſection, and the Injection of an acrid Clyſter. *Bartholine* informs us, "That this Girdle proves mortal, when applied to Patients who "are either too young, weaken'd by a Diſeaſe, or of a cacochymic Habit of Body. Hence due Care muſt be taken not "to apply it to weak Patients, and ſuch as abound with impure "Juices, at the time that the Methods to be previouſly uſed "have been neglected." Hence, according to the ſame Author, a certain Countryman in *Denmark*, who, by the mercurial Girdle, happily cured ſeveral Patients, who, by the frequent Uſe of the Medicines preſcribed by their Phyſicians, had their Bodies ſufficiently purged, could not, at the ſame time, fail to deſtroy ſome others of weak and cacochymic Habits. This Country Quack kill'd his Mercury with Oil of Juniper, made it up into a Maſs, and ſecured it in a Piece of Leather made in the Form of a Girdle, which he tied about the Middle of the Body. This Girdle he recommended as effectual againſt all malignant Diſorders, Cancers, and inveterate and obſtinate Ulcers. Others make a mercurial Girdle in this manner: They mix the Mercury, kill'd by means of Saliva or Suet, with the White of an Egg, which they lay upon Cotton, and this Cotton they ſew up in the Form of a Girdle. Another *Cingulum Sapientiæ*, invented by *Rulandus*, and by him ſaid to be effectual in baniſhing Lice both from the Body, and from Clothes, is by *Hartman* ordered to be prepared in the following manner:

> Take of the black Fæces of Mercury, prepared by ſhaking Mercury ſufficiently with Spirit of Wine, a ſufficient Quantity: Let this be mixed with the Pulps of roaſted Apples, to the Conſiſtence of an Ointment. Then take Shreds of Linen Cloth, cut in the Form of a Girdle; dip this Girdle pretty often in the liquid Extract of Saffron, and dry it. Upon two ſuch Girdles let this Ointment be laid, by way of Plaiſter. Then, to the exterior Side, apply a Piece of thin Leather, and apply the Girdle immediately about the Loins.

According to *Simon Paulli*, in his *Quadripartitum Botanicum*, a more eaſy Method of baniſhing Lice is, to rub the Part affected with ſuch Cloths as Tradeſmen uſe in cleanſing Silver, when they gild it; or with a Linen Cloth, ſoak'd in burnt Spirit of Wine, you may rub and wrap up the Part.

CINIFICATUM. Calcin'd; reduc'd to Aſhes.

CINIFLONES. A Name of Reproach given to the vain boaſting Chymiſts, who pretend to great Secrets in the Art.

CINIS. Aſhes of any kind. *Cineres Clavellati*, Pot-aſh. See ALCALI.

CINNABARIS, κιννάβαεις. Cinnabar. This Name ſeems to have been given, at one time or other, to almoſt all ſorts of concreted Subſtances, whether vegetable or mineral. Thus the *Sanguis Draconis* was call'd Cinnabar, and even the Root of the *Rubia Tinctorum*, Madder, was call'd by this Appellation, according to *Neophytus*. Ceruſs alſo, calcin'd to Redneſs, acquir'd the Name of Cinnabar. *Theophraſtus* and *Dioſcorides* give the following Account of the Cinnabar of the Antients.

There are two Kinds of Cinnabar, one native, the other factitious. The native Cinnabar is produced in *Spain*, and is very hard and ſtony; it is found alſo in *Colchis*, where, they ſay, it grows on inacceſſible Rocks, from which they ſtrike it off with Arrows. The factitious Cinnabar conſiſts of a bright-grain'd red Sand, found in a certain Place a little above *Epheſus*, which they pound very carefully in Stone Mortars to a fine Duſt, and afterwards waſh it a little in Copper Veſſels: What ſubſides to the Bottom is taken and pounded, and waſhed over again. This requires Art; for ſome obtain a good Quantity of Cinnabar, where others, of leſs Skill, can get little or nothing out of an equal Maſs of Sand. What ſubſides is the Cinnabar; what ſwims, which is the greater Part, is the Plyſma (the Waſhings). One *Callias*, an *Athenian*, is ſaid to be the firſt Inventor of factitious Cinnabar; for he, imagining the Sand, becauſe of its Glittering, to contain Gold, was very careful to collect it; but finding his Miſtake, and yet admiring the Beauty of the Colour, his Curioſity at laſt led him to this Invention. Nor is this Diſcovery of any great Antiquity, being but ninety Years before *Praxibulus* was Archon, or chief Magiſtrate of *Athens* (the Year of *Rome*, according to *Pliny*, 249.). *Theophraſtus de Lapidibus.*

The firſt-mention'd is our Native Cinnabar.

Pliny, who tranſlates the foregoing Account, renders the κιννάβαεις of *Theophraſtus* by *Minium*, *Lib.* 33. *Cap.* 7. He adds, that the *Greeks* call Minium *Miltos*, and ſome *Cinnabaris*; whence it comes to be miſtaken for the *Indian* Cinnabar, which is the Name they have for the Blood of the Dragon, cruſhed by the Weight of the dying Elephant falling upon him, the Blood of both Animals being mixed together. This Cinnabar is very uſeful in Antidotes and Medicines; but the Phyſicians, inſtead thereof, uſe Minium, which is poiſonous, becauſe it is alſo call'd Cinnabar.

Some take Cinnabar to be what is call'd *Ammion*; but they are miſtaken, for Ammion is prepared in *Spain* of a ſort of Stone, mixed with Silver Sands. They know this Stone only by the very florid and flame-like Colour which it aſſumes in the Furnace. While it is in the Furnace, it emits a ſuffocating

Vapour;

Vapour; for which Reaſon the Workmen of that Country cover their Face with a Bladder, that they may be able to ſee, and yet have their Reſpiration free from the noxious Exhalations. The Ammion, thus prepared, is uſed by Painters in coſtly Ornaments of Walls; but Cinnabar, which is our preſent Subject, is imported from *Africa*, and ſold very dear, ſo as ſcarce to be purchaſed by the Painters in ſufficient Quantities for the Colouring of their Lines. It is of a very deep and ſaturated Colour, whence ſome have taken it for Dragon's-blood.

Cinnabar has the ſame Virtues as the Lapis Hæmatites, but is more effectual in ophthalmic Caſes, being more aſtringent, and of greater Efficacy in ſtopping an Hæmorrhage. A Cerate, prepared with it, cures Ambuſtions, and Efflorescences [ἐξαν-θήμαϛα]. *Dioſcorides*, *Lib.* 5. *Cap.* 109.

By the *Ammion*, *Dioſcorides* probably means the firſt Sort of Cinnabar of *Theophraſtus*, which both agree to be produced in *Spain*; and at this Day there is a celebrated Mine of Cinnabar at *Almaden*, a Town of *Eſtramadura*, of which Mr. *Juſſieu* gives a long Account, in the *Memoirs of the Royal Academy of Sciences* for 1719.

There are at preſent three Sorts of *Cinnabar* uſed in Medicine. The firſt is the

CINNABARIS NATIVA, Offic. Schw. 374. *Minium purum*, *ſeu Cinnabaris Nativa*, Worm. 126. *Lapis Minium*, Aldrov. Muſ. Metall. 637. *Cinnabaris*, Matth. 1355. *Minium*, Dioſc. *Argenti vivi Minera*, *Cinnabar foſſilis Dioſcoridis*, Calc. Muſ. 439. NATIVE CINNABAR.

The Native or Foſſil Cinnabar of the Shops, call'd *Minium* by the antient *Greeks*, and *Anthrax* by *Vitruvius*, is a foſſil, metallic, heavy Subſtance, not very hard, found ſometimes pure, and ſometimes mix'd with Stones. Of the pure Cinnabar there are ſeveral Kinds; one of a purple Colour, inclining to Red, but which, by grinding, turns to a very beautiful Red; another of a blackiſh or Liver Colour, reſembling the Lapis Hæmatites; and a third of a yellowiſh Colour, which is commonly ſo rich in Quickſilver, that, when heated in the leaſt Degree, the Metal drops ſpontaneouſly from it.

The other Kind of Native Cinnabar is found in a foſſile Stone, form'd of Laminæ, of an Aſh-colour. It has been likewiſe found in a white metalline Stone, and ſometimes in form of a Gold or Silver Pyrites, ſuch as was dug up ſome Years ago in ſeveral Places of *Normandy*.

Native Cinnabar is found in *Hungary*, *Bohemia*, *Italy*, *Spain*, and *France*, and every one knows of what Parts it is compoſed. Quickſilver is obtain'd from it, by diſtilling it with Quicklime, or Filings of Iron; and Sulphur may likewiſe be had, in a ſmall Quantity, by boiling it in ſtrong Lixivia, and then pouring diſtil'd Vinegar into the Decoction, the Quickſilver being firſt ſeparated. The Native Cinnabar, of which Painters of old were extremely fond, is now ſeldom uſed by them, becauſe the factitious Sort is cheaper, and anſwers all their Purpoſes equally as well. The internal Uſe of it is recommended by ſome Phyſicians in the Epilepſy, Vertigo, Madneſs, and all ſpaſmodic Affections. In theſe Caſes they chooſe that of *Hungary* or *Carinthia*, which is of a ſparkling-red Colour, and free from all heterogeneous Particles; and reject the dark or yellowiſh Kind, as being more impure. Sometimes, however, Native Cinnabar, by means of ſome vitriolic, or even arſenical Particles aſſociated with it, happens to excite Naufeas, Vomitings, Anxieties, and Heart-burns, which I have myſelf more than once, ſays *Geoffroy*, been a Witneſs to, even after the Cinnabar had been purged by frequent Waſhings; and therefore I always prefer either factitious Cinnabar, or that of Antimony, to the Native. *Geoffroy*.

Every Pound of good Cinnabar yields fourteen Ounces of Quickſilver.

The ſecond is the

CINNABARIS FACTITIA, Offic. Aldrov. Muſ. Metall. 642. *Cinnabaris artificialis*, Schw. 375. COMMON VERMILION, OR FACTITIOUS CINNABAR.

1. Take a tall earthen Veſſel, which widens upwards; put into it four Ounces of Flowers of Sulphur; then melt the Sulphur over a gentle Fire, the Make and Height of the Veſſel thus preventing it from taking Flame. Then take Quickſilver heated, but ſo as not to fume, and pour a little thereof into the melted Sulphur, which will thus preſently grow viſcous: Stir it continually with a thick Tobacco-pipe; and continue pouring and ſtirring, till thrice the Quantity of Quickſilver, in proportion to the Sulphur, be thoroughly mix'd in therewith. At this time there commonly ariſes a great Hiſſing, with thick red Fumes, and the Matter takes Flame with a Noiſe: Put a Tile upon the Mouth of the Veſſel, let all cool, and the Maſs will be found black. (2.) Put this Maſs into an *Heſſian* Cucurbit; cloſely lute on a Head with a Mixture of Clay and Lime; or elſe invert another Body on the former: Set it in a Sand-furnace, ſo as to touch the Bottom of the Iron Pot; bury the Veſſel in Sand, a little below the Matter; raiſe the Fire gradually to the utmoſt: At firſt a little inſipid Water will riſe, then a few whitiſh Flowers, and at laſt a black Matter. When the Fire has been continued at the greateſt Height for three Hours, let all cool: A compact Matter will be found ſticking to the Sides of the Body, and appearing black on its outward Surface: Bruſh off this Blackneſs with a Hare's Foot, grind the Maſs, and it will appear of a fine red Colour. It is call'd factitious Cinnabar. A little feculent Matter will remain at the Bottom of the Body.

REMARKS.

Cinnabar is a Mixture of Mercury and Sulphur, united by the Fire, in the Form of a ſimple Foſſil, which is found natural in many Mines, and is like factitious, without much Difference. It has nearly the ſame Virtue, in the Body, as Æthiops. *Crato* call'd it the Magnet of the Epilepſy, but I never ſaw it produce any great Effects. If it be mix'd with Purgatives, then, like Æthiops, it is driven quicker thro' the Inteſtines, with the uſual Succeſs of Æthiops. It is mix'd with red Coſmetics, in the form of Pomatum: It is uſed in Fumigations againſt Venereal Ulcers in the Noſe, Mouth, and Throat, with little, and often with bad Succeſs. The Mercury may be revived very pure from the Cinnabar, by grinding it with twice its Weight of Iron-filings, and diſtilling it in a Retort, with the ſtrongeſt Heat of a Sand-furnace, into Water. See ÆTHIOPS. *Boerhaave's Chymiſtry*.

Lemery ſays, that it is beneficial in Epilepſies, Aſthmas, and the Pox; as alſo in order to promote a Tranſpiration of the Humours. The Doſe is from two to twelve Grains, mix'd in ſome proper Conſerve, and ſwallow'd in form of a Pill. It is alſo uſed externally in Ointments for the Itch; and Fumigations are made of it, in order to excite a Salivation.

The Method of raiſing a Salivation with Cinnabar is thus:

The Patient, being firſt duly prepared, is placed naked in a proper Chair, or Stove; and ſmall Pieces of Cinnabar, to the Quantity of two or three Drams, being thrown upon live Charcoal, the Steam is received thro' the Pores of the Skin. The Patient grows ſoon very warm, and ſweats more or leſs, in proportion to his Strength. This Operation is repeated every Day, or every other Day, till the Gums begin to ſwell and ulcerate, and the Spitting riſes to a ſufficient Quantity.

Venereal Ulcers, in the Mouth and Fauces, are alſo frequently fumed with factitious Cinnabar, the Smoak being received into the Mouth by means of a Funnel.

The third is the Cinnabar of Antimony.

The Cinnabar of Antimony, as well as Native and Factitious Cinnabar, is compounded of Sulphur and Mercury, being prepared of Antimony and corroſive ſublimate Mercury; the Fire, after the Separation of the Butter of Antimony, being increaſed, that there may be a Sublimation of the fluid Mercury, ſeparated from the corroſive ſublimate Mercury, and of the Sulphur of Antimony, ſeparated from its metalline Parts, into that highly florid Body, which conſtitutes the Cinnabar of Antimony, a Subſtance of a moſt beautiful Vermilion-colour, when powder'd. See ANTIMONIUM. This is the common Way of preparing Cinnabar of Antimony, which is by the ſame Proceſs as that for making Butter of Antimony. But there are other Ways; as, for Example, let Sulphur, ſeparated from Antimony, be ſublimed with common Mercury. See *Tachenii Hippocrates Chymicus*. There are alſo other mercurial Preparations, which, being ſublimed with Antimony, produce the Cinnabar of Antimony. See the *Ephemerides Germanicæ*. Sometimes it happens, that, after the Antimony is put to the Sublimate for the Diſtillation of the Butter of Antimony, the Cinnabar is ſublimed in a ſhort time by a moderate Fire, while the Butter ſtays behind. See *Boyle's Tentamina*. But if the chymical Regulus of Antimony be choſen for the making of Butter of Antimony, no Cinnabar can be obtain'd, but a moſt pure Mercury, raiſed out of the corroſive Sublimate, which aſcends by itſelf; becauſe ſuch a Regulus is deſtitute of Sulphur, to which it ſhould join itſelf, in order to conſtitute this Cinnabar. Since it can be proved, that there is no Difference between Sulphur of Antimony and common Sulphur, with reſpect to their Nature and Virtues, we may juſtly conclude, that Cinnabar of Antimony, which is prepared with great Labour, and no ſmall Coſt, is no better for Uſe and Efficacy than common Cinnabar, which is eaſily and readily made of Quickſilver depurated, and common Native Sulphur, and, being equal to the other in Virtues, may therefore very well be ſubſtituted in its ſtead, as I am convinced by Obſervations, and the Experience of many Years; not to mention, that the common Cinnabar recommends itſelf by its Colour, which is more beautiful than that of the Cinnabar of Antimony. This Quotation is from the excellent *Frederic Hoffman*, in his *Obſervationes Phyſico-chymicæ*. What he ſays, is not at all invalidated by Dr.

Cheyne,

Cheyne, de Fibra, where he makes Cinnabar of Antimony, very finely pulveriſed, the principal Medicine for cutting, attenuating, and rendering fluid, groſs, viſcid, and tenacious Humours; for it is certain, that Cinnabarine Subſtances, the more they are triturated, and the finer the Powder is, to which they are reduced, the more ſpeedy will be their Effects in attenuating and cutting the coagulated Lymph, in reſolving the thick, viſcid, and grumous Blood, and in opening Obſtructions, and other like Caſes. On the contrary, if the Buſineſs of Trituration be neglected, and the Cinnabar only broken in a groſs manner, it becomes not only the ſlower in Operation, but is frequently diſcharged, all of it, with the Fæces, which it tinges of a red Colour. Therefore, tho' a more accurate Comminution of this Cinnabar may conduce ſomething to the facilitating and promoting of its Operation, it does not, however, convert it into a Remedy of more Efficacy than the common Cinnabar, treated after the ſame manner. It may not be ungrateful to the Reader, if I ſhould here quote what *Johannes Jacobus Roek* ſays, concerning two Superſtitions, as he calls them, of Phyſicians, with reſpect to Cinnabar of Antimony, in his Treatiſe *de Chymiatria Superſtitioſa*. The firſt is in the Explication of the ſpecific Manner of its Operation; for Example, in the Epilepſy, which they imagine to proceed from its alcaline Nature; as, among others, I remember is aſſerted by *Morley* in his *Collect. Chymicis Leydenſibus*. Here are three Things ſuppoſed, which may reaſonably be doubted; firſt, that the proximate material Cauſe of an Epilepſy is an Acid; ſecondly, that the Cure is to be effected by Alcalies; thirdly, that Cinnabar of Antimony is an Alcali. The firſt of theſe Suppoſitions is overthrown, not only by the Account of the Cauſe of the Diſeaſe, drawn from its moſt genuine Hiſtory, but alſo by the Method of Cure uſed in the Epilepſy, eſpecially that of Children, of which we are now ſpeaking; for the Symptoms, produced by the Cauſe, ſufficiently inform us, that the Diſorder draws its Origin from a viſcid, tough, mucous, and tenacious Matter, lodged either in the Primæ Viæ, or in the other Parts deſtin'd for *the Conveyance of the Serum:* Hence this Species of Convulſion becomes neceſſary for eliminating and diſcharging ſuch a peccant Mucus from the Body. This Aſſertion is alſo evinced by the accidental Cauſes of an Epilepſy; ſince we frequently obſerve this Diſorder produced by repelling that Species of cutaneous Diſorder call'd *Cruſta Lactea*, or by an Induration of the Inteſtinal Fæces, which, in the very Nature of the Thing, require ſuch a powerful Commotion of Nature for the Relief of the Patient. This Theory is in a manner ſubjected to our Senſes, by Proofs *à Poſteriori*, drawn from the Cure of an Epilepſy, which is accompliſh'd by reducing the tenacious and viſcid Humours to a due Degree of Fluidity, by Medicines appropriated to Catarrhs, by Abſorbents, by Correctors, by Preparations of Myrrh and Amber; and, when they are corrected, by eliminating them, by means of purgative Preparations of Rhubarb, Mercurius Dulcis, and Orris-root; as alſo by perſpirative Medicines of the milder Kind; and, laſtly, by removing the Epileptic Motions by Preparations of Cinnabar, and other proper Remedies: Hence 'tis obvious, that an Epilepſy is produced rather by a mucous, viſcid, and tenacious Subſtance, than by one of a ſaline and acid Nature. From what has been ſaid, we may form a juſt Notion of the other Suppoſition, which is, that Epilepſies are cured by alcaline Subſtances; for, if an Epilepſy is produced by an Acid, it is of courſe to be removed by Alcalis. But the latter of theſe Aſſertions, as we have already ſeen, is contradictory to Experience; and the former muſt, of conſequence, be groundleſs. As for the laſt Suppoſition, which is, that Cinnabar of Antimony is of an alcaline Nature, it is by no means founded upon Experience; ſince this Subſtance neither poſſeſſes nor exerts either the eſſential or accidental Virtues of an alcaline Salt: For tho', by Accident, upon the Affuſion of a corroſive Acid, it produces the uſual Noiſe of an Effervеſcence, yet it is not, for that Reaſon, to be call'd an Alcali; ſince the ſame Effect is produced by other metalline and mineral Subſtances, which are neither of an alcaline nor of an acid Nature. But this Motion, or apparent Effervеſcence, is produced by an Attenuation, a minute Diviſion, and a Solution of Continuity among the ſolid Corpuſcles, and the conſequent Reception of the Fluid into their Pores. Another ſuperſtitious and uſeleſs Method of treating Cinnabar of Antimony, is the Tranſmutation of it into the Quinteſſence of Cinnabar, Panaceas, Specifics, and what is commonly call'd *Solar Cinnabar*, ſince theſe laborious Operations fruſtrate the Pains of the Undertaker, diveſt the Cinnabar of its genuine Qualities, and prove offenſive to Men of a juſt and correct Taſte in the chymical Way. Preparations of this Kind were long ago not only ridiculed, but treated with Contempt and Deteſtation by the celebrated *Ludovicus:* "For, ſays he, if any Virtue is produced by a long "Calcination, or a Cohobation of the Spirits, as happens in the "*Panacea Arnaldina*, which is prepared by a frequent Incor"poration and Exſiccation of the Spirit of Vitriol and Spirit of "Wine with the Cinnabar of Antimony, this Virtue is by "no means ſuperior to that of other and more common Dia"phoretics." This is, in a particular manner, obſervable in the above-mention'd Panacea. As for the volatile Tinctures of Cinnabar, or its Quinteſſences, extracted with any aromatic Oil, alcaline Salt, or hot Spirit, or other anomalous Preparations of it, which are alſo call'd Wines of Life, and ſolar and ſpiritual Eſſences, they are nothing but Tinctures of an antimonial and ſulphureous Nature. The uncommon Virtues aſcrib'd to them for prolonging Life, by expelling from the Body every thing of a peccant Nature, inſtantaneouſly reſtoring the languid and impair'd Strength, and, in a manner, recalling fleeting Life, are no more than Words of courſe, and ſo many quack Encomiums. In like manner the *Balſamum Cinnabarinum*, accounted a Specific in Diſorders of the Breaſt, and which, by previouſly diſſolving the Union between the Cinnabar of Antimony and the Mercury, by means of ſome Alcali, is extracted from the ſame Cinnabar of Antimony, with the aromatic Oils of Aniſe, Mint, Lemon-peel, and Turpentine, is, in Reality, a Subſtance of the ſame Nature with the Balſam of Antimony, which, by a known Proceſs, is extracted from what is commonly call'd the dry Tincture of Antimony, or that nitrous and ſulphureous Salt obtain'd from the Scoriæ of the Regulus of Antimony, and is of ſingular Uſe both internal and external, ſince it is of an anodyne, detergent, and conſolidating Nature. Beſides, a diligent Inquirer into the Natures of Things will eaſily find, that the common Balſam of Sulphur is equal, if not preferable, to either of theſe now mention'd. For this Reaſon I think it adviſeable not to be ſo prodigal of the Cinnabar of Antimony, but to uſe it ſparingly, ſince 'tis obtain'd by ſo much Labour and Expences, and ſince the Intention may be equally well anſwer'd by Things more eaſily procured. Theſe are the Sentiments of *Joh. Jac. Roek.* Cinnabar of Antimony, when infuſed in Wine, imparts emetic and purgative Qualities to it, which Effect is not produced by common Cinnabar. From what has been ſaid, we may reaſonably conclude, that the Largeneſs of the Price is the only Circumſtance, in which Cinnabar of Antimony differs from common Cinnabar duly prepared. *Rieger.*

The Doſe of this Cinnabar is ſaid to be from ten Grains to a Scruple. *Geoffroy* ſays fifteen Grains.

Cinnabar of Antimony has of late been introduced into Practice as a powerful Medicine, and capable of affording conſiderable Relief in Fevers, attended with Symptoms of an affected Brain; and the Uſe of it is attended with ſome Succeſs. But I am afraid its Operation is too ſlow, to exert itſelf ſoon enough to cure ſo acute Diſorders as thoſe above-mention'd, eſpecially as the Organs, employ'd in conveying it to the Blood, are, under theſe Circumſtances, in a very weak Condition. More active Preparations, therefore, of Mercury and Antimony, promiſe greater Relief. See ANTIMONIUM.

CINNAMOMUM, Offic. Park. Theat. 1579. Comm. Plant. Uſu. 77. *Cinnamomum Zeylanicum, Caſſia Cinnamomea, Canella*, Mont. Exot. 8. *Cinamomum ſive Canella Zeilanica*, C. B. Pin. 408. Raii Hiſt. 2. 1561. *Laurus Zeilanicus baccis calyculatis Hermanni*, Ejuſd. *Caſſia Cinnamomea*, Herm. Cat. Hort. Lugd. Bat. 129. Pluk. Almag. 88. *Laurus Ceylanica glandifera, folio trinervio, optimum & legitimum Cinnamomum ferens*, Muſ. Zeylan. 12. *Canella*, Ger. 1349. Emac. 1532. *Canella ſive Cinnamomum vulgare*, J. B. 1. 440. *Cinnamomi vel Canellæ arbor*, Chab. 33. *Canella Cuurdo, & Caſſia vulgaris*, Piſ. Mant. Arom. 165. *Arbor Canellifera Zeylanica, cortice acerrimo ſeu præſtantiſſimo, qui Cinamomum Officinarum*, Breyn. Prod. 2. 17. *Kurudu*, Herm. Muſ. Zeyl. 12. *Kurundu*, Ejuſd. 37. THE TRUE CINNAMON-TREE, *Dale.*

Cinnamomum, or Cinnamum, among the *Latins*, are the ſame with the κίνναμον and κινάμωμον, or κιννάμωμον, of the *Greeks*. This laſt Name is derived from κίνναμον and ἄμωμον, or from the *Hebrew* Word קינמון or קנמה which ſignifies a Cane or Reed, and the ἄμωμον of the *Greeks*. In the Writings of the Antients, it is not poſitively determin'd what this Subſtance is, ſince moſt of what they have ſaid concerning it is borrow'd from the Accounts of others. But in this they agree, that it is a certain precious and rare Production of the Vegetable Kingdom. According to *Pliny*, many fabulous Accounts were given of this Subſtance by the Antients; and *Herodotus* informs us, that it was obtain'd from the Neſts of Birds, eſpecially of the Phœnix, lodged in inacceſſible Rocks and Trees; and that it was forced thence, either by the Weight of the Fleſh the Birds convey to their Neſts, or by Arrows, with proper Quantities of Lead affix'd to them. *Theophraſtus* gives us an Account of another fabulous Opinion entertain'd in his Time, with reſpect to Cinnamon, in the following Words: "It is ſaid to be pro"duced in Valleys; and as theſe abound with Serpents, whoſe "Bites prove mortal, the Inhabitants deſcend into them with "their Hands and Feet properly defended, in order to gather "the Cinnamon." *Pliny*, from *Heredotus*, informs us, that the *Caſſia*, which, among the Antients, was our *Cinnamon*, was found about Marſhes; and that ſuch as gather'd it were expoſed to the Attacks of wing'd Serpents, and a fierce Species of Bats with formidable Claws. *Solinus*, in *Cap.* 30. informs

us,

us, that the *Ethiopians* gather Cinnamon, but that this Office is allotted to the Prieſts, who do not ſet about it till they have perform'd Sacrifice. Their Time of gathering it is confined between the Riſing and Setting of the Sun; and when their Labour is at an End, the principal Man among them divides the Cinnamon into Heaps, with a kind of Spear appropriated to that Ceremony. Then a certain Portion of what they have gather'd is conſecrated to the Sun; and if the Diviſion is made in a juſt and equitable manner, this Portion takes Fire ſpontaneouſly. *Theophraſtus* gives us the ſame Accounts, but looks upon them as palpably fabulous and abſurd. The ſmalleſt Parts of the Twigs, about a Hand's-breadth in Length, are beſt; that which immediately ſucceeds them, next in Goodneſs, and that which is neareſt the Roots worſt, becauſe there the ſmalleſt Quantity of Bark is found, in which the greateſt Virtue, and moſt agreeable Taſte, reſide: For this Reaſon the Tops are preferable to the other Parts. The Wood itſelf, call'd Xylocinnamomum, is little eſteemed, and loathſome on account of its acrimonious Quality, reſembling that of Origanum. Immediately after, *Solinus* ſubjoins, that ſome had ſpoken of two Kinds of Cinnamon, the one white, and the other of a blacker Colour; that in former Times the white was prefer'd, whereas now the black is eſteem'd beſt. *Dioſcorides* and *Galen* alſo diſtinguiſh the Cinnamon into various Kinds, taking their Diſtinctions from the various Degrees of Goodneſs, and the Places where they are produced. To give the ſeveral Characteriſtics by which *Dioſcorides* and *Galen*, *Pliny* and *Theophraſtus*, diſtinguiſhed the good Cinnamon from that which was bad, would be not only tedious, but in a great meaſure uſeleſs, ſince 'tis of more Importance to know the diſtinguiſhing Properties by which the Moderns judge of the Value of this Commodity; and theſe ſhall be afterwards laid down.

According to *Dioſcorides*, Cinnamon of every Kind is of a heating, emollient, and concocting Quality. It provokes Urine. When drank in ſome proper Liquor, or exhibited with Myrrh, it expels the Fœtus, and promotes an Eruption of the Menſes. It is proper againſt Poiſons, and the Bites of venomous Animals. It removes Dimneſs of Sight, attenuates thick and viſcid Humours. When mix'd up with Honey, and uſed by way of Ointment, it removes Freckles, and other cutaneous Defedations of the Face. It is effectual againſt Coughs, Defluxions, Anaſarcas, Diſorders of the Kidneys, and a difficult Diſcharge of the Urine. It is uſually an Ingredient in precious Ointments, and is of very great, and almoſt univerſal Uſe. Some triturate it in Wine, dry it in a Shade, and lodge it under Ground, that it may remain good the longer. The ſame Author affirms, that Caſſia, which is a Species of Cinnamon, provokes Urine, and is of a heating, drying, and gently aſtringent Nature. Hence he aſſerts, that it is proper for Malagmas, and Medicines intended to render the Sight clear. When mixed with Honey, and uſed by way of Ointment, it removes Freckles. It alſo provokes the Menſes; and, when drank in a proper Vehicle, proves beneficial againſt the Wounds made by Vipers. It is alſo good againſt all internal Inflammations and Diſorders of the Kidneys. It is uſeful by way of Inſeſſion, or Fumigation, for dilating the Pudenda of Women. And double the Quantity of it, mixed with other Medicines, ſupplies the Place of Cinnamon when it cannot be had, ſince it produces the very ſame Effects. In a Word, it is highly uſeful for a great many Purpoſes. *Galen* affirms, that Cinnamon conſiſts of very fine Parts, but that it is only hot in the third Degree; that Caſſia is in ſome meaſure drying, and hot in the third Degree; that it conſiſts of very fine Parts, is highly acrid to the Taſte, and ſomewhat aſtringent. In conſequence of theſe Qualities, he ſays, it incides and digeſts the recrementitious Juices of the Body, and corroborates the ſeveral Parts. *Strabo*, *Theophraſtus*, *Dioſcorides*, *Galen*, and *Pliny*, inform us, that Cinnamon is produc'd not only in *Arabia*, but alſo in the *Eaſt Indies*; for, ſince this latter Country is equally hot with *Arabia* and *Ethiopia*, it produces the ſame Aromatics, ſuch as Cinnamon, Caſſia, and others. From what has been ſaid 'tis obvious, that the Antients were not well acquainted with the Hiſtory of Cinnamon. Nor is this to be wondered at, ſince, according to *Pliny*, the Merchants who imported it into *Europe*, had a Voyage ſo long and hazardous, that they ſcarce return'd ſooner than five Years, and many of them died during the Voyage, ſo that this Branch of Trade was principally carried on by Women. Hence it happen'd, that fabulous Accounts were not only raiſed, but alſo, becauſe corrupted Commodities of different Appearances were imported, they gave the different Names of Caſſia and Cinnamon to one and the ſame Subſtance. Some, becauſe we can learn nothing certain from the Deſcriptions of the Antients, reckon Cinnamon among the Things that are loſt. It is at preſent agreed on by all who have wrote concerning the Cinnamon-tree, that the Bark of the Branches is better than that of the Trunk. Hence the barbarous Nations made a Diſtinction between Cinnamum and Cinnamomum; by the former of which they meant the groſs, coarſe, and leſs aromatic Bark of the Cinnamon-tree, and by the latter that which is finer, and of a more agreeable Flavour. This Diſtinction is uſed by almoſt all the *Arabian* Interpreters, in explaining the three Words *Selicha*, *Darſini*, and *Karfe*. By *Karfe* they underſtand the Cinnamomum, by *Darſini* the Cinnamum, and by *Selicha* the Caſſia Lignea. But this Diſtinction is not agreeable to the Opinion of moſt Authors, who only think, that theſe are different Parts of the Bark of the ſame Tree. But the Accounts of the Canella, the Cinnamum, the Cinnamomum, and the Caſia Fiſtula, are ſo various, and involv'd in ſo much Obſcurity, that they have a Tendency rather to diſtract and confound, than to ſatisfy and enlighten the Mind. For this Reaſon we ſhall paſs them over without attempting a Reconciliation of them, and only obſerve, that what is at preſent in the Shops call'd *Cinnamomum*, *Canella Cinnamum*, or *Caſſia Cinnamomea*, *odorata aromatica*, *Caſſia Fiſtula*, is an aromatic Bark, of a reddiſh Colour, woody, friable, made up into Pipes of different Thickneſs and Length, of a ſweetiſh, pungent, hot, and ſomewhat aſtringent Taſte, of a fragrant Smell, appropriated to various Uſes both in Cookery and Medicine, and gathered from the *Arbor Cinnamomifera Zeilanica*, which is alſo call'd *Caſſia Cinnamomifera*, *Caſſia Cinnamomea*, and *Canella Zeilanica*. The *Arbor Cinnamomifera* is produced in ſeveral other Parts of the *Eaſt Indies*; but all, with reſpect to the Worth and Efficacy of the Bark, are far inferior to that produced in *Zeilan*. And becauſe in *Zeilan* there are ten Species of this Tree, omitting all the others, we ſhall only ſpeak of that from which the beſt Cinnamon is gathered, which is yearly exported by the *Dutch Eaſt Indian* Company, and which by the Natives is call'd *Raſſe Coronde*, which Words imply acrid, grateful, and ſweet Cinnamon. The Tree bears large oval Leaves, of a thick firm Texture, with three remarkable Ribs running from Stalk to End. The Fruit it bears is ſmall, longiſh, and round, growing in a ſhort Calyx or Cup. From an Inciſion made in the Root of this Tree drops a Liquor which ſmells like Camphire. Beſides, Camphire now-and-then ouſes from the Bark of this Root in the Form of oleous Drops, which inſenſibly coagulate into white Grains. Hence we may conclude, that the Cinnamon of the Antients was gathered from the ſame Species of Tree; for *Pliny*, in the nineteenth Chapter of his twelfth Book, informs us, that, "In the Temple erected in Honour of *Divus Auguſtus*, by his Spouſe *Auguſta*, he ſaw the Root of a Cinnamon-tree of great Weight, from which ſome Drops being yearly diſcharged, were indurated into Grains;" which, no doubt, reſembled Camphire. This Species of Camphire, by the *Indians* call'd *Baros*, is alſo obtain'd by Diſtillation from the Bark of the Root, dry'd, bruis'd, and immers'd in Water. It comes off, with a Water, in the Form of an Oil; but, after the Water is become cold, it partly coagulates into white, ſmall, pellucid Cryſtals, like ſmall Icicles form'd at the Edges of Veſſels by a moderate Froſt. The Phyſicians of *Zeilan* uſe this diſtil'd camphorated Water with Succeſs, exhibiting a Spoonful of it at proper Intervals, as a Sudorific in continu'd and malignant Fever. They alſo mix it with common Water, againſt Defluxions, and an epidemical Diſeaſe, by the Natives call'd *Pipa*. Externally it is apply'd with Linen Cloths for diſcuſſing œdematous and watery Tumors. This Species of Camphire is by far the beſt for Medicinal Purpoſes; and in ſome Parts it is gathered and kept only for the Uſe of the Kings, who uſe it as a Cordial Medicine of ſingular and uncommon Efficacy. Not only the Camphire call'd *Baros*, but alſo the Oil of Camphire diſtil'd from the Roots, when taken internally, is poſſeſſed of a cordial and reſtorative Quality. It in a particular manner corroborates the Stomach, diſpels Flatulences, is ſingularly effectual againſt arthritic Pains, and is of a diuretic Quality. Ten or twelve Drops of it may be taken for a Doſe, dropt on white Sugar, or into ſome proper Liquor. Externally it is apply'd in all Pains of the Joints, produced by Cold or Obſtructions. For theſe Intentions it is to be ſufficiently rub'd into the affected Parts with the warm Hand, by which means the Diſorder is gradually and inſenſibly removed. After the Diſtillation is over, the reddiſh Liquor, which remains at the Bottom of the Veſſel, when evaporated, yields an Extract, which is recommended in Fluxes. From half a Dram to a whole Dram of the Bark of the Root is alſo exhibited in Subſtance, in poiſonous and malignant Diſorders. The Inhabitants of *Zeilan* make their Fires, and build their Houſes, of the Wood of this Tree. Its Leaves, in Diſtillation, yield an Oil of a bitteriſh Taſte, reſembling Oil of Cloves, to which a little of the Oil of Cinnamon has been added, and which is call'd *Oleum Malabathri*. This aromatic Oil is highly celebrated as an inſtantaneous Remedy againſt Pains of the Head and Stomach, and various other Diſorders. *Grimm*, in his *Theſaurus Medicus Inſulæ Ceyloniæ*, informs us, that, when exhibited with ſome proper Water or Powder, it has miraculouſly remov'd Pains of the Abdomen ariſing from Cold; and that it is, beſides, an excellent Corrector for the more violent and draſtic Purgatives. The Water diſtil'd from the Leaves is ſaid to poſſeſs the ſame Virtues, when exhibited in a large Doſe. The Oil of the Leaves, made by boiling them with common Oil, is, on account of its heating, anodyne, and reſolvent Quality, highly recommended for Chirurgical Intentions; in the Compoſition of Liniments, for Inſtance, Cataplaſms,

Cataplasms, and Clysters; as also in Colics, Gripes, Tympanies, and other windy and watery Tumors. The Leaves themselves, reduced to Powder, are, in *Zeilan*, also prescribed against flatulent Disorders, which require Medicines of an aromatic and heating Nature. They are also mixed with Purgatives, in order to correct their Force, and prevent Gripes. They are likewise used frequently, and in various Forms, for preparing Baths, Cataplasms, Ointments, and Clysters. From the Flowers is obtained, by Distillation, a fragrant Water, which, when exhibited by Spoonfuls, at proper Intervals, corroborates the Stomach, immediately alleviates colic Pains arising from Cold, improves the Colour of the Face, sweetens the Breath, and is esteemed proper for preserving several Species of Aliments, and rendering them more grateful and agreeable. A Conserve is also made of the Flowers, which is highly commended against Diseases arising from a cold Cause; and which may be given from one to two Drams. From the Kernels of the ripe Fruit is obtained by Expression, as also by Boiling, an Oil, which, in some measure, resembles Suet, is made up in Cakes like Soap, and has no Smell, except when warm'd, in which Case it smells somewhat like Cinnamon. This Oil is, by the *Dutch East Indian* Company, call'd *Cera Cinnamomi*, because the King of *Candia* orders his Candles and Torches to be made of it; and these Candles, on account of the Fragrance of their Smell, he reserves for his own Use, and that of the Court. He allows, however, the Inhabitants to express the pinguious fluid Juice from a Fruit not unlike that of the Cinnamon-tree, as the Oil is express'd from Olives, in order to burn in Lamps. Among the *Indians* this *Cera Cinnamomi* is used in Medicine, and exhibited internally to those whose Limbs are luxated, who have fallen from Precipices, or who have received Contusions or Blows, that the internal Parts, which are hurt and corrupted, may, by its medicinal and balsamic Virtue, be restored, and rendered sound. This Substance is also exhibited in Dysenteries, from one Dram to a Dram and an half. When used externally, it renders the Skin far more pure and soft, than any Species of Pomatum. It is also used in Ointments, and Plaisters of the resolvent, nervous, cephalic, and carminative Kind. In that Species of Palsy by the *Indians* call'd *Beriberi*, it is exhibited internally, and applied externally, because, by its gently anodyne and narcotic Quality, it reduces the Patients to a calm and easy State. When the Fruit, not as yet perfectly ripe, and grossly bruised, is distil'd with common Water, there is yielded with the Water an Oil exactly like that of Juniper in Taste, Smell, and Virtues. In the Bottom of the Still there remains a Substance, which is pinguious, green, and sometimes hard, like the Wax.

The Tree, which bears the Cinnamon, has a certain determin'd Number of Years within which it becomes fit to have its Bark taken off; but with this Difference, that some are ready two or three Years before others: For such as grow in Valleys, covered with a pure, small, whitish Sand, are generally ready for Decortication in five Years; whereas those produced in moist and dank Soils are not fit for this Purpose sooner than the seventh or eighth Year. These also arrive more slowly at Maturity, whose Roots are deprived of the Influence of the Sun by the Shades of taller adjacent Trees. Hence it also happens, that this Species of Bark is not so sweet, and agreeable to the Taste, as that produc'd in whitish sandy Soils, exposed to the Sun; since the former is bitterish, somewhat astringent, and tastes like Camphire; for, by the Influence of the Sun, the Camphire is rendered highly fine and volatile, by which means it enters the Juices of the Tree, and begins, in some measure, to ferment with them; and, rising upwards, betwixt the Wood and the tender interior Membrane of the Bark, it is so diffused among the Branches and Leaves, that the smallest Remains of the Camphire are not to be observed. Besides, this interior, soft, and glutinous Membrane between the Wood and the Bark imbibes the sweet and grateful Particles of this Juice, leaving those which are more gross and impure, and which are carry'd upwards, and convey'd into the Leaves, Flowers, or Fruit. But, as Accounts of this kind belong more properly to Natural History than Medicine, we shall proceed to inform the Reader, that, in the Shops, that Cinnamon is generally accounted best, which is lately gathered, of a yellowish Red externally, and internally of a somewhat darker Colour, which is smooth, easily broken, of a highly fragrant Scent, and pungent Taste. That which is small is preferable to the larger Kind; and the long Pipes are esteemed more valuable than the short. The best Kind is by some Authors call'd *Cinnamomum acutum*; and, according to the *Pharmacop. Augusst. in Prolegom.* this Commodity is adulterated with the Bark of the Caper-bush, or Tamarisk, macerated in Cinnamon-water, and afterwards dry'd. But Falsifications of this kind are very rare, and easily detected. It is also generally adulterated by an Admixture of Cassia Lignea, which, for the most part, does not amount to a Fourth of the Price paid for Cinnamon. Some also adulterate, or rather spoil, the Cinnamon, by boiling or distilling it previously, by which means it is deprived of its best and most aromatic Qualities; but this Piece of Fraud is easily detected by the Smell or Taste of the Commodity. When, indeed, the Pipes, divested of their fragrant Oil by Distillation, are laid for some time among good Cinnamon, they reassume their Virtues, which, at the same time, are lost by the good Cinnamon, in Proportion as they are imparted to that which is bad, according to *Boerhaave* in his *Chym. Vol.* 2. So that the bad cannot be distinguished from the good without examining every Pipe. But as this would be an immense and endless Labour to the Merchant, who buys large Quantities of it, he must, as *Pomet* well advises, take care, that the Person with whom he deals be thoroughly honest. *Valentinus*, in his *Pandectæ Medico-legales*, *T.* 1. informs us, that the Powder of Cinnamon is sometimes adulterated by an Admixture of Bole; and, according to *Meier*, with the Barks of other Trees reduced to Powder. The Druggists, in order to keep the Cinnamon good, and preserve its Virtues entire, cover it over with Pepper; but *Ludovici* has observed, that, when preserved in this manner, it sometimes quite loses its natural Taste. Hence the better Method of preserving it is, perhaps, that of those, who, according to the Advice of *Cardan*, in his Treatise *De Subtilitate*, *Lib.* 13. preserve it among blanched Almonds. Cinnamon is much used for procuring a grateful and agreeable Taste to various kinds of Aliments, either by sprinkling its Powder upon them, or bruising and boiling it among them. As for its Medicinal Virtues, *Bauhine* expressly affirms, that whatever Virtues the Antients ascrib'd to their Cinnamomum and Cassia, justly belong to our Cinnamon, since it is of an aromatic, stimulating, and corroborating Quality. Hence it is classed among the stomachic and uterine Medicines, and affords singular Relief to Women afflicted with a Loss of Strength, a lax State of the Fibres, or a Suppression of the Menses. In a Word, whatever can be said of the Use or Abuse of Aromatics, may be justly applied to Cinnamon; for, according to *Boerhaave*, in his *Chym. Vol.* 1. Cinnamon, the most excellent of all other Aromatics, is possessed of the same common Virtues with them, tho' in a higher Degree. Its Taste is exquisitely grateful, and its Smell so highly fragrant, that it diffuses itself not only over all the Island of *Zeilan*, but also, when the Winds blow from the Land, over a large Tract of the Ocean; so that, according to *Jurgen Anderſen*, quoted by *Dexbachius*, the Sailors are sensible of the Smell of the Cinnamon at six or eight Miles Distance from the Shore. But 'tis observ'd, that Cinnamon, tho' an excellent Cordial, and highly beneficial in a Palpitation of the Heart, has, by being too frequently used, brought on the same Disorder in some Patients, in which Case Acids are the most effectual Means of Relief. Tho' 'tis highly proper in some Disorders incident to pregnant Women, yet, in these Cases, *Ettmuller* justly advises the cautious Use of it, because it powerfully irritates the Matrix to discharge the Menses, and expel the Fœtus. Hence it is of so singular Service in difficult Labours, and in Cases where the Secundines and Lochia are to be expel'd, that *Lindanus* affirms, that no Emmenagogues, nor Medicines intended to expel the Fœtus, ought to be exhibited without an Admixture of a proper Quantity of Cinnamon. Physicians prescribe the Use of it in various Forms. According to *Degnerus*, in his *Historia Medica de Dysenteria*, *Baglivi* ordered it to be chew'd in Substance during the whole Day, and the Saliva to be swallow'd. In Powder it is exhibited from half a Dram to a whole Dram. *Bauhine* informs us, "That the Powder call'd the *Pulvis Ducis* is used by many, "which consists of Cinnamon and Sugar, and is of so grateful "a Taste, that, with an Addition of Wine, it is used as a "Sauce in the Entertainments of Grandees, whose Luxury is "grown to such an exorbitant Height, that they use the most "delicious Medicines as common Aliments." Of half an Ounce of the best Cinnamon, infused in a close-stopt Vessel, with two Pints of boiling Water, is prepared a highly grateful Drink, which recommends itself not only on account of its Colour, Smell, and Taste, but also on account of its analeptic, stomachic, and moderately astringent Quality in Fluxes; as also in a Weakness of the Heart and Stomach. *Dexbachius* affirms, that he has been told, by Persons of unexceptionable Veracity, that some Persons, by the constant Use of this Infusion of Cinnamon, as their common Drink, have preserved an excellent State of Health, and protracted Life to a great Age; and that others of weaker Stomachs, by using a Mixture of it and Wine at Meals, by that means got rid of their Disorder. Wine in which Cinnamon has been infused, when passed thro' a Filtre with Sugar, is what we call the *Vinum Hippocraticum*, *Hippocras*, or the Hippocratic Wine, which derives its so highly celebrated Virtues from the Cinnamon. In Decoctions it is generally ordered to be added last, that its aromatic and volatile Qualities may be preserved. If it is boiled for some time in any Liquor, it is divested of its volatile and aromatic Nature, and remains an astringent corroborating Substance; but, for this Purpose, it must be boil'd in an uncover'd Vessel. *Ludovici*, in *Ephem. Nat. Curios. Decad.* 1. *a.* 9. *o.* 35. affirms, that a Decoction of one Ounce of Cinnamon, in two Pints of good Wine, may, in a proper Dose, be twice a Day successfully exhibited in immoderate Discharges of the Menses, even to Women of delicate and choleric Constitutions. The

desired Effect, produced by this Preparation, is, in my Opinion, to be accounted for from the corroborating Quality of the Cinnamon, by which the Tone of the Vessels being restor'd, the Blood was by that means enabled to make its way thro' Passages before obstructed; and thus an equable Circulation being restored, the immoderate Discharge of the Menses was removed, as the Blood was derived elsewhere. Dr. *Hales*, in his *Statical Essays*, demonstrates the styptic Quality of the Decoction of Cinnamon, by the following Experiment: He injected a certain Quantity of it warm into the slit Intestines of a large Dog; upon which he observed the Vessels gradually contracted, and the Liquor received was retain'd for some time: Hence he infers, how effectual Cinnamon is, by its great Stypticity, in stopping too large Discharges into the Cavity of the Guts.

Before we enumerate the officinal Preparations of Cinnamon, we shall briefly give its chymical Analysis from *Boerhaave*, that we may be able to discover in what Part of it those efficacious Qualities, by which it distinguishes itself from other Aromatics, are lodged.

"If, says this incomparable Author, you cautiously, and "according to Art, distil a Pound of the best Cinnamon with "boiling Water, and take care, that nothing of it be lost, it "will yield you a milky Liquor of a fine Smell and Taste, "and at the Bottom of it a small Quantity of a reddish Oil, "which is exceedingly fragrant, and possesses, in a very high "Degree, the genuine Virtues of the Cinnamon; as, indeed, "does this milky Liquor. If you, then, remove both these, "and boil up the Cinnamon, which remains, with fresh Wa-"ter, you will draw off a clear watry Liquor, of an acid "Taste, and faint Smell; which is so far from containing any "Signs of Cinnamon, that it is so like many others, that you "will not be able to distinguish the one from the others. "Then examine the Residuum of the Decoction, and you will "find it of a brownish-red Colour, an acid austere Taste, "without Smell, or any other sensible Quality, which gives "the smallest Indication of Cinnamon. The Body of the "Aromatic, indeed, remaining in the Decoction, one would "be tempted to take for Cinnamon, since it resembles it so "exactly in its Figure, and outward Appearance: But, upon "farther Examination, we find, that this outward Resem-"blance is the Whole it retains of that noble Bark, since it "has now lost all its primitive Virtues; and, indeed, there is "very little Difference to be observed betwixt this and any "other Bark or Wood, that has been previously treated in the "same manner.

"The genuine and peculiar Virtue, therefore, of the Cin-"namon, is contain'd in the distil'd Water and the Oil, which "subsides to the Bottom of it. If you let this Water remain "at Rest for a considerable time, in a close Vessel, it will let "fall an Oil, grow clearer, and become less aromatic. In the "Oil, therefore, this uncommon Virtue is principally con-"tain'd. But if you separate this Water from the subsiding "Oil, whilst it yet remains richly impregnated with the Cin-"namon, and put it into an open Bottle with a small Mouth, "the whole Place will smell strong of Cinnamon, and in a "short time the Water will become quite vapid, without any "of the Properties of the Cinnamon; and yet, upon Exami-"nation, we shall find, that it has lost no more of its Weight "than would have exhaled from common Water, in an equal "time, in the same Vessel, and in the same Place. The un-"common Virtue, therefore, of this Water is lodged in a very "small Quantity of it, which must, of course, be possess'd of "very singular Qualities. Lastly, if this Oil is exposed to the "Air in a wide-mouth'd Glass Vessel, a highly fragrant and "grateful Smell of Cinnamon is diffused thro' the whole Place; "but the Oil will, in the mean time, lose its peculiar Virtue; "and, after a short time, there will remain an Oil, almost of "the same Weight with the former, but perfectly exhausted "and deprived of its original Qualities." If the purest Oil of Cinnamon is diluted in Alcohol of Wine, and if the whole Alcohol is again drawn off by Distillation in a gentle Heat, it will, indeed, carry the Spirits along with it; but it leaves, in the Bottom of the Still, an Oil destitute of Spirits, and, at the same time, of a resinous Nature: Hence 'tis obvious, that the whole Virtues of the Cinnamon are lodged in the small Quantity of Oil it yields, and that they even reside in a small Quantity of that Oil. *Helmont* affirms, that, when the Oil is extracted from Cinnamon, it has an astringent Taste, like Oak-bark. *Caspar Newman*, in his *Prælectiones Chymicæ*, tells us, that Cinnamon consists of oleous, saline, resinous, gummy, and mostly of earthy Parts: So that in one Pound of Cinnamon are contain'd almost three Fourths of an indissolvable Earth, two Ounces of a resinous Substance, one Ounce and an half of a gummy Substance, and about two Scruples and an half of an essential Oil.

This Oil is yielded with the Water in Distillation, and subsides to the Bottom, in consequence of its being specifically heavier. It is of a yellowish or golden Colour, limpid, of a highly acrid, inflammatory, and corrosive Nature, whether externally applied, or internally exhibited. It speedily cauterises any Part, to which it is applied, into a gangrenous Eschar. When preserved for several Years in close stopt Phials, a great Part of it is said to be transform'd into a genuine Salt, which is capable of being dissolved in Water, and which is impregnated with the Virtues peculiar to Cinnamon. And Dr. *Slare*, as we are inform'd in the *Philosophical Transactions abridged*, T. 3. found, that, in twenty Years time, half of a certain Quantity of this Oil was become a Salt. We shall subjoin what *Ludovici* has observed, concerning the Nature of this Salt. He kept some of the Oil of Cinnamon for several Years, pouring a little common Water to it, lest, in Process of Time, it should become too thick and resinous. But in the Water he previously dissolved a small Quantity of common Salt. At certain Intervals he renew'd the Oil, and sometimes made an Addition to the Water, when it was too much exhausted. After he had neglected this for some time, he informs us, that a Salt was slowly concreted among the thicker Parts of the Brine, which, in its inferior Part, retain'd a cubical Form; but its superior Part was furnish'd with small Striæ, like those of Nitre, but disposed in a more irregular manner. This Salt, taken out, and cleansed with brown Paper and Cotton, under the Teeth, appear'd more compact than common Salt and Nitre, and almost resembled Sal Ammoniac; but its Taste was found less intense than that of other Salts of the same Kind. When laid upon live Coals, it did not burn or flame like Nitre, but was totally, and without any Noise, evaporated into a thick white Smoak, leaving only a black Spot, or the extinguish'd Coal, below it. The Smoak, however, did not so much resemble that of Cinnamon alone, as that of Cinnamon and Benjamin. But because this Oil, when negligently kept in the Air, loses its Spirits, and leaves not a Salt, but a dead Mass, it seems probable to *Boerhaave*, that in this Spirit, in consequence of its sulphureous Principle, there is lodged a certain Power of generating a Salt. A Pound of Cinnamon, tho' of the best Kind, according to *Sala* and *Hoffman*, scarce yields a Dram of Oil; and at most a Dram and an half, according to *Bauhine* and *Lemery*. But, in *Holland*, the People who distil it, from each Pound, obtain more than an Ounce of the Oil, by the Assistance of Spirit of Wine, prepared in a particular Manner, which they keep as a Secret, as *Pomet* informs us he was told by a Person of Veracity: Hence it is, that the only Oil of this Kind, kept in the Shops of Apothecaries, is made by the *Dutch*, of whom they can buy it at a cheaper Rate than they could prepare it themselves. The same Author tells us, that he was credibly inform'd, that their Oil, commonly intended for Sale, was not genuine; but so adulterated with Spirit of Wine, well dephlegmated and tartarized, that not above one half of it is genuine Oil of Cinnamon: But he tells us, that this Piece of Fraud is easily detected, by putting the Point of a Knife into it, which, when applied to a lighted Candle, takes Flame immediately; whereas, when the Oil is genuine, it does not flame, but only smoke.

This Oil, by reason of its acrid caustic Nature, is by many highly celebrated as an excellent Medicine, in a deep seated Caries of the Bones. In which Case, it is either applied with a Tent, or dropt into the Part affected, or laid upon it, with Lint, covering all with a dry Dressing of the same. *Juncker*, in his *Conspectus Therapiæ generalis*, uses the following Words: "Distil'd Oil of Cinnamon is justly accounted a valuable and "efficacious Medicine for stopping the Progress of a Mortifica-"tion; only 'tis to be lamented, that its exorbitant Price hin-"ders Surgeons from saving, or at least relieving, by its means, "most of the miserable Patients afflicted in this manner." *Tulpius*, in his *Observat. Medic. L. 1. C. 37.* informs us, that, in order to separate the carious Parts of Bones, he never saw nor read of any Medicine more effectual than Oil of Cinnamon, mix'd with Oil of Sublimate. As for the genuine medicinal Virtues of this Oil, when exhibited internally, *Boerhaave* informs us, that nothing in the *Materia Medica* is comparable to it, with respect to its restorative Quality, in Cases where Strength is impair'd, in Women during Gestation, hard Labours, or after Delivery, when, at the same time, there is no Inflammation, no Rupture, or Gaping of the Vessels; and that, if there is any Relief to be expected in Disorders of the Uterus, arising from a cold and mucous Phlegm, it is to be obtain'd by this Oil, properly used: Hence 'tis obvious, that, in Cases where 'tis not proper to increase the Heat of the Body, or the Motion of the Fluids, when the Heat and Motion are already too intense, we must abstain from the Use of this Oil. On the contrary, when that Species of Coldness is to be corrected, which arises from a flaccid State of the Vessels, or from a languid, mucous, or aqueous Condition of the Humours, it proves an excellent stimulating, corroborating, resolvent, and heating Medicine, provided the Vessels are entire. Hence 'tis obvious, that it may properly be added to Purgatives, not only with an Intention to render them more palatable, but also to prevent Flatulences and Gripes. Thus 'tis also added to Liniments, Ointments, and Balsams, not only for the sake of its fragrant Smell, but also on account of its resolvent, discutient,

and heating Qualities. Six Drops of it may be given in Substance, either in a poach'd Egg, ſweet Wine, or Broth prepared with Fleſh; but, moſt properly, dropt upon Sugar.

There are various Preparations of Cinnamon kept in the Shops, and directed in the ſeveral Diſpenſatories, to which every one may have recourſe, either when his Inclination leads him, or Neceſſity compels him. Such as the *Aqua Cinnamomi ſimplex*, call'd alſo the *Aqua Cinnamomi ſine vino*; and, in the *London Diſpenſatory*, the *Aqua Cinnamomi tenuis*. See AQUA. The *Aqua Cinnamomi cum vino*, in the *Pharmacop. Argentoratenſis*. The *Aqua Cinnamomi Spirituoſa*, in the *Diſp. Brandenburgicum*. The *Aqua Cinnamomi Spirituoſa*, in the *Pharmac. Pariſienſis*. The *Aqua Cinnamomi fortis*, in the *London Diſpenſatory*, which, in that of *Edinburgh*, is call'd the *Aqua Cinnamomi cum vino*. See AQUA. The *Aqua Cinnamomi*, in the *Pharmacopœia Bruxellenſis*. The *Aqua Cinnamomi hordeata*, in the *Pharmacop. Pariſienſis*, which, in the *Pharmac. Amſtelodamenſis*, is only call'd *Aqua Cinnamomi*. The *Aqua Cinnamomi buglоſſata*, in the *Pharmacop. Argentorat.* The *Aqua Cinnamomi borraginata*, which, in the *Pharmacop. Auguſt.* is call'd the *Aqua Cinnamomi Gordialis*. The *Aqua Cinnamomi cum aquis Cordialibus*, in the *Diſpenſ. Hafnienſe*. The *Aqua Cinnamomi Cardiaca*, in the *Pharmacop. Batæana*. The *Aqua Cinnamomi Cydoniata*, in the *Pharmacop. Argentoratenſis*. The *Aqua Cinnamomi contra Epilepſiam*, in the *Diſpenſat. Norimbergenſe*. The *Aqua Cinnamomi contra Peſtem*, in the *Diſpenſat. Brandenburgenſe*. The *Elæoſaccharum Cinnamomi Compoſitum*, call'd alſo *Aurum Horizontale*; *Panacea Kornmanni*, and which, in the *Pharmac. Pariſienſis*, is ſtyl'd *Pulvis Dreſdenſis ſive auratus Germanorum*. The *Pulvis aureus Cellenſis*, in the *Diſpenſat. Ratiſbonenſe*. The *Balſamum Cinnamomi*. The *Eſſentia*, or the *Tinctura Cinnamomi*. The *Tinctura Cinnamomi Blancardi*. The *Elixir Cinnamomi*, in the *Diſpenſat. Norimbergenſe*. The *Syrupus de Cinnamomo*. The Species *Diacinnamomi*, or the *Diacinnamomum Meſuæ*. The *Electuarium de Cinnamomo Meſuæ*, in the *Antidotarium Bononienſe*; which is alſo call'd the *Confectio Cinnamomi Meſuæ*. The *Confectio de Cinnamomo Regia*, in the *Diſpenſat. Norimbergenſe*. The *Diacinnamomum Regium*, in the *Diſpenſat. Ratiſbonenſe*. The *Confectio Cinnamomi ſicca*. The *Cinnamomum Coctum*, in *Zwelfer Pharmac. Reg.* The *Cinnamomum Laxativum Mynſicht*. The *Magiſterium Cinnamomi*, in *Schroed. Pharmac.* The *Sal Cinnamomi fixus*, in the *Diſpenſat. Brandenburgenſe*; and that of *Schroder*. And the *Sal Volatile Oleoſum Cinnamomi*, in the *Diſpenſat. Brandenburgenſe*.

Another Sort of *Cinnamon* is call'd,

CASSIA LIGNEA, Offic. Hern. 35. *Caſſia Lignea Officinarum*, Park. Theat. 1580. *Caſſia vulgaris Calibacha dicta*, Piſ. Mant. A. 165. *Caſſia Malabarica*, Herm. Cat. Hort. Lugd. Bat. 130. Comm. Flor. Mal. 73. *Cinamomum ſive Canella Malavarica, & Javanenſis*, C. B. Pin. 409. THE CINNAMON-TREE OF MALABAR, Raii Hiſt. 2. 1560. *Canella Malavarica & Javenſis*, Jonſ. Dendr. 164. *Arbor Canellifera Malabarica, cortice ignobiliore, cujus folium Malabathrum Officinarum*, Breyn. Prod. 2. 18. *Cinamomum Malabaricum, Canella Malabarica*, Mont. Exot. 8. *Carva*; Hort. Mab. 1. 107. Tab. 59. THE CASSIA LIGNEA-TREE.

This is the Bark of a Cinnamon-bearing Tree produced in *Malabar*, *Sumatra*, *Java*, and the *Philippine Iſlands*. It is a Tree of the ſame Kind with that found in *Ceylon*; only its Bark is thicker, of a more woody Texture, and of a redder Colour. Whatever is ſaid concerning that of *Geylon*, may alſo be affirm'd of this, only in a lower Degree. The Bark of the *Caſſia Lignea* is brought into *Europe* in ſmall Pipes, like the *Ceylonian* Cinnamon; but is of a darker and more ruſty Colour, of a more hard and compact Texture, of a more languid Smell, of a ſweetiſh mucilaginous and leſs hot Taſte. It is alſo in ſmaller Pipes. Becauſe this Species of Cinnamon is much cheaper than that of *Ceylon*, this latter is frequently adulterated with it: And the Caſſia Lignea itſelf, according to the *Pharmac. Auguſt. in Prolegom.* is adulterated with the Barks of the Caper-buſh and Tamariſks, macerated in the Water of *Ceylonian* Cinnamon, and afterwards dried. That is reckon'd beſt, which is ſmall, of a purpliſh Colour, eaſily broken, fragrant, acrid, of a ſweetiſh and ſomewhat mucilaginous Taſte. Becauſe it abounds with a volatile oleous Salt, ſheath'd up in a large Quantity of a mucilaginous Subſtance, it therefore operates leſs powerfully on the human Body, and is proper in Caſes where the Intention is moderately to heat, open, reſolve, and ſtrengthen. It alſo obtunds the Acrimony of the Humours, by the mild and balſamic Mucilage it contains. Some recommend an Infuſion of it in Diſorders of the Throat; and 'tis generally ſaid to be highly beneficial in Diſeaſes of the Uterus. Its Virtues are the ſame with thoſe of the *Ceylonian* Cinnamon, only it is ſomewhat weaker, and leſs aromatic. It is an Ingredient in the *Theriaca*, and ſome other Preparations, which come under the Denomination of Antidotes. By Phyſicians it is rarely preſcrib'd for other Purpoſes. From the Caſſia Lignea, previouſly digeſted for a conſiderable time, is obtain'd, by Diſtillation, an Oil like that yielded by the *Ceylonian* Cinnamon, but leſs valuable. *Mynſicht*, of the diſtil'd Oil of the Caſſia Lignea, prepares an Elæoſaccharum, which he adds to the Rob of Quinces, boil'd, in a gentle Heat, to the Thickneſs of Honey; and reduced to the Conſiſtence of an ordinary Syrup, by an Addition of the Tincture of the Caſſia Lignea. This Medicine he highly recommends as a Cordial, eſpecially to old Men, and ſuch as are of a cold Conſtitution.

Another Sort of Cinnamon is the

CASSIA LIGNEA COMMUNIS, *Pharmacopolis*. *Caſſia Lignea fuſca aromatica*, C. B. Pin. 409. *Caſſia Lignea fuſca aromatici & glutinoſi ſaporis*, J. B. 1. 451. *Caſſia, Canella*, Chab. 33. *Arbor canellifera Indica, cortice acerrimo, viſcido ſeu mucilaginoſo, qui Caſſia Lignea Officinarum*, Breyn. Prod. 2. 17. THE COMMON CASSIA LIGNEA.

It is a Bark, thicker than Cinnamon; but of a fainter Smell and Taſte, of a redder Colour, harder Subſtance, and deprived of its outer Rind or Pellicle. It is brought from the *Eaſt Indies*, and common enough in the Shops.

The *Cinnamomum craſſiore Cortice* is the MALABATHRUM, which ſee.

Cinnamomum Album is the CANELLA ALBA, which ſee.

Cinnamomum Magellanicum is the CORTEX WINTERANUS, which ſee.

Cinnamomum Spurium is, according to *Rieger*, the *Cortex Caryophyllatus*.

CINNIOGLOTTUS, CINNATUS. Terms coin'd by *Paracelſus*, *Chirurg. Lib.* 5. *Cap.* 7. by which he would expreſs the total Deſtruction and Corruption of mineral Bodies.

CINNUS. The ſame as CYCEON, which ſee.

CINZILLA. A Name, in *Paracelſus*, for that Diſtemper which is by others call'd ZONA, which ſee.

CION, κίων, is defin'd, by *Aretæus*, a ſolid Body hanging from the Palate or Roof of the Mouth, between the Tonſils. It is alſo call'd, as he ſays, *Gargareon*; for *Staphyle* is the Name of a Diſeaſe. It is of a nervous Subſtance, but moiſt, becauſe placed in a moiſt Situation. *Aret. de Cauſ. & Sign. acut. Morb. Lib.* 1. *Cap.* 8. Κίων is alſo a Diſeaſe, when the Part before deſcrib'd ſwells to an extraordinary Size, and hangs down in an oblong Figure, repreſenting a Pillar, which is the Signification of κίων, in *Latin*, *Columna* or *Columella*. See UVULA. From ſome Reſemblance to this Diſorder, *Hippocrates*, *Lib.* περὶ γυναικ. φύσ. and *Lib.* 2. περὶ γυναικείων, gives the Name κίονα to a carunculous Excreſcence in the *Pudendum Muliebre*.

CIONIA, ἰόνια, (or, as *Hermolaus Barbarus* reads it, κιόνια) in *Dioſcorides*, are the middle Parts of the Whelks and Purple-fiſh, near the Centre of the Striæ; which, being calcin'd, have a more cauſtic Quality than the other Parts, becauſe of its preſſory Nature. The Fleſh of Whelks and Purple-fiſh is grateful to the Palate, and friendly to the Stomach, but of a binding Quality. *Dioſcorides*, *Lib.* 2. *C.* 6. See BUCCINUM.

CIONIS, κωνὶς. The ſame as CION, which ſee.

CIPOREMA. A Species of Garlick growing in *Braſil*, without Leaves. *Raii Index*.

CIRCÆA, κιρκαία, from *Circe*, a famous Inchantreſs, who is ſuppoſed to have made great Uſe of this Herb in her Faſcinations.

Circæa, which ſome call Dircæa, has Leaves like Garden Nightſhade, and abounds with Shoots. The Flowers are ſmall, black, and numerous; and the Seed like Millet, ſometimes incloſed in a Sort of ſmall corniculated Capſules. The Roots are three or four Spans in Length, white, ſweet-ſcented, and of a heating Quality. It grows moſtly on rocky Grounds, and open Places expoſed to the Sun and Wind.

The Root, to the Quantity of four Ounces *, bruiſed, and macerated a Day and Night in three Pints of ſweet Wine, [οἴνῳ γλευκίνῳ] and drank for three Days together, purges the Womb. The Seed, taken in ſorbile Liquors, generates Plenty of Milk. *Dioſcorides*, *Lib.* 3. *Cap.* 134.

This *Circæa* is not the ſame as that Plant which now goes by that Name, according to *Parkinſon*.

CIRCÆA, of the Moderns, *Inchanters Nightſhade*.

The Characters are;

The Root is fibrous, creeping, perennial; the Leaves alternate, entire, like thoſe of the common Nightſhade; the Cup of the Flower bifoliated, caducous, and growing in the Margin of the Ovary; the Flower dipetalous, caducous, furniſh'd with two Stamina, and diſpoſed in Spikes. The Extremity of the Pedicle paſſes into an Ovary of a round Figure, inclining to an Oval, furniſhed on its upper Part with a Placenta, and a long Tube, and paſſing into a Pyriform, or Pear-ſhaped, lappaceous, bicapſular, dry Fruit, containing two oblong Sides.

Boerhaave mentions two Species of this Plant.

* For μιᾶι I read, with *Cornarius*, ὑγιᾶι, which agrees with *Pliny's Quadrans Radicis*; beſides, four Pounds of the Root could hardly be macerated in three Pints of Wine.

1. Circæa; Lutetiana. *Lob. Ic.* 266. INCHANTERS NIGHTSHADE. *Ocymaſtrum verrucarium*, J. B. 2. 977.

2. Circæa; minima. Col. 2. 79. 80. THE SMALLEST INCHANTERS NIGHTSHADE. *Boerhaave's Index alter Plantarum, Vol.* 1.

Gerrard ſays, the firſt Species has the Virtues of *Garden Nightſhade*.

CIRCIUS. The ſame as ARGESTES, which ſee.

CIRCOS, κίρκος, and, by a Metatheſis or Tranſpoſition of Letters, κρίκος, ſignifies a Ring, a kind of Button, a Loop, and other Things of that Nature. *Rhodius, de Acia*, ſhews, from *Hippocrates's Mochlicus*, and his Book *de Fracturis*, that κρίκοι are Rings made of *Egyptian* Leather, which were ſow'd on to ſome Part of the Apparatus neceſſary for the Diſtention of a luxated Leg.

CIRCUITUS. See PERIODUS.

CIRCULATIO, in Chymiſtry, is explain'd under the Articles CIRCULATORIUM, and CIRCULATUM, which ſee.

CIRCULATIO, in Anatomy, is the Circulation of any Fluid of the Body thro' the Veſſels deſtin'd for its Conveyance. Thus there is a Circulation of the Chyle, for an Account of which ſee CHYLUS. A Circulation of the Blood, ſee SANGUIS. A Circulation of the Lymph, ſee LYMPHA. And a Circulation of the Spirits, ſee SPIRITUS. But Circulation is properly applied only to the Blood, becauſe that moves circularly, or returns to the Heart again, the Origin of its Motion; which the others do not.

CIRCULATOR. A ſtrolling Quack, or Mountebank. See AGYRTA.

CIRCULATORIUM, in *Latin*, correſponds to what in *Engliſh* we call a *Circulatory Glaſs*, which, among Chymiſts, ſignifies a particular Species of Glaſs Veſſel, in which the contain'd Liquor, when put over the Fire, performs certain Gyrations, and circulates by aſcending and deſcending in ſuch a manner, that the more volatile Part of the Liquor, raiſed by the Fire, not finding a Paſſage, may always fall back again. A *Pelican* conſtitutes ſuch a Veſſel, or a Glaſs whoſe Belly is of an oval Figure, for which Reaſon it is call'd *Ovum Philoſophicum*, or the Philoſophers Egg. But in the room of theſe may be ſubſtituted Phials, with long Necks, hermetically ſeal'd; or a Cucurbit, with a blind Alembic placed upon it; or a Cucurbit, or Glaſs Bottle, with a ſufficiently long Neck, is ſo diſpoſed, that, having firſt put in the Materials, another leſſer Phial, whoſe Neck may enter it, is placed upon it. Then the Joinings are to be carefully luted, after the Veſſels and Materials are become ſufficiently warm, for carrying on the Proceſs; for then the Air, being heated, and expanding itſelf, goes out of the Veſſels; the Joinings of which being afterwards luted, the Fire may ſafely be raiſed, and continued at Pleaſure. But, in this Proceſs, it generally happens, that the Liquor, falling cold upon the warm Bottom of the Veſſel, cracks it; for which Reaſon, we muſt proceed cautiouſly in raiſing the Fire. By this we underſtand, that the chymical Operation, commonly call'd *Circulation*, is no more than a certain Species of Digeſtion; and that to circulate a Liquor, is to place it in Circulation or Digeſtion, that its more volatile Parts may be continually raiſed, and fall back; and thus paſſing, as it were, in a Circle, may become finer, and more attenuated; for, according to *Sennertus*, Circulation is only uſed for thoſe Liquors which are already depurated, and freed from their Fæces, or, at leaſt, whoſe higheſt Degree of Subtilization is required. Thus Spirit of Wine, already rectified, is, by Circulation, ſaid to be transform'd into what we call the Quinteſſence. According to *Barnerus*, Circulation is principally inſtituted for two Reaſons. The firſt is, That the Spirits and Liquors to be join'd, being thus mutually driven backwards and forwards, may be the more effectually united. The ſecond is, That any Subſtance to be diſengaged from its Eſſence, or the Liquor in which it is contain'd, may be the ſooner and more effectually ſeparated from it. Since, then, Circulation is no more than a Species of Digeſtion, 'tis obvious, that, according to the Sentiments of M. *Hoffman*, the Subjects of this Operation may be either Liquids alone, or Solids mix'd with Liquids, either for the Purpoſes of Clarification, Depuration, Exaltation, or Maturation; and ſometimes to obtain the Volatilization of fix'd Subſtances, or the Fixation of ſuch as are volatile; but the Veſſels muſt be very cloſely join'd, or hermetically ſeal'd, and a proper Space of Time allow'd for the ſeveral different Intentions of the Operator. That this Proceſs may be ſupplied by repeated Diſtillations, is obvious, from the Article COHOBATIO. Hence the Reaſon is plain, why, in the Language of *Paracelſus*, to be ſubjected to Circulation, and to be diſtil'd into a Spirit, import one and the ſame thing.

CIRCULATUM.

According to *Boerhaave*, the *Circulatum* of *Paracelſus* was a Liquor, by infinite Labour, and a tedious Circulation, prepared from Sea-ſalt, in which bountiful Nature has lodged the higheſt Degree of Perfection. This romantic Chymiſt, by indefatigable Induſtry, from this Salt obtain'd a perpetual Oil, which he call'd *Circulatum Minus*, or *Circulatus Sal minor*, *Ens primum Salium*, *Oleum Salis*, *Liquor Salis*, and *Aqua Salis*. In this Proceſs he uſed Spirit of Wine, but of what Kind is not at preſent known. He had alſo a *Circulatum Majus*, to which he likewiſe gave the Names of *Materia Mercurii Salis*, and *Ignis Vivens*, which was much more powerful and efficacious than the *Circulatum Minus*, and obtain'd with far greater Difficulty. From theſe two, intimately united, *Paracelſus* affirms, that he prepared the highly celebrated Solvent, in which Gold was ſo effectually transform'd, as to remain no longer Gold. *Barchuſen*, in his *Pyroſophia*, gives us a diſtinct, tho' tedious, Preparation of both theſe *Circulatums*, extracted from the Writings of *Paracelſus* himſelf. The *Circulatum Minus* is prepared of Sea-ſalt, Water, the Juice of the Radiſh-root, and Alcohol of Wine. The *Circulatum Majus* was prepared of corroſive ſublimate Mercury, and Sea-ſalt. Some affirm, that the *Circulatum Majus* of *Paracelſus* was no more than rectified Spirit of Wine; and that his *Circulatum Minus* was only Spirit of Vinegar. Others, as we find in the *Collectanea Chym. Leydenſ.* will have the *Spiritus Nitri dulcis* to be the *Circulatum Majus* of *Paracelſus*. We there alſo find *Maets* giving the following Directions for preparing the *Circulatum Minus* of *Paracelſus*.

> Take any Quantity of the pureſt Flowers of Sal Ammoniac, twice ſublimed from the common Salt. Upon theſe pour ſuch a Quantity of the Alcohol of Wine, as ſhall riſe three Inches above them. Let them ſtand in a moderately warm digeſtive Heat for three Days and Nights ſucceſſively, or longer; for by this means the Spirit of Wine will intimately unite itſelf with the volatile Sal Ammoniac, and we ſhall obtain a Menſtruum far more efficacious than the *Alcohol* of Wine. And when Spirit of Wine fails in extracting the Tinctures, for Inſtance, from the *Crocus Solis*, from the Glaſs of Antimony, and from other mineral Subſtances, this Menſtruum will ſupply the Defect.

In *Blancard's Lexicon Renovatum*, the *Circulatum Minus* is ſaid to be no more than Spirit of Wine. In a Word, ſome entertain one Opinion, and others another, concerning theſe whimſical and myſterious Preparations, with reſpect to which all are equally in the Dark. See ALCHAHEST.

CIRCULUS, κύκλος, κύκλον, a Circle, beſides its known Signification, is applied to Parts of the Body. Thus, in *Hippocrates, Lib.* 2. *de Morb.* κύκλοι τῶ πρηστήρε are the Balls of the Cheeks; and κύκλα τῶν ὀφθαλμῶν are the Orbs of the Eyes, or Cavities which ſurround the Eyes, *Lib.* 7. *Epid.* And, in the ſame Book, we read ἦεν ἐρυθρὸν τὰ κυκλώδεα, "the Urine "round about its Margin was red, or was ſurrounded with a "red Circle." *Galen* alſo, *de Uſu Partium*, demonſtrates ſeven Circles in the Eye. *Circulus* is alſo a Name which the Chymiſts give to a round Iron Inſtrument for cutting off a Neck of Glaſs, which is thus perform'd: They heat the Circulus red-hot, and apply it to the Glaſs, preſſing it thereon till the Glaſs be thoroughly heated, when, by a few Drops of cold Water, or a cold Blaſt thereon, it flies aſunder. It is alſo call'd *Abbreviatorium*. *Circus quadruplex*, the fourfold Circle, is a kind of Bandage, call'd alſo *Plinthius Laqueus*. *Gal. de Faſciis.* The Circulus is alſo reckon'd among chirurgical Inſtruments, Figures of which, adapted to the Uterus, are repreſented in *Scultetus's Armamentarium Chirurgicum*, *Tab.* 22. *Fig.* 6, 7, and *Tab.* 43. *Fig.* 5.

CIRCUMCALUALIS, CIRCUMOSSALIS, are Epithets in *Aetius*, *Tetr.* 2. *Serm.* 3. *Cap.* 1. of the outermoſt Coat of the Eye, call'd alſo *Tunica Adnata*, and *Conjunctiva*. See OCULUS.

CIRCUMCISIO, περιτομὴ, περιαίρεσις.

Albucaſis has deſcribed ſeveral Ways of Circumciſion, but what he moſt recommends is the following: The upper Skin of the Penis, that is, the Præputium, is taken and ſtretch'd out, and held in that Poſture, by a Ligature made in two Places. This done, the Operator, with a Pair of Sciſſars, immediately cuts off the Prepuce, making a Section between the two Ligatures. The ſame might be perform'd by a very ſharp Razor. *Paulus*, *Lib.* 6. *Cap.* 57. directs Circumciſion as neceſſary, when the Prepuce is affected with a Gangrene, and become black; in which Caſe it muſt be cut off with an orbicular Section, and the Blood ſtopp'd with red-hot falcated Irons. If the Glans alſo be turn'd black, it muſt be ſerved in the ſame manner, and a ſmall leaden Pipe introduced into the urinary Paſſage. I myſelf, in order to ſave the Patient's Life, when the Penis was cancerated, and corrupted below the Glans, have cut off the Part with a very ſharp Razor, and, ſtopping the Blood with red-hot Irons, have ſubdued the Corruption, and cured the Man. *Fabricius ab Aquapendente, de Oper. Chirurg.*

Circumciſion ſeems to be a very convenient Operation in warm Countries, for the ſake of Cleanlineſs. For the Glandulæ Odoriferæ, lying under the Prepuce, diſcharge their Contents, which, lying under the Prepuce, corrupt, and become acrimonious, corroding the Glans, and inflaming both that and

the Prepuce; and this, even in our cold Countries, where the Humours have not so great a Tendency to Putrefaction as in warmer Climates. This Case is often mistaken for a *Clap*.

CIRCUMFORANEUS. The same as AGYRTA, which see.

CIRCUMLITIO, περίχεσις, περιχεστὸν, or more properly περιχεισὸν. In *Marcellus Empiricus*, *Medicamentum Perichristarion* imports, in general, any kind of Medicine apply'd to an affected Part, by way of Unction, or as a Litus; but, in a strict Sense, is appropriated to ophthalmic Medicines, with which the Eyelids are anointed. These latter Remedies, as *Scribonius Largus* says, N°. 29. are named περιχεισὰ (*Perichrista*); and *Dioscorides*, *Lib.* 1. *Cap.* 130. calls them ὀφθαλμικαὶ περιχείσεις.

CIRCUMOSSALIS. See CIRCUMCALUALIS. The *Circumossalis Membrana* is the same as the *Periosteum*.

CIRCUMSTANTIA, τὸ περιεστατικὸν, in medicinal Matters, comprehends whatever is not essentially connected with the principal Indicant. Of this Kind, in what are commonly call'd *Res Naturales*, are the Condition of the Patient, and the Part affected, the Strength, Age, Sex, Custom, and Way of Life; in *Præternaturalibus*, or the Preternaturals, are the Times of Diseases, the Paroxysms, Number, and Symptoms; and, in the Non-naturals, the Air and Soil. These are the Things which regulate the Conduct of the Physician, and indicate how he ought to act. *Castellus*.

CIRLUS. A small Bird. The same as LUTEA, which see.

CIRRHOS, κίρρὸς, is a sort of Colour, particularly belonging to Wine, and importing the same as *Fulvus*, a pale Yellow, or fallow Colour, like that of a Lion. It is call'd also *Gilvus*, that is, the Colour of half-burnt Brick. It is a Colour between a White and a Yellow. *Dioscorides*, *Lib.* 5. *Cap.* 8. makes this Colour in Wine a Medium between White and Black; but, then, he takes κίρρὸς in a large Acceptation. *Castellus*.

CIRRI. See what they are under the Article BOTANY. *Cirri* are also the same as CERÆA, which see. And, in *Pliny*, they signify the Claws of the Polypus-fish.

CIRSIUM.

The Characters are;

The Leaves are cover'd with short soft Prickles.

Boerhaave mentions nine Species of this Plant.

1. Cirsium; maximum, radice Asphodeli. *C. B. P.* 377. THE GREATEST ASPHODEL-ROOTED GENTLE THISTLE.

2. Cirsium; Pannonicum; primum; pratense. *Clus. H.* 148.

3. Cirsium; latissimum. *C. B. P.* 377.

4. Cirsium; majus; singulari capitulo magno, vel incanum variè dissectum. *C. B. P.* 377.

5. Cirsium; singulari capitulo squamato; vel incanum alterum. *C. B. P.* 377.

6. Cirsium; singularibus capitulis parvis. *C. B. P.* 277.

7. Cirsium; acanthoides; montanum; flore flavescente. *T.* 448.

8. Cirsium; latifolium; flore flavescente in Capitulo folioso.

9. Cirsium; maculis argenteis notatum. *T.* 448. THE WHITE SPOTTED GENTLE THISTLE.

Boerhaave's Index alter Plantarum, *Vol.* 1.

The fourth and fifth Sort grow wild in *England*.

Gerrard says, that no medicinal Virtues are attributed to any Species of the *Cirsium*.

The Cirsium of *Dioscorides* is thus distinguish'd.

CIRSIUM, Offic. *Cirsium foliis non hirsutis, floribus compactis*, C. B. 377. Raii Hist. 1. 306. Hist. Oxon. 3. 149. Tourn. Inst. 447. *Cirsium foliis non hirsutis*, Ger. Emac. 1182. *Cirsium montanum capitulis compactis*, Park. 962. *Cirsium Monspelianum, folio longo glabro Matthioli*, Chab. 346. *Carduus cirsium Monspeliacum, folio longo glabro Matthioli*, J. B. 3. 44. *Cardua-cirsium foliis non hirsutis floribus compactis*, Pluk. Almag. 83. MELANCHOLY THISTLE.

It grows in several Places near *Montpellier*; and flowers in *June*. *Dale*.

The Root eases the Pains of Varices, (κιρσῶν) if bound to the Part affected, as *Andreas* writes. *Dioscorides*, *Lib.* 4. *Cap.* 119.

The *Carduus Vinearum repens*; *folio sonchi*, is call'd *Cirsium, arvense, sonchi folio, radice repente, flore purpurascente*.

CIRSOCELE, from κιρσὸς, a Varix or Dilatation of a Vein, and κήλη, a Tumor.

Sometimes the Spermatic Veins, adjacent to and lying above the Testicles, as also those in the Processes of the Peritoneum, in the lower Part of the Scrotum, and sometimes above the Scrotum in the Groin, are so surprisingly swell'd, that they resemble a Species of Varix, the Intestine of some Bird, a Straw, and sometimes a Quill; except that they are sometimes, here-and-there, diversified with pretty large and unequal Knots, and the Testicles hang lower than in their natural State. This Species of Disorder is, by Physicians, call'd *Ramix Varicosus*, *Varicocele*, and *Cirsocele*; tho', perhaps, it might be more properly call'd a varicose State of the Spermatic Vessels. Sometimes also the Veins of the Scrotum swell like *Varices*, as *Celsus* long ago observed; but, according to *Fabricius ab Aquapendente*, the Dilatation of these Veins is more properly accounted a Varix of the Scrotum than a Hernia, though these different Disorders are often unjustly taken for one and the same.

The principal Cause, both of the one and the other, seems to be either a Redundance, or a preternatural Inspissation and Viscidity of the Blood, which, whilst it remains in these Veins, may distend them too much, and excite the most troublesome Symptoms. Sometimes this Disorder may be produced by an external Violence, which, by contusing or weakening these Veins, must of course obstruct and hinder the Circulation of the Blood thro' them. Sometimes also young Men, especially those who abound with seminal Matter, or are of a salacious Turn, are subject to this Disorder, most generally within the Scrotum, as I have frequently observed; for the Spermatic Veins of such Persons, in consequence of the Redundance of Blood, and the impetuous Motion, with which it is carried to the Testicles, are sometimes distended to a surprising Bulk. But it rarely happens, that a Cirsocele, or any very troublesome Symptoms, arise from this Cause. Nor is every Dilatation of the Veins to be accounted a Cirsocele, as Quacks and Mountebanks often pretend it is; for, unless the Distention of these Veins is accompanied with troublesome Symptoms, or considerable Pains, there scarce appears any Reason, why, from a slight Distention, they should be accounted morbid, or employ a Physician, much less a Surgeon. It will not, however, be improper to give them the Advice afterwards laid down.

When these Veins are become so preternaturally large and turgid, as to excite intense and racking Pains, 'tis then necessary to look out for proper Means of Relief. But the Cure may be attempted in different manners; for when, in sound and vigorous Men, the Disorder arises from a Redundance of Blood, especially in the Spermatic Veins, Matrimony is the most speedy and efficacious Remedy, and therefore ought to be warmly recommended to them. But in Cases where this Method does not prove effectual, for I have seen some in a married State afflicted with this Disorder, as also in Cases where the *Cirsocele* is brought on by any external Violence or Contusion, Medicines are generally of no great Use; since by their means the preternaturally distended, debilitated, and lacerated Veins are, for the most part, slowly, and with great Difficulty, restored to their former Strength and Vigour. But, since this Disorder seems principally to arise from an inspissated Blood, we are, for this Reason, carefully to have recourse both to such Medicines as dilute the viscid Blood, and corroborate the weaken'd Veins. 'Tis also highly expedient the Patient should consult some skilful Physician, with respect to proper internal Medicines. And externally, besides Venesection, astringent and corroborating Fomentations are used with great Success.

But if, after a fruitless and unsuccessful Use of the most proper Medicines, the Knots and Pains of the distended Vessels, in the Coats of the Scrotum, are increased, the Antients recommended the Application either of the actual Cautery, or of a proper Ligature to these Veins. But as these Methods of Cure, to me, seem harsh and cruel, if these Varices are lodged in the Coats of the Scrotum, I think it will not, in this Case, be improper to make an Incision, with the Knife, in the distended Vein, as far as the Tumor reaches, taking from the Wound some Ounces of Blood. When this Step is judiciously made, the Wound is to be fill'd with Lint, and cover'd with a vulnerary Plaister, which must be secured with a proper Compress and Bandage. In the subsequent Dressings, the Conglutination of the Wound is to be promoted, by the Application of Balsams and Plaisters of a vulnerary Nature. For by this Method the Body is not only freed from the inspissated Blood, and the Pains produced by it; but also the lax and flaccid Part of the Vein is, by the Induction of a strong Cicatrix, so corroborated and fortified, that it is not for the future so subject to be distended by the Blood. If the Disorder has its Seat within the Scrotum, after making an Incision in this, and the Process of the Peritoneum, some proceed in the manner now directed. In both these Species, however, of the Disorder, the Patient is to be advised to drink a sufficient Quantity of some thin Liquor, to use frequent Exercise, and take such Medicines as attenuate the Blood, not omitting Venesection twice or thrice a Year. On the contrary, he is carefully to abstain from such Aliments as are viscid, and of difficult Digestion; as also from too sedentary a Life, since by these means the Mass of Blood is remarkably inspissated. This Advice ought also to be follow'd by those who perceive this Disorder beginning in themselves, either with a View to prevent its Increase, or remove it entirely. Some Surgeons, when this Disorder proves intolerably painful, apply a Ligature to the Spermatic Vessels in the Groin, and the Process of the Peritoneum, and extirpate the Testicle, together with the varicose Vessels. But if the Vessels

are

are already indurated as far as the Rings of the abdominal Muſcles, 'tis adviſeable to abſtain from this Operation, ſince, in that Caſe, it is generally ſucceeded by the Death of the Patient. *Heiſt. Chirur.*

CIRSOIDES, κιρσοειδὴς, from κιρσὸς, and εἶδος, Reſemblance, varicous, is an Epithet in *Ruffus Epheſius* for the upper Part of the Brain, the lower Part being call'd βάσις, *(Baſis)* the Baſe; it is applied alſo by him to two of the four ſeminal Veſſels, in his way of numbering them, the other two being ἀδενοειδὴ. glandulous.

CIRSOS, κιρσὸς. See VARIX.

CISSAMPELOS, κισσάμπελος, an Epithet in *Galen* and *Ægineta* for a Species of CONVOLVULUS call'd *Helxine.*

CISSAMPELO *ramoſo di Candia Pon. Bald. Ital.* is the Convolvulus; ramoſus; incanus, Foliis Piloſellæ, *C. B. P. Boerhaave's Index alter, Vol.* 1.

CISSANTHEMOS. A Name in *Dioſcorides* for one of his two Species of *Cyclamen.*

CISSINUM, κίσσινον. The Name of a Plaiſter in *Ægineta, Lib.* 7. *Cap.* 17. for Wounds of the Nerves, and Stabs or Punctures, tho' never ſo inveterate.

CISSYBIUM, κισσύβιον. A Cup made of the Wood of Ivy, in Uſe among the *Greeks*, which *Langius, Lib.* 1. *Ep.* 19. recommends on two Accounts; firſt, becauſe the Ivy, by its Coldneſs, reſiſted Drunkenneſs; and, ſecondly, becauſe it diſcovered if any Water were fraudulently mix'd with the Wine; for, as *Cato, de R. R. Cap.* 110. aſſerts, if Wine mixed with Water be pour'd into an Ivy Veſſel, the Wine will all paſs thro' the Pores of the Wood, and leave the Water behind.

CIST, or KIST. A Veſſel of Wine containing two Meaſures, or a Meaſure and half, according to the Difference of Places, being about four Pints. *Rulandus. Johnſon.*

CISTA, κίστη, κίστις, according to *Pollux*, is a Cupboard to hold Meat, a Trunk for Clothes, or a Box for Medicines. The Word κίστα occurs in the ſpurious Additions to *Lib.* 1. γυναικείων, where a Collyrium for the Eyes is directed to be repoſited ἐς χαλκῆν κίστα, "in a Copper Box." *Foeſius.*

CISTERNA, a Ciſtern, is a Term uſed by ſome Anatomiſts to ſignify particular Parts of the Body; as, for Inſtance, the fourth Ventricle of the *Cerebrum*, or rather of the *Cerebellum*, and the Concourſe of the Lacteal Veſſels in the Breaſts of Women who give Suck. *Caſtellus.*

CISTUS, κίστος.

The Ciſtus, which ſome call *Ciſthorus*, or *Ciſſarus*, is a Shrub which grows in ſtony Places, is full of Branches and Leaves, but not tall. The Leaves are round, black, and hairy. The Leaves of the Male Ciſtus reſemble thoſe of the Pomegranate-tree, but thoſe of the Female Ciſtus are white.

The Plant is of an aſtringent Quality, for which Reaſon the Flowers, bruiſed, and drank twice a Day in auſtere Wine, cure the Dyſentery; made into a Cataplaſm by themſelves, they reſtrain Nomæ or ſpreading Ulcers; and, in a Cerate, they heal Ambuſtions and old Ulcers (*Galen* ſays, of the Mouth). *Dioſcorides, Lib.* 1. *Cap.* 126.

The Characters of the Ciſtus are,

The Root is perennial, the Habit like a Tree. The Leaves are conjugated; the Calyx conſiſts of three or five Leaves; the Flower is roſaceous, pentapetalous, expanded, and furniſhed with numerous Stamina. The Ovary riſes from the Centre of the Calyx, with a rough, hemiſpherical, incumbent Apex; and becomes a roundiſh or acuminated, quinquecapſular, or multicapſular gaping Fruit, containing very numerous ſmall Seeds. *Boerhaave, Index alter, Vol.* 1.

Boerhaave mentions ſeventeen Species of this Plant.

1. Ciſtus; Ladanifera; Hiſpanica; ſalicis folio; flore albo, macula punicante inſignito. *T.* 260. SPANISH GUM-BEARING CISTUS, OR ROCK-ROSE, WITH WILLOW-LEAVES, AND WHITE FLOWERS SPOTTED WITH PURPLE.

2. Ciſtus; Ladanifera; Hiſpanica; ſalicis folio; flore candido. *T.* 260. SPANISH GUM-BEARING CISTUS, OR ROCK-ROSE, WITH WILLOW-LEAVES, AND WHITE FLOWERS.

3. Ciſtus; Ledon; foliis laurinis. *C. B. P.* 476. See LADANUM.

4. Ciſtus; Ledon; foliis populi nigræ; major. *C. B. P.* 467. LARGE SWEET CISTUS, OR ROCK-ROSE WITH POPLAR-LEAVES.

5. Ciſtus; mas; folio oblongo; incano. *C. B. Pin.* 464. *Jonſ. D. Tourn. Inſt.* 259. *Elem. Bot.* 227. *Boerh. Ind. A.* 275. *Ciſtus Hypociſtidem ferens*, Offic. *Ciſtus mas vulgaris*, Park. Theat. 658. *Ciſtus mas cum Hypociſtide*, Ger. 1093. Emac. 1275. *Ciſtus mas* IV. *Monſpelienſis folio oblongo, albido*, J. B. 2. 3. Chab. 95. CISTUS, WITH THE HIPPOCISTUS. *Dale.*

It grows on rocky Hills, and in Woods, and flowers in Summer. The Hypociſtis, which adheres to the Tops of the Clods about the Root, is uſed in Medicine. See HYPOCISTIS.

6. Ciſtus; mas; major; folio rotundiori. *J. B.* 3. 2. *Tourn. Inſt.* 259. *Elem. Bot.* 227. *Boerh. Ind. A.* 275. *Ciſtus mas*, Offic. Park. Parad. 421. Ger. 1093. Emac. 1275. *Ciſtus*, Chab. 95. *Ciſtus mas folio rotundo, hirſutiſſimo*, C. B. Pin. 464. Raii Hiſt. 2. 1007. *Ciſtus mas folio ſubrotundo*, Park. Theat. 658. *Ciſtus rotundifolius flore roſeo*, Rupp. Flor. Jen. 101. MALE HOLLY-ROSE, OR CISTUS. *Dale.*

It grows in *Italy* and *Spain* ſpontaneouſly, but with us it is cultivated in Gardens, and flowers in Summer. The Leaves and Flowers are uſed in Medicine, and their Virtues are already ſpecify'd from *Dioſcorides*, in the Beginning of this Article.

7. Ciſtus; mas; foliis undulatis, & criſpis. *T.* 259. MALE CISTUS, OR ROCK-ROSE, WITH WAV'D AND CURL'D LEAVES.

8. Ciſtus; mas; folio breviore. *C. B. P.* 464. SHORT-LEAV'D MALE CISTUS, OR ROCK-ROSE.

9. Ciſtus; Luſitanicus; folio ampliſſimo, incano. *T.* 259. H.

10. Ciſtus; mas; II. folio longiori. J. B. 2. 2.

11. Ciſtus; fœmina; folio Salviæ, *C. B. Pin.* 464. *Raii Hiſt.* 2. 1008. *Tourn. Inſt.* 259. *Elem. Bot.* 227. *Boerh. Ind. A.* 275. *Ciſtus fœmina*, Offic. Ger. 1094. Emac. 1276. *Ciſtus*, Park. Parad. 422. *Ciſtus fœmina vulgaris*, Theat. 660. *Ciſtus folio Salviæ*, Rupp. Flor. Jen. 101. *Ciſtus fœmina Monſpeliana, flore albo*, J. B. 2. 4. Buxb. 96. FEMALE HOLLY-ROSE.

The Leaves and Flowers are in Uſe, which agree in Virtues with thoſe of the *Ciſtus Mas.*

12. Ciſtus; Ladanifera; Monſpelienſium. *C. B. P.* 467. THE GUM-BEARING CISTUS, OR ROCK-ROSE OF MONTPELIER.

13. Ciſtus; Ledon; foliis anguſtis. *C. B. P.* 467. H.

14. Ciſtus; folio Halimi; I. *J. Cluſ. H.* 71. *Ciſtus, fœmina, portulacæ marinæ folio latiore, obtuſo.* C. B. P. 465.

15. Ciſtus; folio Halimi; II. *J. Cluſ. H.* 71. *Ciſtus, folio Halimi longiori incano.* J. B. 2. 5.

16. Ciſtus; fœmina; folio Salviæ; flore Ochræ colore. *C. B. P.* 465.

17. Ciſtus; foliis roriſmarini, ſed non incanis. *C. B. P.* 467. *Boerhaave's Index alter, Vol.* 1.

Beſides the foregoing Species of the CISTUS, *Dale* gives us the following.

LEDUM ROSMARINI FOLIO. Buxb. 182. Rupp. Flor. Jen. 101. *Ciſtus, Ledon foliis Roſmarini ferrugineis*, C. B. Pin. 467. Raii Hiſt. 2. 1006. *Ciſtus, Ledum Sileſiacum*, Ger. 1106. Emac. 1288. *Roſmarinus ſylveſtris quorundam*, J. B. 2. 23. Chab. 103. *Roſmarinum ſylveſtre Bohemicum Matthioli, ſive Ledum Sileſiacum Cluſii*, Park. Theat. 75. BOHEMIAN ROSEMARY.

It grows in Woods, and flowers in *July.* The Herb is in Uſe, which is of an inebriating Quality; for which Reaſon, in many Places of *Saxony*, they boil it in their Beer, to make the Peaſants drunk the ſooner; whoſe Heads, when they have drank freely of this good Liquor, are affected with it for ſome Days afterwards: They lay it alſo among Clothes to expel Moths. *Dale.*

CITHARUS, κίθαρος, according to *Heſychius*, ſignifies the Breaſt, the Side, and a Species of Fiſh. In the firſt Senſe it often occurs in *Hippocrates*, as *Galen*, in his *Exegeſis*, expounds the Word, which, as we are inform'd by *Erotian*, was a Term in Uſe among the *Dorians.*

CITRA *Indis Lignum*, J. B.

A Sort of reddiſh, ſweet-ſcented Wood, of an aromatic Taſte, growing in the *Eaſt Indies.* It is a Queſtion whether this Wood be of the *Citrus Arbor* of the Antients, of which they made very coſtly Tables. *Raii Hiſt. Plant.*

CITRAGO. A Name for the MOLDAVICA; *Betonicæ Flore albo*; which ſee. *Boerhaave, Index alter, Vol.* 1.

CITREUM. The Citron-tree.

The Characters are,

It hath broad ſtiff Leaves, like thoſe of the Laurel, but without any Appendix (as hath the Orange): The Flowers conſiſt of many Leaves, which expand in form of a Roſe: The Cup of the Flower is ſlender and fleſhy, and is divided into five Segments at the Top: The Piſtil of the Flower becomes an oblong, thick, fleſhy Fruit, which is divided into many Cells, is very full of Juice, and contains ſeveral hard Seeds.

Of this there are two Species.

1. Citreum; vulgare. *Tourn. Inſt.* 620. *Elem. Bot.* 493. *Boerh. Ind. A.* 2. 240. *Malus Citria*, Offic. *Citrum, Malus Citria*, Commel. Plant. Uſual. 87. *Malum Citrum*, Aldr. Dendr. 525. *Citreum, Malus Citria, Malus Medica*, Mont. Ind. 40. *Citreum Malum*, Ind. Med. 37. *Malum Citreum vulgare*, Ferr. Hiſp. 61. *Malus Citria vulgaris*, Jonſ. Dendr. 10. *Malus Citria ſive Medica*, Raii Hiſt. 2. 1654. *Malus Medica ſive Citria*, Park. Theat. 1506. *Malus Citria*, J. B. 1. 94. *Malus Medica*, Ger. 1278. Emac. 1462. C. B. Pin. 435. Chab. 4. THE CITRON-TREE.

2. *Citreum; Medulla dulci.*

The firſt of theſe is principally uſed in Medicine. It does not grow to be a Tree of any great Bigneſs, being frequently planted

planted for Fences and Hedges in the *Weſt Indies*, the Branches having a great many ſharp Thorns growing on them: The Leaves are oval, ſharp-pointed, larger than either Orange or Lemon leaves: The Flowers are white, like Orange-flowers, which are ſucceeded by very large oval Fruit, of a pale-yellow or lemon Colour; on the Outſide ſomewhat rugged, and full of Protuberances; the Inſide is white, fleſhy, and thick, containing but a ſmall Quantity of Pulp in proportion to the Bigneſs of the Fruit, with ſeveral Seeds like thoſe of Lemons.

Some are of Opinion, that the Citreum is that celebrated Tree, whoſe beautiful and alluring Fruit was forbidden to our firſt Parents in Paradiſe; for which Reaſon the Citron is alſo call'd *Pomum Adami*. In the Days of *Pliny* the Fruit was not eaten; and, according to *Salmaſius*, *Plutarch* informs us, that they only began to be eaten a little before his Time; but, on account of their grateful and fragrant Smell, they were laid among Clothes, and were eſteemed effectual for preſerving them againſt Moths. According to *Athenæus*, the Citron was laid in Cheſts among Clothes, as a thing of uncommon Value and Excellence. It was alſo eſteemed beneficial in Caſes where mortal Poiſons had been drank, and in order to ſweeten the Breath; for if any one ſqueezes the Juice of the Citron-peel into his Mouth, and ſwallows it, after being boil'd in Broth, or any other Liquor, it procures a ſweet Breath. The dry'd and freſh Citron, uſed before Meals, is ſaid to reſiſt all Poiſons, according to the Experience of *Athenæus*, who alſo informs us, "That the whole Citron, together with its Seed, boil'd in the "beſt Honey, till it is entirely colliquated, proves an effectual "Antidote againſt all Poiſons, if a ſmall Quantity of the Li- "quor is uſed every Morning." Beſides, *Dioſcorides* informs us, that the Seeds of the Citron, drank in Wine, reſiſt Poiſon, render the Body ſoluble, procure a ſweet Breath, and that they are principally uſed by Women againſt that Species of Diſorder call'd *Malacia*. *Pliny* alſo informs us, that the Seeds, when exhibited in Vinegar, are good againſt a Weakneſs of the Stomach. According to *Matthiolus ad Dioſcor.* *Galen*, when ſpeaking of the Medicinal Virtues of the Citron, uſes the following Words: "The Seeds are poſſeſſed of a highly acid and "dry Quality, ſo that they are dry and cold in the third De- "gree." But *Matthiolus* obſerves, that theſe Words are not to be underſtood of the genuine Seed, but concerning the acid Juice of the Citron, by which the Seed is every-where incloſ'd, as is obvious from the following Words. "Its Peel is alſo dry- "ing, but highly acrimonious; but, though it is drying in the "ſecond Degree, it is not cold, but temperate, or nearly ſo. "Beſides, its Pulp alſo contains a thick Juice, which is of a "cold and pituitous Quality; for this is alſo eaten as well as the "Peel. The Seed is unfit for being eaten, as alſo the Kernel "contained in it, which is the genuine Seed. It is bitter, and "poſſeſſed of a digeſtive and drying Faculty, receding from "temperate in the ſecond Degree." The Leaves are alſo of a drying and digeſting Nature. *Paulus Ægineta* alſo makes mention of a purgative Medicine call'd *Djacitrium*, which is compoſed of the Peel and Pulp of the Citron, with Water, boiled to a third Part, to which Honey is afterwards added, and Scammony and long Pepper ſprinkled upon them. From what has been ſaid 'tis obvious, that the Citrons were eaten in the Days of *Galen*. From *Apicius* alſo, *Lib.* 4. *Cap.* 3. we learn, that they were uſed as Food; but, for this Purpoſe, they were choſen with a ſweet Pulp, which, according to *Palladius*, the Antients had a Method of procuring by macerating the Seeds for three Days in Hydromel, or in Sheep's Milk, which is ſtill preferable. Others, according to the ſame Author, had a different Method of obtaining this End. Theſe are almoſt all the Virtues which, in the Works of the antient *Greeks* and *Romans*, we find aſcribed to the Citron; but as the Tree, which bears this Fruit, is much cultivated in *Italy*, *Portugal*, *Spain*, and the South of *France*, the Writings of the Moderns abound with Obſervations on the Virtues of this Tree, and its ſeveral Parts. Thus the Leaves are ſaid to be poſſeſſed of an aromatic Quality, for which Reaſon they are thought to be of a diſcutient drying Nature, and are therefore preſcribed for the Cure of Wounds. The Juice is alſo expreſs'd from the tender Leaves, and young Buds; then it is mix'd with *Venice* Turpentine in a glazed earthen Veſſel, which is to be well covered. When this Mixture is ſubjected to the Fire, it is to be ſuffer'd to boil till the Citron-juice is thought to be conſumed; and when the Subſtance is become tepid, it is ſtrained, and the Part affected anointed with it, as Neceſſity requires. When the ſuperfluous ſmall Branches are taken off, and cut into large Portions, an Oil is extracted from them by Diſtillation with Water, which is of a whitiſh-green Colour, a grateful Smell, and highly beneficial in the Cure of ſeveral Diſeaſes. Thus, according to *Ferrarius*, thirty or forty Pounds of the Leaves, and tender Branches, yield an Ounce of Oil. The Flowers, by their grateful Smell, and fragrant Scent, ſufficiently diſcover their aromatic, analeptic, and heating Quality. According to *Ferrarius*, in Places where theſe Trees are produc'd in great abundance, ſuch as *Regio*, and other Parts of *Sicily*, an Oil is obtained from the Flowers, by Diſtillation with Water, which is of a yellowiſh Amber-colour, a faint Smell, but, at the ſame time, of ſingular Uſe in Medicine; but he tells us, that ſcarce an Ounce of this Oil is to be obtained from fifty or ſixty Pounds of theſe Flowers. They are alſo, like other Flowers, preſerved with Sugar, and uſed as a Sweetmeat. They are of a cordial Nature, and generally preſcribed in Electuaries. The Virtues and various Uſes of Citrons have gradually, and at different times, been diſcover'd by the Experiments of different Perſons. We have already ſeen, that the Antients put them among Clothes, not only for the Fragrance of their Smell, but alſo to preſerve them from Moths; that they look'd upon them to be Antidotes againſt Poiſon, and that they uſed them as Food. According to *Ferrarius*, *Bedreddin*, an *Arabian* Author, tells us the following Story concerning the Virtues of the Citron: It is reported, ſays he, that, among the *Perſians*, a Man celebrated for Wiſdom, and dear to King *Choſroas*, was at laſt deprived of the Favour and Countenance of his Prince. Upon this, being clapt in Priſon, he, by the King's Orders, had his Choice of only one Species of Aliment for his Subſiſtence, and to all the others he preferred Citrons. When he was aſked the Reaſon of this Choice, he anſwered, "The grateful Smell of the Citron "chears my Spirits; its Skin and Seed are cordial, and revive "my Heart; its internal Peel ſupplies the Room of Food, "and its Pulp that of Drink." *Dominicus Pancirolus*, in his *Iatrologiſmoi*, or *Obſervationes Medicinales*, *Pentec.* 2. *Obſ.* 36. gives us an Account of a Patient labouring under an Atrophy, who, being juſt at the Point of Death, longed for Citrons, and upon eating a large one, which weigh'd four Pounds, he began immediately to grow better, and at laſt recovered entirely. In *Braſil* a Piece of Citron is uſed, by way of Suppoſitory, for curing a particular Species of Ulcers in the *Inteſtinum Rectum*, which are frequent in that Country. An entire Citron, ſtuck full of Cloves, is by ſome ordered to be carried in the Pocket, and frequently applied to the Noſe, as a Preſervative againſt contagious Diſeaſes. *Guido Patin*, a celebrated Phyſician, highly extols this Fruit, and gives it the Preference to ſome of the Shop-cordials, which have rather the Name than the real Virtues of a Cordial; and he affirms, that in all malignant Diſorders, putrid and peſtilential Fevers, more infallible Relief is to be expected from a few Citrons, than from all the various Preparations of Oriental Bezoar. *Diemerbroeck*, in his Treatiſe *de Peſte*, *L.* 3. *C.* 2. affirms, that all the Parts of the Citron are poſſeſs'd of an alexipharmic Quality; for which Reaſon, in a Plague, he orders the whole Citron to be cut into Slices, and boil'd among the Patient's Victuals, or mix'd with his common Drink. He alſo prepared a grateful Drink from Citrons, in the following manner:

Take three Citrons, full of Juice; cut them, together with the Peel, into ſmall Slices; then, putting them in a Glaſs Veſſel, add of Spring or Carduus-water, and of Roſe-water, each half a Pint; of ſmall White-wine, one Pint; as much white Sugar, or Syrup of Lemons, as is ſufficient to render it moderately ſweet. Mix all together for Drink. This Preparation is what is commonly call'd *Lemonade*, and is highly extol'd for extinguiſhing Thirſt, and a refreſhing Quality.

There are various other Liquors prepared from the Citron, which are better calculated for the Purpoſes of Luxury than thoſe of Medicine. The *Citronelle* of the *French*, for Inſtance, or what we call *Barbadoes* Water, is prepared in the following manner:

Take of the yellow Citron-rind, dried in the Sun, three Pounds; of *French* Brandy, ſix Pints: Let them ſtand in Infuſion, in a cold Place, for a Month, in a Glaſs Cucurbit, with an Alembic and Receiver adapted to it; then diſtil *in Balneo Mariæ*. When the ſtrongeſt of the Spirit is drawn off, add to the Remainder the Pulps of Citrons; and five or ſix Days after diſtil a Liquor, which ſerves to render the former Spirit weaker. Add to the Mixture a ſufficient Quantity of Sugar; or, in order to give it a more grateful Taſte, a proper Quantity of the Water of Orange-flowers.

The *Ratafia Citri*, ſo much eſteem'd by Perſons of a delicate Turn, is to be found in *Lemery's Pharmacope Univerſelle*. We ſhall here briefly conſider the ſeveral Parts of the Citron.

Firſt, then, as to its yellow Rind; it is of a fragrant Smell, recruits the Spirits, and has an acrid Taſte. In conſequence of the fragrant and highly penetrating Oil, with which it abounds, it is a highly grateful Aromatic, of a corroborating, ſtimulating, heating, inciding, and diſcutient Quality; and may be properly preſcrib'd in Caſes where a Languor is produced by a Defect of the Oſcillatory Motion of the Muſcles, ſince, in ſuch a Caſe, a proper Stimulus is required: Hence it is a beneficial Medicine

Medicine in Weakneſſes of the Stomach, Flatulences, and Cachexies. Hence the Reaſon is obvious, why 'tis claſs'd among the carminative, antihypochondriac, antiſcorbutic, ſtomachic, and antifebrile Medicines. It is added to ſeveral Diſhes and Liquors, either entire or raſp'd down, not only with a View to give them a grateful Flavour, but alſo as an Aromatic, in order to correct their cold and flatulent Qualities. By the Confectioners this Rind is uſed in various Preparations. When cut into Slices, and incruſtated with Sugar, 'tis what we call *candied Citron-peel*; which is not only grateful to the Taſte, but corroborates the Stomach, in Caſes where its Weakneſs ariſes from a Laxity of the Fibres. The *Italians* prepare their *Orſebato* of the yellow Rind of the Citron, beat with Melon-ſeeds in Water, which is a Drink of a grateful Taſte, and of an analeptic and refrigerating Quality.

Secondly, the white Skin, lying immediately under the yellow Rind, and which, when eaten, is of difficult Digeſtion, is ſaid to be poſſeſs'd of lithontriptic Qualities; and, according to *Ettmuller*, when diſtil'd with the Fruit of the Alkekengi, it yields an elegant nephritic Water. In the Shops it is ſcarcely uſed, except for the *Electuarium de Citro*, and ſtomachic Lozenges; but, by Confectioners, it is uſed for various Purpoſes.

Thirdly, the acid Subſtance, or Pulp, lying under this Skin, is eaten crude, either with or without Sugar, in Caſes where the Heat of the Body is to be leſſen'd, or the Orgaſm of the Blood check'd: Hence, in all hot Diſorders, it is accounted an excellent Medicine for quenching Thirſt. It not only refrigerates and cools the Body, by leſſening the too violent Motion of the Humours, but alſo reſiſts Putrefaction. For this Reaſon the Pulp is either boil'd among Aliments, or its Juice is expreſs'd crude upon Fleſhes, Fiſh, and in various Broths, not only for the ſake of its grateful Acidity, but alſo with a View to correct their urinous Smell, their Rancidity, or their Tendency to Putrefaction. It is of ſingular Uſe for theſe Purpoſes, eſpecially in the Summer-time, as it procures an Appetite, and promotes Digeſtion: Hence it is accounted an excellent Medicine in Fevers, and againſt the Scurvy, for correcting the muriatic and alcaleſcent Acrimony of the Juices. *Ettmuller* informs us, "That, both in preventing and curing burning malignant Fevers, no Medicines ought to be exhibited without "an Admixture of Citron-juice, whether mix'd with the Patient's Drink, or expreſs'd upon his Aliments; for when "the Spirits are exhauſted by profuſe Sweats, and the Patient "is ſeiz'd with an uncommon Weakneſs, upon exhibiting "Citron-juice, and other Preparations of it, as alſo Decoctions of the Citron, in Imitation of *Mynſicht*, their Acidity "gently coagulates the too fluxile Blood, procures it a due "Conſiſtence, prevents its Diviſion into too minute Particles, "reſiſts Malignity, and proves highly cordial. Beſides, the "Citron-juice is of a diuretic Quality; for which Reaſon 'tis "generally recommended againſt nephritic Diſorders. It is "ſaid to be a preſent Remedy in the Scurvy, and Diſorders "produced by a contaminated State of the Atmoſphere. The "*Dutch*, when they undertake a Voyage to the *Eaſt Indies*, "or any other far diſtant Country, where they generally contract the Scurvy, take along with them Citrons, and "Caſks full of their Juice, as a Cure for the Scurvy, as the "volatile Acid of the Citron corrects the rancid Acid of the "Scurvy." *Ferrarius* informs us, that there was a *German* Phyſician, who, upon the Approach of the Paroxyſms in intermittent Fevers, uſed to exhibit two Spoonfuls of the Citron-juice, mix'd with one Spoonful of *French* Brandy; and that, by means of every ſuch Doſe, the Fever became proportionably milder, and was, in a few Days, totally removed; beſides, the intenſe Thirſt, and feveriſh Heat, were mitigated by this Medicine. He alſo affirms, that the ſalutary Effects of this Medicine were ſufficiently experienced, in the Cure of a tertian Fever, which raged at *Rome* in the Summer-time. But becauſe, in a Plague, the moſt formidable of all the hot Diſorders, the Humours of the human Body have a ſtrong Tendency to Putrefaction, 'tis eaſy to perceive, that the Citron-juice is juſtly claſs'd among the antipeſtilential Medicines. Beſides, its Virtues are highly celebrated in Diſorders ariſing from the Exhibition of acrid and corroſive Subſtances, the noxious Qualities of which are obſerved to be reſiſted by Acids. Thus, in *Baptiſt du Hamel's Hiſtoria Reg. Scient. Acad.* we are inform'd, that thoſe who were at the very Point of Death, in conſequence of having taken Euphorbium, were effectually cured by an Exhibition of Citron-juice: Hence 'tis obvious, for what Reaſon, and againſt what kinds of Poiſons, the Citron-juice may be recommended as an Antidote; and that *Stenzelius*, in his *Toxicologia*, is in the right, when he ſays, "There "is no doubt to be made, but the acid Juice of the Citron "reſiſts the alcaline Poiſons of Animals; but I much doubt, "whether the Citron is an univerſal Antidote for all Poiſons, "as *Athenæus* maintains." It is ſaid to prove effectual againſt that Species of Poiſon call'd *Aqueta*, which is a Liquor prepared from Arſenic. *Hoffman*, in his *Clavis Schrod.* affirms, that the Citron-juice cured a Man bit by a Viper; but *Charas*, in whoſe Houſe the Accident happen'd, charges his Story with Falſhood. And *Redi*, in his *Opuſcula*, T. 2. does not heſitate to deny the alexipharmic Virtues of the Citron againſt the Bites of Vipers; and pronounces the Story of *Athenæus*, concerning the Virtues of the Citron againſt the Bites of Aſps, to be entirely fabulous: Hence we underſtand, why the Citron-juice contributes to the Cure of a *Malacia*, or a depraved Appetite, wherein ſome Women, eſpecially when pregnant, long for uncommon and unuſual Aliments; becauſe, for Inſtance, it ſubdues and corrects the predominant alcaline and rancid Acrimony, which is the Cauſe of the Diſorder. It may be claſs'd among the diuretic and ſudorific Medicines, becauſe, by its acid Quality, it ſtimulates the Solids, whilſt, at the ſame time, it dilutes and attenuates the Humours. But whether its reſolvent Virtue, as *Quercetan* would have it, is ſufficient to diſſolve ſtony Concretions form'd within the Viſcera, is what we will not take upon us to determine, ſince we have no Experience with reſpect to this Particular. But the Reaſon that Author aſſigns, which is, that, without the Body, it is capable of diſſolving ſtony Concretions, Pearls and Corals, does by no means appear ſatisfactory, ſince Vinegar does the ſame; which, however, is not celebrated as a Lithontriptic, or Menſtruum for Stones of the human Body. But ſince it is poſſeſs'd of a Quality, by means of which it checks the exorbitant Motions of the Humours, and prevents inflammatory Infarctions or Obſtructions, it is not to be denied a certain Efficacy againſt nephritic Pains, which almoſt always follow inflammatory Stagnations; or, when they laſt for any conſiderable time, bring on ſuch Stagnations. But the Citron-juice is, in a more particular manner, beneficial in alleviating nephritic Pains, when it is exhibited with Oil of ſweet Almonds. But they who recommend an Ounce or two of it, drank in White-wine, for expelling the Stone, muſt be certain, that the Stone is ſo ſituated, that it may be convey'd either from the Ureters to the Bladder, or from the Bladder without the Body; and that the Patient is capable of ſupporting the Stimulus; otherwiſe lubricating and relaxing Medicines alone are more properly to be uſed. This Juice is ſaid to be a Remedy againſt Worms of the Inteſtines, for no other Reaſon, but becauſe Acids prove fatal to them. Since we have ſeen, that, in Caſes where the Citron-juice produces any happy Effects in the human Body, it acts as an Acid, it is obvious, that, by an unſeaſonable or immoderate Uſe of it, the ſame Effects may be produced as by other Acids of the ſimple Kind, which generate thoſe Diſeaſes ariſing from a predominant Acid. But when the Citrons are unripe; and abound with an acid, crude, and harſh Juice, like thoſe generally ſold in the Northern Countries, the too liberal Uſe of them produces an acid Acrimony, which, by its aſtringent Quality, generates various Diſeaſes and Obſtructions. The fatal Effects produced by eating Citrons too plentifully, we learn from the Caſe of a Woman, related in the *German Ephemerides*, who, after eating ſix or ſeven of them a Day for a Year, died of a ſcirrhous Tumor of the Pylorus and Duodenum, ſo that there ſcarcely remain'd room ſufficient to introduce a Quill. The Citron-juice ſeems, in my Opinion, ſays *Rieger*, to contribute to the Protraction of Life, for no other Reaſon, than that it corrects the alcaleſcent State of the Fluids, and conſequently belongs to that Species of Aliment which reſiſts Putrefaction: But the frequent and daily Uſe of it ſeems far ſafer, when it is mix'd with other Liquors, than when it is exhibited alone. Thus, for Inſtance, when reduced to a Syrup with Sugar, it is mix'd with Piſans, which may be drank at Pleaſure, to alleviate the Heat and quench the Thirſt; or *Lemonade* may be prepared of it, in which Liquor the Juices of ninety Citrons were conſumed, in the Space of twenty-four Hours, to the Recovery of the Patient from a continued Fever, as we learn from a Caſe in *Blegny's Zodiacus Medico-gallicus*. *Ferrarius* is of Opinion, that the frequent Uſe of the Pulp, made up with Sugar, and boil'd, contributes much to the Preſervation of Health, and the Protraction of Life; and, becauſe theſe are Matters of the laſt Importance, we ſhall here tranſlate the whole Paſſage from that Author. "The Caſe, ſays "he, of *Joannes Baptiſta Martini* convinces me of the ſalutary Qualities of Citron-juice. This Man, for forty Years, "from the Beginning of *March* to the End of *October*, every "Morning almoſt, three Hours before Breakfaſt, took half a "Spoonful of the above-mention'd Compoſition; but in the "Evening, before he went to ſleep, he took the third Part of "a Spoonful of the ſame Liquor. This Evening Doſe he did "not ſwallow all at once, but ſuffer'd it to melt away gradually, that it might wipe away, and render fit for Expectoration, the Phlegm, which, in the Night-time, adheres to the "Fauces and Thorax; as alſo, that it might extinguiſh the "Thirſt generally produced by the firſt Concoction. But in "the Morning he ſwallow'd this Medicine at once, for diſpelling, expectorating, or evacuating by Stool, the Phlegm of "the Stomach, for rendering his Body ſoluble, for provoking "Urine, preventing Putrefaction, and quenching Thirſt. "When, in the Winter Seaſon, inclement ſouthery Winds "blow'd, he uſed ſucceſsfully this Medicine. By means of "this

" this delicious and eaſily prepared Remedy, without the " Aſſiſtance of any other, he preſerved his Life, and enjoy'd " good Health for ſo many Years; and, when he was almoſt " eighty Years old, Age was not to him a Diſeaſe, according " to the Proverb, but a healthy vigorous State of Life, em- " ploy'd in the Diſcharge of civil and domeſtic Offices, and " bleſs'd with the grateful Reflections of a well-ſpent Life. In " this Compoſition he was particularly careful, that the Acri- " mony of the Juice ſhould be predominant, leſt too great " Sweetneſs ſhould excite a Nauſea. For this Reaſon he made " up eight Ounces of Citron-juice, with twelve Ounces of " Sugar; then boil'd them to a due Conſiſtence, agitating " them with a wooden Spatula, leſt the Sugar ſhould be burnt, " and become red. To this Compoſition, before it was cold, " he added an Ounce of the fineſt Sugar, coarſely pounded, " that the Compoſition, when concreted, might be more grate- " ful to the Taſte. I myſelf taſted this Mixture, and muſt " own, that the due Mixture of the Acid and the Sweet " was highly grateful to the Palate." The Pulp of the Citron is uſed externally for cooling Epithems, whilſt, for Inſtance, in Fevers, in order to allay the Heat, Slices of it are applied to the Wriſts of the Hands, and the Soles of the Feet. But I very much doubt, whether the Pores can be thus contracted, and Tranſpiration ſtopt, by cold Applications, without Fear of ſome Danger ariſing from a Retropulſion of the perſpirable Matter to the internal Parts. After impure Coition the Citron-juice, mix'd with Water, is ſaid to be of great Uſe for waſhing the Penis. It is alſo poſſeſs'd of a coſmetic Quality, and removes Spots, Freckles, Ring-worms, and Puſtules of the Face, eſpecially when it is mix'd with Camphire and White-wine. *Nibelius* informs us, that, according to *Jonſton*, a Citron, cut thro' the Middle, ſprinkled with Flower of Sulphur, and warm'd in hot Aſhes, contributes to the Cure of the Itch, if the Parts affected are anointed with it. This Effect it produces by its Juice; for which Reaſon, Lemon-juice may alſo be added to the Powders, of which the Ointments againſt the Itch are compoſed. But general Evacuations ought firſt to be premiſed, leſt, even in this Caſe, the Health of the Patient ſhould be endanger'd by a Retropulſion of the perſpirable Matter. But, ſince the Skin is render'd ſomewhat rough by the Uſe of acrid abſtergent Medicines, it may be again ſmooth'd by Milk, or Emulſions of mild farinaceous Subſtances, as the cold Seeds, and ſweet Almonds. The Citron-juice is alſo uſed, inſtead of Vinegar, for coagulating Milk, and ſeparating the Whey. That the Citron-juice may be readily had, when Citrons themſelves cannot be found, the *Italians* ſell the expreſs'd Juice, impregnated with Sugar: This they call *Agre di Cedre*. In *Egypt* the expreſs'd Juice of the Citrons, after having ſtood ſome time, till it becomes clear, is put up in Caſks, and kept for Sale. The Inhabitants of *Ceylon* boil it in earthen Veſſels, till it becomes black, like Pitch; after which they keep it for Uſe. From the Sediment or Fæces of the Juice, when kept in Jars for Depuration, according to *Pomet*, is prepared, by Diſtillation, the *Oleum Citri vulgare*, which is greeniſh, fragrant, and tranſparent, and of which, for the moſt part, about three Pints are obtain'd from fifty Pounds of the Fæces. According to *Nebelius*, an eſſential Salt may alſo be obtain'd from the acid Citron-juice, by boiling it, when expreſs'd and ſtrain'd, to a Conſumption of the Humidity; and afterwards putting it by in a cool Place, that the Cryſtals may adhere to the Sides or Bottom of the Veſſel. Theſe Cryſtals partake of the ſame Nature with the Juice, and are of a refrigerating Nature, and reſiſt Putrefaction. They alſo ſerve to prepare the *Syrupus Citri Siccus*.

Fourthly, the Citron-ſeeds are poſſeſs'd of an aromatic Quality, and are uſed principally in Emulſions againſt Fevers, and other malignant Diſorders; as alſo againſt the Meaſles, Small-pox, and Worms of the Inteſtines. From their aromatic Quality we muſt account for their Efficacy, commonly aſcrib'd to them, againſt Poiſons; ſince, by increaſing the Motion of the Humours, it promotes a free Perſpiration, and, like other Aromatics of a diaphoretic Nature, affords a proper Opportunity of diſpelling and eliminating the peccant Matter thro' the cutaneous Pores. According to *Ferrarius*, *Piſanelus* affirms, that, when drank in Wine, it is effectual againſt the Hæmorrhoids, and Poiſons of all Kinds, but more eſpecially that of Scorpions. The Oil, expreſs'd with hot Inſtruments from theſe Seeds, after they are unhuſk'd and bruis'd, is, by *Porta*, in his *Magia Natural.* ſaid to be effectual againſt Poiſons. He alſo affirms, that it is the moſt proper Menſtruum for extracting the Odours from Muſk, Amber, and Civet, and for preparing Ointments, becauſe it is long before it becomes rancid. *Ferrarius*, from *Badreddinus*, informs us, that the *Perſians* uſe it in their Lamps. In the *Pharmacopœia Auguſtana*, it is call'd *Oleum è granis Citri*, and is recommended in arthritic Pains, and the Swellings which ſucceed them. It is alſo ſaid to expel the Stone from the Kidneys and Bladder. In a Plague it is recommended as a powerful Alexiterial; and ſome pretend, that it kills Worms, either when exhibited internally, or when the Belly is anointed with it.

Beſides the more important and uncommon Preparations of the Citron, already ſpecified, there are ſeveral others directed in the Diſpenſatories, and kept in the Shops; ſuch as the *Conditum totius Citri*, in the *Inſtitutiones Medicæ* of *Sennertus*; the *Syrupus de toto Citro eſſentificatus*, in the *Diſpenſat. Brandenburg.* the *Eſſentia Corticum Citri*, in the ſame Diſpenſatory; the *Aqua Citri compoſita ex Succis*, ibid. the *Aqua Citri cum ſpiritu vini*, ibid. the *Aqua Corticum Citri*, in the *Pharmacop. Pariſ.* the *Decoctum Citratum*, in the *Diſpenſat. Brandenburg.* the *Electuarium de Citro Meſuæ*, in the *Antidotarium Bononienſe*, which, in *Lemery's Pharmacop.* is call'd *Electuarium ex Citro Stomachicum Meſuæ*; the *Electuarium de Citro*, in the *Pharmacop. Pariſ.* the *Electuarium de Citro Tabulatum*, in the *Pharmacop. Bruxellenſis*, which, in the *Pharmacop. Argentorat.* and that of *Lemery*, is call'd the *Electuarium de Citro ſolutivum*; the *Elixir Citri*, in the *Diſpenſat. Brandenburg.* the *Elixir Citri purgans*, in the *Pharmacop. Argentorat.* the *Eſſentia Citri*, in the *Pharmacop. Auguſt.* the *Extractum Diacitri*, *D. D. Hieronymi Reuſneri*, in the *Phar. Auguſt.* and *Argentorat. Morſuli Citri ex ſucco*, in the *Pharmacop. Argentorat.* the *Syrupus de Corticibus Citri*, in the *Diſpenſat. Brandenburg.* the *Syrupus Acetoſitatis Citri*; the *Syrupus e Citro tota*, in the *Diſpenſat. Brandenburg.* the *Syrupus de toto Citro Eſſentificatus*, ibid. and the *Unguentum de Citriis*, in the *Diſpenſat. Brandenburg.* There are ſo many other Preparations of the Citron, in the practical Authors, and Writers of Diſpenſatories, that a bare Catalogue of them would tire the Reader's Patience, without informing his Judgment.

The *Syrupus e Succo Citriorum*, or Syrup of the Juice of Citrons, is thus prepar'd:

Take one Pint of the clear Juice of Citrons; of fine Sugar, two Pounds; and boil into a Syrup, with a gentle Fire.

The *Syrupus Corticum Citriorum*; or Syrup of Citron-peels.

Take five Ounces of the outer yellow Citron-peel, full ripe, and freſh; of Kermes-berries, or, in their ſtead, of the imported Juice, two Drams; of Spring-water, three Pints: Steep them together, for one Night, in a Bath-heat; and, to the ſtrain'd Liquor, put two Pounds and a half of fine Sugar; and, with a moderate Heat, boil up into the Conſiſtence of a Syrup. *London Diſpenſatory.*

The ſame Virtues are attributed to the *Citrium Medulla dulci*, ſweet Citron, as to the ſweet Orange.

CITRINATIO. Complete Digeſtion. *Theatrum Chymicum*, *Vol.* 2. Or, according to *Rulandus* and *Johnſon*, Reſuſcitation, or Reſurrection.

CITRINELLA, *Geſn.* from its yellow or lemon Colour, is a ſmall Bird, about the Bigneſs of a Lark. It ſings agreeably, and lives upon Seeds. It contains much volatile Salt and Oil, and is judg'd very proper to be eaten for the Epilepſy. *Lemery des Drogues.*

CITRINULA is the Flammula or Spearwort, an Herb much uſed by *Paracelſus*, as appears in his Writings. *Johnſon.*

CITRINULUS. A Stone between a Cryſtal and a Beryl, called, by *Paracelſus*, *Saxifragus*. *Citrinulus*, in *Rulandus*, is a pale Cryſtal. They make of it a Liquor, in manner of an Alcali, againſt the Stone. *Caſtellus.*

CITRONES. A Term which occurs in *Paracelſus*, *Philoſ. Athenienſ.* where he ſays, that, among other Bodies to be found in the Sea, there are *Corallia*, *Trina*, and *Citrones*; but he no-where explains what he means by it. *Caſtellus.*

CITRULLUS, Offic. *Citrullus Officinarum*, Ger. 767. Emac. 913. *Citrullus folio Colocynthidis ſecto, ſemine nigro; quibuſdam Anguria*, J. B. 2. 235. *Citrullus, Anguria, Tetranguria*, Chab. 133. *Anguria*; *Citrullus dicta*, C. B. Pin. 312. Raii Hiſt. 1. 643. Tourn. Inſt. 106. Elem. Bot. 89. Hiſt. Oxon. 2. 228. Boerh. Ind. A. 2. 79. Rupp. Flor. Jen. 43. *Anguria ſive Citrullus vulgatior*, Park. Theat. 771. *Citrullus jacea Braſilienſibus*, Marcg. 22. *Citrullus jacea ſive Anguria*, Piſ. 262. CITRUL, or WATER-MELON.

Among the later *Greeks* it is called ἀγγούριον, from ἄγγος, which ſignifies any Veſſel or Receptacle. This Name was probably beſtow'd upon it, becauſe the Shell of the Fruit, when the Pulp is taken out, may ſerve as a Veſſel for holding any Liquor. It ſpreads along the Earth ſmall rough Twigs, with large Leaves, cut in deep Jags, rough and uneven. From the Sinuſes of theſe Leaves ſpring ſmall Tendrils, as alſo Foot-ſtalks ſuſtaining yelloviſh Flowers, which are ſucceeded by large round Fruit, capable of filling both one's Hands. The Rind is ſomewhat hard, but ſmooth, and without any Tubercles, of a darkiſh-green Colour, and variegated with Specks of a faint-green. Its Pulp is like that of the common Cucumber, white, firm, and of a grateful Taſte. The Seed is placed in a fungous Subſtance, which is lodged in the Meditullium. It is oblong, broad, flat, black, rough, and furniſhed with a pretty hard Huſk, under which there is a white Pulp, which, like that of the

the Gourd-ſeed, is grateful to the Palate. The Rind of the Citrul is not always of the ſame Colour; for in ſome it is green, whereas in others it is variegated with whitiſh Spots; in ſome the Pulp is red and ſweet, and in others white, and not ſo grateful to the Palate; the Seeds in ſome are black, and in others of a rediſh-brown. It grows ſpontaneouſly in hot Climates, ſuch as *Apulia*, *Calabria*, *Sicily*, and other Countries which lie towards the South. In the more northerly Regions it is ſown, and bears, but never arrives at perfect Maturity. It flowers in *Auguſt*, and its Seeds are ripe in the Autumn, in *Italy*, *Spain*, and other hot Climates. In the *Indies* it thrives no-where better than in *Braſil*, where its Pulp is ſweet and ſucculent, like thoſe imported yearly into *Muſcovy* and *Peterſburg* from *Aſtracan* and *Caſan*, under the Name of *Arbus*, which is, perhaps, borrowed from the *Turks*, who call the Water-melon *Carpas*. They are capable of being preſerved for a conſiderable time without Corruption; but for this End they muſt be pulled before they are entirely ripe. Their fungous Pulp or Marrow is a grateful Aliment, not very nouriſhing, aqueous, but juſtly celebrated for its moiſtening, laxative, diuretic, and refrigerating Qualities. In theſe reſpects they agree with the Cucumber; but in this they ſurpaſs it, that, being free from its viſcid Quality, they are ſooner digeſted, and do not prove offenſive to the Stomach, though eaten in large Quantities. They are eaten raw, but Luxury, the fruitful Parent of Cookery, has laid a Foundation for their being prepared in a thouſand other Forms. The Seeds are, by Phyſicians, claſſed among the Four greater cold Seeds. They provoke Urine, but leſs powerfully than the Seeds of the Pompion. They are principally uſed in cooling Emulſions. Not only the Species of Citrul, of which we now ſpeak, is poſſeſſed of theſe Qualities, but alſo various other Species growing out of *Europe*, which are grateful to the Palate and Stomach, in proportion to the Heat of the reſpective Climates, in which they are produced.

The Seed is the only Part uſed here, being one of the great cold Seeds, and is of the Nature of Melon and Cucumber-ſeed, agreeing with them in their cooling diuretic Faculties.

Boerhaave calls this Plant *Anguria*.

CITTA, *κίττα*. A Diſeaſe incident to Women. See PICA.

CITTITES. The ſame as AETITES, which ſee. *Rieger*.

CIVETTA. See ZIBETHUM.

CLADOS, *κλάδος*, in *Hippocrates περὶ φύσ. παιδίου*, is a Slip taken from a Tree to ſet in the Ground.

CLÆR. A Chymical Term of Art, ſignifying Bone-flour, which is prepared of the Bones of the fore Part of the Cranium of a Calf, depurated from Fat by Boiling, afterwards calcined to a Whiteneſs, and very finely levigated on a Porphyry-ſtone; then moiſtened with freſh Water, and calcin'd again in an Earthen Pot cloſed, and, after Refrigeration, reduced again to a very ſubtile Powder, which is ſprinkled through a Sieve upon Earthen Veſſels, to prevent their contracting any Chinks. *Caſtellus*.

CLAKIS. A Name, in *Rieger*, for BARNACLES, which ſee.

CLAMOR, *βοή*. An Intenſeneſs of the Voice, a loud Outcry, a Clamour. This is ſometimes the Cauſe of a Rupture of the Veſſels, and ſometimes of a Diſorder like an Inflammation about the Membranes of the Fauces and Muſcles, which may be compared to that ulcerous and inflammatory Laſſitude, which affects the Hands, Legs, and Loins, after exceſſive hard Labour, the ſpirituous and humid Particles being exhauſted, and the Fibres and Membranes dry'd and contracted. Theſe are *Galen*'s Obſervations. Sometimes a *Clamor*, as *Paracelſus* ſays, is a Symptom of a tartareous Diſeaſe, and proves the Preſence of a Tartarus, becauſe it burns and cuts like a Knife, *Paracel. de Tartar. Lib. 2. in Notis.* A *Clamor* is ſometimes alſo a ſort of Remedy, and preſcribed as ſuch in order to rouſe Perſons out of a Lipothymy, or Syncope. *Caſtellus*.

CLANDESTINA. A kind of Plant, with a monopetalous, perſonated Flower, tubulated in its lower Part, and its upper divided into two Lips, the upper of which is fornicated, and the lower divided into three Parts. From the Flower-cup, which is tubulated and crenated, riſes the Pointal, which perforates the Bottom of the Flower, and becomes an oblong unicapſular Fruit, which, dividing into two Parts, diſcharges, with a Spring, or elaſtic Force, its Seeds, which are of a roundiſh Figure.

I know but one Species of *Clandeſtina*, whoſe Varieties are the Clandeſtina with the bluiſh, and that with the white Flower. *Tournefort. Inſtit.*

CLANGE, *κλαγγὴ*, is properly the Cry of Cranes and Geeſe, a ſhrill Noiſe; hence *κλαγγώδης φωνὴ*, "a ſhrill Voice," an Expreſſion uſed by *Hippocrates*, particularly in *Prorrhet.* where *Galen*, in his *Comment.* obſerves, that *κλαγγώδης φωνὴ* is occaſioned by a Dryneſs of the vocal Organs, as *βεβεγχόδης*, "a hoarſe" (Voice) is of their immoderate Humidity.

CLARETA. The White of an Egg. *Rulandus*.

CLARETUM.

Claretum and *Clareta* ſignify what in *Engliſh* we call Claret. By this Name, in Medicine, is generally imply'd an Infuſion of aromatic Powders in Wine, which is afterwards edulcorated with Sugar or Honey. This Species of Liquor is alſo called *Vinum Hippocraticum*, and, by the *Germans*, *Hippocras*, becauſe, when the Infuſion is finiſhed, it is ſtrained thro' *Hippocrates's Sleeve*, as 'tis commonly call'd. It is prepared of various Aromatics, and other Ingredients, according to the different Intentions to be anſwered. Thus, for Inſtance, there is a laxative Claret in *Schroder's Pharmacopœia*; and another, bearing the ſame Title, in *Zwelfer's Pharmacopœia Regia*. *Schroder*, in the above-mention'd Work, has alſo a purgative Claret, which he calls *Vinum Hippocraticum Antimoniale*. *Barchuſen*, in his *Synopſis Pharmaciæ*, gives us Directions for preparing a purgative Claret; and *Zwelfer*, in his *Pharmacop. Regia*, gives us a Recipe for a hydragogue Claret. Other Formulas of preparing Claret, ſuited to different Intentions, occur in different Authors, to which every one may have Acceſs. Some, for making the Infuſion, uſe Spirit of Wine, both ſimple, and impregnated with Aromatics; others mix diſtil'd Waters with the Wine, or the Spirit of Wine. *Foreſtus*, in *Obſ. Med. Lib. 3. Obſ. 11.* alſo gives the Name of *Claret* to an Infuſion prepared of one Pint of Spring-water, half an Ounce of the beſt Cinnamon, and three Ounces of the whiteſt Sugar. In tertian Fevers he ordered this Infuſion to be drank inſtead of Wine: And *Geiger*, in his *Kelegraphia*, gives us the following Recipe for quenching Thirſt:

> Take of pure Spring-water, two Pints; of Sugar-candy, one Ounce; of the Powder of red Sanders, three Drams; of Cinnamon, two Drams; and of the Flowers of red Roſes, one Dram: Infuſe in a cloſe-ſtopt Glaſs, ſituated in a warm Place, for ſix Hours; then ſtrain off the Liquor, and add one Scruple of the Spirit of Vitriol; of Lemon-juice, and of the Julaps of Violets and Roſes, each one Ounce. Mix up into a Claret.

Some will have Claret to be different from the *Vinum Hippocraticum*, becauſe the former is edulcorated with Honey, and the latter with Sugar; and becauſe the Claret is generally rendered yellow by means of Saffron, whereas the *Vinum Hippocraticum* is red, ſince the Powders are infuſed in a Wine which is naturally red, and not made ſo by Art. Whoever intend to make extemporaneous Claret, uſe Spirit of Wine, impregnated with aromatic Powders, or a certain aromatic Eſſence, called the *Tinctura pro Clareto*, of which they pour a few Drops into a Glaſs of Wine. Without giving the particular Recipes, which, in the ſeveral Diſpenſatories, come under the Title of *Vinum Hippocraticum*, we ſhall only here take a View of thoſe which come under the Denomination of Claret. In *Bauderon's Pharmacopœia* the *Clareta Simplex* is prepared in the following Manner:

> Take of the beſt Aqua Vitæ, ſix Ounces; of Roſe-water, four Ounces; of white Sugar, three Ounces; and of the beſt Cinnamon, one Ounce: Infuſe all together for twenty-four Hours, in a narrow-mouth'd and cloſe-ſtopt Glaſs Veſſel; then ſtrain the Liquor twice or thrice thro' *Hippocrates's Sleeve*. An Ounce of this may be exhibited in the Morning before Breakfaſt, in order to corroborate the Stomach, and diſpel Flatulences.

The *Clareta Compoſita*, in the ſame *Pharmacopœia*, is prepared of aromatic and aſtringent Ingredients, which, when macerated in White-wine, are diſtil'd, with an Addition of Baum, white Sugar, and Cinnamon.

There is alſo another Species of Claret, which, in the *Pharmacopœia Pariſienſis*, is call'd the *Claretum è ſex Seminibus Carminativis*, and which is prepared in the following Manner:

> Take of the Seeds of Aniſe, Fennel, Dill, Coriander, Caraway, and Carrots, each one Ounce: Bruiſe and macerate them in a cloſe-ſtopt Glaſs Veſſel, with a ſufficient Quantity of Aqua Vitæ, which muſt riſe four Fingers Breadth above them, expoſing the Whole to the Heat of the Sun for three Weeks. Then ſtrain the Liquor thro' brown Paper, and add to it a Syrup prepared of one Pound of white Sugar, and a ſufficient Quantity of Chamomile, or Graſs-water. Mix all together. A Spoonful or two of this may be exhibited for a Doſe, and it is eſteem'd an excellent Medicine in Flatulences proceeding from a cold Cauſe.

CLARIFICATIO. Clarification.

The Apothecaries are ſaid to clarify any thick and turbid Liquors, the expreſſed Juice of Vegetables, for Inſtance, Decoctions, or Syrups, when they render them more tranſparent, pure, and free from Fæces. This they do, either by placing the Liquor in a cool Place, allowing it Time to ſettle, that its more

more earthy and feculent Parts may gradually and ſpontaneouſly ſubſide to the Bottom. This, in the Language of the Chymiſts, is call'd *Clarificatio per Subſidentiam*, or *Clarificatio per Reſidentiam*. Liquors are alſo clarify'd by *Filtration*, or *Colation*, by which Method the groſſer Parts remain in the Filtre, whilſt thoſe which are finer, and more ſubtile, paſs thro' it. Fermentation is another Method of clarifying Liquors, becauſe, by the fermentative Motion, their groſſer Parts are carry'd to the Bottom. Liquors are alſo ſometimes clarify'd by being boil'd a little with Whites of Eggs reduced to a Froth; for this Subſtance, in conſequence of its glutinous Nature, adheres to the groſſer Parts of the Fluid, which are afterwards to be ſeparated by Filtration. Another Method of clarifying Liquors is by an Affuſion of other Liquors, according to the Nature of the Liquor to be clarify'd; by which means it being render'd turbid, and a Precipitation produc'd, may become more clear and pure.

CLARUM. Any thing made of Cryſtal. *Rulandus.*

CLASIS, CLASMA, κλάσις, κλάσμα, from κλάω, to break, a Fracture. See FRACTURA.

The Verb κλᾶν is often uſed by *Galen*, *Lib.* 2. *de Mot.* to expreſs ſuch a Diſtortion or Reflexion of the Muſcles as almoſt deprives them of Action; and ſo in *Hippocrates*, *Lib. de Fract.* it is ſpoken of the Reflexion or Recurvation of a Member.

CLAVATA. The Name of a Suture. See SUTURA.

CLAVATIO. The ſame as GOMPHOSIS. See ARTICULATIO.

CLAUDIACON, κλαυδιακόν. The Name of a Collyrium, in *Ægineta*, *Lib.* 7. *Cap.* 16.

CLAUDICATIO. Lameneſs.

CLAVELLATI CINERES. Pot-aſh. See the Article ALCALI.

CLAVICULÆ, in Anatomy, the Clavicles.

The two Clavicles are ſituated tranſverſly, and a little obliquely, oppoſite to each other, at the ſuperior and anterior Part of the Thorax, between the Scapula and Sternum.

Each Clavicle reſembles an *Italic S*, being a long Bone, irregularly cylindrical, bent forwards near the Sternum, and backwards near the Scapula, as if it were made up of two Arches join'd endwiſe in oppoſite Directions, that which lies on the fore Part of the Breaſt being the largeſt. The Clavicles are more ſtrait in Women than in Men.

The Clavicle is divided into a Body, or middle Part, and two Extremities, one anterior, inferior, and internal, which I term the Pectoral or Sternal Extremity; the other poſterior, ſuperior, and external, which I name the Humeral or Scapular Extremity.

The pectoral Extremity is the thickeſt, and of a triangular Figure, eſpecially near the End, where it is a little enlarged, and ſhews a cartilaginous Surface with three Angles, of which the loweſt is the moſt prominent, and turned a little toward the Cavity of the Thorax. Near theſe Angles there are ſeveral muſcular and ligamentary Impreſſions, one of which, near the inferior Angle, is ſometimes raiſed like a Tubercle.

The humeral Extremity is flat and broad, and two Sides may be conſidered in it, one ſuperior, the other inferior; likewiſe two Edges, one anterior, the other poſterior; and a ſmall articular Surface.

The upper Side has ſeveral Inequalities, and in the lower there is a kind of oblong, rough, oblique Tuberoſity. The poſterior Edge is convex, thick, and uneven, being that of the ſmall Arch of the Clavicle. The anterior Edge is concave, narrow, and ſmooth every-where, except near the great Arch, where it has a rough Impreſſion. The articular Surface terminates this Extremity, being cartilaginous, turned obliquely forward, and of an oval Figure, like that of the Acromium, with which it is articulated.

The Body, or middle Portion, which, together with the pectoral Extremity, forms the great Curvature of the Clavicle, is not ſo thick as the Extremities. It is a little flatted both on the upper and lower Sides, and therefore two Edges may likewiſe be diſtinguiſhed in it. The upper Side is pretty even, the lower ſomething rougher, and a little depreſſed by a ſuperficial Chanel. The Edges are rounded, the anterior being convex, the poſterior concave.

The inner Subſtance of the Extremities is cellulous: The reſt is more ſolid, conſiſting of very thick Sides, with a narrow Cavity, more or leſs fill'd with reticular bony Filaments.

The particular Situation of this Bone is eaſily underſtood from what has been ſaid. The moſt uneven Side of the Body, and rough Side of the humeral Extremity, are always to be turned downward.

The Clavicle is articulated with the Acromium and Sternum by Arthrodia. The Articulation with the Scapula, by means of the Acromium, is as real and diſtinct as the Articulation with the Sternum, which laſt appears ſomething extraordinary in the Skeleton, where the ſmall Notch in the Sternum is no-ways proportion'd to the broad Extremity of the Clavicle.

The Clavicles ſerve for Buttereſſes to the Scapulæ, and bound their Motions forward and upward; by their ligamentary Connections they likewiſe hinder the Scapulæ from running too far back, which might happen in thoſe who drag Burdens behind them. They alſo give Inſertion to many Muſcles.

The ſternal Extremity of the Clavicle is cruſted over with a Cartilage, which is a little convex, and covers its whole triangular Surface; beſides which it has another moveable Cartilage, common to this and the Sternum. See STERNUM.

The ſmall cartilaginous Surface of the humeral Extremity of the Clavicle, anſwering to that of the Acromium, is much thicker in freſh than in dry Bones, and appears, like that of the Acromium, to be a little convex.

Between theſe two Cartilages of the Clavicle and Acromium there is, in ſome Subjects, a thin interarticular Cartilage, very ſmooth on both Sides.

The Articulation of the Acromium, with the Extremity of the Clavicle, is ſtrengthened quite round by ſeveral ſmall ſtrong Ligaments, which go from one Bone to the other. Theſe Ligaments lie very near each other, and are withal ſo tightly braced over the Joint, as to hide it altogether; and they appear more like a cartilaginous Covering than a ligamentary Texture. The internal Surface of theſe Ligaments is lined with the Capſula of the Joint.

When the ſmall interarticular Cartilage is found, its whole Circumference is connected to theſe Ligaments.

The Articulation of the Clavicle with the Sternum is ſuſtain'd by ſeveral Ligaments, fixed by one End, round the pectoral Extremity of the Clavicle, near the Edge of the triangular Surface, and from thence paſſing over the interarticular Cartilage, are inſerted by the other End in the Sternum.

There is a long, narrow, ſtrong Ligament, which goes from one Clavicle to the other, behind the Furca of the Sternum, being fixed to the internal Angle of the contiguous Extremities of the Bones. It may be called the interclavicular Ligament. *Winſlow's Anatomy.*

FRACTURES *of the* CLAVICLES.

The Clavicle*, on account of its tranſverſe Poſition, but principally from its remarkable Tenderneſs, is very often broken, ſometimes in the Middle, ſometimes near the Humerus, or the Sternum; but where-ever it happens, the Part next the Humerus, from the Weight of the Arm ſuſtained by the Clavicle, deſcends below that next the Sternum. And therefore, tho' that Part of it next the Breaſt remains immoveable, yet, from the Tendency of the other downwards, they will of Neceſſity run one over the other.

It is not difficult to know when this Part is fractured; for, firſt, the Patient cannot lift his Arm; ſecondly, the Arm hangs inclin'd towards the Breaſt, whereas before it was extended upwards or backwards; and, thirdly, the Bones of the Clavicles having ſcarce any Muſcles to cover them, a Fracture of thoſe Parts muſt undoubtedly be evident to the Touch, Sight, and Hearing, eſpecially upon the leaſt Motion of the Humerus or Arm on the ſame Side.

The Reduction of the Bones of the broken Clavicle is not hard to effect, eſpecially in a tranſverſe Fracture; for the Humerus, with the connected Fragment of the Clavicle, is uſually reduced with little Trouble, and replaced in its Seat by Help of the Fingers only. But it is far more difficult to keep the reduc'd Bones in their Place, eſpecially in an oblique Fracture; for which there are two Reaſons: Firſt, the circular Bandage, with which the long Bones of the Arms, and other Extremities, are held very firm, are quite improper here on account of the Diſpoſition of the Place or Part affected; and, next, the Weight of the depending Arm very eaſily pulls aſunder what has been replac'd; ſo that it is no Wonder, if the Bones of the Clavicles are very often found either uneven, or elſe very infirm, after Agglutination, tho' we do not want Examples where theſe ſorts of Fractures have been very firmly and happily reſtored, eſpecially when the Patients take due care to keep themſelves at Reſt.

A Fracture of the Clavicle is reduced after the following Manner: The Patient is placed on a low Seat; and an Aſſiſtant, thruſting his Knee againſt the Patient's Back, between the Shoulders or Scapulæ, lays hold with his Hands on the Shoulders, and gently pulls them backwards, by which means the Clavicles are duly extended. While this is doing, the Surgeon, who ſtands before, endeavours with his Hands to reduce the Bones into their proper Place; which done, he orders an Aſſiſtant to hold them firmly in that Poſition. He then applies, firſt, above and below the Clavicles, a narrow, but thick Bolſter, (*Tab.* 30. *Fig.* 13.) folded on one Side, in order to fill up the Cavities. Upon this, ſecondly, he lays two narrower Bolſters, in the Form of the Letter X (*Tab.* 29. *Fig.* 11.),

* A Fracture of the Clavicle is by *Celſus*, *Lib.* 8. *Cap.* 8. called *Jugulum Fractum*; but all our modern Anatomiſts and Surgeons call this Bone the *Clavicle*, and underſtand the Word *Jugulum* in a different Senſe.

Over all these, thirdly, he applies a Piece of thick Paper, (*Tab.* 29. *Fig.* 12.) accommodated to the Neck and Shoulders, and first dipt in Spirit of Wine or Oxycrate. Then, in the fourth Place, he is to put under the Shoulder a thick Fillet, rolled up, or a Ball, lest the Arm should again slip from its Position. And, in the fifth and last Place, he is carefully to apply a Bandage to the affected Part, and suspend the Arm in a Sling fixed about the Neck. Plaisters, whatever some may pretend, are, in this Case, generally found superfluous and useless.

But because the Arm is sometimes with great Difficulty kept back, and with still greater Difficulty conglutinated, unless retained in that Situation, Surgeons have, for the Retention of the Humerus, invented an Instrument, resembling the Letter T. This Instrument may be made either of Wood or Iron, and is represented by *Fig.* 13. in *Tab.* 29. Its Sides are almost three Inches broad, and covered either with Leather or Cloth. The Method of applying it is this: Its transverse Parts, A. A. are applied to both Shoulders or Scapulæ, whilst its longer Part, B. reaches along the Back. In the Hole, C. are fixed two strong Cords, by means of which, after passing the Arms thro' the Rings, A. A. this crucial Instrument is securely fixed to the Body. The more closely or loosely the longer Part, B. is ty'd about the Body, the more or less the *Humeri* are drawn backwards. But, in Cases where a very tight Tying of this Instrument does not answer the Intention, a longitudinal Bolster is to be applied to the Back, under the Part B. before the Cords are ty'd; for, by this means, the Clavicle is somewhat more powerfully raised, and kept back. The Rings, A. A. may be made either of Iron or Leather, and in such a manner, that they may be either lessen'd or enlarged at Pleasure.

When Splinters of the Bone are quite disengaged from the rest, and not only prick the adjacent Flesh, but also hinder the Reduction of the Clavicles, it seems necessary, in this Case, to make an Incision in the Skin, and extract them cautiously, before we proceed to the Reduction, and due Treatment, of the other Parts of the Bone. But if Splinters, still adhering to the Bones, should either prick the adjacent Muscles, or prevent the Reduction, they are either to be cut off with the Scissars represented by *Fig.* 1. in *Tab.* 29. or, when they are found sufficiently blunt, they are to be forced into their original Seat, by which means they are often conglutinated with the rest of the Bone: But, in making this Incision, great Care and Caution are necessary, lest the large Subclavian Veins and Arteries should happen to be wounded, and fatal Hæmorrhages by that means brought on.

Luxations *of the* Clavicle.

Tho' the Clavicles, on account of their strong Ligaments, are rarely luxated, yet they are sometimes forced from the Sternum or Acromium, with which they cohere, by external Violence, such as Falls, for Instance, Blows, or the lifting of too heavy Burdens. As to the Cure of this Disorder, the sooner the Reduction is attempted, the more easily the Bones resume their natural Situation. On the contrary, the longer the Reduction is delay'd, the Cure is proportionably the more difficult; for old Luxations of the Clavicles are almost always found incurable.

The Clavicles may be separated from the Sternum in two Manners, and slip either to the internal Part towards the Aspera Arteria, or to the external Part. In the former of these Cases a certain Sinus is generally observed about the Part affected; and the Aspera Arteria, the adjacent Carotids, the contiguous Nerve, and the Oesophagus itself, are strongly squeezed and compressed; whereas, when the Clavicle is separated and disjoined externally from the Sternum, a preternatural Tumor is observed about the Joining of these Bones.

As for reducing luxated Clavicles, and retaining them in their natural Situation, the same Rules are to be observed as in reducing Fractures of the Clavicles; only the Surgeon must carefully observe to apply a proper Bandage, as soon as the Bones are reduced; for, if an accurate Application of Bandages is necessary in any Case, it is particularly so when the Clavicle is dislocated, especially when the Relief of the Patient has been delay'd for a considerable time; for, as the Clavicles are supported by scarce any Muscles, so also, in Cases of this Nature, their Ligaments are generally so hurt and weaken'd, that they are insufficient for supporting the Arm; for which Reason the Application of a proper Bandage is in this Case absolutely necessary.

Luxations of the Clavicles, happening at that Extremity towards the Acromium, are generally discovered with so much Difficulty, that, according to *Hippocrates*, in his Book *De Articulis*, and the skilful *Paré*, many of the most knowing Physicians and Surgeons have mistaken them for Dislocations of the Humerus, and accordingly subjected the Patients to unnecessary Pain to no manner of Purpose; for when a Case of this Nature happens, as *Paré* observes, the superior Part of the Clavicle protuberates upwards, and a Hollow or Cavity is observed in the Part where the Clavicle is separated from the Acromium. The Patient is also afflicted with violent Pains, and the Arms are absolutely incapable of moving or raising themselves up. Unless, therefore, the Clavicles are speedily reduced, it is not to be wonder'd at, if the Arms of Patients, to whom this Misfortune has happen'd, should become so weak and paralytic, that they are not afterwards able to lift them to their Mouth or Head. *Galen*, in his Commentaries on the first Book of *Hippocrates de Articulis*, informs us, "That in Wrestling he had his Clavicle "so far separated from the Acromium, that there was a Sinus, "almost three Inches broad, between the two Bones;" but, by a tight Bandage, worn for forty Days, they were again united.

From what has been said it naturally follows, that the principal and most distinguishing Characteristics of a luxated Clavicle are, first, a Hollow or Cavity between the Clavicle and Acromium, which, as it is wanting in sound Persons, denotes a Separation of these Bones, which, in their natural State, adhere to each other. Secondly, the Patient cannot lift his Arm to his Head. In treating Disorders of this kind the Surgeon is to be particularly careful to extend and reduce the luxated Parts to their natural Situation, with as much Expedition and Dexterity as he possibly can; and, since the principal Means of Cure are placed in Bandages, these are to be apply'd with the greatest Care; for Patients, to whom the Bandages have, in this Case, been unskilfully or negligently applied, are seldom so perfectly cured, but a Stifness or Weakness of the Arm remains. *Heister. Chirurg.*

Bandages *for the* Clavicle.

I. There are two Kinds of Bandage for a fractured Clavicle, with respect to the Distance of the Fracture from the Sternum, or the Os Humeri. In the former Case the most convenient Bandage is the *Capitalis Reflexa*, or Capeline, consisting of a Roller, six Ells long, and three or four Fingers wide, which is rolled up with two Heads. The Fracture then being duly reduced, the Cavities above and below the Clavicle are fill'd up with narrow Bolsters, upon which are laid thick Splints of Pasteboard, about an Inch in Breadth, along the Clavicle; and upon these again, at the Place of the Fracture, a third Splint, which is very small, and well covered, and secured with a square Bolster, and a Splint of very thick Pasteboard, (*Tab.* 29. *Fig.* 12.) to prevent the Clavicle from slipping out on either Side. This rightly done, the Surgeon orders an Assistant to hold his Hand upon the Dressings, while he applies the Middle of the Roller to the Top of the diseased Shoulder (*Tab.* 58. *Fig.* 23. *a.*); whence he brings down the anterior Head of the Roller obliquely over the Breast, *b.* carrying the posterior Head obliquely over the Back between the Scapulæ to the Axilla, *c.* of the sound Side, under which he passes it; and, bringing it up across the Breast to *d.* passes it over the anterior Roller; and, drawing it under the Axilla, *e.* of the diseased Side, brings it out towards the Back. Then the anterior Head of the Roller, which was taken in by the circular Motion of the other Head, is reflected over the diseased Shoulder, *f.* and taken in by the other Head of the Roller, on the Back, in its circular Progress towards the Breast; and, being reflected, is carry'd back over the Shoulder, to cross the other again upon the Breast. Thus is the Roller spent in carrying one of its Heads round the Body, while the other Head is taken in by it, and reflected from the Breast to the Back, and from thence back again, at every mutual Concurrence of the Heads; by which means the Splints, with the subjacent Bolsters, are firmly covered, and secured upon the fractured Bone. In the last Place, the Ends of the Roller are to be well fasten'd with Pins, and the Arm to be suspended in a Sling, as in *Tab.* 59. *Fig.* 17. C. C. But, since it is very difficult to retain the Parts of the broken Clavicle, after they are reduced, in their proper Situation, by this Bandage alone, because they are very subject to be drawn out of their Place by the Weight of the Arm, the Surgeon would do well to assist it with another Bandage, termed, from its Figure, the *Stellate*, which draws back, and in a manner suspends, the Shoulders. The Application of it is as follows:

II. Take a single-headed Roller, four or five Ells long, and three Fingers broad, and apply the End of it upon a Bolster under the Axilla of the sound Side (*Tab.* 58. *Fig.* 24. *a.*); whence carry it obliquely up the Back, between the Scapulæ, to the Top of the Shoulder next the Fracture, *b.* from whence descending before, let it pass under the diseased Axilla, *c.* and from thence return obliquely up the Back, and over the Shoulder, to the sound Axilla, where it began; so that the Courses, by their Intersections, *e.* form the Figure of an X in the Middle of the Back. These Circumvolutions are to be continued till the Roller is spent, when the Bandage fixed on the Shoulders will represent the Figure (∞), that is, of two Rings cohering by vertical Angles, or opposite and continued Vertices; and the Shoulder next the Fracture will be firmly retained in a backward Posture, by which a Dislocation of the reduced Fragments will be prevented. If this Bandage, after some time, becomes slacker, as it usually happens, it may be necessary, after every two or three Days, to renew the same, the Arm being held back by an able Assistant, while it is off; and, at other times,

the Patient muſt conſtantly keep his Arm in a Sling. See *Tab.* 59. *Fig.* 17. And this is the Bandage call'd *Stellate*, from ſome ſort of Reſemblance it ſhews on the Back to a Star. It may alſo begin by applying the End of the Roller upon the Shoulder, *d.* and thence carrying it by *e.* and *c.* to *b.* and from thence by *e.* and *a.* to *d.* again, and ſo on till it is ſpent. Obſerve, laſtly, that, inſtead of this Bandage, the Machine recommended above, and repreſented *Tab.* 29. *Fig.* 13. may commodiouſly be uſed.

III. When the Clavicle is fractured near the Humerus, the moſt proper and commodious Species of Bandage is that call'd the Spica Simplex, ſo denominated from its ſuppoſed Reſemblance to an Ear of Grain. It has alſo gone under the Name of Geranium, among Phyſicians, ever ſince the Days of *Hippocrates*. It conſiſts of a common or ſimple Roller, about five Ells long, and three Fingers Breadth, rolled up into one Head. The Fragments being rightly reduced, and ſecured as before directed, the End of the Roller is apply'd under the ſound Axilla upon a Bolſter, and an Aſſiſtant ordered to hold it on the Place. See *Tab.* 58. *Fig.* 25. *a.* From hence the Roller is carry'd obliquely over the Breaſt, *b.* and the broken Clavicle, *c.* and thence deſcends behind over the Top of the Scapula; and, paſſing under the diſeaſed Axilla, is reflected from its interior Part, *d.* to its poſterior Part, in ſuch a manner as to paſs over the former Courſe, *c.* making with it the Figure X over the Axilla; whence it deſcends obliquely over the Back to the oppoſite Axilla, *a.* where it began. When the Roller is thrice paſſed about the Patient in this manner, the remaining Part of it may be diſpoſed of either in the ſame Courſe, or in a circular Direction about the Humerus, adjacent to the affected Clavicle; and the End of it is to be ſecured either by a Pin, or by Suture. The Patient's Arm is alſo to be ſuſpended in a Sling, leſt by its Weight the reduced Bone ſhould be removed from its Situation. The Surgeon, in the mean time, is to be particularly careful, that the Bandage be exactly applied to the fractured Part, and retain it in its due Poſition. The Patient muſt alſo keep his Arm as eaſy as poſſible; for which Purpoſe ſome faſten it to the Breaſt by a circular or ſpiral Bandage.

Others apply the Bandage for this Purpoſe, by beginning under the Axilla of the ſound Side, as in *Fig.* 25. from whence they proceed obliquely acroſs the Back, and over the Shoulder adjacent to the fractured Clavicle, *c.* which is alſo to be comprehended by the Bandage: And, having paſſed the Roller under the Axilla, *d.* it is carry'd over the Shoulder; and, interſecting the former on the Fracture, *c.* it goes obliquely acroſs the Breaſt, *b.* to the oppoſite Axilla, *a.* where it began; and thus they continue till the Roller is ſpent, faſtening its End about the Shoulder, or where-ever it terminates. The Uſefulneſs of theſe Bandages, in a Fracture or Luxation of the Clavicle, is ſelf-evident. It may be alſo apply'd with Advantage in a Luxation of the Humerus, and even in a Fracture of its Neck.

IV. The ſimple Spica with two Heads is a Bandage made with the ſame or a ſomewhat longer Roller, rolled up into two Heads in manner following: The Middle of the Roller is fix'd under the ſound Axilla, *(Fig.* 25. *a.)* whence its anterior Head paſſes over the Præcordia, *b.* and its poſterior over the Back obliquely to the affected Shoulder, *c.* where the Heads changing, deſcend one behind, the other before, to the Axilla, *d.* under which they again change, and are carry'd up to the Top of the Shoulder, *c.* where they croſs again, and deſcend obliquely, one over the Breaſt, the other over the Back, to the Right or ſound Axilla, *a.* under which again croſſing, they continue the ſame Courſe as before, till the Roller is run out, and the Clavicle well cover'd and ſecur'd. After this the Arm is to be ſuſpended in a Sling, and the ſame Cautions are to be obſerv'd as before.

Another Method of applying the double-head *Spica* is as follows: The Middle of the Roller is fixed under the Axilla of the Side affected, *Fig.* 25. *d.* whence both Heads are carry'd up to the Top of the Shoulder, *e.* where croſſing, they muſt be drawn tight, and carry'd obliquely over the Breaſt, *b.* and the Back to the Right Axilla, *a.* where again croſſing and changing, they return by the ſame Way to the Top of the Shoulder, *e. e.* and there croſſing, and being duly ſtrain'd, they are carried down under the Left Axilla, *d.* where the Bandage firſt began. And thus the ſame Courſe is to be repeated, till the Roller is run out, and the affected Part well cover'd and ſecur'd. Some modern Surgeons, following *Galen* and the Antients, apply a Part of this Bandage, in manner of a Sling or Bridle, about the lower Arm, in order to ſuſtain it; but as, by that means, the fractured Clavicle will be drawn downwards by its ſuſtaining the Weight of the Arm, I ſhould rather approve of a particular Sling, ſuch as is repreſented *Fig.* 17. *Tab.* 59. to be faſten'd about the Neck and the ſound Shoulder.

Monſ. *Gouey*, a *French* Surgeon, in his *Chirurgie veritable*, has directed a Bandage different from the preceding, but equally neat and commodious, and perhaps preferable, as being applicable to all kinds of Fractures of the Clavicle. In this Method, which is a particular Application of the *Capitalis reflexa*, or *Capeline*, he uſes a Roller, ſix Ells long, and two Fingers broad, which is alſo rolled up with two Heads, in the following Manner: The Middle of the Roller is fixed under the Axilla neareſt to the affected Clavicle, (ſee again *Fig.* 25. *Let.* d.) and the two Heads of the Roller carry'd up to the Top of the Shoulder; where they croſs in the Figure of an X, and are thence brought down, one over the Breaſt, *b.* the other over the Back, to the oppoſite Axilla, *a.* under which they croſs; and thence being carry'd in a Circle round the Body, meet again under the Axilla next to the Fracture; and there croſſing, are again carry'd up to the Top of the Shoulder, and their Courſe continued as before, till they return to where they began; the poſterior Head is then brought forward over the Shoulder down to the Breaſt, and is there taken in by the anterior Head, (ſee *Fig.* 23. *a. b.*) which is carry'd circularly round the Body; and having thus paſſed under it, is reflected back in the Direction *f.* and again taken in by the circular Turn on the Back; whence it is again reflected, and taken in by the Circle at the Breaſt; and thus the Heads continue their Courſe, till the Roller is ſpent. That we may know the Reaſon, which moved the Author of this Bandage to prefer it before all others, it will be proper to ſhew its Uſefulneſs, according to the Deſcription of the Inventor. While, then, the Beginning of this Bandage ſtreightly compreſſes the Axilla next the diſeaſed Part, the broken Clavicle, which was drawn downwards from its Situation by the Weight of the Arm, is reduced or forced into its Place. And again, as ſoon as the Roller, after croſſing upon the Shoulder, is carry'd obliquely over the Breaſt, and the diſeaſed Place, to the oppoſite Axilla, the Fragment of the Clavicle near the Sternum, which is always raiſed upwards by the Fracture, is moſt commodiouſly depreſſed into its proper Situation, ſo that, after two Circles only of the Roller, the broken Parts of the Clavicle will be reduced to their natural Poſition. M. *Gouey* alſo judges this Bandage better than the common Sort for a Fracture of the Scapula.

The Bandage for a Luxation of the Clavicle is almoſt the ſame as for a Fracture of it, the Injury in theſe Caſes being much of the ſame Nature. As ſoon, therefore, as the Luxation is reduced, a Bolſter, dipt in Spirit of Wine, is to be apply'd to the Part; and, if the Diſlocation be of that End next the Sternum, the *Capeline* Bandage, before deſcribed, is to be uſed; but if the Clavicle be depreſſed inwards, it will be alſo neceſſary to apply the Stellate Bandage, deſcribed above, in order to keep the Shoulders extended backwards, that the Clavicle may be thrown outwards; but, when this Bone is diſlocated outwards, this Bandage muſt be omitted; and we muſt endeavour to depreſs it by Application of thick Bolſters. If the Head of the Clavicle, next the Scapula, be diſlocated, your Bandage muſt be the ſimple *Spica* with two Heads, or that of M. *Gouey*, before deſcribed. Laſtly, when both the Clavicles are violently diſplaced, the double *Spica* is to be applied in the Manner directed for Luxations of the HUMERUS and SCAPULÆ, which ſee. In all Fractures and Luxations of this kind, the Patient is to carry his Arm in a Sling, faſtened at his Neck, till the Parts are ſufficiently confirmed, to prevent a new Diſlocation. *Heiſter*, *Chirurg.*

CLAVICULÆ, in Botany, is the ſame as *Capreoli*. See CAPREOLUS.

CLAVIS *Siliginis*. *Lonicerus* calls by this Name the Grains of Rye, which are ſpoiled in the Growth, and look black. I think the Country People call it *Smutted Rye*. It is eſteemed an excellent Remedy againſt an immoderate Flux of the *Lochia*.

CLAVIS, in Anatomy, is the ſame as CLAVICULA.

CLAVIS, in Chymiſtry, is any Menſtruum, particularly of Minerals, which unlocks them, as it were, and penetrates to their inner Subſtance: Or it imports Directions for performing any ſecret Proceſs.

CLAUSTRUM *Gutturis*, κλεῖθρον, κληῖθρον. The Paſſage to the Throat, which lies immediately under the Root of the Tongue and Tonſils. *Clauſtrum Virginitatis* is the *Hymen*.

CLAUSURA. An Imperforation of any Canal or Cavity in the Body. Thus *Clauſura Uteri* is a preternatural Imperforation of the Uterus. And *Clauſura Tubarum Fallopianarum* is a morbid Imperforation of the Fallopian Tubes, mention'd by *Ruyſch* as one Cauſe of Infecundity.

CLAVUS is a Chirurgical Inſtrument of Gold, with a large Head, mentioned by *Amatus Luſitanus*, which was deſigned to be introduced into an exulcerated Palate, for the better Articulation of the Voice. *Foreſtus* takes notice of one made of Silver.

CLAVUS *Hyſtericus* is an hyſterical Symptom, which *Sydenham* thus deſcribes:

Hyſterics ſometimes attack the external Part of the Head, between the Pericranium and the Cranium, and occaſion violent Pain, which continues fix'd in one Place, not exceeding the Breadth of the Thumb; and it is likewiſe accompany'd with enormous Vomitings. I call this Species the *Clavus hyſtericus*, which principally affects ſuch as have the Green Sickneſs. *Sydenham*. See HYSTERICA.

Such a Pain in the Head alſo ſometimes ariſes from a Venereal Caries or Exoſtoſis of ſome Bone of the Cranium. *Aſtruc.*

CLAVUS *Oculorum*, according to *Celſus*, *Lib.* 7. *Cap.* 7. is a callous Tubercle on the White of the Eye, taking its Denomination from its Figure. This, he ſays, it is proper to perforate with a Needle to the Bottom of its Root, to cut it out, and then to dreſs it with lenient Medicines.

CLAVUS alſo ſometimes imports indurated Tubercles of the Uterus.

CLAVUS is alſo a Corn on the Foot. Very frequently hard and preternatural Tubercles, not unlike ſmooth Warts, are form'd on the Extremities of the Feet, and more eſpecially between the Toes. Theſe Tubercles, whatever their Form and Shape may be, are called by the common Name of *Clavi*. The principal and moſt general Cauſe of this Misfortune is by Phyſicians juſtly aſcribed to narrow Shoes; for Perſons who, from a Principle of Vanity, or ſome other miſtaken Notion, wear Shoes of this kind, are not only more ſubject to this Diſorder, but alſo more tormented by it, than others, eſpecially when the Weather is exceſſively hot, or when they are reduced to a Neceſſity of ſtanding long, or walking far. Tho' various Medicines, both of the emollient and corroſive Kind, are by different Phyſicians preſcribed for the Extirpation of Corns, yet the moſt natural and effectual Way of going to work is, firſt, to ſoften them, when they are preternaturally hard. This Intention is moſt effectually anſwered by frequently waſhing the Feet, after which the upper and harder Part of the Corns are to be carefully and cautiouſly pared off with a Knife; for, by this means the Pain, with which this Diſorder is accompany'd, is often removed: But if it ſhould not yield to theſe Meaſures, a Plaiſter of green Wax, or of Gum-ammoniac, or the Mucilage-plaiſter, or one prepared of ſliced Soap, or a Leaf of the *Sedum Majus*, or greater Houſleek, is to be apply'd to the Corn, after paring it, and to be renew'd daily. After theſe Meaſures have been diligently perſiſted in for ſome time, the Corn may, without much Trouble, be either ſcratched off with the Nail of the Finger, cut out with a Knife, or, which is ſtill more proper, cautiouſly abraded. But the Knife is in this Caſe cautiouſly to be uſed, leſt, by an unſkilful Application of it to the Toes, the Tendon of the Extenſor Muſcle ſhould be wounded; by which means the Patient is often ſubjected to violent Pains, Inflammations, Gangrenes, Convulſions, and ſometimes to an immediate Danger of loſing his Life; Inſtances of which are related by *Hildanus*, and other practical Authors.

Tho', for the moſt part, Corns are not entirely extirpated by Paring, but generally appear afreſh after ſome time, yet they are ſometimes removed by this Method, or, at leaſt, the Pain and Trouble accompanying them are alleviated, eſpecially if, at the ſame time, ſufficiently large Shoes are wore; if the Method already directed is uſed every Month, or repeated as often as the Pain and other Symptoms require; and if ſome of the before-mention'd Remedies, after abrading the external Parts of the Corn, are apply'd freſh every twenty-four Hours. By this Method the Corns are either gradually entirely mortify'd, or, at leaſt, grow more ſlowly, and become tolerable. *Heiſter's Surgery.*

After Corns are cut away, *Harris* ſays the Diachylon ſimplex will prevent them from growing again; as will alſo the *Galbanum Coctum Mynſichti*; and alſo, that ſoft Wax which is uſed by the Lawyers. But, above all, a clean Linen Rag bound about the Toe, after the Callus is cut away. This was much recommended by King *Charles* the Second. *Harris's Diſſert.*

The Pulp of Lemon laid to a Corn, and bound on all Night, ſoftens it by the Morning, ſo that it may eaſily be taken off.

CLEIDION, κλειδίον. An Epithet of a Paſtil deſcrib'd by *Galen*, in his Treatiſe *de Compoſitione Medicam. S. L.* 9. *C.* 5. and by *Paulus Ægineta*, *L.* 7. *C.* 12. It is alſo the Name of an Epithem, deſcrib'd by *Aetius*. They are all of the reſtringent Kind, and take their Names from κλείω, to ſhut. It ſometimes imports the ſame as *Clavicula*.

CLEIS, κλείς. The ſame as CLAVIS.

CLEISAGRA, from κλεὶς, the Clavicle, and ἄγρα, a Prey. The Gout in the Articulation of the Clavicles to the Sternum. *Paré.*

CLEITHRON, κλεῖθρον. The ſame as CLAUSTRUM, which ſee.

CLEMA, κλῆμα. A Twig or Tendril of a Plant. The ſame as *Sarmentum*. Hence,

CLEMATIS. A Name for the *Vinca Pervinca*. See PERVINCA. Hence, alſo,

CLEMATITIS. A ſort of Plant ſo call'd, becauſe it climbs up Trees with Claſpers or Tendrils, like thoſe of Vines.

The Characters are,

The Root is fibrous and perennial; the Leaves conjugated; the Flower is naked, tetrapetalous, ſeldom pentapetalous, diſpoſed ſomewhat in the Form of a Croſs; the Stamina are many in Number, villous, ſet thick together, and ariſing from the loweſt Part of the Margin of the Baſe of the Ovary; the Apex of the Peduncle becomes a Placenta, round which grow many Ova, furniſh'd with a long plumous Tube.

Boerhaave mentions twelve Species of this Plant.

1. Clematitis; ſive Flammula ſurrecta; alba. *J. B.* 2. 127: *Raii Hiſt.* 1. 621. *Tourn. Inſt.* 294. *Elem. Bot.* 244. *Boerh. Ind. A.* 46. *Hiſt. Oxon.* 3. 316. *Chab.* 117. *Flammula Jovis*; Offic. *Flammula Jovis ſurrecta*, Ger. 741. Emac. 888. Park. Theat. 382. Parad. 393. *Flammula recta*; C. B. Pin. 300. *Flammula ſurrecta*, Rupp. Flor. Jen. 54. Buxb. 114. UPRIGHT LADIES BOWER.

This flowers in Summer. The Herb, with the Flower, is uſed, and are of a cauſtic burning Quality. *Dale.*

The Flowers, Seed, Bark, and Root, have a cauſtic Virtue: This Species, rub'd with the Fingers, and then held to the Noſtrils, ſtrikes them, like Lightning, in an Inſtant with a moſt ſtrong and vehement Smell. It yields a Water as hot as Spirit of Wine; and is found to be very effectual, as *Matthiolus* tells us, in the coldeſt Diſeaſes; but, doubtleſs, it cannot be taken inwardly with Safety, unleſs it be well mix'd and temper'd with other Waters, to prevent its injuring the Viſcera.

Some commend the Oil for the Pain of the Sciatica, Joints, and Ilia, for Difficulty of Urine, and the Stone in the Kidneys, to be rub'd on the Parts hot, or infuſed in Clyſters. This Oil is thus prepared:

They take the Leaves of the Flammula, cut very ſmall, and put them into a Glaſs Veſſel in Oil of Roſes; then expoſe the Veſſel, well ſtopt, to the Sun during the Summer. It is taken alſo in Food, for theſe Diſtempers, to the Weight of three Drams. *Raii Hiſt. Plant.*

2. Clematitis; ſylveſtris; latifolia. *C. B. P.* 300. See ATRAGENE.

3. Clematitis; peregrina; foliis pyri inciſis. *C. B. P.* 300. SPANISH CLIMBER, OR TRAVELLERS JOY, WITH CUT LEAVES.

4. Clematitis; Canadenſis; trifolia; dentata; flore albo. *H. R. Par.* 1. *H. ſubm.* THREE-LEAVED CANADA CLIMBER, WITH A WHITE FLOWER.

5. Clematitis; cœrulea; erecta. *C. B. P.* 300. *M. H.* 3. 616. UPRIGHT BLUE CLIMBER.

6. Clematitis; cœrulea; vel purpurea; repens. *C. B. Pin.* 300. *Tourn. Inſt.* 294. *Elem. Bot.* 244. *Boerh. Ind. A.* 46. *Clematis altera*, Offic. *Clematis peregrina cærulea ſive rubra*, Ger. 740. Emac. 887. Raii Hiſt. 1. 622. *Clematis peregrina flore rubro vel purpureo ſimplex*, Park. Theat. 381. Parad. 392. *Clematis ſive Flammula flore purpureo & cæruleo ſcandens*, J. B. 2. 128. Chab. 117. *Clematis flore ſimplici*, Rupp. Flor. Jen. 54. VIRGINS BOWER. *Dale.*

This is thought to be the *Clematitis* of *Dioſcorides*, who informs us, that the Seeds, taken in Water or Hydromel, purge Phlegm and Bile; and that the Leaves, applied to the Part affected, cure a Leproſy. The Moderns have added nothing to theſe Virtues.

7. Clematitis; repens; rubra. RED CREEPING CLIMBER.

8. Clematitis; Orientalis; folio Apii; flore ex viridi flaveſcente, poſterius reflexo. *T. Cor.* 20. *t. ſubm.* EASTERN CLIMBER, WITH A SMALLAGE-LEAF, AND A REFLEX'D FLOWER OF A GREENISH YELLOW.

9. Clematitis; cœrulea; flore pleno. *C. B. P.* 301. BLUE CLIMBER, WITH A DOUBLE FLOWER, OR DOUBLE VIRGINS BOWER, *vulgò*.

10. Clematitis; Alpina; geranifolia. *C. B. P.* 300. *Prodr.* 135. *M. H.* 3. 616.

11. Clematitis; Hiſpanica; ſurrecta; altera; & humilior; flore albicante. *H. R. Par. H. ſubm.* LOW SPANISH CLIMBER, WITH A WHITISH FLOWER.

12. Clematitis; erecta; folio fraxini.

The ſecond Sort is found wild in moſt Parts of *England*, and grows upon the Sides of Banks, under Hedges, and extends its trailing Branches over the Trees and Shrubs, which are near it. *Miller's Dictionary.*

CLEONIS *Collyrium*. The Name of a Collyrium, deſcrib'd by *Celſus*, *Lib.* 6. *C.* 6. The *Cleonis Gluten*, mention'd by *Oribaſius*, *L.* 4. and recommended for reſtraining Fluxions, conſiſts of Terra Samia, Myrrh, and Grains of Frankincenſe, each equal Parts, mix'd with the White of an Egg: It is to be ſpread on Linen Cloth, and applied to the Temples and Forehead.

CLEOPHANTUS. An antient Phyſician quoted by *Celſus*, who, according to this Author, *L.* 3. *C.* 14. cured Tertians by pouring a great Quantity of Water on the Patient's Head, before the Acceſſion of the Paroxyſm, and then exhibiting Wine. This Method *Celſus* diſapproves.

CLEPSYDRA, κλεψύδρα, from κλέπτω, to conceal, and ὕδωρ, Water. Properly an Inſtrument to meaſure Time, by the Dropping of Water from one Veſſel, perforated with a ſmall Hole,

Hole, into another Veſſel. But it is uſed to expreſs a chymical Veſſel perforated in the ſame manner. *Clepſydra* is alſo an Inſtrument mention'd by *Paracelſus*, contrived to convey Suffumigations to the Uterus.

CLIBANUS, κλίβανος. A little portable Oven, made either of Earth, Iron, Copper, or any other convenient Materials. See ARTOS.

CLIDION. The ſame as CLEIDION, which ſee.

CLIMA, κλίμα. A Climate. It is very neceſſary for a Phyſician to be well acquainted with the Differences of Climates, not only becauſe they produce Variety of Diſtempers; but alſo becauſe they require the Methods of Cure, and Regimen, to be varied. *Paracelſus*.

CLIMACION, κλιμάκιον, or κλιμάκειον. The Round of a Ladder. It is mention'd in the Treatiſe of *Hippocrates de Arte*, when ſpeaking of reducing a luxated Shoulder.

CLIMACTER, κλιμακτήρ. It imports the ſame as *Climacion*, that is, the Scale or Round of a Ladder. Hence,

CLIMACTERICUS *Annus*. A climacteric Year: According to ſome, every ſeventh Year is a Climacteric; but others only allow thoſe Years produced by multiplying ſeven by the odd Numbers 3. 5. 7. and 9. to be climacterical. Theſe Years, they ſay, bring with them ſome remarkable Change, with reſpect to Health, Life, or Fortune. The grand Climacteric is the ſixty-third Year; ſome, making two, add to this the Eighty-firſt. The other remarkable Climacterics are the Seventh, Twenty-firſt, Forty-ninth, and Fifty-ſixth. I believe the Credit of climacteric Years can only be ſupported by the Doctrine of Numbers introduced by *Pythagoras*; tho' many great Men, both among the Antients and Moderns, appear to have had great Faith in it.

CLIMIA. A Name for the *Cadmia Fornacum*. *Climia Ereps Rulandus* explains by *Cadmia Auripigmenti*.

CLINERES, κλινῆες. The ſame as CLINOPETES, which ſee.

CLINICUS, κλινικὸς, from κλίνη, a Bed. Clinical. A Clinical Phyſician is one who viſits Patients confin'd to their Beds. Hence Clinical Medicine, of which *Hippocrates* is ſaid to have been the Author. *Clinicus* is alſo applied to a Patient who keeps his Bed.

CLINOIDES. The four ſmall Proceſſes of the Os Sphenoides, which form the *Sella Turcica*. *Caſtellus*.

CLINOPETES, κλινοπετής. A Perſon who, on account of great Weakneſs, or any Diſtemper, is obliged to lie in Bed, or on the Bed.

CLINOPODIUM. A Plant thus call'd.

The Characters are,

The Calyx is long, tubulous, quinquefid, rough, and cloſely compacted; the Galea is roundiſh, erect, bifid, and furniſh'd with a tripartite Beard; the Flowers grow in thick Whorls, cloſely ſet round the Stalk.

Boerhaave takes notice of nine Species of this Plant.

1. Clinopodium; Origano ſimile; elatius; majore folio. *C. B. Pin.* 224. *Cat. Monſp.* 71. *Hiſt. Oxon.* 3. 374. *Tourn. Inſt.* 195. *Elem. Bot.* 163. *Boerh. Ind. A.* 158. *Rupp. Flor. Jen.* 188. *Buxb.* 75. *Clinopodium*, Offic. Dill. Cat. Giſſ. 132. Rivin. Irr. Mon. *Clinopodium majus*, Raii Hiſt. 1. 558. Phyt. Brit. 28. *Clinopodium vulgare*, Merc. Bot. 1. 29. *Cinopodium quorundam Origani facie*, J. B. 3. 250. *Clinopodium, Acinos*, Ger. 548. Emac. 675. Mer. Pin. *Acinos ſive Clinopodium majus*, Park. Theat. 22. GREAT WILD BASIL. *Dale*.

It grows frequently in Hedges. The Herb, and the Decoction thereof, is taken as an Antidote againſt the Bites of venomous Animals, and as a Remedy for Spaſms, Contuſions, and Stranguries. It facilitates Delivery, provokes the Menſes, and cures penſile Warts, call'd *Acrochordones*, if taken for ſome Days. It ſtops a Diarrhœa, boil'd to the Conſumption of one Third, and then drank. It muſt be boil'd in Wine, in caſe of a Fever; but Water, if there is no Fever. *Dioſcorides*.

2. Clinopodium; Alpinum; roſeum; ſaturejæ foliis. *Bocc. Muſ. p.* 119. *a*. ALPINE FIELD BASIL, WITH LEAVES LIKE SAVORY.

3. Clinopodium; anguſtifolium; minus; Pulegii odore; Romanum. *Bocc. Muſ. p. T.* 45. *a*.

4. Clinopodium; Orientale; hirſutum; foliis inferioribus Ocymum, ſuperioribus Hyſſopum, referentibus. *T. Cor.* 12. *a*.

5. Clinopodium; Canadenſe; fiſtuloſum; foliis dilutè virentibus & hirſutis. *Flor.* 2. 69. *Origanum, fiſtuloſum, Canadenſe*. Cornut. 14. *Leonurus, Canadenſis, Origani folio*. T. 187.

6. Clinopodium; Canadenſe; fiſtuloſum; foliis ſaturatius virentibus & hirſutis. *Flor.* 2. 69.

7. Clinopodium; Orientale; humile; verticillis florum ſingularibus & craſſioribus. *T. Cor.* 12. *a*.

8. Clinopodium fiſtuloſum; pumilum; Indiæ Occidentalis; ſummo caule floridum. *Pluk.* a.

9. Clinopodium; ſpicatum; & verticillatum; Luſitanicum. *T.* 195. *Bigula, odorata, Luſitanica*. Corn. 46. *a*.

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CLISSUS, in *Paracelſus*, is a certain Virtue, or occult Viciſſitude of Things, which goes and returns to the Place from whence it departed. Thus the Flowers of all Vegetables grow flaccid in the Evening, but revive, and are expanded, in the Morning, by virtue of this *Cliſſus*.

It imports alſo the ſame as CLYSSUS, which ſee.

CLISTUS. The ſame as CLYSSUS, which ſee.

CLITORIS, or as it is call'd *Oeſtrum Veneris*, is a Part of the external Pudenda, ſituated at the Angle which the Nymphæ form with each other. See the Explication of the Letters *a. b b. c c. d.* and *e.* in *Tab.* 16. *Fig.* 7. and 9. in *Fig.* 3. of *Tab.* 17. and the Figures.

The Clitoris appears, at firſt Sight, like a ſmall imperforated Glans: Its upper and lateral Sides are cover'd by a kind of Prepuce, form'd by a particular Fold of a Portion of the inner Side of the Nymphæ, which appears to be glandular, and to diſcharge a certain Moiſture, and its Inſide is granulated.

By Diſſection, we diſcover in the Clitoris a Trunk, and two Branches, as in the Penis, made up of a ſpongy Subſtance, and of very elaſtic Coats, but without any Urethra. This Subſtance may be inflated either by Air, or by anatomical Injections into the Artery. The Trunk is divided into two lateral Parts by a middle Septum, from the Biſurcation to the Glans, where it is inſenſibly loſt.

The Biſurcation of the Trunk is on the Edge of the cartilaginous Arch of the Oſſa Pubis; and the Branches, which reſemble the Roots of the Corpora Cavernoſa, are inſerted in the inferior Branches of theſe Bones, and in thoſe of the Oſſa Iſchium, where they terminate by degrees; but there is ſometimes a membranous Tube on each Side, which reaches to the Tuberoſity of the Iſchium.

The Trunk of the Clitoris is ſuſtain'd by a ſuſpenſary Ligament, fix'd in the Symphyſis of the Oſſa Pubis, and containing this Trunk in its Duplicature, nearly as in the other Sex.

Four Muſcles, or Faſciculi of fleſhy Fibres, are inſerted in the Trunk of the Clitoris, two on each Side. One of them runs down on the fore Side of the neighbouring Corpus Cavernoſum, and is inſerted by a tendinous or aponeurotic Portion, partly in the Extremity of the Corpus Cavernoſum, and partly in the Tuberoſity of the Iſchium. Theſe two Muſcles are call'd *Erectores*; but the Name of *Iſchio-cavernoſi* would be more proper.

The other Muſcle on each Side lies under the former, and runs down on the Side of the Urethra, and great Orifice of the Uterus, all the Way to the Anus; increaſing gradually in Breadth in its Paſſage, and terminating partly like that which is call'd *Accelerator* in Males.

Theſe two Muſcles ſurround, very cloſely, the lateral Parts of the Urethra, and of the great Orifice. They expand very much as they deſcend, and are ſpread in the lower and lateral Parts of the great Orifice; for which Reaſon ſeveral Anatomiſts have look'd upon them as muſcular Sphincters. All theſe four Muſcles, and eſpecially the two latter, are oftentimes almoſt cover'd with Fat.

The Blood-veſſels of the Clitoris come principally from the Hypogaſtricæ, and the Nerves from the ſecond and third Pairs of the Nervi Sacri, by means of which they communicate with the inferior Meſenteric Plexus, and with the great Sympathetics. *Winſlow's Anatomy*.

The Clitoris has, like the Penis, an Erection; and is eſteem'd to be the principal Seat of Venereal Pleaſure.

Extirpation of Part of the CLITORIS, *when too large.*

The Clitoris is in ſome ſo ſhamefully large as to protuberate without the Lips of the Pudenda; in which Caſe it is by the Attrition of the Clothes erected, and powerfully ſtimulated to Venery: For this Reaſon the *Egyptians* judged it expedient to amputate a ſufficient Part of it, before it aſſumed ſuch an enormous Size, at that time eſpecially when Virgins were to enter into a married State. Their Method of performing this Operation is as follows: The Virgin, who was to have her *Clitoris* curtail'd, is placed in a proper Seat, with a robuſt Fellow behind her, who, with his Arms, is to ſecure her Legs, and the Whole of her Body, in a Poſture proper for the Operation. Then the Surgeon, ſtanding before the Patient, is, with a pretty large Forceps in his Left Hand, to lay hold of the Clitoris, and extend it in a due Degree: After this he is, with his Right Hand, to cut it off near the Teeth of the Forceps. But, as in the Exſection of the Columella, he is to take particular Care not to extirpate it totally, but only to cut off its ſuperfluous Parts; for, in conſequence of its being furniſh'd with ſeveral Pellicles, it is capable of being much extended; by which means the Surgeon is in Danger of performing the Amputation beyond the proper Part, and this Error is follow'd by an involuntary Diſcharge

charge of the Urine. When the Operation is thus perform'd, the Wound is to be cleanſed with a Sponge, ſqueez'd out of aſtringent Wine, or cold Water. Then the Part affected is to be ſprinkled with Powder of Frankincenſe. After this a Linen Cloth, dipt in Oxycrate, is to be applied to it; and a Sponge, ſqueez'd out of the ſame Liquor, ſecured over all. But, after the ſeventh Day, the Parts are to be ſprinkled with Cadmia, finely triturated, either by itſelf, or with Roſe-leaves, or with a dry Preparation of the *Phrygian* Stone, recommended for Fiſſures of the Pudenda, or with the Aſhes of Date-ſtone. *Aetii Tetrabib.* 4. *Serm.* 4. *C.* 103.

An Operation, ſomewhat analogous to this, is perform'd for that Species of Diſorder by the *Greeks* call'd κέρκωσις, by the *Latins Cauda*, and which, by *Aetius*, in the above cited Part, is deſcrib'd in the following manner: In ſome Women, ſays he, a certain fleſhy Subſtance ariſes from the Mouth of the Uterus, and fills the Vagina. Sometimes it alſo protuberates without the Lips of the Pudenda, like the Tail of ſome Animal, from which Circumſtance it has received the Denomination of *Cauda*. The Patient is, in this Caſe, to be ſituated in the manner directed for the Amputation of the Clitoris; and the protuberating Caruncle is to be extended with a Forceps, and totally extirpated. After the Operation is perform'd, the Dreſſings, and other Meaſures of Cure, are the ſame as in the Amputation of the *Clitoris*. *Ib.* 104.

In ſome Women the *Clitoris* is ſo preternaturally large, as to prove a monſtrous Deformity. In this Caſe, the Patients are to be laid in a ſupine Poſture, and the ſuperfluous Parts of the *Clitoris*, being laid hold of with a proper Forceps, are to be extirpated with the Knife; but, in performing this Operation, the Surgeon muſt take particular Care not to make the Inciſion too deep, leſt an involuntary Diſcharge of Urine ſhould be brought on. The Cauda (κέρκωσις) alſo, which is a fleſhy Body ariſing from the Mouth of the Uterus, and filling the Vagina, ſometimes protuberates without the Lips of the Pudenda; in which Caſe its ſuperfluous Parts are, as well as the *Clitoris*, to be extirpated with the Knife. *Paulus Ægineta de Re Medica, Lib.* 6.

The Clitoris, in ſome Women, is of ſo extraordinary a Size, as to reſemble a Penis, and procure its Subjects the Name of Hermaphrodites *, though it be deſtitute of any Perforation or Duct for the Emiſſion of Semen or Urine. As the enormous Bigneſs of this Part is a great Incumbrance to the conjugal Office, the Aſſiſtance of the Surgeon is ſometimes deſired to remedy the Nuiſance. Among the *Arabians* and *Egyptians*, this Diſorder is ſaid to have been very frequent; ſo that it was a common Practice with them to cut off from the new-born Girls whatever was indecently prominent in that Part. Such an Operation indeed is rarely performed among *Europeans*, becauſe the Subjects of this Diſorder are ſtudious to conceal it, either through Modeſty, or Dread of the Knife. But, that the Surgeon may not be at a Loſs how to proceed, if ſuch a Caſe ſhould happen, we ſhall direct him to two Methods of Cure: The firſt is to make a Ligature upon the Part, and ſo take off all Superfluities or Excreſcences, in the ſame manner as is done in Tubercles, or removing a mortified Part of the Penis. The ſecond Method is to cut off the indecent Part with an Inciſion-knife, and, after it has bled ſufficiently, to ſtop the Hæmorrhage with Styptics and a Bandage, performing the Cure as in other Wounds. *Bellonius* relates, that the *Indians* reduce the exceſſive Length of this Part in their Women, by applying an actual Cautery. *Heiſter. Chirurg. p.* 1025.

CLITORIDIS *Flos Ternatenſibus.* Breynei. A beautiful Flower, which grows in the Iſland *Ternate*, which the Inhabitants boil and eat. But I do not find any particular Virtues aſcribed to it.

CLOACA ſignifies ſtrictly a Jakes, a Word which relates to Phyſic, only as it is a neceſſary Appendage to moſt medicinal Springs, which are, in any Degree, reſorted to; for this Reaſon, I preſume, Dr. *Short*, in his Account of *Harrigate* Spaw, has been particularly careful to ſpecify at what Point of the Compaſs the Neceſſary-houſe at that Place lies from the Spring. A neceſſary Inſtruction for Strangers, who are ſtudious of Cleanlineſs!

But CLOACA, in comparative Anatomy, imports the Canal in Birds, through which the Egg deſcends from the Ovary in its Exit. In this it is remarkable, that the Part, which is next the Ovary, is jagged, like the *Morſus Diaboli*, and fluctuates in the Abdomen, without any Attachment to the Ovary; hence Anatomiſts have been ſomewhat puzzled to comprehend, by what Means the Egg falls into the Ovary.

CLONODES, κλονῶδες. An Epithet for a ſort of Pulſe, which is vehement, large, and at the ſame time unequal in one and the ſame Stroke. *Caſtellus.*

CLONOS, κλόνος. Any tumultuary and inordinate Motion. It is applied to any epileptic, convulſive Motions.

CLUNES. The Buttocks. They conſiſt of the Skin, Fat, and Muſcles, principally thoſe called *Glutæi*.

CLUPEA. A Fiſh called the Shad. See ALOSA.

CLUTIA.

The Characters are,

It hath a roſe-ſhaped Flower, conſiſting of five Leaves. In the Centre ariſes the Pointal, ſurrounded by five Stamina. This Pointal afterwards becomes the Fruit, which is divided into three Parts, and hath three Cells, in which are contained Seeds. *Miller's Dictionary, Vol.* 2.

Boerhaave mentions but one Species of this Plant, which is,

Clutia. *Frutex Æthiopicus, Portulacæ folio, flore ex albido vireſcente*, H. A. 1. 177. SHRUBBY ETHIOPIAN CLUTIA, WITH A PURSLANE-LEAF, AND A GREENISH-WHITE FLOWER. *Boerhaave's Index alter Plantarum, Vol.* 2. *p.* 260.

CLYDON, κλύδων. It imports a Fluctuation and Flatulency in the Stomach and Inteſtines.

CLYMA. The Fæces of Silver and Gold. *Caſtellus.*

CLYMENOS DIOSCORIDIS is the *Scorpioides folio Bupleuri*. Boerhaave's Ind. alt. Vol. 2. p. 52.

CLYMENUM, Chickling-vetch.

The Characters are,

The Stalks, Flowers, and Fruit, of this Plant are like thoſe of Lathyrus; but the Leaves conſiſt of many Conjugations placed on a Mid-rib, which ends in a Tendril. *Miller's Dictionary, Vol.* 1.

Boerhaave mentions four Species of this Plant, which are,

1. Clymenum; Hiſpanicum; flore vario; ſiliquâ planâ. *T.* 396. *Lathyrus, vicioides, vexillo rubro, petalis roſtrum ambientibus cæruleis.* M. H. 2. 50. *Lathyrus, viſcoſi nomine miſſus.* Ind. 159. a. SPANISH CHICKLING-VETCH, WITH A VARIABLE FLOWER, AND A PLAIN POD.

2. Clymenum; Hiſpanicum; flore vario; ſiliquâ articulatâ. *T.* 396. *Lathyrus vicioides, floris vexillo phœniceo, foliis labialibus, ſubalbeſcentibus; ſiliquis Ochri.* M. H. 2. 55. a. SPANISH CHICKLING-VETCH, WITH A VARIABLE FLOWER, AND A JOINTED POD.

3. Clymenum; Bithynicum; ſiliquâ ſingulari; flore minore. *Juſſieu. a.* BITHYNIAN CHICKLING-VETCH, WITH A SINGLE POD, AND SMALLER FLOWER.

4. Clymenum; vexillo obſoletè cœruleo, petalis pallidis. *An Clymenum, Pariſienſe, flore cæruleo?* T. 396. a. COMMON CHICKLING-VETCH, WITH A BLUE FLOWER. *Boerhaave's Index alter Plantarum.*

To theſe *Miller* adds a fifth, which is the

Clymenum; Græcum; flore maximo ſingulari. *T. Cor.* GREEK CHICKLING-VETCH, WITH A LARGE SINGLE FLOWER.

CLYPEALIS CARTILAGO. The Thyroide Cartilage.

CLYPEUS. This ſeems to have been a ſort of Regiſter belonging to the Baths of the Antients, ſo called from its Form. The Uſe of it was, to increaſe or diminiſh the Heat, by excluding or letting in the Air.

CLYSMA, κλύσμα. A Clyſter. See ENEMA.

CLYSSIFORMIS *Deſtillatio.* A Deſtillation of ſuch Subſtances as are ſubject to take Fire, and fulminate, by a tubulated Retort. *Caſtellus* from *Wedelius.*

CLYSSUS.

Among the antient Chymiſts, the Word *Clyſſus* imported an Extract prepared of various Subſtances mixed together; and, among the Moderns, it alſo ſignifies a Mixture, containing the various Products of one Subſtance united with each other; when, for Inſtance, the diſtilled Water, the Spirit, the Oil, the Salt, and the Tincture, of Wormwood, are ſo blended, that the Mixture is poſſeſſed of all the united Virtues of the Simple, from which theſe various Preparations are obtained. According to this latter Senſe of the Word, *Rulandus*, in his Lexicon, informs us, that "a Clyſſus may contain "the whole Eſſence of any Subſtance, when, by a Separation "of its impure and feculent Parts, its eſſential and conſtituent "Principles are reduced to one Compound; or, a *Clyſſus* is "an Extract of all the ſubtle Parts of any Plant combined and "united in one common Subſtance." According to *Poterius*, a *Clyſſus* is a certain Union of all thoſe Virtues of any Plant, which exiſt in the three conſtituent Principles of Bodies, Sulphur, Salt, and Mercury, extracted from the ſeveral Parts of the Plant; when, for Inſtance, theſe three Principles are extracted from the Roots treated apart, and then from the Leaves, the Fruit, and the Seeds, and afterwards mixed, and ſufficiently united and incorporated, with each other. The Oil is firſt to be mixed with the Salt over a moderate Fire, agitating them gently together. The diſtil'd Water, which is that ſpirituous Liquor reſembling Aqua Vitæ, is to be added laſt of all, and is properly the Mercury, the Elixir, and the Quinteſſence of the Plant. If there is a conſiderable Quantity of Liquor, theſe Subſtances are moſt eaſily incorporated with each other by repeated Cohobations, with the Mouths of the Veſſels cloſe-ſtopt for this Purpoſe. They may alſo be converted into a Powder, or into any other Form, at Pleaſure; but they are moſt commo-

* Inſtances of this kind are frequent enough in *Tulpius, De Graaf, Platerus, Rhodius, Plazzonus, Panarolus, Paullinus*, and others.

diouſly kept under the Form of an Extract. They are very commodious for Uſe, and may be exhibited either diſſolved in ſome proper Liquor, or in the Form of a Bolus, or that of Pills. The Doſe is only to be known and aſcertained by Experience. In exhibiting Medicines of this Nature, the Phyſician muſt chuſe a proper Time, and carefully advert to the Nature of the Diſeaſe, the Condition of the Patient, and the State of the Weather. *Borrichius*, in his Treatiſe *De Uſu Plantarum indigenarum in Medicina*, ſpeaks in the following Manner, with reſpect to the Uſe and Method of preparing a Clyſſus of this Kind:

> Take, ſays he, any recent Plant, or Flower, or Seed, or Root, or all thoſe together; bruiſe them in a Mortar of Stone, or Iron. Immediately after, without waiting for a Fermentation, from a low, but pretty large, Glaſs Cucurbit, extract, and keep for Uſe all the Liquor, which can be obtained in this Manner, in Balneo Mariæ; whilſt at the ſame time the Veſſel is deep-lodged among wet Sand.

We muſt obſerve, that, from moſt Plants thus treated, a far more efficacious Water is obtained, than the common diſtil'd Waters; and this Water is alſo accompanied with an Oil. After this, take out the remaining Parts of the Plant, which are now perfectly dry, and conſequently Proof againſt Putrefaction, and preſerve them in a wooden Veſſel for future Uſe; and, when Neceſſity requires, add to this dry Magma a Quantity of any proper Water, ſufficient to riſe an Inch or two above it, and leave the Whole upon warm Aſhes for a Quarter of an Hour. Then expreſs the Liquor ſtrongly, and, if it is neceſſary, ſtrain it, that it may, at laſt, become clear by ſubſiding. What is thus clarified, is to be exhibited with a little Sugar, if the Patient nauſeates it without, or with thrice the Quantity of Broth. The feculent Parts, ſtill remaining in the Veſſel, are to be put into an earthen Veſſel, cloſe ſtopped, and calcined to black Aſhes; and, making a Lixivium of it, add the yellowiſh Salt, collected from that Lixivium, to the Liquor formerly expreſſed, or, if you pleaſe, keep it by itſelf. By this Method, none of the Virtues of the Plant are loſt, and no uſeleſs or corrupted Parts of it are kept in the Shops. Nor is an empyreumatic Taſte to be dreaded, if the Sand, in which the Cucurbit is placed, be continually moiſtened with Water. By this means, the Farrago of Syrups, and the numerous Veſſels filled with the inſignificant Waters of the Shops, may be juſtly laid aſide, and thoſe far more ſalutary Waters kept in fewer and ſmaller Glaſſes. If to this Mixture or Clyſſus, when become pure, we add good Vinegar, there will be produced inſtantaneouſly the Vinegar of Scordium, of Roſes, of Clove-julyflowers, of Raſpberries, or of Sage, according to the Diverſity of the Clyſſus. If compound Mixtures are deſired, they may be tranſformed into Clyſſuſes with as much Eaſe as ſimple Plants, by extracting, by Diſtillation, the Principles from ſeveral Subſtances at one and the ſame time, and afterwards adding them, at Pleaſure, to their inſpiſſated Juices, and clarifying them. It will amount almoſt to the ſame thing, whether this dry Magma, remaining in the Cucurbit after Diſtillation, be kept for Uſe in wooden Boxes, or whether, by boiling in Fountain-water, and afterwards by a gentle Evaporation, it be reduced to what we call a Rob, and kept in Phials for extemporaneous Purpoſes. Nor is it of any Importance to object, that, in this Caſe, the Spirits of the Plants, which are the moſt efficacious Means of Health, are excluded; for the more pure theſe Spirits are, the more ſeverely they ſometimes ſhock the Patient, and injure the natural Spirits of the Body; whereas this Mixture, when prudently exhibited, acts moderately, and produces no preternatural Heat in the Body. The drier Plants and Seeds, upon Diſtillation, yield ſo ſmall a Quantity of Liquor, that it is ſcarce ſufficient to moiſten the Magma; for which Reaſon the Magma, remaining in the Cucurbit after Diſtillation, is to be boiled in Spring-water, and inſpiſſated to a Rob. After this, it is cuſtomary to add its native Liquor to it, that it may, by that means, be reduced to a proper Conſiſtence. But the Reaſon, why, for this Purpoſe, we rather chuſe yellowiſh Salts, than ſuch as are white, is, becauſe the white Salts, being long expoſed to the Violence of the Fire, have, by that means, loſt almoſt all the eſſential Virtues of the Plants; whereas the yellowiſh Salts, in conſequence of their being gently expoſed to the Fire in a cloſe Veſſel, retain more native Oil and Sulphur. 'Tis certain, that only a ſmall Quantity of Salt can be obtain'd in this manner; but what is obtain'd, is found to partake the more of the Virtue of the Plant. If we afterwards have a mind to ſubject this black inſpiſſated Subſtance to an open Fire, more Salt will indeed be obtained, but leſs of the native Virtues of the Plant. From what has been ſaid, 'tis obvious, that, by this Method, we may obtain all the united active Virtues of one or more Plants, which may be expected in the Salt, and the eſſential Oil, whilſt, at the ſame time, the elemental Water ſerves for a Vehicle accommodated to medicinal Uſes. *Boerhaave*, in the thirty-ninth Proceſs of the ſecond Volume of his Chymiſtry, proceeds in a Manner ſomewhat different from this:

> "Take, ſays he, a Dram of any Elæoſaccharum, and two "Drams of the medicated Salt of *Tachenius*; grind them "together ſtrongly, and for a conſiderable Time, in a "Glaſs Mortar, till they become thoroughly mixed; then "add ſix Ounces of the cohobated diſtil'd Water of the "ſame Plants, of which the Elæoſaccharum was made; "and, if a Syrup of the ſame Plants be kept in the Shops, "a little of it may alſo be added: And thus, in a ſmall "Compaſs, the Virtue of a Plant may be collected for "medicinal Uſes, and act according to its own Nature in "the Body. The Salt of *Tachenius* will not here communicate any Virtue foreign to the Deſign, tho' prepared "from a different Plant; for the particular Virtue of "Plants does not reſide in the Salts, but in their eſſential "Oil. If a Perſon therefore, for making this medicated "Liquor from Cinnamon, ſhould add the Salt obtained "from burnt Cinnamon, he would loſe more of that Aromatic, or more Labour, than the Virtue of the Liquor "would compenſate."

By this means, the proper Virtues of every Plant are obtained concentrated, becauſe the elementary Water is the ſame in all Plants, and therefore does not alter their Effects. The Salt alſo loſes its own Nature in the Burning, ſcarce retaining more than the common one, and therefore proves of the ſame Virtues, whatever the Plants be that afforded it; ſo that all the peculiar Virtue of a Plant remains in its preſiding Spirit, which is here ſeparated, and lodged in the Oil: Whence this Preparation is extremely commodious, efficacious, and uſeful, if the medicinal Virtue of the Plant be previouſly well known; for thus we obtain a certain, tho' a leſs perfect Kind, of ſaponaceous, oily, eſſential Salt of the Plant, than that in which the learned *Helmont* places almoſt all the Efficacy of Medicines. The Doſe of theſe medicated Liquors is principally determined from the Power of the Oil employed in them. The moſt proper Time for exhibiting them is, when the Stomach is empty; but, when they are uſed, a due Regard ought to be had to the Nature of the Diſeaſe: For Inſtance, a ſimple Tertian Fever, very cold in the Beginning, is to be cured after this manner: Two Hours before the Fit is expected, let the Patient uſe a warm Bath to his Legs and Feet, till he grows moderately hot; and afterwards take, every Quarter of an Hour, half an Ounce of the medicated Liquor, prepared from the Water, Oil, and Salt, of Wormwood; then let his Feet and Legs be well rub'd, and the whole Regimen be continued till two Hours after the Fit was expected. And by this means all theſe Caſes are generally cured with Eaſe and Safety, even in old Age, except there be any Scirrhoſity or Suppuration attending them. So again, in the Caſe of Worms, a like Preparation from Tanſey, being given for ſome time upon an empty Stomach, proves excellent; but here, inſtead of the Salt of Tanſey, which is ſcarce, the Salt of Wormwood may be uſed. *Rieger. Boerhaave.*

CLYSSUS ANTIMONII.

This Liquor is alſo called *Aqua Stimmi Sulphurea*, *Clyſſus Mineralis*, and, in the *Diſpenſatorium Brandenburgenſe*, *Spiritus Antimonii*. It is a Liquor obtained from a Mixture of Antimony, Nitre, and Sulphur, thrown by Spoonfuls into a Retort, whoſe Bottom is red-hot, ariſing from their Detonation, and collected in Vapours, applying at the ſame time to the Retort a large Receiver, with ſome Water in it. The Proportion of the Ingredients is varied, according to the Humours or Intentions of different Operators. It is a ſomewhat acid Spirit, partaking much of the Nature of Spirit of Vitriol, which proceeds from the kindling of the Sulphur, both of the common Sort which was added, and alſo what was contained in the Antimony, and united with the inflammable Portion of the Nitre in the Detonation.

It ſerves for various Purpoſes; for if is preſcribed to feveriſh Patients, in order to procure a grateful Acidity to their Potions. It is alſo exhibited to ſuch as labour under a Loſs of Appetite. *Schulzius*, in his *Prælectiones*, informs us, that, by the Uſe of it continued for ſome time, he has known the Worms of Children expel'd, and obſtinate Epilepſies cur'd; and perhaps the Perſon who firſt added Spirit of Vitriol to the compound Water of Swallows, obſerved Inſtances of the like Nature. It may be exhibited from three to fifteen or twenty Drops, according as it contains a ſmaller or larger Quantity of Phlegm, provided it be diluted in a large Quantity of ſome aqueous Vehicle. According to *Ettmuller*, in *Tom.* 2. it is obſervable, that, in making this Clyſſus, during the Detonation, there are raiſed at the ſame time, in the Neck of the Retort, reddiſh Flowers of Antimony, of a ſomewhat acid Taſte, and which, when edulcorated with common warm Water, may be kept as a Succedaneum to the Flowers of Antimony. Some prepare the Clyſſus of Antimony with Tartar, inſtead of Sulphur; but, in this Caſe, a more ungrateful Liquor is yielded, or an urinous, volatile, diaphoretic, diuretic, carminative, and antiacid Spirit, which is called *Aqua Tartarea*.

CLYSTER, or CLYSTERIUM; κλυσὶς, or κλυσήριον, from κλύζω, to waſh. A Clyſter. See ENEMA.

CNACOS, CNECOS, κνακὸς, κνηκὸς. A ſort of Colour between White and a yellowiſh or fallow Colour. *Caſtellus.*

CNAPHOS, κνάφος, is the *Carduus Fullonum*, Teaſel; and in *Hippocrates*, *Lib.* 2. περὶ γυναικείων, ſignifies a Fuller's Shop.

CNEMATA, κνήματα, in *Galen's Exegeſis*, are expounded by ξύσματα, Parings, Scrapings, Shavings. Some Copies read κνήσματα, and ſo it is written *Lib.* περὶ φύσ. παιδίω.

CNEMIU, κνημίυ, is expounded by *Galen*, τῦ ἐ κνήμης, "of ſomething pertaining to the Tibia." Perhaps it ſhould be κνημαίυ, as the beſt Copies have it. *Foeſius.*

CNEMODACTYLÆUS, κνημοδακτυλαῖος. The Name for the *Muſculus Extenſor digitorum Pedis communis. Caſtellus.*

CNEORON, κνέωρον. The *Cneoron* is the ſame as the *Gneſtron*, or *Thymelæa*, as appears from *Dioſcorides*, *Lib.* 4. *Cap.* 173. and *Pliny*, *Lib.* 13. *Cap.* 21. who ſay, "That "ſome call this Shrub *Thymelæa*, others *Chamelæa*, others "*Pyros Achne*, others *Gneſtron*, others *Cneoron*." A Decoction of the *Gneſtron* is directed by *Hippocrates*, *Lib.* 1. περὶ γυναικ. as a Purge for Phlegm and Bile; and *Lib.* 2. of the ſame Treatiſe he orders a Decoction of two Potions (δύο πόσιας) of *Cneſtrum* to be boiled in a Cotyle of Water, and mix'd with Oleum Narciſſinum, or Anthinum, to be injected into the Uterus, under an Inflammation of that Part.

CNEORON *Album* is the Convolvulus; major; rectus; Creticus; *argenteus*. See CONVOLVULUS.

The CNEORON *nigrum* is the Thymelæa; Alpina; linifolia; humilior; flore purpureo; odoratiſſima. See THYMELÆA.

The laſt is ſuppoſed to be the *Cneoron* or *Cneſtron* of *Hippocrates* and *Galen*.

CNESERA, κνησέρα. A Sieve or Searſe.

CNESIS, κνῆσις. The ſame as κνησμὸς, *Cneſmos*, (from κνάω, to ſcratch) which, as *Galen* ſays, *Com. in Aph.* 4. *Sect.* 5. *Lib.* 6. ſignifies that eager Hurry and Motion with which Animals employ their Nails in ſcratching any Part about them which itches; and this is no more than what is natural to them all, as he obſerves. But it is more generally meant of the Itching itſelf, in which Senſe one has defin'd it a dolorific Pleaſure excited in the Skin, by a thin, ſalt, acrimonious Ichor, without an Exulceration.

CNESMA, κνῆσμα. See CNEMATA.

CNESMOS. See CNESIS.

CNESTRON, κνῆστρον. The ſame as the CNEORUM. It alſo imports a Raſp; which is likewiſe call'd *Cneſter*. And, particularly, it ſignifies a Raſp for ſcraping Cheeſe.

CNICELÆON, κνικέλαιον, from κνίκος, Cnicus, and ἔλαιον, Oil, is Oil made of the Seeds of Cnicus, the Manner of which is directed by *Dioſcorides*, *Lib.* 1. *Cap.* 44. The Virtues of it, as the ſame Author tells us, are the ſame with thoſe of the Oil of the *Grana Cnidia*, being cathartic, only weaker.

CNICION, κνίκιον. A Name in *Dioſcorides*, *Lib.* 3. *Cap.* 123. for the *Trifolium.*

CNICUS. A Name for the CARTHAMUS, which ſee. But the more modern Botaniſts have excluded the *Carthamus* from the Species of *Cnicus*. According to theſe, the Characters of the *Cnicus* are,

The Heads are ſurrounded with a Crown, formed of a Complication of Multitudes of Leaves.

Boerhaave mentions nine Species of this Plant, which are,

1. Cnicus; perennis; cœruleus; Tingitanus. *H. L. Carduus cœruleus, erectus, Tingitanus, Cnici facie, foliis magis integris*, M. H. 3. 159. TANGIER PERENNIAL BLUE DISTAFF-THISTLE.

2. Cnicus; Atractylis lutea dictus. See ATRACTYLIS.

3. Cnicus; Atractylis purpurea dictus.

4. Cnicus; exiguus; capite cancellato; ſemine tomentoſo. *T.* 451. Carduus parvus. *J. B.* 3. 93. Carduus, minimus. *Alpini Exot.* 254. *a.*

Proſper Alpinus ſays it is of no Uſe in Medicine.

5. Cnicus; ſylveſtris; hirſutior; five Carduus Benedictus, *C. B. P.* 378. *Tourn. Inſt.* 450. *Boerh. Ind. A.* 140. *Carduus Benedictus*, Offic. J. B. 3. 77. Chab. 351. Ger. 1008. Emac. 1171. Park. Parad. 530. Raii Hiſt. 1. 303. *Carduus luteus; procumbens ſudorificus & amarus*, Hiſt. Oxon. 3. 160. *Cardo-cnicus ſylveſtris hirſutior*, Pluk. Almag. 82. HOLY-THISTLE.

From a ſmall woody Root, which periſhes after giving ripe Seed, there ariſe ſeveral rediſh hairy Stalks, two Foot high or more, on which grow long hairy green Leaves, cut in, or torn, on both Sides, into ſeveral Laciniæ or Jags, each terminating in a ſmall harmleſs Spinula. On the Top of the Stalks grow the Flowers, in round Heads, encompaſſed with ſeveral Leaves ſmaller and ſhorter than thoſe below, leſs jagged, and ſomewhat more prickly: They are yellow and fiſtular, ſtanding in ſcaly Calyces, each Scale of which ends in a long ſlender Spine, denticulated on both Sides like the Saw of a Saw-fiſh. The Seed is longiſh, round, and ſtriated, of a brown Colour, encompaſs'd at the Top with a Crown of ſtiff *Setæ* or Briſtles, ſtanding out like the Feathers of a Shuttle-cock. The whole Plant is very bitter. It is ſown every Year in Gardens, flowering in *June*.

Paulli, after *Cæſalpinus*, obſerves, that the Head of this Herb is of a fragrant Smell, reſembling that of the Muſcadel-pear; but *Cæſalpinus* compar'd it to that of Muſk itſelf. This Fragrance, however, does not diffuſe itſelf to a great Diſtance, nor impregnate the Air at all times; but is principally perceiv'd, when, during a ſerene and dry State of the Atmoſphere, it is formed into a perfect Flower, which, after ſome time, loſes its grateful Scent. Becauſe the Fragrance of this Flower is only to be perceived at a ſmall Diſtance, being in a manner overbalanced by the fetid Smell of the Herb itſelf, and becauſe it is ſurrounded with a large Number of offenſive Prickles, he thinks, that none, before the Days of *Cæſalpinus*, had Courage enough to inveſtigate and diſcover it. The whole Plant is remarkably bitter, except the Root, which has ſcarce the ſlighteſt Degree of Bitterneſs. Some have obſerv'd, that when the Buds of the Carduus are cut, before they are blown into full-form'd Flowers, they yield a ſmall Quantity of a bloody Juice; but *Matthiolus* denies the Truth of this Aſſertion. This Thiſtle is dignify'd with the pompous Epithets of *bleſſed* and *holy*, in conſequence of its ſingular Virtues againſt various Diſeaſes. *Pontedera* is of Opinion, that this Plant was either unknown to the Antients, or at leaſt neglected by them; for he thinks, if they had known its ſingular Efficacy in the Cure of ſeveral Diſeaſes, they would not have conceal'd their Sentiments with reſpect to this Matter, ſince they have often beſtowed over-done Encomiums upon Plants whoſe Virtues exiſted rather in the Imaginations of the Whimſical, than in the Plants themſelves. This Cnicus is ſaid to have been firſt imported from the *Indies* by way of Preſent to the Emperor *Frederic* the Third; at which Juncture it was highly celebrated, either uſed in Aliments, or Drink, as an excellent Preſervative againſt that Species of Head-ach, which the *Greeks* call *Hemicrania*. The Phyſicians of this Emperor, in order to ingratiate themſelves with their Maſter, began to uſe it in various Caſes; and, when the Succeſs in Practice anſwered the Encomiums beſtowed upon it, the Plant acquired an uncommon Fame and Reputation. Upon this it was cultivated by ſuch a Number of Hands, that it was in a ſhort time the Produce of various Provinces. It was, however, afterwards diſcover'd, that this Cnicus grew ſpontaneouſly in *Europe*; for, according to *Bellonius*, in his *Obſervations des pluſieurs Singularités*, *Lib.* 1. *Cap.* 25. it is to be frequently met with in the Fields of *Lemnos*, an Iſland in the *Mediterranean* Sea. It is alſo produced in *France*, on thoſe towering Parts of the *Alps* called *Marignols*, near *Monſterias* in *Provence*. According to *Ray*, the Species produc'd on the Summits of theſe Hills is firmer, and ſomewhat leſs, than that cultivated in the Gardens. It is at preſent reckoned among the leſs valuable Plants, tho' it ſtill retains its former Worth in the Eyes of Phyſicians, for whoſe Uſe it is ſtill cultivated in many Gardens. It flowers in the Summer, and in the Autumn its Seeds become ripe. *Hoffman*, in his Treatiſe *De Medicamentis Officin. Lib.* 2. *Cap.* 50. gives us an Account of the Medicinal Virtues of this Plant, in the following Words: "Its Virtues are nearly "the ſame with thoſe of Wormwood. Decoctions of it, eſpe-"cially in Wine, are of ſingular Efficacy when the Patient is "not feveriſh. It is leſs efficacious when exhibited in Powder, "and the diſtil'd Water is much leſs ſo. It is highly extol'd in all "pituitous Diſorders of the Head, Hemicranias, Deafneſs, "Vertigos, Epilepſies, Defluxions on the Breaſt, Dropſies, "Quartan Fevers, and thoſe of long Standing, as theſe Diſor-"ders draw their fatal Origin from Obſtructions. It is alſo "celebrated as an excellent Medicine in Colics, nephritic and "ſciatic Pains, as it partly diſcuſſes the peccant Matter, and "partly derives it to the urinary Paſſages. But its Efficacy is "principally celebrated in that formidable Diſtemper the "Plague, againſt which it is uſed both internally and externally. "Internally it is exhibited both with a preſervative and cura-"tive Intention, ſince it powerfully excites a Diaphoreſis. Ex-"ternally it is apply'd for breaking and opening peſtilential "Buboes, with which Intention it is alſo apply'd to other Im-"poſtumations. In the Opinion of the common People, a "Wine, prepared of it in the Autumn, is poſſeſſed of ſo "powerful Qualities, that it is little leſs than a *Panacea*, or "univerſal Remedy. It is preferable to the Wine of Worm-"wood, becauſe, in conſequence of its analeptic Quality, it "does not prove offenſive to the Head, whilſt, at the ſame "time, it is equally, if not more, beneficial to the Stomach; "for, if I am not much miſtaken, it is proper both for bilious "and pituitous Patients, as it is a powerful Abſtergent: It is "alſo ſo effectual an Aſtringent, that it is uſed in ſtopping "Hæmorrhages." According to *Pontedera*, it abounds with volatile Salts; for which Reaſon he concludes, that it is highly ſalutary in Caſes where Coagulations or Inſpiſſations of the Juices happen. A Decoction of it, therefore, in Water, may be properly exhibited to Patients labouring under a Hemicrania, "a Vertigo, an Epilepſy, or a Dulneſs of Hearing. By the

Uſe

Uſe of this Decoction colic Pains, ariſing from preternatural Diſtentions of the Colon by Flatulences, are often happily removed, as alſo nephritic Pains, and moſt Indiſpoſitions to which the urinary Veſſels are ſubject. It is alſo an excellent Medicine for ſuch as labour under Fevers, either of the totally intermittent Kind, or of that Species which never ſo intermit, that the Patient is quite free from them. By an Exhibition of this Medicine in the Paroxyſm, as ſoon as the Patient's Extremities are become cold, I have known many, ſays *Pontederâ*, ſpeedily cured; which I can alſo affirm of other Medicines, by my own Preſcription exhibited in Agues at that particular Time. *Rulandus*, according to *Ettmuller*, after having previouſly exhibited a Preparation of Aſarabacca, or Antimony, by way of Vomit, orders a Decoction of this Plant, and Leaves of the leſſer Centaury, to be uſed for ſome Days, in order to promote a Diaphoreſis; and he affirms, that by this Method he cured many Patients labouring under Quartan Fevers; for which Purpoſe he either uſed this Plant alone, or in Conjunction with Aſarabacca-root. The Powder of the tender Leaves in the Middle of the *Carduus Benedictus*, dried, and exhibited three Nights ſucceſſively in warm Wine, was, according to *Bauhine*, the celebrated Arcanum of a certain great Phyſician in *Germany* againſt Fevers. According to *Ettmuller*, "A Dram of the "Powder, exhibited with an Intention to promote a Diapho- "reſis, is, among the common People, a celebrated Remedy "for Tertian Fevers; but thoſe of the Quartan Kind do not ſo "eaſily yield to it." The *Carduus Benedictus* is of a highly penetrating bitter Taſte, which, however, does not remain long in the Mouth. It contains little Oil, which is in a ſmall Quantity diffuſed through the Plant, and rendered almoſt of a ſpirituous Quality; for which Reaſon *Ludovici*, in his *Pharmacopœia*, affirms, that it is ſcarcely to be obtained. Hence this Plant is poſſeſſed of a reſolvent and highly ſudorific Quality, eſpecially when prepared recent by way of Infuſion, ſince its bitter Principle is of a highly ſubtile Nature, and renders its Infuſion preferable to that of the *Lapis Porcinus*, or Stone found in the Gall-bladder of the Porcupine. For this Reaſon, infuſed in Water, and drank like Tea, it is an excellent ſudorific Medicine againſt Fevers, in Patients of languid, cold, pituitous, and lencophlegmatic Habits. And if this Herb is infus'd either in Wine alone, or Wine mixed with Water, to be drank warm, it, by promoting a powerful Diaphoreſis, carries off all intermittent Fevers of a mild Kind, and purifies the Maſs of Blood tainted with any Admixtures of adventitious Salts; for which Reaſon it is no deſpicable Remedy in ſcorbutic Caſes. According to *Ray*, our Countrymen boil it in Poſſet-drink, which they exhibit in a ſmall Doſe, when the Intention is only to promote a Diaphoreſis; but increaſe the Quantity, when a Vomit is to be excited, or the ſordid Contents of the Stomach to be evacuated. According to *Bauhine*, *Geſner*, in order to kill Worms of the Inteſtines, prepared a Powder of the dried Leaves of the *Carduus Benedictus*, a little Cinnamon, Fennel, and Sugar, which he exhibited either in the Morning, or after Supper, with a little toaſted Bread ſoaked in Wine. Theſe Effects aſcribed to the *Carduus Benedictus* are to be accounted for from the Bitterneſs, and the penetrating and reſolvent Quality, of the Plant. Hence we underſtand, for what Reaſon it is claſſed among the ſudorific, alexipharmic, emmenagogue, antifebrile, and antiſcorbutic Medicines. *Hoffman*, in his *Clavis Pharmaceutica Schræderiana*, recommends the following Infuſion as a Preſervative againſt all Diſeaſes:

> Take of the Herb Carduus Benedictus, of the Tops of Wormwood, and the leſſer Centaury, each one Ounce: Infuſe in two Pints of *Rheniſh* Wine, mixed with two Drams of the Spirit of Vitriol. Let them ſtand in a warm Place for three Days.

The Doſe of this Liquor, when ſtrain'd, is a Spoonful or two, to be taken at Bed-time. This Preparation is by ſome accounted a Specific againſt the Pleuriſy; but, for my own Share, I cannot conceive, how this Medicine can prove effectual againſt that Diſorder by any other Means than by exciting a Diaphoreſis, where that is indicated by the State of the Patient. According to *Ettmuller*, it is an excellent Remedy againſt the Pleuriſy, in whatever Manner it is exhibited, but more eſpecially in the Form of a Decoction. Hence it is an Ingredient in the antipleuritic Spirit of *Michaelis*, which is prepared by pouring Spirit of Wine upon antipleuritic Plants, and ſubjecting them to a ſlow Diſtillation by the Alembic; then it is mixed with Spirit of Nitre, digeſted, and again ſubjected to Diſtillation by the Alembic. Thus the Spiritus Nitri Dulcis is obtain'd, which, by itſelf, is alſo of an antipleuritic Nature. One or two Drams of this, exhibited in a Water diſtil'd from the *Carduus Benedictus*, or in any other proper Water, prove an excellent Remedy in Pleuriſies accompany'd with a Difficulty of Breathing. This Medicine alſo excites a Diaphoreſis, removes Inflammations, promotes Expectoration, and puts a ſeaſonable Stop to Fevers. According to the ſame Author, the *Carduus Benedictus* contributes to the Reſolution of grumous Blood, eſpecially when produc'd by Falls from an Eminence, by exciting a Diaphoreſis. It alſo expels the grumous Blood, when attenuated, by the urinary Paſſages. Thus we are ſatisfy'd with reſpect to the ſeveral Methods in which this Plant operates, which are either by opening Obſtructions, and eliminating the peccant Matter from the Body; or by promoting a Diaphoreſis, or a Diſcharge of the Urine, according to the particular Regimen uſed for different Intentions. In hot Diſeaſes, the Uſe of it ſeems not ſo much to be dreaded, as that of moſt other Medicines of a reſolvent and ſudorific Nature; for, in conſequence of its reſolving the thick Juices by the Fineneſs and Subtilty of its Parts, it does not lodge long in the Body, whilſt, at the ſame time, it puts the Humours into a Commotion. For this Reaſon, to uſe the Words of *Paulli*, "I think 'tis now known "to every body, that malignant Diſorders of every kind can- "not be more ſucceſsfully and effectually removed, than by "means of a proper Uſe of the Carduus Benedictus." Unſpeakable Advantages, therefore, ariſe from the due Uſe of this Plant, when Plagues, petechical Fevers, Meaſles, and the Small-pox, rage. I am alſo of Opinion, that this Plant acts by its reſolvent and penetrating Quality, when uſed in external Applications. Hence the Steam, ariſing from a Decoction of it, admitted into the Ears, is ſaid to be an excellent Remedy for Dulneſs of Hearing, becauſe it opens the Obſtructions, and reſolves the indurated Sordes of the Ear. *Paulli* affirms, that he had ſcarce found any Herb comparable to it in conſolidating putrid obſtinate Ulcers, and even Cancers; and informs us, from *Bauhine*, that *Arnoldus de Villa Nova* affirms, that he had ſeen a Man recovered, who by putrid and hollow Ulcers had the Fleſh of his Legs conſumed to the very Bones, and who had in vain ſpent all he had on the Cure. This Patient took the recent Leaves of the Carduus Benedictus; and, after bruiſing them, boil'd them in generous Wine, to which adding melted Hogs-lard, he boiled them together; then putting in ſome Wheaten-meal, he, without Interruption, agitated the whole Maſs with a Spatula, till it aſſum'd the Conſiſtence of a Plaiſter, by applying which, twice a Day, warm to his Ulcers, they were cured. *Paulli* alſo, from *Bauhine*, informs us, that a certain Woman, whoſe Breaſts were by a Cancer conſumed to the very Ribs, was, by means of the diſtil'd Water of this Plant, and the Powder of its Leaves ſprinkled on the Parts affected, perfectly freed from her Diſorder. But *Garidel*, in his *Hiſtoire des Plantes qui naiſſent aux environs d' Aix*, ſuſpects, that this Paſſage is hyperbolical, and that by this means, perhaps, a malignant or cancerous Ulcer was cured, but not a genuine and legitimate Cancer, againſt which no Simple in the Fields, no Plant in the Gardens, no Preparation in the Shops, has hitherto been found effectual. The Seeds of this Plant are poſſeſſed of the ſame Medicinal Virtues with the Plant itſelf. In Caſes where the Hypochondria are indiſpoſed by Flatulences, or Obſtructions of the Liver, theſe Seeds are generally exhibited in hot Wine: Half an Ounce of them may be given for a Doſe. They are principally and moſt frequently uſed in Emulſions againſt the Pleuriſy, prepared with Water of wild Poppies; in which Caſe the Patient muſt be kept warm, in order to promote a Diaphoreſis. An Emulſion of the Seeds of the Carduus Benedictus is alſo commonly prepared, with ſome proper Liquor, for expelling, by a Diaphoreſis, the malignant Matter in the Small-pox, Meaſles, and other malignant Diſorders. The Root of this Plant, ſo far as we know, is uſed in no Preparation, except that of the *Spaniſh* Balſam, directed in *Lemery's Pharm. Univerſ.* There are various Shop-preparations of this Plant, ſuch as the *Succus inſpiſſatus*, which is no more than the Juice expreſs'd from the green Herb, and boil'd over a gentle Fire to the Conſiſtence of a Syrup. A Spoonful of this Juice is an effectual Vomit; but, when exhibited in a ſmaller Quantity, half a Dram, for Inſtance, it is recommended for provoking the Menſes. In Conjunction with a warm Vehicle, and a proper Regimen, it excites a Diaphoreſis. This Effect is alſo produced by the *Extractum Cardui Benedicti*, (Extract of Carduus Benedictus) which is prepared by evaporating the Decoction of the Herb, and is preſcrib'd in Pills. A few Grains of it are, by ſome, alſo added to purgative Medicines, in order to prevent Flatulences, and Gripes of the Inteſtines.

If, according to *Schroder*, it is prepared with diſtil'd Vinegar, it is an excellent Remedy againſt putrefactive Diſorders, ſuch as the Plague; and, according to the Obſervation of *Ettmuller*, when exhibited from half a Scruple to a whole one, in Conjunction with a little Laudanum Opiatum, it excites ſo powerful a Diaphoreſis, that the Patient ſeems ready, as it were, to be diſſolved in Sweat. The Syrup, prepared from the recent expreſs'd Juice of the Leaves, and made up with Sugar, is, by Nurſes and the common People, highly extol'd in Diſorders of the Stomach, Crudities, and Loſs of Appetite. They alſo uſe this Syrup after Sallies of Paſſion, and in the Colic. They likewiſe recommend it for killing Worms, and removing Putrefaction; on which account they order it in Pleuriſies, in malignant and peſtilential Fevers. The Doſe is from one to two or three Spoonfuls. The ſimple diſtil'd Water, obtain'd from the *Carduus Benedictus*, is one of the Four antipleuritic Waters.

ters. By the good Women it is exhibited in all thoſe Diſeaſes in which the Herb is recommended, eſpecially with a View to increaſe Tranſpiration, and promote the Eruption of the Small-pox and Meaſles; but as this Water is ſomewhat weak, and ſlow in its Operation, the Water diſtil'd from the fermented Plant, in the manner deſcrib'd under the Article AQUA, is preferable, where a Diaphoreſis is intended: This is much commended by *Ludovici*. The Eſſence, prepared from this Herb with Spirit of Wine, is bitter, in Virtues agrees with the Eſſence of Wormwood, and is, in a peculiar manner, appropriated to Diſorders of the Stomach. Twenty, thirty, or more Drops of it may be exhibited for a Doſe. The *Oleum diſtillatum Eſſentiale* of the *Carduus Benedictus*, in Virtues, agrees with the Oil of Wormwood. Theſe are the moſt common Preparations from this Plant.

6. Cnicus; ſive Carduus Benedictus; ex Chio. *Volk. a.*

7. Cnicus; Hiſpanicus; arboreſcens; fœtidiſſimus. *T.* 451. *H.* STINKING SPANISH TREE DISTAFF THISTLE.

8. Cnicus; cœruleus; humilis; & mitior. *T.* 451. *Eryngium, minimum, mitius, capitulo magno.* H. R. Par. H.

9. Cnicus; cœruleus; aſperior. *C. B. P.* 378. *T.* 456. *Carthamus, ſive Cnicus, flore cæruleo.* J. B. 3. 80. *Carduus erectus, cæruleus, Cnici facie, foliis diſſectioribus.* M. H. 3. 159. *Boerhaave's Index alter Plantarum, Vol.* 1.

Dale mentions another Species of the *Cnicus*, which is,

CARDUUS PINEA, Offic. *Carduus pinea Theophraſti*, Alp. Exot. 126. Raii Hiſt. 1. 301. *Carduus Creticus humillimus integris & anguſtis foliis*, Hiſt. Oxon. 3. 159. *Carduus humilis gummifer, magno flore ſimplici cæruleo*, Ejuſd. 158. *Carduus pinea ſeu Ixine Theophraſti*, Park. 970. *Carlina acaulos gummifera*, C. B. 380. *Cinara acaulis gummifera*, Raii Hiſt. 1. 301. *Cnicus Carlinæ folio, acaulos, gummifer, aculeatus, flore purpureo & flore albo*, Tourn. Coroll. 33. *Chamæleo albus Apulus purpureo flore gummifer*, Raii Hiſt. 1. 301. *Chamæleo albus verus acaulis.* THE TRUE CHAMÆLEON, OR CHANGEABLE THISTLE, WITHOUT A STALK, Park. 967. THE PINE-THISTLE, *Dale.*

The Country-people of *Apulia*, who attend the Flocks, gather the Gum produced in the Head, and between the Leaves of the Cup. This Gum they call *Cera di Cardo*, becauſe, when it is concreted, it becomes hard like Wax. They uſe it as a drawing Topic. Whilſt it is recent, its Parts cohere, like thoſe of Bird-lime, and it may be drawn out into a Thread of a whitiſh Colour; for it originally conſiſts of a milky Juice, which, when collected, becomes thick like Wax, and, when handled, aſſumes a blackiſh Colour. Theſe Accounts are given by *Colonna*. *Raii Hiſt. Plant.*

CNIDE, κνίδη, is a Name in *Dioſcorides*, *Lib.* 4. *Cap.* 94. for the Urtica, or Nettle.

CNIDELÆON, κνιδέλαιον, from κνίδεος, *Cnidian*, and ἔλαιον, Oil, is Oil made of the *Grana Cnidia*. The Manner of Preparation is ſhewn in *Dioſcorides*, *Lib.* 1. *Cap.* 43.

CNIDIA GRANA, *Cnidian* Berries. Theſe are directed, by *Hippocrates*, as a Purge. Modern Botaniſts do not agree of what Plant this is the Fruit; but moſt take it to be that of the *Thymelæa*, *foliis Lini*, C. B. P. Others, however, believe the *Grana Cnidia* to be the Fruit of the *Mezereon*, as *Cordus*, and *Scroder*. *Schulzius* is of Opinion, that they are the Berries of the *Cneoron*, or *Cneſtron*. *Ray* ſays, the Berries of the *Thymelæa* are not the *Grana Cnidia*, but the Seeds contain'd in the Berry. See THYMELÆA.

CNIDOSIS, κνίδωσις. An itching and ſtimulating Senſation, ſuch as is excited by the *Cnide*, or Nettle. The Word occurs ſeveral times in *Hippocrates*, *Prorrhet.* 2. *Celſus*, *Lib.* 2. *Cap.* 8. renders κνιδώσεις, in *Hippocrates*, *Pruriginem.*

CNIPES. A kind of ſmall Worms, which infeſt Vines. See AMPELITES TERRA.

CNIPOTES, κνιπότης, is expounded, in *Galen's Exegeſis*, by κνησμὸς, "an Itching;" but ſome, as he obſerves, take it for a dry Ophthalmy, which is *Erotian*'s Expoſition of the Word.

CNISMOS, κνισμὸς, is the ſame as CNESMOS, which ſee.

CNISSOREGMIA, κνισσορεγμία, (from κνίσσα, a nidorous Smell, and ἐρεύγη, an Eructation) a nidorous Eructation, as ὀξυρεγμία is an acid Eructation. Thus *Caſtellus*; but he does not ſeem very happy in compounding of Words, for κνισσερευγμὸς and ὀξερευγμὸς are Terms of a better Stamp, and more expreſſive of his Meaning.

CNYMA, κνῦμα, from κνάω, the ſame as ξύω, to ſcrape or grate, in *Hippocrates*, is a Raſure, Punction, or Vellication; and alſo the ſame as *Cneſmos*. Κνῦμα, in *Galen's Exegeſis*, is ſaid to be a Term made by an Onomatopœia to expreſs a gentle or ſoft Sound; and κνῦμα μολύβδινον, *Lib.* 2. περὶ γυναικ. is a leaden Peſſary.

CO, COS, COOS, κῶ, κῶς, κῶος. An Iſland in the *Archipelago*, now call'd *Lango*, the Birth-place of *Hippocrates*, who, from hence, is uſually call'd *Cous*.

COA. A Plant, ſo named by Father *Plumier*, in Honour of *Hippocrates*. It is a ſcandent Plant, growing to the Height of five or ſix Feet, and is an Ever-green, bearing a globular Bell-ſhaped Flower, conſiſting of one Leaf, from whoſe Cup ariſes a multifid Pointal, fix'd like a Nail in the hinder Part of the Flower, which afterwards becomes a Fruit, compoſed of three membranaceous Seed-veſſels, which are compreſs'd, bivalve, and divided into two Cells, in which are contain'd oblong wing'd Seed. It grows plentifully in *America*, particularly about *Campeachy*, whence the Seeds have been brought to *England*, and Plants raiſed from them.

We have but one Species of this Plant, which is,

Coa ſcandens, fructu trigemino ſubrotundo. Plum. CLIMBING COA, WITH A ROUNDISH FRUIT, WHICH OPENS INTO THREE PARTS. *Miller's Dictionary, Vol.* 2.

COACTIO. See ANANCE.

It is alſo the Name of a Diſeaſe in Horſes, cauſed by hard Labour, bad Food, or want of Care. It may be call'd a *Surfeit*. *Veg. L.* 1. *C.* 37.

COACUS. An Epithet of a Treatiſe of *Hippocrates*, call'd *Coacæ Prænotiones*, from *Coos*, the Birth-place of their Author.

COAGULANTIA. In general, Subſtances, which, when mix'd with Fluids, coagulate them. But it is uſually expreſſive of Remedies, or Poiſons, which coagulate the Blood and Juices.

COAGULATIO.

The *Coagulatio* of the *Latins*, the πῆξις of the *Greeks*, and the *Coagulation* of the *Engliſh*, import a certain Change in the State of any Liquor, by means of which, inſtead of retaining its Fluidity, it becomes more or leſs conſiſtent and ſolid, according to the Degree of the Coagulation. Changes and Tranſmutations of this Kind happen almoſt everywhere in Nature, ſince ſolid Bodies ſeem to be little elſe than concreted Liquors. The hardeſt Woods ariſe from a Concretion and Coagulation of the nutritious Juices. The moſt ſolid Parts of animal Bodies, the Bones, for Inſtance, are gradually and inſenſibly form'd of an inſpiſſated Fluid. Beſides, there are many ſatisfactory Arguments, proving, that foſſile Subſtances are originally fluid. Some Fluids, by means of Cold, aſſume a very conſiderable Degree of Conſiſtence, and are converted into what we call Ice. Coagulations of a morbid and preternatural Kind alſo happen in the human Body; whence ariſe Obſtructions of thoſe Veſſels and Cavities, which ought to remain pervious and open. Heat and Cold are the two principal Inſtruments commonly uſed by Nature, for producing Coagulations. Sometimes alſo Fluids are coagulated by an Admixture of ſome foreign and adventitious Subſtance, which produces a firmer Coheſion of their Parts. Apothecaries condenſe and coagulate Fluids in various Manners, by Evaporation, for Inſtance, or Diſtillation, when they prepare the inſpiſſated Juices of Vegetables, Extracts, and Jellies; for, by this means, the moſt fluid and diluted Parts being carried off, the others, which have a natural Tendency to Coalition, conſtitute a coagulated Body. This Species of Coagulation is, by Chymiſts, call'd *Coagulatio per Segregationem*, or *per Separationem*. Its Oppoſite is what they commonly call *Coagulatio per Comprehenſionem*; which is, when the Whole of the Fluid, without the Loſs of any of its Parts, is ſo treated as to be coagulated into an uniform Subſtance. Whoever intends to produce Coagulations of the former Kind, ought to advert to the following Advice of *Hoffman*. "If, ſays he, in order to produce the Conſiſtence of an inſpiſſated Extract, any Fluid is to be drawn off, this is to be done *in Balneo Mariæ*, that an Empyreuma, and the Aduſtion of the Particles of the Extract, may be prevented; which is to be obſerved in preparing the Extracts of Aloes, Opium, and other Vegetables: Or, 'tis ſtill more adviſeable to carry off the greater Part of the Liquor, over a bare Fire, or by means of a Sand-heat. Then the Inſpiſſation is to be perfected by the Aſſiſtance of a more mild and gentle Heat. We muſt alſo obſerve, that ſome Extracts, as alſo Robs, and ſome other Subſtances of a like Nature, cannot, by a bare Fire, or a ſtrong Degree of Heat, be reduced to a due State of Conſiſtence, but always remain fluid; whereas they become inſpiſſated, and aſſume a due Conſiſtence, if, after having been previouſly and ſufficiently boil'd, they are, during a proper time, treated with the mild and gentle Heat of a Stove, or proper Furnace."

What thoſe Subſtances are, by the Addition or Interpoſition of which Fluids aſſume a Conſiſtence, we are taught, by Chymiſtry; an Art, which, when genuine, imitates unerring Nature in her Operations: For chymical Coagulations are produced,

1. By Water, either in the way of Congelation, Cryſtallization, or Precipitation. Congelation is produced by the Aſſiſtance of Cold, and is explain'd under its proper Article. Salts, diſſolved in Water, are reduced to Cryſtals after an Evaporation of the Water, by boiling. Thus, if you intend to

transform a very fine Powder into a Salt, 'tis abſolutely neceſſary you call in Water to your Aſſiſtance; for, when Salts are diveſted of Water, they aſſume the State and Condition of a Powder, and do not retain the Form of coherent ſmall Maſſes. This holds true with reſpect to all the Species of Vitriol, and metalline Salts in general. Water is alſo united with common Sulphur, and is the Cauſe of its Coagulation; for Spirit of Sulphur, obtain'd by the Bell, contains about three fourth Parts of Water, which adhere to the acid Principle reſiding in it. Water is thus lodged not only in animal and vegetable Subſtances, but alſo in Metals themſelves; for, in the Earth, almoſt every thing owes its reſpective State and Condition to Water. 'Tis by means of this Fluid that Earths cohere; for all Earthen and Clay Veſſels are, by means of Water, model'd into their particular Shapes and Forms: Thus Bricks, by an Addition of Water to the Earth, and a proper Application of Fire, are converted into hard ſtony Subſtances; which, when reduced to a Powder, and ſubjected to Diſtillation, yield a certain Quantity of Water. Thus alſo Stones are form'd of the Water dropping from the Roofs of certain Caverns, when coagulated and inſpiſſated. That Coagulations are produced by Precipitation, we learn from the Preparation of the *Mercurius Vitæ*; whilſt, for Inſtance, the Oil of Antimony, which, in a liquid Form, keeps the Regulus of Antimony diſſolved in the Acid of the Sea-ſalt, precipitates a Powder, when dropt into pure Water. Camphire, diſſolved in oleous and acid Menſtruums, is coagulated by an Affuſion of Water.

2. Coagulations are alſo produced by Oil, with the Application of a due Degree of Fire, which unites the Parts of Sulphur, Salts, and Metals: Thus Oil coagulates an alcaline Salt into a Soap: Sulphurs are, by means of Oil, transform'd into Balſams of a very thick Conſiſtence. Sugar of Lead and Litharge, when boil'd for a conſiderable time in Oil, are reduced into one ſolid Maſs.

3. Alcohol of Wine coagulates alcaline volatile Spirits, the Whites of Eggs, the Serum of the Blood, the Oil of Vitriol, and the Spirit of Nitre.

4. An alcaline and an acid Salt are united together in a ſolid Coagulum, as is obvious from the Preparation of vitriolated Tartar, from a Combination of the Oil of Tartar *per Deliquium*, and the Oil of Vitriol: Thus rectified Butter of Antimony is form'd into a Coagulum with Oil of Tartar; Spirit of Urine is coagulated with a ſtrong Solution of Vitriol. Spirit of Nitre coagulates with any fix'd Salt, as we learn from the Preparation of the *Nitrum Regeneratum*.

5. Coagulations are produced by alcaline fix'd Salts, as in Milk, for Inſtance. Thoſe are, therefore, in an Error who lay it down as an Axiom, that alcaline Salts diſſolve, and acid Salts coagulate; for an Experiment, made by the celebrated Mr. *Matte*, Royal Profeſſor of Chymiſtry at *Montpelier*, demonſtrates, that what has been coagulated by an alcaline is ſometimes diſſolved by an acid Salt. He reduced, for Inſtance, to a Powder, that Subſtance which remains in the Retort after the Diſtillation of the Spirit of volatile Sal Ammoniac with Lime. This Subſtance he boil'd in pure Water for two Hours. He afterwards filtrated this Water, and permitted ſome Part of it to evaporate, ſtirring it now-and-then with a wooden Spatula, till a Pellicule was form'd on its Surface. Then he mix'd two Drams of it with two Drams of the Oil of Tartar, *per Deliquium*, in a Glaſs Veſſel, agitating them with a Stick, in order to unite them the more effectually. In a ſhort time the Mixture was reduced to ſuch a Conſiſtence, that ſmall Balls might be made of it, which might be roll'd up and down the Table without loſing their Form. By an Affuſion of the Spirit of Nitre the Liquor recover'd its former Fluidity, which was again removed by an Affuſion of the Oil of Tartar.

6. Coagulations are produced by an acrid Salt, as in Milk, for Inſtance, Whey, the Whites of Eggs, Bile, the expreſs'd Oils of Olives, and ſweet Almonds; as alſo in ſome foſſile and other Subſtances: Thus the Oil of Vitriol, with the Fæces of the Regulus of Antimony, diſſolved in a ſubterraneous Cellar, is form'd into a Coagulum. The ſame Oil runs into a Coagulum with Sea-ſalt, as alſo with Filings of Steel. When dropt into Oil of Aniſe, it produces a perfectly reſinous Coagulum. It alſo produces a Coagulum with a Decoction of Quick-lime and Arſenic. The Tincture of Lead-ore, prepared with the *Acetum Radicatum*, when mix'd with Butter of Antimony, in Proceſs of Time forms a Coagulum; as does alſo the Spirit of Vinegar, when mix'd with the Calx of Lead, with Coral, or with Pearls. Rectified Spirit of Nitre coagulates Oil of Olives, if digeſted with it for ſome Days. From what has been ſaid 'tis obvious, that Acids, mix'd with Alcalis, produce Coagulations.

7. By the Steam or Fume of melted Lead, Mercury is coagulated.

8. By Aſtringents or Stypties the Whites of Eggs, Milk, and Bile, are coagulated.

9. That by Motion alſo alone, without the Addition of any ſenſible Subſtance, Fluids are transform'd into coagulated or conſiſtent Bodies, we learn from the Churning of Butter, from the frequently repeated Diſtillation of the Oil of Turpentine, and Spirit of Wine; as alſo from the Preparation of the *Mercurius præcipitatus ruber per ſe*. We now conclude, with Mr. *Boyle*, that many, tho' not all, Coagulations are produced by Salts, as ſome have erroneouſly aſſerted: But, as to the indurating Quality of Salts, it does not, in this Author's Opinion, ariſe from any peculiar and inexplicable Property, by which they coagulate and brace up Bodies, "but rather from the "Figure and Motion of the ſaline Corpuſcles, which ſeem "naturally more diſpoſed, than other concreted Subſtances, to "inſinuate themſelves into the Pores of other Bodies, and to "join their Parts not only to themſelves, but alſo to each "other; and that, either by joining theſe Corpuſcles, as it "were, with Wedges, or by penetrating a large Number of "them by their rigid ſlender Parts, or by their ſharp Corners "and Edges, juſt as Pieces of Paper are kept from being ſcat-"ter'd by having a File paſs'd thro' them, or as a Knife, "thruſt into ſeveral Pieces of Bread, or Victuals, lifts them "all at one and the ſame time." But in whatever manner any Coagulation is produced, whether by Nature or Art, we may probably conclude, with this Author, that, in order to its Production, the conſtituent Parts of the Fluid muſt either be render'd thicker, and leſs diſpoſed to fluctuate, and roll over each other; or that its component Parts remain in a State of Reſt among themſelves, with their Surfaces touching each other almoſt in every Point, juſt as two poliſh'd Plates of Marble cohere with each other; or that they be kept in mutual Coheſion, juſt as two Bodies are fix'd together by a Nail or Cement. Thus a Change of the Texture or Diſpoſition of the component Parts of the Body muſt be allow'd to be moſt commonly the Cauſe of the Coagulation, in whatever manner it is produced. To theſe various Species of Coagulation we muſt add what *Beecher* has ſaid, concerning the *Coagulatio Continui*, the *Coagulatio Partis*, and the *Coagulatio Totius*. The *Coagulatio Continui* is produced in two Manners, either by Impaſtation or Condenſation: By Impaſtation, when Powders are mix'd with Water or Slime; whence, by an Evaporation of the Humidity, the Mixture is coagulated, but again reſolved, upon an Addition of it. Coagulation by Condenſation is, when the Subſtance of Water by its Coldneſs congeals; in which Caſe it is again diſſolved by Heat, as in Ice, for Inſtance. In theſe two Species of the *Coagulatio Continui*, the following Axiom is to be obſerved: *Whatever is coagulated by Fire, is reſolved by Water; and*, vice verſa, *whatever is coagulated by Water is reſolved by Fire.* The *Coagulatio Partis* is when an oleous adheres to a ſaline Principle, Sulphur to Salt, Oil to Water, Male to Female, dry to moiſt, and what is volatile to what is fix'd. This Species of Coagulation is reſolved either in the way of Sympathy, or in the way of Antipathy; in the way of Sympathy, by a Subſtance like itſelf; in the way of Antipathy, by a Subſtance oppoſite to itſelf. With reſpect to this Coagulation, the following Axioms are to be laid down: *What is weak yields to what is ſtronger. Things of ſimilar Natures agree with each other. Nature intends the moſt perfect Productions. The Life of one Subſtance is the Deſtruction of another. Let every Separation be made with Modeſty and Caution.* The *Coagulatio Totius* is alſo of two Kinds, preternatural and natural. The preternatural is when heterogeneous Subſtances are coagulated; whereas the natural is, when homogeneous Fluids are coagulated by way of Generation. *Rieger.*

COAGULUM.

The Coagulum of the *Latins*, the πυτία and the τάμισος of the *Greeks*, are the ſame with what in *Engliſh* we call *Rennet*. This is the concreted Milk found in the Stomach of ſucking Quadrupeds, which have as yet received no other Nouriſhment than their Mothers Milk. It is found not only in the Stomachs of cloven-footed, ruminating Animals, but alſo in thoſe of cloſe-hooved Quadrupeds, ſuch as Horſes and Aſſes, and in the Stomachs of thoſe Animals, whoſe Feet are furniſhed with Claws, ſuch as theſe of the Hare-kind. In ruminating Animals, which have a conſiderable Number of Stomachs, it is generally found in the laſt, which is called *Abomaſus*, tho' it is ſometimes to be met with in ſome of the other Stomachs, eſpecially in the third, which is called *Omaſus*, included in the numerous Folds of its Membranes, which occur there. But the Reaſon why it is generally found in the laſt Stomach of Calves, when killed, is, becauſe theſe Animals are rarely killed immediately after Suction; ſo that, in Proceſs of Time, the coagulated Milk may have paſſed from the other Stomachs to the laſt. The Antients affirmed, that all Rennet in general was of the ſame acrid Nature; that it was beneficial in ſtopping Fluxes, checking the exorbitant Diſcharge of the Menſes, preventing the fatal Effects of Poiſons, reſolving coagulated Milk in the Stomach, and diluting concreted Blood. *Ariſtotle* maintained, that Rennet was poſſeſſed of a highly hot and fiery Quality; that the older it was, the more valuable and efficacious it became; that it was an excellent Cure for Fluxes; and that the Rennet of a Calf of a Red Deer was preferable to that of other Animals. But, according to *Galen*, that of the Hare is the moſt valuable. *Dioſcorides* informs us, that the Rennet of every Animal, in which

it

it is to be found, coagulates fluid Subſtances, and reſolves ſuch as are coagulated. *Hippocrates*, in the ſecond Book of his Treatiſe *De Morbis Mulierum*, for Fluxes, and all Diſorders of the Uterus, preſcribes a Potion prepared of Wine, the Rennet of an Aſs, the Root of the ſweet Pomgranate, and Galls. According to *Galen*, ſome of the Antients, in their Writings, alſo affirmed, that the Rennet of the Hare, drank with Vinegar, proved a Cure for epileptic Patients. *Cœlius Aurelianus*, however, in the fourth Chapter of the firſt Book of his Treatiſe *De Tardis Paſſionibus*, rejects the Uſe of *Rennet* in the Cure of Epilepſies. *Averroes*, according to *Hieronymus Mercurialis in Morb. Mul. L. 3. C. 5.* advanced in his Works, that every Species of Rennet was poſſeſſed of an aſtringent Quality, as was obvious from Fluxes being ſtopped by the Exhibition of Rennet. *Mercurialis* affirms, that this Opinion of *Averroes* is true, and confirmed by Experience; but that, notwithſtanding this, Rennets are of a highly reſolvent and attenuating Nature; and he thinks, that the aſtringent Virtue of Rennets depends on ſome occult Property; whereas their attenuating and reſolvent Virtues depend upon their manifeſt and ſenſible Qualities. *Riverius* informs us, that, againſt an immoderate Flux of the Menſes, the Women in *France* uſe half a Scruple of the Rennet of a Kid or Hare; which not only ſtops the Diſcharge of the Blood, but diſſolves and attenuates it, when concreted in the Uterus. *Rondeletius*, in his Treatiſe *De Ponderibus*, determines the Doſe of Rennets in internal Medicines to be from one to twelve Grains; and, in external Applications, he allows the Quantity to be from a Scruple to a Dram. In the *Antidotarium Florentinum*, the Rennet of the Hare is ſaid to be, of all others, the beſt for medicinal Purpoſes; that of the Kid is ſaid to come next to it; and that of the Calf of the Red Deer next to that of the Kid. It is to be taken from theſe Animals before they have taſted any thing, except their Mothers Milk. The Rennet of the Sea-Calf is alſo highly commended, if taken from the Animal before it can ſwim about with its Mother in Queſt of Prey. Theſe Rennets, if dried in the Smoke, or in the Sun, and kept in a dry Place, preſerve their Virtues for a Year or two. So far as we know, Rennets are, at preſent, neither kept in the Shops, nor preſcrib'd by the Phyſician. Beſides the medicinal Uſes of Rennets, the Antients applied them for coagulating Milk, in order to make Cheeſe; for which Purpoſe they generally choſe that of a Lamb or Kid, according to *Columella*, *L. 7. Cap.* 8. and *Pallad. L.* 6. *Tit.* 9. *Varro*, *L. 2. Cap.* 4. affirms, that the Rennets of the Hare and Kid were more eſteemed than that of the Lamb. *Pliny*, in the forty-firſt Chapter of his eleventh Book, informs us, that the Rennets of the Calf of the Red Deer, the Hare, and the Kid, were highly eſteemed. The Virtues of the Rennet in coagulating Milk, and ſeparating its ſerous Part for the Formation of Cheeſe, are ſufficiently known to the moſt ignorant of the Country People. According to *Johannes Jacobus Scheuchzerus*, in his *Itinera Alpina*, the Inhabitants of *Switzerland* take two Calves Stomachs, and an Handful of common Salt; then pouring upon theſe common Water, till they are covered, they ſuffer them to macerate for about two Weeks. Of the Liquor, thus prepared, a Spoonful is uſed for coagulating thirty or forty Pints of warm Milk, ſtirring all about, in order to mix them the more effectually. If too large a Quantity of this Liquor is mixed with the Milk, the Cheeſe made of it has too ſalt a Taſte; a Circumſtance which proves, that ſome Particles of that Salt coaleſce with the coagulated Parts of the Milk. For this Reaſon, ſome rather chuſe Rennet prepared of the Stomachs of Calves, or Lambs, dried, bruiſed in a Mortar, and macerated in Vinegar. Others prepare Rennet in a different manner, eſpecially that of the Calf, for coagulating Milk, in order to make Cheeſe. Some alſo keep their Art of preparing the Rennet a Secret, eſpecially in *Holland*, where, by their Method of preparing it, they render the Whey highly grateful to the Taſte. Here, in *England*, ſome take the interior Membrane of a Calf's Stomach, well waſhed from its Sordes. This, after ſalting it, they hang up in brown Paper. When they intend to uſe it, they waſh off the Salt, and macerate a ſmall Portion of it during a Night, in a few Spoonfuls of Water, which they afterwards pour into Milk, with an Intention to coagulate it. We muſt here obſerve, that not only the *Rennet* of the Calf, which is moſt generally uſed, but alſo the Stomach, in which it is contained, coagulates warm Milk, without any previous Preparation. It alſo tinges the Juice of the Turnſole of a rediſh Colour, and proves a briſk Purge. Hence we may juſtly infer the acid Nature of Rennets. Whoever reflects, that Milk, kept for ſome time in a warm Place, recedes from its mild Nature, and becomes more and more aceſcent, and that, in a particular Manner, its pinguious Parts, called the Cream, become rancid, will eaſily and readily conceive, firſt, that Rennets are principally of an acid Nature, on account of the large Number of Parts contained in the Milk, from whence Rennet derives its Origin, which incline to an Acid, and are intermixed with others, which have a Tendency to become rancid. Secondly, that the acid Acrimony muſt be more or leſs prevalent than the rancid Acrimony, according to the Nature of the Animal, of whoſe Milk, impregnated with a greater or ſmaller Number of pinguious Parts, the Coagulum is produced. Thus Rennets are poſſeſſed of an Acrimony, which partakes both of an acid and of a rancid Nature; and there will be ſome Difference between the Rennets of different Animals, according as they are poſſeſſed of greater or ſmaller Degrees of Rancidity. But in this they all agree, that they belong to the Claſs of acrid and reſolvent Medicines. As for the aſtringent Virtue of Rennets, this ſeems only to be aſcribed to them, becauſe they are found beneficial in the Cure of Fluxes. I am inclined to think, that where-ever Rennets have really been obſerved by Phyſicians to ſuppreſs any Fluxes, their Efficacy, in this reſpect, may be derived from their reſolvent Quality; inaſmuch as they expelled the peccant and irritating Matter, which was the Cauſe of the Flux, or reſolved the concreted Matter, which formed the Obſtructions; and conſequently removed the Spaſms ariſing from them, which frequently prove the Cauſes of an Hæmorrhage. *Galen* therefore, in his Treatiſe *De Medic. Facult. L.* 10. *Cap.* 2. condemns the Advice of ſome, who, in their Writings, have aſſerted, that the Rennet of the Hare drank contributes to the Suppreſſion of bloody Vomitings, becauſe it is an acrid Remedy; whereas the Diſorder indicates the Uſe of Aſtringents. According to *Martin Shoockius*, in his Treatiſe *De Averſatione Caſei*, the ſame *Galen* obſerved, that the Acrimony of the Rennet is conveyed from it to the Cheeſe, during its Preparation. But nobody, who eats acrid Cheeſe, is ſenſible of any aſtringent Quality; which, in like manner, is not proved by aſſerting, that Rennets coagulate Milk; for, beſides Acids and Aſtringents, this Effect may be alſo produced by other acrid Subſtances, and even by Alcalis, as is obvious in the Article COAGULATIO.

From what has been ſaid above with reſpect to the reſolving Virtue of Rennet, the Reaſon is obvious, why Rennet is found an effectual Medicine in Caſes where the Stomach has been overcharged by a Debauch, or, as it is uſually expreſſed, *ſurfeited*, when exhibited in the Manner directed under the Article ALCALI.

Hence alſo a Reaſon may be deduced, why Cheeſe, when ſtrong of the Rennet, and old, may be poſſeſſed of a reſolvent Virtue, and aſſiſt the Stomach in attenuating the Aliment, when it overloads this Organ, in conſequence of its being ſuperior to the Powers of Digeſtion.

COALESCENTIA. Coaleſcence. The Union or growing together of two Bodies, before ſeparate. It is principally applied to ſome Bones in the Body, which are ſeparate during Infancy, but afterwards grow together; or to ſome morbid Union of Parts, which ſhould naturally be diſtinct from each other. Thus, there is a Coaleſcence of the Sides of the Vulva, Anus, and Nares, of the Eyelids, Fingers, Toes, and many other Parts.

COALTERNÆ *Febres*. Fevers mentioned by *Bellini*, which, in all Probability, are utterly imaginary. They are deſcribed to be two Fevers affecting a Patient at one and the ſame time, the Paroxyſm of one commencing ſoon after that of the other ends. This ſecond Paroxyſm is more likely to belong to the ſame Fever, which produced the firſt.

COAPOIBA. See CAOPOIBA.

COARCTATIO. Coarctation. A rendering the Canals more narrow; or Contraction of the Diameters of the Veſſels. A Coarctation of the Pulſe is its Diminution.

COARTICULATIO. The ſame as ABARTICULATIO, which ſee.

COAXOCHITL. The *American* Name for the *Tagetes*; *Indicus*; *minimus*; *flore ſericea hirſutie obſito*. Boerh. Ind. alt. See TAGETES.

COBALTUM. Cobalt. See ARSENICUM and CADMIA.

COBASTOLI. Aſhes. *Rulandus*.

COBBAN. A ſmall Tree like the Peach-tree, which grows in *Sumatra*, called *Perſicæ affinis in Taprobana*. C. B. *Arbor Gebuph, ſive Cobban*. J. B.

It bears a ſmall Leaf, like that of the Tree which produces the *Siliqua Cathartica*, with ſhort Branches, and a yelloviſh or ſaffron-colour'd Bark. The Fruit is pretty thick, and round, like a Tennis-ball, incloſing a Nut as big as a Filberd, which contains a very bitter Kernel, taſting like the Root of Angelica.

The Fruit is very proper to quench Thirſt; but the Kernel, however bitter, is far ſuperior in Virtue. The Inhabitants of *Sumatra*, where the Tree grows, extract an Oil out of the Kernel, which is very efficacious in Pains of the Liver and Spleen, taken inwardly, or uſed outwardly by way of Unction; and is alſo a ſovereign Remedy in the Pain of the Gout, to which the Inhabitants of this Iſland are very ſubject.

From the ſame Tree diſtils a Gum, which is very ſerviceable in the fore-mentioned Diſorders, if it be diſſolved with a moderate Quantity of Oil, and applied to the affected Parts by way of Cataplaſm. *Ray Hiſt. Plant. p.* 1518.

COBITES. A Species of freſh Water-fiſh of the Gudgeon-kind, mentioned by *Aldrovandus*.

COBRA DE CAPELLO. The Name of a very venomous Serpent, called alſo *Serpens Indicus*; Offic. *Serpens Indicus Coronatus*,

ronatus, Diademate ſeu Conſpicillo inſignitus, Raii Synop. A. 330. *Cobras de Capello Luſitanis dictus.* Garc. ab Hort. *Vipera Indica vittata geſticularia.* Cat. Muſ. Ind. *Vipera pileata quibuſdam.* INDIAN SERPENT.

The Part of this Serpent in Uſe, is the Stone, or rather Bone, of the Head, called *Pedro del Cobra.* This Stone of the Serpent, called in *Ind. Med.* 65. by Miſtake, *Piedra di Cobra,* is of an oval Figure, plain on one Side, and gibbous on the other, of a brown Colour, ſhining, with Pores interſperſed.

It expels all Sorts of Poiſons, either taken inwardly, or outwardly applied. It reſiſts Putrefaction, promotes inſenſible Perſpiration, raiſes the vital Spirits, comforts the Heart, communicates a new Fermentation to the Blood, and relieves Nature under all malignant Diſtempers. *Marl. Ob.*

Though this Stone be deſcribed by *Garcias, Redi,* and others, yet the Learned among the Moderns differ about it principally in two reſpects, as, 1. Whether it be a Thing natural or factitious. *Kircher,* in his *China Illuſtrata,* and *Thevenot,* in his Relation of Voyages and Travels, affirm theſe Stones to be found in the Head of a great *Chineſe* Serpent; Mr. *Boyle,* in the Head of an *African* Serpent. Others, on the contrary, as Father *Boccone,* in *Muſeo di Fiſica,* ſuppoſe them to be artificial Subſtances, as calcined Bones, and other teſtaceous Fragments; and *Thevenot* the younger will have them to conſiſt of a Mixture of the Aſhes of ſome burnt Roots, and a ſort of Earth found near *Diu* in the *Eaſt Indies.*

Another thing in which they differ, is about their Virtues. Father *Kircher* relates ſeveral Experiments of their Virtue in extracting the Poiſon infuſed by the Bite of a Viper, or another Serpent. Mr. *Boyle,* in his Treatiſe of ſpecific Medicines, affirms the ſame from an Experiment made on a young Cat. And *Clayton,* in his Account of *Virginia, Act. Philoſoph.* No. 210. writes, that he was preſent when the ſaid Honourable Gentleman tried the Experiment on ſome Chickens, which all recovered. Dr. *Havers* was an Eye-witneſs, as he tells us, of the ſalutary Effects of this Stone upon a Dog; and Dr. *Tyſon,* in his *Anatomy of the Rattle-ſnake,* relates an Obſervation, which he received from a celebrated Phyſician of *London,* who, by means hereof, cured a Man, who was bitten by Vipers. *Baglivi* alſo performed the ſame thing for one, who was ſtung by a Scorpion. But, tho' theſe Experiments ſucceeded well with all the Perſons before-mentioned, yet others, as *Redi* and *Charas,* made the ſame Trials with a different Succeſs.

Having given this brief Account of the Opinions of the Learned on both Sides, my beſt Way, I think, is to endeavour to reconcile them. For this End, I ſhall only obſerve, that I have ſeen two Sorts of this kind of Stone; one of which was like a Bone, porous, and had viſible Marks of the File; the other was of a more compact Subſtance, and poliſhed. This I ſuppoſe to be the factitious Stone, and a Counterfeit of the former; and therefore conjecture, that the unſucceſsful Experiments were made with thoſe artificial Stones, and not with the true.

The *Lapis Colubrinus,* which formerly went at a high Price, is now ſold very cheap at *Manile*; but what is thus ſold, is not taken from the *Coluber* (Snake), but is made of Hartſhorn luted up in an earthen Pot, where it is burnt to a Blackneſs, and afterwards poliſhed. The *Moors* call this adulterated; but ſay, it is made of a ſtrange Kind of Clay, like Terra Sigillata. The true *Lapis Colubrinus* cures the Bites of Serpents by Application. In a Fever attended with purple Spots, ſeveral of theſe Stones applied relieve the Patient. In the Year 1681 I ſaved from preſent Death a Boy of three Years old at *Brana,* who had ſwallowed Arſenic diſſolved in Milk, by the repeated Application of this Stone. It is a Queſtion, whether the Virtue of this Stone is to be aſcribed to the Salt in the Hartſhorn not being thoroughly burnt, or to its Pores, by which it attracts like a Cupping-glaſs. *Ex MSS. Camell. Dale.* See BOICININGA.

COCAZOCHITL. The *Mexican* Name for the *Tagetes*; *Indicus*; *medius*; *flore ſimplici, luteo-pallido.* Boerh. I. alt. See TAGETES.

COCCA *Gnidia,* or *Cnidia.* See CNIDIA.

COCCALOS, κόκκαλος. Some call the *Grana Cnidia* by this Name; but the moſt general Signification of the Word is, the *Nux Pinea,* or Pine Nut; or rather, in *Hippocrates,* the Kernels. See PINUS.

COCCARIUM. A very ſmall Pill, about the Size of a Cicer. *Oribaſii Synopſ. L.* 3.

COCCINELLA. See COCHINILLA.

COCCION, κόκκιον. A Weight in *Myrepſus*; the ſame as SILIQUA, which ſee.

COCCOBALSAMON, κοκκοβάλσαμον, in *Myrepſus,* is the Fruit of the true Balſam-tree.

COCCONES, κόκκωνες. The Grains or *Acini* of the Pomegranate.

COCCONILEA. A Name for the COCCYGRIA.

COCCOTHRAUSTES, from κόκκος, a Grain, and θραύω, to break. A Bird, which is found in the Woods of *Italy* and *Germany,* called alſo *Fringilla Roſtrata.* It receives its Name from its Manner of Living; for it feeds on the Kernels of Cherry-ſtones, and other Fruit of the like Kind.

This Bird is recommended as a Remedy for the Epilepſy, and as a Diuretic, if either eaten, or taken by way of Decoction. *Lemery des Drogues.*

COCCULUS INDUS, Offic. Park. Theat. 1582. *Cocculus Officinarum,* Jonſ. Dend. 156. *Cocculus,* Ind. Med. 38. *Cocculæ Officinarum,* C. B. Pin. 511. Mont. Exot. 11. Pluk. Mant. 52. Phytog. 345. *Cocci Orientales,* Ger. 1365. Emac. 1548. J. B. 348. Raii Hiſt. 2. 1812. Chab. 26. *Natſiatam,* Hort. Mal. 7. 1. Tab. 1. *Arbor Indica Cocculos Officinarum ferens,* Breyn. Prod. 2. 19. Commel. Flor. Mal. 24. *Solanum racemoſum Indicum arboreſcens, Cocculos Indos ferens,* Raii Dendr. 115. INDIAN BERRY.

This is a little Berry, about as big as a Bay-berry, but more of a Kidney-ſhape, having a wrinkled Outſide, with a Seam running lengthways from the Back to the Navel. It is of a bitteriſh Taſte, being the Fruit of a Tree deſcribed in the ſeventh Volume of the *Hortus Malabaricus,* under the Name of *Natſiatam,* bearing Leaves in Shape of a Heart, and Bunches of five-leav'd white Flowers, which are ſucceeded by theſe Berries. They grow in *Malabar* in the *Eaſt Indies.*

They are rarely uſed in Phyſic, being accounted to be of a hurtful and pernicious Nature. *Miller's Bot. Off.*

Condronchius, who has wrote a Treatiſe concerning theſe Berries, informs us, that he had often found from Experience, that a ſmall Quantity of the Powder of theſe Berries, mix'd with Hogs-lard, a boil'd Apple, or ſome Subſtance of a like Nature, if apply'd to the Heads of Children, kill Lice more effectually than Staveſacre, and with leſs Danger than Quick-ſilver.

But theſe Berries are principally uſed for catching Fiſhes. *Cardan*'s celebrated Receipt for this Purpoſe runs thus:

> Tak of the Berries of the oriental Coccus, a Quarter of an Ounce; of Cumin, and boiling Water, each two Ounces; of Cheeſe, one Ounce; and of Meal, three Ounces: After bruiſing theſe together, form them into ſmall Balls.

Others mix the Berries with old Cheeſe, Honey, and Wheaten-meal, of which they form ſmall Balls to be thrown to Fiſhes. Others, for this Purpoſe, mix a Variety of other Subſtances with theſe Berries; but there is no Neceſſity for ſo troubleſome an Apparatus, ſince I know from Experience, ſays *Ray,* that a ſimple Ball of the Powder of theſe Berries, made up with Wheaten-meal and Water, is equally efficacious for ſtupifying, and at laſt killing Fiſh: For that Fiſhes, as ſome aſſert, are, by eating Balls of this kind, only rendered vertiginous and ſtupid for a while, but ſoon return to their natural State, is not confirm'd by Experience; for my own Experience quadrates with the Opinion of thoſe Fiſhers ſpoke of by *Condronchius,* and who affirm, that Fiſhes are ſoon kill'd by Balls of this kind. But I don't know whether, as they aſſert, they ſoon become putrid, and fall into Pieces, unleſs they are ſpeedily taken out of the Water. If, ſays *Condronchius,* any ſhould object, that, upon taking theſe Balls, the Fiſhes ſwim up and down with uncommon Haſte and Precipitation, by which means their Intoxication or Vertigo is produced, I anſwer, that they do not thus ramble in conſequence of their Vertigo, but in conſequence of the intolerable Pain they feel from that unfriendly Subſtance, juſt as other Animals, eſpecially Men, do, when they are racked with any intenſe Pain. I readily grant, that, by theſe Balls, Fiſhes are at firſt rendered vertiginous, and, as it were, intoxicated; but, at the ſame time, I affirm, that they are ſoon after kill'd; for I am not ſo much of Opinion, that they are render'd vertiginous, and kill'd by the bitter and acrid, as by ſome other hitherto unknown Quality of theſe Berries. I will not, however, take upon me to determine, whether Fiſhes, kill'd in this manner, may be ſafely eaten; but, with *Condronchius,* I am of Opinion, that no Danger attends the Uſe of them as an Aliment, if they are gutted and boiled as ſoon as they are taken.

That theſe Berries are hot, and by no means cold, as *Matthiolus* maintains, notwithſtanding their narcotic Quality, is ſufficiently obvious from their acrid and bitter Taſte, as alſo the other Effects produced by them, as *Condronchius* has evidently demonſtrated.

This ſame Author is of Opinion, that theſe Berries are by no means poſſeſſed of a poiſonous and deleterious Quality; and that it is not by this, but by their Bitterneſs, and primary Qualities, that Fiſhes are kill'd; but the contrary to me ſeems plain from a Story related by *Amatus.* A certain Schoolmaſter, aſking for Cubebs from an ignorant Apothecary, received theſe Berries in their ſtead. When the Schoolmaſter had greedily devour'd three or four of them, he was ſeiz'd with a Nauſea, Hiccough, and Anxiety, which Symptoms, together with the Danger they threatened, were immediately remov'd by the Exhibition of a Vomit. *Raii Hiſt. Plant.*

COCCOS, or COCCUM; κόκκος, in *Hippocrates*, when without any Addition, imports the *Cnidia Grana*. But Coccus implies any Berry or Grain.

COCCOS. The Coco-nut. See PALMA; COCCIGERA; ANGULOSA.

COCCUS *Americanus* is the Cochineal. See COCHINILLA.

The COCCUM *baphicum*, *infectorium*, *tinctorium*, *Chermesinum*, or *Scarlatinum*, is the CHERMES, which see.

The COCCUS *Polonicus*, which *Breynius* calls *Coccus Radicum Tinctorius*, becauſe it is principally found adhering to the Roots of the *Polygonum Cocciferum*, *Koſmaczeb Polonis*, C. B. which he takes to be the *Polygonum Germanicum*, *incanum*, *flore majore perenni*, Raii, is another ſort of Grain us'd in Dying.

This, ſays *Breynius*, is found ſometimes ſingle, ſometimes more, even forty adhering to one Plant, of different Sizes, from a Poppy-ſeed to that of a white Pepper-corn. It is roundiſh, ſmooth, and of a purple-violet Colour, and, in a thin Cuticle, incloſes a blood-red Juice: One Half, or more of it, is cover'd with a rough dark-brown Cruſt, by which it adheres to the Roots.

The Countrymen gather it about Midſummer, and dry it with a ſlow Fire in Earthen Platters.

Several of theſe Cocci he expoſed to the Sun in open Glaſſes, and found, that by the 24th of *July* every one, according to its Size, had excluded a ſmall Worm with ſix Feet. That Part, which ſeem'd to be the Head, had two ſhort carnoſe Antennæ; for he could not perceive, with Glaſſes, any thing like either Mouth or Eyes. On the Back, lengthwiſe, were two Sulci, which were more or leſs viſible according to the different Motions of the Animalcule. Its Feet ſeem'd arm'd with Claws, and the firſt Pair ſtronger and darker than the reſt. The whole Worm was of an obſolete Purple-colour, and had ſeveral Briſtles of a brown-grey.

Theſe, after ten or fourteen Days, lay in a State of Reſt, and ſoon became covered with an exceeding white, fine, lanuginoſe Subſtance; in which Condition they continued five or eight Days longer, and then laid their Eggs; fifty, one hundred, or more, apiece; which, to the naked Eye, appeared but like ſo many red oblongiſh Points, but, with Glaſſes, looked like Ants Eggs, almoſt tranſparent, with a diluted blood-red Content.

Theſe Eggs, being again expoſed in the Sun about *Bartholomew-tide*, were hatched a Month after, when ſome Vermiculi were excluded, which, in the Microſcope, appear'd to be Hexapods of a purpliſh Hue, with two Antennæ at their Head, and two greyiſh Briſtles at their Tails, ſcarce viſible, except upon black Paper.

He ſuppoſes theſe laſt-excluded Vermiculi, after ſome Wanderings, at laſt fix themſelves to the Roots, and ſome of the loweſt contiguous Branches, of the Polygonum, where, being deprived of local Motion and Senſe, by ſome way or other, they imbibe that Juice from the Plant, and at laſt become the *Cocci*, ſo call'd, or Veſicles full of that blood-red Juice, ſo uſeful in Dying.

This Inſect, under what Shape ſoever it appears, either of a Giarn, a Male Worm, a Nymph, a Fly, a Female Worm, or a Worm coming out of an Egg, always, when preſſed and cruſhed, affords a Matter of a Purple-colour, which, however, is obſerved to run moſt copious in the Cocci and the Worms, eſpecially the Female ones. *Phil. Tranſ. abr. Vol.* 8.

As for the Medicinal Uſes of this Species of Coccus, the learned *Paulli* informs us, that the common People in *Sileſia* ſwallow every Year three Grains of it, in order to prevent the Attack of Fevers; but he juſtly cenſures this as a ſuperſtitious Practice, as it is not attended with the propoſed Succeſs. The ſame Author alſo brands, with the odious Name of Superſtition, the Practice of the credulous and giddy Multitude, who, about the Middle of the Day, on St. *John*'s Eve, dig up theſe Grains, in order to imprint on their Shirts and Breaſts certain Characters, with the bloody Juice they yield upon being bruis'd, thinking, by this means, to eſcape Falls, Contuſions, Wounds, the Bites of mad Dogs, and a large Train of other Diſeaſes. But tho' this learned Author affirms, that he has juſt Cauſe to deteſt and condemn the internal Uſe of this Species of Coccus, yet I ſee no Reaſon why they ſhould be rejected for Medicinal Purpoſes, ſince the whimſical Uſes, to which ſuperſtitious Fools apply any Medicine, can never rob it of its real and inherent Virtues. This I am the rather inclin'd to think, becauſe the Coccus Polonicus is found, from Experience, to have the ſame Efficacy in Medicines as the Kermes, and may be ſafely uſed as a Succedaneum to them. They are not, however, as yet receiv'd into the Shops. If, in Caſes of this Nature, Conjectures are pardonable, I am inclined to think, that the Cocca Polonica, if ſubjected to the ſame Chymical Analyſes as the Kermes, would yield the ſame Principles, and diſcover themſelves to be of a ſimilar Nature. *Rieger.*

COCCUS DE MALDIVA, Offic. Park. Theat. 1598. *Coccos de Maldiva, ſive Nux Indica ad venena celebrata*, Chab. 28. Raii Hiſt. 2. 1359. *Palma coccifera figura ovali*, C. B. Pin. 509. *Nux Indica ad Venena celebris, ſive Coccus de Maldiva*, J. B. 1. 384. *Tavaccare, ſive Nux Medica Maldivenſium*, Piſ. Mant. 203. *Palma Naldivenſis, aliis Maldivenſis*; Jonſ. Dendr. 147. THE MALDIVA NUT.

This Nut has a black Rind, which is more ſhining than that of the common Coco, or *Indian* Nut, and its Shape is more upon the Oval, and not ſo round as that of the other; the Medulla, or interior Pulp, when dry'd, is extremely hard, and of a white Colour, ſomewhat inclining to Paleneſs, very porous, and full of Clefts in the Superficies, and of no excellent Savour.

The Nuts, which *John Baubine* ſaw, were a Foot in Length, and in Compaſs as much as he could graſp with both Hands; the Part compreſs'd was ſix Inches broad, in which appear'd a large Perforation, from another Fruit which was ſeparated, ſo that the Fruit was really double, and, in that State, was much larger than a Man's Head; the Shell was hard and thick, like that of other Nuts, mark'd with long oblique Striæ on the Outſide, and, when ſtruck, ſounding like a Pot.

Garcias ſays there is a vulgar Tradition, that the *Maldives* were once a Continent, but, by an Inundation of the Sea, were reduced into a Multitude of Iſlands; on which Occaſion the Palm-trees, which bore theſe Cocos, were bury'd in the Earth, where their Fruit were hardened in the manner they now find it. But, whether they are of the ſame Species with other Cocos, is not eaſy to determine, becauſe none ever ſaw a Leaf, or a Bough, of the Tree to which they belong, but only the bare Nuts, which are caſt upon the Shore, ſome ſingle, ſome double; but no one dares gather them up on Peril of his Life, becauſe whatever the Sea throws upon the Shore, belongs to the Sovereign. The Pulp, or medullary Subſtance, is taken out of the Shell, and then dry'd and harden'd to a Condition fit for Sale.

It is of ſo high a Value among the Natives and People of *Malabar*, that, as *Acoſta* aſſures us, not only the common Sort, but even their Princes, have recourſe to it as to a ſovereign Remedy under almoſt all kinds of Diſeaſes; and it is accounted, in particular, an excellent Alexipharmic. Under this Perſuaſion they make Drinking-cups of it, and let a Piece of the Pulp hang by a Chain in the Water which they drink, being confident, that no Poiſon can hurt thoſe who drink out of theſe Cups, which will, beſides, preſerve them againſt many Diſeaſes. But, ſince theſe Virtues are not confirmed by ſufficient Experiments, and ſome Phyſicians affirm, that they have made uſe of this Nut for the Purpoſes aforeſaid, but with no Effect; and others ſay, that they have found by Experience, that this Medicine was more injurious than beneficial; we ſhall ſay no more on this Head.

As to its ſpecific Quality, ſays *Piſo*, of promoting and facilitating Delivery in a difficult Labour, and of reſiſting the Fits of the Epilepſy, we have it confirm'd by more than one Experiment, and thoſe made by ſome of our moſt eminent Phyſicians, who have made uſe of it with all the deſired Succeſs. *Ray, Hiſt. Plant.*

COCCYGRIA. See COTINUS CORIARIA.

COCCYMELEA. Another Name for the *Cotinus Coriaria*.

COCCYX, or *Os Coccygis*, κόκκυξ. This Bone is ſituated at the Extremity of the Os Sacrum, and is, in ſome meaſure, an Appendix thereof. The Figure of it is ſomething like that of an inverted Pyramid, a little bent forward toward the Pelvis. The anterior Side is flat, the poſterior a little convex. It is made up of four or five Pieces, like falſe Vertebræ, joined together by Cartilages, more or leſs pliable. Sometimes all the Pieces are entirely cemented together.

The firſt Piece is the largeſt, and, on each Side of its Baſis, there are ſometimes ſmall Apophyſes or Cornua, joined cloſely to the Extremity of the Os Sacrum. It has alſo ſometimes a kind of tranſverſe Apophyſes, with ſmall Notches on their upper Part, which, joining with thoſe in the laſt Piece of the Os Sacrum, form a Pair of Holes, ſituated in the ſame Row with the other large ones. The other Pieces of the Os Coccygis are irregular Squares, diminiſhing in Size as they deſcend, ſo that the loweſt is like a Seſamoide Bone.

The Cartilages, which join the different Portions of the Os Coccygis, are preſerv'd in ſome Subjects to a very great Age; in others they ſoon become entirely bony. *Winſlow's Anat.*

COCHIA. A Name for certain officinal Pills. The Etymology of this Word is very obſcure. *Caſtellus* derives it from κόκκος, a Berry, on account of the Form of Pills; or from κόχος, a redundant Flux of Humours, alluding to their Effects. But, as the Preſcription is originally *Arabic*, 'tis probable the Name is ſo likewiſe.

Pilulæ Cochiæ Majores.

The greater PILL COCHIÆ.

Take of Hiera Picra, ten Drams; of the Troches of Alhandal, three Drams and a half; of Diagrydium, two Drams and a half; of the moſt reſinous Turpeth, five Drams, and make them into a Conſiſtence fit for Pills with a ſufficient Quantity of Syrup of Buckthorn. S. A.

This is taken from the *Rhaſes*, *Cap.* 1. *ad Almanſorem*, and was received at firſt by the *College* and *Auguſtan Diſpenſatories*; but the former Emendation of the College changed the Pulp of Colocynth, which was in the original Preſcription, for the Trochiſci Alhandal: But this hath further mended it, by rejecting the Stœchas, and making it into a due Conſiſtence with Syrup of Buckthorn inſtead of Syrup of Stœchas, which is more ſuitable to the Deſign of the Medicine; but it is hardly ever uſed in the preſent Practice.

Pilulæ Cochiæ Minores.

The leſſer PILL COCHIÆ.

Take of bright Aloes, the pureſt Scammony, and the Pulp of Colocynth, of each one Ounce. When they are powdered, make them into a Maſs, with a ſufficient Quantity of Syrup of Buckthorn, S. A. adding thereunto two Drams of the diſtil'd Oil of Cloves.

This is a modern Compoſition, and the moſt in Uſe of any under this Claſs: It was not in the firſt *Diſpenſatories* of the College; and, in the laſt but one, there were but two Scruples of the Oil of Cloves to the ſame Proportion of Ingredients; ſo that this is much warmer, which greatly adds to its Efficacy in many Intentions, eſpecially in colic Pains, and to diſcuſs Viſcidities, watery Humours, and Flatulences, for which Purpoſes it is often preſcribed: But then a Grain or two of Opium is generally mixed with it, to make its Operation milder, and prevent the Membranes from being too much irritated therewith. Its Doſe is from fifteen Grains to two Scruples to grown Perſons.

Pilulæ Cochiæ cum Helleboro.

PILL COCHIÆ *with* HELLEBORE.

Take the Species of the leſſer Pill Cochia, and Powder of black Hellebore, of each one Ounce: Make them into a Maſs with Syrup of Stœchas.

This has been in ſome former Editions of the *College Diſpenſatory*, but is rejected in the laſt, where many a great deal worſe are retained; for, if this be well underſtood, it is an admirable Cathartic in maniacal, hypochondriacal, and almoſt all nervous Caſes; and nothing likewiſe more effectually opens the menſtrual Diſcharges, when they are wanted, than this Medicine. It may be given from fifteen Grains to half a Dram. At firſt Uſe it will ſometimes vomit, but, after a few Repetitions, it takes more downwards. *Quincy's Diſpenſatory.*

COCHINILLA & COCCINILLA, Offic. *Cochenille*, Duret. 66. *Cochinilla*, Laet. Ind. Occ. 229. *Cochinille, ſive Fici Indici grana*, Park. Theat. 1498. *Ficus Indicæ Grana*, C. B. Pin. 458. *Coccinella*, Offic. *Coccus Indicus tinctorius*, Geoff. Tract. 370. *Nepalnochezтli, ſeu Coccus Indicus in Tunis quibuſdam naſcens*, Nieremb. 312. Hern. 79. *Cochenilla Hiſpanis*, Breyn. Hiſt. Cocc. 6. *Scarabeolus hemiſphæricus Cochineelifer*, Gaz. Pet. T. 1. Fig. 5. Sloan. Hiſt. Jam. 2. 208. *Scarabæus nigricans alarum alias rubicundus limbis*, Mer-Surin. 2. *Cochineal*, Act. Philoſoph. Lond. No. 176. 193. COCHINEAL.

This Drug comes from the *Weſt Indies*, but Authors are not agreed as to its Nature, ſome taking for a kind of Worm, others ſuppoſing it to be purely the Grain of a Tree.

Father *Plumier*, a *Minim*, and a famous Botaniſt, who dy'd in 1704. was of the firſt Opinion; but *Pomet*, who dy'd about the ſame time, in his general Hiſtory of Drugs, ſtrenuouſly contends for the latter.

It might, perhaps, be prov'd, that they are equally miſtaken in their Deſcriptions of Cochineal, whether it be a Worm, or a Grain; and yet, to reconcile them in ſome meaſure, it may be ſuppoſed, that there is one Sort of Cochineal which is a Worm, and another which is only a Grain.

This is the Opinion of *Dampier*, an *Engliſh* Traveller, who, in his Relation, intituled, *A new Voyage round the World*, where he profeſſes to affirm nothing but what he had ſeen, or knew the Original of, ſpeaks of both theſe Sorts of Cochineal.

His Deſcription of them is ſo exact and circumſtantial, that, if it be not true, it is at leaſt more probable than all that has hitherto been ſaid on the Subject. He deſcribes the Worm-cochineal in the following Manner:

Cochineal is an Inſect generated in a kind of Fruit very much reſembling the Prickly-pear. The Shrub, which bears that Fruit, ſeldom grows above five or ſix Feet high, and is very thorny. On the Top of the Fruit grows a red Flower, which, when ripe, turns in upon the Fruit. When this Flower, being dry'd by the Heat of the Sun, falls off, the Fruit opens to the Breadth of two or three Inches, and appears quite full of ſmall Inſects, which have Wings of a ſurpriſing Minuteneſs, and would there die and putrify, if they were not removed. As ſoon, then, as the Fruit is ſufficiently open, the *Indians* ſpread a large Sheet, and beat down the Inſects with Poles.

The Tree which produces theſe Inſects is thus diſtinguiſh'd: COCHINILLIFERA, Offic. *Ficus Indica major, lævis, ſive non ſpinoſa, Vermiculos, quos Cochinilla vocant, proferens*, Pluk. Phytog. Tab. 231. Almag. 145. *Opuntia maxima, folio oblongo, rotundo, majore, ſpinulis obtuſis, mollibus, & innocentibus, obſito flore ſtriis rubris variegato*, Cat. Jam. 194. Hiſt. 2. 152. Raii Dendr. 19. *Tuna mitior flore ſanguineo, Cochenillifera*, Dillen. Hort. Eltham. 399. Tab. 297. Fig. 383. *Arbor Cochenille*, Duret. 66. *Nocheznopatli, ſeu Nopalnochezтli, in quo Coccus Indicus naſcitur*, Hern. 78. *Nepalnocheteli ſeu Nochetzli Nopalli*, Jonſ. Dendr. 56. THE COCHINEAL TREE. *Dale.*

There are large Plantations of theſe Trees at *Guatimala*, *Chepe*, and *Guexaca*, in *Mexico*, as alſo in the Province of *Tlaſcala*.

According to *Dampier*, the vegetable Cochineal is produc'd by a Tree not unlike that, from which the animal Species is procur'd. The Fruit of this, when ripe, opens, and diſcloſes a great Number of ſmall Grains, which the *Indians* gather. This, according to the above-quoted Author, affords near as beautiful a Colour as the other Cochineal.

But, I think, it is now univerſally allow'd, that the Cochineal uſed in Medicine is an Inſect. *Melchior de la Runſcher* took the Pains to procure from *Antiquera* in *New Spain*, the Place where there is the greateſt Traffick for Cochineal, Atteſtations upon Oath of eight Perſons, who have been immediately employed in propagating and managing it for many Years; from whence the whole Natural Hiſtory of this Drug is collected. Theſe ſhew, firſt, in regard to Cochineal itſelf,

That they are ſmall living Animals, with a Beak, Eyes, Feet, and Claws; that they creep, climb, ſeek their Food, and bring forth Young, not changing their Species, as Silkworms, but producing their like; which are not larger than Knits, or ſmall Mites, or the Point of a Needle; but, when come to Maturity, reſemble, in Size and Figure, a Dog's Ticke. Thus far is certain; but their Manner of generating is doubtful, tho' it is commonly believed by thoſe who cultivate them, that they are impregnated by a ſmall Butterfly, which is bred upon the Nopal, (the Plant they live upon) which paſſes and repaſſes over them.

Secondly, As to the Manner of raiſing, nouriſhing, and managing them, it appears, that at the proper Time, that is, after Winter, (when theſe little Animals can bear the open Air) when the Cochineals, which they have kept in their Houſes, are grown ſo large and big as to produce young ones, they put twelve or fourteen together into a Paſtle or little Neſt, made of fine ſoft Hay, or Straw, or Moſs of Trees, or the Down, which immediately invelopes the Cocoa Nut. Theſe Paſtles are then placed upon the Plants of the Nopal, or prickly *Indian* Fig (which they take care to cultivate well for this Purpoſe); and in two, three, or four Days, theſe Animals bring forth a great Number of young ones; ſoon after which the Mothers die. In the mean while the young ones, coming out of the Neſts, climb up the Nopal, fix themſelves to it, and ſuck its Juice, which is their only Nouriſhment; but do not eat the Plant; and for this Reaſon they always ſeek thoſe Parts of it, which are greeniſh, and fulleſt of Juice, taking care at the ſame time to place themſelves on the Parts moſt ſheltered from the Wind and Weather. During this Time, whilſt they are growing up, and become pregnant, great Care is taken, that no Vermin incommode or kill them, as alſo to keep them clean, and diſengage them from certain Threads, like Cobwebs, which grow upon the Nopal; as likewiſe to defend them from too much Heat or Cold, from the Rain and Winds, becauſe the fine Cochineals are very tender. Nevertheleſs the wild Cochineals ſtand all theſe Inconveniencies; but then they are ſo gritty, of ſo ill a Smell, and of ſuch little Value, that they ought not to be mixed with the fine.

Thirdly, In regard to the gathering of the Cochineal: The firſt is of the Mothers, which, having brought forth their young, have died in their Neſts. Three or four Months after this, as the Seaſon permits, when the firſt young ones are become ſufficiently large and big, and are in a State to bring forth Young in their Turn, and alſo have produced ſome few, the *Indians* carefully gather them off the Nopals with a little Stick, to which they fix a little Hair, in the Nature of a Pencil. Theſe Animals being collected in this Manner, and afterwards killed by hot Water or Fire, this is called the ſecond Gathering, or rather the firſt of the young ones that have been nouriſhed and raiſed in the open Air. Three or four Months after this, they gather the ſecond Brood of thoſe, which have been born upon the Nopal, which, being become big, have brought forth already ſome young ones. This they do much in the ſame manner as before; only now they take off the Plant a great many young ones with their Mothers; which makes this Sort of Cochineal be called *Granilla*, from the Number of ſmall ones found in it. In the mean time they keep a Number of theſe young ones alive upon the Nopals, which they pluck up, or cut, and lock up in their Houſes, to nouriſh theſe Animalcules during the rainy Seaſon. Laſtly, theſe being grown large, they put them into the Paſtles, and proceed in the Manner above expreſſed;

preſſed; ſo that, for the moſt part, they make three Gatherings in a Year.

Fourthly, as to the Manner of killing the Cochineal: This is commonly done two Ways, either in hot Water, or in Tamaſcales, which are little Ovens made for that Purpoſe; tho' there are ſome People who kill them by roaſting them upon Comales, which are flat Stoves with Fire under them, made uſe of by the *Indian* Women to bake their Maiz-bread. Theſe three different Methods give the Cochineal three different Colours. The firſt renders them of a brown Red, the hot Water making them loſe the white Colour, with which they are cover'd when alive. The ſecond makes them of an Aſh-colour, and marbled, or jaſper'd; both upon account of the natural White with which they are cover'd, and the red and tranſparent Colour of the Cochineal. The third Sort becomes black, as if it had been burnt. Of the old ones, which died after dropping their Young, four Pounds produce but one, when dried; or rather, one Pound is reduced to four Ounces: But three Pounds only of the Living, which have been taken off the Nopals, being kill'd and dried, produce as much.

Theſe Inſects are accounted a powerful ſudorific, alexipharmic, and antifebrile Medicine, capable of curing all Fevers, however malignant; for which Reaſon they are frequently exhibited in the Plague, and in petechical Fevers. *Dale.*

Geoffroy ſays, that the Cochineal is uſed in all the ſame Intentions, with Chermes; and, beſides the common Scarlet, is the Baſis of that beautiful Colour call'd *Carmine*, which is uſed by Painters.

Lemery informs us, it is good for the Stone, for the Gravel, for a Diarrhœa, and to prevent a Miſcarriage, being taken in Powder from twelve Grains to half a Dram.

We are inform'd, in the *Philoſophical Tranſactions*, that there grows a Berry (by Report) both in *Bermudas* and *New-England*, call'd the *Summer-Iſland Reed-weed*; which Berry is as red as the Prickly-pear, giving much the like Tincture; out of which Berry come out firſt Worms, which afterwards turn into Flies, ſomewhat bigger than the Cochineal-fly, feeding on the ſame Berry; in which, we read, there hath been found a Colour, not inferior to that of the Cochineal-fly, and, as to medicinal Virtue, much exceeding it.

COCHLAX, κόχλαξ. A Flint.

COCHLEA.

The *Cochlea* of the *Latins*, and the κόχλος or κοχλίας of the *Greeks*, import what, in *Engliſh*, we call a *Shell-ſnail*. Among the *Greeks* it received this Name from the Word κόχλω, to wind or wreath; becauſe this Animal is wreath'd or wrapt up in a Shell of a ſpiral Form. Without enumerating all the Peculiarities relating to the Natural Hiſtory of this Animal, we ſhall only obſerve, that Shell-ſnails are divided into thoſe of the Land, and thoſe of the Water Kind. Thoſe of the former Claſs are again ſubdivided into Garden and Vineyard Snails; whereas thoſe of the latter Claſs are diſtinguiſh'd into Sea and River Snails. Theſe Animals vary conſiderably with reſpect to Bulk, Figure, and Colour. *Swammerdam*, in his *Biblia Naturæ*, informs us, that he had found from Experience, that a Shell-ſnail was not conſumed, as is commonly believed, but only kill'd, by ſprinkling Salt upon it; ſince by that means, in conſequence of the ſtrong Contraction of the Muſcles, all the Viſcera are ſo powerfully corrugated, that nothing of a diſtinct Form is to be obſerved; for all the Mucus is at that time ſqueez'd out of their Bodies, as he ſays he himſelf obſerved. The ſpermatic Veſſels of this Species of Snail were alſo render'd a Third leſs by the Salt: Hence Salt, to him, appears a truly purgative Medicine to the Snail, by which all the Humours of its Body are evacuated. He alſo thinks it would be expedient to anoint this Animal with various Kinds of purgative Medicines, in order to obſerve the Effects produced by this means. This Attempt, he is of Opinion, would be of no inconſiderable Service to Medicine. But, waving Topics of this Nature, we ſhall briefly inquire into the various Uſes, to which theſe Animals have been apply'd, both by the Antients and the Moderns. That Shell-ſnails, therefore, were by the *Greeks* uſed as an Aliment, we may learn from *Athenæus*, in *Lib.* 2. *Cap.* 23. and, that the *Romans* apply'd them to the ſame Purpoſe, is obvious from thoſe ſubterraneous Cavities call'd *Cochlearia*, deſtin'd for keeping theſe Animals; of which, according to *Apicius Cœlius*, *de Opſoniis & Condimentis*, *L.* 7. *C.* 16. various Diſhes were prepared among the *Romans*, after they had been fed or fatten'd in a particular manner. *Pliny*, in the fifty-ſixth Chapter of his ninth Book, informs us, that theſe Animals were fed to ſuch a Bulk by proper Subſtances, that their Shells were capable of containing *Octo Quadrantes*, as *Salmaſius*, in his *Exercitationes Plinianæ*, will have the Paſſage read, and not *Octoginta Quadrantes*, according to the common Reading. Now a Quadrans is the fourth Part of a Sextarius, and contains five Ounces, Wine-meaſure; ſo that eighty *Quadrantes* amount to twenty Sextarii, which are equivalent to our twenty Pints, according to the Calculation of *Geſner*. According to *Dioſcorides*, in *L.* 2. *C.* 9. "Land Snails, call'd "*Operculares*, are beneficial to the Stomach, and not ſoon "corrupted. The Sea Shell-ſnail is alſo beneficial to the Sto"mach, and eaſily diſcharged by Stool. The River Snail "ſmells rank. But that Species which adheres to Briers and "Buſhes, and which is by ſome call'd *Seſilon*, produces Diſor"ders in the Belly and Stomach, and excites Vomitings. "When apply'd raw, with their Integuments, they diſcuſs "anaſarcous Swellings; but they ought not to be removed till "all the Humour is evacuated, or drawn out. They afford "Eaſe in arthritic Inflammations. When Splinters are lodg'd "in any Part of the Body, they are drawn out by anointing "it with Snails. When triturated, and applied by way of "Peſſary, they provoke the Menſes. Their Fleſh, made up "into an Ointment, with Frankincenſe and Myrrh, conglu"tinates Wounds, eſpecially thoſe of the Nerves. When tri"turated in Vinegar, they ſtop Hæmorrhages of the Noſe. "The Body of a live Shell-ſnail, eſpecially one of the *African* "Kind, if eaten with Vinegar, mitigates Pains of the Sto"mach. If it is triturated, with its Shell, in Wine and "Myrrh, a little of this Wine, drank, removes Pains of the "Colon and Bladder. The viſcid Juice of the Land Snail, "applied to the Hair, makes it lie in any Poſition in which it "is placed. The Shells of all the Species of Snails are of a "drying and cauſtic Nature. They alſo remove Leproſies, "Vitiligos, and Foulneſs of the Teeth. Theſe Shells, when "calcined with their Fleſh, and triturated with Honey, make "an Ointment for ſore Eyes, for Foulneſs of the Face, for "Films of the Eyes, and Dulneſs of Sight." *Pliny*, in the fourth Chapter of his thirtieth Book, affirms, "That the "Aſhes of all Shell-ſnails inſpiſſate and heat by their ſapona"ceous Quality; for which Reaſon they are uſed in Cauſtics, "and as an Ointment in the Itch, Leproſy, and Freckles." Pains of the Uvula are alſo mitigated by anointing the Part affected with the Juice of a Snail, let out with the Point of a Needle. A little after, he ſubjoins, that Roughneſs and Defluxions of the Fauces are mitigated by Snails boil'd in Milk, when the Earth is waſh'd from them; after which they are to be bruiſed, and exhibited for Drink, in that Species of Wine which the Antients call'd *Paſſum*. The ſame Author informs us, that Tooth-achs are removed by putting the ſmall Sand, found in the Horns of the Snails, into the Hollows of the Teeth. He alſo affirms, that theſe ſandy Concretions procure an eaſy and unpainful Dentition; and that the Aſhes of the Shells, with Myrrh, are beneficial to the Gums. He aſſerts, that the Fleſh of the Snail is of Service to the Stomach, if, after a gentle Boiling, it is roaſted on the Coals, and exhibited in Wine and Garum; but their rank Smell produces a bad Breath. With *Dioſcorides*, he condemns the River and Wood Snails; but commends thoſe found in the Sea, as an excellent Medicine for Pains of the Stomach, if eat alive with Vinegar. He alſo ſays, that Shell-ſnails, without the Shells, bruiſed in Water, make an excellent Medicine, if drank by ſuch as ſpit Blood. For alleviating a Cough, he recommends Snails bruis'd to be drank in three *Cyathi* of moderately warm Water. By boiling unwaſh'd Snails in Muſt, (*Protropum*) or in Sea-water, he ſays, a Decoction is prepared very proper for Uſe at Meals; and that theſe Animals, with their Shells, triturated in *Muſt*, make an excellent Medicine againſt a Cough. He alſo aſſerts, that Patients afflicted with Deliquiums, Alienations of Mind, and Vertigos, are greatly relieved by drinking Snails, triturated with their Shells, in three Ounces of warm Wine, for nine Days; and that, for this Purpoſe, ſome uſed but one Snail for the firſt Day, two for the ſecond, three for the third, two for the fourth, and one for the fifth; and that by this means Aſthmas, and Impoſtumations of the Lungs, are render'd more tolerable; as alſo, that three Snails, triturated with their Shells, and boil'd in Wine, with fifteen Grains of Pepper, are properly exhibited for a Draught to Patients afflicted with Pains of the Loins. The ſame Author, in *Cap.* 7. informs us, that two Snails, triturated with their Shells, with an Egg, and an Addition of Salt, and two Ounces of Paſſum, or Palm-juice, or three Ounces of Water, boil'd in a new Veſſel, make an excellent Draught for Dyſenteric Patients; for which Purpoſe he alſo recommends their Aſhes to be drank in Wine, with the Addition of a ſmall Quantity of Reſin. In the ſubſequent Chapter he informs us, that three Snails triturated, without their Shells, in an Ounce of Wine, make an excellent Medicine for the Cure of an involuntary Diſcharge of Urine. The Day following two are only to be uſed, and the Day after that one. He alſo recommends the Aſhes of the calcin'd Shells for expelling the Stone; and affirms, that the Juice of Snails, extracted by Puncture, removes a *Procidentia Ani*, if the Part affected is anointed with it; that ſciatic Pains are alleviated by drinking *Aminean* Wine, in which crude Snails and Pepper are triturated; that, if one of the Teſticles hang lower than the other, the Diſorder is removed by anointing it with the Froth of Snails; and that broad ſmall Snails, either triturated in Vinegar, or the Aſhes of theſe Animals, cure running Ulcers of

theſe

theſe Parts; that the Aſhes of *African* Snails, calcin'd with their Shells, and drank in ſome proper Liquor, cure an Hydrocele; that the Aſhes of the Shells, mix'd with Wax, contribute to the Diſcuſſion of *(Pani)* glandulous Tumors; and that Tumors of the Groins are cured by anointing them with Snails bruiſed with Honey. In his ninth Chapter he ſays, 'tis commonly reported, that, by drinking broad Snails, Pains of the Feet and Joints are removed; that, for this Purpoſe, two of them muſt be triturated with Wine, and the Snails themſelves apply'd to the Part affected, with the Juice of the *Helxine*; but that, for this Purpoſe, ſome only triturate them in Vinegar. In the thirteenth Chapter of the ſame Book he affirms, that Snails bruiſed, and applied to the Forehead, contribute to ſtop Hæmorrhages from the Noſtrils; that, when bruiſed with their Shells, they are proper for the Cure of ſpreading Ulcers; that, when triturated with Myrrh and Frankincenſe, they cure wounded Nerves; that Land Snails, dried in the Sun, and applied with Vinegar, are beneficial to Wounds; that, when taken out of their Shells, bruiſed, and applied, they conglutinate recent Wounds, and put a Stop to ſpreading Ulcers; that the Species of Shell-ſnails, which, in Cluſters, live upon Leaves, if bruiſed with their Shells, and applied, extract Splinters, Arrows, or any other ſuch Thing, from the Body; and that ſuch as are eaten are to be uſed without the Shells; but that they are moſt efficacious with the Rennet of the Hare. *Pliny*, in the fourteenth Chapter of the ſame Book, affirms, that Snails, uſed by way of Aliment, accelerate the Expulſion of the Fœtus; and that they alſo contribute to Conception, when applied with Saffron. That an Ointment made with Snails, Amylum, and Gum Tragacanth, ſtops Hæmorrhages of the Uterus; that, when uſed in Aliments, they promote a Diſcharge of the Lochia; and, in Conjunction with the Marrow of the Stag, correct the Indiſpoſitions of the Uterus; whoſe Flatulences they alſo diſcuſs, when triturated, without their Shells, with Oil of Roſes; but that, for theſe Purpoſes, the Shell ſnails of *Stampalia* are moſt proper. That two *African* Snails, triturated with as much Fenugreek as can be taken up in three Fingers, with an Addition of four Spoonfuls of Honey, are proper for anointing the Belly; but, for this Purpoſe, they muſt be firſt well anointed with the Juice of Orris. That the long ſmall whitiſh Shell-ſnails, which occur every-where, when dry'd in the Sun, reduced to a Powder, and mix'd with an equal Quantity of Bean-meal, prove an excellent Medicine for rendering the Skin white and ſmooth; and that, by the ſmall broad Shell-ſnails, mix'd with Polenta, a Species of fine Flour, the Deſire of Scratching is removed. In *Lib.* 30. *Cap.* 15. he alſo tells us, that the Froth or Mucus of Snails, apply'd by way of Ointment to the Eyes of Children, corrects the Eyelids, and enlarges them when too little; that the Aſhes of Snails, prepared with Frankincenſe and the Whites of Eggs, apply'd by way of Ointment, for thirty Days, to the Part affected, cures Hernias; that the Aſhes of their Shells, mix'd with Wax, prevent a Procidentia Ani; but that, with theſe Aſhes, there is a Neceſſity of mixing the Sanies of the Viper's Brain, let out by Puncture; that the Deſire of Venery is check'd by the Excrements of Snails, drank with Oil and Wine; but *Petronius* aſſerts, that the Necks of Shell-ſnails prove a powerful Stimulus to Venery. *Pliny* alſo, in the fifth Chapter of his thirty-ſecond Book, affirms, that the Fleſh of River Shell-ſnails, whether raw or boil'd, is good againſt the Stings of Scorpions; that, for this Reaſon, ſome keep them ſalted, and apply them to Wounds of any Kind. And, in the tenth Chapter of the ſame Book, he informs us, that recent River Snails may be uſed, as an Aliment, for the Cure of Quartan Fevers; that, for this Purpoſe, ſome keep them in Salt, and exhibit them triturated in ſome proper Liquor.

Hippocrates, in his Treatiſe *de Fiſtulis*, in a *Procidentia Ani*, orders the prolapſed Part to be anointed with the Mucus of Snails, and fomented with a ſoft Sponge, drench'd in ſome proper Liquor. According to *Matthiolus ad Dioſcoridem*, *Galen*, when treating of the medicinal Uſe and Virtues of Shell-ſnails, ſpeaks in the following manner: If the Whole of the Snails are calcin'd with their Shells, and mix'd with unripe Galls, and white Pepper, they are ſingularly beneficial in Dyſenteries, where the Ulcers are not as yet become putrid. 'Tis proper, that, for this Purpoſe, there ſhould be one Part of Pepper, two of the Galls, and four of the Aſhes of the Snails. When theſe are ſufficiently levigated, the Powder is to be ſprinkled on Aliments, and exhibited to be drank either in Water, White-wine, or tart Wine; but, without the Admixture of the Galls, the Aſhes of the Snails are of a very drying Quality, and ſomewhat hot, in conſequence of the Calcination. Beſides, Shell-ſnails, which have not been calcin'd, if triturated with their Shells, and applied to the Bellies of dropſical Patients, and to arthritic Swellings of the Joints, can hardly be removed again, but dry very conſiderably. They muſt alſo be ſuffer'd to adhere to the Parts, till they fall off ſpontaneouſly. They are to be applied in the ſame manner to Tumors ariſing from Blows, and which are with Difficulty reſolved; as alſo to Tumors of the Ears, ariſing from Contuſion; for they greatly dry all theſe Species of Tumors, tho' a thick and viſcid Humour ſhould be deep-ſeated in them. The Fleſh of Shell-ſnails, firſt bruiſed in a Mortar, and afterwards reduced to an equable Softneſs, powerfully dries Parts abounding with ſuperfluous Humours; for which Reaſon it is a proper Medicine in dropſical Caſes. The Juice of theſe Animals, which, without their Fleſh, is call'd by ſome μύξα κοχλίε, that is, the Mucus of the Snail, when mix'd with Aloes, Frankincenſe, or Myrrh, or with all theſe together, to the Conſiſtence of a Cerate, is a Medicine of a conglutinating Quality; dries up purulent and mucous Diſcharges from the Ears; and, when applied to the Forehead, removes Defluxions of the Eyes. Some alſo uſe the Whole of theſe Snails, levigated with their Shells, for extracting Splinters of Wood lodged in any Part of the Body; and others uſe them, thus prepared, for ſtopping immoderate Diſcharges of the Menſes. I myſelf, ſays *Galen*, in the Country, once apply'd their Fleſh triturated to a Wound, accompanied with Contuſion, and an Injury of the Nerve, and the Wound was by that means elegantly conglutinated; but the Patient was a robuſt and hardy Country Fellow. After they were triturated, I mix'd with them the fine volatile Flour, which adher'd to the Walls of a neighbouring Mill. For this Purpoſe, a little triturated Reſin may be alſo mix'd up with them. When you intend to procure a large Quantity of the Mucus of theſe Snails, their Fleſh is to be pierced with a Probe; but this muſt be done a few Days after they are taken, for, in Proceſs of Time, they become dry. And 'tis obſerved, that recent Snails contain moſt of this viſcid Mucus, which, when pierced, they diſcharge. *Galen* alſo, according to *Konigius*, informs us, that, for Abſceſſes of the Tonſils, Shell-ſnails are an excellent Medicine, if they are diveſted of their Shells, torrefied in a Pot, reduced to a Powder, mix'd up with Honey, and applied, by way of Ointment, to the Part affected: And *Avicenna*, in a Hydrocephalus, recommended Snails to be made into a cephalic Decoction, with *Arabian* Stœchas and Calamint. In the ſame Author we find, that, for this Purpoſe, ſome bruiſe them, and apply them to the Head. According to *Liſter ad Apicium*, *Galen* maintains, that the Fleſh of the Shell-ſnails is of hard and difficult Digeſtion; but that, when concocted by the Stomach, it is of a highly nutritive Quality. In theſe Animals the hard Part, call'd *Spondylus*, is to be ſeparated from that Lobe or Cavity, in which the tender Viſcera are contain'd. *Galen* alſo, in his Commentary on the eighteenth Aphoriſm of the ſecond Section of *Hippocrates*, informs us, that Shell-ſnails nouriſh ſlowly, and by little and little. *Celſus*, in the eighteenth Chapter of his ſecond Book, claſſes Shell-ſnails among the Aliments of a highly tender Subſtance; and, in the twentieth Book of the ſame Chapter, affirms, that they contain a laudable Juice. We muſt alſo obſerve, that *Horace*, in the fourth Satire of his ſecond Book, affirms, that Shell-ſnails procure an Appetite after a Debauch. From what has been ſaid, 'tis obvious, that the Antients uſed Shell-ſnails againſt many Diſorders of the human Body; that they were perſuaded of their conglutinating, drying, refrigerating, and repellent Qualities; and that, for this Reaſon, they judged them proper for correcting Acrimony, and alleviating Pain. They were alſo convinced, that they were poſſeſs'd of a ſtimulating Quality, render'd the Body ſoluble, promoted Conception, and expel'd the Fœtus; but that the medicinal Virtues of theſe Animals differ'd, according to their various Species, the different Methods of preparing them, or the Nature and Qualities of the Ingredients with which they are joined. But they were, in a particular manner, full and explicit upon the abſtergent and drying Qualities of calcined Snails, eſpecially their Shells; and aſſerted, that, in conſequence of theſe Properties, they were effectual in removing Diſorders of the Skin. We muſt alſo obſerve, that, before the Days of *Serenus Samonicus*, who flouriſh'd in the third Century after *Chriſt*, Shell-ſnails were not recommended in phthiſical Caſes.

What are the genuine Virtues of theſe Animals, and for what Reaſons they are beneficial in the above-mention'd Diſorders, we ſhall now endeavour to inveſtigate from what the Moderns have advanced on this Subject. But we muſt previouſly obſerve, that, abſtracting from the Shell, which conſtitutes their particular Genus, theſe Animals do not differ from other Snails without Shells. With reſpect to theſe Animals, *Swammerdam*, in his *Biblia Naturæ*, delivers his Sentiments in the following Words: "Tho', ſays he, the Snail is claſſed among the impure "Animals, the Uſe of which, by way of Food, was prohi- "bited to the *Jews*, (probably on account of their ſtrong "Tendency to an alcaline Putrefaction) many Chriſtian Na- "tions uſe Snails as a Delicacy, tho' every Species of Snails is "not apply'd to this Purpoſe. Tho' in *Holland* there are "various Species of Shell-ſnails, yet I do not know, that any "of them are uſed, except that Species of the Sea Snail called "*Aliekruyk (which is our Periwinkle)*. Nor do we eat theſe "at every Seaſon of the Year, but only between *Eaſter* and "*Whitſuntide*, or a few Days longer, at which time Jars of "them

" them are convey'd into the Towns; and, after boiling them " with Salt and Water, they are ſold out by Meaſure. Sailors, " and ſuch as love to create a Thirſt by ſalt Food, are generally " the Perſons who eat theſe Animals, drawing them from their " Shells with a Needle, or a Pin, and taking a large Draught of " Liquor after them. As for my own Part, I don't much ad- " mire their Taſte, ſince in the Mouth they ſeem to be too ſalt " and rancid. Their Liver is more ſapid, or better taſted, " than any other Part of their Body. Beſides, they are a " heavy tenacious Aliment, uſed rather to create Thirſt, than " preſerve Health. Their Inteſtines are alſo frequently ſo " ſtuffed with Clay or Sand, that they grate upon the Teeth. " Other Nations, ſuch as the *Italians*, the *Germans*, and the " *French*, uſe the Vine-ſhell-ſnails, eſpecially after, by a want of " Food for ſeveral Months, they have purg'd themſelves from " their Sordes; for then, in the Orifice of the Shell, there is " form'd a certain Covering, as it were, of Clay, which pre- " vents the Acceſs of Earth, or any other Sordes; for this " Species of Snail lies above ſeven Months without Motion, " that is, from the Autumn to the Spring, during which time " they abſtain from every kind of Aliment." *Henricus Mun- dius*, in his *Opera Phyſico-medica*, informs us, that among the *Italians*, and other Nations of a delicate Turn with reſpect to Cookery, an Aliment, much eſteem'd by the Luxurious, is prepar'd of Shell-ſnails, dreſſed with Wine, Aromatics, and Oil; but that, for this Purpoſe, the Species call'd *Pomacia* is moſt proper, eſpecially thoſe produc'd in *Liguria*, and ſome other Parts. *Aldrovandus* affirms, that, in his time, Shell-ſnails were eaten at any Seaſon of the Year. He likewiſe informs us, that ſome gather them in the Autumn during rainy Weather, and preſerve them in a proper Vault ſtrew'd with Bran or Sand, that by this means they may be purg'd. Then the Animals, fixing themſelves to the Walls, and other Parts of the Vault, are left in that State during the Winter, and are uſed as Food in the Spring, and during *Lent*. Then he informs us, that, at *Bononia*, they are prepar'd in various Manners, either boil'd with ſome Broth, in Conjunction with Parſley bruis'd, and ſeaſon'd with Aromatics, or only fry'd with Oil. The ſame Author alſo informs us, that the *Swiſs* uſe Shell-ſnails as an Aliment; and that, in *Switzerland*, and other Countries on the ſame Side of the *Alps*, they are gather'd, and imported into *Italy*. *Matthiolus ad Dioſc.* informs us, that in the inland Part of *Italy* Shell-ſnails are very rarely us'd as an Aliment, but that they are frequently eaten by thoſe who live on the Sea- coaſts. *Bruyerinus*, in his Treatiſe *De Re cibaria*, *Lib. 3. Cap.* 51. uſes the following Words: " I am inform'd," ſays he, " that ſome of my Countrymen in *Breſcia* preſerve Shell- " ſnails in Ditches, as a Delicacy in the Winter-time; for " theſe Animals, in conſequence of the Mucus and viſcid " Juice they contain, are capable of being preſerved for a " great while. 'Tis alſo reported, that they become more " valuable in proportion as this Juice is exhauſted. In *France* " the ſmall white Shell-ſnails are moſt eſteem'd, which are " found in Vineyards and Nurſeries. They are principally " uſed in the Spring during *Lent*; but when the Vines begin to " ſend forth their Buds, and their Tendrils become turgid, " they are no longer uſed by thoſe of a more faſhionable and " delicate Turn. The Method of preparing them is very " tedious and laborious; for they waſh them three times in cold " Water, that the Mucus, which, according to *Galen*, the " *Greeks* call μύξα, may be thoroughly taken from them. " Then they boil them in Water, which they pour out, and " add freſh Water, boiling them again, in order to ſoften their " Fleſh, which is very hard. Others fry theſe Snails in a Pan, " others bake them in Pyes, which are generally made very " rich. Among Phyſicians 'tis agreed upon, that the Fleſh of " theſe Snails is very heavy, and of difficult Digeſtion. When " it is thoroughly concocted, it is, however, highly nutritive; " but the frequent and liberal Uſe of it generates black Bile." In the *Bibl. Angl. T.* 13. we are inform'd, that in *Sileſia* Shell- ſnails are fed for an Aliment, with the Leaves of Plants. In the *Commercium Literarium* for the Year 1739. we are told, that in ſome Gardens in *Brunſwick* there are peculiar Repoſito- ries, or deep ſquare Caverns, whoſe Sides are cover'd with Wood, and over whoſe Mouths there is a kind of Iron Net, prepared for gathering theſe Snails during the Summer, when they are fed with Lettuce, in order to be taken out for Uſe in the Winter. I think moſt Phyſicians are agreed, that, for Ali- ments, thoſe Snails are moſt proper, which are found in Vine- yards and Nurſeries, adhering to the Hedges, and Tendrils of the Vines. Thoſe of this Species are call'd *Operculares*, or *Pomatiæ*, *Edules*, *Geſneri*, and the πωματίαι of *Dioſcorides*, from πῶμα, *operculum*, a Cover or Lid. But *Matthiolus* obſerves, that Shell- ſnails, whether black or white, whether large, ſmall, or of an indifferent Size, are all poſſeſſed of the ſame common Nature and Qualities; and that, if there is any Difference between them, it is the Conſequence of the Soil in which they are produc'd and nouriſh'd; for thoſe which live in open ſunny Places, and feed upon Herbs, are certainly preferable to thoſe found in ſhaded or marſhy Soils; which may be eaſily diſcover'd by the Taſte, ſince theſe latter are either inſipid, or retain the Reliſh of the Slime; whereas the former are better taſted, and more grateful to the Palate. Thoſe alſo which have fed upon Wormwood yield a grateful Bitter; whereas thoſe fed upon Mother-of-thyme, Peny-royal, Calamint, Origanum, and other fragrant Herbs, are recommended by their grateful Smell. Among theſe we may claſs that Species of Snails, which, being ſomewhat larger than Lupins, are found in the Fields about *Rome*, where large Cluſters of them are in the Autumn obſerv'd to adhere to the Stalks of certain Thiſtles. *Swammerdam*, in his *Biblia Naturæ*, has obſerv'd, that the moſt proper Seaſon for conveying that Species of Shell-ſnails call'd *Operculares* from one Place to an- other is in the Winter, ſince, at that time, they remain ſhut up in their Shells without Motion, and are obſerv'd to have the Mouths of their Shells cloſed up with a kind of Cover. If, on the contrary, they are to be carry'd in the Summer, he ſays 'tis moſt expedient to pack them up with ſome Herbs. If they are intended for preſent Uſe, they are to be put into a Bag, and have cut Straw intermixed with them, ſince, by the Stimulus and Puncture of theſe, they will be hinder'd from coming out of their Shells. I think it may be affirm'd in general, that Snails may be advantageouſly uſed by thoſe for whom a mucilaginous and glutinous Diet is proper, and conſequently by thoſe of a robuſt and hardy Make. But, from this very Cir- cumſtance, it may be juſtly doubted, whether they are proper for phthifical, conſumptive, and extenuated Patients. *Wel- ſchius*, in his *Curationes propriæ*, obſerves, that they prove pre- judicial in a Phthiſis; and *Lanzonius*, in his *Opera Medico- phyſica*, thinks, that Shell-ſnails are not proper in a Phthiſis, becauſe they are concocted with Difficulty, and do not afford a laudable Juice; and becauſe phthifical Patients labour under a Fever, and for that Reaſon have a ſmall Degree of natural Strength, incapable of digeſting Aliments of difficult Concoction. *Sebizius* argues pretty much in the ſame Strain, and concludes his Reaſoning with the following Queſtion: " How is it poſſible," ſays he, " that a laudable and ſalutary " Nouriſhment can be convey'd to the human Body by that " which is of a cold and viſcid Nature, which lives under the " Earth, and on its Surface, in dark and marſhy Places, and " which is of itſelf often nouriſhed with noxious Aliments?" The Force of this Reaſoning *Boeclerus* attempts to invalidate in the following Words: " Ducks and Geeſe live in marſhy " Places, and are often nouriſhed upon Subſtances of a hurtful " Nature, in conſequence of which they cannot, according to " this Reaſoning, afford a laudable and ſalutary Nouriſhment. " 'Tis, indeed, certain, that theſe Animals, when ill prepar'd, " or us'd in two large Quantities, may prove prejudicial; but " it does not from this follow, that they are not at all to be " us'd; but it frequently happens, that Phyſicians commend or " condemn to others what they themſelves like or diſlike." *Rolfincius*, in his *Ordo & Methodus Medicinæ*, affirms, " that " a frequent Uſe of the Shell-ſnails, gather'd in Vineyards, " and prepar'd in Fleſh-broths, is beneficial to Patients labour- " ing under Hectic Fevers; and that they afford an Aliment of " eaſy Digeſtion, ſomewhat cold, moiſtening, and ſolid." According to *Sennertus*, hectic and extenuated Patients are not abſolutely to be forbid the Uſe of Shell-ſnails, but only of their Fleſh, becauſe it is of difficult Digeſtion, and conſequently re- quires a ſtrong Stomach; for which Reaſon it is neceſſary it ſhould be long boil'd, and prepar'd with various Sauces; but, in whatever manner it is cook'd, it continues to be of difficult Digeſtion, generates a thick and black Blood, and creates Ob- ſtructions. But what is ſaid to be principally beneficial to hectic Patients is, the Broth of theſe Snails, not of the firſt, but of the ſecond Boiling; becauſe, by long Boiling, a large Quantity of the glutinous and alimentary Subſtance is extracted. There is alſo in the poſterior Part of theſe Snails, which, according to ſome, *Ariſtotle*, in his *Hiſtoria Animal. Lib. 4. Cap. 4.* call'd μύκων, a certain glutinous Subſtance, of a ſomewhat hard cheeſe-like Conſiſtence, eaſily diſſolvable, ſoon yield- ing to the Teeth, concocted with Eaſe, and highly nutritive. This Part is, therefore, to be choſen for the Uſe of hectic Pa- tients, or their Broth alone is to be exhibited, becauſe it is friendly to the Stomach, Pains of which it is alſo ſaid to re- move. But no ſmall Care is to be uſed in the Choice of theſe Snails; for they frequently adhere to, and feed upon, loathſome, corrupted, and poiſonous Subſtances, ſuch as Funguſes, Ser- pents, putrid Bodies, and poiſonous Herbs, in conſequence of which it has been obſerv'd, that ſome have died by eating theſe Snails. Hence *Cardan* pronounces the Man a Fool, who raſhly expoſes himſelf to ſo conſiderable a Danger. But, if we are reſolv'd to eat them, he adviſes, that they ſhould be fed for fif- teen Days in a Pot; that they ſhould be often ſhifted from one Place to another; and, above all things, that they ſhould be gather'd in clean Places. Sir *Theodore Mayerne*, in his *Opera Medica*, has the following Particulars relating to the Uſe of theſe Animals. According to *Matthiolus*, Wood-ſnails, well cleanſed from their native Mucus, and boil'd in new Milk, with Colts-foot, are ſucceſsfully uſed as an Aliment by con- ſumptive Patients. The Fleſh of theſe Animals, freed from their

their Shells and Excrements, washed with Water, and wrapt up in several Folds of Linen, are to be bury'd for two Hours in hot Horse-dung; when they are taken thence, they are to be wash'd with some warm Liquor, and boil'd in Broth prepar'd with Pullets. When thus prepar'd, they afford singular Relief to consumptive and extenuated Patients. But they may, with still greater Advantage, be prepar'd in the following Manner:

Take fifty large Shell-snails: After washing them sufficiently, boil them with Water in their Shells, along with Barley stript of its Husks, till the Barley breaks: Then, taking them out of their Shells, boil them a second time, in Capon-broth, till they are sufficiently tender. Strain the Broth thro' a clean Linen Cloth, and every Morning and Evening exhibit six Ounces of it, edulcorated with one Ounce of Sugar, three Hours before Breakfast and Supper.

Another Method of preparing them is this:

Take of Snails, divested of their Shells, two Pounds; of fresh Liquorice-root, one Pound; of Marshmallow-root, four Ounces: After cutting all these small, distil them from a Glass Alembic, plac'd in a Bath Heat. Four Ounces of this Water, edulcorated with one Ounce of Sugar, are every Morning to be exhibited to consumptive Patients.

Johannes Junckerus, in his *Conspectus Therapiæ generalis*, informs us, that, for the Use of consumptive, hectic, and phthisical Patients, those Shell-snails are accounted most proper, which, for some time before, have been fed upon Sugar and Meal; but, because they are with Difficulty concocted, they excite a Loathing in most Persons, and afford no very considerable Relief, he thinks, that their Jellies are preferable to them. But *Ettmuller* affirms, that all Shell-snails afford a Jelly impregnated with a large Quantity of a highly mild volatile Salt, like that contained in refrigerating Plants: He also asserts, that Shell-snails are possessed of a moistening Quality, and are not of very difficult Digestion. Hence he concludes, that they are highly proper in hectic Cases, when prepar'd after the manner of a certain *Italian*, whose only Remedy, in Disorders of this Kind, were Mountain Shell-snails, prepared in the following Manner: For some Days they were fed only with Sugar and Meal: Two or three Days after they were gently boiled with Water and a little Vinegar, and afterwards in rich Broth, prepared with Fowls or Mutton. *Boeclerus* positively affirms, that he himself, when so extenuated, that his Skin adhered in a manner to his Bones, was happily restored by the Broth of Shell-snails, and by Jelly of Oatmeal. See GELATINA. The Method of preparing this Broth he directs in the following Manner:

Take the mucous Part of eight or ten Snails, well boil'd, and two or three River-crabs, with their Heads cut off, and their Intestines taken out. After these are cut and bruised, let them be boil'd in Flesh-broth, till the Broth assumes a redish Colour. Then strain the Broth, and boil it a second time. Then add, of Scurvy-grass, and Water-cresses, each two or three Pugils; and take the Vessel off the Fire, covering it well up. In the mean time dissolve the Yolk of an Egg in a sufficient Quantity of some other Broth; and, when the former Broth is so cold, that it may be drank, mix both Broths together, adding Salt, Butter, or Mace, at Pleasure. This Liquor is to be drank for some Weeks, on an empty Stomach.

Other Instances of phthisical Patients cur'd, and render'd fat, by the Use of Shell-snails, may be seen in *Eph. Nat. Curios. Decad. 2. a. b.* It is not to be doubted, but Shell-snails, when boil'd, afford a Substance capable of nourishing the human Body; but, at the same time, it cannot be deny'd, that their viscid and glutinous Nature renders them somewhat difficult to be digested. I am, however, persuaded, that, when diluted in other Liquors, they are easily digested, and contribute powerfully to obtund and correct the Acrimony of the Humours. Whoever reflects upon this correcting Quality of Snails, join'd to their glutinous Nature, by which they block up the Pores, will be easily able to determine, in what particular Cases and Disorders the Use of them is to be recommended. If by the Use of Shell-snails different Effects from these are produc'd, they are to be accounted for from the particular Constitution of the Patient, which, perhaps, cannot bear glutinous Substances; or from the Things on which the Snails have been previously nourish'd and fed. To these I shall subjoin a Remedy, prepar'd from Shell-snails, against the Stone of the Kidneys and Bladder, and, by the learned *Bruckmannus*, describ'd in the following Words: "Garden Snails, gather'd from their Holes in the "Ground, in the Winter-time, when they sleep securely, "and are defended from the Cold by their white and chalk-like "Shells, are to be strongly calcin'd, for two Hours at least, in "a new Earthen Vessel, cover'd and luted, by means of a "rotatory Fire. When they are cold, they are either to be "triturated in a Mortar, or, by Levigation on a Marble, re-"duc'd to a Powder of a cineritious blackish Colour, which is "to be pass'd thro' a Hair Sieve, in order to alleviate nephritic "Pains, and expel the Stone. During the Paroxysm, half a "Dram of this Powder is to be exhibited every four Hours in "Water, either with or without Sal Prunellæ, till the Pain "ceases; the Patient, in the mean time, drinking a proper "Quantity of the Oil of sweet Almonds after every Dose. "With a preservative Intention the Patient is, about the Full "of the Moon, every Month, to take three Doses of the "Powder at Bed-time, either in simple or distil'd Parsley-water; "and this Method is to be persisted in for a Year. During a "twenty Years Course of Practice, I have, with uncommon "Success, exhibited this Powder to large Numbers of Patients "labouring under nephritic Disorders. This Medicine is of "an earthy and alcaline Nature, as a great many others of the "lithontriptic Kind are." 'Tis observable, that this is one of Mrs. *Stevens*'s Ingredients. *Wagnerus*, in *Eph. Nat. Curios. Decad. 2. a. 10. o. 110.* informs us, that large Snails, well triturated with their Shells, render'd hot in any Vessel over the Fire, spread on a Linen Cloth, and frequently apply'd by way of Cataplasm, are an excellent Remedy in arthritic Pains, arising from a Defluxion of acrid Humours. Some also, according to *Ettmuller*, from Snails, previously well wash'd, distil, in Balneo Mariæ, a Phlegm or Water, calculated not only for diuretic, but also for cosmetic Purposes; such as removing Disorders of the Skin, Hands, and Face: But, in his Opinion, the Liquor obtain'd from these Animals, per Deliquium, is justly preferable to the distil'd Water. *Schroder* is also of Opinion, that the distil'd Water is excel'd either by the Liquor flowing spontaneously from Shell-snails, upon their being prick'd with a Needle, or by that excellent cosmetic Liquor into which they are colliquated, when they are bruis'd, and common Salt, or rather Salt of Tartar, is sprinkled upon them in a cool Place; for both these Liquors are impregnated with a moderately oleous and volatile Salt, in consequence of which they prove excellent anodyne and refrigerating Medicines in preternatural Heats, and Pains arising from an acid or a viscid Cause; but they are, in a particular manner, beneficial in the Gout. *Joannes Heurnius*, in *T. 1.* informs us, that eight Ounces of the distil'd Water may be exhibited in Cases where the Strength is much impair'd and exhausted. And *Forestus*, in his *Observ. Medicinal. Lib. 16. Obs. 58.* tells us, that, by a Spoonful of the Water distil'd from young Snails, gather'd in Vineyards before the Rising of the Sun, and now-and-then exhibited with the Yolks of two Eggs, he knew a certain Monk, so extenuated as to be a truly venerable Spectacle of Mortification, render'd fat, and restor'd beyond Expectation, in a few Months. With respect to the external Use of this Water, *Juncker* advises Practitioners to take care, lest the Use of it should prove prejudicial to their Patients by a sudden Repulsation of any recrementitious Matter from the Surface of the Body. But, with respect to the common distil'd Water of Shell-snails, *Hoffman*, in his *Clavis Schroderiana*, justly observes, that these Animals, in Distillation, yield none of their Virtues; whereas, when they are boil'd, they deposit in the Liquor that Mucilage, in which their glutinous and nutritive Virtue is lodged. According to *Hoffman*, (*ad Poterium*) the Shells of the Snails, calcin'd to a very white Calx, are an excellent antinephritic Medicine: And the same Author, in his *Dissertatio de Remediorum Domesticorum Præstantia*, affirms, that, as a Preservative against the Stone, he found no Medicine more effectual than the Powder of Snails, exhibited frequently every Week. The learned *Adolphi* thinks, that between half a Dram and a Dram of the fine Powder of Snail-shells, frequently exhibited in a proper Vehicle, is preferable to most other antinephritic Medicines, because it powerfully dissolves the Gravel, and gritty Matter, of which the Stones are form'd, since, by the Use of it, large Quantities of Sand are evacuated with the Urine. But, in all Probability, this Powder is not possessed of greater Virtues than other Substances of an equally absorbent Nature. The white Opercula or Covers of Land Snails, well wash'd, and reduc'd to a Powder, are, by *Ettmuller*, recommended for carrying off a Dropsy by a plentiful Discharge of Urine, if, every Morning and Evening, the Patient takes as much of the Powder as may be held on the Point of a Knife, in a proper Vehicle. The same Author observes, that others dissolve these Opercula or Covers in Spirit of Salt, coagulate them by drawing off the Menstruum, and, *per Deliquium*, reduce them to a Liquor, which, he says, is a powerful Diuretic in Dropsies; and if, instead of the Spirit of Salt, this Solution is made in four Wine or Vinegar, he asserts, that the Liquor will be possessed of the same Virtues. These Covers are, of all other Parts of the Snail, most easily obtain'd, because the Snails, spontaneously breaking thro' them every Spring, remove them. They are recommended in Suppressions of Urine; and, when mix'd with a little Nitre, highly extol'd as an Arcanum in the Stone. Some also add Crabs-eyes, the Kernels of Peach-stones, or the Raspings of Boars Teeth. In practical Authors, various Instances occur of Patients who have discharg'd Shell-snails, of different Kinds, both by Vomit and Stool.

There

There are various Sorts of Snails taken notice of, and deſcrib'd, by Naturaliſts; but we ſhall only briefly mention thoſe to which we find any Medicinal Virtues aſcrib'd, ſuch as the

COCHLEA NUDA. See LIMAX.

COCHLEA OLEARIA. This Animal receives the Epithet *Olearia*, becauſe, according to *Pliny*, in *L. 32. Cap. 11.* its Shell, from its commodious Figure, was uſed by way of Oil Crewet; perhaps alſo becauſe it was eſteem'd of ſome Efficacy againſt Poiſons.

COCHLEA TERRESTRIS, LIMAX TERRESTRIS, Offic. *Cochlea teſtacea*, Schrod. 5. 283. *Cochlea cinerea, maxima, edulis, cujus os operculo craſſo, velut Gypſeo, per hyemem clauditur*, Liſt. Hiſt. Animal. Angl. 111. *Cochlea cinereo rufeſcens faſciata, leviter umbellicata*, Ejuſd. Hiſt. Conch. 1. n. 46. *Cochlea Pomatia edulis Geſneri*, Ejuſd. Exer. Anatom. 1. *Pomatia*, Geſn. de Aquat. 255. *Cochlea terreſtris Gypſeo operculo obſerata*, Aldrov. de Exang. 389. THE SNAIL.

Theſe are the Snails commonly uſed in Food and Medicine.

COCHLEA CÆLATA, Aldrov. de Exang. 393. Jonſ. de Exang. Tab. 12. Geſn. de Aquat. 240. Rondel. de Piſc. 2. 98. Charlt. Exer. 62. *Cochlea cælata antonomaſtice dicta*, Bonan. 114. Tab. 11. n. 11, 12, 13. *Cochlea Trochiformis ſtriata, rugoſa, papilloſa, &c.* Lang. Meth. Teſt. 51.

This is a Species of Shell-ſnail found in the *Mediterranean* Sea. Its Operculum or Cover is, according to ſome, the *Umbilicus Marinus* of the Shops. See UMBILICUS MARINUS.

COCHLEA MINOR EX LUTEO ET NIGRO VARIEGATA, Ind. Med. *An Cochlea interdum unicolor, interdum variegata, &c.* Liſt. Hiſt. Conch. 1. n. 54. THE PARIS GARDEN SNAIL.

Theſe are us'd in Collyria. *Dale.*

COCHLEA AQUATICA, Offic. *Cochlea fuſca, faſciis crebris anguſtiſque prædita*, Liſt. Hiſt. Animal. Ang. 162. *Cochlea nigricans, denſe & læviter ſtriata*, Ejuſd. Hiſt. Conch. 4. Sect. 5. n. 43. THE WATER SNAIL, OR PERIWINKLE.

COCHLEA *Purpurifera* is the *Murex*. Purple-fiſh.

COCHLEA *Sarmatica*. A very large Snail found in the *Baltic* Sea, mention'd by *Aldrovandus* and *Johnſon*. *Rieger* ſays, it is as large as a *(Dolium)* Hogſhead, with Horns as big as thoſe of a Stag. I do not find, that it is us'd, either in Phyſic, or as an Aliment.

COCHLEA *Cærulea*. A Sea-ſhell, eſteem'd only for its beautiful Colour.

COCHLEA *Margaritifera*. See CONCHA MARGARITIFERA.

The Shells of all theſe, when calcin'd, become Lime.

COCHLEA *Foſſilis, vel Lapidea*. See COCHLITA.

COCHLEAR, COCHLEARE, COCHLEARIUM, κοχλιάριον. A Spoon, thus call'd, perhaps, from its Reſemblance to a ſort of Shell.

In medicinal Authors, it imports a Meaſure, both for liquid and dry Subſtances. *Rieger* ſays, the *Attic* κοχλιάριον was the fourth Part of the Cyathus, containing four Scruples and two-fifths of a Grain; and that the *Roman* Cochleare was the ſame. According to *Eiſenſchmidius* and *Galen*, it was only one-tenth of a Cyathus. *Monardus* ſhews, that, in *Dioſcorides* and *Pliny*, a Cochleare is not ſo much as a Dram; and that, in *Galen*, mention is made of two Sorts of Cochlearia, the leſſer and the greater. *Sennertus* is of Opinion, that the Cochleare was of four Sorts, the leaſt, the ſmall, the greater, and the greateſt; ſo that the leaſt was half a Dram; the ſmall one a Dram; the greater a Dram and a half, or two Drams; and the greateſt half an Ounce. *Arbuthnot* informs us, that a *Cochleare* was half a Chema, which is the ſixtieth Part of an *Attic* Xeſtes, or *Roman* Sextarius. By this way of calculating, a Cochleare was one-tenth of a Cyathus.

In the *London* and *Edinburgh* Diſpenſatory, a Cochleare is defin'd in Syrups half an Ounce; in diſtil'd Waters three Drams.

COCHLEARIA.

The Characters are,

The Fruit is almoſt globous; the Seeds are round.

Boerhaave mentions ſix Species of this Plant, which are,

1. Cochlearia; folio Cubitali. *Tourn. Inſt.* 215. *Elem. Bot.* 184. *Boerh. Ind. a.* 2. 10. *Dill. Cat. Giſſ.* 66. *Buxb.* 77. *Raphanus ſylveſtris*, Offic. *Raphanus ruſticanus*, Cod. Med. 96. Ger. 187. Emac. 241. Park. Theat. 860. C. B. Pin. 96. Raii Hiſt. 1. 818. Synop. 3. 301. Merc. Bot. 1. 64. Phyt. Brit. 103. Mer. Pin. 102. Hiſt. Oxon. 2. 237. *Raphanus ſylveſtris, ſeu Armoracia multis*, J. B. 2. 851. *Raphanus ſylveſtris Armoracia*, Chab. 474. *Armoracia Rivini*, Rupp. Flor. Jen. 74. HORSE-RADISH. *Dale.*

The Roots of this are a Finger thick, and more long, ſinking deep in the Earth, of a white Colour, and of a hot, biting Taſte, and of a volatile, pungent Smell. It has many long, large, undivided Leaves, indented about the Edges, of a dark-green Colour. The Stalks ariſe not very high, having a few, long, narrow Leaves, and ſlender Spikes of ſmall, white, four-leav'd Flowers, ſucceeded by little, round-pointed Seed-veſſels, which ſeldom bring ripe Seed. It grows wild in ſeveral Places near River-ſides, and is planted in Gardens for the Root's ſake, which is only uſed.

It is heating, drying, and aperitive, frequently us'd in Sauces, to create an Appetite. It is of great Uſe againſt the Scurvy, Dropſy, and Jaundice, and is often put into Diet-drinks for thoſe Purpoſes. *Miller's Bot. Off.*

The only Medicine, deriving its Name from this Plant, is the *Aqua Raphani Compoſita*. See AQUA.

When this Plant is calcin'd, very little or no Salts can be extracted from the Aſhes, theſe being naturally volatile.

The expreſſed Juice, being ſuffered to putrify, affords an alcaline volatile Salt, as does Urine; which is the Reaſon why it is ſo highly beneficial in the acid Scurvy. In the other kind of Scurvy, it is very pernicious; in which Caſe I have known it to procure a Rupture of the Liver. But where there is a Defect of Heat, and a Coldneſs and Viſcidity of the Juices, it is very proper. In a Scurvy attended with a hot Fever, and a Putridneſs, it would deſtroy the Patient. So alſo in a Dropſy, if it proceeds from a cold Cauſe, this Plant is proper to be uſed, otherwiſe not. I have ſeen bloody Stools and Urine procur'd by an unſeaſonable Uſe of it. A Maid in this City (*Leiden*) was afflicted with a hot Scurvy; by taking this Herb, ſhe fell into a continual Bleeding at the Noſe, from which ſhe was afterwards freed by the Uſe of *Acetoſa*. The Root, taken in a large Quantity, excites Vomiting. Bruiſed ſmall, and drank to the Quantity of two Ounces, it is good for thoſe, who are afflicted with a pituitous Stomach; and, if this be attended with Vomiting, it will be proper to drink plentifully of warm Water, after taking the Doſe. The Herb, in Conjunction with Acetoſa, makes an excellent antiſcorbutic Medicine; otherwiſe, where its Acrimony is to be feared, it is to be temper'd with Milk, Whey, or Raiſins. It is uſed for Gargariſms in Putrefactions of the Gums, and yields a noble Spirit and Tincture. *Boerh. Hiſt. Plant. p.* 419.

This Plant is frequently uſed in ſtimulating Cataplaſms, together with Muſtard-ſeed, old Yeaſt, and Vinegar.

2. Cochlearia; hederæ folio. *M. H.* 2. 308. *Hederaceum Thlaſpi.* J. B. 2. 933. Lob. Ic. 615. Obſ. 338. a.

3. Cochlearia; folio ſubrotundo. *C. B. P.* 110. *Tourn. Inſt.* 215. *Elem. Bot.* 184. *Boerh. Ind. a.* 2. 10. *Rupp. Flor. Jen.* 67. *Buxb.* 76. *Cochlearia Batava, rotundifolia, hortenſis*, Offic. *Cochlearia*, J. B. 2. 942. Chab. 297. Raii Hiſt. 1. 822. Synop. 3. 302. Mer. Pin. 27. *Cochlearia rotundifolia*, Ger. 324. Emac. 401. *Cochlearia major rotundifolia, ſive Batavorum*, Park. Theat. 285. *Cochlearia major Batavica ſubrotundo folio*, Hiſt. Oxon. 2. 308. *Cochlearia rotundifolia, ſive Batava*, Merc. Bot. 2. 19. Phyt. Brit. 29. GARDEN SCURVY-GRASS.

The Root of this Scurvy-graſs is ſomewhat long, and full of Fibres, from which ſpring a great Number of flatiſh ſucculent-green Leaves, on long Foot-ſtalks, which are round, and appearing ſomewhat hollow, like a Spoon; whence it has its Name *Cochlearia*. The Stalks grow to be eight or nine Inches high, brittle, and cloath'd with the like Leaves, which are more angular and pointed. The Flowers grow in Tufts on the Top of the Stalks, conſiſting of four ſmall white Leaves, which are ſucceeded by little, round, ſwelling Seed-veſſels, parted in the Middle by a thin Film, and containing ſmall round Seeds. Both Leaves and Flowers have a biting, hot Taſte. It grows wild in ſeveral Parts of the North of *England* by the Sea-ſide; but is very much cultivated in Gardens, and flowers in *April*.

Scurvy-graſs abounds with fine volatile Parts; and therefore the Herb infuſed, or the Juice expreſſed, is more prevalent than a Decoction, the volatile Parts flying away in the boiling. This is accounted a ſpecific Remedy againſt the Scurvy, cleanſing and purifying the Juices of the Body from the bad Effects of that Diſtemper, and clearing the Skin from Scabs, Pimples, and foul Eruptions.

Officinal Preparations are the ſimple Water, the Spirit, and a Conſerve. *Miller's Bot. Off.*

It muſt be remembered, that theſe warm alcaleſcent Plants are only proper in an acid Scurvy; but that, in a putrid alcaline Scurvy, they are Poiſons, as is remarked under the firſt Species of Cochlearia.

4. Cochlearia; major; Batavica; erecta; folio oblongo; *H. L.* 165. *a*,

5. Cochlearia; folio ſinuato, *C. B. P.* 110. *Raii Hiſt.* 1. 833. *Synop.* 3. 305. *Tourn. Inſt.* 215. *Elem. Bot.* 184. *Boerh. Ind. a.* 2. 10. *Cochlearia Britannica marina*, Offic. *Cochlearia Britannica*, Ger. 324. Emac. 401. *Cochlearia Britannica folio ſinuato*, Hiſt. Oxon. 2. 308. *Cochlearia vulgaris*, Park. Theat. 285. Mer. Pin. 27. *Cochlearia vulgaris longo & ſinuoſo folio*, Merc. Bot. 1. 29. Phyt. Brit. 29. SEA SCURVY-GRASS.

This Sort of *Scurvy-graſs* grows to be about as high as the Garden Scurvy-graſs; but the Leaves are rather thicker, longer, narrower, and more pointed at the Ends, frequently ſinuated about the Edges, of a duller green Colour than the Garden. The Flowers and Seeds are alike in both. It has a ſalter Taſte,

not

not nigh ſo hot and pungent as that. It grows in ſalt Marſhes, and particularly by the *Thames* Side, all the Way below *Woolwich*, flowering rather later than the Garden-kind.

The *Sea Scurvy-graſs* is frequently uſed in ſcorbutic Remedies along with the Garden ſort; but, wanting its fine volatile Parts, it ſeems not ſo prevalent, but, abounding more in ſaline Particles, it may be uſed, to good Purpoſe, as a Diuretic. *Miller's Bot. Off.*

6. Cochlearia; minima; ex montibus Walliæ, *Sher. a.* THE LEAST SCURVY-GRASS FROM THE WELSH MOUNTAINS.

COCHLEATA. See MEDICA.

COCHLIA, or COCHLIAS. See COCHLEA.

COCHLIAXON, κοχλιάξων. A Name for a Part in a Machine deſcrib'd by *Oribaſius*, in his Book *De Machinamentis*, *C.* 24. which he calls *Gloſſocomum Nymphodori*.

COCHLIDIUM, κοχλίδιον, the ſame with κόχλις. A ſmall Shell-ſnail, whoſe Shell, according to *Breynius*, is of a conical, and regularly ſpiral Form. This Author, in his *Diſſertatio Phyſica de Polythalamiis*, enumerates various Species of the Cochlidium.

COCHLITA. This is alſo call'd Cochlea foſſilis, or lapidea. It is a Stone of the Shape and Figure of a certain Shell-ſnail.

This is ſaid to be poſſeſſed of ſome lithontriptic Virtue.

COCHONE, κοχώνη. *Galen* explains this the Juncture of the Iſchium near the Seat or Breech; whence, ſays he, all the adjacent Parts about the Seat are call'd by the ſame Name. *Hippocrates* repreſents theſe Parts, in his firſt Book *De Morbis Mulierum*, as ſubject to Pains in certain Irregularities of the menſtrual Flux, which he there deſcribes, when they grow inveterate; and, in the ſecond Book, he alſo mentions Pains of theſe Parts in certain uterine Diſorders; and, in the fifth Book of his Epidemics, he relates the Caſe of *Eupolemus*, who was afflicted with Pains in the right Coxendix, the Groin, and the Juncture of the Iſchium, which is at the fore Part of the Iſchium with the Inguen, I ſuppoſe he means the Os Pubis. Theſe Pains, he informs us, terminated in a Suppuration about the Iſchium, Inguen, and *Cochone*, and at laſt prov'd fatal. *Heſychius* ſays, *Cochone* is the Part of the Spine, which is adjacent to the Os Sacrum and Breech; and tells us, that ſome call the Parts on both Sides the Os Sacrum by this Name; and adds, that the Iſchia are thus nam'd.

COCILIO. The Weight of eleven Ounces. *Rulandus*.

COCOLATA. Chocolate.

COCOMICA SIGNA. A Term uſed by *Paracelſus* in his Treatiſe *De Podagricis*, *L.* 2. It is no eaſy matter to diſcover his preciſe Meaning. He ſeems to be ſpeaking of what we uſually call Blaſts, which, he ſays, reſide in half the Middle of the Sky (*Cæli*), and deſcend upon Herbs, Leaves, Trees, and the like: And in the ſame manner, ſays he, either with or without the Dew, many Figures, Forms, and *Cocomic Signs*, are found, which frequently fall upon Men whilſt walking in the Line of their Direction.

COCOS. See PALMA, INDICA, COCCIGERA, ANGULOSA.

COCTIO. The *Coctio* of the *Latins*, and the πέψις of the *Greeks*, imports what, in *Engliſh*, we call *Boiling*, which is heating any Liquor over a Fire to ſuch a Degree, that Bubbles ariſe in it. This Proceſs is a Species of ſtrong and powerful Digeſtion; for which Reaſon *Juncker*, in his *Conſpectus Chymiæ Theoretico-practicæ*, informs us, that, among the antient Chymiſts, the Word *Coctio* was frequently uſed inſtead of *Digeſtio*, and convey'd the ſame Idea. Chymiſts and Apothecaries boil ſeveral Bodies furniſhed by the mineral, the vegetable, and the animal Kingdoms, in different Liquors, with various Views, for preparing Extracts, Eſſences, and what we call medicated Decoctions, that, by this means, the Virtues of theſe Bodies may be transfuſed into the reſpective Liquors in which they are boil'd. *Coction* or *Boiling* is alſo uſed for depurating ſome Subſtances from their Sordes; for inſpiſſating Juices; for qualifying Preſerves for a longer Continuance in the State they are deſir'd; for correcting and mitigating the draſtic Virtues of ſome Subſtances; and for removing the flatulent Qualities of ſome Aliments and Medicines. *Oribaſius*, in his *Medicinal Collections* from *Galen*, gives us the following beautiful Account of Coction or boiling with Water: "Any ſolid Subſtance, ſays he, "when boil'd in Water, depoſits in that Fluid the primary Qua- "lities, of which it was poſſeſſed; by which means it is diveſted "of every Quality, and aſſumes an inſipid Nature; nor does it "retain any thing of a ſaline, bitter, or aſtringent Taſte." If bitter Subſtances are twice or thrice boil'd, they evidently depoſit their Bitterneſs in the Water, and become like thoſe Subſtances, which are ſaid to be deſtitute of Qualities. Acrid Subſtances, in like manner, when boil'd, depoſit their Acrimony in the Water uſed for that Purpoſe. The ſame alſo holds true with reſpect to aſtringent Subſtances.

Various Liquors are uſed, and different Portions of Time allotted, for Coction, according to the different Intentions of Operators, or the particular Natures of the Subſtances to be boil'd; ſo that nothing general can be determin'd with reſpect to this, the Obſervation of which would be of univerſal Uſe to the Operator; but we are to judge of the Manner, in which particular Subſtances are to be boil'd, from a Knowledge of the reſpective Natures of the Bodies to be ſubjected to this Operation. I think, it is ſufficiently obvious, from the penetrating and powerful Action of the Fire, and from the pervading and reſolvent Virtues of the Liquors added, that, if Bodies are of ſuch a Nature as to be penetrable by the Liquor, they are, by Coction, conſiderably chang'd, and, in a particular Manner, diveſted of thoſe Qualities, which depend upon their volatile Parts, which are more or leſs lodg'd in the Menſtruum, in which the Coction or Boiling is perform'd, in proportion as they are reſtrain'd and kept from flying off by the Veſſel's being cloſely covered, or the reverſe. But the longer the Coction of any Liquor is protracted in an open Veſſel, without an Effuſion of freſh Liquor, the more inſpiſſated it muſt be, in conſequence of the Diſſipation of its more fluid and volatile Parts. Hence it is obvious, that, according to *Boerhaave*, in his *Chymiſtry*, *Vol.* 2. the Fermentation of fermentable Juices may be deſtroy'd by Coction or Boiling. With reſpect to that particular Species of Coction called *Aſſatio*, ſee the Article ASSATIO.

Vegetables, by boiling, loſe their native Waters, their volatile eſſential Oil, wherein their diſtinguiſhing Spirit reſides, and a Portion of the Acid they originally contain'd. There remain their Earth, a Portion of fix'd Oil, and the Salts.

The Coction of the Aliments in the Stomach is their Digeſtion, or Reduction to a ſort of Emulſion or Chyle.

By the Coction of the Humours, the Writers of Inſtitutes mean, the Reduction of the Chyle to Blood, which is call'd the ſecond Coction; and alſo the Separation of any Fluid from the Blood, by means of Glands deſtin'd to this Uſe, which is call'd the third Coction.

It is commonly ſaid, that the Faults ariſing from any Defect in the firſt Coction, are not mended in the ſecond, nor thoſe from the ſecond by the third; that is, when the Aliment is not ſufficiently comminuted in the Organs of Digeſtion, the Particles of the Chyle are not ſmall enough to circulate regularly through the minute Veſſels of the Lungs, and be converted into good Blood, it being not poſſible for the Organs of Sanguification to diſſolve farther the Particles they receive from the Stomach. Hence, theſe Particles being too large to circulate thro' the Capillary Arteries, Obſtructions, and all their Conſequences. And the third Coction, that is, in the Glands, is not better adapted to the farther Diſſolution of theſe Particles, than the ſecond.

The Coction of the morbific Matter, or the Matter which forms a Diſeaſe, is its Reduction, either ſpontaneouſly, by the vital Powers, or the Force of Medicines, to a natural and healthy State, ſo that it may be no longer offenſive; or the preparing it for Expulſion out of the Body, by a ſalutary Criſis. See CATHARTICA. And, when this is accompliſhed, the Diſeaſe ceaſes, or, at leaſt, is much diminiſhed, together with all its Symptoms; the Strength and Firmneſs of the vital Powers increaſe; the injured Functions are reſtored to their natural Vigour; and the circulating Humours, Secretions, Excretions, and Excrements, which are alter'd by the Diſeaſe, now put on a natural and healthful Appearance. The ſooner this Coction is brought about, and the more perfectly, the leſs dangerous is the Diſeaſe, and *vice verſa*.

The Remedies proper to promote this Coction, and a ſubſequent Criſis, are ſuch as attenuate the inſpiſſated Juices; obtund and deſtroy Acrimony; open the obſtructed Veſſels; ſtrengthen the lax Fibres; relax thoſe which are too rigid; and moderate the Motion of the Blood: And, on Medicines ſuited to theſe Intentions, the Cure of all Diſtempers, whether acute or chronical, depends.

CODAGA-PALA, H. M. *Arbor Malabarica lacteſcens, Jaſmini flore odoro, ſiliquis oblongis.* D. Syen.

A Tree which grows in *Malabar*. The Bark of the Trunk and Root, powder'd, and drank in ſour Milk, put a Stop to any Flux of the Belly, and to the Hæmorrhoids. The Root powder'd, and boil'd in Water wherein Rice has been waſh'd, makes an excellent Fomentation for the tumefy'd Part in a Quinſey, or for any other Tumors, and for the Gout: It alſo cures the Tooth-ach, if held in the Mouth; and alſo kills Worms. *Raii Hiſt. Plant.*

CODAGEN. See *Hydrocotyle*; *Zeilanica*; *Aſari folio.*

CODDAM-PULLI. See CARCAPULI.

CODDA-PANNA. See *Palma montana, folio plicatili, flabelliformi, maximo; ſemel tantum frugifera.*

CODESELLA. A Carbuncle. *Foreſtus.*

CODIA, κωδία, κωδεία, or κώδεις, in *Hippocrates*, import a Poppy-head. *Galen. Heſychius.* The Heads of other Plants are alſo call'd by this Name.

CODI-AVANACU, H. M. *An Lathyris fruticeſcens, fructu in foliorum alis echinato?*

This is an Under-ſhrub, which grows in ſandy Soils in the *Eaſt Indies*. The Juice of the whole Plant, taken in Wine, is a good Remedy for Fluxes. This Juice alſo, boil'd with Oil, is exhibited as a Reſtorative in caſe of Weakneſs. The Oil procured

procured from the whole Plant, makes a good Embrocation for the Head, in order to remove a Vertigo.

CODOSCELLÆ. Buboes. *Fallopius.*

CŒLA, κοῖλα. The Cavities or Hollows, as they are call'd, of the Eyes. These are two, one immediately above the ſuperior Eyelid, which is properly call'd κοῖλον: the other immediately under the inferior Eyelid, call'd ὑπόκοιλον. These are ſubject to ſwell, and be fill'd up, in a Cachexia, Oedema, or any bad Habit of Body.

The κοῖλα of the Feet are the hollow Parts at the Bottom of the Foot, adjacent to the Heels.

COELESTINUS *Color*, in *Paracelſus*, is a ſky Colour. He informs us, that a Circle of this Colour, in the Urine of Women, is a Sign of a leprous Putrefaction in the Matrix; and that a Bubble of this Colour, on the Urine, is a Sign of a Leproſy, or ſometimes of an Alopecia.

COELIA, κοιλία, or κοιλίη. This has many different Significations. For, firſt, it imports a Cavity in any Part of the Body, or in any of the Viſcera. Secondly, it implies the ſame as ALVUS (which ſee). The κοιλίη, with the Addition of ἄνω, that is, ἡ ἄνω κοιλίη, is the Stomach, and ſometimes the Thorax; and ἡ κάτω κοιλίη is the lower Belly, or inteſtinal Tube.

As κοιλίη, therefore, ſignifies the entire Alimentary Duct, from the Cardia to the Anus, I ſhall, in this Place, give the Reader the anatomical Deſcription of theſe Parts, conſidering them as one Organ, that they may be the better underſtood.

The Stomach is a great Bag or Reſervoir, ſituated partly in the Left Hypochondrium, and partly in the Epigaſtrium.

The Figure of the Stomach is like that of the Bag-pipe, that is, it is oblong, incurvated, large, and capacious at one End, and ſmall and contracted at the other. We ſee this Figure moſt evidently, when the Stomach is moderately fill'd with Air, or with any other Fluid.

The Curvature of the Stomach gives us Occaſion to diſtinguiſh two Arches in it, one large, which runs along the greateſt Convexity; and one ſmall, directly oppoſite to the former. I name theſe Arches the great and ſmall Curvatures of the Stomach; and by the Sides of the Stomach I underſtand the two lateral Portions, which lie between the two Arches.

The Stomach has two Extremities, one large, and one ſmall, like a crooked Funnel. It has two Openings, call'd the Orifices of the Stomach, one between the great Extremity and the ſmall Curvature; the other at the End of the ſmall or contracted Extremity. The firſt Opening is a Continuation of the Œſophagus; the other joins the inteſtinal Canal, and is call'd by the Name of Pylorus.

The Stomach is not ſituated in the Left Hypochondrium, and Epigaſtric Region, in the manner repreſented in moſt of the Figures. It lies tranſverſely, obliquely, and almoſt laterally, in ſuch a manner, as that the great Extremity, and the Orifice next it, are on the Left Hand; and the ſmall Extremity, with its Orifice, or the Pylorus, on the Right Hand, and lower, and more inclined, than the former. Therefore we ought, with the antient Anatomiſts, to call one of theſe Orifices ſuperior, the other inferior.

The great Extremity of the Stomach is in the Left Hypochondrium, and, for the moſt part, immediately under the Diaphragm; yet the ſuperior Orifice is not in the Left Hypochondrium, but almoſt oppoſite to, and very near the Middle of the Bodies of the loweſt Vertebræ of the Back.

The ſmall Extremity of the Stomach does not reach to the Right Hypochondrium. It bends obliquely backward, toward the upper Orifice; ſo that the Pylorus lies about two Fingers Breadth from the Body of the Vertebræ, immediately under the ſmall Portion of the Liver, and conſequently lower down, and more forward, than the other Orifice by almoſt the ſame Diſtance. This Extremity of the Stomach has ſometimes a particular Dilatation on the Side next the great Curvature.

According to this natural Situation, the Stomach, eſpecially when full, lies ſo, as that the great Curvature is turn'd more forward than downward, and the ſmall Curvature more backward than upward.

One of the lateral convex Sides is turn'd upward, the other downward; and not forward and backward, as they appear in dead Bodies, where the Inteſtines do not ſupport them in their natural Situation.

If we divide the Stomach, along the two Curvatures, into two equal Parts, we ſhall ſee, that the two Orifices do not both adhere to the ſame Half of this Diviſion, as we would be apt to imagine, according to the common Notion; but that the diaphragmatic Orifice is entirely in the upper Half, and the inteſtinal Orifice in the lower Half.

Therefore, the Body of the Stomach is ſo far from lying in the ſame Plane with the Œſophagus, as it is commonly repreſented in Figures, drawn from a Stomach taken out of the Body, and laid upon a Table; that it forms an Angle or Fold, immediately at the Paſſage of the Œſophagus thro' the ſmall Muſcle of the Diaphragm; and it is on account of this Angle, that the ſuperior Orifice is turn'd backward.

The Stomach is compoſed of ſeveral Parts, the chief of which are the different Strata which form its Subſtance, to which Anatomiſts give the Name of Tunicæ or Coats. Theſe Coats are commonly reckon'd to be four in Number, the outer or common, the fleſhy or muſcular, the nervous or aponeurotic, and the villous or inner Coat; and they are afterwards ſubdivided ſeveral Ways.

The firſt or outermoſt Coat is ſimply membranous, being one of the internal Productions of the Peritonæum. This appears evidently at the Connection of the ſuperior Orifice with the Diaphragm, where the external Membrane of the Stomach is really continuous with the Membrane which lines the inferior Surface of the Diaphragm; and it is from this, that it has been named the common Coat.

The ſecond or muſcular Coat is made up of ſeveral Planes of Fibres, which may all be reduced to two, one external, the other internal. The external Coat is longitudinal, tho' in different reſpects, following nearly the Direction of the Curvatures and Convexities of the Stomach; and the internal Plane is tranſverſely circular.

The Fibres of the external Plane run ſlanting in ſeveral Places, and are interſected by ſmall oblique whitiſh Lines, which ſeem to be in ſome meaſure tendinous. This Plane is ſtrengthen'd by a particular Faſciculus, which runs along the ſmall Curvature, its Fibres appearing to be leſs oblique than thoſe of the great Plane.

The Fibres of the inner or circular Plane of this muſcular Coat are ſtronger than thoſe of the outer Plane. They are rather Segments, which unite at different Diſtances, than entire Circles; and they are likewiſe interſected by great Numbers of ſmall white Lines, in ſome meaſure tendinous, and very oblique, which, all together, repreſent a kind of Network, the Areolæ or Meſhes of which are very narrow.

As theſe Circles or Segments advance on the great Extremity of the Stomach, they diminiſh gradually, and form a kind of muſcular Vortex, the Centre of which is in the Middle of that Extremity.

Between the outer and inner Planes, round the ſuperior Orifice, there are two diſtinct Planes, about the Breadth of a Finger, and very oblique, which ſurround this Orifice in oppoſite Directions, and interſect each other where they meet on the two lateral Sides.

Along the Middle of each lateral Side of the ſmall Extremity there runs a tendinous or ligamentary flat Portion, above a Quarter of an Inch in Breadth, which terminates in the Pylorus. Theſe two Portions lie between the common and muſcular Coats, and adhere very ſtrongly to the firſt.

Between the ſame two Coats there is a cellular Subſtance, which adheres very cloſely to the external Coat, and inſinuates itſelf between the fleſhy Fibres of the ſecond, all the Way to the third, as may be perceived by blowing it up. Some make it a diſtinct Coat, and call it Tunica Celluloſa; but it is no more than the cellular Portion of the membranous Coat, like the cellular Portion of the Peritonæum.

The third Coat, call'd commonly Tunica Nervoſa, ſuſtains, on its convex Side, a very large reticular Diſtribution of capillary Veſſels and Nerves. On the concave Side it ſeems to be of a very looſe Texture, and, as it were, ſpungy or filamentary, containing a great Number of ſmall glandular Bodies, eſpecially near the ſmall Curvature, and ſmall Extremity of the Stomach.

This ſpungy Texture reſembles fine Cotton, as may be ſeen by macerating it a little in clear Water, which ſwells it conſiderably in a very ſhort Space of Time. It is ſupported by a kind of Ground-work of very fine ligamentary or aponeurotic Filaments, which interſect each other obliquely, much in the ſame manner as the third Coat of the Inteſtines, of which hereafter; and it adheres to the convex Side of the villous Coat.

The fourth Coat of the Stomach is term'd Villoſa, becauſe, when it ſwims in clear Water, ſome have imagined they ſaw ſomething in it like the Pile of Velvet. The Antients call'd it Tunica Fungoſa, and perhaps this Name agrees beſt with its true Structure. We obſerve in it a great Number of ſmall Holes, anſwering to the ſmall Glands already mention'd.

Theſe two Coats are of a larger Extent than the two former, and they join in forming large Rugæ on the concave Surface of the Stomach; the greateſt Part of which are tranſverſe, tho' irregular and waving. There are likewiſe ſome longitudinal ones, which interſect the others; but at the Pylorus they all become longitudinal, and terminate there.

At the ſuperior Orifice of the Stomach theſe Rugæ are in a manner radiated, and ſeem to be a Continuation of the Plicæ or Folds of the Œſophagus; only they are thicker, and, where theſe Rugæ and Plicæ meet, they form a ſort of Crown, which diſtinguiſhes the ſuperior Orifice of the Stomach from the inferior Extremity of the Œſophagus.

In the Interſtices of theſe Rugæ there is often found a ſort of ſlimy Mucus, with which the whole Cavity of the Stomach ſeems likewiſe to be moiſten'd. This Mucus is much more fluid in living Bodies, and is ſupplied by the Glands of the Stomach. It may be term'd Succus Gaſtricus, or Stomachicus.

On the inner Surface of the ſmall Extremity of the Stomach, at the Place where it ends in the inteſtinal Canal, we obſerve a broad thin circular Border, with a roundiſh Hole in the Middle. This Hole is the inferior Orifice of the Stomach, call'd by the *Greeks* Pylorus, which ſignifies a Porter.

This Border is a Fold or Duplicature of the two inner Coats of the Stomach, the Nervoſa and Villoſa; and it is form'd, in Part, by a Faſciculus, or fleſhy Fibres, fix'd in the Duplicature of the Tunica Nervoſa, and diſtinguiſh'd not only from the other fleſhy Fibres of the Extremity of the Stomach, but alſo from thoſe of the Inteſtines, by a thin whitiſh Circle, which appears even thro' the external or common Coat, round the Union of the Stomach and Inteſtines.

The Figure of the Pylorus is that of a Ring, tranſverſely flatted, the inner Edge of which, or that next the Centre, is turn'd obliquely toward the Inteſtines, like a broad Portion of a Funnel. This inner Edge runs naturally more or leſs into little Plaits or Gathers, like the Mouth of a Purſe almoſt ſhut; all which Particulars are very different from what Figures, and dried Preparations, would make us believe. It is, therefore, a kind of Sphincter, which can contract the inferior Orifice of the Stomach, but ſeems not capable of ſhutting it quite cloſe.

The principal Arteries of the Stomach are the Coronaria Ventriculi, which runs along the ſmall Curvature, and the two Gaſtricæ, that is, the Siniſtra or Major, and Dextra or Minor, both which form one common Artery, which runs along the great Curvature. The Coronaria Ventriculi becomes united in the ſame manner with the Pylorica, and both make one common Veſſel.

To theſe two arterial Arches ſend a great Number of Branches toward each other on both Sides of the Stomach, and theſe Branches are gradually ramified in different Directions, by very frequent Diviſions and Subdiviſions; the greateſt Part of which communicate with thoſe from the other Artery.

From theſe frequent Ramifications and Communications of the arterial Arches of the Stomach, two different reticular Textures ariſe, whereof one, which is the largeſt, lies between the common and muſcular Coats in the cellular Subſtance found there; the other, which is very fine, lies on the Surface of the Tunica Nervoſa. This latter is a Production of the firſt, being form'd by means of a great Number of very ſhort Branches, which go out from the other, and paſs thro' the ſmall Interſtices between the Fibres of muſcular Coats.

By artificial Injections we can ſhew a third extremely fine reticular Texture of capillary Veſſels, which run between the glandular Bodies and Papillæ of the Tunica Villoſa. Theſe do not ſeem, in the natural State, to be purely Blood-veſſels, as Inflammations and Injections may incline us to think.

The Arteries of the Stomach come originally from the Cœliaca, by means of the Hepatica, Splenica, and Coronaria. The Pylorica, and Meſenterica ſuperior, likewiſe contribute to them by Communications, more or leſs immediate. They communicate alſo with the Mammariæ Internæ and Diaphragmaticæ, and, by means of the Epigaſtrica ſiniſtra, with the Meſenterica inferior.

The Veins of the Stomach are Ramifications of the Vena Portæ in general, and in particular of the Meſeraica major, Splenica, and Hæmorrhoidalis interna. They accompany the Arteries more or leſs, and form nearly the ſame kinds of Arches and reticular Textures; with this Difference, that they are proportionably greater, their reticular Areolæ larger, and their external Communications more frequent.

Between the common and muſcular Coats of the Stomach we find a great Number of Nerves, of different Sizes. Many of them accompany each other, in form of a broad flat Faſciculus, along the ſmall Curvature of the Stomach, from the ſuperior to the inferior Orifice. The reſt are ſpread in different Directions, on the Sides, Extremities, and great Curvature, forming, at different Diſtances, a kind of reticular Plexus, from which a great Number of Filaments are detached to the inner Coats.

They ariſe chiefly from the Nervi Sympathetici Medii, or eighth Pair, by means of the Plexus Coronarius Stomachicus form'd round the ſuperior Orifice of the Stomach, by the Expanſion of the Extremities of two large Ropes, which run down upon the Œſophagus, by the Name of Nervi Stomachici. The great ſympathetic Nerve, commonly call'd Intercoſtalis, contributes likewiſe to them, by communicating Filaments, which the Plexus Stomachicus receives from the ſemilunar Ganglions of the Plexus Hepaticus, and particularly from the Plexus Splenicus.

The Stomach receives, in general, whatever the Mouth and Tongue ſend thither, thro' the Canal of the Œſophagus; but its particular Uſe is to receive the Aliments, to contain them for a longer or ſhorter time, in proportion as they are more ſolid and fluid, and to digeſt them; that is, to put them in a Condition to be turn'd into that nutritious Fluid, call'd Chyle.

This Operation, which goes by the general Name of Digeſtion, and by which Chylification begins, is perform'd partly by the Succus Gaſtricus, which flows continually from the Tunica Villoſa, and partly by the continual Contraction and Relaxation of the muſcular Coat. Theſe Motions, in Men, are but very weak, and no ways ſufficient for Digeſtion, without the Aſſiſtance of the alternate Motions of the Diaphragm, and Muſcles of the Abdomen.

The Pylorus, or fleſhy Circle of the inferior Orifice of the Stomach, ſerves to retain the Aliments in it, till they have acquired a ſufficient Degree of Fluidity, to paſs eaſily thro' that Opening. I ſay, eaſily; for, by a particular Irritation of the muſcular Coat of the Stomach, and ſtill more by a violent Contraction of the Diaphragm and Muſcles of the Abdomen, the Contents of the Stomach may be very ſoon forced towards the ſmall Extremity, and puſh'd thro' the Pylorus.

The gentle and alternate Motions of the orbicular Fibres of the muſcular Coat may aſſiſt in ſending thro' the Pylorus, in the natural Way, the Aliment that is ſufficiently digeſted. This was call'd the periſtaltic or vermicular Motion, by thoſe who believed, that it is ſucceſſively reiterated, like that of Earth-worms when they creep.

Trituration might be a proper enough Term for this Operation, provided it be made to ſignify only a gentle Agitation, or Action of the fleſhy Fibres, in a Subſtance continually moiſten'd by the Gaſtric Liquor, and not a violent Grinding of a dry Subſtance.

The Situation of the Stomach, which is nearly tranſverſe, is likewiſe of Uſe in making the Aliment remain long enough in that Cavity, and may ſerve to make the Length of this Stay in ſome meaſure arbitrary, by means of the different Poſtures of the Body; for, when we lie on the Left Side, the Aliment muſt remain longer, than when we lie on the Right Side, &c.

The Obliquity of the Stomach may ſerve to clear up a Difficulty, that very much torments thoſe who believe, that both Orifices of the Stomach lie in the ſame Level, which is, how any heavy Subſtance, once got into the Stomach, can ever riſe again to this Level, to paſs into the Inteſtines.

The Inteſtines *in general, and* Inteſtinum Duodenum *in particular.*

Between the Pylorus and the very loweſt Part of the Abdomen lies a long Canal, bent in a great many different Directions, by numerous Convolutions or Turnings call'd the Inteſtines.

This Canal, thus folded and turn'd, forms a conſiderable Bulk, which fills the greateſt Part of the Cavity of the Abdomen; and it is connected, through its whole Extent, to membranous Productions or Continuations of the Peritonæum, principally to thoſe call'd the Meſentery and Meſocolon.

The Incurvations of the inteſtinal Canal form two Arches, a ſmall one, by which it is connected to the Meſentery and Meſocolon, and a great one on the oppoſite Side, which lies looſe. The whole Canal is generally about ſeven or eight times as long as the Subject.

The inteſtinal Canal is neither of an equal Size nor Thickneſs, through its whole Length; from whence Anatomiſts have taken Occaſion to conſider its different Portions as ſo many particular Inteſtines, and to divide them all into ſmall and great.

And as they ſtill found ſome Differences in each Claſs, taken all together, they divided each into three Portions, which they diſtinguiſh'd by particular Names. In the ſmall Inteſtines the three Portions are named Duodenum, Jejunum, and Ileum; and, in the great Inteſtines, Cæcum, Colon, and Rectum.

The Inteſtines in general are compoſed of ſeveral Coats, much in the ſame manner with the Stomach. The firſt and outermoſt is a Continuation of the Meſentery, or of ſome other Elongation or Duplicature of the Peritonæum.

This is commonly term'd the common Coat, and it has a cellular Subſtance on its inner Surface, like that of the Stomach, which M. *Ruyſch* thought fit to call a diſtinct Coat, by the Name of Tunica Celluloſa.

The ſecond Coat of the Inteſtines is fleſhy or muſcular, and made up of two Planes, one external, the other internal. The external Plane is very thin, and its Fibres longitudinal; the internal Plane is thicker, and its Fibres run tranſverſely round the Circumference of the inteſtinal Cylinder.

I am not of Opinion, that theſe Fibres are ſpiral, nor that they are perfect Circles or Rings; but they ſeem rather to be Segments of Circles, diſpoſed much in the ſame manner as in the

the Stomach, and thus ſurrounding entirely the inteſtinal Canal.

Theſe two Planes adhere cloſely together, and are ſeparated with great Difficulty. They adhere likewiſe to the common Coat, by the Intervention of the cellular Subſtance, which is in greater Quantities on the Side next the Meſentery than on the other.

The third Coat is call'd Nervoſa, and is ſomething like that of the Stomach. It has a particular Plane, which ſerves as a Baſis to ſuſtain it, made up of very fine, ſtrong, oblique Fibres, which ſeem to be of the ligamentary or tendinous Kind.

To ſee this Plane diſtinctly, a Portion of the Inteſtines muſt be inflated, the common Coat removed, and the fleſhy Fibres ſcraped off.

This Coat ſuſtains two reticular Subſtances, which are both vaſcular, one arterial, the other venal, accompanied by a great Number of nervous Filaments. Theſe Veſſels and Nerves are Productions of the Meſenteric Veſſels and Nerves; and, as they ſurround the whole Canal of the Inteſtines, ſome Anatomiſts have form'd them into a diſtinct Coat, by the Name of Tunica Vaſculoſa.

The nervous Coat ſends off, from its inner Surface, a great Number of Portions of Septa, more or leſs circular, which contribute to the Formation of what are call'd Valvulæ Conniventes. It likewiſe ſeems to ſuſtain ſeveral different glandular Bodies, which we diſcover in the Cavity of the Inteſtines.

The fourth or innermoſt Coat is very ſoft, and is named Tunica Villoſa. It has the ſame Extent with the third Coat, which ſupports it, and it lines all the Septa of that third Coat; but it is not uniform thro' the whole Canal.

Inteſtina Tenuia.

The ſmall Inteſtines form one continued uniform Canal; and tho' three Portions of it have three different Names, yet we have no ſufficient Marks whereby to diſtinguiſh them, to fix the preciſe Extent or Length of each Portion, or to ſettle its juſt Limits.

The firſt and ſmalleſt Portion of the whole Canal is called Duodenum; the ſecond, which is much longer, Jejunum; and the third, which is ſtill longer than the ſecond, Ileum.

The firſt Portion of the ſmall Inteſtines was call'd Duodenum, from the Length aſcribed to it by the Antients, that is, the Breadth of twelve Fingers; and the Moderns need not cavil about this Length, if it is meaſured with the Ends of the Fingers of the Subject.

This Inteſtine, having ariſen from the Pylorus, is immediately bent a little backward, and obliquely downward; then it bends a ſecond time toward the Right Kidney, to which it is a little connected; and from thence paſſes before the renal Artery and Vein, aſcending inſenſibly from Right to Left, till it gets before the Aorta and laſt Vertebræ of the Back. It continues its Courſe obliquely forward, by a gentle Turn, which may be reckon'd a third Incurvation, and alſo the Extremity of the Duodenum.

Through this whole Courſe the Duodenum is firmly bound down by Folds of the Peritonæum, eſpecially by a tranſverſe Duplicature, which gives Origin to the Meſocolon. The two Laminæ of this Duplicature, being at firſt ſeparate, and ſoon after uniting, muſt leave a triangular Space between them, which is lined with a cellular Subſtance.

It is in this Space that the Duodenum adheres, by means of the cellular Subſtance, to the Parts already nam'd; and the Inteſtine is contained therein, as in a Caſe; ſo that, without Diſſection, we can ſee nothing but its two Extremities; and even theſe are hid by the Colon, and by the firſt Convolutions of the Jejunum.

The firſt Coat of the Duodenum is conſequently different from that of the other ſmall Inteſtines, having this peculiar to it, that it does not inveſt the whole Circumference of the Inteſtine, becauſe, thro' the greateſt Part of its Length, it lies in the triangular Space already mention'd; and for the ſame Reaſon there is a greater Quantity of cellular Subſtance belongs to the outer Coat of the Duodenum, than to that of the other Inteſtines.

The muſcular Coat of the Duodenum is thicker than in the Jejunum and Ileum.

The Tunica Nervoſa and Villoſa form conjointly, on the Inſides of this Inteſtine, a great Number of ſmall Duplicatures; which advance into the Cavity more or leſs directly, like Portions of circular Planes, with one Edge fixed to the Inteſtine, and the other looſe. Theſe are what Anatomiſts call Valvulæ Conniventes.

The looſe or floating Edge of theſe Valves is form'd into ſmall Gathers or Waves in the natural State: I ſay deſignedly, in the natural State, to rectify the falſe Ideas which dry Preparations of the Inteſtines are apt to beget. The whole Surface of theſe Duplicatures or Valves is villous, as well as that of the Interſtices between them.

The Villi of this Inteſtine are thicker than in the Stomach; but the Texture of them in Men is not like Hairs, as they are commonly repreſented in Figures; but rather like that of a fungous, granulated Subſtance, compoſed of an infinite Number of very fine Papillæ of different Figures, in which we ſee, thro' a Microſcope, a Multitude of depreſs'd Points or Pores, by which their whole Surface ſeems to be pierc'd.

By the ſame Help we obſerve, on different Places of the inner Surface of this Inteſtine, ſeveral round villous Tubercles, riſing, like ſmall Verrucæ, at different Diſtances from each other.

This Subſtance ſuſtains an infinite Number of capillary Veſſels of different Kinds; for, beſides the Blood-veſſels, we ſometimes obſerve a great Number of white Filaments, which run thro' it, and end at its inner Surface, like ſo many capillary Roots of the Veſſels, call'd Venæ Lacteæ.

The fungous Subſtance, which binds theſe capillary Filaments together, and ſurrounds them, is very tender; and the capillary Extremities of the ſmall Blood-veſſels, diſtributed thro' it, ſeem to be turned toward the Pores of the Papillæ. Through theſe Pores a mucous Fluid, more or leſs tranſparent, is diſcharg'd, which continually moiſtens the Cavity of the Inteſtine.

The internal Surface of the Duodenum is furniſh'd with a great Number of ſmall flat glandular Tubercles, raiſed on the Sides, and depreſſed in the Middle, by a kind of Foſſula; and they are more numerous near the Beginning of this Inteſtine than any-where elſe. About the Pylorus they lie in a manner in Heaps or Cluſters, and from thence the Diſtance between them increaſes gradually all the Way to the other Extremity, where they are ſingle.

Theſe Glands, when examined carefully, appear like little Bladders, with the Orifices turn'd toward the Cavity of the Inteſtine, and the Body fix'd in the ſpungy Subſtance next the nervous Coat. They furniſh a particular Fluid, which is often found to be viſcid.

In the inner Surface of the Duodenum, almoſt at the lower Part of the firſt Incurvation, and on the ſhorteſt Side, there is a longitudinal Eminence, in the Point or Apex of which lies a particular Opening, which is the Orifice of the Ductus Bilarius, within which the Ductus Pancreaticus likewiſe opens.

This Inteſtine is commonly the wideſt, tho' the ſhorteſt, of the ſmall Inteſtines; and is inveſted by more cellular Subſtance, eſpecially while within its triangular Caſe, where it wants the outer Coat, which the others have; and conſequently it is more eaſily dilatable, by the Subſtances which might otherwiſe ſtick within it. See Duodenum.

Inteſtinum Jejunum.

The Jejunum, ſo call'd becauſe it is oftener found empty than the Ileum, begins at the laſt Incurvation of the Duodenum, and is there connected to the Beginning of the Meſocolon.

From thence it bends downward from Left to Right, and obliquely forward, or from the Vertebræ, and makes ſeveral Convolutions, which lie principally in the upper Part of the umbilical Region. Through all this Courſe it is connected to the Meſentery.

It is a pretty difficult Matter to fix the exact Bounds between this Inteſtine and the Ileum. The external Marks of a redder Colour in the one than in the other, tho' pretty common, are not conſtant; and the internal Marks, fix'd from the Plurality of Valvulæ Conniventes, are indeterminate, and oftentimes appear only from Diſſection.

Theſe two Inteſtines may be better diſtinguiſhed by their different Situations, which are pretty regular; but as even this Mark is not particular enough, the moſt eaſy Way that I have been able to contrive, and which will, in moſt Caſes, be found ſufficiently exact, is to divide both Inteſtines into five Parts, and to allow nearly two Fifths to the Jejunum, and three Fifths and a little more to the Ileum.

The Coats of the Jejunum are nearly of the ſame Structure with thoſe of the Duodenum, but thinner. The common Coat is a Continuation of the Meſentery, and the cellular Subſtance is in leſs Quantity than in the Duodenum, and, indeed, ſeems to be altogether wanting along the great Curvature of the Convolutions, where the longitudinal Fibres of the muſcular Coat adhere very cloſely to the external Membrane.

This muſcular Coat is not ſo ſtrong as that of the Duodenum. The longitudinal Plane of Fibres is very thin, and almoſt imperceptible, except along the great Curvature, oppoſite to the Connection of the Meſentery, where we ſee, thro' the membranous Coat, a kind of whitiſh ligamentary Band, about the third Part of an Inch in Breadth, which is continu'd along the great Curvature of all the Convolutions of this Inteſtine, and of the Ileum.

This ligamentary Band is like thoſe we obſerve on the Sides of the ſmall Extremity of the Stomach. It adheres perfectly to the membranous Coat, and to the longitudinal Fibres of the muſcular Coat, which are here more viſible, and appear to be ſtronger than in any other Place.

The Tunica Nervoſa, which I chooſe rather to call Reticularis, and its proper cellular or lanuginous Subſtance, have nothing

thing peculiar to them more than has been already ſaid about the Inteſtines in general. By blowing artfully into this Subſtance, it may be made to ſwell ſo much, round the whole Cavity of the Inteſtine, as to deſtroy all the Duplicatures or Valvulæ Conniventes.

Theſe Valves in this Inteſtine are very broad, very numerous, and very near each other. On the Side of the great Curvature their Circumference is continuous and uniform, but, next the ſmall Curvature, there are ſeveral Breaks in them, the Extremities of ſome advancing beyond the reſt, and terminating in Points. Some of theſe Valves go quite round, others only ſome Part of the Way, and ſome of them are very ſmall, which go obliquely between two large ones, forming a kind of Communication.

The Papillæ of the Tunica Villoſa are here more raiſed, more looſe, and floating, than in the Duodenum; and each of them ſeems to be divided into ſeveral others, by Inciſures of a very ſingular Kind. In other reſpects they agree pretty much with what has been ſaid in the Deſcription of the Inteſtines in general. The Obſervations and Figures publiſh'd by M. *Helvetius*, in the *Memoires* of the Royal Academy, expreſs theſe Papillæ, and the whole Tunica Reticularis, very juſtly.

The glandular Lacunæ of the Jejunum are of the ſame Structure with the Glandulæ Brunneri or Duodenales; but they are diſpoſed in a different Manner. They are partly ſingle at different Diſtances from each other, and partly in ſeveral Cluſters, like flat oblong Bunches of Grapes, called Plexus Glanduloſi Peyeri. Theſe are in the largeſt Quantity near the great Curvature, and they croſs thro' ſeveral Valvulæ Conniventes at once.

Intestinum Ileum.

The Convolutions of the Inteſtinum Ileum ſurround thoſe of the Jejunum on the two lateral and lower Sides, and it paſſes in a winding Courſe from the Left Side, by the Hypogaſtrium, to the Right Side, where it terminates a little below the Right Kidney, joining the Inteſtina Craſſa. The lateral Convolutions are ſupported by the Oſſa Ileum, ſo called, not from this Inteſtine, but from the Region of the Abdomen term'd Ilea.

The Structure of the Ileum is much the ſame with that of the Jejunum, only the internal Duplicatures or Valvulæ Conniventes decreaſe gradually both in Number and Size. Near the Extremity of the Ileum their Direction is changed, and inſtead of being tranſverſe or circular, they become longitudinal, and terminate in a kind of Pylorus, which advances into the Cavity of the great Inteſtines.

We obſerve likewiſe in this Inteſtine, as in the Jejunum, ſingle or ſolitary Glands or Lacunæ, and alſo reticular Glands, or Glands in Cluſters, the laſt of which, at the Extremity of this Inteſtine, is oftentimes of a great Extent; but the greateſt Part of theſe Glands appear to be flatter here than in the Jejunum. The cellular Subſtance of the external Coat is in leſs Quantities than in the foregoing Inteſtines, and the Ileum appears commonly more pale, or not ſo red as the Jejunum.

For an Account of the Intestinum Cæcum, ſee Cæcum and Appendicula.

Intestinum Colon.

The Colon is the moſt conſiderable of all the Inteſtines. From the Cæcum, of which it is a Continuation, it reaches, in form of an Arch, above the umbilical Region, and to the lower Part of the Left Hypochondrium. Its Continuity is, however, a little interrupted by the Ileum, which advances into the Cavity of the Colon, and, together with a certain Fold of that Inteſtine, forms what is call'd Valvula Coli.

The whole convex Side of the Colon is divided longitudinally into three Parts, by three ligamentary Bands, continu'd from thoſe of the Cæcum, and of the ſame Structure with theſe. Two of theſe Bands run on each Side, along the great Curvature of the Colon, and the third along the ſmall Curvature.

The uppermoſt Band of the two, that belong to the great Curvature, is the broadeſt of the three; that which belongs to the ſmall Curvature, is the narroweſt, and lay hid by the Connection of the Meſocolon, till it was brought to Light by M. *Morgagni*.

Theſe three longitudinal Bands do the Office of longitudinal Fræna, between which this Inteſtine is, thro' its whole Length, alternately depreſſed into tranſverſe Folds, and raiſed into conſiderable Eminences. All the Folds are Duplicatures, which form Portions of Valvulæ Conniventes, in the Cavity of the Inteſtine; and the Eminences form Receptacles, call'd the Cells of the Colon.

All the Coats of the Colon concur equally to the Formation of theſe Duplicatures and Cells, the Depth of which decreaſes gradually toward the Extremity of the Inteſtine; and neither of them go any further than the ligamentary Bands.

Theſe Portions of the Colon, which are immediately cover'd by the ligamentary Bands, are ſmooth, and without Rugæ; and therefore, if theſe Bands alone are cut acroſs, the Inteſtine is not elongated ſufficiently to deſtroy all the Folds and Cells.

The common Coat on one Side is a Continuation of the Meſocolon, and, on the other Side, it contributes, by the ſame Continuation, to form the Omentum. The longitudinal Fibres of the muſcular Coat are very ſlender; and thoſe which anſwer to the annular or circular Fibres of the ſmall Inteſtines, are only Segments ſtretched over the Eminences and Folds. The other Coats are nearly as in the Cæcum; only the glandular Lacunæ, or ſolitary Glands, are broader and more numerous.

The Arch of the Colon begins under the Right Kidney, near the Hanch. It runs up on the fore Side of that Kidney to which it is connected, paſſes under the Veſicula Fellis, which tinges it with a yellow Colour at that Place, and continues its Courſe before the firſt Incurvation of the Duodenum, to which it adheres, and partly hides it. In this Part of its Courſe, therefore, there is a remarkable Connection between the Colon, Duodenum, Right Kidney, and Veſicula Fellis.

From thence the Arch of the Colon runs before the great Convexity of the Stomach, and ſometimes a little lower; then turns backward under the Spleen, in the Left Hypochondrium, runs down on the fore Side of the Left Kidney, to which it is connected; below this Kidney turns toward the Vertebræ, and terminates there by a double Incurvation, or by two oppoſite Convolutions, which repreſent, in ſome meaſure, an inverted *Roman* S.

Theſe laſt Convolutions of the Colon are ſometimes multiplied, and even advance to the Right Side of the Pelvis; and along the great Arch, and the two laſt Incurvations, there are a kind of Fringes call'd Appendices Coli Adipoſæ.

At the Place where the Cæcum joins the Colon, one Portion of the Circumference of both is depreſs'd, and forms a large Fold on the Inſide, which advances into the Cavity of the Inteſtine. It is a little open in the Middle, and its Extremities are very thick, by reaſon of the mutual Duplicature of the Coats of the Cæcum and Colon.

The Extremity of the Ileum is, as it were, grafted in the Opening of this Fold, and ſtrongly united to its Sides by the Adheſion of its tranſverſe Fibres to the tranſverſe Fibres of the Cæcum and Colon.

This Union forms a pretty thick Ring, which likewiſe advances into the common Cavity of the Cæcum and Colon, where it is wrinkled or formed into Gathers, almoſt like the lower Extremity of the Œſophagus, the Pylorus, or Inſide of the Anus. Its Circumference is more or leſs oval; and, by a kind of Continuity with the common Fold of the Cæcum and Colon, it forms two Productions, which M. *Morgagni* calls the Fræna of the Valvula Coli.

The membranous Coat of the Extremity of the Ileum is continu'd on the Cæcum and Colon, without ſinking into any Fold, at the Place where the Ileum enters the Colon. The longitudinal Fibres of the muſcular Coat ſeem here to be confounded with the neareſt circular Fibres of the Cæcum and Colon.

The inner Portion of the muſcular Coat of the Ileum runs in between the circular Fibres of the Ileum and Colon, as into a common Fold of theſe two Inteſtines; from all which a pretty thick ſhort Portion of a fleſhy Tube is formed, which is the circular Riſing already mention'd.

The nervous and villous Coats of the Extremity of the Ileum likewiſe enter the common Cavity of the Cæcum and Colon, and, on the Edge of the circular Riſing, join the like Coats of theſe two Inteſtines; ſo that the circular Riſing, or ſhort muſcular Tube, is covered, both on the outer and inner Sides, by a nervous and villous Coat; that on the Inſide being ſupplied by the Ileum, and the other by the two great Inteſtines.

The Situation of this Extremity of the Ileum is moſt commonly tranſverſe, and is inſerted almoſt in the ſame Direction in the common Cavity of the two Inteſtines; but it is often a little more inclin'd towards the Cæcum than the Colon. And whereas, in all other Places, the Ileum is wide, and eaſily dilatable, it is very narrow at its Inſertion, and its Sides more ſolid and firm.

It is chiefly in this Structure, that the Mechaniſm of the Inſertion of the Ileum in the Cæcum and Colon conſiſts; about which Inſertion or Opening Authors are very much divided, ſome reckoning it a Valve, others only a Sphincter.

It is very evident, from what I have ſaid, that it is a double Machine, contriv'd to hinder the Return of the Excrements into the Ileum, becauſe it can produce this Effect partly as a Valve, and partly as a kind of Sphincter. The dried Preparations of this Part give a very falſe Idea of its Structure and Conformation; and the ſame thing is to be ſaid of the Opening of the Appendicula Vermiformis into the Cæcum.

The capacious Arch of the Colon is connected by both Extremities to the Regio Lumbaris, near the Kidneys, by two particular Ligaments, one on the Right-ſide, the other on the Left, which are only ſmall Duplicatures of the Peritonæum more or leſs tranſverſe.

The remaining Portion, which forms the two Convolutions in form of the *Roman* S, contracts below the Left Kidney, being

being narrower there than lower down. The Coats of this Portion become gradually thicker and ſtronger, and likewiſe the ligamentary Bands, which approach each other by Degrees, and ſeem to increaſe in Breadth.

Intestinum Rectum *and* Anus.

The laſt of all the Inteſtines is nam'd Rectum, or the ſtrait Gut, from its Situation; for, when view'd directly forward, it appears to run down in a ſtrait Courſe from the laſt Vertebra of the Loins, on the fore Side of the Os Sacrum, all the Way to the Os Coccygis, where it ends in what is call'd the Anus.

This Inteſtine, properly ſpeaking, is a true Continuation of the laſt Convolution of the Colon; and it is the Repoſitory, Sink, and common Sewer, of the whole inteſtinal Canal. It has likewiſe a ſpecial Relation to the Bladder, and to the Parts of Generation in both Sexes.

The Rectum, having paſſed below the laſt Vertebra of the Loins, to the Inſide of the Os Sacrum, is bent backward on that concave Side, to which it is connected, and, having reached the Os Coccygis, it runs likewiſe in the Direction of that Bone, and bends a little forward, terminating beyond the Extremity of the Coccyx.

The Figure of this Inteſtine varies according as it is full or empty. When empty, it is irregularly cylindrical, and ſinks in by a kind of tranſverſe Folds; and, in that State, it is about three Fingers-breadth in Diameter, more or leſs: When full, it is wider in proportion to the Quantity of Fæces, Wind, or whatever elſe is contain'd in it; and it may be extended to the Size of a large Bladder, ſo as to repreſent a kind of Stomach.

The membranous Coat often contains a great Quantity of Fat, ſpread between it and the muſcular Coat, and forming, round the Inteſtine, numerous Eminences, in the room of the Appendices Adipoſæ of the Colon.

The muſcular or fleſhy Coat is very thick. The longitudinal Fibres, which, in the other Inteſtines, are very thin, are in this ſtronger than the circular Fibres of the reſt. The ligamentary Bands continue to increaſe in Breadth, and to approach each other, as has been ſaid; and it is to the fleſhy Fibres of theſe Bands that the Thickneſs of the longitudinal Fibres ſeems to be owing.

The nervous, or filamentous and internal Coats are larger here, than in the other Inteſtines; and, when the Rectum is empty, they form a great Number of waving Rugæ in its Cavity, which diſappear, in proportion as that Cavity is fill'd.

The innermoſt Coat is very improperly term'd Villoſa, and ſcarce deſerves the Name of Papillaris, becauſe of the Smalneſs of the little Corpuſcles ſpread on its Surface. It contains a great Number of ſingle or ſolitary Glands; and it is always moiſten'd by a Mucus of different Conſiſtences, diſcharg'd by theſe Glands or Folliculi, and perhaps by the Corpuſcles alſo.

Near the Extremity of this Inteſtine, the Rugæ or Folds become, in a manner, longitudinal; and, at laſt, towards the Circumference of the inner Margin of the Anus, they form little Bags, or ſemilunar Lacunæ, the Openings of which are turn'd upward towards the Cavity of the Inteſtine. Theſe Lacunæ are ſomething like thoſe at the lower Extremity of the Œſophagus, or upper Orifice of the Stomach.

At length the Extremity of the Rectum contracts, and terminates by a narrow Orifice, call'd the Anus, the Sides of which are diſpoſed in cloſe Folds or Gathers. This Extremity of the Inteſtine has ſeveral Muſcles belonging to it, ſome of which ſurround it like Sphincters; the reſt are broad, fleſhy Planes inſerted in it, and which, being likewiſe fix'd to other Parts, ſuſtain it in its natural Situation, and reſtore it to that Situation, when diſturb'd by the Force neceſſary for the Excluſion of the Fæces. Theſe latter Muſcles are term'd Levatores Ani; the firſt go by the general Name of Sphincters.

Theſe Sphincters are three in Number, one inteſtinal or orbicular, and two cutaneous or oval, whereof one is large, ſuperior, and internal, the other ſmall, inferor, and external.

The inteſtinal or orbicular Sphincter of the Anus conſiſts merely in an Augmentation of the inferior Portion of the fleſhy Fibres of the Extremity of the Rectum.

In order to the Deſcription of the Anus, there are two Ligaments, which muſt be deſcrib'd here; the Ligamentum Cutaneum Oſſis Coccygis; and the other, Ligamentum Pubis Interoſſeum.

The cutaneous Ligament goes out anteriorly from the Extremity of the Os Coccygis. It is very ſlender, and divides into two Portions at the Orifice of the Anus, which run into the Membrana Adipoſa, and are inſerted in the Skin on each Side of the Anus by a kind of Expanſion, and, continuing to divaricate, they are loſt on the two Sides of the Perinæum.

The interoſſeous Ligament of the Oſſa Pubis is a very ſtrong triangular Membrane, fix'd, by two of its Edges, in the inferior Branches of thoſe Bones, all the Way up to their common Symphyſis. The third Edge, which is the loweſt, is looſe; and this whole Membrane, the Middle of which is perforated by a particular Hole, is ſtretched very tight between the two Bones, and under their cartilaginous Arch, to which it adheres very cloſely.

At the lower Part of this interoſſeous Ligament, along its whole or looſe Edge, lies a digaſtric Muſcle, fix'd, by its two Extremities, in the Branches of the Oſſa Pubis, its middle Tendon lying on the Middle of the Edge of the Ligament. This Muſcle is to be deſcrib'd under its proper Article, and it is only mention'd here, becauſe of the Relation it bears to the cutaneous Sphincters of the Anus. It is call'd by ſome Muſculus tranſverſalis Urethræ; by others, Muſculus triangularis.

The cutaneous Sphincters have each an anterior and poſterior Inſertion, ending both Ways in a kind of Point, and comprehending the Orifice of the Anus between their middle Portions.

They are diſtinguiſh'd from each other by their Situation, by their Size, and by a kind of white cellular Line. The greateſt of the two appears to be double, and the ſmalleſt lies neareſt the Skin, and adheres moſt cloſely to it.

They are inſerted backward, partly in the Apex of the Os Coccygis, and partly in the contiguous Portion of the cutaneous Ligament of that Bone. Forward their chief Inſertion is in the middle Tendon of the Tranſverſalis Urethræ; and they have likewiſe ſome Connections to other Muſcles of the Urethra.

The Levatores Ani are broad, thin, muſcular Portions, fix'd by one Extremity of their fleſhy Fibres, round the concave Side of the inferior Portion of the Pelvis, from the Symphyſis of the Oſſa Pubis, beyond the Spine of the Iſchium. The other Extremity of theſe Fibres runs down on each Side behind, and under the Curvature of the End of the Rectum, where they meet together, and unite from the Baſis of the Os Coccygis all the Way to the Margin of the Anus.

By their ſuperior Inſertions, theſe Portions are, on each Side of the Pelvis, divided into three Claſſes; an anterior, middle, and poſterior Claſs. The two anterior Claſſes reach from about the Middle of the Symphyſis of the Oſſa Pubis to the upper Border of the Foramina Ovalia of the Pelvis. The middle Claſſes continue the ſame Courſe immediately above the Inſertion of the Obturator internus, on the Oſſa Iſchium, and a little on the Oſſa Ileum. The poſterior Claſſes are ſpread on the inner Sides of the Oſſa Iſchium to the ſpinal Apophyſes of theſe Bones, and even a little beyond theſe, on the Ligamenta Sacro-ſciatica.

The anterior Portions are, in their Paſſage, connected to the proſtate Glands, to the Neck of the Bladder, to the Bulb of the Urethra; and they ſometimes ſend Fibres to the Muſculus tranſverſalis Urethræ.

The Fibres of all theſe Portions, having, by their ſuperior Inſertions, formed this large and ample Circumference, run down obliquely, from before, backward, contracting in Breadth, and approaching each other in the Manner of truncated Radii; and behind, and under the Extremity of the Rectum, they form a digaſtric Muſcle, ſomething like the Mylo-hyoidæus, which terminates the bony Pelvis below, and forms the Bottom of the Cavity of the Abdomen, as the Diaphragm forms the upper Part.

It is here neceſſary to obſerve, that the Muſcles of the Os Coccygis may be looked upon as Aſſiſtants to the Levatores.

We ought likewiſe to remark, that the Margin or Edge of the Anus is form'd by the Union of the Skin and Epidermis with the internal Coat of the Rectum; ſo that the moſt ſuperficial Portion of that Coat ſeems to be a Continuation of the Epidermis.

Mesenterium *and* Mesocolon.

This great Bundle of Inteſtines is not left to move at random in the Cavity of the Abdomen, but artfully bound down by a membranous Web, which prevents the inteſtinal Convolutions from being intangled in each other, and from being twiſted or compreſſed in all their different Ways of Meeting; and yet allows them a gentle, floating, but limited, Motion.

This Web goes ſtill by the antient *Greek* Name of *Meſentery*, as being, in ſome meaſure, in the Middle of the Inteſtines. It is diſtinguiſh'd into two Portions, one of which, being very broad, and very much plaited, connects the ſmall Inteſtines; the other, which is long, and incurvated, does the ſame Office to the great Inteſtines.

Theſe two Portions are, in Reality, only one and the ſame Continuation of the membranous Lamina of the Peritonæum doubled back upon itſelf; and they are diſtinguiſh'd only by their Breadth. Taken both together, they form a kind of ſpiral Roll, more or leſs plaited in its Circumference. The firſt Portion has retain'd the Name of Meſentery, the other is term'd Meſocolon.

The Meſentery begins at the laſt Incurvation of the Duodenum, and runs obliquely, from Left to Right, along the Vertebræ of the Loins. In this Space, the membranous Portion of the Peritonæum is detached on both Hands, produces a Duplicature by two Elongations, or particular Laminæ, applied to each other, and thus forms the Meſentery.

It is narrow at its upper and lower Parts, but chiefly at the upper. The middle Portion is very broad, and the Edge of it,

next the Inteſtines, is every-where very much plaited. Theſe Plaits or Folds are only waving Inflexions, ſuch as may be obſerv'd in the Edge of a Piece of Shamoy, which has been often drawn through the Fingers. They make this Edge of the Meſentery very long, and they run through about one-third of its Breadth.

The two Laminæ are join'd together by a cellular Subſtance, which contains Glands, Veſſels, and Nerves; and, in ſome Subjects, it has a great Quantity of Fat, which keeps the two Laminæ at a good Diſtance from each other.

Along the whole Circumference of the Meſentery, the two Laminæ are naturally ſeparated, and applied to the two Sides of the ſmall Inteſtines, which they inveſt by their Union, or rather reciprocal Continuation, on the great Curvature of that Canal, and carry it as in a Scarf or Sling. This is what forms the external or membranous Coat of the Inteſtines.

The Meſocolon is the Continuation of the Meſentery, which, having reach'd the Extremity of the Ileum, contracts, and changes its Name. At this Place, the particular Lamina, which is turn'd to the Right-ſide, forms a ſmall tranſverſe Fold, call'd *Ligamentum Coli Dextrum*.

Afterwards, the Meſocolon aſcends towards the Right Kidney, where it ſeems to be loſt, by the immediate Adheſion of the Colon to that Kidney, and to the firſt Incurvation of the Duodenum. Then it appears again, and, increaſing in Breadth, it continues its Courſe almoſt tranſverſly under the Liver, Stomach, and Spleen, where it begins to run downward under the Left Hypochondrium towards the Kidney on the ſame Side.

Thro' this whole Courſe, the Meſocolon extends in Breadth, and forms nearly a tranſverſe ſemicircular Plane, very little plaited at its great Circumference. By this Circumference or Edge, it is connected to the Colon, and hides that ligamentary Band of this Inteſtine, which runs along its ſmall Curvature. By its ſhort or ſmall Edge, it forms the triangular Caſe of the Duodenum; and, by its great Edge, the external Coat of the Colon, in the ſame manner as the Meſentery does that of the ſmall Inteſtines. As it paſſes under the large Extremity of the Stomach, it adheres a little to the lower Portion of that Extremity, as the Diaphragm does to the upper.

Having got below the Left Kidney, it contracts, and forms another tranſverſe Fold, call'd *Ligamentum Coli Siniſtrum*. Afterwards it expands again, but not ſo much as in the upper Part, and runs down on the Left Pſoas Muſcle towards the laſt Vertebræ of the Loins. This deſcending Portion is fixed to the Convolutions of the Colon, in the ſame manner as the ſuperior Portion is to the Arch of that Inteſtine.

The Inteſtinum Rectum is likewiſe inveſted by a particular Production of the Peritonæum, call'd commonly by the barbarous Name of Meſo-rectum. This Production is very narrow, and, about the Middle of the Foreſide of the Rectum, it forms a tranſverſe ſemicircular Fold, which appears when the Inteſtine is empty, but is loſt when it is filled.

Glandulæ Meſentericæ, Vaſa Lymphatica & Lactea. See CHYLUS.

The BLOOD-VESSELS *and* NERVES *of the* INTESTINES.

The Duodenum has commonly a particular Artery called Duodenalis or Inteſtinalis, which comes indifferently from the Stomachica Coronaria, Pylorica, Gaſtrica major, or Hepatica. It has likewiſe ſeveral diſtinct Ramifications from theſe Trunks, and from the Meſenterica Superior and Splenica, which Ramifications communicate with each other.

The Arteria Duodenalis, and the other additional ſmall Arteries, form a vaſcular Net-work round the muſcular Coat of the Inteſtine, which ſends out a great Number of Capillaries towards both the outer and inner Sides, that make the whole Inteſtine look of a red Colour.

The Veins of the Duodenum are Branches of the Vena Portæ, and the Diſtribution and Denomination thereof is pretty much the ſame with that of the Arteries; only they communicate more with each other, than the Arteries, and alſo with the great hæmorhoidal Vein.

The venal Ramifications form round the Duodenum a Net-work, like that of Arteries; and the ſame kind of vaſcular Texture is more or leſs to be found on all the other Inteſtines.

The Arteries of the Jejunum come chiefly from the Meſenterica Superior, and ſome from the aſcending Branch of the Meſenterica Inferior. The Veins are, for the moſt part, Branches of the great Meſeraica, and the reſt come from the Splenica and ſmall Meſeraica, or Hæmorrhoidalis Interna.

The principal ſubaltern Trunks of theſe Arteries and Veins accompany each other through the cellular Subſtance between the Laminæ of the Meſentery, are diſtributed by Branches and Ramifications, and form Maſhes, Lozenges, and Arches. The laſt of theſe Arches and Lozenges, or thoſe next to the Inteſtine, produce two ſmall vaſcular Planes, which ſeparate from each other very diſtinctly, and ſurround the inteſtinal Canal in a reticular Manner.

The Blood-veſſels of the Ileum come from the ſame Sources with thoſe of the Jejunum; and it ought to be obſerved concerning both theſe Veſſels, and thoſe of the Jejunum, that, in their whole Courſe through the Meſentery, they give Ramifications to the Glands, Laminæ, and cellular Subſtance of the Meſentery; and alſo, that there is a kind of Communication between ſeveral ſmall meſeraic Veins, and the capillary Branches of the Venæ Lumbares and Spermaticæ.

The Arteries of the Cæcum and Appendicula Vermiformis are Ramifications of the laſt Branch, from the convex Side of the Meſenterica ſuperior; and they have likewiſe ſome ſmall ones from the ſecond and third Branches, when both are found. The Veins of theſe two Parts are Ramifications of the great Meſeraica; and one of theſe Branches is by *Riolan* termed Vena Cæcalis.

The ſtreight Portion of the Arch of the Colon, or that which is an immediate Continuation of the Cæcum, is ſupplied with Arteries by the ſecond Branch, that comes from the concave Side of the Meſenterica ſuperior, and likewiſe a little by the third, when there is a third.

The ſuperior or middle Portion of the Arch of the Colon is furniſhed by the firſt Branch, from the ſame Side of the Meſenterica ſuperior, which, by a Bifurcation, communicates on both Hands with the other Portions of the Arch of the Colon.

The Left Portion of this Arch derives its Arteries partly from the firſt Branch of the ſame Meſenterica, and partly from that of the Meſenterica inferior; which two Branches form the celebrated Communication, or common Arch of the two Meſentericæ.

By means of this Communication or Continuation, in caſe one Artery ſhould be obſtructed or compreſſed, the other would furniſh Blood to all the Branches below the Place of the Obſtruction. The ſecond Branch of the Meſenterica inferior gives likewiſe ſmall Arteries to the Left Extremity of the Colon.

The deſcending Convolutions of the Colon, which repreſent a *Roman* S, are ſupplied by the other Branches of the Meſenterica inferior, the laſt of which forms the Hæmorrhoidalis interna.

The Veins of all theſe Portions of the Colon are Branches and Ramifications of the Vena Portæ Ventralis, and principally of the ſubaltern Trunk, the Meſeraica major, and Meſeraica minor, or Hæmorrhoidalis interna. The Diſtribution of theſe Branches and Ramifications is, in ſome meaſure, the ſame with that of the Arteries.

The Arteries of the Rectum are furniſh'd by the Hæmorrhoidalis interna, the laſt Branch of the Meſenterica inferior, which communicates with the Hypogaſtrica, and particularly with the Hæmorrhoidalis externa, a Production of one of theſe Arteries.

The Veins of the Rectum are Ramifications of the laſt Branches of the Meſeraica minor, or Hæmorrhoidalis interna; and they communicate with the Hæmorrhoidales externæ, which are Branches of one of the Hypogaſtricæ. They communicate likewiſe with the capillary Ramifications of the other hypogaſtric Veins, which go to the internal Parts of Generation of both Sexes.

It is here to be obſerv'd in general, that there is a ſucceſſive Continuation, more or leſs ſimple or multiplied, between all the Arteries of the inteſtinal Canal, and likewiſe between all the Veins; and alſo that the Veins are here thinner, and more capacious, than the Arteries, in a greater Proportion than in the other Parts of the Body.

The Nerves of the Duodenum are the middle Plexus of the ſemilunar Ganglion, and ſome Filaments of the Plexus Stomachicus and Hepaticus.

The Nerves of the Jejunum, Ileum, and meſenteric Glands, are the Plexus meſentericus ſuperior, the poſterior meſenteric Faſciculi, and the Plexus Meſentericus inferior.

The Nerves of the Cæcum are the poſterior meſenteric Faſciculi or Plexus, and the Plexus Meſentericus inferior.

The Nerves of the Arch of the Colon are the ſame Faſciculi, and the two Plexus Meſenterici.

The Nerves of the laſt Convolutions of the Colon are the poſterior meſenteric Faſciculi, and the Plexus Meſentericus inferior, and Submeſentericus.

The Nerves of the Rectum are the Plexus Meſentericus inferior, Plexus Submeſentericus or Hypogaſtricus, and the two Ganglions of that Plexus.

The Nerves of the Anus, and of its Muſcles, are the Ganglions of the Plexus Submeſentericus, the inferior Rope of both Sympathetici maximi, and the common Arch of the Extremities of both Ropes.

The Inteſtines, in general, finiſh what the Stomach had begun. The alimentary Pulp, having been ſufficiently prepared by the Succus Gaſtricus, or Lymph of the Stomach, undergoes a farther Change by the inteſtinal Lymph, Bile, and pancreatic Juice, by which the milky Liquor, call'd Chyle, is produced, and this Liquor render'd fluid enough to enter the lacteal Veſſels through the Tunica Villoſa of the ſmall Inteſtines, while the groſſer Portion of the Aliment continues its Courſe, and, becoming gradually thicker, as it advances towards the great Inteſtine, is there collected by the Name of Fæces.

The Dilatation of the Inteſtines is bounded by their common Coat. The undulating, ſucceſſive, and periodical Contraction of the fleſhy Fibres, eſpecially of the orbicular Fibres of the muſcular Coat, expreſſes the inteſtinal Lymph, beats it up into an Emulſion with the alimentary Paſte, ſtrains that Emulſion through the lacteal Veſſels, and propels the Reſiduum.

The nervous Coat ſerves to ſuſtain the Tunica Villoſa, and, by the oblique Diſpoſition of its Fibres, yields to the periodical Motions of the muſcular Coat, without compreſſing the chyliferous Ducts, which paſs through the Maſhes of this Coat in the ſmall Inteſtines.

The Length of the ſmall Inteſtines gives a great Extent to what may be call'd the Strainer of the Chyle, and this Extent is very much inlarged by the numerous Folds termed Valvulæ Conniventes. By means of this large Extent, there is a great Quantity of Chyle ſtrain'd through theſe Inteſtines, and the Valves hinder the alimentary Pulp from paſſing through them too faſt; that is, before all the milky Juice has been expreſſed; and this may be obſerv'd chiefly in the Beginning of the Inteſtines, where theſe Valves are moſt numerous and broadeſt, and the Aliment moſt fluid.

The Cavity of the great Inteſtines ſerves to receive the Fæces of the Aliment, and to contain a conſiderable Quantity thereof for a certain Space of Time, without any Inconveniency, and without being obliged to diſcharge them continually, which would be as great an Inconveniency as any. The Incurvation of the Colon, its Cells, and Contraction of its laſt Convolutions, contribute to this Retention of the Fæces; but the Cæcum ſeems to be the firſt Organ thereof, becauſe the Fæces, being firſt collected there, are obliged afterwards to move in a contrary Direction as they aſcend into the Colon.

The Valve of the Colon, which might more properly be term'd the Sphincter or Pylorus of the Ileum, hinders the Fæces from returning into the ſmall Inteſtines: I ſay, the Fæces or groſs Matter, becauſe it is not certain, that this Valve entirely ſtops that Paſſage, or that it always hinders any fluid Matter, forced downward by the Colon, from entering the Ileum, even in a natural State.

The glandular Lacunæ of the great Inteſtines furniſh continually a kind of Mucilage, which not only defends the internal Coat from the Acrimony of the Fæces, but ſerves alſo to lubricate theſe Fæces, in proportion to their different Degrees of Solidity.

The Appendicula Vermiformis is ſo very ſmall in Adults, that its Uſe cannot be determined with Certainty. Perhaps the mucilaginous Matter in its Cavity, furniſh'd by the numerous glandular Lacunæ of its internal Coat, which can only be evacuated by Plenitude, may, during its Stay there, contract an Acrimony, which may vellicate or ſtimulate the Cæcum, in order to throw its Contents into the Colon.

The Inteſtinum Rectum is the laſt Reſervatory of the Fæces. The great Thickneſs of its muſcular Coat, and the great Number of longitudinal Fibres, by which this Thickneſs is chiefly form'd, enable it to yield to the collected Fæces to ſo great a Degree, as to repreſent a large Bladder or Stomach. The Muſculi Levatores Ani ſerve to ſuſpend the lower Portion of this Inteſtine, eſpecially when full; and it is partly by the Contraction of theſe Muſcles, which overcome the Sphincter of the Anus, that the Fæces are diſcharged out of the Body. Theſe Sphincters form the third Pylorus of the whole alimentary Canal.

The Meſentery and Meſocolon connect the Inteſtines in ſuch a manner, as that they cannot be twiſted or run into Knots, without hindering them from ſliding, and yielding to each other, according to the different Poſtures of the Body, or according as they are more or leſs empty or full.

The Adheſions of the Meſentery form the Convolutions of all the ſmall Inteſtines into a large Bundle, irregularly round, which fills a great Part of the Cavity of the Abdomen, from the Epigaſtrium downward.

The Meſocolon, by its Adheſion to the Colon, forms a kind of Septum Tranſverſum, between the ſmall Inteſtines and the Viſcera contain'd in the Epigaſtrium; and this Septum ſupports the Liver and Stomach, under the Arch of the Diaphragm, juſt as much as it is ſuſtain'd by the Inteſtines. This natural Situation of theſe Viſcera is moſt commonly alter'd in dead Bodies, open'd after the common Method, and without the neceſſary Precautions.

The Breadth of the Meſentery and Meſocolon affords a large Extent to the Ramifications of the Arteries, Veins, and Nerves, diſtributed through them by innumerable Communications and Anaſtomoſes; by means of which any Portion of the Inteſtines may be ſupplied, tho' the principal Branch, which leads to it, ſhould happen to be compreſs'd or obſtructed.

The cellular Subſtance, in the Duplicature of the Meſentery and Meſocolon, ſerves not only for a ſoft Bed to all theſe Ramifications, but alſo to contain thoſe Collections of Fat neceſſary for the Formation of the Bile; and the cellular Subſtance of the Meſentery has likewiſe one Uſe peculiar to it, which is, to inveſt the Lymphatic Glands, and Lacteal Veſſels; and, upon this Account, it is thicker than that of the Meſocolon.

The Lacteal Veſſels being firſt form'd by a copious reticular Texture, round the Circumference of the Inteſtines, reſembling the vaſcular Network of that Canal, and afterwards uniting every-where, thro' the Duplicature of the Meſentery, with the arterial Ramifications, which they likewiſe accompany in many Places; it is eaſy to conceive, that the Pulſation of the Meſenteric Arteries muſt propel the Chyle in the Lacteal Veſſels, from the Inteſtines to the Receptaculum Chyli, that Motion being ſuitable to the Direction of their Valves. *Winſlow's Anatomy.*

CŒLIACA *Arteria.* See ARTERIA.

CŒLIACA PASSIO. The Cœliac Paſſion: This is a Diſtemper not named by *Hippocrates.* *Aretæus* calls thoſe afflicted with this Diſeaſe κοιλιακοὶ, and, *Cœlius Aurelianus*; *Ventriculoſi.* What *Celſus* calls the *Cœliacus Ventriculi Morbus*, is a Diſorder very different from that which the above-mention'd Authors mean, and which the Moderns underſtand by the Cœliac Paſſion: For *Celſus*, *Lib.* 4. *Cap.* 12. deſcribes the Diſeaſe as attended with an Induration and Pain of the Belly, entire Coſtiveneſs, inſomuch that even Wind cannot be diſcharged, Coldneſs of the Extremities, and Difficulty of Breathing. That the Diſtemper meant by *Celſus* is very different from that underſtood by *Aretæus*, and *Cœlius Aurelianus*, will evidently appear, from the Deſcriptions given by the laſt-mention'd Authors, compared with what is quoted from *Celſus.*

The Stomach, which is the Organ of Concoction, is diſturb'd in the Exerciſe of its Function, when the Patient labours under a Diarrhœa, which is a Diſcharge of moiſt and crude Aliment. And if this Diſorder proceeds not from a tranſient Cauſe, but continues for a Day or two, ſo as to render the Body weak for want of Nouriſhment, it becomes a chronic Diſeaſe, and is call'd the *Cœliac Paſſion.* The Cauſe of this Affection is a Debility of the concoctive Heat, and a Refrigeration of the Stomach, when the Heat is ſufficient to diſſolve, but not to concoct the Aliment, and convert it into a Juice proper for the Body, coming ſhort of its End, and performing but half its Work through Imbecillity. The Concoction being thus left unfiniſh'd, the crude Aliment undergoes an Alteration for the worſe, in Colour, Smell, and Conſiſtence, being white, and deſtitute of Bile, of an ill Smell, like Mud, humid, and of no firm Conſiſtence, for want of a due Elaboration, partaking of no more Virtue or Benefit from Concoction, than what was communicated to it in the Beginning.

Hence the Patient is moleſted with Inflations in the Belly, and continual and fetid Eructations, which, if they make their Way downwards, cauſe a Rumbling in the Inteſtines, with a Diſcharge of a rough, humid, argillaceous, and flatulent Matter, ſucceeded by an Efflux of ſomething humid in Appearance. A ſevere Pain, like a pungent Senſation, is felt at the Stomach at Intervals. The Patient, in the mean time, falls into an Atrophy, and becomes lean, pale, weak, and incapable of diſcharging the Duties of his Calling; for, whenever he walks, his Strength fails him, and he is ready to fall down. The Veins of the Temples appear elevated, becauſe of the Hollowneſs of thoſe Parts, thro' Want of Nouriſhment; and the Veins over all the Body are remarkably viſible; for the Aliment is not only unconcocted in any due Meaſure, but, even in its crude and imperfect State, undiſtributed towards the Support of the Body; the Diſeaſe, in my Opinion, conſiſting in a Defect of Diſtribution as well as Concoction.

If the Diſeaſe increaſes, there is a Reflux from all Parts to the Stomach, ſucceeded by a Waſting of the whole Habit, a Dryneſs of the Mouth, and a Defect of Humidity or Sweat over the whole Superficies of the Body. Sometimes the Stomach is afflicted with a burning Heat, as from a fiery Coal; at other times it labours under a refrigerating Senſation, as from a Piece of Ice; ſometimes at the End of the Stools there is an Efflux of yellow, pure, and unmix'd Blood, which ſeems to flow from the open Mouth of ſome Vein; for the Veins are corroded by the Acrimony of the Humour. This Diſorder is of very long Duration, and difficult to be cured; for, tho' it ſhould ſeem to leave the Patient without a manifeſt Cauſe, it returns upon him, whenever the leaſt Error ſhall give Occaſion for a Relapſe, and performs the ſame Circuit over again.

This Diſeaſe is much incident to aged Perſons, and to Women more than Men: As for Children, becauſe of their daily Intemperance in Food, they have a continual Diarrhœa; but this proceeds not from any Diſorder of the Stomach. The Summer is the Seaſon in which this Diſtemper is moſt common; next to that, the Autumn; a very cold Winter alſo, by which the natural Heat is almoſt extinguiſh'd, is productive of the ſame. It proceeds alſo from long Illneſs, from a Dyſentery, and a Lientery; and a greedy Draught of cold Water has been known to occaſion this Diſorder. *Aretæus*, περὶ δισ. καὶ σημ. χρον. παθ. *Lib.* 2. *Cap.* 7.

The Diſorder of the Stomach, which the *Greeks* call κοιλιακὸν, (Cœliac) took its Name from that Part of the Body which is affected (from κοιλία). The Cauſe of it is a continual preceding Indigeſtion, a vehement Inflammation, (*Tumor* in the Lan-

Language of the Methodics) or a Dyſentery. The Symptoms attending this Diſorder are, a Variation of the Excrements, both in Quality and Colour; for ſometimes they are of a thin and looſe Conſiſtence, at other times rough, unequal, and denſe; ſometimes they are white, ſometimes like Camels Urine, ſometimes yellow and ſpumous, at other times porraceous, livid, black, purulent, or bloody, extremely fetid, and diſcharged with a Rumbling of the Inteſtines, which they call βορβορυγμὸς, *Borborygmus*. The Stools appear full of Veſicles, or Bubbles, as from an Ebullition, and ſometimes continually fatigue the Patient by Night as well as Day; ſometimes they are diſcharged in great Quantities at Intervals, as once or twice in a Day, or at an Interval of one or two Days, or perhaps more; ſometimes with a Tenſion, Inflation, and Gripings, or with Pain, or the Hiccough, a Compreſſion and Contraction of the Skin which covers the Belly, a Thirſt, great Heat of the Belly, and a ſlight cold Numbneſs in the interior Parts. Theſe Symptoms are ſucceeded by Want of Sleep, Averſion to Food, and ſometimes an extraordinary Appetite, Weakneſs, a whitiſh Paleneſs, and ſometimes a Fever, and afterwards by an extremely fetid Smell of the Body, which is communicated to whatever is touch'd with the Hands, ſo as difficultly to be removed, with an Inflation of the Face and Feet. Sometimes a Dyſentery attends this Diſorder, the Inteſtines being very ſubject to Ulcerations, from the Acrimony of the Humours flowing to them.

This is a Diſeaſe of *Solution*, but ſometimes complicated with a *Stricture*; for, by ſome of its Symptoms, as we may conjecture from what has been ſaid, it ſeems to partake of both. *Cœlius Aurelianus*, *Morb. Chron. L.* 4. *Cap.* 3.

By many of the Moderns the Cœliac Paſſion and Lientery are ſaid to differ only in Degree: But the Difference ſeems to be more than they apprehend; for, in a Lientery, the Aliments are diſcharged crude and undigeſted; an Indication, that the Stomach is, through ſome Defect, unable to diſſolve them: Whereas, in a Cœliac Paſſion, Chyle is diſcharged together with the Excrements; which ſhews, that the Stomach diſſolves the Aliment, but that the Lacteal Veſſels are by ſome means obſtructed, ſo that the Chyle cannot paſs thro' them, or that the Inteſtines are too much relax'd.

Freind diſtinguiſhes betwixt the Cœliac Paſſion, and Chylous Flux: The latter, ſays he, is cauſed by an Obſtruction of the Lacteal Veſſels; the former from Obſtructions of the Inteſtinal Glands, on which account a ſufficient Quantity of Lymph cannot, by theſe, be ſupply'd for diluting the Chyle, and rendering it fit to paſs into the Lacteals; and hence it paſſes off with the Excrements. This, he ſays, is confirm'd by Diſſections of People who have died of theſe Diſtempers.

The Chylous Flux, ſometimes call'd by the Name of *Cœliac Paſſion*, when it proceeds from an Obturation of the Lacteals, is more or leſs dangerous, in proportion as the Obſtructions are obſtinate; upon the Removal of which the Cure depends. If theſe reſide olny at the Orifices of the Lacteals, the Cure is leſs difficult, than when ſituated deep in the Meſentery.

That Species of Cœliac Paſſion, which is cauſed by a Deficience of the diluting Fluid, ſecreted by the Inteſtinal Glands, admits of more ready Cure than the other. But every Species, when it continues long, is attended with a great deal of Danger.

As the Cure of theſe Diſorders, propoſed by the Antients, with Aſtringents, muſt be very wrong, and likely to increaſe the Diſeaſe, I ſhall only ſpecify that of *Aretæus* as an Example.

If the Stomach cannot retain *(a)* the Food, but the Aliment paſſes thro' the Body unconcocted, unchanged *(b)*, and crude, without contributing any thing to the Support of the Body, we call the Patients under this Diſorder *Cœliaci*, as being affected with a Refrigeration of the natural Heat which ſerves for Concoction, and an Imbecillity of the diſtributive Faculty.

In this Diſeaſe the Stomach muſt, firſt of all, be relieved from its Pain by Faſting and Reſt, which will procure a Return of the Strength; and, if the Stomach appears to be oppreſs'd with a Multitude of Humours, the Patient muſt vomit, faſting, with Water or Hydromel. It will be convenient alſo to cover and moiſten the Part with greaſy Wool, as an Aſtringent; or to anoint the ſame with Unguentum Roſaceum, Œnanthinum, or Melinum; or, what is beſt, with Schœnanthinum, together with Hypocyſtis, or Omphacium *(ſee theſe Words in their proper Places)*; and with theſe may be apply'd Cataplaſms, warm to the Touch, and of an aſtringent Virtue. If the Diſorder be attended with a Convulſion or Inflammation of the Liver, or Mouth of the Stomach, it will be proper to uſe Cupping and Scarifying, which have ſometimes been found ſufficient for a Cure; and when the Wounds, thus made, are, by the Application of Cerates, nearly cicatriſed and conſolidated, apply Leeches to the ſame. After theſe may be apply'd Epithems which help Concoction, ſuch as that which is prepared of Seeds, with an Addition of the Root of Chamæleon. Bay-berries are alſo very proper in this Caſe, and alſo the *green* Malagma, and that of our own Invention call'd *Myſterium*, which are of a mollifying and aperitive Quality, excite the natural Heat, and diſcuſs Flatulences in the Viſcera, which are all neceſſary Effects, in order to a due Conſtriction. Muſtard alſo, the Limneſtis, Euphorbium, and other Things of that Kind, prevent Refrigeration, and revive the natural Heat. The following Potions are alſo proper on account of their Aſtringency: Firſt, we ſhall mention the Juice of Plantain, with the aſtringent Water of Myrtle-berries or Quinces. The Kernels or Stones of unripe Grapes, and Wines of the moſt aſtringent Quality, are alſo very proper on this Occaſion. Then let the Patient take ſome Potion, which is of a heating Nature to his Belly, ſuch as is prepared of Ginger, Pepper, and the Seeds of wild Parſley, which grows on the Rocks, all well mix'd together, with Theriaca. If theſe Remedies are of little or no Service, vomit with Horſe-radiſh; and if with theſe you infuſe the Root of white Hellebore, for one Night, you will be provided with an excellent Cathartic, which will cleanſe and evacuate cold Humidities, and revive the natural Heat.

As to Diet, and Way of Living, the Patient muſt be very regular: Let him ſleep in the Night, and ſpend the Day in walking about, in exerciſing his Voice, and being carried thro' Groves of Myrtles and Bay-trees, or over Fields thick-ſet with Thyme; for a free Perſpiration, and Breathing in ſo ſweet an Air, are a great Help to Concoction. Then let him betake himſelf to Gymnaſtics, as Frictions, artificial Motions of the Arms, and throwing of Weights, in order to exerciſe the Breaſt and Stomach. Let him drink well; for Bread will contribute very little towards the Reſtoration of his Strength. *Aretæus*, περὶ θερα. χρ. παθ. *Lib.* 2. *Cap.* 7.

Dr. *Freind* ſays, that the moſt rational and ſucceſsful Method of treating the Cœliac Paſſion is to adminiſter ſuch Remedies, as gently ſtimulate the Inteſtinal Tube, and deterge the obſtructed Glands. For this Purpoſe gentle Purges, adminiſter'd in ſmall Quantities, and frequently repeated, are recommended, and gentle Vomits of Ipecacuanha. See LIENTERIA.

CŒLIFOLIUM.

This Subſtance, to which *Paracelſus* gave the Names of *Noſtoch* and *Cerefolium*, and which is by others call'd *Cœli Flos*, *Cœlifolium*, and *Flos Terræ*, appears to be a Species of Jelly, ſometimes clear, ſometimes greeniſh, and agitated with a kind of tremulous Motion ſo long as it is freſh. It is moſt generally found, after Rain, in Meadows, and in dry parch'd and ſandy Soils. It moſt commonly appears between the vernal and autumnal Equinoxes. It muſt be gather'd before the Riſing of the Sun; ſince, by the Heat of its Rays, it is ſo dried and ſhrivel'd up, that nothing of it remains, except ſome Membranes of a browniſh Colour.

Its real Origin is much controverted; ſome imagine, that it falls from the Heavens like Dew, and is the Excrement of ſome Star; whereas others are of Opinion, that it is a Species of Plant, or ſome Production of the Earth.

Mr. *Magnol*, in his *Botanicum Monſpelienſe*, has call'd it *Muſcus fugax Membranaceus Pinguis*; and Mr. *Tournefort*, in his *Traité des Plantes des environs de Paris*, has given it the Name of *Noſtoch Ciniſonum*. I believe they are the only two Botaniſts who have rank'd it among the Number of Plants.

I thought it incumbent upon me to take a View of this Subſtance in its various States, and at its different Ages, in order to convince the World, that it is a Production of the Earth, to which it adheres by one or more ſlender Roots. The Embryo, then, of this Plant, at firſt, appears like a ſmall Tubercle, which is fleſhy, ſoft, and diverſify'd with inconſiderable Inequalities, like theſe obſerved on Strawberries. It is of a greeniſh-brown Colour, but becomes clear, in proportion as its Membrane is inlarged. This Membrane, at laſt, appears entirely unfolded on the Earth, in which it ſometimes leaves the Impreſſion of its Cavities.

When it is arrived at this State, it remains in it ſo long as the Weather is moiſt, and does not fade till the Wind and Sun dry the Earth, and conſequently deprive it of its proper Nouriſhment.

In its natural State I have generally found it folded lengthways; and it appear'd to me, that its two Ends form'd, at their Joining, a Species of membranous Aſſemblage or Bundle.

In the Year 1667. Mr. *Duclos* preſented to the Academy a clear and inſipid Water diſtil'd from the *Cœlifolium*, which gave a whitiſh Colour to the Solution of corroſive Sublimate.

In the Year 1678. Mr. *Bourdelin* ſubjected it to a more accurate Analyſis, extracted from it not only a great deal of Phlegm, but alſo a pretty large Quantity of fetid Oil, and volatile Salt, which was either concreted, or diſſolved in the Liquor.

The Analyſis, to which I myſelf ſubjected it, quadrates pretty exactly with thoſe inſtituted by the above-mention'd Gentlemen. I firſt obtain'd from it a very clear and inſipid Liquor, which render'd the Solution of corroſive Sublimate white, and the Syrup of Violets green.

(a) For ἀκεσίης, I read ἀκρατίης. *(b)* For ἀβρεπλὸς, I read ἀπεπλὸς.

The

The other Liquors I extracted from it, confirm'd what I had before remark'd with reſpect to the firſt.

At laſt, I obtain'd from it a beautiful volatile Salt, concreted, and well cryſtallized on the Sides of the Receiver; as alſo a volatile urinous Spirit, and a fetid Oil. The *Caput Mortuum*, when calcin'd and lixiviated, furniſh'd me with a very ſmall Quantity of fix'd Salt, and was alſo impregnated with Earth. It gave a faint yellow Colour to the Solution of corroſive Sublimate, changed the Syrup of Violets, and render'd it of a greeniſh Colour.

If this Plant is ſuffer'd to ferment by itſelf, in a cloſe-ſtopt Veſſel, it becomes putrid, and is diſſolved into a pretty fetid Liquor, which, at the End of twenty Days, is of a rediſh, and ten Days after of a bluiſh Colour.

I obſerved, that, even after a conſiderable time, one of theſe Liquors was an Acid, and the other an Alcali. The red Liquor had no Effect upon the Solution of corroſive Sublimate, and only produced a faint and almoſt imperceptible Red in the Syrup of Violets: The blue Liquor gave a white Colour to the Solution of corroſive Sublimate, and render'd the Syrup of Violets green.

Uncommon Virtues are, by ſome, aſcrib'd to the *Cœlifolium*. The Country-people in *Germany* uſe it to make their Hair grow. It is alſo accounted excellent in Cancers and Fiſtulas. A *Swiſs* Phyſician reduced it to a Powder, of which he exhibited two or three Grains, in order to leſſen and allay internal Pains. He alſo apply'd it externally for the Cure of Ulcers.

The Cœlifolium is an Ingredient in the *Sperniolum Compoſitum Cnæfelii pro Principe van Eggenberg*, which is deſcrib'd in the *German Ephemerides* for the Year 1676. among the Secrets of *Cnæfelius*.

Some Chymiſts imagine, that the Cœlifolium contains the univerſal Spirit. They alſo extract a mild Spirit from it, to which they aſcribe uncommon Virtues, and which they believe to be the radical Menſtruum, or Solvent of Gold.

The Water is diſtil'd from it either by the Heat of the Sun alone, or by a very ſlow Fire, by the Action of which it is raiſed very faſt. This Water is generally accounted a very mild Diſſolvent. It is by ſome ſaid to be an admirable Remedy for alleviating Pain, and curing Ulcers, however obſtinate and rebellious they may poſſibly be. *Mem. de l' Acad: Roy. des Sciences, Anno* 1708. *by M. Geoffroy the younger.*

This is generally call'd by the Country-people *Star-fall*, and is thought to be what is vomited up by ſome Animals, which live on Frogs or Fiſh, as the Heron, or Bittern.

CŒLOMA, *κοίλωμα*. See BOTHRION.

CŒLOSTOMIA, *κοιλοστομία*, from *κοῖλος*, hollow, and *στόμα*, the Mouth. A Defect in Speaking, when a Perſon's Speech is obſcur'd, by ſounding as if his Voice proceeded from a Cavern.

CŒLUM. The Air, or Climate.

CŒMENTATIO. CŒMENTUM. See COEMENTUM.

CŒNA. Supper. Moſt Authors adviſe Suppers to be eaten at a ſufficient Diſtance of Time from going to Bed: They ſhould conſiſt of eaſily digeſtible Aliment, and never exceed in Quantity. Valetudinarians, ſhould, in a particular Manner, obſerve theſe Rules, which are alſo of ſome Importance to thoſe who uſe but little Exerciſe.

CŒNOLOGIA. *κοινολογία*. A Conſultation of Phyſicians.

CŒNOTES, *κοινότης*, from *κοινὸς*, common. I know of no *Engliſh* Word which will expreſs the Meaning of this. The Phyſicians of the Methodic Sect aſſerted, that all Diſeaſes aroſe from Relaxation, Stricture, or a Mixture of both. Theſe were call'd *κοινότητες*, what Diſeaſes have in common.

COFFEE. The Plant which bears Coffee-berries is thus diſtinguiſhed:

COFFEE, Offic. *Coffee Frutex; ex cujus fructu fit potus*, Raii Hiſt. 2. 1691. *Jaſminum Arabicum, Caſtoneæ folio, flore albo odoratiſſimo cujus fructus Coffy in Officinis dicuntur*, Comm. Plant. Uſu. 85. Boerh. Ind. A. 2. 217. *Frutex Coffee*, Act. Reg. Soc. Lond. 208. p. 61. *Arbor Ymenſis fructum Coffé ferens*, Dougl. p. 2. *Euonymo ſimilis Ægyptiaca fructu baccis Lauri ſimili*, C. B. Pin. 428. *Bon arbor cum fructu ſuo Buna*, Park. Theat. 1622. *Bon.* Alp. Ægyp. 63. Veſlinge Obſ. 21. *Bon vel Ban Arbor*, J. B. 1. 422. *Bon vel Ban, ex cujus fructu Ægypti potum Coava conficiunt*, Pluk. Almag. 69. Phytog. 272. THE COFFEE-TREE.

This is a low ſhrubby Tree or Buſh, which grows in *Arabia Felix*. It is a Species of Jaſmine, according to *Commelin*, having very ſweet odoriferous Flowers, like thoſe of Jaſmine. The Leaves are about four Inches long, and two broad in the Middle, decreaſing gradually till they become ſharp at both Ends. The Flowers come forth at the ſetting on of the Leaves, and are ſucceeded by Berries, each of which incloſes two Seeds in an inner thin Skin, being oval and roundiſh on the one Side, and flat on the other, with a Sulcus running thro' it. *Miller's Bot. Off.*

The Coffee-ſhrub is propagated from a Seed which muſt be ſown very recent. Some have affirmed, that the *Arabians*, from a Principle of Envy, will not permit the Seeds to be exported from their own Territories, till they have deſtroy'd their Buds either by Fire or boiling Water, leſt they ſhould ſerve to propagate the Coffee-ſhrub in other Countries; but this is a palpable Miſtake; for the *Dutch* found means to import freſh Coffee-ſeeds from *Arabia Felix* into *Java*, where they produc'd the Coffee-ſhrub in ſuch Perfection, that it bore very good Fruit. When ſome of the *Java* Seeds were imported into *Europe*, firſt the Phyſic-garden at *Amſterdam*, and then that at *Paris*, produc'd the Coffee-ſhrub: And, at preſent, this *Arabian* Seed is ſown and propagated in ſeveral Gardens of *Europe*. But this groundleſs Charge againſt the *Arabians* is juſtly apply'd to the Governors of *Surinam* in *America*, who, by a Statute, have made it Death to export the Coffee-ſeeds from their Territories before their Buds are burn'd; but the *French* fell upon Expedients to fruſtrate their Statute; for, finding means to import theſe Seeds in their natural State into the Iſland *Cayenne*, they there cultivate their belov'd Shrub with great Succeſs.

Theſe Berries, when dry'd in the Sun, are much us'd almoſt in every Part of the habitable World, for preparing, by Infuſion or Boiling, that celebrated Liquor known by the Name of *Coffee*. The firſt among the *Europeans*, who wrote on the Uſe of theſe Berries, were two Phyſicians; *Rauwolffius*, a Native of *Germany*, after he had finiſh'd his Travels thro' the *Eaſt*; and *Proſper Alpinus*, an *Italian*, after he had for ſome time reſided in *Egypt*, which borders upon *Arabia Felix*. Becauſe the Coffee-ſhrubs, cultivated in the cold Gardens of the *Europeans*, do not yield a Quantity of Berries ſufficient to anſwer the Conſumption, we are obliged to have them imported not only from the *Arabians* under the Name of *Levant Coffee*, which is the ſmalleſt of all the other Kinds, but alſo from the *Dutch* in *Java*, under the Name of *Java* or *Eaſt India Coffee*, which is the largeſt, and of a whitiſh livid Colour. Theſe Berries are alſo imported from *America*, under the Name of *Engliſh* or *Surinam Coffee*; and the Berries of this Kind are indifferently large, and of a greeniſh Colour. They are alſo ſometimes imported into *Europe* from a *French* Settlement in *Africa* call'd *Bourbon*, under the Name of *French Coffee*. But thoſe Coffee-berries or Grains are accounted beſt which are ſmall, and of a greeniſh Colour, which are not corrupted by Moiſture or Mouldineſs, which are recent, and affect the olfactory Nerves with a Smell reſembling that of Hay, which have an herbaceous grateful Taſte; which are of a very cloſe Conſiſtence, and ſomewhat tranſparent, ſince 'tis reported, that the Berries of this Kind are capable of being preſerv'd for five or ſix Years. The *Levant Coffee* is generally prefer'd to the other Kinds; but ſome, with good Reaſon, affirm, that the Berries imported into *Europe* from *Surinam* in *America* are the beſt, becauſe they may be had more freſh and recent than thoſe imported from other Parts.

We ſhall now inquire in what Manner the ſeveral Nations, from whom we receive the Coffee-berries, prepare them; what Effects they promiſe themſelves from their Uſe, or on what Accounts they recommend them; and, laſtly, what may reaſonably be aſſerted with reſpect to the Medicinal Virtues and Uſe of Coffee.

The *Arabians* then triturate the Coffee-berries in an open Earthen Veſſel, immediately after they are roaſted; then, pouring boiling Water upon them, they boil them for ſome time, and drink the Liquor forthwith, not waiting till its groſſer Parts ſubſide: But ſome of them, as ſoon as the Veſſel is taken off the Fire, wrap it up in a wet Linen Cloth, in order to produce a Precipitation of the groſs Parts; by which means they drink their Coffee clear and fine. The Men of Note and Diſtinction among the *Arabians* do not uſe the Berries themſelves, but the ſeminal Capſulas, and the Pellicles immediately covering the Berries, which produce a Liquor of a grateful Taſte, and free from Bitterneſs. But, for this Purpoſe, theſe Capſulas and Pellicles muſt be very freſh and recent. This Species of Coffee is, by the *French*, call'd *Café à la Sultane*. When the *Arabians* are aſk'd, what Reaſons induce them to drink Coffee ſo liberally as they do, they generally anſwer, that they are, from Experience, convinc'd of its being poſſeſſed of nutritive Qualities, and ſuch as render them Proof againſt various Diſorders. But they ſeem principally addicted to the Drinking of this Liquor, for no other Reaſon, than that by ſo doing they may paſs the Time agreeably. The Chevalier *D'Arvieux*, in his *Memoires*, informs us, that this Liquor is abſolutely neceſſary for all thoſe, who, like the *Arabians*, are diſtractedly fond of Opiates and Narcotics. The *Egyptians* alſo eſteem the Coffee, prepared from the ſeminal Capſulas and Pellicles, more rich and efficacious than that produc'd by the Berries themſelves. The *Egyptians*, as well as the *Arabians*, uſe warm Coffee very frequently throughout the Day; but, in a particular Manner, they drink large Quantities of it in the Morning for Breakfaſt; for, as *Alpinus* informs us, the *Egyptians* find from Experience, that the Stomach is warm'd and corroborated, and Obſtructions of the Viſcera remov'd, by the Uſe of Coffee. It is a ſpeedy and efficacious Remedy for provoking the Menſes; and, among the

Egyptians, thoſe Women, in whom they flow too ſparingly, drink large Quantities of it pretty warm, ſipping it up by little and little; which is the manner of drinking it among them all. After an univerſal Evacuation of the Body, Coffee, drank upon an empty Stomach, eſpecially in the Morning, effectually provokes the Menſes, and affords inſtantaneous Relief in Caſes where they are diſcharged with violent Pains, and in too ſmall a Quantity. In order to prepare their Coffee, they take of the Berries, freed from the Capſulas, a Pound and an half, or eighteen Ounces: Theſe they roaſt a little over a Fire, and, when roaſted, boil them in twenty Pints of Water. Some of them ſuffer their Berries, when roaſted and triturated, to remain a Day in Infuſion with Water. Others, without any previous Infuſion, boil them to a Conſumption of half the Water, ſtrain the boil'd Liquor off, and keep it for uſe in Earthen Veſſels, cloſe ſtopt. They prepare Coffee from the Capſulas of the Seeds in the ſame Manner; but, for that Purpoſe, uſe a ſmaller Quantity of them; for ſome take only ſix, and others nine Ounces of them, which they boil in twenty Pints of Water, till half of the Liquor is conſumed. According to *Veſlingius*, the *Egyptians* prepare Coffee either from the Seeds alone, or from the ſeminal Capſulas alone, or from both together. In order to prepare it both with the Seeds and their Capſulas, they muſt be powerfully dried, and even a little torrify'd in a Stove, that by this means they may become capable of being reduc'd to a Powder. This Liquor is, among the *Egyptians*, boil'd in well-tin'd Kettles, plac'd in Furnaces elegantly built for this Purpoſe; and the Fire, by which the Operation is perform'd, conſiſts of the Excrements of Animals made up into Balls with Straw. *Alpinus* informs us, that ſome, who love their Coffee rich, uſe a ſmaller Quantity of Water than that already ſpecify'd; whereas others, who chooſe it weak and thin, employ a larger Quantity of Water in preparing it; that there is no Neceſſity for ſtraining the Liquor; and that, in the Coffee-houſes, ſome of them add a ſmall Quantity of the freſh Powder immediately when this weak Decoction is intended for Uſe. *Alpinus* informs us, that this Liquor is highly beneficial to the Stomach. An Ounce or more of it, prepared with boiling Water, is by them ſup'd in the Morning on an empty Stomach; for they are obſerv'd to be as fond of Coffee as our Countrymen are of Debauches of Wine in a Tavern. According to *Veſlingius*, in the City of *Memphis*, now call'd *Grand Cairo*, Coffee is ſold, in ſome thouſands of Tayerns, to large Multitudes of Perſons, who ſup it warm either as an Amuſement, or for the ſake of Health, eſpecially when the Heart and Stomach are languid. Some correct the Bitterneſs of the Coffee with Sugar, and candy the Seeds themſelves by way of Sweetmeat. This Practice obtains not only in *Egypt* itſelf, but alſo in the ſeveral Provinces of the *Ottoman* Empire. It is impoſſible to believe what large Quantities of it are drank by Companies of idle Men, who, drinking Coffee and ſmoaking Tobacco by turns, conſume whole Days in the public Houſes: And becauſe, according to the ſame Author, the Capſulas are poſſeſſed of a certain Acidity, whereas the Seeds themſelves are palpably bitter to the Taſte, they neither create a Nauſea, nor overheat the Stomach, tho' drank in a pretty large Quantity, provided they be roaſted and triturated in a Marble Mortar with a Wooden Peſtil. During the Heat of the Summer, the Decoction of the Capſulas is moſt properly exhibited to feveriſh Patients. On the contrary, in Caſes where cold and viſcid Humours obſtruct the Viſcera, and ſeveral Ducts of the Body, a Decoction of the Seeds themſelves, roaſted and ground, is preferable to the other; but Moderation in the Uſe of both is by no means to be neglected. This learned Gentleman thinks, that the Fruit *Cafe*, and its Decoction *Caova*, are, probably, ſo call'd from their cheriſhing and comforting Qualities. Hence, in the Mouths of Foreigners, aroſe the Names *Caova alcaova*, *Chaova Choube*, *Cave* and *Cafe*; and he confeſſes, that, by means of this Liquor, he has often reſtor'd the Stomach, become languid by drinking Water, when Wine could not be had for that Purpoſe. He alſo aſſerts, that it proves beneficial in Diſorders of the Head, which is frequently affected in conſequence of its Conſent with the other Parts of the Body. We muſt here obſerve, that, according to others, the *Arabic* Word *Cahoua*, which is the Infinitive of a Verb ſignifying *to labour under a loſt Appetite*, denotes not only Wine, but alſo every kind of Liquor, and conſequently Coffee. Hence the *Turks* derived their *Cahveh*, from which again comes the *European* Word *Café*. According to *Bauhine*, we learn from *Rauwolffius*, that Coffee is very much uſed among the *Turks* as well as the *Egyptians*. The Proportion they obſerve, with reſpect to the Ingredients, we are taught by *Du Mont*, who informs us, that, to twenty Parts of Water, eſtimated by Meaſure, they take one Part of the Powder of the Berries, compreſſed with the Hand. The richer Sort to every Diſh add a Drop of the Eſſence of Amber; others boil in their Coffee, Cloves, others the Aniſum Stellatum, and others the leſſer Cardamoms. In *Holland* the Juice of Liquorice, obtain'd by boiling with Water, is ſometimes added to the Coffee; but this Liquor, all over *Europe*, is moſt commonly edulcorated with Sugar, which by ſome is uſed for that Purpoſe in ſo large Quantities, as to transform the Coffee into a kind of Syrup, which affects the Palate with no other Taſte than that of the Sugar. There are ſome who drink their Coffee with new Milk or Cream alone; but moſt are directed in the Quantity of this Liquor they uſe, either by Cuſtom or Appetite. But 'tis needleſs to diſpute about the Method of preparing this Liquor in *Europe*, ſince the Method uſed by each Country is moſt acceptable to itſelf. M. *Juſſieu*, in his Anſwer to that Queſtion propoſed in the Schools of *Paris*, *A.* 1716. Whether the Uſe of Coffee is ſalutary to the *Literati*, and Men of a ſtudious Turn, uſes the following Words: "The Berries, when clean, and "ſtript of their Capſulas, are roaſted in an open Earthen Veſ- "ſel, rather than in a cōver'd one of Braſs or Iron. They are "to be roaſted to ſuch a Degree as to become of a bluiſh-black "Colour. As Occaſion requires, they are more commodiouſly "ground in what we call a Coffee-mill, than triturated in a "Mortar. An Ounce of Coffee, thus prepared, is ſufficient "for impregnating a Pint of Water; and this Proportion has, "for forty Years paſt, been generally obſerv'd in *Europe*;" but ſome uſe a far leſs Quantity of the Coffee. Thus *Meiſner* orders only about three Drams of it for ten or twelve Ounces of Water. Coffee-grains are roaſted, that by the Action of the Fire they may be open'd, and diſpoſed for yielding their Tincture; as alſo that the flatulent Qualities, common to all farinaceous Subſtances, may by that means be corrected. Theſe Seeds, when roaſted, ought not to be ground till they are juſt about to be uſed, becauſe they are, in the very Nature of the Thing, leſs ſubject to Exhalation when entire, than when triturated. In order totally to prevent this Exhalation of their volatile Parts, 'tis highly proper they ſhould not even be roaſted till they are to be uſed. From this *Du Mont* ſeems juſtly to conclude, that 'tis better to roaſt them in a cover'd Veſſel, than in one which is open, as Mr. *Juſſieu* directs.

We now come to inquire, what the particular Nature of Coffee-berries is, and what Virtues and Properties the Liquor prepar'd from them is poſſeſſed of. According to *Stenzelius*, in his *Toxicologia*, *Sect.* 3. the celebrated *Taury*, by means of a Chymical Analyſis, obtain'd from Coffee-berries a volatile Salt, a fix'd Salt combin'd with a large Quantity of Sulphur, and an earthy Subſtance. According to *Le Fevre*, M. *Du Tour*, with an Intention to diſcover the conſtituent Parts of Coffee-berries, put a Pound of them into a Glaſs Retort, cover'd with Clay, to which he adapted a large Receiver, luted the Joinings, and applied a Fire gradually. In this Proceſs a limpid Phlegm was firſt diſcharg'd Drop by Drop; then Vapours or Clouds appeared in the Receiver, which were at laſt converted into an Oil, which was firſt of a rediſh, and then of a blackiſh Colour. The Smell of the Coffee exhal'd thro' the Joinings, tho' cover'd with Cement, and diffuſed itſelf thro' all the Laboratory. When the Veſſels were become cold, only half a Pound of the various Elements of the Coffee-berries was taken out of the Receiver, that is, two Ounces and five Drams of a black Oil, which, when rectify'd, aſſum'd an Amber-colour; an Ounce and three Drams of a volatile Spirit; and four Ounces of a Caput Mortuum, which, by Elixiviation, afforded a Dram of fix'd Salt. *Boeclerus* informs us, that one Pound of Coffee-berries, by a Chymical Analyſis, yields about four Ounces of Phlegm and volatile Spirit, and of Oil one Ounce, a Caput Mortuum of above four Ounces being left, whilſt the other Parts were evaporated and carry'd off. M. *Bourdelin*, in a Chymical Analyſis made by a Retort, from three Pounds of the beſt Coffee-berries obtain'd twenty Ounces and ſeven Drams of a Liquor, in which there was a large Quantity of an Acid, mix'd with an oleous ſulphureous Principle, as was diſcover'd by various Proofs and Experiments: A large Quantity of Oil was alſo extracted, that is, eight Ounces and two Drams, not in a liquid, but in a concreted Form. The Caput Mortuum was of a larger Bulk than the Berries originally employ'd, and an Ounce and ſixty Grains of a fixed Salt were extracted from it. *Houghton* ſays, that, by Diſtillation from a Retort, a Pound of clean Coffee-berries yielded ſix Ounces and ſix Drams of Phlegm, of a very thick Oil two Ounces four Drams and two Scruples, whilſt five Ounces and three Drams of a Caput Mortuum remained. He informs us, that both the Oil and the Phlegm were of an ungrateful empyreumatic Taſte, but the Caput Mortuum was inſipid, incapable of being calcin'd to Aſhes, and probably deſtitute of every kind of Salt. The like Analyſis, inſtituted at the ſame time upon common Beans and Grains of Wheat, demonſtrated, that the Quantity of Oil obtained from the Coffee was almoſt double that obtain'd from the Beans, and almoſt triple of that obtain'd from the Wheat. *Caſpar Newmannus*, from one Pound of Coffee, ſubjected to Diſtillation by an open Fire, obtain'd five Ounces five Drams and an half of diſtil'd Phlegm, ſix Ounces and half a Dram of a thick fetid Oil, whilſt there remain'd four Ounces and two Drams of a Caput Mortuum, which, by Incineration and Elixiviation, yielded three Drams of a fixed Salt. From theſe Experiments 'tis obvious, that, by ſubjecting Coffee-berries to Diſtillation, we obtain Phlegm, Oil, and an earthy Subſtance; from which, beſides, every one, except *Houghton*, by Elixiviation, procured a fixed Salt. But Authors vary in their Proportions of the Subſtances now ſaid to

be yielded, according as greater or leſs Care has been taken in the ſeveral Diſtillations they have made. The Method uſed by *Newman* ſeems to be the moſt accurate, ſince, in the Products, he obtained the entire Weight of the Coffee-berries originally ſubjected to the Analyſis. But 'tis to be lamented, that, whilſt he recounts the Experiments of others, which have been either leſs accurately perform'd, or leſs clearly and diſtinctly repreſented, he attacks their Characters with a haughty and ſupercilious Air, which ill becomes a Man of Learning. Except *Bourdelin*, none of the others make mention of an Acid among the Products or Subſtances yielded by the Coffee-berries. But that this Acid is lodged in the Oils poſſeſſed of a thick Conſiſtence, like that of Balſams, is ſufficiently plain; and *Newman* himſelf does not deny, that an Acid is lodged in Coffee-berries, granting at the ſame time, that the alcaline Parts are, by the protracted Action of the Fire, generated during the Diſtillation. If we obſerve, that it is uſual with moſt Chymical Authors, by taking the Whole for a Part, to give the Name of a ſulphureous Principle to that, which they intend ſhould be looked upon as an oleous one, we ſhall perceive, that theſe Authors did not deſerve to be chaſtiſed in ſo contemptuous a Manner by *Newman*. But let us inquire what this Gentleman has diſcovered with reſpect to the Nature of Coffee-berries, by the Application of aqueous and ſpirituous Menſtruums: By Digeſtion and Coction with diſtil'd common Water, from two Ounces of Coffee-berries, he obtained five Drams of an aqueous Extract; and, from the remaining Magma, with highly rectified Spirits of Wine, he obtain'd twenty-ſix Grains of a ſpirituous Extract. As ſoon as he added the Spirit of Wine, he obtained three Drams and an half of a ſpirituous Extract; and, with Water, afterwards extracted from the remaining Matter two Drams of an aqueous Extract. When the rectified Spirit of Wine was diſtil'd from the Coffee-berries, it came off without any Change, and the Water employed alſo came over in a State ſcarce different from that of common diſtil'd Water. From what has been ſaid, we may infer, firſt, that Coffee-berries abound both with reſinous Parts, to which the Spirit of Wine proves a Menſtruum, as alſo with Parts of a gummous Nature, capable of being diſſolv'd by Water. Secondly, that, in theſe Berries, the latter Parts are more numerous than the former. Thirdly, that both the reſinous or oleous, and the gummous or ſaline Parts in Coffee-berries are of ſo fix'd a Nature, as to require a ſtronger Degree of Fire, than that by which the Spirit and the Water are raiſed.

We now come to inquire, what Properties theſe Berries diſcover, or what Principles they yield, when roaſted.

Mr. *Bourdelin* then, from three Pounds of Coffee-berries, roaſted in the ordinary Manner, ſo as to weigh no more than two Pounds and an half, obtain'd, by Diſtillation with a Retort, ten Ounces or more of a Liquor, containing a manifeſt acid and a ſulphureous Principle; that both of them were manifeſtly diſcover'd; but, in the laſt two Ounces and an half of this Liquor, there was a larger Quantity of volatile Salt, than in the reſt of it; for it produced a very conſiderable Effervescence with Spirit of Salt. It contain'd ſix Ounces and ſix Drams of an Oil, and nine Drams and an half of fix'd Salt.

To theſe Experiments we may add, that, when Coffee-berries are roaſted, a pinguious or oleous Kind of Subſtance is obſerv'd to be diſcharged from them by way of Sweat. This Subſtance appears on the Surface of the Decoction or Infuſion of theſe Berries in Water; and the *Turks*, when they can have it, ſwallow it very greedily. From what has been ſaid, it is obvious, that, by being roaſted, the Coffee-ſeeds become better diſpoſed for yielding their gummous, as alſo their reſinous Parts, than when they are crude. In roaſted Coffee-berries therefore we are furniſh'd with earthy Parts, which remain undiſſolvable after the Extracts are made, as alſo with Parts of a gummous and oleous Nature. The Infuſion or Decoction of Coffee commonly uſed may therefore be conſider'd as containing a gummous Extract, impregnated with oleous, fix'd, and volatile Parts, perceptible to the Eye and Taſte, and which, in conſequence of theſe farinaceous Berries being roaſted, are diſengag'd and mix'd with the boiling Water. From what has been ſaid, we may juſtly conclude, firſt, that Coffee is poſſeſſed of the diluting Virtues of warm Water. Secondly, that it is furniſh'd with the emollient and moderately nouriſhing Qualities of farinaceous and oleous Subſtances. Thirdly, we may conclude, that, in conſequence of its volatile Principle, it contains Parts, which ſtimulate the Fibres, and rouſe the animal Spirits. And, fourthly, that its oleous, in Conjunction with its ſaline Principle, acts by way of natural Soap, with which when the Water is impregnated, it becomes capable of mixing with the Maſs of Blood, and operates by its reſolving and abſtergent Qualities. The other Virtues of Coffee are to be determin'd by the ſeveral Subſtances, which different Perſons, according to their reſpective Taſtes, uſe in preparing it. Hence we may juſtly affirm, that Coffee contributes to Watchfulneſs, and the baniſhing Sleep; that it allays Thirſt, and checks that preternatural Heat, which attends Fevers and Surfeits; as alſo, that, in Head-achs ariſing from Congeſtions of Blood in the Head, it helps to drive the Humours to the inferior and leſs noble Parts. *Le Fevre* gives his Opinion of Coffee in the following Words: "I am of Opinion, ſays he, that Coffee is proper for the Cure and Prevention of comatous Diſorders, ariſing from a Phlegm, or a too viſcid Blood. Beſides, this Liquor, in conſequence of its aſſiſting Chylification and Sanguification, increaſes the Quantity of the animal Spirits, and repairs the Loſs of them ariſing from preternatural Watching. Coffee alſo, in conſequence of its volatile Salt, removes Obſtructions of the Brain, dries up its ſuperfluous Moiſture, and conſequently reſtores a due Degree of Elaſticity to its Membranes and Veſſels. Since therefore this Liquor contributes ſo much to the Secretion of the Spirits, it is no ſurpriſing Thing, that thoſe who, with an Intention to watch, drink Coffee after Supper, ſhould bear it out for ſeveral Days and Nights, without any conſiderable Loſs of Strength; and that this Liquor ſhould be claſſed among the antiapoplectic Medicines, ſince, by its Means, Obſtructions are removed, the Spirits put into a briſker Motion, the Blood rendered fitter for a due Circulation, the Languor of the ſolid Parts overcome, Drowſineſs carried off, and the Mind rendered gay and chearful." The deobſtruent Virtues of this Liquor, according to *Proſper Alpinus*, are confirmed, by the Reſemblance its Taſte bears to that of a Decoction of Succory. That apoplectic Patients have been rous'd by injecting Clyſters of Coffee, we learn from the *Hiſt. de l'Academie Royale des Sciences* for the Year 1702. From what has been ſaid, we may juſtly infer, that this Liquor is proper for Perſons of a ſtudious Turn, who, by cloſe and intenſe Thoughtfulneſs, perceive their fineſt Humours diſſipated, and the Tone of their Fibres deſtroy'd; whence ariſe Imperfections of the firſt Digeſtion, hypochondriac Flatulencies, a Diminution of all the Secretions and Excretions, a Paleneſs of the whole Body, Languors, Weakneſs, and their ſeveral concomitant Symptoms. Nothing more effectually contributes to prevent theſe Diſorders, than Coffee, as the learned Mr. *Juſſieu* has ſufficiently demonſtrated. To theſe we muſt join the concurring Authority of the incomparable *Baglivi*, who delivers his Sentiments, with reſpect to Coffee, in the following Words: "I muſt, ſays he, "obſerve, that Coffee is an infallible Secret for removing that "Species of Head-ach, which, in conſequence of a bad Digeſtion, ariſes ſome Hours after Dinner. This Effect I have "ſeen produced by Coffee in Numbers of Patients at *Rome*; "and I daily find the Obſervation verified in myſelf; for, ſince "my Stomach is render'd weak, and I begin to be afflicted "with a Head-ach, Liſtleſneſs, and Melancholy, about three "Hours after Dinner, in conſequence of cloſe Thinking, too "extenſive Practice in viſiting the Sick, and indefatigable Induſtry in deſcribing the Natures of their ſeveral Diſeaſes, a "thing abſolutely neceſſary to the Practice of Phyſic, I miraculouſly free myſelf from theſe Diſorders, which proceed "from a weak Digeſtion, by drinking two or three Diſhes of "Coffee. I ſometimes uſe Tea or Chocolate, but not with "ſuch Advantage as ariſes from Coffee, which is an efficacious "Medicine for Diſorders of the Stomach, and the Diſeaſes "ariſing from them; whereas Tea is calculated for Diſorders "of the Head." *Le Fevre*, with an Intention to confirm theſe Sentiments, uſes the following Words: "Coffee is beneficial "to thoſe, who are liſtleſs, who uſe thick and viſcid Aliments, "and who abſtain entirely from Wine. The Method of Living uſed by the *Turks* is a ſufficient Proof, that the Digeſtion "of the Aliments is greatly promoted by Coffee; for tho' they "live upon Pulſes, Fruits, Preparations of Milk, and unleaven'd "Bread not ſufficiently bak'd, yet they are very rarely ſubject "to Diſorders of the Stomach." I might add, that this Liquor ſeems, in a manner, neceſſary to the *Turks*, becauſe they daily uſe ſo large a Quantity of Opium, which is a powerful Narcotic. *Henricus Schulzius*, in his *Diſſertatio de Rebus non-naturalibus*, tells us, that it may ſafely be affirmed, that Coffee, drank warm within an Hour after Dinner, is highly proper for thoſe who are afflicted with Head-achs, in conſequence of a Weakneſs of the Stomach, contracted by cloſe Thinking, and conſtant Study. It is alſo much recommended againſt Head-achs contracted by Drunkenneſs. *Lewenhoek*, in *Epiſt.* 120, uſes the following Words: "If, ſays he, I happen at any time "to ſup more ſumptuouſly, eat more liberally, or drink a "larger Quantity of Wine, than uſual, next Morning, by way "of Medicine, I uſe a ſomewhat larger Quantity of Coffee, "than at other times. This Liquor I drink as hot, and as "quickly, as I poſſibly can; by which means an univerſal Diaphoreſis is generally excited. By this Expedient, I endeavour "not only to expel the Matter, which, in conſequence of my "having eaten or drank too much, proves hurtful to my Blood, "but alſo to ſupply its Place by the Coffee, which I edulcorate with Sugar-candy. If, by this Method, I cannot reſtore "myſelf to Health, none of the Medicines in the Shops can, "in my Opinion, effect it. This was alſo the only "Medicine I uſed ſome Years ago, when I perceiv'd myſelf "feveriſh; only I ſometimes uſed Tea, in order to excite a Diaphoreſis." In the *Ephemerides Nat. Curioſ. Decad.* 2. *a.* 3. *o.* 198. we have an Account of an inveterate Cephalæa cur'd

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by Coffee. In the ſame Work, *Dec. 2. a. 8. o. 5.* we are inform'd, that Coffee, drank thrice a Day, prov'd an effectual Remedy for a Vertigo; and in *Eph. Nat. Curioſ. Vol. 1. 44.* we have an Inſtance of a Diarrhœa remov'd by Coffee. Becauſe anodyne Effects have often been produc'd by this Liquor, in conſequence of its diluting and aperient Qualities, ſome have imagin'd, that it was the Medicine uſed by *Helen* for baniſhing Grief, to which *Homer* gives the Name of *Nepenthe*: But others are of a different Opinion. There are alſo others, who, according to *Muraltus*, extolling Coffee for its Antiquity, call it the *Jus nigrum* of the *Lacedæmonians*. Thus we have taken a View of the Virtues of Coffee, which, in general, for daily Uſe, ſeems more proper for Perſons of phlegmatic Conſtitutions, than for Patients of choleric Habits, ſuch as are extenuated, and thoſe whoſe Blood is eaſily put into Commotions; for theſe are injur'd by uſing it too frequently, and moſt effectually conſult their own Health by drinking it weak, with Milk, and a little good toaſted Bread, drinking a Glaſs of cold Water previouſly. By this means the Stomach is corroborated, and fortified againſt the weakening Qualities of the warm Water, the Digeſtion of the preceding Meal is promoted, and the Body is rendered ſoluble. Some, with an Intention to reſtore the Strength and Tone of the Stomach, put ſome Aromatics, ſuch as Cinnamon, in their Coffee; but they, who love their Coffee rich, and drink it with Milk or Cream, uſe a Liquor, both of whoſe Ingredients are of a nutritive Quality. The celebrated *Lanzonius* preſcrib'd Coffee, prepar'd with Milk inſtead of Water, as a Medicine; and highly extols it in Aſthmas, beginning Hectics, the Gout, the Pleuriſy, the hyſteric Paſſion, the Rheumatiſm, and Barrenneſs in Women. In preparing it, the Milk of Aſſes, Cows, or Goats, may be uſed, as the State and Condition of the Patient require. But we are not to conceal the Diſadvantages generally ariſing from an immoderate and too liberal Uſe of Coffee. Many then, after the Uſe, or rather the Abuſe, of this Liquor, are affected with a Trembling of the Hands, and a Palpitation of the Heart. This, in my Opinion, is to be accounted for, not only from the too large Quantity of hot Water, which reſolves and weakens the Fibres of the Stomach and whole Body, but more particularly from the ſtimulating Virtue of too rich Coffee, eſpecially if the Perſon who uſes it has a nervous Syſtem, too eaſily thrown into Commotions, and when it is drank upon an empty Stomach in a cold Room; for, at that Time, the cutaneous Pores being contracted, the Motion of the Humours is, by its means, more directed to the internal Parts. In Caſes where the Body is not habituated to a due Degree of muſcular Motion, the Coffee, precipitating in the Primæ Viæ, is converted into a kind of farinaceous Glue, which obſtructs the Lacteal Veſſels, and prevents the Diſtribution of freſh Supplies of Chyle to the Body. Hence ariſe all thoſe Diſorders produc'd by a preternatural Viſcidity of the Blood, and a Retention of the uſual Evacuations. Hence we diſcover the Reaſon, why *Waldſchmidius* affirms, that Coffee, unſeaſonably uſed, without any Regard to the Conſtitution of the Patient, paves the Way to a Palſey. *Willis*, in his *Pharmaceutice Rationalis*, uſes the following Words: "In moſt "Diſorders of the Head, ſuch as a Cephalalgia, a Vertigo, a "Lethargy, and a Catarrh, when the Habit is plethoric, the "Conſtitution cold, the Blood aqueous, the Brain too moiſt, "and the Motion of the Spirits too ſlow and languid, Coffee is "often uſed with great Advantage; for, when daily drank, it "ſurpriſingly rouſes the vital and animal Spirits, and removes "every thing that can retard the animal Functions. On the "contrary, thoſe who are lean, who are of a bilious or melancholic Conſtitution, whoſe Blood is acrid or retorrid, whoſe "Brain is hot, or whoſe animal Spirits are ſtimulated to too "briſk and irregular Motions, ought entirely to abſtain from "this Liquor, ſince it diſorders both the Spirits and Humours, "and renders them unfit for performing their ſeveral Functions; for I have frequently obſerv'd Patients labouring under a Penury of Spirits, Cephalalgias, Vertigos, Palpitations "of the Heart, Tremors of the Joints, and Stupors, rendered "worſe by the Uſe of Coffee, and unuſual Languors brought "on." *Boeclerus* informs us, that many, by the continued Uſe of Coffee on an empty Stomach, have become indiſpoſed and extenuated; and that he himſelf knew a certain Man, who, by drinking one or two ſmall Diſhes of Coffee every Morning, was ſeized with a Vertigo, and Dimneſs of Sight, which were not removed till he eat ſomething. From that Quality of Coffee, by which it ſtimulates the Fibres, and exagitates the Humours, we may conclude, that it is, in a particular manner, hurtful, when ſtrong and hot, to plethoric Patients, as alſo in Coughs ariſing from an acrid or too ſubtle a State of the Blood, and in confirmed Conſumptions. But I take the Conſtitution of that Man to be ſingular, to whom, as *Boyle* informs us, a Diſh of Coffee proved a more powerful Emetic, than Emetic-wine itſelf. The Obſervations of great and ſkilful Phyſicians evince, that the above-mentioned Diſorders may be brought on by the too frequent and too liberal Uſe of Coffee. Thus *Hoffman*, in his Diſſertation *De Remediorum benignorum Abuſu*, uſes the following Words: "No one, ſays he, will eaſily believe, "that Coffee is prejudicial to his Health, ſince not only with "the *Turks*, but alſo with our own Countrymen, nothing is "more common than to drink liberally of it early in the Morning, and immediately after Meals; yet we have numerous "Proofs, that this Practice is often attended with bad Conſequences; for a frequent and immoderate Uſe of this Liquor "is highly prejudicial to weakly Perſons, and more eſpecially "Women, whoſe Nerves and Strength are conſiderably impaired by it; and, either in Child-birth, or on the Attack "of any Diſeaſe, ſo conſiderable a Languor is brought on, that "their Strength is hardly able to ſurmount the Symptoms, with "which they are afflicted. I know ſeveral Perſons, who, by "a too frequent Uſe of this Liquor, have contracted a Trembling of the Hands. Others, by its means, I have known "afflicted with an obſtinate Watchfulneſs, and a Debility of "the Senſes; for theſe *Arabian*, as well as other Species of "Beans, abound with an Oil, which is not friendly and balſamic, but hurtful and injurious, to the nervous Syſtem, which "it renders ſtill more weak than it was before." *Slare*, in the Dedication to his Vindication of Sugars, informs us, that he became paralytic by too liberal an Uſe of Coffee; and that his Diſorder was removed by his abſtaining from that Liquor. *Stenzelius*, in the firſt Book of his *Toxicologia*, ſpeaks of the Diſorders ariſing from the Abuſe of Coffee in the following manner: "Coffee often proves a temporary Poiſon, when uſed too "frequently in too large Quantities, or promiſcuouſly by Perſons of every Conſtitution, eſpecially in the Afternoon; for, "by the Roaſting, its ſalino-volatile Parts are carried off, and "there are only left a narcotic Oil, and an Earth, which produce "Obſtructions and Coſtiveneſs. Hence we obſerve, that thoſe, "who have narrow Veſſels, and thick and tenacious Juices, "are, after the Uſe of this Liquor, eſpecially when rich, "afflicted with an Uneaſineſs of the Præcordia, a Palpitation "of the Heart, Anxiety, Reſtleſneſs, Sadneſs, Watchings, "and various other Diſorders; for, by the earthy and oleous "Parts of the Coffee, the Circulation of the already viſcid "Blood through the Apices of the ſmall conic Veſſels is more "and more retarded; the thick, ſlimy, and terreſtrial Juices "ſtagnate here and there; and, when a Coheſion is once begun, by the Accretion and Combination of ſimilar Particles, "Obſtructions and Infarctions are formed in the ſhaggy Extremities of the capillary Veſſels, which, proving a Stop or Hindrance to the ſucceeding Blood, produce a Regurgitation, "and the ſeveral Symptoms ariſing from it. On the contrary, "we find, that the moderate Uſe of this Liquor produces no "bad Effects in Perſons of hot and fine Juices, but rather preſerves their Health, by correcting the acrid Particles of their "Fluids, corroborating the Villi of the ſolid Parts, and promoting the Secretion of the Excrements, Sweat, and Urine." In the Year 1695. it was in the Schools of *Paris* defended as a Theſis, that the daily Uſe of Coffee rendered both Men and Women unfit for Procreation; but no one will affirm this, who conſiders, that as numerous a Progeny is brought into the World ſince the daily Uſe of this Liquor in *Europe*, as before. With reſpect to this Subject, the above-mentioned *Stenzelius* ſpeaks in the following manner: "In briſk and vigorous Perſons, whoſe Genitals are in good Order, and who have a "ſufficient Quantity of gelatinous Juices, Coffee, moderately "uſed, is ſo far from impairing, that it rather promotes Venery. But it produces contrary Effects in weaker Perſons, "who abound with Phlegm, and a Superfluity of earthy Particles, or whoſe genital Organs are languid. Of this Claſs "was the King of *Perſia* Sultan *Mahmud Kaſnin*, who, being "a great Lover of Coffee, could not perform the Office of a "Huſband with due Vigour. The unfortunate Queen aſcrib'd "his Impotence to his immoderate Uſe of Coffee, and was ſo "firmly perſuaded of its ariſing from that Source, that when, "from her Window, ſhe ſaw a Horſe led out, ſhe aſked with "what Intention the People did ſo; and being told, that the "Animal was about to be caſtrated, ſhe replied, that ſuch a "harſh Method was by no means neceſſary, ſince, by the Uſe "of that helliſh Liquor Coffee, he might be enervated, and "rendered like the King." I can by no means agree with thoſe who affirm, that, by the daily Uſe of it, Scurvies, hypochondriac Diſorders, and Melancholy, are rendered more univerſal than in former Times. Without determining whether Coffee contributes more or leſs to Health, according as Perſons love it, we ſhall only ſay, that it has been, in many Caſes, obſerved to produce very happy Effects. The Abuſe of a Thing ought never to deſtroy its Uſe. It was therefore unreaſonable in *Simon Paulli*, a celebrated *Daniſh* Phyſician, univerſally to condemn Coffee. This Author's Opinion, ill-grounded as it was, was afterwards eſpouſed by two learned *French* Phyſicians, *Duncan* and *Hecquet*. Since, from what has been ſaid, we ſee, that Coffee is beneficial to ſome, and hurtful to others, we ſhall here quote the Words of the celebrated *Cheyne*, in his Eſſay on Health and long Life, with reſpect to Coffee: "As to Coffee, "ſays he, it is a mere Calx, or a kind of burnt Horſebean, but "lighter on the Stomach, and of a ſomewhat better Flavour. "The *Turks* uſe it and Opium inſtead of Brandy. But the

"Plea

" Plea which ſome make for running into Exceſs in it, from " this *Mahometan* Cuſtom, is altogether weak and groundleſs; " for thoſe who do ſo there, ſuffer for it as we do here; and " thoſe who debauch in it, turn ſtupid, feeble, and paralytic " by it; eſpecially when they join Opium with it, (as they " frequently do) as thoſe who wallow in theſe do here; and " are as much deſpiſed and expoſed by ſerious Perſons, as our " Topers and Brandy-ſwillers are here. A Diſh or two of " Coffee, with a little Milk to ſoften it, in raw or damp " Weather, or on a wateriſh or phlegmatic Stomach, is not " only innocent, but a preſent Relief. But 'tis as ridiculous, " and perhaps more hurtful, at leaſt in thin and dry Habits, " to dabble in it two or three times every Day, as it would be " for ſuch to drink nothing but ſcalding Lime-water." Dr. *Andry*, in his Treatiſe *dés Aliments de Carême*, directs a Method of preparing Coffee, which excels the ordinary Sort, is of a more grateful Taſte and Smell, proves beneficial to the Head and Stomach, removes Crudities, corrects the Acrimony of the Humours, and cures obſtinate Coughs. The Method of preparing it is as follows:

Take of unroaſted Coffee-berries, well excorticated, a Dram: Boil them in eight Ounces of common Water, for half a Quarter of an Hour at moſt, and there will be a Liquor of a Lemon-colour produced; which, after ſettling a little in a cloſe Veſſel, is to be drank warm, with an Addition of Sugar.

The ſame Seeds may be kept for a ſecond, or even a third Infuſion, becauſe they do not impart all their Virtues to the Water at once. If they are long boil'd over a ſtrong Fire, the Liquor becomes greeniſh, which indicates an Admixture of earthy Parts, but the Coffee becomes leſs valuable. But Mr. *Duncan* objects againſt this Method, and maintains, that by it that Principle is not extracted, for the ſake of which the Coffee is prepared; that the Tincture is inſipid, almoſt without Smell, and, in Reality, little elſe than warm Water; for which Reaſon it is to be prefer'd, by ſuch as only drink Coffee for an Amuſement, ſince the Abuſe of it is leſs prejudicial to Health, and leſs expenſive. In order to ſave Expences, various Experiments have been made upon Seeds of the Pulſe and Corn Kind, with a View to diſcover a proper Succedaneum to Coffee, poſſeſs'd of the ſame Taſte and Qualities. It is, then, found, that common Beans, roaſted, come very near Coffee, with reſpect to the Taſte and Smell; but they are heavy on the Stomach, and create a Head-ach. It is alſo found, from Experience, that Rye roaſted, with a ſufficient Mixture of Almonds, for the ſake of the Oil, and boil'd longer than common Coffee, affords a Liquor exactly of the ſame Taſte, Smell, and other Qualities. *Newman* calls the Coffee prepared of Rye, *Café à la Paiſane*, in Imitation of the *Café à la Sultane* of the *French*. D. *Friedel*, in a *German* Treatiſe intituled *Mediciniſche Bedencken*, prepares, what he calls a Drink for Women, from an equal Quantity of ſweet and bitter Almonds, well excorticated, roaſted till they are black, and almoſt reduced to a Powder. This he recommends for weaning thoſe, who are accuſtom'd to drink Coffee, from it; for it is not poſſeſs'd of the ſame Qualities. They who intend to render old and effete Coffee-berries as grateful as if they were freſh and recent, add a little Butter to them, when they are roaſting. We muſt alſo obſerve, that roaſted Coffee-berries are candied with Sugar, and preſented to the Table by way of Deſert; and that, by means of Spirit of Wine, there is a Liquor prepared from Coffee, which the *French* call *Coffee-water*, and which is made in the following manner:

Take of roaſted Coffee, three Ounces; of Spirit of *French* Wine, two Pints: After Digeſtion, diſtil them, and edulcorate the diſtil'd Liquor with a ſufficient Quantity of Sugar. This Preparation is intended for thoſe who are very fond of the Smell of Coffee.

Many have affirm'd, that the Uſe of Coffee was firſt diſcover'd in the *Eaſt* by an Abbot of a Monaſtery, who being inform'd by a Keeper of Goats or Camels, that theſe Animals, upon brouſing on the Leaves, or eating the Fruit, of the Coffee-ſhrub, kept themſelves awake, and danced about all Night, recommended the Seeds of this Shrub to the Monks, that they might be the better enabled to watch, and offer up their Prayers. But this is an erroneous Opinion, ariſing from this, that a certain High Prieſt of the *Mahometan* Law, call'd the Mufti, about the Middle of the fifteenth Century after *Chriſt*, having travel'd from the City *Adde*, in *Arabia Felix*, to *Perſia*, there ſaw the Inhabitants drinking Coffee. This Mufti, returning home, and falling ſick, was cured by Coffee, and procured it a great Reputation; eſpecially becauſe he obſerved, that it removed heavy Pains of the Head, exhilarated the Mind, and prevented Sleep; on account of which laſt Circumſtance, he recommended it to his Devotees, when offering their nocturnal Prayers. From *Arabia* it was introduced into *Egypt*, by Monks of the *Mahometan* Sect, about the Beginning of the ſixteenth Century. At this Time, when he who govern'd at *Mecca* in *Arabia*, as Sultan, ſaw Coffee drank in the Temple, he was ſo enraged at the Affront, that, calling a Council, he condemn'd it by public Authority, becauſe it excited People to do Things inconſiſtent with the *Mahometan* Religion. Some Phyſicians, in the mean time, muſter'd up Arguments againſt its ſalutary Qualities, tho' they were oppoſed by others. But this Edict of the Sultan was ſoon abrogated. After this, both in thoſe Parts of *Arabia* and *Egypt*, which were ſubject to the *Turks*, ſome Hypocrites attempted to diſcountenance the Drinking of this Liquor, but to no Purpoſe; for the Love of it not only more effectually ſeiz'd the *Arabians* and *Egyptians*, but alſo affected the *Turks*, and, thro' *Syria*, reach'd *Conſtantinople*; where, about the Middle of the ſixteenth Century, public Coffee-houſes began to be erected for the Drinking of Coffee. But when, in this Place, the Number of Taverns was enlarged, and Men neglected the public Worſhip in order to attend them, ſome zealous Devotees had Intereſt enough to get Coffee condemn'd by public Authority; alledging, that it was inconſiſtent with the Laws of *Mahomet* to uſe any thing, by way of Aliment, which reſembled Coals, as, ſaid they, Coffee did; and therefore could not be drank by *Mahometans*. And tho', in the Reign of *Amurath* the Third, the Prohibition was reinforced; yet, becauſe Men could not totally abſtain from this Liquor, Liberty was granted, that they ſhould drink it privately who paid a certain ſtated Sum; the Law remaining in Force only againſt thoſe who drank it publicly. At laſt, by another Mufti, the Law was totally abrogated, and a Proclamation iſſued out, That Coffee-berries were not to be conſider'd as Coals, and, conſequently, that their Uſe was not inconſiſtent with Religion: Upon this, People of all Characters drank Coffee, and Coffee-houſes were publicly authoriz'd for the Sale of it. But, when *Kupruli* govern'd for *Mahomet* the Fourth, who was not as yet of Age, it was obſerved, that theſe Coffee-houſes were too commodious for thoſe who wanted to pry too curiouſly into the Meaſures of the State; for which Reaſon they were prohibited at *Conſtantinople*, except a very few. This Liquor is, however, ſtill uſed in private Families, and ſold in the Streets not only of *Conſtantinople*, but alſo publicly in Coffee-houſes in the other Cities of the *Ottoman* Empire. So neceſſary this Liquor is thought among the *Turks*, that Huſbands are bound, by Contract, to provide their Wives with it, as a Thing they cannot poſſibly do without. *Dumont* endeavours to prove, that Coffee has been uſed from Time immemorial in the *Eaſt*, or at leaſt among the *Arabians*; but his Arguments will not bear a rigorous Scrutiny. It ſeems probable, that the *Venetian* Merchants, in their Return from the *Eaſt*, having learnt the Uſe of Coffee either in *Egypt*, or at *Conſtantinople*, made it known to the other Parts of *Europe*. In *France* it is ſaid to have been firſt known at *Marſeilles*, in the Year 1644. In *Paris* Coffee was ſcarcely known till 1669. From the Inhabitants of *Marſeilles*, and eſpecially thoſe of *Paris*, the Uſe of this Liquor ſpread itſelf not only thro' the other Provinces of *France*, but alſo, in all Probability, thro' the other Parts of *Europe*. The firſt Coffee-houſe in *London* is ſaid to have been erected in 1652. but at preſent 'tis computed, that there are three thouſand of them in this City.

The firſt public Coffee-houſe in *London* is ſaid to have been at the *Tilt-yard*.

Geoffroy informs us, that we may diſtinguiſh two Kinds of Coffee, one ſmall and greeniſh, like Horn; the other large and yellowiſh. This latter Sort is the leaſt valued, and grows in the Iſland of *Bourbon*. Coffee enlivens the Blood, cures Head-aches, ſometimes promotes the Menſes; and, therefore, they who are ſubject to large Hæmorrhages, or an Eryſipelas, ought to abſtain from it; for, till then, they can never be cured. It certainly accelerates the Motion of the Blood, and has been often obſerved to cauſe Bleeding at the Noſe.

If Coffee produces Hæmorrhages, it muſt certainly promote Miſcarriages.

COHOB, COHOPH, COHOBIUM, COHOBATIO. Cohobation. The Returning of a Liquor, diſtil'd from any Subſtance, back again upon the ſame Subſtance, and diſtiling it again, either with or without an Addition of freſh Ingredients. See AQUA.

COHOL. The ſame as ALCOHOL. *Caſtellus* informs us it is uſed, in *Avicenna*, to expreſs dry Collyria for the Eyes, in fine Powder.

COHOS. The ſame as CHAOS.

COHYNE. An *American* Tree, with Leaves like the Laurel. It bears a Fruit as large as a Melon, in the Shape of an Oſtrich's Egg, of which the *Indians* make Cups. This Fruit is not eatable; but the Inſide of it, bruiſed, and applied to the Head, is ſaid to eaſe Pains thereof.

COLATORIUM. A Strainer, of any Kind.

COLATURA. Any ſtrain'd or filtred Liquor is thus call'd.

COLCAQUAHUITL. An *American* Plant; alſo call'd *Jobualxochitl, ſeu Flos Orbicularis. Nieremberg.*

The Leaves, laid upon the Breaſt, are ſaid to cure a Syncope; drank, with Water, to provoke Sweats; fry'd, the Juice being previouſly expreſs'd, they make thoſe who eat them grow fat; powder'd, and ſprinkled upon obſtinate Ulcers, it is ſaid to cure them. It has alſo the Reputation of being good in Palſies, and Uterine Diſorders. *Raii Hiſt. Plant.*

COLCHICUM.

The Characters are,

The Flower is naked, monopetalous, hexapetaloidal, in the Shape of a very ſlender Tube, which ariſes immediately from the Root. The Ovary, which is lodged within the lower Part of the Flower, is furniſh'd with a long Tube, and becomes a triangular, oblong, tricapſular Fruit, full of round Seeds. The Root is double, tuberous, carnous, barren and wither'd in its outer Part, after one Year; while the other Part, which is incloſed within the former, runs into Fibres, is cover'd with a membranous Skin, and ſends up a Plant. *Boerhaave's Index alter, Par.* 2.

Boerhaave mentions eight Species of this Plant.

1. Colchicum; vernum; Hiſpanicum. *C. B. P.* 69. SPRING-FLOWERING MEADOW-SAFFRON.

2. Colchicum; candidum; multiflorum. *C. B. P.* 68. *M. H.* 2. 341. MANY-FLOWER'D WHITE MEADOW-SAFFRON.

3. Colchicum; commune. *C. B. Pin.* 67. *Raii Hiſt.* 2. 1170. *Synop.* 3. 373. *Hiſt. Oxon.* 2. 340. *Buxb.* 77. *Rupp. Flor. Jen.* 27. *Tourn. Inſt.* 348. *Elem. Bot.* 388. *Boerh. Ind. A.* 2. 117. *Colchicum*, Offic. J. B. 2. 649. Chab. 225. Dill. Cat. Giſſ. 175. *Colchicum purpureum & Anglicum album*, Ger. 127. Emac. 157. Park. Theat. 153. *Colchicum Anglicum purpureum, ac etiam flore albo, ſed rarius.* Mer. Pin. 28. *Colchicum purpureum, ac etiam flore albo ſed rarius.* Merc. Bot. 1. 29. Phyt. Brit. 29. MEADOW-SAFFRON. *Dale.*

It is found in fat and rich Meadows; and the Root is the Part uſed, which is mortal to thoſe who eat it after the manner of Muſhrooms, by ſuffocating them. *Dioſc.*

The Root is ſuppoſed by ſome to be the Hermodactyl of the Shops: It is of a poiſonous Quality, but is recommended in the Gout, being externally apply'd. *Buxb. Dale.*

4. Colchicum; pleno flore. *C. B. P.* 69. *J. B.* 2. 654. *Cluſ. H.* 202. DOUBLE-FLOWER'D MEADOW-SAFFRON.

5. Colchicum; pleno flore, variegato. *C. B. P.* 68. *M. H.* 342.

6. Colchicum; floribus Fritillariæ inſtar teſſellatis; foliis planis. *M. H.* 2. 340.

7. Colchicum; Chionenſe; floribus Fritillariæ inſtar teſſellatis; foliis undulatis. *Hiſt. Oxon.* 2. 341? *Hermodactylus*, Offic. Park. Theat. 1587. Chab. 228. Mil. Cat. 53. *Hermodactylus Officinarum*, Ger. Emac. 164. Raii Hiſt. 2. 1172. *Colchicum radice ſiccatâ albâ.* C. B. Pin. 67. *Colchicum minus malignum, ſive Hermodactylus Officinarum.* J. B. 2. 658. *Colchicum variegatum.* Corn. 173. HERMODACTYLS. *Dale.*

This is a Root which is brought to us from *Turkey*; but what Plant it is the Root of, we have no certain Knowledge; ſome taking it to be the Root of a *Colchicum*, or a *Dens Caninus*; others, of a tuberous *Iris*; and others, of a Species of *Cyclamen*. They are flattiſh on the one Side, and a little convex on the other, ſomewhat in the Shape of a Heart, of a firm compact Subſtance, yet eaſily powdering, of a light-brown Colour without, and white within, having but little Smell or Taſte.

Hermodactyls are a ſtrong Cathartic, purging tough, ſerous, and phlegmatic Humours from the Joints, and are therefore accounted good for the Gout, and rheumatic Pains in the Limbs; and are an Ingredient in the *Electuarium Caryocoſtinum*, and the *Pulvis Diaturpethi compoſitus. Miller's Bot. Off.*

8. Colchicum; vernum; flore pleno, purpureum. *H. Eyſt. Vern. o.* 2. *F.* 1. *Fig.* 3. *Boerhaave's Index alter Plantarum, Vol.* 2.

COLCOTHAR. The Caput Mortuum of Vitriol. See VITRIOLUM.

COLERITIUM. A Liquor prepared of the corroſive and moſt pernicious Parts of Metals, by virtue of which Gold is try'd, when rub'd againſt the Touchſtone, and which no Metal, but Gold, is capable of reſiſting. By this Liquor we know immediately whether Gold be mix'd with any other Subſtance; for this latter will inſtantly change its Colour from the Application of this Liquor, whereas the pure Gold remains unalter'd. *Rulandus.*

COLES, COLIS, *κωλὶς*, is the ſame as PENIS, which ſee.

COLETTA VEETLA.

The Characters are,

The Leaves are conjugated, and furniſh'd with Prickles: The Flowers monopetalous, quinquefid, and large: The Fruit is bivalve, oblong, containing Seeds.

Boerhaave mentions one Species of this Plant.

Coletta Veetla. *H. Mal.* 9. 77? *Eryngium Zeylanicum, febrifugum, floribus luteis.* Herman. Herbar. Viv. *Melampyro cognata, Maderas patana, ſpinis horrida, an Coletta Veetla.* H. Mal. 9. 77. Plukn. Phyt. 119. 5? H. *Boerhaave's Index alter Plantarum, Vol.* 2.

COLIAS, *Colias, ſive Colia*, Ariſt. *Lacertus maximus minor*, Plinii.

A Fiſh pretty much reſembling a Macarel, but mark'd with black Spots, and oblique Lines upon the Skin. It is good to eat, but its Fleſh is difficult of Digeſtion. They ſalt it.

It has a reſolvent Virtue, being bruiſed, and apply'd. The Brine or Pickle of it, held in the Mouth, cures the Tooth-ach. *Lemery des Drogues.*

COLICA. The Colic.

The Name of this Diſeaſe is one of thoſe not mention'd by *Hippocrates*, and it appears, by the Manner in which *Celſus* ſpeaks of it, to be new in his Time. "*Diocles Caryſtius*, "ſays he, gave the Name of *Chordapſus* to a Diſeaſe of the "ſmall Inteſtine; and call'd another Diſeaſe, which is ſeated "in the great Inteſtine, by the Name of *Ileus*; but, it ſeems, "moſt of our modern Phyſicians call both of theſe Diſorders "the *Colic.*" If we may believe *Pliny*, not only the Name, but the Diſeaſe itſelf was new at the Time of the Emperor *Tiberius*. "The Colic, ſays that Author, crept in upon us "*(irrepſit)* under the Empire of *Tiberius*. None was ever "troubled with that Diſtemper before that Emperor; ſo that "when he came to mention it in an Edict, where he ſpoke of "the State of his Health, it was not underſtood at *Rome*, the "Name of *Colic* being unknown till that Time." The Paſſage of *Celſus*, juſt cited, proves, indeed, that the Name of this Diſeaſe was pretty much a Novelty in his Time; but it does not, from hence, follow, that the Diſeaſe itſelf never was known before the Time he ſpeaks of. *Celſus* himſelf is entirely contrary to *Pliny* in that reſpect; for he is poſitive, that *Diocles* gave that Diſeaſe the Name of *Ileus*. *Hippocrates* ſeems to have comprehended the *Colic* under Pains of the Belly, of which he ſpeaks in ſeveral Places.

It is not at all probable, that the Name *Colic* is ſo new as *Pliny* ſays it is; and, when *Celſus* obſerves, that it is the Name which moſt Phyſicians of his Time gave to that Diſtemper, what he ſays does not imply, that this Name was given it preciſely at that Time. It imports only, that the Phyſicians, in the Time of *Diocles* or *Hippocrates*, had another Name for this Diſeaſe; and that the Term *Colic* had not been long uſed. What confirms me in this Opinion is, that *Celſus* himſelf deſcribes a Medicine for the Colic, which was invented by *Caſſius*, and that this Phyſician valued himſelf on that Invention. *Celſus* reckons *Caſſius* among the Phyſicians of his own Age; but ſo as to let us know, that *Caſſius* preceded him. *Caſſius*, ſays *Celſus*, *valued himſelf*; which Expreſſion implies, that *Caſſius* was not living at the Time when *Celſus* wrote. *Cœlius Aurelianus*, treating of the ſame Diſtemper, mentions alſo the Remedies which *Themiſon* thought proper in that Caſe. Now *Themiſon* lived under the Reign of *Auguſtus*, and before.

There is another Author, who, I believe, is as antient as the two laſt-named, and ſpeaks of the ſame Diſeaſe, calling it by the ſame Name. This is *Philo* of *Tarſus*, who, among other Virtues which he aſcribes to a Medicine of his own Invention, ſays, it is proper for thoſe who are troubled with Pains of the *Colon*. This is the Name of the Inteſtine which is the Seat of this Diſorder, and was alſo the Name of the Diſorder itſelf, as we may collect from the Paſſage of *Pliny* before quoted. But tho' this Name was in Uſe among the Phyſicians who lived under *Auguſtus*, it was not, perhaps, known among the common Sort under the following Reign. And the ſame Thing might poſſibly happen at any Time, with reſpect to certain Names which Phyſicians give to ſome Diſtempers, and which occur in their Writings; but do not, however, immediately paſs into Uſe among thoſe who are not of the ſame Profeſſion. What *Pliny*, then, ſays, that none ever heard any Talk of the *Colic* in the Time of *Tiberius*, is not true, if we take his Words in an abſolute Senſe, when he ſays, that this Emperor was the firſt of Mankind who was afflicted with this Diſorder.

Sydenham, ſpeaking of the epidemical Diſorders of the Years 1670, 1671. and 1672. ſays, that, during all the Years of this Conſtitution, the Blood was ſignally diſpoſed to depoſit hot and choleric Humours in the Inteſtines, whence the bilious Colic prevail'd more than uſual; which Diſeaſe, tho' it ſhould be reckon'd amongſt thoſe of the chronical Kind, and conſequently foreign to my Purpoſe, ſays he, yet, as it depended on the ſame Diſpoſition of the Blood at that Time, from which moſt of the then prevailing Epidemics aroſe, it ſhould, for this Reaſon, be treated of here; but eſpecially becauſe I perceived, that the ſame febrile Symptoms preceded it, which uſually preceded the reigning Dyſentery of thoſe Times: And ſometimes alſo this Diſtemper ſucceeded the Dyſentery, when it had continu'd a long time, and ſeem'd to be going off. But when it did not ſucceed an inveterate Dyſentery, it generally aroſe from a Fever, which afflicted the Patient only for a few Hours, and ordinarily terminated in this Diſeaſe.

It principally attack'd young Perſons of a warm and bilious Conſtitution, eſpecially in the Summer-ſeaſon. A violent and intolerable

intolerable Pain of the Bowels attends it, which ſometimes ſeem to be tied together, and at others cloſely purs'd up, and bor'd thro', as it were, with a ſharp-pointed Inſtrument; the Pain abates between whiles, and immediately the Fit comes on again. In the Beginning the Pain is not ſo certainly fix'd in one Place, as in the Progreſs of the Diſorder; and the Vomiting is leſs frequent, and the Belly more eaſily moved by Purgatives; but, as the Pain increaſes, it becomes more obſtinately fix'd in one Place, frequent Vomitings ſucceed, and the Belly is leſs ſoluble, till at length the unavoidable Violence of the Symptoms occaſions a total Inverſion of the periſtaltic Motion of the Inteſtines, (unleſs the Patient be reliev'd ſooner) and conſequently an Iliac Paſſion, in which Diſtemper all Cathartics immediately become emetic, and Glyſters likewiſe, together with the Fæces, are forc'd up the inteſtinal Tube, and ejected by Vomit. If the Matter thus ejected be ſincere, it is ſometimes green, ſometimes yellow, or of ſome unuſual Colour.

As all the Signs of this Diſeaſe clearly ſhew it to ariſe from ſome ſharp Humour or Vapour thrown off from the Blood into the Inteſtines, I judge the primary curative Indication to be, firſt, that both the antecedent Humour in the Veins, and that contain'd in the Inteſtines, be evacuated; ſecondly, that the great Tendency of the Humours to the Parts affected be check'd, and the intolerable Pain eaſed by exhibiting Opiates.

In order hereto I bleed freely in the Arm, if no Blood has been taken away before, and, in three or four Hours after, adminiſter an Opiate. The next Day I direct ſome lenient Purgative, and order it to be repeated a ſecond time at a Day's Interval, and ſometimes a third time, according as the Remains of the Humour ſeem to be more or leſs in Quantity. But it muſt be obſerved, that if this Diſeaſe proceeds either from a Surfeit of Fruit, or any other kind of Aliment of difficult Digeſtion, whence depraved and corrupt Juices are firſt receiv'd into the Blood, and thence ſeparated into the Inteſtines; in theſe Caſes the Stomach muſt firſt be well cleanſed by drinking Poſſet-drink plentifully, and vomiting it up again; which being over, an Opiate muſt be given, and a Vein open'd the next Day; and, in other Particulars, the Proceſs above delivered is to be followed.

But when the Violence of the Pain, and the Vomiting, whence the Inteſtines are in a manner inverted, do not yield to Purgatives, they muſt be made ſtronger; for it avails not to exhibit a gentle Cathartic, unleſs, perhaps, the Patient be eaſy to work upon, which ſhould be carefully inquired into, becauſe ſuch a Medicine, being too weak to make its Way thro' the inteſtinal Tube, does more Miſchief, the Vomiting and Pain being increaſed by its languid and ineffectual Motion. A lenitive purging Potion, made of an Infuſion of Tamarinds, Sena, and Rhubarb, in which Manna and Syrup of Roſes may be diſſolv'd, is to be prefer'd to other Purges, becauſe it diſturbs and agitates the Juices leſs. But if this cannot be retain'd in the Stomach, either becauſe the Patient has an Averſion to a liquid Medicine, or on account of the Vomiting, recourſe muſt neceſſarily be had to Pills, amongſt which I eſteem the *Pilulæ Cochiæ* moſt, becauſe they operate the moſt certainly in this and moſt other Caſes. But where, either thro' the Weakneſs of the Stomach, or the Vomiting, Pills cannot be retain'd, I firſt preſcribe an Opiate, and in a few Hours after a Purgative, at ſuch a proper Interval, for Inſtance, that the latter may not be overcome, and rendered ineffectual, but continue long enough in the Stomach to communicate its purging Quality thereto, ſo that it may at length operate immediately after the Virtue of the Opiate is gone off. However, if the Caſe will permit, 'tis beſt to give the Purge a conſiderable time after the Opiate, becauſe it operates with Difficulty, even twelve Hours after the Exhibition of the Opiate.

But becauſe a Purge always increaſes the Pain in this and moſt other Diſeaſes, where Opiates are indicated, at leaſt when the Operation is over, the Patient ſometimes finding Relief whilſt it works, I generally give an Opiate immediately after it has done operating, and order it to be repeated daily, Morning and Evening, on the intermediate Days, that I may more certainly eaſe the Pain, till Purging has been ſufficiently perform'd.

When the Affair of Purging is over, I endeavour to check the violent Motion of the Humours, which is all that now remains to be done, by exhibiting an Opiate every Morning and Evening, which muſt ſometimes be repeated more frequently: nor have I ever been able to eaſe very violent Pains, without adminiſtering a larger Doſe than ordinary, and repeating it. For what might be ſufficient to overcome another Diſeaſe, proves ineffectual in this; the Violence of the Pain deſtroying the Force of the Medicine. Opiates may be ſafely repeated whilſt this Kind of Pain continues violent, but not after it ceaſes; for which Reaſon I repeat the Opiate in proportion to the Violence of the Pain, till it either goes quite off, or abates conſiderably; obſerving, however, to adminiſter it at ſuch convenient Intervals, that I may ſee what Effect is to be hoped for from the former Doſe, before I proceed to give another. But, in general, unleſs the Pain be very ſevere, it will ſuffice to exhibit an Opiate Morning and Evening. The Opiate I commonly uſe is my Laudanum, ſays *Sydenham*, of which I give ſixteen Drops at a time, in ſome diſtil'd cordial Water; or the Doſe may be augmented occaſionally, in proportion to the Violence of the Pain.

This plain Method, whereby the peccant Humour is diſcharged by Bleeding and Purging, and then Eaſe procured by means of Opiates, has always ſucceeded better with me than any other I ever knew; whereas carminative Glyſters, injected in order to expel the ſharp Humours, prolong the Diſeaſe, by raiſing a Diſturbance in the Juices. But I would have it particularly remark'd here, that tho' I have affirm'd, that Bleeding and Purging muſt neceſſarily precede this quieting Method, yet ſometimes, when the Caſe demands it, omitting both, the Cure is to be begun with Opiates. For Inſtance, when, by reaſon of ſome preceding Illneſs, large Evacuations have been uſed not long before the Colic began; for frequently ſuch as have lately recovered from ſome other Diſeaſe, are ſuddenly attack'd with this, from a Weakneſs of the Bowels, eſpecially if a greater Degree of Heat be occaſioned, by too free an Uſe of Wine, or any ſpirituous Liquor. Now, in this Caſe, I eſteem it not only unneceſſary, but detrimental, to raiſe freſh Commotions, by giving more Purges. Not to mention, that the Patient, in this Diſeaſe, has generally cleanſed his Bowels ſufficiently, by the frequent Uſe of Glyſters, before applying to a Phyſician; ſo that, partly upon this Account, and partly on account of the long Continuance of the Diſeaſe, it ſhould ſeem, that only Opiates ought to be exhibited.

In *Auguſt* 1671. I was call'd to *Belvoir-Caſtle* by Lord *Anneſley*, who had been afflicted for ſome Days with a bilious Colic, attended with exquiſite Pain, and frequent Vomiting. He had try'd all kinds of Glyſters, and other Remedies directed by the neighbouring Phyſicians: I immediately adviſed the repeated Uſe of Opiates, in the manner above delivered; and by this means he recover'd in a few Days, and return'd to Town with me in good Health.

As this Pain is more ſubject to return ſpontaneouſly than any other, all Occaſion of Relapſe is to be prevented, by exhibiting an Opiate twice a Day for ſome time; but if it ſhould return upon omitting the Opiate, as it ſometimes happens, I have hitherto diſcover'd nothing that will ſo certainly promote the Cure, as taking long Journeys on Horſeback, or in a Coach, obſerving, in the mean while, to give an Opiate every Morning and Evening; for, by this kind of Exerciſe, the morbific Matter is brought into the Habit of the Body, and the Blood, broken and divided by the continual Motion, as it were, undergoes a new Depuration; and, at length, the Bowels are greatly ſtrengthen'd and refreſh'd by this way of rouſing the natural Heat. Nor do I think it beneath me to own, that I have frequently cur'd this Diſtemper by this Exerciſe, when all other Means had fail'd me. But this muſt not be attempted, unleſs ſufficient Evacuations have been previouſly made; and it muſt be perſiſted in for ſeveral Days afterwards.

During theſe Years, one of my poor Neighbours, yet living, was ſeiz'd with a moſt violent bilious Colic, which he had long endeavoured ineffectually to relieve by Cathartics, Glyſters, and ſwallowing Leaden Bullets. I had recourſe here to the frequent Uſe of Opiates; nor did they prove unſucceſsful, for he remain'd tolerably eaſy whilſt he was taking them; but, perceiving they only palliated, and did not eradicate the Diſorder, for it return'd immediately after the Effect of the Opiate was gone off, I had Compaſſion on the Man, labouring under low Circumſtances, and a violent Diſeaſe, and lent him a Horſe to ride to a conſiderable Diſtance, as above directed; and, after riding a few Days, his Bowels became ſo ſtrong, as to be able to expel the Remains of the Diſeaſe, and he recover'd perfectly by this means without the Aſſiſtance of Opiates.

And, to ſpeak the Truth upon this Occaſion, I have always known this kind of Exerciſe uſed with great Succeſs, not only in this Caſe, but in moſt other Chronical Diſeaſes, provided it was reſolutely perſiſted in. For if we conſider, that the lower Belly, wherein all the Secretory Organs are ſeated, is greatly agitated by this Exerciſe, perhaps ſome thouſand times a Day, we ſhall readily believe, that they are hereby enabled to ſhake off any groſs ſizy Humour fix'd there, and, which is ſtill more material, ſo ſtrengthen'd by this powerful Rouſing of the natural Heat, as to be able to perform the Functions of purifying the Blood, aſſign'd them by Nature, in a proper manner.

In young Perſons of a hot Conſtitution I direct a cooling and inraffating Diet, ſuch as Cremor of Barley, Panada, and a ſmall Chicken, or a boil'd Whiting, every third Day, if the Appetite continues craving. I allow only Small-beer, or Milk boil'd with thrice the Quantity of Water, for Drink; and I indulge nothing further, unleſs Riding, which is neceſſary to complete the Cure, requires a more nouriſhing Diet, and the Uſe of ſome generous Liquor, to recruit the Loſs of Spirits occaſion'd by Exerciſe.

Moreover, 'tis manifeſt from Obſervation, that when this Diſeaſe, thro' wrong Management, proves of long ſtanding, ſo that the Bowels become weak, and the Patient is extremely emaciated and debilitated, the free Uſe of Plague-water, Aqua Mirabilis,

Mirabilis, or ſome other Cordial, which was moſt grateful to him when in Health, relieves at this time beyond Expectation; for, by this means, the ſmall Remains of the natural Heat are rouſed, and the preternatural Ferment lodged in the Bowels, which occaſions freſh Fits between whiles, rendered inactive.

The ſlender Diet above-mention'd muſt be continued not only thro' the Courſe of the Cure, but for ſome time after the Diſeaſe is gone off; for as it is more ſubject to return than any other, and, beſides, is ſeated in the principal Inſtruments of Concoction, which are the Bowels, already weaken'd thereby, the leaſt Error of this kind will immediately occaſion a Relapſe; and, therefore, all Aliment of difficult Digeſtion muſt be avoided, both in this and all other Diſorders of the Bowels, and Food of eaſy Digeſtion uſed very ſparingly.

Some Women are afflicted with a hyſteric Diſorder nearly reſembling the bilious Colic in the Acuteneſs of the Pain, its Seat, and the yellow and green Colour of the Matter diſcharg'd by Vomit.

Females of a lax and groſs Habit of Body are principally ſubject to it; as are likewiſe ſuch as have formerly had ſome hyſteric Indiſpoſition; or (which frequently happens) thoſe who have juſt recover'd of a difficult Labour, occaſion'd by the Largeneſs of the Infant, whereby the Mother's Strength and Spirits were nearly exhauſted. It attacks the Region of the Stomach, and ſometimes the Parts juſt below it, with as violent a Pain as accompanies the Colic, or Iliac Paſſion, which is ſucceeded by exorbitant Vomitings, ſometimes of green, and ſometimes of yellow Matter; and with theſe Symptoms, as I have frequently obſerv'd, there is joined a greater Lowneſs of Spirits, and Deſpondency, than occur in any other Diſeaſe. The Pain goes off in a Day or two, but returns again in a few Weeks after, and rages with as much Violence as ever, before the Fit terminates. 'Tis ſometimes attended with a remarkable Jaundice, which vaniſhes ſpontaneouſly in a few Days. When the Symptoms are all gone off, and the Patient ſeems pretty well recovered, the leaſt Diſturbance of Mind, whether proceeding from Anger or Grief, to both which Women are extremely liable in this Caſe, is ſubject to occaſion a Relapſe. Walking alſo, or any Exerciſe uſed too ſoon, will do the ſame; ſuch Cauſes being productive of Vapours in lax and weak Conſtitutions. I uſe the Term Vapours with the Vulgar, but whether they be Vapours, or Convulſions of particular Parts, the Phenomena may be equally accounted for.

When theſe Vapours, or Convulſions, attack any particular Part of the Body, they produce ſuch Symptoms as are natural to the Part affected; whence, tho' they every-where conſtitute the ſame individual Diſtemper, yet they artfully reſemble moſt Diſeaſes incident to Mankind, as plainly appears from the Diſeaſe under Conſideration, which exactly counterfeits the bilious Colic, when it attacks the Parts adjacent to the Colon. And this is equally manifeſt alſo in many other Parts of the Body affected with this Diſeaſe. For Inſtance, it ſometimes attacks one of the Kidneys with a violent Pain, occaſioning exceſſive Vomiting; and, being frequently propagated along the Ureters, it counterfeits the Stone; in which Caſe the Pain being increas'd by Glyſters, and other Lithontriptic Medicines, uſed to bring away the Stone, it continues with the ſame Violence for a long time, and ſometimes deſtroys the Patient, contrary to its Nature, as being of itſelf not dangerous. I have alſo known it occaſion a Train of Symptoms, exactly like thoſe of the Stone in the Bladder. I was call'd up lately in the Night to a Counteſs in the Neighbourhood, who was ſeized, on a ſudden, with a very ſevere Pain in the Region of the Bladder, along with a Suppreſſion of Urine; and having learn'd, that ſhe was ſubject to various hyſteric Complaints, I conjectur'd, that the Diſorder was miſtaken, and therefore forbid the injecting a Glyſter, which her Maid had got in Readineſs, as apprehending it might be augmented thereby; and inſtead of this and the Emollients brought by the Apothecary, ſuch as the Syrup of Marſhmallows and others, I adminiſtered an Opiate, which ſoon removed the Diſorder. In reality, no Part of the Body, either external or internal, is quite free from the Attacks of this Diſtemper. Thus, in the Jaws, Hips, and Legs, it cauſes intolerable Pain; and, when it goes off, leaves ſuch a Tenderneſs of the Part behind, that it cannot bear the Touch, as if the Fleſh had been bruiſed with abundance of Stripes.

Having now, by way of Digreſſion, delivered ſome Particulars belonging to the Hiſtory of the hyſteric Colic, to prevent its being taken for the bilious Colic, I will briefly treat of ſome other Particulars relating to the Cure of the Symptom of Pain attending it; for the radical Cure of the Diſeaſe itſelf, which is effected by removing the Cauſe, is a quite different Subject.

Bleeding and repeated Purgation, which are ſo manifeſtly indicated in the bilious Colic, at the Beginning, ſhould be omitted here; for Experience ſhews, that the Pain, and other Symptoms, are increas'd by the Diſturbance cauſed by theſe Evacuations; and I have often obſerved, that the Repetition of the moſt gentle Glyſters have occaſioned a continu'd Train of Symptoms: For, if we take a View of the Cauſes whence this Diſeaſe generally proceeds, both Reaſon and Experience teach, that it is rather owing to an irregular Motion of the Spirits, than to any Depravity of the Juices. Now theſe Cauſes are either copious and preternatural Hæmorrhages, inordinate Paſſions of the Mind, violent Exerciſe of the Body, or the like; in all which, ſuch Medicines as increaſe the Hurry of the Spirits are improper, and Opiates are to be exhibited in their ſtead, tho' the green and ill Colour of the Matter ejected by Vomit ſhould ſeem to indicate the contrary; for the Conſideration of Colours is of too ſubtile and refin'd a Nature to authorize ſuch Evacuations as Experience proves to be detrimental; and I doubt not but this Diſeaſe, which, tho' it be very painful, does no way endanger Life, has proved fatal to abundance of Perſons, thro' Miſtakes of this kind. To this may be added, that, tho' a very powerful Emetic be given To-day, in order to expel the ſuppoſed Cauſe of the Diſeaſe, yet the Patient will the next Day vomit a Matter equally green, or of ſome other bad Colour, like the former.

But it muſt be obſerved, that ſometimes there is ſuch a Fulneſs of Blood and Juices, as reſiſts the Operation of Opiates ſo powerfully, that, how often ſoever they be repeated, they are not ſufficient to quiet the Diſturbance, unleſs Bleeding or Purging precede. I have remarked this in Women of a very ſanguine Conſtitution, and robuſt Make. This being the Caſe, one or more of theſe Remedies, and perhaps both, muſt be previouſly uſed, in order to make way for the Opiate, another Doſe whereof will produce the Effect for which it is given; whereas, before Bleeding or Purging, the largeſt avails not. But this is an uncommon Caſe, and theſe Remedies are not to be repeated. Theſe Particulars being premiſed, where there is a Demand for Opiates, we are to proceed in adminiſtering them according to the Method ſpecify'd in treating of the bilious Colic: They are to be repeated, in point of Frequency, in proportion to the Abatement of the Pain. This Method, indeed, is only adapted to relieve the preſent Symptom of violent Pain; for I have not undertaken to treat of that, in this Place, which removes the Cauſe of the Diſeaſe.

But as this Diſtemper, both in hypochondriac and hyſteric Subjects, often terminates in a Jaundice, which increaſes proportionably as the original Diſorder goes off, it muſt be remark'd, that, in curing this Species of Jaundice, all Purgatives are either wholly to be refrain'd from, or none exhibited except Rhubarb, or ſome other gentle Lenitive; for 'tis to be apprehended, that a new Commotion may be occaſioned by Purging, and conſequently a Return of the Symptoms. In this Caſe, therefore, 'tis more expedient to give no Medicines at all, as the Jaundice, ariſing from this Cauſe, abates by degrees ſpontaneouſly, and totally vaniſhes in a ſhort time; but if it continues long, and ſeems to go off ſlowly, we muſt have recourſe to Medicines. I direct the following.

> Take of the Roots of Madder and Turmeric, each an Ounce; the Roots, together with the Leaves of the greater Celandine, and the Tops of the leſſer Centaury, each an Handful: Boil them in equal Quantities of *Rheniſh* Wine and Spring-water to a Quart, to which, when ſtrain'd off, add two Ounces of the Syrup of the Five opening Roots: Mix them together for an Apozem; of which let the Patient take half a Pint warm, every Morning and Evening, till the Cure is completed. *Sydenham.*

As there are ſeveral Species of Colic beſides thoſe taken notice of above, and other Methods of treating theſe, I ſhall add the following Treatiſe on this Subject.

Among other Affections incident to the nervous Syſtem may well be reckon'd thoſe violent Pains which afflict the Inteſtines, as being very ſenſible and nervous Parts, endued with a propulſive Motion, and, by Conſent, affecting other Parts of the nervous Frame, in Places more remote, being productive of very pernicious Diſorders.

As the ſmall and great Inteſtines differ with reſpect to their Contexture, Capacity, Function, and Situation, ſo the Pains which affect them are no leſs diſtinguiſh'd by the Places where they are ſeated, their Degree of Violence, their Danger, and other acceding Diſorders.

It is obſerv'd, that Pains in the ſmall Inteſtines are far more ſevere and acute, than in the great ones. This is abundantly evident from the Effects of ſtrong Cathartics, and Poiſons of a cauſtic Quality, in exciting moſt ſevere, griping, and racking Pains above and below the Navel, as well as in the Middle of the Belly. For this Reaſon *Hippocrates* calls all Pains of the Inteſtines by the general Name of *Iliac*, making no mention in his Writings of the *Colic* Pain; tho', in our Times, almoſt all Pains affecting the Inteſtines are call'd *Colic*, and ſo accounted.

Thoſe Pains are more properly to be accounted *Iliac*, which affect the Middle of the Belly, either by ſpaſmodic Conſtrictions, or extraordinary Inflations; whereas *Colic* Pains are ſeated in the Right and Left Hypochondria, and, by their Preſſure and Diſtention, create a vaſt Uneaſineſs. *Hollerius, de Morb. intern. Cap.* 39. gives the following Deſcription of the Pain of the Colic: "It is ſettled in one particular Place, like

"a Stake

" a Stake that is fix'd, yet ſometimes makes Excurſions to the " Groins, to the Left Kidney, or both Kidneys; ſometimes " takes a revolving Courſe upwards, ſhifting its Place, accord- " ing to the Flexures of the Colon, which, after it has left the " Rectum, is turn'd towards the Left Groin, from whence it " aſcends to the Left Kidney, where it is narroweſt; and this " Narrowneſs, with its Flexure at the ſame Place, is the " Cauſe why the Pain is more intenſe in that Part. Hence " the Colon, becoming more lax and enlarg'd, is extended to " the Spleen, and proceeds under the Liver, where it ſome- " times adheres to the Gall-bladder, and from thence deſcend- " ing to the Right Ileon, ends at laſt in the *Inteſtinum Cæ- " cum.*"

We take the whole Region of the Inteſtines for the Seat and Subject of the Pain; yet ſo as that, when one Part of it is affected in an extraordinary Manner, the whole inteſtinal Tube, from the Fauces to the Anus, ſuffers by Conſent; or, to ſpeak more properly, the preternatural Motions, and even the very Inverſions and Injuries of the periſtaltic Motion, are communicated to all the reſt, in ſuch a manner, that, if the Cauſe of the Diſeaſe be very conſiderable, the whole nervous Syſtem is, at the ſame time, affected to an extraordinary Degree.

The more ſevere and threatening Affections and Symptoms, which either accompany or ſucceed the Pains of the Inteſtinum Jejunum, Ileon, Colon, or of the Rectum, in the blind Hæmorrhoids, principally ariſe from a Convulſion of the nervous Parts, and are as follows: A Shivering, a Trembling of the external Parts, cold Sweat, total Loſs of Strength, Reſtleſneſs, Toſſing, extreme Anxiety, and internal Uneaſineſs, Hiccups, Vomiting, Conſtipation of the Belly, Teneſmus, Suppreſſion of Urine, Spaſms of the Bladder, a Fever, a contracted Pulſe, Difficulty of Breathing, and ſometimes epileptic Convulſions, and a Delirium.

As the very Nature, or immediate Cauſe, of all Pain, conſiſts in too ſtrong a Diſtenſion, Diſtraction, or Expanſion, of the Membranes and nervous Parts, or in too violent and convulſive a Conſtriction or Compreſſion of the ſame, ſo the Pains of the Inteſtines proceed from the ſame Cauſe; for either ſome particular Parts of the Inteſtine are diſtended and diſtracted by retained and included Flatulences, in a violent Manner, as if they threaten'd a Solution of Continuity, or theſe Parts are contracted and compreſſed by a ſpaſmodic Conſtriction, cauſing a very painful Senſation from ſome acrid, cauſtic, pungent Humour contain'd within the Inteſtines, or in their membranous Subſtance. For this Reaſon, the old Diſtinction, made by the Schools, of a Pain in the Inteſtines, or Colic, into *flatulent* and *ſpaſmodic*, is ſtill retain'd, not without Reaſon.

In a flatulent Pain of the Inteſtines, the Abdomen becomes turgid and inflated to a ſurpriſing Degree; and ſo great oftentimes is the Force of the Flatulences, as to diſtend the Skin in ſuch a manner, that the Pain is exaſperated by the very Touch; and there are Inſtances of a Hernia Umbilicalis proceeding from the Violence of theſe Flatulences. The Pain, in this Caſe, is acute; the Belly very much conſtipated; there is an extreme Anxiety or Oppreſſion, attended with an Inflation of the Stomach, and a great Difficulty of Reſpiration, which are ſucceeded by Eructations, which afford ſome ſlight Relief; and, as an Acceſſion to the Diſtemper, the Patient is ſeized with cardialgic Affections, and makes fruitleſs Efforts to vomit.

In the ſpaſmodic or convulſive *Colic*, as it is call'd, there is a ſtraiter Compreſſion of the Belly, with a Retraction of the Navel inwards, an extreme Coſtiveneſs, ſo as not to tranſmit a Flatus, and hardly to admit a Clyſter. There is, beſides, a moſt ſevere Pain in the Loins; the Peritonæum itſelf, with the Muſcles of the Abdomen, is violently contracted; and theſe Symptoms are attended with a Refrigeration of the extreme Parts, Trembling, Shivering, a hard and contracted Pulſe, extreme Anxiety, and a great Diſpoſition to fainting.

We think it proper here to obſerve, that there is a remarkable Difference between a Flatulence of the Inteſtines, and a flatulent Pain of the Inteſtines; for the former proceeds only from a Decay of the Tone, Motion, and Strength of the Inteſtines, eſpecially in aged Perſons, and thoſe who have made an intemperate Uſe of cold and flatulent Food, or have their Bodies much weaken'd by ſome preceding Diſeaſe; but the latter never happens without ſeverely affecting the Inteſtines, is not eaſily remov'd, and is attended with more formidable Symptoms; whereas the other ſoon terminates in Eructations, and a flatulent Stool or two.

We muſt not omit alſo to obſerve, that nephritic Pains, which proceed from the Stone in the Kidneys, are carefully to be diſtinguiſhed from thoſe, which have their Cauſe ſeated in the Inteſtines themſelves. The confounding of theſe together has long ſince been complain'd of by *Galen*, and his Followers. How nearly ſoever theſe Diſorders may agree, with reſpect to their Symptoms and Effects, there is this remarkable Difference between them, that the Pain, which proceeds from the Stone in the Kidneys, is more fix'd in the Loins, as well as more obſtinate and acute, than in the ſpaſmodic Colic, which, on the contrary, cauſes a greater Conſtipation of the Belly, than nephritic Pains. Beſides, the Pain of the Colic remits after Evacuation of the Belly by a Clyſter, which does not happen in nephritic Caſes. In theſe latter alſo the Patient is more ſtimulated to an Emiſſion of Urine, which, beſides, appears very thin in the Paroxyſm, aqueous, and ſometimes ſandy. Laſtly, in nephritic Diſorders, the Pain is propagated ſucceſſively through the Tract of the Ureters, which is a Symptom not obſerved in Pains of the Inteſtines. But they, who have laboured under one or two Fits of the Stone, are beſt qualified to diſcern its characteriſtical Marks.

With reſpect to the Theory of Pains of the Inteſtines, there is one thing principally to be obſerv'd, which is, that the Cauſe, from whence they ariſe, has its Seat in a quite different Place from that where the Exacerbations of thoſe Pains are felt. Thus, there never happens an Inflation of an Inteſtine, without a preceding or attending ſpaſtic Stricture, Straitneſs, or Obſtruction from Excrements, or ſome tenacious Humour, of ſome Inteſtine in another Part or Tract. The inteſtinal Tube indeed is never without Flatulences, on account of the Heat and aqueous Humour conſtantly reſident therein; but then theſe Flatulences create no Uneaſineſs, becauſe they have free Space to expand themſelves on all Sides; but as ſoon as a Bar is put to their Tranſmiſſion, and, by being intercepted, they become collected, confined, and, in a manner, incarcerated, in one particular Place, they exert their expanſive Force with great Violence upon the Membranes of the Inteſtines, by diſtending and diſtracting them to an extraordinary Degree.

Whenever a Convulſion, Stoppage, or extraordinary Compreſſion, is produced in ſome Part of the ſmall Inteſtines, as it happens in a Hernia Scrotalis, or from Worms, or harden'd Fæces; or when there is a Stagnation of a conſiderable Quantity of Excrement in the Beginning of the Colon on the Right-ſide, which cannot be remov'd, there ariſes a great and moſt painful Inflation of the Abdomen above and below the Navel, and in the Middle of the ſame.

If the Inteſtinum Rectum, or lower Part of the Colon, be affected with a violent Convulſion, the great Flexure of the Colon, in the Left Hypochondrium towards the Spleen, together with that Part of it, which is ſeated beneath the Stomach, and near the Liver, becomes inflated in a ſurpriſing Manner. But when it happens, as is frequently the Caſe in hypochondriac and hyſteric Diſorders, that the Beginning of the Jejunum, or End of the Duodenum, is ſpaſmodically affected, there preſently ariſes, on account of the neighbouring ſuperior meſenteric and intercoſtal Branch of the Nerves extended upon the Jejunum, a moſt ſevere Pain in the Loins; the Duodenum and Stomach are filled with Flatulences to a ſurpriſing Degree, and the free Motion of the Diaphragm is obſtructed; whence proceed a great Anxiety of the Præcordia, a Straitneſs of Reſpiration, with frequent, and almoſt endleſs, violent Eructations. I have, more than once, in the ſpaſmodic Colic, obſerv'd the lower Part of the Colon contorted like a Rope, and the ſmall Inteſtines expanded to the Thickneſs of a Man's Arm.

Pains of the Inteſtines are ſo frequent, that no Age, Sex, Habit of Body, or Conſtitution, are exempted from them; but they principally infeſt Infants, Women, and old Perſons, and thoſe who are of a tender and weak Nature, and of a quick and delicate Senſation.

There are different Cauſes of theſe ſevere and bitter Pains of the Inteſtines; and, according to the Nature, Diſpoſition, and Force of thoſe Cauſes, are the Symptoms diverſified, and the Danger more or leſs to be apprehended. A very frequent Cauſe is a Retention and Induration of the Fæces in the large Inteſtines, and ſometimes in the ſmall ones, proceeding, in a great meaſure, from a Load of acido-viſcid Crudities, dry, juiceleſs, and aſtringent Food, immoderate Sleep, and a Way of Life unuſed to Exerciſe and Motion. In this obſtructed and coſtive State of the Belly, whenever it happens, that, upon the Uſe of ſweet Aliments, and ſuch as are ſubject to ferment, of fat Fleſh-meats, eſpecially Mutton, with drinking of cool Liquors, and Refrigeration of the Feet and Belly, the Inflation of the Abdomen is increaſed, and the Pain exaſperated, we may hence diſcern the Nature and Marks of the *flatulent* Colic, which the Antients aſcribed to a cold Cauſe; and whoſe Generation, and frequent Attacks, ſuppoſe an Imbecillity of the Inteſtines, and a Want of due Tone and Strength in thoſe Parts; whence this ſort of Colic is very incident to fat and phlegmatic, as well as old and infirm Perſons, eſpecially if they take not due Care to keep the Cold from their Feet, Back, and Belly.

Another kind of Colic is the *bilious*, which, according to the Antients, owes its Original to a hot Cauſe, and ariſes from a bilious, acrid, corrupted Humour, collected in too great Plenty, and ſtagnating in the ſmall Inteſtines, eſpecially the Duodenum. It frequently ſucceeds a great Fit of Anger, eſpecially in Perſons of a hot and dry Conſtitution, in a hot and ſultry Seaſon, in Youth or riper Years; or it proceeds from an exceſſive Uſe of hot and ſpirituous Liquors, and by cooling Potions, which obſtruct Perſpiration, is exaſperated, and rages with the greater Violence. The moſt remarkable Symptoms, which attend it, are,

are, a Hoarſneſs of the Voice, the Heart-burn, a continual Loathing of Food, a Vomiting of porraceous bilious Matter, the Hiccups, a hot and feveriſh Diſtemperature, Reſtleſneſs, an intenſe Thirſt, a Bitterneſs in the Mouth, high-colour'd Urine, and little in Quantity, which is ſometimes ſucceeded by frequent and bilious Stools.

Infants alſo are ſubject to be moleſted with very ſevere and griping Pains of the Inteſtines, occaſioned by a Stagnation of their Milk, which is very much corrupted, and rendered corroſive, by a Mixture of Bile. Hence the Fæces are, for the moſt part, green, few, and coagulated, and are ſometimes ſucceeded by epileptic and mortal Convulſions, from a Corroſion of the Coats of the Inteſtines.

Children are very ſubject to the Colic, which proceeds from Worms collected together, and fix'd in the Inteſtinum Ileum. This Diſorder is often attended with a continual Fever, Syncope, and a lancinating Pain of the Belly, as if it were perforated with an Auger. We find Inſtances of this kind in *Zacutus Luſitanus*, *Prax. admir. Lib.* 2. *Obſ.* 33. and *Hildanus*, *Cent.* 1. *Obſ.* 57.

Nor are Women in Childbed ſecure from very ſevere Pains of the Abdomen, which principally ſeize them on a Defect of the lochial Flux, and when the Belly is not rightly bound after the Birth, or has had its Parts refrigerated.

The Pain of the Colic, and that to a vehement Degree, is alſo very incident to hypochondriacal Perſons; and principally ſeizes the Sides, ſeating itſelf either in the Right Hypochondrium, under the Os Ileum, when the Beginning of the Colon happens to be ſtuffed with Fæces and Flatulences; or under the Liver, the Flexure, which the Colon there makes, being diſtended with Flatulences and Excrements. But the Pain is moſt intenſe in the Left-Hypochondrium, under the Diaphragm and Spleen, becauſe the greateſt Flexure of the Colon is there ſituated; and the attendant Symptoms are a Conſtipation of the Belly, Difficulty in making Urine, Anxiety, Oppreſſion, internal Inquietude, and Decay of Strength; for, in what they call the *hypochondriacal Diſeaſe*, the periſtaltic Motion of the Inteſtines being very much injur'd and vitiated, neither Fæces nor Flatulences have their due Courſe or Deſcent towards the lower Parts, but, ſtopping in the Inteſtines, eſpecially at their Flexures, where their moving, contractile, and elaſtic Force is leaſt powerful, there ſtagnate, and excite thoſe troubleſome and painful Diſtentions.

There are Pains of the Inteſtines, which are of a different Nature and Origin from the preceding, being cauſed by an impure and acrimonious Serum, ſeated within the Coats of the Inteſtines. Such a vitiated Fluid is often obſerv'd in ſcorbutic Bodies, and thoſe who are infected with the ſcorbutic Purples, or the Itch; and even in the Gout, when this corrupted Matter, through a Decay of natural Strength, is retain'd, and not tranſmitted to the extreme Parts; or from theſe, on account of various external Cauſes, by a Metaſtaſis tranſlated within the Body. This Species of Colic, exerting itſelf principally in Convulſions, belongs to the ſpaſmodic Kind, and is attended with very ſevere Symptoms. It is alſo difficult to be cur'd, and threatens an Inflammation, nor eaſily ceaſes to moleſt the Patient, till the noxious Matter be again repel'd to the Extremities. See ARTHRITIS.

Nor muſt we omit to take notice of a very bad and ſpaſmodico-convulſive kind of Colic, by ſome call'd the *ſanguineous* Colic, becauſe it proceeds from Blood collected within the Coats of the Inteſtines, eſpecially of the Colon, there ſtagnating, and very much diſtending the ſenſible nervous Membranes. Women are uſually ſubject to this Diſorder, from a Suppreſſion of the menſtrual Flux, and then it is called *hyſteric*; or it may proceed from a Stoppage of the ſtated Flux of the Hæmorrhoids, and then it is properly term'd *hæmorrhoidal*; and, tho' often occurring in Practice, yet the Cauſe of it is, for the moſt part, unregarded by the Phyſician. Men of a good, robuſt, and ſanguine Conſtitution, who are high Feeders, or indulge themſelves in the free Uſe of Wine, and lead an idle Life, are the uſual Subjects of this Diſtemper. Of this ſanguineous Colic we have many Examples and Obſervations by the very learned *C. Piſo*, in his excellent Treatiſe of *Diſeaſes proceeding from a Collection of corrupt Seroſities*.

There is a very ſevere kind of ſpaſmodic Colic, which has its Origin from Fumes, which fly off in the Working of Lead, and are taken into the Mouth, and ſwallowed with the Spittle. This Diſorder is very common among the Workmen employ'd in melting and purifying Lead, or in ſeparating Lead from Silver in docimaſtic Furnaces, as it is practiſed among the Miners in the *Black Foreſt* in *Germany*, and the *Peak* in *Derbyſhire*, and other Parts of *England*. The Patient is affected with an intolerable Pain of the Inteſtines, an extreme Coſtiveneſs, which, with Difficulty, yields to Clyſters or Laxatives, a Retraction of the Navel inwards, a great Reſtleſneſs, Contraction of the Limbs, Nauſea, and continual Retchings. This Diſorder is very ſubject to terminate in a true Palſy, or a ſpaſmodic Aſthma, and often miſerably torments the Patient for a long time together. Potters, who are employ'd in glaſing Earthen Ware with Lead, are obnoxious to the ſame Diſeaſe; and we are aſſured by practical Obſervations, that Medicines, which have Lead in their Compoſition, as the *Tinctura Antiphthiſica*, or the Magiſtery of Lead, which Quacks frequently uſe for ſuppreſſing a Gonorrhœa, leave behind them an invincible Coſtiveneſs, attended with moſt tormenting Pains. The great and dangerous Inconveniences occaſion'd ſome Years ago in *Szabia*, by edulcorating acid Wines with Litharge, was exquiſitely and learnedly ſet forth in a Diſcourſe made by the Preſident *Zeller*, *De Noxa Vini Litharg;rio Mangoniſati*, "of the Hurtfulneſs of Wine adulterated with Litharge." Hence proceed not only Pains in the Stomach, Abdomen, and the Left Hypochondrium, with obſtinate Coſtiveneſs, but alſo a convulſive Colic, and even a convulſive Aſthma. This Species of Colic is call'd the BELLON.

There is yet another kind of Colic, which may properly be call'd *endemic*, becauſe it is common in ſome Countries. Thus, the Inhabitants of *Moravia*, *Auſtria*, and *Hungary*, are very often afflicted with a very ſevere ſpaſmodic and convulſive colic Pain, the Cauſe of which is nothing but an exceſſive Drinking of the very ſpirituous Wines of thoſe Countries, eſpecially if attended with taking Cold; for, by this means, the Blood being put in too high an Ebullition, and having its Motion increaſed, if it can no-way diſcharge itſelf, either by natural or artificial Evacuation, falls upon the Inteſtines, and, being there accumulated, excites dreadful Symptoms. But this Diſorder alſo may properly be referred to the ſanguineous and ſpaſmodic Colic.

Some Pains of the Colic, of a very bad Kind, are conſequent upon other Diſtempers; and I have known Inſtances, where a Diarrhœa, too ſoon ſuppreſſed by Aſtringents, and a Dyſentery, cauſed by Errors in Diet, as feeding too freely on flatulent and fermentable Aliments, have been ſucceeded by terrible and fatal Pains of the Belly. *Fernelius*, *Pathol. Lib.* 6. *Cap.* 10. relates an Inſtance, which he ſaw, where an immoderate Uſe of Quinces, preſcrib'd in a Diarrhœa, threw the Patient into moſt violent Pains and Gripes of the Belly, which increaſed to the Degree of vomiting up the Excrements, and proved mortal; and I have ſometimes obſerv'd the ſame Effect from too violent Cathartics. They, who are well verſed in the Practice of Medicine, muſt have taken notice, that Intermittents, as a Tertian or Quartan, not well cur'd, and eſpecially if the Patient uſes a bad Diet, have been ſucceeded by moſt dreadful and racking Pains of the Abdomen, Inſtances of which may be ſeen in *Binninger*, *Cent.* 3. *Obſ.* 34. *Cent.* 4. *Obſ.* 41. and *Lib.* 4. *Obſ.* 8, 9. And this Diſorder is uſually very obſtinate; for, in the Diſeaſes which precede it, as before-mention'd, the inteſtinal Tube has been much deprav'd and vitiated, and its Function, which, for the moſt part, depends on a convenient, regular, and ſucceſſive Conſtriction and Dilatation, diſturb'd and injured to ſuch a Degree, as eaſily to retain a Collection of vitious Humours; from whence theſe, and other deſtructive Diſeaſes, may derive their Original.

To proceed, the ſpaſmodic Colic is uſually a frequent and even conſtant Attendant of other Pains and Diſorders: Thus nothing is more common than for a Pain, proceeding from the Deſcent of a Stone in the Kidneys into the Ureters, and forcing its Way to the Bladder, to excite moſt ſevere Pains in the Abdomen, together with the Cardialgia, or Heart-burn, Nauſea, and Vomiting; which are principally owing to the Conſent of thoſe Parts, effected by the intercoſtal Nerve, which is common to them. This is the Cauſe why ſome Phyſicians often confound the Pain of the Colic with that proceeding from the Stone, not being capable of diſcerning one from the other, as we before obſerved. It is alſo an Obſervation in Practice, that the convulſive Colic, with a ſtrong Conſtipation of the Belly, which are ſucceeded at laſt by an Epilepſy, take their Riſe in Infants, from the Pains which they ſuffer in Dentition, on account of the admirable Conſent of the nervous Parts.

Moreover, it appears, among other Proofs, from Diſſections, that a Pain of the Belly may be excited by a biliary Stone detain'd in the Gall-bladder, and vellicating its Duct. Thus *Ballonius*, *Lib.* 2. *Epidem.* and *Miſcellanea Naturæ Curioſorum*, *An.* 6, 7. *Obſ.* 220. inform us, that, in the Bodies of thoſe who have died of the Colic, the Gall-bladder has been found full of Stones. And *Horſtius*, *Lib.* 4. *Obſ.* 47. relates, that a very ſevere Colic was relieved by the Diſcharge of two hundred thirty-three Stones from the Gall-bladder. Here I cannot omit taking notice of a peculiar Cauſe of Colic Pains, obſerved by the celebrated *Tulpius*, *Obſ. Lib.* 2. *Cap.* 37. where he ſays, that "the Pain of the Colic is often cauſed by yellow Bile "affecting the Colon, which is often obſerved in Diſſections, "and probably tranſudes inſenſibly thro' the Membranes of "the Gall-bladder to this Inteſtine, as being the neareſt. It "is by no means adviſeable, therefore, to make a ſtrong Com-"preſſion of the Liver, by bending the Body forwards, becauſe "ſuch a Poſture expreſſes the Bile."

Farther, it is not improbable, that Pains may be excited in the whole Volume of the Inteſtines, by an acrimonious Humour corroding

corroding the inteſtinal Membranes. And this is confirm'd by Obſervations on diſſected Bodies, in which it has appear'd, that the purulent Matter, from the Rupture of an Abſceſs of the Meſentery, by its adhering to the Inteſtines, has excited moſt ſevere Pains and Torments before the Death of the Patients, as *Willis*, *Benivenius*, and *Wharton*, ſeem to hint in many Places of their Works.

Beſides theſe Pains of the Inteſtines, which are of an *acute* Nature, and ſoon terminate in Death, or a Recovery, there are alſo Pains of the ſame Parts, which are of a *chronical* Kind, and of a longer Duration, afflicting the Patient for Weeks, and even for a whole Year together, tho' with Remiſſions and Exacerbations at Intervals. After Death, at length, the Cauſe of ſo tedious an Illneſs has been found, upon Diſſection, to be a great Narrowneſs, Conſtriction, Scirrhoſity, or Calloſity, in ſome Part of an Inteſtine, by which the Equality of the Motion of the Inteſtines was quite deſtroy'd. To this Purpoſe *Kerckringius*, *Spicileg. Anatom. Obſ.* 50. relates, that in a Boy, who died of the Gripes of the Inteſtines, he obſerved the Parts every-where diſtended with Flatulences; but the Perforation of the Pylorus ſo very ſmall, as hardly to tranſmit a Flatus; and the Sides of the Duodenum and Rectum, ſubſiding, conglutinated, and, as it were, drawn together with a Thread, ſo as that no Flatus could make its Way through. *Hollerius*, *de Morb. intern. Lib.* 1. *Cap.* 41. and *Rhodius*, *Cent.* 2. *Obſ.* 76. give us a Deſcription of a Scirrhus of the Colon. And *Benivenius*, *Lib.* 5. *de Abdit. Cap.* 30. 34. obſerved the Cauſe of the Colic to proceed from a Callus in the Inteſtines. *Rhodius*, *Cent.* 2. *Obſ.* 77. and 82. found a Coalition of the Inteſtines after a Dyſentery: With this may be compared what we find in *Bartholine*, *Cent.* 6. *Obſ.* 38. and 2. and *Miſcellanea Naturæ Curioſorum*, *An.* 1672. on the ſame Subject. *Ballonius*, *Epidem. Lib.* 1. *p.* 58. gives an Account of an Inteſtine which was contracted, and cover'd with a Callus. To theſe we may add, that the celebrated *Waltherus*, Profeſſor at *Leipſic*, has given us a very learned Diſſertation on the Anguſtation, or Narrowneſs, of the Inteſtines, which is very well worth our Peruſal. There has been frequently obſerved alſo, in Diſſections of thoſe who have died of the ſpaſmodic Colic, an Implication or Folding of the Omentum; which is a plain Argument, that this Part alſo is ſubject to ſome ſort of convulſive Motions. That chronical Pains of the Abdomen may ariſe from a Diſorder of the Liver, we have ſeveral times obſerved, when that Part has been found whitiſh and indurated, and the Gall-bladder full of Stones: For, whenever the free Paſſage of the Blood through the Liver is obſtructed, it is not duly depurated from bilious Sordes; and, beſides, its Courſe thro' the Inteſtines is obſtructed, in which, making but ſlow Progreſs, becauſe of its Redundance, and the too great Diſtention of the Veſſels, it makes painful Stagnations in the Membranes of the Inteſtines.

In thoſe who die ſuddenly of an acute Pain of the Inteſtines, theſe Parts are commonly found to be inflamed and ſphacelated. Thus *Spigelius*, in his Treatiſe of a Semitertian, informs us, that, in Diſſections of Perſons who died of this Fever, and had before their Death felt moſt violent Pains, like thoſe of the Colic, he obſerved the Inteſtines inflamed and eryſipelatous. And he adds, that it was pernicious, in theſe Caſes, to omit Phlebotomy, and inſtead thereof to ſubſtitute Purging, as the common Practice is; and we, for our Parts, have ſeen the Inteſtinum Rectum ſphacelated, from an ill Treatment of the blind Hæmorrhoids.

A Fit of the Colic, or a Pain of the Inteſtines, is often happily reſolved by a copious Sweat, an Hæmorrhage at the Noſtrils, or a Flux of the Hæmorrhoids; as alſo by an Expulſion of purple Eruptions to the external Parts, a Fit of the Gout, or any Eruption of ſcorbutic Spots. There are frequent Inſtances, and well worthy of Obſervation, to be met with every-where, of ſevere and ſtubborn Pains of the Colic, occaſion'd by repelling the Gout inwards, and ceaſing, on a Return of the Gout to the outward and extreme Parts. Thus alſo a bilious Colic is reſolved by a Diarrhœa, which carries off the black and putrid Matter. Remarkable to this Purpoſe is that noted Place in *Hippocrates*'s Book of the *Humours*, at the End; where he ſays, that "a Perſon, labouring under a Pain in the Right "Side of the Inteſtines, being taken with a Fit of the Gout, "had his Pain much remitted." It is a good Prognoſtic alſo, when the Pain ſhifts its Seat and Place.

It is a bad Sign, when the Pain of the Colic, eſpecially that of the ſpaſmodic and convulſive Kind, after the Strength has been exhauſted, and the Patient fallen into a colliquative Sweat, changes into a true Palſey, or into a ſpurious one, or into a Stupor of the Hands and Feet; and it is a fatal Prognoſtic, when the Violence of the Pain ſtill increaſes; for, in ſuch a Caſe, an Epilepſy, or Convulſions, or ſome other dangerous Diſorder of the Head, as a Lethargy, Carus, or Apoplexy, puts an End to Life. The Colic alſo is very dangerous, whether it be of the convulſive or bilious Kind, which ſeizes the Patient with an actual Shivering, and rages with extreme Violence; for it is a Sign of an Inflammation, which, if not ſpeedily removed, is ſucceeded by a Sphacelus.

The Method *of* Cure.

As to the Method of Cure, it appears, from what has been ſaid, that the Cauſes of this Affection are ſurpriſingly various; and conſequently it may be infer'd, that the Manner of Treatment ought to be vary'd in a Way ſuitable to the Difference of the Cauſes whence a Pain of the Inteſtines proceeds.

When, from a Suppreſſion of the cuſtomary Flux of the Hæmorrhoids or Menſes, eſpecially in Bodies abounding with Blood, there ariſes a violent Pain of the Abdomen, attended with much Heat, and an Acceleration of the Pulſe, we order a Vein to be open'd in the Foot; then preſcribe emollient Clyſters, antiſpaſmodic Powders, with a ſmall Portion of Nitre and Cinnabar, mix'd with a ſmall Quantity of Caſtor; alſo our mineral anodyne Liquor, (*ſee* LIQUOR) mix'd with Eſſence of Caſtor, and vinous Sal Ammoniac, not forgetting Bathing of the Feet, which, by remitting the Intenſeneſs of the Pain, in a ſurpriſing Manner, are ſovereign Remedies in the Time of the Paroxyſm. Under a Remiſſion of the Fit we muſt, in order to prevent its Return, lay hold of the Opportunity, for endeavouring a Reſtoration of the Menſes in Women, and the Hæmorrhoids in Men, to their natural Courſes. Remedies, moſt conducive to this Purpoſe, are the Uſe of the mineral Waters, and Bathing, eſpecially in the Spring; beſides theſe, Bathings of the Feet, with due Motion and Exerciſe of the Body, a proper Diet, balſamic Pills, and Infuſions, in the manner of Tea, of carminative and uterine Herbs, are very proper.

When the Pain of the Inteſtines proceeds from a Redundance of intemperate and cauſtic Bile, the ſame Remedies are of Service as before preſcrib'd. But what exceeds theſe, and all other Remedies, in this Caſe, is a nitrous Powder, mix'd with one or two Drops of the true diſtil'd Oil of *Milleſolium*, (Yarrow) to be taken in three or four Ounces of the Water of common Chamomile-flowers; which may be render'd ſtill more grateful, as well as efficacious, by a Mixture of Syrup of white Poppies, and ſweet Spirit of Nitre, rightly prepared. And as this Water, before-mention'd, is a moſt convenient Vehicle for Remedies in all Pains of the Abdomen, ſo it operates with more Succeſs, when diſtil'd with Beer made of Wheaten-malt. It is better alſo, in this kind of Colic, to exhibit the Remedies in a ſomewhat cool than hot Vehicle, and to abſtain from hot Decoctions and Infuſions, as well as from a ſudorific Regimen, and the Uſe of the hot Bath, which might exaſperate the bilious Humour, and cauſe it to penetrate more deeply into the nervous Parts. We are taught, by practical Obſervations, that the bare Drinking of cold Water, which *Galen* himſelf preſcrib'd in a bilious Colic, has done excellent Service in ſuch Caſes as theſe, and removed the Diſtemper; and this Precept is the more to be regarded, if the Diſorder was excited by a ſudden Fit of Anger.

If the Pain be tenſive, and fix'd in the Right or Left Hypochondrium, or beneath the Stomach, it is a ſure Sign, that the Diſorder proceeds from Flatulences, or Excrements incloſed within the Flexures of the Colon. In this Caſe, the principal Indication directs us to the Uſe of Clyſters of an emollient, diſcutient, and corroborating Quality, not omitting external Applications of carminative and emollient Liniments to the affected Part. The Belly being thus evacuated, and the Flatulences expel'd and diſcuſs'd, our balſamic Pills, prepared after the Example of *Becher*, are to be taken; interpoſing, between the Doſes, ſome digeſtive Salt, Decoction of Manna, Cremor, or Terra foliata, of Tartar, mix'd with a Spoonful or two of Oil of ſweet Almonds.

When the Rectum, and Part of the Colon, particularly on the Left Side, are affected with a ſtrong convulſive Stricture, ſo as to be incapable of tranſmitting either Flatus or Fæces, and a Clyſter cannot conveniently be introduced, the Abdomen is to be fomented all over with hot and rich Oils, by Coction, particularly thoſe of Chamomile, Dill, or Rue boil'd, and with the Fats of a Badger, Dog, Fox, Beaver, or Man; which may alſo be introduced, if poſſible, into the Belly by Clyſters, in order to the Relaxation of the ſpaſmodic Conſtriction: This done, the Infuſion of Manna, before directed, is to be exhibited.

A flatulent Colic, proceeding from Imbecillity and Want of due Tone of the Stomach and Inteſtines, or from crude Meats ill digeſted, and cauſing Inflations, admits of the Uſe of carminative Things ſomewhat hotter than ordinary. Among theſe are ſpirituous carminative Waters, prepared of the Seeds of Cumin and Caraway, Orange-peel, the Flowers of common and *Roman* Chamomile, and Cardamoms, diſtil'd in Wine; the carminative Eſſence of *Wedelius*; the Eſſence of Orange-peel, well ſaturated, and exalted with the Spirit of Sal Ammoniac; the mineral anodyne Liquor, mix'd with our liquid Balſam of Life; or the following carminative Liquor:

Take

Take of ſweet Spirit of Nitre, or of our mineral anodyne Liquor, Eſſence of Orange-peel, Tincture of Tartar, each three Drams; Spirit of Sal Ammoniac, one Dram; Oil of Caraway diſtil'd, Oil of Cumin, Oil of Cedar, Oil of common Chamomile diſtil'd, of each ſix Drams: Mix them. The Doſe is from thirty to fifty Drops.

A Draught of *Vinum Hippocraticum*, as it is call'd, prepared of Aromatics, as Orange and Lemon-peel, Mace, Cloves, Cardamoms, and Sugar, to aged Perſons, and where the Diſeaſe takes its Riſe from a Refrigeration of the Abdomen and external Parts, often affords extraordinary and preſent Relief. It is alſo very uſeful to foment the Region of the Abdomen, now-and-then, with heated Tiles, or Marble, or with Bags full of Oats and common Salt, the Seeds of Caraway and Aniſe, Bay-berries, and Juniper-berries, heated.

When the Pains of the Abdomen are occaſion'd by the Repreſſion, or ſtriking inwards, of ſome exanthematous Matter, or critical Diſcharge, the Itch, Purpura, Gout, Rheumatiſm, or Eryſipelas, a prudent Phyſician, who knows what he has to do, will make it his ſole Care to promote a gentle Diaphoreſis; in which I have ſometimes very happily ſucceeded, by preſcribing Eſſence of Scordium, well ſaturated, extracted with Spirit of Elder-flowers, not highly rectify'd, and mix'd with an equal Quantity of our anodyne Liquor, to be taken, thirty or forty Drops, twice a Day, in ſome warm Fluid. About the Time of going to Bed I exhibit a bezoardic Powder, mix'd with a very ſmall Quantity of Nitre and Cinnabar, in recent Juice of Lemons, not omitting the Uſe of emollient and demulcent Clyſters, and keeping the Body in a gentle Diaphoreſis.

If the Pain of the Inteſtines proceeds from Worms, as it is uſual in younger Subjects, it will be proper, in order to eaſe the Patient, firſt of all, to apply a Cataplaſm to the Abdomen, conſiſting of Emollients and Paregorics, as the Flowers of Elder, common Chamomile, Melilot, and Mullein, the Seeds of Fenugreek, Dill, and Aniſe, prepared with Milk and Saffron, and included in a Hog's Bladder, or in a Linen Cloth. After this, Clyſters, compoſed of the ſame Ingredients, are to be frequently uſed, and they are to be prepared with new Milk. Internally are to be given a Tincture of Rhubarb and Tanſey, which laſt is a true ſpecific Anthelmintic, or Remedy againſt Worms; the Belly is to be evacuated, and ſometimes the Uſe of Water, in which crude Mercury has been boil'd, is to be interpoſed. By theſe means it often happens, that Cluſters of Worms, which oppreſs'd and obſtructed the Paſſages of the Inteſtines, have been expel'd; upon which thoſe ſevere Pains of the Abdomen have ceaſed, and all the dangerous Symptoms ſoon after vaniſh'd.

Here we muſt not omit to take notice of that moſt ſevere, and almoſt intolerable Pain, which affects the nervous Membrane of the Inteſtinum Rectum, a Part of moſt exquiſite Senſation, and communicating its Diſorder, by Conſent, to almoſt all Parts of the Body. It proceeds from hæmorrhoidal Blood oppreſſing and ſtraitening the ſmaller Veſſels, and is known by the Name of the *blind Hæmorrhoids*, requiring a particular Method of Cure. In this Caſe I order a Vein to be open'd, not in the Foot, but in the Arm, for the better Derivation of the Blood from the inferior to the ſuperior Parts. For external Uſe, I have had ample Experience of two Remedies of excellent Virtue: One is a Liniment, prepared of three Drams of Sperma Ceti, one Dram of Oil of Henbane, ſix Grains of Camphire, and ten Grains of Saffron, with which the Tumors muſt be anointed hot. The other Remedy is an Epithem, prepared of Water of Quick-lime, temper'd with Roſe-water, and Elder-flower-water, Sugar of Lead, and camphorated Spirit of Wine, to be apply'd warm upon Linen.

As for that terrible convulſivo-ſpaſmodical Colic, call'd *Saturnine*, (from *Saturnus*, the chymical Term for *Lead*) which afflicts the Workmen employ'd in Smelting, or otherwiſe Manufacturing, of Lead, and torments them to a moſt violent Degree, there is no better Preſervative, hitherto invented, than taking ſome fat Broth in the Morning. For the Cure, Clyſters of pure Oil, with drinking good Quantities of Oil of ſweet Almonds, with or without a Decoction of Manna, are ſufficient to complete the Work. To relieve the Palſey, let the Patient bathe in ſweet Water, and afterwards anoint the Abdomen, and Spine of the Back, with a Liniment prepared of human Fat, expreſs'd Oil of Nutmeg, and of Henbane, Saffron, and Oil of Roſemary: There is ſcarcely a more certain and ſpeedy Remedy. See BELLON.

CLINICAL CAUTIONS *and* OBSERVATIONS.

In a ſpaſmodic and convulſive Pain of the Abdomen and Inteſtines, attended with a great Conſtipation of the Belly, by all means avoid Cathartics, and Clyſters of an acrimonious Quality, which we have known to produce Inflammations, ſucceeded by Death.

After a long Coſtiveneſs, and Oppilation of the Inteſtines with indurated Fæces, it is not ſufficient to give the Patient one Clyſter; for there is often Occaſion for two or three to be injected within the Space of one Hour.

Sometimes it happens, that an indurated and compacted Portion of the Excrements, by fixing itſelf in the Inteſtinum Rectum, intercepts the Paſſage of the reſt, together with the Flatulences: In this Caſe the Anus is to be treated with emollient Fomentations, and the Belly is to be ſolicited with pinguious and ſaline Suppoſitories. Some Ounces alſo of Linſeed-oil, or Rapeſeed-oil, with an emollient Decoction, in which there has been firſt diſſolved a ſufficient Quantity of *Venice* Soap, are to be injected by a Syringe, in order to mollify the Hardneſs of the Fæces.

The Fume of Tobacco alone, convey'd thro' a convenient Syringe, is believed to excel all other Remedies, its happy Succeſs, in theſe Caſes, being atteſted by Obſervations; tho', for my part, I can promiſe nothing, with Certainty, concerning its ſingular Efficacy: But thus far I know, that this Experiment, try'd on Horſes, is of extraordinary Virtue in an obſtinate Coſtiveneſs. I have known alſo ſome of the meaner Sort of People, who labour'd under very ſevere Pains of the Inteſtines, freed from them, in an Inſtant, by only ſwallowing the Smoak of Tobacco.

In all violent Pains of the Inteſtines, heating Carminatives, Sudorifics, and Bathing, are very prejudicial, when uſed before Evacuation of the Belly; for while they convey the bilious or corroſive Matter into the Blood, without expelling it to the exterior Parts, the Anxiety is increaſed, and Palſeys, Contractions, hectic Fevers, and even epileptic Convulſions, are the Conſequence.

Aged or weak Perſons, afflicted with Pains of the Abdomen, are wholly to avoid Opiates, and much more Narcotics; and the ſame Caution is neceſſary, when the Body has been weaken'd and exhauſted with long and ſharp Pains; but more eſpecially to be obſerved, when, after an extreme Weakneſs, the Patient ſweats exceſſively; for I have known a true as well as a ſpurious Palſey, and even a Sphacelus of the internal Parts, produced by ſuch Means.

However, in hypochondriacal Diſorders, and the hyſteric Paſſion, attended with a violent Cough, and ſevere Pains of the Abdomen, with Eroſions, our balſamic Pills, or the *Pilulæ Alephanginæ*, quicken'd with the *Extractum Panchymagogum* of *Crollius*, with an Addition of one or two Grains of rightly prepared Laudanum, or Theriaca Cœleſtis, taking, between the Doſes, ſome nitro-ſaline and abſorbent Powders, afford extraordinary Relief under the Pains and Spaſms. And thus many famous Phyſicians, particularly *Riverius*, *Peterius*, *Cranius*, *Hollerius*, and *Foreſtus*, highly recommend ſome cathartic Pills, mix'd with a ſmall Quantity of Laudanum, in Pains of the Abdomen, and that not without Reaſon; for, on a Remiſſion of the Pain and Spaſms, the Operation of the Cathartic is much facilitated, and the intended Evacuation ſucceſsfully perform'd.

If a ſevere Pain of the Inteſtines returns at certain Intervals of Time, which uſually happens in *March* and *October*, eſpecially when the North Wind blows hard, the Cauſe of it is probably a Collection of Blood within the Coats or Membranes of the Inteſtines; becauſe, at ſuch a Seaſon, the Blood, regurgitating, becomes accumulated in the Veins of the Anus. For this Reaſon, Bleeding in the Foot will be very convenient, in order to promote the Flux of the Hæmorrhoids, if cuſtomary, as a Preſervative. But, if the Patient was never affected with this critical Excretion of Blood, I always found it moſt adviſeable to open a Vein in the Arm, in order to derive the Blood from the inferior to the ſuperior Parts; whereas, if it finds no Paſſage by the hæmorrhoidal Veins, its Impetus and Afflux towards the inferior Parts is increaſed by frequent Veneſection in the Foot.

Hypochondriacal Perſons, and thoſe who are ſubject to a Flux of the Hæmorrhoids, are almoſt continually moleſted with Pains of the Stomach and Inteſtines. If, therefore, the Diſorder be inveterate, and will yield neither to domeſtic nor officinal Remedies, I never found a ſpeedier or more effectual Help than a right Uſe of the hot *Caroline* Springs, or temperate mineral Waters, ſuch as the *Selteran*, or thoſe of *Embſen*, internally; and of the Waters of *Tæplitz*, externally, by bathing in them, eſpecially if the Uſe of theſe Waters be attended with frequent and proper Motion and Exerciſe, and a due Care be taken of the Diet.

The ſame is to be underſtood of our *Bath* Waters.

Women in Childbed are very ſubject to Pains of the Loins and Inteſtines, eſpecially if the Lochia flow not in due Time or Quantity. From theſe Pains ariſe exanthematous Fevers, which, if they increaſe upon the Patient, uſually prove fatal. In this Caſe the Duty of the Phyſician is to uſe his utmoſt Endeavours for the Mitigation of thoſe Pains, which is beſt effected by promoting the Lochial Flux; and, if Medicines prove ineffectual for this Purpoſe, Bleeding in the Foot may very ſafely be uſed; upon which the Lochia oftentimes immediately appear, and

and the Pains entirely ceaſe, as I have found by frequent Experience.

The PRESERVATIVE CURE.

Thoſe who are moleſted with Pains of the Inteſtines and lower Belly, that frequently return upon them, which is the Caſe, as I have often obſerved, of thoſe who are afflicted with the Gout, or Stone in the Kidneys, and alſo of hypochondriacal Perſons, and ſuch as are ſubject to the Hæmorrhoids, ought, before all Things, to be injoin'd a ſtrict Regimen of Diet, and Way of Living. The principal Rules to be obſerved for this Purpoſe are, firſt, to avoid, as much as poſſible, all pernicious Perturbations of Mind, ſuch as Terror, Anger, and Sorrow; for there is nothing ſo injurious to the nervous Syſtem, and ſo likely to excite on a ſudden any latent Diſeaſe in thoſe Parts, as a violent Commotion of the Mind. Then, in the next Place, the Cold of the North Wind is by all means to be avoided, becauſe it has great Influence in promoting the Returns and Exacerbations of nervous Diſtempers; in particular, the Region of the Loins, the Parts about the Præcordia, and the Feet, are carefully to be defended againſt it. Again, as to Diet, ſuch Perſons are adviſed to abſtain from leguminous Aliments, and, among theſe, eſpecially from Peas, Beans, and Cabbage. Eating of fat Mutton, and eſpecially drinking cold Liquors upon it, are to be avoided alſo as prejudicial. Moreover, the Body is not to remain one Day in Idleneſs and Reſt, but to be frequently exerciſed. *Trallian* ſpeaks well, and very much to the Purpoſe, when he recommends Motion for thoſe Diſorders, in the following Expreſſions: "All kinds of Motion and Exerciſe are admirably beneficial to thoſe who have "been ſubject to ſuch a Diſorder, and have frequent Fits of "the ſame, whether it be Walking, Riding on Horſeback, "or Moving in a Ship or Boat; alſo Exerciſes and Frictions of "the whole Body, Change of Place, and long Journeys; for "all theſe Means attenuate, diſcuſs, and render the whole "Body free from excrementitious Incumbrances, corroborating the univerſal Habit to ſuch a Degree, that the affected "Parts ſhall not for the future collect the cold Humour, nor "yet readily receive it by Influx from other Parts." In the laſt place, I would adviſe all Perſons to be ſparing in their Uſe of ſpirituous Liquors, and particularly of the Stomach Cordial-waters, becauſe I have often obſerved, that an exceſſive Drinking of theſe Liquors has been more prejudicial and pernicious, in theſe Caſes, than eating of Fruits; for it is a vulgar and erroneous Notion, that theſe ſpirituous Draughts contribute any thing towards the better Diſſolution and Digeſtion of the Food, which principally depend on the ſalival Humour; ſpirituous Liquors being ſo far from promoting the Solution of the Aliment, that, by precipitating the chylous Parts into the Inteſtines, and by their incraſſating and obſtruent Qualities, they adminiſter Matter for Eructations and Flatulences. *Hoffman, Medic. Rat. Syſtemat.*

As I apprehend, that much the greateſt Number of Colics which occur are real Inflammations, I ſhall make ſome farther Remarks upon this Diſtemper, when I treat on Inflammations of the Inteſtines. See INTESTINA.

COLIFORME OS. The *Os Cribroſum*. See CAPUT.

COLINIL, H. M. *Polygala Indica minor, ſiliquis recurvis*, D. Syen. *Nil, ſive Indiga ſpuria*. The Name of an *American* Plant; the Juice of which, with a little Honey, is ſaid to be a very effectual Topic for Puſtules of the Mouth. *Raii Hiſt. Plant.*

COLIPHIUS *Panis*. A ſort of Bread, which was uſed for Dinner, without any other Food. It was made of fine Wheat-flour, with an Addition of Barm, baked but moderately, and made into Loaves of an oblong Form. *Caſtellus* from *Langius*.

COLLA, κόλλα. Glue.

COLLATENNA. A certain Specific for the Cure of Wounds, mention'd by *Paracelſus* in his Treatiſe *de Vita Longa, L.* 2. *C.* 14.

COLLATITIUM. A ſort of Food, prepared, according to *Blancard*, of the Fleſh of a Capon or Pullet bruiſed, and then mix'd with Mutton-broth, and exhibited with Verjuice or Lemon-juice.

COLLETICA, κολλητικὰ φάρμακα, from κόλλα, Glue. Conglutinating Medicines.

COLLICIÆ. The Union of the Ducts, which convey the Humours of the Eyes from the Puncta Lachrymalia to the Cavity of the Noſe.

COLLICULA. The ſame as NYMPHÆ, which ſee.

COLLIGAMEN. A Ligament.

COLLIQUAMENTUM. An extremely tranſparent Fluid in an Egg, obſervable after two or three Days Incubation, containing the firſt Rudiments of the Chick. It is included in its own proper Membranes, diſtinct from the Albumen. *Harvey* alſo calls it the *Oculus*.

COLLIQUATIO, Colliquation; apply'd to the Blood, when it loſes its Craſis, or balſamic Texture; to the ſolid Parts, when they waſte away; and to animal, vegetable, and mineral Subſtances, which are capable of being melted; and is then the ſame as Fuſion.

COLLISIO. See CONTUSIO.

COLLIX, κόλλιξ, or κόλιξ. A ſort of round Loaf of Bread, or perhaps rather a Cake, made in a round and flat Form. But, in *Hippocrates*, and the other *Greek* medicinal Writers; κόλλιξ imports a ſort of Paſtil, or Troche, of the Form abovemention'd.

COLLODES, κολλώδης. Glutinous. From κόλλα, Glue.

COLLODIUM. A Word mention'd by *Paracelſus* in his Treatiſe *de Vita Longa, L.* 2. *C.* 9. in treating of the Cure of Wounds; but he no-where explains what it is.

COLLUM. See CERVIX.

COLLUTORIUM *Oris*. A Gargariſm. See GARGARISMUS.

COLLYMUS *Lapis*, or *Collinus*. The LAPIS AETITES.

COLLYRION. The Name of a Bird thus diſtinguiſh'd. *Merula*, Offic. Aldrov. Ornith. 604. Geſn. de Avib. 542. Jonſ. de Avib. 73. Charlt. Exer. 90. Mer. Pin. 177. *Merula nigra*, Schw. A. 300. Bellon. des Oyſe, 320. *Merula vulgaris*, Will. Ornith. 140. Raii Ornith. 190. Ejuſd. Synop. A. 65. *Collyrion*, Turn. THE BLACK-BIRD.

Pliny informs us, that this Bird roaſted, with Myrtle-berries incloſed in it, cures the Dyſentery. The Dung, mix'd with Vinegar, takes off Freckles. *Dale* from *Johnſon*.

COLLYRIUM, κολλύριον, or κολλάριον, from κόλλα, Glue, and οὐρά, a Tail, becauſe the antient Collyria were in the Form of a Rat's Tail, and prepared of Powders made up with ſomething glutinous.

The Word *Collyrium* principally and properly imported a Compoſition under a certain Form. *Oribaſius, Collect. Lib.* 10. *Cap.* 23. ſays, that "a Collyrium muſt be four Fingers long, "and of a Figure repreſenting the Tail of a Rat;" that is, not only round and long, like the *Magdalides* for Plaiſters, (ſee *Scribonius Largus, Cap.* 69.) but diminiſh'd by little and little towards one End, as *Celſus, Lib.* 5. *Cap.* 28. explains it, and as the Etymology of the Word imports. The Materials of a Collyrium were, in general, every thing which could ſerve to make up a Compoſition, or Maſs of Medicine, of a Conſiſtence capable of being reduced into the Form before-mention'd. This Form, being eſſential to the Collyrium, render'd that Name common to Medicines whoſe Ingredients and Uſes were very different: Hence they gave this Name to Suppoſitories, which were a Medicine compoſed of Soap, boil'd Honey, and other Ingredients, and reduced into the Form we ſpeak of, for its more commodious Introduction into the Anus. They call'd by this Name alſo Tents, which were made out of the Compoſitions for Plaiſters, and introduced into Fiſtulas, or deep Ulcers; and uſed the ſame Term for all other ſorts of Tents, which are in Uſe among Surgeons, not only for Wounds and Ulcers, but to put in the natural Cavities, as the Ears, Noſtrils, and Penis. For the ſame Reaſon they gave the Name *Collyrium* to Peſſaries adapted to the Uterus, becauſe their Figure, as well as that of Tents, had a very near Reſemblance to what a Collyrium ought to have. Theſe Sorts of Collyria are commonly call'd *entire* or *form'd* Collyria, becauſe they are uſed entire, or in the ſame Form in which they were made, to diſtinguiſh them from another ſort of Collyria, which were reduced into a Powder, or diluted with ſome Liquor, when they were to be uſed.

It was not neceſſary, that theſe laſt Collyria ſhould always be exactly in the ſame Form as the others; it was ſufficient for them to come pretty near it, and they might be the *Magdalides* of Plaiſters, which were alſo ſometimes call'd *Collyria*; and the ſame Name was given to ſmall Bits of Paſte, with which they cram'd Birds, in order to fatten them. The Medicines, which went by this Name, were made up into a Maſs, the better to preſerve the Virtues of the Ingredients, that they might not evaporate, when not fix'd by Gums, or any other Things proper to reduce them to one ſolid Maſs. When they had Occaſion to uſe them, they pounded them in a Mortar, or levigated them on a Marble, to render the Powder the finer: Theſe laſt Collyria were principally deſign'd for Diſeaſes of the Eyes. *Oribaſius, Collect. Lib.* 10. *Cap.* 23. diſtinguiſhes theſe two ſorts of Collyria in the following Paſſage, which is taken from *Antyllus*: "What we properly call *Collyria* are Medicines ap"ply'd to the Eyes, after Levigation: But the *Collyria*, com"monly call'd *entire*, are uſed in the ſame entire State, and "either apply'd to one Part, or introduced into another. "They are apply'd to the Uterus, and introduced into Fiſtu"las, and ſinuous Ulcers." When *Oribaſius* here ſays, that Collyria, properly ſo call'd, were Medicines for the Eyes, he intends, I think, only to hint, that this ſort of Collyria was the moſt known; tho' they would not probably have had that Name, but on account of their being made, at the Beginning, in the ſame Form with thoſe which were uſed entire. But, as this Form was not eſſential to this Medicine for the Eyes, they afterwards

afterwards changed it, but retain'd the firſt Name; whence all Remedies, proper for the Eyes, came to be call'd *Collyria*: One Sort, which was compoſed of dry Ingredients, had the Name of ξηροκολλύεια, "dry Collyria;" the other, being prepared of liquid Subſtances, they call'd ὑγροκολλύεια, "humid "Collyria." The Ingredients of the firſt, which were the ſame as thoſe that enter'd the Compoſition of the *entire Collyria*, were metallic Powders, Ceruſs, Pompholyx, burnt Antimony, Verdegriſe, Chalcitis, Cadmia, and others of a like Nature; with theſe were mix'd Powders made of Plants, ſome Juices of Herbs, and ſome Gums, as Saffron, Roſes, Juices of Celandine and Fennel, Aloes, Myrrh, and Opium. All theſe Ingredients were mix'd together, and form'd into Maſſes, which they dry'd, and, when they had Occaſion to uſe them, pulverized. The liquid Collyria were prepared only of liquid Subſtances; for Example, of *Attic* Honey, which was accounted the beſt, Opobalſamum, Gall of a Viper, of a Partridge, or ſome other Animal, and Juice of Fennel. Of theſe they made a Mixture, ſome Drops of which they inſtil'd into the Eyes, in caſe of a weak Sight, or the Beginning of a Cataract. There are various other Preſcriptions for Collyria, both dry and liquid, in *Aetius*, *Galen*, and other Writers. There were Collyria of both Sorts for all other Diſeaſes of the Eyes, as for reſtraining a Defluxion, removing an Inflammation, eaſing Pains, cleanſing and conſolidating Ulcers of the Membranes, diſſipating Specks or Pearls, and, in a Word, for all Diſeaſes incident to the Eyes. A learned Man, who has very well explain'd and commented upon *Horace*, in his Note upon a Verſe of that Poet, *Serm. Lib.* 1. *Sat.* 5. where he ſpeaks of Collyria, ſays, that a *Collyrium* is a Medicine prepared of diſtil'd Waters, and divers other Drugs, for the Eyes. He was not aware, that there was no ſuch Thing as diſtil'd Waters in thoſe Times, and that the Collyrium of *Horace* was not like thoſe which are made now-a-days.

At preſent, *Collyria* commonly ſignify topical Medicines for the Eyes; whether they are ſolid and dry, ξηροκολλύεια, call'd, by the *Arabians*, *Sief*, which are kept in the Form of Troches, and ſprinkled into the Eye in the Form of a very ſubtle Powder; or whether they are liquid or humid, ὑγροκολλύεια, (call'd *Collyria* properly, and by way of Eminence, and often containing ſomething of a Powder) which are either inſtil'd into the Eye, or apply'd by means of a Linen Cloth moiſten'd therewith; or, laſtly, whether they are apply'd to the Eyes in the Form of a Liniment, Ointment, or Cataplaſm, or even by way of Fumes or Vapours.

Their Uſe is underſtood from the different Preparations, Materials, and a thorough Inſight into the Cauſe of the Affection, againſt which the Collyrium is provided; for, as *Gorræus* juſtly obſerves, ſince the Eye is ſubject to a Variety of Diſorders, there is a ſuitable Diverſity of Collyria; ſome are adapted to the Beginning of an Ophthalmy, others to the State of that Diſeaſe, and others to its Decline, in the ſame manner as it happens in Inflammations of other Parts. In general, it ought to be obſerved, that great Caution is to be uſed in the Mixture of oily and pinguious Subſtances in Collyria, becauſe, by relaxing the Veſſels, they uſually diſpoſe them to Defluxions; and it is no leſs worthy of Obſervation, that acrid and aſtringent Matters are prejudicial to the Cornea Tunica, by too much drying it, and by that means inducing a Rigidneſs of that Membrane; or, by their ſtimulating Property, irritating the Defluxion, and by ſuch means exciting or increaſing an Inflammation. "Generally ſpeaking, Collyria are either too acri-"monious, ſuch as thoſe prepared of Water of Quick-lime, "Sal Ammoniac, with white or *Cyprian* Vitriol; or too "aſtringent, ſuch as thoſe compoſed of Alum, Dragon's-"blood, *Armenian* Bole, Lapis Calaminaris, Tutty, and the "White of an Egg; or too refrigerating, of which Kind are "thoſe compoſed of the Water of Frogs-ſpawn, Roſe-water, "Plantain-water, with an Addition of Saccharum Saturni; "or too drying, of which Nature are thoſe prepared of burnt "Hartſhorn, Lapis Calaminaris, and Tutty; or, laſtly, too "much relaxing; ſuch are thoſe compoſed of Mucilage of the "Seeds of Fleabane, Quinces, Fenugreek, with Tragacanth, "and freſh Butter. All theſe Compoſitions, tho' of excel-"lent Service in other Affections of the Eye, yet, in an In-"flammation, eſpecially of the ſanguineous Kind, are ſo far "from being of any Benefit, that they are rather prejudicial; "for, by their means, not only the Diſeaſe is exaſperated, and "takes deeper Root, but the pellucid Humours of the Eye "become turbid, which is ſucceeded by a Tabes, Corrugation, "Cataract, with a chronic, red, dry, and rough Epiphora, "and an Exulceration of the Eyelids." Thus far *Frederic Hoffman*, in his *Medicina Rationalis*, *T.* 4. *P.* 1. Among acrimonious Subſtances, which may not ſafely be uſed, *Wedelius*, in his *Amœnitates Materiæ Medicæ*, reckons Opium in the Compoſition of Collyria. "In Pains of the Eyes, ſays he, "Opiates, externally apply'd, are of little Service, becauſe an "ardent Heat is rather excited than mitigated by their bitter "Quality; and if any one ſhould object, that the Eyes de-"light in Things endued with ſomewhat of Acrimony, that, "indeed, is true; but it is better, in ſuch a Caſe, to chuſe "Aloes than Opium, which conſiſts of an obtunding Muci-"lage." We learn from *Dioſcorides*, *Lib.* 4. *Cap.* 60. that the Uſe of Opium, in Collyria, was condemn'd by ſome among the Antients; and *Zecchius*, in his *Conſultationes Medicinales*, lays it down as a Rule perpetually to be obſerved, that, when there is Occaſion for a pretty ſtrong Collyrium, the Eyes are firſt to be waſh'd with new Woman's Milk, or Mulſum very much diluted; and this is to be done not by means of a Sponge, but by gently diſtilling the Liquor into the Eyes, out of a Bottle with a very narrow Neck. But that there are Caſes, in which acrid Subſtances are applied to the affected Eye, without any other Thing, we learn from the *Eph. Nat. Curioſ. Decad.* 3. *a.* 9. *o.* 182. where we have an Inſtance of a Man, above ſixty Years of Age, cured of a membranous Excreſcence in his Right Eye, as large as a Pea, and of a cylindrical Form, attended with a preternatural Weakneſs of Sight, by gradually anointing it with a Drop or two of the Spirit of Vitriol. Various Subſtances are, by different Authors, recommended as proper Materials for Collyria. *Ramazzini* informs us, that the Antients recommended the Squama Æris for this Purpoſe: And *Le Mort* aſſerts, that, in all Diſorders of the Eyes, that Species of Collyrium is proper, which conſiſts of half a Dram of Verdegriſe; Camphire, one Scruple; well rectified Spirit of Wine, about half a Dram; and of the Spirit of Sal Ammoniac, two Drams. The Tincture extracted from theſe, when mix'd, is of a deep Sky-colour, and muſt be kept for Uſe in a cloſe-ſtopt Veſſel. Such a Quantity of it is only to be uſed, as will give a bluiſh Colour to ſome proper Water, ſuch as that of Roſes, Plantain, Eye-bright, or Fennel. But the Collyrium will be ſtill more valuable, if a bluiſh Colour is communicated to the following Mixture by an Affuſion of the Tincture.

Take the White of a new-laid Egg: Let it be thoroughly incorporated with the Waters of Fennel, Eye-bright, and Roſes, of each two Ounces. When it is ſufficiently diſſolved in theſe Waters, add ten Grains of the Sugar of Lead, and ſix Grains of white Vitriol.

The ſame Author, in all Inflammations, Specks, and other Diſorders of the Eyes, calls that an excellent Collyrium, which is compoſed of one Dram of the Flos Æris, or cryſtalliz'd Verdegriſe; Spirit of Sal Ammoniac, one Ounce; and camphorated Alcohol of Wine, an Ounce and an half: When from theſe a bluiſh Tincture is extracted, a few Drops of it are mix'd with an Ounce of ſome proper Water, till it is tinged with a bluiſh Colour, and then three Grains of the Sugar of Lead are to be added. But, for Inflammations of the Eyes, he aſſerts, that no Collyrium is more efficacious than the following:

Take of the Oleum Saturni, twenty Drops; of the Tincture of Copper, ten Drops; of camphorated Spirit of Wine, fifteen Drops; of the Waters of Roſes, and Plantain, or Elder, each an Ounce and an half: Mix all together, and let the Part affected be frequently anointed with the Mixture.

There are numberleſs Forms of Collyriums to be met with, not only in the Works of the Antients, ſuch as *Galen*, *Paulus Ægineta*, *Aetius*, and *Oribaſius*, but alſo among the Moderns; in the *Collectanea Leydenſ.* for Inſtance, in the *Pharmacia Acroamatica* of *Wedelius*, in the *Conſult. Zecchii*, in the *Obſervat. Medicin.* of *Foreſtus*, in the Works of *Ettmuller*, and in the *Ephemer. Nat. Curioſ.* There are alſo various Forms of this Medicine in the Shops, which have either their Denomination from their Colour, or their Inventor; ſuch as the *Collyrium album*, in the *Antidotarium Bononienſe*, which is alſo call'd *Sief album*, or the *Trochiſci albi Rhaſis*; the *Collyrium*, or *Sief album Galeni*, which, in the *Antidotarium Florentinum*, is call'd *Trypherum Galeni*; the *Sief album Meſuæ*, in *Antidot. Florentin.* the *Collyrium D. Bruni*, in *Lemery's Pharmac.* which, in *Schroder's Pharmac.* is call'd *Aqua Ophthalmica Bruni*; the *Collyrium Citrinum Meſuæ*, in the *Antidotar. Bonon.* the *Collyrium Damantii*, in *Lemery's Pharmacop.* the *Collyrium Lanfranci*, in the *Phar. Pariſien.* the *Collyrium Libianum*, in the *Antidot. Florentin.* the *Collyrium rubrum aridum Rhaſis*, in *Antidot. Bonon.* the *Sief rubrum Meſuæ*, in *Antidot. Florentin.* the *Collyrium*, or *Sief Viride Antæi*, in the *Pharmacop. Auguſtan.* and ſeveral others in various *Diſpenſatories*.

COLOBOMATA, κολοβώματα. The Meaning of this Word is, in *Celſus*, expreſs'd by *Curta*. Both theſe import Deficiencies in ſome Part of the Body, particularly in the Ears, Lips, or Alæ of the Noſtrils.

COLOCASIA.

The Characters are,

The Root is tuberous, thick, and farinaceous; the Leaves are ſmooth, and have their Peduncle inſerted into their Umbilicus. From the End of the Peduncle proceeds a monophyllous, membranous Calyx, of an oval Figure, hollow beneath, and expanding itſelf above into an acute or ſharp-pointed Vagina,

half

half open like a Sheep's Ear. From the Bottom of the Calyx arises an Axis, surrounded with many spherical berry-like Ova, each furnished with a long slender Tube, like a Filament, and bearing one or two roundish Seeds. Round the same Axis, above the Ova, grow the masculine Stamina, in very close Order, and furnish'd with their proper Testiculi. Above these again, round the same Axis, stands a third Series of numerous Filaments. The Axis here runs out into a slender purple Peduncle, which at last ends in a long black Clava.

Boerhaave mentions five Species of this Plant, which are,

1. Colocasia. See *Arum maximum, Ægyptiacum, quod vulgo Colocasia.*

2. Colocasia; maxima; foliis â parte posteriore usque ad pedunculi insertionem apertis. *H.*

3. Colocasia; strongylorhiza; Zeylanica; pediculis & limbis foliorum atropuniceis. *Par. Bat.* 85. *Arum maximum, Ægyptiacum, quod vulgo Colocasia, cauliculis nigricantibus Zeylanica.* H. L. H.

4. Colocasia; quod Arum Zeylanicum; minus; Colocasiæ foliis; pediculis punicantibus. *Par. Bat.* 77. *Par. Bat. Pr. Ghahala Zeyl. Arum Ceylonicum, cauliculis nigricantibus, foliis Colocasiæ similibus.* Commel. Cat. Hort. Med. Amst. H.

5. Colocasia; Americana; folio ex viridi & rubro speciosissime variegato. *Boerhaave's Index alter Plantarum, Vol.* 2.

COLOCHIERNI. A Name for a Plant call'd *Colochierni Carduus Cretensibus.* J. B. *Atractylidi et Cnico sylvestri similis.* C. B.

It differs very little from the ATRACTYLIS.

COLOCYNTHIS, κολοκυνθὶς. Colocynth, commonly call'd Coloquintida, or the bitter Apple. *Hippocrates* mentions this under the Name of κολοκύνθη ἀγρία, wild Cucumber. This he sometimes directs as an Ingredient in stimulating Pessaries. But I do not remember, that he any-where recommends it as an internal Medicine.

The Characters of the Colocynthis are,

It is in every respect like the Gourd, except that the Leaves are deeply jagged; the Fruit is extremely bitter, and not eatable.

There are two Sorts of Colocynth mentioned in Medicine. The first is, the

Colocynthis, Offic. Ger. 768. Emac. 915. J. B. 2. 232. Chab. 133. Raii Hist. 1. 642. *Colocynthis vulgaris*, Park. Theat. 160. *Colocynthis fructu rotundo minor*, C. B. Pin. 313. Tourn. Inst. 108. Chomel. 67. COLOQUINTIDA. *Dale.*

The bitter Gourd, in its Manner of growing, and Make of the Leaves, pretty much resembles the Water-melon; it has such hairy creeping Branches, with Claspers, by which it climbs upon any thing, like other Gourds. The Leaves are divided into five Laciniæ, or Sections, but somewhat broader than the Water-melon-leaves; the Flowers come forth at the Joints with the Leaves, and are alike in Shape, but of a yellowish-white Colour. The Fruit is of the Bigness, Shape, and Colour of an Orange, but smoother, with a hard Shell, or Bark, including a white spongy Pulp, full of flatish, oval, hard Seed, of a pale-yellow Colour: This Fruit is exceedingly bitter. It grows in *Turkey*, whence it is brought to us with the outside Orange-colour'd Bark taken off. *Miller's Bot. Off.*

This has been a Drug of great Esteem in Medicine for many Ages. Its Roughness and Violence of Operation has always tortured the several Hands it has passed thro', to determine in what Part of its Composition this Quality resided, that they might the better know how to correct and mitigate it. To some it seems to reside in certain resinous Particles, which soonest join with a spirituous Menstruum, and therefore make such Infusions too violent; for which Reason they direct more aqueous Dissolvents, and such as are capable of uniting with Salt of Tartar, which would separate the Resins, and make their Efficacies upon the Fibres more moderate. *Schroder* and *Ludovicus* speak much of this Management, and commend the Extract made by Evaporation of the Liquor with Salt of Tartar for its Corrector: They direct it from three to eight Grains. Others conjecture its cathartic Property to be more in its slimy and mucilaginous Parts, which are best drawn out and dissolv'd by plain Water: But most assign it to a penetrating volatile Salt; and this latter seems to have been the Opinion of the Antients, particularly of the *Arabians:* For which Reason, in the *Trochisci Alhandal* (for *Handala*, or *Alhandala*, was the Name by which this Drug was known to them) it stands corrected with gummy and mucilaginous Bodies, as they are most proper to blunt the Violence of those Spiculæ, and prevent their too great Irritation of the Membranes. *Van Helmont* speaks of this as a thing which might easily be divested of its purgative Quality, and reduced into an extraordinary Alterative in some Chronical Cases; but this is a Secret not yet found out.

In the Memoirs of the *French* Academy for 1701. Monsieur *Boulduc* has given his Observations and Experiments on this Drug, which are worth our Notice. He tells us, that it is the Fruit of a Plant of the Nature of a wild Gourd, and is very purgative, insomuch that its Operation is sometimes attended with Excoriations of the Membranes, and a Discharge of Blood: Whence many have conjectur'd, that Coloquintida, by its volatile Salts, would render the Blood more fluid; but our Author did not find this true by his own Experience; for he put a good Quantity of it in Powder to new-drawn Blood, which did not prevent it from running into its usual Coagulations. The little Success of the Means hitherto attempted to correct this Remedy has not hindered Monsieur *Boulduc* from trying others. He fermented four Ounces of its Pulp with six Pounds of good Must of Wine, for ten or twelve Days together; then he distil'd this Mixture in a Vapour-heat by Degrees. The first Portion of eight Ounces was very clear, moderately spirituous, and excessively bitter. The other Portions gradually decreas'd in their Qualities; and, when the Liquor came altogether insipid, he put an End to the Distillation, and evaporated the Remainder into an Extract, which was of a sufficiently solid Consistence, and weigh'd two Ounces and a half.

With these, Experiments were made upon the Sick with all necessary Precaution. An Ounce of what came away first in the Distillation caus'd great Nauseas, and severe Colics, which were obliged to be appeas'd by other Remedies; tho' two Ounces of the same, upon another Trial, had its Effect, but with Gripings. Of the Extract made after Distillation, he gave ten Grains, which operated without Violence or Irritation; which he attributed to the essential Salts of the Wine, whose Acids had suppress'd, and, as it were, fix'd the volatile Salt of the Coloquintida.

Next, instead of Must, Monsieur *Boulduc* made use of Water, and put in Digestion for fifteen Days sixteen Ounces of the Pulp, with two Quarts of Water; after which he distil'd the Whole. The Liquors, which came away, had nothing in them penetrating or volatile, had no Taste, and, if taken inwardly, had no Effect; but the Extract made of what remain'd after Distillation he found to be very efficacious. It was a gentle Purger, and of sufficient Force, given in but little Quantity. Perhaps, says he, as the Substance of the Coloquintida is extremely spongy; its mucilaginous Parts, which are in great Number, are the most offensive; and a long Digestion, in a large Quantity of Water, may so attenuate, subtilize, and dissolve them, that an Extract made in this manner may be a good Preparation; and he believes the following Experiments confirm this Opinion. He drew from the Coloquintida all the Tinctures possible with Water, and by Filtration separated the clear from the mucilaginous: Of each of these he made a solid Extract, of which the former was the more efficacious, tho' a more gentle Purger than the latter. The last Trial he made was with Spirit of Wine: From eight Ounces was obtain'd but half an Ounce of a resinous Extract; whereas he had from the same Weight, by the means of Water, near three Ounces of a saline one, reckoning both its clear and mucilaginous Parts: Whence he concludes, that the Colocynth contains much more Salt than Oil or Sulphur; and that it is probable the Salts, particularly the more gross, envelop'd in the mucilaginous Parts, are the Occasion of its violent Operation.

I shall leave the Reader to make the best Application of this Account, to his own Practice, he can, and only observe, that the common way of making the *Eustachian* Extract, that is, *Extractum Rudii*, contradicts Monsieur *Boulduc*'s first Experiment, of the Spirit's coming over excessively bitter and purgative; for the Liquor, in which the Ingredients of this Composition, the principal being Colocynth, are infused, when it is drawn off by Distillation, (which most do only for good Husbandry, as it may serve for the same Use again) has neither Colour, Taste, or purgative Quality, any more than common Spirit of Wine: So that Monsieur *Boulduc* seems to have made a Mistake in the Experiment, by letting some small Quantity of the Infusion inadvertently pass over into the Receiver, which, in the least Portion, would give an extreme Bitterness to the Whole that came over by Vapour.

This Drug is yet much in the Officinal Compositions, but hardly ever met with in extemporaneous Prescription; its nauseous Taste not making it tolerable in any Form but Pills, where it can be covered. It is so smart a Purger, as not to be safe but to athletic Constitutions, and such full Habits, where the Fibres are sufficiently guarded by a large Quantity of Humours, from its vehement Vellications. It is by all esteem'd very efficacious against Worms; but its Roughness of Operation makes it hardly safe to give to Children, who principally want it upon that Account, unless in Glysters. The *Confectio Hamech*, which our College retain in their *Dispensatory*, is never prescrib'd, because it is so irksome in taking, from the Taste it has of this Ingredient. *Quincy's Dispensatory.*

Geoffroy adds, that the Pulp of this Apple is bitter and purgative; but the Seeds have neither of these Qualities in so great a Degree, except they have touch'd the Pulp; for then they become very bitter. Coloquintida, taken in a large Dose, is one of the most violent Purges now known. It not only often brings away pure Blood, but produces violent Convulsions, Ulcers in the Intestines, and fatal Hypercatharse. When the Pulp is taken in Substance, it sticks to the Coats of the Stomach and Intestines; and therefore it has been judged convenient to divide it

as much as poſſible. Thus having firſt reduc'd it to a fine Powder, it is made up into Lozenges call'd *Trochiſci Alhandal*; but even theſe are hurtful to Perſons of weak abdominal Viſcera. When it is thought proper to give it in Clyſters, it ought to be boil'd in a Linen Bag, that no large Pieces of the Pulp may mix with the Decoction. Theſe Clyſters are often ordered in Apoplectic Caſes. Some ſay, that Coloquintida will purge Children, by being reduc'd to a Paſte with Ox-gall, and apply'd to the Navel.

The other Species of this Plant is the

Colocynthis fructu rotundo; major. *C. B. Pin.* 313. *Tourn. Inſt.* 109. *Chomel.* 67. *Boerh. Ind. A.* 2. 80. *Hiſt. Oxon.* 2. 27. *Colocynthis major rotunda*, Park. Theat. 160. THE GREATER COLOQUINTIDA.

This is alſo imported from the *Levant*, and is ſaid to agree with the preceding in Virtues.

COLOCYNTHIS MONOCOCCOS. See SICYOÏDES AMERICANA; FRUCTU ECHINATO; FOLIIS ANGULATIS.

COLOEOS, κολοιός. The GRACULUS, which ſee.

COLON. The Name of one of the large Inteſtines. See COELIA.

COLOPHONIA. Colophony, or black Roſin. This Subſtance, when perfectly cold, is hard, dry, and friable, but eaſily becomes fluid on the Application of Heat. It is yellowiſh, or red, pellucid, and almoſt reſembling Glaſs. It is almoſt deſtitute of Taſte and Smell, and is in reality no more than a Roſin boiled to this Conſiſtence by intenſe Heat, after which it becomes more indurated by the Cold, and loſes all its volatile Parts; for which Reaſon it is by ſome Authors alſo call'd *Reſina fricta*, or *toſta*, dry'd Roſin. That Species of Colophony is accounted beſt, which is yellowiſh, pellucid, and conſiſts of large Pieces. It receives its Name from *Colophon*, a City of *Ionia*, becauſe, in former times, the beſt Colophony was brought from that Place. Concerning this Species of Colophony, *Pliny*, in *Lib.* 14. *Cap.* 20. affirms, that it is more yellow than the other Sorts; that, when it is triturated, it becomes white; and that it is of a nauſeous Smell; for which Reaſon it was not uſed by the Unguentarii. Since the Antients make mention of two Sorts of Colophony, one in a dry, and another in a liquid Form, it is probable, that the latter of theſe was liquid Pitch, call'd alſo *Grecian* Pitch, which is nothing but the crude Reſin of the Pine brought from *Colophon*; whereas the former was the *Reſina fricta*, which the *Greeks* call'd ſimply ψυκτή. *Galen*, in his Work *De Compoſ. Med. per Gen. Lib.* 7. *Cap.* 3. informs us, that tho' *Pinea*, *Fricta Reſina*, and *Colophonia*, were promiſcuouſly uſed, there was yet another Species of Colophony at *Chios*, very like to Maſtich, and which, like it and Frankincenſe, had ſomething of an emollient Quality. But the later *Greeks*, according to *Salmaſius*, call'd every Kind of Reſin *Colophony*, becauſe the Reſin of *Colophon* was accounted the beſt. Hence the *Arabians* uſe the Word *Kalphonia* for every Species of Reſin. The Colophony ſold at preſent is Turpentine boil'd in Water, and afterwards dried; but the Caput Mortuum of the Turpentine is better, that is, the Reſin remaining after a Diſtillation of the etherial Oil, which, when it is urged by a more intenſe and long-continu'd Fire, is chang'd into true and genuine Colophony. When Colophony, thus prepar'd, is treated with a Fire of Suppreſſion, it yields a thick Oil, along with a heavy acid Water, which diſcovers the genuine Nature and Properties of a Reſin. Whatever Virtues, therefore, Colophony is poſſeſſed of, may be aſcribed to the Energy of theſe two Principles, combined and blended in one common Subſtance. Hence 'tis obvious, why Colophony, when reduc'd to a Powder, and thrown into the Flame of a Candle, takes Fire, and reſembles Lightning: Its Nature is, therefore, underſtood by that of a Reſin. Colophony, reduced to a Powder, is of ſingular Advantage in Surgery, in Caſes where the Bones are laid bare, or the Periоſteum, Tendons, and Muſcles, injur'd by Burns, Corroſions, Contuſions, Punctures, Lacerations, or partial Diviſions. It alſo prevents Defluxions of Serum on the Joints, and induces Cicatrixes, and checks the fungous Excreſcences of Ulcers, if apply'd in the ſame Manner. Beſides its drying, conſolidating, and lenitive Qualities, it is an Ingredient in ſeveral Plaiſters and Ointments. *Konigius* affirms, that his balſamic Plaiſter is of univerſal Uſe in diſcuſſing Tumors, curing Ulcers and Wounds, and removing arthritic Pains. The Method of preparing it is as follows:

> Take of Colophony and new Wax, each three Ounces; of Gum Elemi and Gum Tragacanth, each one Ounce; of Nitre, an Ounce and an half; of native Sulphur, ſix Drams; of the Powder of red Sanders, red Myrrh, the beſt Maſtich, and Frankincenſe, each half an Ounce; of the Oil of Bays, ſix Drams; and of the Balſam of Peru, two Drams. Infuſe the Sanders for ſome time in Spirit of Wine; then add it to the other Ingredients, and form into a Plaiſter of a proper Conſiſtence.

Some prepare Pills of Colophony, whilſt warm, for the Cure of Gonorrhœas, and other Venereal Diſeaſes. The Powder of it is alſo recommended for expelling the Stone. Some, by diſſolving Colophony in Spirit of Wine, prepare a reddiſh Tincture, which they call *Aurum Potabile*, and recommend againſt Chronical Diſeaſes ariſing from Obſtructions. *Hoffman*, in his *Clavis Schrod.* aſſerts, that it is of ſingular Efficacy in carrying off tartarious Sordes by the Urine. Colophony, minutely triturated, mix'd with double the Quantity of dry Sand, paſs'd thro' a Sieve, and diſtil'd from a Glaſs Retort, in a Sand-heat, yields firſt a white and aqueous Liquor, then an oleous and clay-colour'd Liquor, then one of a reddiſh Colour, and, laſtly, a thick Subſtance call'd Balſam of Colophony; which, when again diſtil'd, together with the reſt of the oleous Liquor, after a Separation of the Phlegm, is the Oil of Colophony, ſo much extol'd by *Margrave* for curing Wounds, and ſoftening Tumors, for which Purpoſes it may be uſed both internally and externally. A few Drops may be exhibited for a Doſe internally. There is a Preparation of Colophony in the *Antidotarium Bonnienſe*, under the Title of *Unguentum Colophoniæ*.

COLOSTRUM. The firſt Milk of any Animal after bringing forth Young, call'd *Beeſtings*. It is remarked, that this Milk is gently cathartic, and purges off the Meconium, ſerving both as an Aliment and Medicine.

An Emulſion, prepared with Turpentine diſſolved with the Yolk of an Egg, is ſometimes call'd by this Name.

COLOTES, κολώτης. The ſame as ASCALABOTES, which ſee. A Sort of ſpotted Lizard. Hence

COLOTOIDES, κολωτοειδής. Variegated like the Skin of this Animal. It is apply'd, by *Hippocrates*, to the Excrements.

COLPOS, κόλπος. The ſame as SINUS, which ſee.

COLUBRINA. The *Dracontium* is call'd by this Name, according to *Blancard*; as is likewiſe the *Biſtort*.

COLUBRINUM LIGNUM. A Sort of Wood, or Root, thus diſtinguiſh'd:

Lignum Colubrinum, Offic. *Nux Vomica minor Moluccana*, *Lignum Colubrinum Officinarum*, Parad. Bat. Prod. 357. *Nux Vomica altera*, Raii Dendr. 117. *Radix Colubrina*, *Lignum Colubrinum*, Mont. Exot. 7. *Solanum arboreſcens Indicum, foliis Napecæ majoribus magis mucronatis, fructu rotundo, duro, ſpadiceo-nigreſcente, ſemine orbiculari compreſſo, maximis*, Breyn. Prod. 2. 93. Commel. Flor. Mal. 249. *Fructus orbicularis peregrinus cum granis Nucis Vomicæ ſimilibus*, J. B. 1. 341. *Modira-Caniram*, Hort. Mall. 8. 47. Tab. 24. *An Clematitis Indica foliis Perſicæ, fructu Periclymeni*, C. B? *Lignum Colubrinum primum Garciæ*, Park. C. B. SNAKE-WOOD.

This is a Wood, or rather a Root, which comes from the *Eaſt Indies*, of a heavy, cloſe, and ponderous Subſtance. It is covered with an Iron-colour'd Bark, having many Aſh-colour'd Spots on it, and of a bitter Taſte, being ſuppoſed to be the Root of ſome Species of the Tree which bears the Nux Vomica; and though it be commended by ſome as good againſt the Biting of Serpents, and as a Cure for Tertian Agues, yet Dr. *Anton. de Heide*, after ſeveral Trials which he made with it, gives it but an indifferent Character, as a malignant, ſoporiferous, and poiſonous Thing, and therefore better let alone, and neglected, as it is in our Shops. *Miller's Bot. Off.*

COLUM. A Filtre.

COLUMBA, Offic. *Columba domeſtica*, Schrod. 5. 316. Bellon. des Oyſe. 314. *Columba, ſive Columbus*, Ind. Med. 39. *Columba domeſtica ſeu vulgaris*, Raii Ornith. 180. Ejuſd. Synop. A. 59. Will. Ornith. 131. *Columba domeſtica*, Aldrov. Ornith. 2. 462. Jonſ. de Avib. 62. Schw. A. 237. *Columba domeſtica, Livia*, Charlt. Exer. 84. *Columba vulgaris*, Geſn. de Avib. 245. *Columba, vulgaris, Livia*, Mer. Pin. 174. THE PIGEON OR DOVE.

The Parts in Uſe are, the living Pigeon, the Blood, the Coat of the Stomach, and the Dung. The live Pigeon, diſſected in the Middle, and applied to the Head while the Blood is hot, mitigates the Violence of Humours, and diſcuſſes Melancholy and Sadneſs; whence it is a very convenient Remedy in the Phrenſy, Head-ach, Melancholy, and the Gout. The warm Blood, inſtil'd into the Eyes, helps Pain and Lippitude, diſcuſſes Cataracts and ſtagnated Blood, cures recent Wounds, has a peculiar Virtue in ſtopping an Hæmorrhage from the Membranes of the Brain, and mitigates the Pain of the Gout. The Coat of the Stomach, dry'd and pulveriz'd, is recommended in the Dyſentery. The Dung is violently heating, on which account it is a Cauſtic and Diſcutient, and excites a Redneſs of the Skin by attracting the Blood thither; whence it is of frequent Uſe in ſtimulating Plaiſters and Cataplaſms. Triturated and ſifted, and applied with the Seed of Naſturtium, is relieves under inveterate Diſorders, as the Gout, Hemicrania, Vertigo, Head-ach, and others; internally it waſtes the Stone, and provokes Urine. *Schrod. Dale.*

There are ſeveral Sorts of Pigeons, which are diſtinguiſhed into two general Claſſes, the tame and wild Pigeon.

You are to chuſe, both of the one and the other, thoſe which are young, tender, fat, fleſhy, well fed, and that have been bred in a pure and ſerene Air.

They are very nouriſhing, ſomewhat binding, ſtrengthening, and provoke Urine: They are looked upon to be good for cleanſing the Kidneys, and to expel the groſs Matter which ſometimes adheres to them.

Some

Some Authors pretend, that the Uſe of Pigeons cures Convulſions, and is a Preſervative againſt peſtilential Diſtempers; but I will not aſſure the Reader, that theſe Pretences are well-grounded.

As a Pigeon grows old, ſo proportionably does its Fleſh become more dry and ſolid, harder of Digeſtion, and productive of groſs and melancholy Humours; and hence it is, that many Authors have condemned the Uſe of Pigeons, and look upon them to be bad Food.

They contain much Oil and volatile Salt, and an indifferent Quantity of earthy Parts.

They agree at all times with any Age and Conſtitution; but thoſe who are melancholy ought to make uſe of them more moderately than other Perſons.

REMARKS.

The tame Pigeon is a Bird well known, for being much uſed by way of Food. When 'tis young, the Fleſh is tender, juicy, and eaſy of Digeſtion; becauſe it contains a juſt Proportion of ſaline, oily, balſamic, and phlegmatic Principles; but as it grows older, ſo proportionably the Juices are more groſs, earthy, and ſubject to render the Fleſh hard, and heavy in the Stomach. In the mean time, this Fleſh being very nouriſhing, and affording ſolid and durable Food, it may be proper for thoſe who have a good Digeſtion, are in continual Exerciſe of Body, and ſpend themſelves much.

We may ſay in general, that all Pigeons are of a dry Nature; and that, in this Particular, they do not differ one from another, but as they are more or leſs ſo. Their Fleſh is nouriſhing, becauſe it contains a great many oily and balſamic Parts. It alſo yields good and ſolid Nouriſhment, becauſe that being compact and cloſe ſet together, it ſticks in ſuch a manner to the ſolid Parts, that it cannot, without Difficulty, be ſeparated from it. Laſtly, the Fleſh of a Pigeon fortifies and binds, not only becauſe it contains many exalted Principles, but alſo becauſe that being but a little moiſt, and full of ſome earthy Parts, the ſuperfluous Moiſtures, which relax the Fibres of the Entrails, are ſwallowed up thereby. *Lemery on Foods.*

COLUMELLA. The UVULA, which ſee.

COLUMELLARES *Dentes* are the *Dentes Canini.*

COLUMNÆ CORDIS. Theſe are ſmall, long, and round fleſhy Productions in the Ventricles of the Heart. See COR.

COLUMNA NASI is the loweſt and fleſhy Part of the Noſe, which forms a Part of the *Septum.*

COLUMNA ORIS is the UVULA.

COLUS JOVIS, in Botany, is the *Sclarea*; *glutinoſa*; *floris lutei, variegati*; *barba ampla, cava.* See SCLAREA.

COLUTEA. Bladder-ſena, or Baſtard-ſena.

The Characters are,

The Pods are membranaceous, and inflated like ſmall Bladders.

Of this *Boerhaave* mentions ſix Sorts.

1. Colutea; veſicaria. *C. B. Pin.* 396. *J. B.* 1. 380. *Chab.* 81. *Raii Hiſt.* 2. 1720. *Jonſ. Dendr.* 377. *Tourn. Inſt.* 649. *Elem. Bot.* 509. *Boerh. Ind. A.* 2. 39. *Colutea*, Offic. Ger. 1116. Emac. 1299. Ind. Med. 39. *Colutea veſicaria vulgaris*, Park. Theat. 226. *Senna Mauritanorum*, Chomel. 1. 42. *Pſeudo-Senna, ſive Senna Europæa*, Boerh. Hiſt. Plant. 468. *Senna Pauperum*, Ejuſd. BASTARD-SENA.

This is a Buſh, or ſmall Tree, which ſends from the Root many Aſh-colour'd ſlender Branches, on which grow long pinnated Leaves of nine or eleven Pinnæ, round, and a little hollow'd in at the End. The Flowers grow in Bunches on the upper Part of the young Shoots, being yellow and papilionaceous, ſucceeded by large ſwell'd thin Bladders, ſomewhat flattiſh on the upper Part; and ſharper and boat-faſhion'd underneath, with a crooked Appendix at the End, full of black Kidney-like Seed. It grows wild in ſeveral Parts of *Italy*, but is with us only in Gardens, and flowers in *July.*

The Leaves of this *Baſtard-ſena*, but eſpecially the Seeds, purge upwards and downwards with much Violence; and therefore ought only to be adminiſtered to ſtrong robuſt Bodies, and then with good Correctives. *Miller's Bot. Off.*

2. Colutea; veſiculis rubentibus. *J. B.* 1. 380. *Deſcr.*

3. Colutea; Orientalis; flore ſanguinei coloris, lutea macula notato. *T. Cor.* 44. *H. R. D.* EASTERN BLADDER-SENA, WITH BLOOD-COLOUR'D FLOWERS SPOTED WITH YELLOW.

4. Colutea; Æthiopica; flore Phœniceo; folio Barbæ Jovis. *Breyn. Cent.* 70. *Prod.* 30. *H.* ETHIOPIAN BLADDER-SENA, WITH SCARLET FLOWERS, AND LEAVES LIKE THE SILVER-BUSH.

5. Colutea; Africana; annua; foliis parvis, mucronatis; veſiculis compreſſis. *H. A.* 2. 87. AFRICAN ANNUAL BLADDER-SENA, WITH SMALL-POINTED LEAVES, AND COMPRESS'D PODS.

6. Colutea; Zeylanica; argentea tota. *H. L.* 169. *Boerhaave's Index alter Plantarum, Vol.* 2.

COLUTEA; SCORPIOIDES. See EMERUS.

COLYMBADES, κολυμβάδες. Pickled Olives. See OLIVA.

COLYMBÆNA, κολυμβαίνα. The Name of a Sort of Shrimp in *Galen.*

COMA, κῶμα, in *Galen's Exegeſis*, is expounded by καταφορά, *Cataphora*, that is, a preternatural Propenſity to Sleep; and, in the third Chapter of his Treatiſe of a *Coma*, he informs us, that *Coma* includes every *Cataphora*, both the ſleepy and the wakeful. He gives the ſame Expoſition of it in *Com.* 1. *in Prorrhet.* where he ſays, ὡς εἶναι τὸ κῶμα τὴν εἰς ὕπνον καταφοράν, &c. "So that a *Coma* is a *Cataphora*, in which the Patients "are incapable of acting as thoſe who are awake, but have a "Deſire to ſhut their Eyes in hopes of ſleeping; but it ſome-"times happens, that they are unable to ſleep after their Eyes "are ſhut, but continue for the moſt part waking, which Diſ-"order *Hippocrates* call'd ἄνευ ὑπνώδους κῶμα (a *Coma* not of the "ſleepy Kind); but we have written a whole Treatiſe of the "Signification of a *Coma*, in which we have ſhewn, by ſeveral "Paſſages, that *Hippocrates* call'd every Sort of *Cataphora* by "the Name of *Coma*." Again, *Com.* 3. *in Prorrhet.* he tells us, that he has written a Treatiſe of a *Coma*, according to the Sentiments of *Hippocrates*, wherein he has ſhewn, that a *Coma* ſignifies τὴν εἰς ὕπνον καταφοράν, "a violent Propenſity to ſleep," under which the Patients are incapable of waking with their Eyes open, and uncertain of ſleeping while they are ſhut, but ſometimes continue waking. Once more, the ſame Author, in *Com.* 1. *in Lib.* 3. *Epid.* ſays, "I call εἰς ὕπνον καταφοράν "a Diſorder when the Patients cannot continue waking, having "their Eyes not open, but winking, being either in a deep "Sleep, a Slumber, or waking. Wherefore there is required "Diſtinguiſhing, with the Help of good Judgment, and great "Experience, in order to know, of a Certainty, under what "kind of comatous Indiſpoſition the Patient labours."

As there are two Sorts of the *Cataphora*, ſo there are of the *Coma*, in *Hippocrates*; for there is the *Coma* (κῶμα) βαρὺ, ὑπνῶδες, ἢ δυσδιεγερσίαν, "heavy, profoundly ſleepy, or difficult to be "rous'd from." To which is oppoſed λεπτὸς ἢ μικρὸς ὕπνος, "a ſmall or gentle Sleep or Slumber." This Sort of *Coma* is uſually attendant on a Lethargy. Hence κωματώδεις ὕπνοι, in *Coac.* ſignify a profound Sleep, attended with a Sopor, from whence it is difficult to rouſe the Patient. For, according to *Galen, Com. ad Aph.* 3. *Lib.* 2. it is call'd a *Coma*, when it is difficult to rouſe the Patient out of it; but when it exceeds what is agreeable to Nature only in reſpect of Time, it is call'd barely a long Sleep. *Coma*, in this Senſe, then, comprehends lethargic Affections, eſpecially if it be attended with Diſorders of the Head, Refrigerations of the whole Body, a Torpor, Heavineſs, and Dulneſs of Senſation, ſuch as in *Coac.* are call'd κωματώδεις παθήσι, "comatous torpid (Indiſpoſitions)." "It "is cuſtomary with the Author of the *Prorrheticon*," ſays *Galen*, "to uſe the Word *Coma* to ſignify a Lethargy; for the "Word λήθαργος occurs not once in the whole Book." They, then, who are oppreſs'd with a Sleep, which is attended with a Sort of Torpor, are ſaid to be κωματώδεις, "under a *Coma*."

There is another Sort of *Coma*, which *Hippocrates* calls κῶμα ἄνευ ὑπνώδους, ἢ ἄγρυπνον, "the unſleepy or wakeful Coma." This is a uſual Symptom of a Phrenitis, and ſeems to be an Affection made up of Sleeping and Waking. We have it thus expreſs'd by *Hippocrates*, *Lib.* 3. *Epid.* κωματώδεις ἐπὶ πολὺ, καὶ πάλιν ἄγρυπνοι, "they were, for the moſt part, under a Sopor, and "then again moleſted with want of Sleep." Again, in the ſame Book, κατέχει δὲ ἢ τὸ κῶμα συνεχῶς ἄνευ ὑπνώδους, ἢ μετὰ πόνων ἄγρυπνοι, "they either laboured under a continual wakeful "*Coma*, or want of Sleep, attended with great Uneaſineſs." *Galen, Lib. de Comate, Cap.* 3, 4. and *Com.* 3. *in Lib.* 3. *Epid.* explains this Affection in the following Manner: "When the "Patients cannot wake with open Eyes, but lie winking in hope "of ſleeping, but continue waking, we call this Affection a "*wakeful Coma*; and if there be an Uneaſineſs in the Caſe, "they will more manifeſtly appear to be awake, and not ſo "much as in a Slumber. Perſons, under ſuch a comatous Diſ-"poſition, ſeem conſtituted in a middle State between thoſe "who are perfectly awake, and thoſe who are aſleep." The ſame Author, *Com.* 1. *in Lib.* 1. *Prorrhet.* ſays, that this Diſorder is compounded of a Phrenſy and a Lethargy, and is by ſome call'd *Typhomania*, contrary to the Sentiment of *Hippocrates.* See his *Lib. de Comate, Cap.* 4. But, in his *Iſagoge Pulſuum*, he tells us, that this Affection wants a proper Name, and that the Knowledge of it muſt be learned from its concomitant Symptoms.

For a farther Account of a *Coma*, ſee LETHARGUS.

For the Cauſes of, and Treatment due to, a *Coma*, conſidered as a Symptom in Fevers, ſee FEBRIS.

COMA AUREA.

The Characters are,

It hath a fibrous perennial Root; the Leaves, which are in great Numbers, are produced alternately on every Side of the Branches; the Cup of the Flower is not ſpacious; the Flowers are yellow, and produced either ſingly, or in an Umbel, upon the Tops of the Branches: To which may be added, it hath the Appearance of a Shrub. *Miller's Dictionary, Vol.* 1.

Boerhaave mentions nine Species of this Plant.

1. Coma aurea; Germanica. *Park.* 688. *Linaria, folioso capitulo luteo, major.* C. B. P. 213. *Linaria aurea.* H. Eyst. Æst. 9. 1. F. 14. Fig. 1. *Linaria, aurea, Tragi, sive Linaria tertia.* J. B. 3. 151. *Linosyris Nuperorum.* Lob. Ic. 409. *Virga aurea, Linariæ foliis.* Raii Meth. 189. *Conyza, linariæ folio.* T. 455. *Virga aurea, Linariæ foliis, floribus congestis, & umbellatim dispositis.* M. H. 3. 25. GERMAN GOLDYLOCKS.

2. Coma aurea; Africana; fruticans, foliis linariæ angustis; major. *H. A.* 2. 89. *Conyza Æthiopica, flore bullato, aureo, pinastri brevioribus foliis, læte viridibus.* Plukn. 327. H. R. D. AFRICAN SHRUBBY GOLDYLOCKS, WITH NARROW TOAD-FLAX LEAVES.

3. Coma aurea; Africana; fruticans; foliis Crithmi marini. *H. A.* 2. 89. *H. R. D.* AFRICAN SHRUBBY GOLDYLOCKS, WITH SAMPHIRE-LEAVES.

4. Coma aurea; Africana; fruticans; foliis glaucis & in extremitate trifidis. *H. A.* 2. 97. *H. R. D.* AFRICAN SHRUBBY GOLDYLOCKS, WITH SEA-GREEN LEAVES, which are divided into three Parts at their Extremities.

5. Coma aurea; Africana; fruticans; foliis viridibus & in extremitate trifidis; floribus majoribus. *H. R. D.* SHRUBBY AFRICAN GOLDYLOCKS, WITH LONG NARROW SEA-GREEN LEAVES, which are divided into many Parts, each of which are trifid at their Points.

6. Coma aurea; Africana; fruticans; foliis glaucis, longis, tenuibus, multifidis, apice pinnularum trifido. *H. R. D.*

7. Coma aurea; Africana; fruticans, foliis tenuissimis, longis, trifidis. *H. R. D.*

8. Coma aurea; Africana; fruticans; foliis glaucis succulentis, digitatis, odoratis. *H. R. D.*

9. Comæ aureæ similis frutex; ambarum spirans. Frutex Africanus ambarum spirans. *Volk.* 175. *Plukn.* 183. *H. R. D. b. Boerhaave's Index alter Plantarum, Vol.* 1.

There is nothing said of the Virtues of these Plants; and yet, from their aromatic Quality, and fragrant Smell, there seems Reason to believe, that they are not destitute of useful Properties. The eighth Species is the most fragrant, and is proper for Pains of the Colic proceeding from Acidities. The ninth is used by the Inhabitants of *Africa* in cold Diseases; for it is extremely sweet-scented, but, after the Leaf is bruised, the Smell soon vanishes. It is effectual in Obstructions of the Urine and Menses, dissolves coagulated Blood, and kills Worms.

COMA is the Hair of the Head: Whence

COMÆ imports the Tops of Plants, or the Leaves of Trees. *Raii Hist. Plant.*

COMARUS *Theophrasti.* See ARBUTUS.

COMBUSTIO, in Chymistry, imports Burning, one Sort of Calcination.

COMEDONES. See CRINONES.

COMETZ. Half a Drop. *Rulandus.*

COMISDI. Gum Arabic.

COMISTE, κομιστή. The Epilepsy; so call'd because People were subject to be seized with this Disease in the public Assemblies of the People, call'd *Comitia.*

COMMAGENUM, κομμαγηνόν. The Name of an Ointment mentioned by *Galen*, in his Treatise *De Compositione Med. S. L. Lib.* 2. *Cap.* 1. It is also call'd *Syriacum Unguentum.*

COMMANDUCATIO. Mastication.

COMMANSUM. The same as APOPHLEGMATISMUS. *Blancard.*

COMMELINA. A Plant so call'd by Father *Plumier*, by way of Compliment to Dr. *Commeline*, a famous Professor of Botany at *Amsterdam.*

The Characters are,

The Leaves are produced alternately, and surround the Stalks at their Base, being in Shape somewhat like the Ephemeron: The Stalks trail upon the Ground, and grow very branchy: At the setting on of the Branches, between the Wing of the Leaf and the Stalk, is produced a Flower, which consists of two Leaves, which are placed in the Form of two Wings, much after the Manner of the Butterfly-flowers: From the upper Part of the Flower are produc'd three short Stamina, (or Threads) upon which are fastened yellow Apices, which resemble the Head of a Mushroom: In the under Part of the Flower are produced three other Male Stamina, which are thicker and longer than the others: The Ovary is produced in the Centre of the Flower, which is extended into a long intorted Tube, and becomes an oblong Fruit, divided into two Cells, in each of which is contained one oblong Seed. *Miller's Dictionary, Vol.* 1.

Boerhaave mentions but one Species of this Plant, which is

Commelina; graminea; latifolia; flore cœruleo. *Plum. N. G. Pl.* 48. *Ephemerum, Africanum, annuum, flore bipetalo.* H. L. BROAD GRASS-LEAV'D COMMELINE, WITH BLUE FLOWERS. *Boerh. Ind. alt. Vol.* 1.

There are no Medicinal Virtues attributed to this Plant, that I can find.

COMMI, κόμμι. Gum. When alone, and without any Epithet, it implies Gum Arabic. The κόμμι λευκὸν mention'd by *Hippocrates*, in his second Book *De Morbis Mulierum*, is the same Gum. See GUMMI.

COMMINUTIO. Comminution. The Reduction of a solid Body into finer Particles by any means whatever.

COMMISSURA. Juncture, Joint, or Articulation.

COMMOSIS, κόμμωσις. The first Stratum of gummy Matter, with which Bees line their Hives.

COMMOSIS also imports that Art which is employed in concealing natural Imperfections, with respect to Beauty. This Authors distinguish from the Cosmetic Art, as this last consists in preserving the Beauty which is natural.

COMMUNICANTES FEBRES, according to *Bellini*, are two Fevers, which infest a Person at one and the same time, the Paroxysm of one beginning immediately after the Paroxysm of the other ceases.

COMPASSIO. Compassion, in Nosology, is the Suffering of one Part, on account of an Affection of some other Part. This is call'd suffering by Consent.

COMPEPER, κομπέπερι. A Name in *Myrepsus* for Cubebs. They are call'd by *Actuarius, Compeba*, κομπέβα.

COMPLEXIO. A Constitution or Temperament.

COMPLEXUS. Complex, or complicated.

COMPLEXUS MUSCULUS. There are two Pair of Muscles call'd by this Name. The first is term'd, simply,

COMPLEXUS.

This is a pretty long and broad Muscle, lying on the posterior lateral Part of the Neck, all the Way to the Occiput. It is complicated by reason of the Decussations of its different Portions, from which it has its Name, but is commonly look'd upon to be one Muscle.

It is fixed below by small short Tendons to the transverse Apophyses of all the Vertebræ of the Neck, except the first, to which it is fixed only near the Root of its transverse Apophysis. From thence it runs up obliquely backward, crossing under the Splenius, and often communicating with it, by some Fasciculi of Fibres.

It is afterwards inserted above, by a broad fleshy Plane, in the posterior Part of the superior transverse Line of the Os Occipitis, near the Crista or Spine of that Bone. At its Insertion it joins by one Edge the Complexus of the other Side, and by the other the Splenius, which covers it a little.

Before we dissect the Splenii, we may see, in the Interstice left between their superior Portions, the two Complexi united together on the Spine of the Os Occipitis.

The other is, the

COMPLEXUS MINOR SIVE MASTOIDÆUS LATERALIS.

This is a long, slender, narrow, indented Muscle, lying along all the Side of the Neck up to the Ear, where it increases a little in Breadth. It is something like the *Complexus Major*; and *Vesalius* took it to be a Portion of that Muscle.

It is fixed by one Extremity in all the transverse Apophyses of the Neck, except the first, by the same Number of Digitations or Branches, mostly fleshy, and disposed obliquely.

From thence it ascends, and, having reached above the transverse Apophysis of the first Vertebræ, it forms a small broad Plane, by which it is inserted in the posterior Part of the Apophysis Mastoidæus. It is here covered by the Splenius, and covers a little the Obliquus superior.

This Muscle is often mistaken for a Portion of the Longissimus Dorsi. *Winslow's Anatomy.*

COMPLICATIO MORBI. A Complication of Diseases. Diseases are said to be complicated, when two or more subsist at once in the same Subject.

COMPOSITI MORBI. Compound Diseases. The same as complicated.

COMPOSITA MEDICAMENTA. Compound Medicines, which consist of many Ingredients; they are thus call'd by way of Distinction from simple Medicines, which contain only one Ingredient.

COMPREHENSIO. The same as CATALEPSIS.

COMPRESSÆ. Compresses, in Surgery, are folded Pieces of Linen Cloth, contrived to make a gentle Pressure upon any particular Part. Their Forms and Uses are specify'd under the Articles of Disorders and Operations where they are employ'd.

COMPUNCTIO. The same as PARACENTESIS, which see.

CONARIUM. The Glandula Pinealis, so call'd from its Form.

CONCAVATIO. The same as ARCUATIO, which see.

CONCAUSSA. A Cause which co-operates with another in the Production of a Disease.

CONCENTRANTIA. Absorbents of Acids are sometimes call'd by this Name.

CONCENTRATIO. This signifies that Operation, by which the most active Parts of any Liquor, and those from which it derives its principal Qualities, are collected together, and

and ſeparated from the other Parts, which dilute and render them weaker. When, for Inſtance, ſpirituous, oleous, and ſaline Liquors, being expoſed to the Cold, have their aqueous Parts congeal'd; whilſt their ſpirituous, oleous, and ſaline Parts, being free from the Congelation, become more pure, and free from the aqueous Parts before mix'd with them. Becauſe the aqueous Parts are thus ſeparated, Concentration may properly be ſaid to be a Species of Dephlegmation. It is alſo call'd Concentration, when, by an Addition of earthy, dry, and abſorbent Subſtances, the Acid of any Liquor is attracted and imbib'd; whilſt the aqueous Parts are left, and the Acid, as it were, convey'd to another Body. The Uſe of this Species of Concentration is obvious, in Caſes where Acidities are to be ſubdued or corrected: Hence Abſorbents are call'd concentrating Medicines. To this belongs that Species of *Concentration*, in which, by an Acid, any Body is corroded, and remains combin'd with it. Thus Vinegar, combined with, and then diſtil'd from Verdegriſe, is much ſtronger than it was before, and, for that Reaſon, is call'd concentrated. There is another Species of Concentration, which is, when alcaline Salts are ſaturated with acid Spirits, which are ſo retain'd in them, that both, in Conjunction, conſtitute neither an Acid, nor an Alcaline, but a neutral Salt. The Uſe of this Species of Concentration is obvious, that is, to procure neutral Salts. Laſtly, Concentration, in an extenſive Senſe, denotes an Union or Combination of a Spirit, a Salt, or a Sulphur, with any Body. Thus, in ſublimate Mercury, which is form'd of Quick-ſilver and the Acid of Sea-ſalt, united together, the Spirit of Salt is ſaid to be concentrated.

CONCEPTIO, Conception. See GENERATIO.

CONCEPTUS. The very firſt Rudiments of the Fœtus in the Uterus after Conception.

CONCHA.

The *Concha* of the *Latins*, the κόγχη and κόγχος of the *Greeks*, correſponds to what, in *Engliſh*, we call a *Shell-animal*. Among ſome Authors, the Word *Concha* ſometimes denotes the Whole of a teſtaceous Animal, and ſometimes only its Shell; ſometimes this Word is reſtrain'd to Fiſhes with two Shells. In the laſt Signification, *Concha* imports every teſtaceous aquatic Animal with two concave Shells, whether large or ſmall, ſo join'd by a kind of natural Hinge, that they may ſhut and open. This Genus comprehends many Species under it. As for the Natural Hiſtory of this Animal, it is to be found in the *Memoires de l' Academie Royale des Sciences*, for the Years 1706. 1710. and in the *Spectacle de la Nature*, T. 1. The Diſeaſes moſt generally found incident to Shell-fiſh are, firſt, in ſuch of them as are old, Moſs adhering to the outer Part of the Shell, like that which generally adheres to Stones, which, penetrating the Shell, makes way for the Water, and proves fatal to the Animal. Secondly, Sea-weeds adhering to the external Surface of the Shell, and to Stones or Rocks at the ſame time, retard the progreſſive Motion of the Animal. Thirdly, a Species of Itch, or Tubercules, ariſing on the internal Surface, which, increaſing, produce an Exfoliation of the Shell. Fourthly, a Diſſolution of the Shell, which gradually becomes ſofter and ſofter. We muſt here obſerve, in general, that Sea Shell-fiſhes are eatable, when boil'd and dreſs'd with a Sauce, according to every one's Taſte; but they are of difficult Digeſtion, and of an alcaleſcent Nature. The Oyſter is alſo eaten crude. In Medicine, the Shells of theſe Fiſh are found to be drying, abſorbent, correcting, and precipitating; for which Purpoſes, thoſe beat to a fine Powder are preferable to thoſe levigated on a Marble with Water, which are commonly call'd *Conchæ præparatæ*. What are uſually kept in the Shops, under this Title, are the Shells of Muſcles, and are recommended for exciting a Diaphoreſis in intermitting Fevers, if a Scruple, or half a Dram, is exhibited, about an Hour before the Paroxyſm, in Carduus-water, or that of the leſſer Centaury; ordering the Patient, at the ſame time, to be kept warm, in order to encourage a Diaphoreſis. But, when the Shells are calcined, they become Lime, and do not abſorb and correct, but ſtimulate and reſolve, in conſequence of the Acrimony they have acquired by Calcination. In this Caſe they are ſo far from correcting the Acrimony of the Juices, that they rather increaſe the Heat of the Stomach and Fauces.

Olaus Wormius, in his *Muſeum*, informs us, that the Aſhes of Shell-fiſh are poſſeſs'd of a cauſtic Quality; that they are recommended againſt Leproſies, Freckles, and Spots of the Skin; that, when they are previouſly waſh'd, like Lime, they cure Ulcers, and Eruptions on the Head; and that, in the *Netherlands*, they are uſed as a Cure for the Hæmorrhoids. *Pliny*, in the ſeventh Chapter of his thirty-ſecond Book, deſcribes their detergent Quality in the following Words: "The "Aſhes of the Shells of Fiſh, if uſed by way of Ointment, "with Honey, remove Spots in the Faces of Women in ſeven "Days time, render the Skin ſmooth, and, on the eighth, "the Part is to be anointed with the Whites of Eggs." There are various Species of Shell-fiſhes deſcrib'd by Naturaliſts, ſuch as the

CONCHA ANATIFERA, ſo call'd, becauſe 'tis fabulouſly reported, that a Species of Bird, of the Duck-kind, is form'd in it.

CONCHA ERYTHRÆA. See CONCHA VENERIS.

Concha Lævigatoria, or *Lævigata*. A Shell-fiſh of an oval Form, with a very ſmooth Shell, uſed by the *Egyptians* in ſmoothing their Linen, and by the *Greeks* and *Turks* in poliſhing their Papers.

CONCHA FOSSILIS, or LAPIDEA. See CONCHITES.

CONCHA MARGARITIFERA. This may be apply'd to every Shell-fiſh, from which Pearls are obtain'd; but, becauſe the beſt Pearls are generally found in the *Indies*, it is confined, for the moſt part, to the *Concha Indica magna*, whoſe Shells are moderately hollow, thick, and, externally, ſomewhat yellowiſh, rough, and uneven, but not ſtriated; internally they are ſmooth, and ſhine like Pearls. The Animal contain'd in this Shell is ſometimes eaten raw by the *Indians*, and ſometimes broil'd. It is ſaid to be ſweet and grateful to the Taſte. It is a Species of Oyſter, found principally in the *Perſian* Sea. The Shell of this Fiſh is the *Mater Parlarum* of the Shops, which ſee.

CONCHA PERSICA. A Shell-fiſh ſo call'd from the *Perſian* Sea, in which 'tis produced. *Aldrovandus* claſſes it among the univalve, but *Bonannus* more juſtly among the bivalve Fiſhes.

CONCHA PICTORUM, ſo call'd, not from its being uſed in mixing or containing the Colours of Painters, but from the Shell being raſp'd down for mixing up Colours, as an Ingredient.

CONCHA SAXATILIS. See CONCHITES.

CONCHA VENEREA, or VENERIS. This is what we call *Venus*'s Shell. It is a Fiſh, whoſe Shell is univalve, wreath'd, and has a ſmall longitudinal and denticulated Chink or Aperture in it. It is alſo call'd *Concha Porcellana*, from its Aperture in ſome meaſure reſembling the Mouth of a Hog; and *Concha Erythræa*, from its being found in the *Red Sea*, which is call'd *Erythræum*. It is alſo call'd *Concha Cytheriaca*, from *Venus*, who received the Epithet *Cytheræa* from *Cythera*, a *Grecian* Iſland. That this Species of Shell-fiſh was uſed by the Antients as an Aliment, we read in *Seneca*, *Epiſt.* 95. *Mundius* aſſerts, that they prove a Stimulus to Venery, and provoke Urine. *Rondeletius* informs us, that theſe Shells are an Ingredient in the *Pilulæ de Bdellio*, for removing Fluxes, and curing Ulcers of the Uterus. But, inſtead of the *Concha Venerea*, Apothecaries generally uſe Cockles. Excellent Dentifrices are prepared from this Species of Shell; which is alſo uſeful for curing Ulcers in the Canthus of the Eye, and the Fiſtula Lachrymalis. It is remarkably drying, without exciting any Heat. *Wormius* informs us, that he has heard Spoons of theſe Shells highly commended for curing the Chin-cough in Children, if they ſup Broths, or other proper Fluids, with them. The Powder of theſe Shells muſt be own'd to poſſeſs an abſorbent drying Quality; but that, on account of their Beauty, or any other Circumſtance, their Powder is preferable to that of other Shells, is by no means probable.

CONCHA, κόγχη. This was a ſort of liquid Meaſure among the *Athenians*, which contain'd two Myſtra, or half an Ounce. As much Oil as it was capable of holding, weigh'd five Drams one Scruple and twenty Grains, according to *Gorr. Defin. Pitiſci Lex. & Eiſenſchom.* Others think, that the *Concha* contain'd three Spoonfuls, ninety-ſix of which fill'd a Pint-veſſel (Sextarius); a Sextarius was, therefore, equivalent to thirty-two Conchæ, and ſix Sextarii made one Congius, a Meaſure equal to our three Quarts, according to *Salmaſ. Exerc. Plinian.* and *Bodæus, in Theophraſt.* According to *Fernelius*, the Concha was equivalent to two Myſtra, or five Spoonfuls; which, according to *Jacobus Sylvius*, are equivalent to ſix Drams. According to *Galen*, in his Work *de Ponderibus & Menſuris*, *Cap.* 11. the *Concha magna* contain'd the ſame Quantity with the Acetabulum, which, in liquid Meaſure, was an Ounce and an half, and, in Weight, fifteen Drams. The *Concha minor* was, in liquid Meaſure, half an Ounce, and, in Weight, five Drams.

CONCHARUM ANTIFEBRILE. This Medicine is in the *Pharmacop. Bateana*, and directed to be prepared in the following manner:

> Pour Vinegar upon Muſcle-ſhells, and macerate them for twenty-four Hours. Wipe off the external Mucus; dry and reduce them to a Powder; during which Operation add a Spoonful of Carduus-water, to prevent the Flying-off of the volatile Part of the Powder. The Doſe is one Dram. This is an excellent Febrifuge, and powerfully promotes a Diaphoreſis.

CONCHIS. This, among the *Romans*, was a Name given to the entire Bean, wrapt up in its Capſula or Follicule. Tho' it was principally uſed as an Aliment by the poorer Sort, yet, according to *Apicius de Opſoniis & Condimentis*, it is a delicate Food, much eſteem'd by the Luxurious, when boil'd with aromatic Subſtances.

CONCHITES. This is alſo call'd *Concha Feſſilis*, *Lapidea*, and *Saxatilis*, and, in *Engliſh*, *Cockle-ſtone*. It is a Stone, in Figure, reſembling a certain Shell-fiſh.

CONCHOIDES. This, according to *Breynius*, in his *Diſſertatio de Polythalamiis*, is a Species of Shell-fiſh, whoſe Shell is bivalve, and is at the ſame time made up of ſmaller teſtaceous Portions.

CONCHYLIA, κογχύλια, and ὀστρακόδερματα, are what, in *Engliſh*, we call Shell-fiſh. Theſe are Animals without Feet, incloſed in a hard, friable, and kind of ſtony Covering, ſometimes more, and ſometimes leſs thick, ſmooth, and even within, to which they adhere, and are join'd by muſcular Ligaments. The ſeveral Species of theſe Animals, the Methods of their Production and Nouriſhment, together with the ſeveral Particulars relating to their Natural Hiſtory, are to be found in *Hebenſtreit's Diſſertatio de Ordinibus Conchyliorum*, in *Wormius's Muſeum*, in *Rondeletius's Hiſtoria Piſcium*, and in the Works of *Paliſſy*, *Bellonius*, *Liſter*, *Leeuwenhoek*, *Helmont*, *Bonannus*, *Cyprianus*, and others, who have been induſtrious in enriching Natural Hiſtory with their Obſervations.

With reſpect to the Uſe of Shell-fiſh as an Aliment, we may obſerve, in general, that the Antients, eſpecially the *Romans*, look'd upon them as an uncommon Delicacy. Hence we read, in *Athenæus*, *L.* 3. *C.* 9. that they were uſed in the rich and delicate Entertainments of Widows. The *Romans* fed Shell-ſnails for the Purpoſes of Luxury; and *Pliny*, in the 34th Chapter of his ninth Book, does not ſcruple to affirm, that the Uſe of Shell-fiſh was a very conſiderable Source of Luxury, and Depravity of Manners: And, in the 57th Chapter of his eighth Book, he informs us, that *Marcus Scaurus*, during his Conſulſhip, prohibited the Uſe of Shell-fiſh for Supper. The Juice of Sea Shell-fiſh is certainly poſſeſs'd of a ſtimulating Quality, and proves a powerful Incentive to Venery, eſpecially when prepared with Aromatics. But as Shell-fiſh were the Incentives to Luxury and Luſt, among the more civiliz'd and delicate Nations; ſo they were the neceſſary Food and Aliment of ſome of the more barbarous Countries. Thus *Strabo*, in his 16th Book, gives us an Account of ſome People in *Aſia*, who, putting Shell-fiſh into a Pit in the Sea, fed them with ſmall Fiſh, and uſed them when the other Fiſhes, on which they lived, were ſcarce. And *Diodorus Siculus*, in *Lib.* 3. *Cap.* 16. tells us, that ſome *Ethiopians*, when labouring under a Penury of Aliments, gather large Shell-fiſh, whoſe Shells they break with Stones, and whoſe Fleſh, which taſtes like that of Oyſters, they eat raw. *Sprat*, in his Hiſtory of the Royal Society, informs us, that the *Indians*, about the Iſland *Java*, eat large Shell-fiſh pickled in Brine, as hard as a Piece of Horn, and whoſe Taſte reſembles that of the Fleſh of a wild Boar. *Celſus*, in the 18th Chapter of his ſecond Book, affirms, that Shell-fiſh nouriſh but little: And *Hippocrates*, in his Book *de Diæta*, *L.* 3. aſſerts, that they are dry, but their Juice renders the Body ſoluble; that Muſcles, Cockles, and Limpins, paſs more eaſily off by Stool than the other Species; and that Muſcles alſo excite a Diſcharge of the Urine. *Diocles Caryſtius*, according to *Athenæus*, *L.* 3. *Cap.* 9. informs us, that Muſcles, Cockles, Baſtard-cockles, and Oyſters, are more efficacious in rendering the Body ſoluble, and exciting a Diſcharge of Urine, than other Shell-fiſhes. *Horace* was no Stranger to this Quality of Shell-fiſhes; for, in *L.* 2. *Satir.* 4. *V.* 27. he gives the following Advice:

> ---------- *ſi dura morabitur Alvus,*
> *Mitulus & viles pellent obſtantia Conchæ.*

According to *Galen*, in his Work *de Alimentorum Facultat. L.* 3. *C.* 33. "All Shell-fiſhes contain a ſaline Juice, fit for "rendering the Body ſoluble. This Effect they produce in "proportion to the Quantity and Quality of their reſpective "Liquors. The Fleſh of the Oyſter is, of all others, the "ſofteſt, and conſequently the moſt purgative; but it is not "poſſeſs'd of a highly nutritive Quality. Thoſe Shell-fiſhes, "on the contrary, which are harder, are with greater Diffi-"culty concocted; but they are more nutritive, and leſs purga-"tive. From theſe a large Quantity of crude Juices are gene-"rated; whereas thoſe, whoſe Fleſh is ſoft, generate Phlegm. "Since, therefore, when they are diveſted of their ſaline Juice, "their Fleſh is with Difficulty diſſolved, and renders the "Body coſtive; ſo when they are pickled with Salt or Garum, "the Liquor yielded by them, if drank, renders the Body "ſufficiently ſoluble, but conveys no Nouriſhment to it. The "Purple-fiſh and Whelk have a harder Fleſh, and thicker "Juice, than the other Species, which are more moiſt and "viſcid, eſpecially the Oyſter." *Janus Plancus*, in his Treatiſe *de Conchis minus notis*, thinks, that in human Life, and for the Propagation of Mankind, Sea Shell-fiſhes are of ſingular Service; ſince, by uſing them as an Aliment, Conſumptions, and other formidable Diſorders, are cured. He alſo informs us, that it has been obſerved, by thoſe who make diligent Scrutinies into Nature, that the Inhabitants of the Sea-coaſts are more prolific, than thoſe who live at a Diſtance from them, on account of their eating Fiſh, eſpecially thoſe of the Shell-kind, whoſe Fibres are ſhort, fit for Digeſtion and Nouriſhment, and conſequently qualified for proving a Stimulus to Venery. Since 'tis obvious, that Shell-fiſhes do, from their own Bodies, ſeparate the Matter of which their Shells are form'd, ſome have aſſerted, that they muſt alſo contribute to the Generation of Stones in the human Body: But, as this is a Piece of Speculation, which can only be determin'd by Experience, the Reader muſt conſult the ſeveral Qualities of Shell-fiſhes under their reſpective Articles. The Antients imagined, that Shell-fiſhes increaſed and decreaſed with the Moon. Some of the Moderns have charged this Opinion with Falſhood; but others have ſtood up in Defence of it. For the Reaſons of this Phenomenon, the Reader may conſult Dr. *Mead de Imperio Solis & Lunæ*. The Shells of theſe Animals, when reduced to a Powder, are, in Medicine, uſed on account of their drying, abſorbent, correcting, and precipitating Qualities. The Virtues and Efficacy of the teſtaceous Powders, ſo much recommended by *Liſter* for aſſiſting the Concoction and Digeſtion of the Aliments, can only be underſtood of the calcined Shells; ſince, in conſequence of the Calcination, they acquire a calcareous and ſeptic Quality, by means of which they reſolve and attenuate Crudities. The learned *Kramerus* obſerves, that the Shells of terreſtrial Animals, when reduced to a Powder, are ſcarce fit for being mix'd with aqueous Vehicles, becauſe they ſwim upon them, by reaſon of the large Quantity of the animal Glue they retain; ſo that they are a very improper Succedaneum to the Shells of Shell-fiſh.

CONCHYLIA FOSSILIA. Theſe are what we call foſſile Shells, concerning which there are ſo many different Conjectures, and ſo many diſagreeing Hypotheſes, that 'tis difficult to diſcover Truth. The Curious may, however, for their Satisfaction, conſult *Morton*, *Paliſſy*, *Woodward*, *Dale*, *Ray*, and other Writers of Natural Hiſtory. Theſe are, by ſome, celebrated for their lithontriptic Virtues.

CONCIDENTIA. A Decreaſe of Bulk in the Whole, or any Part of the Body; or, the ſubſiding of a Tumor.

CONCOAGULATIO. The Coagulation, Concretion, or Cryſtallization of different Salts, firſt diſſolved together in the ſame Fluid.

CONCOCTIO. This implies much the ſame as Coctio, which ſee.

CONCRETIO. Concretion, in Chymiſtry, is the Condenſation of any fluid Subſtance into a more ſolid Maſs, importing the ſame as Coagulation.

In Surgery, Concretion is the growing together of any Parts, which ought, in the natural State, to be ſeparate. Thus there is a Concretion of the Fingers with each other; of the Nares, Eyelids, Sides of the Vagina, and of many other Parts.

CONCURSUS. See Syndrome.

CONDENSATIO, Condenſation. It implies a Contraction of the cutaneous Pores by means of refrigerating, aſtringent, or drying Remedies: Or, it imports an Inſpiſſation of any ſort of Fluid, whether in or out of the Body. Hence, *Condenſantia Medicamenta* are Medicines which condenſe or inſpiſſate the Juices.

CONDER, Frankincenſe, or Olibanum. *Rulandus.*

CONDIMENTUM.

The *Condimentum* of the *Latins*, the ἄδυσμα, the ἄρτυμα, and the ὄψυμα of the *Greeks*, import whatever procures Sweetneſs, and a grateful Taſte, to any Subſtance. Hence thoſe Ointments are called ἀδύσματα, to which Aromatics are added, in order to give them a grateful Smell: But, in a more reſtrain'd Senſe, that is called *Condimentum*, which is uſed in preparing Aliments, whether with an Intention of rendering them palatable, or aſſiſting their Digeſtion. The Uſe of theſe Seaſonings in Aliments is ſufficiently obvious; for they are neceſſary, firſt, in Caſes where a Weakneſs of the Viſcera, and a Difficulty of Digeſtion, require that the concoctive Powers of the Stomach ſhould be excited, that by this means the Body may be recruited by the Aliments uſed: Secondly, they are neceſſary when the Aliments to be taken are too hard to be eaſily brought to undergo that Change, which is abſolutely neceſſary for the Nutrition of the Perſons who take them: Thirdly, they are neceſſary in order to procure a grateful Taſte to Aliments, otherwiſe ungrateful and diſagreeable. In this laſt reſpect we muſt readily perceive, that the ſame Seaſoning does not agree with every Palate, ſince ſome are fond of what is ſweet, and others charm'd with what is bitter, whilſt a third Claſs prefer an Acid to every other Taſte. This particular Taſte may be owing either to a congenial Idioſyncraſy, or Peculiarity of Conſtitution, or it may be acquired by Cuſtom, or it may be the Reſult or Effect of ſome Diſeaſe. When, in a Weakneſs of the Viſcera, Seaſonings are requiſite, 'tis the Buſineſs of the Phyſician to judge from what Cauſe this Weakneſs proceeds: If, for Inſtance, it proceeds from too great a Relaxation, ſtimulating Aromatics, and all thoſe Medicines commonly call'd Corroboratives, are proper for removing it. If it proceeds from a quiet, ſedentary, and idle Life, the digeſtive Powers are moſt effectually roufed

by muſcular Motion, and proper Exerciſe. If, on the contrary, this Weakneſs proceeds from Repletion, then Evacuants are principally beneficial; and, according to the Proverb which *Cicero*, in his Treatiſe *De Finibus*, *Lib.* 2. borrows from *Socrates*, *Hunger is the beſt Sauce.* For the other Diſorders ariſing from the Intemperature of the peccant Juices, we are to chooſe ſuch Correctors as are directly oppoſite to the particular Diſorder. Thus, for Inſtance, Diſeaſes ariſing from an alcaline Cauſe are to be removed by Subſtances of an acid and aqueous Nature; whereas thoſe proceeding from an oleous, putrid, or rancid Cauſe, are to be ſubdued by Subſtances of an acceſcent and aqueous Quality. Where the Intention is to produce a ſpeedy Change in hard, dry, and tenacious Aliments, then thoſe Subſtances are proper, which diſſolve what is tenacious, moiſten what is dry, and ſoften what is hard. According to *Boerhaave*, in his *Inſtitut. Medic. Sect.* 54. Salt, Vinegar, Aromatics, and oleous Subſtances, are the principal Materials of which Seaſonings conſiſt. *Diocles*, as the Ingredients of Seaſonings, recommended Rue, Cumin, Coriander, Origanum, Savory, Thyme, Salt, Vinegar, Oil, Cheeſe, Silphium, and Seſamum. This is an Inſtance of the antient *Greek* Simplicity, before their Trade with *Alexandria* paved a Way for the Importation of foreign Aromatics. According to *Salmaſius*, in his *Exercitat. Plinianæ*, Salts were the moſt important of the dry Seaſonings; whereas Vinegar and Oil were the principal among the liquid Kind, which were properly called βάμματα, and ἐμβάμματα; and, according to the different Subſtances with which they were mixed, γαρέλαιον and ὀξύγαρον. From what has been ſaid 'tis obvious, that Seaſonings are intended either to aſſiſt Nature, or gratify the Palate; tho' they are often perverted to the worſt of Purpoſes, and uſed as Incentives to Gluttony. According to *Boerhaave*, Seaſonings of the acid, ſaline, and aromatic Kind are hurtful to ſound Conſtitutions by their noxious Acrimony, prove offenſive to the capillary Veſſels, and, by exciting a falſe Appetite by their Stimulus, load and oppreſs the Body, rather than nouriſh it. On the contrary, pinguious and oleous Subſtances, uſed too liberally, prove deſtructive of Health, by lubricating, relaxing, and debilitating the Solids. Upon the whole, the beſt Seaſoning for Aliments is Hunger, whereas that moſt proper for Drink is Thirſt.

CONDIRE ſignifies either to preſerve with Sugar or Honey, or to pickle with Vinegar or Brine.

CONDITIO. The Condition, State, or Conſtitution of a Patient. *Paracelſus* ſpeaks of *Condition* as relative to one Quality only, as Cold or Heat; whereas Complexion, or Temperament, according to him, conſiſts in a Mixture of Qualities.

CONDITUM. The *Latins*, and lower *Greeks*, underſtood by *Conditum*, or κονδίτον, a Sort of Mulſum; that is, a Wine impregnated with Honey and Aromatics, eſpecially Pepper, a Sort of Metheglin. *Meibomius* takes it for the *Claretum*, or *Vinum Hippocraticum*. But *Conditum*, in the modern Shops, imports what we call *Preſerves*. The principal Uſes of Preſerves in Medicine are, to render nauſeous Remedies more agreeable to the Palate, when mix'd therewith; or to take after diſagreeable Phyſic; in order to remove the Remains of the Taſte. But no great Dependence is had on their Medicinal Virtues. Some, however, are aſtringent, as that of Quinces; and others cooling, as that of Berberies; and, in general, their Virtues may be known by thoſe of the Vegetable preſerv'd.

As this Subject belongs more to the Province of Confectioners or Cooks than Phyſicians, I ſhall only add farther, what the College of Phyſicians have thought proper to direct, in the *London Diſpenſatory*, relative to *Preſerves*.

Preserves *of* Roots, Stalks, Peels, Flowers, Fruits, *and* Pulps, *as directed by the College.*

Take of the Roots of Eryngo, any Quantity; let them be cleanſed externally and internally, by taking out the Pith.

Then ſteep them for a Day or too in clear Water, now-and-then ſhifted, and afterwards be rub'd dry with a clean Linen Cloth.

Afterwards take an equal Quantity of Sugar; diſſolve it in a ſufficient Quantity of Roſe-water over the Fire, and ſcum it till it is almoſt of the Conſiſtence of a Syrup; then put in the Roots, and continue it upon the Fire till all ſuperfluous Humidity is evaporated, and it comes up to the Conſiſtence of a Syrup.

The ſame way likewiſe are preſerved the Roots of Angelica, Elecampane, Satyrion, the greater Comfrey, Ginger, and Zedoary.

The ſame way likewiſe are managed the Stalks of Angelica, and others, gathered before too long a Growth.

Take of the freſh Peels of Oranges, any Quantity; ſeparate the outer yellow Peel, and, after three Days Maceration, at leaſt, in Spring-water, frequently ſhifted, put them into Sugar, ordered and boiled as before, ſo that they may be made into a Preſerve, according to Art.

Conformably hereunto are managed the Peels of Citrons and Lemons.

Take of the Flowers of Citrons, as much as you pleaſe; and preſerve them in Sugar, as above directed.

After the ſame Manner Orange-flowers are to be manag'd.

Take of as many Apricots as you pleaſe; pare them, take out their Stones, and put them into an equal Quantity of the fineſt Sugar.

After four Hours take them out again; and, boiling the Sugar without the Addition of any new Liquor, put them in, and ſimmer them together, according to Art.

After the ſame manner, or not much unlike it, are prepared the Fruits of Berberies, Cherries, wild Cherries, Citrons, Quinces, Peaches, common Apples, the five Kinds of Myrobalans, Walnuts, Nutmegs, Raiſins, Pepper in Bunches from *India*, Garden and wild Plums, Pears, and Grapes.

The Pulps alſo are preſerved of Berberies, of the ſolutive Caſſia, or Fruit of the Pudding-pipe-tree, of Citrons, Quinces, Sloes, and others.

Take of Berberies, as much as you pleaſe; boil them in a ſufficient Quantity of Spring-water, till they are tender; then pulp them thro' a Hair Sieve, with a Wooden Peſtil made on purpoſe. Afterwards boil the Pulp in an Earthen Pan over a gentle Fire, ſtirring it frequently for fear of burning, till the watery Part is evaporated; and to ſix Pounds of ſuch Pulp put ten Pounds of Sugar, and boil up together to a due Conſiſtence.

There alſo are ſaid to be preſerved, or pickled, though with Brine and Vinegar, the Buds of Broom, Capers, Olives, and others.

Laſtly, are alſo preſerved the Bark of Cinnamon, the Flowers of Marygold, Almonds, Cloves, Pine and Piſtachio-nuts, and others, as likewiſe Seeds and Buds; but theſe are managed in another manner, and, for the moſt part, incruſted with Sugar dry; and therefore they are more properly call'd Candies, or Confections. *London Diſpenſatory.*

The *Diacydonium* is properly a Confection of Quinces, being the ſame as Marmalade. See Cydonia.

CONDITURA. The ſame as *Condimentum*. It ſignifies alſo the ſame as Balsamatio, or the Embalming of dead Bodies, or any Parts thereof.

CONDRILLA. See Chondrilla.

CONDUCTIO, in *Cœlius Aurelianus*, is a Spaſm or Convulſion.

CONDUCTOR. A Chirurgical Inſtrument uſed in Lithotomy. See *Tab.* 49. *Fig.* 2, 3, and 4. It is call'd a Gorget. See Lithotomia.

There are other Inſtruments call'd by this Name, which are uſed for directing the Knife in laying open Sinuſes or Fiſtulas.

CONDURDUM. A Plant mention'd by *Pliny*, *Lib.* 26. *Cap.* 5. which he alſo calls *Herba Solſtitialis Flore rubro.* This, he informs us, if hung about the Neck, repreſſes ſtrumous Swellings. *Parkinſon* takes it for the *Vaccaria*, which, in *Boerhaave*'s *Index alt.* is call'd *Lychnis*; *ſegetum*; *rubra*; *foliis Perfoliatæ.*

CONDYLOMA, κονδύλωμα, from its Reſemblance to a *Condylus*; κόνδυλος, a Joint or Tubercle. It is a Tubercle, or callous Eminence, which ariſes in the Folds of the Anus, or rather a Swelling and Hardening of the Wrinkles of that Part. Theſe Tumors frequently happen about the Orifices of the Uterus and other Parts. See Anus.

CONDYLUS, κόνδυλος. A Condyle, that is, a Knot in any of the Joints, form'd by the Epiphyſis of a Bone. In the Fingers it is call'd a Knuckle. In Botany it ſignifies the Joints of Plants.

CONEION, κώνειον. In *Hippocrates* it imports the *Cicuta*, Hemlock; but he only ſpeaks of it as an external Remedy. It is ſaid to be call'd by this Name from κωνᾶν, to turn round, becauſe it produces a Vertigo in thoſe who take it internally.

CONESSI. A Sort of Bark, of which I find the ſubſequent Account in the *Edinburgh Medical Eſſays*, in a Letter to Mr. *Monro*:

The Tree, of which I gave you ſome of the Bark as a Specific in Diarrhœas, grows on the *Cormandel* Coaſt in the *Eaſt Indies*, where it is called *Coneſſi*, and is not unlike the *Cadoga pala* of the *Hortus Malabaricus*. The *Coneſſi-ſeca*, or Coneſſi Bark of the ſmall young Branches of the Tree which has leaſt Moſs, or external inſipid Scurf on it, is to be choſen, and all that Scurf is to be ſcraped off.

The clean Bark, being pounded into a very fine Powder, is made into an Electuary with Syrup of Oranges, and taken to the Quantity of half a Dram or more, four times a Day, for three or four Days. The firſt Day it increaſes the Number and Quantity of the Stools, but without increaſing the Gripes.

The ſecond Day the Bark is taken, the Colour of the Stools is mended; and on the third or fourth Day their Conſiſtence generally comes near to a natural State, when it ſucceeds at all.

In recent Diarrhœas, ariſing from Irregularities in Diet, without a Fever, this Medicine ſeldom fails to make a Cure, if a Vomit of Ipecacuanha is given immediately before the Patient begins the Uſe of the Bark. The ſame Management alſo is attended commonly with Succeſs in Perſons of a lax Habit of Body, who are troubled with an habitual Diarrhœa in moiſt rainy Weather, a remarkable Itching in the Skin being felt on the third or fourth Day. To ſuch Patients, eſpecially, the Electuary ought to be given Morning and Evening, for ſome time after they are ſeemingly cured. Their Drink ſhould be Water wherein Rice hath been boiled; and ſometimes Emulſions of the cold Seeds, with Sal Prunellæ, are neceſſary.

If there is a Fever with the Looſeneſs, that muſt be remov'd by Bleedings and cool Emulſions, or the white Decoction with Sal Prunellæ, before the Coneſſi Bark is given.

Sometimes, when the Cauſe of a Diarrhœa, ſtopt by this Medicine, lies beyond the inteſtinal Canal, the Patient, in a few Days after, complains of a Pain in the Right Hypochondrium, or in the Right Shoulder, or over the Stomach towards the Left Side, cauſing often a dull Senſe of Pain, near or above the Left Clavicle, with a feveriſh Pulſe. As ſoon as theſe Symptoms appear, the Patient muſt be blooded, and his Blood will be ſizy, or with a tough yelloviſh Cruſt on the Top, when it has coagulated. The Quantity of Blood to be taken away, and the repeating the Veneſection, muſt be determin'd by the Patient's Strength, the Degree of Fever, and Sharpneſs of his Pain. In ſuch Caſes, however, the Bleeding ſeldom removes the Pain entirely; but, after the Fever is brought ſufficiently down by the Loſs of Blood, I have ſeldom miſs'd to complete the Cure, by giving Mercurius Dulcis, or rather Calomel, for ſome Days, in ſmall Quantities, as an Alterative. I ought to obſerve, that the Bark ſhould be freſh powder'd, and the Electuary new made, every Day, or ſecond Day; otherwiſe the Bark loſes its auſtere, but grateful Bitterneſs on the Palate, and its proper Effects on the Inteſtines.

CONFECTA. Comfits, or Sugar-plums; Seeds, or other Subſtances, incruſted with Sugar. Theſe are ſometimes impregnated with cathartic Ingredients, as a Temptation to froward Children. See CONFECTIO.

CONFECTIO. A Confection, in general, ſignifies any thing prepared with Sugar. See *Wedelius's Pharmacia acroamatica.* In particular, it imports the ſame as CONDITUM, "ſomething preſerved," eſpecially dry Subſtances; and is otherwiſe call'd *Confectio ſolida*, "a ſolid Confection." This is either *ſimple* or *compound*, call'd alſo *Medicinal:* Solid, ſaccharine, *ſimple* Confections, as we are taught by *Zwelfer*, in his *Pharmacopœia Regia*, are prepared after the following Manner:

The Sugar, being firſt well clarify'd with pure Water, and the White of an Egg, is boil'd to a Conſiſtence a little thicker than that of a Syrup. Then the Thing which is to be preſerv'd, or incruſted with Sugar, for Inſtance, Cinnamon, Almonds, Aniſeeds, and the like, are put into a large Copper-veſſel, flat-bottom'd, not deep, which is plac'd upon a very gentle Fire, and when it is moderately heated, together with its Contents, the Artiſt ſprinkles ſome of the liquid Sugar, before prepar'd, ſomewhat warm, upon the Things in the Veſſel, juſt enough to moiſten them, and immediately ſtirs them to and fro, ſhakes them, rubs them in his Hands, and toſſes the Veſſel after an artificial manner, in order to prevent the Seeds, or whatever elſe it be, from cluſtering or ſticking together. Then they are to be totally dried by a gentle Coal Fire under the Veſſel. After this as much diſſolv'd Sugar is to be added to the Thing as is ſufficient to moiſten it moderately, and, continuing the Agitation, Commotion, and Rubbing with the Hands, it is to be dry'd. This Operation is to be repeated, moiſtening and drying the Materials by turns, till they are ſufficiently covered with Sugar.

This is the Method of preparing Confections with pure Sugar, without any Adulteration; but, that Confectioners may prepare them with greater Eaſe, and be able to ſell them at a lower Rate, they add Starch to the diſſolv'd Sugar, with which they moiſten them; by which means they not only dry them ſooner, but alſo render them ſufficiently large, at a leſs Expence than otherwiſe they could do. *Helmont*, without Exception, condemns all the Confections of the Shops, not only as inſignificant and trifling, but alſo pernicious and hurtful Medicines. *Ettmuller* declares himſelf of the ſame Opinion, and affirms, that Confections are prejudicial to moſt Patients, eſpecially thoſe labouring under hypochondriacal Diſorders. The Word *Confection* alſo ſignifies a liquid or ſoft Electuary.

There are various Sorts of Confections directed in *Diſpenſatories*; but thoſe ordered in the *London Diſpenſatory* are the following.

CONFECTIO ALCHERMES. See ALKERMES.

CONFECTIO ARCHIGENIS.

The CONFECTION *of* ARCHIGENES.

Take of the beſt Caſtor, of long and black Pepper, Styrax, Spikenard, Coſtus, Galbanum, and Opium, of each half an Ounce; of Saffron, two Drams; of Syrup of Mugwort, a ſufficient Quantity to make the Whole into a Confection.

This hath not been received into any *Diſpenſatory* of the College before the laſt Reformation of it. It is originally a Preſcription of *Meſue*, *de Tuſſi Humida*, and is in *pag.* 30. of the *Venice* Edition in 1549. It is from thence inſerted into the *Auguſtan Diſpenſatory*, exactly as it ſtands here, unleſs in the Subſtitution of the Syrup of Mugwort for Honey; and is there recommended for Diſtempers of the Breaſt, as alſo in nervous Diſorders; and theſe Intentions it ſeems very well accommodated to. *Zwelfer*, in his Animadverſions upon it, ſays, great Care is to be taken in its Compoſition, notwithſtanding it conſiſts but of few Ingredients; but it ſeems to require no other Skill than is required in the Compoſition of the Capitals, that is, diſſolving and ſtraining the Gums and Opium, ſo as to incorporate them with the Syrup, and then to ſift and ſtir in the reſt of the Ingredients, finely powder'd, together. Its Doſe is from one Scruple to one Dram, to be repeated as Occaſion requires.

CONFECTIO FRACASTORII. See DIASCORDIUM.

CONFECTIO HAMECH.

The CONFECTION *of* HAMECH.

Take of the Barks of yellow Myrobalans, two Ounces; of the Chebulan and black Myrobalans, of Violets, Pulp of Colocynth, and Polypody of the Oak, of each one Ounce and a half; of Wormwood and Thyme, of each half an Ounce; of the Seeds of Aniſe and Fennel, and of red Roſes, of each three Drams. Bruiſe all theſe, and macerate them together for a whole Day in ſix Pounds of Whey; then boil to half its Conſumption, and to the ſtrain'd Liquor, after it has been preſſed out, add of the Juices of Fumitory, of the Pulps of Prunes and Raiſins, of each half a Pound; of white Sugar, and clarify'd Honey, of each one Pound. Boil theſe to the Conſiſtence of Honey; ſprinkling in, at the latter End, powder'd, of the Troches of Agaric, and the Leaves of Sena, of each two Ounces; of Rhubarb, one Ounce and a half; of Epithymum, one Ounce; of Diagrydium, ſix Drams; of Cinnamon, half an Ounce; of Ginger, two Drams; of the Seeds of Fumitory and Aniſe, and of Spikenard, of each one Dram; and make them all together into a Confection. S. A.

This is a very antient *Arabian* Compoſition, and firſt preſcrib'd by *Meſue*, tho' ſince alter'd by *Fernelius*. It is continu'd here much the ſame as in the *Auguſtan Diſpenſatory*, and as it was firſt receiv'd by the College: But it is ſo nauſeous as ſeldom to be preſcrib'd but in Glyſters, and not often in that manner, ſo that the Shops have of late not been much accuſtom'd to make it.

In every Ounce of this Confection are contain'd ſeven Grains and a half of Diagrydium, a Scruple of Sena and Agaric, half a Scruple of Epithymum, and the Decoction of fifteen Grains of Colocynth.

CONFECTIO RALEIGHANA: *Sir* Walter Raleigh's *Confection.*

Take of the Shavings of Hartſhorn, one Pound; of Vipers Fleſh, with their Hearts and Livers, ſix Ounces; of the Flowers of Borrage, Roſemary, Marygolds, Sun-dew, red Roſes, and Elder, of each half a Pound; of the Leaves of Scordium, Carduus Benedictus, Baum, *Cretic* Dittany, Mint, Marjoram, Betony, of each twelve Handfuls; of the Juice of Kermes, of the greater Cardamom-ſeeds, and Cubebs, of Juniper-berries, Mace, Nutmegs, Cloves, and Saffron, of each two Ounces; of the beſt Cinnamon, Saſſafras-bark, and the yellow Peel of Citrons and Oranges, of each three Ounces; of Aloes-wood, and Saſſafras-wood, of each ſix Ounces; of the Roots of Angelica, wild Valerian, Fraxinella, or white Dittany, *Virginia* Snake-root, Zedoary, Tormentil, Biſtort, long and round Birthwort, Gentian, and Maſterwort, of each one Ounce and a half. After theſe are all cut, and groſly bruiſed, put them into a proper Veſſel, to draw out their Tincture, with rectified Spirit of Wine, according to Art. Filtre this Tincture, and evaporate it into an Extract by Diſtillation in *Balneo Mariæ*. Let the Magma, which is preſs'd out, be burnt, and a Lixivium made of its Aſhes, ſo as to procure from it a pure Salt, according to Art, which muſt be added to the aforeſaid Extract; and afterwards, to this Mixture, ſtir in the following Ingredients, according to Art.

Take

Take of Oriental and Occidental Bezoar, of each half an Ounce; of Oriental Pearls, two Ounces; of red Coral, three Ounces; of Oriental Bole, true ſeal'd Earth, and calcined Hartſhorn, of each one Ounce; of Ambergriſe, one Ounce; of Oriental Muſk, a Dram and a half; of white Sugar-candy powder'd, two Pounds: And make into a Confection, according to Art.

This hath not been in any *Diſpenſatory*, that I know of, before, except that of *Bates*. It hath obtain'd a great Name and Eſteem amongſt ſome Perſons, which ſeems to have been the Reaſon why the College have now made it an officinal Medicine. The whole Proceſs is long and troubleſome; but the greateſt Care incumbent upon the Compounder is, that the Extract be, at firſt, left thin enough to receive the Powders, which are afterwards to be mix'd with it, ſo that the Whole may be of a due Conſiſtence. However this Medicine may ſtand in the Opinion of many, it hath now much more Honour done it than it deſerves, all its main Intentions being much better anſwerable with leſs Trouble.

CONFECTIO DE SANTALIS: *Confection of Saunders.*

Take of each ſort of Saunders, one Ounce; of red Coral, *Armenian* Bole, and ſeal'd Earth, of each half an Ounce; of Kermes-berries, Tormentil-root, Dittany, Saffron, Myrrh, red Roſes exungulated, and burnt Hartſhorn, of each three Drams: And make them into an Electuary, with Syrup of Cloves.

This was an Addition to the laſt *College Diſpenſatory*, and ſeems to have been deſign'd for an Aſtringent.

CONFECTIO DE THURE: *Confection of Frankincenſe.*

Take of prepared Coriander-ſeeds, half an Ounce; of Nutmegs, and the whiteſt Frankincenſe, of each three Drams; of Liquorice and Maſtich, of each two Drams; of Cubebs, and prepared Hartſhorn, of each one Dram; of Conſerve of red Roſes, one Ounce; of the whiteſt Sugar, a ſufficient Quantity, to make them into little Balls or Lozenges.

CONFERENS. The ſame as SYMPHERON, which ſee.

CONFERTUS. The ſame as ἀθρόος. See ATHROOS.

CONFERVA. A ſort of barren Moſs, deſtitute of florid Heads, and even of thoſe Knobs or Tubercles, which ſome Moſſes are furniſh'd with, inſtead thereof. It conſiſts entirely of mere ſlender and uniform Leaves or Stalks, divided into very ſlender Capillaments. The Confervæ are divided, in the laſt Edition of *Ray's Synopſis*, firſt, into ſimple, which are thoſe whoſe Leaves or Stalks are equable or ſmooth; ſecondly, geniculated, or thoſe which are interſected with Rings, like thoſe of a Worm; thirdly, nodoſe, or knotted, which are thoſe which have frequent Knots or Tubercles along their Leaves or Stalks.

CONFIRMANTIA MEDICAMENTA. Medicines which reſtore or confirm the Strength of the Body, or any Part of it; or, Medicines which faſten the Teeth in their Sockets.

CONFLUENTIA. A Term, uſed by *Paracelſus*, to expreſs the Agreement, Conjunction, or Confederation of the Microcoſm with the Stars; or of a Diſeaſe with Remedies.

CONFŒDERATIO, in *Paracelſus*, implies the ſame as CONFLUENTIA.

CONFORMATIO, Conformation. Some Diſeaſes are call'd *Morbi malæ Conformationis*, or organical Diſeaſes; that is, which depend upon the ill Conformation of the Parts. Theſe, if external, may admit of a chirurgical Cure; and proper Exerciſe, Regimen, and Medicines, may ſometimes contribute much to the Relief even of thoſe which are internal, or, at leaſt, may render them ſupportable.

CONFORTANTIA MEDICAMENTA. Comforting Medicines. The ſame as Cardiacs, or Cordials. See CARDIACA.

CONFORTATIVA. The ſame as CONFORTANTIA.

CONFRICATIO, in Pharmacy, ſignifies the reducing any eaſily friable Subſtance to Powder, by rubbing it with the Hands, as Starch, for Inſtance: Or, it implies the Rubbing any ſoft and ſucculent Vegetable with the Hands, in order to expreſs out the Juice.

CONFRICATRICES. The ſame as TRIBADES, which ſee.

CONFUSÆ FEBRES. Certain Fevers, which, perhaps, never exiſted, except in the Imagination of *Bellini*. Theſe, according to him, are more Fevers than one affecting a Perſon at the ſame time, beginning and ending together, and ſo confuſed together, as ſcarcely to be diſtinguiſhable from each other.

CONFUSANEUS PANIS. The ſame as ἄρτος ἀυτοσυλίτης, or ἀυτόσυτος. Bread made of Meal, from which the Bran has not been ſeparated. See ARTOS.

CONFUSIO. A Diſorder of the Eyes, which happens, when, upon a Rupture of the internal Membranes, which include the Humours, they are all confounded together.

CONGELATI, or CONGELATICI. Perſons affected with a *Catalepſis* are ſometimes call'd by this Name.

CONGELATIO. Congelation is ſuch a Change, produced by Cold, in a fluid Body, that it quits its former State, and becomes conſiſtent or condenſed. When the Cold is leſſen'd, and reduced to the Degree in which it ſubſiſted before the Concretion, the Body congeal'd again reſumes its fluid State. Thus *Conglaciation* is, when a liquid Subſtance is converted into that Species of hard and conſiſtent Body, which we call Ice. We muſt here obſerve, that the Word *Congelation* is only apply'd to homogeneous Fluids, ſuch as Water, Oils, or pinguious Subſtances, and fuſed Metals, in which, beſides a Concretion in the cold Air, no Change is obſerved. We muſt alſo obſerve, that, by *Congelation*, ſome Bodies, ſuch as Water, are rarefied or expanded; whereas others are condenſed, or render'd more compact, ſuch as fix'd Metals, and pinguious Bodies. In the Shops the Condenſation of any Liquor, in a cold Place, is alſo call'd *Congelation*. The Stones produced in ſome Caverns, from the Drops of a petrifying Water, are alſo call'd Congelations. For one Method, in which Nature forms Stones, is, by ſuch a Congelation as does not ſuffer any thing of an earthy Nature to be ſeparated or precipitated from the whole Maſs, either ſpontaneouſly, or by the Action of Fire; but produces uniform Dryneſs, and Induration of the whole Maſs.

CONGELATIVA MEDICAMENTA, are Medicines which ſtop Fluxions, inſpiſſate, and dry. *Rulandus.*

CONGER, or CONGRUS. The Conger Eel. A very large Sea Eel, commonly call'd a Sea-ſerpent. *Galen* ſays, the Fleſh is hard, and of difficult Digeſtion. It is eſteem'd a very ordinary Food.

CONGESTIO. Congeſtion, or Collection. Some Authors, diſtinguiſhing Congeſtion from Collection, ſay, that a Collection of Humours is made on a ſudden; whereas a Congeſtion is form'd gradually.

CONGIUS.

This Species of Meaſure, uſed among the Antients, is generally determined to be the ſame with the *Chus* or *Choa* of the *Athenians*, which contains ten Pints of Wine, and nine of Oil. In *Lemery's Pharmacopeé univerſalle*, it is diſtinguiſh'd from the *Choa*, and ſaid to contain ten Pints of Wine, or nine of Oil; whereas the *Chsa* contains eight Pints of Wine, and ſeven and a Quarter of Oil. But *Lemery* is in an Error, when he affirms, that this *Congius* is a Meaſure of the *Athenians*; for the *Congius* or *Chus*, in uſe among them, weigh'd nine Pounds, and that among the *Romans* ten. *Peireſkius* determines, that the *Roman Congius* was half a cubic Foot in Dimenſions, and contain'd about three *Paris* Pints. In the *Cabinet de la Bibliotheque de St. Genevieve*, and in *Fernellii univerſa Medicina*, it is aſſerted, that it is equal to three *Paris* Pints. The *Roman Congius* is the eighth Part of an Amphora, that is, it contains ten *Roman* Pints of Wine; and its Capacity was equivalent to 168½ cubical *Pariſian* Inches; ſo that two Congii are almoſt equal to ſeven *Paris* Pints, or three *Straſburg* Meaſures and an half; and three Congii are nearly equivalent to ten *Paris* Pints and an half, or five *Straſburg* Meaſures and a Quarter. According to *Beverinus*, the *Roman Congius* was the eighth Part of an Amphora, contain'd ſix Sextarii, and 120 Ounces of Wine and Water, but only 90 of Corn.

Salmaſius, in his *Exercitat. Plinian.* endeavours to prove, that a *Congius* contain'd ten Pounds of Wine or Water, but only nine of Oil. In the *London* and *Edinburgh Diſpenſatories* eight Pints make the *Congius*. The Meaſure containing two Congii was call'd *Bicongius*, and that containing three *Tricongius*. From the *Congius* came the *Congiarium*, a kind of Gift or Largeſs, publicly diſtributed to the People by the Emperors. This Name it probably received from its being at firſt diſtributed in *Congii*.

CONGLACIATIO. The ſame as COAGULATIO, or CONGELATIO, which ſee.

CONGLOBATA GLANDULA. A conglobate Gland.

Modern Anatomiſts have reduced all the Glands of the Body to two Sorts, that is, the *Conglobate Glands*, and the *Conglomerate Glands*.

A conglobate Gland is a little ſmooth Body, wrapt up in a fine Skin, by which it is ſeparated from all other Parts, only admitting an Artery and Nerve to paſs in, and giving way to a Vein and excretory Canal to come out. Of this Sort are the Glands of the Brain, and the Teſtes. *Keill's Anatomy.*

Under the Title of *Conglobate Glands*, *Winſlow* includes the lymphatic Glands alone; and he calls all the other Glands of the Body by the Name of *Conglomerate*.

CONGLOMERATA GLANDULA. A conglomerate Gland.

A conglomerate Gland is compoſed of many little conglobate Glands, all tied together, and wrapt up in one common Tunicle or Membrane. Sometimes all their excretory Ducts unite, and make one common Pipe, thro' which the Liquor of all of them runs, as the Pancreas and the Parotides do. Sometimes the Ducts, uniting, form ſeveral Pipes, which only communicate with one another by croſs Canals, and ſuch are the Mammæ. Others, again, have ſeveral Pipes, without any Communication with one another, of which Sort are the Glandulæ Lachrymales, and Proſtatæ. And a fourth Sort is, when each little Gland has its own excretory Duct, thro' which it tranſmits its Liquor to a common Baſon, as the Kidneys. *Keill's Anatomy.*

CONGLUTINANTIA. Conglutinating; that is, healing Medicines.

CONGRUS. See CONGER.

CONIA, κονία. Lime. It imports alſo, when join'd with ἁλκαλὶ, a Lixivium, or Lye, of vegetable Aſhes. Hence, in *Hippocrates*, κονιώδεα οὖρα are high-colour'd Urines, reſembling a Lixivium.

CONIA, κωνία. This is the πισίτης οἶνος, Wine impregnated with the Picea, or Fir. *Dioſcorides*, *L.* 5. *C.* 48. gives the Method of making this Wine; which is, by pouring Muſt upon liquid Pitch, and letting it ferment upon it, previouſly waſhing the Pitch with Brine, or Sea-water. *Galen*, in his *Exegeſis*, gives a ſhort, but obſcure, Deſcription of this Wine. According to him, it is Wine impregnated with the πεύκη, which is the Picea, or Tæda, which muſt be infuſed in the Wine, without taking off the Bark.

CONIFERÆ ARBORES. Coniferous Trees are ſuch as bear Cones; as the Cedar of *Lebanon*, Fir, and Pine. *Miller's Dictionary*, *Vol.* 1.

CONILE, from its Similitude to κώνειον, Hemlock, is the MYRRHIS, which ſee. But, I believe, this is not the Plant which *Oribaſius* calls by this Name, and which he repreſents as a briſk Cathartic.

CONIS, κόνις, Duſt, or fine Powder, or Aſhes: It ſignifies alſo a Nit, or Scurf on the Head; and ſometimes Lime.

CONISTERIUM, κονιστήριον. The ſame as APODYTERIUM, which ſee. It ſignifies alſo the Aſh-hole of a chymical Furnace.

CONJUNCTA CAUSA. The conjunct or immediate Cauſe of a Diſeaſe. See the PREFACE.

CONJUNCTA SIGNA are the pathognomonic Signs of a Diſtemper.

CONJUNCTIVA TUNICA. See ADNATA.

CONNA: A Name for the *Caſſia Fiſtula*.

CONOCARPODENDRON, κωνοκαρπόδενδρον. The Name of a Tree, which is a Native of the Country of the *Hottentots*, near the Cape of *Good Hope*.

The Characters are,

It hath an apetalous ſtamineous Flower, which is ſurrounded by a Number of long Leaves, immediately under the Flower-cup, which conſiſts of five narrow Leaves: Theſe are ſucceeded by Cones, in Shape like thoſe of the Larch-tree. The Seeds are each of them included in a ſeparate Cell. *Miller's Dictionary*, *Vol.* 2.

Boerhaave mentions ten Species of this.

1. Conocarpodendron; foliis argenteis; ſericeis, latiſſimis. SILVER-TREE, WITH BROAD SOFT WHITE LEAVES.

2. Conocarpodendron; folio craſſo, nervoſo, lanuginoſo, ſupra crenato, ibique limbo rubro; flore aureo; cono facilè deciduo.

3. Conocarpodendron; folio rigido, craſſo, anguſto; cono Laricis parvo. SILVER-TREE, WITH A NARROW THICK STIFF LEAF, AND A SMALL CONE.

4. Conocarpodendron; folio rigido, anguſto, apice tridentato, rubro; flore aureo.

5. Conocarpodendron; folio ſubrotundo, craſſo, rigido, valde nervoſo; cono longo, variegato, ex rubro & flavo; flore aureo. SILVER-TREE WITH A ROUNDISH THICK STIFF LEAF FULL OF NERVES, LONG CONES VARIEGATED WITH RED AND YELLOW, AND A GOLD-COLOUR'D FLOWER.

6. Conocarpodendron; folio anguſto, rigido, breviori; cono parvo, aureo, coronâ foliaceâ ſuccincto.

7. Conocarpodendron; acaulon, folio rigido, nervoſo, oblongo, latiori; cono fuſco; ſemine oblongo, in medio quaſi excavato.

8. Conocarpodendron; foliis ſubrotundis, breviſſimis; capituli immaturi, globoſi, parte inferiori fuſcâ, mediâ aureâ, ſupremâ viridi.

9. Conocarpodendron; folio tenuiſſimo, anguſtiſſimo, ſaligno; cono caliculato.

10. Conocarpodendron; folio tenui, anguſto, ſaligno; cono caliculato, coronâ foliaceâ ſuccincto. SILVER-TREE WITH A NARROW WILLOW-LEAF, AND THE CONES GROWING IN SMALL CUPS, WHICH ARE SURROUNDED WITH A CROWN OF LEAVES. *Boerh. Ind. alt. Vol.* 2.

CONOIDES CORPUS, κωνοειδὲς σῶμα. The *Glandula Pinealis*. See CEREBRUM.

CONOPS; κώνωψ. A Gnat. *Hippocrates* mentions Efflorescences on the Skin like the Bites of Gnats, as appearing in certain epidemical Diſtempers, which he deſcribes.

CONQUASSATIO. *Conquaſſation*, is a Species of Comminution, or a particular Operation, by which moiſt concreted Subſtances, ſuch as recent Vegetables, their Fruits, lacteſcent Seeds, and the ſofter Parts of Animals, are ſometimes in a Marble, ſometimes in a Glaſs, ſometimes in an Earthen, and ſometimes in a Metalline Mortar, contuſed and agitated with a Peſtil, either of Metal, Wood, or Stone, till partly, by their proper Succulence, or an Affuſion of ſome Liquor, they are reduced to a ſoft and fine Pulp. Metalline Inſtruments are not to be uſed for this Purpoſe; becauſe not only the manifeſt, but alſo the latent Salts of the Subſtances, ſubjected to this Operation, acting upon theſe Inſtruments, may derive an adventitious and virulent Quality from them, which will not only render ſuch Subſtances unfit for the intended Purpoſes, but alſo nauſeous and hurtful, when exhibited as Medicines.

CONSENSUS. Conſent. The ſame as SYMPATHIA, which ſee.

CONSERVA: A Conſerve is a Medicine of the Conſiſtence of a Pulp, or an Electuary prepared of Flowers, Herbs, their tender Tops, rarely their Roots, and more rarely the Pulps of Fruits, cut into ſmall Pieces, contuſed, and intimately mixed by beating them in a Mortar, eſpecially of Stone, with a wooden Peſtil. Refin'd Sugar, or loaf Sugar, are generally uſed for preparing Medicines of this Kind, unleſs we have a mind to ſubſtitute in their room white powder Sugar; which anſwers the End very well; ſince it is ſometimes intirely diveſted of that Calx, by which the loaf Sugar is form'd into Pyramids, by which means it acquires a certain innocent Acrimony, according to *Wedelius*. The Proportion of Sugar is generally double to the Subſtance to be made into a Conſerve; but ſometimes more, and ſometimes leſs, is uſed. In the *London Diſpenſatory*, triple the Weight of Sugar is preſcrib'd: but ſome, who go more accurately and diſtinctly to work, inform us, that for moiſt Subſtances, double the Weight of Sugar is ſufficient; and that the Pulps of ſome Fruits, ſuch as that of the Dog-hip, require ſtill a ſomewhat ſmaller Quantity; but Subſtances of a drier Nature require more than double the Quantity of Sugar, adding at the ſame time a little of ſome diſtil'd Water, that they may be the more commodiouſly mix'd with the Peſtil. In the *Edinburgh Diſpenſatory*, triple the Quantity of Sugar is preſcribed for making dry Subſtances into Conſerves.

According to *Zwelfer*, in his *Pharmacop. Reg.* "In dry "Subſtances an equal Weight of Sugar is ſufficient: But in "ſucculent and mucilaginous Herbs and Flowers, a Pound and "an half of Sugar is requiſite for one Pound of the Herbs or "Flowers; leſt too large a Quantity of the Sugar ſhould in"creaſe the Price, inlarge the Doſe, create a Nauſea, deſtroy "the Digeſtion by its preternatural Ferment, which, in cla"rifying, it received either from the Quick-lime, or the Clay "of the Moulds; or, laſtly, leſt it ſhould blunt or weaken "the Force of the Medicine, or produce any other unlucky "Effect. We muſt, with *Wedelius*, obſerve, that different Plants require different Quantities of Sugar. Hence, in order to prevent Mouldineſs, the ſofter and more ſucculent the Plant is, the larger Quantity of Sugar is to be uſed, and *vice verſâ*. Plants which are too moiſt, ought previouſly to be dried a little in a Shade. The more Sugar is uſed, the ſofter the Conſerve produced will be. For making any highly ſucculent or mucilaginous Plant into a Conſerve, Sugar boil'd to a thick Conſiſtence is ſometimes uſed. Some, for making Conſerves, uſe Honey inſtead of Sugar, as we may ſee in the *Atrium Medicinæ Helvetiorum Conſtantini de Rebecque*. Some prepare Conſerves by laying Flowers and Sugar *ſtratum ſuper ſtratum*; and expoſing them in this State to the Sun. Others make a Julap, which they mix up with the Subſtance of which the Conſerve is to be made. Some boil the Subſtances, of which the Conſerve is to made, as the Roots of Marſhmallows or Comfrey, in Water, till they become ſoft; then they pound them, or even paſs them through a Sierce, and add a ſufficient Quantity of Sugar. The Pulps of Fruits alſo, when bruiſed, are to be paſſed through a Sierce; then adding a ſufficient Quantity of Sugar, they are to be mixed up to a due Conſiſtence. New-made Conſerves are generally expoſed to the Sun for ſome Days, and agitated now-and-then, that they may be the more effectually mix'd. But we muſt take care, leſt they ſhould ferment, and run over the Veſſel, which generally happens to the Conſerves of the Flowers of Borrage and Bugloſs. This Misfortune is beſt prevented by not filling the Veſſel full. Conſerves are beſt preſerved in glaz'd Earthen Veſſels, or in Glaſs Veſſels: They may be eaſily prepared of recent Herbs and Flowers; but they may alſo be had at any Seaſon; if, for Inſtance,

ſtance, the dried Flowers, reduced to a Powder, and form'd in a Maſs, with the diſtil'd Water of theſe Flowers, are mix'd with Sugar diſſolv'd in the like Water. Thus liquid Conſerves are prepared; whereas ſuch as are ſolid, are made by mixing the dried Flowers, reduced to a Powder, with Sugar diſſolved in the Water of the ſame Flowers. We muſt alſo obſerve, that, according to *Hoffman*, in his *Diſſertat. de Natura Sacchari*, the moſt elegant and effectual Conſerves are made by evaporating the Juice of any Vegetable, or by uſing its tender Flowers, Leaves, and diſtil'd Oil. *Conſerves* are the Invention of the *Arabians*, in order to preſerve Vegetables, when their Virtues are loſt by being dried. The principal Uſe of Conſerves is, together with Preſerves and Syrups, to be a Vehicle for Powders, in order to make Boluſes and Electuaries. But they are in a particular manner uſeful, where the Virtue of the Vegetable, reduced to a Conſerve, is wanted to mix ſlowly with the Maſs of Blood. For this Reaſon they are recommended for ſtrengthening the Viſcera in arthritic Diſorders.

Directions given by the *College Diſpenſatory*, for Conſerves, are theſe: The Conſerves of Wormwood, Sorrel; of Orange, Borrage, and Clove-flowers; of Scurvygraſs-leaves; of the greater Comfrey-flowers; of Hips; of Fumatory; of the Flowers of Lavender; Lilies of the Valley, Mallows, and Tops of Marjoram; of the Leaves of Mint; of the Flowers of Damaſk, Red, and Dog-roſes; of Roſemary-flowers; of the Leaves of Rue, of Elder and Violet-flowers; of the yellow Rind of Oranges; of Lemon-peel; of Sloes, and of Berberies; are all made with a triple Proportion of Sugar. But it is to be obſerved, that they are not all to be mix'd in the ſame manner.

Some require to be cut, bruiſed, and gently boiled; and ſome require neither cutting, nor bruiſing, nor boiling; and ſome again require or forbid only ſome of theſe Preparations. But this Caution is ſufficient to prevent any Error in a ſkilful Compounder. *London Diſpenſatory.*

Quincy, in his *Pharmaceutical Prælections*, informs us, that the Galenical Pharmacy furniſhes us with ſeveral Medicines preſerved by Sugar or Honey, under the Titles of Syrups, Honeys, Oxymels, Juices, Candies, Confections, and Conſerves; all which Forms differ in little elſe than the Management, whereby their reſpective Materials are joined with Sugar or Honey; and all of theſe ſeem contrived either to preſerve certain Things, as near as poſſible, to the Condition in which Nature affords them, or elſe to render them more palatable in taking.

In order to judge what Dependence may be had upon theſe Things, in any Intention, which may occur in extemporaneous Practice, we muſt examine the Fitneſs of the Parts of the *Materia Medica* to be ſo mix'd; to which Purpoſe we are to conſider, what it is which the Sugar or Honey does.

In this View, the Materials, thus ordered, may be conſider'd either in their whole Subſtance, with which the Sugar is immediately mix'd, as in the Conſerves; or elſe in their Juices or Decoctions, which are afterwards boiled up with Sugar or Honey into Syrup. And, in ſuch a Review of them, we are to have a great Regard to that particular Quality in the Simples, in which their medicinal Virtue conſiſts, as it is, or is not, capable of Preſervation by this Means; and to its Quantity of Efficacy or Power of Operation, to ſee whether, after this manner, we can have enough of it in a convenient Doſe, to depend upon, as a Medicine, in Caſes of Moment.

Of Things which are immediately mixed in Subſtance with Sugar, thoſe only ſeem fitted for it, whoſe predominant Qualities are thus to be preſerved, and thus to be given as a Medicine, from which ſomewhat may be expected to be done. Thus the Flowers of Lavender, Roſemary, the outer Peels of Oranges and Lemons, and a few more of thoſe ordered in Conſerves, are preſervable with Sugar, in ſuch a manner, that ſmall Quantities of them will anſwer in ſuch Intentions as they are ſuited to anſwer in any other Form. But Mint, Scurvygraſs, Rue, and ſuch Things as require to be taken in large Quantities before we can lay any Streſs upon them, are very unfit for this Treatment; becauſe a Doſe, ſufficient to be truſted to, is enough to nauſeate the Stomach, and do Miſchief otherwiſe, by the Sugar they neceſſarily carry along with them. All Bitters are likewiſe unfit for this Management, as Wormwood, Fumatory, and the like, becauſe they are too nauſeous to be endured; and thoſe of a glutinous and viſcid Texture, as the Comfrey, and others, by lying in Sugar, loſe that very Quality which ought to be expected, and ſoon become good for nothing. The ſame Rule of judging holds likewiſe in all other Forms where Sugar comes in; ſo that, on Examination, we ſhall find few of the Alterants improveable by this means; though, as to Emetics and Cathartics, where a ſufficient Efficacy for a Doſe lies in a little Room, they are conveniently enough thus preſerved. And, indeed, if we conſider a Conſerve, or a Syrup, as a means to join other Things of Efficacy together, and to give to other Forms Conſiſtence, and a Convenience of taking, thus may moſt of them have their Uſe; but little elſe can be ſaid in their Favour.

The Conſerves make a conſiderable Article in the Furniture of an Apothecary's Shop; but, although they are now much abridg'd by the College, they have retained more than are ever preſcrib'd or made, either from their Nauſeouſneſs, or Unfitneſs for this Form. Of thoſe Things which require to be gently boil'd, are only the Sloes and Barberries, becauſe, without it, their Pulps are ſo thin as not to afford a due Conſiſtence with Sugar; but much Boiling is here to be avoided. All other Conſerves require nothing more than barely beating them, in a Mortar, to a ſufficient Fineneſs; but the Labour required to do this makes moſt of them, at beſt, ſo coarſe, that they ought to be pulp'd before they are reduced into Electuaries: Their Aptneſs to candy likewiſe ſubjects them to the ſame Neceſſity.

There is a very conſiderable Overſight in the Liſt of Simples reducible into Conſerves, as it is printed in the laſt *Diſpenſatory*, both in relation to the Method in which they ſtand, and the Diſtinction of the Things themſelves; which it may be neceſſary to take ſome Notice of here, to prevent being led into Miſtakes thereby. The Diſtinctions of *Summitates*, *Flores*, *Folia*, and *Fructus*, are not only intermix'd, and conſequently repeated oftener than a good Method requires; but alſo Things are placed under theſe Diſtinctions, which do not belong to them. Thus, under *Summitates*, are Lavender, and Lilies of the Valley, the fine prick'd Flowers of which only are uſed in Conſerves. Under the *Folia*, likewiſe, are Violets, which are uſed only in Flowers, and Elder, the Leaves of which were never yet made into a Conſerve. The Sloes and Barberries, which ſtand here, belong to the Diſtinction of Fruits, and ſhould be placed with the Hips. There are other Inadvertences not of much Conſequence, and which every Reader can eaſily rectify. *Quincy's Prælect. Pharmac.*

CONSERVATIO, in Pharmacy, is Preſerving, Pickling, or keeping any thing from Putrefaction or Evaporation, by the Addition of ſome other Subſtance.

CONSERVATIVA MEDICINA. That Part of Medicine which relates to the Preſervation of Health.

CONSILIGO. The *Helleboraſtrum*, Setterwort. See *Helleborus*; *niger*; *fœtidus*.

CONSILIUM. The Advice given by one or more Phyſicians, relative to the State of the Patient, and the Method of Cure proper to be purſued.

CONSISTENTIA. When uſed relative to a Diſeaſe, it imports the State or Acme thereof. When apply'd to the Humours, Excrements, or Excretions, it imports their Conſiſtence.

CONSISTENTIA, Conſiſtence. This Word relates to the Thickneſs or Thinneſs of Medicines. What the particular *Conſiſtence* of each Claſs of Medicines is, will be taken notice of under its reſpective Article. Only we muſt here obſerve, with *Jacobus Sylvius*, that not only the Gratefulneſs, but alſo the Operation of Medicines depend, in ſome meaſure, upon their *Conſiſtence*; for Medicines of a thick Conſiſtence are taken into the Stomach, and penetrate into the Body, with greater Difficulty, than ſuch as are thin and liquid; and it requires more Trouble to ſwallow a thick than a thin Medicine: For this Reaſon thick Medicines are generally nauſeous and ungrateful; and this is the Reaſon why cathartic Boluſes are often diſſolved in ſome agreeable Liquor, ſince, in this Form, they are more grateful than in any other: For this Reaſon, alſo, Apozems are generally clarified by the Whites of Eggs, or a Strainer. Thus, Honey is diluted with Water, that it may the more eaſily enter the obſtructed Pores of the Skin, and operate as a Detergent. For this ſame Reaſon a large Quantity of warm Water is more effectual in exciting a Vomiting, than a ſmaller Quantity. On the contrary, a thick Conſiſtence is, on ſome Occaſions, more to be deſired; in Ulcers, for Inſtance, of the Aſpera Arteria and Œſophagus, where we muſt give Medicines made up with Gum Tragacanth, or other Subſtances of a like Nature, which, by their Viſcidity, fix the Medicines, as it were, longer to the Part affected: Hence it happens, that, in Medicines to be inſpiſſated, ſome Things are added, which neither add to nor impair their Operation, but only have a Reſpect to their Conſiſtence; ſuch as Wax, for Inſtance, in Ointments and Plaiſters.

CONSOLIDA. A Name apply'd to many different Plants. Thus the *Conſolida major* is the SYMPHYTUM; the *Conſolida media* is the BUGULA; the *Conſolida minima* is the BELLIS MINOR; the *Conſolida Regalis* is the DELPHINIUM; and the *Conſolida Saracenica* is the DORIA; *quæ Jacobæa*; *Alpina*; *foliis longioribus, ſerratis*. See DORIA.

CONSOLIDANTIA, or CONSOLIDATIVA MEDICAMENTA. Theſe are Medicines calculated for promoting the Cure of Wounds, by removing the ſeveral Impediments to their Conſolidation or Conglutination.

CONSPERSIO. The ſame as CATAPASMA, which ſee.

CONSTANS. When apply'd to the Strength, or vital Powers, it imports Firmneſs, or a good Condition.

CONSTELLATUM UNGUENTUM is an Ointment made of Earth-worms, cleanſed, dried, and powder'd, and made into an Ointment, with the Fat of Boars or Bears. It is eſteem'd good for the Tooth-ach, and for healing Wounds.

CONSTIPATIO. The ſame as ADSTRICTIO, which ſee.

CONSTITUENS. This is no more than that Subſtance which gives a due Conſiſtence to compound Medicines, ſuch as Rob, Honey, or Syrups, in Electuaries; or Wax, and other tenacious Subſtances, in Plaiſters.

CONSTITUTIO. The ſame as CATASTASIS, which ſee.

CONSTRICTIO. The ſame as ADSTRICTIO.

CONSTRICTIVA, Styptics.

CONSTRICTORES MUSCULI. Muſcles which ſhut up or cloſe ſome of the Orifices of the Body, are call'd by this Name. Thus there is the *Conſtrictor Palpebrarum*, otherwiſe call'd *Orbicularis Palpebrarum*: The *Conſtrictor Labiorum*: The *Conſtrictor Alæ Naſi*, call'd alſo *Depreſſor Labii ſuperioris*; all which are deſcrib'd under the Article CAPUT.

CONSTRINGENTIA. The ſame as ASTRINGENTIA, which ſee.

CONSUETUDO. Habit, or Cuſtom. In Medicine it is uſed with reſpect to the Non-naturals.

CONSUMMATUM. In French *Conſommé*. A Broth ſo ſtrong as to concrete into a Jelly, when cold. Frequent Mention is made of this in the *French* medicinal Writers.

CONSUMPTIO. The ſame as ANALOSIS. A Conſumption, meaning a Diſtemper, is the ſame as PHTHISIS, which ſee.

CONTABESCENTIA. The ſame as ATROPHIA.

CONTAGIO, or CONTAGIUM. Contagion, or Infection.

CONTEMPERANTIA. The ſame as TEMPERANTIA.

CONTENTA. Contents. By theſe in Medicine are underſtood any Fluids contained within a ſolid Part of the Body.

Relative to the Urine, the Contents are ſmall Particles collected together as the Urine cools, and appear either at the Top of the Urine, when they are call'd Clouds or νεφέλαι; or are ſuſpended in the Middle, and denominated ἐναιωρήματα; or elſe ſink to the Bottom, and then acquire the Name of ὑπόστασις, or Sediment.

CONTENTIO, or CONTENSIO, ſometimes imports Tenſion, or Stricture. Hence,

CONTENTUS, Stretch'd.

CONTINENS FEBRIS. A continual Fever, which proceeds regularly in the ſame Tenor, without either Intermiſſion or Remiſſion. See SYNOCHOS.

CONTINUA FEBRIS. A Fever attended with Exacerbations, and ſlight Remiſſions, but no Intermiſſions. See SYNECHES.

CONTORSIO. In Medicine has many Significations. Firſt, the Iliac Paſſion is thus call'd. Secondly, an incomplete Diſlocation is thus named, when a Bone is in part, but not entirely, forc'd from its Articulation. Thirdly, a Diſlocation of the Vertebræ of the Back ſideways, or a Crookedneſs of theſe Vertebræ, are called Contorſions thereof. Fourthly, A Diſorder of the Head is thus call'd, in which it is drawn towards one Side, either by a ſpaſmodic Contraction of the Muſcles on the ſame Side; or a Palſy of their antagoniſt Muſcles on the other.

CONTRA-APERTURA. A Counter-opening. This is ſometimes very neceſſary in Wounds made by Puncture, or a Bullet, in order to diſcharge whatever is contain'd in the Wound, and prevent its growing fiſtulous. The Operation, according to *Heiſter*, is thus perform'd: The Surgeon being provided with a particular Sort of Probe or Needle, blunt at the Top, and arm'd with a Button (A), but at the other End furniſhed with a pretty large Eye or Hole (B), (*See Tab.* 26. *Fig.* 1.) introduces it into the Wound or Ulcer, and paſſes it to the Bottom, directing the Button towards the Skin, and preſſing on it with ſome Force, that it may be felt on the external Part by the Finger. After this, if it may be done with Safety, he cuts the Skin, and other Parts, upon the Button, making a pretty large Opening. He then paſſes a long, but narrow Piece of Linen, through the Eye of the Probe or Needle (B), if it was not done before; and, impregnating it with ſome vulnerary Ointment or Balſam, draws it through the recent Wound, and leaves it there in the manner of a Seton; after which, he applies Lint, ſpread with the ſame Balſam or Ointment, to both Wounds, and covers the ſame with Plaiſters, and a Bandage. In every ſucceeding Dreſſing he takes care to cleanſe the Wounds; and, ſpreading upon the upper Part of the Seton, or Piece of Linen, ſome vulnerary Ointment, draws the lower Part, till the other, cover'd with the freſh Ointment, enters the Wound. He continues this Method till the Wound is throughly cleanſed by the new Opening, the Pus greatly diminiſhed, and no Purulences collected at the Bottom; he then removes the Seton, and heals up the Wounds in the uſual Manner.

Garengeot, in his *Traité des Inſtrumens*, *Tom.* 1. deſcribes a triangular Inſtrument, invented by *Petit*, for this Purpoſe, which the *French* call a *Troicar*. With this he makes an Opening at the Bottom of the Fiſtula, and immediately after draws a Piece of Linen, paſſed through the Eye of this Inſtrument, through the whole Cavity of the Wound or Fiſtula (*See Tab.* 25. *Fig.* 1.). But as this Inſtrument of *Petit* is ſtrait, and I have met with Patients, where a new Opening, made by ſuch a ſtrait Inſtrument, could not conveniently nor ſafely be made, I had, long before *Garengeot*'s Book was publiſhed, invented another for the Uſe of a Nobleman, who had a large Abſceſs in the fore Part of the Abdomen, which, open'd near the Navel, on the Right Side, but penetrated to the Groin, on the ſame Side. For, becauſe I thought it very dangerous to attempt a new Opening in this Place with a ſtrait Inſtrument, on account of the adjacent, large, crural Veſſels, I directed one to be made almoſt like thoſe Inſtruments which are uſed in extracting Water from hydropical Perſons, but ſomewhat crooked towards the Point, and of a good Length, becauſe it was a long Fiſtula; this Inſtrument was alſo conceal'd in a Cannula (*See Tab.* 25. *Fig.* 2.). By means hereof, taking care to direct its Apex towards the Skin, a new Opening at the Bottom might ſafely be made without endangering the crural Veſſels. And that I might, at the ſame time, by means of this Inſtrument, introduce a Seton, or Piece of Linen, into the Wound, I contrived a Sulcus, like a Ring, near the Extremity, to which I faſten'd the Piece of Linen, by the Help of a ſtrong Thread, and, by drawing back the Inſtrument, tranſmitted it through the Fiſtula. As often as the Piece of Linen is almoſt ſpent, but the Wound not thoroughly cleanſed, a new one is tied or ſewed on to the upper End, and introduced into the Wound, by drawing as before; then cutting off the foul Linen, we proceed in the ſame manner as before, continuing ſo to do as long as it ſhall be thought proper, and avoiding, by this Method, the Neceſſity of always introducing a new Piece of Linen by means of the Inſtrument. *Heiſter Chirurg.*

CONTRACTIO. Contraction in general; as of the Heart, Arteries, and Muſcles.

CONTRACTURA. An Immobility of any of the Joints, induced by a preternatural Contraction of ſome of the Muſcles deſtin'd, in a natural State, to move them.

CONTRAFISSURA, A Contrafiſſure. This is a Fiſſure in the Cranium, in a Part thereof oppoſite to, or at a Diſtance from, that which received the Injury. This is treated of under the Article CAPUT.

CONTRAHENTIA. Theſe are Medicines, which, by their contractive Force, render the Length of the Solids leſs, but their Thickneſs greater, in conſequence of which they incraſſate the Fibres, and render their mutual Connection the ſtronger. Thoſe are only, for the moſt part, accounted aſtringents, which are of Uſe in a Weakneſs or Laxity of the Fibres, and the Diſorders ariſing from them; but any one, who diligently reflects upon this Subject, muſt perceive, that the Cauſes promoting Contraction may be reduced to theſe following: Firſt, ſuch as produce a Solution of Continuity in the Fibres; for, when the Fibres are wounded or divided longitudinally, they contract themſelves: Hence it follows, that many contracting Medicines act, or produce their Effects, by wounding. Secondly, ſuch things as, by their ſtrong and powerful Action, ſo dilate the Ducts of our Bodies, that their longitudinal Diameter is leſſen'd, and their latitudinal enlarged. Of this Kind are ſuch nutritive Subſtances as fill the Veſſels, ſtimulating Subſtances, and all Corroborants. Thirdly, ſuch things as remove the Cauſes diſtending the Veſſels. Of this Kind are Evacuants; for the emptied Veſſels contract themſelves. The Effects of contracting Medicines may be eaſily underſtood; for, if the Solidity of the Fibres is increaſed, the Strength and Force of the Fibres, Membranes, and Veſſels, muſt of courſe be augmented. *Rieger.*

CONTRAINDICATIO. The ſame as ANTENDEIXIS, which ſee.

CONTRALUNARIS. An Epithet given by *Dietericus* to a Woman who conceives during the menſtrual Diſcharge.

CONTRAYERVA.

Drakena, *Contrayerva*, Offic. Mont. Exot. 7. *Drakena Radix*, Ger. Emac. 1621. Raii Hiſt. 2. 1339. J. B. 2. 740. *Contrayerva Radix*, Ejuſd. 2. 741. *Drakena Radix Cluſii*, *Bezoardica Radix Tabernæmontani*, Chab. 245. *Contrayerva Hiſpanorum ſive Drakena Radix*, Park. Theat. 421. *Contrayerva*, Worm. Muſ. 154. Ind. Med. 40. Barr. Icon. 482. Obſ. 1398. Bocc. Muſ. Fiſic. 277. Tab. 2. 101. Ejuſd. Muſ. Plant. 168. Tab. 121. *Cyperus longus odorus Peruanus*, C. B. Pin. 14. Park. Theat. 218. *Dorſtenia Sphondilii folio, dentaria radice*, Plum. Nov. Gen. 29. Tab. 8. COUNTER-POISON.

This is a longiſh knotty Root, encompaſſed on all Sides with ſmall ſlender Fibres. It is of a light reddiſh-brown Colour on the

the Outside, and white within; of a pleasant aromatic Smell, but of no very strong Taste.

It is brought to us from the *Spanish West Indies*, being said to grow in *Peru*. It is not certainly known what Plant this is the Root of, most Botanical Writers believing it to be the Root of a Species of *Granadilla*, or *Passion-flower*; but Father *Camelli*, in his Letters to Mr. *Ray*, (which see in his History, *Vol.* 3. *pag.* 647.) makes it a different Plant, describing it to have thick, nervous, Plantain-like Leaves, woolly underneath, not at all climbing or branching like the Passion-flowers; but his Account of it is so short and obscure, that it has given us but little Light into this Matter. Others will have it to be the Root of a Plant, like a *Virga aurea*, but having solid Seeds. Probably there may be two Species; for I have seen a kind of *Contrayerva*-root, brought over by our *South-Sea* Company's Ships, which was thicker, rounder, and with very few Fibres, appearing like the tuberous Glands of the *Apios Americana*, tho' the Colour and Scent were very like the common *Contrayerva*.

The only officinal Preparation is the *Lapis Contrayervæ*. *Miller's Bot. Off.*

Lapis Contrayerva: CONTRAYERVA STONE.

Take of calcin'd Hartshorn in Powder, of red Coral prepar'd, Pearl, white Amber, and Crabs-eyes, of each two Drams; of Contrayerva-root powder'd, and the prepar'd Crabs-claws, of each half an Ounce: Mix them together, and make them up into Balls, with a Solution of Gum Arabic.

This is but very lately brought into the *College Dispensatory*, but now very much used in common Prescriptions, as an Alexipharmic. It was before ordered with Jelly of Vipers, and to be covered with Leaf Gold, but they are neither of them of any Consequence: A Dram and a half of Ambergrise was also left at Discretion to be added; but that is so far out of the Intention of the Composition, as to be now quite neglected. Its Dose is from ten Grains to half a Dram.

The *Contrayerva*-root was call'd *Drakena* by *Clusius*, because it was first imported into *England*, in 1581. by Sir *Francis Drake*, on his having finish'd his Voyage round the World. That Species of the Root, which is at present kept in the Shops, is externally of a redish, and internally of a whitish Colour. It is thought best when entirely fresh, and free from Rottenness; when its Taste is at first a little astringent, but, when somewhat longer chew'd, a little acrid; and when its Smell is aromatic. From its Smell and Taste it seems, to *Geoffroy*, to be composed of a moderate Portion of a volatile, oleous, and aromatic Principle, wrapt up in earthy Parts. Hence we may account for its aromatic Qualities, that is, those by which it stimulates, incides, attenuates, corroborates, resists Poisons, and increases the Motion of the Humours. Hence it becomes proper in Cases where Perspiration is to be augmented, the Body to be heated, and in Fevers in which Coldness is to be surmounted, and the Causes of the Disorder eliminated thro' the cutaneous Pores. *Clusius* informs us, that the Inhabitants of *Peru* esteem it highly as an Alexipharmic; that it strengthens the Heart and vital Faculties, if the Powder of it is taken in a little Wine in the Morning; and that, in Water, it contributes to allay feverish Heats. *Monardus*, who, according to *Clusius*, was the first of the *Europeans* who wrote upon *Contrayerva*, informs us, "That the Powder of *Contrayerva*, exhibited in White-"wine, is a speedy and efficacious Remedy against Poisons of "all Kinds, except Sublimate, (which can only be cured by "copious Draughts of Milk) since it either throws it up by "Vomit, or evacuates it by a Diaphoresis." It is also reported, that the Powder of it prevents the Effects of Philtres, and dislodges Worms of the Intestines. *Terentius*, in his Notes upon *Hernand. Hist. Lib.* 8. *Cap.* 58. informs us, that a Dram, or a Dram and an half, of the Powder, exhibited in a few Ounces of Water, with a Regimen calculated for promoting a Diaphoresis, expels Poisons, and cures the Plague, and other violent Diseases; as also, that Wine or Water, in which this Root has been infused, if drank daily at Dinner, preserves against the Plague and Melancholy, promotes Digestion, dispels Flatulences, and corroborates the Stomach. But because it seems to act by stimulating, resolving, and putting the Humours into a Commotion, we cannot hence reasonably conclude, that it is an universal Antidote. This, to *Wedelius*, seems too hyperbolical an Assertion, since different Poisons require Remedies of different Virtues. In *Europe Contrayerva* is principally used against malignant Disorders, and in Cases where the Intention is to excite a Diaphoresis. The learned *Paulus Neucrantzius*, in his Treatise *De Purpura*, solemnly affirms, that he has found it highly efficacious in purple Fevers, in which it carries off the peccant Matter by a Diaphoresis, and rarely operates by Vomit. *Simon Pauli*, in his *Quadripartitum Botanicum*, tells us, that he used to mix the Powder of its Root with a Decoction of the Shavings of Hartshorn, which he exhibited to rich Patients, labouring under malignant Disorders; but, for Persons of a meaner Condition, he order'd the Roots of the greater Burdock to be made into a Decoction with Shavings of Hartshorn. According to *Ludovici*, in his *Pharm.* the Root of Zedoary may be commodiously used as a Succedaneum to it. Others substitute in its room Substances possessed of aromatic Qualities. Some, in intermittent Fevers, exhibit the Powder of *Contrayerva*, with double the Quantity of *Peruvian* Bark; and against Dysenteries it is exhibited in Conjunction with Ipecacuanha. According to the celebrated *Juncker*, in his *Conspectus Therapiæ generalis*, it is justly classed among the powerfully heating Medicines, because it strongly agitates the Mass of Blood; for which Reason it ought not to be an Ingredient in Alexipharmic Essences, tho' it has always been celebrated as highly proper for that Purpose: But it is proper against Apoplexies produced by Serum; in a Weakness and want of Tone in the Stomach, arising from a cold Cause; in catarrhous Disorders; in Defluxions, and in flatulent and pituitous Colics. According to *Schulzius*, in his *Prælectiones*, it is beneficial in malignant Disorders, especially such as rage in Camps, and are accompanied with a Dysentery, because it consists of alexipharmic Particles, mixed with sufficiently mild, earthy, and astringent Parts. From half a Scruple to half a Dram of the Powder may be exhibited in Cases where inciding, resolvent, and heating Medicines are proper. In a liquid Form, infused in Wine, the Dose may be double or triple of this. It is an Ingredient in many alexipharmic and bezoardic Compositions. When subjected to a Chymical Analysis by *Wedelius*, its Root, put into a Retort by itself, and distil'd in a Sand-heat, yielded first a Phlegm, then an acid Spirit, like Spirit of Tartar, which produc'd an Effervescence with an Alcali, and whose Colour was at first redish, but afterwards became obscurely yellow, with a Cast of Red; after this succeeded an Oil, which was thick, acrid, inflammable, and empyreumatical; and from the Caput Mortuum, calcin'd in a very brisk Fire, was obtain'd a fixed alcaline Salt, like Salt of Tartar or Pot-ash. With respect to the Essence of *Contrayerva*, prepared with rectify'd Spirit of Wine, *Schulzius*, in his *Prælectiones*, uses the following Words: "I am afraid," says he, "that the Spirit of "Wine is so far from extracting its Virtues, and conveying "them to the Body of the Patient, that it would be more "proper to exhibit it in Substance. Half a Dram of it may be "exhibited for a Dose, except in Cases where, on account of "the Spirit of Wine, we ought to be more sparing." *Willis*, in his *Pharmaceutice Rationalis*, makes the Dose of this Tincture from half a Dram to a whole Dram. It is surprising, that this Root should be found to communicate more of its Parts to an aqueous, than to a spirituous Menstruum; for, when infus'd in common Water, it yields a larger Quantity of Extract than with Spirit of Wine. Hence we may conjecture, that the Use of the aqueous Extract is safer than that of the spirituous, as it exagitates the Humours less. We must not here forget the Experiments made with the Tincture of this Species of *Contrayerva*, from which every one is at Liberty to draw his own Conclusions, with respect to its Nature. Rain-water then soon extracts a Tincture, obscurely red, from bruised Contrayerva-root. The same Effect is also produc'd by Spirit of Wine, but the Tincture is of a more brisk and lively Colour. The Tincture extracted with Water immediately becomes turbid upon an Admixture of Aqua Fortis, and a large Number of red Flakes subside to the Bottom: It is also render'd turbid by Salt of Tartar, but more slowly; and the subsiding Flakes are smaller, and fewer in Number. The Tincture extracted with Spirit of Wine, when mixed with that extracted with Water, immediately became milky, which it also did with Aqua Fortis; but Salt of Tartar seemed to produce no Change in it. These Experiments are related by *Heide*, in his *Observationes Medicinæ*. There are several celebrated Shop-medicines, in which Contrayerva is an Ingredient; such as the *Lapis Contrayervæ*, in the *London Dispensatory*; the *Syrupus Contrayervæ*, in the *Pharmacop. Argent.* and several others to be met with in the *Dispensatories*.

The *Contrayerva Nova*, commonly distinguished by the Epithet *Mexicana*, was imported into *Europe* after the former Species, and is thought to be produced in *Mexico*. It is pretty large, about two Fingers thick, externally rough, and of a brownish Colour; internally white, with a Pith in the Middle, like the *Contrayerva* already mentioned, of a sweetish aromatic Taste, but little different from the antient *Contrayerva*, to which it is not thought inferior. On account of its alexipharmic, diaphoretic, and antifebrile Qualities, it is prescribed in Conjunction with Absorbents for the Cure of malignant and petechical Fevers, Measles, and the Small-pox. *Contrayerva* is not, therefore, the Product of *Peru* alone, as the *Spaniards* assert; for we learn from Mr. *Des Marchais's Voyage en Guinée*, that Contrayerva, an Inch and an half thick, and four or five Inches long, is produc'd in *Guiana*, a Province of *South America*.

CONTRAYERVA ALBA. See VINCETOXICUM.

CONTRAYERVA GERMANICA. See ACONITUM.

CONTRAYERVA VIRGINIANA. See SERPENTARIA VIRGINIANA.

CONTRITIO, in Pharmacy, is *Comminution*.

CONTUSA. Contus'd Wounds; that is, Contusions or Bruises.

If an obtuse hard Body, either by its Motion, Resistance, Pinching, or Pressure, causes a Rupture of a great many small

ſmall Veſſels at once, the Injury thus received is call'd a *Contuſion*.

A *Contuſion* is a Solution of Continuity, produced in any Part of the Body, by an Inſtrument whoſe Surface does not riſe by way of Edge, but in any obtuſe Figure. By this means a *Contuſion* is diſtinguiſhed from a Wound, which is a Solution of Continuity produc'd by a ſharp cutting Inſtrument. Hence a *Contuſion*, if all other Circumſtances are alike, poſſeſſes a larger Space than a Wound, becauſe, in the former, a larger Portion of the Surface of the wounding Inſtrument is applied to the Body. Now 'tis ſufficiently obvious, that, ſince Action is equal to Reaction, the Effect will be the ſame, whether the obtuſe Body, put in Motion, ſtrike the Part of the Body, or whether the Part of the Body, put in Motion, ſtrike upon the hard obtuſe Obſtacle in a State of Reſt; whether the obtuſe Subſtance, by its Gravity, acts upon any Part of the Body; or whether that Part of the Body, by any kind of Pinching, is contus'd.

We muſt, therefore, conſider a Contuſion as an Accumulation of minute Wounds, with an Attrition of the Solids, and capillary Veſſels.

In the Place contus'd we may conceive as many ſmall Wounds, as there are Parts injured in the whole Circumference of the Contuſion: Hence the Aggregate, or Sum total, of the minute Wounds adjacent to each other, gives the cleareſt and moſt adequate Idea of a *Contuſion*. Thus, for Inſtance, when an Artery is cut aſunder by a Razor, a Wound is made in that Artery; but when it is divided by a large Number of ſmall Inciſions, made very contiguous to each other, a *Contuſion* of that Artery is nearly repreſented. Thoſe Parts that are hard, ſolid, and conſequently capable of making Reſiſtance, are, by the Cauſe producing the Contuſion, mangled and ſhatter'd into the ſmalleſt Fragments or Portions. Thus, for Inſtance, when the Bone of the Arm is, by any Cauſe, broken in two Pieces, this is call'd a Fracture; but, when it is ſhattered in ſmall Portions, it is then ſaid to be contus'd.

The Effect, therefore, of a Contuſion is,
Firſt, A lacerating Solution of Continuity.

That is Dilaceration, which happens when the ſoft Parts of the Body are, by any diſtractile Force, broken or drawn aſunder. This Diſtraction accompanies every *Contuſion*, which is, by this, diſtinguiſhed from a Wound, in which there is alſo a Solution of Continuity, but not a Diſtraction or Dilaceration, ſince a Wound is inflicted with a ſharp Inſtrument. A Contuſion may, indeed, accompany a Wound; but then the Diſorder is of the complicated Kind.

Secondly, An utter Deſtruction of many of the ſmall Parts.

In a Wound, there is only a ſimple Diviſion of thoſe Parts which before coher'd: Hence it often happens, that the largeſt Wounds are ſucceſsfully cured, whilſt the divided Parts, when brought into mutual Contact, coaleſce, and grow together again. But in Contuſions, the Parts are frequently ſo mangled, and their vital Structure and Make ſo deſtroy'd, that it becomes impoſſible to produce a mutual Union and Coaleſcence among them. Hence, in the Cure of Contuſions of this Kind, a Separation of all theſe Parts is neceſſary, becauſe, being totally deprived of a vital Influx of the Humours, they, of conſequence, become mortify'd, and like a heterogeneous Body, by their Intervention, prevent the Union of the adjacent live Parts. For this Reaſon *Hippocrates*, in his Book *De Ulceribus*, juſtly affirmed, *That contus'd Fleſh muſt neceſſarily be converted into Pus, and ſeparated from that which is ſound.* Hence he adviſ'd a Suppuration to be brought on with all poſſible Expedition.

Thirdly, An Effuſion of Liquids into the adjacent Cavities, or Cavities form'd in conſequence of the Injury; beſides many other bad Effects.

When the Veſſels are broken or dilacerated, the Fluids contained in them are diſcharged, and lodged in other Places, where they ought not to be. *Hippocrates*, in his Treatiſe *De Arte*, did not heſitate to pronounce, that the whole Body was full of Cavities; *For*, ſays he, *every Part of the Body, which is not of a compact or concreted Nature, is full of Cavities, whether it be covered with Fleſh or Skin. The Cavities which are ſound, and in their natural State, are filled with Air, whereas thoſe which are diſorder'd and indiſpos'd, are filled with Ichor.* Hence the diſcharged Humours will every-where find an eaſy Acceſs to theſe Cavities, whether large or ſmall; for almoſt every Veſſel, and every muſcular and tendinous Fibre in the Body, is ſheathed up in a Membrane, which is eaſily dilatable, and which conſiſts of a large Number of ſmall Cells, which have a mutual Communication with each other. Theſe leſſer Cavities, or Cells, are therefore diſperſed thro' the whole Body, and may be fill'd with the Humours diſcharged from the dilacerated Veſſels (ſee CELLULOSA MEMBRANA). This is ſtill more palpable and obvious, with reſpect to the larger and more conſiderable Cavities of the Body, ſuch as the Ventricles of the Brain, the Cavity of the Thorax, the Tracheæ, and Veſicles of the Lungs, the Pericardium, the Abdomen, and the Stomach. But the Humours, thus diſcharg'd, may not only fill the natural, large, and minute Cavities of the Body, but alſo, by being accumulated there, diſtend them, and of courſe ſeparate and disjoin the Parts before contiguous to each other; in conſequence of which, new Cavities are either form'd, or the Capacity and Bulk of ſuch as are natural ſurpriſingly enlarged. Whilſt, for Inſtance, after a violent Contuſion of the Head, in which the Veſſels of the Dura Mater are dilacerated, and the diſcharged Blood collected between it and the Cranium, the Dura Mater is ſeparated from the Cranium, to which it before adher'd; by which means a new and preternatural Cavity is formed.

The whole Train of Symptoms, ſubſequent to a Contuſion, may be reduced to three Claſſes; for, firſt, they ariſe either from this, that when the Solids are deſtroy'd, and the Humours diſcharged, thoſe Functions are aboliſhed, which depend upon a due and determinate Motion of the Fluids through the ſound Veſſels: Or, ſecondly, they ariſe from this, that the diſcharg'd Humours, collected either in the natural or preternatural Cavities of the Body, by their Bulk and Quantity preſs upon the adjacent Parts, and either totally deſtroy, or at leaſt diſturb, their reſpective Functions: Or, thirdly, the Humours, thus diſcharged, may, by their Continuance and Stagnation in the Cavities, acquire ſuch a Degree of Acrimony, as to corrode and deſtroy the adjacent Parts. If theſe three Claſſes are diligently conſidered, and applied to the ſeveral Parts of the Body, it will be ſufficiently obvious, that numberleſs Symptoms may happen, which cannot poſſibly be enumerated. A Caſe, related in the Memoirs of the Royal Academy of Sciences for the Year 1713. ſufficiently informs us, that Contuſions may be followed with a Series of very ſurpriſing Symptoms, and ſuch as cannot be foreſeen by the moſt ſkilful and knowing Surgeons; for a Man of ſixty Years of Age had the Misfortune to have a Carriage or Waggon drawn over his Breaſt, by which his Ribs were ſo contus'd and fractur'd, that a Splinter of one of the Ribs had only gently dilacerated the external Membrane of the Lungs. Hence a Part of the inſpir'd Air, paſſing through this ſmall Wound, inſinuated itſelf into the cellular Membrane, and inflated almoſt the whole Surface of the Body with a ſurpriſing Emphyſema; by which means the miſerable Patient was ſuffocated on the fourth Day. The celebrated *Paré*, in the ſixth Chapter of his twelfth Book, makes mention of ſuch a flatulent Swelling happening about the Ribs after Contuſions, tho' he ſeems not to have been perfectly acquainted with the Cauſe of this Phenomenon. Numberleſs Obſervations occur in practical Authors, which inform us, that, by violent Contuſions, tho' no Injury appear'd in the external Parts, the Liver, the Spleen, and other Organs, have been frequently broken, and a ſudden Death brought on. It has alſo ſometimes been obſerved, that violent Contuſions have been followed by immediate Death, when no remarkable Injury appeared to be done, either to the internal, or the external Parts. *Bohnius*, in his Treatiſe *de Renunciatione Vulnerum*, ſupplies us with a memorable Inſtance of this Nature. A certain Man was ſtruck on the Right Hypogaſtrium by a Stone, weighing ſeveral Pounds, and thrown with conſiderable Force, upon which he dropt down, and died immediately. When, by the Order of the Magiſtrates, *Bohnius* inſpected the Carcaſe, he found no manner of Injury either in the Integuments, Veſſels, or Viſcera; only in that Part of the Diaphragm which was contiguous to the ſpurious Ribs on the Right Side, he obſerved a Kind of Contuſion and Sugillation, the whole Circumference of which ſcarce exceeded that of half an Imperial.

But the worſt Sort of Contuſion is, when the internal Parts are affected in the manner already deſcrib'd, whilſt the Integuments cohere, and confine the extravaſated Fluids within; which, therefore, ſtagnate, coagulate, and putrefy.

The Skin is ſo tough, and the mutual Coheſion of its Parts ſo ſtrong, that it is not eaſily broken with an obtuſe Inſtrument; whereas the Veſſels lying under it, and running thro' the Panniculus Adipoſus, are far more tender, and conſequently more eaſily broken. Thus, when any one ſtrikes his Finger with a Mallet, the Skin generally remains ſound, but a black Spot, produced by the Effuſion of the Blood from the ruptured Veſſels under the ſound Skin, deforms the contuſed Part, and renders it unſeemly. This Effect is in a more particular manner produced, when the Veſſels, lying under the Skin, are, by the Cauſe making the Contuſion, forcibly daſh'd againſt the hard ſubjacent Bone. Hence it is, that ſo large Tumors ariſe ſo ſuddenly, when the Head is ſtruck againſt any hard and reſiſting Obſtacle. But the Humours thus diſcharged from the dilacerated Veſſels, being pent up and confin'd by the ſound Skin, are accumulated, ſtagnate, and of courſe coagulate in the cellular Membrane, and may at laſt become putrid; tho' this laſt Accident will not happen very ſoon, if no Acceſs is permitted to the external Air. Various Misfortunes ariſe from this, the principal of which are theſe following:

Firſt,

First, An Ecchymosis.

This is an Effusion of the Humours from their respective Vessels under the Integuments, and which, by *Paulus Ægineta*, in *Lib.* 4. *Cap.* 30. is defined in the following Words: "When, says he, the Flesh is contused by the violent Collision of any Object, and its small Veins broken, the Blood "is gradually discharged from them." This Blood, when collected under the Skin, produces what we call an *Ecchymoma*. The Skin, in the mean time, remaining entire, a Tumor, which is soft, yielding to the Touch, livid, and, for the most part, without Pain, is form'd. *Galen* also, in *Commentar. in Aphor.* 20. *Sect.* 6. defines an *Ecchymosis* an Effusion of the Blood into the Cavities or Interstices contiguous to the Vessels; and, in *Commentar.* 3. *in Librum Hippocrat. de Medici Officina*, he uses these Words: "When contused Flesh discharges the "Blood under the Skin, this Disorder is call'd ἐκχύμωμα."

Secondly, A spurious Aneurysm.

When, for Instance, in consequence of the Injury done to a large Artery, a considerable Quantity of discharged Blood is collected in the Panniculus Adiposus under the Skin: Hence if, in consequence of a Rupture or Dilaceration of the smaller Vessels, a moderate Quantity of Blood is collected under the sound Skin, it is call'd an Ecchymosis: But if, in consequence of the Rupture of a large Vessel, the Skin is distended with the extravasated Blood, it is call'd a spurious Aneurysm.

Thirdly, Sugillation.

When the Pressure of the Atmosphere on the Surface of any Part of the Body is either lessen'd, or almost totally removed, whether by Suction, or the Application of Cupping-glasses, the Blood rushes into those Parts which are less press'd upon by the Air, distends the Vessels, and enters the small dilated Vessels, in which there is naturally no red Blood. In these Vessels the Blood is often so firmly impacted, that it cannot return: Hence red, livid, and frequently black Spots, are produced. For this Reason such a Spot, remaining after the Suction of any Part, is call'd Sugillation. But when any Part of the Body is struck with a Mallet, for Instance, the Blood-vessels being suddenly compress'd by this Blow, the Blood may be forced into the serous and lymphatic Vessels, and produce such a Spot, by remarkably changing the Colour of the Skin. Sugillation, therefore, differs from an Ecchymosis in this, that, in the latter, the Blood is discharged from the ruptured Vessels into the adjacent Interstices or Cavities; whereas, in a Sugillation, the Blood, in consequence of the strong Pressure, enters other Vessels, in which it ought not naturally to be; but which, at the same time, remain sound and entire: For this Reason the Sugillation rather appears in the Parts adjacent to that contused, than in itself. But 'tis obvious, that an Ecchymosis and a Sugillation often accompany each other, after violent Contusions; for which Reason these two Words are, by some Authors, frequently confounded, and promiscuously used, as importing one and the same Thing.

Fourthly, Ulcers and Gangrenes.

When, for Instance, the discharged Humours, becoming corrupted in consequence of their Stagnation, inflame or corrode the adjacent Parts. Sometimes also a Suffocation is produced, when, for Instance, the cellular Membrane is preternaturally distended by the discharged Humours; whence Gangrenes, and the most fatal Putrefactions, may ensue.

Fifthly, Caries.

When, for Instance, the above-mention'd Disorders penetrate so deep as to affect the Bone.

Sixthly, Scirrhus and Cancers in the Glands.

Since, from anatomical Discoveries, 'tis certain, that the Glands consist of a large Number of small Arteries, by whose various Disposition there is separated, from the arterial Blood, another Liquor, which, being collected, is discharged through their excretory Ducts; 'tis obvious, that, these Parts being injured by the Contusion, the small Vessels may be by this means destroy'd; or that the Emunctories of the Glands may be so compress'd or obstructed, as to prevent the free Discharge of the Humours secreted thro' the arterial Fabric of the Glands: Hence, from the Stagnation of these Humours, the Exhalation of their more fluid Parts, or their Absorption into the small Veins, arises an Inspissation of the secreted Fluid; by which means a Tumor is produced, which is hard, scarce capable of Discussion, and indolent. This Species of Tumor is, by Physicians, call'd *Scirrhus*; and, when it becomes inveterate, highly hard, rough, and accompanied with Pain, it is call'd a *Cancer*.

Contusions often affect the Bones, and are then productive of Disorders analogous to those which are caused by Contusions of the Head (described under the Article CAPUT): Hence the Marrow is injured; and from this Source arise Ulcers, Fistulas, Caries, and Putrefaction; for the Marrow is situated in the Bones, as the Brain is in the Cranium.

When the Contusion affects the Bones themselves, the Vessels distributed between the small Lamellæ, which constitute the Fabric of the Bones, may be either compress'd, or totally destroy'd: Hence the vital Influx of the Humours into these Lamellæ is abolish'd, which, therefore, becoming mortified, must necessarily be separated from the live subjacent Parts. This Disorder may gradually spread and diffuse itself thro' the whole Substance of the Bone, as is explain'd under the Article CAPUT.

As for Injuries done to the Marrow of the Bones, these are greatly to be dreaded in Contusions; for the Marrow is deposited in the Cavities of the larger Bones, and a Substance of a similar Nature is dispersed thro' the bony Cellulæ. As the Brain is defended from Injuries by a bony Covering, so the Marrow is lodged in the Cavities of the Bones. In like manner, as the Brain is cover'd with a peculiar Membrane, call'd the Pia Mater, which receives and preserves the Vessels, which enter the Substance of the Brain; so the Marrow is surrounded with a very tender Membrane, destin'd for similar Purposes. The arterial Vessels of the Pia Mater appear very tender, after they are divested of their thicker Coats. This same Circumstance holds true, with respect to the Vessels distributed to the Substance of the Marrow. Thus the Marrow, taken from the Thigh-bone of an old Ox, may, by the Fingers, be easily reduced to a kind of oleous colliquated Mass; tho' 'tis certain, that this Marrow receives Supplies from numberless Arteries, which are distributed to it. As, when the Cranium is fissured, fractured, or contused, the Disorders, arising from an Effusion or Corruption of the Humours, may affect the Brain itself; so Injuries done to the Bones may, in like manner, prove prejudicial to the Marrow contain'd in them. As by a violent Concussion of the Head the tender Vessels of the Brain may be destroy'd, whilst, at the same time, the Cranium remains sound and entire; so the like Misfortune may happen to the Marrow, when the Bones, in which it is lodged, are forcibly struck. But when the tender Vessels of the Marrow are injured by having the Disorder of the surrounding Bone communicated to them, or by any other Cause, the medullary Oil, discharged from the ruptured Vessels, will stagnate, acquire a rancid Acrimony of the worst Kind, corrode all the adjacent Parts, and render the Bone itself carious: Hence arise malignant Ulcers, and such as scarcely admit of a Cure; obstinate Fistulas, not to be heal'd till this medullary Corruption is removed; a virulent oleous Putrefaction, preying upon all the adjacent Parts; and numberless other Disorders.

Sometimes the muscular Parts are injured by Contusions; whence considerable Suppurations, Gangrenes, Palsies, and Contractions. But if, from a Contusion, any large Nerve, which sends out a great Number of Branches, is corrupted, then a Palsy, Atrophy, certain and incurable Insensibility, or Gangrene, of all the Parts below the contused Nerve, ensue. And this is in a particular manner true, with respect to the Spine of the Back, and the Medulla thereof.

As for the muscular Parts, when injured, 'tis certain, from anatomical Discoveries, that every visible Muscle may be separated into smaller Bundles of muscular Fibres: Nor hitherto, even by the Assistance of Microscopes, has any End of such a Separation or Division been found; for no one ever yet saw a single muscular Fibre, but only a Congeries of them collected into one common Body. These Bundles of muscular Fibres are inclosed in a thin cellular Membrane, which contains a certain subtile pinguious Fluid, destin'd for the Lubrication of the Fibres. So incredible a Number of Arteries are distributed among the Interstices of these Bundles, and in the cellular Membrane, lying between them, as is certain from the Injections of *Ruysch*, that they seem almost to constitute or make up the whole Substance of the Muscle. These Arteries have also correspondent small Veins and Nerves distributed thro' the Substance of the Muscle. When, therefore, a Muscle is contused, these Vessels may be ruptured, and the Humours discharged into the Cavities of the cellular Membrane, where, being collected, they may compress the adjacent Parts. These extravasated Humours may also be corrupted, and, acquiring an Acrimony, corrode the contiguous Parts: Hence Inflammations, Suppurations, Gangrenes, and other Disorders arising from them, may be produced. Suppurations, proceeding from this Cause, are, of all others, the worst; because the Pus, form'd in the cellular Membrane, surrounding the muscular Fibres, will find out uncommon Ways for itself, and may spread thro' all the Windings and Meanders of this Membrane, and by that means produce the worst of Sinuses and Fistulas. Add to this, that, by a long-continued Suppuration, this cellular Coat being consumed, which not only separates the Bundles of Fibres, but also, in all Probability, the single muscular Fibres from each other, these would coalesce, and grow together;

ther: Hence the free Expanſion of theſe Fibres, by the Cauſes which diſtend the Muſcles, when acting, will be prevented, and muſcular Motion either depraved, or entirely deſtroy'd. The muſcular Fibres themſelves, properly ſo call'd, may alſo be deſtroy'd by a ſtrong Contuſion: Hence muſcular Motion, to which the ſound and entire State of theſe Fibres is requiſite, will ceaſe, and a Palſy of the Muſcle, that is, an Inability of exerting its proper Motion, together with a preternatural Laxity, will be produced. From this Cauſe Contractions may alſo ariſe, when, by a ſtrong Suppuration, the cellular Membrane, which ſeparates the muſcular Fibres, being deſtroy'd, theſe grow together, and become impervious to the fineſt Humours: Hence they are gradually ſhorten'd, and can never afterwards be drawn out, to their former Length, by any Force. From this, ſurpriſing Contractions of the Members may ariſe; as alſo from this, that, when the Action of any Muſcle is deſtroy'd, its antagoniſt Muſcle continues to act, and continually draws the Member, to which it is affix'd, to its Origin; by which means that Member, at laſt, becomes ſtiff; and for this Reaſon 'tis, that Contractions are ſo frequently ſubſequent to long-continued Palſies.

But when, by a Contuſion, ſome of the muſcular Fibres are dilacerated in ſuch a manner, as not to deſtroy the Action of the Muſcle, this ſeems to be another Diſorder, which is, indeed, highly painful; and which the antient Phyſicians call'd σπάσμα, or Divulſion, and ῥῆγμα, a Rupture. *Galen*, in *Commentar. 3. in Librum Hippocrat. de Medici Officina*, when ſpeaking of a Contuſion, uſes the following Words: "It is "certain, that, in the Formation of Ecchymoſes, [ἐκχυμάτων] "the ſmall Veins are divided with the Fleſh: But "Divulſions [σπάσματα] happen in the muſcular Fibres, when "ſome of them are ſo preternaturally diſtended as to break; "and the later Phyſicians call theſe Diſorders *Ruptures*, [ῥήγματα] "which were firſt mention'd by *Hippocrates*." Theſe Ruptures are, by *Hippocrates*, in his Treatiſe *de Morbis, Lib. 1. Cap.* 8. deſcrib'd in the following Words: "In ſome Caſes, "ſays he, when gentle Divulſions are made in the Fleſh or "Veins, no Suppuration enſues; but long-continued Pains are "brought on, and theſe Divulſions are call'd [ῥήγματα] Rup"tures." In the End of the ſame Chapter he adds the following Words: "Divulſions are produced by too violent Ex"erciſe, by Falls, by Wounds, by lifting too heavy Burdens, "by Running, by Wreſtling, and other Things of a like Na"ture." He alſo ſeems to have had theſe in his View, when, in his *Coacæ Prænotiones*, he uſes theſe Words: "All Divul"ſions are indeed troubleſome, and, at firſt, accompany'd with "intenſe Pains; from which they are not entirely free in the "future Courſe of the Diſorder: But Divulſions of this Kind, "happening about the Thorax, are moſt dangerous, and cured "with the greateſt Difficulty." It is to be obſerved, that ſome Tranſlators have render'd the Word σπάσματα by *Convulſions*, but very improperly; ſince the Word σπασμοὶ was, by the *Greeks*, uſed for *Convulſions*. *Galen*, in *Method. Medend. Lib.* 4. obſerves, that the ſmall muſcular Fibres, when thus disjoin'd, are, with Difficulty, reunited; for he was of Opinion, that the divided Fleſh would eaſily coaleſce, if the Ecchymoſis is ſufficiently ſoon diſcuſs'd; but when it was a conſiderable Time before this Effect was produced, he thought, that the collected Sordes interpoſed themſelves between the disjoin'd Fibres, and prevented their Reunion: Hence the Pain is renew'd by too intenſe Exerciſe, the Acceſs of a Fever, too languid a Concoction of the Aliments, and other Cauſes of a like Nature. An Effect, ſomewhat analogous to this, is obſerved, when, after ſtrong Efforts, or the Attempts to lift too heavy Burdens, very intenſe Pains ariſe ſuddenly, which often rack the Patient for a long time, and are increaſed by the leaſt Motion of the Body. 'Tis undeniably confirm'd by Experience, that, in Pains of this Kind, an entire and uninterrupted State of Reſt is the moſt efficacious Cure: And *Hippocrates*, in his Treatiſe *de Morbis, Lib.* 2. in [ῥήγματα] Ruptures of the Breaſt or Back, order'd the Patient to abſtain from Labour for a whole Year. In his Treatiſe *de Morbis internis*, after he has told us, that this Diſorder was produced by immoderate Exerciſe, he informs us, that Reſt is abſolutely neceſſary, otherwiſe the Diſeaſe returns in a more terrible Shape, than that in which it firſt appear'd.

As for the Corruption of large Nerves, in conſequence of a Contuſion, if we conſider the Nerves, with reſpect to their Origin, as ariſing from the Medulla Oblongata, or the ſpinal Marrow, 'tis obvious, that they are highly ſoft. If the Extremities of the Nerves are view'd in thoſe Parts, where, being diveſted of their Coverings, they conſtitute that corporeal Organ, by a Change induced in which, by external Objects, new Ideas are convey'd to the Mind, by means of the Senſes, they appear ſurpriſingly tender. This is ſufficiently confirm'd by the highly ſoft Pulp of the auditory Nerve, and by the Retina of the Eye, which collapſes to a ſhapeleſs Mucus, unleſs preſerved in its natural State by the uniform and equable Preſſure of a circumambient Fluid. But theſe ſurpriſingly tender nervous Stamina are ſafely convey'd to the Extremities of the Body, by being defended and wrapt up in tough Coats. If, therefore, a large Nerve, in its Courſe from its Origin to the Extremities of the Body, ſhould happen to be contuſed, this pulpous and ſurpriſingly ſoft Subſtance may be injur'd, or even deſtroy'd, tho' the Coat or Covering of the Nerve ſhould appear to be unhurt. By this means all thoſe Functions will be deſtroy'd, which depend upon the Soundneſs of the Nerves collected and terminating in this large Nerve. This is obvious from the Experiment made by *Valſalva*, and mention'd under the Article CAPUT; for when that Anatomiſt tightly applied a Thread to the cardiac Nerves of a Dog, and immediately removed it again, the Animal, a few Days after, died in the ſame manner as if theſe Nerves had been cut off; and yet, after the Death of the Dog, no ſenſible Injury appear'd to have been done to theſe Nerves; but the Ligature had ſo compreſs'd the pulpous and nervous Subſtance itſelf, that the free Influx of the Spirits, into theſe Nerves, was totally intercepted.

But the Reaſons why an incurable Gangrene ſhould follow, upon the Deſtruction of a large Nerve, and more eſpecially an Injury done to the ſpinal Marrow, are enumerated under the Article VULNUS; where memorable Caſes are alſo related, in Confirmation of this Truth.

Sometimes Contuſions injure the Viſcera; whence ariſe Inflammations, Suppurations, Gangrenes, Scirrhuſes, and a Depravation of the Functions peculiar to the Part affected.

What terrible Diſorders may ariſe from violent Contuſions of the Head, even when the Brain is not injured by them, is obſerved under the Article CAPUT. The Viſcera, contain'd in the Cavities of the Breaſt, are ſafely incloſed, and everywhere defended by the Ribs, the Sternum, and the Spina Dorſi: Yet the ſurpriſing Caſe already ſpecified informs us, that theſe Viſcera may alſo be injured by Contuſions; ſince, in it, a Splinter of the Rib lacerated the external Membrane of the Lungs, upon which an uncommon Emphyſema and Death enſued. The abdominal Viſcera are more ſubject to be injured by Contuſions, as the greater Part of the Abdomen is only cover'd with ſoft Integuments. The Spleen, however, and moſt Part of the Liver, are defended by the ſpurious Ribs. But that, in conſequence of violent Contuſions, theſe Viſcera have ſometimes been crack'd, and ſudden Death produced, is obvious from the medicinal Obſervations ſpecified under the Article VULNUS. Nor does this appear in the leaſt ſurpriſing, when we conſider, that the Liver and Spleen are ſo tender, that the higheſt Caution is neceſſary, in order to take them entire from a Carcaſe: Hence it is, that violent Contuſions of the Abdomen prove ſo frequently, and ſo ſuddenly, mortal. *Paré* informs us, that, whilſt two Prize-fighters were putting their Strength and Dexterity to the Teſt, the one, who was of a low Stature, but well made, forcibly threw the other, who was taller, on the Ground; but, being enraged at this, he afterwards ſeiz'd his Adverſary, and throwing him down, with his Elbow placed upon the Pit of his Stomach, and thus falling on him with the Weight of his whole Body, he kill'd him on the Spot. In the Carcaſe, when inſpected, a large Quantity of extravaſated Blood was found in the Cavities both of the Thorax and Abdomen. Numberleſs Obſervations occur in practical Authors, from which 'tis certain, that various Viſcera have been ſo injured by violent Contuſions, that Death, or the moſt terrible Diſorders, have enſued; for, by theſe Contuſions, the Veſſels may be ruptured, and the Humours diſcharged; and theſe extravaſated Humours, becoming corrupted, may, by corroding the adjacent Parts, produce very terrible Symptoms; ſuch as an Inflammation, with all its Conſequences, a Suppuration, for Inſtance, a Gangrene, and the other Effects of Inflammation. And ſince all the Functions of the Viſcera depend upon the ſound and entire State of the Veſſels, and the due Circulation of the Fluids thro' them, 'tis alſo obvious, that theſe Functions may not only be depraved, but totally aboliſh'd and deſtroy'd.

From what has been ſaid, many and miſerable Diſorders, the Conſequences of Contuſions, may be readily explain'd and prognoſticated, and theſe both of the acute and chronical Kind.

If what has been already ſaid with reſpect to the true Nature of a Contuſion, and the Effects neceſſarily accompanying every Misfortune of this Kind, be applied to the ſeveral Parts of the Body, which may be injured by Contuſion, it will be ſufficiently obvious, what Symptoms are to be dreaded; and theſe may be ſafely prognoſticated from a Knowledge of the Structure and Uſe of the particular Parts contuſed. Thus, for Inſtance, if any one, by a Fall, has daſh'd his Right Hypochondrium againſt ſome hard and obtuſe Obſtacle, and if ſoon after a preternatural Yellowneſs appears in his Eyes and Skin, we, by this Circumſtance, know, that the repel'd Bile has contaminated the Maſs of Blood; and, conſequently, that the Region of the Gall-bladder, and the Liver itſelf, are injur'd by the Contuſion. Now, if we conſider, that the Subſtance of the Liver is ſo tender, that it reſembles a Sponge full of Blood, 'tis highly

highly to be dreaded, leſt, by a Rupture of its Veſſels, a large Quantity of Blood ſhould be diſcharged into the Cavity of the Abdomen: Hence Convulſions, Faintings, and often ſpeedy Death, will enſue. If, on the contrary, the Diſorder is but ſlight, and only the ſmaller Veſſels, diſtributed through the Subſtance of the Liver, ruptured, the diſcharg'd Humours, by preſſing the adjacent Veſſels, or, if they become corrupted, by corroding them, may produce an Inflammation, a Suppuration, and a Scirrhus, in this Organ: Hence, after ſuffering the moſt intolerable Agonies, a ſlow Death will enſue. If the Region of the Loins is injured by a violent Contuſion, and a Diſcharge of bloody Urine enſues, we, from this Circumſtance, know, that the ſmall Veſſels of the Kidneys are ruptured; by which very terrible Diſorders will be frequently produced; for the Clots of coagulated Blood, falling into the narrow Parts of the Pelvis and Ureters, will entirely intercept the Paſſage of the Urine from the Kidneys to the Bladder: And hence an Inflammation of the Kidneys, and an Iſchury, or Retention of Urine, will be brought on. Beſides, a ſmall Clot of Blood, remaining in theſe Parts, may afford a proper Baſis, around which a Stone may, in Proceſs of Time, be form'd, which will prove a freſh Source of other Diſorders. Now, if we conſider, that the ſame Misfortune may happen in any of the other Viſcera, it will be ſufficiently obvious, that numberleſs Diſorders may enſue, which will either ſoon deſtroy the Patient; when, for Inſtance, the Humours are extravaſated, or when the Fabric and Structure of thoſe Parts, whoſe Soundneſs is abſolutely neceſſary to Life, are deſtroy'd; or elſe, when ſome of the Functions of the Parts are only deprav'd, the Life of the Patient may be preſerved; but, at the ſame time, the State of his Health will be far from being good. From this Source chronical, and often incurable, Diſorders will proceed. This is confirm'd by the lamentable Caſe of a celebrated General, who, when mounted upon a high-mettled Horſe, ruſh'd in upon the Front of his Enemies: But the Horſe, happening to be wounded, ſuddenly ſprung upwards, by which means the Riſing of the Saddle was forcibly daſh'd againſt the Region of the Stomach. This Misfortune was immediately ſucceeded by a copious vomiting of Blood. But as this brave Soldier did not obſerve a moderate Regimen, and not only lived intemperately, but alſo entirely neglected his Misfortune, he, indeed, ſurviv'd the Accident for a conſiderable Time, but was afterwards conſtantly afflicted with various Pains of his Stomach, and then with a troubleſome Vomiting and Dyſentery, till at laſt Death put an End to his Miſery. Upon laying his Body open, a large Part of his Liver, and the Whole of his Pancreas, were found cancerous. Terrible Diſorders are in like manner produced by Contuſions of the Teſticles. *Van Swieten* informs us, that he ſaw one of the Teſticles render'd ſcirrhous by a Contuſion, which, being afterwards unſkilfully treated with emollient and ſuppurating Medicines, grew to ſuch an enormous Bulk, that the Scrotum, with the included Teſticle, almoſt reach'd the Patient's Knee. This Teſticle, as that Author informs us, was afterwards conſumed by a Cancer of the worſt Kind; which, after ſubjecting the Patient to the moſt intolerable Pain, at laſt killed him, though his Conſtitution, in other reſpects, was ſound and vigorous.

A Contuſion is diſcovered, and the Part affected is diſtinguiſhed,

Firſt, By the Sight and Touch.

For when Veſſels are ruptured under the entire Skin, the extravaſated Humours fill and diſtend the Panniculus Adipoſus: Hence the Tumor and Softneſs of the contuſed Part are ſubjected to the Sight and Touch, eſpecially in Contuſions of the Head; becauſe the hard ſubjacent Bone of the Cranium contributes to make the extravaſated Humours raiſe and elevate the Skin more than they would otherwiſe do. Hence it happens, that ſo enormous Tumors are often ſo ſuddenly produced by Contuſions of the Head.

Secondly, By the Effects; as Pain; Stupor; a Senſe of Gravity; a Change of the natural Colour to red, brown, lead Colour, black, yellow, or green; Hæmorrhage; or Gangrene.

Almoſt every Contuſion is accompanied with Pain. But, when, in conſequence of a very violent Contuſion, all the Veſſels are almoſt deſtroy'd, then the Pain is either none at all, or at leaſt very faint and ſlight: In this Caſe, there is a Stupor, and Senſe of Weight, in the Part affected; which denote, that the Nerves in the contuſed Part are either deſtroy'd, or ſo compreſſed by the extravaſated Humours, or the Cauſe producing the Contuſion, that they are render'd incapable of Senſation. But ſince the extravaſated Blood is collected under the Skin, which, for the moſt part, remains entire, the Colour of the contuſed Part is changed in proportion to the Quantity of extravaſated Blood, and the Time elapſed ſince the Contuſion was made; for a ſlight Contuſion is only at firſt ſucceeded by a rediſh Colour of the Part; for when the ſmall Veſſels are ruptur'd, they only diſcharge an inconſiderable Quantity of Blood. But this rediſh Colour will in a few Hours become more dark, and at laſt aſſume a blackiſh Caſt. But, after ſevere Contuſions, the Colour of the Part affected is often ſpeedily chang'd into a lead Colour, or becomes livid, and frequently blackiſh; becauſe a large Quantity of concreted Blood is lodg'd under the Skin, which ſtill remains entire. And though at firſt the Colour of the Part was red, yet afterwards, when the fineſt Part of the extravaſated Blood is diſpel'd, or again abſorb'd, the Remainder of it is of a blackiſh Colour. Nor ought this leaden and livid Colour of the contuſed Part to ſtrike a groundleſs Terror in the Surgeon, becauſe it is not always a Sign of a Gangrene; for a Part, becoming livid in conſequence of a Gangrene, is diſtinguiſhed by its Coldneſs, and by the ſmall Bubbles which ariſe on the Epidermis, and are full of Ichor. When the concreted Blood begins to be gradually reſolved and diſſipated, then the leaden, or even the blackiſh, Colour becomes proportionably fainter, and begins to aſſume a rediſh Caſt. A yellow or ſlight greeniſh Colour, alſo, appears about the Margins of the Contuſion, in proportion as the red Parts of the Blood are gradually reſolved and diſſipated; which denotes, that the extravaſated and concreted Humours begin to be diſſolved. Almoſt every one knows, that when Blood is taken from the Vein of a ſound Man, it is ſoon after ſeparated into two diſtinct Subſtances; that is, the limpid, yellowiſh Serum, and the red, concreted Part, which ſwims in it. If all this Serum is poured away, a few Hours after, a conſiderable Quantity more will appear; whilſt, in the mean time, the red concreted Maſs is gradually leſſen'd, and melted down into Serum; ſo that, by often pouring off the Serum, almoſt the Whole of the red and concreted Part is conſumed. This ſeems alſo to happen in Contuſions, becauſe the concreted Blood is gradually reſolved into a fine Serum. Hence proceeds that Change of Colour obſervable in contuſed Parts, when the Attenuation and Diſſipation of the extravaſated Blood begins to happen. *Hippocrates*, in his Treatiſe *de Fracturis*, when ſpeaking of a Fracture of the Os Calcis, takes particular Notice of this Circumſtance; for he reckons it among the beſt Signs, and ſuch as remove the Dread of a Relapſe: "When "Ecchymoſes [ἐκχυμώματα] blackiſh Spots, and the Parts adjacent to them, aſſume a greeniſh Colour, without any "Hardneſs; this, in every Ecchymoſis, is the beſt and moſt "ſalutary Sign."

But Contuſions are rarely ſucceeded by violent Hæmorrhages, except in Caſes where the Skin is divided by a pretty large Wound; for the Blood diſcharg'd from the ruptur'd Veſſels, being collected in the Panniculus Adipoſus, becomes grumous, and blocks up the Paſſage of the Blood, which would otherwiſe be diſcharg'd. But when the Viſcera, or larger Veſſels, are injured by a Contuſion, a conſiderable Quantity of Blood may be pour'd into the Cavities of the Body; when, for Inſtance, the Liver is thus injur'd. But, in this Caſe, the Paleneſs of the Countenance, the Coldneſs of the Extremities, the preternatural Weakneſs, and the Syncopes, ſufficiently indicate ſuch an internal Hæmorrhage. But when, in conſequence of a violent Contuſion, all the Veſſels of any Part of the Body are ſo deſtroy'd, as totally to prevent the Influx and Efflux of the Humours in this Part, then a Gangrene, or a Mortification of the Part, is produced.

Thirdly, By comparing the Part affected with the Cauſe of the Injury.

When we are appriſed, that a hard obtuſe Body, put in Motion, has ſtruck upon any Part of the Body; or, *vice verſa*, that any Part of the Body, put in Motion, is daſh'd againſt ſuch a hard and obtuſe Obſtacle; we, from either of theſe Circumſtances, know, that a Contuſion is produced. Hence it happens, that Wounds are often accompanied with Contuſions, unleſs when the wounding Inſtrument is ſharp. The Nature and Situation of the Parts injured are carefully to be adverted to. Thus, for Inſtance, the Viſcera of the Thorax are not ſo eaſily and readily injur'd by Contuſions, as thoſe of the Abdomen. Hence we underſtand;

Firſt, That an internal and large Contuſion of any of the more noble Viſcera is incurable, and the frequent Cauſe of Diſeaſes and Death.

For when the Veſſels are ruptur'd, either a mortal Hæmorrhage, and ſuch as cannot be ſtopt, will enſue; or the contuſed Parts muſt, by a Suppuration, be ſeparated from thoſe which are ſound, as *Hippocrates* obſerves in the Paſſage already mentioned. But from internal Suppurations of the Viſcera, Conſumptions frequently ariſe, which ſlowly deſtroy the Patient. Beſides, ſince each of the Viſcera contributes to the Preſervation of perfect Health, after the Suppuration, the Functions of the injur'd Bowel will be ſo diſorder'd, that Life may indeed poſſibly remain, but the Patient will continue in a miſerable and morbid State of Health: But, ſince ſuch Injuries frequently happen from Contuſions, eſpecially in the Liver and Spleen, on account of their tender and friable Nature, hence it is ſufficiently obvious, that the worſt Conſequences are to be expected, that the Cure muſt be very difficult, and that it

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is very rarely poſſible to reſtore the Patient to perfect Health; ſince, during the remaining Part of his Life, there almoſt always remains ſomething of a ſcirrhous Nature, which will diſturb the Functions of the injur'd Organ.

Secondly, That Contuſions of the Bones are very dangerous, and difficult to cure; eſpecially when they happen near the Joints; and when the Marrow is injur'd.

For when thoſe Veſſels are ruptur'd, which convey Life and Nouriſhment to the Laminæ of the Bone, theſe Laminæ will of courſe become mortified, and muſt be ſeparated: But if ſuch a Contuſion ſhould happen, eſpecially about the Joints of the larger Bones, no Separation is to be expected; for in theſe Parts the bony Laminæ recede from each other, and form ſmall Cells, in which there are numberleſs Blood-veſſels, and others which contain a very fine and ſubtile Oil, which will, therefore, be deſtroy'd; and the extravaſated Humour, ſtagnating, will become highly corrupted: Hence a Caries of the Bone is produced, and all the Train of Diſorders, which can draw their Origin from it. But, if the Marrow itſelf is thus injur'd, an unhappy Change into a rancid Acrimony, a Corroſion of the Bone, and a Corruption of all the Parts which cover it, will neceſſarily enſue. Add to this, that the Bones cannot be contuſed about the Joints, but the Ligaments, which connect and join the articulated Bones, muſt at the ſame time be injured. Hence the moſt intenſe Pains, Anchyloſes, and other Diſorders, may ariſe.

Thirdly, That Contuſions of the Cranium are worſt of all, on account of the Vicinity of the Brain, as has been already explain'd under the Article CAPUT.

Fourthly, That Contuſions of the larger Glands, as thoſe near the Ears and Armpits, thoſe in the Breaſts, the Pancreas, the Groins, and Uterus, endanger a Scirrhus, a Cancer, and all their Conſequences.

For, in all the Parts here enumerated, there are conſiderable Glands ſituated, from the Contuſion of which, the moſt violent Diſorders often proceed. Among ten Caſes, where there are Scirrhuſes and Cancers of the Breaſts, nine of them, perhaps, ariſe from Contuſions. Thus I ſaw, ſays *Van Swieten*, a miſerable Woman, who had her Breaſt contuſed by her Daughter's Elbow, whilſt, ſleeping in the ſame Bed, ſhe endeavour'd to turn herſelf, by leaning her whole Weight on her Mother's Breaſt. In a few Weeks the whole Breaſt became ſcirrhous, immenſely large, and was at laſt ſeiz'd with a formidable Cancer: Diſorders of the like Nature are obſerved to ariſe from Contuſions about the Parotids, the axillary and inguinal Glands. The Uterus of ſuch Women as are not with Child, is every-where ſufficiently defended by the Bones of the Pelvis; for which Reaſon it cannot be eaſily contuſed. But, in pregnant Women, as the Bottom of the Uterus riſes above the Oſſa Pubis, it may of conſequence be eaſily injur'd by Contuſions, as alſo by the imprudent Management of Midwives, or by difficult Labours; after which, Scirrhuſes of the Uterus are ſo often obſerv'd to degenerate into cancerous Ulcers.

In the Cure of a Contuſion, Reſolution muſt be attempted; Suppuration muſt, if poſſible, be prevented; but much more a Gangrene.

Since, in Contuſions, the ſolid Parts of the Body are mangled and ruptur'd, whilſt at the ſame time the extravaſated Fluids poſſeſs Interſtices, in which they ſhould not actually be; the Intentions of Cure muſt of courſe conſiſt in removing the extravaſated Humours, and uniting the ſolid Parts now ſeparated. Theſe Ends are moſt effectually anſwer'd by reſtoring a due Degree of Fluidity to the concreted Humours; for, by this means, being abſorb'd by the bibulous Veſſels, they will circulate with the reſt of the Juices. This is call'd a Cure by Reſolution. But a Suppuration is, if poſſible, to be prevented, ſince, by its Means, a great Part of the Subſtance of the contuſed Part is always deſtroy'd, whilſt all that, in which the Circulation can no longer be carried on, is ſeparated. Hence unſeemly Scars often remain, and ſometimes, after violent Suppurations, the cellular Membrane being conſum'd, the Muſcles and Tendons grow to the adjacent Parts; by which means their Uſe and Functions are diſturb'd, and ſometimes totally deſtroy'd. Though a Suppuration cannot always be prevented, yet 'tis certain, that, by the Application of the Remedies we ſhall afterwards ſpecify, ſuch Contuſions may often be reſolv'd, as without their Uſe, or with the too late Application of them, would have certainly ended in Suppurations. 'Tis ſufficiently obvious, that a Gangrene is ſtill more carefully to be guarded againſt, ſince, by its means, the vital Influx and Efflux of the Humours, into the Part affected, is totally prevented; and afterwards all the mortified Part muſt be ſeparated, by Suppuration, from the live adjacent Parts.

Reſolution is accompliſh'd by removing the extravaſated Liquids, without any farther Injury to the Veſſels.

In all Contuſions, a Removal of the extravaſated Liquor is univerſally indicated as neceſſary; but, when by making an Inciſion in the contuſed Part, the extravaſated Humours are evacuated, this cannot properly be call'd Reſolution, ſince a new Injury is done to the Parts. This alſo holds true, when the Cure is accompliſh'd by Suppuration; for, in this Caſe, the Ends of the injur'd Veſſels are ſeparated and diſcharged with the extravaſated Humours in the Form of Pus. But, in order to produce a Cure by Reſolution, 'tis neceſſary, that no farther Injury ſhould be done to the Parts, whilſt, at the ſame time, the extravaſated Humours are removed. This is what *Hippocrates*, in his Treatiſe *de Articulis*, calls, *to dry and reabſorb the extravaſated Blood*; for, when treating of thoſe Diſorders which follow Contuſions of the Fleſh about the Ribs, when not fractur'd, after he has preſcrib'd proper Remedies, he adds, that proper Bandage is highly neceſſary, till the Ecchymoſis is dry'd up and reabſorb'd, which is produced by the Rupture; θλάσεως.

This Reſolution is brought about;

Firſt, By rendering the extravaſated Humours fluid.

The Blood, diſcharged from the Veſſels, is immediately concreted, and becomes unfit both to circulate thro' the minute Blood-veſſels, and to be reabſorb'd by the ſmall Mouths of the Veins. The firſt Thing requiſite is, therefore, to procure a due Degree of Fluidity to the concreted Humours; for, if theſe extravaſated Juices can be reduced to the Fineneſs and Subtilty of Water, they will certainly be diſſipated, provided the Conſtitution of the Patient is found in every other reſpect. *Hippocrates*, who acknowledg'd, that the whole Body was expirable and inſpirable, in the ſixth Book of his *Epidemics*, aſſerts, *that Fleſh attracts the Fluids both from the Cavities of the Body, and from without.* Hence the bibulous Veins, diffuſed thro' all the Cavities of the Body, whether large or ſmall, will reabſorb the extravaſated Juices, provided they be only ſo attenuated, as to enter their ſmall Orifices.

Secondly, by relaxing the adjacent Veſſels.

The extravaſated Fluids, when ſufficiently attenuated, will be reabſorb'd; but, at the ſame time, they firſt enter the ſmall and minute bibulous Veins, and are from thence convey'd into the larger Ramifications; for 'tis certain, from Experiments accurately made, that ſmall Glaſs Tubes, whoſe Ends are immerſed in any Fluid, attract that Fluid into their Cavities; and that it aſcends higher in them, in proportion to the Narrowneſs of their Diameters, and according as they recline from a perpendicular to an horizontal Direction, but moſt of all, when their other Extremities are turn'd downwards; for then the Gravity of the Fluid aſſiſts that Force, by which it is drawn or attracted into theſe Tubes. The extravaſated Humours, when previouſly attenuated, ſeem to enter the ſmall Veins in the ſame manner, and by the ſame Laws. But ſuch is the Structure of the Valves conſpicuous in the ſmalleſt lymphatic Veins, that the Preſſure of the Fluid retained by them by no means hinders the extravaſated Liquor from being abſorb'd. Flexible Tubes are the more eaſily fill'd, the leſs the Reſiſtance made by their Sides is. Hence, in conſequence of the Laxity of the adjacent Veſſels, theſe ſmall reſorbent Tubes are enabled the more eaſily to convey the Fluid they have abſorb'd to the largeſt Ramifications, which in this Caſe is neceſſary.

Thirdly, By procuring the Reſorption of the extravaſated Humours into the Veſſels, by evacuating theſe Veſſels, or by Frictions.

The Fluids, thus abſorb'd by the minute venous Ducts, will the more eaſily be convey'd thro' the larger Ramifications, the ſmaller the Quantity of the Liquid, to be thus convey'd, is; provided the other Cauſes, promoting the Motion of the venous Blood, remain the ſame. The principal of theſe Cauſes are the Pulſation of the Arteries adjacent to the Veins, and muſcular Motion; for the Muſcles, during their Action, becoming turgid, the adjacent Veins are by that means compreſs'd, and the Blood contain'd in them of courſe propel'd to the Heart. If, therefore, the Quantity of Fluids to be moved is leſſen'd, whilſt, at the ſame time, the moving Cauſes remain equally ſtrong, 'tis obvious, that the Veins muſt be proportionably ſooner emptied, and conſequently that the Fluid to be abſorb'd muſt, with the greater Eaſe, enter the ſmall Mouths of the minute bibulous Veins. This is confirm'd by Experience; for, when certain Men were travelling in the ſcorching Heat of the Sun, their Bodies became rough and ſqualid, their Mouths were parched, and they were tormented with a burning and inſatiable Thirſt; but, after the Uſe of the Bath, they were ſurpris'd to find their Thirſt extinguiſh'd, their Mouths moiſten'd, their whole Bodies ſoft, humid, and free from their former Roughneſs. This Inſtance is brought by *Galen*, in *Comment.* in *Lib.* 6. *Epidem. Hippocr.* in order to prove, that the whole Body is inſpirable; for by violent Motion, in an intenſely hot State of the Atmoſphere, a large Quantity of Moiſture is evaporated and exhaled

exhaled from the Body; in consequence of which, being render'd dry, it greedily absorbs the Water contiguous to its external Surface. 'Tis probably for this Reason, that, after large Hæmorrhages, the Body is fill'd with aqueous Humours, since, in consequence of the Loss of Blood, the minute absorbent Veins can easily evacuate the Fluids they have imbib'd into the larger empty Veins. In the mean time, on account of the impair'd Strength, and diminish'd Heat of the Patient, this subtile aqueous Fluid is accumulated in the large, as well as the small, Cavities of the Body, which, according to *Hippocrates*, in the Passage already quoted, in a State of Health contain Air, but in a morbid State Ichor. Hence also a Reason may perhaps be assign'd, why dropsical Patients, after an Extraction of the Waters by the Paracentesis, or any other Method, become afresh so suddenly tumid, tho' they abstain from drinking; for tho' in the Cavities of a dropsical Body there is a large Quantity of Water collected, yet the other Vessels collapse, and empty themselves. Hence the other Parts of the Body decrease, in proportion as the Abdomen is distended, in that Species of Dropsy call'd Ascites; so that the Body must of course become more bibulous.

But Frictions, by the gentle Compression they produce, act principally upon the Veins, because these are furnished with weaker Coats than the Arteries: Hence the Veins are emptied. But because, in every Species of Friction, there is an alternate Pressure and Relaxation of the Parts, for this Reason the Veins, empty'd by this gentle Pressure, are immediately fill'd again: Hence, by Frictions, an Effect somewhat analogous to Evacuation is produced; for, when the Veins are empty'd, an easy Access is procur'd to the Fluids absorb'd by the small Mouths of the bibulous Veins. Add to these Advantages, that by Friction the extravasated Blood is attenuated and resolv'd; for if Blood, taken from the Vein of a sound Person, and concreted in the open Air, is triturated in a Glass Mortar, it is again resolved into a frothy Liquid of a redish Colour. Hence appears the singular Advantage of Frictions in the Cure of Contusions.

Bleed, therefore, plentifully; soon after, exhibit a strong, but not inflammatory Purge; let a penetrating, relaxing, and resolvent Fomentation be applied to the Part; and let warm Frictions be used: Mean time internal Resolvents, Sudorifics, and Diuretics, are of considerable Service.

As for liberal Venesection, it is a Remedy of the utmost Importance in all Contusions, provided the Patient is furnish'd with sufficient Strength to bear it: Hence it ought not only to be boldly performed, but also carefully repeated, if the Condition of the Patient requires it; for, by this means, a Fever will be prevented; as also violent Inflammations, which, in this Case, are highly to be dreaded; for, by Venesection, the thickest Part of the Fluids, that is, the red Blood, is remov'd, the Vessels empty'd, and an easy Access procured to the finer Fluids, to be absorb'd by them. When also the larger Veins are empty'd by Venesection, the small bibulous Veins can, with the greater Ease, convey the Humours they have absorb'd to the large venous Ramifications. Hence a more quick and speedy Dissipation of the extravasated Blood will be produced.

As for Purges which operate violently without producing any inflammatory Effects, 'tis shew'd under the Article VULNUS, that purgative Medicines not only evacuate those Substances which existed in the Body in the same State in which they are discharged, but also that they dissolve the sound Humours, and eliminate them by Stool. Hence *Erasistratus*, and his Followers, justly maintain'd, *That Purgations were Evacuations, accompany'd with a Corruption and Change of the Substances evacuated.* *Galen*, indeed, was of a different Opinion; but the Sentiment of *Erasistratus* seems to be founded on Truth; for, when Scammony is exhibited to a sound and healthy Man, it so resolves the laudable Juices into a fine and subtile Water, that they are copiously discharged by Stool; and if the Use of this Medicine is frequently repeated, the whole Body is emaciated, the Vessels collapse, and an incredible Weakness is brought on. All these Circumstances sufficiently prove, that Humours, previously morbid, have not only been discharged, but also that the laudable Juices, resolved by the Force of the Medicine into a fetid Water, have been eliminated: By these Remedies, therefore, the Vessels are empty'd, and the Humours resolv'd, whilst, at the same time, the small Veins in every Part of the Body, whether internal or external, are rendered highly bibulous and open, as is obvious from the following beautiful Experiment, mentioned by *Simpson*. A young Man, labouring under a Fever, was seized with a Diarrhœa, and an uncommon Stupor of his Senses. As this Patient would drink nothing, tho' his whole Body was scorched with a feverish Heat, his Physician ordered his Feet to be immersed in moderately warm Water: After this Step was taken, a surprising Decrease of the Water was observed, and soon after it was impetuously discharged from the Anus, almost without any Change of Colour. Hence 'tis obvious, that by such Purgatives the Humours are resolv'd, the Vessels empty'd, and that Power, by which the bibulous Veins absorb the contiguous Humours, increased.

But it must, at the same time, be observed, that, in Cases of this Nature, those Purgatives are by no means proper, which operate by exciting a violent Commotion in the Fluids, such as Coloquintida, the Juice of Spurge, or Euphorbium, and some others of a like Nature: But those must be prescrib'd, which, tho' possessed of an highly efficacious resolvent Quality, yet produce their Effects without exciting any considerable Commotions, such as Scammony, Jalap, Sena-leaves, and some others; the Formulas or Methods of preparing which, are these following.

PURGES *which operate powerfully, without producing inflammatory Effects.*

Take of Agaric, two Drams and an half; and of Sal Polychrestus, one Scruple: Mix up for a Purge.

Or,

Take of the recent middle Rind of Elder or Dwarf-elder, one Ounce; triturate it with a sufficient Quantity of Rain-water; then boil, and express the Liquor, of which four Ounces are to be exhibited for a Dose.

Or,

Take the Emulsion of Jalap-root, prepared with Sugar, and described under the Article CAPUT.

Or,

Take of Agaric, two Drams; of Sena-leaves, three Drams; of Mechoacan-root, one Dram; and of Tamarinds, two Ounces. Cut and bruise these together, macerate them for half an Hour in Rain-water, then let them boil gently for half a Quarter of an Hour; and, with every nine Ounces of the strain'd Decoction, mix of Sal Prunellæ, half a Dram; of solutive Syrup of Roses with Sena, nine Drams. Of this Preparation let the Patient take one Ounce every Half-hour, till he is briskly purg'd.

A PREPARATION, *in lesser Bulk, answering the same Intention.*

Take of *Syrian* Scammony, thirteen Grains; of diaphoretic Antimony, twenty Grains; and of solutive Syrup of Roses with Sena, four Drams. With these Ingredients, sufficiently triturated, mix half an Ounce of the distil'd Water of Succory for a Draught.

As for penetrating, relaxing, and resolvent Fomentations, the extravasated Blood remains coagulated in the contus'd Part, under the Skin, which generally remains entire. This coagulated Blood is to be render'd fluid, but in such a manner as to prevent Putrefaction; for when the coagulated Blood is expos'd to the open Air, it is, indeed, generally colliquated; but, at the same time, it becomes putrid. Hence, in Fomentations prepared for this Intention, the Ingredients must not only be possessed of a resolvent Quality, but also of a peculiar Virtue, by means of which they resist every Degree of Putrefaction. Sal Ammoniac, or Sea Salt, dissolved in twenty times as much Water, adding a fourth Part of Wine, and an eighth Part of Vinegar, make a Fomentation of this Kind, which, when apply'd warm, answers all the before-mentioned Intentions; for it relaxes by means of the Water, and the Vinegar and Wine are powerful Resolvents, whilst, at the same time, they resist and prevent every Kind of Putrefaction. The Urine of a sound and healthy Man, with the Addition of some Vinegar, is a Fomentation of the like Nature, by which the frequent Tumors, produc'd in the Heads of Children by Contusions, are successfully and happily resolved.

Several Simples, of a resolvent Quality, may also be infused in Water for this Purpose: Thus, for Instance,

Take of white Bryony-root, two Ounces; of round Birthwort, one Ounce; of the recent Leaves of Rue and Savin, each one Handful; of the Flowers of Tansy, Chamomile, and Feverfew, each one Ounce; and of recent Onions, six Ounces. Digest these for half an Hour in a close Vessel, with a pretty strong Heat; then let them boil for a Moment; then, with every twenty-five Ounces of the Liquor, strongly expressed thro' a Cloth, mix half an Ounce of the Meal of Linseed. After this let it boil a little again, and with the Whole of the Decoction, when cold, mix of Spiritus Vini Theriacalis, two Ounces; and of Sal Ammoniac, one Ounce. Let this be applied by way of Fomentation, with Woollen Cloths.

This Intention may be also answered by Cataplasms and Plaisters; Formulas of which are these following.

Take the Ingredients of the above-mentioned Fomentation, prepare them into a Cataplasm, and add, of the Meal of Linseed, a sufficient Quantity; of Galbanum, dissolv'd in the Yolk of an Egg, one Ounce; and of the Oil of Chamomile, an Ounce and an half.

A PLAISTER *for the same Purpose.*

Take of the Powder of Bryony-root, two Ounces; of the Flowers of Sulphur, one Ounce; of Æthiops Mineral, three Drams; of pure and well-dissolv'd Galbanum, four Ounces; of Melilot-plaister, nine Ounces; and of the Oil of Chamomile, a Quantity sufficient for forming all into a Plaister.

Besides these, the following Plaisters contribute to answer these Intentions.

Emplastrum de Galbano,
——— Baccis Lauri,
——— Betonica,
——— Cumino,
——— Cephalicum,
——— Diachyl. cum Gumm.
——— Diaphoreticum,
——— Ischiadicum,
——— de Meliloto,
——— Mucilaginibus,
——— Oxycroceum,
——— de Ranis,
——— Idem, cum Mercurio.

Since these, by their viscid and tenacious Nature, strongly adhere to the Skin, they retain the highly subtile exhaling Fluid, and, as it were, strike it back on the Part to which they are apply'd. Hence the Part affected is plac'd, as it were, in a Bath of its own Steams, the Vessels are relaxed, and the fragrant Qualities of the Aromatics, mix'd with these Plaisters, insinuate themselves into them, from which very happy Effects are frequently produced; for Fomentations are of small Service, unless they could be kept continually warm on the Part affected.

As for warm Frictions, if there is no Inflammation, nor considerable Pain, in the contused Part, moderate Frictions are of singular Service; for, by this gentle Agitation, the concreted Blood is attenuated and divided, by which means it is rendered fit for entering the small Mouths of the bibulous Veins. The Veins are at the same time evacuated; and hence the Motion of the absorb'd Fluids thro' the empty'd Veins is rendered easy, as we have already observ'd. Thus a certain Man had his whole Face so contus'd, that it was rais'd in a formidable and unseemly Tumor, which, however, was, by the Assistance of the above-mention'd Fomentations, and gentle Frictions, dissipated, without any Suppuration; and, which could scarce have been expected, his Face and Complexion were perfectly restor'd to their former State.

As for internal Resolvents, these are such Medicines as again reduce the coagulated Fluids into the Molecules, of which they originally consisted before Concretion. Among these the principal is warm Water, partly because, by diluting, it insinuates itself between the small concreted Masses, and partly because it is the Vehicle of other resolvent Medicines; with respect to which, see the Article STRICTURA. After Venesection, therefore, and the Use of such antiphlogistic Purgatives, as powerfully resolve without producing any violent Commotion, it is proper to exhibit large Quantities of Decoctions, in which there is a great deal of Water; and, at the same time, such Medicines are to be prescribed, as, by their gentle Stimulus, may a little increase the Action of the Vessels upon the Fluids, lest the languid Water should remain, and be accumulated in the Body: For this Purpose such Medicines as also resist Putrefaction should be chosen. For this Reason the Intention is best answered by Infusions of Germander, Rue, and Horehound, as also by Decoctions of the Five Roots, and of the three Species of Sanders, mixed with Nitre and Honey; for whilst, by drinking these warm, the Veins, which were before evacuated by Venesection, and the Use of Purgatives, are continually fill'd, and whilst Fomentations are constantly applied to the contused Part, and by Frictions their Efficacy deriv'd to the injur'd Part, all the Relief is afforded which can possibly be expected from Art. See the Article OBSTRUCTIO. For, by this means, the warm Water, richly impregnated with the resolvent Quality of these Medicines, continually washes, as it were, the extravasated Juices, dilutes, resolves, and renders them fit for being absorb'd by the minute bibulous Veins. Thus all the extravasated Fluid is carry'd off without any additional Injury done to the Vessels, which, in this Case, is requisite. But since all these Remedies, taken in large Quantities, are again generally dissipated, and carry'd out of the Body, either by a Diaphoresis, or by Urine, hence these Remedies, according to different Regimens, are either sudorific or diuretic; for if the whole Body is placed in a warm Atmosphere, as, for Instance, when the Patient lies in Bed closely covered up, a Diaphoresis will be excited by these Medicines; but if the Patient is placed in a somewhat cooler Air, a preternatural Discharge of Urine is generally excited by the Use of these Preparations.

The Order in which these are to be used; the Necessity of repeating them, and their respective Degrees of Strength, are to be regulated by the Consideration of what has been said above, and the Danger which is threaten'd.

In every Contusion all these Measures are not to be taken indiscriminately; for slight Contusions are easily cured with Fomentations of Urine, Salt, and Vinegar, or other Preparations of a like Nature. But where a violent Inflammation, a Suffocation, and a Gangrene, are dreaded, then all the above-mention'd Methods of Relief are to be used. We are, therefore, to begin with Venesection, which must be as liberal as the Strength of the Patient will allow. Then we are to exhibit these Purgatives, that by this means the Humours being resolved, and the Patient brought low, the Body may be render'd as far from a feverish and inflammatory State as possible. When, by the Application of these Remedies, the Tumor, Pain, and Inflammation, are neither remov'd nor lessen'd, they are boldly, and without any Hesitation, to be repeated, especially if the internal Parts of the Body are injured by the Contusion; for, in this Case, the most terrible Consequences are to be dreaded from a Suppuration; or, when such a Disorder is not thoroughly removed, an incurable Scirrhus may remain, and prove the fatal Source of a Cancer, and other dreadful Calamities: But when, by an Application of these Medicines, the Symptoms begin to be lessened, if the Hands can have Access to the Part affected, Friction is then the most effectual Remedy, but not before; for if the Parts, rendered tense by the extravasated Humours, are inflamed by Friction, especially of the severe Kind, they will soon be seized with a Gangrene.

Whilst these Methods are pursued, a very slender Regimen, and one which is opposite to Putrefaction, is requir'd.

For 'tis requisite, that the Humours should be as thoroughly diluted as they possibly can; and that the Patient should, indeed, be kept alive, but at the same time so low, that no Inflammation may be apprehended. And, since the extravasated Humours have a natural Tendency and Disposition to Putrefaction, we must chuse such Kinds of Aliments as resist this Depravation of the Juces. Hence Decoctions of Barley, Oats, Rye, Bread, and other Substances of a like Nature, as also Milk diluted with Water, boil'd Apples, and Summer Fruit, especially when ripe, are in this Case principally beneficial. Weak Flesh-broths, boil'd with Rye or Barley, with the Addition of a proper Quantity of Lemon-juice, are in like manner serviceable. Nor are we in the least to be afraid, that the Patient's Life cannot be sustain'd and supported by such weak and low Nourishment; for the human Body, when preserv'd in a State of Rest, is capable of being supported with the lightest and weakest Aliments. The Truth of this *Boerhaave* experienc'd in his own Constitution; for, when rack'd with the most violent rheumatic Pains, he liv'd upon Whey alone, for twelve Days; and, at the same time, his Habit remain'd sufficiently strong for performing muscular Motion, unless the intense Pain had prevented it. But when by Venesection, and the Use of Purgatives, the Body is previously weaken'd, it cannot act so powerfully upon the Aliments taken in, as to convert them to a Substance of a similar Nature with itself. Hence the Aliments will generally retain their own Nature, and incline to a spontaneous Depravation. But, because a Putrefaction of the extravasated Humours is to be dreaded, such Aliments are to be chosen, as have a natural and spontaneous Tendency to Acidity. For this very Reason, all Fleshes, Eggs, and Fishes, are carefully to be abstain'd from. All acrid Substances and Aromatics would, in this Case, prove prejudicial, by increasing and accelerating the Circulation of the Fluids, which ought rather to be faint and languid. But, in every Disorder of this Kind, we are to have particular Regard to the Season of the Year; the Constitution of the Patient, whether sound or morbid; his Method of Life; and other Circumstances mentioned under the Article VULNUS.

If all these Cautions relating to Regimen, and the Aids afforded by Pharmacy and Surgery, are carefully observ'd, the Event will always be successful, provided the Disorder is curable. As for the numberless boasted Specifics against Contusions, we are not so implicitly to confide in them, as to commit the Cure to them alone. Most of them are, indeed, innocent, and, consequently, may be safely used; but, at the same time, we are by no means to neglect the efficacious Means of Relief above specify'd. Thus *Helmont*, in his *Ortus Medicinæ*, orders the Blood flowing from the amputated Testicles of the Goat, to be dried, and exhibited to such as have fallen from Eminences, with an Intention to dissipate the grumous

grumous and coagulated Blood produced by the Contuſion: For this Purpoſe Sperma Ceti, and a Decoction of Malder, are recommended by others.

Sydenham relates, that Sperma Ceti, *Iriſh* Slate, and other Medicines which are eſteem'd Specifics in Contuſions, only miſlead us, and retard the proper Methods required in theſe Caſes; as will appear by trying how much more ſafely and expeditiouſly theſe Accidents may be cured by Bleeding and Purging alternately, without having recourſe to thoſe inſignificant Remedies, which are generally given after the firſt Bleeding, or to raiſing a Sweat, which is uſually continued during the Uſe of them, and heats the Parts, already diſpoſed to an Inflammation, ſo much as to endanger the Life of the Patient without Neceſſity.

If the Contuſion is ſo conſiderable, as not to admit of Reſolution, and is ſo ſituated, as to admit of Aſſiſtance from manual Operation; Scarification, Aperture, and Suppuration, are to ſucceed the Methods of Cure above directed, which, mean time, are not to be diſcontinued. If the Diſorder is already ſo violent, as to produce a Mortification, or ſo conſiderable, that intolerable Pains, Inflammations, Suppurations, Atrophies, Fevers, and Death, can certainly be foreſeen, the Part affected is to be extirpated, if that is poſſible.

If the Diſorder is ſo violent, that it is not to be expected the extravaſated Humours ſhould be removed, without any farther Injury done to the Veſſels, the only Methods of Relief remaining are, provided the Hands can have Acceſs to the Part affected, by an Aperture to procure a free Diſcharge to the extravaſated Humours, by a gentle Suppuration to cleanſe the Part, and reduce it to the State of a ſimple Wound; for, unleſs theſe Meaſures are taken, the extravaſated Humours, by preſſing upon the adjacent Veſſels, may produce an Inflammation, or, which is ſtill worſe, a Suffocation of all vital Motion, that is, a Gangrene in the Part. But if the extravaſated Humours are corrupted, Conſequences of a ſtill more formidable Nature may enſue. In a Caſe, therefore, of this Nature, the contuſed Part is either to be entirely laid open, or ſcarified in ſeveral Places, that the extravaſated Humours may be freely diſcharged. Then the live ſubjacent Parts, being freed from this preternatural Preſſure, will be ſeparated, and expel all the Parts, which, by the Contuſion, were ſo deſtroy'd, that the Juices could no longer circulate in them: But this Method is, in a particular Manner, to be taken, if a Set of formidable Symptoms are to be apprehended from the Inflammation or Corroſion of the adjacent Parts, as is obſerved under the Article CAPUT.

Nor, even in this Caſe, are we to neglect the Methods of Relief above enumerated; for, if there is a very violent Inflammation in the contuſed Part, inſtead of a benign Suppuration, a Gangrene would be produced: Hence Veneſection, and the Uſe of antiphlogiſtic Purgatives, will, in this Caſe, be of ſingular Service; as alſo ſuch Fomentations as reſiſt every Degree of Putrefaction. It will, at the ſame time, be expedient to exhibit large Draughts of reſolvent Decoctions, that the Parts of the corrupted Humours, or of the Pus generated from them, abſorb'd by the bibulous Veins, and infecting the Maſs of Blood, may be eliminated, and diſcharged from the Body, either by a Diaphoreſis, or by Urine; for ſince 'tis obvious, from what has been ſaid, that the extravaſated Blood may be ſo attenuated as to be abſorb'd by the bibulous Veins; ſo 'tis, in like manner, poſſible, that the Pus, or corrupted Ichor, may mix with this Blood, and produce a Cacochymy of the worſt Species: Hence, again, a formidable Train of Symptoms may enſue.

But if, in conſequence of a violent Contuſion, the larger Veſſels are ſo injured, or the natural Structure of the Part ſo deſtroy'd, that the vital Juices can no longer circulate thro' it, a perfect Mortification is produced, and all the Parts will become corrupted. The only Meaſure to be taken, in this Caſe, is to extirpate the Part, and by that means preſerve the Life of the Patient. This Misfortune is diſtinguiſh'd by the following Circumſtances: If, for Inſtance, neither Heat nor Senſation remain in the contuſed Part, when profound Scarifications are made in it; and if, ſoon after, a Putrefaction happening, the Part ſends forth a cadaverous Stench. In this Caſe, unleſs the Part affected is extirpated with all Expedition, the Sphacelus ſpreads, and puts a ſpeedy Period to the Patient's Life. A Misfortune of this Nature happen'd to a ſkilful Coachman, when accuſtoming young Horſes to the Harneſs; for the Horſes, ſtarting with uncommon Fury, threw their Manager from his Seat; and his Legs, happening to be intangled among the Wheels, were ſo miſerably mangled and ſhatter'd, that neither Heat nor Senſation any longer remain'd in them; but, as he would not ſubmit to an Amputation, which was abſolutely neceſſary to the Preſervation of his Life, he died on the fourth Day. This alſo holds true, if, in conſequence of violent Contuſions, the Bones are ſo fractured as to fly into ſmall Splinters; for theſe, by pricking and ſtimulating the nervous Parts, may produce intenſe Pains, violent Inflammations, and the miſerable Train of Symptoms ſubſequent to them. Thus *La Motte*, in his *Traité complet de Chirurgie*, gives us an Account of a Man, who, by a Caſk full of Wine, had his Right Hand ſo contuſed, that thoſe Bones of the Metacarpus, which ſuſtain the Ring Finger, the middle Finger, and the fore Finger, were totally ſhatter'd, together with the adjacent Muſcles. A celebrated Surgeon told the Patient, that the only Method of Relief was placed in the Amputation of the Parts ſo mangled; and foretold, that the moſt terrible Symptoms would enſue, if this neceſſary Step was neglected. But the Patient would not ſubmit to the Operation; and, tho' the moſt proper and efficacious Remedies were applied, yet, in two or three Days time, intenſe Pains, a violent Inflammation, and an immenſe Tumor, indicated a future Gangrene. But, upon the contuſed Parts being immediately extirpated, the Patient was happily cured. What incredible Effects, even in the moſt deſperate Caſes, may be produced by the Intrepidity of the Patient, and the Skill of the Surgeon, we learn from a Caſe related by the ſame Author. A certain Captain of a Man of War had his whole Arm, as far as the Humerus, ſo miſerably contuſed by an unlucky Accident, that neither Heat nor Senſation remain'd in the Part: But tho' the Sphacelus had already ſpread beyond the Articulation of the Humerus, and the whole Arm was corrupted, and ſent forth a cadaverous Stench; yet the Surgeon, animated by the Courage of his Patient, and confiding in his own Skill, prefer'd a dubious Remedy to certain Death, and amputated the Arm immediately below the Articulation. Then, aſſiſting Nature by proper Remedies, he ſeparated the reſt of the corrupted Parts, and, in two Months time, the Patient was perfectly recover'd.

The Method of Cure, above ſpecify'd, will perform more than could eaſily be expected; eſpecially as Nature ſpontaneouſly aſſiſts, and that in a very remarkable Manner, in attenuating, reſolving, diſſipating, and expelling what is offenſive to her.

We are not, however, even in the moſt deſperate Caſes, raſhly to proceed to Extirpation; for unexceptionable Inſtances ſufficiently inform us, that Diſorders of this Kind, in all Appearance abſolutely deſperate, have been ſometimes happily cured without it. For this Reaſon it always ſeems expedient previouſly to try the Method above directed, ſince it may be ſafely practiſed, and ſince there are Medicines known, by means of which the mortified Parts may be ſo preſerved, that the Putrefaction will not readily diffuſe and ſpread itſelf. Alliaria, Scordium, Horehound, Sage, and Rue, infuſed in Water, with an Addition of Salt, Vinegar, and Wine, or the Spirit of Wine, make a Fomentation, which, when conſtantly apply'd, infallibly prevents every Degree of Putrefaction. By the Uſe of this, the Surgeon may ſafely wait for ſome Days, to ſee whether Nature attempts any Separation, or whether the Signs of returning Life appear in the Part contuſed. Thus the celebrated *Boerhaave*, when ſpeaking to his Pupils upon this Subject, uſed to tell them, that, by this Method, he cured a *German* of Diſtinction, who, by a Fall from his Chariot, had the Wheels driven over his Legs; by which means the Tibia and Fibula of them both were miſerably ſhatter'd, and the adjacent Parts dilacerated in the moſt terrible Manner; and this Cure he completed, even after a Gangrene was begun in the Parts. *La Motte*, in his *Traité complet de la Chirurgie*, *Tom.* 3. gives us a memorable Inſtance of a young Man, the anterior Part of whoſe Right Cubit was ſo ſeverely ſtruck with a Cudgel, that a violent Contuſion, accompanied with intenſe Pain, appear'd from the Elbow to the Carpus. The Patient applied, to the contuſed Part, Linen Cloths, dipt in Spirit of Wine; but, finding little or no Relief from theſe Applications, he conſulted a Surgeon. When the Pain in the Hand was almoſt removed, but that about the Cubit augmented, the Hand became pale, and entirely cold; whilſt, at the ſame time, the Skin, when roughly touch'd by the Points of the Fingers, came off. Upon the Surgeon's making deep Scarifications, with a Lancet, the Patient felt no Pain; and, even upon paſſing a Lancet entirely thro' the Hand, not a ſingle Drop of Blood was diſcharged. This Coldneſs, and Want of Senſation, reach'd as far as the Middle of the Cubit. The Part was fomented with Spirit of Wine, impregnated with Salt, and the *Unguentum Ægyptiacum*. At the ſame time a Cataplaſm was apply'd, compoſed of the Meal of Barley, Beans, and Lupins, with an Addition of Aromatics and Wine. By theſe Applications the Heat and Senſation of the Parts were reſtored, as far as the Carpus; whilſt the Hand, in the mean time, remain'd cold, and deſtitute of Senſation; but, in five Days time, it neither became fetid nor blackiſh. Freſh Scarifications being made in the Hand, Oil of Turpentine was dropt into them. Thus the other Applications being continued for five Days more, all Things remain'd in the ſame State; but, at laſt, Heat and Life began inſenſibly to be reſtored, and the Patient was cured, without the Extirpation of the Part; but two of his Fingers remain'd contracted, and he could not move the reſt, without ſome Difficulty. Since, therefore, in ſo deſperate

sperate a Case, the contused Part was preserved, it seems to be the Duty of every prudent Surgeon never to have recourse to Extirpation, till all other Methods have been tried in vain; for if, by Venesection, and the other Methods proposed, the Impetus and Force of the Blood is so allay'd, that there is no Dread of an Inflammation or Gangrene from this Cause; if, at the same time, such external Applications are used as prevent Putrefaction; and if, in Conjunction with these, a slender Diet, and such as has not the least Tendency to Putrefaction, is prescrib'd, there is great Reason to hope, that the corrupted Parts may be separated from those which are alive, and that such as are destroy'd may grow again.

CONVALESCENTIA. A Recovery from Sickness.

CONVOLVULUS.

The Characters are,

The Leaves grow alternately on the Branches; the Stalks are generally scandent; the whole Plant usually abounds with a milky Juice; the Flower-cup in some is double, one, which is external, being bifoliated; the other, within this, is less, quinquefid, and tubulous; in others, the Flower-cup is single; the Flower is monopetalous, campaniform, and pentagonal, with expanded Edges; the Bottom of the Flower being often perforated with five Holes; and five Stamina, arising from the Bottom of the Flower, uniting in one Tube; the Ovary becomes a roundish membranaceous Fruit, inclosed in the Calix, and sending forth three Tubes, and divided generally into three Cells, seldom into four, and sometimes, but seldom, univalcular.

Convolvuli with a trailing or scandent Stalk.

1. Convolvulus; maritimus; nostras; rotundifolius. See BRASSICA MARINA.

2. Convolvulus; Syriacus; & Scammonea Syriaca. *Hist. Oxon.* 2. 12. *Tourn. Inst.* 83. *Elem. Bot.* 73. *Boerh. Ind. A.* 245. *Scammonium*, Offic. *Scammonium Syriacum*, Ger. 716. Emac. 866. *Scammonia Syriaca*, C. B. Pin. 294. Raii Hist. 1. 722. *Scammonea Syriaca legitima*, Park. Theat. 163. *Scammonea Syriaca, flore majore Convolvuli*, J. B. 2. 163. *Scammonea & Scammoneum*, Chab. 123. SCAMMONY.

The Plant which produces Scammony has a large thick Root, as big as a Man's Arm, having a slender hard Pith in the Middle: It is full of a white milky Juice. From this Root spring many slender climbing Stalks, which twine and wind about any thing in their Way, like our common great *Convolvulus*, or Bindweed, which it pretty much resembles, having Leaves like it, but more triangular. The Flowers too are much of their Shape and Colour, being white, and Bell-fashion'd, and are succeeded by roundish Seed-vessels, each containing three angular Seeds. It grows in *Syria*. The concreted Juice of the Root is the Scammony of the Shops, whereof the best comes from *Aleppo*; that which comes from *Smyrna* being fuller of Dross and Sand. See SCAMMONIUM.

3. Convolvulus; Canariensis; sempervirens; folio molli, incano; flore ex albo purpurascente. *H. A.* 2. 101. PERENNIAL CANARY BINDWEED, WITH SOFT HOARY LEAVES, AND WHITISH PURPLE FLOWERS.

4. Convolvulus; minor; arvensis; flore roseo. *C. B. Pin.* 294. *Tourn. Inst.* 83. *Elem. Bot.* 72. *Boerh. Ind. A.* 245. *Helxine cissampelos*, Offic. *Helxine cissampelos multis, sive Convolvulus minor*, J. B. 2. 157. *Convolvulus minor vulgaris*, Park. Theat. 171. Mer. Pin. 29. Raii Hist. 1. 725. Synop. 3. 275. *Convolvulus minor*, Merc. Bot. 1. 30. Phyt. Brit. 30. Chomel. 761. *Convolvulus vulgaris, flore minore purpureo*, Hist. Oxon. 2. 13. *Convolvulus minor; Jasione veterum; Helxine cissampelos*, Chab. 121. *Smilax lævis minor*, Ger. 712. Emac. 861. SMALL BINDWEED.

It grows in Fields, and flowers in *June*. The Herb is used. The Juice of the Leaves, taken internally, are cathartic.

I know not whether this Plant be purgative, as several Persons affirm; but I know, from the Experience of our Peasants of *Provence*, that, being externally apply'd, it is a good Vulnerary. *Tournefort. Histoire des Plantes*, &c.

5. Eadem (4.); flore albo.

6. Eadem (4.); flore purpureo.

7. Eadem (4.); flore ex albo & roseo variegato.

8. Convolvulus; vulgaris; major; albus. *Hist. Oxon.* 2. 12. *Boerh. Ind. A.* 246. *Smilax lævis*, Offic. *Smilax lævis, Convolvulus major*, Chab. 121. *Smilax lævis sive lenis major*, Ger. 712. Emac. 861. *Convolvulus major*, J. B. 2. 154. Raii Hist. 1. 725. Synop. 3. 275. *Convolvulus major albus*, C. B. Pin. 294. Park. Theat. 163. Tourn. Inst. 82. Elem. Bot. 72. Mer. Pin. 28. *Convolvulus major flore albo*, Merc. Bot. 1. 30. Phyt. Brit. 30. *Scammoneum Germanicum*, Hoffm. Cat. Altdorff. GREAT BINDWEED.

The Root of the great Bindweed is long, slender, and creeping, with small Fibres at every Joint, when broken, yielding a thin Milk: The Stalks are long, slender, and frequently contorted, twisted together, climbing and ramping upon any thing in its Way, and running to a great Length. The Leaves grow alternately on pretty long Foot-stalks, large, and smooth, hollow'd in, and Heart-fashion'd next the Stalk, with two sharp Ears, ending gradually in a sharp Point: Among these, toward the Tops of the Branches, come forth, singly, large white Bell-fashion'd Flowers, with the Brims somewhat turn'd outward, growing in a Calyx of five small Leaves, set in a Covering made of two more. The Seed-vessel is roundish, containing several blackish angular Seeds. It grows everywhere in the Hedges, flowering all the latter Part of the Summer. *Miller's Bot. Off.*

It grows about Hedges, and in Gardens, and flowers in the Summer. The Root, the Herb, and the Water distil'd from it, are kept in the Shops at *Hall* in *Germany*, according to *Dale*. This Plant has the Reputation of purging off bilious, acrid, and serous Humours. The Root is cathartic; whence it is call'd, by *Hoffman*, *German Scammony*. The Women use a Decoction of this Plant as a Preservative against Miscarriages, with an Intent to allay wandering Pains, and to prevent any sudden Frights from affecting them. *Prevotius*, in his *Medicina Pauperum*, recommends a Decoction of this Plant as a mild Evacuant of Bile.

9. Convolvulus; vulgaris; major; flore ex roseo & albo variegato.

10. Convolvulus; Indicus; flore violaceo. *H. Eyst. Æst. o.* 13. *F.* 8. *F.* 2. *Campanula Indica.* J. B. 2. 165. a.

11. Convolvulus; Indicus; flore albo. *H. R. Par. a.* INDIAN BINDWEED, WITH WHITE FLOWERS.

12. Convolvulus; Indicus; flore albo purpurascente; semine albo. *H. R. Monsp. a.* INDIAN BINDWEED, WITH WHITISH PURPLE FLOWERS, AND WHITE SEEDS.

13. Convolvulus; cœruleus; hederaceus; seu trifolius. *Park. M. H.* 2. 13. *Nil Arabum, sive Convolvulus cœruleus.* J. B. 2. 164. *Nil Arabum Camerarii.* H. Eyst. Æst. o. 13. F. 8. F. 3. IVY-LEAVED INDIAN BINDWEED, WITH FAIR BLUE FLOWERS.

14. Convolvulus; folio anguriæ; flore exiguo, carneo.

15. Convolvulus; Africanus; minor; flore albo, minimo. *Volk. H. Mauroc.* 56.

16. Convolvulus; argenteus; folio Althææ. *C. B. P.* 295. *M. H.* 2. 13.

17. Convolvulus; argenteus; Althææ foliis magis incisis & incanis. *H. L.*

18. Convolvulus; Orientalis; folio crasso, magno, ad pedunculum excisо; flore amplo, subcœruleo. *Sher. H.*

19. Convolvulus; Græcus; Sagittæ foliis; flore albo. *T. C.* 1.

Convolvuli with a Stalk, little, or not at all, scandent.

1. Convolvulus; Lusitanicus; flore cyaneo. *Bras.* Convolvulus; peregrinus; cœruleus; folio oblongo; flore peramœno triplici colore insignito. *M. H.* 2. 17. *Campanula exotica*, Aldin. 88. PORTUGAL BINDWEED, WITH FINE BLUE FLOWERS, VULGARLY CALL'D CONVOLVULUS MINOR.

2. Idem (1.); flore, & semine, albo. *a.* PORTUGAL BINDWEED, WITH WHITE FLOWERS AND SEEDS, VULGARLY CALL'D CONVOLVULUS MINOR FLORE ALBO.

3. Idem (1.); flore cyaneo. *a.*

4. Convolvulus; Siculus; annuus; cœruleus; minimus; capsulâ floris binis foliolis cinctâ. *M. H.* 2. 36.

5. Convolvulus; major; rectus; Creticus argenteus. *Hist. Oxon.* 2. 11. *Boerh. Ind. A.* 247. CNEORON ALBUM, DORYCNIUM, Offic. *Cneoron album folio Olea argenteo molli*, C. B. Pin. 463. *Cneoron album foliis argenteis*, Ger. Emac. 1598. Chab. 47. *Dorycnium*, Alpin. Exot. 73. *Dorycnium Imperati*, J. B. *Dorycnium Creticum Alpini*, Park. Theat. 361. *Doricnio D'Alcuni overo Convolvulo retto di Candia*, Pon. Bal. Ital. 131. *Convolvulus rectus odoratus Ponæ*, Raii Hist. 1. 731. *Convolvulus argenteus umbellatus erectus*, Elem. Bot. 73. Tourn. Inst. 84. ROCK ROSE.

It grows in *Crete*, where it flowers in *June*. I know of no medicinal Virtues attributed to it.

6. Convolvulus; argenteus; minor, repens; Rupellensis; flore rubro. *M. H.* 2. 17. *Ic. est. Sect.* 1. *T.* 4. *No.* 2.

7. Convolvulus; linariæ folio; assurgens. See CANTABRICA.

8. Convolvulus; folio linariæ; humilior. *T.* 84. *Cantabrica quorumdam.* Clus. H. 49. H.

9. Convolvulus; ramosus; incanus; foliis Pilosellæ. *C. B. P.* 294. *Cissampelo ramoso di Candia.* Pon. Bald. Ital. 16. H. *Boerhaave's Ind. alt. Plant. Vol.* 1.

Dale reckons the Jalap, Mechoacan, and Turbith, amongst the Species of CONVOLVULUS. See these under their respective Articles.

CONUS, κῶνος. This is a Word used by Mathematicians, among whom it signifies, a Figure generated by the Circumvolution of a Triangle about one of its Sides. From Geometry, the Word *Conus* has been borrowed by Botanists; among whom it imports such a Fruit as arises from a broad circular Base, terminates in a Point or Apex, and is composed of a compact Congeries of woody Layers. Trees, bearing

Fruit of this Kind, are call'd coniferous Trees; ſuch as the Pine, the Fir, and the Larch-tree. And though, according to *Salmaſius*, in his *Exercitationes Plinianæ*, that Fruit is only a Cone, which gradually ariſes from a round Baſe to an Apex or Point; yet thoſe Trees, whoſe Fruits are ſquamous, are alſo reckon'd among the coniferous Trees, though they do not reſemble a Cone, ſuch as the Cypreſs, the Elder, the Thuya, the Birch-tree; for, according to *Cæſalpinus*, *de Plantis*, *L.* 3. *C.* 52. "it is ſufficient to give them this Denomination, "that they be as a compact ſquamous Fruit, under every "Layer of which, Seeds are contained." Hence *Ray*, in his *Methodus Plantarum Emendata*, uſes the following Words: "Cones, ſays he, are theſe ſquamous, hard, and dry Fruits, "wreath'd up in the Form of a Cone or Pyramid, and, for "the moſt part, containing two Seeds under each Layer. "Under this Name I alſo comprehend thoſe Fruits, which "conſiſt of ſeveral cruſtaceous or woody Parts, cloſely join'd "together, and gaping when the Fruit is ripe; ſuch as the "Fruit of the Cypreſs-tree." *Ludwig*, in his *Aphoriſmi Botanici*, has an Eye, not only to the Figure, but to the Layers of the Fruit, when he defines a Cone, *A Series of Layers adhering to a common Axis, and containing Seeds in their ſeveral Interſtices.* Coniferous Trees are commonly ſaid to be Proof againſt Corruption, Rottenneſs, and the Impreſſions of Time. *Bodæus in Theophraſt.* accounts for this Phænomenon, from the pinguious Subſtance, with which they abound; which not only ſuffocates all Inſects, but alſo conglutinates and fills up the Cavities of the Wood, as it were, with a kind of Bitumen, which hinders the Air from entering its Pores, and corrupting its internal Parts. *Bodin*, in his *Univerſæ Naturæ Theatrum*, declares himſelf of the ſame Opinion. But I would have this Aſſertion underſtood with ſome Reſtriction, leſt the Hyperbole ſhould be carried too far, to the Diſadvantage of Truth; ſince no more can be juſtly aſſerted, than that thoſe coniferous Trees, whoſe Wood is moſt compact and ſolid, are leaſt ſubject to Rottenneſs and Putrefaction. Beſides, 'tis not improbable, that from recent coniferous Trees Inſects are baniſhed, by the pinguious and bitter Juice they contain. *Theophraſtus*, in his *Hiſt. Plant. L.* 2. *Cap.* 2. has determined, that all coniferous Trees, in general, ariſe from a Seed; and *Bodæus*, in his Commentary on this Paſſage, confirms this Sentiment in the following Words: "I have often attempted "to rear coniferous Trees by ſetting a Twig or Branch, but "I always loſt my Labour; for they never budded; and, if co-"niferous Trees are tranſplanted, they generally decay and "periſh: But," ſays he, in another Paſſage, "whoever "has a Mind to tranſplant theſe Trees, muſt carefully obſerve "what particular Parts of them are turn'd to the South, and "what to the Weſt; for if that Part of the Tree, which "before fac'd to the Weſt, is, upon Tranſplantation, turn'd "to the South, the Tree fades and dies."

Beſides theſe Significations of the Word *Conus*, it occurs in another Senſe in *Dioſcorides*, *L.* 1. *C.* 78. where he ſays, that liquid Pitch is by ſome call'd κῶνος. *Bodæus* ſuſpects this Word, and thinks that nothing more is meant by it, than the Fruit of the Pine, and the Pitch-tree. *Saracenus* alſo confeſſes, that the Word κῶνος is ſcarce any-where elſe uſed for liquid Pitch. Κῶνα, however, ſeems to him to be deduced from it. Hence κωνῶσαι, which *Heſychius* interprets πισσοκοπῆσαι, which is, to bedawb with Pitch.

CONUS FUSORIUS. This is alſo call'd *Pyramis*, and is what we call a Cone. It is a Veſſel, whoſe Figure reſembles that of an inverted Cone. It is made either of Braſs or Iron, and is intended for ſeparating Reguluſes from their reſpective Scoriæ; for whilſt the fus'd Mineral is pouring into the Crucible, it is ſtruck with a Mallet, in order to produce a tremulous Motion in it; by which means the heavier Parts fall to the Bottom, and thoſe which are lighter, ſuch as the Scoriæ, float on the Surface.

CONVULSIO. A Convulſion, or involuntary Contraction, of the Muſcles. See SPASMOS.

For an Account of Convulſions, as Symptoms of Fevers, ſee FEBRIS; as Symptoms of Wounds, ſee VULNUS.

CONVULSIVUS. Convulſive. Spaſmodic.

CONYZA.

The Characters are,

It hath undivided Leaves, which, for the moſt part, are glutinous, and have a ſtrong Scent: The Cup of the Flower is, for the moſt part, ſcaly, and of a cylindrical Form: The Flower is compoſed of many Florets, which are ſucceeded by Seeds, which have a downy Subſtance adhering to them.

Boerhaave mentions ten Species of this Plant; which are,

1. Conyza; latifolia; viſcoſa; ſuaveolens; flore aureo; ex Gallo-provinciâ. *T.* 445. *M. H.* 3. 113. *Eupatoria, conyzoides, maxima, Canadenſis, foliis caulem amplexantibus.* Pluknet. Phyt. 87. 4. b. H.

2. Conyza; major, vulgaris. See BACCHARIS.

3. Conyza; cœrulea; acris. *C. B.* 265. *Raii Hiſt.* 1. 270. *Synop.* 80. *Ger. Emac.* 484. *Hiſt. Oxon.* 3. 315. *Boerh. Ind. A.* 116. *Conyza*, Offic. Germ. *Conyza odorata cærulea* Park. 126. *Conyzoides*, Dill. Cat. 154. *Senecio ſive Erigeron cæruleus, aliis, Conyza cærulea*, J. B. 2. 1043. *Senecio cæruleus*, Chab. 325. *Aſter arvenſis cæruleus acris*, Tourn. Inſt. 481. Buxb. 30. BLUE FLEABANE.

It grows in barren Paſtures, and flowers in *July* or *Auguſt*. This Herb is ſaid to accelerate Suppuration.

4. Conyza; mas; Theophraſti; major Dioſcoridis. *C. B.* 265. *Boerh. Ind. A.* 116. *Conyza major.* Offic. Ger. Emac. 481. Raii Hiſt. 1. 261. *Conyza major vera.* Hiſt. Oxon. 3. 114. *Conyza major verior Dioſcoridis.* Park. 125. *Conyza major Monſpelienſis odorata.* J. B. 2. 1053. *Conyza Pulicaria.* Chab. 327. *Virga aurea major foliis glutinoſis, & graveolentibus.* Tourn. Inſt. 484. GREATER FLEABANE.

It grows in *Italy*, and other Places, near the Highways; where it flowers in *July* and *Auguſt*. The Fume of the Leaves, when burn'd, is ſaid to drive away Gnats, Fleas, and other troubleſome Inſects.

5. Conyza; aquatica; laciniata. *C. B. P.* 266. *Aſter paluſtris, laciniatus, luteus.* T. 483. *Jacobæa aquatica; elatior; foliis magis diſſectis.* M. H. 3. 110. a.

6. Conyza; Cretica; fruticoſa; folio molli, candidiſſimo, & tomentoſo. *T. Cor.* 33. *H.* SHRUBBY FLEABANE FROM CRETE, WITH SOFT, DOWNY, WHITE LEAVES.

7. Conyza; Africana; tenuifolia; ſubfruteſcens; flore aureo. *H.*

8. Conyza; Sicula; annua; lutea; foliis atroviridibus; caule rubente. *Bocc. M. H.* 3. 115.

9. Conyza; minor; flore globoſo. *C. B.* 266. *Boerh. Ind. A.* 116. CONYZA PULICARIA. Offic. *Conyza minor*, Raii Hiſt. 1. 262. Synop. 79. Schw. 56. *Conyza minima.* Ger. Emac. 482. *Conyzæ mediæ ſpecies, flore vix radiato:* J. B. 2. 1050. Chab. 328. *Aſter Paluſtris parvo flore globoſo.* Tourn. Inſt. 483. *Aſter parvus paluſtris, parvo flore globoſo.* Dill. Cat. 160. *Chryſanthemum Conyzoides paluſtre minus flore globoſo.* Hiſt. Oxon. 3. 19. SMALL FLEABANE.

This is a ſmall low Plant, ſeldom growing above a Span high, with many hard rediſh-brown Stalks, ſet with narrow, round-pointed, ſomewhat woolly Leaves, ſcarce an Inch long, and not a Quarter of an Inch broad, ſet on without Foot-ſtalks; on the Tops of the Branches grow many ſmall, round, yellow Flowers, made only of a Thrum, without any yellow Petala, or Border, about them; the Root is ſmall, woody, and periſhing yearly; it grows in moiſt Places, and where Water has ſtood all the Winter, and flowers in *Auguſt* and *September*.

This is the *Pulicaria* of *Lobel*; and ſo call'd, becauſe, by its Smell, it drives away and deſtroys Fleas and Gnats: Tho' the larger Sort, or the *Conyza media*, which is taller, thicker ſet with ſharper-pointed Leaves, and bearing at the Top larger Flowers, having a yellow Border of Petala, about a broad Thrum, of the ſame Colour, has a ſtronger Scent, and, by *Gerard*, and *Parkinſon*, and other Authors, is accounted to be of more Force and Virtue than the former. An Ointment, made with this, is likewiſe commended by ſome for the Itch. *Miller's Bot. Off.*

10. Conyza; Americana; lamii folio. *T.* 455. *Eupatorium, ſenecionis facie, folio Lamii.* Par. Bat. a. AMERICAN FLEABANE, WITH LEAVES OF THE DEAD-NETTLE. *Boerh. Ind. Alt. Vol.* 1.

Beſides the preceding Species of the *Conyza*, *Dale* mentions the two following; which are,

1. CONYZA MEDIA. Offic. Ger. Emac. 482. Raii Hiſt. 1. 262. Synop. 79. Schw. 55. *Conyza media Aſteris flore luteo, vel tertia Dioſcoridis*, C. B. 265. Hiſt. Oxon. 3. 113. *Conyza media Matthioli, flore magno luteo, humidis locis proveniens.* J. B. 2. 1050. Chab. 327. *(cujus Fig. eſt tranſpoſita) Herba Dyſenterica.* Cat. Altdorf. Delis Sylv. *Aſter pratenſis autumnalis Conyzæ folio.* El. Bot. 384. Tourn. Inſt. 482. Buxb. 29. COMMON FLEABANE.

It grows in moiſt and watery Places, and flowers in *July* and *Auguſt*. Some prepare an Ointment of the Root and Leaves of this Plant, which is recommended for the Itch. The Leaves, taken with red Wine, are ſaid to be good againſt a Dyſentery, and Jaundice; to be effectual in promoting the Menſes, and curing a Strangury. A Decoction of the Herb has the Reputation of being diuretic. *Dale.*

2. CONYZA MINOR VERA. Offic. Ger. Emac. 481. Raii Hiſt. 1. 261. Hiſt Oxon. 3. 114. J. B. 2. 1054. Chab. 328. *Conyza minor vera Penæ.* Park. 127. *Conyza femina Theophraſti, minor Dioſcoridis.* C. B. 265. *Virga aurea minor foliis glutinoſis & graveolentibus.* Tourn. Inſt. 484. SMALL TRUE FLEABANE.

It agrees in Virtues with the fourth Species.

Dioſcorides attributes the following Virtues to the *Conyza*. The Plant, with the Leaves ſtrewed, or uſed by way of Fumigation, drives away venomous Inſects and Gnats, and kills Fleas. The Leaves are effectually apply'd to the Bites of Serpents,

Serpents, Tubercles, and Wounds. The Flowers, with the Leaves, are drank in Wine, in order to provoke the Menſes, and expel the dead Fœtus [ἐμβρύων]; and alſo for the Strangury, Gripes, and yellow Jaundice; the ſame, drank in Vinegar, help the Epilepſy. The Decoction, uſed by way of Inſeſſion, cures Diſorders of the Uterus, and promotes a Diſcharge of the Menſes; but the Juice, in a Peſſary, cauſes Abortion. The Herb, uſed with Oil, cures a Rigor, if the Part affected be anointed with it; and the ſmall Species is effectually apply'd in Cataplaſms for the Cephalalgia, or Head-ach.

The ſame Author deſcribes three Species of the Conyza: The firſt, he ſays, is call'd the ſmall Conyza, which is the moſt fragrant, or ſweet-ſcented; the ſecond is higher than an ordinary Shrub, and has larger Leaves than the former, and a ſtrong Smell; the third Species has a thicker and ſofter Stem, and Leaves of a middle Size, between thoſe of the larger and ſmaller Species, and of a very ſtrong and unpleaſant Smell.

CONYZOIDES. The third Species of *Conyza*, mentioned above, under the Title of *Conyza*; *cærulea*; *acris*.

COOPERTIO. A Covering of any Kind, as Clothes, for Inſtance. The Membranes of the Fœtus, the Uterus, and the Belly, are ſometimes call'd by this Appellation, relative to the Fœtus.

COOPERTORIUM. A Name for the Thyroide Cartilage, according to *Caſtellus*.

COOSTRUM. The middle Part of the Diaphragm. *Rulandus*.

COPAIBA. Balſam of Capivi. See BALSAMUM.

That Balſam of Capivi is eſteem'd genuine, which, when a ſmall Drop of it is taken up on the Point of a Needle, and let fall into cold Water, ſinks to the Bottom, or is ſuſpended in the Middle of it, without altering its Figure. That, on the contrary, which floats on the Surface, expands itſelf, and is diſſolv'd, is eſteem'd ſpurious. This Balſam is frequently adulterated, by a Mixture of leſs valuable Oils; or it is counterfeited by mixing the diſtil'd Oil of Turpentine with expreſs'd Oil of ſweet Almonds; and the fineſt and freſh Turpentine of the Larix is ſold for it: So that it is not very eaſy to procure the Genuine.

The external Application of this Balſam is of ſingular Efficacy in conſolidating all Wounds, except thoſe of the Gunſhot Kind. This Balſam is to be dropt, as hot as the Patient can bear it, into recent Wounds, after expreſſing out the Blood, which flows ſpontaneouſly. The Lips of the Wound, and the adjacent Parts, are alſo to be anointed with it. Then bringing the Lips into Contact, a Pledget, dipt in this Balſam, is to be apply'd, and ſecur'd with proper Compreſs and Bandage. In this State the Wound is to be left for twenty-four Hours; after which, the Compreſs and Bandage is to be removed; and if the Pledget ſhould adhere to the Wound, it is not to be taken off, but a few Drops of the warm Balſam are to be pour'd upon it every twenty-four Hours, till it fall away ſpontaneouſly. According to *Ettmuller*, "When uſed externally, it is a more valuable vulnerary Medicine than Peruvian Balſam; and in twenty-four Hours time conglutinates "Wounds, except very large, without leaving any unſeemly "Scar, as the *Dutch* often find from Experience." It is apply'd warm, upon Cotton, to Excoriations of the Anus. But this Piece of Practice muſt not be uſed, where the Redneſs of the Parts indicates an Inflammation, or where the Humours of the Patient abound with Acrimony; for, in both theſe Caſes, the Inflammation would be increas'd, and a Gangrene endanger'd. In *Cailus's Hiſtoire Naturelle du Cacao*, it is ordered to be applied warm upon a linen Cloth, in the firſt Aſſaults of the Gout, in Rheumatiſms, and in ſciatic Pains. When internally uſed, it alſo produces the Effects of vulnerary Medicines, and is recommended in all Hæmorrhages ariſing from a Rupture of the Veſſels; ſuch as an Hæmoptyſis, for Inſtance, or a Spitting of Blood. In bloody Fluxes, an Ounce of it is to be mix'd with an anodyne Clyſter, which is to be retain'd as long as poſſible. It is alſo a celebrated Medicine in ſcorbutic and rancid Cachexies, where the Humours have a Tendency to Putrefaction; as alſo in a Gonorrhœa, a Fluor Albus, and in Caſes where the Intention is to purge the Kidneys from Sand and Gravel; for it provokes Urine, extinguiſhes the Heat attending its Diſcharge, and effectually carries off its bloody, loathſome, and purulent Contents. It does not, like moſt other Balſams, give the Urine a Smell like that of Violets, but it communicates to it a manifeſtly bitter Taſte, and ſurpriſingly deſtroys the muriatic Saltneſs, not only of the Urine, but alſo of the Serum, Blood, and Saliva. *Ettmuller* informs us, that it is ſucceſsfully exhibited in Diarrhœas; and more particularly in a Cholera, and Dyſenteries ariſing from an Acrimony of the Humours. It is ſaid to be a highly powerful and efficacious Medicine for Diſorders of the Thorax; becauſe it deterges the Bronchia, procures a due Tone and Soundneſs to the Lungs, and, perhaps, diſſolves crude Tubercles; for dangerous Coughs, and ſuch as palpably threaten'd a Phthiſis, have been obſerv'd to be thoroughly cured by it alone. Though it is intenſely bitter, and evidently hot, yet it proves beneficial to hectic Patients, becauſe it powerfully corrects the Saltneſs and Acrimony of their Juices, and at the ſame time deſtroys the putrid Taint, with which they are infected. The Doſe of this Balſam is generally from five to fifteen Grains; but when two or three Drams of it are exhibited in the Form of a Potion, it proves as purgative as Turpentine. The moſt commodious Methods of exhibiting it are either in the Form of Pills, made up with powder Sugar, or diſſolv'd with the Yolk of an Egg, or mix'd with warm Milk. It may be exhibited twice a Day. Mr. *Labat* extols it as an efficacious Remedy againſt intermitting Fevers, if five or ſix Drops of it are exhibited in about an Ounce and an half of Fleſh-broth, a little before the Paroxyſm. But, for the Cure of continued Fevers, it is to be exhibited in the ſame Form two Hours before Meals. He tells us, that this Doſe muſt be repeated twice in twenty-four Hours; and affirms, that it inſenſibly produces the deſir'd Effect, without either promoting a Diſcharge of the Urine, or exciting a Diaphoreſis. *Ettmuller* highly extols this Balſam, as an uncommon Specific in Gonorrhœas, when exhibited in warm Milk; and adds, "This Medicine was much uſed by *Sylvius* and *Lindanus*, "who every Morning exhibited five or ſix Drops of it in "*Spaniſh* Wine. Theſe Phyſicians, not only in a ſimple, but "alſo in a virulent Gonorrhœa, preſcrib'd this Balſam, in Con"junction with Mercurius Dulcis, with uncommon Succeſs." *Carolus de Maets*, in his *Chymia Rationalis*, endeavours to confirm this ſpecific Virtue of the Balſam of Capivi; and, under the Name of Elixir Antivenereum, prepares from it the following Medicine againſt a Gonorrhœa, the Lues Venerea, and nephritic Diſorders.

> Take of Alcohol of Wine, five Ounces; of the beſt Gum Guajacum, two Drams; of the recent Oil of Safafras-wood, half a Dram; and of Balſam of Capivi, one Ounce: Let theſe be digeſted together for twenty-four Hours, with the Addition of a ſmall Quantity of the Salt of Tartar.

He ſays this Medicine operates by a Diaphoreſis, and is proper in all Diſorders to be cured by producing that Effect. The Doſe of it is from three Drops to one Scruple, in ſome proper Liquor; ſuch as a Decoction of Guajacum, for Inſtance, in a Lues Venerea. *Quincy* orders forty Drops for a Doſe. Our Countryman, *Turner*, in the Cure of a Gonorrhœa, prefers Balſam of Capivi to Turpentine, and the other native Balſams generally preſcribed againſt this Diſorder; ſuch as thoſe of *Peru*, *Tolu*, and *Gilead*. After the Uſe of proper Purgatives, this Author, in order to complete the Cure, preſcribes about an Ounce of it to be diſtributed into ſeveral Doſes, and exhibited, either in the Form of an Electuary, with Conſerve of Hips, or in the Form of a white Paſte, prepared with white Sugar. The Bulk of a Nutmeg of either of theſe Preparations is to be taken, every Morning and Evening, upon an empty Stomach.

Notwithſtanding the large Encomiums beſtow'd on the Balſam of Capivi by Authors, 'tis neceſſary the young Practitioner ſhould not be hurried away by their Authority, or implicitly rely upon their Words, without any Limitation or Reſtriction; for theſe happy Effects are only produced by this Balſam, when it is genuine and unadulterated; when it is exhibited at a proper Time, in a due Manner, in a juſt Quantity, and by the Directions of a judicious Phyſician: For when too large Doſes of it are exhibited; when the Uſe of it is too long perſiſted in; or when it is adminiſtered at an unſeaſonable Time; by its acrid and balſamic Sulphur, it ſtimulates the delicate and ſenſible Coats of the Primæ Viæ, throws the Humours into Commotions, and, by that means, produces Fevers, Head-achs, Palpitations of the Heart, Pains and preternatural Heats of the Inteſtines, together with ſeveral other Diſorders. But the Abuſe of this Balſam is, in a particular Manner, prejudicial to Patients who labour under a Phthiſis, or Ulcers of the Kidneys; ſince, in theſe Caſes, it generally exaſperates the Cough, brings on an Hæmoptoe, produces a Diſcharge of bloody Urine, and increaſes the ſlow Fever: When exhibited too frequently, or in too large Doſes, to nephritic Patients, it increaſes the Pains and Inflammations of the Kidneys. I have frequently, ſays *Rieger*, obſerv'd, that this Balſam, exhibited internally, or uſed in Clyſters, to ſuch as labour under malignant Dyſenteries, or ſpurious Lienteries, ariſing from an Abraſion of the nervous Coats of the Stomach and Inteſtines, has excited preternatural and internal Heats. In all Fluxes, therefore, ariſing from the Acrimony of the Humours collected in the Primæ Viæ, and accompanied with a violent Inflammation of the Inteſtines, the Balſam of Capivi is more hurtful than beneficial. It is alſo prejudicial in Diſcharges of bloody Urine and Dyſenteries in old People; becauſe it throws the Blood into a Commotion, and more powerfully ſtimulates the urinary Paſſages already too much afflicted. Nor is the external Uſe of this Balſam always proper; becauſe when applied to Wounds or Ulcers, as yet not ſufficiently deterg'd,

terg'd, or freed from their Pus, it induces a Cicatrix too ſpeedily, and by that means frequently brings on ſinuous Ulcers, which ſoon after break out afreſh, and are not to be cured without the greateſt Difficulty. *Rieger.*

COPAL GUMMI.

Reſina Copal, Offic. Schrod. Phyt. 193. Jonſ. Dend. 357. Raii Hiſt. 2. 1846. *Copal*, J. B. 1. 325. Chab. 70. C. B. Pin. 504. Mont. Exot. 11. *Gummi Copal*, Park. Theat. 1670. Ind. Med. 40. *Copalli quabvith palaboca, ſive Arbor Copallifera latifolia, ſive* IL Hern. 46. *Rhus Virginianum lentiſci foliis*, Raii Hiſt. p. 1799. *Rhoi Obſceniorum ſimilis Americana, Gummi candidum fundens, non ſerrata, foliorum Rachi medio alata*, Pluk. Almag. 318. Phytog. Tab. 56.

This is a Gum or Roſin of a yellowiſh-white Colour, not very hard, ſomething like the common Frankincenſe, but in ſmaller Pieces, and of a much pleaſanter Smell. It is brought from the *Spaniſh Weſt-Indies*, being by our lateſt Writers thought to be the Gum of the *Virginia* Sumach, or a Tree very near akin to it; Dr. *Plukenet* having, as he ſays, gathered a Gum from that Tree very like *Gum Copal*.

This Gum is accounted a Cephalic, and good for the Palſy, and other Weakneſſes of the Nerves; but it is not much uſed. What we in *England* call *Gum Copal*, is call'd *Gum Anime* in foreign Parts; and, on the contrary, what they call *Gum Anime*, we call *Copal*. *Miller's Bot. Off.*

The Natives of *America* give the Name of *Copal* to all odoriferous Gums, which are tranſparent. The Gum we commonly call by that Name is not much uſed in Phyſic, but is in great Eſteem with the Varniſhers, who diſſolve it in Oleum Spicæ. It has been ſometimes employ'd in Fumigations for violent Defluxions of the Head, and in Cucuphas for the ſame Purpoſe. *Geoffroy.*

COPALXOCOTL *Tepeacenſium.* A Tree mentioned by *Du Laet*, much like the Cherry-tree, whoſe Fruit abounds with a glutinous Juice. Hence they are, by the *Spaniards*, called *Ceraſa Gummoſa*. *Raii Hiſt. Plant.*

COPAU. A Sort of Wood which grows in *Braſil*, like that of the Walnut-tree. *Raii Hiſt. Plant.* The Tree is call'd *Arbor Braſiliana juglandi ſimilis, nucibus carens.*

COPELLA. A Cuppel. A Sort of Veſſel, or Inſtrument, uſed by the Refiners, and in ſome Chymical Proceſſes. It is made uſually of the Aſhes of calcin'd Bones, moiſten'd with Small-beer or Water, into a Sort of Paſte. But vegetable Aſhes, perfectly freed from the Salts, will ſerve for the ſame Purpoſe. Both theſe bear the utmoſt Degree of Fire, without Fuſion or Vitrification. See CUPELLA.

COPEYA, or COPEIA *Arbor Papyracea.* J. B. *Copey in Inſula Hiſpaniola.* C. B. *Copeia Americanorum.* Nieremberg. A Tree which is a Native of *Hiſpaniola* in *America*. It bears a Leaf which ſerves for Paper, and of which the *Spaniards* make Cards. From this Tree a Sort of Pitch is made, as from the Pine. *Raii Hiſt. Plant.*

COPHOS, κωφός. A Sort of Toad, mention'd by *Nicander.*

COPHOS, κωφός. Deaf, or dumb, or both together. But it is alſo us'd to expreſs a Dulneſs or Weakneſs of any of the Senſes. See AURIS.

COPHOSIS, κώφωσις, from the preceding Word. Deafneſs; ſometimes Dumbneſs, or a Dulneſs of any of the Senſes.

COPIIBA *Braſilienſibus.* Marggr. *Arbor baccifera Braſilienſis, fructu monopyreno, folio ſeſquipedali.* This is a tall Tree, which grows in *Braſil*, to which no Medicinal Virtues are attributed.

COPISCUS, κόπισκος. A Sort of Frankincenſe mention'd by *Dioſcorides*, *Lib.* 1. *Cap.* 81. This is the ſecond in Goodneſs; and he ſays it is in leſs Fragments, and of a more tawny Colour.

COPOS, κόπος. Laſſitude; Wearineſs; or a morbid Senſation of Laſſitude, which comes on ſpontaneouſly, without any previous Motion, Exerciſe, or Labour. This is a frequent Symptom in acute Diſtempers, and is call'd *ſpontaneous Laſſitude*, κόπος αὐτομάτος. *Galen. Comment. ad Hippocrat. Aph.* 31. *Lib.* 4.

COPOVICH-OCCASSOU. A Tree mentioned by *De Laet*, which grows in the *Weſt Indies*. The Leaves are like thoſe of the Pear-tree. And the Fruit, call'd *Oumery*, is like a large Pear, and, when perfectly ripe, it is eſteem'd an excellent Fruit. *Raii Hiſt. Plant.*

COPPAROSA. Copperas. Green Vitriol. See VITRIOLUM.

COPRAGOGUM, from κόπρος, Dung, and ἄγω, to bring away. The Name of a gently cathartic Electuary mentioned by *Rulandus*, in his *Curat. Empiric. Cent.*

COPRIEMETOS, κοπρίεμετος, from κόπρος, Dung, and ἐμέω, to vomit. A Perſon who vomits up his Excrement, as it ſometimes happens in the laſt Stage of the Iliac Paſſion.

COPROCRITICA MEDICAMENTA, from κόπρος, Excrement, and κρίνω, to ſeparate. Thoſe cathartic Medicines which evacuate only the Inteſtines, and bring away Excrement alone. They are the ſame as the ECCOPROTICA.

COPROPHORIA, from κόπρος, Excrement, and φέρω, to bring away. Purgation. *Blancard.*

COPROS, κόπρος. Dung, or Excrement.

COPROSTASIA, from κόπρος, Excrement, and ἵστημι, to ſtop. A Conſtriction of the Belly, or rendering it coſtive. *Blancard.*

COPTARION, κοπτάριον. A Medicine formed in the Shape of a very ſmall Cake. Theſe were directed for Diſorders of the *Aſpera Arteria* and Lungs, and for many other Intentions, by the Antients. It is a Diminutive from

COPTON, or COPTE, from κόπτω, to beat or pound, becauſe it was formed by beating or pounding the Ingredients into a Paſte. This was the Form of a Medicine uſed by the Antients: It was a ſort of Cake, made generally of vegetable Subſtances, and exhibited internally in various Intentions. *Paulus* mentions a *Copton*, which was directed to be apply'd externally to the Region of the Stomach and Liver.

COPULA. A Ligament.

COQ. An Abbreviation which frequently occurs in Medicinal Writers. It imports *Coque, Coquantur*, Boil, or, Let them be boiled.

COQUENTIA MEDICAMENTA. Medicines which promote Coction or Concoction.

COR. The Heart. This is a muſcular Organ included in the Pericardium, hanging between the Lungs in the Thorax, and affording an Origin to the Trunks of the lower Blood-veſſels, by means of which it receives and emits all the ſeveral Humours in the Body.

The Hearts of Animals, conſidered as an Aliment, are of difficult Digeſtion, and, according to *Paulus Ægineta*, *Lib.* 1. *Cap.* 85. contain a thick Juice, are with Difficulty concocted, and ſlowly transformed and converted into Nouriſhment. *Oribaſius*, in his *Collect. Lib.* 2. *Cap.* 39. acknowledges, that the Hearts of Animals are fibrous, and conſequently with Difficulty concocted, and ſlowly changed into a State fit for the Purpoſes of the animal Œconomy: But, if they are ſufficiently concocted, they afford a large Quantity of Nouriſhment to the Body, and contain a laudable Juice. *Sennertus*, in his *Inſtitutiones Medicinæ*, advances the ſame things with reſpect to the Hearts of Animals; and adds, that when they are duly concocted, they afford a firm and durable Nouriſhment.

COR, in Botany, ſignifies the Heart of Vegetables, or what is otherwiſe call'd MEDULLA, which ſee. *Cor*, or *Corculum*, alſo ſignifies that minute Portion of any Seed, from which the Root and Bud ariſe. *Raii Hiſt. Plant.*

COR, in Chymiſtry, imports Gold; and ſometimes an intenſe Fire.

ANATOMY *of the* HEART.

The Heart is a muſcular Body, ſituated in the Cavity of the Thorax, on the anterior Part of the Diaphragm, between the two Laminæ of the Mediaſtinum. It is, in ſome meaſure, of a conical Figure, flatted on the Sides, round at the Top, and oval at the Baſis. Accordingly we conſider, in the Heart, the Baſis, Apex, two Edges, and two Sides, one of which is generally flat, and the other more convex.

Beſides the muſcular Body, which principally forms what we call the Heart, its Baſis is accompanied by two Appendices, called Auriculæ, and by large Blood-veſſels; and all theſe are included in a membranous Capſula, named Pericardium.

It is hollow within, and divided by a Septum, which runs between the Edges, into two Cavities, call'd Ventricles, one of which is thick and ſolid, the other thin and ſoft. This latter is generally termed the Right Ventricle, the other the Left Ventricle; tho', in their natural Situation, the Right Ventricle is placed more anteriorly than the Left.

Each Ventricle opens at the Baſis by two Orifices, one of which anſwers to the Auricles, the other to the Mouth of a large Artery; and accordingly one of them may be termed the auricular Orifice, the other the arterial Orifice. The Right Ventricle opens into the Right Auricle, and into the Trunk of the pulmonary Artery; the Left into the Left Auricle, and into the great Trunk of the Aorta. At the Edges of theſe Orifices are found ſeveral moveable Pellicules, called Valves by Anatomiſts, of which ſome are turn'd inward toward the Cavity of the Ventricles, and are called Triglochines, or Tricuſpides; others are turn'd toward the great Veſſels, and call'd Semilunares, or Sigmoidales. The Valvulæ Tricuſpides of the Left Ventricle are likewiſe termed Mitrales.

The inner Surface of the Ventricles is very uneven, many Eminences and Cavities being obſervable therein. The moſt conſiderable Eminences are thick fleſhy Productions call'd *Columnæ*. To the Extremities of theſe Pillars are faſten'd ſeveral tendinous Cords, the other Ends of which are joined to the Valvulæ Tricuſpides. There are likewiſe other ſmall, ſhort, tendinous Ropes along both the Edges of the Septum between

the

the Ventricles. These small Cords lie in an obliquely transverse Situation, and form a kind of Network at different Distances.

The Cavities of the inner Surface of the Ventricles are small deep Fossulæ or Lacunæ, placed very near each other, with small prominent Interstices between them. The greatest Part of these Lacunæ are Orifices of the venous Ducts.

The fleshy or muscular Fibres, of which the Heart is made up, are disposed in a very singular Manner, especially those of the Right or anterior Ventricle; being either bent into Arches, or folded into Angles.

The Fibres which are folded into Angles, are longer than those which are only bent into Arches. The Middle of these Arches, and the Angles of the Folds, are turned toward the Apex of the Heart, and the Extremities of the Fibres toward the Basis. These Fibres differ not only in Length, but in their Directions, which are very oblique in all, but much more so in the long or folded Fibres than in the short ones, which are simply bent.

It is commonly said, that this Obliquity represents the Figure 8; but the Comparison is very false, and can only agree to some bad Figures drawn by Persons ignorant of the Laws of Perspective.

All these Fibres, regard being had to their different Obliquity and Length, are disposed in such a manner, as that the longest form partly the most external Strata on the convex Side of the Heart, and partly the most internal on the concave Side; the Middle of the Arches and the Angles meeting obliquely and successively to form the Apex.

The Fibres, situated within these long ones, grow gradually shorter and straiter all the Way to the Basis of the Heart, where they are very short, and very little incurvated. By this Disposition the Sides of the Ventricles are very thin near the Apex of the Heart, and very thick toward the Basis.

Each Ventricle is composed of its proper distinct Fibres, but the Left Ventricle has many more than the Right. Where the two Ventricles are join'd, they form a Septum, which belongs equally to both.

There is this also peculiar to the Left Ventricle, that the Fibres, which form the innermost Stratum of its concave Side, form the outermost Stratum of the whole convex Side of the Heart, which consequently is common to both Ventricles; so that, by carefully unravelling all the Fibres of the Heart, we find it to be made up of two Bags contained in a third.

The Anterior or Right Ventricle is larger than the Posterior or Left, as was well observed by the Antients, and clearly demonstrated by *Helvetius*. They are both nearly of the same Length in Men; and, in some Subjects, they end exteriorly in a kind of double Apex.

All the Fibres are not directed the same Way, tho' they are all more or less oblique; for some end toward the Right Hand, others toward the Left; some forward, some backward, and others in the intermediate Places; so that, in unravelling them, we find that they cross each other gradually, sometimes according to the Length of the Heart, and sometimes according to its Breadth.

The Tubes which cross each other transversely are much more numerous than those which cross longitudinally; which ought to be taken notice of, in order to rectify the false Notions which have been entertain'd concerning the Motion of the Heart, which is, that it is performed by a Contorsion or Twisting like that of a Screw; or that the Heart is shorten'd in the time of Contraction, and lengthen'd in Dilatation.

The Fibres which compose the inner or concave Surface of the Ventricles, do not all reach to the Basis; some of them running into the Cavity, and there forming the fleshy Columnæ, to which the loose floating Portion of the tricuspidal Valves is fasten'd by tendinous Ropes.

Besides these fleshy Pillars, the internal Fibres form a great many Eminences and Depressions, which not only render the inner Surface of the Ventricles uneven, but give it a great Extent within a small Compass. Some of these Depressions are the Orifices of the venous Ducts, found in the Substance of the Ventricles. The Circumferences of the great Openings at the Basis of the Heart are tendinous, and may be looked upon as the common Tendon of all the fleshy Fibres, of which the Ventricles are composed.

The Valves at the Orifices of the Ventricles are of two Kinds; one Kind allows the Blood to enter the Heart, and hinders it from going out the same Way; the other Kind suffers the Blood to go out of the Heart, but hinders it from returning. The Valves of the first Kind terminate in the Auriculæ, and those of the second lie in the Openings of the great Arteries. The first are termed Semilunar or Sigmoidal Valves, the others Triglochines, Tricuspidal, or Mitral.

The tricuspidal Valves of the Right Ventricle are fixed to its auricular Orifice, and turned inward toward the Cavity of the Ventricle. They are three triangular Productions, very smooth and polish'd on that Side which is turned toward the Auricle; and on the Side next the Cavity of the Ventricle they have several membranous and tendinous Expansions, and their Edges are notched or indented. The Valves of the auricular Orifice of the Left Ventricle are of the same Shape and Structure, but they are only two in Number; and, from some small Resemblance to a Mitre, they have been nam'd Mitrales.

These five Valves are very thin, and fasten'd, by several tendinous Ropes, to the fleshy Columnæ of the Ventricles. The Cords of each Valve are fixed to two Pillars; and between these Valves there are other small ones of the same Figure. They may all be termed Valvulæ Tricuspides, Auriculares, or Venosæ Cordis.

The semilunar Valves are six in Number, three belonging to each Ventricle, situated at the Mouths of the great Arteries; and they may be properly enough nam'd Valvulæ Arteriales. Their concave Sides are turn'd toward the Cavity of the Arteries, and their convex Sides approach each other. In examining them with a Microscope, we find fleshy Fibres lying in the Duplicature of the Membranes, of which they are composed.

They are truly semilunar, or in Form of a Crescent, on that Side by which they adhere; but their loose Edges are of a different Figure, each of them representing two small Crescents, the two Extremities of which meet at the Middle of this Edge, and there form a kind of small Papilla.

The great Artery, which goes out from the Left Ventricle, is term'd Aorta. As it goes out, it turns a little toward the Right Hand, and then bends obliquely backward, to form what is called the Aorta Descendens. From about the Middle of the convex Side of this Curvature three great Branches arise, which furnish an infinite Number of Ramifications to the Head, and upper Extremities of the Body; as the descending Aorta does, in the same manner, to the Thorax, Abdomen, and lower Extremities.

The Trunk of the Artery, which goes out from the Right Ventricle, is call'd Arteria Pulmonaris. This Trunk, as it is naturally situated in the Thorax, runs first of all directly upward for a small Space, then divides laterally into two principal Branches, one for each Lobe of the Lungs; that which goes to the Right Lung, is the longest.

Auriculæ.

The Auricles are muscular Bags situated at the Basis of the Heart, one toward the Right Ventricle, the other toward the Left, and joined together by an inner Septum, and external communicating Fibres, much in the same manner with the Ventricles; one of them being named the Right Auricle, the other the Left. They are very uneven on the Inside, but smoother on the Outside, and terminate in a narrow, flat, indented Edge, representing a Cock's Comb, or, in some measure, the Ear of a Dog; and for that Reason a famous Anatomist of *Leyden* would fain have distinguished this Edge by the particular Name of Auricle, calling the rest the Bag. They open into those Orifices of each Ventricle, which I name auricular Orifices; and they are tendinous at their Opening, in the same manner as the Ventricles.

The Right Auricle is larger than the Left, and it joins the Right Ventricle by a common tendinous Opening. It has two other Openings united into one, and formed by two large Veins, which meet and terminate there, almost in a direct Line, call'd Vena Cava superior and inferior. The notched Edge of this Auricle terminates obliquely in a kind of obtuse Point, which is a small particular Production of the great Bag, and is turned toward the Middle of the Basis of the Heart.

The whole inner Surface of the Right Auricle is uneven, by reason of a great Number of prominent Lines, which run across the Sides of it, and communicate with each other by smaller Lines, which lie obliquely in the Interstices between the former. The Lines of the first Kind represent Trunks, and the others small Branches in an opposite Direction to each other. In the Interstices between these Lines the Sides of the Auricle are very thin, and almost transparent, seeming to be formed merely by the external and internal Coats of the Auricle joined together, especially near the Point.

The Left Auricle is, in the human Body, a kind of muscular Bag or Reservoir, of a pretty considerable Thickness, and unequally square, into which the four Veins open call'd Venæ Pulmonares, and which has a distinct Appendix belonging to it, like a third small Auricle. This Bag is very even on both Sides, for which Reason one might be led to call it the Trunk of the pulmonary Veins, and its Appendix the Left Auricle. However, the Bag and Appendix have but one common Cavity, and therefore may still be both comprehended under the common Name of the Left Auricle. In Men the small Portions may likewise be named the Appendix of the Left Auricle; but, in other Animals, the Case is different.

This small Portion or Appendix of the Left Auricle is of a different Structure from that of the Bag or large Portion. Exteriorly it resembles a small oblong Bag, bent different Ways, and indented quite round the Edges; interiorly it is like the Inside of the Right Auricle. The whole common Cavity of the

Left

Left Auricle is ſmaller in an adult Subject than that of the Right; and the fleſhy Fibres of this Left Auricle croſs each other obliquely, in Strata, differently diſpoſed.

Beſides the great common Veſſels, the Heart has Veſſels peculiar to itſelf, call'd the coronary Arteries and Veins, becauſe they in ſome meaſure crown the Baſis of the Heart. The coronary Arteries, which are two in Number, go out from the Beginning of the Aorta, and afterwards ſpread themſelves round the Baſis of the Heart, to the Subſtance of which they ſend numerous Ramifications.

The exterior Courſe of the Veins is pretty much the ſame with that of the Arteries; but they end partly in the Right Auricle, and partly in the Right Ventricle. They likewiſe terminate in the Left Ventricle, but in ſmaller Numbers; and in both they end by certain venous Ducts, which open into the Foſſulæ or Lacunæ, already taken notice of, in the uneven inner Sides of the Ventricles. There are likewiſe Lacunæ of the ſame Kind in the Auricles, between the prominent Lines; and, in the great Bag of the Left Auricle, we find likewiſe ſmall Holes, which ſeem to have the ſame Uſe.

There are ſeldom more than two Arteries, of which one lies toward the Right Hand, the other toward the Left of the anterior third Part of the Circumference of the Aorta. The Right Coronary Artery runs in between the Baſis and Right Auricle, all the Way to the flat Side of the Heart, and ſo goes half Way round. The Left Artery has a like Courſe between the Baſis and Left Auricle; and, before it turns on the Baſis, it ſends off a capital Branch, which runs between the two Ventricles. Another principal Branch goes off from the Union of the two Arteries on the flat Side of the Heart, which, running to the Apex, there joins the other Branch.

The coronary Veins are diſtributed exteriorly, much in the ſame manner. Their Trunk opens principally into the Right Auricle, by a particular Orifice, furniſh'd with a ſemilunar Valve. All the coronary Veins, and their Ramifications, communicate with each other; ſo that, if we blow thro' a ſmall Hole made in any of theſe Branches, having firſt compreſs'd the Auricles, and large Veſſels, we obſerve, that the Air ſwells all the Veſſels, and the Ventricles alſo, by paſſing thro' the Ductus Venoſi.

The Heart lies almoſt tranſverſely on the Diaphragm, the greateſt Part of it being in the Left Cavity of the Thorax, and the Apex being turn'd toward the bony Extremity of the ſixth true Rib. The Baſis is toward the Right Cavity, and both Auricles, eſpecially the Right, reſt on the Diaphragm.

The Origin or Baſis of the pulmonary Artery is, in this natural Situation, the higheſt Part of the Heart on the fore Side; and the Trunk of this Artery lies in a perpendicular Plane, which may be conceived to paſs between the Sternum and Spina Dorſi. Therefore ſome Part of the Baſis of the Heart is in the Right Cavity of the Thorax, and the reſt, all the Way to the Apex, is in the Left Cavity; and it is for this Reaſon, that the Mediaſtinum is turn'd toward that Side.

According to this true natural Situation of the Heart, the Parts, commonly ſaid to be on the Right Side, are rather anterior; and thoſe on the Left Side poſterior; and that Side of the Heart, which is thought to be the fore Side, is naturally the upper Side; and the back Side conſequently the lower Side.

The lower Side is very flat, lying wholly on the Diaphragm; but the upper Side is a little convex, thro' its whole Length, in the Direction of the Septum, between the Ventricles. And it may be proper here to remark, that tho' commonly received Terms of Art may ſtill be retain'd, yet it is neceſſary to prevent their communicating falſe Ideas to thoſe who have not had an Opportunity of making Obſervations themſelves, or of being inſtructed by others.

The Heart, with all the Parts belonging to it, is contain'd in a membranous Capſula, call'd the Pericardium, which is, in ſome meaſure, of a conical Figure, and much larger than the Heart. It is not fix'd to the Baſis of the Heart, but round the large Veins, above the Auricles, before they ſend off the Ramifications, and round the large Arteries, before their Diviſions.

The Pericardium is made up of three Laminæ, the middle and principal of which is compoſed of very fine tendinous Filaments, cloſely interwoven, and croſſing each other in different Directions. The internal Lamina ſeems to be a Continuation of the outer Coat of the Heart, Auricles, and great Veſſels. The Trunks of the Aorta, and pulmonary Artery, have one common Coat, which contains them both, as in a Sheath; and is lined on the Inſide by a cellular Subſtance, principally in that Space which lies between where the Trunks are turn'd to each other, and the Sides of the Sheath. There is but a very ſmall Portion of the inferior Vena Cava contain'd in the Pericardium.

It is the middle Lamina, which chiefly forms the Pericardium; and the Figure of this Bag is not ſimply conical, its Apex, or Point, being very round, and the Baſis having a particular Elongation, which ſurrounds the great Veſſels as amply as the other Portion ſurrounds the Heart.

The Pericardium is cloſely connected to the Diaphragm, not at the Apex, but exactly at that Place which anſwers to the flat or lower Side of the Heart; and it is a very difficult Matter to ſeparate it from the Diaphragm in Diſſection. This adhering Portion is in ſome meaſure of a triangular Shape, anſwering to that of the lower Side of the Heart; and the reſt of the Bag lies upon the Diaphragm, without any Adheſion.

The external Lamina, or common Covering, as it may be call'd more properly, is form'd by the Duplicature of the Mediaſtinum. It adheres to the proper Bag of the Pericardium, by the Intervention of the cellular Subſtance in that Duplicature; but leaves it where the Pericardium adheres to the Diaphragm, on the upper Surface of which it is ſpread, as being a Continuation of the Pleura.

The internal Lamina is perforated by an infinite Number of very ſmall Holes, thro' which a ſerous Fluid continually tranſudes, in the ſame manner as in the Peritonæum. This Fluid, being gradually collected after Death, makes what is call'd the Water of the Pericardium, which is found in conſiderable Quantities in opening dead Bodies, while they remain freſh: Sometimes it is of a reddiſh Colour, which may be owing to a Tranſudation of Blood thro' the fine Membrane of the Auricles.

The Heart, and Parts belonging to it, are the principal Inſtruments of the Circulation of the Blood. The two Ventricles ought to be conſider'd as two Syringes ſo cloſely joined together as to make but one Body, and furniſh'd with Suckers, placed in contrary Directions to each other, ſo as that, by drawing one of them, a Fluid is let in, and forced out again by the other.

The Heart is made up of a Subſtance capable of Contraction and Dilatation. When the fleſhy Fibres of the Ventricles are contracted, the two Cavities are leſſen'd in an equal and direct manner, not by any Contorſion or Twiſting, as the falſe Reſemblance of the Fibres to a Figure of Eight has made Anatomiſts imagine. For, if we conſider attentively, in how many different Directions, and in how many Places, theſe Fibres croſs each other, we muſt ſee clearly, that the whole Structure tends to make an even, direct, and uniform Contraction, more according to the Breadth or Thickneſs, than according to the Length of the Heart; becauſe the Number of Fibres ſituated tranſverſely, or almoſt tranſverſely, is much greater than the Number of longitudinal Fibres.

The fleſhy Fibres, thus contracted, do the Office of Suckers, by preſſing upon the Blood contain'd in the Ventricles; which Blood, being thus forced toward the Baſis of the Heart, preſſes the tricuſpidal Valves againſt each other, opens the Semilunares, and ruſhes with Impetuoſity thro' the Arteries, and their Ramifications, as thro' ſo many elaſtic Tubes.

The Blood, thus puſh'd on by the Contraction of the Ventricles, and afterwards preſs'd by the elaſtic Arteries, enters the capillary Veſſels, and is from thence forced to return by the Veins to the Auricles, which, like Retirements, Porches, or Antechambers, receive and lodge the Blood return'd by the Veins during the Time of a new Contraction. This Contraction of the Heart is, by the Anatomiſts, term'd *Syſtole*.

The Contraction or Syſtole of the Ventricles ceaſes immediately, by the Relaxation of their fleſhy Fibres; and, in that time, the Auricles, which contain the venous Blood, being contracted, force the Blood thro' the tricuſpidal Valves into the Ventricles, the Sides of which are thereby dilated, and their Cavities enlarged. This Dilatation is term'd Diaſtole.

In this Manner does the Heart, by the alternate Syſtole and Diaſtole of its Ventricles and Auricles, puſh the Blood thro' the Arteries to all the Parts of the Body, and receive it again by the Veins. This is call'd the Circulation of the Blood, which is carried on in three different Manners.

The firſt and moſt univerſal kind of Circulation is that by which almoſt all the Arteries of the Body are fill'd by the Syſtole of the Heart, and the greateſt Part of the Veins evacuated by the Diaſtole.

The ſecond kind of Circulation, oppoſite to the firſt, is thro' the coronary Veſſels of the Heart, the Arteries of which are fill'd with Blood, during the Diaſtole of the Ventricles, and the Veins empty'd during the Syſtole.

The third kind of Circulation is that of the Left Ventricle of the Heart, thro' the venous Ducts of which a ſmall Quantity of Blood paſſes, without going thro' the Lungs, which is the Courſe of all the remaining Maſs of Blood. See SANGUIS. *Winſlow.*

WOUNDS *of the* HEART.

When the Heart is wounded, a large Quantity of Blood is diſcharged, provided any of its larger Arteries or Veins are pierced; the Pulſe becomes languid, and the Colour highly pale; a cold and fetid Sweat breaks out, and, the Extremities becoming exceſſively cold, Death ſpeedily ſucceeds. If only the Subſtance of the Heart is injured, and the Weapon has not penetrated into the Ventricles, the Patient has ſometimes been obſerved to remain alive for a Day or a Night. But if the

Point of the Weapon reaches the Ventricles, the Extremities forthwith become cold, and a ſudden Death enſues. *Lommii Obſervat. Medicinal.*

Wounds of the Heart are always eſteem'd mortal, and to admit of no Cure. See POLYPUS.

DISORDERS *of the* PERICARDIUM.

The enſuing ingenuous Obſervations, made by Dr. *Freind*, ſhew, that the Pericardium is ſubject to various Diſorders, tho' too ſeldom regarded.

Avenzoar takes notice of an Abſceſs in the Pericardium, which I don't find had been deſcrib'd, or even obſerved, by any of the *Greeks* or *Arabians:* And there is no doubt, but this Membrane, and the Mediaſtinum, to which it is contiguous, are ſubject, as well as the Pleura and Lungs, to an Inflammation. *Salius Diverſus*, who has, with good Judgment, given us an Account of ſeveral Diſtempers, overlook'd by the Generality of Writers, deſcribes this Diſorder in a diſtinct Chapter by itſelf; and ſays, it had been taken notice of by no practical Author before him. His Deſcription of the Symptoms, which follow upon an Inflammation here, is very exact and particular; and, becauſe the Caſe is one pretty much out of the Way, tho', without Diſpute, ſuch as often occurs in Practice, and may be eaſily diſcern'd, if well attended to, I ſhall juſt, in ſhort, give a Sketch of what he obſerves, which, indeed, anſwers to what I have recited from *Avenzoar*. There is an acute Fever, Inquietude, Thirſt, breathing thick and quick, great Heat in the Thorax, little Pain, except at the Sternum; in which Place was perceived an uneaſy Straitneſs, and Stop, rather than an exquiſite Pain, in Reſpiration, a Cough always with it, and the Pulſe hard, juſt as it is in a Pleuriſy: However, Want of acute Pain diſtinguiſh'd it from a Pleuriſy; and a much leſs difficult Degree of Breathing, from a Peripneumony. When the Pericardium was inflamed too, there was a more intenſe Heat, and a frequent Syncope; in one Word, all the Symptoms worſe. He very rightly infers, that there is a leſs Degree of Pain in theſe Membranes, becauſe they are looſe, and not tied to the Ribs, as the Pleura is; only at the Sternum, to which the Mediaſtinum is faſten'd, there was felt ſome Uneaſineſs. And, as a Proof of what he aſſerts, he gives the Caſe of one, who died on the ninth Day after ſome Fits of a Syncope; where, upon Diſſection, there appear'd an Inflammation of the interſepient Membranes, as he calls them, and ſome Part of the Pericardium. And this Diſtemper, I don't queſtion, happens oftener than our Practitioners commonly are aware of. When an Inflammation here ſuppurates, the Matter may burſt into the Cavity of the Mediaſtinum; for, tho' there have been great Diſputes among Anatomiſts, whether it has any Cavity or no, the Knife, I think, decides the Controverſy, and ſhews, that it has one, tho' not ſo large as ſome have deſcrib'd it; at leaſt, as it riſes from the Sternum, its two Membranes lie at ſuch a Diſtance, that it is capable of having a Humour or Pus fall down between them, as *Columbus* firſt obſerved, and which he and *Barbette* order to be taken out by trepanning the Sternum. And *Spigelius* makes this further Obſervation, that he has ſometimes ſeen Surgeons impoſed upon by Wounds, tranſverſely made, in this Place; ſo as to think they had penetrated the Lungs, when, indeed, they had only reach'd into this Cavity. As a further and more convincing Proof of what has been here remark'd, a Gentleman, juſtly eſteem'd for his long Experience, and ſound Judgment, in every thing relating to Surgery, has inform'd me, that Abſceſſes of the Mediaſtinum particularly happen in Venereal Diſtempers; and that, in ſuch Caſes, he has frequently uſed the Trepan with great Succeſs. You may, from hence, be ſatisfied, how little Ground there is for that Hint of *Paré*, where he ſeems to think this Operation a ridiculous Attempt.

Avenzoar, I have remark'd, has mention'd an Inflammation and Abſceſs in the Pericardium: And *Rondeletius*, in his Book of *Diſtinguiſhing Diſeaſes by the Symptoms*, has ſomething concerning the ſame Diſtemper. He takes notice, that, in this Caſe, beſides a leſs Difficulty of Breathing, when they ſpit, they are leſs relieved by it, than in a Peripneumony. In a Perſon he diſſected, he found the Pericardium extremely inflamed, and ſome ſanious Matter round the Heart. A like Example we may ſee in *Hildanus*, where the Quantity of the extravaſated Blood, mix'd with Fluid, amounted to above four Pints; and yet no Part of the Heart itſelf was ulcerated: The chief Complaints of the Perſon, ſome time before his Death, were Pain, which ſhot upwards to his Shoulders, and a violent Palpitation. *Rondeletius* owns this to be as a very acute, and dangerous, ſo a very rare Caſe, and one which nobody had ever obſerved before. As to this Writer, and *Salius*, perhaps neither of them might have been appris'd of what the other had ſaid upon this Argument; for tho' *Rondeletius* died many Years ſooner, yet his Book was not printed till the Year before *Salius* publiſh'd his. Yet, after all theſe new Diſcoveries, as they are call'd by the two mention'd Authors, we ſee, that the Diſeaſe is here very fully and clearly deſcrib'd by *Avenzoar*. And this is no more than what has happen'd, in the like Caſes, to other Moderns, who, for want of reading the Antients, have publiſh'd ſome Obſervations as entirely their own, and ſuch as were never hit upon before.

Our Author ſtill affords us ſomething more relating to the Pericardium. He ſpeaks of its being increaſed by the Generation of ſome new Subſtance, like Cartilages, or Pellicles; a Caſe, which, he ſays, had eſcaped the Obſervation of every body before him. This, I ſuppoſe, muſt be meant of the Coats of this Bag being thicken'd; for, when there is an Obſtruction of the Glands here, or too great a Viſcouſneſs of the Lymph, which ſhould ſupply the Liquor naturally contain'd in its Cavity, the Membranes of the Pericardium often enlarge their Bulk to a great Degree, and very often are found firmly adhering to the Heart; more particularly in tabid and aſthmatic Caſes, ſo as to cauſe a frequent Syncope and Palpitation. And the Adheſion, in this Caſe, not being carefully examin'd, may perhaps have given Occaſion to what *Columbus*, and others, ſay, of their having obſerved Hearts without any Pericardium at all. Certain it is, that the Coalition of this Membrane is much more probable, than the entire Want of it. I have ſeen an Inſtance, where it has been, throughout all its Compaſs, above a Quarter of an Inch thick, and ſo cloſely united with the Heart, that it could not any-where be divided, without tearing. It appear'd very evident, that there had been an Inflammation; for ſome Parts of it were ſcirrhous, and others full of little Abſceſſes: In which Caſe there had been, for ſome time, a great Decay of Strength; then a Fever ſucceeded, with a violent Shortneſs of Breath, and Pain in the Thorax. After this, the Pains were more diſperſed over all the Body, and particularly the Limbs, ſomewhat of the Fever ſtill continuing. Towards the End of the Diſeaſe was obſerved a conſtant Quickneſs, and often great Inequalities and Intermiſſions of the Pulſe, attended with ſtrong Palpitations. At laſt, the Patient died unexpectedly in a Moment; tho', upon conſidering the Caſe, as it appear'd in opening thoſe Parts, it was more wonderful, indeed, that the Circulation could be carry'd on ſo long, ſince, in theſe Circumſtances, the Heart had ſcarce any room to move in: Beſides, that there was a large Polypus both in the pulmonary Artery, and the Left Ventricle of the Heart, which might, perhaps, at firſt owe its Production to the original Diſeaſe of the Pericardium.

A Dropſy in this Part is likewiſe taken notice of by *Avenzoar*; a Caſe, he ſays, he had never ſeen himſelf, nor had *Galen* ever mention'd it: Notwithſtanding this, ſuch a Caſe has been obſerved by others. For tho', in a natural State, and in a ſound Conſtitution, the Water here contain'd is not above two or three Spoonfuls; yet, in morbid Bodies, there is frequently found half a Pint, or more; as likewiſe in old People. *Piſo* gives an Inſtance, where ſeveral Pints were taken out; and we need not be ſurpris'd at ſuch an extraordinary Diſtention of this Membrane, ſince the like happens in many others. *Freind's Hiſtory of Phyſic, Vol.* 2.

CORACINE, *κορακινη*. An Epithet for a ſort of Paſtil, quoted by *Galen*, from *Aſclepiades*. *De Comp. M. per Gen. L.* 5. *C.* 11.

CORACINUS, Offic. Rondel. de Piſc. 1. 128. Schonef. Ichth. 32. Raii Ichth. 300. Emac. Synop. Piſc. 95. Bellon. de Aquat. 115. Aldrov. de Piſc. 69. Salv. de Aquat. 117. Charlt. de Piſc. 15. Jonſ. de Piſc. 31. *Coracinus ſubniger*, Geſn. de Aquat. 294. THE CROW-FISH.

This is a Fiſh mention'd by *Galen*, *Aldrovandus*, and *Bruyerinus*. It is found in Rivers, particularly in the *Nile* and the *Mediterranean* Sea. Certain Bones, found in the Head of this Fiſh, are ſaid to be poſſeſs'd of ſome medicinal Virtues. They are call'd *Lapides Coracini*, and are recommended againſt nephritical and colical Pains, and the Jaundice, by *Rondeletius*.

CORACOBOTANE, from *κόραξ*, a Crow, and *βοτάνη*, a Plant. A Name for the *Laurus Alexandrina*. *Blancard.*

CORACOBRACHIALIS *Muſculus*.

This is a long Muſcle, lying on the Inſide of the upper Half of the Os Humeri, that is, on that Side which anſwers directly to the Hemiſphere of the Head of the Bone, and to the prominent internal Condyle.

It is fix'd above to the Point of the Coracoide Apophyſis, between the Inſertions of the Biceps and Pectoralis minor, by a Tendon, which, as it deſcends, adheres, for a good Way, to the Tendons of theſe two Muſcles. Afterwards it becomes fleſhy, and is inſerted, by a broad thin Extremity, with a ſmall Mixture of tendinous Fibres, in the middle Part of the Os Humeri, cloſe by the ligamentary Frænum of the Latiſſimus Dorſi and Teres major. Its Inſertion is continued down below the Frænum, near the internal Intermuſcular Ligament, to which it likewiſe adheres a little.

This Muſcle paſſes behind the Tendon of the Pectoralis major, and, as it is perforated in the Middle to give Paſſage to a Nerve, it has by ſome been term'd *Perforatus Caſſerii*, that Author being the firſt who gave a particular Figure of it. *Winſlow.*

CORACO-HYOIDÆUS, otherwiſe call'd *Omoplato-hyoidæus*, or *Omo-Hyoidæus*.

This is a very long ſmall Muſcle, much narrower than the Sterno-hyoidæus, and ſituated obliquely on the Side of the Neck or Throat, between the Scapula and Os Hyoides. It is a Digaſtric Muſcle, being divided into fleſhy Portions, join'd endwiſe to a ſhort middle Tendon.

It is commonly fix'd, by the lower Extremity, to the ſuperior Coſta of the Scapula, between the ſmall Notch and the Angle, and ſometimes very near the Angle; and from thence ſome Anatomiſts have given it the barbarous Name of Coſto-hyoidæus.

From thence it paſſes over the Coracoide Apophyſis, adhering ſometimes to it by a kind of Aponeuroſis, or membranous Ligament; and from this Adheſion the Name of Coraco-hyoidæus was given it by ſome, who had not diſcover'd its main Inſertion.

It is likewiſe often fix'd to the Clavicle by ligamentary or fleſhy Fibres; and I have ſometimes ſeen it inſerted in the whole middle Portion of that Bone, being inſeparably united with the Sterno-hyoidæus. In one Subject I found it to be a kind of Biceps, one Portion of it being fix'd to the Angle of the Scapula, the other to the Extremity of the Clavicula.

Having paſs'd the Clavicle, it is bent forward, and runs between the Sterno-maſtoidæus and internal Jugular Vein, the ſmall middle Tendon being ſituated in this Place. From thence it runs up to its Inſertion in the inferior lateral Part of the Baſis of the Os Hyoides, near the Cornu, and Inſertion of the Sterno-hyoides, which it covers a little. *Winſlow.*

CORACOIDES PROCESSUS. A Proceſs of the Scapula, call'd thus becauſe of its Reſemblance to a Crow's Bill. See SCAPULA.

CORACOIDEUS. The ſame as CORACOBRACHIALIS.

CORACUM EMPLASTRUM. A Plaiſter deſcrib'd in *Paulus Ægineta*, *L.* 7. *C.* 17. He recommends it as a proper Topic for the Pudenda, and ſpreading Ulcers.

CORAL. See CORALLODENDRON.

CORALLACHATES. A Species of the *Achates*, which reſembles Coral, with reſpect to Colour.

CORALLATUM. A Name for the *Mercurius Præcipitatus ruber*. See MERCURIUS.

CORALLINA. Offic. J. B. 3. 810. Raii Hiſt. 1. 65. Chab. 577. Tourn. Inſt. 570. Elem. Bot. 444. *Corallina Anglica*. Ger. 1379. Emac. 1571. *Muſcus Maritimus ſive Corallina Officinarum*. C. B. 363. *Muſcus marinus, ſive Corallina alba Officinarum*. Park. 1295. SEA CORALLINE, WHITE WORM-SEED.

This is a ſmall low Plant, of a ſomewhat ſtony Conſiſtence, ſeldom growing above two or three Inches high, much branch'd, full of ſhort, ſmall, jointed, round Stalks, of a white Colour for the moſt part, though it is ſometimes found purpliſh and greeniſh; it is of a ſaltiſh Taſte, and of a pretty ſtrong Smell. It is found growing every-where, upon the Rocks of the Sea, and frequently on Oyſters, and other Shells.

Coralline is only uſed to deſtroy Worms in the Stomach and Bowels, being given from half a Dram to a Dram, in coarſe Powder, in any convenient Vehicle. *Miller's Bot. Off.*

CORALLIUM, Coral. Of this there are many Species mentioned by Botaniſts. But thoſe principally uſed in Medicine, are the following:

CORALLIUM ALBUM. Offic. Raii Hiſt. 1. 62. Calc. Muſ. 7. Worm. 232. Boet. 318. J. B. 3. 805. Ger. 1381. 1576. Hiſt. Oxon. 3. 655. *Corallium album majus*. Park. 1300. *Corallium album Officinarum*. Chab. 572. *Corallium album*. Tourn. Inſt. 572. Elem. Bot. 445. C. B. 366. WHITE CORAL.

There are ſeveral Kinds of white Coral, ſome growing taller and larger, ſome ſhorter and ſmaller; the beſt Sort is pure white, of a firm, ſtony, and ſolid Subſtance, through its whole Body, not hollow, porous, ſcurfy, nor eaſily friable. It grows on the Rocks in divers Parts; the beſt comes from the *Mediterranean*.

White Coral is cooling, drying, and binding, good for the Heart-burn, or any Diſorders which proceed from ſharp acid Juices in the Stomach or Blood. *Miller's Bot. Off.*

It is ſaid to ſtrengthen the Liver, and to ſtop Fluxes of all Kinds.

CORALLUM RUBRUM. Offic. Raii Hiſt. 1. 60. Worm. 231. J. B. 3. 805. Ger. 1381. Emac. 1575. *Corallium rubrum majus*, Park. 1299. *Corallium rubrum*. C. B. 366. Tourn. Inſt. 572. El. Bot. 445. Hiſt. Oxon. 3. 655. *Corallum ſive Corallium*. Chab. 572. *Coralium*. Calc. Muſ. 3. *Corallium verum*. Boet. 318. RED CORAL.

This is a ſtony Plant, which grows upon the Rocks at the Bottom of the Sea, ſpreading out round Branches, like a ſmall Tree, which are rough and whitiſh on the Outſide while growing; but, when poliſh'd, of a pure red Vermilion-colour. It grows in the *Tyrrhenian* Sea, and on the Coaſts of *Spain* and *France*.

This is in much greater Uſe than the *white Coral*, being eſteem'd to have greater Virtue, and to be cordial, drying, and reſtringent, good to ſweeten the Blood, and free the Stomach from acid ſour Juices; it ſtops all Kinds of Fluxes and Hæmorrhages; and, where-ever an Alcali is neceſſary, this will do as much as any.

The only officinal Preparation from *Coral*, is the *Electuarium Diacorallion. Miller's Bot. Off.*

DIACORALLION: *The Coral Electuary.*

Take of white and red Coral, of the true *Armenian* Bole, and Dragons Blood, of each one Dram; of Pearls, half a Dram; of Aloes-wood, red Roſes, Gum Tragacanth, and Cinnamon, of each two Scruples; of white and red Saunders, of each one Scruple; of Sugar, diſſolv'd in ſmall Cinnamon-water, four times as much as the Whole; and make them into an Electuary.

This hath been continued through all the Editions of the *College Diſpenſatory* the ſame; and all the Ingredients agree in the main Intention of an Aſtringent; but it hath been hitherto ſo ſeldom ordered in extemporaneous Preſcriptions, that, I believe, it is not to be met with in the Shops.

Whether Coral exhilarates the Heart, or is a Preſervative againſt the Epilepſy, if it be given, to the Quantity of ten Grains, to the new-born Infant, in the Mother's Milk, as *Schroder* adviſes, I ſhall not determine.

Outwardly it is recommended for incarning of Ulcers, obliterating the Marks of Cicatrices, and in Collyria for Eyes ſubject to ſhed Tears; and to quicken the Sight.

Our Nurſes, and old Women, here in *England*, have a Cuſtom of hanging Coral about the Necks of Infants, to promote Dentition; and the Children taking Delight in putting them to their Mouths, and biting them, becauſe they are ſmooth and cold, by that means rub their Gums, and ſo facilitate the Eruption of their Teeth; not that ſuch an Effect proceeds from any Property or occult Virtue of the Coral, as the Vulgar imagine.

The Tincture of Coral is very much commended in peſtilential Fevers. *Boetius de Boot* uſed it with Succeſs; and *Garenciers* ſays, it ſeldom deceived his Expectations in theſe Diſtempers; but it is a Queſtion among the Chymiſts, whether there be any true and genuine Tincture of Coral. *Raii Hiſt. Plant.*

CORALLIUM NIGRUM. Raii Hiſt. 1. 61. Hiſt. Oxon. 3. 655. Worm. Muſ. 233. Calc. Muſ. 10. Miſc. Cur. Dec. 11. *A.* 1. 57. *Corallium nigrum ſive Antipathes*. J. B. 3. 804. Ger. 1382. Emac. 1575. Chab. 573. Park. Theat. 1300. *Corallum nigrum*. C. B. Pin. 366. Rar. Muſ. Beſl. T. 28. *Keratophyton arboreum, nigrum*. Boerh. Ind. A. 6. *Lithophyton nigrum arboreum*. Tourn. Inſt. 574. *Lithophytum nigrum, majus, & craſſius*. Elem. Bot. 446. *Pſeudo-corallium nigrum*. Boet. 319. BLACK CORAL.

It is found ſometimes in the *Italian* Sea; but more frequently in the *American* Seas. It agrees with other Corals in Virtues.

Another Species of the *Corallium* is the

ASTROITES, STELLARIS, ET STELLÆ LAPIS. Mont. Exot. 7. *Aſtroites diſtinctiſſimè Stellas emulas*. Muſ. Swam. 6. *Aſtroites*. Geſn. de Fig. Lap. 35. Worm. Muſ. 68. Plot. Hiſt. Oxon. 87. Tab. 2. f. 6. 7. *Lapidis Aſtroitidis, ſive Stellaris primum genus*. Boet. 298. Cat. Jamaic. 2. Hiſt. Vol. 1. Pag. 54. Tab. 21. *Stellatus Lapis*. Aldrov. Muſ. Metall. 872. Fig. 877, 878, 879. *Stellarius Lapis*. Laet. de Gem. 97. STAR-STONE.

This is found in the Sea near *Jamaica*, and has the ſame Virtues attributed to it as the Coral.

Coral is call'd Lithodendron, that is, a Tree of Stone, it being, in Effect, nothing but a ſtony Plant, which grows under hollow Rocks in many Parts of the *Mediterranean* Sea, where there is the greateſt Depth of Water. There are three different Kinds of it, Red, White, and Black; and we ſometimes meet with little Boughs, which are red in ſome Parts, and black in others: The red Coral is the moſt common, and more uſed in Phyſic, than either the black or white; and the beſt Kind of it is well compacted, ſmooth, and of a ſhining high Colour.

The white Coral is more rare than the red; it ought to be hard, ſmooth, bright, and white as Ivory. The black Coral is the moſt rare, and leaſt uſed in Phyſic; 'tis a kind of *Lithophyton*, call'd by the Antients *Antipathes*, or *Antipathes*; and by *Tournefort*, *Lithophyton nigrum arboreſcens*. We ſhould make Choice of that which is cloſe, heavy, ſmooth, ſhining, and of a deep black. Corals are generally cover'd in the Sea with a tartarous Cruſt, which can be eaſily ſeparated from the Body of the Plant, and probably proceeds from Foam harden'd and petrified. We may diſtil from this Cruſt a Sort of urinous Spirit,

Spirit, replete with volatile Salt, and a little black Oil, which, in a great meaſure, have the ſame Virtue, Taſte, and Smell, as thoſe extracted from Hartſhorn. While Corals are young and tender, the Tops of their Branches are ſurrounded with little thick Balls, as large as our red Goosberries; they are ſoft, and contain an oily milky Liquor, of a ſharp aſtringent Taſte. Theſe little Balls are the Fruit of the Coral, and in them ought we to look for the Seed; for the white Liquor of the Fruit, being ſpilt on Rocks, produces Plants of Coral. Theſe little Balls harden and petrify, in proportion to the Growth of the Tree. Some have affirmed, that the Coral is always ſoft, before it is taken out of the Sea; and that it only grows hard, after it is taken from thence; but Experience has ſhewn us the contrary.

If you ſteep, for a Day or two, red Coral in white Wax, melted on hot Embers, the Coral will loſe its Colour, and become white, and the Wax will aſſume a yellow Dye; but there muſt be a little more Wax than Coral.

If you ſteep another Piece of red Coral in the ſame Wax, it will become brown; and if, a third time, you ſteep red Coral in the ſame Wax, it will come out red. Wax diſſolves a little the Bitumen which is upon the Coral, and makes it red. We may extract the Tincture of Coral, contain'd in the white Wax, by infuſing it in Aqua-Vitæ impregnated with Salt of Tartar. Many hang red Coral about their Necks in order to ſtop Bleedings, to cleanſe the Blood, and ſtrengthen the Heart: I am inclin'd to think, that its red Colour, reſembling nearly that of the Blood and Heart, has induced People to believe it had theſe Virtues; but we know by Experience, that the external Application has no Effect.

Coral is to be prepared by grinding it on a Marble into a Powder, as ſmall as poſſible, that it may be the more eaſily diſſolved; and we uſe this Preparation of Coral for ſtopping Dyſenteries, Diarrhœas, the Flux of the Hæmorrhoids, the Menſes, bloody Fluxes, and all other Diſeaſes which proceed from acrimonious Humours. A Doſe of this, from ten Grains to a Dram, may be given in Water of Knot-graſs, or any other Liquor.

The more the red Coral is pounded, the more it loſes of its Colour, and 'tis inſipid to the Taſte. If you have any Curioſity to diſtil red Coral, you may put eight Ounces pulverized in a Retort, and you will only draw off about two Drams of a ſpirituous Liquor, of a dark Hue, mix'd with ſome Particles of black Oil, of a fetid Smell, like what we diſtil from Hartſhorn, and other Parts of Animals, and of a ſalt and bitter Taſte, which proceeds from the volatile alcaline Salt. Though I mention the Quantity of Liquor commonly drawn from Coral, yet there cannot be any general Rule laid down concerning it; for Coral yields more or leſs, in proportion to the Time it has been taken out of the Sea, and has been kept. The black Coral yields more Spirit, volatile Salt, and Oil, than any other Coral.

The red and white Coral, being calcin'd in a Crucible, become both white, and are commonly inſipid to the Taſte; but we ſometimes find white Coral, after it is pulverized, and a little calcin'd, to be very ſalt; and therefore we may conclude, that it had the ſaltiſh Taſte from the Water of the Sea, which it received into its Pores: However that be, I have always obſerved this Coral more porous and ſpongy than the red; and I attribute that to its wanting that bituminous Subſtance, which conſtitutes the red Colour; and, as it ſtops the Pores of the Plant, renders the Coral more compact and cloſe; but, for any thing elſe, the red and white Coral ſeem to be of the ſame Nature, and to have the ſame Qualities in Phyſic. 'Tis, nevertheleſs, worth while, here, to take notice of a Circumſtance which ſeems to denote a ſmall Difference betwixt the Formation of theſe two Plants: If you take diſtil'd Vinegar, and pour it on calcin'd red Coral, it will make a conſiderable Effervеſcence, and boil up to a pretty good Height, and continue for a little time; but, ſhould the ſame be pour'd on white calcinated Coral, it will effervеſce, but weakly, and ſink in an Inſtant. This Difference of Effervеſcence does not hinder the Corals from diſſolving equally, and making each a Salt and a Magiſtery alike in all reſpects.

The Difference in the Effervеſcences of the red and white calcin'd Coral ariſes from hence; that the Pores of the white Coral, which were larger than thoſe of the red in their natural State, are more enlarg'd and worn by Calcination, ſo that they have loſt a great Part of their Reſiſtance; and the Points of the Vinegar entering there, and finding but little Reſiſtance, produce a very eaſy Separation of the Parts; whereas the red Coral, which is more compact in its Parts, preſerves in the Calcination all its Power of Reſiſtance; and the Points of the Vinegar, poured on it, excite a violent Separation.

Out of eight Ounces of red calcin'd Coral, from which the active Principles have been diſtil'd, in the manner abovementioned, by Lixiviation, four Scruples of fix'd alcaline Salt may be procur'd; and this muſt evidently be ſome of the Sea Salts that penetrate into the Coral, which is render'd alcaline by the Fire, during the Calcination of the Matter.

We may draw from calcin'd Coral a great many Particles of Iron, by means of a Knife touch'd with a Loadſtone.

Tincture *of* Coral.

This Operation conſiſts in the Separation of a little of the bituminous red Matter, wherewith all red Coral is ting'd.

Put into a Matras, what Quantity you pleaſe, of red Coral prepar'd, or pulverized in the fineſt manner; pour on it Oil of Tartar per Deliquium, or of fix'd Nitre, till either riſes above the Coral about four Inches; then let the Veſſel be plac'd on warm Sand, and continue there in Digeſtion for eight Hours, only ſhake the Matter now-and-then: Thus the Liquor will be of a red Colour; and, after being filtred, it will be, what we call, the Tincture of Coral. It will preſerve the alcaline Acrimony of its Diſſolvent; but it may be ſweeten'd by mixing an eighth Part of the Spirit of Vitriol in it.

The Tincture of Coral may be alſo extracted by the ſame Method with Aqua Vitæ, mix'd with Salt of Tartar. The Tincture of Coral is reckon'd proper to cleanſe the Blood, to ſtrengthen the Heart, for reſiſting malignant Humours, and driving them out by Perſpiration; to ſtop bloody Fluxes, and Looſeneſs of the Belly. A Doſe, from four to ſixteen Drops, may be given in any Liquor proper for the Diſtemper; but it may be exhibited in much larger Doſes.

REMARKS.

Among all the Kinds of Coral, the Red has met with the Preference in Phyſic, eſpecially from the Antients, becauſe of its Colour; for they pretended, that its red Colour, which approaches to that of Blood, was very proper for cleanſing and ſtrengthening the Heart. They knew it, by Experience, to be aſtringent; but, it does not appear, that they had any Notion of its alkaline and abſorbent Virtues: This principal and diſtinguiſhing Quality was diſcovered by modern Chymiſts; for the Antients believ'd, that its Colour was the Cauſe of its ſtopping Blood, and other Humours.

And, having once given into the Notion, that the red Colour of Coral was of very great Virtue and Efficacy in Medicine, they ſpar'd no Pains to find out the Means of ſeparating that Tincture from the Body of the Coral. Both antient and modern Chymiſts have made it their principal Buſineſs, and have labour'd as much to find out this, as ever they did to make Gold potable; becauſe they were perſuaded, that, after having made this Diſcovery, they could find out a kind of univerſal Medicine or Remedy, for all the Diſorders of the Body. Accordingly we ſee, in Authors, a great Number of Deſcriptions of the Tincture of Coral; and each ſeems to contend for the Honour of his own. It would be tedious to recount them in this Place; but this I can ſay, that though I have made Experiments by moſt of their Deſcriptions, I cannot find any one true Tincture of Coral. This determin'd me to diſregard the Experiments of thoſe who have gone before me, and to have recourſe ſolely to my own. I have applied myſelf to diſcover ſome certain and eaſy Menſtruum for extracting that Tincture, and in this I am inclin'd to think I have ſucceeded; but muſt, however, confeſs, that I cannot give into the Opinion of the Antients, concerning the great Virtues they attribute to the Tincture of Coral: I believe rather, that it is only a little, inſipid, bituminous Matter, with which all Coral is ting'd, and that there is little Virtue in it. Mean time I have not been wanting to make Reſearches into the Matter, as there are many Phyſicians at this Day, who are prepoſſeſſed with an Opinion of theſe great Virtues; and, beſides, Experiments may be of Uſe to Natural Hiſtory.

The Tincture of Coral may be extracted by making a warm Infuſion, for ſome Days, of red pulveriz'd Coral, and the Juice of a Lemon newly ſqueez'd. The firſt Day there will be an Ebullition, occaſioned by the Meeting of the acid and alcaline Particles. When the Tincture is finiſh'd and filtred, it will loſe all the Acidity of the Lemon, and will have ſomewhat of a bitter Taſte; it will not preſerve its Colour long, but will be loſing it by little and little every Day; and, in the Space of a Month, the Liquor will corrupt; tho' this Corruption of the Liquor may be prevented, by pouring the Oil of ſweet Almonds one Inch deep above the Tincture in a Phial. But, as it is an eaſy Matter to prepare this Tincture of Coral with Lemon-juice, People may make it frequently, and not give it time to grow old. It retains the Smell of the Lemon, which makes it a little more agreeable. A Doſe from half a Dram to ten Drams may be adminiſter'd.

One may alſo extract the Tincture of Coral by making an Infuſion, for eight Days, of red Coral prepared, and the Spirit of Honey rectify'd, and made by Diſtillation as clear as Water; and this Menſtruum will extract the Colour of the Coral, and loſe its Acidity, becauſe it will be abſorb'd by the Alcali. One may take of this Tincture from twelve Drops to thirty in any proper Vehicle.

We may, moreover, extract the Tincture of Coral, by making a warm Infuſion and Digeſtion, for eight Days, of ſmall red Coral-branches in the Spirit of Wax rectify'd. The Diſſolvent will be of a deep-red Tincture, and the Coral will have a grey Colour on the Outſide, but inwardly it will continue red, becauſe the Spirit of Wax will not penetrate there. A Tincture alſo of prepared Coral may be thus extracted; but, whatever Way you extract it, it retains ſo diſagreeable a Smell and Taſte of the Menſtruum, that it can ſcarcely be made uſe of in Medicine.

Dissolution *of* Coral.

In order to diſſolve Coral, you may take any Quantity, and reduce it to the ſmalleſt Parts poſſible on a Porphyry; then put it in a large Matraſs, and pour diſtil'd Vinegar upon it, till it riſe four Inches above the Coral. Let your Matter be ſet in Digeſtion on warm Sand for the Space of two Days, and remember to ſhake the Matraſs frequently. Suffer the Coral to ſettle to the Bottom, and pour gently the clear Liquor off. Pour on as much diſtil'd Vinegar as before on the Reſidue, and let it be two Days more in Digeſtion. Separate again the clear Liquor, and continue the pouring on more diſtil'd Vinegar, and to draw off that impregnated, till the Coral be almoſt wholly diſſolv'd: Then mix all the Liquors, which were drawn off, together; and put them into a Glaſs Cucurbit, or a Stone Veſſel: Let two Thirds of the Moiſture evaporate by a Sand-heat, or till there appears on the Top a fine thin Pellicule. Filtre this impregnated Liquor, and keep it to make the Salt and Magiſtery. It will have a greeniſh Colour, and an inſipid Taſte.

It may be adminiſter'd on all Occaſions where the Salt is us'd. A Doſe of it may be from ten to twenty Drops in any proper Liquor.

REMARKS.

Red Coral is moſt commonly uſed, becauſe People are of Opinion, that the Colour adds to its Virtue. The Diſſolution which is made, when the Vinegar penetrates into the Coral, is commonly rank'd amongſt the cold Effervеſcences, or Ebullitions; but I have known, by the Help of a Thermometer, that it had a little Heat. 'Tis ſurpriſing, indeed, that ſo great an Agitation and Ebullition of the Parts ſhould not cauſe ſome ſenſible Heat; but it ought to be conſidered, that the Coral having very large Pores, it may be eaſily diſſolv'd; and conſequently there cannot be ſo great a Colliſion betwixt the Particles of the Coral and the Acids, as would be neceſſary for raiſing any conſiderable Heat.

In this Operation, ſome, inſtead of Vinegar, make uſe of the acid Waſhings of Butter of Antimony, or the pure Spirit of Vitriol, or the Spirit of Copper; but as theſe Spirits impart a great deal of Acridneſs to the Preparations of Coral, I think it far better, in this Caſe, to make uſe of diſtil'd Vinegar, which is but a weak Acid, and incapable of communicating any injurious Impreſſion.

As Coral is an Alcali, the acid Points join with it, and, keeping its Parts ſuſpended, render them imperceptible. For the ſame Reaſon the Vinegar entirely loſes its Acidity, which conſiſting only in the Motion and Activity of its Points, theſe are ſheathed by the Alcali. The Solution acquires no Colour, but, being filtrated, is as clear as diſtil'd Vinegar, and of a ſweetiſh Taſte, inclining a little to bitter.

Should we continue to throw freſh diſtil'd Vinegar on the ſame Coral, in proportion as we ſeparate the Solution from it, there will remain nothing but a very ſmall Quantity of argillaceous Matter, which is indiſſoluble by the ſame Diſſolvent, tho' duly apply'd; but this is neglected as a thing of no Uſe.

If you have a mind, out of Curioſity, to diſtil off the humid Part of your Solution, inſtead of evaporating it, as was directed, you will obtain only an inſipid Water, becauſe the Acid is firmly fixed in the Coral. We evaporate this Water, becauſe it would be of no Service, and would only weaken the Impregnation.

The Solutions of Pearls, Crabs-eyes, burnt Hartſhorn, and other alcaline Subſtances, are perform'd after the ſame manner; Salts and Magiſteries may alſo be made of them, like thoſe of Coral.

It is here to be obſerved, that a Solution of theſe Sorts of alcaline Subſtances, in diſtil'd Vinegar, has ſome Smell of Spirit of Wine, and that a ſmall Quantity of that Spirit may be drawn from it by an Alembic, and a very gentle Fire. The Reaſon is, that, in the making of the Vinegar, the Acids had in a manner fixed this ſulphureous Spirit; but, when they come to enter the Pores of the Coral, they are forced to abandon it, and leave it to reſume its Volatility.

Magistery *of* Coral.

This Operation is perform'd on Coral firſt diſſolv'd, and afterwards precipitated in very fine and white Particles.

Take any Quantity of diſtil'd Vinegar, impregnated with red or white Coral, as before deſcribed; pour it into a Phial or Matraſs, and inſtil therein Drop by Drop the Liquor of Salt of Tartar *per Deliquium*; there will be produc'd a *Coagulum*, which will be precipitated to the Bottom in the Form of a very white Powder. Let the clear Liquor be pour'd off by Inclination, and, waſhing the Powder in five or ſix Waters, afterwards dry it. This is what we call *Magiſtery of Coral*. Great Virtues are aſcribed to it; it is ſaid to comfort and ſtrengthen the Heart, to reſiſt Poiſon, and to ſtop a Dyſentery, and all Hæmorrhages. The Doſe is from ten to thirty Grains, in any Liquor appropriated to the Diſtemper.

REMARKS.

The Name *Magiſtery* is given only to precipitated Subſtances. The Meaning of the Word is, *ſomething very exquiſite*, but oftentimes there is nothing in it extraordinary; for Magiſteries are no more than Subſtances attenuated and divided by Solution and Precipitation. The firſt Chymiſts invented this Term for ſome particular precipitated Subſtances, but not for all; and we have now no general Idea, or eſtabliſh'd Characteriſtic, to diſtinguiſh Magiſtery from Precipitate; whence they are very much confounded, and we are pleaſed to continue to them both the ſame Name, which has paſſed current for a long time, without troubling ourſelves to inquire into the Reaſon. What may be ſaid on this Subject is, firſt, that every Magiſtery is a Precipitate, but every Precipitate is not a Magiſtery; ſecondly, that Magiſteries are always very white, and lighter than other Precipitates, which is the Reaſon why they are commonly longer in precipitating; thirdly, moſt of thoſe Preparations call'd Magiſteries are made from ſtony Subſtances, as Corals, Shells, Pearls, Crabs-eyes, Hartſhorn, Ivory, Sulphur, Antimony, and Biſmuth; and, in particular, the Magiſtery of Coral is call'd the *Albugo* of Coral, becauſe of its Whiteneſs.

The Liquor of Tartar, which is an alcaline Salt diſſolv'd, encountering with the Acid, makes it quit its Hold of the Particles of Coral, which it held ſuſpended, ſo that they are precipitated by their Weight. This Precipitate is nothing but a Coral reduced to a very fine Powder by the Acids, which divide what ſeemed indiviſible under the levigating Stone into a great Number of Particles. But we ought here to remark, that theſe Preparations, inſtead of rendering the Coral more efficacious, as is pretended, make it almoſt uſeleſs. This is eaſy to be proved, if we conſider, that Coral acts no otherwiſe on the Body than by abſorbing the Acids, and the acrimonious and ſalt Humours, which are the Cauſes of ſeveral Diſeaſes at all times. For Example, it puts a Stop to Hæmorrhages on no other account than by mollifying the pungent Salts which corrode the Membranes of the Veins, or excite Effervеſcences in the Blood, conſiderable enough to cauſe an Extravaſation; it ſtops Diarrhœas only by ſubduing the Acrimony of the Bile, or other Humours; and, in ſhort, that it cures Relaxations of the Uvula, and is a Remedy for ſeveral other Diſorders, is owing purely to its breaking the Force of the Ferments which ſupport them, in the ſame manner as it deſtroys the Acid in Vinegar, or other Liquors. This being the Caſe, as there ſeems to be great Reaſon to believe, it is better to take the Coral without any other Preparation than what the Marble gives it, than to diſſolve it by an Acid, and precipitate it into a Magiſtery; for the Acids or acrimonious Humours of the Body, meeting with the Magiſtery, and finding nothing in it to mollify or blunt their Points, will continue their Activity, and ſo no Effect will follow. The ſame may be ſaid with regard to the Magiſteries of Pearls, Hartſhorn, Crabs-eyes, Ivory, and Shells, which are made after the ſame manner. They are, indeed, ſlight Abſorbents, but are much leſs active and effectual in Diſeaſes than the Subſtances themſelves, with the ſimple Preparation of the Porphyry. Here it may be proper to obſerve, by the way, that, among the alcaline Subſtances, of which I have ſpoken, and which are now very much uſed in Medicine, Coral is the ſtrongeſt Abſorbent, and what appears to me of the greateſt Efficacy in ſtopping an Hæmorrhage.

There is not the leaſt Effervеſcence in this Precipitation, becauſe the acid Points of the Vinegar, being broken, have neither Strength nor Motion enough left to penetrate and diſperſe the Parts of the Salt of Tartar. But if the Solution of the Coral be made with a ſtronger Diſſolvent than Vinegar,

Vinegar, for Inſtance, with Spirit of Vitriol, there will be an Ebullition in the time of Precipitation, becauſe there will remain Activity enough in the broken Points to enter into the Pores of the alcaline Salt, and to rarefy it.

The Powder of red Coral grows whiter, in proportion to its Fineneſs; the Stone changes its red Colour into a pale; but the Acids dividing it yet much more, it acquires a white Colour, which can proceed only from the Diſpoſition of the Parts, which cauſes different Reflexions of the Rays of Light to our Eyes.

Some, who are willing to have their Magiſtery of the Colour of red Coral, tinge the diſtil'd Vinegar, which they uſe for the Solution of the Coral, with dry'd red Roſes.

Salt *of* Coral.

This is a Preparation of Coral, rarefy'd and penetrated by the Acids of the Vinegar.

Take what Quantity you pleaſe of a Solution of Coral in diſtil'd Vinegar; put it into a Glaſs Cucurbit, or a Stone Veſſel, and ſet it to evaporate all its Humidity in a Sand-heat; there will remain at the Bottom a Salt of Coral, which keep in a Phial, well ſtopt. It is given for the ſame Purpoſes as the Magiſtery. The Doſe is but ſmall, being from five to fifteen Grains.

Remarks.

Coral will yield three Kinds of Salt; the firſt is a volatile Salt, which you obtain in a ſmall Quantity by Diſtillation in a Retort; it is of a urinous Nature, and altogether like that of Salt of Hartſhorn, and of animal Subſtances. The ſecond Kind is a fixed Salt, obtained by Calcination and Lixiviation, and nearly reſembling thoſe Salts which are got out of ſeveral terreſtrial Plants by the ſame Method; but there is a great Probability, that this Salt is a Sea-ſalt, contracted by the Coral during its Growth in the Sea, and rendered porous and alcaline by Calcination. I have ſpoken before of theſe two Salts. The third Kind is the Salt of Coral, of which we are ſpeaking, and which I juſt now deſcribed: It is a Coral penetrated and diſſolved by an Acid, which is condenſed and incorporated with it. This laſt is the only one in Uſe, under the Name of Salt of Coral, there being no Mention, in the Practice of Medicine, of the other two Salts, which, however, may be ſaid to be true Salts of Coral. But, to return to our Operation.

In this Evaporation there only paſs off the aqueous Parts, and, the Acids ſtill adhering to the Body of the Coral, there is form'd a Kind of Salt, which in drying, provided it be not ſhaked, ſhoots into ſmall fine Figures, chanel'd, and interlaced one within another, and repreſenting, as it were, a ſmall Foreſt of Salt, agreeable enough to the Sight. You muſt not think, that theſe Figures owe their Riſe to any particular Manner of Operation; Art has no Share therein; they are form'd conſtantly and naturally in all Operations, whenever repeated, and as ſoon as the Evaporation is a third Part advanced. Part of this Salt, tho' the Fire be but ſmall, is ſublimated, and adheres to the Margin of the Veſſel, and even extends itſelf a little over it.

I ſhould hardly forbear perſuading myſelf, that this Diſpoſition of the Salt of Coral was a kind of Revivification, and that it repreſents, in ſome meaſure, the Branches of the Coral, whence that Salt proceeds, if I were not appriſed, that Salts, obtained by the ſame Proceſs, as thoſe of Pearl, Mother of Pearl, Crabs-eyes, Hartſhorn, and Ivory calcin'd, all aſſum'd the ſame Figure.

When the Solution of Coral is about two Thirds evaporated, it becomes a little turbid, and acquires a brown Colour, becauſe the Particles of the Coral, not being extended in ſo great a Quantity of Liquor as before, collect themſelves into Molecules of a larger Size, and more ſenſible to the Sight; but, towards the End of the Evaporation, the Liquor appears greeniſh; which Colour is not the Effect of Chance, for the ſame thing happens at all times, in the Preparation of this Kind of Salt of Coral. It ſeems to proceed from a Vitriol contained in the Coral; for I have, on another Occaſion, by means of a Knife touch'd with a Load-ſtone, prov'd that Coral contains a conſiderable Quantity of Particles of Iron: Now it is well known, that Iron is form'd of a vitriolic Subſtance, and may be almoſt wholly reduc'd into a Vitriol. The ſame greeniſh Colour of the Liquor continues in the Salt of Coral, till it begin to be condenſed by the Fire; and does not leave it, till it arrives at a good Degree of Dryneſs, when it turns white. It muſt be obſerved, that when we prepare in this manner the Salts of Crabs-eyes, Pearls, Mother of Pearl, and Hartſhorn, this greeniſh Colour does not appear: Hence all theſe Subſtances are void of Iron Particles, and the touch'd Knife diſcovers none in them either before or after Calcination.

If, in order to make that Kind of Salt of Coral before deſcribed, you had taken four Ounces of Coral, well pulverized and dry'd, then wholly diſſolv'd it in diſtil'd Vinegar by repeated Affuſions, and after due Filtration evaporated it, you would have obtained five Ounces and ſix Drams of Salt, of a good Whiteneſs and Dryneſs; there were then incorporated in the Pores of the Coral one Ounce ſix Drams of the Acid of the Vinegar; but the Points are well ſheath'd, for they are no longer ſenſible to the Taſte, and the Salt has only a ſtyptic and bitter Flavour.

Though the Preparation, juſt now deſcribed, be what we call the *Salt of Coral*, we muſt not ſuppoſe, that it is a true Salt of Coral; it is rather a Salt of Vinegar, ſince it is compos'd only of the Acids of Vinegar, detained and fixed in the Pores of the Coral; as in a terreſtrial Subſtance, which only ſerves to incorporate them. For a Proof of this Aſſertion, diſſolve this Salt of Coral in Water, and pour thereon Oil of Tartar *per Deliquium*, there will be formed a Magiſtery, that is, a Coral in Powder, the Acids of the Vinegar, which had brought it into the Form of a Salt, being broken by the Liquor of the Salt of Tartar.

If you put this Salt of Coral into a Retort, and urge it by a Sand-heat, you will obtain a Liquor ſimply ſtyptic, without any conſiderable Acidity; which ſhews, that the Acids are deſtroy'd, and never come out of the Alcali as they enter into it; there will remain a Powder of Coral of a grey Colour, which is of no Uſe. *Lemery, Cours de Chymie.*

CORALLODENDRON.

The Characters are,

It hath the Appearance of a Tree: The Leaves, for the moſt part, conſiſt of three Lobes: The Flowers are papilionaceous: The Standard, or Vexillum, is long, and ſhap'd like a Sword: The Wings on each Side, and the Keel, or Carina, are very ſhort: The Flowers are ſucceeded by knobbed bivalve Pods, which contain ſeveral Kidney-ſhap'd Seeds.

Boerhaave mentions two Species of this Plant.

1. Corallodendron; triphyllon; Americanum; ſpinoſum; flore ruberrimo. *T.* 661. *Arbor Coral.* H. A. 1. 211. *Coral, Arbor, ſiliquoſa.* J. B. 1. 426. *Siliqua, ſylveſtris, ſpinoſa, Arbor Inda.* C. B. P. 402. *Arbuſcula Corallii.* Ferrar. Flor. 381. *Coral, Arbor.* Cluſ. App. 1. H. Prægn. *The three-leav'd* AMERICAN CORAL-TREE, *with deep-red Flowers, commonly call'd in* America THE BEAN-TREE.

2. Corallodendron; triphyllon; Americanum; minus; ſpinis & ſeminibus nigricantibus. *T.* 661. Coral, Arbor, ſiliquoſa, minor, ſpinis & ſeminibus nigricantibus. *H. L.* 189. *H. Prægn. Leſſer three-leav'd* AMERICAN CORAL-TREE, *with blacker Seeds and Spines. Boerh. Ind. alt. Vol.* 2.

Boerhaave ſays, that the Virtues of theſe Trees are not yet diſcovered; but *Ray* has the following Particulars relative to the Medicinal Uſes of the firſt.

The Inhabitants of *Malabar* make Sheaths of the Wood for their Swords and Knives. They uſe the ſame, together with the Bark, in waſhing a ſort of Garments which they call *Saraſſas*, and make of the Flowers the Confection *Caryl.* The Leaves pulverized, and boiled with the mature Nux Indica, or Coco-nut, conſume Venereal Buboes, and eaſe Pains of the Bones; bruiſed, and applied to the Temples, they cure the Cephalæa, and Ulcers: Mixed with the Sugar called *Jagra*, they mitigate Pains in the Belly, eſpecially in Women; and the ſame Effect follows from the Uſe of the Bark, levigated with Vinegar, or ſwallowing the Kernel, ſtript of its red Pellicle: The Juice of the Leaves, taken with the Oil *Sergelim*, mitigates Venereal Pains; drank with an Infuſion of Rice, it ſtops Fluxes; made into a Cataplaſm, with the Leaves of *Beteleira*, it deſtroys Worms in old Ulcers; and, worked with Oil, it cures the Pſora and Itching. *Raii Hiſt. Plant.*

CORALLOIDES.

The Characters are,

It is a dry juiceleſs Subſtance, harder than that of the *Lichen*, brittle, ligneous. In Shape it pretty well reſembles Corals, being ramous, and furniſhed with Apices. On the Apices of the Tops of the Branches grow fungous Tubercles, opening when mature, caducous, and full of a very ſmall ſlender Seed.

Of this *Boerhaave* mentions nine Species.

1. Coralloïdes; cornua cervi referens, corniculis brevioribus. *T.* 565. *Muſcus Coralloïdes, ſaxatilis, cornua Cervi referens.* C. B. P. 361. *Lithobryon coralloïdes.* Col. 2. 83. *Muſco-fungus montanus, corniculatus, minor.* M. H. 3. 632. *Muſcus corniculatus.* J. B. 3. 767.

2. Coralloïdes; cornua cervi referens, corniculis longioribus. *T.* 565. *Muſco-fungus, montanus, corniculatis, major.* M. H. 3. 632. Sect. 15. T. 7. 1. *Muſcus ceranoïdes, major.* C. B. P. 361.

3. Coralloïdes; qui muſco-fungus; ceranoïdes; albus; tuberculatus; apicibus nigris. *M. H.* 3. 633. *Muſcus ceranoïdes, albus, fungoſus, apicibus nigris.* Plukn. Phyt. T. 205. F. 6.

4. Coral-

4. Coralloïdes; qui muſco-fungus; coralloides; montanus; ramoſiſſimus; fuſcus. *M. H.* 3. 633.

5. Coralloides; corniculis candidiſſimis. *T.* 565.

6. Coralloides; candida; ramoſiſſima; exigua.

7. Coralloides; candida; ramoſiſſima; mollis.

8. Coralloides; candida; ramoſiſſima; mollis; capillaris.

9. Coralloides; candida; ramoſiſſima; molliſſima; filis pilo tenuioribus. *Boerh. Ind. alt. Plant. Vol.* 1.

Coralloïdes; fruticoſa; planta; marina; rectior, is the *Titanokeratophyton; quod Lithophyton; marinum; albicans.*

Coralloïdes; granuloſa; alba, is the *Titanokeratophyton; quod Lithophyton; cortice verrucoſo, albo.*

Coralloïdes, minor, bulbifera, is the *Dentaria; heptaphyllos; baccifera.*

Theſe are all call'd *Coralloides*, from their Reſemblance to *Coral*. Their Virtues in Medicine are not much celebrated; but they are, however, ſaid to be ſtrengthening and aſtringent.

CORAX, κόραξ. The Raven. See CORVUS.

CORBATUM, Copper. *Johnſon.*

CORCHORUS *Plinii*, C. B. *Corchorus ſive Melocia*, J. B. Park. *Melochia*, Alpin. *Corchorus*, Ger. *Olus Judaicum nonnullis.*

It has a ſmooth Stalk, a Cubit in Length; Leaves pretty like the *Cynocrambe*, or Mercury, but larger. The Pods hang each by a ſhort Pedicle, and are four or five Inches long, mark'd with yelloviſh Striæ, mucronated, quinquefid lengthwiſe, and containing a copious, Aſh-colour'd, angulous, ſmall Seed, of a viſcid Taſte. The Flowers, as *Alpinus* informs us, are ſmall, yellow, leſs than thoſe of the Leucoia, and conſiſting of five broad, ſhort, mucronated Petals. The Plant is a Native of *Egypt*.

There is no ſort of Food more common or grateful to the *Egyptians* than this Plant, for they boil it in Water, or in Broths; but many find themſelves ill, after eating it; for it is of little Nouriſhment, and generates a viſcid Juice, ſo that they who frequently eat it are ſubject to difficult Obſtructions. Of this we are aſſured by *Veſlingius*, who ſays, that a Diſh prepared of boil'd *Melochia* is fit only for vulgar and coarſe Palates, viſcid, and, beſides, inſipid, if it be not ſeaſon'd, as uſual, with Juice of Lemons. The Seeds are very much uſed by the *Egyptians*, for all the Purpoſes for which the Seed of Althæa is recommended; for its Mucilage has a greater Viſcidity than that of Althæa: Two Drams of it, taken, purge all Humours abundantly. The Decoction of the whole Plant, but eſpecially of the Leaves, is beneficial to the Breaſt, by moiſtening it; for which Reaſon, being taken with Sugar-candy, it is a preſent Remedy for rough and dry Coughs. *Raii Hiſt. Plant.*

CORDA, or CHORDA, from χορδὴ, a Chord of a muſical Inſtrument. A CHORDEE, which ſee.

CORDIALIA. See CARDIACA.

CORDINEMA. See SCORDINEMA.

CORDOLIUM. The Heart-burn.

CORDOSUM FILUM. A contorted Thread.

CORDYLA, κορδύλη. A Name for the *Thunnus*, Tunny Fiſh. See THUNNUS.

CORE, κόρη. The Pupil of the Eye.

COREMATA, κορήματα. Bruſhes or Beſoms. But, in *Paulus Ægineta*, κορήματα imports Medicines for cleaning and ſmoothing the Skin.

CORIANDRUM, Coriander.

The Characters are,

It hath a fibroſe perennial Root. The lower Leaves are broad; but the upper Leaves are deeply cut into fine Segments. The Petals of the Flower are unequal, and ſhaped like a Heart. The Fruit is compoſed of two hemiſpherical (and ſometimes ſpherical) Seeds.

1. Coriandrum; majus. *C. B. Pin.* 158. *Tourn. Inſt.* 316. *Elem. Bot.* 266. *Boerh. Ind. A.* 59. *Coriandrum*, Offic. J. B. 3. 89. Chab. 295. Raii Hiſt. 1. 470. Synop. 3. 221. Ger. 859. Emac. 1012. *Coriandrum vulgare*, Park. Theat. 918. CORIANDER.

The lower Leaves of *Coriander* are a little like Parſley-leaves, roundiſh, and crenated about the Edges. The Stalks are ſmooth, round, and ſtriated, beſet with longer, narrower, and finer Leaves than thoſe below, ariſing to be two or three Foot high, bearing, at the Top, Umbels of ſmall white five-leaved Flowers, which falling away, there follow, in their Places, round, perfectly ſpherical, ſtriated Seed. The whole Plant, whilſt green, has a nauſeous ungrateful Smell, like Bugs; but the Seed, when dry, is of a pleaſant agreeable Scent.

It is generally ſown for the Benefit of the Seed, tho' it is found in various Places, flowering in *June*; and the Seed, which is the only Part uſed, is ripe in *July* and *Auguſt*.

They are grateful and ſtrengthening to the Stomach, help Digeſtion, expel Wind, and are frequently uſed as Correctors in ſtrong purging Medicines. Some commend them as good againſt the King's-evil. *Miller's Bot. Off.*

2. Coriandrum; minus; teſticulatum. *C. B. P.* 158. *M. H.* 3. 269. SMALLER TESTICULATED CORIANDER.

3. Coriandrum; ſylveſtre; fœtidiſſimum. *C. B. P.* 158. *a. Boerh. Ind. alt. Plant. Vol.* 1.

Botaniſts and Phyſicians are not agreed as to the poiſonous Quality of *Coriander*. *Dioſcorides* writes, that, being drank, it cauſes Hoarſeneſs, with a Diſturbance of the Brain and Reaſon, like what is excited by exceſſive Drinking of Wine. According to *Simeon Sethi*, the Juice, drank, is a mortal Poiſon, and makes the whole Body ſmell of *Coriander*. Many alſo of the *Arabians* have aſcrib'd to *Coriander* a cold narcotic Quality, producing a Stupor, Diſturbance of the Senſes, and fatal Diſorders. With theſe agrees *Matthiolus*, who writes, that the Seed ought never to be uſed in Food or Medicine, unleſs after three Days Maceration in Vinegar. *Tragus* alſo charges the Apothecaries to ſell this Seed to no Perſon, no not with Sugar, before it is prepared in the aforeſaid Manner, if they intend not to give Poiſon inſtead of a Remedy.

On the contrary, *Lobel* and *Alpinus* aſſure us, that the *Egyptians* very commonly uſe the green Herb in Food. However, *J. Bauhine* is of Opinion, that we ought to be cautious in the Uſe of this Plant, eſpecially if unprepared; becauſe of the malignant Quality which ſome, doubtleſs from Experience, have aſcribed to it. The extraordinary rank and noiſom Smell which it yields, upon rubbing it with the Fingers, argues a Malignity; and tho' the *Spaniards*, as we are inform'd by *Amatus*, very frequently uſe it, and look upon it as a Cordial, yet Experience has ſhewn, that many *Spaniſh* Monks have loſt their Reaſon by the Uſe of this Herb, for the Cure of whom ſo many Hoſpitals are erected; and this might alſo be the Caſe, ſays *C. Hoffman*, in *Egypt*, tho' *Alpinus* did not obſerve it.

The Seeds, incruſted in Sugar, or Coriander-comfits, are very much uſed by us, in *Germany*, ſays the fore-mention'd *Hoffman*, to help Concoction; for they have ſomething of Aſtringency, which is alſo the Reaſon why they are of Service in Spitting of Blood, and in Fluxes of the Belly; but, in theſe Caſes, we commonly give it torrefy'd; as we do alſo with an Intent to deſtroy Worms. But I would adviſe thoſe who are ſubject to be too venturous, not to uſe it very often, nor unprepared; for, tho' poſſibly the Seeds may have very little excrementitious Humidity, they are not wholly deſtitute of it. *C. Hoffman.*

The Seeds bruiſed, and ſprinkled upon recent raw Fleſh, prevent it from putrefying ſo ſoon as it would otherwiſe do, in the Summer-ſeaſon, if we may believe *Matthiolus*.

CORIANON. The ſame as CORIANDRUM.

CORIARIA, *Myrtle-leaved Sumach*, vulgo.

The Characters are,

It hath a Flower compoſed of ten Stamina, (or Threads) each having two Apices; theſe ariſe from the Bottom of the Calyx, which is divided into five Parts to the Baſe. When the Flower is paſs'd, the Pointal (which is contain'd in another Cup, divided alſo into five Parts to the Baſe) becomes (jointly with the Cup) a Fruit, containing five Kidney-ſhaped Seeds.

We have but one Species of this Plant, which is,

Coriaria vulgaris. Mem. Acad. Scien. Ann. 1711. MYRTLE-LEAVED SUMACH, *vulgo.*

This Plant is uſed by the Tanners, for dreſſing their Leather, in the South of *France*, where it grows wild, in great Plenty. *Miller's Dictionary, Vol.* 2.

CORINDUM.

The Characters are,

It hath a trailing Stalk, emitting Claſpers, whereby it faſtens itſelf to whatever Plant it ſtands near. The Calyx (or Flower-cup) conſiſts of three Leaves. The Flowers conſiſt of eight Leaves, and are of an anomalous Figure. The Ovary becomes a Fruit, which is like a Bladder, and divided into three Cells, in which are contain'd round Seeds, in form of Peas, of a black Colour, having the Figure of a Heart, of a white Colour, upon each.

Boerhaave mentions two Species of this Plant.

1. Corindum; folio ampliori; fructu majore. *T.* 431. *Piſum; veſicarium, fructu nigro, albâ maculâ notato.* C. B. P. 343. *Halicacabum peregrinum multis, ſive Cor Indum.* J. B. 2. 173. *Halicacabus peregrina.* Dod. p. 455. *Piſum cordatum.* H. Eyſt. Æſt. o. 13. F. 11. 1. *& vulgo. a.* HEART-PEA, WITH LARGE LEAVES AND FRUIT.

2. Corindum; folio, & fructu, minore. *T. a.* HEART-PEA, WITH SMALL LEAVES AND FRUIT, CALL'D BY THE INHABITANTS OF THE WEST-INDIES WILD PARSLEY. *Boerh. Ind. alt. Plant. Vol.* 1.

The *Corindum* is ſaid to be uſed as an emollient Herb, boil'd as Food. The Seeds, which are a ſort of Pea, are alſo boil'd and eaten.

CORINTHIACÆ UVÆ. See UVÆ PASSULÆ MINORES.

CORIS, Offic. *Coris lutea*, C. B. Pin. 280. *Coris Matthioli*, Ger. Emac. 544. Park. Theat. 570. *Coris legitima Cretica Belli*, Ejusd. *Hypericoides, Coris quorundam, & Coris legitima, Cretica*, J. B. 3. 384. Chab. 456. Raii Hist. 2. 1018. *Hypericum seu Coris legitima Ericæ similis*, Hist. Oxon. 2. 469. *Hypericum saxatile tenuissimo & Glauco folio*, Elem. Bot. 322. Tourn. Inst. 255. BASTARD SAINT JOHN'S-WORT.

The Seed provokes Urine, and the Menses; and, taken in Wine, is good against the Bite of the *Phalangium*, (a poisonous Spider) and for that Species of Convulsion call'd Opisthotonos. Oil also, impregnated with this Plant, is good for the last-mention'd Disorder, apply'd externally. *Dioscorides*, L. 3. C. 174.

CORIUM. The Skin. See CUTIS.

CORNEA TUNICA. A Coat of the Eye thus call'd. See OCULUS.

CORNELUS, or CORNEOLUS. See CARNEOLUS.

CORNESTA. A Retort.

CORNICULA. An Instrument made of Horn, almost in the Form of a Cupping-class, except that, at the more slender Extremity, there is a small Perforation. The wide End is laid upon emaciated Parts, and a Person, applying his Mouth to the Perforation at the small Extremity, by Suction draws out the Air: In consequence of this, the Part cover'd rises into the Hollow of the Instrument; and by this means the nutritious Juices are thought to be invited to the emaciated Part. *Hildanus*, *Cent.* 1. *Obs.* 80. relates a Cure perform'd by this Means, and gives a Figure of the Instrument. *Tulpius*, L. 3. *Obs.* 49. gives another Instance of a Cure perform'd by this Means.

The Instrument was, by the Antients, esteem'd a Species of Cupping-glass.

CORNICULARIS PROCESSUS. The same as CORACOIDES.

CORNICULATÆ PLANTÆ are Plants which produce many distinct horn'd Seed-pods, call'd *Siliquæ*. *Miller's Dictionary.*

CORNIX, Offic. Schrod. 5. 317. Bellon. des Oyse. 282. Will. Ornith. 83. Raii Ornith. 122. Ejusd. Synop. A. 39. Gesn. de Avib. 281. *Cornix nigra*, Aldrov. Ornith. 1. 736. *Corvus*, Jonst. de Avib. Tab. 16. Mer. Pin. 171. *Corvus minor*, Charlt. Exer. 75. THE CARRION-CROW.

The Dung of the Carrion Crow, taken in Wine, is recommended for the Cure of a Dysentery.

CORNU. A Horn. That of the Male Deer, commonly call'd *Hartshorn*, is most frequently used in Medicine; the Uses of which are specify'd under the Article CERVUS, together with the Analysis of Horns in general; which, under the Article ALCALI, is, by Mistake, promised under the Article CORNU.

For an Account of the Analysis of Hartshorn, by Boiling, see ALIMENTA.

CORNU MONOCEROTIS. See MONOCEROS.

CORNU RHINOCEROTIS. See RHINOCEROS.

CORNU CERVI, in Chymistry, is the Beak of an Alembic.

CORNU CERVI, in Botany, is a Name of some Plants. Thus,

CORNU CERVI ALTERUM REPENS is the *Nasturtium*; *Sylvestre*; *capsulis*; *crispatis*.

CORNU CERVINUM is a Name for the *Coronopus hortensis*.

CORNUA *Uteri*. In comparative Anatomy, the Horns of the Womb; for the Womb is so divided in some Quadrupeds, as to form Corners resembling Horns.

CORNUA also imports horny Excrescences, which sometimes arise on some Parts of the Body.

CORNUE, in *French*, is a Retort.

CORNUMUSA. A Retort.

CORNUS. The Name of a Tree.

The Characters are,

The Calyx (or Flower-cup) consists of four small rigid Leaves, which are expanded in form of a Cross; from the Centre of which are produced many small yellowish Flowers, each consisting of four Leaves, which are disposed almost in form of an Umbrella. These Flowers are succeeded by Fruit, which are oblong, or of a cylindrical Form, somewhat like an Olive, containing a hard Stone, which is divided into two Cells, each containing a single Seed.

Cornus; hortensis; mas. *C. B. Pin.* 447. *Tourn. Inst.* 641. *Elem. Bot.* 502. *Boerh. Ind. A.* 2. 256. *Jonst. Dendr.* 88. CORNUS, Offic. Chab. 14. *Cornus mas*, Ger. 1282. Emac. 1466. Park. Theat. 1520. Raii Hist. 2. 1537. *Cornus hortensis mas*, C. B. Pin. 447. Tourn. Inst. 641. Elem. Bot. 502. Boerh. Ind. A. 2. 256. Jonst. Dendr. 88. *Cornus vulgaris*, Rupp. Flor. Jen. 72. *Cornus sativa sive domestica*, J. B. 1. 210. THE CORNELIAN CHERRY.

This Tree is usually of the Bigness of an ordinary Cherry-tree, with Leaves somewhat alike; but broader, smoother, and not serrated about the Edges. The Flowers grow in Clusters, being small and yellow. The Fruit is longish, of a cylindrical Shape, about as big as a *Lucca* Olive, of a red Colour when ripe, including a long hard Stone. It is of a sweet, but somewhat astringent Taste. It grows in Gardens, and flowers in *March* and *April*; but the Fruit is not ripe till *September*.

The Fruit of the Cornel-tree is cooling, drying, and astringent, strengthens the Stomach, stops all kinds of Fluxes and Looseness, and is good in Fevers, especially if attended with a Diarrhœa.

The only officinal Preparation of this Fruit is the *Rob de Cornis*. *Miller's Bot. Off.*

The Leaves of the Cornelian-cherry are very bitter: The Fruit is sour, styptic, and gives as lively a Red to blue Paper as Alum, which gives us room to think, that it contains a Salt analogous to it. Thus it is no Wonder, that *Hippocrates*, *Dioscorides*, and *Pliny*, believed this Fruit to be good to stop a Looseness. *Ruellius* says, that they preserve it, for this Disorder, in Bottles of Honey or Syrup. An Electuary is made of the strain'd Pulp for a Dysentery, and to restore the Appetite. To make a Wine of Cornelian-cherries, *J. Bauhine* advises to put ten Pounds of these Fruits into fifty Quarts of good red Wine, mix'd with six Quarts of Steel Wine: Let the Whole ferment a Fortnight; after which draw it out, and keep it in Bottles for a Looseness. The dry'd Cornelian-cherries are used in cooling and astringent Ptisans. They are preserved with Sugar; and a Marmelade is made of them. *Martyn's Tournefort.*

ROB DE CORNIS: *Rob of Cornelian-cherries.*

Take one Pound of wild Cherries, and macerate them in a sufficient Quantity of Spring-water, till the Pulp can be pass'd thro' a Sieve: Then evaporate the superfluous Humidity; and, with half a Pound of fine Sugar, boil it up to a due Consistence.

2. Cornus; fœmina. *C. B. P.* 447. *Lob. Ic.* 169. THE DOG-BERRY, OR GATTEN-TREE.

The Fruit of the *Cornus fœmina* is very bitter, styptic, and gives a pretty deep-red Colour to blue Paper. *Tournefort.*

3. Cornus; fœmina; foliis variegatis. *H. L.* THE STRIPED DOGBERRY-TREE.

Besides these, *Miller* takes notice of the

Cornus; fœmina, Laurifolia, fructu nigro cœruleo, officulo compresso, Virginiana. *Pluk. Almag.* THE VIRGINIAN DOGBERRY-TREE. And the

Cornus; mas; odorata, folio trifido, margine plano Sassafras dicta. See SASSAFRAS. And five other Species in the second Volume of his Dictionary.

CORNUTA. A Retort, so call'd on account of its Shape.

CORNUTIA. A Plant, so call'd from *Cornutus*, a Physician of *Paris*, who publish'd a History of *Canada* Plants. We have no *English* Name for this Plant.

The Characters are,

It hath a monopetalous personated Flower, whose upper Lip stands erect, but the under Lip is divided into three Parts; from the Flower-cup arises the Pointal, which is fixed like a Nail in the hinder Part of the Flower, which afterward becomes a spherical succulent Berry, including Seeds, which are, for the most part, Kidney-shap'd.

There is but one Species of this Plant yet known; which is,

Cornutia flore pyramidato cœruleo, foliis incanis. *Plum.* CORNUTIA WITH A PYRAMIDAL FLOWER, AND HOARY LEAVES. *Miller's Dictionary, Vol.* 2.

COROCRUM. A Ferment.

COROLLA. The Petals of Flowers.

CORONA. A Crown, in Botany, is a Series of small Beards, or Rays, in Discoide Flowers. *Rieger.*

CORONA IMPERIALIS.

The Characters are.

The Flower is Bell-shap'd, and hexapetalous; the Petals being furnished on the Inside of the Unguis with a Cavity, containing a Liquor as sweet as Honey; it is also pendulous, naked, provided with six Stamina, contains an Ovary, and is disposed into the Form of a Crown, under a foliaceous Crown and *Coma*. The Ovary becomes an oblong winged Fruit, containing flat Seeds, placed upon one another: From the Centre of the Apex proceeds a long Tube, furnished with a trifid Top: The Leaves are like those of the Lily, and grow in Circles round the Stalk; the Root consists of Coats, and is furnished with Fibres at the Bottom.

Boerhaave take notice of thirteen Species of this Plant.

1. Corona Imperialis major. *T.* 372. *Lilium, sive Corona Imperialis, per omnia major.* H. R. Par. 106. THE GREATER CROWN IMPERIAL.

2. Corona

2. Corona Imperialis. *Dod. p.* 202. *H. Eyst. Vern.* c. 5. *F.* 2. *Fig.* 1. *Lilium, sive Corona Imperialis.* C. B. P. 79. M. H. 2. 406. *Tusai, sive Lilium Persicum.* Clus. H. 127. THE COMMON CROWN IMPERIAL.

3. Corona Imperialis; folio vario. *T.* 372. *Lilium, sive Corona Imperialis, Sinensium, seu folio vario.* H. R. Par. 107. *Lilium Imperiale, seu Corona Imperialis, foliis variegatis.* M. H. 2. 407. STRIP'D-LEAV'D CROWN IMPERIAL.

4. Corona Imperialis; folio vario ex viridi & argenteo. SILVER STRIP'D-LEAV'D CROWN IMPERIAL.

5. Corona Imperialis; duplici Coronâ. *T.* 372. *Lilium sive Corona Imperialis, duplici Coronâ.* C. B. P. 79. M. H. 2. 407. CROWN IMPERIAL WITH A DOUBLE CROWN.

6. Corona Imperialis; triplici Coronâ. *C. H. L. Schuyl.* CROWN IMPERIAL WITH A TRIPLE CROWN.

7. Corona Imperialis; multiflora; latoque caule. *T.* 372. *Lilium, sive Corona Imperialis, multiflora, latoque caule.* C. B. P. 79. M. H. 2. 407. *Tusai πολυανθές.* Clus. CROWN IMPERIAL WITH MANY FLOWERS, AND FLAT STALKS.

8. Corona Imperialis; flore pleno. *T.* 373. *Lilium, sive Corona Imperialis, flore pleno.* H. R. Par. CROWN IMPERIAL WITH A DOUBLE FLOWER.

9. Corona Imperialis; flore pulchrè luteo. *T.* 372. *Lilium, sive Corona Imperialis per omnia major, flore lutea.* H. R. Par. CROWN IMPERIAL WITH A BEAUTIFUL YELLOW FLOWER.

10. Corona Imperialis; flore luteo pleno. CROWN IMPERIAL WITH A DOUBLE YELLOW FLOWER.

11. Corona Imperialis; flore luteo striato. *T.* 372. & *H. Edinb.* CROWN IMPERIAL WITH A YELLOW STRIP'D FLOWER.

12. Corona Imperialis pulcherrima; flore ex aureo & aurantio striato.

13. Corona Imperialis; ramosa. *T.* 373. *Lilium, sive Corona Imperialis, ramosa.* C. B. P. 79. M. H. 2. 407. *Tusai λιχλωφ.* Clus. H. 128. BRANCH'D CROWN IMPERIAL. *Boer. Ind. alt. Plant. Vol.* 2.

The Whole of the Corona Imperialis is poisonous.

Upon the inferior Part of the Petals, certain white limpid Drops of Liquor are found, which resemble a Pearl, and are sweet. These are used by the *Turks* as an Emetic; and by others, as an Ecbolic.

CORONA REGIA. The Herb Melilot. *Blancard.*

CORONA TERRÆ. The HEDERA TERRESTRIS. Ground-ivy. *Blancard.*

CORONA SOLIS.

The Characters are,

The Flower is radiated like that of the Aster, but is larger; the Cup is squamous; the Embryos of the Seeds are distinguished by little imbricated Leaves in the Disk; the Top of the Ovary is crown'd with two small Leaves, betwixt which the Flower grows upon the Ovary; the Seeds are push'd out from the Bottom of the Flower, leaving a Vacuity, which appears very like a Honey-comb.

Boerhaave mentions eighteen Species of this Plant; which are,

1. Corona Solis, Tabernæmontani. *Elem. Bot.* 391. *Tourn.* 489. *Boerh. Ind. A.* 102. *Flos Solis.* Offic. Raii Hist. 1. 314. *Flos Solis major.* Ger. 612. Emac. 751. *Chrysanthemum Peruvianum sive Flos Solis.* Park. Parad. 295. *Chrysanthemum Indicum, Flore & semine maximis annuum.* Herm. Hort. Lugd. Bat. 142. Pluk. Almag. 98. *Chrysanthemum Indicum maximum annuum, non ramosum.* Hist. Oxon. 3. 19. *Helenium Indicum maximum.* C. B. 276. *Herba maxima.* J. B. 3. 107. *Herba maxima, Sol Indianus.* Chab. 360. *Chimalath Peruviana, Flos Solis.* Hern. 228. SUN-FLOWER. *Dale.*

It is a Native of *Peru*, and other Countries of *America*, but is cultivated with us in Gardens for the sake of Ornament. What are its Virtues, says *Cæsalpinus*, was never yet declared; though we may conjecture, that it is of a heating Quality, and of fine Parts, and therefore effectual to the same Purposes as Helenium; but its Tear is by far the most efficacious Part of it. *Fragoso*, in *Clusius*, speaks more fully of its Uses; where he says, "It is a kind of Olus, or esculent Green, and "tastes well; the Leaves, therefore, being cleared of their "Pedicle, and their rough Hairs deterged with a Cloth, may "be eaten; for which Purpose they are first cut, then sprinkled "with Oil, Salt, and Spices, and afterwards boiled in an "earthen Pot, making a Dish not ungrateful to the Palate. "The Fruit also, or the Head, while it is tender, having its "downy Part taken off, which covers the Seed, as it is in a "Artichoke, is much more pleasant Food than any Carduus. "It is proved, by Experience, that this Plant, especially the "Head, is a potent Incentive to Venery. It is highly to be "valu'd, as it produces a resinous Tear, and delicate Gum, "and is both Meat and Drink. It is so full of Moisture, that "the little tender Pedicles, which sustain the Leaves, being "chewed, afford a copious Juice, and the thick and knotty "Stalk serves very well for Firing; for its resinous Liquor, "and ferulaceous Hollowness, make it burn like a Torch." Because the Stalk is very soon cover'd with a Callus after it is broken, it is conjectur'd to be of the Number of vulnerary Plants, on account of the terebinthinaceous balsamic Liquor with which it abounds. *Ettmullerus, T.* 1. says, that the Seed-vessel, taken when the Seeds are almost ripe, and cut, and boiled, affords a copious Gum, which, reduced into the Form of a Plaister, is extol'd as a most singular Vulnerary: The Pulp of the Seeds is sweet, and greedily coveted by Birds, which are fatten'd by it. According to *Hernandez*, the Seeds, though they excite an Head-ach, when eaten too freely, yet they are lenitive to the Breast, and extinguish burning Heats. In some Countries they are bruised, and made into Bread, serving instead of Corn; though some say they prove Incentives to Venery. *Rieger.*

2. Corona Solis; maxima; semine albo, cinereo, & striato. *T.* 489. GREAT ANNUAL SUN-FLOWER, WITH ASH-COLOUR'D STRIP'D LEAVES.

3. Corona Solis; maxima; flore pallidè sulphureo, fere albo; semine nigro. *An Chrysanthemum, majus, alterum, sulphureo magno flore.* H. R. Par? 2. GREAT ANNUAL SUN-FLOWER, WITH PALE BRIMSTONE-COLOUR'D FLOWERS, AND BLACK SEEDS.

4. Corona Solis; maxima; flore pleno, aureo; semine nigro. *a.* GREAT ANNUAL SUN-FLOWER, WITH DOUBLE YELLOW FLOWERS, AND BLACK SEEDS.

5. Corona Solis; maxima; flore pleno, aureo; semine albo. *a.* GREAT ANNUAL SUN-FLOWER, WITH DOUBLE YELLOW FLOWERS, AND WHITE SEEDS.

6. Corona Solis; maxima; flore pleno, sulphureo; semine nigro. *a.* GREAT ANNUAL SUN-FLOWER, WITH DOUBLE BRIMSTONE-COLOUR'D FLOWERS, AND BLACK SEEDS.

7. Corona Solis; maxima; flore pleno, sulphureo; semine albo. *a.* GREAT ANNUAL SUN-FLOWER, WITH DOUBLE BRIMSTONE-COLOUR'D FLOWERS, AND WHITE SEEDS.

8. Corona Solis; ramosa; perennis. *Helenium, Indicum, ramosum.* C. B. P. 277. *Chrysanthemum, Indicum, perenne, flos solis, minor.* Flor. 2. 45. *Flos Solis, prolifer.* H. Eyst. Æst. 0. 5. F. 2. Fig. 1.

9. Corona Solis; parvo flore; tuberosa radice. See BATATA CANADENSIS.

10. Corona Solis; latifolia; altissima. *T.* 489.

11. Corona Solis; latifolia; humilior; Canadensis.

12. Corona Solis; Rapunculi Radice. *T.* 490. *Helenium Canadense, altissimum, Vosacan dictum.* H. R. P. 85.

The Roots of this are bitterish, but not ungrateful. They are used in *Canada* as Food.

13. Corona Solis; altissima; Virgæ aureæ foliis. *T.* 490. TALLEST PERENNIAL SUN-FLOWER, WITH GOLDEN-ROD-LEAVES.

14. Corona Solis; arborea; folio latissimo platani. *Doronicum, maximum, Americanum, latissimo angulosо folio, radice transparente.* H. L. 222. TREE-LIKE PERENNIAL SUN-FLOWER, WITH A BROAD PLANE-TREE-LEAF.

15. Corona Solis; foliis amplioribus laciniatis. *T.* 490. *Doronicum, Americanum, laciniato folio.* C. B. P. App. 516. PERENNIAL SUN-FLOWER, WITH LARGE DIVIDED LEAVES.

16. Corona Solis; foliis angustioribus; laciniatis. *T.* 490. *Aconitum, Helianthemum, Canadense.* Corn. 170. PERENNIAL SUN-FLOWER, WITH NARROW DIVIDED LEAVES.

17. Corona Solis; altissima; caule alato. *T.* 490. *Helenium Canadense, elatius, alato caule.* H. R. P. 85.

18. Corona Solis; salicis folio; alato caule. *T.* 490. WILLOW-LEAV'D PERENNIAL SUN-FLOWER, WITH WINGED STALKS. *Boerh. Ind. alt. Plant. Vol.* 1.

CORONALIS SUTURA. The Coronal Suture. See CAPUT.

CORONALE OS. The *Os Frontis*, according to *Bartholine.*

CORONARIA VASA. The Coronary Vessels. These are certain Vessels, which furnish the Substance of the Heart with Blood. See COR.

Certain Vessels in the Stomach are call'd Coronary Vessels. See COELIA.

CORONE, *κορώνη.* The Carrion Crow. This Name is also given to the anterior Apophysis of the lower Jaw. See CAPUT.

CORONILLA.

The Characters are,

In Habit and Leaves it resembles the Emerus (Scorpion Sena); the Pod is composed of many Parts, join'd, as it were, by a sort of Articulation; each of which is turgid, with an oblong Seed.

Boerhaave mentions eight Species of this Plant; which are,

1. Coronilla; five Colutea minima. *Lob. Ic.* 87. *T.* 650.
1. *Polygala, Valentina.* Cluſ. H. 98. *Colutea ſive Polygala.* 1. *Polygala, Valentina. Cluſii.* M. H. 2. 122. *Polygala, altera.* C. B. P. *Valentina, Cluſii.* M. H. 2. 122. *Polygala, altera.* C. B. P. 349. *Colutea, parva Species, Polygala Valentina, Cluſii.* J. B. 1. 383. H.

2. Coronilla; Hiſpanica; fruteſcens; major. *Colutea, ſive Polygala altera, fruticeſior, foliis latioribus.* H. L. 168. *Polygala major, Maſſiliotica.* C. B. P. 349. *Colutea, Scorpioides Quædani, ſive Polygalæ Cortuſi ſimilis planta, ſed major.* J. B. 1. 382. H.

3. Coronilla; argentea; Cretica. *T.* 650. *Colutea, Scorpioides, Cretica odorata.* Alpin. Exot. 17. M. H. 2. 123. H. SILVER-LEAV'D JOINTED-PODDED COLUTEA OF CANDIA.

4. Coronilla; Zeylanica; argentea tota. *Colutea, Zeylanica, argentea, tota.* H. L. Ic. & Deſcr. 171. H. SILVER JOINTED-PODDED COLUTEA OF CEYLON.

5. Coronilla; minima. *T.* 650. *Ferrum, equinum, Gallicum, ſiliquis in ſummitate.* C. B. P. 349. *Polygalon, Cortuſi.* J. B. 2. 251. *Lotus, enneaphyllos.* Lugd. 510. *Colutea, herbacea, enneaphyllos.* M. H. 2. 120. H. THE LEAST JOINTED-PODDED COLUTEA.

6. Coronilla; herbacea; flore vario. *T.* 650. *Colutea, herbacea, dumetorum, major, ſiliquis articulatis, flore vario.* H. L. *Securidaca, dumetorum, major, flore vario, ſiliquis articulatis.* C. B. P. 349. *Melilotus, quinta, Tragi.* J. B. 2. 349. HERBACEOUS JOINTED-PODDED COLUTEA, WITH A VARIABLE FLOWER.

7. Coronilla; Cretica; herbacea; flore parvo, purpuraſcente. *T. Cor.* 44. *a.* CANDIA HERBACEOUS JOINTED-PODDED COLUTEA, WITH A SMALL PURPLISH FLOWER.

8. Coronilla; Cretica; herbacea; flore parvo, luteo. *T. Cor.* 44. *a. Boerh. Ind. alt. Vol.* 2.

I find no medicinal Virtues attributed to any of theſe.

CORONOPUS.

The Characters are,

It agrees in Flower and Fruit with the Plantain, from which it differs in its Leaves, which are deeply cut in on the Edges; whereas the Leaves of Plantain are either entire, or but ſlightly indented.

1. Coronopus; hortenſis. *C. B. Pin.* 190. *Tourn. Inſt.* 128. *Elem. Bot.* 104. *Boerh. Ind. A.* 2. 101. *Coronopus.* Offic. *Coronopus vulgaris ſive Cornu Cervinum.* Park. Theat. 501. Raii Hiſt. 1. 879. *Coronopus ſive Cornu Cervinum vulgò ſpicâ Plantagineâ.* J. B. 3. 509. *Coronopus, Herba ſtella, Cornu Cervinum.* Chab. 509. *Cornu Cervinum.* Ger. 340. Emac. 427. Mer. Pin. 30. Merc. Bot. 1. 30. Phyt. Brit. 31. *Plantago foliis laciniatis Coronopus dicta.* Raii Synop. 3. 315. *Plantago Coronopus dicta ſativus in acetariis utilis.* Pluk. Almag. 298. *Stella terræ vulgo.* BUCKSHORN-PLANTAIN.

This Plantain has pretty long, ſlender, whitiſh Roots, which run deep into the Ground, having many Leaves lying flat on the Earth, in a round Compaſs; whence it is call'd *Stella Terræ*, or the Star of the Earth: The Leaves differ from all other Plantains, in that they are long, and very narrow, having about ſix ſlender Jags or Laciniæ on each Leaf. They are ſomewhat downy and hairy: The Spikes are narrow, compoſed as in other Plantains, of ſmall, irregular, four-leav'd Flowers, growing on hoary Stalks, three or four Inches long. The Seed is ſmall, of a dark-brown ſhining Colour. It grows in ſandy Ground, and upon Heaths, and flowers in *June*.

Buckſhorn Plantain is much of the Nature of other Plantains, being moderately drying and binding, and a good vulnerary Herb, uſed both inwardly and outwardly; beſides which, it is particularly commended againſt the Bitings of all kind of venomous Creatures, and more eſpecially for the Bite of a mad Dog. *Miller's Bot. Off.*

2. Coronopus; maritima; major. *C. B. P.* 190. *Plantago anguſtifolia.* Dod. p. 108. a.

Miller mentions two more Species of Coronopus.

CORONOPUS RUELLII. See AMBROSIA CAMPESTRIS.

The Name is derived from κορώνη, a Carrion Crow, and πούς, a Foot. The Plant being ſaid to reſemble a Crow's Foot.

COROS, κόρος. Satiety.

COROZONE CELIO. A Name for the *Sedum*; *Canarinum*; *foliis omnium maximis.*

CORPORA NERVOSA, or NERVEOSPONGIOSA, PENIS. The nervous or nerveo-ſpongeous Bodies of the Penis. See GENERATIO.

CORPORA OLIVARIA. Two Protuberances of the Medulla oblongata. See CEREBRUM.

CORPORA PYRAMIDALIA. Two other Protuberances near the preceding. See CEREBRUM.

CORPORA STRIATA. Two Prominences in the lateral Ventricles of the Brain. See CEREBRUM.

CORPORATIO. Incorporation.

CORPULENTIA. Corpulence.

CORPUS CALLOSUM. A medullary Part of the Brain, which covers the two lateral Ventricles. See CEREBRUM.

CORPUS GLANDULOSUM. The *Proſtatæ.*

CORPUS PAMPINIFORME, PYRAMIDALE, or VARICOSUM. A Body form'd a little above the Teſticles, by the Diviſion and Reunion of the ſpermatic Veins. See GENERATIO.

CORRAGO. The Plant call'd BORRAGO, Borrage.

CORRÆ, or CORSÆ, κόρραι, or κόρσαι. The Temples. *Gorræus.*

CORRECTIO, Correction. This Word in Pharmacy has ſeveral peculiar Senſes: And, firſt, draſtic Medicines, or ſuch as operate with Violence, are ſaid to be corrected, when, in their Compoſition, ſome Ingredient is added, which proves a kind of Check or Balance to their violent Operation, or prevents the Misfortunes which they generally bring on without ſuch a correcting Ingredient. Thus, for Inſtance; ſome Carminatives, ſuch as the Seeds of Fennel or Aniſe, are added to Sena-leaves, which, when exhibited alone, generally produce Flatulences and Gripes. The Subſtances or Ingredients thus added, with an Intention to render the Medicines ſafer and leſs dangerous, are call'd *Corrigentia* or *Correctoria*; as alſo *Caſtigantia*, and *Infringentia.* According to *Wedelius*, in his Treatiſe *de Medicamentorum Compoſitione extemporanea*, CORRECTORS have a Reference either to the noxious Quality, the Viſcidity and Toughneſs, the Coldneſs, the narcotic Nature, the emetic Virtue, and the violent Operation, of the Medicines to which they are added. 'Tis, therefore, obvious, that Correctors muſt conſiſt of ſuch Parts, as are of an oppoſite Nature to thoſe which prevail in the Subſtance to be corrected. Thus, for Inſtance, Alcalis are corrected by Acids; Acids by Alcalis; and Subſtances, of any given Nature, by thoſe of directly contrary Qualities. The univerſal *Correctors* of Medicines, which operate too violently, are, firſt, Water, which dilutes Acrimony; and, ſecondly, mild and balſamic Oils, which obtund and ſheath up the ſtimulating and irritating Spicula of any Medicine. To this Species of Correction belongs alſo ſuch a Preparation of Medicines as weakens or impairs their violent and draſtic Operation; when, for Inſtance, the Root of Arum is render'd milder and leſs violent in its Operation, by being macerated in ſome Liquor, or by being dry'd. But *Corrections* are ſometimes boaſted of in conſequence of the Ignorance, in which Perſons remain, with reſpect to the Natures of the Medicines to which they are added; when, for Inſtance, Opium is thought to be corrected by Caſtor, and an Addition of other healing and aromatic Subſtances; becauſe the Antients imagin'd, that Opium prov'd prejudicial by its exceſſive Coldneſs. Thus alſo ſome Corrections are made, which rather deſerve the Name of Caſtrations; when, for Inſtance, the Seeds of Coriander or Cumin are macerated in Vinegar. In like manner, according to *Helmont*, ſome boil Scammony in acid Liquors with a View to correct, or render it more mild in its Operation. But every one, who is in the leaſt verſed in medicinal Affairs, knows, that when Scammony is expoſed to the acid Steam of Sulphur, it is entirely diveſted of its Properties, and recedes from the Nature of Scammony, in proportion to the Quantity of the Acid it has imbib'd. With reſpect, therefore, to ſuch Corrections, we may, with that Author, affirm, that they are made without any Knowledge of the Qualities, Parts, and mutual Relations between the Correctors, and the Subſtances to be corrected. It is pretty ſurpriſing, that ſome Subſtances, by Correction, ſhould have their Qualities and medicinal Virtues directly inverted and reverſed, which happens to Aſarabacca, upon being boiled. The genuine and peculiar Correctors of each Medicine are ſpecified under its reſpective Article.

Secondly, Medicines which operate in a ſlow and languid Manner, are ſaid to be corrected, when they are ſo prepared as either to accelerate or augment their Operation; when, for Inſtance, Salts are mixed with evacuating Medicines of a gummous and reſinous Nature, that, by this means, being more reſolv'd or attenuated, they may operate more powerfully. Thus, with this very Intention, Salt of Tartar, or Sal Polychreſtus, are added to Infuſions of Sena. Ingredients, added with this View, are call'd *Adjuvantia*: And, when more draſtic Subſtances, of the ſame Virtues, are added, in order to augment the Operation of the Compoſitions, theſe additional Ingredients are call'd *Acuentia.*

Thirdly, Nauſeous and ungrateful Medicines are ſaid to be corrected, when they are prepared in ſuch a manner as to become more acceptable and agreeable to the Palate. But, as the Senſe of Taſte is not the ſame in all Mankind, the Correctors of this Sort muſt neceſſarily vary according to the peculiar Taſte of different Patients. Medicines, intended for Children, are generally corrected, or rendered grateful, by an Addition of Sugar. In like manner, Subſtances of an ungrateful and diſagreeable Smell are to be corrected by an Addition of fragrant and well-ſcented Ingredients.

CORRIGIOLA. According to *Fuchſius*, in his Commentaries upon *Nicolaus Myrepſus*, is the ſame as *Polygonum Mas.*

CORROBORANTIA. Corroborative Medicines, or Remedies which impart Strength.

CORROBORATIO. Corroboration, or Strengthening.

CORRODENTIA, or CORROSIVA. Corrosives, or corroding Medicines.

These are Medicines of much Use in Surgery, which corrode whatever Part of the Body they are applied to. They consist of acrid Substances, and may properly enough be thus divided:

First, Into mild Corrosives; among which may be reckon'd burnt Alum; the Ashes of green Wood; Mercurius Dulcis; white Precipitate of Mercury, and white Vitriol.

Secondly, Into strong Corrosives; as red Precipitate of Mercury; Colcothar of Vitriol; and the *Trochisci de Minio Vigonis*, made of red Lead, half an Ounce; Corrosive Sublimate, an Ounce; Crums of Bread, four Ounces; with Rose-water, a sufficient Quantity, to make the Ingredients into Troches.

Thirdly, The strongest Corrosives, as Butter of Antimony; the Infernal Stone; Corrosive Sublimate of Mercury; Oil of Tartar *per Deliquium*, and Oil of Vitriol. With respect to these, it must be observed, that the stronger they are, the greater Caution is required in their Use.

Corrosives act by their Acrimony, by which they destroy not only foreign Substances adhering to animal Bodies, but also the Solids themselves, provided they meet with any Moisture, when apply'd to them; and particularly when confined upon the Part by any adhesive Plaister; so as to have their Action excited by the Heat of the Body. In the two first Cases they are call'd Catheretics; in the last, potential Caustics. See CAUSTICA.

Corrosives are used for opening Abscesses; for making Issues, or artificial Ulcers; for consuming Tubercles, and callous Excrescences; for separating and extirpating corrupted Parts; and cleansing sordid Ulcers; and sometimes for stopping Hæmorrhages.

Relative to the Use of Corrosives, the following Cautions are laid down by various Authors:

First, When the Disorder is not so great but that it may be subdu'd by the milder Corrosives, the stronger are never to be used, lest too much Pain should be excited, and a Flux of Humours invited to the Part affected.

Secondly, Corrosives are not proper for such Constitutions, nor such Parts of the Body, as may too readily receive an Injury by their Application; nor are they equally well adapted to all Ages. Thus they are attended with Danger, when applied to Bodies whose Humours are easily irritated; to nervous and tendinous Parts; and to Infants.

Thirdly, Corrosives are most proper in Disorders which admit of Delay.

Fourthly, When the Root or Source of the Disorder subsists within, and Corrosives are more likely to irritate and augment than to diminish it, in such Cases Corrosives are never to be used.

Fifthly, The Action of Corrosives is to be so limited, as not to injure, consume, or exulcerate the sound Parts.

CORROSIO. Chemical Corrosion is what we have call'd *Calcination* by potential Fire, under the Article CALX, which see. *Barchusen* defines it, a total or particular Solution of any Body by some acrid Salt.

CORROSIVA. Corrosives. In Chymistry, saline Menstruums. *Rieger.* See CORRODENTIA.

CORRUDA. See ASPARAGUS PETRÆA.

CORRUGATIO. Corrugation, or Wrinkling of the Skin, or any other Part.

CORRUGATOR COITERI, or

MUSCULUS FRONTALIS VERUS.

This Muscle arises fleshy from the Process of the Os Frontis, next the inner or great Angle of the Orbit, above the Joining of the Os Nasi and superior Process of the Os Maxillare with this Bone; from thence it runs obliquely outwards and upwards, and

Is inserted into the fleshy Part of the Occipito-frontalis, some of its Fibrillæ passing through into the Skin, a little higher than the middle Region of the Eyebrows.

Its Use is to smooth the Skin of the Forehead, by pulling it down after the Action of the Occipito-frontalis; and, when it acts more forcibly, it serves to wrinkle the Skin of the Front, between the Supercilia, as it happens when we frown, or knit the Brows. *Douglas.* See CAPUT.

CORSÆ. See CORRÆ.

CORSOIDES. A Name for the AMIANTHUS LAPIS.

CORTALON, in *Myrepsus*, is the same as the *Senecio*, Groundsel.

CORTEX CARDINALIS DE LUGO. See QUINQUINA.

CORTEX CARYOPHYLLATUS. See CARYOPHYLLUS.

CORTEX CULITLAVVAN, Mont. Exot. 8. *Culilavvan, Ephem.* Ger. Dec. II. Anno. I. p. 55.

This is a hot aromatic Bark, said to be found in *New Guinea*, but a Stranger to the *European* Shops. The same Virtues are attributed to it, as to the CORTEX MASSOY. *Dale* from *Monti.*

CORTEX ELATERII. See CASCARILLA.

CORTEX MAGELLANICUS. See CORTEX WINTERANUS.

CORTEX MASSOY, Mont. Exot. 8. Ephem. Ger. Dec. II. Ann. I. 55.

This is a warm aromatic Bark, said to be found in *New Guinea*, but is not known in our Shops. It is alexipharmic, opening, carminative, cephalic, cordial, and stomachic. The Inhabitants of the Country where it grows use it powder'd, and made up into a kind of Pulp with Water, for anointing their Bodies in cold and rainy Weather. It is said to warm them very much, to ease pungent Pains and Gripes, and to be of a very grateful Fragrance. *Dale* from *Rumphius* and *Monti.*

CORTEX PERUVIANUS. See QUINQUINA.

CORTEX WINTERANUS SPURIUS. See CANELLA ALBA.

CORTEX WINTERANUS, Offic. Park. Theat. 1652. *Cortex Winteranus, Cortex Magellanicus*, Mont. Exot. 8. *Cortex Winteranus acris sive Canella alba.* J. B. 460. *Cortex Winteranus Clusii*, Chab. 34. *Laurifolia Magellanica cortice acri*, C. B. Pin. 461. Raii Hist. 2. 1801. WINTER'S CINNAMON.

This Bark is now hardly to be met with, we making use of the *Canella alba*, which is generally call'd *Winter's Bark* in the Shops, in its stead. *Miller's Bot. Off.*

Capt. *Winter*, who went out with Sir *Francis Drake*, when he went round the World, at his Return, brought with him, from the Streights of *Magellan*, an aromatic Bark, which had been very useful to those of his Ship, both used instead of other Spices with their Meat, and as a Medicine very powerful against the Scurvy. *Clusius*, from this Captain's Name, call'd it *Cortex Winteranus*, and the Tree *Magellanica Aromatica Arbor.* The Writer of the Journal of the *Dutch* Ships, which went to the Streights of *Magellan* about 1599. calls it *Lauro similis Arbor, licet procerior, Cortice Piperis modo acri & mordenti:* And *Sebald de Weert*, who was there, says, that both Leaves and Bark were used with their Meat and Muskles, to correct them in so cold a Climate. *Caspar Bauhine* calls it *Laurifolia Magellanica Cortice acri*; *Johnston, Arbor Laurifolia Magellanica.*

But Mr. *George Handyside*, who came from thence some little time since, gives the best Account of it, having brought with him a Specimen or Sample of its Leaves and Flowers on the Twig, and its Seed; by which I cannot reduce it to any of our kind of Plants so well as the *Periclymenum*; and therefore I shall call it, tho' it differs in many things from the Honeysuckle, *Periclymenum rectum Foliis Laurinis, Cortice acri aromatico.*

He assured me, that this Tree rose to be higher and larger than an Apple-tree, spreading very much both in Root and Branches. The Twigs had on them Leaves of a light-green Colour on their upper Side, standing on half Inch long Foot-stalks; are an Inch and half long, and an Inch broad in the Middle, where broadest, and whence they decrease to both Ends, ending blunt. The Flowers come from the Alæ of the Leaves, standing on Stalks a Quarter of an Inch long; two, three, or more of them together, something like those of the *Periclymenum*; each of them are milk-white, pentapetalous, and smell like Jessamine; to which succeeds an oval Berry, made up of two, or three, or more Acini, or little Berries, standing together on the same common Foot-stalk, of a light-green Colour, with some black Spots; and in these Berries are contained several black aromatic Seeds, something like the Stones in Grapes.

It grows in the Middle of the Streights of *Magellan* very plentifully.

The Leaves of this Tree were used with other Herbs, by Mr. *Handyside*, for Fomentations in several Cases, with very good Success; but he admired most the Use of the Bark inwardly, boiling half a Dram of it with some carminative Seeds, and giving it to those of the Ship who were under his Care, very much afflicted with the Scurvy. It usually sweated them, and they were very much relieved. The same Medicine he likewise administered to a great many of the Ship, who were very ill by eating a poisonous sort of Seal, found in those Parts, call'd a Sea Lion; with which they had a very great Amendment, altho' they had been so ill with feeding on this Creature, as to lose most of their Skins, which peel'd off their Bodies by degrees, and in large Pieces; so that the Antidote to this strange Poison was to be had very near it, and was very much extol'd by this Gentleman, who was put to a stand to know what to do in this strange Case, altho' he very well understood the Materia Medica.

By the Description of this Tree, and that of wild Cinnamon, it appears, that the *Cortex Winteranus*, commonly sold in the Shops, is not the true *Cortex Winteranus:* But I must needs say, tho' they are the Barks of two very different Trees, and growing in very different Places, and appear quite another thing in their outward Faces, yet their Taste is much the same, and I believe they may be used as a Succedaneum, one for another; tho'

tho' the true be much to be valu'd beyond the falſe, being much more aromatic. *By Sir Hans Sloan, in the Phil. Tranſ. abr. Vol. 2.*

In order more effectually to inveſtigate the Qualities, and diſcover the genuine Nature, of *Winter's Cinnamon*, we ſhall now take a View of the ſeveral Experiments inſtituted with it by *Antonius de Heide*, as related in his *Obſervationes Medicæ*. "Rectify'd Spirit of Wine," ſays he, "when pour'd upon this "Bark, is immediately tinig'd with an intenſely red Colour, "and impregnated with the Taſte of the Bark; but Rain-"water, when poured upon it, only acquires a faint-yellow "Colour. A large Quantity of the Oil of Vitriol, added to "the ſpirituous Tincture of this Bark, as yet not poured off "from it, excited a violent Heat, and an Agitation of the "Pieces of the Bark, which were before lying at Reſt in the "Bottom of the Veſſel, and which had aſſumed a blackiſh "Colour. Aqua-fortis, dropt into the Tincture poured off "from the Bark, gave it a whitiſh kind of Colour, which Ef-"fect ſeems rather to be aſcribed to the aqueous Nature, than "to the Acidity of the Aqua-fortis; for Rain-water produc'd "a milky Colour with this Tincture, whilſt, at the ſame time, "white Flakes ſubſided to the Bottom of the Veſſel. Oil of "Tartar *per Deliquium* ſeemed to produce no Change in the "ſpirituous Tincture, except that by its means it aſſumed a "brighter Colour. Salt of Tartar renders the aqueous Tin-"cture of this Bark turbid; and precipitates a ſmall Quantity "of white Flakes to the Bottom of the Veſſel. Aqua-fortis "ſeems to render the Colour of this Tincture more deep than "it was before." According to *Boecler*, in Diſtillation it affords a large Quantity of Oil, which, like that of Cinnamon, partly floats, and partly ſubſides, in the Water with which it is yielded. As this Bark is an Aromatic, we may reaſonably conclude, that it is poſſeſſed of aromatic Qualities, and conſequently that it is ſtimulating, corroborating, inciding, aperient, and antiacid. It is highly extol'd as a Specific in the Scurvy; and, in *England*, it is ſometimes preſcrib'd under the Name of *Cortex antiſcorbuticus*, or the antiſcorbutic Bark. "In *Eng-*"*land*," ſays *Ettmuller*, "it is frequently and ſucceſsfully "exhibited with Crabs-eyes, in ſcorbutic and hypochondriac "Diſorders." The Powder of it is given from one Scruple to half a Dram; and, according to others, a whole Dram. When infuſed in ſome proper Liquor, two Ounces of the Infuſion may be exhibited for a Doſe. According to *Valentini*, the Powder of it may be exhibited from ten to fifteen Grains; but, in Infuſions or Decoctions, a Dram or two of it may be us'd. The ſame Author informs us, "That this Bark is poſſeſſed of a "heating and diſcutient Quality, whereby it corroborates the "Stomach, attenuates thick and ſcorbutic Blood, and conſe-"quently preſerves its Circulation: Hence 'tis highly benefi-"cial in Diſorders ariſing from too copious an Uſe of Sea Salt, "the Scurvy, and others of a like Nature. For this very "Reaſon it is, by *Willis*, highly extol'd in a Palſy, and Impo-"tency of the Joints; for ſtrengthening and corroborating "which it is calculated, in conſequence of its volatile Acri-"mony, and its oleous penetrating Parts. From this Bark is "diſtil'd a Water, on which floats an Oil, which, when tritu-"rated with Sugar, makes an excellent Elæoſaccharum "for the above-mentioned Diſorders. Externally it is uſed in "Clyſters intended for Apoplexies, Lethargies, and other Diſ-"orders of a like Nature. Some, who ſmoke Tobacco, add a "little of it in a Pipe, by which means it diffuſes a fragrant "Odour, reſembling that of Cloves. *Apinus* makes it a Suc-"cedaneum to the *Peruvian* Bark, and by its means cur'd not "only erratic, but alſo petechical Fevers." According to the celebrated *Juncker*, in his *Conſpectus Therapiæ Generalis*, this Bark is reſolvent, diſcutient, and ſubaſtringent; for which Reaſon it is ſucceſsfully preſcrib'd in Diſorders of the Stomach, Crudities, Nauſeas, Diarrhœas, exceſſive Vomitings, Colics; as alſo in the Declenſion and End of intermittent Fevers, with a View to corroborate the Stomach. It is alſo ſaid to be highly beneficial to ſcorbutic Patients, and ſuch as labour under Obſtructions of the Viſcera, Cachexies, and Irregularities of the Menſes; but it neither cures quartan nor petechical Fevers, nor affords any conſiderable Relief to paralytic Patients.

CORTICALIS SUBSTANTIA. The cortical Subſtance of the Brain and *Cerebellum*. See CEREBRUM.

CORTUSA. This Plant is ſo call'd from *Cortuſus*, a famous Botaniſt, who firſt brought it into Uſe.

The Characters are,

It hath a perennial Root: The Leaves are roundiſh, rough, and crenated on the Edges, like thoſe of Ground-ivy: The Cup of the Flower is ſmall, and divided into five Parts: The Flowers are ſhaped like a Funnel, are cut at the Top into many Segments, and are diſpoſed in an Umbel: The Fruit is roundiſh, terminating into a Point, and is cloſely fixed in the Cup, in which are contained many ſmall angular Seeds.

1. Cortuſa. *J. B.* 3. 499. *Boerh. Ind. A.* 206. *Cortuſa, Sanicula montana*, Offic. Mont. 41. *Cortuſa Sanicula Alpina quibuſdam*, Chab. 490. *Sanicula Alpina ſive Cortuſa Matthioli*, Park. Theat. 533. Parad. 240. Raii Hiſt. 2. 1084. *Sanicula Alpina Cluſii ſive Cortuſa Matthioli*, Ger. 645. Emac. 788. *Sanicula montana latifolia ſinuata*, C. B. Pin. 243. Hiſt. Oxon. 2. 558. *Auricula Urſi laciniata ſeu Cortuſa Matthioli flore rubro*, Tourn. Inſt. 121. BEARS-EAR SANICLE.

It grows in mountainous Places, and flowers in the Spring. The Leaves promote Expectoration. *Dale* from *Monti*.

CORU *Canarica, Arbuto vel Malo Aureæ ſimilis*. J. B. *Coru Foliis Mali Aureæ, flore luteo Acoſtæ*. C. B. *Coru*. Park. *Luſitanis Herba Malabarica*.

It is a dwarf Tree, like the Quince-tree, with Leaves very like it, and a yellow Flower, with little or no Smell; but *Garcias* makes it have Leaves like thoſe of the Peach-tree, and a white Flower, ſmelling much like the Periclymenum. The Bark of the Root is of a Watry-green, light and thin; and, if broken or wounded, diſtils a copious milky Juice, more ropy and viſcid than what flows from the *Macer*, inſipid, if not a little bitteriſh, cold, and drying, but more drying than cold.

The Inhabitants of *Malabar*, both Pagans and Chriſtians, make very much Uſe of the Liquor of the green Bark, tho' it be very ungrateful to the Taſte, on account of its ſurpriſing Effects in all manner of Fluxes, as in the Lientery, Diarrhœa, and Dyſentery, from whatever Cauſe they proceed. The Doſe is ſeven Ounces in the Morning, and as many in the Evening, if Neceſſity require it; but becauſe the Juice is bitter and unſavoury, they waſh their Mouths with Whey after taking it.

The *Portugueſe* diſtil the Bark of the Root, and prepare it in the following Manner:

> Take of the Bark pulveriz'd, eight Ounces; of Ammi, Apium, Coriander dry'd, black Cumin ſomewhat roaſted and pulveriz'd, each three Ounces; of the Rinds of Chebule Myrobalans, ſeven Ounces; of freſh Butter, made of Cows Milk, two Ounces; ſour Milk, a ſufficient Quantity to dilute the Powders: Diſtil them in a proper Veſſel.

The common Doſe, for ſuch as labour under a Flux of the Belly, is four or five Ounces of the diſtil'd Liquor, with two Ounces of Water of *Indian Filberd*, commonly call'd *Areca*, or Water of the Pedicles of Roſes, to be taken once a Day, or twice, if it be neceſſary. Sometimes, upon a preſſing Occaſion, they mix with it Troches of Amber, or Terra Lemnia. Immediately after taking it, the Cuſtom is to exhibit Rice with Oxygala, or ſour Milk, and, toward Night, they adminiſter a Clyſter prepared of the ſaid diſtil'd Liquor.

Tho' *Garcias* had always good Succeſs in the Uſe of this Water, yet he confeſſes, that the Herba Malavarica, prepar'd by the *Malavarians* themſelves, was a more preſent Remedy. This is made of the ſame Ingredients as the Water before deſcrib'd, very finely pulveriz'd, and macerated in Whey, or a ſtrong Decoction of Rice. *Acoſta* prefers the green Bark of the Macer, tho' much more ungrateful, and difficult to be taken, far before this Liquor. The Medicine before deſcrib'd is alſo effectual in Weakneſs of the Stomach, and, taken with Water of Mint, and Powder of Maſtich, reſtrains Vomiting. *Raii Hiſt. Plant.*

CORVINUS LAPIS. A Stone ſaid to be found in *India*, called by the Inhabitants *Cocaote*. It is remarkable for making a Noiſe like Thunder when heated.

CORUSCUS. The Auricula Muris. *Rulandus*.

CORVUS, Offic. Schrod. 5. 317. Aldrov. Ornith. 1. 694. Bellon. des Oyſe. 280. Geſn. de Avib. 294. Jonſ. de Avib. 23. Charlt. Exer. 75. Mer. Pin. 171. Schw. 244. Will. Ornith. 82. Raii Ornith. 121. Ejuſd. Synop. A. 39. THE RAVEN.

This is a Bird too well known to require a Deſcription. Young Ravens, calcin'd to Aſhes, are recommended againſt the Epilepſy, Gout, and that Species of Leproſy call'd *Alphus*. The Brain is alſo taken notice of among the Remedies for an Epilepſy. The Fat and Blood are ſaid to render the Hair black. The Dung, ſuſpended about the Necks of Children, is reported to eaſe their Coughs, and procure them an eaſy Dentition. *Dale* from *Schroder*.

CORYCUS, κόρυκος. A ſort of Ball among the Antients, probably made of Leather, and ſtuffed with the Acini or Grains of the Fig, or Bran, or Meal, for weak Perſons, but with Sand for thoſe who were ſtrong and robuſt, as *Oribaſius* informs us from *Antillus*. The Size of this Ball is not determin'd, but probably it was pretty large: It was, however, more or leſs ſo, according to the Age and Strength of the Perſon whom it was deſign'd for. This was ſuſpended from the Ceiling, in ſuch a manner as to reach as far as the Navel of the Perſon who was to uſe it, who took it in both Hands, and, puſhing it from him, receded as it return'd. Then throwing it from him, in its Return he either caught it in his Hands, or ſuffered it to meet his Body. This Exerciſe was call'd *Corycomachia*, κορυκομαχία, and was recommended for extenuating too groſs Bodies.

CORYDALUS, κορυδαλός. The Lark. See ALAUDA.

CORYLUS. See AVELLANA.

CORYMBIA, CORYMBAS, or CORYMBE. The Ivy-tree. *Blancard*.

CORYM-

CORYMBUS, κόρυμβος. See the Explication of botanical Terms under the Article BOTANY.

Corymbiferous Plants are ſuch as have a compound diſcous Flower, but their Seeds have no Down adhering to them. The Name is taken from the Manner of bearing their Flowers in Cluſters, and ſpreading round in the Form of an Umbrella, as Onions, &c. Of this Kind is the Corn-marygold, common Ox-eye, the Daiſy, Chamomile, Mugwort, Feverfew, &c.

Mr. *Ray* diſtinguiſhes them into ſuch as have a radiate Flower, as the Sun-flower, the Marygold, &c. and ſuch as have a naked Flower, as the Lavender, Cotton, Agrimony, and Tanſey; and alſo thoſe that are akin to them, as Scabious, the Teaſel, Carduus, and others. *Miller's Dict. Vol.* 1.

CORYPHE, κορυφή. The Vertex, or Top of the Head.

CORYZA, κόρυζα. *Celſus* tranſlates this by *Gravedo*, and *Cœlius Aurelianus* by *Catarrhus ad Nares*. It imports ſuch a Diſtillation of Humours from the Noſe as happens in a Cold. See CATARRHUS.

COS, Offic. Worm. 41. Chart. Foſſ. 17. Aldrov. Muſ. Metall. 718. *Cotes*, Boet. 52. *Cotes*, Kentm. 35. *Cotes*, *Novaculæ*, Mer. Pin. 211. *Lapis Naxius*, Matth. 1390. THE WHETSTONE.

Dioſcorides informs us, that the Grit which is worn off the Whetſtone, by ſharpening Iron, cauſes Hair to grow upon the Parts affected with an *Alopecia*; that it reſtrains the Growth of the Breaſts in Virgins; and that, drank with Vinegar, it conſumes the Spleen, and is good for an Epilepſy.

There are three different Sorts of Whetſtones, the Hone, the Gritſtone, and the black Whetſtone. It is not eaſy to determine which is meant by *Dioſcorides*.

COSCINOS, κόσκινος. A Sieve, or Sierce.

COSCULIA, κοσκύλια. The Grains of *Chermes*.

COSMET, Antimony. *Johnſon*.

COSMETICA ARS. That Part of Medicine, which is employ'd in preſerving or improving the natural Beauty. See COMMOTICA.

COSMETORGES. A Word coin'd by *Dolæus*, to expreſs the ſenſitive Soul. *Caſtellus*.

COSMIANA ANTIDOTUS. The Name of an Antidote in *Marcellus Empiricus*, *Cap.* 29.

COSMOS, κόσμος. This, in *Hippocrates*, is the Order and Series of critical Days.

COSSI. Hard Tubercles in the Face. The ſame as VARI. See VARUS.

COSSUM. A malignant Ulcer of the Noſe, mention'd by *Paracelſus*.

COSSUS. A ſmall Worm, which eats into Wood. See TEREDO.

COSTÆ. In Botany, the Nerves of Leaves. Theſe are long tough Strings, which run either acroſs or lengthways in the Leaves of Plants.

COSTÆ, in Anatomy, ſignifies the Ribs. Theſe are ſo united with the *Sternum*, in the Formation of the Thorax, that it will be neceſſary to deſcribe them under the ſame Article, in order to avoid Confuſion. See, therefore, THORAX.

COSTUS, Offic. Comm. Flor. Mal. 90. *Coſtus Arabicus Dioſcoridis*, C. B. Pin. 36, 37. *Iridem redolens ejuſdem*, *amarus Officinarum*, *ſeu Helenium*, & *Comagenium Dioſcoridis ejuſdem*, *dulcis Officinarum*, *Centaurio magno cognatus ejuſdem*, Raii Hiſt. 2. 1347, 1348. *Coſtus Helenii facie Officinarum*, J. B. 2. 749. Chab. 246. *Coſtus dulcis Officinarum*, Ejuſd. *Indicus odoratus*, Ger. Emac. 1620. *Indicus Cluſii*, Park. Theat. 1582. *Coſtus Indicus Violæ Martis odore*, Herm. Muſ. Zeyl. 58. *Tſjana Cua*, Hort. Mal. 11. 15. Tab. 8. SWEET AND BITTER COSTUS.

Tho' theſe were antiently eſteem'd to be two different Roots, yet they are now generally believed to be both of them the Roots of the ſame Plant, differing only in Age; the freſheſt being only the *Coſtus dulcis*, and the oldeſt and ſtaleſt the bitter; and, indeed, ſo long ago as *Garcias ab Horto* and *Cluſius*, they began to be of this Opinion. This is a pretty thick Root, brown on the Outſide, and of a yellow White within, appearing a little ſpongy in the Middle. 'Tis of a ſomewhat hot bitteriſh Taſte, and of a Smell pretty much reſembling the Orris-root. The *Coſtus* is deſcrib'd in the 11th Volume, and 15th Table, of the *Hortus Malabaricus*, by the Name of *Tſjana Cua*.

It is accounted to be hot and dry, comforting the Head and Stomach, and helping vertiginous Diſorders. It is likewiſe a good Deobſtruent, opening Obſtructions of the Womb, and procuring the Catamenia. It is one of the Ingredients in the *Theriaca*.

It bears a Part in naming the *Electuarium Caryocoſtinum*. *Miller's Bot. Off.*

It is alſo eſteem'd as a good Hepatic; and is ſaid to be of Service in Obſtructions of the urinary Organs, Colic, Dropſy, and Palſy.

That Coſtus is beſt which is recent, denſe, odorous, bitteriſh, and not carious.

Geoffroy ſays, we are ſtill ignorant of the Coſtus of the Antients, of which the *Greeks* had three Kinds. *Pliny* diſtinguiſhes two Kinds, the white and black; and the *Arabians* had likewiſe two Kinds, one ſweet, the other bitter. The Doſe of our Coſtus is from twelve Grains to half a Dram; and, in Infuſion, from two Drams to half an Ounce. It was antiently uſed as a Perfume.

It was likewiſe employ'd in Sacrifices.

COSTUS HORTORUM. See BALSAMITA MAS.

COSTUS NIGRA. See CINARA.

COTARONIUM. A Word coin'd by *Paracelſus*. It implies a Liquor, into which all Bodies, and even their Elements, may be diſſolved.

COTHON, κώθων. A kind of large earthen Cup, uſed to drink out of; or an earthen Veſſel, wherein Flowers, Leaves, and Roots, were kept, being preſs'd down in it. In *Galen*, it imports an earthen Veſſel for burning Cadmia.

COTINUS, κότινος, among the Antients, imported the *Oleaſter*, or wild Olive-tree. But

COTINUS, among the modern Botaniſts, implies a Shrub of another Kind.

The Characters are,

The Leaves are round, and ſuſtain'd by long Pedicles. The Flower-cup is ſmall and quinquefid; the Floſcules are roſaceous and pentapetalous, diſpoſed in capillary Branches; the Ovary becomes an orbicular Fruit, which contains a triangular Seed, under a hard indiviſible Shell.

There is but one Species of the *Cotinus*, which is the

Cotinus; coriaria. *Jonſ. Dendr.* 293. *Elem. Bot.* 483. *Tourn. Inſt.* 610. *Boerh. Ind. A.* 2. 228. COTINUS; Offic. Rupp. Flor. Jen. 80. *Cotinus Matthioli*, C. B. Pin. 415. *Coccigria*, *Cotinus coriaria nonnullis dicta*, Chab. 37. *Coccigria*, *ſive Cotinus putata*, J. B. 1. 494. Raii Hiſt. 2. 1696. *Coggygria Theophraſti vel Cotinus coriaria Plinii*, Ger. 1293. Emac. 1476. *Cotinus Coriaria*, Park. Theat. 1451. VENICE OR RED SUMACH.

This Shrub flowers in *May*, and produces ripe Fruit in *July* and *Auguſt*. The Wood is uſed, in the Southern Parts of *France*, to dye Woollen Cloth yellow. The Leaves are uſed by the Tanners for preparing their Leather.

The whole Plant is thought to be extremely drying and aſtringent. Of a Decoction of the Leaves, Gargariſms are prepared, which are good for Ulcers of the Mouth and Tongue; and are uſed againſt Relaxations of the Uvula, and Glands in the Fauces. The Fruit is particularly ſerviceable in Ulcers of the Fauces and Pudenda; and reſtrains Diarrhœas, and a too copious menſtrual Diſcharge.

The Leaves, dry'd and powder'd, and then ſprinkled on the Belly, after anointing it with Vinegar of Roſes, ſtop any Flux of the Belly, according to *Matthiolus*.

COTIS, κοτίς. The poſterior Part of the Head. Some take it for the Hollow of the Neck, near its Articulation with the Head. *Hippocrates* uſes this Word in his Treatiſe *de Morbis*, *L.* 2.

COTONASTER. A Name for the *Gratægus*; *folio oblongo*; *ſerrato*, *utrinque virente*.

COTONEA. See CYDONIA.

COTONEASTER. A Name for the *Meſpilus*; *folio ſubrotundo*; *fructu rubro*.

COTONIUM. See BOMBAX.

COTTYPHUS, κόττυφος, or κότυφος. The Name of a Fiſh mention'd by *Oribaſius*, in his medicinal Collections, *L.* 2. *C.* 58. It is the *Merula*, or Cook-fiſh. See MERULA.

COTULA.

The Characters are,

The Leaves are ſmall, like thoſe of Chamomile; the Flower is crown'd, or naked; the Seeds are flat, in the Shape of a Heart, and winged. The Flower-cup is generally ſquamous.

Boerhaave mentions ſix Species of this Plant, which are,

1. Cotula; flore luteo, radiato. See BUPHTHALMUM.

2. Cotula; flore pallido, radiato. *Chryſanthemum*, *folio Cotulæ*, *flore albo*. Triumfett. *Chryſanthemum*, *fruticoſius*, *ſubcandidum*. C. B. P. 135. *a*.

3. Cotula; floris radiis ſulphureis, diſco luteo. *a*.

4. Cotula; flore albo, pleno. *a*.

5. Cotula; flore luteo, nudo. *T.* 495. *Chryſanthemum*, *Valentinum*. Cluſ. H. 332. *Buphthalmo tenuifolio ſimile*, *Chryſanthemum Valentinum Cluſii*. J. B. 3. 125.

6. Cotula; Cretica; minima; folio Chamæmeli; capitulo inflexo. *T. Cor.* 37. *a*. *Boerhaave's Index alter Plant. Vol.* 2.

COTURNIX, Offic. Schrod. 5. 317. Bellon. des Oyſe. 264. Aldrov. Ornith. 2. 150. Will. Ornith. 121. Raii Ornith. 169. Ejuſd. Synop. A. 58. Geſn. de Avib. 310. Mer. Pin. 173. Schw. A. 247. Charlt. Exer. 184. Jonſ. de Avib. 47. THE QUAIL.

You are to chuſe thoſe which are young, tender, and well fed. They are very nouriſhing, create an Appetite, and produce good Juice.

Several Authors look upon Quails to be very bad Food, tho' they are not ſo much ſo, as they would have them to be. Indeed, they are ſomewhat hard of Digeſtion, eſpecially when old.

They contain much Oil, and volatile Salt.

They agree at all times with any Age and Conſtitution, provided they are moderately uſed.

REMARKS.

The Quail is a ſmall Bird, ſomewhat bigger than a Thruſh, finely feather'd, and has a pleaſant Note. It uſually feeds upon Millet, Corn, and other Grains. It is ſuch tender and delicious Food, that it is ſerved to the beſt Tables.

Moſt Authors do not agree about the Effects produced by the Quail. *Averrhoes* ſays it has good Juices; and that it is good for Perſons recovering from Sickneſs, and ſuch as enjoy perfect Health; which we willingly agree to, becauſe, in the firſt Place, we have not experienced any ill Effects produced by the Quail: Secondly, becauſe we find its Fleſh to conſiſt of a Subſtance, which is a little compact in the Parts thereof; and that it contains a convenient Proportion of oily and balſamic Principles, and of volatile Salts. Indeed, it is ſometimes not ſo eaſy of Digeſtion, and this proceeds from its Over-fatneſs, which makes it ſit heavy on the Stomach; but when it is uſed moderately, there is none of this ſmall Inconvenience to be met with from it.

Galen, *Pliny*, and *Avicenna*, on the contrary, aſſure us, that the Quail is very dangerous Food; and *Galen* ſays, he had ſeen ſeveral Perſons in *Phocis*, *Bœotia*, and *Doris*, who fell into Convulſions and Epilepſies, that had eaten thereof; and this, as he imagines, was produced from the Quails of this Country feeding upon Hellebore; tho', on the contrary, this Plant ſeems to me to be more likely to cure, than to cauſe the Epilepſy; for this, working by Stool and Vomit, may expel the ſharp and pungent Humours which cauſe it: But tho' Hellebore, of itſelf, were proper for the producing of Epilepſies, and that Quails very frequently feed upon it, it would not from thence follow, that Quails cauſe Epilepſies; ſince the Hellebore, by aſſimilating itſelf with the ſolid Parts of the Quails, muſt have loſt a certain Diſpoſition of its inſenſible Parts, wherein alone this pretended Malignity might conſiſt.

Thoſe who are of *Galen*'s Opinion, in reſpect to a Quail, further ſay, for the maintaining of it, that Quails, being very liable to epileptical Motions, may impart the ſame to thoſe that eat them; but it would follow from hence, that Goats, Sheep, Capons, Turtles, and ſeveral other Animals, commonly eat by us, and that are often ſubject to Epilepſies, muſt communicate the ſame to us, which we have not yet experienced. Some of the Antients, following the falſe Reaſoning of *Galen*, with reſpect to the Effects of the Quail, will have it eaten with Coriander-ſeed, Vinegar, and ſeveral other Ingredients, which will make it loſe its good Taſte, and ſo pretend hereby to diveſt it of its ſuppoſed Malignity; but as we are not yet ſo well convinced of its being ſo pernicious, we ſhall hold ourſelves free to ſeaſon the Quail with what we ſhall deem moſt proper to improve its pleaſant Taſte; and we ſhall not trouble ourſelves about correcting a pretended ill Quality, of which we have no manner of Experience.

The Quail does not riſe high above the Earth, and flies heavily; for which Reaſon *Pliny* calls it rather a terreſtrial than aereal Bird; but Nature has made it Amends, by the great Agility of its Feet, whereby it runs extremely ſwift. It is a wanton and laſcivious Bird.

The Fat of the Quail is good to take away Specks on the Eyes; as its Dung, when dried and reduced to Powder, is for the Falling-ſickneſs. *Lemery on Foods.*

As the Aliment of Quails is principally Vegetables and Water, and the habitual Exerciſe not very great, it does not ſeem likely, that the Salts ſhould be very much exalted; and yet the Lewdneſs of this Bird inſinuates the contrary.

Boerhaave claſſes the Quail amongſt alcaleſcent Aliments, and ſays it feeds on Inſects.

COTYLA. See CHAMÆMELUM.

COTYLE, κοτύλη. This properly ſignifies any deep Cavity in a Bone, in which any other Bone is articulated; but it is generally uſed to expreſs the Acetabulum, or Cavity, which receives the Head of the Thigh-bone. It alſo imports a deep Sinus, ſurrounded with large Lips.

Cotyle, *Cotyla*, *Cotula*, among the Antients, ſignify'd not only a Drinking-cup, of a wide and deep Capacity, but any thing which had a Cavity; for Inſtance, the Hollow of the Hand, as we learn from *Athenæus*, *Lib.* 11. *Cap.* 8. But it is alſo a Meaſure of Capacity among the *Greeks* for Things liquid as well as dry, and is the ſame with the Hemina of the *Romans*, containing half a Sextary, or four Acetabula: Hence it appears, that it contains ten Ounces of Wine, and nine of Oil. See *Galen*, *de Ponderibus & Menſuris*, where he alſo determines its Capacity of Honey, which is thirteen Ounces and a half. *Philander*, on *Vitruvius*, makes the Cotyla conſiſt of ten *Unciæ menſurales*. It will help us, for the better underſtanding of Authors, to read what *Pitiſcus* has written on this Subject in his Lexicon: "The Cotyla, ſays he, which is alſo call'd *Tri-*"*blion*, is half a Sextary, and the twelfth Part of a Chœus. It "contains two Quarteries and ſix Cyathi: Its Capacity, full "of Oil, weighs ſeven Ounces and a half, or ſixty Drams; "and it holds, of Wine or Water, eight Ounces two Drams "two Scruples. The *Attic* Cotyle was nine *Italic* Ounces, "which, as they are mark'd by the Sections of the Horn, "weigh ſeven Ounces and a half; ſo that the *Unciæ menſura-*"*les* differ from the *ponderales*; and hence it is, that the "medicinal *Unciæ*, and *Libræ menſurales*, are the ſame as the "*Attic* and *Roman*. The *Cotyla Georgica* is larger than the "*Libralis*, as containing thirteen *Unciæ menſurales* and a half, "that is, a *Roman* Pound, beſides an Ounce and a half. The "*Cotyla hippiatrica libralis* is twelve *Roman* Ounces. That "of *Paris* is, indeed, a Pound; but more than the *Roman* "Pound, in the ſame Proportion as the *Paris* Foot is larger "than the *Roman* Foot; that is, by nine Drams, or an Ounce "and a Dram, which we may call the Depth of an Inch and "a half, if we compare lineal with ſolid Meaſures." *Rieger.*

It is neceſſary, for underſtanding the above Quotation, to obſerve, that there was amongſt the *Romans* a *Libra menſuralis*, which the *Greeks* call'd λίτρα μετρική, and diſtinguiſh'd from the λίτρα σταθμική, or the *Libra ponderalis*. This conſiſted of twelve Ounces, and was divided likewiſe as the *As*. It was made commonly of Horn, and divided by twelve Lines marking the Ounces; from whence it was call'd by *Galen* κέρας μετρικόν, *Cornu menſurale*. According to *Galen*, *Lib.* 6. *de Compoſ. Medicament.* this *Libra menſuralis* weigh'd ten Ounces of Oil, and, of Wine, eleven Ounces two Scruples one Obolus and one Siliqua, according to the ponderal *Libra*; that is, in the Proportion of Nine to Ten, which the Antients all along ſuppoſed to be that of the ſpecific Gravities of Oil and Wine. According to the Weight of Wine aſſign'd by *Galen*, the *Libra menſuralis* contain'd 19. 085 ſolid Inches, ſomewhat leſs than three Quarters of our Pint, Wine-meaſure.

COTYLEDON. Certain glandular Bodies, adhering to the Chorion of ſome Animals, are call'd by the Name of *Cotyledons*; but no ſuch Subſtances are obſervable in the Human Chorion.

COTYLEDON, in Botany, is that Part wherein the nutritious Juices of the new Plant are prepared. In ſome Plants there is but one Cotyledon, but in moſt there are two, which become the ſeminal Leaves: Hence the Diſtinction betwixt monocotyledonous and dicotyledonous Plants. *Rieger.*

COTYLEDON is alſo the Name of a Plant.

The Characters are,

In Root, Leaves, Stalk, and the whole Appearance, it reſembles the *Sedum*, Houſeleek. The Flower-cup is multifid. The Flower is monopetalous, quinquefid, and tubulated. The Fruit is like that of the *Sedum*.

Boerhaave takes notice of ten Species of this Plant.

1. Cotyledon; major. *C. B. Pin.* 285. *Tourn. Inſt.* 90. *Elem. Bot.* 76. *Boerh. Ind. A.* 287. *Umbilicus Veneris*, Offic. Ger. 423. Emac. 528. Mer. Pin. 126. Merc. Bot. 1. 77. Phyt. Brit. 131. *Umbilicus Veneris vulgaris*, Park. Theat. 740. *Cotyledon vera, radice tuberoſa*, J. B. 3. 683. Raii Hiſt. 2. 1878. Synop. 3. 271. *Cotyledon, Umbilicus Veneris*, Chab. 537. *Cotyledon Dioſcoridis, Umbilicus Veneris vulgaris*, Rupp. Flor. Jen. 31. *Sedum luteum murale Spicatum, folio umbilicato rotundo*, Hiſt. Oxon. 3. 470. NAVELWORT.

This Plant has a thick knotted Root, with many Fibres at the Bottom, from which ſpring ſeveral fat ſucculent Leaves; the lowermoſt of which have their Foot-ſtalks ſet on upon the Side of the Leaf, which is roundiſh, and crenated about the Edges; but the upper Leaves have the Foot-ſtalk inſerted into the Middle. They are round, and ſomewhat hollow. The Flowers grow on the Tops of the Branches, in long Spikes, of a whitiſh-green Colour, hollow, and of an oblong cylindrical Shape, each of which is ſucceeded by two little horn'd Veſſels, in which are contain'd many ſmall Seeds. It grows upon old Stone-walls and Buildings in divers Parts of *England*, and flowers in *May*. The Leaves only are uſed.

Navelwort is gently cooling and moiſtening, refrigerating and aſtringent, uſeful in hot Diſtempers of the Liver: It provokes Urine, and takes off the Heat and Sharpneſs thereof. The Juice, outwardly applied, helps the Shingles, St. *Antony*'s Fire, the Pain and Inflammation of the Piles. It is likewiſe uſeful againſt Kibes and Chilblains. It is an Ingredient in the *Unguentum Populeon*; tho' the Herb-gatherers too frequently impoſe the *Nymphæa minima*, or Frog-bit, or, which is worſe, the *Cotyledon paluſtris*, or Marſh-penywort, for this Herb, on their unwary Cuſtomers.

Cotyledon; Africana; fruteſcens; foliis orbiculatis, limbo purpureo cinctis. *T.* 90. *Sedum, Africanum, fruteſcens, incanum, foliis orbiculatis.* H. L. 349. M. H. 3. 474. *Sedum, majus, arboreſcens, Africanum, alterum, foliis rotundioribus, glaucis, limbo purpureo cinctis.* Breyn. Prodr. 1. 47. *Sedum, majus, arboreſcens, Africanum, foliis rotundioribus, glaucis, flore rubente.* Breyn. Prodr. 2. 89. H: SHRUBBY AFRICAN NAVELWORT, WITH ROUND LEAVES EDG'D WITH A PURPLE RIM.

3. Cotyledon; Afra; arboreſcens; major; foliis glaucis, oblongioribus; flore luteo. *Sedum, majus, arboreſcens, Africanum, foliis oblongioribus, flore luteo.* Breyn. Prodr. 2. 88. *Sedum, arboreſcens, Promontorii Bonæ Spei.* Stapel. 335. Breyn. Prodr. 1. 47. *Sedum, maximum, arboreſcens, latifolium, flore flavo.* Dn. ten. Rhyne. Brevn. Cent. 1. 179. H. GREATER TREE-LIKE AFRICAN NAVELWORT, WITH OBLONG SEA-GREEN LEAVES, AND A YELLOW FLOWER.

4. Cotyledon; major; arboreſcens; Afra; foliis orbiculatis, glaucis, limbo purpureo, & maculis viridibus, ornatis. *H.* GREATER TREE-LIKE AFRICAN NAVELWORT, WITH ROUNDER SEA-GREEN LEAVES, HAVING PURPLE EDGES, AND SPOTTED WITH GREEN.

5. Cotyledon; major; arboreſcens; Afra; foliis minoribus, craſſiſſimis, viridioribus, minutiſſimè punctatis. *Sedum, Africanum, folio rotundo, minori.* Ind. 121. H. GREATER AFRICAN TREE-LIKE NAVELWORT, WITH SMALL THICK LEAVES.

6. Cotyledon; major; arboreſcens; Afra; foliis minoribus, oblongis, atro-viridibus. H. GREATER AFRICAN TREE-LIKE NAVELWORT, WITH SMALL OBLONG DARK-GREEN LEAVES.

7. Cotyledon; Africana; fruteſcens; folio longo & anguſto; flore flaveſcente. *Commel. Rar.* 23. *H. R. D.* SHRUBBY AFRICAN NAVELWORT, WITH A LONG NARROW LEAF, AND A YELLOWISH FLOWER.

8. Cotyledon; Africana; fruteſcens; flore umbellato, coccineo. *Commel. Rar.* 24. *H. R. D.* SHRUBBY AFRICAN NAVELWORT, WITH SCARLET FLOWERS GROWING IN AN UMBEL.

9. Cotyledon; Afra; arborea; craſſo caudice; folio auriculæ Urſi anguſtiore.

10. Cotyledon; Afra; folio craſſo, lato, laciniato, floſculo aureo. *Telephium, maximum, Africanum, flore aurantio.* Ex Cod. Bent. 1. Plukn. Phyt. 228. 3. H. R. D. AFRICAN NAVELWORT, WITH A BROAD THICK DIVIDED LEAF, AND SMALL YELLOW FLOWERS. *Boerh. Ind. alt. Plant. Vol.* 1.

Beſides the foregoing Species of the Cotyledon, *Dale* mentions the following:

COTYLEDON. Offic. *Cotyledon radice tuberoſa longa repente.* Mor. Hort. Bleſ. 257. Chomel. 807. Tourn. Inſt. 90. Elem. Bot. 76. Raii Hiſt. 2. 1878. *Cotyledon flore luteo radice repente.* Dodart. Mem. 73. *Cotyledon flore luteo maxima.* Hort. Lugd. Bat. 191. *Sedum luteum umbilicatum ſpicatum radice repente majus.* Hiſt. Oxon. 3. 471. CREEPING NAVELWORT.

The Leaves are uſed in the ſame Intentions as thoſe of the firſt Species mention'd above.

COVALAM. The Name of a Plant which grows in the *Eaſt Indies*, otherwiſe called, *Cucurbitifera trifolia Indica fructus pulpâ Cydonii æmula. Cydonia exotica.* C. B. *An Malum Cydonium Indicum.* Bontii? *Beli ſeu Serifole Bengalenſium, Cydonia eorundem Garciæ.* J. B.

This is a tall Tree, which grows in *Malabar*, and the Iſland of *Ceylon*; the Fruit of which reſembles a round Apple in Shape; it is cover'd with a greeniſh thin Rind, under which lies another, which is hard and woody, incloſing a viſcid, yellowiſh, moiſt Subſtance, of a ſweetiſh acid Taſte, in which are plac'd flat, oblong, white Seeds, turgid with a gummy pellucid Juice.

This Fruit, whilſt tender, is preſerv'd in Sugar or Vinegar; when ripe, they are eaten by the Inhabitants of the Country, and eſteem'd delicious; whilſt unripe, they ſtop a Diarrhœa, or Dyſentery. A Decoction is prepared of the Bark, and ſmall Roots, with common Water, which cures hypochondriac Melancholy, Palpitations of the Heart, and Faintings. An Electuary, made of the Bark in Powder with Honey, promotes the Digeſtion of the Aliment, and takes away Head-achs, and Vertigos. A Decoction of the Leaves cures an Aſthma. From the Flowers a Water is diſtil'd, poſſeſſed of cardiac and alexipharmic Virtues.

The Phyſicians of the Country, where this Tree grows, uſe the immature Fruit, preſerv'd in Honey or Vinegar, to ſtop a Diarrhœa; and employ it for the Cure of a Dyſentery with great Succeſs, prepared in any Manner. *Raii Hiſt. Plant.*

COUHAGE. Offic. *Phaſeolus Zurratenſis, ſiliquâ birſutâ, Couhage dicta.* Raii Hiſt. 1. 887. Flor. Mal. 212. Rivin. Irr. Tetr. *Phaſeolus ſiliquâ birſutâ.* Park. Theat. 1056. *Phaſeolus pruritum excitans birſutie ſiliquarum.* Ger. Emac. 1215. *Phaſeolus Zurratenſis ſiliquâ birſutâ pungente.* Hiſt. Oxon. 2. 69. Herm. Hort. Lugd. Bat. 492. *Phaſeolus utriuſque Indiæ lobis villoſis, pungentibus, minor.* Par. Bat. Prod. 365. Cat. Jam. 69. Hiſt. Jam. 1. 37. *Phaſeolus Braſilianus ſiliquis durante lanugine obſitus, Ricini fructu.* Hor. Par. 140. *Phaſeolus Suratenſis villoſus ſiliquâ birſutâ, pungente.* Hort. Boſ. 27. *Nai Corona.* Hort. Mal. 8. 61. COUHAGE, OR STINKING BEANS.

This is a Sort of Kidney-bean imported from the *Eaſt Indies*, where they are uſed as a Cure for the Dropſy.

Infuſe twelve Pods of this Plant in two Pints of Beer, and exhibit a Quarter of a Pint of this Infuſion every Morning to one labouring under a Dropſy, and you will experience it to be a moſt certain Remedy. This Receipt was communicated by Sir *Samuel Hubbards*, who lived ſome Years in *Barbadoes*, and had often tried it on his Negro Slaves. *Raii Hiſt. Plant.*

This is call'd *Siliqua birſuta*, and, by a Corruption of the Word, *Cowitch*. The Down, growing on the Outſide of the Pod, is ſo pointed, as, like a Nettle, to ſting the Fleſh, but not with ſo painful a Senſation; this cauſing only to itch; which continues ſo long, and at laſt will grow ſo troubleſome, as to excite much Pain in rubbing to allay it; ſo that it frequently occaſions a Flux of Humours to the Parts.

COUM is a Name for the Colchicum; Chionenſe; floribus Fritillariæ inſtar teſſellatis; foliis undulatis. See COLCHICUM.

COURAP. The *Indian* Name for a Diſtemper, which, as *Bontius* informs us, is very common in *Java*, and other Parts of the *Eaſt Indies*. It is a Sort of Herpes, or Itch, which generally breaks out on the Arm-pits, Breaſt, Groins, and Face, with ſuch an intolerable Itching, that the Perſons affected cannot forbear ſcratching themſelves perpetually, both in the Day, and during the Night: But they pay very dear for the Diverſion which this gives them; for an inſufferable Pain ſucceeds in thoſe Parts which are rendered bare, and denudated of the Cuticula, by the Nails; theſe diſcharging an acrid Humour, which vellicates the Parts, and cauſes the Linen to adhere ſo faſt to the raw Parts, as that it cannot be ſeparated from them without tearing the Cruſt form'd thereon. *Courap* is a general Name for any Sort of Itch; but the Inhabitants call this Diſtemper thus, by way of Eminence. It is ſo extremely contagious, that very few eſcape it. Though it is an unſeemly Diſorder, cauſing a Roughneſs of the Skin, with Scales or *Furfures*, yet the Inhabitants imagine, that it is attended with one Advantage; which is, that, whilſt a Perſon is affected with this, he is ſure to be troubled with no other dangerous Diſtemper; and look upon the Diſappearing of this, as a Prognoſtic of ſome worſe Diſorder. They are, therefore, very eaſy under it for many Years together, without being very ſolicitous about curing it. It is remarkable, that the Vulgar in *Scotland* are poſſeſſed of the ſame Opinion with reſpect to the Itch, and even carry it ſo far, as to affirm, that the Catching this Diſtemper proves a Cure for any other previous to it, conſidering it in the ſame Light as others do the Gout, perhaps with juſt the ſame Foundation.

The Cure, according to *Bontius*, is to be begun by repeated Purges of the following Powder:

Take of clean Sena-leaves, fourteen Ounces; of the beſt Rhubarb, and white Turbith, each eight Ounces; of white Tartar, and the beſt Scammony, each four Ounces: Mix together.

The Doſe is half a Dram.

As for Topics, *Bontius* recommends the following, which, he informs us, was communicated to him by *Juſtus Heurnius*:

Take of the Ruſt of Iron, an Ounce; of Sulphur, half a Dram: Let theſe be finely powder'd in a Mortar, adding as much of the Juice of the Baſilicon, which grows in the *Indies*, as is ſufficient to make the Powder into Paſtils, which are to be diſſolv'd in Vinegar, and applied to the Part affected at Night, waſhing it off the next Morning.

If this is not ſufficient to perform a Cure,

Take of Opium, half a Scruple; of Lime prepared of Shells calcin'd, two Scruples: Let theſe be rub'd together in a Mortar, with the Juice of Love-apples. When the Cruſt is abraded, and the Ichor well abſterg'd from the Part affected, let it be anointed with this Compoſition.

Bontius adds, that Oil of Benzoin, with a little Nitre, Sal Prunellæ, or a very ſmall Quantity of Sublimate, makes a good Topic in theſe Caſes; and that the Juice of Lemons may be commodiouſly added to theſe Applications. He farther informs us, that he cured himſelf, when affected by this Diſorder in the Arm-pits, and upon the Breaſt, by once purging, and then anointing the Part affected with prepar'd Tutty, or Ceruſs alone. The Diet ſhould be moderate, and of Aliments which afford a good Juice. *Bontius, de Medicina Indorum.*

COURBARIL. This is the *American* Name, by which the *Indians* call the Tree which produces the Gum Anime.

The Characters are,

It hath a papilionaceous Flower, from whoſe Calyx ariſes the Pointal, which afterwards becomes an unicapſular hard Pod, including roundiſh hard Seeds, which are ſurrounded with a fungous ſtringy Subſtance.

It is thus diſtinguiſhed by Authors:

Arbor Braſilienſis ſiliquoſa & gummifera, Gummi Anime ſimili. Ejuſd. 1760. *Arbor ſiliquoſa ex Virginia, Lobo fuſco, Scabro.* C. B. Pin. 404. *Arbor ſiliquoſa, ex qua Gummi Anime elicitur.*

elicitur. Ejuſd. *Animifera Arbor Braſiliana.* Herm. Par. Bat. Prod. 312. *Anime, Cancamum Græcorum.* Mont. Exot. 11. Ind. Med. 10. *Acaciæ quodammodo accedens, Arbor Anime Gummi fundens, Americana, foliis magnis acuminatis in pediculo binis, lobo magno, craſſiſſimo, eduli.* Breyn. Prod. 2. 8. *Ceratia diphyllos Antegoana, Ricini majoris fructu, oſſea ſiliqua grandi incluſo.* Pluk. Almag. 96. Phytog. Tab. 82. *Jetaiba Arbor.* Piſon. (Ed. 1648.) 60. (Ed. 1658.) 123. Jonſ. Dendr. 313. *Jetaiba Braſilienſibus.* Marcg. 101. *Courbaril.* Plum. Nov. Gen. 49. Tab. 36. *Lobus ex Wingandecacuw.* J. B. 1. 436. *Lobus Peregrinus cartilaginoſus Phaſeolo nigro puniceo annulo cinctο.* Chab. 138. *Locus vulgo.* THE LOCUST-TREE. *Dale.*

It is a large Tree, growing in many Parts of the *Weſt Indies*, bearing two Leaves at a Joint, which are about the Bigneſs and Shape of Bay-leaves, but having the middle Rib bending towards one Side of the Leaf, which makes one Half appear bigger than the other. It bears large Lobes or Pods, three or four Inches long, and two Inches over, of a flattiſh round Shape, very thick and hard, and full of ſmall Aſperities, making them feel like Shagreen, of a browniſh yellow Colour, containing in the Inſide ſeveral hard ſtony Kernels.

COURONDI. H. M. P. 4. T. 50. *Arbor Indica fructu rotundo, cortice molli nucleum unicum nudum Glandi ſimilem continente.*

This is a tall evergreen Tree, which grows about *Paracaro*, in the *Eaſt Indies*. The Juice expreſs'd from the Leaves, taken in warm Whey, cures a Diarrhœa and Dyſentery; as do the Kernels of the Fruit, taken any way. *Raii Hiſt. Plant.*

COUROU-MOELLI. H. M. P. 5. T. 39. p. 77. A Shrub about four or five Foot high, which grows about *Baypin*, and other ſandy Places near *Cochin*, in the *Eaſt Indies*. The Bark, together with the Root, boil'd in Cows Milk, is eſteem'd an Antidote againſt the Bites of Serpents. Of the Bark bruiſed, with Oil, a Liniment is prepared, which is ſaid to be good in the Gout. The Fruit, which is a black, ſhining, ſucculent, acid Berry, is eſteem'd very delicious. *Raii Hiſt. Plant.*

COUTON. The Name of a Tree which grows in *Canada*, like the Walnut-tree, call'd *Arbor Vinifera Couton, Juglandi ſimilis.* J. B.

This Tree is remarkable for affording, from Inciſions made in it, a Juice in great Quantities, of a very agreeable Taſte, like that of *Orleans* Wine.

COXÆ OSSA. The ſame as Oſſa Innominata. See INNOMINATA.

COXENDIX. The Iſchium. Some call the *Oſſa Innominata* by the Name of *Oſſa Coxendicis.* See INNOMINATA.

CRABRO. Offic. Aldrov. de Inſect. 225. Jonſ. de Inſect. 22. Charlt. Exer. 38. *Crabro vulgaris.* Raii Inſect. 250. *Crabro, Tenthredo.* Mer. Pin. 196. Mouff. Inſect. 49. THE HORNET.

I don't know that the Hornet is uſed as a Medicine; but their Combs are recommended in a Drench for that Diſorder in Horſes, which *Vegetius, L. 2. C. 23.* calls *Scrofula*, meaning, I believe, what we call the Strangles.

The Sting of the Hornet is very troubleſome, making the Part affected to ſwell very much, with an exceſſive Pain. I ſhould apprehend, that anointing it with Oil of Olives would be the moſt effectual Remedy.

CRADE, κράδη. In *Hippocrates* it imports the Branch of a Fig-tree.

CRÆPALE, κραιπάλη. According to *Galen*, in his Commentary on the third Aphoriſm of the fifth Section of *Hippocrates*, it ſignifies every Diſorder of the Head, produced by exceſſive drinking of Wine.

CRAMA, from κεράννυμι, to mix. Any ſort of Mixture.

CRAMBE, in general, ſignifies a Cabbage; but the modern Botaniſts diſtinguiſh it from the *Braſſica.* According to *Boerhaave*, the Characters are,

The Seed-veſſel is unicapſular, divides into two Parts, and contains a ſingle oblong Seed.

The Species are,

1. Crambe; maritima; folio Braſſicæ. *Tourn. Inſt.* 211. *Elem. Bot.* 181. *Boerh. Ind. A.* 2. 1. *Raii Synop.* 3. 307. *Braſſica ſylveſtris.* Offic. *Braſſica Maritima.* Raii Hiſt. 1. 838. *Braſſica Maritima monoſpermos.* C. B. Pin. 112. *Braſſica Marina Anglica.* Ger. 248. Emac. 315. Mer. Pin. 16. *Braſſica Marina monoſpermos.* Park. Theat. 270. Merc. Bot. 1. 24. Phyt. Brit. 16. *Braſſica monoſpermos Anglica.* J. B. 2. 830. Chab. 270. *Braſſica major repens, multiflora, alba, monoſpermos.* Hiſt. Oxon. 2. 209. SEA-COLEWORT, or CABBAGE.

This is uſed as an Aliment, like other Cabbage, when very young; but is eſteem'd more hot and dry. *Dale* informs us, that the Leaves heal Wounds, and diſcuſs inflammatory and other Tumors.

2. Crambe; Orientalis; dentis leonis folio; erucaginis facie. *T. C.* 14. *Boerh. Ind. alt. Vol.* 2.

I don't know, that the ſecond Species has any medicinal Virtues aſcribed to it.

CRAMBEION, κραμβεῖον, according to *Erotian*, is the old *Sicilian* Name for the *Cicuta*, Hemlock; and κραμβίον is, by *Heſychius*, interpreted the ſame. But

CRAMBION, κραμβίον, in *Hippocrates*, imports a Decoction of Cabbage.

CRAMPUS. The Cramp. *Helmont.*

CRANEIA, κράνεια. The *Cornus.* Cornelian Cherry-tree.

CRANGON. Offic. *Squilla Crangon.* Aldrov. de Exang. 150. 149. Rondel. de Piſc. 1. 547. Geſn. Aquat. 906. Jonſ. Exang. 17. *Alia Squilla.* Bellon. de Piſ. 359. THE PRAWN.

This is a Sea Shell-fiſh, too well known to require a Deſcription. It is eſteem'd an extremely nouriſhing Food, and therefore proper in Conſumptions. *Dale.*

CRANIUM. The Skull. See CAPUT.

The human Skull has been much celebrated for the medicinal Virtues it is ſaid to exert, in the Cure of Epilepſies, Apoplexies, Dyſenteries, Fevers, and arthritic Diſorders; and has, on this Account, not only been employ'd as an Ingredient in ſome Shop-Compoſitions, but has alſo been recommended by the Superſtitious, as an Amulet againſt Conſumptions, Hæmorrhages, and Incontinence of Urine. But, becauſe the Uſe of this Remedy was likely very often to diſappoint the Patient who try'd it, certain Circumſtances, not very eaſy to be comply'd with, were ſaid to be neceſſary to its producing the ſalutary Effects intended, which might ſerve as an Excuſe for the Preſcriber, in caſe of Failure. Thus the Skull was to be that of a young healthful Man, who died of a violent Death; it was, moreover, to have been expoſed to the Air for many Years, and never to have been buried; beſides, it was to be very clean, and free from Filth. A Female Skull only, as was ſaid, could produce the deſir'd Effects in Women, and that of a Male in Men. And the anterior Part was preferr'd to the poſterior. Some attributed the greateſt Efficacy to the triangular Bone, which, in ſome Skulls, is found at the Juncture of the lambdoidal and ſagittal Sutures. In order to increaſe the Eſteem, and, conſequently, the Price, of Medicines prepared of the human Skull, ſome Dealers in Medicines endeavoured to poſſeſs People with a Notion, that, upon diſtilling or calcining it, various ſupernatural Noiſes were heard, as if ſome evil Spirit was inclin'd to frighten the Artiſt from procuring a Medicine of ſuch extraordinary Virtues. Some grave Authors, however, preſcribe it: Thus, *Angelus Sala* directs it to be taken uncalcin'd, in the Form of a very fine Powder, for the Epilepſy. And *Lemery* orders it, with the ſame View, dry'd and powder'd, from ten Grains to two Scruples; and, upon a Suppoſition that it is poſſeſs'd of ſome Virtues againſt an Epilepſy, accounts for them from the volatile Salts it contains: Therefore, ſays he, it muſt not be calcin'd, becauſe, by that means, it is depriv'd of its volatile Salts, the Part wherein its Efficacy reſides. *Riverius* orders the Shaving of a Skull, in the Quantity of a Dram, to be taken in Broth, or any other proper Liquor, for the Cure of a Dyſentery. And *Hartman* carries the Affair ſo far, as to aſſert, that even drinking frequently out of a Skull cures the King's-evil. What *Ettmuller* relates, is too ridiculous to mention ſeriouſly; which is, that ſome Soldiers imagine, that drinking out of a Skull renders them invulnerable.

Notwithſtanding the Reputation of the human Skull as a Medicine, *Galen*, and, ſince him, many other Authors, have been of Opinion, that the human Skull is poſſeſſed of no more Virtues than any other Bones, either of Man or Beaſt, or Hartſhorn; and that it is nothing more than an Abſorbent.

Rieger cautions the Phyſician, who preſcribes this Medicine uncalcin'd, to take care, that the Skull, which is uſed, did not belong to a Perſon who was infected with the Pox, which frequently attacks this Part. *Fuller* is of Opinion, that a Skull is deſtitute of all manner of medicinal Virtues. And *Eraſtus* affirms, from Experience, that calcin'd Hartſhorn is preferable to it in every medicinal Intention. *Junker* ſays, that when exhibited with other Ingredients, it is ſometimes found of ſome Efficacy in Epilepſies, but very ſeldom when given alone: Hence he juſtly concludes, that the ſalutary Effects are owing to the other antiepileptic Drugs adminiſter'd with it.

It is not found, by chymical Analyſis, to differ from other Bones: The Water, therefore, Spirit, Oil, and volatile Salt, of a human Skull do not perceptibly differ from thoſe of other Bones. The principal Shop-compoſition, in which a Skull is an Ingredient, is the *Pulvis ad Guttetam.*

The Earth found in a human Skull, after being expoſed for many Years, is ſaid, by *Pliny*, to be a Depilatory of the Eye-lids.

For an Account of the Moſs which grows on the Cranium, ſee USNEA.

CRANOCOLAPTES, κρανοκολάπτης. The Name of a venomous Spider, which is the fourth of the ſix Species mentioned by *Aetius, Tetrabib. 4. Serm. 1. C. 18.*

CRANTERES, κραντῆρες. A Name for thoſe Teeth which grow laſt of all, and are call'd otherwiſe *Dentes Sapientiæ.*

CRAPAUDINA. The Toad-ſtone. See BUFONITES.

CRAPULA. The ſame as CRÆPALE.

CRASIS, κρᾶσις, from κεράννυμι, to mix. A Mixture, as of Wine and Water. But it is used by Physicians to express a Mixture of *Galen*'s first Elements, or Qualities. In this Sense it is the same as TEMPERAMENTUM.

CRASPEDON, κρασπεδον. A Disorder of the *Uvula*, when it hangs down in the Form of a thin, oblong Membrane. *Aretæus de Causis & Signis Acut. Lib.* 1. *Cap.* 8.

CRASSA INTESTINA. The large Intestines. See COELIA.

CRASSENA. A Term coined by *Paracelsus*, to express certain saline, putrefactive, and corrosive Particles, which produce Ulcers, and Tumors of various Forms.

CRASSULA. The same as *Anacampseros*, Orpine.

CRATÆGUS. The Wild-service-tree.

The Characters are,

The Leaves are single, and not pinnated; the Flower is rosaceous and pentapetalous; the Ovary like that of the Pear; the Fruit is in Shape like a Pear, of the Size of a Berry, containing callous Seeds in membranous Cells.

Boerhaave mentions four Species of this Plant.

1. Cratægus; folio subrotundo, serrato, subtus incano. See ARIA.

2. Cratægus; folio oblongo, serrato, utrimque virente. *T.* 633. *Chamæmespilus.* J. B. 1. 72. *Cotonaster, folio oblongo, serrato.* C. B. P. 452. *Cotonaster forte Gesneri.* Clus. H. 63. *Mespilus, humilis, folio Mali Cydoniæ oblongo, serrato.* H. L.

3. Cratægus; Virginiana; foliis Arbuti. *T.* 633. *Sorbus, Virginiana, foliis Arbuti.* Breyn. Prodr. 1. H. L. 699. THE VIRGINIAN WILD-SERVICE, WITH LEAVES LIKE THE STRAWBERRY-TREE.

4. Cratægus; folio laciniato. *Tourn. Inst.* 633. *Boerh. Ind. A.* 2. 248. *Sorbus torminalis*, Offic. Ger. 1288. Emac. 1421. Mer. Pin. 115. Aldrov. Dendr. 618. *Sorbus torminalis Plinii*, Chab. 2. Merc. Bot. 71. Phyt. Brit. 117. *Sorbus torminalis seu vulgaris*, Park. Theat. 1420. *Sorbus torminalis & Cratægus Theophrasti*, J. B. 1. 63. *Mespilus Apii folio, sylvestris non spinosa, seu Sorbus torminalis.* C. B. Pin. 454. Raii Hist. 2. 1457. Synop. 3. 453. Elem. Bot. 503. *Cratægus, Sorbus torminalis*, Mont. 41. *Sorbus Apii folio sylvestris, non spinosa, aliis Sorbus torminalis, Cratægus Theophrasti*, Jonst. D. THE WILD-SERVICE OR SORB-TREE. *Dale.*

The common Service-tree will, in good Ground, grow considerably tall, having a whitish Bark, and Leaves that differ from those of the true *Sorbus*, in not being winged, but somewhat like the Maple, tho' larger and longer, being cut into seven sharp-pointed and serrated Segments, the two next the Stalk being cut in deepest, of a Pale-green above, and whitish underneath. The Flowers grow in Clusters like the true *Sorbus*, of a yellowish-white Colour; and the Fruit is set in the same manner on long Foot-stalks, more than as big again as the common Haws: They are likewise umbilicated at the Top, of a harsh restringent Taste when green, but, when mellow'd, sweet and pleasant, having a stony Substance in the Middle, including two Seeds. It grows frequently in Woods and Thickets, and flowers in *May*, the Fruit being ripe in *September*.

The Fruit is substituted for the *Sorbus sativa*, or true *Sorbus*, being of the same Nature, or rather more astringent and binding: It is good for all Kinds of Fluxes, either of Blood or Humours: When ripe, it is pleasant and grateful to the Stomach, promoting Digestion, and preventing the too hasty Passage of the Food out of the Bowels, and is commended in Fevers attended with a Diarrhœa.

CRATÆGONUM. See MELAMPYRUM.

CRATER, κρατήρ. A large Drinking-cup. But *Rulandus* defines it a Brass Kettle, wide at the Bottom, and narrow at the Top.

CRATERION, κρατήριον. A small Cup, Pot, or Vessel.

CRATIBULA, or CRATICULA. The Iron Bars, or Grate, which cover the Ash-hole in Chymical Furnaces.

CRAUROS, κραῦρος. Friable.

CREA, according to *Blancard*, is the anterior Part of the *Tibia*.

CREBER. Frequent. It is applied to Respiration, and to the Pulse, when the Intervals betwixt each Inspiration, or each Pulsation of the Artery, are very short.

CREGYON, κρήγυον. Good. In *Hippocrates* it is apply'd to Symptoms.

CREMASTER, from κρεμάω, to suspend. The Name of a Muscle of the Testicle, of which there is one on each Side. It arises fleshy from the lowest and fore Part of the Spine of the Os Ilium, and upper Part of the *Ligamentum Pubis*, its Fibres running parallel with those of the *Obliquus Ascendens*, (not with the *Transversalis*, as *Bartholin* objects against *Riolan*) and, almost encompassing the Process of the Peritonæum, descends with it, and is inserted into the *Tunica Vaginalis*, upon which it is spread in several distinct Portions.

Its Use is to draw up and suspend the Testis.

CREMER. The Name of a Distemper which is said to be endemial in *Hungary*, which, by the Description, should be a sort of *Crapula*. It is cured by drinking a small Quantity of any cordial Water.

CREMNOI, κρημνοί. The Lips of Ulcers, and the *Labia* of the Female Pudenda.

CREMOR, χυλὸς, or χυμὸς, in *Greek*. It signifies, first, the expressed Juice of any Grain. Secondly, the strain'd Juice of any Grain, particularly Barley, boil'd till it be so soft as to pass thro' a Strainer. See PTISANA. Thirdly, it imports the Cream of Milk.

CREMOR *Tartari* is a Preparation of Tartar thus call'd, because properly it is the Cream or Scum of a Decoction of Tartar in Water. See TARTARUS.

CRENÆ, in Botany, imports Incisures on the Edges of the Leaves of Plants. Hence Leaves with these Incisures are call'd crenated Leaves, which differ from serrated Leaves, in which the Incisures are more acute.

CREPATIO, or CREPATURA. In Pharmacy *Crepatura* implies the Cracking or Breaking of any Seed in boiling; and this is to be understood, when Seeds are directed to be boil'd *ad Crepaturam*.

CREPATURA, in *Paracelsus*, signifies an intestinal Hernia.

CREPINUM, in *Paracelsus*, is Tartar.

CREPITATIO. The same as DECREPITATIO, which see.

CREPITUS. A Discharge of Air from the Anus, attended with a Noise.

CREPITUS LUPI, in Botany, is that Fungus, which in *English* is call'd Puff-ball. See LYCOPERDON.

CRESERA, κρησέρα. A Sieve for the separating the Bran from Meal.

CRESPULUM, κρέσπυλα, in *Myrepsus*, is the Herb call'd *Buphthalmum*, Ox-eye.

CRESSIO, according to *Blancard*, is a Name for the CARDAMON.

CRETA. Chalk, call'd by the *Greeks* Κρητικὴ γῆ, *Cretan Earth*, because the best Sort was brought from *Crete*, now *Candia*. *Kentman* takes notice of fifteen different Sorts of Chalk. *Geoffroy* defines Chalk a dense, brittle, earthy Substance, which readily stains the Fingers, and sticks to the Tongue, without any Astringency. Many kinds of Earth come under the Denomination of Chalk. Those mention'd by *Dale* are, the *Creta Alba*; *Terra Melitæa*; *Plumbum Nigrum*; and *Terra Selinusia*.

The white Chalk, or *Cretan* Earth, is thus distinguish'd:

Creta, Offic. Mer. Pin. 218. Schrod. 320. Worm. Mus. 3. Charlt. Foss. 2. Worm. 3. Agricol. 580. *Terra Creta*, Aldrov. Mus. Metall. 241. *Creta alba, seu Candida*, Dougl. Ind. 28. CHALK.

This is now found in many Countries besides *Crete*. It raises an Effervescence with acid Liquors, and is therefore deservedly looked upon as an Alcaline, or absorbent Earth. It is us'd with Success to allay the too great Acidity of the Juices of the Stomach, particularly in the Disease commonly known by the Name of the Heart-burn; and also in Coughs, that arise from a sharp Phlegm. It is likewise serviceable in Hæmorrhages, and is said to kill Worms. In a Word, the Property of all alcaline Earths is not only to absorb Acids, but to allay the Acrimony of the Fluids, and especially to restrain the violent Motion of the Bile, by detaining the Salts and Sulphurs thereof in their fixed Parts. White Chalk is given alone, from ten Grains to a Dram. It is likewise used in the *Decoctum Cretaceum* of *Bates*, which is thus prepared:

> Boil half a Pound of powder'd Chalk in three Pints of Water to a Quart; and, when the thicker Parts have subsided, pour off the clear milky Liquor, and add to it a proper Quantity of Sugar of Roses, or of any other proper Syrup.

An Emulsion may likewise be made of this Decoction, by pouring it by degrees on two Drams of each of the Four greater cold Seeds, bruised in a Mortar, and then adding to the strain'd Liquor two Drams of Chalk, finely powder'd, and five Ounces of the Syrup of Colt's-foot, Comfrey, or any other suitable to the Intention. The Patient is to drink plentifully of either of these Liquors.

Powdered Chalk is likewise given with Milk, to prevent its turning acid in the Stomach; and, externally, it is commended for drying Wounds, Ulcers, and Fissures in the Nipples. *Geoffroy*.

Chalk, when calcin'd, becomes a Lime, and differs extremely in Virtues from Chalk uncalcin'd. See CALX.

Chalk, in large Quantities, put into Springs or Wells of hard Water, is said to render it soft.

Dr. *Slare*, from Experience, affirms, that Chalk absorbs Acids sooner, and more powerfully, than Crabs-eyes, calcin'd Hartshorn, or Coral; and he therefore judges it to be a better Remedy than either of these for destroying Acids in the Stomach.

It is applied externally to running Puſtules, *Achors*, and Excoriations; and has been recommended for ſtopping Hæmorrhages, if apply'd to Wounds by way of Tent. It is farther ſaid to do Service, when applied to an Eryſipelas, or to Parts affected with gouty Pains.

Chalk, however, if taken in conſiderable Quantities, and without proper Cathartics to carry it thro' the inteſtinal Tube, when it has exerted the Effects intended, is known by Experience to be productive of great Miſchiefs, by plaiſtering, as it were, the Inteſtines, obſtructing the Lacteals, and the Orifices of the inteſtinal Glands, and thereby cauſing Cachexies, Indigeſtions, and various Diſorders.

TERRA MELITEA, Offic. Schrod. 317. *Terra Melitenſis*, Charlt. Foſſ. 4. Worm. 6. Aldrov. Muſ. Metall. 253. *Terra ex Melita Inſula effoſſa*, Calc. Muſ. 130. *Terra Melitenſis. Gratia Sancti Pauli*, Mont. Exot. 14. *Terra Sigillata Sancti Pauli vulgo.* EARTH OF MALTA.

This is a cretaceous ponderous Subſtance, of a whitiſh Colour, and aſtringent Taſte. It is brought from *Malta* in ſmall Cakes, ſealed with the Effigies of St. *Paul*, with a Viper. It agrees in Virtues with the *Creta alba* above-mention'd. The Earth of *Malta* is ſaid to have received a Benediction from St. *Paul*, when ſhipwreck'd upon that Iſland; and hence alexipharmic Virtues are attributed to it, which it is not likely to be poſſeſſed of on that account.

PLUMBUM NIGRUM, Offic. *Nigrica fabrilis*, Mer. Pin. 218. Charlt. Foſſ. 2. *Meſſa nigra ad Pnigitem referenda.* Worm. 5. *Ochra nigra*, Phil. Tranſ. No. 240. p. 183. *An Creta nigra mollis & dura.* Kentman. 7? BLACK LEAD. WADT, KELLO.

This is accounted refrigerating, drying, and repellent; and is ſometimes applied to ſtrumous and cold œdematous Tumors.

CRETA SELINUSIA, Offic. Aldrov. Muſ. Metal. 248. *Terra Selinuſia*, Matth. 1392. Calc. Muſ. 126. EARTH OF SELENUSIA.

That is in moſt Eſteem, which is reſplendent, white, friable, and readily diluted with a Fluid. It is drying and aſtringent, and is recommended as a good Topic for Ulcers.

CRETHMON, *κρηθμόν*. Samphire. See CRITHMUM.

CRIBRATIO. Cribration, in Pharmacy, is the paſſing any Subſtance thro' a Sieve or Searce, in order to ſeparate the finer Particles from the coarſe, whether the Body cribrated be dry, and in Powder, or moiſt, as the Pulps of Seeds, Fruits, or Roots.

With reſpect to Cribration, *Quincy*, a very good Judge of Pharmacy, makes the following Remark, in order to obviate the Miſchiefs and Inconveniences, which, thro' Inadvertency or Haſte, frequently happen in the practical Shops; which is, that whatſoever is powder'd, the whole Ingredient or Ingredients, with all their Parts to be uſed, ſhould paſs the Sieve, and be all mixed equally together, before any is uſed; for, thro' Neglect of this, ſeveral Medicines, which come under this Management, will be, in their different Parts, of different Efficacies; according as that Part of moſt Virtue, being more or leſs friable, may paſs thro' firſt, which will make that much too ſtrong; or remain behind, to the ſame Prejudice. In Compoſitions likewiſe of Ingredients of different Textures and Coheſions, ſome run thro' much ſooner than others; ſo that there is an abſolute Neceſſity of mixing the Whole carefully, after 'tis all paſs'd.

This Admonition may appear ſuperfluous in ſo obvious a Matter; but I have often found great Miſchiefs from a Neglect herein, eſpecially in the powdering ſuch things as Jalap, Ipecacuanha, and the like, whoſe Virtues lie in the more reſinous Parts, which, being the moſt brittle, break in the Mortar, and paſs thro' the Sieve firſt: And nothing is more common in ſuch things, than to put at once into the Mortar two or three times the Quantity of what preſent Uſe calls for, which, perhaps, is only a Doſe juſt then to be made up, or enough to fill a ſmall Glaſs, which ſtands to be in Readineſs; whereby the firſt Patients are over-doſed, and the latter, by having only the woody and fibrous Part of the Ingredient, are cheated in their Expectations. *Quincy's Diſpenſ.*

CRIBRATORIUM, or CRIBRUM. A Sieve, or Sierce.

CRIBRIFORME, or CRIBROSUM, or *Os Ethmoides.* The Name of one of the Bones in the Head. See CAPUT.

CRICELASIA, *κρικηλάσια*, according to the Etymology, ſignifies driving a Ring, or Circle; from *κρίκος*, a Ring or Circle, and *ἐλαύνω*, to drive. This was a Species of Exerciſe in Uſe among the Antients. *Oribaſius*, in his *Medicinal Collections*, *Lib.* 6. *Cap.* 26. deſcribes it, but not very diſtinctly, from *Antyllus*. It ſhould ſeem to be little more than the Diverſion of driving a Hoop, which the Boys in *England* take great Delight in. The Hoop was made ſo large, as to reach as high as the Breaſt of the Perſon who uſed it. The Inſtrument, with which it was driven along, was of Iron, with a Wooden Handle; and ſmall Rings (*κρίκοι*) were faſten'd to the large Hoop, in order to jingle, and divert the Perſon who exerciſed himſelf with it, which *Oribaſius* conſiders as of Importance. This Exerciſe was recommended for rendering the Limbs pliable, and ſtrengthening the Nerves which were weak. By Nerves, I ſuppoſe, Tendons or Muſcles were meant.

CRICOARYTÆNOIDÆI MUSCULI. Muſcles whoſe Office it is to open the *Glottis*. See LARYNX.

CRICOIDES. The Name of an annular Cartilage belonging to the LARYNX, which ſee.

CRICOS, *κρίκος*. A Ring or Circle. *Hippocrates* calls the annular Cartilages, which form the Aſpera Arteria, by this Name.

CRICOTHYROIDÆI. Certain Muſcles which ſhut, or cloſe up, the *Glottis*. See LARYNX.

CRIDONES. Worms which breed in the Skin.

CRIMNODES, *κριμνώδης*, of *κρῖμνον*, Bran. An Epithet for Urine which depoſits a branny Sediment.

CRIMNON, *κρῖμνον*. *Dioſcorides*, *Lib.* 2. *Cap.* 112. deſcribes *κρῖμνον* (*Crimnon*) as a coarſe Sort of Meal, produced of Zea and Wheat, of which they make Puls, *πολτός*. *Galen*, in his *Exegeſis*, expounds *κρῖμνα* by *τὰ διὰ τοῦ ἐρεμνίστρου τῶν ἀλφίτων*, "the coarſer or groſſer Part of the Polenta;" and, *Comm.* 2. *in Progn.* he ſays the *Crimna* (*κρῖμνα*) are the larger Particles of the roaſted or torrefy'd Barley, which have eſcaped the due Contuſion of the Mill. *Hippocrates* often preſcribes for Drink *τὸ ἀπὸ τῆς κρῖμνου ὕδωρ*, "Water in which *Crimnon* has been macerated;" and, *Lib.* 3. *de Morbis*, he orders a refrigerant Potion to be thus prepared:

> Take half a Chœnix (about three Quarters of a Pint) of the coarſe *Crimna* of Barley; pour thereon a Congius or Chœas (about ſix Pints) of Water, and, when the *Crimna* are ſwell'd, work them with the Hands till the Water becomes white; and then, after putting in it a Pugil of Adiantum, and expoſing it for ſome time to the open Air, exhibit the ſame.

Κεμινώδεις ὑποστάσεις, in *Hippocrates*, are Sediments in Urine reſembling *Crimna*, *Progn.* where *Galen*, on the Place, condemns ſuch a Sediment as proceeding from thick Blood highly aduſt, and an unequal Colliquation of the carnous Parts. *Hippocrates*, in another Place, ſays, that ſuch a Sediment, in Fevers, portends a long Illneſs; on which *Galen* writes, that ſuch Hypoſtaſes in Urine are found by Experience to prognoſticate the worſt of Events; for all who made ſuch Urine dy'd, or recovered very ſlowly, and with much Difficulty. The ſame Author, in his firſt Book of *Criſes*, ſays, that this Hypoſtaſis indicates two Affections, which are, a Colliquation of the more ſolid Parts, and a violent Eſtuation, and high Aduſtion, of the Blood. Again, *Com.* 3. *in Lib.* 6. *Epid.* he ſays, that *Crimnodes Hypoſtaſes* indicate a Colliquation of the Parts of the Body, and eſpecially of the Liver; if they are of a remarkable Thickneſs and Hardneſs, but not whitiſh, they ſignify a Colliquation of the Fleſh; but, when black, they rather indicate a Waſting of the Spleen.

CRINATUM, *κρινάτον*, from *κρῖνον*, a Lily. An Epithet of a Thymiama, or Suffumigation, in *P. Ægineta*, *Lib.* 7. *Cap.* 22.

CRINES, *τρίχες*. The Hair. See CAPILLUS.

CRINITUS, from *Crinis*, a Hair, *κεκομημένος*. An Epithet of Plants, whoſe Roots abound with Capillaments, or ſmall Fibres, like Hairs.

CRINOMYRON, *κρινόμυρον*, from *κρῖνον*, a Lily, and *μύρον*, Ointment. Ointment of Lilies, conſiſting of Lilies with ſome Aromatics. It was alſo call'd *Ægyptium album* and *Suſinum*. See ÆGYPTION.

CRINON, *κρῖνον*. A Lily.

CRINONES. Worms which breed in the Fleſh. See DRACUNCULI.

CRIOGENES, *κριογενής*. An Epithet for certain Troches mentioned by *Paulus Ægineta*, *Lib.* 7. *Cap.* 12. and by him recommended for cleanſing ſordid Ulcers.

CRIOMYXUS, *κριόμυξος*. An Epithet for Perſons abounding with Mucus in the Noſe.

CRISIMOS, *κρίσιμος*. Critical.

CRISIS.

The Doctrine of *Criſes*, critical Days, and their various Effects, is not only uſeful, but abſolutely neceſſary, in the Practice of Medicine. Of this *Hippocrates* gave us not only the firſt, but, at the ſame time, the moſt full and rational Account. Many, and, among the reſt, *Galen* and his Followers, have made Attempts of the ſame Kind; but they have been ſo far from enriching and improving this uſeful and important Piece of Knowledge by Experiments and Obſervations, that they rather ſeem in ſome reſpects to have perverted and corrupted it. For this Reaſon we ſhall have recourſe to *Hippocrates* himſelf, draw the Doctrine of *Criſes* from its original Source, and confirm it by Reaſon and Experience. By this means we ſhall be the better able to diſcover the Superfluities, the Defects, and the Errors, of the ſeveral Hypotheſes advanced with reſpect to *Criſes*.

But it ſeems neceſſary to premiſe, that the Word *Criſis* is uſed in different Senſes both by the Antients and the Moderns; for ſome frequently mean no more by a *Criſis*, than the Excretion of any noxious Subſtance from the Body. Thus *Hippocrates*, in his

Book *de Arte*, calls the Excretion of a corrupted Bone a *Criſis*: Others, with *Galen*, take the Word *Criſis* for a Secretion of the noxious Humours made in a Fever; for the Word κρίνειν ſignifies to ſeparate, or, as it were, to paſs thro' a Sieve: Others uſe the Word *Criſis* for the critical Motion itſelf, and the violent Perturbation produced in the Actions of the human Body; or, as they chooſe to call it, the Conteſt or Struggle of Nature with the Diſeaſe, in which the Period when the Diſeaſe arrives at its greateſt Height, is the critical and important Moment, which decides with reſpect to the Death or Recovery of the Patient.

Galen, in his *Commentary* on *Aph.* 13. *Sect.* 2. defines a *Criſis* in Fevers a ſudden and inſtantaneous Change, either for the better or the worſe, productive of Recovery or Death: But Phyſicians often confound the Criſis itſelf with the critical Day or Time.

But, as *Hippocrates* was the firſt who made mention of *Criſes*, and critical Days, we ſhall here inquire, in what Senſe he uſed this Word. From his Writings 'tis therefore obvious, that by the Word *Criſis* he generally meant the Judgment which is, or at leaſt ought to be, formed, with reſpect to the lucky or unlucky Termination of the Diſeaſe, from the Symptoms of the Diſeaſe itſelf, and the particular Habit and Conſtitution of the Patient. Hence ariſe good and bad, lucky and unlucky Criſes. And, in his Book *de Affect.* he uſes theſe Words: "A *Criſis* "is ſaid to happen in Diſeaſes, when they are either increaſed "or diminiſh'd, changed into others, or totally removed." By the Word *Criſis* he alſo frequently means the Solution of a Diſeaſe: Hence, in his *Præceptiones*, he uſes theſe Words; κρίσις ἐστὶν ἀπόλυσις νόσου, "a Criſis is the Solution of a Diſ-"eaſe." Every-where alſo, in the Writings of *Hippocrates*, the following Methods of Speaking occur to the Reader: *A perfect Criſis happen'd to ſuch a Patient, or ſuch a Diſeaſe, on the ſeventh or fourteenth Day*; that is, there was a Solution of the Diſeaſe, and the Patient recover'd.

But, that we may be enabled to form a juſt and adequate Idea of the *Criſis* of acute Diſtempers, it is neceſſary to recount all the Circumſtances requiſite to a Criſis. In the firſt Place, therefore, a Criſis has only a Reference to acute Diſorders, and more eſpecially continual Fevers; for a λύσις, or Solution, is applied to thoſe Turns which chronical Diſeaſes take. Secondly, a Criſis only happens on certain Days of the Diſeaſe; the moſt uſual of which are, the ſeventh, or the Time approaching neareſt to the Half of that Number, from the Beginning of the Diſeaſe; for the other Days contribute little or nothing to a *Criſis*. Thirdly, on theſe Days the Phyſician is to judge of the Change of the Diſeaſe, whether it is like to terminate in a Recovery, Death, or ſome other Diſeaſe. Fourthly, on the critical Days the Phyſician is to form a Prognoſtic, or Judgment, from certain Signs; among which not only the Urine and Excrements, but alſo the Pulſe and Strength, of the Patient are to be adverted to. Theſe are the Things which, in my Opinion, complete the Notion of a *Criſis* in acute Diſtempers, and explain what the ſkilful Antients meant by it. Of how great Importance, therefore, the Doctrine of *Criſes* is in Practice, is ſufficiently obvious; for what can be of more Uſe, than that, according to the Directions of provident Nature, certain ſtated Days ſhould be obſerved by the Phyſician, in which he is to have an Eye to paſt, preſent, and future Circumſtances, and from them form a Judgment or Prognoſtic of the Diſeaſe?

We ſhall, firſt of all, quote the moſt plain and unexceptionable Paſſages from the Works of *Hippocrates*, which point out, evidently and diſtinctly, on what Days the Criſes of Fevers happen. The firſt of theſe is in his Treatiſe *de Diebus Judicatoriis*. "Criſes, ſays he, happen to Fevers on the fourth "Day, the ſeventh, the eleventh, the fourteenth, the ſeven-"teenth, and the twenty-firſt. But, even in theſe acute Diſ-"orders, the *Criſis* ſometimes happens on the thirtieth, the "fortieth, and the ſixtieth Day." In his *Aphor. Sect.* 2. *Aph.* 23. and 24. he uſes the following Words: "Criſes happen to "acute Diſeaſes in fourteen Days. The fourth is the Index "of the ſeventh; the eighth Day is the Beginning of the "ſecond Week: The eleventh is alſo to be adverted to, be-"cauſe it is the fourth of the ſecond Week. The ſeven-"teenth is alſo to be conſider'd, becauſe it is the fourth from "the fourteenth, and the ſeventh from the eleventh." The ſame Author, in his *Coacæ Prænot.* tells us, "That the moſt "gentle Fevers, and ſuch as are accompanied with the ſafeſt "Signs, terminate on the fourth Day, or ſooner; but thoſe "which are highly malignant, and accompanied with the "worſt Signs, remit on the fourth Day, or ſooner: Their firſt "Attack, therefore, ends thus; but their ſecond is protracted "to the ſeventh, and their ſixth to the twentieth Day." In his third Book *de Præſagiis*, he informs us, "That we muſt "advert to the Diſeaſe from the firſt Day, and obſerve every "fourth Day, by which means we may evidently perceive "what Turn the Diſeaſe will take." According to this Author, a regular *Criſis* happen'd, in burning epidemical Fevers, in ſeventeen Days. Thus, in his Treatiſe *de Partu Septimeſtri*, he uſes the following Words: "In moſt Diſeaſes the "moſt conſiderable Days are the firſt and ſeventh; for theſe "are of great Importance, not only in Diſeaſes, but alſo with "reſpect to the Fœtus; for moſt Abortions happen on theſe "Days." And, a little after, he has the following Words: "The Phyſician, who intends to prognoſticate with Judgment "and Certainty, muſt obſerve and contemplate all Days; but, "of thoſe which are even, the fourteenth, the twenty-eighth, "and the forty-ſecond. The Phyſician muſt alſo calculate by "Ternaries and Quaternaries; that is, by the Number of "three and of four Days."

The Opinion of *Hippocrates*, therefore, is, as is obvious from what has been ſaid, that acute and continual Fevers terminate by Septenaries, if their Solution or Termination is to be ſalutary. But this Solution happens by ſufficient Evacuations, either by Sweat, Urine, Stool, Hæmorrhages, or Spit, on the above-mention'd critical Days; for, if they happen on any other Days, they are accounted leſs ſalutary, and are generally ſymptomatical. Accordingly, *Hippocrates* informs us, in *Aph.* 36. *Sect.* 4. "That Sweats in Fevers are beneficial, if "they begin upon the third, fifth, ſeventh, ninth, eleventh, "fourteenth, ſeventeenth, twenty-firſt, twenty-ſeventh, thir-"tieth, or thirty-fourth Days; for theſe Sweats determine the "Diſeaſe: But thoſe which happen otherwiſe, import a great "deal of Trouble, that the Diſeaſe will be of long Conti-"nuance, and Relapſes." *Hippocrates* is back'd in this Sentiment by *Galen*, who has the following Words in his Treatiſe *de Diebus Judicat.* "Thoſe Sweats which ariſe on the indi-"cating Days, which are not critical, prognoſticate much "Trouble, and the Protraction of the Diſorder; for thoſe "Evacuations, which are not critical, are either fatal, or af-"ford a very bad Prognoſtic." In the ſame Book he informs us, "That he never ſaw a *Criſis* happen on the twelfth or "ſixteenth Day; and that *Criſes*, happening on the ſixth Day, "are imperfect, attended with unlucky Symptoms, and im-"minent Danger." But *Hippocrates* pronounces that Sweat moſt ſalutary, which, on the critical Days, determines the Diſeaſe, as he informs us in his *Coacæ Prænot.* and that the Sweat is bad, which, appearing in a Fever, does not alleviate, but protract it. This is alſo confirm'd by the fifty-ſixth Aphoriſm of the fourth Section: "If, ſays he, Sweats happen in a "Fever, without cauſing a Remiſſion, the Sweat is bad; for "the Diſeaſe is protracted, and ſuperfluous Humidity indi-"cated."

But, according to *Hippocrates*, the *Criſis* is ſalutary, and the Diſeaſe determined, if, on the critical Day, the Urine is well concocted; that is, neither white, nor thin, nor copious, but deep-colour'd, of a proper Conſiſtence, and ſuch as depoſits a Sediment. There is a memorable Paſſage, relating to this, in *Lib.* 1. *Epid.* where he uſes theſe Words: "Urine which, in "Fevers, is crude, unconcocted, and whoſe Sediment is bad, "indicates either a Removal of the Criſis, Pains, Protraction "of the Diſtemper, Death, or Relapſes." In the ſeventy-firſt *Aph.* of *Sect.* 4. he informs us, "That if a Criſis happen "upon the ſeventh Day, the Urine has a red Cloud in it upon "the fourth Day, and other Circumſtances accordingly." And, in the ſubſequent Aphoriſm, he tells us, that "Urines, "which are very pellucid and white, are bad; and that ſuch "Urines are generally diſcharged by phrenetic Patients." With reſpect to the Signs of a good *Criſis*, taken from the Urine, he makes the following Obſervations in his *Coacæ Prænotion.* "In the Beginning of a Fever, the Urine which has "a white and ſmooth Sediment, infallibly denotes the ſpeedy "Solution of the Diſeaſe. Reddiſh Urine, with a ſmooth and "reddiſh Sediment, if it appears before the ſeventh Day, ter-"minates the Diſorder; but, after the ſeventh Day, this Ef-"fect is more ſlowly produced, and the Criſis is at a greater "Diſtance. Urine which, on the fourth Day, has a red Cloud, "terminates the Diſeaſe on the ſeventh, if other Circumſtances "are favourable. Bilious Urine, and ſuch as has a ſmall "Quantity of thin Sediment, and which is changed from bet-"ter to worſe, denotes, that the Diſeaſe will be protracted. "But, when Urine of this Kind is diſcharged for a long time, "eſpecially about a *Criſis*, the Patient is not free from Danger. "But aqueous and white Urine, in protracted Diſeaſes, is al-"ways the Sign of a difficult *Criſis*, and an unlucky Progno-"ſtic." Again, in the ſecond Section of the third Book of his *Epidemics*, he tells us, "That a Patient, who, on the "ſecond Day, became deaf, and his Urine thin and pellucid, "died on the fifth Day." And, in *Sect.* 3. he tells us, "That another Patient, whoſe Urine was thin and white, "died phrenetic on the fourth Day."

A Solution of Fevers ſometimes alſo happens by Eruptions of Blood, or an Excretion of the Fæces, on the critical Day. With reſpect to this, there is a memorable Paſſage in *Hippocr. Epidem. Lib.* 1. *S.* 115. "In epidemical burning Fevers, in "which the Blood is copiouſly diſcharged from the Noſtrils, "the Patients are generally recover'd by this means; and I "know of none who died in this Conſtitution, provided the "Blood was copiouſly diſcharged. In *Philiſcus*, *Epaminones*, "and

" and *Silenus*, a few Drops of Blood were discharged from " their Nostrils on the fourth and fifth Days, and they died: " But there was an Eruption of Blood in many, especially " young and vigorous Persons; and those who had not this " Eruption generally died. But old Patients were seiz'd with " a Jaundice, or a Diarrhœa, or they became dysenterical."

Acute Affections of the Breast, as a Peripneumony, attended with a Fever, are abated by Sweat as well as Spitting. Our very excellent Author before quoted, in his Book of *Critical Days*, pronounces of a pleuritical Fever, that " it comes to " a Crisis on the seventh Day, and, when longest, on the four- " teenth." And, of a Peripneumony, that " the Patient " labours under the Symptoms at least fourteen Days, and at " most twenty-one, and coughs violently all the while; ex- " pectorating at the same time, first of all, much frothy Spit. " On the seventh and eighth Days, when the Fever is at its " Height, and the Peripneumony in a humid State, a thicker " Matter is expectorated, otherwise not. On the ninth and " tenth Days the Spit becomes of a pale Green, and some- " what bloody: From the twelfth to the fourteenth, it is " copious and purulent. Such are the Symptoms when the " Patient is of a humid Nature and Constitution, and the " Disease violent; but when the Disease, as well as the Pa- " tient, are of a dry Nature and Constitution, the Symptoms " are different."

We have hitherto consider'd the Solution of Fevers, which usually happens on critical Days, by favour of several sorts of Excretions; and now proceed to treat of those imperfect Crises and Solutions which are effected by an Abscess, or, to use a Term of *Hippocrates*, by an Apostasis, and Settlement on other Parts, especially the Extremities. Among Abscesses we may justly reckon Erysipelas, Buboes, arthritic Pains, and Tumors, Spots, Pustules malignant or otherwise, purple Eruptions, Small-pox, and several exanthematous Eruptions of the like Kind. It is Nature herself which makes these Secretions, also, on stated Days, and oftentimes to the great Advantage of the Patient, who perceives a Mitigation of his Fever, and its Symptoms, tho' not a sufficient and plenary Solution. As for an Erysipelas, it is known to attack the Patient with a violent Fever, which is resolved on the Appearance of a Tumor in the Skin; and *Hippocrates* reckons an Erysipelas among critical Abscesses, as is very evident from *Lib.* 2. *Epid. Sect.* 3. where he says, ὁκόσα δόκιμα ἀφανίζεται δύσκριτα, ᾗ οἷον τῇ τε πολεμάρχῃ παιδίσκῃ ἐρυσίπελας. " Whatever disappears, without " the proper Sign of a *Crisis*, determines unfavourably for the " Patient, as it happen'd with the Erysipelas of *Polemarchus*'s " Maid-servant." And, in his Book *de Judicationibus*, and in *Coac.* to the critical Solutions of Fevers he subjoins Pains and Tumors of the Joints, Knees, and Hips. Thus again, *Lib.* 3. *Epid. Sect.* 1. he says, that " the third Patient, on the " twentieth Day, had an imperfect Crisis by a Pain of the " Right Hip." And, in short, among Abscesses, or Matters abscedng under the Skin, he reckons both putrid and suppurating Tubercles, and also Pustules, as appears from the second of the *Epidemics*, *S.* 45. under which, no doubt, the Measles and Small-pox may be included. Among Abscesses are justly to be reckon'd those Tubercles, or Tumors about the Ears, by which Fevers are resolved; as may be infer'd from our Author, who, *Lib.* 1. *Epid. Sect.* 1. says, " many had Tubercles about " one Ear, and more about both, sitting up, and walking " about, without a Fever; tho' some of them were a little " hotter than ordinary. These Symptoms happen'd to young " Men, to Persons of vigorous Habits, and generally to those " who were accustom'd to Exercise." But the most memorable Passage, relating to the several Manners in which Fevers are determined, is found in his Treatise *de Victus Ratione in Acut.* where, speaking of a certain Kind of burning Fever, he adds the following Words: " If no Hæmorrhage happens from " the Nostrils, if an Abscess does not appear about the Neck, " if the Patient is not seiz'd with a Pain of the Legs, if he " does not expectorate thick Spit, if he is not afflicted with a " Pain of the Hip, and if his Pudenda are not livid, then the " Disease is not determin'd. The Tension of a Testicle is also " a Symptom of an approaching *Crisis*." A pestilential Carbuncle ought also to be enumerated among Abscesses.

Thus we have taken the Doctrine and History of *Crises*, and *critical Days*, from *Hippocrates* himself, who probably first discover'd them, and generously convey'd the Discovery to Posterity. *Galen*, the faithful Follower of *Hippocrates*, confirms the Sentiments of his Master, with respect to *Crises*, almost in every Instance. He explains the Nature of critical Days; extols the salutary Virtue of the seventh in particular; but condemns the sixth as treacherous and fallacious: The former he compares to a King, who sets his oppress'd Subjects at Liberty; and the latter to a Tyrant, who, without Mercy, exerts his Power, and does all the Mischief he can; for the sixth Day is productive of Danger, and imperfect and unlucky Crises, as he informs us in *Lib.* 1. *de Diebus Decretoriis*. But *Galen* has this peculiar to himself, that he also reckons the ninth Day among the salutary critical Days: Hence, in the Part already quoted, he informs us, that, in one Summer, he knew above three hundred Patients labouring under acute Disorders, in which a Crisis happen'd either on the seventh or the ninth Day. He deserves our Observation, also, when he writes, that he saw none die who had a Crisis after Concoctions; see *Lib.* 3. *de Crisibus*, *Cap.* 3. and that there is never a Crisis without a great preceding Perturbation, in which Nature is on a sudden, and in a most violent manner, irritated by the Disease: Hence he asserts, that a Crisis always happens at the Height of the Distemper; that the preceding Day and Night are most troublesome and dangerous; and that none was ever freed from the Disorder, without some remarkable Evacuation, or an Abscess: For which Reason, when a Distemper ends in an Excretion or Abscess, he calls it a *Crisis*. To proceed, *Galen*, *Lib. de Diebus Decretoriis*, calls the seventh, fourteenth, and twentieth, *prime critical Days*; on which, he says, more recover than die. A second Order of critical Days he calls *intermuncial Indices*, because on them are plainly seen the Signs of a future Crisis on the seventh Day, provided the Excrements are concocted. These are the semi-seventh Days. The rest, between the Indices and the truly critical Days, he calls *intercalary*, and also *provocatory* Days, because they irritate Nature to Excretion; such are the third and the fifth in the first Week. The other Days are call'd *vacant*, because they neither determine, indicate, nor provoke; and also *medicinal*, because on them the Physician treats his Patients with Medicines, and Cathartics may be safely administer'd. And this also is what the divine *Hippocrates* has express'd in plain Terms, *Lib.* 2. *de Morbis*: " Whoever, labouring under a continual Fever, says " he, were treated with Cathartics on even Days, were never " purged to Excess; but they who had Cathartics administer'd " to them on odd Days, were all too much purged, and many " of them died." These Days are by some call'd *artificial critical Days*, because they determine; that is, effect a Solution by medicinal Art. See *Laurentius*, *de Crisibus*.

Having thus proposed and explain'd what we thought useful and necessary to be known, concerning the *Crises* of acute Diseases, and critical Days, from the celebrated Writings of *Hippocrates* and *Galen*, before we interpose our own Judgment, and confirm what shall be found agreeable to Truth and Experience, by just Arguments, it will be proper to produce and consider those Authors, and their Arguments, who call in Question this Doctrine of *Crises*. The first, among the Antients, was *Asclepiades*, who, according to *Cœlius Aurelianus*, *Lib.* 1. *Cap.* 14. declares, that there are no such stated Days as they call *critical* in Diseases; and that there are no Solutions of Diseases at certain and due Periods of Time. With this very antient Author agrees *Celsus*, who, *Lib.* 3. *Cap.* 4. expressly says, " There arises a Question concerning Days, be- " cause the Antients principally regarded odd Days, and call'd " them κρίσιμους, " critical," as if a Judgment were to be " pass'd on the Patient on those Days. This was by *Asclepiades*, as a vain Opinion, justly rejected; for the Patient, " he said, was neither in more or less Danger on any Day, " because it was even or odd; for sometimes the even are the " worst Days. Sometimes also, in the Disease, the Days take " a new Turn, and those are most afflictive, which used to be " the most favourable: But the Numbers of *Pythagoras*, which " were highly celebrated in these Times, deceived the Antients; " for it is the Duty of a Physician not to number the Day, " but narrowly to observe the Access of the Paroxysm." Among the Moderns may be reckon'd *Helmont*, who, *Lib. de Tempore*, *Sect.* 53. endeavouring to explode the Observation of *Crises* in Practice, " I have observed, he says, that there never " is a Crisis, when a Physician, who is Master of his Art, " takes care to remove the Disease before the *Crisis* is ex- " pected; for as Nature delights in its ordinary Motions, and " is accustom'd to them, and is willingly govern'd by the " Unity of the moving Power; so, when the whole Affair of " the Disease is entrusted to its sole Management, it exerts it- " self in exciting stated Crises, which would otherwise, either " by the Goodness of a Medicine, be anticipated, or, by its " Badness, retarded and destroy'd; by which means the Crisis " is prolonged from the fourteenth Day to the fortieth. It is " the Part, therefore, of a good and faithful Physician to " neglect Crises; and it were better for those Patients, who " recover by a Crisis, to have no Physician, and much more " for those who have a slow Crisis." The same Author, *Lib. de Feb. Cap.* 2. *S.* 8. says, " a true Physician ought to " subdue the Disease before a *Crisis*: If he acts otherwise, " nothing at all can be ascrib'd to the Assistance of the medi- " cinal Art." " For if a *Crisis*," as *Langius*, *Miscell. Quæst.* 4. infers, " is to be expected in the Cure of Diseases, Me- " dicine must certainly be a superfluous and useless Profession, " because the whole Affair of Curing is by this means com- " mitted, in a manner, alone to Nature, and not to the Art, " nor its Professor." Of the same Opinion is *Faber*, who, in his *Panchymag. Tom.* 3. says, it is the Duty of a Physician to

cure

cure a Diſeaſe before and without a *Criſis*. And, to name no more, the Count *de Filiſco*, *Lib. de Fato*, aſſerts, that this Number of Days is not always obſerved in Practice; and that Criſes often happen on other Days.

There are, beſides theſe before-mention'd, another Set of Authors, who do not, indeed, call in queſtion the Exiſtence and Uſe of critical Days, but ſuppoſe the Obſervation of them to be of Service in *Greece* only, and not in our Countries. Thus the celebrated *Waldſchmid*, in *Fundament. Med.* ſpeaking of a *Criſis*, adviſes us "not to be too curious in our Inquiries into "the Cauſes of critical Mutations, becauſe, in our Times and "Countries, ſuch Criſes no longer take place; for which Rea- "ſon alſo our Predictions in acute Diſeaſes are not ſo certain "and infallible, as they are repreſented to be in *Hippocrates*, "who relates ſuch Phænomena, or Signs of Diſtempers, as "ſeldom or never appear to us." And *Eiſchſtad. Pæd. Aſtron. Sect.* 3. ſays, "In our *German* Countries, and parti- "cularly in our own Climate and Soil, perfect and ſalutary "*Criſes* ſeldom happen." *Hollerius* alſo, in *Aph. Hippocr.* obſerves, "that, in cold and northern Countries, perfectly "critical Evacuations are rarely to be expected." As to the Cauſe why perfect Criſes, happening on critical Days, are ſo rarely obſerved in our Climate, ſome aſcribe it to the Temperature of thoſe Countries. See *Wedel.* in *Diſſert. de Diebus criticis*. *Baglivi*, in *Prax. Med.* ſeems to be of this Opinion, where he grants, that in *Greece* acute Diſeaſes end in perfect Criſes, but not in our northern Countries, which, he thinks, is to be aſcrib'd to the Purity and Thinneſs of the Air, which, in *Greece*, as it is in all the adjacent eaſtern Countries, is endu'd alſo with a great Elaſticity; whereas our Air, which is impregnated with aqueous and groſs Vapours and Impurities, muſt at all times render the Humours of the Body more impure, ſo that they can never attain to a perfect Criſis or Deſpumation.

We are now to give ſome Account of the Cauſes of thoſe wonderful Effects of critical Days, in acute Diſtempers, according to the Sentiments of the Antients. Many of the Antients agree in making the efficient Cauſe of critical Motions to be no other than the Nature of the Body, the Soul, or Principle of Motions in our Body, which rules and governs the whole Machine, which removes Diſeaſes, which, as it is expreſſed, *Lib.* 6. *Epid. Sect.* 5. is informed by none, nor ever learned any thing, and yet effects, in the moſt proper Way, what things are to be done, and where they ought to be done; which encounters with Diſeaſes, and fights it out to the laſt, combating with great Violence and Obſtinacy; which ſecretes Good from Bad by proper Paſſages, in due and convenient Seaſons, and for a good and neceſſary End; which excites Commotions of ſuch a Nature, and in ſuch a Proportion and Degree, as are correſpondent to the preſent morbific Matter; and this it does of itſelf, ſpontaneouſly, and from an innate Principle, not by Compulſion from any neceſſary external Cauſes, as it is ſomething incorporeal, which cannot be affected or altered by corporeal things. Some add, as a more remote Cauſe, an auxiliary aſtral Nature, eſpecially the Influence of the Moon, according to her Aſpects from ſalutary or unfriendly Planets, as ſhe enters the Signs of the Zodiac.

Thus have we given you an Account of *Criſes*, and critical Days, from the Writings of the Antients, with the different Opinions concerning their Effects: We are now to declare and explain our own Opinion, in relation to what there may be of Truth or Falſhood in this Doctrine; as whether there be any critical Days, and why they are of ſo much Importance in the Practice of Medicine as the Antients would have us believe. Now, ſince Experience is of moſt Service in our Inquiries after Truth in Phyſical and Medicinal Affairs, as being the firſt Foundation of all Truth, which conſiſts in Fact, and of Medicinal Ratiocination, it ſeems proper to be alſo firſt conſulted on this Occaſion. Wherefore, diveſting ourſelves of all Prejudice from Authority, we ſhall fairly propoſe what we have learned, from attentive Obſervation, concerning the Solution of Fevers, eſpecially on certain and ſtated Days. Firſt, then, it is certain from undoubted Experience, that, in Fevers, the Ephemera and Synochas are generally reſolved, the firſt in four-and-twenty Hours, and the other on the fourth or ſeventh Day, by Sweat, or a Hæmorrhage. The Pleuriſy, or Peripneumony, is milder and more remiſs about the fourth Day, when bloody Matter is expectorated by Coughing; and, about the ſeventh Day, it is uſually reſolved by Sweat, and a free Expectoration. If the Diſeaſe be pretty ſevere, it is prolonged to the tenth, and ſometimes to the fourteenth Day; but, if it proceeds farther, it turns to an Empyema. An Eryſipelas of the Stomach, indicated by a Lipyria, is reſolved, on the fourth or ſeventh Day, by an Evacuation upwards or downwards, and alſo by Sweating. An inflammatory Fever of the Liver meets with a Solution on the ſeventh, eleventh, or fourteenth Day, partly by Sweat, and partly by a Flux of the Belly; that is, if the concave Part of the Liver be inflamed. A Diſtillation from the Noſtrils ſucceeds an internal Inflammation of the Viſcera, and is ſometimes ſalutary, but ſeldom or never perfectly reſolves the Diſeaſe. Simple Tertians very often leave the Patient, ſpontaneouſly, after ſeven Fits. See *Hippoc. Lib. de Judic. Sect.* 4. Bilious burning Fevers are reſolved on the ſeventh Day generally, or elſe on the fourteenth Day, by Sweat, and a Looſeneſs. See *Hippoc.* in the laſt-mentioned Book. Petechial Fevers loſe their Virulence on the ſeventh, eleventh, fourteenth, and ſometimes, tho' but rarely, on the twenty-firſt Day. The Peſtilence loſes a great Share of its Malignity on the fourth, ſeventh, or eleventh Day, if the Patient recovers; and, in ſhort, moſt continual Fevers generally come to a Period on the ſeventh, eleventh, or fourteenth Day. Malignant and peſtilential Fevers are reſolved more by Stools than Sweat, as I have often obſerv'd, and as *Galen* remarks, *Lib. de atra Bile*, *Cap.* 4. And *Gerhardus Columba*, in *Lib. de Febr. peſtilent.* wonderfully admires the Effects of Excretions of the Belly by Stool; where he ſays, that "in that peſtilential Conſtitution he ſpeaks of, almoſt all "who had plentiful Diſcharges downwards, tho' attended with "the Signs of Crudity, at laſt recovered; for," ſays he, "as "the Looſeneſs proceeded, the Signs of Concoction every Day "more and more appeared, and the Diſeaſe became milder, "the Flux continuing till the Patient was judged out of "Danger."

With reſpect to Fevers, and their Commotions, which are not wholly reſolved, but yet remitted by an Abſceſs, or Settlement of the noxious Matter on ſome Part of the Body, the Caſe, in regard to Time, may be thus repreſented: An Eryſipelas attacks the Patient, in a very violent Manner, with a Fever, which on the ſemi-ſeventh Day, that is, between the third and fourth Day, quite ceaſes, the Matter being propel'd to the Superficies of the Body. The Small-pox and Meaſles come on with violent Symptoms, and a high Fever, which alſo, on the ſemi-ſeventh Day, by the Propulſion of the acrid and cauſtic Matter to the Skin, is not only mitigated, but the Severity of the Symptoms is generally much abated. In the Purple Fever, about the fourth Day, the acrid and pernicious Humours being expel'd and driven to the Superficies, the Violence of the Symptoms is quite ſubdu'd. The Petechiæ always come forth on the fourth or ſeventh Day, with ſome Relief to the Patient. Arthritic Fevers, if violent, are ſoon mitigated, by diverting the Courſe of the acrimonious and cauſtic Humour upon the Joints. Bilious Fevers, on the ſeventh, ninth, eleventh, or fourteenth Day, are relieved by the coming on of a Jaundice. Hence *Hippocrates*, *de Judic. Sect.* 10. was in the right when he ſays, "If a Jaundice comes on at the going off of a burning "Fever, the Patient is not uſually moleſted with Sweats, nor "has an Abſceſs form'd in any Part, but recovers his Health." A Tumor in the auditory Paſſage is a good and ſalutary Apoſtaſis; and Deafneſs thence proceeding is alſo a good Sign, which, in the *Hungarian* Fever, and acute ones, attended with a Pain of the Head, and a Delirium, if it came on a critical Day, and continued, was commonly a very happy Prognoſtic of Recovery. And this was obſerved alſo by *Hippocrates*, *Sect.* 2. *Aph.* 60. The Reaſon of this particular Obſervation is obvious; for it is a Sign of a robuſt and vigorous Conſtitution, when Nature propels a viſcid, and, without doubt, a ſulphureous Humour to the extreme and leſs noble Parts, as alſo to the Emunctories; ſuch as, in this Caſe, the Glands of the auditory Paſſage are. Hence we may clearly underſtand that Aſſertion of *Hippocrates*, in his Treatiſe *de Judicationibus*, "That thoſe who become deaf before the Solution of the "Fever, muſt neceſſarily become delirious: But the Solu- "tion is brought about either by an Hæmorrhage from the "Noſe, an Evacuation of bilious Matter by Stool, a corroding "Dyſentery, or a Pain of the Hips, or Knees."

Neither muſt we forget, that, in this Part of the World, Tranſlations are very common in acute Fevers, when Nature, become weak, does not expel and eliminate from the Body the peccant Blood or Matter, but conveys it to the internal Parts, both at the critical, and at other Times. Theſe Tranſlations, therefore, are almoſt all productive of the worſt of Conſequences; for they ariſe from the Stagnation, which is the principal Source of all the unlucky Symptoms, and of the Patient's Death. By this means are produc'd Phrenſies, Convulſions, Twitchings of the Tendons, Drowſineſs, and Apoplexies, which draw their ſeveral Origins from too large a Quantity of Blood ſtagnating in the Veſſels of the Brain. Inflammations alſo, and Suffocations of the Breaſt, ariſing from a Congeſtion of Blood in theſe Parts, prove mortal. In like manner Inflammations, producing a Quinſey, Aphthæ, accompanied with a Dryneſs of the Mouth, an inſatiable Thirſt, and a Difficulty of Breathing, ariſing from Stagnations of Blood in the Fauces, the Œſophagus, and its Orifice, generally prove fatal. *Hippocrates*, in the fifteenth *Aphor.* of his fourth *Sect.* in a continu'd Fever pronounces a Difficulty of Breathing, accompany'd with a Delirium, a mortal Sign. In the fifty-ſecond *Aphor.* of the ſame *Sect.* he alſo pronounces an involuntary Shedding of Tears, and a difficult Deglutition, fatal Signs in a continued Fever; for theſe Symptoms indicate, that ſome Part of the Blood already ſtagnates, and is fixed out of the Courſe of the Circulation.

With respect to the Solution of Fevers, Experience has confirmed, that the following Observations deserve our highest Attention.

First, In every salutary Determination or Solution of a Fever, either about or on the critical Day, a remarkable Evacuation, either by Sweat or Stool, almost always happens. This Evacuation is so copious, that it sometimes continues for some Days; and not only when this Evacuation is present, but also before and after it, the Pulse is more calm, the Strength is increased, the Mind acquires a Vigour and Energy it had not before, the Sleep becomes quiet and uninterrupted, and the preternatural Heat ceases.

Secondly, When large Evacuations happen either upon the critical or other Days, whilst, at the same time, the Violence of the Disease, and its several Symptoms are not abated, but rather remain in their former State and Condition, this is a very bad Sign.

Thirdly, It is a frequent, and, at the same time, an infallible Observation, that as the Solution which happens on the critical Days, with Evacuation, and the Relief of the Patient, is lucky and salutary, so the Evacuations which happen at other times, however they may seem to afford some Relief to the Body, are yet to be suspected as unsafe. Hence *Hippocrates*, in the fifth Section of the second Book of his *Epidemics*, condemns those Evacuations which, happening not upon the critical Days, relieve.

Fourthly, It is observed, that when the Small-pox, Measles, petechial and purple Fevers, break out on the first or second Day of the Disorder, they are always of the worst Kind.

Fifthly, A large Quantity of thin Urine is in no Stage of a continual Fever observed to be salutary.

Sixthly, Before the Propulsion of exanthematous Efflorescences, and the driving of the peccant Matter from the internal to the external Parts, the Disorder is generally more violent, and the Symptoms more exasperated. Hence *Hippocrates*, in the thirteenth *Aphor.* of *Sect.* 2. says, that the Night before the Crisis, the Disease is very violent, but more moderate the Night after it. But this does not always hold true, with respect to the full and perfect Solution of Fevers. Hence it is not an universal and infallible Rule, that the Solution of a Disease cannot happen without a previous Perturbation of Nature, and an Exacerbation of the Disorder, and its several Symptoms.

Seventhly, Tho', in acute continual Fevers, there is never a total Intermission of the Symptoms, yet there may be a certain Remission, which is succeeded by an Increase, or fresh Exacerbation, of the Symptoms; and this is often preceded by a Shivering and Rigor, during which both Impostumations and Translations are to be apprehended.

Eighthly, In general we are to observe, that, in numbering or computing the critical Days, we are not to begin from the Lassitude of the Patient, taking his Bed, or his bad State and Disposition, but from the febrile Motion, which is known from the Shivering, and the Change of the Pulse; I mean, when it begins to be swifter.

Ninthly, Tho' every fourth and seventh Day are more to be observed than the rest, yet the Observation of *Hippocrates* and *Galen*, that the fourth indicates the seventh, and the eleventh the fourteenth, does not always answer in these Parts; but the Signs of Concoction in the Urine appear sometimes on other Days: Wherefore we are every Day to inspect the State of the Sick, the Strength and Excretions.

Tenthly, Bilious burning Fevers, and also inflammatory ones, attended with violent Symptoms, especially in Subjects of a more sensible Constitution, have always more perfect Crises at the stated Times, than malignant putrid Fevers, in impure, cacochymical, and infirm Subjects, which, though they terminate within fourteen Days, yet keep not so exact Time, nor critical Days.

Diseases are not only resolved on critical Days, but are often exasperated, and the Patient dies on those Days. Hence it is observed, that the seventh, eleventh, and fourteenth Days are fatal to Multitudes under inflammatory Distempers, the Small-pox, Petechiæ, and other epidemical acute Fevers; and yet more die on the ninth than the seventh Day; more on odd than even Days. Copious Evacuations by Sweat, thin and copious Urine, with a small, weak, quick Pulse, and a Delirium, prognosticate Death. We have observed, that the hotter, and of the more exquisite Sense, the Subject or Patient, the warmer the Climate, and the more violent the Disorder, the sooner the Disease comes to a Solution, and changes either for the better or the worse; but that a Crisis proceeds more slowly in languid and phlegmatic Subjects, in cold and marshy Countries, under a milder Distemper, and a full, gross, and common Diet. In such a State Relapses are also more frequent, and the Disease more easily passes, by *Metastasis*, into another of a different Kind.

It also deserves Consideration, that, as *Hippocrates*, *Lib.* 2. *Epid. Sect.* 20. well observes, in calm and settled Weather, and Years which happen agreeably to the Seasons, Diseases are of a mild Nature, and come to a very easy Crisis; but when the Seasons are inconstant, Diseases partake of their Inconstancy, and have a difficult Solution. By this we are to understand, that when the Years keep up to their natural Constitution and Temperature, and no extraordinary or preternatural Weather happens, then are vegetable and animal Bodies in a right Disposition; and, if any Diseases arise in such Seasons, they keep to their ordinary Nature, Custom, and Genus; whence they are attended with none but the usual Symptoms, run out their legitimate Time, and come to a Solution on the usual critical Days. But, if the Seasons of the Year deviate from their natural Constitution, and assume a quite contrary and unnatural Face, so as to be transform'd one into another, the Summer to be like Autumn, the Winter warm, and partaking of the Nature of Summer, the Sky continuing for a long time covered with Mists and Clouds, and no Winds blowing, in such a Case the animal Fluids receive an irregular and preternatural Crasis and Temperature; whence arise Diseases of the worst Sort, attended with unusual Symptoms, and a very difficult Crisis, because they proceed not according to the ordinary Law and Course of Nature. And the Reason of this is obvious; for the Air, as *Hippocrates* has determin'd, is the principal Author and Ruler of whatever is done in our Bodies: This it is which, by its Elasticity, imparts not only Strength and Tone to the Solids, but Spirituousness, and an expansive Force, to the Fluids; whence it disposes and directs the Circulation of the Blood and Humours, and the Excretions from them, which are so necessary for the Preservation of the Body. Nor can it be doubted, but that, in hotter Countries, and a thinner Air, the Humours are more fluid and moveable, and Bodies more disposed to Perspiration: For which Reason *Crises*, and *critical* Solutions, of acute Diseases, are more observable in them than in more humid Countries, where the Air, destitute of Elasticity, is not limpid, but impregnated with Effluvia of a foreign Nature. Hence it comes to pass, that not only the *Crisis* is retarded, and rendered less sensible, but the ordinary Motions of Nature, which are bounded within certain Periods of Time, are much disturb'd; for which Cause some celebrated Writers doubt even the Existence of *Crises* in our Countries, or have ventured to pronounce them less exact than in *Greece*. Among these Authors is *Caspar Hoffman*, who, in his *Institut. Medicæ*, is of Opinion, that *Crises* are very rare among us. And *Baglivi*, *Prax. Med.* does not deny, but that, in *Greece*, where the Air is purer, the regular critical Motions take place more than in *Italy*. But, though careful and constant Observation proves, that there are *Crises* in our Country, yet we are to have a respect to the Difference in the Seasons of the Year, the Country, Diet, the Constitution of the Patient, and his Treatment by the Physician; for all these things, to a surprising Degree, circumscribe and modify the ordinary Motions of Nature in Diseases. *Galen*, therefore, *Lib. de Dieb. decret.* very well advises one who would know the Day of the Crisis, carefully to inform himself of the Age, Constitution, and Pulse of the Patient, and to consider the Country, and Season of the Year.

All prudent Physicians generally agree in this, that a *Crisis* may be anticipated, postpon'd, or diminish'd, by a preposterous Method of Cure, or an Error in Diet. Thus *Semertus*, *de Diebus criticis*, *Institut. Lib.* 3. *Part.* 3. *Cap.* 2. expressly says, "If the Patient should commit any remarkable Error, it "is much to be feared, that the *Crisis*, which would have "happened on a good critical Day, for Instance, the seventh, "will fall out, by Anticipation, sooner, or, by Retardation, "later, so as to happen on the sixth or eighth Day." And *Prosper Martianus*, *Com. in Lib. de Morb. Sect.* 2. speaks yet more plainly: "By the continual Use," says he, "of cooling "Medicines, on account of the Fever, the Humours being "incrassated, and the Corpuscles condensed, the spontaneous "Evacuations are often prevented; so that this is none of the "least Causes, why Crises so rarely happen in our Times; "whereas, among the Antients, they were very common." The famous *Baglivi* is also very express to this Purpose, in *Prax. Med.* where he says, "The modern Practitioners in "Medicine ought not to wonder, that Crises are not so fre-"quent and perfect in our Days as they were formerly in "*Greece*; for, either not knowing, or else condemning, the "*Greek* Laws, they oppress, and almost kill, the Patient, by "treating him, from the Beginning to the Decline of the "Distemper, with Phlebotomies, and cathartic, diaphoretic, "spirituous, and other Sorts of Medicines, imprudently and "unseasonably exhibited. It is impossible, therefore, that "Humours, thus disturbed by such opposite and disagreeing "Medicines, should be disposed for the Work of a critical "Despumation, at a stated Time; but, being perpetually "agitated, and thrown into Confusion, instead of a perfect "Crisis, must end in preternatural Metastases. And, for this "Reason, we can neither observe the Rules of a *Crisis*, *critical* "Days, nor other Motions of Nature, delivered by the An-"tients." To the same Purpose this Author, not without Experience, asserts, that, "Among the Peasants, who have "no Assistance from a Physician, these *Crises*, or Despumations

" of the peccant Matter, are accomplished by Sweat, a Flux, " Urine, and other Ways of Nature, and by a Motion alto- " gether regular."

Now, since the Doctrine of *Crises*, and *critical* Days, is abundantly confirm'd and establish'd, not only on the Authority of the most celebrated Men in our Profession among the Moderns, but also by Experience, the undoubted Mistress of Truth, as we have proved at large above, it remains for us to inquire into the natural Causes of these wonderful Effects. *Galen, Lib. de Dieb. decret.* rightly acknowledges this Doctrine to be drawn from Experience, not from Reason: And, indeed, accurate Inquisition into the Causes of this wonderful Operation in Nature seems to surpass human Capacity. We shall, however, rejecting the Opinions of others, propose what to us seems most probable, and endeavour to explain and defend the same by proper Arguments. To begin with the Antients; they almost unanimously suppose Nature to be the efficient Cause of *Crises*, and *critical* Days; which same Nature they believed to be the Principle of all the Actions in the Body, and, being endued with a peculiar Knowledge of Acting, to make use of a certain or determinate Time, Order, Degree, Proportion, and Means, according to the Diversity of the morbific Cause, and to institute such Motions as are adapted to the Cause and Subject, in order to the Attainment of a certain End, which is the Preservation of the Body at a certain Time; and, moreover, to direct and regulate those Motions by certain Mediums or Organs. This Agent, which, with so much Prudence, moves and governs, and brings all the Motions, both in a sound and morbid State, to Perfection, by fit and proper Means, they suppose to be a real Being, free, incorporeal, and endued with the Knowledge of acting; but they judge its Essence to be incorporeal, chiefly from its Effect, which is Motion; for they suppose, that Motion, in itself, without Action upon the Body, or while it is in the Body, and acts upon the Body, cannot be said or understood to be any thing corporeal, but to be separated from the Essence of the Body, and never to exist necessarily with the Body; so that the Body may subsist without it, and, consequently, it has no essential Relation to Corporeity, as Quantity, Magnitude, and Figure have. Hence they conclude the Cause of this Motion to be something spiritual, especially considering the Order and Regularity of Motion in the Body; and, above all, that neither the material Alteration of the Humours, nor Changes of the Air, nor Diet, nor Medicine, can in the least alter or invert the settled Motions of Nature; but they judge of its spiritual Force principally, by considering, that a Perversion of the Order and Direction of these Motions can be accomplish'd by mere Imaginations and Fictions of the Mind. This Nature they believe to be also very observant of Time, that is, to perform its Actions in a certain and determinate Time: Such are those of forming, perfecting, curing, preserving the Man; correcting the Causes of Diseases, or expelling them through proper Emunctories adapted to the peccant Matter; as, for Instance, viscid and bilious Humours, through the Intestines; the thin and acrimonious, through the external Habit of the Body; salt and serous Superfluities, through the Kidneys; the Redundance of the Blood, through the Mouths of the Vessels; and an acrimonious volatile Bile, by Vomit. Then they affirm, that this Nature, for the Accomplishment of its most remarkable and stated Effects, has selected the septenary Number of Days, Months, and Years. And this was the most common Opinion of the Antients; from which we can only infer, that these admirable and orderly Effects have a like Cause from whence they proceed; but, we may still justly ask, What is this Cause? What is its Nature? Is it endued with Understanding, and a Knowledge of Things? Or are these Effects the Result of a necessary and physical Order and Contrivance of Causes, acting without all manner of Knowledge or Consciousness?

There is no Doubt, but that an Order, where-ever it is observed, always supposes an antecedent Cause, which is the Author of that Order; for Example, the Artist is the Cause of a Clock: But still it remains a Difficulty, whether these orderly or regular Effects are immediately to be derived from the Order or Mechanism established in Nature, or from the first Cause or Author of this Order, which Cause is endued with Knowledge and Perception. For Example; in a Clock, that the Index shews exactly the Hour, is not owing immediately to the Artist, but to the Order and Contrivance established by him in this Instrument, which is the proximate and immediate Cause of such an Effect; and we may very well apply this Instance to our Body, in which we perceive the most orderly and regular Effects in Nutrition, Augmentation, Perfection, Excretions, Motion of the Blood, and Cure of Diseases. These Things consider'd, we may justly ask the Question, Whether these Effects proceed immediately from God, the first and most perfect Author of Order, or from the Soul, as a subaltern Cause, or rather from the Order, Structure, and Mechanism, of the Body. For our part, we are of Opinion, as to physical and medicinal Affairs, that if Effects can be demonstrated proximately from corporeal mechanic Causes, which are perceptible by the Senses, there is no Occasion to have recourse to remote or obscure Causes, with which we are altogether unacquainted; as Spirit, Soul, Sympathy, Antipathy, Terror, Rage, or to moral Intentions and Direction. Our Sentiments, besides, are, that, though all Effects which happen in Nature, cannot very clearly be demonstrated *à priori* to the Senses and Capacities of Men, because of the narrow Limits of the human Understanding, it does by no means follow, that they have their Origin, not from a mechanic, but spiritual Cause; and this we would the more earnestly press and insist upon, that the Physician and Naturalist might be induced always to search out the proximate and physical Causes, without having recourse to such as are spiritual, metaphysical, unknown, and quite useless.

None of sound Judgment can deny, but that in our Body, which is a most artificial Structure, there inhabits a Principle whose Nature and Operation are quite distinct from Motion and Body. Of this Kind are Perception, Cogitation, Direction of Motions, and the Will, which can subsist without the Body, and have no Agreement with it. But, we utterly deny, that Motion, or rather the Principle from which Motion, whether it be local or intestine in Bodies, proceeds, and on which it depends, has no manner of Relation to the Essence of Body: For a Body without Operation, and the Principle of Operation, cannot be conceived; since a Creature merely passive, which is not furnish'd with a Principle of acting, is not a real physical Being, but a Creature of the Imagination. A Body, therefore, never subsists or exists, nor can be conceived, without an innate internal Principle of Motion, which is the Cause of the motive Forces and Powers, which it exerts upon other Bodies. Then, where-ever there is Body, or an extended Substance, there is Motion, Tendency, Pressure, and Action, of one Body upon another; and where there is a Machine, or organiz'd Body, there Motion is appointed for some certain End. Our Body is a very artificial Machine, which, from the convenient and agreeable Disposition of the fluid and solid Parts exercised on one another, produces Actions, as it sufficiently appears from the Preservation of the Body by Digestions, Mixtures, and Excretions, intestine progressive Motion, and Nutrition. Now these Motions are not immediately perform'd by the Soul in the motive Fibres; but the Soul only perceives certain Species of Motion in the Organs, understands, distinguishes, and compares them, and governs those Motions in Parts subjected to the Will. And nothing more deserves our Observation, than that great Intercourse which God has establish'd in Man between the Soul, and the Motions of the Body; for though the Soul does not indeed immediately perform Motions in the Body, it has a Power of modifying and disturbing them. Of this we have a clear Proof from the Passions of the Mind, and the Imaginations of pregnant Women, which are very well known to have a surprising Effect upon the Motion of the Blood and Humours. On the other hand, the Motion of the Fluids has a strange Influence in disposing the Operations of the Soul, I mean the Manners and Passions; as may very clearly be demonstrated from the different Nature of Temperaments, Ages, Nations, and Diet. We cannot doubt, then, but that Motions in the Body are quite distinct from the Actions of the Soul; and that the Blood and Fluids are not passive in the Case, so as to be directed by the Soul, but rather these Fluids exert their Action on the Soul: And, in short, what can be more evident, than that Diseases are caused, and Health restored, and Life preserved or destroy'd, by Air, Drink, and Diet? What can be more certain, than that the Structure of the solid Parts, which differs with respect to Ages, Temperaments, and hereditary Disposition, disposes to particular Diseases? And yet all these Things have no Regard to, or Communion with, the Soul, which therefore must of necessity be passive.

That a just Time is observed in some Actions, and those of the principal or more solemn Kind, is one of the best Proofs of the Presence and Necessity of a Mechanism; for an exquisite and accurate Order is visible in Actions, of which Mechanism is the Foundation. We see this in the Macrocosm, by the remarkable Phænomena of the Tides, the stated Winds and Rains in some Places, the Revolutions of Times and Seasons, with the Budding, Blossoming, and Fructification of Plants, which all come to pass in a certain Time, and require a limited Season. The most wise Architect of the Universe has been pleased to make Choice of the septenary Number for the Production of many solemn and surprising Effects, especially in our Microcosm.

The venerable Sages of Antiquity dignify'd this Number with the Epithets of *perfect*, *full*, *holy*, *masculine*, for the great Effects accomplished in it, which are a sufficient Evidence of the infinite Wisdom of the Creator display'd in our microcosmical Nature. We must not, however, think there is so much Power inherent in this Number, as some of the Antients imagin'd; but we are to form our Notions of the Matter by what follows. In order to the Production of certain Effects in

corporeal

corporeal Things, there is required a certain and ſpecific Proportion of the agent Cauſe or Actions: Now all phyſical Actions are nothing but Motion; and therefore a certain Proportion, a certain Number of Motions, is neceſſary to a certain Effect; for the Meaſure and Number of Motions conſtitute Time, and Time is nothing but a certain Number of Motions: Hence *certain* Actions require a *certain* Time. Let us accommodate this to our preſent Purpoſe by the following Inſtance: Under an Inflammation, for the Diſſolution and Abſterſion of a *certain* Proportion of Blood ſtagnating in the Veſſels, there is requir'd a *certain* Force and Number of Motions, by which the Blood, being impelled from the Heart and Arteries, to the affected Part, may free it from the Obſtruction. But God has form'd our Machine in ſuch a manner, that ſeven Days, and the Circulations of Blood, during that Period, are to be ſpent in performing that Operation: Hence acute and inflammatory Fevers are commonly reſolved on the ſeventh Day. Again, From the many uneaſy Irritations excited in the nervous and membranous Syſtem, it is over-and-above evident, that the Matter of the Small-pox, Meaſles, Petechiæ, and Purpura, is of an acrimonious and cauſtic Quality: Now, that this Matter may be removed by a Mixture of other Parts from the Blood, and diſpoſed for Secretion by the Habit of the Body, a *certain* Time is required, which takes up the Space of three or four Days; at the End of which, the peccant Matter leaves the internal Parts, and takes its Courſe to the Superficies. The Poiſon in the Plague, and contagious Fevers, is a Matter of a highly penetrating and putrefying Nature, which, mix'd with the Blood, either introduces a like putredinous Motion, and ſo fatally deſtroys the corporeal Texture; or elſe is itſelf corrected and eliminated out of the Body; in order to which Effect, there is required a juſt Time, and ſufficient Motion, for the Correction and Evacuation of the peſtiferous Matter. Thus again, When a Fever proceeds from the Putrefaction of ſome Humour ſtagnating in the Viſcera, there is a certain or determinate Motion of the Blood neceſſary to cleanſe and abſterge the putrid Collection; which Effect is to be accompliſhed by a certain Number of Pulſations of the Heart and Arteries, even juſt as many as paſs from the Beginning to the ſeventh or eleventh Day. Several Sorts of burning Fevers take their Riſe from a cauſtic acrimonious Bile; for the tempering and correcting, or, as the Antients expreſs'd themſelves, for the concocting and maturating of which, the ſame Time is required. "God, as "*Pliny*, *Hiſt. Nat.* ſays, has appointed this Law for Diſeaſes, "that they ſhould be terminated by a quaternary or ſeptenary "Number."

That the Solution of a Diſeaſe, at a ſtated Time, proceeds not from a Soul, or from Nature, as an intelligent incorporeal Principle, but from Mechaniſm, may be inferr'd, from only conſidering, that ſuch *Criſes* are anticipated or poſtponed, and become irregular, if the Patient errs in Point of Diet; if the Diſeaſe be treated with wrong Medicines; or the Cauſe thereof is ſomething ſtrange and unuſual: On which account, *Criſes* vary alſo according to the Diverſity of Years, Seaſons, Countries, and Subjects. *Riverius, in Inſtitut.* writes, that Motion and Diſpoſition are the Cauſe, why Criſes happen ſometimes ſooner, ſometimes later, and ſometimes upon intercalary Days, according to the Celerity of Concoction of the mild, or malignant, Humours: Wherefore, if the Cauſe of the Diſeaſe be not too malignant, and the ordinary Motions not much diſturbed or perverted with improper Diet or Medicines, if there be a free Perſpiration, and the Body not very impure, and if the Air be pure, ſerene, and elaſtic, the Criſes happen in juſt Time and Order.

Here ariſes a Queſtion of ſome Importance, Why full and perfect *Criſes* happen principally on critical Days; and good *Criſes* are attended with a Remiſſion of the Symptoms, and with Evacuations; for, as *Galen* has it, there is no good *Criſis* without ſome remarkable preceding Evacuation. To explain this, it is ſaid, that Nature, which is very obſervant of the ſeptenary Number, riſes up at firſt, with all her Forces, againſt the Cauſe of the Diſeaſe, which ſhe endeavours to mollify and diſpel; for the Preſervation and Continuance of our Bodies are principally maintained by excretory Actions, which prevent Putrefaction and Death. To this we anſwer, that the Soul is, indeed, endu'd with Knowledge; but not Nature, which cures Diſeaſes, and which, being conſcious of nothing, acts out of mere Neceſſity; for which Reaſon, it neither underſtands the Cauſe of a Diſeaſe, nor fights or ſtruggles, or kindles up a Fever, on that account; but all theſe Things, in my Opinion, depend on pure mechanical Principles, ſince external Cauſes alone, for Example, Baths, which obſtruct the Pores, or heterogeneous Liquors infuſed into the Veins, may, by diſtending and pricking the Membranes, excite febrile Spaſms. Further, It cannot be deny'd, that Life, as it ſignifies an Integrity of the Structure or Compoſition, is preſerved by Excretion; but, as Life rather imports an Act, that is, a circular Motion of the Blood and Fluids, which is alſo the neareſt Tye between Body and Soul, and not an Integrity of the Compound, and is, moreover, the Spring of all the Actions in the Bodies of Animals, and of thoſe very Excretions which preſerve the Integrity of the Structure, it evidently appears, that Excretions are not to be regarded as the only Cauſes of the Preſervation of Life; and that Diſeaſes do not ariſe only from a Suppreſſion of Excretions, nor are cured only by their Reſtitution. For nothing can be more evident, than that Life can be taken away by an Effuſion of Blood, by a Polypus, Ligatures, Coagulations, ſtopping the Circulation of the Blood, or a Diſturbance of the Motions by means of Poiſons, the Texture and Compoſition of the Parts remaining inviolated. Hence we may conclude, that all Cauſes which produce a Diſeaſe, are not of ſuch a Nature as to indicate only a Putrefaction, and to require, or even admit, an Excretion; ſince it frequently happens, that a ſmall Portion of Matter, of a very deleterious Quality, which indicates Correction and Preparation, in order to Excretion, proves the moſt dangerous and ſecret Enemy to Life; beſides, the peccant Matter often requires Reſolution, rather than Expulſion.

In compliance with this Sentiment, we might charge Nature with Error and Imprudence, for exciting ſuch violent Motions in Fevers, for the ſake of Reſolution and Excretion; when, it is well known, that the Affair of Excretion, as well as Secretion, would ſucceed at leaſt as happily under a more moderate Motion of the Fluids. For theſe Reaſons, we are of Opinion, that thoſe Excretions, which happen on critical Days, are to be eſteem'd a Sign, and not a Cauſe, of the Solution of the Diſeaſe: For hence it appears, that Nature being compoſed to Reſt, and the irregular and ſpaſtic Motions of the Fibres ceaſing, there commences a quicker Secretion, and a freer Appulſe of thoſe Impurities of the Blood and Humours, which were generated under the Diſeaſe, to the Emunctories of the Body. For if the moſt copious Excretions happen on the critical Days, or any other, without Relief, and an Augmentation of the Strength, they are of no Efficacy; ſo that ſometimes Death comes with large Excretions, which is a manifeſt Proof, that the Diſeaſe is not reſolved by Excretions: Wherefore all Evacuations, which happen not in and with a Decreaſe of the Diſeaſe, are call'd *ſymptomatical*; but thoſe which proceed from an Increaſe of the Strength, and argue a Vigour in Nature, are termed *critical*.

Copious Excretions by Urine, as well as thin watery Urine, and profuſe Sweats, without an Alleviation of the Symptoms, are never ſafe, according to the Authority and Experience both of Antients and Moderns; for they indicate the Matter of the Diſeaſe to be unſubdu'd, and that the Mixture of the Blood, and its Union with the Serum, is deſtroy'd; whence the fluid and aqueous Parts are ſeparated from the thicker: Wherefore copious and thin Urine, as *Hippocrates* long ago obſerved, portend a Delirium; for the Blood being render'd thicker by a Subtraction of the Serum, and being under a more languid Impulſe of the Arteries, eaſily ſtagnates in the Veſſels of the Meninges, and produces a Phrenſy. Whenever there happens an Abſceſſion and Eruption, as of the Small-pox, Meaſles, or Petechiæ, before the ordinary Time, it is an ill Sign; becauſe it indicates a copious Matter, and the ſame not well temper'd and corrected.

From the Premiſes it appears, that Excretions, on critical Days, are not the Cauſes of the Solution of a Diſeaſe, but rather the Conſequences of an Advantage obtain'd over the morbific Cauſe. Of this we have a manifeſt Example in the Paroxyſms of intermittent Fevers, where Sweats yield no Relief; but, when they happen in the Decline of the Diſeaſe, they are of Service; not becauſe they evacuate the formal Matter of the Fever, but becauſe they aſſure us of the Ceſſation of the irregular Motions, and febrile Spaſms: However, much excrementious Sordes, generated in the Diſeaſe, is eliminated with them. It is obſervable, alſo, that under ſevere Pains no Sweat appears; but as ſoon as it flows in a free Manner, it paſſes for a Sign of the Removal of the Pain, a Relaxation of the Tenſeneſs of the Fibres, and a freer Circulation of the Blood.

We may conclude from the preceding Diſcourſe, that the Obſervation of *Criſes*, and *critical* Days, has its Foundation in Nature, and is of Uſe in Practice; for as nothing is made and produced without Time, but every Effect requires a certain Time, ſo is there alſo a certain Time neceſſary for the Correction of the morbific Cauſe, and the Preparation of it in order to an Evacuation. And as a determinate Time is requir'd for the Generation of a morbific Cauſe, ſo alſo is the Correction and Expulſion of it out of the Body perform'd in a certain Space of Time. Now theſe Alterations, Corrections, and Immutations of the morbific Matter, happen on the ſeventh, ſemi-ſeventh, eleventh, or fourteenth Day, according to the ordinary Courſe of Nature. The Phyſician, therefore, (1.) who acts againſt this Order, or uſes violent Means in attempting to ſubdue the Diſeaſe, before the Time appointed by Nature for ſubduing the morbific Matter, acts raſhly and prepoſterouſly, and commits an Error. (2.) When the Matter is to be temper'd and concocted, and the Phyſician attempts Expulſion, and for that End uſes Volatiles, Sudorifics, and Veneſection,

Veneſection, he offends againſt the Law of Nature, and greatly injures the Patient; for the Law of Nature is a Law to the Phyſician. (3.) On *critical* Days, and about that time, it is beſt to abſtain from ſtrong Evacuants, for fear of deriving the Humours, which ought to be excreted by proper Emunctories, into inconvenient and improper Places. (4.) If Nature be weak in Expulſion, we are prudently to aſſiſt it; for Evacuations owing to Strength of Nature, and a Conqueſt over the Diſeaſe, are beneficial, by freeing the Body from many noxious excrementitious Parts, generated in the time of the Fever, as well in the Veſſels, as in the inteſtinal Tube; otherwiſe Evacuations, not well ſucceeding, eaſily induce a Relapſe. (5.) Evacuants and Purges, according to *Hippocrates*, *Sect.* 2. *Aph.* 25. are proper to be uſed in the Beginning of a Fever, when the Matter is redundant, that is, if the Blood be copious, and the Veſſels and *Primæ Viæ* obſtructed with impure Sordes; ſuch Depletions potently aſſiſt Nature, and remove what hinders the Cure, and foments the Diſeaſe. (6.) If, thro' the Malignancy of the Matter, the irregular Motions of Nature ſeem to have a Tendency towards a dangerous Metaſtaſis, the prudent Phyſician, without any regard to Time, will make it his Care to reſolve the Blood, to derive it to other Places, and to prevent its Stagnation, by ſeaſonable Relaxation, Phlebotomy, a Diaphoreſis, external Diſcutients, and ſometimes by Section under the Tongue, or Scarification of the Noſtrils. In ſuch a Situation, when the Signs prognoſticate certain Death, it would be Madneſs to expect a *Criſis*; and, therefore, we have often known gentle Cathartics, and nitro-ſaline Subſtances, mixed with *Aurum fulminans*, and diſcreetly exhibited, ſucceſsful in ſuch Caſes beyond Expectation. *F. Hoffman.*

CRISPATURA. Criſpature. Curling. In Medicine it implies a ſpaſmodic Contraction of the Membranes and Fibres. *Caſtellus.*

CRISPINUS, or CRESPINUS. A Name for the Barberry-tree. *Blancard.*

CRISTA. A Creſt. In Anatomy, a Proceſs of the Os Ethmoides is call'd CRISTA GALLI, from its ſuppoſed Reſemblance to the Comb of a Cock. See CAPUT. In Surgery, certain Excreſcences, about the Anus and Pudenda, are called *Criſtæ*, on account of their Form. See ANUS. In Botany, *Criſta Galli* is the ALECTOROLOPHUS, which ſee; and the *Criſta Pavonis* is the POINCIANA; *flore pulcherrimo*, which ſee.

CRITHAMUM. The ſame as CRITHMUM. *Blancard.*

CRITHE, κρίθη. Barley; a Grain much recommended by *Hippocrates*, and moſt Phyſicians ſince his Days, in acute Diſtempers. Hence, from its Similitude, a ſort of Tubercle on the Eyelids is call'd *Crithe*. See CHALAZA.

CRITHMUM. The Name of a Plant.

The Characters are,

The Root is fibrous, and ſpreading; the Leaves are ſucculent, thick, narrow, trifid, divided, and ſubdivided; the Seed is flat, a little ſtriated, and parts from its Covering.

Boerhaave takes notice of two Sorts of the *Crithmum*.

1. Crithmum; ſive fœniculum maritimum minus. *C. B. Pin.* 288. *Mor. Umb.* 20. *Boerh. Ind. A.* 57. *Tourn. Inſt.* 317. *Crithmum Fœniculum marinum*, *Herba S. Petri*, Offic. *Crithmum marinum*; Ger. 427. Emac. 533. Raii Hiſt. 1. 457. Synop. 3. 217. Mer. Pin. 31. *Crithmum marinum vulgare*, Park. Theat. 1286. *Crithmum ſive Fœniculum marinum*, Merc. Bot. 1. 31. Phyt. Brit. 32. *Crithmum multis ſive Fœniculum marinum*, J. B. 3. 194. Hiſt. Oxon. 3. 289. *Critmum ſive Crithmum*, Chab. 408. SAMPHIRE.

The *Sea-fennel*, or *Samphire*, is a much lower Plant than the common Fennel, having broader, ſhorter, thicker Leaves than that, of a dull-green Colour; the Stalk grows ſcarce a Foot high, having the like Leaves on it; and on the Top it bears Umbels of ſmall yellowiſh Flowers, and, after them, roundiſh Seeds, ſomewhat like ordinary Fennel, but bigger. The Root is thick and long, continuing ſeveral Years. The whole Plant has a warm aromatic Smell and Taſte. It grows upon Rocks by the Sea-ſide in many Places of *England*.

Samphire is more made uſe of as a Pickle, being a very agreeable one, than for any Medicinal Purpoſes. However, it is ſtrengthening to the Stomach, procures an Appetite, provokes Urine, and opens Obſtructions of the Bowels, and is good for the Jaundice. *Miller's Bot. Off.*

It is farther recommended as a Diſſolvent of the Stone, and a Promoter of the Menſes.

Hippocrates directs the Bark of Samphire (κρίθμου) in Wine, faſting, together with the Grains of Piony, and Seeds of Elder, in a Dropſy of the Uterus; and, in Pains of the ſame Part, he orders Roots and Seeds of this Plant to be taken internally.

2. Crithmum; ſive Fœniculum marinum; majus; odore Apii. *C. B. P.* 288. *M. U.* 3. 290. *Baticulæ alterum genus, ex Siciliâ.* Cæſalp. t. R. P. *Boerh. Ind. alt. Plant. Vol.* 1.

CRITICUS. Critical.

CROCE, κρόκη. In *Hippocrates* it ſignifies a Thread.

CROCIDE CONFECTIO. The Name of a Confection recommended by *Nicolaus Myrepſus* for the Colic. *Sect.* 31. *Cap.* 22.

CROCINUM, κρόκινον. Oil of Saffron is thus deſcribed by *Dioſcorides*.

> The ſame Weight and Quantity of Oil are to be taken as in the Compoſition of the SUSINUM, (ſee this under ÆGYPTION) and alſo inſpiſſated: Into three Pounds and an half of the Oil, thus inſpiſſated as for the SUSINUM, put eight Drams of Saffron, and ſtir them ſeveral times in a Day for five Days together. The ſixth Day cleanſe the Oil well from the Saffron, and pour a like Quantity of Oil upon the ſame Saffron, and ſtir them for three Days. Then cleanſe off the Oil, and put therein of Myrrh, pounded and ſifted, forty Ounces; ſtir them well together in a Mortar, and afterwards ſet the ſame aſide for Uſe.

Some uſe an Oil impregnated with Aromatics in the Compoſition of the CROCINUM, as they do of the CYPRINUM. The beſt CROCINUM, and the fitteſt for Medicinal Purpoſes, is what ſmells very ſtrong of the Saffron, and the next in Goodneſs is what is well ſcented with the Myrrh.

The *Crocinum* is of a heating Quality, and procures Sleep; whence it is frequently adviſed in Phrenſies, by way of Embrocation, or held to the Noſe, or the Noſtrils are rub'd with the ſame; it is alſo a Suppurative, and deterges Ulcers. It is effectual in Hardneſſes, Obſtructions, and malignant Ulcers of the Uterus, uſed with Wax, Saffron, Marrow, and double its Quantity of Oil; for it concocts, mollifies, moiſtens, and is alſo a Lenitive. It is good againſt a Glaucoma, if it be mixed with Water, and the Eyes anointed with it. *Dioſcorides*, *Lib.* 1. *Cap.* 64.

CROCUS. The Name of a Plant; the Characters of which are, according to *Miller*,

It hath a Flower conſiſting of one Leaf, which is ſhaped like a Lily, fiſtulous underneath; the Tube widening into ſix Segments; and reſting on the Foot-ſtalk: The Pointal riſes out of the Bottom of the Flower, and is divided into three headed and creſted Capillaments; but the Empalement afterwards turns to an oblong triangular Fruit, divided into three Cells, and is full of roundiſh Seeds: To theſe Marks muſt be added, it hath a tuberous Root, and long graſſy Leaves, with a longitudinal white Furrow thro' the Middle of each.

There are a great Number of Species of the Crocus. *Boerhaave* mentions twenty-eight. But that which is principally uſed in Medicine is, the

Crocus; ſativus. *C. B. Pin.* 65. *Tourn. Inſt.* 353. *Elem. Bot.* 289. *Boerh. Ind. A.* 2. 120. *Rupp. Flor. Jen.* 26. *Mer. Pin.* 31. CROCUS, Offic. Ger. 123. Emac. 151. Raii Hiſt. 2. 1176. Synop. 3. 374. J. B. 2. 637. *Crocus vel Crocum*, Chab. 222. Pin. 31. *Crocus genuinus ſive ſativus*, Merc. Bot. 2. 19. Phyt. Brit. 33. *Crocus Autumnalis ſativus*, Hiſt. Oxon. 2. 335. SAFFRON.

The Plant, which produces the true *Saffron*, has a round bulbous Root, about as big as a Nutmeg, flatted at Bottom, from which ſpring ſeveral white Fibres: It is covered outwardly with a yellowiſh-brown Skin, but is white on the Inſide. From this Root ariſe the Flowers, incloſed in a thin Skin or Huſk, being naked, and without Stalks, made up of ſix long, but roundiſh-pointed, purple Leaves, incloſing in their Middle three Stamina, of a fiery, yellow, red Colour, which being gather'd, and carefully dry'd in a Saffron-kiln, and made into ſquare Cakes, is the *Saffron* of the Shops.

The *Saffron-flowers* blow in *September*, but the Leaves come not forth till the Spring; being narrow and graſs-like, with a white Furrow running thro' the whole Length.

The beſt *Saffron* in the World grows in *England*, being cultivated in *Eſſex*, *Suffolk*, and *Cambridgeſhire*.

Saffron is a moſt noble Cordial, and a Strengthener of the Heart and vital Spirits, reſiſts Putrefaction, and is good in all kinds of malignant and contagious Diſtempers, in Fevers, Small-pox, and Meaſles. It opens Obſtructions of the Liver and Spleen, helps the Jaundice, brings down the Catamenia, expedites the Birth, and expels the Secundines. It is good in Diſeaſes of the Lungs, as Aſthma and Difficulty of Breathing, and of great Service in conſumptive Weakneſs. Outwardly applied in Poultices, it eaſes Pains, and ripens Impoſtumations.

Officinal Preparations of *Saffron* are, the Tincture, the Spirit, the Syrup, the Extract, and the Plaiſter *Oxycroceum*. *Miller's Bot. Off.*

The dry'd Filaments of the Flower, which are more peculiarly call'd *Crocus*, or *Crocum*, κρόκος, κρόκον, by the *Arabians* *Zaffaran*, or rather *Zahafaran*, whence the *Engliſh Saffron*, are ſlender Subſtances, thinner in the lower Part, and broader in the upper, of a whitiſh or paliſh Yellow, finely crenated, of a peculiar, pleaſant, and aromatic Smell, of ſubtile Parts, and diffuſing its Odour to a great Diſtance, ſomewhat ſtimulating to the Eyes, and moderately ſtuffing the Head, and inclining

to Sleep, of a bitterish Taste, and sufficient, in a small Portion, to turn a large Quantity of Wine or Water of a yellow or Lemon-colour, inclining to Red. Crocus is by the Chymists, from its Golden Colour, call'd *Arcma Philosophorum*, by Contraction *Aroph*; by others *Sanguis Herculis*, and *Aurum vegetabile*: For its extraordinary Virtues against many Diseases, it is honoured with the Title of *Rex vegetabilium*, and *Panacea vegetabilis*.

Saffron, by a Chymical Analysis, according to *Geoffroy*'s Account, yields an acrimonious, thin, and highly volatile Spirit, which comes off first, tho' in small Quantity, in the Distillation; to this succeeds an acidish Phlegm, which will turn a Tincture of Heliotropium of a red Colour; then a very little Oil, and a very small Quantity of urinous Salt. Something of a fixed alcaline Salt is extracted from the Caput Mortuum by Lixiviation. The acid Salt is not so deeply involved in the Sulphur, but that it communicates an intensely red Colour to a Solution of Heliotropium. Oil of Tartar, poured on a Solution of Saffron, produces no Alteration; but Lime-water, with a very slight Effervescence, and a thin Coagulum, assumes a white Colour, on account of the Acid concealed in the Saffron, tho' no Heat can be perceived. The Tincture of Saffron may be extracted either with Water, or Spirit of Wine. *Antonius de Heide*, in his *Observ. Medic.* informs us, that a few Drops of this Tincture, poured upon clean Paper, underwent no Change, as to their Colour and Consistence, by an Addition of Aqua-fortis, Pot-ash dissolved, and a Solution of sublimate Mercury, made with Rain-water. *Newman* denies, that the essential Oil, the fixed Sulphur, and the volatile Salt of Saffron, can be obtained separately; and affirms, that it is a mixed, aqueous, gummous, and terrestrial Substance, in which, tho' there are rarefied oleous Parts, mixed with resinous and highly subtile saline Particles, yet these cannot be separated from each other; for from two Ounces and an half of Saffron, dried by a Bath-heat, he obtained by Distillation half an Ounce of a fragrant Liquor, or the Quintessence of Saffron, in which there was no substantial Oil. The Part remaining after Distillation, which weighed two Ounces, he divided into two equal Parts for making Extracts. From an Ounce, therefore, of this Saffron he obtained of the first spirituous Extract five Drams and one Scruple, and of the second aqueous Extract one Dram and half a Scruple, and of the terrestrial Part one Dram and an half. With the other Ounce of Saffron he first used Water, and obtained of the first aqueous Extract six Drams, and of the second spirituous Extract one Scruple, whilst the Saffron remaining weighed five Scruples. Hence 'tis obvious, that, in Saffron, the Quantity of gummous Parts surpasses that of the resinous. But if we may believe the Author of the Annotations on this Passage of *Newman*, the essential Oil of Saffron may be obtain'd by Distillation, entirely separate from the other Parts. According to him, a Dram and an half of this Oil may be obtain'd from one Pound of Saffron, which is of so penetrating a Taste, that one Drop of it, taken upon the Tongue, will be felt for twenty or thirty Hours after. It may be obtained by any one from the Extract of Saffron made with Water, provided half a Pound of the Saffron is used for that Purpose. According to *Schroder*, a Pound of Saffron yields a Dram of this Oil. But since Saffron is dissolved in Water, as well as in Spirit of Wine, and since separately with each of these Fluids, when reduced to a thicker Consistence, by means of Abstraction, it resembles a pinguious balsamic Oil, capable of being mixed with Water, Oil, and Spirit of Wine, *Cartheuser* from this concludes, that there is a fixed Principle, of a very peculiar Nature, lodged in it, since it neither resembles a perfect Oil and Gum, nor a perfect Resin, but is of a kind of neutral Nature, and seems, in some measure, to resemble both. *Boerhaave*, in the second *Vol.* of his *Chymistry*, calls it an heteroclite Body, which scarce resembles any other in Nature. As for the Virtues of Saffron, resulting from its constituent Parts, *Ettmuller*, from its volatile Oil, in Conjunction with its acrid, highly spirituous, and penetrating Salt, derives its intoxicating, and at last narcotic Quality. He affirms, that both these Principles, the Oil and the Salt, are so closely combined and united in the concrete Body, that it yields but very little Oil without contracting an Empyreuma. He also maintains, that the acrid Salt contains a certain aromatic Quality, by which it stimulates the Uterus. The celebrated *Hoffman*, in his *Dissertatio de Remediorum domesticorum Utilitate*, informs us, that Saffron, in consequence of its mild, anodyne, and vaporous Sulphur, is excellently calculated for alleviating Pains and Spasms; and that, by means of its acrid and volatile Salt, it contributes to open and remove Obstructions. *Newman* deduces the narcotic Virtue of Saffron from its highly attenuated, rarefy'd, and vaporous oleous Parts.

Without enumerating the several Uses to which the Antients applied Saffron, whether as an Ingredient in Aliments, or an Instrument of Luxury, we shall proceed to the modern Accounts of it. We shall but just mention, that it serves the Dyers to give a yellow Colour, and the Painters in their Water-colours; and that it is boiled with Alum in Water, to make a yellow Ink; and that the *Indians*, on their Holidays, express their Joy by scattering or throwing about Saffron, as we read in *Ovington's Voyages*; and that it is accounted in many Countries the best Seasoning for Food: This I know to be Matter of Fact, with regard to the Inhabitants of *Poland* and *Courland*; and, as for the *Spaniards* and *Italians*, we are assured by *Labat*, in the Account of his Travels into *Spain* and *Italy*, that they are persuaded, that without the Use of Saffron they should be perpetually molested with Disorders of the Breast, Lipothymies, and want of Sleep. The Women in *Ireland*, as *Laurembergius* says, dye their Shifts with Saffron, to preserve them from Vermin, and to procure to themselves Strength of Body, and Chearfulness of Mind. In that Country the young Men also chew it in their Mouths; by which means they acquire a fragrant Breath, and by breathing upon the Face of a Woman, which they suspect to be painted, immediately make her become pale, and betray her counterfeited Beauty. *Scaliger*, in his *Exercitationes*, informs us, that, in *Ireland* and *Iceland*, there are a Set of clownish People, who wear Shirts tinged with Saffron, for six Weeks and more, with an Intention to banish Lice. *Bacon*, in his *History of Life and Death*, informs us, that, in *Iceland*, Linen and Shirts, tinged with Saffron, were originally intended for preventing Putrefaction; but he thinks, that this Piece of Practice contributes to the Prolongation of Life; and, in the same Work, he expressly affirms, that the *English* are rendered sprightly by a liberal Use of Saffron in Sweetmeats and Broths. And the same *Bacon*, in his Treatise *De retardandis Senectutis Accidentibus*, advises Saffron to be mixed with Medicines intended to prevent the Effects of old Age; for, says he, Saffron conveys Medicines to the Heart, cures its Palpitation, removes Melancholy and Uneasiness, revives the Brain, renders the Mind chearful, and generates Boldness. Saffron seems to produce its Effects on the human Body, by the uncommon Fineness and Subtilty of its Parts; and, according to *Caspar Hoffman*, it is justly doubted, whether it does not surpass all other Simples. Hence it is, as *Lister* observes, that it greatly contributes to promote the Concoctions, especially the third. *Boerhaave*, in the second *Vol.* of his *Chymistry*, calls it a true and genuine Rouser of the animal Spirits, because it is possessed of aromatic, stimulating, and heating Qualities; and is therefore discutient, resolvent, aperient, and corroborating. It is classed not only among the cordial, alexipharmic, sudorific, diuretic, cephalic, pectoral, emmenagogue, and ecbolic, but also among the anodyne and narcotic Medicines. In malignant and contagious Fevers, *Friccius*, from his own Experience, recommends the following Medicine;

> Take of Rose-water, beat with the White of a new-laid Egg, two Spoonfuls; of Saffron, one Pugil. When these are sufficiently mixed, add two Spoonfuls of the Spirit of Wine, and about the Bulk of a small Nutmeg of Camphire reduced to Powder. Let it be exhibited Morning and Evening.

Diemerbroeck, in his Treatise *de Peste*, informs us, that in a particular Plague he rarely used Saffron; and that he could not be sensible of its Efficacy and Virtue against this contagious Malignity, when he did use it. Besides, continues he, 'tis not safe to make Trial of its Qualities in a Plague, because it affects the Head; and, when exhibited in large Quantities, induces a Drowsiness or Delirium, both which are greatly to be dreaded, and consequently carefully prevented in Plagues. It is successfully used for freeing the Lungs from thick and viscid Phlegm; for which Reason it is by some call'd *Anima Pulmonum*, the Soul of the Lungs. *Camerarius*, in his *Hortus Medicus*, affirms, that it is so beneficial in Disorders of the Thorax, that some exhibit a Scruple and an half of it, with half a Grain of Musk, to be drank in warm Wine for curing Asthmas. He also affirms, that it greatly contributes to remove the Effects of a Perspiration obstructed by Cold. *Paulus de Sorbait*, in his *Universa Medicina*, informs us, that if we want to protract the Life of a phthisical Patient for a short time, we must exhibit to him half a Scruple of Saffron. *Friccius*, in Coughs, especially those of Children, recommends the following Preparation as a Specific:

> Take of fresh Sperma Ceti, half a Scruple, and of Saffron, one Grain, if the Child is a Year old: But, if the Child is two or three Years old,
> Take of fresh Sperma Ceti, one Scruple; and of Saffron, two Grains; and to Children farther advanced, half a Dram of Sperma Ceti, and three Grains of Saffron, may be exhibited in warm Broth.

Saffron is by many recommended in removing Obstructions of the Liver, and curing the Jaundice. *Hertodt* in his *Crocologia*, recommends the following Preparation as a Specific in the Jaundice.

Take

Take of Malmſey-wine, one Pint; the Yolks of two Eggs; one Dram of Saffron: Mix all together. One Half of this Preparation is to be taken at Night, when going to Bed, and the other Half in the Morning.

In the Cure of a Dyſentery Saffron acquired an uncommon Reputation, after *Bontius* affirm'd, that no more efficacious Remedy could be found; and that the Extract of Saffron was the moſt genuine Antidote in this Diſorder, tho' of the moſt virulent and obſtinate Kind. This Extract he orders to be prepared in the following Manner:

Take of the beſt Opium, Dragons-blood, Gum Benzoin, and *Perſian* Saffron, each equal Parts; and of black or Japan Amber, a third Part: Mix them all together in an oblong Veſſel with a narrow Neck. Pour a Quantity of ſtrong Wine Vinegar upon them, ſufficient to riſe three or four Inches above the Materials. After Digeſtion in a ſtrong Heat, let the Liquor, ſtrongly expreſſed, be inſpiſſated to the Conſiſtence of an Extract. The Doſe of this Medicine is from ſix to nine Grains, in the Form of a Pill, or diſſolved in a Spoonful of Wine, or any other proper Liquor. It is principally to be exhibited towards Night.

Bauhine, from *Matthiolus*, informs us, that Children, which continually cry, are very weak, and diſcharge ſmall fabulous Concretions in their Urine, are greatly relieved by a little Saffron exhibited with Milk. *Helmont*, againſt the Stone, greatly recommends the *Aroph* of *Paracelſus*, which, according to *Hoffman* in his *Clavis Schrod.* is prepared by putting Saffron and Bread, dipt in Wine, in a Veſſel, and burying them for ſome Days in Horſe-dung, and then diſtilling. According to *Boerhaave*, there is no Neceſſity for a previous Corruption of the Saffron and Bread in Horſe-dung, for extracting this Tincture, ſince, by that means, it is rather rendered worſe than better. But the Caſes, related by Phyſicians, of Children ting'd in their Mothers Bellies, ſufficiently prove, that Saffron has a peculiar Influence on the Uterus, and that its emmenagogue and ecbolic Virtues are to be derived from this Circumſtance. 'Tis alſo certain from Experience, that Saffron, when taken internally, tinges not only the Excrements, but the Urine. But, in *Eph. Nat. Curioſ. Decad.* 3. *a.* 6. *o.* 273. we have an Account of a young Man of twenty-two Years of Age, whoſe Seed was ting'd of a Saffron-colour by his eating Aliments prepared with Saffron. *Riverius* affirms, that half a Scruple of Saffron, exhibited, in ſome proper Broth, every Hour, is ſingularly beneficial in difficult Labours. It is univerſally uſed, as a Medicine of uncommon Service, in promoting the Eruption of the Small-pox; and, in *England*, according to *Ray*, it is ſuſpended in ſmall Bags, under the Chin and Throat, for diſſipating putrid and venomous Matter, leſt, ſtagnating in the Parts, it ſhould excite an Inflammation, and ſtrangulate the Patient. *Verulam* informs us, that a certain *Engliſhman*, who uſed to be exceſſively ſick at Sea, had his uſual Nauſeas prevented by wearing a Bag of Saffron on the Region of his Stomach. Externally it is extol'd, as an excellent Ingredient, in Medicines calculated for Diſorders of the Eyes. Thus *Geoffroy*, in Inflammations of the Eyes, orders the following Preparation.

Take of Fennel-water, four Ounces; and of Saffron, fifteen Grains: Triturate both together, in a Mortar, till the Water aſſumes a Golden Colour. Then the Liquor is to be ſeparated from the Powder by Inclination, and mixed with an equal Quantity of ſtibiated Wine.

Or, according to *Friccius*,

Take a ſufficient Quantity of the Whites of Eggs beat up with Roſe-water, or Womens Milk; add Saffron, and apply to the affected Eyes.

Avenzoar, in Cataracts of the Eyes, orders them to be kept open over the Decoction of Saffron, in ſuch a manner, that the Steam of it may affect them. For reſolving inflammatory Tumors, and alleviating Pain, *Geoffroy* recommends an anodyne Cataplaſm, prepared of

A Pound of the Crumb of the fineſt Wheaten Bread, broken between the Hands; of Cows Milk, a ſufficient Quantity. Theſe he orders to be boil'd, ſtirring them at the ſame time, and adding, towards the End of the Preparation, the Yolk of one Egg, and one Dram of Saffron, reduced to a fine Powder.

According to *Bauhine*, Saffron, mixed with Milk, Oil of Roſes, and a little Smallage, alleviates the intenſe Pains of the Gout, ariſing from a hot Cauſe. In arthritic Pains, and Eryſipelas, a Linen Cloth, impregnated with Saffron, is ſaid to be a divine Remedy. *Mynſicht* gives the following Directions for preparing a Cloth of this Kind.

Take a Piece of new Hempen Cloth; waſh it five or ſix times in Frogs-ſpawn, gathered in the Month of *March*, and ſo carefully filtrated, that the Granulations, reſembling ſmall black Eyes, may be ſeparated from it. Suffer the Cloth to dry as often in a Shade, to which the Heat of the Sun has no Acceſs. Then take of the Vinegar of Elder-flowers, and of Saffron, a ſufficient Quantity. Make into a Tincture, in which boil the Hempen Cloth, till it aſſumes a deep Saffron-colour. Let it cool in this Tincture; then take it out, dry it, and preſerve it for Uſe. After other neceſſary Precautions are taken, this Cloth, when anointed with *Venice* Soap, is to be applied to the Part affected.

According to *Bauhine*, Saffron applied warm, mixed with a Lixivium and Oil of Olives, is of ſingular Service in Tumors in which a Gangrene is dreaded; and a Plaiſter of Lupins, boiled in a Lixivium and White-wine, with an Addition of Saffron, is ſaid to be an excellent Remedy in Gangrenes. *Ettmuller* informs us, that Spirit of Wine, impregnated with Saffron, and applied, with a Linen Cloth, to the Fingers and Toes, when ſo injur'd by the Cold as that a Gangrene is dreaded, is an excellent Remedy. That Saffron contributes to the Cure of Wounds, is obvious from the Caſe of a Man, who, with a Hatchet, inflicted a deep Wound in his Foot; but, by waſhing the Wound with Wine in which Sugar was diſſolved, and filling it with Saffron, he was cured. This Caſe we have in *Ephemer. Nat. Curioſ. Decad.* 1. *a.* 3. *o.* 310. According to *Laurembergius*, the Bites of Spiders and Scorpions are cured by the Application of Saffron. It is applied externally, by way of Epithem, to the Forehead and Wriſts, in order to alleviate Pain, and procure Sleep. Some, for the ſame Purpoſe, place Chaplets or Garlands of Saffron round the Head. According to *Wedelius*, in his *Opologia*, Nurſes, in order to remove obſtinate Watchings in Children, place a Bag, in which Saffron has been kept, below their Heads. But *Friccius*, upon this Paſſage of *Wedelius*, obſerves, that the Bag ought to be removed as ſoon as the Child is aſleep. Saffron is alſo often uſed, in Conjunction with Opium, as we ſee in many of the Laudanums of the Shops. With the learned *Geoffroy* we may juſtly doubt, whether it corrects or augments the Effects of the Opium; or whether, as an Aromatic, it, by the Minuteneſs of its Parts, contributes to divide and reſolve its tenacious and viſcid Quality: For no one ever aſſerted, that Saffron was a more powerful Narcotic than Opium. Nor, in the mean time, does it ſeem proper for correcting or leſſening its Virtues, becauſe its Smell teſtifies, that it is poſſeſſed of narcotic Qualities. Beſides, like Opium, when uſed in too large a Quantity, it induces Drunkenneſs, proves narcotic, or produces a Delirium; but, when moderately us'd, it calms the Mind. For this Reaſon it is recommended for exhilarating melancholic Patients, when ſew'd up in a ſmall Bag with Camphire, and wore on the Pit of the Stomach; but *Juncker* doubts whether this Practice be ſafe. According to *Bauhine*, *Geſner* orders a little Saffron to be mixed with Broth, as a proper Means of Relief in melancholic Diſorders. *Borelli*, in his *Obſervationes Medico-phyſicæ*; *Cent.* 2. *Obſ.* 99. informs us, that a certain Woman, by wearing Saffron on the Pit of her Stomach, was cured of Melancholy, and a perpetual Inclination to weep. *Schulzius*, in his *Prælectiones*, informs us, that the exhilarating Virtues of Saffron are ſufficiently conſpicuous in young Children, to whoſe Noſtrils if an empty Glaſs, in which Eſſence of Saffron has been, is applied, they are immediately ſet a laughing. The Power of Saffron to excite Laughter is ſo well known, that it has become a Proverb, when one is eaſily ſet a laughing, to ſay, that *He eats Saffron*. But it ſeems to be an hyperbolical Expreſſion of *Levinus Lemnius*, when he aſſerts, that the Heart is ſo miraculouſly refreſhed by Saffron, that when the Ring Finger of the Left Hand is rub'd with it, it immediately penetrates to the Heart. From what has been ſaid 'tis obvious, why it is call'd the *Hortus Lætitiæ*, and the *Medicina Triſtitiæ*. *Dioſcorides* and *Pliny* aſcribe to Saffron a Virtue, by means of which it reſiſts Intoxication. This Effect it may poſſibly produce as a ſubtile Aromatic, by opening and diſcuſſing, if it is not exhibited in too large a Doſe; for whatever opens the Pores, lays a Foundation for the Elimination of the Wine by Perſpiration. Perhaps, alſo, they aſcribed this Virtue to it, becauſe it procures ſound Sleep to thoſe who are drunk; for, by its mild and gentle Effluvia, it diſcuſſes the Uneaſineſs ariſing from exceſſive Drinking; by which means a calm and pleaſant State being brought on, the Crapula is concocted, as *Plutarch* informs us in his *Sympoſ. Lib.* 3. *Probl.* 1. *Bodæus*, in *Theophraſt.* is of Opinion, that Saffron, previouſly exhibited, diſcuſſes the aſcending Vapours, and prevents their Arrival at the Brain; but that, when drank with the Wine itſelf, it exhilarates the Heart too much, promotes Ebriety, and aſſiſts the Strength of the Wine. But, to uſe the Words of the celebrated *Juncker*, "If we "compare all theſe Encomiums with modern Experience, we

"ſhall

" ſhall find the Virtues of Saffron leſs extenſive, and much in-
" ferior to what they are generally ſaid to be; for it is to be
" obſerved, that it muſt be exhibited in ſmall Quantities; other-
" wiſe it excites violent Commotions of the Humours, Cepha-
" lalgias, Drunkenneſs, and Deliriums. Beſides, if it is ex-
" hibited at the time when any Diſeaſe is accompanied with
" Heat and a Fever, various unhappy Symptoms are brought
" on by it. For this Reaſon 'tis to be doubted, whether it is
" proper in malignant Fevers; nor is it to be uſed, except in
" ſmall Quantities, for promoting the Eruption of the Menſes
" and Lochia. Beſides, tho' it in ſome meaſure rouſes the
" languid Motions, and may with Succeſs be exhibited in Dif-
" ficulties of Breathing, and obſtinate Coughs, yet it neither
" remarkably diſſipates the Stagnations of the Humours, nor
" the Obſtructions of the Viſcera; nor is it ſo powerful in Diſ-
" orders of the Lungs, as to deſerve the Title of *Anima Pulmo-*
" *num*; nor does it protract the Lives of phthiſical and pleuritic
" Patients, much leſs procure a perfect Cure in theſe Diſorders.
" But the external Uſe of Saffron is eſtabliſhed upon ſurer and
" leſs precarious Foundations; for it is highly proper for an Ery-
" ſipelas, and all inflammatory Tumors, eſpecially for diſpelling
" the ſerous Matter lodged in them, and alleviating the Pains
" with which they are accompanied. For this Reaſon it is
" frequently mixed with Epithems, medicated Bags, diſcutient
" or maturating Cataplaſms or Plaiſters. Nor is it unſucceſs-
" fully applied to the Eyes with Milk, in order to free them
" from Inflammations, or to defend them againſt Defluxions in
" the Small-pox." *Hoffman*, in his *Diſſertatio de Remediorum domeſticorum Præſtantia*, gives us the following ſimple and eaſy Preparations of Saffron: " In obſtinate Coughs, and
" Difficulties of Breathing, an Infuſion of Saffron in the
" Water of Paul's Betony, with the Addition of a ſufficient
" Quantity of Sugar-candy, is found to be of ſingular Efficacy.
" The ſame Infuſion, prepared with Cinnamon-water, is highly
" beneficial for provoking the Menſes, facilitating difficult La-
" bours, expelling the Secundines, and promoting the Lochia,
" eſpecially when, at the ſame time, Oil of ſweet Almonds is
" now-and-then exhibited. Externally, Saffron, boiled with
" Milk, the Flowers of Elder and Chamomile, and the Crumbs
" of Wheaten Bread, and applied by way of Cataplaſm,
" wonderfully alleviates arthritic Pains. I have alſo known
" the ſame Remedy applied with Succeſs for removing the
" Pain of the blind Hæmorrhoids. Saffron, put into Roſe-
" water, with the Addition of a little Camphire, cures Inflam-
" mations of the Eyes in the Meaſles and Small-pox."

We ſhall now enumerate the Diſadvantages attending the prepoſterous and unſeaſonable Exhibition of Saffron. *Dioſcorides* then informs us, that three Drams of it, drank in Water, are ſaid to prove fatal. *Galen*, in his Treatiſe *De Simplic. Medicament. Facultat. Lib.* 5. *Cap.* 19. claſſes Saffron among thoſe Subſtances, which, when liberally uſed, either deſtroy the Patient's Reaſon, or procure his Death. And, in the ſecond Book of his Treatiſe *De Compoſitione Medicamentorum*, he affirms, that the Smell of Saffron alone produces a Pain of the Head; and a little after, in the ſame Book, he claſſes it among ſuch Subſtances as diſturb and diſorder the Mind. According to *Geoffroy*, *Coſtæus* informs us, that many, who have uſed a ſmall Bag of Saffron by way of Cuſhion, have been ſeized with a Pain of the Head ſo intolerable as to put an End to their Lives. *Borelli*, in like manner, in his *Obſervationes Medico-phyſicæ*, *Cent.* 4. *Obſ.* 35. gives us an Account of a certain Merchant's Servant, who, uſing to lie down and ſleep near a large Quantity of Saffron, was ſeized with ſo intenſe a Pain of his Head, and a Weakneſs of his Heart, that he died. He alſo tells us, that he was informed, that Horſes, which carry Loads of Saffron, generally died of a Diſcharge of bloody Urine. *Friccius* alſo, from the *Veterinarii*, informs us, that a ſmall Quantity of Saffron, exhibited to the ſtrongeſt Horſe, proves fatal to him, by exciting an immoderate Diſcharge of Urine. *Amatus*, in *Dioſcorid.* gives us an Account of one *Agaſo*, a Native of *Peſaro*, who, happening to ſleep upon two ſmall Bags of Saffron, died the ſame Night. And, according to the ſame Author, a certain Merchant, after throwing a large Quantity of Saffron into a Pot containing ſome Soop, which he intended for his Supper, was, upon eating the Soop, ſeiz'd with ſo violent a Fit of Laughter, that he was near dying. *Serapio*, from *Rhaſis*, affirms, that Saffron intoxicates very much, if mixed with Wine, and produces a Chearfulneſs next to Madneſs. *Konigius* informs us, that, at *Baſil*, Saffron produced Cephalalgias, and exceſſive Laughter, in ſuch as mix'd too large a Quantity of it with their Wine. According to *Caſpar Hoffman*, in his Treatiſe *De Medicamentis officinalibus*, *Julius Alexandrinus* gives us a ſimilar Inſtance, in the following Words: " I myſelf ſaw a Woman of Diſtinction, at *Trent*,
" who was ſeized with an immoderate Fit of Laughter for
" three Hours; and her Misfortune was produced by too large
" a Quantity of Saffron, exhibited with an Intention to pro-
" voke her Menſes." *Riverius* informs us, that he knew a Woman, who, by taking too large a Doſe of Saffron, with a View of reſtoring her Menſes, had them diſcharged ſo immoderately, that ſhe dy'd in three Days time. *Simon Pauli* uſes the following Words: " I remember," ſays he, " that a
" certain Virgin, labouring under a Suppreſſion of the Menſes,
" endeavour'd to provoke them by the Uſe of Saffron; but, by
" this very means, ſhe expoſed her Life to imminent Danger;
" for, tho' ſhe was marry'd immediately after, ſhe has ever
" ſince been afflicted with continual and intenſe Head-achs,
" tho' ſhe is now ſeventy Years of Age." *Bauhine* informs us, that he had ſomewhere read, that the Stamina of Saffron, triturated, and applied to the Wriſts, or under the Breaſts, convey'd their Qualities immediately to the Heart and Brain, produced a Vertigo, attended with Dimneſs of Sight, and weaken'd the Eyes. From the immoderate Joy, and exceſſive Laughter, excited by the Uſe of Saffron, *Lindeſtolpe* ſuſpects, that it was the *Nepenthe* of *Homer*.

From what has been ſaid 'tis ſufficiently obvious, that, as the moderate Uſe of Saffron is beneficial in ſeveral Diſeaſes, ſo, when exhibited unſeaſonably, in too large Doſes, or for too long a Time, it proves highly prejudicial to Health. For this Reaſon it is, by *Boerhaave*, claſſed among the narcotic Poiſons; and the Antidotes to it are aqueous, oleous, acidulated Vomits, and ſuch as have Honey for an Ingredient. Theſe are to be uſed in large Quantities, and often repeated: Clyſters alſo, and Baths, of the ſame Ingredients, are to be employ'd. But, becauſe Saffron is a narcotic Aromatic, poſſeſſed of heating Qualities, and which, by reaſon of the Smalneſs and Subtilty of its Parts, penetrates to the Humours, throws them into Commotions, and ſtimulates the Solids, it ought not to be uſed in Caſes where the Stimulus of the Solids, and an Increaſe of Motion in the Fluids, would produce bad Conſequences. For this very Reaſon it muſt be ſparingly and cautiouſly exhibited to plethoric Patients, and to tender Children; as alſo in burning, bilious, and inflammatory Fevers, critical Hæmorrhages, eſpecially when the Matter to be eliminated is of a malignant Nature; as alſo in painful Spaſms, which are often ſalutary, and aſſiſt the Propulſion, or throwing off, of the Impurities ſtagnating or fix'd in the ſmall Veſſels, or contribute to the Ejection of virulent Matter. In old Men, who begin to labour under a Dryneſs and Rigidity of the Fibres, accompany'd with a Penury of gelatinous Lymph, it does not procure Sleep, but rather induces Watchfulneſs, increaſes the Drineſs and Imbecillity of their Fibres, and diſturbs their Imaginations. The ſame Effects are to be apprehended in Patients of dry, bilious, and choleric Habits, who, in conſequence of the Senſibility and briſk Oſcillation of their Solids, and the hot Quality of their Humours, receive no friendly Impreſſion from Subſtances which produce ſtrong Commotions, but are ſeverely injured, and often thrown into maniacal Diſorders or Deliriums, by them. 'Tis, therefore, obvious, that pregnant Women, and thoſe who are ſubject to too copious Diſcharges of the Menſes, to Apoplexies, and lethargic Diſorders, ought to abſtain from the Uſe of Saffron. *Schulzius*, in his *Prælectiones*, juſtly adviſes, that all Preparations of Saffron ſhould be cautiouſly exhibited to Women in the Flower of their Age. That Saffron ought to be cautiouſly uſed in external Applications, eſpecially to the Head, we learn from the *Ephemerid. Nat. Curioſ. Decad.* 2. *a.* 4. *o.* 67. where we have an Account of a Woman, who, labouring under a putrid Fever, applied a Linen Cloth, impregnated with the Effluvia of Saffron, to her Temples, in order to promote Sleep; but ſhe was forthwith ſeized with a Heat of her Stomach, which was not abated till the Cloth was removed. I think it is obvious, not only from this Caſe, but alſo from what has been before ſaid, how imprudent a Part the common People act, who, without the Knowledge of the Phyſicians, and againſt their Advice, in Phrenſies, acute Fevers, and obſtinate Watchings, have recourſe to Saffron as an approved Remedy, and think, that they may ſafely and innocently tie up the Heads of Patients, afflicted with theſe Symptoms, with Cloths impregnated with Saffron. 'Tis, on the contrary, obvious, that Saffron is a Remedy adapted to thoſe who have cold Conſtitutions, to the Leucophlegmatic, and ſuch as labour under Diſeaſes ariſing from a cold Cauſe. For this Reaſon we underſtand why *Fernelius* aſſerts, that it powerfully aſſiſts lethargic Patients. *Zwelfer* is of Opinion, that the beſt Form of exhibiting Saffron, in Caſes where it is proper, is to add it to Medicines in Subſtance, or to prepare an Eſſence from it; that its Extract is defective, with reſpect to ſeveral Virtues, becauſe, in the Abſtraction of the Menſtruum to the due Conſiſtence of an Extract, many of the ſpirituous and volatile Parts fly off; but that theſe finer Parts of the Saffron are retained in the Diſtillation of a Water from it, whilſt the more valuable, corroborating, terreſtrial, and efficacious Parts, ſubſide in the Diſtillation, ſo that the diſtil'd Water muſt be entirely deſtitute of them. But, with reſpect to the ſalutary or hurtful Doſe of Saffron, Authors are by no means agreed, ſince, as *Geoffroy* obſerves, ſome affirm, that half a Scruple, and others that a Scruple and an half, may ſafely be exhibited internally. But *Rhaſis* affirms, that, with good Succeſs, he exhibited two Drams of Saffron, in order to promote a Delivery: But *Caſpar Hoffman* thinks, that this is an Error of the Printers, who for two Scruples have

placed two Drams; for *Dioſcorides*, and after him *Serapio*, *Avicenna*, and others, inform us, that three Drams of it prove mortal. But, according to *Ettmuller*, the Inhabitants of *Poland* are ſo accuſtom'd to the Uſe of Saffron, that they often mix an Ounce of it with their Aliments; but the Force of Cuſtom is ſufficiently obvious from a long-continued Uſe of Opium, a Dram or two of which may be ſafely taken every Day by thoſe who have been gradually habituated to it; tho' three, four, or five Grains were once ſufficient to have deſtroy'd them. Saffron may, therefore, ſafely be preſcribed in Subſtance, from half a Scruple to a whole Scruple, or even half a Dram. Let me add, that the largeſt Doſe, for ſuch as are not accuſtom'd to it, ought not to exceed half a Scruple.

Processes *upon* Saffron.

Nature has prepared, in certain particular Parts of certain Vegetables, a determined kind of Body, ſo different from all others, as ſcarce to be refer'd to any other known Kind; and has, at the ſame time, endow'd it with Virtues, otherwiſe inimitable. We have an Example of this in the Chives of Saffron. It is incredible how rich this Saffron is in Colour, Taſte, Odour, and Virtue; how ſmall the Bulk is, that poſſeſſes all theſe rich Faculties; and how tender, and eaſily corruptible, the Thing itſelf is; and therefore requires a peculiar Method of Operation.

Take, therefore, two Ounces of the choiceſt *Engliſh* Saffron, dried, and either cut ſmall, or remaining whole; put it into a clean Bolt-head with a long and ſlender Neck; pour upon it ſo much of the pureſt Alcohol, containing no foreign Subſtance, as may float four or ſix Inches above it: Then ſtop the Glaſs ſlightly with a Wreath of Paper, and ſet it in a Heat of only a hundred Degrees. Leave it thus in Digeſtion for three Days, the Veſſel being often ſhook: Let it afterwards reſt, for twenty-four Hours, in a cold quiet Place; then carefully ſtrain off all the tinged Liquor thro' a Piece of clean Linen, placed in a Funnel ſet in a clean Glaſs, and keep it cloſely ſtopt. It will be of a bright-red Colour; the Saffron, remaining at the Bottom of the Glaſs, will be found paler than before. To this pour the like Quantity of freſh Alcohol, and proceed as before; and mix the Tincture, thus acquired, with the former: The Saffron will now remain paler. If more Alcohol be added to it, and the Proceſs be repeated, a ſtill poorer Tincture will be obtain'd, which ought to be kept ſeparate: The Saffron will now become pale, but otherwiſe will have the ſame Appearance and Bulk as before. To this if Water be added, digeſted therewith, and pour'd off, it will be of a yellow Colour: Put on freſh, and continue thus, till more Tincture can be extracted; and now the Chives will appear quite white; and, if gently dried, will retain their former Figure, tho' they appear much ſhrunk, perfectly inodorous, and inſipid, ſo as ſcarcely to be diſtinguiſh'd from Bits of clean Thread: Whence it is wonderful, where the Seat of that ſurpriſing Matter, extracted from it, ſhould be, which is found to give ſo rich a Tincture to ſo large a Proportion of Alcohol. Let the Tincture, procured by the two firſt Digeſtions, be diſtil'd in a Glaſs Body, fitted with its Head, and perfectly well cloſed, with a Fire of a hundred Degrees, till about an Ounce remains behind; which, when cold, is to be pour'd into a Glaſs Veſſel, to be kept carefully ſtopt. It will prove of an exceeding red Colour, a highly fragrant Odour, and a bitter, aromatic, penetrating Taſte, and have the Conſiſtence of thin Oil. Let it be kept under the Title of *The eſſential Extract of Saffron*. The Spirit that came over in the Diſtillation will be limpid and colourleſs; but retain the grateful and aromatic Smell and Taſte of Saffron. This is to be reſerved for the ſame Operation upon freſh Saffron; and thus every time becomes the richer.

Remarks.

This ſurpriſing Experiment ſhews us a new Species of Matter, which we can neither call Oil, Spirit, Gum, Reſin, Gum-reſin, Wax, or Balſam; but it is ſomething perfectly ſingular, and of a ſpirituous oily Nature. This Extract mixes with Water, Spirit, and Oil; and has ſuch exhilarating Virtues, that, being uſed too freely, it occaſions an almoſt perpetual and indecent Laughture; but, uſed moderately, it becomes properly exhilarating. It tinges the Urine red, and is particularly ſaid to deſtroy the petrifying Power thereof in the Kidneys, and therefore to be an extraordinary Remedy againſt the Stone. It is the true *Arcph* of *Paracelſus*. There is no Occaſion previouſly to digeſt the Saffron with Bread, in the Heat of Horſe-dung, in order to procure its Tincture, which is thus render'd rather worſe than better; for, in our preſent Preparation, all that is efficacious is brought together without Loſs, or impairing its peculiar Virtues, or any ſenſible Change. And theſe Preparations, being miſcible with any Liquor, and of a very penetrating ſubtile Nature, eaſily enter the fineſt Veſſels of the Body, and, by their extraordinary Mobility, diffuſe their Virtue thro' the Whole, and chiefly excite the animal Spirits. Laſtly, they have that admirable Virtue, which the Author of Nature has planted in them, and which can never be explain'd upon any Principle, and can only be known by itſelf. *Boerhaave's Chymiſtry.*

Spiritus Croci: *Spirit of Saffron.*

Take of the beſt *Engliſh* Saffron, four Ounces; Spirit of Wine, four Pints: Let them digeſt together, in a Retort, a Week or two; then, in a Sand-heat, draw off the Spirit to Dryneſs. Put to the Reſiduum two Pints more of Spirit; and, after the ſame Digeſtion, draw that off alſo, and mix with the former. Put the Whole back again, and draw a third time. Let the Reſiduum be clean rinſed out with a little freſh Spirit, as little as can be; then ſtrain it hard, and evaporate the Liquor into an Extract.

The College order this Diſtillation but once; yet by repeating, as here directed, the Saffron may, almoſt all, be brought over: But the Junctures muſt be well luted, and all Parts of the Operation managed with Diſpatch and Dexterity; otherwiſe as much of the finer Parts will be loſt, as will be obtain'd by ſuch Repetition. What is got, indeed, this way, is loſt in the Extract; and, therefore, the Operator may manage it as either of the Medicines are depended upon. If the Spirit be but once drawn, the Reſiduum may be mix'd, and digeſted with a ſufficient Quantity of *Canary*; then ſtrain'd, clarify'd, and made into a Syrup, as good as can be made from the freſh Saffron; for, in the Diſtillation, nothing riſes which can be retain'd in a Syrup, howſoever made. This Spirit is one of the greateſt Cordials which Medicine can produce; and has the Advantage, at the ſame time, of being a noble Alexipharmic, and diſpoſing the Patient to ſweat, if it be duly encouraged. It may be given from one Dram to one Ounce, or more, at a Doſe, and repeated as often as there is Occaſion, in any proper Diluter. The Extract is ſeldom given alone, and is fit for no Form but Pills or Boles, wherein it may be mix'd, from two Grains to twelve Grains for a Doſe.

Syrupus Croci: *Syrup of Saffron.*

Take of the *Engliſh* Saffron, one Ounce: Infuſe it in one Pint of *Canary*; and digeſt them together, in a cloſe Veſſel, by a gentle Heat, for three Days; then preſs out the Wine, and diſſolve in it twenty Ounces of the fineſt Loaf Sugar, ſo as to make it into a Syrup.

This hath not, till now, been order'd in any College Diſpenſatory, altho' much directed in extemporaneous Practice; and it ſeems to be one of the beſt of the ſimple Syrups, becauſe capable of containing enough of the Ingredient, in one Doſe, to anſwer ſome Intention of Conſequence, which can be ſaid but of very few others.

Tinctura Croci: *Tincture of Saffron.*

Take Saffron, half an Ounce; Treacle-water, half a Pint: Digeſt for ſix Days, and then ſtrain it for Uſe. It may be alſo made with *Canary*, or *French* Brandy.

This is often preſcrib'd as a Cordial, and an Alexipharmic, in Fevers, and whatſoever Diſorders require ſweating, or driving out by the Skin. But it ſoon loſes its Colour, as Saffron will do in any thing which is acid: For this Reaſon ſome make it with other Menſtrua. This is given from two Drams to one Ounce, or more, at a Doſe.

Emplastrum Oxycroceum.

Take of Saffron, two Ounces and a half; of Pitch, Colophony, and yellow Wax, of each four Ounces; of Turpentine, Galbanum, Gum Ammoniacum, Myrrh, Olibanum, and Maſtich, of each one Ounce and three Drams. To the melted Wax put the Pitch, clear'd of all Droſs, and ſtrain'd, as alſo the Colophony; and, after they are melted together, taken off the Fire, and a little cool'd, mix with them the Galbanum and Ammoniacum, diſſolved in Vinegar, ſtrain'd, and boil'd to the Conſumption of the Vinegar; as likewiſe the Turpentine: Then ſift in the Maſtich and Myrrh, powder'd ſeparately; and, laſt of all,

all, the Saffron. Stir them all well together, and make them into a Plaiſter, according to Art.

This is aſcrib'd to *Nicolaus Myrepſus*, in the *Auguſt. Diſpenſat.* as likewiſe by the firſt of the College, into which it is tranſcrib'd; but here the Quantity of Saffron is much abridged. This ſeems to have taken its Name from the Saffron and Vinegar, both which are expreſs'd by it, notwithſtanding the ſmall Share Vinegar hath in it; and, indeed, the *Auguſtan* Collection gives one Preſcription, under this Title, from *Vigo*, which is alſo in the firſt Edition of the College, that hath in it neither Saffron nor Vinegar; but that whole Compoſition is very juſtly cenſured by *Zwelfer*. The *Pharmacopœia Regia* gives likewiſe a Preſcription bearing this Title, and not greatly differing in Materials. This hath been in great Eſteem for many Intentions of Conſequence; tho' *Hildanus*, *Cent.* 4. *Obſ.* 99, 100. takes notice of ſome Inconveniences and Miſchiefs ariſing from its Uſe. The Manner of its Compoſition hath been very particularly directed by *Zwelfer*; but what the College have thought fit to give here, is ſufficient for any Compounder. Notwithſtanding the Abridgment of the Saffron in its Quantity, (which, in ſome meaſure, might probably be from the Virtues of ours being ſo much beyond any that is foreign) yet the Covetouſneſs of our wholeſale Medicine-makers has found out a Way to diminiſh even that; and, it is to be fear'd, ſometimes to imitate its Colour, without putting in any Saffron at all; ſo that it is incumbent upon us to be cautious, when any great Dependence is had hereupon. It is principally uſed to warm and ſtrengthen debilitated Parts.

CROCUS *Germanicus*, *Saracenicus*, *Spurius*, or *Sylveſtris*, are Names for the CARTHAMUS, which ſee.

CROCUS *Indicus* is the CURCUMA, Turmeric. See CURCUMA.

CROCUS is alſo a Name given to ſome Preparations of Metals, calcin'd to a red or deep-yellow Colour. Thus there is the *Crocus Martis aperiens*, and the *Crocus Martis aſtringens*. See MARS. Thus alſo Copper, reduced to a reddiſh Powder by a ſtrong Calcination, is call'd *Crocus Veneris*.

CROCUS METALLORUM is an emetic Preparation of Antimony with Nitre; for which ſee ANTIMONIUM.

CROCUS alſo is ſometimes uſed to expreſs the Yolk of an Egg.

CROCODES, κροκώδης. An Epithet for certain Troches or Paſtils mention'd by *Paulus Ægineta*, *L.* 7. *C.* 12.

CROCODILION. A Name for the *Echinopus*; *major*. Glove-thiſtle.

CROCODILUS, Offic. Jonſ. 141. Tab. 79. Schw. Rept. 145. Aldrov. Quad. Ovip. 677. Charlt. Exer. 29. Geſn. de Quad. Ovip. 9. Rondel. de Piſc. 2. 234. Bellon. de Aquat. 41. Obſ. ed. Cluſ. 104. *Lacertus omnium maximus*, *Crocodilus dictus*, Raii Synop. A. 261. Sloan. Hiſt. Jam. 2. 332. THE CROCODILE, OR ALLEGATOR.

The Blood of this Animal is ſaid to clear the Sight; and the Fat is recommended for Wounds and Cancers. *Dale* from *Johnſon*.

CROCOMAGMA, according to *Dioſcorides*, is prepared of *Unguentum Crocinum*, and Spices preſs'd, and made into Troches. The choiceſt *Crocomagma* is what is ſweet-ſcented, mix'd with a moderate Quantity of Myrrh, ponderous, black, free from Chips, when ſufficiently diluted, giving the Colour of Saffron, ſmooth, bitteriſh, and dying the Teeth and Tongue with a Colour which laſts for many Hours: Such is the *Crocomagma* imported from *Syria*.

It abſterges ſuch Things as darken the Pupil of the Eye, provokes Urine, heats, mollifies, and concocts; and anſwers in ſome meaſure to the Virtues of Saffron, of which it is principally compoſed. *Dioſcorides*, *Lib.* 1. *Cap.* 26.

CROMMYON, or CROMYON, κρόμμυον, or κρόμυον. An Onion.

CROMMYOXYREGMIA, κρομμυοξυρεγμία. Acid and fetid Eructations reſembling the Taſte of Onions.

CROPIOT. A ſmall Fruit, mention'd by *Cluſius* and *J. Bauhine*, like the *Ethiopian* Pepper, containing a ſmall black Seed.

CROTALARIA.

The Characters are,

It hath ſingle Leaves, in which it differs from Reſt-harrow; and the Pods are turgid, in which it differs from *Spaniſh* Broom.

Boerhaave mentions five Species of this Plant.

1. Crotalaria; Aſiatica; folio ſingulari, verrucoſo; floribus cœruleis. *H. D. Deſcr. & Ic.* 199. *a. Prægn.* ASIATIC CROTALARIA, WITH A SINGLE WARTED LEAF, AND BLUE FLOWERS.

2. Crotalaria; Aſiatica; folio ſingulari, cordiformi; floribus luteis. *H. L. Deſcr. & Ic.* 201. *a. Prægn.* ASIATIC CROTALARIA, WITH A HEART-SHAPED LEAF, AND YELLOW FLOWERS.

3. Crotalaria; Africana; ſtyracis folio; flore cœruleo. *T.* 644. *Geniſta*, *arboreſcens*, *Africana*, *ſtyracis folio*, *flore cœruleo*. H. L. *Arbor*, *ſiliquoſa*, *Africana*, *Geniſtæ ſemine*. Bartholl. Act. Hafn. Anno 1673. Obſervat. 131. *Crotalaria*, *Arbor*, *Africana*, *ſtyracis folio molli*, *incano*, *flore cœruleo*. Amm. Charact. Plant. 241. H. Prægn. AFRICAN CROTALARIA, WITH A LEAF OF THE STORAX-TREE, AND A BLUE FLOWER.

4. Crotalaria; Afra; arboreſcens; eadem; minori folio. *H. Prægn.*

5. Crotalaria; Aſiatica; folio argenteo, villoſo; flore luteo; ſiliquis pendulis in Spicâ. *a. Prægn.* *Boerh. Ind. alt. Plant. Vol.* 2.

No medicinal Virtues have yet been diſcover'd in theſe Plants.

CROTALISTRIA. A Name for the Stork. See CICONIA.

CROTAPHI, κρόταφοι. The Temples.

CROTAPHITÆ, κροταφῖται. The temporal Muſcles.

CROTAPHIUM. This ſometimes implies a Pain in the Head, near the Temples.

CROTON, κρότων. The Plant call'd *Ricinus*. In *Hippocrates* it alſo imports the Bronchia of the Lungs, diſcharged by Expectoration, according to *Foeſius*.

CROTONE, κροτώνη, is properly a fungous Excreſcence on Trees, as appears from *Theophraſtus de Plantis*, *Lib.* 1. *Cap.* 13. but is, by a Metaphor, apply'd alſo to Excreſcences and fungous Tumors on the Perioſteum. *Caſtellus*.

CROUMATA, κρούματα, from κρούω, to beat, in *Hippocrates*, *Lib.* 1. περὶ διαίτ. are the muſical Tones reſulting from the Pulſation of Inſtruments of Muſic. *Foeſius*.

CROUSMATA, κρούσματα. This Word occurs in *Myrepſus*, *Sect.* 10. *C.* 1. The Tranſlators render it *Defluxiones*, Rheums. But *Fuchſius* thinks it ought to be read ῥεύματα.

CRUCIALIS. An Epithet, uſed by Surgeons, for an Inciſion made in ſuch a manner as to croſs another Inciſion.

CRUCIALIS, in Botany, is the CRUCIATA HIRSUTA.

CRUCIATA. A Plant ſo call'd, becauſe the Leaves are diſpoſed in the Form of a Croſs.

The Characters are,

It hath ſoft Leaves, like the *Gallium*, (Ladies Bed-ſtraw) four being placed at every Joint of the Stalk; in other reſpects it reſembles the *Mollugo* (Baſtard Madder).

Boerhaave divides the Species of this Plant into ſpicated, and verticillated.

The ſpicated are,

1. Cruciata; glabra; folio nervoſo, rigido; baccâ gemellâ, ſiccâ, hiſpidâ; flore lacteo. *Rubia erecta*, *quadrifolia*. J. B. 3. 716. *Mollugo montana*, *erecta*, *quadrifolia*. Raii Syn. 117.

2. Cruciata; glabra; folio rotundiore, nervoſo, rigido, minori; Bacca gemella, ſicca; flore lacteo.

3. Cruciata; paluſtris; parva; procumbens; flore albo ſpicato. Gallium paluſtre album. *C. B. P.* 335.

4. Cruciata; glabra. *C. B. P.* 325. SMOOTH CROSSWORT.

5. Cruciata; Orientalis; latifolia; erecta; glabra. *T. Cor.* 4. *H.* UPRIGHT AND ORIENTAL CROSSWORT, WITH BROAD SMOOTH LEAVES.

The verticillated are,

1. Cruciata; minima; ſeſſilis; floſculo albo verticillato.

2. Cruciata; anguſtifolia; floſculo luteo, verticillato. *Rubeola*, *repens*, *lutea*, *foliis ſpinoſis*. C. B. P. 334. *Rubia*, *minima*, *Lobelii*. Lugd. 1330.

3. Cruciata; tomentoſa; floſculis luteis in Corniculis longis, hiſpidis. *a. Boerh. Ind. alt. Plant. Vol.* 1.

Neither of theſe ſeem to be the ſame as the following *Cruciata*, by the Names, tho' the Virtues aſcribed to them are alike.

CRUCIATA, Offic. Ger. 965. Emac. 1123. Raii Hiſt. 1. 479. Synop. 3. 223. *Cruciata vulgaris*, Park. Theat. 566. Volck. 129. *Cruciata hirſuta*, C. B. Pin. 335. Dill. Cat. Giſſ. 67. Hiſt. Oxon. 3. 328. Rupp. Flor. Jen. 3. Bux. 88. *Cruciata vel Crucialis*, *Gallii ſpecies quibuſdam*, Chab. 549. *Gallium latifolium*, *Cruciata quibuſdam*, *flore luteo*, J. B. 3. 717. CROSSWORT. *Dale*.

This Croſſwort, from a ſlender creeping Root, ſends forth ſeveral hairy Branches, which grow to be about a Foot high; having at the Joints, which are pretty numerous, four ſmall, ſomewhat broad, and round-pointed Leaves, which are alſo pretty hairy, and ſet on without Foot-ſtalks; from the Boſoms of which ariſe, as it were in Whorles, many ſmall four-leaved yellow Flowers, or rather one ſingle Flower cut in four Parts, each of which is ſucceeded by two ſmall, round, black Seeds. It grows in Hedges, and Borders of Fields, particularly in *Hampſtead* Church-yard; but it is not very common about *London*; and flowers in *July*. The Leaves and Tops are uſed.

This is reckon'd among the vulnerary Herbs, being of a drying and binding Nature; and is particularly commended for the

the Swelling of the Scrotum, which is caused by the Falling-down of the Intestines into it. *Miller's Bot. Off.*

The Decoction of this Herb is thought to be good for Ruptures, taken in Wine. *Tournefort.*

Camerarius recommends it for promoting the Expectoration of viscid Humours.

CRUCIBULUM, *Catinus fusorius*, *Tigillum*, a *Crucible*, is an earthen Vessel, capable of sustaining the highest Degree of Fire, wider above than below, either of a round or triangular Form, and appropriated to the fusing and calcining of Minerals; as also to other chymical and pharmaceutical Operations. The Crucibles most generally used are those of *Hesse* and *Austria*; but, because the former are sandy, and cannot sustain the Fire after they are made wet, and the latter are blackish, from the Admixture of Iron in their Composition, those of *Hesse* are less capable of resisting Lead, and those of *Austria* less proper for the Preparation of Salts and Antimony. For this Reason many prefer that Mixture, of which the Glass-founders make their Crucibles. Others order the Powder of common Tiles, and an equal Quantity of Chalk, to be mix'd with Linseed-oil, and made into the Form of a Crucible; after which it is to be baked, till it assumes a proper Hardness. Others order a large Piece of Chalk to be cut into the Form of a Crucible, and boil'd in Linseed-oil for twenty-four Hours. This, when dry, they use as a Crucible. The Mixture of *Becher*, which for a long time retains the Glass of Lead, which is not easily done, consists of two Parts of a fat oleous greenish Earth, with apparently metallic Veins every-where running thro' it, one Part of Tobacco-pipe-clay, or such as the Glass-founders use for their Furnaces and Vessels. These, when triturated together, and pass'd thro' a fine Sieve, are to be moisten'd with Water, in which Quick-lime has been extinguish'd. They are to be carefully agitated together, till they are so mix'd, that the earthy Particles are not to be distinguish'd from each other. This Mass is to be form'd into Crucibles, which are to be dried and boil'd. *Charas*, in his *Pharmacopœia Regia*, gives the following Directions for making Crucibles:

> Take equal Parts of the best Potters-clay dried, of plumose Alum, and of Bastard Talc, commonly call'd *Lapis Glacialis*: Let them be finely triturated, and mix'd up with Whey, to a Consistence fit for making Crucibles; which are to be harden'd, and treated in the same manner with other earthen Ware.

CRUDITAS, Crudity. It is apply'd to unripe Fruits; to raw Flesh; to undigested Substances in the Stomach; to Humours in the Body, which are unconcocted, and not prepared for Expulsion; and to the Excrements.

CRUNION, *κρήνιον*. The Name of a compound Medicine describ'd by *Aetius*, celebrated for provoking Urine.

CRUOR. Sometimes it signifies the Blood in general; sometimes only the venous Blood; and sometimes extravasated or coagulated Blood.

CRUPINA. A Plant, call'd also *Cyanus pulchro semine Centaurii majoris*, J. B. *Chondrilla rara purpurea*, *Crupina Belgarum dicta*, Park. *Chondrilla Hispanica*, Ger. *foliis laciniatis serratis*, *purpurascente flore*, C. B. THE BEARDED CREEPER. *Raii Hist. Plant.*

I find no medicinal Virtues attributed to this Plant.

CRURA CLITORIDIS. The two spongeous Bodies which form the Clitoris, before their Union, are thus call'd. See GENERATIO.

CRURA MEDULLÆ OBLONGATÆ. The two largest Legs, or Roots, of the *Medulla Oblongata*, which proceed from the *Cerebrum*, are call'd by this Name.

CRURÆUS MUSCULUS, or CRUREUS. This is a fleshy Mass, covering almost all the fore Side of the Os Femoris between the two Vasti, which likewise cover the Edges of this Muscle on each Side.

It is fix'd to the fore Side of the Os Femoris, from the anterior Surface of the great Trochanter, down to the lowest Quarter of the Bone, by fleshy Fibres, which run down successively over each other, between the two Vasti; and are partly united to these two Muscles, so as not to seem to form a distinct Muscle.

It is not so thick as the two Vasti; and, as it is cover'd by them on each Side, a sort of fleshy Chanel is form'd by all the three, in which the Rectus is lodged, covering the fore Part of the Crureus.

It terminates below in a tendinous Aponeurosis, which joins the back Side of the Tendon of the Rectus anterior, and the neighbouring Edges of the Extremities of the two Vasti. These four Muscles form a common Tendon, which is inserted in the Side of the Patella, in the Edge of the Ligament of that Bone, and in the adjacent lateral Part of the Head of the Tibia. *Winslow's Anatomy.*

CRURALIS. An Epithet of the Artery which conveys Blood to the *Crura*, Legs; and of the Veins by which this Blood returns towards the Heart.

CRUS. The Leg, including the Whole of one of the lower Extremities, from the *Os Innominatum* to the Toes.

Of the Inferior Extremities.

The inferior Extremities comprehend all those Parts depending from the Acetabula of the Ossa Innominata, and are commonly divided into three Parts, *viz.* the Thigh, Leg, and Foot.

The Thigh (*Μηρὸν*, *Femen*, *Coxa*, *Agis*, *Archæ os*, *Crus*, *Femur*) has only one Bone, which is the longest of the Body, and the largest and strongest of any of the cylindrical Bones. The Situation of it is not perpendicular: For the lower End is inclined considerably inwards; so that the two Knees are near contiguous, while there is a considerable Distance between the Thigh-bones above. This is of good Use to us, since sufficient Space is thereby left for the external Parts of Generation, the two great Cloacæ of Urine and Fæces, and for the large thick Muscles which move the Thigh inwards; and at the same time this Position renders our Progression quicker, surer, straighter, and in less Room. For had the Knees been at a Distance from each other, we must, to have made a long Step, have been obliged to describe some Part of a Circle with the Trunk of our Body; and, if one Leg was raised from the Ground, our Centre of Gravity would have been too far from the Base of the other, and we should consequently have been in Hazard of falling; so that our Steps would neither have been straight nor firm, nor would it have been possible to walk in a narrow Path, had our Thigh-bones been otherwise placed. In consequence however of the Weight of the Body bearing so obliquely on the Joint of the Knee by this Situation of the Thigh-bones it is, that weak rickety Children become inkneed.

The superior Extremity of the Thigh-bone is not continued is a straight Line with the Body of it, but is set off obliquely inwards and upwards, whereby the Distance between these two Bones is considerably increased above. When this Extremity first goes off, it is small, but afterwards is formed into a large round Head (*Vertebrum*) which is the greater Portion of a Sphere unequally divided. This Head is smooth, and covered with a Cartilage to play in the Acetabulum Ischii. Towards its inferior internal Part a round rough spongy Pit is observable, where the strong Ligament, which is commonly called the round one, but that is of rather an oval Figure in its transverse Sections, is fixed, to be extended from thence to the inferior internal Part of the receiving Cavity, where it is considerably broader, than in its Progress to the Head of the Thigh-bone. The Neck of the Os Femoris has a great many large Holes, into which the Fibres of the strong Ligament, that covers it, enter, and are thereby securely united to it; and round the Root of the Neck, where it rises from the Bone, a rough Ridge is found, where the circular Ligament of the Articulation is connected. Below the back Part of this Root, the large unequal Protuberance, called the Trochanter major, (*Τλετὸς*, *Rotator Natis*, *Malum granatum testiculorum*) is observable; at the superior Root of which, a Cavity is left for the Insertion of the Musculus Glutæus minimus; and immediately without that, is another, where the Pyriformis, Marsupialis, and Gemini, are inserted. On the superior Extremity of this Process is a smooth flat Surface, where the Glutæus medius is attached; and, without and below that, a large smooth Surface is to be seen for the Insertion of the Glutæus maximus. From the posterior Face of the Root of this great Trochanter, a rough Ridge runs backwards and downwards, into which the Quadratus is inserted. In the Hollow, at the internal Side of this Ridge, the Obturator externus is implanted; and at its interior Extremity we find a conoide Process called Trochanter minor (*Rotator minor*) into which the Musculus Psoas, and Iliacus internus, are inserted, and the Pectineus is implanted into a rough Hollow below the internal Root of it. The Muscles inserted into these two Processes, being the principal Instruments of the rotatory Motion of the Thigh, have occasioned the Name of Trochanters to the Processes.

The Body of the Os Femoris is convex on the anterior Part, and made hollow behind by the Action of the Muscles which move upon it, and for the Conveniency of sitting, without bearing so much on these Muscles; and probably the Weight of the Legs depending from the Thighs in that Posture contributes considerably to this Curvature. The anterior Surface is a little flatten'd above by the Beginning of the Crureus Muscle, as it is also below by the Rectus and Crureus. The external Surface is likewise made flat below by the Vastus externus, where it is separated from the former by an obtuse Ridge. The Vastus internus depresses a little the internal inferior Surface. The posterior concave Surface has a Ridge rising in its Middle, commonly called Linea aspera, into which the Triceps is inserted. At the superior Part of it the medullary Vessels enter by a small Hole, which runs obliquely upwards, a little above which is a rough Fossa or two, where the tendinous Expansion of the Glutæus maximus is fixed. The inferior Extremity of the Linea aspera divides into two, stretching to each Side, the

long

long Head of the Triceps being inſerted into the internal, and the ſhort Head of the Biceps Flexor Tibiæ riſing from the external. Between theſe two rough Lines, the Bone is made flat by the large Blood-veſſels and Nerves which paſs upon it; and, near the Extremity of each of theſe Ridges, a ſmall ſmooth Protuberance may often be remarked, where the two Heads of the Muſculi Gaſtrocnemii externi take their Riſe, and the ſeſamoide Bones, deſcribed by *Veſalius, (lib. 1. cap. 28. & 30.)* ſometimes are found.

The inferior Extremity of the Os Femoris is larger than any other Part of it, and formed into a great Protuberance on each Side, called its Condyles; between which a conſiderable Cavity is found, eſpecially at the poſterior Part. The internal Condyle is longer than the external, which muſt happen from the oblique Poſition of this Bone, to give leſs Obliquity to the Leg. Each of theſe Proceſſes ſeems to be divided in its plain ſmooth Surface. The Mark of Diviſion on the external is a Notch, and on the internal a Protuberance. The anterior Part of this Diviſion is formed like a Pulley, the external Side of which is higheſt. On it the Rotula plays. The poſterior Part has two oblong large Heads, whoſe greateſt Extent is backwards for the Motion of the Tibia; and from the rough Cavity between them, but near the Baſe of the internal Condyle, the ſtrong Ligament, commonly called the croſs one, has its Riſe. The Sides of the Condyles are made flat by the Muſcles paſſing along theim; and on the back Part of the internal Side a ſlight Foſſa ſeems to be made by the Tendons of the Gracilis and Sartorius; but on the external a conſiderable Depreſſion is formed by the Biceps Flexor Cruris. A little farther forward than where theſe Depreſſions are on each of the Condyles, the lateral Ligaments of the Joint of the Knee riſe out from the Os Femoris. Round this inferior Extremity of the Thigh-bone, large Holes are found, into which the Ligaments for the Security of the Joint are fixed, and Blood-veſſels paſs to the internal Subſtance of the Bone.

All the Proceſſes of the Femur in new-born Children are cartilaginous, and afterwards become ſmall Apophyſes, with large Epiphyſes.

The Thigh-bone is articulated above with the Acetabulum of the Oſſa Innominata by Enarthroſis, and therefore can be moved to every Side; but is reſtrained in its Motion outwards by the high Brims of the Cavity, and by the round Ligament; for otherwiſe the Head of the Bone would be frequently thruſt out at the Breach of the Brims on the Inſide, which allows the Thigh to move conſiderably inwards. The Body of this Bone enjoys little or no rotatory Motion, tho' the Head moſt commonly moves round its own Axis, becauſe the oblique Progreſs of the Neck and Head from the Bone is ſuch, that the rotatory Motion of the Head can only bring the Body forwards and backwards; nor is this Head, as in the Arm, ever capable of being brought to a ſtraight Direction with the Body. So far however as the Head can move within the Cavity in a Circle backwards and forwards, the reſt of the Bone may have a partial Rotation. The Os Femoris is articulated below to the Tibia and Rotula by Ginglymus.

The Leg (*Κνήμη, Crus, Tibia*) is compoſed, according to the common Account, of two Bones, Tibia and Fibula, tho' it ſeems to have a very good Title to a third, the Rotula; ſince this, tho' a diſtinct Bone, bears a ſtrong Analogy to the Olecranon or ſuperior great Proceſs of the Ulna. Therefore I ſhall rank the Rotula with theſe other two Bones.

Tibia, (*Προκνήμιον, ἀντικνήμιον, Focile majus, Arundo major, Canna major, Canna domeſtica Cruris*) ſo called from its Reſemblance to an old Muſical Pipe or Flute, is the long thick triangular Bone, ſituated at the anterior internal Part of the Leg, and continued in near a ſtraight Line from the Thigh-bone, to ſupport the whole ſuperior Fabric.

The ſuperior Extremity of the Tibia is large, bulbous, and ſpongy; and is divided into two Cavities by a rough irregular Protuberance, (*Διάφυσις, ἐξοχὴ ὑδροχοειδὴς, Tuber, Tuberculum*) which again is hollow at its moſt prominent Part, as well as at its poſterior and anterior Baſe. The anterior of the two Ligaments, which compoſe the great croſs one, is inſerted into the Middle Cavity; and the poſterior Depreſſion of this irregular Proceſs receives the poſterior Ligament. The two broad Cavities at the Sides of this Protuberance are not equal; for the internal is oblong and deep to receive the internal Condyle of the Thigh-bone, while the external is more ſuperficial and rounder for the external Condyle. In each of theſe two Cavities in a recent Subject a ſemilunar Cartilage is placed, the convex Edge of which is thick, and the Cartilage becomes gradually thinner towards the concave or interior Edge. The Middle of each of theſe Cartilages is broad, and the Extremities turn narrower and thinner, as they approach the middle Protuberance of the Tibia. The thick convex Edge of each Cartilage is connected to the circular Ligament of the Articulation, but ſo near to its Riſe from the Tibia, that the Cartilages are not allowed to change Places far; while the narrow Extremities of theſe Cartilages, becoming almoſt Ligaments, are fixed at the Inſertion of the ſtrong croſs Ligament into the Tibia, and ſeem to have their Subſtance blended with that Ligament. Therefore a circular Hole muſt be left between each Cartilage and the Ligament, in which the moſt prominent convex Part of each Condyle of the Thigh-bone moves. In the Circumference of theſe Cavities deſcribed, the ſuperior Extremity of the Tibia is rough and unequal for the firm Connection of the Ligaments of the Joint. Immediately below the poſterior Edge two rough flatten'd Protuberances ſtand out: Into the internal the Tendon of the Semimembranoſus Muſcle is inſerted; and ſome Part of the croſs Ligament is fixed to the external. On the Outſide of this laſt Tubercle, a ſmooth ſlightly-hollowed Surface is formed by the Action of the Poplitæus Muſcle.

Below the anterior Part of the upper Extremity of the Tibia, a conſiderable rough Protuberance (*ἀντικνήμιον, Anterior Tuber*) riſes, to which the ſtrong tendinous Ligament of the Rotula is fixed. On the internal Side of this, a ſcabrous Cavity is form'd, where the Seminervoſus, Gracilis, and Sartorius Muſcles are inſerted: Whence Surgeons know at what Part the Tibia ought to be ſaw'd through in an Amputation, ſo as not to have too long and troubleſome a Stump, and at the ſame time to preſerve the Motions of the Leg, by ſaving the proper moving Muſcles. Below the external Edge of this ſuperior Extremity, a circular flat Surface, cover'd, in a recent Subject, with a Cartilage, is found for the Articulation of the Fibula: Between which, and the anterior Knob, is a rough Hollow, from which the Tibialis anticus, and Extenſor Digitorum longus, take their Origin. From the ſmooth flat Surface, a Ridge runs obliquely downwards and inwards, to give Riſe to the Tibialis poſticus. At the Inſide of this Ridge, an oblique plain Surface is left, where the Muſculus Poplitæus is inſerted, and Part of the Solæus has its Origin. The remaining Body of the Tibia is triangular, the anterior Angle of which is very ſharp, and is commonly called the Spine or Shin (*ἀκανθα, Spina, Crea, Linea prima Tibiæ, Angulus acutus*). This Ridge is not ſtrait, but turns firſt inwards, then out, and, laſtly, in again. The plain internal Side is ſmooth and equal, being little ſubjected to the Actions of Muſcles; but the external Side is hollowed above by the Tibialis anticus, and below by the Extenſor Digitorum longus, and Extenſor Pollicis longus. The two Angles behind theſe Sides are rounded by the Action of the Muſcles; and the poſterior Side, comprehended between them, is not ſo broad as thoſe already mentioned; but is more oblique and flatten'd by the Action of the Tibialis poſticus, and Flexor Digitorum longus. Some Way above the Middle of the Bone, the internal Angle terminates, and the Bone is made round, but rough, by the Preſſure of the Muſculus Solæus. Near to this, the Paſſage of the medullary Veſſels is ſeen ſlanting obliquely downwards in the poſterior plain Surface.

The inferior Extremity of the Tibia is made hollow, but ſo as a ſmall Protuberance riſes in the Middle. The internal Side of this Cavity, which is ſmooth, and in a recent Subject is cover'd with a Cartilage, is produced into a conſiderable Proceſs, commonly named *Malleolus internus*, (*σφυρὸν, πέσσον, Talus, Clavicula, Cavilla interior, Cavilla domeſtica*) whoſe Extremity is divided by a Notch, and from it Ligaments are ſent out to the Foot. We ought to obſerve here with *Winſlow*, (*Expoſition anatomique des Os ſecs*, § 865.) that this internal Malleolus is ſituated more forwards than the internal Condyle of the ſuperior Extremity of this Bone, which is neceſſary to be remark'd in reducing a Fracture of the Leg. The external Side of this Extremity has a rough, irregular, ſemilunar Cavity form'd in it, for receiving the inferior Extremity of the Fibula. The poſterior Side has two lateral Grooves, and a ſmall middle Protuberance. In the internal Depreſſion, the Tendon of the *Muſculus tibialis poſticus* is lodg'd; and in the external, the Tendon of the *Flexor longus Digitorum* plays. From the middle Protuberance, ligamentous Sheaths go out for tying down theſe Tendons.

The Articulations and Motions of the Tibia ſhall be explained, after all the three Bones of the Leg are deſcribed.

The two Extremities of the Tibia are Cartilages at the Birth, and become afterwards Epiphyſes.

Fibula (*παρκνήμιον, Perone, Focile minus, Arundo minor, Canna minor Cruris, Sura, Radius*) is the ſmall long Bone, placed on the Outſide of the Leg, oppoſite to the external Angle of the Tibia; the Shape of it is irregularly triangular.

The ſuperior Head of the Fibula has a ſuperficial circular Cavity form'd on its Inſide, which, in a recent Subject, is covered with a Cartilage, but ſo cloſely connected to the Tibia by Ligaments, as to allow only a ſmall Motion backwards and forwards. This Head is protuberant and rough on its Outſide, where the Muſculus Biceps is inſerted; and below its internal poſterior Side, a Tubercle may be remark'd, which gives Riſe to the ſtrong tendinous Part of the Solæus Muſcle.

The Body of this Bone is a little crooked inwards and backwards, which Figure is owing to the Actions of the Muſcles; but is ſtill increaſed to a Fault by careleſs Nurſes holding Children by the Legs. The ſharpeſt Angle of the Fibula is anterior; on each Side of which, the Bone is conſiderably,

but unequally depreſſed, by the Bellies of the ſeveral Muſcles that riſe from, or act upon it; and, in old People, theſe Muſcles make diſtinct Sinuoſities for themſelves: For the poſterior Surface is flatten'd above by the Solæus, and is made hollow below by the Flexor pollicis longus. The external Surface of this Bone is depreſſed obliquely from above downwards and backwards by the two Peronæi; and the anterior Surface bears the Prints of the Extenſor digitorum longus, Nonus Veſalii, and Extenſor pollicis longus. From the internal Angle, the ſtrong Ligament is produced to be continued to the Tibia, for the Connection of theſe two Bones, and Origin of ſeveral Muſcles. The poſterior Surface is the plaineſt and ſmootheſt: In the Middle of it, the Paſſage of the medullary Veſſels is ſeen ſlanting downwards. I have been particular in remarking, with *Havers*, (*Oſteolog. nov. Diſc.* 1.) the Entry and Direction of theſe Veſſels; becauſe, in ſeveral chirurgical Caſes, the Operator had need to take care, that they are not opened very near to the Bone, to occaſion an obſtinate Hæmorrhage. And then there ſeems to be ſome particular Deſign in contriving theſe Canals, ſo that the Os humeri, Tibia, and Fibula, ſhould have them running obliquely down; whereas the Radius, Ulna, and Os femoris, have them ſlanting upwards, whereby the Arteries and Nerves, which are ſent to theſe three laſt Bones, muſt ſuffer a conſiderable Reflexion before they come at the Cancelli. The Reaſon of this Diverſity may, perhaps, be, that the Arteries, particularly, which are ſo ſmall within the Bones, as to have no ſtrong contractile propelling Force in their Coats, and where they are not aſſiſted by the Action of any moving neighbouring Organ, ſhould have, at leaſt in their Paſſage through the Bone, a favourable Deſcent for their Liquids; which, it is evident, they will have in the deſcending oblique Paſſages form'd for them in the firſt Claſs of Bones, which are generally depending; and they will alſo moſt frequently acquire the like Advantage in the laſt-named Bones, becauſe the Hand, in the moſt natural Poſture, is higher than the Elbow; and, when we ſit or lie, the inferior Extremity of the Thigh-bone comes to be at leaſt as high raiſed as the ſuperior. In ſtanding and walking, or when the Arms are moved, the Blood muſt indeed aſcend, as it paſſes through the Bones of the fore Arm and Thigh; but the Preſſure of the Muſcles, then in Action, on the Veſſels, before they enter the Bones, is ſufficient to compenſate the Diſadvantage of their Courſe. This Reaſoning ſeems to be ſtill enforc'd by obſerving, that this Paſſage is always in theſe Bones nearer the ſuperior, than the inferior Extremities.

The inferior Extremity of the Fibula is extended into a ſpongy oblong Head, on the Inſide of which is a convex, irregular, and frequently a ſcabrous Surface, that is received by the external Hollow of the Tibia, and ſo firmly join'd to it by a very thin intermediate Cartilage, and ſtrong Ligaments, that it ſcarce can move. Below this, the Extremity of the Fibula is ſtretch'd out into a coronoide Proceſs, that is ſmooth, cover'd with a Cartilage, and contiguous to the Outſide of the firſt Bone of the Foot, the Aſtragalus, to ſecure the Articulation on that Side. This Proceſs is named Malleolus externus. This Proceſs being ſituated farther back than the internal Malleolus, and in an oblique Direction, obliges us naturally to turn the fore Part of the Foot outwards, as is obſerved by *Winſlow* (*Memoires de l'Acad. des Sciences*, 1722.). At its inferior internal Part, a ſpongy Cavity for mucilaginous Glands may be remark'd; from its Point Ligaments go out to the Foot, and on the back Part of it is a Sinuoſity, made by the Tendons of the Peronæi Muſcles.

The Conjunction of the ſuperior Extremity with the Tibia is by Arthrodia; and, at the lower End, the Cartilage ſeems to glew the two Bones together; not, however, ſo firmly in young People, but that the Motion, at the other Extremity of ſuch a long Radius as the Fibula, is very obſervable. In old Subjects I often ſee the two Bones of the Leg grown together at their inferior Extremities.

The principal Uſe of this Bone is to afford Origin and Inſertion to Muſcles; the Direction of which may be a little alter'd, on proper Occaſions, by its upper Part ſhuffling backwards and forwards. It likewiſe helps to make the Articulation of the Foot more ſecure and firm.

Both Extremities of this Bone are cartilaginous in a ripe Child, and aſſume the Form of Appendices before they are united to the Body of the Fibula.

Rotula (ἐπιμυλὶς, μυλακὶς, κόγχος, ἐπιγονατὶς, πλακοείδες, *Patella*, *Mola*, *Genu*, *ſcutiforme Os*, *cartilagineſum*, *diſciforme*, *Oculus genu.*) is the ſmall flat Bone ſituated at the anterior Part of the Joint of the Knee. Its Shape reſembles much the Section of a Heart with its Point downwards. The anterior convex Surface of the Rotula is pretty ſmooth; only ſeveral Holes pierce it, into which Fibres of the ſtrong Ligament, that is ſpread over it, enter. The poſterior Surface is ſmooth, cover'd with a Cartilage, and divided by a middle convex Ridge into two Cavities, of which the external is largeſt; and both are exactly adapted to the Pulley of the Os femoris. This plain ſmooth Surface is ſurrounded by a rough prominent Edge, to which the circular Ligament adheres: And, below them, the Point of the Bone is ſcabrous, where the ſtrong tendinous Ligament from the Tubercle of the Tibia is fixed. The ſuperior horizontal Part of this Bone is flatten'd and unequal, where the Tendons of the Extenſors of the Leg are inſerted.

The Subſtance of the Rotula is cellular, with very thin external firm Plates; but then theſe Cellulæ are ſo ſmall, and ſuch a Quantity of Bone is employ'd in the Formation of this Bone, that ſcarce any Bone of its Bulk is ſo ſtrong. Beſides, it is all cover'd over with a thick Ligament, (as was obſerv'd this ſort of Bones generally is) to connect its Subſtance, and is moveable to one Side or other; and, therefore, is ſufficiently ſtrong to reſiſt the Actions of the large Muſcles, that are inſerted into it, or any common external Force applied to it; while a fixed Proceſs, ſuch as the Olecranon, would not have been ſufficient to bear the whole Weight of our Bodies falling on it, as frequently happens to this Bone, and muſt have hinder'd the rotatory Motion of the Leg. Notwithſtanding theſe Precautions to preſerve this Bone from ſuch Injuries, yet I have ſeen ſuch another Caſe as *Ruyſch* (*Obſerv. Anat. Chirurg. Obſ.* 3.) mentions; that is, a tranſverſe Fracture in this Bone, when, by the Report of the Patient, and People about him, and by the want of Swelling, Diſcolouring, or other Mark of Bruiſe or Contuſion, it was plain the Bone was broke by the violent Straining and Effort of the Muſcles. Though my Patient recovered the Uſe of the Joint of the Knee, yet I think it reaſonable to believe, that this ſort of Fracture ſhould be attended with a Difficulty of Motion, after the broken Parts of the Rotula are reunited; becauſe the callous Matter will probably extend itſelf into the Cavity of the Joint, where it may either grow to ſome of the Parts; or, at beſt, it will make ſuch an Inequality on the poſterior Surface of this Bone, as will not allow it to perform the neceſſary Motions on the Condyles of the Femur.

The Articulation of the Rotula with the Os femoris is a plain Ginglymus, and it is connected to the Tibia by a ſtrong Syndeſmoſis.

At the ordinary Time of Birth, the Rotula is entirely cartilaginous, and ſcarce aſſumes a bony Nature ſo ſoon as moſt Epiphyſes do.

Now, therefore, that all the Parts of the Joint of the Knee are deſcrib'd, let us examine what are its Motions, and how perform'd. The two principal Motions are Flexion and Extenſion. In the former of theſe, the Leg may be brought to a very acute Angle with the Thigh, by the Condyles of the Thigh-bones being round and ſmoothed ſo far backwards. In performing this, the Rotula is pulled down by the Tibia. When the Leg is to be extended, the Rotula is drawn upwards, and, conſequently, the Tibia forwards, by the Extenſor Muſcles, which, by means of the protuberant Joint, and this thick Bone, with its Ligament, have, in effect, the Chord with which they act, fixed to the Tibia, at a conſiderable Angle; therefore act with Advantage; but are reſtrain'd from pulling the Leg farther than to a ſtraight Line with the Thigh, by the poſterior croſs Ligament, that the Body might be ſupported by a firm perpendicular Column: For, at this time, the Thigh and Leg are as little moveable as if they were one continued Bone. But when the Joint is a little bended, the Rotula is not tightly braced, and the poſterior Ligament is relaxed. Therefore, conſidering the ſuperficial Cavities of the Tibia, this Bone may be mov'd a little to either Side, or with a ſmall Rotation; which, *Winſlow* (*Expoſition Anatomique du Corps humain, Traité des Os ſecs*, § 976.) juſtly remarks, is done by the Motion of the external Cavity backwards and forwards on the internal, which ſerves as a ſort of Axis. Seeing then one Part of the croſs Ligament is ſituated perpendicularly, and the poſterior Part is ſtretch'd obliquely from the internal Condyle of the Thigh outwards, that poſterior Part of the croſs Ligament will prevent the Leg's being turn'd at all inwards; but it could not hinder it from turning outwards almoſt round, was not that Motion confin'd by the lateral Ligaments of this Joint, which can yield no great Way. This Rotation of the Leg outwards, is of good Advantage to us in croſſing our Legs on ſeveral neceſſary Occaſions; though it is altogether fit this Motion ſhould not be very large, leſt Luxations ſhould frequently have happen'd here. While all theſe Motions are performing, the only Part of the Tibia, that moves immediately on the Condyles, is only ſo much as is within the cartilaginous Rings, which, by their Thickneſs on their Outſides, make the Cavities of the Tibia more horizontal, by raiſing their external Side, where the Surface of the Tibia ſlants downwards. By this means, the Motions of this Joint are more equal and ſteady than otherwiſe they would have been. The Cartilages being capable of changing a little their Situation, fits them for doing this good Office in the different Motions and Poſtures of the Member, and likewiſe contributes to make the Motions larger and quicker.

The Foot is divided, as well as the Hand, into three Parts, that is, Tarſus, Metatarſus, and Toes; in the Deſcription of which, the ſeveral Surfaces ſhall be named according to the natural Situation, that is, the Broad of the Foot ſuperior, the

Sole inferior; the Side of the Great Toe internal, the Little Toe external.

The Tarſus (*Raſſeta*) conſiſts of ſeven ſpongy Bones; of which the Aſtragalus is the ſuperior, the Os calcis poſterior; the Os naviculare in the Middle, the Os Cuboides the external of the four anterior; Os Cuneiforme externum, medium, and internum, follow in reckoning inwards. That the Deſcription of theſe Bones may not be ſwell'd with Repetitions, I deſire, once for all, to obſerve, that where-ever a rough Ridge is mention'd, without a particular Uſe aſſign'd, a Ligament is underſtood to be fix'd to it; or where-ever a ſpongy rough Cavity, Depreſſion, or Foſſa, is remark'd, without naming its Uſe, a Ligament is inſerted, and mucilaginous Glands are lodg'd; for ſuch will occur in the Detail of each of theſe Bodies.

The Aſtragalus is already deſcrib'd under the Article of its Name.

The Calcaneum, Os Calcis, πτέρνα, Calcar Pedis, is the largeſt Bone of the ſeven, ſituated at the inferior and poſterior Part of the Tarſus. See CALCANEUM.

Os naviculare, (σκαφοειδὲς, *Os cymbæ*) ſituated immediately before the Aſtragalus, is ſomewhat circular. Its poſterior Surface is form'd into an oblong Concavity, for receiving the round anterior Head of the Aſtragalus. On the ſuperior Surface is a rough Foſſa. Below, the Os naviculare is very unequal and rough, but hollow, for the Safety of the Muſcles. On its Inſide is a pretty large riſing Knob, from which the Abductor pollicis takes in part its Origin, and the Tendon of the Tibialis poſticus is inſerted into it: And to it two remarkable Ligaments are fix'd; the firſt is the ſtrong one formerly mentioned, which ſupports the Aſtragalus; the ſecond is ſtretch'd from this Bone obliquely croſs the Foot, to the metatarſal Bones of the middle Toe, and of the Toe next to the little one. On the Outſide of the Os naviculare is a ſemicircular ſmooth Surface, where it is joined to the Os cuboides. The anterior Surface of this Bone is all cover'd with a Cartilage, and divided into three ſmooth Plains, fitted to the three Oſſa cuneiformia.

The Os naviculare is wholly Cartilage in a new-born Infant.

Os Cuboides (πολύμορφον, *cubiforme, quadratum, grandinoſum varium, Teſſaræ, multiforme*) is a very irregular Cube, ſituated immediately before the Os calcis. The poſterior Surface is an oblong unequal Concavity, adapted to the anterior Part of the Os calcis. On the internal Side of this Bone, a very ſmall ſemicircular ſmooth Cavity is form'd, to join the Os naviculare; immediately before which, an oblong ſmooth Plain is made by the Os cuneiforme externum; and, below this, the Bone is hollow and rough. On the internal Side of the inferior Surface, a round Protuberance and Foſſa are found, where the Abductor pollicis has its Origin. On the external Side of this ſame Surface is a round Knob, cover'd with a Cartilage; immediately before which, a ſmooth Foſſa may be obſerv'd, in which the Tendon of the Peronæus primus runs obliquely croſs the Foot; and, on the Knob, the thin flat Cartilage, proper to this Muſcle, plays; in place of which ſometimes a Bone is found: More externally than the Knob, a rough Hollow is made, for the ſtrong Ligament ſtretch'd betwixt this Bone and the Os calcis. The anterior Surface of the Os cuboides is flat, ſmooth, and ſlightly divided into two Plains, for ſuſtaining the Os metatarſi of the Little Toe, and of the Toe next to it.

The Oſſification of this Bone is ſcarce begun at the Birth.

The Os cuneiforme externum, (*Chalcoideum externum*) is much of the Shape of a Wedge, being broad and flat above, with long Sides running obliquely down, and terminating in a ſharp Edge. The ſuperior Surface of this Bone is an oblong Square: The poſterior is a ſmooth Triangle, which is not complete at the inferior Angle, and is joined to the Os naviculare. The external Side is divided, as it were, by a Diagonal; the ſuperior poſterior Half of which is ſmooth, for its Conjunction with the Os cuboides; and the other is a ſcabrous Hollow. In the ſuperior anterior Angle of this Surface, a ſmall ſmooth Impreſſion is made by the Os metatarſi of the Toe next the little one. The internal Side of this Bone has both the anterior and poſterior Edges made flat and ſmooth, the firſt by the Os metatarſi of the Toe next the great one, and the laſt by the Os cuneiforme medium. The anterior Surface is exactly an oblong Triangle, for ſuſtaining the Os metatarſi of the middle Toe.

Os cuneiforme medium, or minimum, is ſtill more exactly the Shape of a Wedge than the former. Its internal Side has a flat ſmooth Surface above and behind, for its Conjunction with the following Bone; with a ſmall rough Foſſa below; and a conſiderable Share of it is rough and hollow. The external Side is ſmooth, and a little hollowed, where it is contiguous to the laſt deſcribed Bone. Both anterior and poſterior Surfaces are flat, ſmooth, and triangular, for its Articulation with the Os naviculare behind, and with the Os metatarſi of the Toe next the great one before.

Os cuneiforme maximum, or internum, differs from the two former in its Situation, which is more oblique. Beſides, the broad thick Part is placed below, and the ſmall thin Point above and outwards; while the inferior broad Surface is concave, for allowing a ſafe Paſſage to the Flexors of the great Toe. The poſterior Surface of this Os cuneiforme is hollow, ſmooth, and of a circular Figure below, but pointed above. The external Side is alſo ſmooth and flat, but divided into two, whoſe Direction is near at right Angles with each other. With the poſterior, that runs obliquely from below forwards and upwards, the Os cuneiforme minimum is joined; and, with the anterior, whoſe Direction is longitudinal, the Os metatarſi of the Toe next the great one is connected. The anterior Surface of this Bone is ſemilunar, but flat and ſmooth, for ſuſtaining the Os metatarſi of the great Toe. The internal Side is ſcabrous, with two remarkable Tubercles below, from which the Muſculus abductor pollicis riſes; and the Tibialis anticus is inſerted into its ſuperior Part.

The three cuneiform Bones are all in a cartilaginous State in a Fœtus of nine Months.

Theſe ſeven Bones of the Tarſus, when conjoin'd, are convex above, and leave a Concavity below, for lodging ſafely the ſeveral Muſcles, Tendons, and Veſſels, that lie in the Sole of the Foot, and are, in the ſame manner as thoſe of the Carpus, all (except ſome few Parts mention'd in their particular Deſcriptions) cover'd over with ſtrong Ligaments, that, by entering the Holes on their Surface, adhere firmly to them; and therefore ſo tightly connect them to each other, that, notwithſtanding the many ſmooth Surfaces they have all cover'd with Cartilage, and ſome of them of the ſame Shape as if deſign'd for a very moveable Articulation, no more Motion is here allow'd, than only to prevent too great a Shock of the Fabric of the Body in walking, leaping, &c. by falling on too ſolid a Baſe; which, if it was one continued Bone, would likewiſe be much more liable to be broke; and to make our Foot accommodate itſelf to the Surfaces we tread on, by becoming more or leſs hollow, or by raiſing either Side. When the Ligaments are too weak, as in ſome morbid Caſes, a very evident Motion of the Os naviculare on the Aſtragalus may be obſerved.

Metatarſus (σῆσθον, πεδίον. *Planta, Planum, Veſtigium, Solium, Pectus, Præcordium, Pectuſculum*) is compoſed of five Bones, which, in their general Characters, agree with the metacarpal Bones, but may be diſtinguiſhed from them by the following Marks: 1. They are longer, thicker, and ſtronger. 2. Their anterior round Extremities are not ſo broad, and are leſs in proportion to their Baſes. 3. Their Bodies are ſharper above, and flatter on the Sides, with their inferior Ridge inclin'd more to the Outſide. 4. The Tubercles at the inferior Roots of the round Heads are larger.

The firſt, or internal metatarſal Bone, is eaſily diſtinguiſhed from the reſt by its Thickneſs. The one next to it is the longeſt, and with its ſharp Edges almoſt perpendicular; and the others are ſhorter and more oblique, as their Situation is more external: Which general Remarks, with the Deſcription I am now to give of each, may learn us to diſtinguiſh what Bone, and of which Foot, any one is, that can be offered to our Examination.

Os metatarſi pollicis is by far the thickeſt and ſtrongeſt, as having much the greateſt Weight to ſuſtain. Its Baſe is oblong, irregularly concave, and of a ſemilunar Figure, to be adapted to the Os cuneiforme maximum. The inferior Edge of this Baſe is a little prominent and rough, where the Tendon of the Peronæus primus Muſcle is inſerted. On its Outſide, an oblique circular Depreſſion is made by the following Bone. Its round Head has generally on its fore Part a middle Ridge, and two oblong Cavities, for the Oſſa ſeſamoidea; and, on the external Side, a Depreſſion is made by the following Bone.

Os metatarſi of the ſecond Toe is the longeſt of the five, with a triangular Baſe, ſupported by the Os cuneiforme medium, and the external Side produced into a Proceſs, whoſe Extremity is an oblique ſmooth Plain, to be joined to the Os cuneiforme externum. Near the internal Edge of the Baſe, this Bone has two ſmall Depreſſions, made by the Os cuneiforme maximum, between which is a rough Cavity. Farther forwards we may obſerve a ſmooth Protuberance, which is join'd to the foregoing Bone. On the Outſide of the Baſe are two oblong ſmooth Surfaces, for its Articulation with the following Bone; the ſuperior ſmooth Surface being extended longitudinally, and the inferior perpendicularly; between which is a rough Foſſa.

Os metatarſi of the middle Toe is the ſecond in Length. Its Baſe, ſupported by the Os cuneiforme externum, is triangular, but ſlanting outwards, where it ends in a ſharp-pointed little Proceſs; and the inferior Angle is not completed.

The internal Side of this Baſe is adapted to the preceding Bone; and the external Side has alſo two ſmooth Surfaces cover'd with Cartilage, but of a different Figure; for the ſuperior is concave, and, being round behind, turns ſmaller as it advances forwards; and the little inferior ſmooth Surface is convex, and very near the Edge of the Baſe.

Os metatarſi of the fourth Toe is near as long as the former, with a triangular ſlanting Baſe joined to the Os cuboides, and

and made round at its external Angle, with one hollow ſmooth Surface on the Outſide, where it is preſſed on by the following Bone, and with two on the internal Side, correſponding to the former Bone; behind which, is a long narrow Surface impreſſed by the Os cuneiforme externum.

Os metatarſi of the little Toe is the ſhorteſt, ſituated with its two flat Sides above and below, and with the Ridges laterally. The Baſe of it, Part of which reſts on the Os cuboides, is very large, tuberous, and produced into a long pointed Proceſs externally; whence Part of the Abductor minimi digiti has its Origin; and, into its ſuperior Part, the Peronæus ſecundus is inſerted. Its Inſide has a flat conoidal Surface, where it is adjoining to the preceding Bone.

When we ſtand, the anterior Extremities of theſe metatarſal Bones, and the Os calcis, are our only Supporters, and therefore it is neceſſary they ſhould be ſtrong, and have a confin'd Motion, as indeed we ſee they have.

The Bones of the Toes are much of kin to thoſe of the Thumb and Fingers, particularly the two of the great Toe are preciſely form'd as the two laſt of the Thumb; only their Poſition, in reſpect of the other Toes, is not oblique; and they are proportionally much ſtronger, becauſe they are ſubjected to a greater Force; for on thoſe principally the Weight of the Body is ſupported, when we are raiſed on our Tip-toes.

The three Bones in each of the other four differ from thoſe of the Fingers, in theſe Particulars: They are leſs, and ſmaller in proportion to their Lengths: Their Baſes are much larger than the anterior Extremity: Their Bodies are ſharper above and below, and flatter on the Sides: The firſt Phalanx is proportionally much longer than the ſecond and third, which are very ſhort.

Of the four, the Toe, next the great one, has the largeſt Bones in all Dimenſions, and more externally the Toes are leſs. The little Toe, and frequently that next to it, have the ſecond and third Bones intimately united into one, which may be owing to their little Motion, and the great Preſſure they are ſubjected to.

The Toes are of good Uſe to us in Walking, by ſerving as Supporters to the Foot behind, when the Sole is raiſed, in order to bring our Body, with its Centre of Gravity, perpendicular to the advanced Foot.

The Bones of the Metatarſus and Toes are in the ſame Condition, in Children, as thoſe of the Metacarpus and Fingers.

The only Bones, now remaining to complete the Deſcription of the Skeleton, are the ſmall ones, which are found in the Hand, Foot, and ſome other Parts.

Oſſa Seſamoidea are the little Bones moſt frequently found at the Articulations of the Toes and Fingers, which, tho' generally ſaid to reſemble the Seed of the Seſamum, are of very different Figures and Magnitudes. After the Diſſection of ſeveral of them in recent Subjects, they ſeem to me nothing elſe than the Ligaments of the Articulations, or the firm Tendons of ſtrong Muſcles, or both, become bony by the violent Compreſſion they ſuffer in the Situation they are. Thus the ſeſamoide Bones, at the Beginning of the Gaſtrocnemii Muſcles, are evidently compoſed of the tendinous Fibres only. Theſe, at the firſt Joint of the great Toe, are as plainly the ſame continued Subſtance with the Ligaments and Tendons of the Abductor, Flexor brevis, and Adductor; and that, which is ſometimes double at the ſecond Joint of that Toe, is Part of the circular Ligament; and, indeed, if it was worth while to enumerate all of them, that are at any time found, we ſhould obſerve the Whole of them form'd in this Manner. Their Number, Figure, Situation, and Magnitude, are ſo uncertain, that it were in vain to inſiſt on the Differences of each; and, therefore, I ſhall only in general remark,

1. That, where-ever the Tendons and Ligaments are firmeſt, the Actions of the Muſcles ſtrongeſt, and Compreſſion greateſt, there ſuch Bones will be moſt probably found.

2. That, *cæteris paribus*, the older the Subject is, in which they are ſought, their Number will be greater, and Size bigger.

3. The more Labour of either or both Extremities any Perſon is enured to, he will, *cæteris paribus*, have the moſt numerous and largeſt Oſſa ſeſamoidea.

However, as the two at the firſt Joint of the great Toe are much larger than any other, and are ſeldom wanting in an Adult, we may judge, that, beſides the more forcible Cauſe of their Formation, there ſhould alſo be ſome particular Advantage neceſſary at this Place, rather than elſewhere; which may poſſibly be, to allow the Flexor Muſcles to ſend their Tendons along this Joint, ſecure from Compreſſion, in the Hollow between the two oblong ſeſamoide Bones, while, by removing theſe Tendons from the Centre of Motion, and giving them the Advantage of an Angle at their Inſertion, the Force of the Muſcles is increaſed; and therefore the great ſuperincumbent Weight of our Body, in Progreſſion, is more eaſily raiſed.

For the Arteries of the inferior Extremities, ſee ARTERIA.

For the Veins of the inferior Extremities, ſee VENA.

For the Nerves of the inferior Extremities, ſee NERVUS.

The Muſcles of the lower Extremities are, firſt, thoſe which move the Os Femoris upon the Pelvis.

Theſe Muſcles are commonly twenty-two in Number, ſixteen of which are inſerted in the Os Femoris, and ſix move it, without being fix'd to it.

Thoſe Muſcles only, which are inſerted in the Os Femoris, are reckon'd to belong to the Thigh, and they are commonly ſaid to be fourteen in Number; but it is eaſy to make out ſixteen very diſtinct from each other. Of theſe ſixteen, three lie on the fore and upper Part of the Thigh. They are the,

1. Pſoas.
2. Iliacus.
3. Pectineus.

On the Inſide of the Thigh are three, commonly reckon'd one, by the Name of *Triceps*; tho', according to the antient Language, it has three Tails, as well as three Heads, and three Bellies, and therefore might more properly be call'd Triplex.

4. Triceps ſive Triplex primus.
5. Triceps ſecundus.
6. Triceps tertius.

Three form the Buttocks, and are call'd,

7. Glutæus Maximus.
8. Glutæus Medius.
9. Glutæus Minimus.

There are ſix very ſmall Muſcles, more or leſs, hid under the Glutæi; the four firſt of which are by ſome term'd *Quadrigemini*. The particular Names of theſe ſix are,

10. Pyriformis.
11. Gemellus ſuperior.
12. Gemellus inferior.
13. Quadratus.
14. Obturator externus.
15. Obturator internus.

Laſtly, there is a ſmall anterior ſuperficial Muſcle, commonly, but falſly, term'd *Faſcia Latà*, which is a large membranous, tendinous, or ligamentary Covering, to which the greateſt Part of this ſmall Muſcle is fix'd; and, therefore, it ought not to be call'd by the Name of that Membrane without Reſtriction, that is, without the Addition of *Muſculus*, in this Manner:

16. Muſculus Faſciæ latæ ſive muſculus Membranoſus. See FASCIA.

The ſix Muſcles which move the Os Femoris, without being inſerted in it, belong to the Claſs of thoſe which move the Leg upon the Thigh. They are,

17. Sartorius.
18. Rectus Gracilis.
19. Rectus ſive Gracilis internus.
20. Semimembranoſus.
21. Seminervoſus.
22. Portio Bicipitis longa.

All theſe Muſcles, whether inſerted or not inſerted in the Os Femoris, not only move that Bone on the Pelvis, but may alſo move the Pelvis on the Os Femoris.

The MUSCLES *which move the Bones of the* LEG *on the* OS FEMORIS.

Ten Muſcles are commonly reckon'd to belong to this Articulation. Moſt of them are very long, and ſituated lengthwiſe near each other, quite round the Os Femoris.

1. Rectus anterior ſive Gracilis anterior.
2. Vaſtus externus.
3. Vaſtus internus.
4. Crureus.
5. Sartorius.
6. Gracilis internus ſive Rectus internus.
7. Biceps.
8. Seminervoſus.
9. Semimembranoſus.
10. Popliteus.

Of theſe ten Muſcles the Popliteus only is ſmall, and lies, as it were, out of the Rank of the reſt, being ſituated below the Thigh. One Portion of the Biceps is likewiſe ſmall.

Theſe Muſcles not only move the Leg upon the Thigh, but alſo the Thigh upon the Leg, the Popliteus excepted. Some of them likewiſe move the Thigh upon the Pelvis, and the Pelvis upon the Thigh; as the Gracilis anterior, Sartorius, Gracilis interior, the great Portion of the Biceps, Seminervoſus, and Semimembranoſus.

Theſe are not the only Muſcles which move the Leg upon the Thigh, and the Thigh upon the Leg. The Gaſtrocnemii may likewiſe perform theſe Motions, tho' commonly confined to the Extenſion of the Foot.

The MUSCLES *which move the* TARSUS *on the* LEG.

The Motions of the Tarſus are ſuppoſed to be perform'd by nine Muſcles, ſituated in the Leg; three on the fore Side, and ſix on the back Side. They are the,

1. Tibialis Anticus.
2. Peronæus Medius.
3. Peronæus Minimus.
4. 5. Gaſtrocnemii.
6. Solæus.
7. Tibialis Gracilis vulgo Plantaris.
8. Tibialis Poſticus.
9. Peronæus Maximus.

Theſe Muſcles, three of which are anterior, and ſix poſterior, not only move the Tarſus on the Leg, but alſo the Leg on the Tarſus, except the Tibialis Gracilis, or Plantaris. Theſe Motions may likewiſe be perform'd by four Muſcles which belong to the Toes, the Names of which are theſe:

10. Extenſor Pollicis longus.
11. Extenſor Digitorum longus.
12. Flexor Pollicis longus.
13. Flexor Digitorum longus.

The Muſcles which move the Metatarſus and Toes, are theſe,

1. Extenſor Pollicis longus.
2. Flexor Pollicis longus.
3. Thenar.
4. Antithenar.
5. Extenſor Digitorum longus.
6. Extenſor Digitorum brevis.
7. Flexor Digitorum brevis ſive perforatus Pedis.
8. Flexor Digitorum longus ſive perforans Pedis.
9. Flexor Digitorum acceſſorius.
10. Lumbricales.
11. Tranſverſalis Digitorum.
12. Interoſſei.
13. Metatarſus.
14. Parathenar major.
15. Parathenar minor. *Winſlow.*

For an Account of the particular Origins and Inſertions of the Muſcles, ſee the Articles of their reſpective Names.

CRUSTA. The Shell of a Lobſter, Crab, Crawfiſh, Shrimp, or Prawn.

It alſo imports a Scab or Scurf upon a diſeaſed Part, or an Eſchar, or a ſort of Cruſt, or Cream, which coagulates on the Superficies of any Liquor, as upon Blood, or Urine, or upon fermentable Liquors, during one Stage of their Fermentation. See ALCOHOL.

CRUSTA LACTEA. See ACHOR.

CRUSTACEA.

Cruſtata and *μαλακόστρακα* are Animals, which have their external Parts firm and hard, but contain a fleſhy ſoft Subſtance within; or which, being cover'd with ſlender Cruſts or Shells, are deſtitute of Bones internally, which have their Heads furniſh'd with Horns, and other Appendages, which have eight Feet obliquely bended, and two Arms call'd Claws, notch'd like a Forceps. According to *Ray*, they belong to the Claſs of the exſanguious, large, cirrated Animals, furniſh'd with Feet. *Pliny*, in the thirty-firſt Chapter of his ninth Book, comprehends all cruſtaceous Animals under the Name of Crabs. In this Sentiment he is follow'd by *Bodin*, in his *Univerſæ Naturæ Theatrum*. By the celebrated *Linnæus*, in his *Syſtema Naturæ*, they are claſs'd among the Inſects without Wings, under the generical Name of Crabs; the characteriſtic Marks of which are ten Feet, the largeſt of which are like Claws, two Eyes, and a Tail, as it were, foliated. According to *Kleinius*'s Diſtribution of Animals, they belong to the Claſs of Multipeds, or ſuch as have more Feet than four, and conſtitute a particular Genus of loricated or cruſtaceous Animals; the ſeveral Species of which, uſed in Medicine, will be ſpecified under their reſpective Articles.

CRUSTULA. This Word is ſometimes uſed in the ſame Senſe as ECCHYMOSIS, which ſee.

CRUSTUMINA PYRA. Pears much admired by the *Romans*. They are mention'd by *Columella*, *L.* 5. *C.* 10. *Rhodius*, in his Notes on *Scribonius Largus*, takes it to be the ſame with that which is now call'd the *Bergamotte* Pear.

CRUSTUMINATUM, *κρυσυμίνατον*. A ſort of Rob, made of the Juices of Apples or Pears, boil'd up with Rain-water and Honey. *Aetius*, in *Tetrabib.* 2. *Serm.* 1. *C.* 138. directs the Manner of preparing a *Cruſtuminatum*.

CRUX CERVI. The Bone of a Stag's Heart. *Caſtellus.*

CRYMODES, *κρυμώδης*, from *κρύος*, Cold. An Epithet for a Fever, wherein the external Parts are cold. *Aetius*, in *Tetrabib.* 2. *Serm.* 1. *C.* 89. mentions ſuch a Fever as an Attendant of an Eryſipelas of the Lungs.

CRYOXA, *κρύωξα*. *Erotian* explains this, a ſort of Pot-herb, like Parſley, which grows near the Sea.

CRYPHEMA, *τὰ κρύφημα*. In *Hippocrates*, *L. Epidem.* 7. imports private Sentiments.

CRYPTOS. Occult, or latent.

CRYSORCHIS. A Retraction or Retroceſſion of one of the Teſticles. *Caſtellus* from *Galen. Definit. Medic.*

CRYSTALLI. Eruptions about the Size of a Lupin, white and tranſparent, which ſometimes break out all over the Body.

CRYSTALLINÆ MANUS, *κρυστάλλιναι χεῖρες*, in *Hippocrates*, *Epidem. L.* 7. are hard Hands, ſo exceſſively cold as to ſeem almoſt frozen.

CRYSTALLINÆ, Cryſtallines.

Theſe are little Puſhes fill'd with Water, or Phlyctænæ, are tranſparent, reſemble Cryſtal, and, on that account, are call'd Cryſtallines. They are reckon'd in the Number of the worſt Symptoms of a Gonorrhœa. But, as theſe Bladders are not always full of Water, they are flat, when they are preſs'd with the Finger, and are always without Pain. The Cryſtallines are only on the Foreſkin; the Parts whereof, on which theſe Bladders do not appear, being very red, and of a blackiſh Colour, as all Parts are which have been bruiſed. This blackiſh Redneſs is very different from the Inflammations of the Glans and Foreſkin, and therefore does not ſeem to be the Offſpring of the virulent Matter of a Gonorrhœa; and far leſs can we imagine, that the Bladders and Cryſtallines are produced by the Sharpneſs of the Corruption.

On the other hand, by conſidering the dark Redneſs ſo very common in all Contuſions, we may naturally conclude, that this Symptom is of the ſame Sort. On this Suppoſition of a Bruiſe, the Bladders will eaſily become manifeſt; eſpecially if we conſider, how plentifully lymphatic Veſſels appear to be beſtow'd on that Part. Now a Contuſion of ſuch Veſſels would certainly hinder the Lymph to flow along them, and the Lymph, thus interrupted, will diſtend its Veſſels in their natural Form, which is the very Figure of the Cryſtallines; for the Lymphatics are not equal in their Surface, nor conical, nor cylindrical, like the reſt of the Veſſels; and, tho' they be really Cylinders, they are unequal and knotty, becauſe of the frequent Interruption their Liquor finds from the great Number of their Valves, which occaſion them to ſwell thus unequally, when the Lymph proceeds more ſlowly in its Courſe, or endeavours any Return or Reflux, and is the true Cauſe of the cryſtal Knots, the Figure of the Cryſtallines: So the Cryſtallines may be the Effect of Coition, but are never the Product of Infection received at that time.

The Nature of Cryſtallines, one ſort of the Caries mention'd by *Antonius Muſa*, and call'd *Taroli* by *Italian* Phyſicians, being thus explain'd, we are under no Difficulty in laying down the Indications of their Cure; eſpecially if we conſider, that they are the Effect of a Bruiſe, on a Part ſubject to a great Afflux of Humours, and to a Gangrene: On which account the Applications muſt be ſo temper'd, as to be ſtyptical and aſtringent, to contract the Bladders, without any Danger of condenſing the Liquors of the bruiſed Part, which might occaſion a Gangrene; or elſe, aſtringent Applications muſt be ſo well animated with ſpirituous Medicines, that all Riſque of ſplitting on the ſame Rock may be avoided.

A Practice of this Kind, always ſucceeding in Experience, is a ſtrong Confirmation of the Theory that was eſtabliſh'd: For, by it, Cryſtallines are not a Symptom of the Gonorrhœa, but a genuine Effect of Coition, more eſpecially in the Circumſtances there mention'd. On the other hand, Methods of any other Kind either do not ſucceed, or after a very long time. Mr. *Blegny*'s Experience agrees perfectly with this Doctrine. "Thoſe watry Tumors, ſays he, being uſually accompany'd "with other grievous Circumſtances, ſome Authors have con"ſider'd them as Symptoms of a Pox, and ſometimes taken "them for the Pox itſelf; and therefore have endeavoured to "cure them by directing Purgatives, Sudorifics, and the moſt "violent Diuretics, the Fumes of Cinnabar, the Applications "of Plaiſters and Ointments prepared with Mercury; and, in "a Word, by all the general Remedies employ'd for the Cure "of a Pox. But in this they are groſly miſtaken; for thoſe "watry Tumors have no Dependence upon a Pox; and it is "very certain, that the general Medicines, employ'd in the "Cure of it, do not effectuate the Cure in ſo ſhort a time as "is neceſſary for the Cure of watry Tumors, which are al"ways ſo urgent, that they come to their Height in three or "four Days, if they be not check'd by topic Remedies."

This was proper to be ſhewn, from one of the beſt Books we have on theſe Subjects, firſt, That I might not appear altogether ſingular in an Opinion, which may ſeem ſtrange to moſt Phyſicians. Then, ſecondly, Becauſe they may rather embrace it on the Authority of a dead and foreign Practitioner, than from any living Author; howſoever this Opinion be ſupported on Experience, and the beſt Reaſon. But Monſieur *Blegny*, not taking his Indications from the Nature of Cryſtallines, but the Appearance of their Water, falls into as great, tho' not ſo pernicious Miſtakes, as ſome other Authors; and fanſies, that the Water of the Bladders may be carry'd off, as is commonly ſaid, by Medicines that purge Water; and he ſtill bears ſo great a Tenderneſs for the Specifics of the Pox, that he would have them mix'd with ſome he recommends for Venereal Ulcers and Chancres; but withal, that none of theſe ought to hinder our uſing proper Topics: "Which, he ſays, "are ſo much the more neceſſary, that they only are ſo ſuc-

"ceſsfully

" ceſsfully employ'd in curing ſome Patients, that, without " them, internal Remedies would prove ineffectual." Now, as theſe Topics are ſo neceſſary, that all internal Medicines will prove ineffectual in curing Cryſtallines without them, and as he uſes purging Medicines only with a View to diſcharge the Water, which they cannot do; ſo we may ſafely conclude, that Mr. *Blegny* has not made a right Uſe of his Experience, and that Cryſtallines are cured only by topical Medicines, without having any regard to a Gonorrhœa, a Chancre, or any other of their Symptoms.

Tho' Cryſtallines have been commonly reckon'd among the moſt terrible Symptoms of a Gonorrhœa; and tho' neither the Notion, nor Experience, I have of its Cure, can induce me to that Perſuaſion, I hope the Practice of other Authors, which confirms this my Opinion, rather than overturns it, ſufficiently warrants the Liberty I have taken to differ from them. And, therefore, that Means, proper to cure this Symptom, may not be wanting, however different our Opinions are about its Nature, we find the following Method principally recommended.

Muſitanus thinks the Spirit of Tobacco the only Medicine ſufficient againſt this great Evil, which he thus prepares:

Take of the green Leaves of Tobacco, as much as you pleaſe: Infuſe them in Malmſey-wine. The Tincture is uſed without Diſtillation.

The Cryſtallines are to be touch'd with this Tincture five times at moſt, after it is firſt humbled with ſublimate or precipitated Mercury. This is to be done when the Patient is lying, leſt the Violence of the Pain, becauſe of the violent Operation of the Tincture, ſhould make him drop down in Convulſions.

If this Symptom was near as fatal as this Author pronounces it, or if it was attended with ſuch dreadful Conſequences in its only Cure, it ought deſervedly to be reckon'd the moſt terrible Symptom of the Gonorrhœa, or of the Pox.

But Monſieur *de Blegny*, and moſt Practitioners, do not find the Cryſtallines ſo dangerous a Symptom, or to require ſo violent a Remedy, tho' he be led away with greater Apprehenſions of Danger than ever he obſerved, and had Occaſion to fear; for he finds, that drying and diſcuſſing Medicines are a ſufficient Cure of Cryſtallines, and give Forms accordingly of camphorated Spirit of Wine, making a Paſte with Bean-flower, Lime-water, and Sal Ammoniac; and even comes to aſtringent Medicines, as Whites of Eggs, with Alum, mix'd with ſympathetic Powder.

But, as I have already obſerved, the Bruiſe requiring warm Medicines, in order to diſcuſs the Liquors, or to make them flow, ſuffers very much by indiſcreet Applications of aſtringent and drying Medicines, made for waſting the Liquor of the Cryſtallines; whereby a Gangrene often enſues, as would be the Conſequence of all other conſiderable Bruiſes, that are treated with theſe like Medicines. And, therefore, the Applications ought rather to have the greateſt View to the Contuſion, and may carry ſome Degree of Aſtringency with them; as,

Take of Lime-water, three Ounces; and Spirit of Wine, two Ounces: Bathe the affected Part with this, when warm, four or five times a Day.

Take of the Leaves of Wormwood, one Handful; of the Flowers of Chamomile and Elder, of each half a Handful. Boil them, in a Pint and a half of Lime-water, to the Conſumption of a third Part; and to the Liquor, ſtrain'd and preſs'd out, add ſix Ounces of Spirit of Wine.

When no further Apprehenſions remain from the bruiſed Part, the former Medicines may be made more aſtringent, with ſome *Roman* Vitriol diſſolved in them, or ſome *Aqua Opthalmica Sapphirina*; which will perfect the Cure, without any Preparation of Mercury, or adminiſtring any ſort of inward Medicines.

But as neither the Spirit of Tobacco, nor the moſt powerful and effectual of the other Medicines, can be ſaid to deſtroy the Venereal Contagion, while they cure Cryſtallines, there is not ſufficient Experience for aſſerting their being occaſioned by it, ſince neither their Nature nor Cure give any Proof of it. And, therefore, the former Doctrine, that Cryſtallines are rather the Effect of Coition than of Contagion, is plain from both Experience and Reaſon. No doubt they may be together; but, in that Caſe, neither of them is the Cauſe of the other. *Cockburn.*

CRYSTALLINUS HUMOR. The Cryſtalline Humour of the Eye. See OCULUS.

CRYSTALLION, in *Oribaſius*, *Med. Collect. Lib.* 12. is a Name for the PSYLLIUM. *Fleawort.*

CRYSTALLIZATIO.

Cryſtallization is that particular Operation, by which the ſolid Parts, which, in any Fluid, are highly attenuated, extended, or diſengaged, are reduced to a Body which is dry, hard, compact, diaphanous, or at leaſt ſemidiaphanous, and either foliaceous, or of ſome geometrical Figure, ſuch as cubical, priſmatical, or conical. This Deſcription comprehends not only the Cryſtallizations of Salts, and ſaline Corpuſcles, ſuch as thoſe uſed in Laboratories and Shops, but alſo of earthy Bodies. That theſe laſt are capable of being cryſtalliz'd, is obvious from the Experiment the learned *Henkelius* made on recent Urine, diſcharged in the Morning, by a young Man, who drank only Beer; for after this Fluid had ſtood unmoved for four Years, in a moderately warm Place, and in a pretty large Cucurbit, which had a long Neck, a narrow Mouth, ſtopt with a Cork, and covered with a Bladder, and was half full, beſides the ſmall pinguious Drops adhering to the Neck, which were Marks of a volatile Salt, and the whitiſh-yellow Earth in the Bottom, which is common to Urine, it depoſited, firſt, a conſpicuous white Earth, which gently adhered to the ſuperior Part of the Belly of the Cucurbit; and, ſecondly, eſpecially near the Surface of the Liquor, by the Sides of the Glaſs, all around, were oblong priſmatical Cryſtals, as large as a Grain of excorticated Oats, running unequally into Points at both Extremities; not ſaline, but of a ſtony Conſiſtence; void both of Taſte and Smell; ſemidiaphanous; crackling betwixt the Teeth, like the Selenites; combuſtible; indiſſolvable in boiling Water, and incapable of Fuſion by the Fire.

The Cryſtallization of Salts and ſaline Bodies is performed, when a Liquor, which is generally aqueous, and contains a Salt diſſolved in it, is filtrated, and, when thus depurated, inſpiſſated by a ſlow and continu'd Evaporation, till a Pellicle appears on the Surface, which is the firſt Beginning, as it were, of the Cryſtallization. The Evaporation is generally thought to be completed, when a Drop of the Solution, poured upon the Nail of the Finger, or any cold Subſtance, is forthwith concreted into a Salt. The Evaporation may be either performed by the Fire, or by the Heat of the Sun; in which laſt Manner Sea Salt is better cryſtalliz'd than any other. The Evaporation ought to be made in large-mouth'd Veſſels, the beſt of which are Glaſs; next to theſe are Earthen Pots, well bak'd, and ſuch as will not ſuffer the Salts to paſs through the Pores; but thoſe made of Metal are corroded by the Salts, and ſubject to be ſpoil'd by the Ruſt. The inſpiſſated Liquor is lodg'd in ſome cool Place, and kept in Veſſels of Glaſs or Wood, or in Earthen Veſſels, well bak'd, and whoſe Mouths muſt be conſiderably large, that the cryſtalliz'd Subſtance may be the more commodiouſly taken out. Some time after, the latent Particles of Salt, diſperſed through the Liquor, are approximated, and joined to each other, and, at the Sides or Bottom of the Veſſel, form ſaline Cryſtals, which are greater or ſmaller according to the Quantity of the Solution. In either Caſe all the Cryſtals are not equally large, but are endow'd with the Figure peculiar to each Salt, ſingle, beautifully ſhining, and the more elegant and large, the more ſlowly the Evaporation has been made. But the whole ſaline Subſtance is not found form'd into Cryſtals, but there is a large Number of irregular Concretions, eſpecially in that Baſe in which the larger Cryſtals are planted, and which ſeems to be, as it were, the Matrix from which theſe Cryſtals ariſe. Nor is all the diſſolved Salt, which was in the Liquor, form'd into Cryſtals, but a Quantity of it remains, ſufficient to ſaturate the Fluid. Hence, when the Cryſtals form'd are taken out, there is a Neceſſity for a new Evaporation, and the Liquor muſt be lodged in a cool Place, in order to obtain more Cryſtals; and theſe Meaſures are to be repeated, till no more Cryſtal can poſſibly be form'd. But ſince, for the Purpoſes of Cryſtallization, ſome Quantity of a Fluid is always required, the Salt cannot poſſibly be totally extracted from the Liquor by Cryſtallization, but Exſiccation becomes neceſſary for drawing off the Remainder. Sometimes, in order to obtain the more elegant Cryſtals, Twigs are put into the Veſſel, or Threads are ſtretched in it as proper Supports, to which they may adhere, as is uſual in collecting the Cryſtals of Alum, Copper, and Sugar. The collected Cryſtals are in the Shops dry'd on coarſe Paper, by the Heat of the Sun. Theſe, however carefully they may be freed from the Humidity adhering to their Surfaces, ſcarce afford ſo genuine a Salt, but that it contains ſome Mixture of Earth and Water. This ſupplies the Place of a Glue or Calx, for uniting, as it were, the ſaline Cryſtals; for it is diſſolv'd when the Water is expel'd, or by Calcination, as we may obſerve in decrepitated Sea Salt, Alum, and Vitriol, calcin'd. Some Salts undergo a better and more perfect Cryſtallization, when, to their Solution, a calcareous Earth is added, as is proved by *Geoffroy*, in the Inſtance of Borax. Thoſe Salts, to which an Oil adheres, are unfit for Cryſtallization, and proportionably more ſo according to its Quantity; becauſe the Oil, interpoſed between the ſmall Portions of Matter, by its Tenacity prevents the Union of the ſimilar Particles; and if, in ſome meaſure, they ſhould happen to unite, yet they never acquire a due Degree of Solidity, but are forthwith melted down, on the Acceſs or Contact of a moiſt Air. Hence the Salters of

Herrings take care, that in boiling no Fat be mixed with the ſalt Water; and ſkilful Chymiſts, when they ſuſpect an Admixture of oleous and pinguious Parts, after a proper Evaporation, pour Spirit of Wine upon it, which diſſolves the oleous Parts, receives them, as it were, into its Boſom, and ſo ſeparates them from the ſaline, by which means they facilitate the Concretion of the Cryſtals. This Obſervation is of ſingular Uſe to Phyſicians, with reſpect to the Formation of Stones in the animal Body; and points out the moſt effectual Remedies, by which their Concretion may be prevented. Hence we learn, that Salts, diveſted of all pinguious Parts, are moſt eaſily cryſtalliz'd. The white Colour of the ſaline Cryſtals is ſomewhat darken'd by the adhering Oil. This Colour is alſo variegated by metalline Particles, almoſt infinitely divided, and combin'd with their ſolvent Salt, as appears in the bluiſh Vitriol of Copper, and the green Vitriol of Iron, which conſiſt of a Metal which is kept diſſolv'd by an acid Salt, and a little pure Water.

The Uſe of ſaline Cryſtallizations is,

Firſt, To ſeparate Salts, in a dry Form, from their ſolvent Liquor.

Secondly, To depurate Salts; for the Water, leaving the Sordes, retains the Salts; for which Reaſon, the better theſe are depurated, the more elegant Cryſtals they yield in Cryſtallization.

The Ætiology of theſe Cryſtallizations is obvious, if we conſider, that, in order to their Production, there is requiſite, firſt, Too ſmall a Quantity of Water to keep them diſſolv'd; ſecondly, The Reſt of the particular Liquor in which the diſſolved Salt is lodg'd; and, thirdly, Cold; for, when the ſolvent Menſtruum begins to prove defective, a ſlender Pellicle is form'd on the Surface of the ſaline Parts, which can no longer be kept in a State of Solution by the Liquor. Then this Pellicle becomes gradually thicker, till at laſt becoming ſpecifically heavier than the reſt of the Solution, it is broken into different Parts, ſubſides, and forms itſelf into Molecules, or Cryſtals, of different Bulks; which could not be produced, unleſs the Liquor was in a State of Reſt, becauſe then the Principle of Solution, which is Motion, proving defective, nothing hinders the mutual Approach of the ſaline Parts to each other; for, as the Want or Defect of Humidity brings the Parts nearer to each other, it conſequently lays a Foundation for their Union. Thus the Diminution of Motion renders the Fluid unfit for ſeparating the Parts, when they happen to adhere. But, when Liquors are compreſſed by the cold Air, many of the Particles flying off from the ſolvent Liquor, the contain'd ſaline Parts are, by the Conſtriction, more and more expel'd, and thrown out from the Pores of the fluid Maſs; and the more intenſe the Cold is, the larger Cryſtals are form'd; but theſe are continually mov'd upon the Acceſſion of Heat. Hence it happens, that, in a warm Air, very ſmall Cryſtals are generally formed. Cryſtallization is, therefore, perform'd, when a ſufficient Quantity of Moiſture, Motion, and Heat, which are the Cauſes of the Solution, prove defective. Cryſtallizations, indeed, of Salts happen, when their highly ſaturated and warm Solutions are left to themſelves; in which manner volatile Salts, ſuch as that of Hartſhorn, Vipers, and Silk, and others obtain'd from the Animal Kingdom, are cryſtalliz'd. But theſe are very near to a State of Cryſtallization; for the Evaporation is perform'd with this Deſign, that the Solution, which remains after the Diminution of the Liquor, may become more ſaturated. But, even in a highly ſaturated Solution, a very ſmall Quantity of Cryſtals are form'd, without a previous Evaporation. 'Tis therefore obvious, that Evaporation, that is, a Diminution of the ſolvent Liquor, is abſolutely neceſſary to the Cryſtallization of any Salt. Hence alſo 'tis obvious, why in a Receiver, from which the Air is exrracted, as alſo in a cloſe-ſtopt Veſſel, Cryſtals are not form'd; becauſe, in theſe Caſes, a very ſmall Evaporation, or none at all, is made. We muſt carefully conſider, that the Cryſtals of Salts, peculiar to each Species, are not obtain'd by every Kind of Concretion; for when the Solution of any Salt, ſufficiently warm, is ſuddenly cool'd, when, for Inſtance, the Veſſel containing it is put in cold Water, the diſſolved Salt, lodged in the Liquor, is precipitated to the Bottom, in the Form of a Powder; for then the Solution is, with a kind of Impetus, condens'd, and forc'd too precipitately to depoſit its Salts. Nor does the Salt acquire its peculiar Figure by a ſudden and continu'd Evaporation on the Fire, till the whole Liquor is totally exhal'd, or, at leaſt, rendered thicker than it ought to be; for the Heat, exciting a preternatural Commotion of all the Parts, hinders the ſaline Parts from receding from each other; but, being forced to run, in all Directions, with a tumultuous Confuſion, and being prepoſterouſly mixed, they are form'd into leſs elegant Cryſtals. As, therefore, a precipitate Refrigeration, ſo alſo an intenſe Heat, hinders Cryſtallization. The beſt Evaporation is made without Boiling; and the Place fitteſt for Refrigeration is that which is of the ſame Temperature with Cellars about the Months of *June* and *July*. But, there are ſome Salts, which are more commodiouſly cryſtalliz'd in a pretty warm Air, ſuch as rich, acid, and alcaline Salts; and, for the Cryſtallization of Sugar in the Pans, a pretty briſk Heat is neceſſary; perhaps becauſe Salts of this Kind require little Moiſture for their Solution, and retain it cloſely, which muſt be afterwards leſſen'd by Evaporation, and a Continuation of the Heat; for it muſt be obſerved, that the Salts, which require a large Quantity of Water to keep them diſſolved, are firſt formed into Cryſtals: On the contrary, the more eaſily and quickly, and with the ſmaller Quantity of Water, Salts are diſſolved, the more firmly they ſeem to retain the Water they receive. Salt of Tartar, for Inſtance, which, of all Salts, requires the ſmalleſt Quantity of Water for its Solution. Hence, if different Salts are diſſolved in the ſame Water, ſome of them will be form'd into Concretions ſooner than others, and each of them will be diſtinguiſhed by the particular Figure of its Cryſtals. Thus, for Inſtance, the Cryſtals of common Salt are quadrilateral Pyramids, with a ſquare Baſe: Thoſe of Sugar are oblong, and have rectangular Baſes: The hexagonal Cryſtals, ariſing in Alum, have alſo hexagonal Baſes: The Cryſtals of Vitriols, for the moſt part, reſemble Iſicles, variouſly interwoven, and Polygons interpoſed, or lying between them: Sal Ammoniac elegantly reſembles the Branches of a Tree; and Salt of Hartſhorn, Arrows plac'd in a Quiver: In the Sal Mirabilis Glauberi, which is made of common Salt and Vitriol, the Figures of both Salts are exhibited: Nitre is formed into priſmatical Columns, not unlike Faggots of Wood; and between theſe are ſome Figures, ſometimes rhomboidal, and ſometimes pentagonal, which ſeem to approach pretty near to common Salts. In the Salt of Tin, ſmall Lines, like Pins, ſo run out in every Direction from the Centre, as to form a Star, ſuch as that obſerved in the martial Regulus of Antimony. 'Tis ſurpriſing, that the Cryſtals of the ſame Salt ſhould be perpetually formed in the ſame Figure. *Willis*, in order to account for this Phenomenon, affirms, that the Author of Nature granted ſuch peculiar Modes of Figuration to Salts, as well as other natural Concretions, according to the Prepollence of the Spirit or Salt, and their Commixture with the other Principles. But this is no more than a formal and explicit Declaration, that we are ignorant of the phyſical Cauſe of this ſurpriſing Appearance. *Muſſchenbroek* alſo denies, that this has hitherto been accounted for by any one, any more than this other Phenomenon, Why green Vitriol and Alum, diſſolv'd, and mix'd with Water, return to their own Cryſtals, and do not become a third Salt of a different Kind. If it ſhould be aſk'd, Why, ſometimes, the Weight of the Salt, uſed in the Solution, is diminiſh'd in the concreted and dry'd Cryſtals, we anſwer, with *Gulielmini*, that the Salt is ſo eaſily diſſolved in the Water, that the aqueous Exhalation, eſpecially when riſing in large Quantities from the Water, may contain ſome of the diſſolv'd Particles of the Salt, eſpecially if they are very minute and fine, like thoſe ſent up by Water, when in a State of violent Ebullition and Evaporation. As much Salt, therefore, as is carry'd off by the Exhalation, ſo much muſt be wanting or defective in the concreted Cryſtals. Some, who are fond of reducing Phenomena to a certain Cauſe, in order to explain ſaline Cryſtallizations, think the Principle of Attraction beſt calculated and adapted to explain ſaline Cryſtallizations. They affirm, that the Parts of the Salt, diſſolv'd in a large Quantity of Water, are more attracted by the Particles of the Water, than by each other, and remain ſeparate from each other for a conſiderable time; but, after a large Quantity of the Water is expel'd in Vapours, and a ſmall Pellicule of Salts begins to be formed on the Surface, ſince the ſaline Parts are brought nearer to each other, and almoſt into mutual Contact, and as the Force of Attraction is greateſt during the Contact, this Pellicule more ſtrongly attracts the Salt from the ſubjacent Water, than an equal Quantity of the Solution, which conſiſts partly of Water, and partly of Salt. When this Pellicule becomes ſpecifically heavier by Inſpiſſation, it is broken into Parts, ſubſides, and, by attracting the ſaline Parts to itſelf, exhibits Cryſtals, which, ſay they, are not formed into Concretions, ſo long as the Solution is warm, becauſe, ſo long as the Motion excited by Heat remains, the Whole of that Motion, which ought to be produced by the attractive Force, is hinder'd and deſtroy'd. But, ſince the Figures of the moſt ſimple Parts remain invariably the ſame, 'tis neceſſary the Forms of the Bodies, into which they are concreted, ſhould alſo be the ſame: And becauſe, on one Side of the ſame ſaline Particle, the attractive Force is greater than on the other, the Concretion always happens on thoſe Sides which attract moſt powerfully: Hence it may be demonſtrated, that the Figure of the minute conſtituent Particles is different from that of the Cryſtal itſelf. From what has been ſaid 'tis ſufficiently obvious, that Cryſtallization may be call'd a Species of Coagulation; and that it is a ſurpriſing and geometrical Operation of Nature, in which ſhe exhibits herſelf to the Eye of the Spectator, not in a falſe and varniſh'd, but in her genuine and real Dreſs.

CRYSTALLUM MINERALE. This is *Sal Prunellæ*, purify'd by Solution and Cryſtallization.

CRYSTALLUS, Offic. Aldrov. Muſ. Metall. 934. Charlt. Foſſ. 35. Worm. 99. Schrod. 349. Boet. 217. Matth. 1388.

Laet.

Laet. 56. Kentm. 46. Mont. Exot. 14. Geoff. Prælect. 77. *Lapis Cryſtallus*, Cup. Hort. Cath. Supp. 2. 50. CRYSTAL.

Schroder informs us, that it is aſtringent, and good in a Dyſentery, Diarrhœa, the Cœliac Paſſion, Cholera, and uterine Fluxes; that it increaſes Milk, wears away the Stone in the urinary Paſſages, and is beneficial in the Gout. He farther ſays, from *Boetius de Boodt*, that two Scruples or a Dram of this, exhibited in Oil of ſweet Almonds, is good for thoſe who have taken Mercury. *Schroder* takes notice of the Salt, Magiſtery, Oil, Elixir, and Eſſence of Cryſtal: But I believe theſe are never either made or uſed.

Frederic Hoffman, in many Parts of his Works, recommends Cryſtal as a Medicine, under the Name of *Cryſtallus Montana*, which I have ſomewhere, by Miſtake, tranſlated *Muſcovy Glaſs*, which is the *Lapis Specularis*.

Rock Cryſtal is a ſoft tranſparent Gem, reſembling Ice, and its Figure is that of an hexagonal Pillar, pointed at both Extremities; or it may be ſaid to be compounded of two Pyramids, with ſuch a Pillar between them. A ſecond Kind is found in *Iceland*, and in ſome Parts of *France*, eſpecially about *Troyes* in *Champagne*, which ſeems to be made up of cryſtalline Plates, and fiſſil in the Direction of all its plain Surfaces; and, when reduced to Powder, it ſtill retains a rhomboidal Figure, ſo that even the fineſt Powder, view'd through a Microſcope, ſhews a Congeries of very ſmall rhomboidal Solids. Another Property of this Cryſtal is, that all Objects, ſeen thro' it, appear double; which ariſes from a double Refraction of the Rays of Light. A third Species of Cryſtal is that mention'd by Dr. *Lyſter*, in the *Philoſophical Tranſactions*, which is very ſmooth, pellucid, and glittering, coming near to a Diamond. Its Figure is ſpherical, oval, depreſſed, and ſometimes repreſenting an Hemiſphere, or Hemiſpheroide, and in others roundiſh and irregular. It is very hard, and has an exquiſite natural Poliſh, and is dug up in Pieces of different Sizes in ſeveral Places of *England*. *Geoffroy*.

CTEDON, κτηδών. A Fibre.

CTEIS, κτείς. The ſame as Pubes, or Pecten. Κτένες, in the plural Number, implies thoſe Teeth which are call'd *Inciſores*.

CTESIPHONTIS MALAGMA. The Name of a Sort of Plaiſter deſcrib'd by *Celſus*, *Lib.* 5. *Cap.* 18. *Sect.* 31.

CUBARIS, κυβαεὶς. A Wood-louſe. See MILLIPEDES.

CUBEBÆ, Offic. Ger. 1365. Emac. 1548. Park. Theat. 1583. J. B. 1. 350. Mont. Exot. 9. Ind. Med. 43. Raii Hiſt. 2. 1813. *Cubebæ vulgares*, C. B. Pin. 412. *An Pindaiba nonnullis Ibira*, Piſ. (ed. 1658.) 144? *Arbor baccifera Braſilienſis; fructu Piper recipiente*, Raii Hiſt. 2. 1593? *Arbor Biſnagarica Myrti amplioribus foliis, per ſiccitatem nigris, Cubebæ ſapore*, Plukn. Almag. 43? Phytog. Tab. 140? CUBEBS.

This is a ſmall round Fruit, or Berry, rather leſs than Pepper, with a dark-brown wrinkled Outſide, and whitiſh within, having a little ſhort Stalk at one End; whence it has been call'd *Piper Caudatum*, or Pepper with a Tail. It is not near ſo hot and biting as Pepper, but is of an aromatic Smell and Taſte. *Cubebs* come from the Iſland of *Java*.

Botanical Writers differ in their Opinion as to the Growth of *Cubebs*; ſome, as Mr. *Ray*, Dr. *Plukenet*, and others, believing that they grow on Trees about as big as Apple-trees, in Bunches like Grapes; of which Dr. *Plukenet* gives a Figure, *Tab.* 140. *Fig.* 1. Others, as *Herman* and *Pomet*, will have them to grow on a ſcandent Plant like Pepper.

Cubebs are heating and drying, ſtrengthen the Stomach, expel Wind, comfort the Brain and Nerves, and are particularly uſeful againſt the Vertigo, or Giddineſs, and other Diſorders of the Head. *Miller's Bot. Off.*

They are brought from the Iſland of *Java*, and other Parts of the *Eaſt Indies*, and are recommended in a Hoarſeneſs and Loſs of Voice, eſpecially when the Tonſils are ſtuffed and obſtructed. The Doſe is from ten to twenty-four Grains in Subſtance, to be chewed; or from a Dram to a Dram and a half in Infuſion. *Geoffroy*.

They are, farther, recommended in Diſorders of the Spleen, and in cold Diſtemperatures of the Uterus. *Dale*.

CUBIFORME OS. The ſame as CUBOIDES.

CUBIL. *Rulandus* explains this by *Terra Rubea*, Red Earth.

CUBITALIS MUSCULUS. A Name for the ANCONÆUS.

CUBITUS, κύβιτον. The Elbow, or the fore Arm from the Elbow to the Wriſt. See BRACHIUM.

A *Cubit*, conſidered as a Meaſure, is eighteen Inches.

CUBOIDES OS. The Name of a Bone in the *Tarſus*. See CRUS.

CUCI. The Fruit of the *Palmæ facie Cuciphora*, J. B. *Palmæ cujus Fructus Cuci*, C. B.

This is a round, oblong, *Eaſt Indian* Fruit, of the Size of a ſmall Fiſt, of a yellowiſh Colour, and ſweet agreeable Taſte, containing a very hard Nucleus. *Lemery* tells us, that this Fruit is cordial and reſtorative.

CUCUBALUS *Plinii*. The ſame as CACUBALUM, which ſee.

CUCULATUM MAJUS. Brandy, or Spirit of Wine. *Rulandus*.

CUCULLARIS MUSCULUS, or *Trapezius*. This Muſcle derives the former Name from its Reſemblance to a Frier's Cowl. It is a large, broad, thin, fleſhy Plane, ſituated between the Occiput and lower Part of the Back, and from thence extending to the Shoulder, in the Figure of a large irregular Square. From this Figure the antient *Greeks* borrow'd its Name, and, together with the Trapezius of the other Side, it forms a kind of Lozenge.

Above, it is fixed in the ſuperior tranſverſe Line of the Os Occipitis, by a thin Series of fleſhy Fibres, reaching to the Occipital Muſcle, and appearing to cover that Muſcle by a kind of Aponeuroſis. Behind, it is fixed to the five ſuperior Spinal Apophyſes of the Neck, by means of the poſterior Cervical Ligament, and immediately to the Extremities of the two loweſt Spinal Apophyſes of the Neck, and of all thoſe of the Back.

Theſe Inſertions are by ſmall and very ſhort tendinous Fibres, except between the ſixth Apophyſis of the Neck, and the third of the Back incluſively, where theſe Fibres are ſomething longer, and form a ſmall Aponeuroſis in form of a Creſcent, which, with that on the other Side, repreſent a kind of Ellipſis pointed at both Ends. At the lower Spinal Apophyſis of the Back, theſe Inſertions are likewiſe tendinous, and form a ſmall triangular Plane, which, together with that of the other Side, repreſent a Square.

From all theſe Inſertions, the fleſhy Fibres run in different Directions, and terminate by one continued Inſertion in about one third Part of the Clavicula, in the poſterior Edge of the Acromium, and through the whole Superior Labium of the Spine of the Scapula, all the Way to the ſmall triangular Surface in that Spine, over which Surface the Fibres paſs and ſlide freely without being fixed therein.

The Directions of all theſe Fibres are theſe: The ſuperior run obliquely downward from the Occiput to the Clavicula: The next to theſe run a little leſs obliquely, and, together with ſome of the ſuperior, are fixed in the ſuperior articular Ligaments of the Shoulder, and in the Acromium. Here the Muſcle forms a kind of Angle included in that formed by the Acromium, and Extremity of the Clavicle.

The reſt of the Fibres that come from the Neck, and thoſe from the ſuperior Spines of the Back, are fixed in the Spine of the Scapula, reaching within an Inch of the ſmall triangular Surface, becoming gradually leſs oblique, or more tranſverſe, as they deſcend.

Laſtly, The Fibres which come from all the other Spinal Apophyſes of the Back, contract like Radii tending toward a Centre, and are inſerted in the Extremity of the Spine of the Scapula, paſſing over the ſmall triangular Space, the ſuperior being more or leſs tranſverſe, and the reſt becoming gradually more and more oblique, running from below upward.

This Muſcle covers immediately, the Splenius or Maſtoidæus Superior, Part of the Complexus Major, the Angularis, Rhomboides, and Part of the Latiſſimus Dorſi. The common Inſertion of the two Trapezii in the Cervical Ligament is the Reaſon, that, in pulling either of them toward one Side of the Neck, the other will follow it a little beyond the Spinal Apophyſes. *Winſlow's Anatomy*.

CUCULLUS. The ſame as *Cucupha*. It ſignifies alſo a Piece of Paper wrapt up in the Form of a Horn, or Cone, in which Grocers include ſmall Quantities of Spices, and Apothecaries ſometime incloſe Pills, or Boles.

CUCULUS, Offic. Schrod. 5. 317. Schw. A. 249. Bellon. des Oyſe. 132. Charlt. Exer. 73. Geſn. de Avib. 319. Will. Ornith. 62. Raii Ornith. 97. *Cuculus alter*, Aldrov. Ornith. 1. 416. *Cuculus minor*, Jonſ. de Avib. 14. *Cuculus noſtras ſeu Aldrovandi ſecunda*, Raii Synop. A. 23. THE CUCKOW.

The whole Bird, and its Dung, are uſed in Medicine. The Bird burnt whole is recommended for the Gravel, Pains of the Stomach, and exceſſive Humidity of the ſame Part. *Rondel.* It is given with good Succeſs alſo in the Paroxyſms of Fevers. The Dung of the Cuckow, drank, cures the Bite of a mad Dog. *Schroder*.

CUCUMIS. The Cucumber.

The Characters, according to *Miller*, are;

It hath a Flower conſiſting of one ſingle Leaf, which is Bell-ſhap'd, and expanded towards the Top, and cut into many Segments, of which ſome are Male, or barren, having no Embryo, but only a large Style in the Middle, which is charg'd with the Farina; others are Female, or fruitful, being faſten'd to an Embryo, which is afterwards chang'd into a fleſhy Fruit, for the moſt part oblong, and turbinated, which is divided into three or four Cells incloſing many oblong Seeds.

1. Cucumis ſativus; vulgaris. *C. B. Pin.* 310. *Tourn. Inſt.* 104. *Elem. Bot.* 87. *Boerh. Ind. A.* 2. 77. *Rup. Flor. Jen.* 41. *Cucumis Hortenſis*, Offic. *Cucumis ſativus*, Park. Theat.

Theat. 772. *Cucumis vulgaris*, Ger. 762. Emac. 910. Raii Hift. 1. 645. Hift. Oxon. 2. 31. J. B. 2. 245. Chab. 134.

CUCUMBER.

The *Cucumber* is a Fruit ſo well known, that it were Labour loſt to ſay much of it. It grows upon a creeping rough Stalk, or Vine, as the Gardeners call it, which has ſeveral Tendrils or Claſpers. The Leaves are rough, and almoſt prickly, in Shape ſomewhat reſembling a Vine-leaf. The Flowers are of a yellowiſh White, Bell-faſhioned, of one Leaf, divided into five Segments. The beſt Fruit is that which is longiſh, of a deep-green Colour, and beſet with ſmall, blackiſh, prickly Tubercles. They are raiſed every Year from Seed; flowering, and bearing Fruit, a great Part of the Summer.

Cucumbers are more eaten as Food and Sallad, than uſed medicinally; and are cooling to the Stomach, quenching Thirſt, and provoking Urine. The Seed only is uſed in Phyſic, being one of the Four greater cold Seeds, and is accounted cooling and diuretic, and is frequently put into Emulſions againſt the Stone, Strangury, and Heat of Urine; as alſo in burning Fevers and Pleuriſies. *Miller's Bot. Off.*

You muſt chuſe ſuch as are long, thick, full-ripe, having a thin Rind, and full of a white, juicy, and firm Pulp.

They moiſten and cool very much, quench Thirſt, allay the Sharpneſs of Humours, and too great an Effervescence of the Blood, and provoke Urine.

They are not eaſily digeſted, and produce groſs and phlegmatic Humours.

They contain a little Oil, much Phlegm, and an indifferent Portion of eſſential Salt.

Cucumbers in hot Weather are proper for young Perſons of an hot and bilious Conſtitution; but weak and tender People, who have a bad Stomach, ought to abſtain from them.

REMARKS.

Cucumbers are Fruits much in Uſe for Food; they are uſually yellowiſh, ſometimes white, and at other times green. Theſe Fruits moiſten much, becauſe they contain a viſcous and thick Juice, very fit to qualify the over-violent Motion of the Humours. In the mean time, this Juice makes them hard of Digeſtion, becauſe they continue long in the Stomach, and becauſe their Parts cannot be disjoined without Difficulty; and therefore they ought always to be well dreſs'd and ordered before they are eaten, that this viſcous Phlegm, wherewith they abound, may be the better digeſted: You may alſo mix ſome other Things with them to help Digeſtion; ſuch as Onions, Salt, Pepper, and other Things of the like Nature.

We find a Number of Seeds in Cucumbers, which contain a ſweet oily Kernel, agreeable enough to the Taſte. This Seed is one of the Four greater cold Seeds, and much uſed by Phyſicians in Emulſions. It is alſo very qualifying, refreſhing, and moiſtening. It operates likewiſe by Urine. *Lemery on Foods.*

The Juice of the Cucumber is nitrous, mucilaginous, emollient, diuretic, and refrigerating; it is therefore excellent Food for hot bilious Conſtitutions, in very warm Seaſons, provided they are not eaten to Exceſs: But the *French* way of preparing them ſeems to be the beſt, which is to boil them in Soops; for the Coction diveſts them of Part of their Viſcidity, and renders them more eaſily digeſtible. Decoctions of Cucumbers are recommended in inflammatory Fevers, in the Stone and Gravel, and when bloody Urine is diſcharg'd; but, in theſe Caſes, their Indigeſtibility renders them unfit to be exhibited crude.

Small Cucumbers pickled with Vinegar, Salt, Pepper, and Dill, are ſaid powerfully to excite an Appetite, when it languiſhes, in conſequence of the Stomach being too hot.

The *Hiſtoria Plantarum*, publiſh'd under the Name of *Boerhaave*, informs us, that if the Branches of Cucumbers are much trodden upon, the Pulp of the Fruit will be bitter and emetic; and that a Water diſtil'd from Cucumbers when full-ripe, and beginning to putrify, purges ſmartly, in the Quantity of a Dram.

Mr. *Ray*, from his own Experience, tells us, that Cucumbers are a very wholſome Food, provided, after cutting them into thin Slices, they are ſhak'd well, ſo that a great deal of their Moiſture may be got out, and then ſeaſon'd with Oil, Vinegar, and Pepper. He farther informs us, that in a Fever which he labour'd under at *Florence*, he took the Pulp of Cucumber boil'd in Broth, by the Directions of Dr. *Kirton*, an *Engliſh* Phyſician; and that he found from it great Relief.

2. Cucumis; ſativus; vulgaris; fructu albo. *C. B. P.* 310. *Var. a.* THE WHITE CUCUMBER.

3. Cucumis, flexuoſus. *C. B. P.* 310. *Cucumeres, longiſſimi. J. B.* 2. 247. *Cucumis, oblongus.* Dod. p. 662. a. THE LONG TURKEY CUCUMBER.

4. Cucumis; Ægyptius; rotundifolius. *C. B. P.* 310. *Cucumis Ægyptiis Chate.* J. B. 2. 248. 2, *Boerh. Ind. alt. Vol.* 2.

The *Chate*, or *Egyptian* Cucumber, has Leaves which are ſmaller, more white, ſoft, and round, than thoſe of our Garden Cucumber. The Fruit is longer, more green, has a ſmooth, ſoft, even Rind, and a ſweeter Taſte than the other. The *Egyptians* eſteem this a very wholſome Food; and the Phyſicians allow ſome Patients labouring under Fevers, and the Plague, to eat them crude, being perſuaded, that they are in theſe Caſes of ſingular Uſe. They preſcribe them alſo boil'd in burning Fevers, with a View of refrigerating and moiſtening. They are taken, boil'd in Milk, in all hot Diſorders of the urinary Paſſages, with very good Effect; and Emulſions of the Seeds are alſo exhibited in the ſame Diſorders. The contus'd Pulp, mix'd with Milk, is apply'd to Inflammations of the Eyes, and of other Parts. The Juice, mix'd with Milk and Oil of Roſes, is apply'd externally to Parts affected with arthritic Pains ariſing from a hot Cauſe. They direct alſo the diſtil'd Water to be taken for many Days together, with a View of correcting hot Intemperatures of the Liver, and of curing Inflammations of the Kidneys, and relieving under the Stone, and this with very good Succeſs, as we learn from *Proſper Alpinus de Plantis Ægypti.*

CUCUMIS CANADENSIS. See SICYOIDES.

CUCUMIS GALENI. See MELO VULGARIS.

CUCUMIS PUNICUS CORDI. See BALSAMINA.

CUCUMIS SYLVESTRIS, or CUCUMIS ASININUS. See ELATERIUM.

CUCUPHA. *Cucupha, Cucullus, Pileolus, Byrethrum*, and *Birrethus*, are ſo many Names, by different Authors given to what in *Engliſh* we call *an odoriferous Cap for the Head.* This is a kind of Bag appropriated to Diſeaſes of the Head. It is made in the Form of a Mitre or Night-cap, either of Pieces of thin Silk or Linen ſtitch'd together at proper Diſtances. Between theſe Pieces of Cloth are put proper Cephalic Species, either cut ſmall, or reduc'd to a groſs Powder. Theſe Species are ſometimes intermixed with Cotton, before the internal and external Parts of the Cap are ſued together, that they may remain equally diſpers'd, and render the Cap ſofter and more commodious for the Patient. Theſe Species are alſo generally ſprinkled either with ſome diſtil'd Oil, or Spirit, or Vinegar, according to the Intention of the Phyſician. It is to be apply'd to the Head, under ſome proper Covering, to prevent its falling off; or it may be ſew'd to the Inſide of a Cap. Sometimes two Cucuphas are order'd, one to be worn in the Night-time, and the other, which is ſew'd to the Hat, is intended for the Day. When Half of the Head is only to be cover'd, in a Hemicrania, for Inſtance, or when the Application is only to be made to a particular Part of the Head, the Preparation us'd is call'd a *Semicucupha.* Cucuphas are to be worn ſo long as the Phyſician ſhall judge them beneficial for the Diſorder they were intended to remove; and, if the Uſe of them is to be long perſiſted in, the Ingredients are to be renew'd, when they have loſt their Virtues. The Species us'd for theſe Intentions are generally preſcrib'd in the following Proportions; that is, one Ounce of Roots, two or three Handfuls of Leaves, two or three Pugils of Flowers, between one and two Drams of ſome proper Gum, and of Powders one Ounce. The Quantity of the whole Preſcription rarely exceeds four Ounces; and, according to ſome, two, leſt the Head ſhould be too much burden'd by it. But this will be better underſtood by Examples, the firſt of which we ſhall take from *Hoffman's Conſult. & Reſponſ.*

> Take of the Root of Florentine Orris one Ounce; of Amber, the beſt Benjamin, Storax, and Cloves, each two Drams; of the Herb Marjoram one Handful; of the Flowers of Lavender, Roſemary, and Roman Chamomile, each four Pugils: Mix up into a Powder, to be made into a Cucupha for ſtrengthening the Head in Vertigos.

The other occurs in the ſame Author's *Medicina Rationalis Syſtematica*, and is prepar'd in the following Manner:

> Take of the Roots of the Long Cyperus, of the Seeds of Fennel-flower, of Amber, Benjamin, Storax, and Florentine Orris, each one Ounce; of Muſk, half a Dram; of the Flowers of Roſemary, Lavender, and Roſes, each three Pugils; of Mother of Thyme, and Marjoram, each half an Ounce: Make into a Powder, to be uſed in Cucuphas, for defending the Head againſt cold and moiſt Intemperatures of the Air; as alſo in Defects of the Hearing, ariſing from a Laxity of the Parts.

Cucuphas act by virtue of the exhaling Species they contain, either by ſtimulating, contracting, and corroborating; or by relaxing the external Skin of the Head, and conſequently by

by heating or refrigerating, ſince by that means their Virtues are more thoroughly convey'd into the Veſſels thro' the Pores; for Cucuphas may operate in theſe ſeveral Manners. But the Phyſician in his Choice of the Ingredients ought to be directed by the Nature of the Diſeaſe, and the particular Conſtitution of the Patient. From what has been ſaid, it plainly appears to be an Error, that aromatic and heating Subſtances are the only proper Ingredients in Cucuphas, intended for the Removal of cold and catarrhous Diſorders; for *Stahl*, in his *Diſſertatio de Multitudinis Remediorum Abuſu*, juſtly obſerves, that we ſhould be very cautious in the Uſe of theſe Subſtances: "For, ſays he, the more attentive Practitioners "have long ago obſerv'd, that not only the daily, but the "frequent Uſe of Cucuphas, compos'd of what we call the "nervino-cephalic and odoriferous Species, whether for cor-"roborating the Head in general, or the Memory in parti-"cular; whether for curing Vertigos, or removing that "Drowſineſs with which cold Catarrhs are accompanied; do "often more Harm than Good, eſpecially in plethoric Ha-"bits. But the leaſt Diſadvantage, attending the Abuſe of "theſe Things, is, that they generally render Patients ſo de-"licate and ſenſible of the ſmalleſt Changes of Heat and "Cold, that by theſe very Changes they are afterwards much "diſorder'd, and their Heads ſurpriſingly diſturb'd." A prepoſterous and immoderate Uſe of refrigerating Cucuphas is not a little hurtful to the Body, by obſtructing Perſpiration, and driving the Humours inwards. There are various Species directed for this Intention in the ſeveral Diſpenſatories, ſuch as the *Species pro Cucupha Francofurtenſium* in *Schrod. Pharmacop.* the *Pulvis* and *Cucuphas* in *Lemery's Pharmacopée univerſelle*; and the *Species Cephalicæ pro Cucuphis* in the *Diſpenſat. Brandenburg.*

CUCURBITA. The Gourd.

The Characters, according to *Miller*, are,

It hath a Flower conſiſting of one Leaf, which is of the expanded Bell-ſhape, for the moſt part, ſo deeply cut, that it ſeems to conſiſt of five diſtinct Leaves. This, like the Cucumber, has Male and Female Flowers on the ſame Plant: The Fruit of ſome Species is long, of others round, or Bottle-ſhaped, and is commonly divided into ſix Cells, in which are contain'd many flat oblong Seeds, which have ſometimes a Border round them.

1. Cucurbita lagenaria; flore albo; folio molli. *C. B. P.* 313. *Hiſt. Oxon.* 2. 23. *Boerh. Ind. A.* 2. 80. *Cucurbita*, Offic. *Cucurbita lagenaria*, Ger. 777. Emac. 923. *Cucurbita lagenaria major*, Park. Theat. 769. *Cucurbita lagenaria*, J. B. 2. 216. Raii Hiſt. 1. 632. Tourn. Inſt. 107. Elem. Bot. 89. Chab. 129. THE GOURD.

This will grow, in a ſuitable Soil, to be a large Plant, with great thick-corner'd rough Stalks, running a great Way on the Ground, or climbing by its Tendrils on Trees, Hedges, or any thing it meets with. The Leaves are large, rough, woolly, and corner'd; among which grow large, white, ſingle-leaved Flowers, as big as white Lilies, and much of their Shape, full of ſoft Downineſs on the Inſide, and a little hairy without; which are ſucceeded by large Fruit, in Shape of a Bottle, which will ſometimes hold ſeveral Quarts, whoſe Outſide is a hard, but brittle Shell, containing a juicy Pulp, full of flattiſh oblong whitiſh-brown Seed. The Root is but ſmall, in proportion to ſo large a Plant, being full of Fibres, and dying every Year. It is ſown annually in rich Ground, flowering in *July*; and the Fruit is ripe here in *September*. The Seed is only uſed.

This Seed is one of the Four greater cold Seeds, being uſed as the Seed of the reſt, in cooling and diuretic Emulſions. *Matthiolus* ſays, that the green Leaves, applied to the Breaſts of Nurſes, dry away their Milk; and ſome commend a Water diſtil'd from the green Fruit, beaten to a Pulp, as very good to cool ſore inflamed Eyes. *Miller's Bot. Off.*

The Seeds ſhould not be kept above a Year; for, after that, they grow rancid and inflammatory.

2. Cucurbita; falcatâ figurâ; folio molli; flore albo. *C. B. P.* 313. *Cucurbita, ſive Zucchia, omnium maxima, anguina.* Lob. Ic. 644. THE SICKLE-SHAPED GOURD, WITH A SOFT LEAF, AND A WHITE FLOWER.

3. Cucurbita; longior. *Dod. p.* 669.

4. Cucurbita; latior. *Dod. p.* 669. *a. Prægn.*

Boerh. Ind. alt. Plant. Vol. 2.

CUCURBITA alſo ſignifies a Cupping-glaſs. See CUCURBITULA.

CUCURBITA. A *Cucurbit*. This is a chymical Veſſel, ſo call'd from its Reſemblance to a Gourd; for it gradually ariſes from a wide Bottom, and terminates in a narrow Neck. The *Germans* call it *Kolbe*, from the ſuppoſed Reſemblance it bears to *Hercules*'s Club. Some give it the Name of *Vas Urinale*, becauſe a Glaſs Veſſel of its Figure, only with a wider Neck and Mouth, is generally uſed for inſpecting the Urine of ſick Perſons. This Inſtrument is of much Uſe in chymical Diſtillations, if a Capital, or an Alembic, with a Worm, is fitted to it; and, in Digeſtions and Sublimations, if a blind Alembic is adapted to it. The more the Wideneſs of the Bottom, at its largeſt Part, ſurpaſſes the Narrowneſs of the Neck, and the narrower and longer the Neck is, with the greater Difficulty is the Liquor in the Cucurbit diſtil'd. Upon theſe Circumſtances depends the Choice we ought to make of Cucurbits; ſo that the leſs any Body is obedient to the Fire, which ought to raiſe it, Cucurbits the more receding from the now-mention'd Conditions ought to be uſed, and *vice verſa*. It is call'd a blind Cucurbit, when a ſmall inverted Cucurbit is adapted to another in ſuch a manner, that the Neck of the one is inſerted in that of the other. The Veſſel call'd a *Circulatory* is one of this Kind. Their principal Uſe is in performing Digeſtions and Sublimations. Cucurbits are divided into thoſe of a larger, an intermediate, and a ſmaller Size, which laſt are call'd ſeparatory Cucurbits. If the Belly, or inferior Part, of the Cucurbit is of a ſpherical Figure, with a long cylindrical Neck, it is call'd a Matraſs, or a Bolt-head, which, according to *Boerhaave*, is of incredible Uſe in performing the moſt curious chymical Operations; for, ſince the Length of the Neck, and its Narrowneſs, in proportion to the Wideneſs of the Belly, may be enlarged at Pleaſure, 'tis ſufficiently obvious, that ſuch a Degree of Reſiſtance may be procured to the Liquor contain'd in the Cucurbit, that ſcarcely any of it ſhall aſcend thro' the Mouth of the Veſſel. But, in Veſſels of this Kind, we are, above all Things, to conſider the Preſſure of the Atmoſphere, which, poſſeſſing the Cavity of the Neck, ſurpriſingly compreſſes the Liquors and Bodies contain'd within, and agitated by the Fire. This Column of Air is, as it were, a Covering to the Aperture of the Veſſel, which preſſes equally every-where, and proves a Reſiſtance to the Liquors endeavouring to riſe; for whilſt, by the Heat of the Fire, the rarefied Air, in the Belly of the Cucurbit, endeavours to raiſe the whole ſuperincumbent Column of the Atmoſphere, it meets with an equal Reſiſtance from the Weight of this Column; by which means the liquid Particles, contain'd in this rarefied Air, are repel'd to the Bottom of the Veſſel: Hence it happens, that the Parts agitated by the Fire are powerfully applied to the Bodies lodged in the inferior Part of the Cucurbit. This Phenomenon may be ſubjected to the Sight, when Alcohol of Wine is prudently expoſed to the Fire, in ſuch a long and ſtraight-neck'd Cucurbit; for, when the Liquor becomes ſo hot as to be almoſt boiling, a Smoak-like Exhalation is obſerved to riſe in the Cavity of the Neck, which is again depreſs'd in the Form of a ſmall fluctuating Cloud. By this Expedient the Digeſtions of Menſtruums, with the ſeveral Subſtances to be reſolved in them, are conveniently carried on, without any Loſs, either of the Menſtruum, or of the Body to be deſolved; a Circumſtance, which, in Chymiſtry, contributes to the Performance of many Experiments, which could not otherwiſe be made. Beſides, theſe long-neck'd Cucurbits are ſingularly uſeful in ſeparating pure alcaline and volatile Spirits and Salts from Water, Oil, and volatile Earth; for theſe Principles are, with great Difficulty, ſeparated from each other. One Diſadvantage, however, attends Cucurbits of this Kind; for, when they are very long, then the boiling Liquor, at the Bottom of the Veſſel, not being able to riſe ſo high, leaves the higheſt Part of the Neck cold, whilſt its inferior Part is intenſely hot: Hence, if the Steam ſhould happen to riſe ſuddenly upwards, it will, by its ſudden Heat, burſt the Neck of the Veſſel, eſpecially in the Winter-time, or in froſty Weather. Another Diſadvantage attending long-neck'd Cucurbits is, that the Drops, collected in the ſuperior Part of the cold Neck, falling down to the intenſely hot Parts of the Belly or Neck, burſt the Veſſel in theſe Parts. Cucurbits are, for the moſt part, made of Glaſs; only ſometimes, for Diſtillations, eſpecially in an open Fire, earthen Cucurbits, call'd alſo *Canthari figulini*, are uſed. Thoſe made of Copper, and lined with Tin, are call'd *Veſicæ Diſtillatoriæ*. In what Manner, by means of Cucurbits, Diſtillations, Digeſtions, and Sublimations are made, is to be ſeen under their ſeveral Articles. As for the Cucurbits uſed in trying Gold and Silver, by means of a Separation, with the Aſſiſtance of *Aqua-fortis*, we muſt obſerve, that they ought not to be of Cryſtal, but of the beſt common Glaſs, which, without ſuffering any Corroſion, bears the Action of the corroding Menſtruums, and the Fire: Nor ought they to be too thick, eſpecially in the Bottom, ſince, when they are ſo, they ſoon crack, when put upon the Tripod. They are eight or ten Inches high, and their Orifice is not above half an Inch in Diameter, leſt, if a violent Effervеſcence ſhould happen in the Matter contain'd in the Veſſel, it ſhould either come over the Lips, or leſt ſome Part of it ſhould be carried off in the Form of ſmall Drops, reſembling thoſe of a gentle Rain, to which ſome of the diſſolved Metal always adheres. By this Narrowneſs of the Neck, the Steams are alſo more effectually reverberated, and beat back. The Belly of this Species of Cucurbit is ſufficiently large, if it contains an Ounce or two of Aqua-fortis. It is alſo proper, that the Mouths of theſe Cucurbits ſhould be turn'd outwards, with a kind of broad or reflected Margin, that the Solutions, when pouring out, may not run down their Sides.

CUCURBITULA, *σικύα*. A Cupping-glaſs, ſo call'd at preſent, becauſe uſually made of Glaſs. But the Cupping-glaſſes of the Antients were made of various Materials, as Horn, Copper, or Glaſs. The Uſe of Cupping-glaſſes is very antient. *Hippocrates* frequently directs them either with or without Scarification.

The Phyſicians of the Methodic Sect made great Uſe of them, with a View of relaxing. They began to apply them the ſecond or third *Diatritos*, that is, the fifth or ſeventh Day of the Diſeaſe, provided it was an acute one: With theſe they uſed almoſt to cover the Patient, in moſt kind of Diſorders. In a Phrenitis, for Example, they apply'd them upon the Head, and the neighbouring Parts; round the Neck, upon the Thighs, the Belly, the Back, and the Hypochondria.

The Methodics generally uſed Scarification with their Cupping; or elſe apply'd Leeches to the Part; and, as ſoon as ever they were full, and fell off, they apply'd their Cucurbitulæ to draw what Quantity of Blood they thought neceſſary.

Sometimes they apply'd them, without any Scarification at all. Theſe they call *Leves*, *κέρας*. *Cœlius Aurelianus*, *Acut. L.* 2. *C.* 29.

They made uſe of others, which were call'd *Arentes*, and *Siccatæ*, by *Cœlius Aurelianus*, *Acut. L.* 1. *C.* 11.

The Cucurbitulæ of the Antients were generally made of Copper, ſome with narrow Mouths, in order to attract more forcibly; others had their Mouths larger, and the Edges bent outwards, that they might not draw too forcibly. *Cœlius Aurelianus*, *Acut. L.* 3. *C.* 17.

For the moſt ſenſible Parts they had them made of Glaſs or Clay. They had others alſo made of Horn. *Cœlius Aurelianus.*

They always made uſe of Fire with thoſe of Copper or Glaſs: But, as *Antyllus* writes, thoſe of Horn were uſed with Suction by the Mouth, having a Perforation at the Top for that Purpoſe.

The Application of Cupping-glaſſes, and taking away Blood by their Means, was very frequently practiſed among the Antients, as we learn from *Hippocrates*, *Celſus*, *Galen*, and others. But theſe Inſtruments are now neglected, and quite diſuſed, in many Countries; in *Germany*, particularly, they are no-where in Faſhion, but among the Retainers to the Baths, who are accounted a lower Rank of Surgeons. However, ſince they come under the Conſideration of Surgery, as the Operations perform'd by them are truly chirurgical, we think ourſelves obliged to give a brief Explication of their Uſe and Manner of Application. The Uſe of Cupping-glaſſes is very extenſive, comprehending almoſt the whole Body: But their Application is to be conſider'd under two different Circumſtances; for they are either apply'd to the Place, firſt ſcarify'd with a Knife, or to a whole Skin: This latter is call'd a *dry*, and the other a *ſanguineous* or wet Cupping. The Figure, which is common to them both, is repreſented *Tab.* 33. *Fig.* 1. In the dry Cupping, before the Application of the Glaſs, a lighted Candle, or Fire, is to be convey'd into it, that the Air being expel'd by the Heat, the Glaſs may immediately be adapted to, and impreſs'd upon the Body, till it firmly adheres with a ſtrong Attraction; an Operation which the Practitioners at the Baths perform with great Dexterity. The View of the Operator, in this dry Cupping, is either to make a Revulſion of the Blood from other Parts, or elſe to invite it to the Place where the Glaſs is apply'd: Hence we ſee the Reaſon why *Hippocrates*, *Sect.* 5. *Aph.* 50. preſcribes the Application of a large Cupping-glaſs under the Breaſts of Women affected with too profuſe a Diſcharge of the Menſes, which was in order to cauſe a Revulſion of the Blood upwards from the Uterus. And, upon the ſame Principle, I have myſelf, in a profuſe Hæmorrhage at the Noſe, and in Spitting of Blood, ſucceſsfully apply'd them to the Feet, the Calves of the Legs, and juſt above the Knees. *Sculletus*, *Obſ.* 85. gives us a remarkable Inſtance of a Woman, who, by the repeated Application of ſix Cupping-glaſſes, without Scarification, was not only relieved from the troubleſome Symptoms cauſed by an Obſtruction of her Menſes, but was alſo thereby freed from the Obſtruction itſelf. Dry Cupping is alſo of Uſe in Pains of the Head, Vertigo, and other Diſorders of that Part, by making a Revulſion, with the Glaſſes apply'd on the Head, to the Temples, behind the Ears, to the Neck or Shoulders. So *Celſus*, *Lib.* 4. *Cap.* 2. in violent Pains of the Head, preſcribes Application of Cupping-glaſſes to the Temples, and back Part of the Head. In Palſies of the Members they are apply'd to the Hands and Feet, in order to provoke the Influx of the Blood and Spirits into the affected Parts; and in the Sciatica, or Pain of the Hips, or other Parts, they are apply'd to the Places affected. In all theſe Caſes the Operation is to be repeated, till the Part appears very red, and is pain'd.

In *Germany*, and in other Northern Countries, Cupping is much oftener join'd with Scarification. In this Caſe the Part is firſt to be dry-cup'd, till it looks red; after which the Skin is to be cut, with about ſixteen or twenty Inciſions, made with a ſmall Inſtrument call'd a ſcarifying Lancet, repreſented *Tab.* 2. *Fig.* 33. Theſe Wounds are to be made ſo cloſe to each other, that the Cupping-glaſs may be able to cover them all, and to draw Blood out of them. See *Fig.* 3. The Operator muſt begin his Inciſions in the loweſt Part, and aſcend gradually; for, otherwiſe, the Profuſion of Blood from the Inciſions in the upper Parts might obſtruct his Work in the lower Parts. Having ſcarify'd the Skin, the Cupping-glaſs, firſt heated with a Candle, is to be apply'd, which, from the Preſſure of the external Air firmly adhering to the Part, draws the Blood from the Inciſions. But as it is cuſtomary for ſeveral Glaſſes, as four, ſix, or eight, and ſometimes more, according to the Diſcretion of the Phyſician or Operator, or the Will of the Patient, to be at one time apply'd to different Parts of the Body, the Buſineſs of Scarification is to be ſo managed, that, while the firſt Glaſs adheres and draws, the reſt may be apply'd, with Scarification, after the ſame Manner; which done, the firſt is to be removed, and the Blood pour'd into a Veſſel; then the Glaſs is to be waſh'd out with warm Water, the Skin cleanſed with a Sponge, dipt in the ſame, and the Sponge again apply'd as before. When the Blood too ſoon ceaſes to flow, freſh Inciſions are to be made, and the Glaſſes apply'd, till a ſufficient Quantity of Blood be taken away; or, as it uſually happens, till it ſtops of itſelf. The Operation being finiſh'd, the wounded Parts are cleanſed with a Sponge and warm Water, and anointed with ſome Fat, to promote Conglutination. But, if the Blood continues to flow, which happens but ſeldom, you are to waſh the Parts with Spirit of Wine, or *Hungary* Water, and bind them up with Bolſters, and a Bandage.

The modern Surgeons have, for Convenience to themſelves, and Eaſe to the Patient, contrived an Inſtrument, conſiſting of ſixteen ſmall Lancet-blades, fix'd in a cubical Braſs Box, with a Steel Spring. See *Tab.* 33. *Fig.* 4. The Side C. C. C. C. of this Inſtrument is apply'd to the Skin; and the Spring, conceal'd within, is raiſed by the Plate *A.* as with a Lever; when, on a ſudden, by depreſſing the Button B. it falls with ſuch a Force as to ſtrike the Edges of the prominent ſixteen Blades, all at once, into the Skin, making ſixteen ſmall Inciſions, over which the Cupping-glaſs is to be apply'd, as before directed. We have the Figure of a Scarificator, not much differing from this, in M. *Paré*'s Surgery, *Book* 11. *Chap.* 5. and, after him, in *Lambzweerde*'s Notes on *Sculletus*'s *Armamentarium Chirurgicum*. But neither of theſe Authors propoſes any other Uſe of this Inſtrument, than to ſcarify the Parts affected with a Gangrene; whereas this before us is uſed with good Succeſs by our Cuppers, in all manner of Diſeaſes which require Scarification, as I have often ſeen, and have myſelf experienced. M. *Garengeot*, indeed, *Tr. de Inſtr. Chir. Tom.* 1. explodes it, as a bad and uſeleſs Inſtrument; but, perhaps, that Gentleman never ſaw it uſed, tho' nothing is more common than this Method among us.

Scarifications are frequently uſed in various Parts of the Body, particularly in the Head, Neck, on or between the Scapulæ, behind or under the Ears, in the Occiput, Back, and Loins, Arms, and Legs, and eſpecially near the Ankle-bones; of which laſt *Mannus* has written a particular Treatiſe, intituled, *De Malleolorum Scarificatione ex Veterum ſententia*, wherein he highly extols it. *Rhodius*, *Cent.* 3. *Obſ.* 17. ſays, that he had obſerved it attended with Danger; but this ſeems to be by Accident. To proceed: Scarifications are of Uſe in various kinds of Diſorders, which, thro' a Redundance of Blood, require Revulſion, Derivation, or Evacuation. Of this Sort are ſeveral Diſeaſes incident to the Head, particularly of the Eyes, Ears, Tonſils, and Uvula, Head-ach, Stuffings of the Head, Ophthalmies, Amauroſis, and Cataracts. In all theſe Caſes it is ſcarce poſſible to expreſs the great Benefit which may be receiv'd from Scarification, eſpecially if uſed at a proper time, and judiciouſly repeated at proper Intervals. Nor is this Operation much leſs beneficial than Phlebotomy to thoſe Patients, whoſe Veins are ſo ſmall as to render it impracticable to take any Blood from them with the Lancet, as it often happens, and yet ſtand in Want of ſuch an Evacuation: The Uſefulneſs of this Method, in ſuch a Caſe, I have ſeveral times experienced. That ingenious and ſkilful Phyſician *Morgagni*, *Adverſar. Anatom.* adviſes Scarification of the Veins of the Occiput in Apoplexies, and comatous Diſorders, being convinced of their ſurpriſing Efficacy, both from Reaſon and Experience. And *Zacutus Luſitanus* relieved a Patient from a dangerous Apoplexy by repeated Scarifications of the Occiput. This, indeed, ſeems to be the fitteſt Method for diſcharging the Blood, ſtagnating in the Veins of the Brain, which have a Communication with thoſe of the Occiput; and reſtoring its uſual Motion: But, then, *Morgagni* directs profound Scarification. This Scarifying of the Occiput is no leſs ſerviceable in Inflammations of the Eyes; and *Lancifi*, a celebrated Author, aſſures us, that in a Pleuriſy, eſpecially a Baſtard Pleuriſy, a deep Scarification of the affected Side, after Phlebotomy premiſed, affords ſpeedy and ſurpriſing Relief. But it is to be obſerved, that Scarification, like Phlebotomy, is

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one of those stated Remedies, which are repeated at certain Seasons of the Year, and, being neglected, after the Patient is once accustom'd to them, endanger a Return of the same or even worse Disorders.

I must confess, indeed, that there are many among our Physicians and Surgeons, who would persuade us, that Scarification is of little or no Efficacy; and the principal Reason they offer is, that, by this Operation, only that Blood is discharged which lodges betwixt the Flesh and the Skin. But, with due Deference to their Authority, this Opinion of theirs seems too hastily form'd, and without just Foundation; for I am convinced, by my own Experience, and that of many eminent Physicians, that as much, and as thick, Blood has been discharged by Scarification as by Phlebotomy; and consequently the most severe and dangerous Distempers, which proceed from a Plethora, may be cured by this Method as well as by Venesection: I dare even assert, for good Reasons, that, on some Occasions, Scarification far excels Phlebotomy in this respect; that the Cupping-glasses, by their firm Adherence to the Skin, not only draw out, but attract the Blood, with extraordinary Force, from all Parts, to a determinate Place; for which Reason it gives speedy and effectual Relief in many Disorders of the Head, Eyes, and Ears, soporific Disorders, Inflammations of the Tonsils, Pains of the Joints, Hæmorrhages, and other Diseases of that Kind.

Again, there are other Physicians, who imagine Scarification to be not only useless, but pernicious; and they think themselves supported in their Opinion by Instances, where Scarification, administer'd at an unseasonable Time, or with impure and infected Instruments, has produced most fatal Effects, and even Death itself. Thus *Hildanus*, *Cent.* 5. *Obs.* 71. remarks, that a Palsy was produc'd by this Operation; which, however, might proceed from many other Causes. The most pure and innocent Person, say they, may be in Danger of contracting some foul Disease, by being scarify'd with an Instrument which had not long before been used upon one infected with the Lues Venerea, Leprosy, Itch, or other contagious Diseases; and, by this means, the Infection may be communicated almost in the same manner as the Small-pox is by Inoculation. *See* Jordanus, *Of the new Lues broke out in* Moravia; Sporischius, *Of the dreadful Symptoms succeeding the Use of Scarification and Cupping, at* Brin *in* Moravia; with the *Observations of* Libavius *concerning a malignant Scarification*, extant in *Horstii Obs. Lib.* 4. But, whatever Weight this Objection may seem to carry with it, it is not sufficient to induce us to condemn and reject Scarification; for if it were, we must, for the same Reason, discard Phlebotomy, which is subject not only to other dangerous Accidents, but to the same as are charged upon Scarification, if the Lancet be not well cleaned. Wherefore, that the Patient may have nothing to fear on this Account, he ought to employ none but such as are neat and cleanly for his Surgeons or Cuppers, and who use none but the cleanest and brightest of Instruments. But, if those who require Scarification cannot otherwise think themselves in absolute Security in this respect, I would advise them to provide proper Instruments and Scarificators of their own for the Operation, which they may always keep as clean and dry as they please for the Purpose.

There is another Method of Scarification, besides the above-describ'd, used by Surgeons in violent Inflammations, recent or confirmed Mortifications, pestilential Carbuncles, and the like; in which Cases it has been found highly serviceable to make many small Incisions in the Skin with a proper Knife or Lancet, in order to discharge the stagnant and putrefying Blood, tho' without the Assistance of Cupping-glasses. This Kind of Scarification is usually denominated *Chirurgical*, to distinguish it from what is used by the Cuppers. Its principal Use is in Gangrenes and Mortifications, but some recommend it also in swell'd Feet, and in a Hydrocephalus, and in hydropical Affections, especially of the Scrotum. For, whenever any Member, for Instance the Leg, is so distended by a Dropsy, as to endanger bursting of the Skin, it may be proper to scarify the Part in order to evacuate the noxious Humours. But this must be done with Caution; for except Nature, on account of the excessive Distention of any Member, requires Relief from the Lancet, we must abstain from the Operation, for fear of a Gangrene or Sphacelus, which often happen in such a Case, and destroy the Patient. *Pliny*, *Hist. Lib.* 28. *Cap.* 1. and 11. advises Scarification of the Gums in the Tooth-ach, which, in my Opinion, is not improper on many Occasions.

Of much the same Nature with Scarification is the Method used by the *Egyptians*, and recommended by *Celsus*, *Lib.* 4. *Cap.* 2. where he directs taking of Blood from the Nostrils in the Head-ach; and by *Aretæus*, *De Curat. Chron. Morb. Lib.* 1. *Cap.* 11. Their Custom is to inflict many small Wounds on the Inside of their Nostrils, on the Ears, Lips, and Gums, which Practice is sometimes attended with surprising Success, in mitigating Inflammations, and in several other Disorders. See *Prosper Alpinus*, in *Med. Ægypt.* and *Stahlius*, *de Scarific. Narium Ægyptiaca*. None, I believe, are so ignorant as not to know what extraordinary Benefit and Relief to labouring Nature result from an Hæmorrhage at the Nose. The same People have another Practice, which is, to beat the Calves of their Legs with Cudgels till they look red, and then to scarify, or make small Incisions in them, by which means they procure a powerful Revulsion of the Humours in violent Inflammations of the Brain, Deliriums, Fevers, and want of Sleep. See *Prosper Alpinus*, *Med. Ægypt. p.* 72. where you have a Figure of this Practice. At present these Methods of Cure are grown almost out of Use among *European* Nations.

Some of the antient Physicians and Surgeons, in Imitation of *Hippocrates*, the great Founder of their Art, had a Custom, in several Disorders of the Eyes, of scarifying the Insides of the Eyelids, and even the Eyes themselves, with a proper Instrument for the Purpose, as appears very plain from the Treatise of *Hippocrates*, *de Visu*. Physicians of great Eminence since *Hippocrates* disus'd this Practice, and it had for a long time been neglected, till it was revived in our Age by one *Woolhouse*, an *English* Physician, at *Paris*; and has, since him, been exercis'd with tolerable Success, as we are told, by others: But for the Instrument, and Manner of performing the Operation, we shall refer to the Article OCULUS. *Heister*, *Chirurg.*

CUDU-PARITL. The Name of a Shrub which grows in *Malabar* to about twice the Height of a Man, and which flowers all the Year round. The Leaves bruis'd, mixed with Milk, and apply'd to the Head by way of Ointment, procure Sleep, and remove Head-achs and Vertigoes. The Fruit bruised, and drank with Water, stops a Dysentery, and is good for Chaps in the Mouth. *Raii Hist. Plant.*

CUIETE. A Name for the *Arbor Cucurbitifera Americana folio subrotundo*. Marcgr. & Pison.

CUIPOUNA. The Name of a Tree which grows in *Brasil*. The Juice of the Bark of that Species which bears yellow Flowers, expressed, and mixed with fair Water, cleanses and incarns inveterate Ulcers. *Raii Hist. Plant.*

CULATUM. Calcin'd. *Rulandus.*

CULBICIO. A Sort of Strangury, or rather a Heat of Urine. *Castellus* from *Velschius.*

CULEUS. The greatest Measure among the *Romans*, of liquid Things was the *Culeus*, or *Culleus*, containing twenty *Amphoræ*. *Rhemnius Fannius.*

Est & bis decies quem conficit Amphora nostris,
Culeus: hoc nulla est major mensura liquoris.

For *nostris* undoubtedly it should be read *nostra*. *Pliny*, *Lib.* 14. *Cap.* 4. interprets seven *Culei* one hundred and forty *Amphoræ*. When, saith he, oftentimes each Acre will yield seven *Culei* of Wine, that is, one hundred and forty *Amphoræ*. A *Culeus* likewise contains forty *Roman Urns*, an *Urn* being the half of the *Amphora*.

Columella, *Lib.* 3. *Cap.* 3. reckons the *Culeus* of Wine at the Vineyard worth three hundred *Nummi*, or seventy-five *Denarii*, that is, according to *English* Rate, one hundred and forty-three Gallons, three Pints, and a half, for 2 *l.* 8 *s.* 5 $\frac{1}{2}$ *d.* which is about a Halfpeny the Pint.

The *Culeus* likewise contain'd 160 *Congii*, or 960 *Sextarii*. We read of *Dolia Culearia*, and *Sesquiculearia*. *Dolia Sesquiculearia* must have been very large, being about 3 $\frac{1}{2}$ Hogsheads, and so therefore larger than our Pipes. *Culeus* signifies sometimes a Leathern Sack. *Arbuthnot.*

CULMUS.

The *Culmus* and *Culmen* of the *Latins*, and the καλαμος of the *Greeks*, are what we call a Stalk of Corn or Grass. In Grasses and Corns the *Culmus* or Stalk corresponds to the *Caudex* or Trunk in Trees, and to the *Calamus* in the Cyperus and Bulrush; so that it generally denotes that Part which reaches between the Root and the Ear or Panicle. Hence it appears, in general, what Plants are of the culmiferous Kind; but these are variously limited by the Founders of different Botanic Systems, who have adopted them for constituting some Genus of Plants. Thus, for Instance, according to *Morison*, to this Class belong all herbaceous Plants, which send forth a single Seed after each Flower, are furnished with straight arundinaceous Leaves, and are commonly call'd Grasses and Corn. These have their Seeds either naked and decorticated, or covered and wrapt up in Coats and Membranes. Both these are divided either into the spicated Kind, or into such as have scatter'd Ears. According to Mr. *Ray*, culmiferous Plants are such as send forth a Stalk which is round, geniculated with knotty Joints, hollow for the most part, with a single Leaf at each Geniculation; and these Leaves are slender, rising gradually from a broad Base, and terminating in an acute Point. The Plants of this Kind have either a large Seed useful for making Bread, and these are call'd frumentaceous Plants: Or they are such as have a small Seed, and these are call'd Grasses; tho', properly speaking, Corn and Grasses do not differ as to their Genus. Both these Species Mr. *Ray* divides into those of the spicated, and those of the paniculated Kind; but he classes them all under the

the common Genus of graminifolious Herbs, with a ſtaminaceous Flower. According to *Herman*, culmiferous Plants are ſuch as are apetalous, furniſhed with an Huſk, and ſtamineous. *Ludwig*, in his *Definitiones Plantarum*, claſſes among the ſtaminaceous Plants, thoſe of the culmiferous Kind, which have their Fruit contiguous to the Flower. According to *Boerhaave*'s Syſtem, culmiferous Plants belong to the monocotyledon and apetalous Kind, and are ſuch as have their Stalks hollow, diſtinguiſhed by Joints, and at theſe Joints rendered firm by a kind of Septum or Diaphragm. From theſe Knots or Joinings ariſe ſingle Leaves, which are ſtraight, arundinaceous, alternate, and, at their Baſe, ſo conſtitute that Part of the Stalk, that, by a careful Separation of them, it is render'd extremely ſlender. Theſe culmiferous Plants are divided into thoſe of the ſpicated, and thoſe of the paniculated Kind. The Stubble of Corn, remaining after the Ears are cut off, is alſo call'd *Culmus*. Hence the Word *Culmare*, if we may believe *Salmaſius*, in his *Exercitationes Plinianæ*, is applied to thoſe who pull up Root and Stalk; and becauſe, in earlier Ages, when Slates and Tiles were not known, the Roofs of Houſes were cover'd with Straw and Stalks, the Tops of theſe Roofs were, for that Reaſon, call'd *Culmina*.

CULMUS. The Stalk of Corn or Graſs. Hence culmiferous Plants are ſuch as have a ſmooth, jointed Stalk, and uſually hollow, and, at each Joiut, wrapt about with ſingle, narrow, ſharp-pointed Leaves; and their Seeds are contained in chaffy Huſks, as Wheat, Barley, *&c.*

CULTER. The third Lobe of the Liver is call'd by this Name in *Theoph. Protaſpatarius*, according to *Caſtellus*.

CULUS. The Anus.

CUMANA *Arbor dicta*, De Laet. *Gacirma*, Nierenberg. Theſe are Names for an *Indian* Tree, like that of the Mulberry, both with reſpect to the Appearance of the Tree, and the Fruit it bears, of which a Syrup is made, ſaid to be good in Coughs and Hoarſneſs. The Wood is ſo hard, that it ſtrikes Fire like a Flint.

CUMANDA GUACU. A Name for certain very large *Indian* Kidney-beans. Theſe roaſted, contus'd, and exhibited with an Egg, are given for Fluxes of the Belly: Boil'd, and made into a Cataplaſm, and applied to the Belly, they are ſaid to cure colic Pains; and they are, in this Form, applied to Apoſtemations, with a View of reſolving them.

There is a ſecond Species, call'd *Cumanda Guara*.

CUMBULU. H. M. *Nux Malabarica unctuoſa Flore cucullato*, D. Syen. *An Adhatoda Zeilanenſium*, Herman?

This is a tall Tree which grows in *Malabar*. The Root, given in Decoction, with the Addition of a little Rice, is ſaid to be of Service in the ſymptomatic Fever, attending the Gout. This Root alſo, exhibited in ſour Milk, is good in Flatulences, and Pains of the Breaſt; bruis'd, and boil'd in Water, it is uſeful in cold languid Fevers; roaſted, and reduced to Powder, it is apply'd to Parts affected with the Gout; taken in ſour Milk, it relieves griping Pains of the Belly; and the Juice of the Leaves, drank, has the ſame Effect. *Raii Hiſt. Plant.*

CUMINOIDES. Wild Cumin.

The Characters are,

It hath Leaves conſiſting of many Lobes, like thoſe of Burnet: The ſmall Flowers, which conſiſt of many Petals, are collected into a round Head: The Petals, or Flower-leaves, are fringed: Each of theſe Flowers are ſucceeded by a ſingle Seed. *Miller's Dictionary.*

Cuminoides; vulgare. *Tourn. Inſt.* 300. *Elem. Bot.* 250. *Boerh. Ind. A.* 132. CUMINUM SYLVESTRE, Offic. Ger. 908. Emac. 1067. Park. Theat. 372. Raii Hiſt. 1. 402. Chab. 384. *Cuminum ſylveſtre Capitulis globoſis*, C. B. Pin. 146. *Cuminum ſylveſtre primum valde odoratum, globoſum*, J. B. 3. 23. *Paſtinaca tenuifolia Cretica capitulis globoſis*, Mor. Umb. Tab. 4. *Daucus odoratus Creticus Sanguiſorbæ capitulis villoſis*, Pluk. Almag. 130. *Umbelliferis affinis, capitulis globoſis & villoſis*, Hiſt. Oxon. 3. 265. WILD CUMIN.

This Plant grows principally in *Crete*. The Part uſed in Medicine is the Seed, which is recommended againſt Gripes and Flatulencies, for curing the Hiccough, for removing Sugillations, and repelling Inflammations of the Teſtes. *Dale.*

CUMINUM. Cumin. *Miller* derives this from κυέω, to bring forth, becauſe it is very efficacious againſt Barrenneſs.

The Characters are,

The Root is annual: The Leaves are like thoſe of Fennel: The Seeds are ſmall, long, narrow, and crooked; two of which ſucceed each Flower, as in the other umbelliferous Plants.

1. Cuminum. *Mor. Umb.* 4. *Hiſt. Oxon.* 3. 271. *Boerh. Ind. A.* 49. *Cuminum*, Offic. *Cyminum, ſive Cuminum Sativum*, J. B. 3. 22. Raii Hiſt. 1. 433. *Cyminum ſive Cuminum*, Chab. 384. *Cuminum vulgare*, Park. Theat. 887. *Cuminum ſemine longiore*, C. B. Pin. 146. *Cuminum ſativum Dioſcoridis*, Ger. 207. Emac. 1066. *Fœniculum Orientale Cuminum dictum*, Tourn. Inſt. 312. CUMIN.

This is a ſmall low Plant, ſeldom growing above a Foot high, with many fine ſlender Leaves like Fennel, but not near ſo large, and winged. The Flowers grow in ſmall Umbels, of a reddiſh-white Colour, each of which is followed by two long, yelloviſh-brown, ſtriated Seeds, of a very ſtrong, not unpleaſant Scent. The Root is ſmall, and periſhes after giving ripe Seed. It is ſown yearly in great Quantities in *Sicily* and *Malta*, from whence we have the Seed, which is the only Part us'd.

Cumin-ſeed is one of the Four greater hot Seeds, and conſiſts of very warming diſſolving Parts, being very good to expel Wind out of the Stomach and Bowels, and is frequently put into Glyſters for that Purpoſe, as well as given in Powder, or infuſed in Wine. Outwardly apply'd, it is of great Service in Pains of the Breaſt or Side, as well as in the Bowels.

The only officinal Preparation is the *Emplaſtrum è Cymino*. *Miller's Bot. Off.*

Emplaſtrum è Cymino: CUMIN PLAISTER.

Take of Cumin-ſeeds, and Bay-berries, each half a Pound; of Ground-pine, four Handfuls: Boil them in twelve Pints of Spring-water; and afterwards, in the ſtrained Liquor, boil ſix Pounds of *Burgundy* Pitch to the Conſiſtence of an hard Plaiſter. Let them ſtand together till almoſt cold, then pour away the ſeparated Decoction. Melt again the Pitch, and to it, by degrees, add, in Powder, Bay-berries and Cumin-ſeeds, each half a Pound; and continually ſtir them together till the Plaiſter acquires a due Conſiſtence.

This was never received by any officinal *Diſpenſatory*, until by the College of *London*; and the firſt Edition of theirs puts half a Pound of the Oil of Dill with a Pound of each of the Powders, ſo that the Conſiſtence in both comes out pretty much the ſame. The Ground-pine is likewiſe an Addition in the Decoction; tho' the firſt Receipt directs no Decoction at all. If good Care is not taken, that the Seeds and Berries be reduc'd to a Powder, without too fierce a Drying, the Whole will be of a brittle Conſiſtence; but otherwiſe there will remain in them ſo much of an oily Moiſture, as not to make the Pitch harder than it would be without them, but give to the Whole a very good Body.

Beſides the preceding, *Dale* mentions the following.

CUMINUM SILIQUOSUM, Offic. Ger. 908. Emac. 1067. *Hypecoi altera Species*, C. P. Pin. 172. *Hypecoum alterum*, Park. Theat. 372. Raii Hiſt. 2. 1328. *Hypecoon ſiliquis propendentibus, non articulatis, bivalvibus incurvis*, Hiſt. Oxon. 2. 579. *Hypecoon tenuiore folio*, Tourn. Inſt. 230. Elem. Bot. 197. CODDED WILD CUMIN.

This Plant is ſaid to have the ſame Effect as the Poppy. It grows in *Spain*, where it flowers in *May*. *Dale.*

CUMINUM PRATENSE. See CARUM.

CUMINUM SYLVESTRE. See CUMINOIDES.

CUNANE. The Name of a large *Indian* Fruit, which grows on a ſmall Tree, call'd *Morremor*. The Inhabitants of the Country where it grows roaſt it, and eat it as a Remedy againſt the Head-ach. *Raii Hiſt. Plant.*

CUNEALIS SUTURA. The Suture by which the *Os Sphenoides*, or *Cuneiforme*, is join'd to the Os Frontis.

CUNEIFORME OS. The ſphenoidal Bone. See CAPUT.

CUNEIFORMIA OSSA. According to *Blancard*, the fifth, ſixth, and ſeventh Bone of the Tarſus are thus call'd. See CRUS.

CUNICULUS, Offic. Schrod. 5. 284. Raii Synop. A. 205. Mer. Pin. 168. Aldrov. de Quad. Digit. 382. Schw. de Quad. 86. Jonſ. de Quad. 111. Geſn. de Quad. 362. Charlt. Exer. 23. THE RABBET OR CONEY.

A Rabbet, calcin'd whole, is ſaid to cure a Quinſey, or Inflammations of the Fauces. The Fat is uſed for reſolving Indurations of the Tendons and Joints; and the Brain is ſaid to reſiſt Poiſons.

Conſidered as an Aliment, thoſe Rabbets are to be choſen, which are tender, fat, well fed, and neither too young, nor too old. Rabbet is better in Winter than Summer, becauſe its Fleſh is the more tender and mellow.

Rabbet is very nouriſhing, and affords good Food.

When they are young, they breed many viſcous Humours; and, on the contrary, when they are too old, their Fleſh becomes dry, hard, and not eaſy of Digeſtion.

A Rabbet contains much volatile Salt and Oil.

It agrees, eſpecially in Winter-time, with any Age and Conſtitution, provided it be uſed moderately.

REMARKS.

A Rabbet is an Animal well known, and like a Hare in many things: Firſt, becauſe it is very near of the ſame Make, tho' ſmaller; ſecondly, becauſe it is of a fearful Nature, runs very faſt, is very quick of Hearing, and chews the Cud; thirdly,

thirdly, becauſe it multiplies space, which made many ſay, who believed that a Hare was an Hermaphrodite, that a Rabbet was ſo too.

Rabbets are either wild or tame; the firſt of which are the more dainty and pleaſant Food, not only becauſe they are more in Motion, and contain leſs ſuperfluous Moiſtures, than the others, but alſo becauſe they feed upon ſeveral aromatic Plants, ſuch as Thyme, and the like, which gives their Fleſh a nicer and more agreeable Reliſh. Rabbets differ much in reſpect of their Colour; for ſome are white, others brown, ſome black, others yellow, and ſome again party-colour'd.

Though a Rabbet is in many things like a Hare, yet the Fleſh ſomewhat differs from the other in Taſte: It is alſo moiſter, tenderer, and more juicy. We do not think, that Rabbets are ſuch wholſome Food when very young, as when of a middling Age, becauſe they are full of viſcous Humours when young: On the contrary, a Hare being of a drier Temper than a Rabbet, ought to be uſed younger than the other; tho' moſt Authors, who have writ concerning a Rabbet, look upon it as bad Food, fit to produce groſs and melancholy Humours: However, when it is endu'd with all the Properties we have mentioned, it produces few ill Effects.

Some fanſy, that Rabbets Brains weaken the Memory, becauſe this Animal cannot for a Moment after retain in mind the Toils laid for her, and that ſhe had juſt eſcaped; but this Conjecture being grounded upon a weak Foundation, I ſhall not endeavour to confute it. *Lemery on Foods.*

CUNTUR. The Name of a very large *American* Eagle, according to *Lemery*, whoſe Fat is ſaid to be reſolvent, and good for the Nerves.

CUPELLA, or, according to ſome, *Capella*, *Catellus Cinereus*, *Cineritium*; *Patella* or *Teſta probatrix*, *exploratrix*, or *docimaſtica*, are ſo many Names for what we call a *Cupel*, or *Teſt*. This is a chymical Veſſel made of Earth, pretty thick, and of the Form of a Diſh or Platter, in which Aſſay-maſters examine Metals, in order to diſcover the Quantity of Gold or Silver intermixed with the other foſſile Bodies, of which they are compos'd. It ſuſtains the higheſt Degree of Fire, cannot be melted by any Degree of common Fire, and retains all fus'd Metals; but in it all the foſſile Portions of any Metal, when mix'd with fus'd Lead, are carried off, except Gold and Silver, which are left fus'd in ſmall Globules. This Veſſel has a ſmall Cavity, which is a ſomewhat obtuſe ſpherical Segment, with a ſmall Canal at its Margin, thro' which the Metal examin'd may be the more commodiouſly pour'd out. The external Surface of this Veſſel towards its Baſe is ſomewhat like a truncated Cone, that it may ſtand the more ſecurely. Theſe Veſſels may be made of different Bulks, according to the Quantity of the Metal to be tried. They may be made either of ſome proper Earth, or of Aſhes obtain'd from the calcin'd Bones, almoſt of any Animals, except thoſe of Hogs; for the Cupels made of theſe, beſides Lead and other Foſſils, alſo abſorb ſome Parts of Gold and Silver. The Aſhes of calcin'd Plants are alſo proper for this Purpoſe, provided their Salts are well waſh'd out of them. Plaiſter alſo of ſome Kinds is fit for making theſe Veſſels; and thoſe made of it *Cramer* thinks preferable to thoſe before-mentioned. For this Purpoſe the ſmaller Bones of Calves, Oxen, Sheep, and Horſes, are moſt commonly us'd; and theſe are the more eaſily calcin'd, the longer they have been expos'd to the Injuries of the Weather. The Manner of calcining them is in the higheſt Degree of an open Fire, for ſome Hours or longer, according to their Thickneſs. The Mark of a perfect Calcination is, when no black Spot appears either externally or internally, when they are broken. Theſe Bones, thus calcin'd to the higheſt Degree of Whiteneſs, are to be triturated in a Mortar, and paſſed through a fine Sierce; or, if ſuch a one cannot be had, the groſſer Powder paſs'd through a common Sierce, is to be levigated upon a Marble, and then waſh'd with freſh warm Water. Since the Bones of Fiſhes are generally pretty ſmall, they are more eaſily calcin'd than thoſe of other Animals, in a large open earthen Veſſel; and, when thus prepar'd, they are preferable to the others. A ſmall Quantity of the Aſhes of theſe Bones, thus treated, is to be put into a clean earthen Veſſel, and a ſecond time calcin'd in a ſtrong Fire, for ſome Hours. Then the Aſhes are to be waſh'd with Water, and levigated upon the Porphyry to a fine Powder. This Powder, when moiſten'd by Drops of pure Water, or the White of an Egg diluted with Water, till the Maſs coheres, when ſtrongly compreſs'd between the Fingers, is to be put into a Copper, or braſs Mortar, of any Size, or if calcin'd Plaiſter is uſed, it is to be ſprinkled with a Solution of Vitriol. Then the Maſs is to be excavated with the Peſtil, apply'd with a ſufficient Force. Over the Surface of the Cavity thus form'd, the fine Powder above-mentioned is to be ſprinkled dry, by means of a Sieve, and ſtrongly preſs'd to the Maſs by a Stroke or two of the Peſtil, that its ſmalleſt Inequalities may be fill'd up; and, after the Inequalities protuberating on the upper Margins and the Bottom, are cut off with a ſharp Knife, the Cupel is to be laid by in a dry Place. The Cupels form'd of the Aſhes of Bones, the Spines of Fiſhes, and Plaiſter, are of all others beſt; becauſe, before they are applied to Uſe, there is no Neceſſity for their being ſtrongly burn'd, nor do they require ſo ſtrict an Attention with reſpect to the Degrees of Fire. But if the Aſhes of Wood are added, the Cupels muſt be burn'd for half an Hour, or an Hour, before the Metal is put in. And, unleſs this Circumſtance is remembered, the Metal is thrown out of the Veſſel, Drop by Drop, by the Eruption of the aqueous Vapours; for theſe Cupels can never be ſufficiently dried by the Air alone, ſince there is always ſome Portion of an alcaline Salt adhering to the Aſhes of the Wood, which attracts the Moiſture of the Air, as we are ſufficiently inform'd by the browniſh Colour of theſe Aſhes, and by an Affuſion of the Solution of Sal Ammoniac upon them. Hence alſo theſe Aſhes have a ſtronger Tendency to Vitrefaction, than the Aſhes of Bones. Beſides, the dry Powder, with which the Cavity of the Cupel was ſprinkled, is more eaſily ſeparated during the Cupellation, if the Aſhes of Wood have been mix'd with the Materials of the Cupel, which proves very prejudicial to the Operation; becauſe by the Adheſion of theſe Aſhes the Weight of the Metal is either increas'd, or, in purging it, ſome of it is loſt. In a Cupel made of the Aſhes of Bones, the Spines of Fiſhes, or Plaiſter, the Cupellation is longer about, but then it is more ſafely perform'd, than if Aſhes of Wood had been added. It indeed receives the melted Metal more ſlowly, in conſequence of its compacter Texture; but, for this very Reaſon, it is the leſs to be apprehended, that any Part of the perfect Metal ſhould be abſorb'd, tho' the Degrees of Fire ſhould be leſs accurately obſerv'd. The beſt Cupels made of Bones may be uſed for two or three Trials, whereas others are only fit to be once employ'd.

CUPEROSA. Copperas. See VITRIOLUM.

CUPHOS, κοῦφος. Light. When applied to Aliments, it imports their being eaſily digeſtible; when to Diſtempers, that they are mild and gentle.

CUPRESSUS. See CYPRESSUS.

CUPRUM. Copper. See Æs.

CURA AVENACEA. The Name of a Decoction, of which there is a Deſcription in a *High Dutch* Book, intituled, *Engliſhes Artzey-Buchlein*, as follows:

> Take of recent Oats, entire and well waſh'd, one Pound and an half; of the recent Root of wild Succory ſlic'd, one Handful; and of Spring-water, twelve Pints: Let them be boil'd in a clean earthen Veſſel, to the Conſumption of Half, and then ſtrain the Liquor through a linen Cloth. To the ſtrain'd Liquor add half an Ounce of Sal Prunellæ, and ſix Ounces of coarſe Sugar. Then boil it again, and, taking it off the Fire, let it ſtand cover'd for a Day and a Night in ſome quiet Place; the next Day let it be pour'd off into glaſs Veſſels, taking care that the thick Matter, remaining in the Bottom, be not mix'd with the pure Liquor intended for Drink. Let the Glaſſes be cloſely ſtopt, and the Liquor preſerv'd for Uſe in a Cellar.

Two ordinary Cupfuls of this Liquor, exhibited twice a Day, that is, two or three Hours before, and three Hours after Dinner, are highly extol'd againſt all Kinds of Fevers, Colic Pains, Pleuriſies, Itches, cutaneous Tumors, and hypochondriacal Diſorders; as alſo for cleanſing the Kidneys from Sand, and opening Obſtructions of the Viſcera. The Uſe of it is order'd to be perſiſted in for thirteen Days. If the Body is cacochymic, a gentle Purge ought to be exhibited before it is uſed. The Effects of this Medicine are moſt ſingular in the Dog-days; and it is highly extol'd as a Preſervative, if uſed once a Year, for two Weeks, either in the Spring, the Autumn, or during the Dog-days. The Inventor of this Decoction was *Johannes de S. Catharina*, who, by uſing it thrice a Year, in the Spring, Autumn, and Dog-days, is reported to have protracted his Life, without Sickneſs, to the hundred and twentieth Year of his Age. After Doctor *Richard Lower* had obſerv'd the Efficacy of this Drink in the Cure of ſeveral Diſeaſes, he made the Preparation of it public. The celebrated *Hoffman* publiſh'd a Diſſertation *de Cura Avenacea*, in which, inſtead of Sal Prunellæ, he orders the Uſe of depurated Nitre, both in continued and intermittent Fevers; becauſe it is more efficacious than the Sal Prunellæ, for allaying and leſſening the Effervescence of the Blood. In the ſame Diſſertation he obſerves, in general, that the two Boilings, ordered by *Lower*, are by no means neceſſary; and that the Sugar and Nitre ſhould be added in the Beginning of the Operation. When it is ſufficiently boil'd, he orders the Ptiſan to be put into Stone or Glaſs Veſſels, kept for twenty-four Hours in ſome cold Place, and then pour'd off from its Sediments. He alſo obſerves,

obſerves, that this Liquor cannot be kept long, eſpecially in the Summer, when, by the Acceſs of the hot Air, it undergoes a Fermentation, acquires an acid Taſte, and ungrateful Smell, by which means it becomes unfit for drinking. For this Reaſon, 'tis highly neceſſary it ſhould be kept in a cool Place, and in cloſe-ſtopt Veſſels. If any one deſires to give this Liquor a fine Colour, which contributes nothing to its Virtues, he muſt boil with it one Ounce of Alkanet-root, or two Ounces of the Raſpings of red Sanders; which was the Method of preparing it uſed by the celebrated *Joannes Francus*. The red Sanders, with the other Powders, muſt be put into the Veſſel when the Fire is not very ſtrong, leſt the Liquor ſhould come over the Margin of the Veſſels, and its reddiſh be chang'd into a greeniſh Colour. From a Conſideration of the Ingredients, 'tis not to be doubted, but this Liquor is of ſingular Efficacy in the Cure of many, and theſe very terrible Diſorders; for it affords ſingular Relief, where Obſtructions of the Veſſels are to be remov'd; where peccant and recrementitious Salts are to be waſh'd out of the Habit; where the viſcid Juices are to be diluted, and a due Degree of Moiſture and Humidity to be reſtor'd. It is alſo excellent for allaying Thirſt, alleviating all feveriſh Heats, and ſtopping Hæmorrhages. Hence it is an approv'd Remedy when uſed for ſome Weeks, in cronical Diſeaſes, eſpecially Aſthmas, Dyſpnœas, Gouts, the Stone of the Kidneys and Bladder, the wandering ſcorbutic Gout, ſcorbutic and hypochondriac Diſorders, the Jaundice, Obſtructions of the Menſes, a Chloroſis, Lippitude of the Eyes, the Itch, and all Impurities of the Blood; provided bitter Balſamics are now-and-then interpos'd, in order to prevent the Weakneſs of the Stomach, to be apprehended from the large Quantity of Water. This Drink may alſo be preſcrib'd in all thoſe Diſorders in which medicated and mineral Waters are proper; and we muſt proceed in the ſame manner in both Caſes; that is, we muſt prepare the Body by Veneſection and Purgatives, and increaſe the Doſe daily, beginning at one Pint, and proceeding to uſe two; at which Number we are to ſtop; through the whole Courſe of the Cure, which is to be finiſh'd by ſome Laxative of a balſamic Nature. *Rieger*.

CURCAS, alſo call'd CARPATA, and, in *Malabar*, CHIVIQUILENGA.

This is a Fruit which grows in *Malabar*, about the Size of a Filberd, and in Taſte reſembling a boil'd Muſhroom. It is not uſed in Medicine.

CURCULIO. A ſmall Inſect, which breeds in Corn, call'd the Weevil. The Leaves of Pellitory of the Wall, are reported to deſtroy theſe Inſects.

CURCUMA. Offic. J. Comm. Hort. Amſt. 107. Park. Theat. 1584. Ger. Emac. 32. C. B. Theat. 679. *Curcuma Officinarum*. Hort. Amſt. Cat. 107. *Curcuma radice longa*. Herm. Hort. Lugd. Bat. 208. C. Comm. Flor. Mal. 99. *Curcuma foliis longioribus & anguſtioribus*. Breyn. Prod. 2. 40. *Curcuma ſive Terra merita, Officinarum radice crocea*. J. B. 2. 746. *Curcuma ſive Officinarum Terra merita*. Chab. 245. *Cyperi genus ex India*. C. B. Pin. 37. *Crocus Indicus, Arabibus Curcum, Officinis noſtris, radix Curcuma dicta*. Bon. 116. *Cannacorus radice crocea ſive Curcuma Officinarum*. Tourn. Inſt. 367. Boerh. Ind. A. 2. 127. *Manjella Kua*. H. M. P. 11. 21. *Kaha*. Herm. Muſ. Zeyl. 30. TURMERIC.

This is a longiſh, firm, tuberous Root, of a browniſh yellow on the Outſide, and a deep ſaffron Colour within; of a ſtrong Scent, and a hot, but ſomewhat bitteriſh, Taſte. It comes from the *Eaſt Indies*. It is well deſcrib'd by *Herman* in his *Hortus Lugduno-Batavus*, *P.* 209. who ſays, "That it has "a tuberous long Root running acroſs the upper Part of the "Earth, like Ginger, of the Thickneſs of a Finger, having "many round knotted Circles, and many large Fibres; from "each of which Knots ſpring three or four large Leaves upon "large Foot-ſtalks: They are about a Span long, and ſcarce "half ſo broad, ſharp-pointed, and very much reſembling "the Leaves of the Canna Indica. The Flowers grow out "of the ſtrongeſt young Roots, on pretty long Foot-ſtalks, in "Faſhion of long ſcaly Spikes, firſt of a pale green, and afterwards of a reddiſh yellow Colour; from among which come "forth yellow or red Flowers, in Shape like thoſe of the Canna "Indica, but ſmaller; which are ſucceeded by tricapſular "Seed-veſſels, containing ſmall round Seed."

This Plant grows copiouſly in the Woods of the *Eaſt Indies*, and is propagated both from the Seed, and the Buds cut from the Root. It is ſaid, that in that Country there is ſcarce a Garden in which it is not cultivated for the ſake of the Root, which becomes ripe, and is dug up, after the Flowers are wither'd. Becauſe the Root tinges Bodies with a yellow Colour, juſt as the garden Saffron does; 'tis therefore call'd *Crocus Indicus*, and *Curcuma*, which is a Name given by the *Arabians* to every Root of a ſaffron Colour. The *Portugueſe* call it *Saffran de Terra*, or ſubterraneous Saffron. In the Shops it is call'd *Terra Merita*, becauſe, when reduced to a Powder, it reſembles that Species of yellow Earth call'd Oker. Some of the Literati are of Opinion, that this Plant is the Cyperus Indicus of *Dioſcorides*, which, he ſays, "grows in "the Form of Ginger, is poſſeſſed of the Bitterneſs, and "other Virtues, of Saffron, when chew'd; and which, when "the Hairs are anointed with it, ſpeedily makes them fall off." Hence we underſtand, why ſome make a Diſtinction between the Curcuma of the *Greeks*, of which we now ſpeak, and that of the *Arabians*, which they take for the greater Celandine. According to *Bontius*, and *Rumphius*, in his *Herbarium Amboinenſe*, the *Indians* levigate it on Marble, together with other fragrant and aromatic Species, which they reduce to the Conſiſtence of an Ointment, with newly-expreſs'd Oil of Coco, or any other Oil. With this Preparation they anoint their Bodies, to defend them from the troubleſome Bites of Flies, for the ſake of its grateful Smell, in order to keep themſelves warm in cold and rainy Days, and with an Intention to leſſen the intenſely cold Paroxyſms of Fevers. This Species of Ointment is by them call'd *Borri-Borri*, or *Boberri*, with them the moſt common Name for Turmeric. The Inhabitants of that Country find, from daily Experience, that the recent Root of Turmeric bruiſed, ſprinkled with Oil of *Indian* Coconut, roaſted in its own Leaves, under the Aſhes, and applied to the Parts oppoſite to thoſe in which Splinters, Thorns, or the Points of Arrows, are lodg'd, ſoon expels theſe extraneous Bodies. When prepar'd in the ſame manner, and applied, it is alſo ſaid to ſoften Impoſtumations, to reſolve obſtinate and inveterate Tumors, to conglutinate recent Wounds, to ſoften and deterge callous and ſordid Ulcers, to alleviate the Pains attending Contuſions and Sugillations, and to afford Relief in Luxations. It is alſo uſed as a Suppoſitory, when reduc'd to a proper Form, and anointed with Salt and Oil. Its Juice is dropt into the Eyes, in order to remove Defluxions and Inflammations; and pour'd into the Ears, with an Intention to ſoften and maturate Tubercles. It alſo checks Inflammations and Eryſipelas, when anointed with it; and, when mix'd with Juice of Lemons, and applied by way of Ointment to the Parts affected, it is ſaid to cure the Itch. *Bontius* obſerves, that the Inhabitants of *China* uſe this Root like that of the white Hellebore, in their ſternutatory Preparations. Beſides, the *Indians* make much uſe of it as a grateful Seaſoning in the Preparation of their Aliments. The Juice, or Powder of this Root, is alſo uſed for promoting a Diſcharge of the Urine, provoking the Menſes, and expelling the Secundines; as alſo for reſiſting and preventing Intoxication. This Root, imported from the *Eaſt Indies*, is alſo uſed by the *Europeans* for medicinal Purpoſes; and we commonly divide it into two Kinds, the round, and the long; but this Diviſion is groundleſs, ſince theſe apparently diſtinct Species, are but different Parts of one and the ſame Root. The round is a Congeries of tuberoſe Glands; whereas the long are the ſeveral Branches or Shoots ariſing from them. That is eſteem'd beſt, which is recent, freſh, thick, heavy, and hard to be broken. It ſeems to conſiſt of an oleous volatile Salt, in Conjunction with a bitter Sal Salſum; both of which are involv'd and wrapt up in viſcid and earthy Parts. Abſtracting from its ſaffron-colour'd Juice, which it yields when chew'd, it ſeems to be poſſeſs'd of Virtues very much reſembling thoſe of Ginger, though its Taſte is ſomewhat more faint and languid. It communicates its Colour to the Urine, which, by the Uſe of it, aſſumes a ſaffron Colour, and tinges Linen. Hence we may eaſily deduce its medicinal Virtues, and conclude, that it is moderately ſtimulating, reſolvent, and aperient. For this Reaſon, it is highly extol'd as an efficacious Remedy in Obſtructions of the Lungs, Liver, and Spleen; in Infarctions of the meſeraic Veins; as alſo againſt the Stone in the Kidneys and Bladder; and for provoking the Menſes, and facilitating Labour: According to *Juncker*, it is of very conſiderable Service in cold Diſorders ariſing from a mucid and corrupted Serum; as alſo in Cachexies, Dropſies, and œdematous Swellings of the Feet. But it is a precarious Medicine, when uſed againſt the Stone, or in difficult Labours, ſince, in theſe Caſes, the only good Effects it can produce, are to be aſcrib'd to its diuretic Virtue. But it is moſt of all extol'd on account of its Efficacy in the Jaundice; for which Purpoſe, the *Chineſe* preſerve it in Sugar. But *Wedelius*, in his *Amœnitates Materiæ Medicæ*, gives the Preference to its Powder, mix'd with an equal Quantity of the Salt of Wormwood. *Juncker*, when treating of the Virtues of Turmeric, uſes the following Words: "It is juſtly cele"brated for curing the Jaundice, provided it is exhibited at a "proper Time, when the Body is not intenſely hot, and "when there is no violent Congeſtion of Blood to the Liver; "but, at the ſame time, I could never find any ſpecific "Virtue in it againſt this Diſeaſe." That this Root is of ſingular Efficacy againſt Stones in the Gall-bladder, we learn from *Hoffman*, in his *Clavis Schroderiana*, where we have an Account of a Man afflicted with moſt acute Pains in his Right Hypochondrium, who, by taking half a Dram of Turmeric-root in a Draught of warm butter'd Ale, was in two Hours time freed from his Pains, and voided ſome ſmall Stones, of a clayiſh

claviſh reſplendent Colour, by Stool, by which means he was reſtor'd to perfect Health. For internal Uſe, its Doſe in Subſtence is, from a Scruple to a Dram; but, in Decoctions and Infuſions, two Drams of it are generally preſcrib'd. The *Pulvis*, or the *Species Diacurcumæ*, does not in the leaſt partake of the Turmeric, but derives the Name from the Saffron.

CURMI, κέρμι. *Dioſcorides*, *Lib.* 2. *Cap.* 110. informs us, that this is a Drink made of Barley, which is frequently uſed inſtead of Wine; but that it cauſes Pains of the Head, generates bad Juices, and prejudices the Nerves. Such a Kind of Liquor, ſays he, is alſo prepared of Wheat, in the Weſtern Parts of *Iberia*, and in *Britain*.

CURSUS is ſometimes employed to expreſs any Flux of Humours.

CURTUMA, or CURSUMA. The *Chelidonium minus*. *Rulandus*.

CURURU-APE. The Name of a ſcandent Tree which grows in *Braſil*, bearing Pods, which contain Seeds like Beans. Theſe Seeds, thrown into the Water, deſtroy Fiſh. The green Leaves, bruis'd, and apply'd to recent Wounds, are ſaid to cure them by the firſt Intention, that is, by uniting their Lips.

CURUTU-PALA. H. M. The Name of a Shrub which grows in *Malabar*. The Bark of the Root bruiſed, and drank with warm Water, cures a Diarrhœa; and, taken with Milk, is of Service in a Dyſentery: Bruis'd with Water, and apply'd to Apoſtemations, it is ſaid to reſolve them.

CUSCULIA. See COSCULIA.

CUSCUTA, Offic. Park. Theat. 10. Merc. Bot. 1. 31. Phyt. Brit. 33. Raii Hiſt. 2. 1903. *Cuſcuta major*, C. B. Pin. 219. Raii Synop. 3. 281. Tourn. Inſt. 652. Elem. Bot. 513. Dill. Cat. Giſſ. 143. Rupp. Flor. Jen. 21. Buxb. 89. *Cuſcuta ſive Caſſutha*, Ger. 462. Emac. 577. Mer. Pin. 32. *Caſſuta ſive Cuſcuta*, J. B. 3. 266. Chab. 422. DODDER.

This is a Plant that differs from all others, in having no Leaves, but conſiſting of a Number of long, ſlender, red Filaments or Threads, by which it takes hold, and twiſts about the Plants that are near it, ſucking its Nouriſhment from them. It has ſeveral monopetalous or ſingle-leav'd Flowers, divided generally into four ſhort and narrow Segments, to which ſucceed little round Seed-veſſels, containing each four ſmall Seeds. It grows frequently upon Heaths and Commons, upon the Furze and Nettles, as alſo in the Fields, upon Flax and Tares, doing great Damage, and almoſt choaking them; whence it is call'd by the Country People *Hell-weed*, and *Devil's-guts*.

Dodder is opening and cleanſing, accounted good to purge melancholy and bilious Humours, to open Obſtructions of the Liver and Spleen, good for the Jaundice, and ſerviceable againſt the Itch.

CUSCUTA MINOR. This is thus diſtinguiſh'd:

Epithymum, Offic. Park. Theat. 10. *Epithymum ſive Cuſcuta minor*, C. B. Pin. 219. Raii Hiſt. 2. 1903. *Cuſcuta minor*, Tourn. Inſt. 652. Elem. Bot. 513. Rupp. Flor. Jen. 21. *Cuſcuta minor, ſeu Epithymum*, Buxb. 89. DODDER OF THYME.

This is reckon'd by ſome to be a leſſer Sort of Dodder, growing upon Thyme, as the larger does upon Nettles, Flax, Tares, and the like. It is compoſed of a Number of very ſmall Threads, of a reddiſh-brown Colour, matted together, having frequently the Tops and Stalks of Thyme amongſt it, of a pretty ſtrong Scent. It is brought to us from *Leghorn* and *Turky*.

It is accounted a Purger of Melancholy and ſerous Humours, and to be uſeful in hypochondriac and melancholy Diſorders, and for thoſe affected with the Spleen and Vapours; as alſo for the Itch, and other cutaneous Diſtempers.

The only officinal Preparation, taking the Name from this Plant, is the *Decoctum Epithymi*.

The Dodder of Thyme is found upon almoſt all Plants. It cannot live without their Aſſiſtance, for the Roots periſh ſoon after the Seed is come up; and then this Plant, which is nothing but a Tuft of reddiſh Hairs, nouriſhes itſelf by twiſting about the neighbouring Plants. Its Fibres do not only embrace them, but faſten themſelves ſtrongly to them by rough Nipples. Theſe Nipples inſinuate their Points into the Pores of the Bark, burſt the Veſſels of which it is compoſed, and receive the extravaſated nutritious Juice. The Flowers grow in round Bunches. Each Flower is a little Cup, of about two Lines Diameter, perforated at the Bottom, expanded, cut into four or five Segments, and adorn'd with ſome very ſhort Chives, loaded with yellow Summits. The Empalement is cut after the ſame manner with the Petal, and ſends forth a Pointal, which faſtens itſelf in the Hole of the Petal, and afterwards becomes a membranous Fruit, almoſt round, raiſed with three or four rounded Ribs. This Fruit is perforated at the Bottom, and faſtened to a little Capſule at the Bottom of the Empalement, which wraps up the lower Part of the ſame Fruit: It contains ſome ſmall brown Seeds. That which is brought from the *Levant*, under the Name of *Venetian* Dodder, does not purge, as I have experienced ſeveral times. It is rather ſtomachic and aperitive. *Martyn's Tournefort*.

Decoctum Epithymi.

DECOCTION *of* DODDER *of* THYME.

Take of the Chebulan, and Indian Myrobalans, of each half an Ounce; of Arabian Stœchas, and Sena, of each one Ounce; of Fumitory, half an Ounce; of Eupatorium, five Drams; of Polypody of the Oak, ſix Drams; of Turpeth-root, half an Ounce; of Spring-water, two Quarts: Boil all together to one Quart; and then add, of the Dodder of Thyme, and ſtoned Raiſins, of each one Ounce; and give them another Boil together. When taken from the Fire, add of black Hellebore-root, of Agaric, and Salt of Tartar, of each half an Ounce. Let them ſtand in Infuſion together ten Hours, and then preſs out the Liquor.

CUSPIDATED Plants are ſuch Plants, the Leaves of which are pointed like a Spear.

CUSPIS. Properly the Point of a Spear, but applied to the Glans Penis. Alſo a ſort of Bandage.

CUTAMBULI. Certain Worms, either under the Skin, or upon it, which, by their creeping, cauſe an uneaſy Senſation. Alſo wandering ſcorbutic Pains, which are very ſevere, and cauſe a Senſation, ſomewhat like that produc'd by theſe Worms.

CUTICULA. The Scarf-ſkin. See CUTIS.

CUTICULARIS MEMBRANA. The Dura Mater.

CUTILIÆ. Certain cold Fountains in *Italy*, mention'd by *Celſus* and *Pliny*, which were uſed as Baths.

CUTIO. A Wood-louſe. See MILLEPEDES.

CUTIS. The Skin.

All the Parts of the human Body are inveſted by ſeveral common and univerſal Coverings, to which Anatomiſts give the Name of Integuments.

There have been many Diſputes about the Number of theſe Integuments: The Antients reckon'd five, the Epidermis, Skin, Membrana Adipoſa, Panniculus Carnoſus, and Membrana Muſculorum Communis.

The firſt three of theſe Coverings are truly common or univerſal, that is, extended over all the Parts of the Body; but, properly ſpeaking, they ought to be reduc'd to two; for I look upon the Epidermis rather as a Part, or an Epiphyſis of the Skin, than as an Integument.

The two other Coverings, mentioned by the Antients, are not univerſal, but confin'd to particular Parts of the Body.

The TRUE SKIN.

The Skin is a Subſtance of very large Extent, made up of ſeveral Kinds of tendinous, membranous, vaſcular, and nervous Fibres, the Intertexture of which is ſo much the more wonderful as it is difficult to unfold; for their Directions are as various as thoſe of the Stuff of which an Hat conſiſts.

This Texture is what we commonly call Leather, and it makes, as it were, the Body of the Skin. It is not eaſily torn, may be elongated in all Directions, and afterwards recovers itſelf, as we ſee in fat Perſons, in Women with Child, and in Swellings; and it is thicker, and more compact, in ſome Places than in others.

Its Thickneſs and Compactneſs are not, however, always proportionable; for on the poſterior Parts of the Body it is thicker, and more lax, than on the fore Parts; and on the Palms of the Hands, and Soles of the Feet, it is both very thick, and very ſolid. It is generally more difficult to be pierced, by pointed Inſtruments, in the Belly than in the Back.

The outer Surface of this Subſtance is furniſhed with ſmall Eminences, which Anatomiſts have thought fit to call Papillæ, in which the capillary Filaments of the cutaneous Nerves terminate by ſmall radiated Pencils.

Theſe Papillæ differ very much in Figure and Diſpoſition, in the different Parts of the Body, and they may be diſtinguiſhed into ſeveral Kinds.

The greateſt Part of them is flat, of different Breadths, and ſeparated by Sulci, which form a kind of irregular Lozenges. The pyramidal Figure aſcribed to them is not natural, and appears only when they are contracted by Cold, Diſeaſes, by Boiling, or by ſome other artificial Preparation, which alters their ordinary Structure.

The Papillæ of the Palm of the Hand, of the Sole of the Foot, and of the Fingers and Toes, are higher than on the other Parts of the Body; but they are likewiſe ſmaller, cloſely united together, and placed, as it were, endwiſe, with reſpect to each other, in particular Rows, which repreſent on the Skin all kinds of Lines, ſtrait, crooked, waving, and ſpiral. Theſe ſeveral Lines are often diſtinctly viſible in thoſe Parts of the Palm of the Hand which are next the firſt Phalanges of the Fingers.

The red Part of the Lips is made up of Papillæ, repreſenting very fine Hairs or Villi, cloſely united together.

There

There is another particular Kind under the Nails; the Papillæ being there more pointed, or, in a manner, conical, and turned obliquely toward the Ends of the Fingers. Thoſe which are found in the hairy Scalp and Scrotum, are ſtill of other Kinds.

The Papillæ of the firſt and ſecond Kinds appear to be ſurrounded at their Baſes by a ſoft, mucilaginous, and pretty viſcid Subſtance, which fills the Interſtices between them, and repreſents a kind of Net-work, or Sieve, the Maſhes or Holes of which ſurround each Papillæ. This Subſtance is commonly call'd Corpus Reticulare or Mucoſum.

The Origin of this reticular or mucous Body has not hitherto been ſufficiently explain'd; and it has not been determin'd, whether it forms an univerſal Integument, or whether it belongs more properly to the Skin than to the Papillæ or Epidermis.

To demonſtrate this reticular Subſtance in public Courſes, the common Method is to take the boil'd Tongues of Oxen or Sheep; but this Method is fallacious, and may lead the greateſt Number of the Spectators into Miſtakes.

In Inflammations we obſerve a reticular Texture of capillary Veſſels, more or leſs extended on the Surface of the Skin; and curious Anatomiſts demonſtrate the ſame thing, by fine Injections, which may be looked upon as artificial Inflammations. But neither of theſe Methods proves, that, in the natural State, theſe Veſſels are Blood-veſſels; that is, that they contain the red Particles of the Blood.

It is more probable, that its vaſcular Texture is only a Continuation or Production of the very ſmall Capillaries of the Arteries and Veins, which, in the natural State, tranſmit only the ſerous Part of the Blood, while the red Part continues its Courſe through wider Ramifications, which more properly retain the Name of Blood-veſſels.

This vaſcular Texture is of various Forms and Figures, in the different Parts of the Body. It is not the ſame in the Face with what it is elſewhere, neither is it alike on all the Parts of the Face, as may be diſcover'd by the moſt ordinary Microſcopes; and from hence we might, perhaps, be enabled to give a Reaſon, why one Part of the Body turns red more eaſily than another.

The inner Surface of the Skin is covered by very ſmall Tubercles, call'd commonly cutaneous Glands; and they are likewiſe term'd Glandulæ Miliares, becauſe of ſome Reſemblance which they are ſuppoſed to bear to Millet-ſeeds.

Theſe Tubercles are partly fixed in ſmall Foſſulæ, in the Subſtance of the Skin, which anſwer to the ſame Number of ſmall Cavities in the Corpus Adipoſum. Their excretory Ducts open on the outer Surface of the Skin, ſometimes in the Papillæ, and ſometimes on one Side of them, as may be ſeen in the Ends of the Fingers, even without a Microſcope.

The greateſt Part of them furniſhes Sweat, and others a fatty oily Matter, of different Thickneſſes, as in the hairy Scalp, in the Back, behind the Ears, and at the lower Part of the Noſe, where this Matter may be ſqueez'd out in form of ſmall Worms. On the Head this is call'd Dandriff, and Filth or Naſtineſs on the other Parts of the Body.

By macerating the Skin in Water, or in any other proper Liquor, theſe Corpuſcles become more viſible, eſpecially in the Skin of the lower Part of the Noſe, and of the Axilla. The late M. *Duverney* demonſtrated to the Royal Academy, that the Structure of ſome of theſe cutaneous Glands reſembled the Circumvolutions of ſmall Inteſtines, plentifully ſtored with capillary Veſſels. The illuſtrious M. *Morgagni*, Profeſſor at *Padua*, has given the Name of Glandulæ Sebaceæ to thoſe which furniſh the unctuous Matter above-mention'd.

Beſides theſe Corpuſcles, there are other ſmall ſolid Bodies, almoſt of an oval Figure, contain'd in the Subſtance of the Skin. Theſe are the Roots or Bulbs from whence the Hairs ariſe, and ſome of them are ſituated within the inner Surface of the Skin.

The Skin has ſeveral conſiderable Openings, ſome of which have particular Names, ſuch as the Fiſſure of the Palpebræ, the Nares, the Mouth, the external Foramen of the Ears, the Anus, and Openings of the Parts of Generation.

Beſides theſe, it is perforated by an infinite Number of ſmall Holes, call'd Pores, which are of two Kinds: Some are more or leſs perceivable by the naked Eye; ſuch as the Orifices of the milky Ducts of the Mammæ, the Orifices of the excretory Canals of the cutaneous Glands, and the Paſſages of the Hairs.

The other Pores are imperceptible to the naked Eye, but viſible thro' a Microſcope; and their Exiſtence is likewiſe proved by the cutaneous Tranſpiration, and by the Effects of topical Applications; and, from theſe two Phenomena, they have been divided into arterial and venous Pores.

We ought likewiſe to obſerve the Adheſions and Folds of the Skin. It is every-where united to the Corpus Adipoſum; but it adheres to it much more cloſely in ſome Parts than in others, as in the Palm of the Hand, Sole of the Foot, Elbow, and Knee.

Some Plicæ, or Folds in the Skin, depend on the Structure of the Membrana Adipoſa, or Cellularis, as thoſe in the Neck and Buttocks; others do not depend on that Membrane, ſuch as the Rugæ in the Forehead and Palpebræ, which are form'd by cutaneous Muſcles, and diſpoſed more or leſs in a contrary Direction to theſe Muſcles. Theſe Folds increaſe with Age.

There is, beſides, a particular kind of Folds in the Elbow, Skin of the Knee, and Condyles of the Fingers and Toes, which are owing neither to the Conformation of the Membrana Adipoſa, nor to any Muſcle.

Laſtly, there is a kind of Plicæ, or rather Lines, which croſs the Palm of the Hand, Sole of the Foot, and correſponding Sides of the Fingers and Toes, in different Directions.

The CUTICULA, *or* EPIDERMIS.

The Outſide of the Skin is covered by a thin tranſparent Web, cloſely joined to it, which is call'd Epidermis, Cuticula, or the Scarf-ſkin.

The Subſtance of the Cuticula appears to be very uniform on the Side next the Skin, and to be compoſed, on the other Side, of a great Number of very fine, ſmall, ſquamous Laminæ, without any Appearance of a fibrous or vaſcular Texture, except ſome ſmall Filaments, by which it is connected to the Papillæ, and which perhaps are detach'd from thence.

This Subſtance is very ſolid and compact, but yet capable of being extended and thicken'd, as we ſee by ſteeping it in Water, and by the Bliſters raiſed on the Skin by Veſicatories, or any other Means; and from thence it ſhould ſeem, that it is of a ſpongy Texture. It yields very much in Swellings, but not ſo much as the Skin, without breaking or cracking.

The Origin of the Epidermis is as obſcure as its Regeneration is evident, ſudden, and ſurpriſing; for let it be deſtroy'd ever ſo often, it ſtill grows again. It probably ariſes from a Subſtance which tranſudes from the Papilla, and therefore the Antients were in the right to call it an Efflorescence of the Skin.

We muſt not, however, imagine, that it is the Air which dries this mucilaginous Matter, and gives it the Form of the Epidermis; becauſe it is found equally in the Fœtus, which ſwims continually in Water; and it grows even on the Palate, when it has been deſtroy'd by too hot Food; and under Plaiſters applied to any Part of the Body.

Hard and reiterated Frictions looſen it inſenſibly, and preſently afterward a new Stratum ariſes, which thruſts the firſt outward, and may itſelf be looſen'd, and thruſt outward by a third Stratum, and ſo on.

It is nearly in this manner that Calloſities are formed on the Feet, Hands, and Knees; and the ſeveral Laminæ or Strata, obſervable at the ſame time on many other Parts of the Body, are owing to the ſame Cauſe, tho' many Anatomiſts have look'd upon them to be natural. It muſt be acknowledged, however, that, on the Palms of the Hands, and Soles of the Feet, the Epidermis is commonly thicker than on any other Part.

The Epidermis adheres very cloſely to the cutaneous Papillæ, from which it may be ſeparated by Boiling, or, which is a much better Way, by ſteeping for a long time in cold Water. It is not impoſſible to ſeparate it with the Knife; but this Management teaches us nothing of its Structure.

It adheres ſtill cloſer to the Corpus Reticulare, which is eaſily raiſed along with it; and they ſeem to be true Portions or Continuations of each other.

It is generally believed, that the Colour of the Epidermis is naturally white, and that the apparent Colour thereof is owing to that of the Corpus Mucoſum. But, when we examine ſeparately the Epidermis of Negroes, we find no other Whiteneſs in it, than in a thin tranſparent Lamina of black Horn.

The Epidermis covers the Skin thro' its whole Extent, except at the Places where the Nails lie. It is mark'd with the ſame Furrows and Lozenges as the Skin, and has the ſame Openings and Pores; and though it may be ſaid to paſs the Bounds of the Skin, where it is continued inward, through the great Openings, yet, at theſe Places, it loſes the Name of Epidermis.

When we examine narrowly the ſmall Pores or Holes through which the Sweat paſſes, the Epidermis ſeems to inſinuate itſelf into theſe, in order to complete the excretory Tubes of the cutaneous Glands. The Foſſulæ of the Hairs have likewiſe the ſame Productions of the Epidermis; and it ſeems to give a ſort of Coat or Bark to the Hairs themſelves. Laſtly, the almoſt imperceptible Ducts of the cutaneous Pores are lined by it.

Having macerated the Skin for a long time in Water, the Epidermis, with all its Elongations, may be ſeparated from it; and, in that Caſe, theſe Productions carry along with them the Hairs, the Bulbs, and even the axillary Glands.

By this Obſervation we may explain, how Bliſters may remain for a long time on the Skin, without giving Paſſage through theſe Holes, to the Matter which they contain; which Holes ought to be increaſed, one would think, by the Dilatation and Tenſion of the Epidermis.

For when the Epidermis is ſeparated from the Skin, it carries along with it ſome Parts of theſe cutaneous Fibres, which

being compreſs'd by the Matter contained in the Bliſter, ſhut the Pores of the ſeparated Epidermis, like ſo many Valves; and it is probably theſe ſmall Portions which have been taken for Valves of the cutaneous Tubes.

USES of the SKIN.

It is principally and properly the filamentary Subſtance, call'd the Body of the Skin, which is the univerſal Integument of the Body, and the Baſis of all the other cutaneous Parts, each of which has its particular Uſes.

The Skin is able to reſiſt external Injuries to a certain Degree, and ſuch Impreſſions, Frictions, and Strokes, to which the human Body is often liable, as would hurt, wound, and diſorder the Parts of which it is compoſed, if they were not defended by the Skin.

The Papillæ are the Organ of Feeling, and contribute to an Evacuation, call'd inſenſible Tranſpiration. They likewiſe ſerve to tranſmit from without, inwards, the ſubtle Particles or Impreſſions of ſome Things applied to the Skin. The firſt of theſe three Uſes depends on the Extremities of the Nerves; the ſecond, on the arterial Productions; and the third, on the Productions of the Veins.

The cutaneous Glands ſecrete an oily Humour of different Conſiſtences, and they are likewiſe the Origin of Sweat. But, without the Epidermis, both Papillæ and Glands would be diſturb'd in their Functions, on which great Diſorders muſt enſue.

In order to explain the Mechaniſm of Feeling, or of the Touch, we ſhould firſt be made acquainted with the Senſes in general, for which this is not a proper Place; and, therefore, all that I ſhall obſerve here is, that there are at leaſt two Sorts of Feeling, one general, the other particular.

Particular Feeling is accompanied with a certain determinate Impreſſion, by which we are enabled to diſcern Objects in a very diſtinct Manner, and this is properly what is call'd the Touch; the proper Organ of which is at the Inſide of the Ends of the Fingers. General Feeling is indeterminate and indiſtinct, not being accompanied with the ſame Impreſſion as the former.

Theſe Differences in the Senſe of Feeling, depend on thoſe of the Papillæ, which, in Effect, appear to be more cloſe, and made up of a greater Number of nervous Filaments, at the Ends of the Fingers, than any-where elſe; for the nervous Ropes that go to the Fingers, are proportionably larger than thoſe that go to any other Part of the Body.

The Epidermis ſerves to keep the Pencils, or nervous Filaments of the Papillæ, in an even Situation, and without Confuſion; and it likewiſe moderates the Impreſſions of external Objects. Particular, as well as general Feeling, is more or leſs perfect, in proportion to the Thinneſs of the Epidermis; Calloſities in which weaken, and ſometimes deſtroy, both.

Another Uſe of the Epidermis is, to regulate the cutaneous Evacuations already mentioned; the moſt conſiderable of which is inſenſible Tranſpiration. By this we underſtand a fine Exhalation, or a kind of ſubtle Fume, which flows out of the Body imperceptibly, and in different Quantities. It might be call'd cutaneous Tranſpiration, to diſtinguiſh it from pulmonary Tranſpiration.

This cutaneous Exhalation becomes ſenſible, by applying the End of the Finger, or Palm of the Hand, to the Surface of a Looking-glaſs, or of any other poliſh'd Body; for it preſently looks dull, and appears to be cover'd with a condenſed Vapour. It ſeems to me, that the convex Side of the Hand and Fingers does not furniſh ſo great a Quantity of this Exhalation, as the Palm of the Hand, and the Inſide of the Fingers, eſpecially the Extremities, which points out one Uſe of this Tranſpiration; which is, to keep the nervous Filaments in due Order for particular Feeling.

Another Proof of inſenſible Tranſpiration is the famous Experiment of *Sanctorius*, continued for thirty Years without Interruption; by which he found, that this Evacuation, in one Day, was equal to all the ſenſible Evacuations for fifteen Days.

This Calculation is not agreeable to what has been made in other Countries; particularly thoſe from the like Experiments made by M. *Dodart*, and *Morin*, of the Royal Academy of Sciences; and by Dr. *James Keill*, as publiſh'd in his *Statica Britannica*. Neither can the Balance inform us, whether the cutaneous Tranſpiration is greater or leſs than the pulmonary.

A long time ago, I diſcover'd a Method to render this Tranſpiration viſible, to the Diſtance of about half a Foot from the Body; and I mention'd it in a Theſis printed at *Copenhagen*. If we look at the Shadow of a bare Head, on a white Wall, in a Sun-ſhiny Day, and in the Summer Seaſon, we ſhall perceive, very diſtinctly, the Shadow of a flying Smoke, riſing out of the Head, and mounting upward; though we cannot ſee the Smoke itſelf. We may try the ſame Experiment with a Dog or Fowl.

It is much in the ſame manner, that the inviſible Exhalations from burning Charcoal throw a very diſtinct Shadow; and that the inviſible Smoke of a Chafing-diſh, Warming-pan, or Stove, make all diſtant Objects appear trembling, when view'd either over, or on either Side of thoſe Utenſils.

The inſenſible cutaneous Evacuation is perform'd ſimply, and without any Artifice, through the ſmall Pores already mentioned, much in the ſame manner as we obſerve the Smoke to ariſe from the Entrails of an Animal newly kill'd and open'd. It is a particular and continual Diſcharge of the Serum of the Blood through the capillary Veſſels of the Skin.

It is naturally very moderate, and it is more abundant in the Summer, before a good Fire, after ſtrong Exerciſe, and during the Diſtribution of the Chyle, than in the Winter, in cold Places, during Inaction, and before Meals.

The tranſpir'd Matter appears to be, in ſome Degree, ſaline, as may be obſerv'd by applying the Tongue to the Palm of the Hand, when it has not been waſh'd lately. This is, perhaps, the Reaſon, why we feel leſs Pain when a Wound is touch'd with the Finger cover'd with Silk, than with the naked Finger; but this Inconveniency might eaſily be prevented by waſhing the Hands and Fingers very well, immediately before we begin to dreſs Wounds.

The Matter of the other two Evacuations, the Sweat, and thick oily Subſtance, comes principally from the Glands of the Skin. Each of them differs according to the different Parts of the Body where they are found, as may be obſerv'd both of the Filth and Sweat of the Head, Armpits, Hands, and Feet.

This Filth or Naſtineſs of the Skin is an unctuous or fatty Matter, collected inſenſibly on the Epidermis, where it thickens, and forms a ſort of Varniſh, which in time becomes prejudicial, by ſtopping up the Paſſages of cutaneous Tranſpiration.

This Collection is more readily made in Winter, than in Summer; and this is the Reaſon why it is more difficult to keep the Hands clean in cold, than in warm Weather. *Winſlow.*

CYAMUS. A Bean. See FABA.

Cyamus alſo ſignifies a Woodlouſe roll'd up in the Form of a Bean; which Form theſe Inſects put themſelves into, upon the Apprehenſion of any Danger.

CYANUS. The Blue-bottle.

The Characters are,

The Extremity of the Pedicle runs into a very ſcaly Calyx, and the Sides of the Scales are hairy; the Diſk is almoſt flat and fungous, on which grow oblong, and almoſt cylindrical Ovaries, ſurrounded with an Annulus, or Ring, on the upper Part, on which ſtand erected downy Hairs. Within theſe Hairs, round the Border of the Ovary, grows a large Flower, tubulous, and running into the Figure of a *Cornu copiæ*. Theſe Flowers are almoſt always barren, having no Tube or Stamina. The interior Flowers are leſs tubulous, bellied on the upper Part, with a quinquefid Border; from the inferior Part of theſe Flowers, on the Inſide, ariſe Stamina, which, uniting in a Tube, cloſely embrace a long Pointal, furniſh'd with a bifid Apex, and proceeding from the Centre of the Apex of the Ovary. The Floſcules which conſtitute the Border of the greater Flower, are of a larger Size, monopetalous, and, in a manner, bilabiated; the Floſcules about the Middle are leſs, and equally divided. *Boerhaave, Ind. alt.*

1. Cyanus; montanus; latifolius; vel verbaſculum Cyanoides. *C. B.* 273. *Boerh. Ind. A.* 145. *Cyanus major.* Offic. Ger. 592. Emac. 732. Raii Hiſt. 1. 322. *Cyanus major vulgaris.* Park. 481. *Cyanus hortenſis.* Tourn. Inſt. 447. *Cyanus Alpinus radice perpetua.* J. B. 3. 23. Chab. 340. Hiſt. Oxon. 3. 134. GREAT BLUE-BOTTLE.

The Leaves of this Blue-bottle are but three or four Inches long, and about an Inch broad, ſharp-pointed at the Ends, not at all ſerrated about the Edges, of a green Colour above, and white and woolly underneath. It grows about a Foot or more high, bearing at the Top of the Stalks (which are not much branched) ſcaly Heads, each of whoſe Scales is border'd with a black Edge; their Heads are thinly ſet about with a Row of hollow wide-mouth'd Flowers, jagged at one End, and ſlender and narrow at the other, of a deep-blue Colour, ſet about a reddiſh-purple Thrum. The Seed is round and long, incloſed in Down. It grows in Gardens, and flowers in *June*. The Leaves and Flowers are the Parts in Uſe, and thoſe but ſeldom.

This is reckon'd among the vulnerary Plants; the Juice being commended againſt Bruiſes and Contuſions from Falls, though a Vein be broken, and the Party ſpit Blood; as alſo to heal any Cut, or green Wound.

2. Cyanus; anguſtiore folio & longiore; Belgicus. *H. R. Par. M. H.* 3. 134. THE GREATER NARROW-LEAV'D BLUE-BOTTLE, OR GLOBE-FLOWER.

3. Cyanus; floridus; odoratus; Turcicus; ſive Orientalis; major. *Park. Theat.* 481. *M. H.* 3. 134. *a.* THE PURPLE SWEET SULTAN.

4. Cyanus; floridus; odoratus; Turcicus; ſive Orientalis; major, flore albo. *H. R. Par. M. H.* 3. 134. *a.* THE WHITE SWEET SULTAN.

5. Cyanus; floridus; odoratus; Turcicus; ſive Orientalis; major; flore incarnato. *H. L. a.* SWEET SULTAN WITH A PALE FLOWER.

6. Cyanus; floridus; odoratus; Turcicus; ſive Orientalis; major; flore luteo. *H. L. a.* THE YELLOW SWEET SULTAN.

7. Cyanus; ſegetum; flore cœruleo. *C. B.* 273. *Tourn. Inſt.* 446. *Boerh. Ind. A.* 145. *Cyanus minor.* Offic. *Cyanus minor, Baptiſecula.* Mont. 38. *Cyanus vulgaris.* Ger. 592. Emac. 732. *Cyanus minor, vulgaris.* Park. 482. *Cyanus Segetum vulgaris minor annuus.* Hiſt. Oxon. 3. 134. *Cyanus.* J. B. 3. 21. Chab. 340. Dill. Cat. 96. Raii Synop. 81. Hiſt. 1. 321. SMALL BLUE-BOTTLES.

The ſmall Blue-bottle grows to be two or three Foot high, and is much more divided into Branches than the great Blue-bottles, with many ſlender whitiſh-corner'd Stalks; the lower Leaves are long and narrow, having three or four long Laciniæ ſet on each Side, green above, and whitiſh underneath. Thoſe which grow on the Stalks, are more narrow and Graſs-like, and wholly white, without any Laciniæ; on the Tops of the Stalks grow ſmaller ſcaly Heads, more thickly beſet with Flowers, in Shape like the great Blue-bottle, but much ſhorter, of a pure azure Blue. The Seed is ſmall, white, and ſhining. The Root is woody, with many Fibres, periſhing yearly. It grows every-where among the Corn, flowering in *June* and *July*.

Camerarius affirms, that in *Saxony* they give a Glaſs of Beer, in which a Handful of it has been boil'd, to thoſe who have the Jaundice, and Retention of Urine. The ſame Author bathed the Gums of young Children with the diſtil'd Water of the *Cyanus*, mix'd with the Juice of Cray-fiſh, to make them cut their Teeth eaſy: The Powder of this Plant, according to the ſame Author, reſolves the *St. Antony's Fire* in the Face. *Tragus* ſays, that half a Dram of the Powder of the Seed of Blue-bottles is a pretty good Purge; and that the diſtil'd Water of its Flowers is excellent for the Redneſs and Inflammation of the Eyes; ſome Saffron and Camphire may be added to this Water, to render it more active. In fine, the Decoction of *Cyanus* is diuretic and emmenagogic. *Martyn's Tournefort.*

According to *Ettmuller*, the Root of this Plant, kept in one's Hand till it becomes warm, is by ſome ſaid to ſtop Hæmorrhages of the Noſe; and, if it is gather'd on the twenty-eighth Day of *May*, call'd *Corpus Chriſti Day*, all Hæmorrhages whatever. According to *Tragus*, half a Dram of its Root, reduced to Powder, and exhibited internally, evacuates the Bile by Stool. According to *Pontedera*, it abounds with reſinous Parts; for which Reaſon ſome, when the Intention is to purge, exhibit a Dram and an half of its Powder in ſome proper Liquor.

The Flowers are uſed in Medicine, and have many repugnant, and in *Geoffroy*'s Opinion, uncertain and precarious Virtues aſcrib'd to them: Thus, for Inſtance, they are ſaid to be exhibited with Succeſs, in order to extinguiſh feveriſh Heats; to prevent the bad Effects ariſing from the Stings and Bites of venomous Animals; to reſiſt Putrefaction, and remove Contagion. They are alſo ſaid to be beneficial to thoſe who are diſorder'd by Falls from Eminences, and Contuſions, and to ſuch as, by any Misfortune whatever, have internal Concretions of Blood. By ſome Authors, they are recommended in the Jaundice, the Dropſy, Suppreſſions of Urine, Retentions of the Menſes, the Itch, and Ulcers of all Kinds. *Tragus* informs us, that the Flower and Seeds, made into a Decoction with Wine, and drank, are an excellent Remedy againſt the Wounds inflicted by Spiders and Scorpions. One Dram of the Flowers and Heads reduced to a Powder, and exhibited for ſome time in Wine, is by ſome extol'd as a Remedy of ſingular Efficacy in the Jaundice. According to *Camerarius*, the Natives of *Saxony* boil a Handful of the Flowers in Ale and Butter; which Preparation they exhibit in the Jaundice, and Suppreſſions of Urine. *Hoffman*, in his *Clavis Schroderiana*, informs us, that he found a Decoction of the Flowers effectual for carrying off the Waters by a Diaphoreſis in a beginning Dropſy; and, that the ſame Effect was produced by them in a confirm'd Dropſy, we find in the *Ephemerides, Nat. Curioſ. Decad.* 3. *a.* 5. *o.* 20. The celebrated *Frederic Hoffman*, in his *Diſſertatio de Remed. Domeſticorum Præſtantia*, affirms, that, in a Suppreſſion of Urine, nothing is more effectual for promoting its free Diſcharge, than a Decoction of the Flowers of the ſmall Blue-bottle, eſpecially when mix'd with Nettle-ſeeds. According to *Ettmuller*, the Flower, either alone, or in Conjunction with the Flowers of Larkſpur, infuſed in Wine, or made into a Decoction with Water, gently provokes Urine, the Menſes, and Lochia, when ſuppreſs'd. Hence *Agricola*, in his *Chirurgia Parva*, recommends a Decoction of the Flowers of Blue-bottle, and Larkſpur, in all Diſorders of the Urine. And if to theſe the Flowers of Marigold are added, the Decoction will be appropriated to Diſeaſes of the Uterus. Putrid Ulcers are ſaid to be cured by dropping the expreſs'd Juice of the Flowers into them, or ſprinkling them with their Powder. Linen Cloths, ſays *Pontedera*, impregnated with the Juice of theſe Flowers, are to be applied to putrid Ulcers; by which Remedy, the Ulcer is not only cleanſed, but the Contagion hinder'd from ſpreading to the adjacent Parts. According to *Bauhine*, the Juice of this Flower, if uſed as a Gargle, contributes to the Cure of putrid Ulcers in the Mouth. The ſame Author alſo informs us, that the *Italian* Women uſe a Fumigation of theſe Flowers, in order to remove a Strangulation of the Uterus. According to *Camerarius*, the Flowers and Heads dried, and reduced to a Powder, are, with uncommon Succeſs, ſprinkled upon an Eryſipelas. Theſe Flowers are ſo efficacious in quickening the Sight, that they are by ſome ſaid to render the Uſe of Spectacles and Microſcopes ſuperfluous; for, according to the celebrated *Boerhaave*, when gently dry'd in a Shade, where the Air is not moiſt, and either reduced to a Conſerve with Sugar, or uſed by way of Infuſion, like Tea, they are ſingularly beneficial; firſt, in Caſes where the Eyes are darken'd, and render'd dull, by a Superfluity of thick and ſordid Moiſture. Secondly, in Caſes where the natural Humours of the Eye are inſpiſſated, and become too viſcid. And, thirdly, in Caſes where the Intention is to remove Lippitude. *Timæus* affirms, that in hot, ſaline, and acrid Defluxions of the Eyes, ſingular Relief is afforded by a Liquor prepared in the following Manner:

> Take of the Flowers of Blue-bottle, gather'd before the Riſing of the Sun, as much as you pleaſe: Bruiſe them in a Marble Mortar; put them into a wide-mouth'd Glaſs Veſſel, which is to be cloſe-ſtopt, and expoſed to the Heat of the Sun for a whole Month. Then let the Glaſs be cover'd over with Leaven, put into a Baker's Oven, and bak'd along with Bread; by which means an excellent ophthalmic Oil, or rather Liquor, will be yielded.

The Water of the Flowers of Blue-bottle, diſtil'd with common Water, is by many extol'd as an efficacious Remedy for Inflammations, Redneſs, and Lippitude of the Eyes; as alſo for quickening and ſtrengthening the Sight, if the Eyes are frequently waſh'd with it every Day; but it is ſtill more efficacious in removing Inflammations of the Eyes; if, as *Tournefort* adviſes, a proper Quantity of Saffron and Camphire are added to it. *Ettmuller* informs us, "That the Water of "Blue-bottle-flowers may ſerve as a Vehicle, when, in a Sup"preſſion of Urine, and in the Stone, an Emulſion of the "Seeds of Violets is to be exhibited. The external Uſe of "theſe is ſaid to be of ſingular Advantage in all Diſorders of "the Eyes, eſpecially thoſe ariſing from the Small-pox. The "Water of Blue-bottle-flowers, mix'd with that of Chervil, "is an excellent Remedy in Cataracts, when applied warm "with Linen Cloths; but it will be more efficacious, if a "little, either of Camphire or Saffron, is mix'd with it." With this Water, the Juice is extracted from a live Crab bruiſed, for anointing the Gums of Children in Dentition. This Water, for Diſorders of the Eyes, ought, according to *Geoffroy*, to be prepar'd in the following Manner:

> Take any Quantity of the Flowers of Blue-bottle, gather'd with their Calices; bruiſe and macerate them for twenty-four Hours in a ſufficient Quantity of Snow-water; then diſtil in a gentle Sand-heat. The Water, yielded, is that celebrated Water, to which the *French* have given the Name of *Eau de Caſſe-Lunette.*

The celebrated *Fabregou* informs us, that a Water diſtil'd from the Flowers of Blue-bottle, in Conjunction with Eye-bright, is an excellent Remedy for Inflammations of the Eyes; and if an Addition is made of Muſk, Benjamin, and Orange-flowers, he recommends it for procuring a florid Colour of the Countenance, eſpecially when mix'd with Virgin-honey. Some Authors are of Opinion, that this Plant, and more eſpecially its Flowers, are aſtringent and drying, like Plantain, and that they conſequently act by refrigerating. But *Caſpar Hoffman*, in his Treatiſe *de Medicamentis Officinalibus*, ſeems, with more Juſtice, to maintain the contrary Opinion, in the following Words: "The Bitterneſs, which is ſuffi"ciently manifeſt, as alſo the acrid Taſte of the Leaves, are "ſufficient Proofs, that the Cyanus is not cold, but hot: "The penetrating and deobſtruent Virtues of a Decoction "of it in Wine, or Ale, in Dropſies, the Jaundice, in Falls "from Eminences, Contuſions, and Caſes where there are "internal Concretions of Blood, are alſo ſufficient Proofs of "its hot Qualities, which are ſtill confirm'd by its Power of "evacuating the Waters in Dropſies, which I have expe"rienced during a long Courſe of Practice." For 'tis certain,

tain, that the bitter and acrid Taſte diſcovers Qualities which act by ſtimulating, reſolving, and opening, provided the above-mention'd Effects are founded upon genuine and real Obſervations. *Geoffroy*, upon ſubjecting the Flowers of the *Cyanus* to a chymical Analyſis, found that they yielded a large Quantity of an acid, and ſomewhat auſtere Phlegm, a ſmall Quantity of an urinous Spirit, a conſiderable Quantity of an Oil as thick as an Extract, ſome fix'd alcaline Salt, and ſome Earth. The Flowers have but a very faint Smell, and a ſubaſtringent Taſte; from which Circumſtance they ſeem to contain an eſſential vitriolico-tartareous Salt, mix'd with a large Quantity of Oil. Of theſe Flowers there are ſeveral Shop-Preparations, ſuch as the *Aqua Ophthalmica inſignis* in *Lemery*'s *Pharmacopée univerſelle*, the *Potio Philomedica* in the *Collectan. Leydenſia*, and ſome others, ſufficiently celebrated for their Virtues.

I ſhall take notice of another Uſe of this Plant, which, tho' it does not belong to Medicine, is curious, and may be turn'd to ſome Advantage, in Countries where there is great Plenty of the *Cyanus Segetum Flore cæruleo*. According to Mr. *Boyle*, the recent Flowers of this Plant yield a Juice, which, when immediately expreſs'd, aſſumes a pretty deep and agreeable bluiſh Colour, and which, by dropping Spirit of Salt into it, is chang'd into a reddiſh Colour; but, by the Addition of a ſtrong Solution of alcaline Salt, inſtead of the acid Spirit, it aſſumes a grateful greeniſh Colour. *Gottſchedus*, in his *Flora Pruſſica*, acquaints us with the Uſes, to which they are applied by Painters, in the following Words: "Theſe "Flowers are to be bruis'd in a Stone Mortar, with a wooden "Peſtil, with the Addition of a ſmall Quantity of Alum. A "Part of the Leaves thus bruis'd are wrapt up in a clean "Linen Cloth; then another Portion of them is wrapt up in "another Part of the ſame Cloth; and thus the Whole of "the Flowers are to be diſpos'd of, Layer above Layer. Then "the Portions thus wrapt up are to be gently preſs'd with the "Hand, that the whole Cloth may be equably impregnated "with the Juice; then the Flowers are thrown away, and "the Cloth, when dry'd, is immers'd in a ſmall Quantity of "Water, in which Gum Arabic has been diſſolv'd; by which "means the Water aſſumes a beautiful bluiſh Colour."

8. Cyanus; ſegetum; flore albo. *C. B. P.* 273. *H. Eyſt. Æſt.* o. 7. *F.* 7. *Fig.* 3. *a.* CORN BLUE-BOTTLE, WITH A WHITE FLOWER.

9. Cyanus ſegetum; flore purpureo. *C. B.* 273. *H. Eyſt. Ibid. Fig.* 4. *a.*

10. Cyanus; ſegetum; flore incarnato. *C. B. P.* 273. *H. Eyſt. Ibid. Fig.* 2. *a.*

11. Cyanus; ſegetum; flore violaceo. *C. B. P.* 273. *a.*

12. Cyanus; ſegetum; flore rubro. *H. Eyſt. Ibid. Fig.* 5. *a.*

13. Cyanus; ſegetum; flore albo, fundo immaculati candoris. *H. R. Par. a.*

14. Cyanus; ſegetum; flore ex albo violaceo. *Tabern. Ic.* 148. *a.*

15. Cyanus; ſegetum; flore albo, umbilico cœruleo, violaceo, purpureo. *H. Eyſt. Ibid. Fig.* 6. *a.*

16. Cyanus; ſegetum; flore albo, fundo purpureo. *C. B. P.* 273. *H. Eyſt. Ibid. Fig.* 7. *a.*

17. Cyanus; ſegetum; flore albo; fundo carneo. *H. R. Par. a.*

18. Cyanus; ſegetum; flore albo, fundo atropurpuraſcente. *H. R. Par. a.*

19. Cyanus; hortenſis; flore pleno, cœruleo. *C. B. P.* 274. *a.*

20. Cyanus; hortenſis; flore pleno, purpureo. *C. B. P.* 274. *a.*

21. Cyanus; hortenſis; flore pleno medio, purpureo. *C. B. P.* 274. *a.*

22. Cyanus; fruteſcens; Hiſpanicus.

Boerh. Ind. alt. Plant. Vol. 1.

CYAR, *κύαρ*. The Eye of a Needle, or the Orifice of the internal Ear.

CYATHISCUS, *κυάθισκος*. The hollow Part of a Probe, form'd in the Shape of a ſmall Spoon, as in an Ear-picker.

CYATHUS, *κύαθος*, ſo call'd from the Verb *χύειν*, to pour out. It was a common Meaſure, both of the liquid and dry Kind, among the *Greeks* and *Romans*, and contain'd the ſixth Part of a *Cotula*, or the twelfth Part of a *Sextarius*; for the *Sextarius*, as well as the *As*, was divided into twelve *Cyathi*, each of which is equivalent to an Ounce: Hence the *Sextans* was equal to two *Cyathi*, the *Quadrans* to three, the *Triens* to four, the *Quincunx* to five, the *Semis* to ſix, the *Septunx* to ſeven; the *Bes* to eight, the *Dodrans* to nine, the *Dextans* to ten, and the *Deunx* to eleven. Theſe were the ſeveral Names given to the Cups or Veſſels, which contain'd two, three, four, or more *Cyathi*. The leaſt Veſſel was therefore a *Cyathus*, which was a kind of Ladle, with which they took Wine, or any other Liquor, out of Bowls, and pour'd it into Cups, for one Draught, as is obſerv'd by *Caſaubon in Athen. Lib.* 8. *Cap.* 9. Hence *Plautus* in his *Menæchmus* uſes the Word *Cyathiſſare*, for meaſuring any Liquor in *Cyathi*. This the *Greeks* call'd *κυαθίζειν*, which they appropriated to thoſe, who did not, at one Draught, drink whole *Sextarii*, but, by repeated Evacuations of the *Cyathus*, fell upon Means to intoxicate themſelves. From the Smalneſs of the *Cyathus*, thoſe are proverbially ſaid *to meaſure the Sea in a Cyathus*, who undertake impracticable Things. In theſe earlier Ages, the *Cyathus*, or one Ounce, was not the Meaſure appropriated to the Abſtemious and Valetudinary, but the *Sextans*, or two Ounces. Beſides, the Cups moſt generally us'd for common Drinking were the *Trientes*, which contain'd four *Cyathi*, or Ounces. The *Deunx*, on the contrary, which contain'd eleven Ounces, was the Cup us'd by the Topers, who drank it off at one Draught. Hence *Suetonius in Cap.* 77. commends *Auguſtus Cæſar*, for his Frugality and Temperance, becauſe, after Supper, he only drank three *Sextantes*, which were equivalent to ſix *Cyathi*, or Ounces; and, even when he was inclin'd to indulge himſelf over the ſocial Bowl, he is ſaid never to have exceeded ſix *Sextantes*, or twelve *Cyathi*. It was alſo cuſtomary among the *Romans*, when they were inclin'd to indulge themſelves at any Entertainment, to drink as many *Cyathi*, as there were Letters in the Name of their Patron, whether Man or Woman. This Practice, together with that of drinking nine *Cyathi*, in Honour of the Nine Muſes; and three, in Honour of the three Graces, are alluded to in ſeveral Paſſages of the *Latin* Claſſics.

Both among the *Greeks* and *Romans*, the *Cyathus* was a dry, as well as a liquid Meaſure. Thus *Pliny*, in *Lib.* 21. *C.* 34. informs us, that the *Cyathus* of the *Greeks* weigh'd ten Drams. *Galen*, in his Treatiſe *de Ponderibus & Menſuris*, *Cap.* 15. aſſerts the ſame; but in *Cap.* 4, 13, and 14. he informs us more explicitly, that a *Cyathus* contains twelve Drams of Oil; thirteen Drams and one Scruple of Wine, Water, and Vinegar; and eighteen Drams of Honey. In the twelfth Chapter alſo of the ſame Book, he tells us, that among the *Veterinarii*, a *Cyathus* conſiſted of two Ounces. The modern Phyſicians make a *Cyathus* contain an Ounce and an half.

CYBITON, *κύβιτον*. See CUBITUS.

CYBIUM, *κυβίον*. A large Sea-fiſh, cut into cubical Slices. *Pliny.*

CYBOIDES, *κυβοειδής*. See CUBOIDES.

CYCEON, *κυκεών*, from *κυκάω*, to mix. Among *Latin* Authors it is call'd *Cinnum*, and is commonly ſaid to have been a Mixture, of the Conſiſtence of a Pap, us'd by the *Greeks*, and compos'd of Wine, Honey, fine Flour, Water, and Cheeſe. In theſe remote Ages there ſeem to have been two Kinds of it; a leſs valuable one, compos'd of a Mixture of Water and Meal; and another, more rich and delicate, made up of Wine, various Kinds of Meal, Cheeſe, and ſometimes Honey. In the Account *Homer*, in *Iliad.* 11. gives us of *Hecamede*'s preparing *Cyceon*, raſp'd Cheeſe and Barley-meal [*τὸ ἄλφιτον*, which *Caſaubon in Athen. L.* 11. *C.* 12. explains by *Polenta*, or fine Flour] are only mix'd with Wine, without the leaſt Mention of Honey and Water. And *Ovid*, in the fifth Book of his *Metamorph.* when ſpeaking of the Draught of *Cyceon*, preſented by an old Women of *Athens* to *Ceres*, only makes mention of Water, mix'd with fine Flour. Hence 'tis obvious, that the *Cyceon* conſiſted of Water mix'd with Meal alone; for the *Polenta* only differs from the *Farina Hordei*, in that the former is dry'd. If we conſult the Writings of *Hippocrates*, we alſo find, that he gave the Name of *Cyceon* to a Mixture of Water and Meal; for in his ſecond Book *de Diæta*, after having treated of the Virtues of a certain Mixture of fine Flour, and Water, or Wine, he adds the following Words: "But a *Cyceon*, pre-"par'd with Water alone, refrigerates and nouriſhes; when "prepar'd with Wine, it heats, nouriſhes, and renders the "Patient coſtive; when prepar'd with Honey, it is leſs heat-"ing and nouriſhing, but more purgative, if the Honey is "genuine and unadulterated; but if it is otherwiſe, it is ſo "far from purging, that it rather renders coſtive. All *Cy-*"*ceons*, prepar'd with Milk, are highly nouriſhing; but, with "that of Sheep, it renders coſtive; with that of Goats, it is "more purgative; with that of Cows, leſs; and that of Mares "and Aſſes, more." *Janus Cornarius*, in his Interpretation of this Paſſage, after the Words *all Cyceons*, inſerted, *that is, of Meal*, intending, no doubt, by the Addition, to inſinuate, that Meal alone, of any Kind, was ſufficient to make a *Cyceon*, when mix'd with any Liquor; at leaſt, from the Text we may without any Conſtraint infer, that in thoſe Days, not only Water and Wine, but alſo ſeveral Species of Milk, were us'd in preparing *Cyceons*. *Galen*, in the ninth Chapter of his firſt Book *de Alimentorum Facultat.* does not heſitate to give the Name of *Cyceon* to that ordinary Ptiſan which ſome prepare, by mixing Rob, Honey, and Cumin, with Water which has been a little boil'd. That Salt was alſo an Ingredient

dient ſometimes us'd in *Cyceons*, we may gather from *Hippocrates*, in ſome Paſſages of whoſe Works an unſalted *Cyceon* is ſaid to be an attenuating Diet. The Seeds of white Poppy and Linſeed were alſo us'd by *Hippocrates* in preparing *Cyceons*, as we find in his Book *de Diæta*. From what has been ſaid, 'tis obvious, that the *Greeks* by the Word *Cyceon* underſtood any miſcellaneous Draught, or confus'd Mixture, prepar'd of Ingredients of different Natures, according to the Deſign and Intention of the Phyſician. Hence *Cyceon* is proverbially us'd for a turbulent and perplex'd State of Affairs, as alſo for a Perſon who turns all Things *topſy-turvy*. *Charterius* explains the κυκεὼν by *Moretum*, which, among the Antients, was a kind of Sallad, made of Herbs, Milk, Wine, Oil, Cheeſe, and Garlick. *Duretus*, in his Commentary upon the Book of Regimen in acute Diſeaſes, takes *Cyceon* for a certain Aliment prepar'd of a Mixture of Milk, Honey, Water, Wine, and Cheeſe; to which *Heurnius* alſo adds, Herbs. *Hieronymus Mercurialis* is of Opinion, that the *Cyceon* was a certain Species of Aliment prepar'd of Meal, Eggs, Honey, Wine, and Cheeſe. As for the medicinal Virtues of *Cyceons*, 'tis certain that nothing general can be advanc'd, which extends to all Preparations of this Kind, ſince, in the very Nature of the Thing, we muſt judge of their Virtues from the Qualities of their Ingredients. We have already ſeen what Diſtinctions *Hippocrates* made with reſpect to this Affair: But, when he ſpeaks ſimply of *Cyceon*, 'tis highly probable he only meant a Mixture of fine Flour with Wine: Thus, for Inſtance, when in the ſixth Book of his *Epidemics*, *Sect.* 6. he recommends a *Cyceon* againſt Pains, he means a Mixture of Meal and Wine. In his ſecond Book *de Morbis*, he orders a like *Cyceon* to be drank in a *Hydrocephalus*, after the Exhibition of a Vomit: But when, for Patients labouring under a quartan Fever, he intends an aqueous, and not a vinous Draught, he adds, *Let the Patient drink a* Cyceon *prepar'd with Water*. When the *Cyceon* is to be compos'd both of Water and Wine, as alſo of other Ingredients beſides the Meal, he explicitly mentions theſe Ingredients. Thus in his Treatiſe *de internis Affect.* when the Patient is afflicted with Thirſt, after Evacuations, and the Uſe of the Bath, he orders him to drink a cold *Cyceon* prepar'd of black auſtere Wine, mix'd with an equal Quantity of Water: And in his firſt Book *de Morbis Muliebr.* thinking that medicated Aliments, of a drying Quality, contributed to the Cure of Exulcerations of the Uterus, he orders the Exhibition of a thick *Cyceon* prepar'd of Cheeſe, roaſted Linſeed, fine Flour, white Poppy-ſeeds, and thin auſtere Wine. In his Treatiſe *de internis Affect.* for ſuch as labour under Conſumptions, he orders what he calls *a florid Cyceon*, prepar'd of the Roots of Smallage, Dill, Rue, Mint, Coriander, young Poppies, Baſil, Lentils, the Juice of ſweet and vinous Pomegranates, black auſtere Wine, the Meal of Vetches, and fine Flour; together with the Shavings of old Cheeſe, made of Goats-milk.

CYCIMA, Litharge. *Rulandus.*

CYCLAMEN. Sow-bread. See ARTHANITA.

CYCLISMUS. A Troche. It ſignifies, alſo, a ſort of Rugine, of a circular Form.

CYCLOPION, κυκλώπιον. The White of the Eye.

CYCLOS, κύκλος. A Circle. But in *Hippocrates* it imports the Cheeks, and the Orbits of the Eyes.

CYCLUS METASYNCRITICUS. See DIATRITAS, and METASYNCRISIS.

CYCNARION, κυκνάειον. The Name of a Collyrium, mentioned by *Galen*, and *Paulus Ægineta*. It was ſo call'd becauſe of its white Colour, reſembling that of a Swan.

CYCNUS, κύκνος. A Swan. See CYGNUS.

CYDAR. Jupiter; that is, Tin. *Rulandus.*

CYDONATUM, κυδώνατον. The Name of a Preparation of Quinces, with an Addition of Aromatics, deſcrib'd by *Paulus Ægineta*, *L.* 7. *C.* 11.

CYDONIA. The Quince-tree.

The Characters are;

It is low, with ſpreading and contorted Branches; the Calyx reſembles that of the Pear-tree; the Flower is roſaceous, and pentapetalous like that of the Pear-tree; the Ovary alſo reſembles that of the ſame Tree; and the Fruit is much like a Pear, carnous, harſh, umbilicated, containing ſeveral glutinous Seeds, within five membranous Cells; and cover'd with a hoary Down. *Boerhaave, Index alter, Part* 2. *p.* 247.

1. Cydonia; fructu oblongo, læviori. *T.* 632. *Boerh. Ind. A.* 2. 247. *Malus Cydonia, Cotonea*, Offic. *Malus Cotonea*, Ger. 1264. Emac. 1452. Raii Hiſt. 2. 1452. J. B. 1. 27. Chab. 2. *Malus Cotonea vulgaris*, Park. Theat. 1504. *Cydonia ſativa*, Jonſ. Dendr. 8. *Mala Cotonea majora*, C. B. Pin. 434. *Mala Cydonea*, Aldrov. Dendr. 538. THE QUINCE-TREE. *Dale.*

The Quince is the Fruit of a Tree, which ſcarcely grows ſo big as an Apple-tree, having uſually a crooked Body, with many weak Branches, whoſe Leaves reſemble thoſe of the Apple-tree; but they are rounder pointed, and whitiſh and hoary underneath. The Bloſſoms are pretty large, of five whitiſh purple Leaves, each of which are ſucceeded by a pretty large Fruit, cover'd over with a Down or Woolineſs, being but of an unpleaſant Taſte, and not fit to be eaten raw. There are two Sorts of them; one being in Shape more like an Apple, the other more like a Pear, which is accounted the beſt. It grows in moiſt Places, hanging over Ponds and Moats; flowering in *May*; the Fruit being ripe about *Michaelmas*. The Fruit and Seed are uſed.

Quinces are cordial, and agreeable to the Stomach; ſtrengthening it, and helping Digeſtion, and ſtaying Vomiting and Hiccough. They are likewiſe reſtringent and binding, and good for all Sorts of Fluxes and Looſeneſſes. The Seed is balſamic and mollifying, tempering the Acrimony of the Humours, and ſerviceable againſt ſore Mouths and Throats, and a Thruſh; for which a Mucilage made of them is frequently preſcribed. The ſame outwardly us'd is very healing to ſore chopt Nipples.

Officinal Preparations of Quinces are the Syrup, the *Electuarium Diacydonium*, and *Rob.*

The Hiſtory of Plants, aſcribed to *Boerhaave*, ſays thus farther of them, that

The Juice of Quinces, before they are quite mature, is very friendly and ſtrengthening; when mature, it is leſs aſtringent, and ſo it is when well boiled. The Seeds are of a quite contrary Quality, being emollient. Infus'd cold in Roſe-water, they are of excellent Service in Ophthalmies, and in allaying the Heat of the Tongue and Fauces. An Emulſion of the Seeds with pure Water eaſes the Pains of Combuſtions, if the Tendon be injur'd; whence it appears, that the Seeds are anodyne: They are alſo of ſignal Uſe in ſpitting of Blood, Ulcers of the Lungs, and the Hæmorrhoids.

Syrupus Cydoniorum:

SYRUP *of* QUINCES.

Take ſix Pints of the clear Juice of Quinces; boil it gently till Half is evaporated, and at times take off the Scum that riſes upon it; then put to it three Pints of red aſtringent Wine, and of fine Sugar four Pounds; which boil into a Syrup, that may be aromatized with Cinamon, one Dram and an half; of Cloves and Ginger, each two Scruples.

This hath *Meſue* for its Author, and hath been retained in all the Diſpenſatories of the College; tho' the preceding to this gives the Liberty of making it with one Pint of the Juice of Quinces only, and two Pounds of Sugar, and only melting them together, as the other ſubacid and auſtere Syrups; and that way the Shops have been of late moſt accuſtomed to make it.

Diacydonium.

Take of the clean Pulp of Quinces, cut into Slices, and boiled up to Thickneſs, in fair Water, eight Pounds; of the whiteſt clarify'd Sugar, boil'd up alſo to a due Conſiſtence, ſix Pounds; and boil them together into a thick Subſtance.

This hath, for a long time, had a Place in moſt Diſpenſatories; but it is now altogether made by the Confectioners, by the Name of Marmalade.

Rob Cydoniorum:

ROB *of* QUINCES.

Take of the depurated Juice of Quinces, as much as you pleaſe; and, after it is gently boil'd to the Conſumption of a third Part, add to it half a Pound of the fineſt Sugar, and continue a ſlow Heat, till it becomes of a due Conſiſtence.

The other Species are,

2. Cydonia; fructu breviore & rotundiore. *T.* 633. THE APPLE-QUINCE.

3. Cydonia; anguſtifolia; vulgaris. *T.* 633. THE COMMON QUINCE-TREE, WITH NARROW LEAVES.

4. Cydonia; latifolia; Luſitanica. *T.* 633. THE BROAD-LEAV'D PORTUGAL QUINCE.

Boerh. Ind. alt. Vol. 2.

CYDONIA EXOTICA is the COVALAM.

CYEMA, κύημα. A Conception, or Fœtus.

CYGNUS REGINÆ. The Name of a Collyrium deſcrib'd by *Aetius*, *Tetrab.* 2. *Serm.* 3. *Cap.* 104. and mention'd by *Actuarius*, *Meth. Med. L.* 6. *C.* 5.

CYGNUS, Offic. Aldr. Orn. 3. 8. Bell. des Oyſe. 152. Charlt. Exer. 103. Geſn. de Avib. 327. Jonſ. des Avib. 90. *Cygnus Manſuetus*, Raii Ornith. 355. Ejuſd. Synop. A. 136. Mer. Pin. 174. *Olor*, Schrod. 5. 321. Will. Ornith. 271. THE SWAN.

The Part of a Swan uſed in Medicine is the Fat, which is eſteem'd emollient, attenuating, and lenient; and is therefore ſaid to be good for the Piles, and Indurations of the Uterus. Mix'd with Wine, it removes Freckles of the Skin, if theſe are anointed with them.

The Skin of a Swan is ſometimes directed to be apply'd to Parts affected with a Rheumatiſm; and to other Parts. It is ſaid to fortify the Nerves and Stomach, to diſpel Flatulences, and to aſſiſt Digeſtion, when apply'd to the Stomach.

CYITES. A Name for the *Lapis Aetites*. See AETITES.

CYLICHNE, κυλίχνη. A ſmall Veſſel, or Box, for holding Medicines. A Gally-pot, or Pill-box.

CYLLOS, κυλλὸς, in *Hippocrates*, is one affected with a kind of Luxation, which bends outwards, and is incurvated or hollow'd inwards. Such a Defect in the Tibia is call'd κύλλωσις *(Cylloſis)*; and the Perſon to whom it belongs is, by the *Latins*, call'd *Varus*, and oppoſed to *Valgus*, βλαισὸς, *(Blæſſus)* one who has his Legs bent the other Way. See *Hippocrates de Articulis*, with *Galen*'s Comment thereon. Κυλλουμένη κοιλίη, *in Coac.* is the ſame as ὀγκωμένη *in Prorrhet.* and ſignifies a ſwelling, protuberant, gibbous Belly. Κυλλὸν, in *Hippocrates de Articulis*, frequently alſo imports maim'd, mutilated, contracted, weak, and imperfect.

CYMA, κῦμα, and, by the Figuré *Synæreſis*, κύημα, Fœtus; and Fœtura, are Names for what we call a Sprout, or little Shoot. This, in Botany, ſignifies the ſuperior ſmall tender Stalk, which Herbs ſend forth in the Beginning of the Spring; and it is, in a particular Manner, applied to thoſe delicate and tender Shoots produced at the firſt Budding of Cabbage. Some *Latin* Authors have call'd it *Turio* and *Aſparagus*. In a more extenſive Senſe, the Word *Cyma* ſignifies the Tops of any Plants whatever, according to *Ray* in his *Hiſt. Plantar.*

CYMATODES, κυματώδης, from κύμα, a Wave. Undulating. It is apply'd to the Pulſe. See PULSUS.

CYMBALARIA. A Name for the *Linaria*; *folio glabro, ſubrotundo*; *Hederæ folio Clematitis*. See LINARIA.

CYMBALARIS CARTILAGO. A Name for the Cricoide Cartilage.

CYMBIFORME OS. The Name of a Bone in the Heel. See CRUS.

CYMINUM, Cumin. See CUMINUM.

CYNANCHE, κυνάγχη. A Species of Quinſey. See ANGINA.

CYNANCHICA MEDICAMENTA are thoſe Medicines appropriated to that terrible Species of Quinſey, which is accompanied with an Inflammation of the Fauces, an incredible Difficulty of Breathing, and which is call'd *Cynanche*, from the *Greek* Words κύων, a Dog, and ἄγχω, to ſuffocate; for when Dogs are hang'd, becauſe their Bodies are not ſufficiently heavy to produce a ſtrong Compreſſion of the Rope, they generally do not die ſuddenly, but ſtruggle for a conſiderable time with Death, with their Eyes turgid, and their Tongues, which are now of a leaden Colour, hanging out of their Mouths, which are open, grinning, and foaming; and becauſe, in this Diſorder, a Set of ſimilar Symptoms afflict the Patient, 'tis therefore call'd *Cynanche*. The Remedies, appropriated for its Removal, are ſuch Antiphlogiſtics as ſpeedily produce their Effects, liberal Veneſections, and powerful Evacuations by Stool; together with other refrigerating and relaxing Medicines, both exhibited internally, and applied externally. See ANGINA.

CYNANTHEMIS. A Name for the *Cotula fœtida*. *Blancard.*

CYNANTHROPIA, from κύων, a Dog, and ἄνθρωπος, a Man. A kind of melancholy Delirium, in which the Perſons affected believe themſelves to be changed into Dogs; and, in conſequence thereof, endeavour to act like them.

CYNCHNIS, κυγχνὶς. A ſmall Veſſel, or Box, to hold Medicines, or to exhibit them in.

CYNICUS, κυνικὸς. Canine. Certain Convulſions are call'd *Cynic Spaſms*. See SPASMUS.

CYNIPHES, in *Helmont*, ſignifies Gnats, or Flies.

CYNNABAR. The ſame as CINNABAR.

CYNNIA, CYMIA, or CARORA. A Veſſel in the Shape of an Urinal. *Rulandus.*

CYNOBOTANE. A Name for the *Cotula fœtida*. *Blancard.*

CYNOCEPHALUS, κυνοκέφαλος. A Species of Monkey, with a Head reſembling a Dog.

CYNOCOPROS, from κύων, a Dog, and κόπρος, Dung. The Dung of a Dog. See CANIS.

CYNOCRAMBE. Dog's Mercury. See MERCURIALIS.

CYNOCTONON. The *Aconitum*. *Oribaſius.*

CYNOCYTIS. The Dog-roſe. See CYNOSBATOS.

CYNODECTOS, κυνόδηκτος. Bitten by a mad Dog. *Dioſcorides, L. 2. C. 99.*

CYNODES, κυνώδης. Canine.

CYNODESMION, κυνοδέσμιον, from κύων, which ſometimes imports the inferior Part of the Prepuce, and δέω, to bind. A Ligature, by which the Prepuce is bound upon the Glans. *Gorræus.*

CYNODONTES, from κύων, a Dog, and ὀδὼς, a Tooth. The Canine Teeth.

CYNOGLOSSUM.

The Characters are,

The Calyx conſiſts of one Leaf, which is deeply cut into five Parts: The Flower is monopetalous, Funnel-ſhaped, and alſo deeply cut into five Segments. Where it begins to expand, appear five hairy little Heads erect, like cylindrical Columns, and under them are five Stamina, proceeding from the Tube of the Flower. The Fruit conſiſts of four rough, and, for the moſt part, lappaceous Cells, affix'd to a pyramidal quadrilateral Placenta, and containing a flat Seed. *Boerhaave's Index alter, Part 1.*

Boerhaave mentions nine Species of this Plant.

1. Cynogloſſum; majus vulgare. *C. B. Pin.* 257. *Ger. Emac.* 804. *Park. Theat.* 511. *Hiſt. Oxon.* 3. 448. *Buxb.* 91. *Tourn. Inſt.* 139. *Elem. Bot.* 116. *Mer. Pin.* 32. *Merc. Bot.* 1. 31. *Phyt. Brit.* 33. *Boerh. Ind. A.* 192. *Rupp. Flor. Jen.* 9. *Cynogloſſum*, Offic. *Cynogloſſum*, Ger. 659. Raii Synop. 3. 226. *Cynogloſſum vulgare*, J. B. 3. 598. Raii Hiſt. 1. 489. Dill. Cat. Giſſ. 89. HOUNDS-TONGUE. *Dale.*

The Root of the common Hounds-tongue is thick and long, of a dark-brown Colour on the Outſide, and whitiſh within: The lower Leaves are near a Foot long, and two or three Inches broad, pointed at the Ends, being ſoft and woolly in handling: The Stalk grows to be two or three Foot high, beſet with ſmaller and narrower Leaves, and having on their Top ſeveral Flowers, growing together, of a ſullen red Colour, in Shape like Bugloſs, but much leſs, appearing but little above the green Calyces they ſtand in; each Flower is follow'd by four flat rough Seeds, ſtanding about the Piſtillum, appearing, as they are all join'd together, like a Shield or Buckler. The whole Plant has a fetid Smell, like the Urine or Dung of Mice. It grows by Hedges and Road-ſides; and flowers in *June* and *July*. The Root only is uſed.

The Root of this Plant is cold, drying, and binding, uſeful in catarrhous Defluxions upon the Lungs, and to temper the Sharpneſs of the Blood; and, by conſequence, good for all kind of Fluxes and Hæmorrhages, as well as for a Gonorrhœa.

It is likewiſe reckon'd among the Vulneraries; and good againſt ſcrophulous Tumors, both taken inwardly, and applied outwardly as a Cataplaſm.

The only officinal Preparation from this Root is the *Pilulæ de Cynogloſſo*.

The Bark of its Root is a little bitter, ſaltiſh, ſtyptic, and glutinous: It gives a pretty deep-red Colour to the blue Paper. It is likely, that the Sal Ammoniac, which is naturally in the Salt of the Earth, predominates in this Plant, where it is temper'd with a great deal of Phlegm, Earth, and fetid Oil.

The Hounds-tongue, analyſed, gives ſtrong Indications of an acrid Salt and Sulphur: Thus the Root of it is proper to ſtop all ſorts of Defluxions, and to correct acrid Humours. It is uſed in Ptiſans and Broths. It has given Name to the *Pilulæ de Cynogloſſo*, which *Faventinus* recommends very much for Catarrhs; but thoſe which are deſcrib'd in *Renodæus*'s Diſpenſatory muſt be uſed. *Faventinus* mix'd half a Dram of theſe Pills with one Dram of Aloes, two Drams of the Juice of Liquorice, and as much Syrup of Violets as was neceſſary to form them into Pills. The Leaves of this Plant are vulnerary and deterſive. *Martyn's Tournefort.*

PILULÆ DE CYNOGLOSSO: *Compound Pill of Hounds-tongue.*

Take of the dried Roots of Hounds-tongue, white Henbane-ſeeds, and Opium, of each half an Ounce; of Maſtich, ſix Drams; of Olibanum, five Drams; of Saffron, Caſtor, and Storax, of each one Dram and a half: Let the Hounds-tongue-root, the Henbane-ſeeds, and Caſtor, be powder'd together; but the Maſtich, Saffron, Olibanum, by themſelves ſeparately: Let the Opium be cut into thin Slices, and diſſolved in Roſe-water; afterwards put in the Powders, and make into a Maſs of a Conſiſtence fit for Pills, with a ſufficient Quantity of Diacodium.

2. Cynogloſſum; majus; vulgare; flore albo. *C. B. P.* 257. *T.* 139. *b.* COMMON HOUNDS-TONGUE, WITH A WHITE FLOWER.

3. Cynogloſſum; floribus ex albo & rubro variegatis. *H. L. Flor.* 2. 62. *b.*

4. Cynogloſſum; montanum; maximum. *T.* 139. THE LARGEST MOUNTAIN HOUNDS-TONGUE.

5. Cynogloſſa; media; argentea; Apula; campeſtris; calidarum regionum. *Col.* 1. 172. *Deſcr.* 171. *Ic.*

6. Cynogloſſum; ſempervirens. *C. B. P.* 257. *Prodr.* 119. *M. H.* 3. 449. EVER-GREEN HOUNDS-TONGUE.

7. Cynogloſſum; minus. *C. B. P.* 257. *Bugloſſum, anguſtifolium, ſemine echinato.* T. 134. *Lappula ruſticorum.* Lugd. 1240.

8. Cynogloſſum; Creticum; latifolium; fœtidum. *C. B. P.* 257. *M. H.* 3. 449.

9. Cynogloſſum; Narbonenſe. *H. Eyſt. Æſt. o.* 8. *F.* 6. *T.* 3. *b. H. Boerh. Ind. alt. Plant. Vol.* 1.

CYNOLOPHA, κυνόλοφα. *Pollux* calls theſe certain Aſperities of the Vertebræ, in the Beginning of the Spine of the Back.

CYNOLYSSA. The ſame as Lyſſa, λύσσα, that Species of Madneſs which is cauſed by the Bite of a mad Dog.

CYNOMORON. A Name for the *Cynocrambe* in *Paulus Ægineta.* See MERCURIALIS.

CYNOMYJA. A Name for the PSYLLIUM in *Oribaſius.*

CYNORRHODON, from κύων, a Dog, and ῥόδον, a Roſe. The Dog-roſe. See CYNOSBATOS.

CYNOSBATOS.

Roſa canina, Cynoſbatos, Cynorrhodon, Offic. *Roſa ſylveſtris, canina, Cynorrhodon, Cynoſbatos,* Mont. Ind. 51. *Roſa ſylveſtris, inodora, ſeu canina,* Park. Theat. 1017. Raii Hiſt. 2. 1470. Synop. 3. 454. *Roſa canina inodora,* Ger. 1087. Emac. 1270. Mer. Pin. 105. *Roſa ſylveſtris vulgaris, flore odorato, incarnato,* C. B. Pin. 483. Tourn. Inſt. 638. Elem. Bot. 501. Jonſ. Dendr. 402. Dill. Cat. Giſſ. 90. *Roſa ſylveſtris vulgaris, flore odorato,* Buxb. 285. *Roſa ſylveſtris,* Merc. Bot. 1. 65. Phyt. Brit. 105. *Roſa ſylveſtris, variorum colorum, foliis glabris, inodoris,* Rupp. Flor. Jen. 111. *Roſa ſylveſtris alba cum rubore, folio glabro.* J. B. 2. 43. Chab. 108. THE COMMON BRIAR, OR DOGS-ROSE.

The wild Briar, or Roſe, that grows on the Hedges, has winged Leaves, like Garden Roſes, but ſmoother and greener. The Flowers are ſingle, of five white, and ſometimes pale-red Leaves; and, when they are fallen, there ſucceed roundiſh red Seed-veſſels, full of Pulp, incloſing white corner'd Seed, cover'd with ſhort ſtiff Hairs. It grows every-where in the Hedges, and flowers in *June*; and the Hips are fit to be gather'd about the latter End of *September.* On the Stalks of this Plant grows the *Bedeguar*, which is a reddiſh-green ſpongy hairy Excreſcence, made by ſmall *Ichneumon* Flies.

The Flowers of the wild Briar are accounted rather more reſtringent than the Garden Roſes; and, by ſome, are reckon'd as a Specific for the Exceſs of the Catamenia. The Pulp of the Hips has a pleaſant grateful Acidity, ſtrengthens the Stomach, cools the Heat of Fevers, is pectoral, good for Coughs, and Spitting of Blood, and the Scurvy. The Seed is accounted extraordinary good againſt the Stone and Gravel; and the ſame Virtues are attributed to the BEDEGUAR, which ſee.

The only officinal Preparation is the *Conſerva Cynoſbati.* See CONSERVA. See HYDROPHOBIA. *Ehrenfridus Hagendornius* wrote a Treatiſe expreſly on the Subject of this Plant, which is intitled *Cynoſbatologia, Jenæ,* 1679.

CYNOSORCHIS. A Plant call'd Dogs-ſtones. See ORCHIS.

CYON, κύων. A Dog. It imports alſo the inferior Part of the Prepuce, and the Penis.

CYOPHORIA, κυοφορία, from κύημα, the Fœtus, and φέρω, to carry. Geſtation, ſpoken of a Woman with Child; or the Time of Geſtation.

CYPARISSUS. The ſame as CYPRESSUS, which ſee.

CYPERI. See GRAMEN CYPEROIDES.

CYPEROIDEA GRAMINA. See GRAMEN CYPEROIDES.

CYPERUS.

The Characters are,

The Stalk is triangular, and bears, on the Top, a Panicle, conſiſting either of a Multitude of ſmall, or narrow ſcaly and compreſs'd Spikes, in cloſe Order, or of numerous ſmaller Locuſtæ. *Boerhaave's Index alt. Part* 2.

The Species are,

1. Cyperus; odoratus; radice longâ; ſive Cyperus officinarum. *C. B. Pin.* 14. *Theat.* 216. *Boerh. Ind. A.* 2. 165. *Tourn. Inſt.* 527. *Elem. Bot.* 419. *Cyperus longus,* Offic. Ger. 28. Emac. 30. Raii Hiſt. 2. 1299. Synop. 3. 425. *Cyperus longus odoratus,* Park. Theat. 146. *Cyperus longus odoratus,* Hiſt. Oxon. 3. 237. *Cyperus, paniculâ ſparſâ ſpecioſâ,* J. B. 2. 501. *Cyperus,* Chab. 194. LONG-ROOTED CYPERUS.

The long Cyperus has a great many narrow graſſy Leaves, rough and hard in handling, among which ariſes a triangular Stalk, about two Foot high; on the Top of which grows a Tuft, or Panicle, conſiſting of ſmall brown ſcaly Spikes, with a few ſhort Leaves ſet on at their Bottom. The Root is long and ſlender, of a dark-brown Colour on the Outſide, and lighter within, of a pleaſant Scent, and a little hot and bitter in Taſte. It grows in ſome Parts of *England* in the Marſhes; but we have it generally brought from *Italy. Miller's Bot. Off.*

2. Cyperus; rotundus; eſculentus; anguſtifolius. *C. B. Pin.* 14. *Theat.* 222. *Hiſt. Oxon.* 3. 236. *Tourn. Inſt.* 527. *Elem. Bot.* 419. *Boerh. Ind. A.* 2. 166. *Traſi,* Offic. J. B. 505. *Tarſi Malinathalle Theophraſti,* Chab. 195. *Cyperus eſculentus,* Raii Hiſt. 2. 1301. *Cyperus rotundus, eſculentus, anguſtifolius,* C. B. Pin. 14. Theat. 222. Hiſt. Oxon. 3. 236. Tourn. Inſt. 527. Elem. Bot. 419. Boerh. Ind. A. 2. 166. *Cyperus eſculentus ſive Traſi Italorum,* Ger. Emac. 32. *Cyperus dulcis rotundus, Traſi dulce vocatus,* Park. Theat. 146. SWEET CYPERUS, OR RUSH-NUT.

It grows in *Italy*, and other Parts. The Root is uſed, and agrees with the other Species in Virtues.

3. Cyperus; rotundus; inodorus; Germanicus. *C. B. P.* 15. *Th.* 215. *Boerh. Ind. alt. Vol.* 2.

Beſides the preceding Species of the *Cyperus*, *Dale* mentions the following:

CYPERUS ROTUNDUS, Offic. *Cyperus rotundus Orientalis major,* C. B. Pin. 13. Theat. 208. Raii Hiſt. 2. 1299. Hiſt. Oxon. 3. 206. *Cyperus rotundus Syriacus,* Ger. Emac. 31. No. 3. *Cyperus rotundus, odoratus, Syriacus,* Park. Theat. 145. *Cyperus Syriacus & Creticus rotundior,* J. B. 2. 502. Chab. 194. ROUND-ROOTED CYPERUS.

The Roots of the round *Cyperus* are of the Bigneſs and Shape of a Nutmeg, rough and brown on the Outſide, and whitiſh within, of a pleaſant fragrant Sweetneſs, faſten'd together by ſlender Strings: In its Leaves, Stalks, and Manner of growing, it pretty much reſembles the long *Cyperus*, and is brought from *Turkey.*

The long and round *Cyperus* are much of a Nature, and have the ſame Virtues, being heating and drying, expelling Wind, and ſtrengthening the Bowels: They help the Colic, provoke Urine, and the Terms, and prevent the Dropſy: They are cephalic, and good for the Swimming of the Head, and Giddineſs; and are ſometimes uſed in abſterſive Gargariſms for Ulcers in the Mouth and Gums. *Miller's Bot. Off.*

Geoffroy adds, that the round *Cyperus* is carminative, emmenagogue, ſtomachic, and diuretic. *Hippocrates* recommends it in Diſeaſes of the Uterus; and *Simon Paulli* in Ulcers of the Bladder, mix'd with the *Schœnanthe.*

CYPHI, κῦφι, is a Compoſition of ſixteen Ingredients, which are Honey, Wine, Raiſins, Cyperus, Roſin, Myrrh, Aſpalathus, Seſeli, Juncus odoratus, Bitumen *Judaicum*, Thryon, [θρύα, a ſort of Ruſh, *Xylander* reads θεῖα, a Fig-leaf] Lapathum, both ſorts of Juniper-berries, which they name the great and the ſmall Juniper-berries, Cardamoms, and Calamus. Theſe Simples are not compounded in a careleſs Manner, but the ſacred Writings are read to the Apothecaries, while they are mixing them. There ſeems to be ſomething extraordinary in the very Number, being the Square of a Square, and the only evenly even Number, which has its Area equal to its Circumference. But theſe, it muſt be confeſs'd, are the leaſt Reaſons for its ſalutary Effects, which are more to be aſcrib'd to the aromatic Qualities of the ſeveral Ingredients. *Cyphi* emits a ſweet and wholſome Fragrancy, by which the Air, being changed, produces, by means of Reſpiration, due Motions in the Body, and receives itſelf a mild and pleaſing Temperature; by which every thing, which ſits uneaſy upon the Thoughts, is gently removed; and thoſe daily Cares, which are as ſo many Fetters of the Mind, are, without the Help of Ebriety, relax'd and diſcharged; and the Imagination, and that Faculty within us, which is the Seat of Dreams, are purify'd, and brighten'd up like a Glaſs; and all this is done as effectually as by the Sound of a Harp, which the *Pythagoreans* uſed in order to compoſe themſelves to Sleep; and by whoſe lulling Melody the irrational Part of the Soul, the Seat of the Paſſions, was charm'd and reduced to due Moderation and Obedience: For Odours oftentimes recal the fainting Senſes; and, on the contrary, as often blunt, and compoſe them to Reſt; the Exhalations, by their Smoothneſs, diffuſing themſelves over the Body; as ſome Phyſicians ſay, that Sleep is procured by Vapours, proceeding from the Aliment, and ſmoothly creeping about the Viſcera, where they excite a kind of Titillation.

The *Egyptians* uſe the *Cyphi* in a medicinal Potion, on account of its clearing the internal Parts, and relaxing the Belly.

It is alſo to be conſider'd in this Compoſition of the *Cyphi*, that the Roſin is the Work of the Sun, and that the Myrrh is a Tear which diſtils from Plants by the Light of the Moon. Of the Ingredients ſome delight in the Night-ſeaſon, being nouriſh'd with cold Spirits, Shades, Dews, and Humidities: For the Light of the Day is ſingle and uniform; and the Sun, as *Pindar* ſays, "is ſeen thro' the void Æther;" but the nocturnal Air is mix'd and temper'd with various Lights and Qualities, which, from a general Conflux from all the Stars, unite like Seeds in one. It is not without Reaſon, therefore, that the former, as being of a ſimple Nature, and procreated by the Sun, are burnt in Sacrifice in the Day-time; but the others, which

are

are a Mixture endued with all kinds of Qualities, are offer'd in the Beginning of the Night. *Plutarch de Iſide & Oſiride.*

Suidas, under the Article κῦφι, ſays, that this was made by *Manæthos*, the *Egyptian*; but confeſſes, that he does not know the Compoſition. Under the Article Μανεθως, he informs us, that he was an *Egyptian* Prieſt, who wrote upon the Compoſition of the *Cyphi*.

The Compoſition call'd *Cyphi* was much uſed in the *Egyptian* Sacrifices; and hence the Troches, call'd *Trochiſci Cypheos*, acquired their Name.

Trochisci Cypheos.

Take of the Pulp of fat Raiſins, well cleanſed from the Huſks and Stones, and of *Cyprus* Turpentine, of each three Ounces; of Myrrh and Schœnanth, of each one Ounce and an half; of Cinnamon, half an Ounce; of Calamus Aromaticus, three Drams; of round Cypreſs-root, Spikenard, Caſſia-wood, Juniper-berries, fat Bdellium, and Wood of Aloes, of each two Ounces and a half; of Saffron, one Dram; a ſmall Quantity of Canary; and of the beſt deſpumated Honey, a ſufficient Quantity. Let the Myrrh and Bdellium be reduced in a Mortar, with Wine enough, to the Conſiſtence of a thin Honey; then ſtir in the Turpentine, the Pulp of the Raiſins, and the Powders; and let all together be well ſimmer'd, with Honey well deſpumated, into a due Conſiſtence to be formed into Troches.

This is but a troubleſome Compoſition; but, as it is made a ſtanding Ingredient in the Mithridate, its Preſcription is ſtill neceſſarily retained here, as it is likewiſe in the *Auguſtan*, and all other officinal Diſpenſatories of Note. It is originally aſcrib'd to *Damocrites*, who, it ſeems, attempted to reform the Mithridate, and contrived theſe Ingredients into this Form on purpoſe for that. It is taken notice of by *Galen*, *de Antidotis*, and recommended, in ſome Caſes, by itſelf; but modern Practice knows no other Uſe for it, than what it was originally deſign'd for.

CYPHOMA, and CYPHOSIS; κύφωμα, or κύφωσις, from κυφόω, to bend. An Incurvature of the Spine of the Back, when the Vertebræ incline preternaturally outwards.

CYPRESSUS. The Cypreſs.

The Characters are,

The Leaves are ſquamous and flat: The Male Flowers, which are ſquamous, grow at remote Diſtances from the Fruit, on the ſame Tree: The Fruit is of a ſpherical Form, and is compoſed of many woody Tubercles, in which are contain'd hard angular Seeds. *Miller's Dictionary.*

Boerhaave mentions three Species of this Plant; which are,

1. Cypreſſus; metâ in faſtigium convolutâ; quæ Fœmina Plinii. *T.* 587. THE COMMON CYPRESS-TREE.

This grows to be a large, tall, high Tree, covered all over, almoſt from the Ground, with ſlender Branches, growing cloſe together, making the Tree have a pyramidal Shape, with ſmall, ſhort, ſharp, and, as it were, ſcaly Leaves, which cover over all the young Twigs. The Flowers are ſmall and ſtamineous, ſucceeded by Cones or Nuts, as they are call'd, which are round, near as big as a Walnut; when ripe, opening with ſeveral Clefts, in which lie brown, flattiſh corner'd Seeds. It is planted in Gardens for its pleaſant Verdure, being a Perennial or Evergreen, holding its Leaves all Winter, and ſhooting out freſh in the Spring. We have two Species growing in our Gardens, whereof the *Fœmina*, or that whoſe Branches grow cloſer together, is the moſt common, having ſomewhat longer Nuts than the *Mas*, whoſe Branches are more expanded, and Cones or Nuts rounder.

The Cones or Nuts are principally uſed; the Leaves but ſeldom: They are accounted very drying and binding, good to ſtop Fluxes of all Kinds, a Spitting of Blood, Diarrhœa, Dyſentery, the immoderate Flux of the Menſes, and involuntary Diſcharge of Urine: They prevent the Bleeding of the Gums, and faſten looſe Teeth: Outwardly they are uſed in ſtyptic reſtringent Fomentations and Cataplaſms.

2. Cypreſſus; ramos extrà ſe ſpargens; quæ mas Plinii. *T.* 587. THE MALE SPREADING CYPRESS.

3. Cypreſſus; Virginiana; foliis Acaciæ deciduis. *H. L. H. A.* 1. 113. THE VIRGINIAN CYPRESS-TREE, WITH LEAVES LIKE THE ACACIA, WHICH FALL OFF IN WINTER. *Boerh. Ind. alt. Plant. Vol.* 2.

CYPRINUM OLEUM, κύπρινον ἔλαιον.

Take of Oil of unripe Olives, (ἐλαίου ὀμφακίνου) waſh'd, one Ceramium (a Meaſure containing about ten Gallons two Pints); Rain-water, one Ceramium and a half; of which mix one Half with the Oil, and reſerve the other to be mixed with Spices. Then take of Aſpalathos, five Pounds and a half; of Calamus, ſix Pounds and a half; of Myrrh, one Pound; Cardamoms, three Pounds nine Ounces; Elecampane, nine Pounds five Ounces. Bruiſe the Bitumen Judaicum, and macerate it in Water; then ſet it over the Fire with the Oil till they boil. Diſſolve the Myrrh in odoriferous Wine, bruiſe the Calamus, and, mixing them together, take out the Aſpalathus, and put in this Mixture of the Calamus into the Oil; and, when they have juſt boiled together, remove the Veſſel from the Fire, and ſtrain it off. Then, having bruiſed the Cardamoms, and mixed them with the reſt of the Water, pour thereto what was boiled, and continually ſtir it with a Spatula till it be quite cold. Afterwards ſtrain off the Oil, and to forty-eight (I read μή inſtead of κή, with *Cornarius*) Pounds of Oil put forty-ſix Pounds eight Ounces of Flowers of Cypreſs; and, having let them alone to macerate, paſs them thro' a Wicker Baſket. If you deſire more of it, you may put in the ſame Quantity of freſh Flowers, and ſtrain it off in like manner; for you may make a ſecond or third Maceration, if you pleaſe, the Preparation being the ſtronger for it. In chuſing it, you ought to regard its Goodneſs, and the ſtriking Fragrancy of its Smell. Some mix Cinnamon with it.

Cyprinum is of a heating and mollifying Quality, and opens the Mouths of the Veſſels, on which account it is proper in Affections of the Uterus and Nerves, and alſo for Pleuriſies and Fractures, either by itſelf, or mixed with Cerate. It is alſo an Ingredient in Malagmas for the Opiſthotonos, Quinſey, and Inflammations in the Groins; and alſo enters the Compoſition of Acopa. *Dioſcorides*, *Lib.* 1. *Cap.* 65.

CYPRUS. See Phyllarea; *folio Liguſtri.*

CYPSELE, or CYPSELIS; κυψέλη, or κυψελίς. The Wax of the Ears.

CYPTARION. The Name of an Antidote in *Myrepſus*, *Sect.* 5. *Cap.* 9.

CYRÆNIA. In *Rulandus* the Fæces of Saffron infus'd in Oil.

CYRBASIA. Properly the *Tiara*, a Sort of Cap worn by the *Perſian* Monarchs. *Hippocrates* makes uſe of this Word, in his Treatiſe of the Diſeaſes of Women, in deſcribing a Sort of Covering which he directs for the Breaſt.

CYREBIA, κυρήβια. The Huſks of Barley, or of other Corn, which fall off whilſt they are torrifying, or ſoaked in Water.

CYRENAICUS SUCCUS. The ſame as Laserpitium.

CYRSEON. The Podex, or Anus.

CYRTOIDES, κυρτοειδής. Gibbous.

CYRTOMA, κύρτωμα. Any preternatural Tumor, Protuberance, or Gibboſity.

CYSSAROS, κύσαρος. The Podex, or Anus.

CYSSITES. A Name for the *Lapis Ætites*.

CYSTEOLITHOS, from κύστις, the Bladder, and λίθος, a Stone. The Stone in the Bladder.

CYSTHEPATICI DUCTUS. The Cyſthepatic Ducts, that is, Ducts which convey the Bile from the Liver to the Gall-bladder.

CYSTICAPNOS.

The Characters are,

It hath an annual fibrous Root; the Leaves, Branches, and Flowers, have the Appearance of climbing Fumitory; the Fruit is an oval Bladder, pierced thro' by an Axis, to which are faſten'd round Seeds on every Side, incloſed again with one common Veſicle, which is expanded about the Axis.

Boerhaave mentions but one Species of this Plant, which is,

Cyſticapnos; Africana; ſcandens. *Fumaria, Africana, veſicaria, ſcandens.* Par. Bat. App. 7. *Fumaria, alba, veſicaria, capreolis donata, ſub exitura autumni florens, Æthiopica*, Pluk. 400. a. AFRICAN CLIMBING BLADDER FUMITORY. *Boerh. Ind. alt. Plant. Vol.* 1.

CYSTINX, κύστιγξ. A ſmall Bladder.

CYSTIS, κύστις. The Bladder of Urine; but *Cyſtis Fellea* is the Gall-bladder. Hence *Cyſtis* is applied to any Receptacle of morbid Humours reſembling a Bladder.

CYSTOTOMIA, from κύστις, the Bladder, and τέμνω, to cut. The Operation of Lithotomy.

CYTHION. The Name of a Collyrium mentioned by *Celſus*.

CYTINUS. The Flower of the Pomegranate.

CYTISO-GENISTA.

The Characters, according to *Miller*, are,

It hath papilionaceous (or Butterfly) Flowers, which are ſucceeded by compreſſed Pods, in which are contain'd many Kidney-ſhap'd Seeds: The Branches are flexible, and have ſometimes ſingle Leaves, and at other times three Leaves join'd together.

Boerhaave mentions but one Species of this Plant, which is,

Cytiſo-geniſta ſcoparia; vulgaris; flore luteo. *Tourn. Inſt.* 649. *Boerh. Ind. A.* 2. 27. *Geniſta*, Offic. Ger. 1130. Emac. 1311. Chab. 83. Mer. Pin. 44. *Geniſta vulgaris*, Merc.

Mett. Bot. 1. 37. Phyt. Brit. 45. *Geniſta vulgaris & ſcoparia*, Park. Theat. 228. *Geniſta anguloſa & ſcoparia*, C. B. Pin. 395. *Geniſta non ſpinoſa anguloſa & ſcoparia*, Jonſ. Dendr. 372. *Geniſta anguloſa trifolia*, J. B. 1. 388. Raii Hiſt. 2. 1723. Synop. 3. 474. *Cytiſus ſcoparius vulgaris*, Elem. Bot. 508. COMMON BROOM. *Dale.*

This has a large, thick, woody Root, running deep in the Earth, whence it is with Difficulty extirpated; from which ſpring a great Number of Stalks, growing pretty cloſe together, which are very tough, ſomewhat welted and angular, growing two Foot or more high. It bears at every Joint three ſmall oval Leaves, growing on a common Foot-ſtalk, which quickly fall away, appearing bare of Leaves for a great Part of the Year. The Flowers grow on the Branches from the Middle upwards, being large and papilionaceous, of a bright-yellow Colour, and are ſucceeded by flat very hairy Pods, containing ſmall, brown, Kidney-like Seed. It grows in Fields and Commons, and flowers in *April* and *May*. The Flowers and Stalks are us'd.

Broom is an aperitive and hepatic Shrub, opening Obſtructions of the Liver and Spleen, provokes Urine, and is accounted very good for the Dropſy, being infuſed in the common Drink. The Aſhes likewiſe, infuſed in Ale or Wine, are uſed againſt the ſame Diſtemper, cauſing great Diſcharges of Water by Urine. The Flowers, before they are grown to any Bigneſs, are pickled with Salt and Vinegar, and are eaten for Sauce, like Capers, and are eſteemed by many as wholſome for the Stomach, and good againſt Diſeaſes of the Spleen and Liver.

Cordus has obſerved, that this Plant ſtinks like the Elder: Its Smell ſeems ſtronger to me, and to approach to that of the fetid Oils: Its Leaves are bitter, and give no Redneſs to blue Paper; whence we may conjecture, that they contain a Salt reſembling the natural Salt in the Earth, mixed with a great deal of fetid Oil: Thus this Plant is aperitive and diuretic. *Pena* and *Lobel* affirm, that, in *Guien* and *Auvergne*, the People eat Broom-flowers in Sallad, without any Provocation to vomit. *Simon Paulli* has obſerved, however, that two Drams of theſe Flowers, infuſed in Hydromel, purged very well. If it be ſo, it is probable, that the Vinegar ſtops their purgative Quality; for every body knows, that Acids weaken Purgatives. Theſe Authors alſo have obſerved the Seeds of Broom to be very little emetic. *Tragus* recommends the diſtil'd Water of Broom-flowers for the Stone: He ſays, that a Scruple of the Seed, powder'd, is ſudorific; and that a Glaſs of the Juice of the Branches, macerated in Water, gives great Relief in the Sciatica and Quinſey. *Dodonæus* preſcribed the Infuſion of the young Shoots to bring off the Seroſities of hydropical and cachectic Perſons by Urine: He alſo gave them to drink the Aſhes of the ſame Plant, infuſed in White-wine; but he gives notice, that they are very acrid. They may be corrected with Cream of Tartar. *Julius Cæſar Claudianus* mixed them with the Salt of Wormwood, and has publiſhed this Secret as an excellent Remedy for the Dropſy. The Extract of the Leaves has the ſame Virtues. The Conſerve and Extract of the Flowers are good for the Diſeaſes of the Stomach. They are uſed in the balſamic Pills, which are taken before Meals. Theſe Pills are ſtrengthening, and keep the Belly open: They are made after the following Manner:

> Mix the Extract of eight Ounces of Rhubarb, that of the like Quantity of Aloes, four Ounces of Maſtich, ſix Ounces of Myrrh, two Ounces of Saffron, one Ounce of the Extract of Broom-flowers, and as much Balſam of *Peru*; make them into Pills, and let a Dram be the Doſe. *Martyn's Tournefort.*

It is remarkable, that Sheep are preſerved from the Rot, by browſing upon young Broom.

CYTISUS.

The Characters, according to *Miller*, are,

It hath papilionaceous (or Pea-bloom) Flowers, which are ſucceeded by compreſſed Pods, in which are contain'd ſeveral Kidney-ſhap'd Seeds. To which may be added, the Leaves are, for the moſt part, roundiſh, and ſomewhat like thoſe of the Nettle-tree.

Boerhaave mentions ſixteen Species of this Plant.

1. Cytiſus Alpinus; latifolius; flore racemoſo, pendulo. *Elem. Bot.* 508. *Tourn. Inſt.* 647. *Boerh. Ind. A.* 2. 26. *Laburnum*, Offic. Chab. 78. *Laburnum trifolium Anagyridi ſimili*, J. B. 1. 361. *Anagyris*, Ger. 1239. Emac. 1427. *Anagyris non fœtida ſive Laburnum majus*, Parkinſ. Theat. 245. *Anagyris non fœtida major vel Alpina*, C. B. Pin. 391. *Anagyris non fœtens major vel Alpina*, Jonſ. Dend. 364. BEAN-TREFOIL-TREE. *Dale.*

The Leaves are refrigerating, and diſcuſs Tumors; and the Decoction thereof provokes Urine.

2. Cytiſus Alpinus; latifolius; flore racemoſo, pendulo; foliis variegatis. *T.* 648. *Anagyris, non fœtida major, Alpina, foliis ex albo & viridi eleganter variegatis.* Plukn. Alm. Bot.

3. Cytiſus Alpinus; anguſtifolius; flore racemoſo, pendulo, longiori. *T.* 648. *Anagyris, non fœtens, minor.* C. B. Pin. 391. *Egelo.* Dod. p. 785. *Anagyris anguſtifolia.* H. Eyſt. o. 1. F. 7. Fig. 1. THE NARROW-LEAV'D LABURNUM, OR BEAN TREFOIL, WITH LONG PENDULOUS FLOWERS.

4. Cytiſus Alpinus; flore racemoſo, pendulo, breviori. *T.* 648. *Anagyris, non fœtida, latifolia, floribus denſius congeſtis in breviorem uvam.* Schol. Bot. BROAD-LEAV'D LABURNUM, OR BEAN-TREFOIL, WITH VERY SHORT PENDULOUS FLOWERS.

5. Cytiſus; glabris foliis, ſubrotundis; pediculis breviſſimis. *C. B. P.* 390. *Trifolium arboreſcens.* H. Eyſt. Vern. o. Arb. & Fr. F. 10. Fig. 2. H. R. D. ROUND-LEAV'D SMOOTH BASE TREE-TREFOIL, WITH SHORT FOOT-STALKS.

6. Cytiſus; glaber; nigricans. *C. B. P.* 390. THE BLACK BASE TREE-TREFOIL.

7. Cytiſus; glaber; viridis. *C. B. P.* 390. SMOOTH GREEN BASE TREE-TREFOIL.

8. Cytiſus; ſecundus Cluſii. *H.* 94. *Pſeudo-Cytiſus alter.* Dod. p. 570. H. R. D.

9. Cytiſus; minoribus foliis; ramulis tenellis, villoſis. *C. B. P.* 390.

10. Cytiſus; ſupinus; foliis infrâ & ſiliquis molli lanugine pubeſcentibus. *C. B. P.* 390.

11. Cytiſus; Africanus; argenteus; flore atro purpureo. *Oldenl. T.* 648. H. R. D. SILVER AFRICAN BASE TREE-TREFOIL, WITH A DARK-PURPLE FLOWER.

12. Cytiſus; hirſutus; flore luteo purpuraſcente. *C. B. P.* 390. HAIRY BASE TREE-TREFOIL, WITH A PURPLISH-YELLOW FLOWER.

13. Cytiſus ſpinoſus. *Herm. Cat. Hort. Lugd. Bat.* 218. *Tourn. Inſt.* 648. *Elem. Bot.* 508. *Boerh. Ind. A.* 2. 27. *Aſphalathus altera*, Offic. *Aſphalathus ſecunda trifolia, quæ Acacia ſecunda Matthiolo trifolia*, J. B. 1. 375. *Aſphalathus ſecunda trifolia, Acacia ſecunda quorundam.* C. B. Pin. 392. Jonſ. Dendr. 366. *Acacia altera trifolia*, Ger. 1149. Emac. 1330. *Acacia Dioſcoridis*, Ger. 1149. *Acacia ſecunda ſeu altera Dioſcoridis*, Park. Theat. 1544. *Cytiſus ſpinoſus Acacia dictus*, Raii Hiſt. 2. 1723. *Cytiſo-Spartium, aculeatum, Acacia trifolia dictum*, Plukn. Almag. 129. TREFOIL ACACIA.

The Juice of this Cytiſus is aſtringent, and a good Medicine for the Eyes. *Dioſcorides.*

14. Cytiſus; humilis; argenteus; anguſtifolius. *T.* 648. *H. R. D.* SILVERY DWARF BASE TREE-TREFOIL, WITH NARROW LEAVES.

15. Cytiſus; Monſpeſſulanus; Medicæ folio; ſiliquis denſe congeſtis & villoſis. *T.* 648. BASE TREE-TREFOIL OF MONTPELIER, WITH MEDIC-LEAVES, AND HAIRY PODS GROWING IN BUNCHES.

16. Cytiſus; argenteus; linifolius; inſularum Stœchadum. *T.* 648. SILVERY FLAX-LEAV'D BASE TREE-TREFOIL OF THE STECHADES ISLANDS. *Boerh. Index alt. Plant. Vol.* 2.

Beſides the foregoing Species of the *Cytiſus*, *Dale* mentions the following; which is,

Pseudo-cytisus, Offic. *Pſeudo-cytiſus hirſutus*, Ger. 1126. Emac. 1308. *Cytiſus hirſutus*, J. B. 1. 372. Chab. 79. Tourn. Inſt. 647. Elem. Bot. 508. *Cytiſus Hiſpanicus arboreus*, Park. Theat. 1475. *Cytiſus foliis ſubruſa lanugine hirſutis*, C. B. Pin. 390. Raii Hiſt. 1. 971. Jonſ. Dendr. 361. Hort. Cath. Supp. A. 25. HAIRY SHRUB-TREFOIL.

The Leaves are uſed in the ſame Intentions as thoſe of the other Species.

CYZICENUS, Κυζικηνός. An Epithet of a Plaiſter deſcrib'd by *Galen, de Comp. M. p. G.* and recommended for Chironian Ulcers, and Wounds of the nervous Parts.

D.

D, in the chymical Alphabet, imports Vitriol.

Δ. The Figure of the Letter *Delta*, the fourth in the *Greek* Alphabet, was uſed by the Antients, as *Galen* ſays, *Com. 3. in 3. Epid. Tit. 71.* as a Symbol to expreſs a Quartan Fever.

DABESTIC. A Tortoiſe. *Johnſon.*

DABURI. *Cluſii.* A Name for the ACHIOTL, which ſee.

DACETON, δακτὸν, from δάκτω, to bite, is an Epithet of ſuch Animals as hurt by biting.

DACHEL. A Name in *Boerhaave's Index alter*, for the PALMA MAJOR.

DACNERON, δακνηρὸν, from δάκτω, to bite, biting, is an Epithet of a Collyrium in *Trallian*, call'd alſo *Oxydorcia* and *Cynopticon*, much recommended by him for clearing the Sight, helping weak Eyes, and diſcuſſing a beginning Cataract. It conſiſts of thirty Drams of burnt Copper, ſixteen Drams of Pepper, eight Drams of Cadmia, four Drams of Myrrh, the like Quantity of Saffron, twenty-four Drams of Gum Arabic, and five Drams of Opium; uſe them in Water. *Trallian, Lib. 2. Cap. 5.*

DACRYDIUM. The ſame as DIAGRYDIUM, which ſee.

DACRYODES HELCOS, δακρυῶδες ἕλκος, from δάκρυ, or δάκρυον, a Tear, is uſed by *Hippocrates, Lib. de Fract.* to ſignify an Ulcer running with a thin and undigeſted Sanies.

DACRYON, δάκρυον, a Tear, is an excrementitious, ſerous, or lymphatic Liquor, diſtilling from the *Glandulæ lacrymales.* Tears are diſtinguiſh'd into natural or voluntary, and preternatural or involuntary: The firſt flow from the Eye, on occaſion of ſome extraordinary Paſſion of the Mind, as Grief, ſudden Joy, and the like. The preternatural, or involuntary, are call'd by *Hippocrates* δάκρυα ἀκόσια, *Lib. 1. Epid.* where he ſays, that, in burning Fevers, they prognoſticate an Hæmorrhage from the Noſe. In *Lib. 4. Epid.* he expreſſes the ſame by ἀκουσίως παραῤῥέοντα, "flowing involuntarily." In *Progn.* he uſes the Phraſe ἀπροαιρέτως δακρύοντες ὀφθαλμοὶ, "Eyes weeping undeſignedly;" to which, *Aph. 52. Lib. 4.* are oppos'd κατὰ προαίρεσιν δακρύοντες, "weeping ſpontaneouſly." And, *Lib. 6. Epid. Sect. 1. Aph. 16.* we are told, "that, in acute Diſeaſes, when the Caſe is dangerous, voluntary Tears are a good Sign, but involuntary, the contrary." *Galen, de Cur. Rat. ad Glauc.* reckons involuntary Tears among the Signs of an Hæmorrhage.

DACRYOPOEOS, δακρυοποιὸς, from δάκρυ, a Tear, and ποιέω, to make, or cauſe, is an Epithet of ſome acrimonious Subſtances, which excite Tears; as the Onion, Sea-radiſh, and the like.

DACTILETUS. The Hermodactyl. *Rulandus.*

DACTYIDEUS, according to *Johnſon*, is the *Lapis Lyncis.* See BELEMNITES.

DACTYLETHRAI, DACTYLITHRAI, δακτυλήθραι, δακτυλίθραι, from δάκτυλος, a Finger, from its Figure, is a ſort of topical Medicine intruded into the Stomach to provoke Vomiting; and is deſcrib'd by *Oribaſius, Collect. Med. Lib. 8. Cap. 6.* "I know ſome, he ſays, who anointed their Fingers "with the Juice of Scammony, and, by that means, pro"voked the Stomach to caſt up its Contents; but, if this had "no Effect, they took eight or ten Feathers out of the Tail "of a Gooſe, and, rubbing them with Oleum Cyprinum, or "Irinum, intruded them." After this follows what relates immediately to this Article: "There is a Method alſo of "ſewing *Dactylethrai* of *Carthaginian*, or ſome other Kind, "of very ſoft Leather, ten or twelve Digits in Length, in "the Shape of a Finger. They filled this with Wool, to the "Length of ſix Digits, and left the reſt empty, to be adapted "to the Finger; then they rub'd it with one of the before"mentioned Oils, and ſo introduced it into the Stomach."

DACTYLIOS, δακτύλιος, in *Hippoc.* περὶ γυναικ. φύσ. is expounded by κύκλος, τροχίσκος, a Troche.

DACTYLODOCHME, δακτυλοδόχμη. See DOCHME.

DACTYLOS, δάκτυλος. The Fruit of the Palm-tree, call'd alſo by the *Greeks* φοινικοβάλανος, and φοινὶξ, as *Galen, Lib. 2. de Alim. Fac.* aſſures us; for which Reaſon, as *Foeſius* obſerves, we very rarely meet with δακτύλους in *Hippocrates*, but often with φοίνικας. In the Paſſage (*Lib. 1. περὶ γυναικ.*) τοῖσι δακτύλοισι καὶ ὄψοισι θαλασσίοισι μᾶλλον ἢ κρέασι χρῆσθαι, "Let her Food be *Dactyli*, and ſuch as the Sea affords, rather "than Fleſh-meats," the Word δακτύλοισι ſeems to import ſomething belonging to the Sea, rather than the Fruit of the Palm-tree, becauſe it reſpects a drying Regimen of Diet: For the *Dactylus* is a Sort of Shell-fiſh, which has the Name alſo of *Unguis*, from its Reſemblance to a Man's Nail; and is uſually eaten, *Pliny, Nat. Hiſt. Lib. 9. Cap. 61, & 33.* For the ſame Reaſon it was call'd by the *Greeks* ὄνυξ (*Onyx*). See BLATTA BYZANTIA. But ſince theſe Fiſh abound with a bad and viſcous Juice, according to *Athenæus*, and are of a hard Fleſh, *Foeſius* ſuſpects the Place to be corrupted, and reads with *Cordæus*, τοῖσι δακτύλοισι, connecting it to the foregoing Sentence; other Interpreters read τοῖσι δ' ἄλλοισι.

Δάκτυλος is alſo the ſhorteſt Meaſure among the *Greeks*, being the fourth Part of a Palm, and the ſixteenth Part of a Foot, the ſame as *Digitus* among the *Latins.*

DACTYLOTHECE, δακτυλοθήκη, from δάκτυλος, a Finger, and θήκη, a Caſe, is a Name given, by *Paré*, to a chirurgical Inſtrument for raiſing a Finger or Thumb, when pendulous from ſome Hurt received.

DACTYLUS, in *Boerhaave, Index alter*, is a Name for the *Palma Major.*

DACTYLUS IDÆUS. See BELEMNITES.

DÆDALUS. A Name for Mercury, or Quickſilver, in ſome chymical Authors.

DÆDION, δαιδίον, is a Diminutive of DAIS, a Torch, which ſee.

DÆMONIS. Ordure, Aſphaltus. *Caſtellus.*

DAIB, DEHEB, DEHEBEB, DEAB. Gold. *Rulandus.*

DAIS, DAS, δαὶς, δᾶς, in *Hippocrates*, is the Tæda, a ſort of Pine-tree, and alſo the Subſtance of that Tree: In *Lib. 1. περὶ γυναικείων*, he preſcribes δαΐδα πιείρην, "very "fat Tæda," for the Expulſion of the Fœtus; and, in the ſame Book, in a Suppreſſion of the Menſes, he orders drinking of Crethmon ἐν οἴνῳ τῷ ἀπὸ δαΐδος, "in Wine made of the "Tæda," or Wine in which the Tæda is boil'd. And again, for a Retention of the Lochia, he preſcribes a Potion, prepared of the Tæda, to be drank every Morning faſting, till the Diſorder be removed. In *Lib. περὶ ἀφόρων*, he directs δαΐδα πιστάτην, very pinguious Tæda, to be cut in thin Slices, and boil'd in the ſweeteſt white Paſſum, [γλυκεῖ, Wine made of dry'd Grapes] and ſo drank; and, in ſeveral other Places of the ſame Book, he orders Shavings of the Tæda, macerated in white Wine, or Water, and drank.

Dædion, δαιδίον, is an oblong, round, and ſmoothed Tæda, cut in the Form of a Peſſary, and introduced into the Uterus, in order to open its Orifice, when cloſed; and commonly preſcrib'd with a leaden Cannula, in many Places of *Hippocrates, Lib. 1. περὶ γυναικ.*

Dioſcorides, Lib. 1. Cap. 86. ſpeaking of the Pine, and the Pitch-tree, ſays, that a *Tæda*, [δαδίον] of them, cut into thin Slices, cures the Tooth-ach.

The *Dais*, or *Tæda*, is the Mountain Pine, wholly converted into a pinguious Subſtance. Hence, ſays *J. Bauhine*, *Pliny* is miſtaken in making the *Tæda* a particular Kind of Tree, and the ſixth of the coniferous Kinds. *Pliny* is alſo cenſured, on the ſame Account, by *Matthiolus, Bellonius, C. Hoffman, Bodæus a Stapel*, and others. *Ray* is of Opinion with *Dalechampius, Cluſius*, and *Parkinſon*, that the Word *Tæda* is homonymous, and ſometimes ſignifies the fat and reſinous Wood [τὴν δᾷδα] of the Pine, which is burnt inſtead of a Torch or Candle; and ſometimes a particular Kind of Tree, unknown to *Theophraſtus.*

From the lower Parts of the Mountain Pine, which are next to the Root, they cut thoſe pinguious Pieces of Wood, which ſerve to kindle a Fire, and to give Light, and are of great Uſe in many Countries of *Germany*; for the Humour, deſcending to the Root, cauſes a Suffocation; by which means the Tree is converted into a *Tæda.* Sometimes the Pitch-tree, and the Larch-tree, are converted into a *Tæda*, but very rarely; for it is a Diſeaſe peculiar to the Mountain Pine. From this Uſe of the Pieces of the *Tæda* in giving Light, the Word *Tæda* came to be uſed for any ſort of Torch, and eſpecially a nuptial one. *Raii Hiſt. Plant.*

Δαὶς, or δᾶς, properly ſignifies a Taper or Torch, from δαίω, to kindle; whence comes the *Latin Tæda*, as from δάσκω, *teſcum, ſino, tina.* All the antient Copies write *Tæda*, not *Teda*; ſo they properly call'd a Torch made of thin Splinters of Wood, bound together, and daubed over with Pitch. But, for the moſt part, the δᾷδες, or *Tædæ*, were made of the pinguious Woods of the Pine and Pitch-tree, as being very ſubject to kindle from their native Pitch; but they were moſt frequently made of the Pitch-tree, as being the moſt plentifully furniſhed with that Subſtance. Hence πεύκη, the Pitch-tree, came to ſignify the ſame as δᾶς, a Torch, as appears

pears from *Pollux*, *Hesychius*, and *Aristophanes*. The *Greeks* then, and especially the Poets, frequently used πεύκη for δᾷς. But we never find, on the contrary, that they made use of δᾷς to signify πεύκη, which would be just as if they should use *Navis* to signify *Pinus*; though *Pinus* is frequently put by the Poets for *Navis*, which is made of the Substance of the Pine. The *Latins*, however, seem to have taken the δᾷς, and the λαμπὰς, for the Picea, or Pitch-tree; because the Picea was most ἐνδᾳδος, or had the Qualifications of a δᾷς to an extraordinary Degree. *Pliny* every-where, by the Word *Tæda*, means a Tree: *Vitruvius*, *Lib. 7. Cap.* 10. does the same; and, in the Glossaries, *Tæda* is the δαὶς, πεύκη, ἢ λαμπάς. And hence *Juvenal*, in the Hemistich——*Si sit latissima Tæda*, uses it as others do *Pinus*, or *Picea*, to signify *Navis*, a Ship: Because, therefore, the *Greeks* confound δᾷς, and πεύκη, in making them both to signify a Torch, the *Latins* have confounded *Tæda* and *Picea*, taking them both for a Tree; which, however, is absurd: And hence *Pliny* renders τὴν δᾷδα, and τὸ ἐνδᾳδον, of *Theophrastus*, as spoken of the Tree *Tæda*; which is extremely absurd. He errs also in making the *Tæda* a sixth Kind of coniferous Tree distinct from the Pitch-tree, and accommodated for Illuminations in sacred Solemnities. A *Tæda* is, indeed, a Torch proper enough on such Occasions; but if there were any Tree called *Tæda*, from whence the *Tædæ* or Torches were taken, it could be no other than the *Picea*: Besides, the *Tædæ* were not taken from a particular Tree call'd the *Tæda*, but from the *Picea*, the *Pinus*, and, *ex omnibus δᾳδοφόροις*, "from all tediferous Trees." *Salmasii Plin. Exercitationes.*

DAITIDES, δαΐτιδες, is expounded by *Galen*, in his *Exegesis*, μεγάλαι λαμπάδες, "great Torches;" but is made by Metaphor, he says, to signify Heads of Garlick, because they consist of many Cloves, as Links and Torches are composed of coarse Flax and Paper, bound up, and compacted together, παρὰ τὸ συνδεδέσθαι. But *Erotian* reads δέτιδα, and expounds it τὴν λαμπάδα, "a Torch," παρὰ τὸ δεσμεῖσθαι, from binding. But I rather think, says *Foesius*, those to be in the right, who read *Galen* δαΐτιδα, μικρὰν λαμπάδα, "*Daitis*, a small Torch;" both because *Daitis* is a Diminutive, and as it comes nearer to the Reading of *Erotian*. Δαΐδες, in *Hesychius*, are λαμπάδες, λυχνοὶ, "burning Torches," from δαίω, to kindle. Δέται, from δέω, to bind, signify Torches, Fetters, Handfuls; δέται are also δεσμοὶ δᾳδῶν, τυτέσι λαμπάδων, "Bundles of Torches," because they are bound together. *Foesius.*

DALECHAMPIA. A Name given by Father *Plumier* to a Plant found in *Martinico*, which he named thus in Honour of *J. Dalechampius*, a curious Botanist. It is call'd *Dalechampia*, *scandens*, *Lupuli foliis*, *Fructu tricocco glabro*, *Calyce hirsuta*. Climbing *Dalechampia*, with Leaves like Hops, a three-seeded Fruit, and a prickly Cup. *Miller's Dictionary*, *Vol.* 2.

DAMA, Offic. Bellon. Obs. ed. Cluf. 57. *Dama vulgaris*, Mer. Pin. 166. Aldrov. de Quad. Bisul. 741. Jonst. de Quad. 55. *Dama vulgaris*, *sive Recentiorum*, Gesn. de Quad. 307. *Cervus Platyceros*, *vel Platyceros simpliciter dictus Plinio*; *Dama vulgaris*, Raii Synop. A. 85. *Mas* THE BUCK, *fœmina* THE DOE, *hinnulus* THE FAWN *dicta*. THE FALLOW DEER.

This Animal is too well known to require a Description.

As the Fallow-deer lives entirely on Vegetables and Water, the Salts are not highly exalted; nor is it much inclined to an alcaline Putrefaction, on account of its Aliment. But the habitual Exercise of the Animal exalts and volatilizes the Salts in some degree. The Venison of a Deer, kill'd when cool, differs very much from that of one kill'd when heated with Exercise: The Fibres of the first are more hard, the Flesh more tough, and consequently less easily dissolvable in the Stomach. The second is more tender, more easily dissolvable, but has a greater Tendency to an alcaline Putrefaction; which, however, may be, in a great degree, prevented, by suffering the Deer to bleed plentifully when kill'd; as the *Jews* were directed to do with respect to all sorts of Beasts and Fowls, in *Leviticus*, *C.* 17. *V.* 13.

Upon the whole, however, Venison is esteem'd, and that justly, an excellent Aliment.

The recent Blood of the Fallow-deer, drank immediately after being taken from the Vein, is said to remove Dizziness of the Head.

The Gall is said to be detersive, to cure Dimness of Sight, and take away Films of the Eyes.

The Liver is recommended against a Diarrhœa.

The Horns are used exactly in the same Intentions as those of the Stag; and the Fat or Suet agrees in Virtues with that of the same Animal.

DAMASCENA PRUNA NOSTRATIA. Damsons. See PRUNUS GALLICA.

DAMASCENA PRUNUS. The Damask Prune. See PRUNUS, *fructu magno*; *dulci*, *atro-cœruleo*.

DAMASONIUM. See HELLEBORINE, and ALISMA.

DAMNATA TERRA. The same as *Caput Mortuum*. See CAPUT.

DAMSIR, or DENSIR. Sand. *Johnson.*

DANAIS. A Name for the *Conyza*. *Oribas. Coll. Med. Lib.* 11.

DANICH. A Weight of eight Grains. The Word is *Arabic*. See LUPINUS.

DANTA. The Name of a large *American* Animal, the Hoofs of which, scrap'd and powder'd, are esteem'd sudorific, good for the Epilepsy, and an Antidote against Poisons, taken from a Scruple to a Dram.

DAPHNE. The Bay-tree.

DAPHNELÆON, δαφνέλαιον, (from δάφνη, the Bay-tree, and ἔλαιον, Oil) Laurinum, or Oil of Bay, is prepared of the Berries when full ripe, and ready to fall off, by boiling them in Water; during which they transmit through the Husks a fat Substance, which, after compressing the Berries with the Hand, is taken off with Shells. Some, after they have inspissated Oil of unripe Olives with Cyperus, Juncus odoratus, and Calamus, cast therein the tender Leaves of the Bay, and boil them together; and some add the Berries, till it smells sufficiently strong; and others mix with them Styrax and Myrrh. The mountainous and broad-leav'd Bay is the fittest for the Preparation of this Oil, which is best in its kind when recent, of a green Colour, very bitter, and acrimonious.

Laurinum has heating and mollifying Virtues, opens the Mouths of the Vessels, (ἀναστοματικὸν) and removes Lassitudes. It is beneficial in all nervous Disorders, Pains of the Ears, and Distillation; and it is an excellent Remedy, inferior to none, in Distempers of the Kidneys, contracted from Cold, the Parts being anointed with it; but, taken inwardly, it excites a Nausea. *Dioscorides*, *Lib.* 1. *Cap.* 49.

DAPHNIA. A Gem mentioned by *Pliny*; said to cure the Epilepsy.

DAPHNITIS. A Name by which the *Alexandrian* Merchants call'd the best Species of Cassia. *Oribas. Collect. Med. Lib.* 11.

DAPHNOIDES. A Name for the *Thymelæa*; *Laurifolia*; *sempervirens*; *seu Laureola Mas. Boerh. Ind. alt. Plant.*

DARATOS, δάρατος. An Epithet for Bread in *Nicander*, which imports its being unfermented.

DARCHEM. The choicest Cinnamon. *Johnson.*

DARSIS, δάρσις, from δέρω, to excoriate. Excoriation, or stripping off the Skin. It is sometimes used as an anatomical Term.

DARTA. A Tetter, Ringworm, or the Itch.

DARTOS, δάρτος. The Dartos, or fleshy Portion of the Scrotum, is a true cutaneous Muscle, the Fibres of which are, for the most part, strongly connected to the Skin, running thro' the cellular Substance, which lies between these two Portions, in place of a Membrana Adiposa, but without the least Appearance of Fat. This Muscle is thin, and, by the Disposition of its Fibres, forms a Bag with two Cavities, or two small Bags, joined laterally to each other, and contained within the cutaneous Portion.

The lateral Parts of these two Bags, which are turn'd from each other, are longer than those which are joined together; and, by this Union, a Septum is form'd between the Testes, which may be call'd the Mediastinum of the Scrotum.

The Raphe, or Suture, adheres to the Edge of this Septum, and thereby braces down the Middle of the cutaneous Portion, which, from thence, appears to be divided into two Portions. The other Edge of the Septum adheres to the Urethra.

These two Bags of the Dartos are lined, on the inner or concave Side, by a cellular Substance, more considerable than that between the convex Side and the Skin; so that the fleshy Fibres, all the Way to the Septum, lie between two cellular Strata. They run thro' the outer Stratum, to be inserted in the Skin; and, by their Contraction, they form the natural Rugæ of the Scrotum.

These fleshy Fibres have likewise a strict Connection with the internal cellular Membrane, especially at the upper Part, below the Groin, where the anterior and external lateral Portions of the Dartos terminate by a kind of tendinous or ligamentary Expansion, which is strongly united to the internal cellular Membrane. I have often shewn this, as a particular Fascia lata, which gives Insertion to the Portions of the Dartos, and as a broad Frænum, which keeps the same Portions together.

The aponeurotic or ligamentary Expansion of the Dartos is fixed in the Branch of the Os Pubis, between the Musculus Triceps and the Origin of the Corpus Cavernosum of the same Side, all the Way to the lower Part of the Symphysis of these Bones. The internal Portion of these muscular Bags, or that which forms the Septum Scroti, is fixed to the Urethra by means of a Communication between the same ligamentary Expansion, and another, which is explained in its proper Place. *Winslow's Anatomy.*

DAS. The same as DAIS, which see.

DASYMMA, δάσυμμα, from δασὺς, rough, is a Disease of the Eyes, the same as TRACHOMA, which see.

DASYPUS, δασύπους, from δασὺς, rough or hairy, and ποῦς, a Foot. An Epithet in *Galen*, *de C. M. S. L. Lib.* 5. *Cap.*

Cap. 9. for a Rabbet or Hare. *Caſtellus.* It generally imports a Hare.

DASYS, δασὺς, denſe, thick, cloſe, rough, in *Prorrhet.* and *Coac.* is an Epithet for a Tongue condenſed, contracted, and exaſperated with Heat and Dryneſs, as it happens in Phrenſies. *Galen* would rather have the Epithet τραχὺς uſed in ſuch a Caſe, and adds, that δασὺς is, by ſome, apply'd to a Tongue which is the Cauſe of a Denſeneſs or Roughneſs, that is, a Hoarſeneſs of the Voice. Δασέα γλῶτ̃α alſo mean the ſame as πεφεικυῖα, (rigid) in *Coac.* and may import as much as when it is ſaid of the Tongue, under a burning Fever, πέφεικε, σκληύνεται, ἢ τραχύνεται, ἢ παχύνεται, "It becomes rigid, hard, "denſe, and rough;" tho' *Galen* aſſerts, that, by δασέα γλῶτ̃α, we are to underſtand no more than a moderate Roughneſs and Dryneſs of the Tongue.

Δασέα ὦρα, and δεδασυμένα, in *Prorrhet.* and *Coac.* are denſe, thick, and very turbid Urines, with a rough or denſe Superficies; tho' this Phraſe is reckon'd by *Galen* among the obſcure and purpoſely affected; of which there are many ſuch in the *Prorrhetica*, and other ſuſpected Works of *Hippocrates.* "Some," he ſays, "by δασέα τῶν ὡρέων underſtand "Urine of an unequal Superficies, exaſperated with ſmall "white Eminences like Hairs. Others take them to be frothy "Urine, which have a thin Spume unequally diſperſed over its "Superficies; and others again will have them to be thick "Urine, with ſomething hard on the Superficies as fine as Sand." In *Coac.* δασυνόμενον ὦρον is Urine which becomes denſe or thick, and is oppoſed to very thin Urine, being reckon'd among the foul or turbid Sorts. It indicates, that Nature attempts a Concoction of the Juices; and portends a Sweat. In *Lib.* 7. *Epid.* πάνυ δασέα ὦρα ἢ ἀνεσεμμένα, "a very denſe, and much "alter'd Urine," are join'd together, and portend a violent Pain of the Head, and Convulſions. Interpreters read ἀνατεταεσμένα, tho' all the Copies have it ἀνατετεμμένα, for which we ought to read ἀνεσεμμένα. In *Coacis*, ὦρον δάσει ἔχον διαπώμενον, "Urine whoſe thick Contents are divided "into two Parts," prognoſticates a Return of the Diſeaſe.

Δασέα ἀναπνοὴ, "a denſe Reſpiration," in *Galen, Com.* 3. in *Lib. de Art.* is ſuch as paſſes with a Noiſe, when the Organs of Reſpiration, either through the Straitneſs of the Place, or the Redundance of the Humours, or on both Accounts, are too much compreſſed, as it happens in hard, indigeſted, and laſting Tubercles of the Lungs. They who labour under this Diſorder are call'd κερχώδεις (*Cerchodes*) ἀπὸ τῦ κέρχνου, as *Galen* ſays, where all the Copies corruptly read κεγχεώδεις and κέγχρων.

Δασέες, *Aph.* 34. *Lib.* 6. are thoſe who have their Heads adorned with Hair, in Oppoſition to the φαλακροὶ (*Phalacri*) the Bald and Smooth. The Epithet is uſed in the ſame Senſe by *Ariſtotle, Hiſt. Animal. Lib.* 3. *Cap.* 2.

Δασέα βλέφαρα are expounded by *Galen, Com.* 1. in *Prorr.* τὰ τραχύτητα ἔχοντά τινα μετρίως, "Eyelids which have a "moderate Degree of Roughneſs."

DATURA. See STRAMONIUM.

DAUCITES VINUM. Wine of the *Daucus* is prepared by putting ſix Ounces (I read ὐγγίας, with *Saracenus*, not ⊰, Drams) of bruiſed *Daucus* into a Ceramium of Muſt, and ſtraining it off.

It is good for Pains of the Thorax, Hypochondria, and Uterus; provokes the Menſes and Urine; excites Eructations; and is ſerviceable in Coughs, Convulſions, and Ruptures of the capillary Veſſels. *Dioſc. Lib.* 5. *Cap.* 70.

DAUCUS.

The Characters are,

It hath, for the moſt part, a fleſhy Root: The Leaves are divided into narrow Segments: The Petals of the Flower are unequal, and ſhaped like a Heart: The Umbel, when ripe, is hollow'd and contracted, appearing ſomewhat like a Bird's Neſt: The Seeds are hairy, and in Shape of Lice.

Boerhaave mentions ſeven Species of this Plant; which are,

1. Daucus; vulgaris, *Raii Synop.* 3. 218. *Merc. Bot.* 1. 32. *Phyt. Brit.* 34. *Tourn. Inſt.* 307. *Elem. Bot.* 257. *Boerh. Ind. A.* 62. *Daucus vulgaris ſeu noſtras*, Offic. *Paſtinaca ſylveſtris tenuifolia*, Ger. 873. Emac. 1028. Merc. Pin. 901. *Paſtinaca ſylveſtris tenuifolia Dioſcoridis, vel Daucus Officinarum*, C. B. Pin. 151. Mor. Umb. 31. Hiſt. Oxon. 3. 305. *Paſtinaca ſylveſtris ſive Staphylinus Græcorum*, J. B. 3. 61. Raii Hiſt. 1. 465. Chab. 390. *Staphylinus*, Dill. Cat. Giſſ. 150. *Staphylinus ſylveſtris*, Rivin. Irr. Buxb. 313. Rupp. Flor. Jen. 224. WILD CARROT, OR BIRD'S-NEST. *Dale.*

The wild Carrot has a Root ſomewhat thick and fleſhy, but much leſs than the Garden Kind, with many pretty large, hairy, winged, and finely divided green Leaves, finer and more hairy than Garden Carrots: The Stalk grows two or three Foot high, divided into ſeveral Branches, full of ſmaller Leaves, and having at the Tops pretty large flat Umbels, of white ſmall Flowers; and, when theſe are fallen off, the Umbels cloſe themſelves into a hollow round Form, like a Bird's Neſt, containing a great many Seeds, which, when ripe, are flattiſh, rough, and hairy. It grows frequently in paſture Grounds, and in fallow Fields, flowering in *June*, and the Seed is ripe ſoon after, which is the only Part uſed.

The Seed, infuſed in Ale, is accounted an excellent Diuretic, and good to prevent the Stone, and to render its Fits leſs violent: It brings away Gravel, and provokes Urine, as it does alſo the Menſes; and is uſeful in uterine and hyſteric Diſorders.

Helmont informs us, that he knew a Lawyer, who was ſeized with a Fit of the Stone every fifteen Days, freed from the Attacks of his Diſorder for ſeveral Years, by means of an Infuſion of Daucus-ſeed in clear Malt Liquor. Two Drams of the Seeds, infuſed in White-wine, and drank, are ſaid to cure hyſteric Paroxyſms. *Tragus*, and ſeveral others, warmly recommend the ſmall purple Flower, in the Middle of the Umbel, as an infallible Antidote againſt an Epilepſy. *Raii Hiſt. Plant.*

2. Daucus; ſativus; radice albâ. *T.* 307. *Paſtinaca, tenuifolia, ſativa, ſeu hortenſis, radice alba.* M. U. 31. C. B. P. 151. M. H. 3. 305. *Paſtinaca, ſativa, ſive Carota alba.* J. B. 3. 2. 64. b. THE WHITE CARROT.

3. Daucus; radice, & umbellâ, luteis. *T.* 307. *b.*

4. Daucus; ſativus; radice aurantii coloris. *T.* 307. *b.* THE ORANGE-COLOUR'D CARROT.

5. Daucus; ſativus; radice atrorubente. *T.* 307. *Paſtinaca, tenuifolia, ſativa, radice atrorubente.* C. B. P. 151. M. H. 3. 305. *Paſtinaca, ſativa, ſive Carota rubra.* J. B. 3. 2. 64. *Paſtinaca, ſativa, rubens.* Dod. p. 678. b. DARK-RED ROOTED GARDEN-CARROT.

The Virtues of the Seeds and Herb are the ſame with thoſe of the *Daucus Officinarum.* According to *Schroder*, it is accounted a Specific in hyſteric Fits.

The Roots are uſed in Kitchens, and the Method in which ſome prepare them is, to cut them into Slices, boil them, and eat them with Butter, Pepper, and Salt. But, in *England*, the moſt common Method of preparing them is, to boil them with Fleſh-broths, eſpecially thoſe prepared with Beef; and, when thus managed, they are eaten along with the Fleſh inſtead of Turneps. They are ſomewhat flatulent, but are thought to render the Body ſoluble, and contribute to the Cure of a Cough. *Quercetan* affirms, that half a Dram of the Seeds of white Carrot dry'd and powder'd, exhibited with Balm-water, is a Specific againſt hyſteric Fits. *Raii Hiſt. Plant.*

6. Daucus; folio tordylii; flore albo; altiſſimus. *Caucalis, daucoides, altiſſima, Paſtinacæ ſylveſtris folio, flore albo.* H. Maur.

7. Daucus; maritimus; lucidus. *T.* 305. *Paſtinaca tenuifolia, marina, foliis obſcurè virentibus; & quaſi lucidus.* Bot. Monſp. *Paſtinaca, folio œnanthes.* Bocc. Rar. 74. *Gingidium, folio Chærophylli.* C. B. P. 151. *Boerh. Ind. alt. Vol.* 1.

In the *Hiſtoria Plantarum*, aſcrib'd to *Boerhaave*, we read that the Root is much celebrated for its Virtues againſt the Stone, and nephritic Diſorders, and for provoking the Menſes. The Seeds, gather'd in the right Seaſon, are endu'd with an Acrimony; and, being infus'd in Beer, are highly beneficial in the fore-mention'd Diſtempers. The Roots of the firſt, ſecond, third, and fourth Species, afford excellent Nutriment, and are very proper Food for conſumptive Perſons. Empirics raſp the Root, and boil the Raſpings in Milk; than ſweeten it with Honey, and exhibit it in all Diſeaſes of the Breaſt, and in Quinſeys, and externally, to prevent Ulcers from contracting a Cruſt: They give it alſo in Pains after the Birth, the Colic and Strangury. It is one of the moſt conſiderable culinary Roots, and ſtrengthens and fattens the Body.

DAVERIDON. Oil of Spike. *Johnſon.*

DAULONTAS, *Daulontas Frutex (G. Piſon.)* is an *American* Shrub, about a Man's Height, and very full of Branches, which ſo ſpread and extend themſelves in Gardens, that they are obliged to reſtrain them by Lopping and Burning. The Leaves reſemble thoſe of the Balſam-tree, being jagged at the Edges. The Flowers grow in Cluſters, like thoſe of the Elder-tree, and are ſucceeded by Flowers of a bitter Taſte.

This Plant has the Smell, and other Properties, of Chamomile; and the Flowers are uſed in Fomentations and Cataplaſms, as emollient, diſcutient, and reſolvent. The Berries are of Service, taken inwardly, for the Aſthma, to provoke the Menſes, and in the Colic. *Lemery des Drogues.*

DAUMUR. A Species of Serpent, entering the Compoſition of the *Theriaca. Johnſon.*

DAURA. A Term uſed by *Paracelſus* for black Hellebore. Some call it DURA.

DEACUMINATA. The ſame as APOXE, which ſee.

DEALBATIO, λευκασμὸς, λεύκωσις. A Whitening. It is a Part of Coſmetics, as when we ſay, a Whitening, or Dealbation, of the Teeth, Cicatrices, or the like. It is alſo a Term in Uſe among ſome Profeſſors of the ſpagirical Art, for the third Operation of the Proceſs of the Philoſophers Stone. *Paracelſus*, in his *Manual*, teaches artificial Ways of whitening Metals; and *Junker*, in his *Lexicon Chymicum*, ſhews two Ways of whitening Copper. *Caſtellus.*

DEARGENTATIO. A Tincturing of the baſer Metals, for Inſtance, Copper, with the Colour of Silver.

DEARTI-

DEARTICULATIO, *διάρθρωσις*. The ſame as ABARTICULATIO, which ſee.

DEASCIATIO. The ſame as APOSCEPARNISMUS, which ſee.

DEAURATIO. A ſuperficial Tincturing of Metals, Money, and the like, with the Colour of Gold. I don't know, that it relates to Medicine, unleſs becauſe Pills and Boluſes are ſometimes gilt.

DEBESSIS. A Tortoiſe. *Rulandus.*

DEBUS. A Term in *Paracelſus, Tract. Apocr. de Vulner.* by which he would ſignify a Remedy againſt Anger.

DECAMYRON, *δεκάμυρον*, from *δέκα*, ten, and *μύρον*, Ointment. The Name of a Malagma in *Oribaſius*, ſo call'd, becauſe it conſiſts of ten different Aromatics. It conſiſts, according to *Myrepſus, Sect.* 9. of *Indian* Leaf, Maſtich, Euphorbium, Spikenard, each four Scruples; Styrax Calamitis, Adarce, each ſix Scruples; common Pepper, four Scruples; Ointment of Nard, four Ounces; Opobalſamum, Wax, each five Drams one Scruple.

DECANTATIO, *κατάχυσις*, the ſame as DEFUSIO, is when a Liquor is gently pour'd off from ſome precipitated Matter, without Straining or Filtration. *Caſtellus.*

DECANUS, *δεκανὸς*, in former times was taken in a bad Senſe, to ſignify a Juggler; as appears from *Galen, Lib.* 6. *de S. F. a little after the Beginning. Caſtellus.*

DECATORTHOMA, *δεκατόρθωμα*, from *δέκα*, ten, and *ὀρθόω*, to direct, or prepare, is a Medicine compounded of ten ſimple Ingredients. *Caſtellus.*

DECEMBER. *Aetius, Tetrab.* 1. *Serm.* 3. *Cap.* 163. places the Winter Solſtice on the twenty-third of this Month; which, if not exact, is yet ſufficient to ſhew, that we are fallen back at leaſt ten or eleven Days in our Computation of Time according to the *Julian* Year.

DECIDENTIA, *κατάπτωσις*. See CATAPTOSIS. It is alſo a Word by which we render *μετάπτωσις*, which, in *Galen, Com.* 1. *in Prognoſt. Hippocr.* and in other Places, ſignifies ſome Turn or Alteration in acute Diſeaſes, whereby they are prolonged from fourteen to twenty, and ſometimes to forty Days.

DECLARATIO, INTERPRETATIO, EXPLICATIO, *ἑρμήνεια, ἐξήγησις*. The ſame as EXEGESIS, which ſee.

DECLINATIO, *παρακμὴ*, the Decline, is that Time of a Diſeaſe in general, or of a particular Paroxyſm, when Nature gets the upper Hand of the Diſeaſe, and there is a Remiſſion of the Symptoms; it ſucceeds the State or Vigour of the Diſtemper. *Declinatio*, in *Avicenna*, is a State of Diſlocation, or imperfect Luxation, when the Bone is not totally remov'd from its Seat.

DECOCTA, *δήκοκτα*, is Water once boil'd or heated, and cool'd in Snow, for the ſake of quenching the Thirſt in a more grateful manner. *Galen* gives an Account of it in *Lib.* 7. *Meth. Med.* And *Pliny, Lib.* 31. *Cap.* 3. ſays, "It was an Inven-" tion of the Emperor *Nero*, and a very ſubtile one, firſt to " boil Water, and then to cool it by ſinking it in a Glaſs " Veſſel in Snow, by which means he had all the Pleaſure of a " cooling Draught, freed from the ill Qualities of the Snow; " for it is agreed, that Water boil'd is moſt ſalutary; and it is " capable of the greateſt Refrigeration after it is heated."

DECOCTIO, *ἕψησις, ἄφεψις*. Decoction.

The Word *Decoction* comes from the *Latin* Word *Decoquere*, which ſignifies to *boil*. The End of Decoction is either to diſſolve the active and ſerviceable Parts of mixed Bodies in a proper Liquor, or to mollify theſe Bodies, by boiling to ſuch a Degree, as that we may be able to ſeparate their pulpous Parts from them.

The general Subjects of Decoction are Animals and Vegetables, and ſometimes Minerals, as Antimony and Quickſilver. The Liquors which ſerve to boil them are Water, Wine, Vinegar, Milk, and Whey.

As Decoctions ought to be as different as the Purpoſes for which they are deſigned, it would be difficult to eſtabliſh Rules concerning the Proportion of the Water to the Ingredients boil'd in it; only we may ſay in general, that the harder and more compact the Drugs are, the greater is the Quantity of the Liquor in which they require to be boil'd.

Decoction ought ſometimes to be preceded by Infuſion, that the Liquor may have ſufficient time to extract the Subſtance of the compound Body; as when we make a Decoction of the Roots of Sarſaparilla, or the Woods of Guaiacum, or Box.

We muſt avoid, as much as poſſible, boiling of Aromatics, becauſe their volatile Principles, which are the moſt eſſential, are diſſipated in Boiling: The beſt Way is, to infuſe them in hot Liquor in a Veſſel well cover'd.

When we deſign to make a Decoction of ſeveral Sorts of Ingredients, we begin with boiling Barley, Shavings of Hartſhorn and Ivory, and the Roots of Quich-graſs, over a moderate Fire, for half an Hour; then we put thereto other Roots, newly gathered, as thoſe of Succory and Sorrel, waſhed and cleanſed from their Strings, and cut in ſmall Bits, ſuffering them to boil together for one Quarter of an Hour; after which we put in Fruits, firſt cleanſed from their Rinds and Kernels, and cut in Pieces, if they are large: To theſe we add chopped Herbs, and bruiſed Seeds, and then Flowers and Liquorice, letting them boil gently. After a ſufficient time we pour the Whole into a Veſſel of Earth or Tin, into which we had put bruiſed Cinnamon, yellow Sanders, Raſpings of Saſſafras-wood, and other Aromatics; we cover the Veſſel, and, when the Decoction is cool, ſtrain it, ſqueezing the Ingredients; and then let it ſtand in order to depurate, and become clear.

If you think fit to have your Decoction enriched with Animals, as Cray-fiſh, Frogs, or Vipers, you muſt put them in at the Beginning, always avoiding to make too great a Fire, for fear of cauſing too great a Diſſipation of the volatile and eſſential Salts. *Lemery Pharmacopée.*

Boerhaave has, in the ſecond Volume of his Chymiſtry, laid down ſome excellent Rules both for the Preparation and Uſe of Decoctions, Infuſions, Robs, Sapas, *&c.* from Vegetables.

Take the Remains, ſays he, of Roſemary, after a Water has been procured from it, by the cold Still, in the manner directed under the Article AQUA, which have now loſt their Verdure, Plumpneſs, and Succulency, and are become brown, contracted, ſhrivel'd, lighter, and almoſt without the natural Smell, and of a Taſte ſomewhat foreign from that of Roſemary. The whole is now brittle, which before was ſupple, ſoft, and viſcous; all which may appear by comparing this Remainder with the recent Plant. Inſtead hereof we may take a Plant gently dry'd, but not too long, in the open Air of a ſhady Place, or even what is freſh-gathered; for this will make no conſiderable Difference, becauſe the Water, which comes over in the Diſtillation above-mention'd, is always loſt in the Boiling.

To the Subject, put into a clean Veſſel, pour pure clear Rain-water, heated from eighty-five Degrees to the Degree immediately under Ebullition, which is, that of two hundred and eleven. Let the whole Plant be well cover'd with the Water, which muſt now ſtand together, in a cloſe Veſſel, in this Degree of conſtant Heat, for the Space of half an Hour or more. Then pour off the Liquor, which will now appear brown-colour'd, and have but little Odour, being deprived of the Taſte of the Roſemary, found in the Water of the Proceſs above-mention'd.

This is call'd the Infuſion of Roſemary, and contains the Virtue of the Plant but little alter'd. If the Water above-mention'd be mixed with it, it will advantageouſly contain the peculiar Virtue of the Plant for Medicinal Uſes. And, perhaps, this is the beſt Manner of conveying the Medicinal Virtues of Herbs into the Body, unleſs it be in the Form of expreſs'd Juices.

If the Plant be boil'd for ſome Minutes with Water, the Liquor then pour'd off is call'd a Decoction, or Apozem. If this be made in an open Veſſel, all the Water of the Proceſs above referred to is loſt, beſides much other Matter. If the Operation be here perform'd in a very tall Chymical Veſſel, fitted with a Still-head and a Receiver, and the Water that comes over be afterwards added to the Decoction, the Whole will then have the principal Medicinal Virtue of the Plant; and, if the Operation be performed in *Papin*'s Digeſter, the Decoction will then have the united Virtues of the Plant, without any Loſs of the Spirit or Water above referred to. But the peculiar Virtue of the Plant is here changed, as appears both by the Smell and Taſte, and, in ſome degree, by the Effect; and it is extremely difficult, in all theſe Caſes, to preſerve the Odour, Taſte, and Colour perfect.

Upon the Remains of the firſt Decoction pour boiling freſh Water; make it conſtantly boil; then pour off the Decoction, and carefully take off, with a clean Spoon, all the Froth which riſes in the Boiling, ſetting it apart in a clean Veſſel. This Matter is unctuous, and, when gently dry'd, burns in the Fire. Continue to pour on freſh Water, pour off the Decoction, and collect the Froth, taking care to avoid the Admixture of any foreign Matter, as Soot, Smoke, or the like, till the Water, at laſt pour'd on, comes off, after a long-continu'd Boiling, as pure, taſteleſs, and colourleſs, as it was when put on, which will happen about the twentieth Repetition. After this, it will be ſurpriſing to obſerve the Leaves of the Roſemary remaining entire, turgid with Water, of their original Form and Size, but having exchang'd their green Colour for a brown, and being ſunk to the Bottom of the Water, wherein they floated before.

The denſer the Plant is, and the more reſinous, the more oily Froth is thrown to its Surface; and the leſs of the reſinous or oleaginous Virtue communicated to the Water, becauſe not diſſolved therein; and therefore, for preparing a Decoction of this Kind, a long previous Digeſtion, or the Addition of a fix'd alcaline Salt, and, afterwards, a longer Boiling, are required, as in making the Decoction of Guaiacum-wood.

But the native ſaponaceous Virtue of ſuch Vegetables, rich in Reſin, preſerves their reſinous Parts in a State capable of Solution, if boil'd whilſt freſh, green, and ſucculent; but this Reſin, when dry, acquires a firmer Texture, and becomes more difficult of Solution. This has been obſerved by thoſe, who, in *America*, have boiled the Chips of green Guaiacum in Water; whereby they ſoon obtain'd a very penetrating

penetrating Liquor, which cures the Venereal Diſeaſe; whilſt the Wood, that has been long kept, being now leſs ſoluble in Water, has a leſs Effect.

Since, therefore, Plants loſe, by Boiling, all that which goes off in the Form of Vapour, with two hundred and twelve Degrees of Heat, all thoſe Plants are unfit for this Operation, whoſe Virtue required is volatile with this Degree of Heat. But thoſe, whoſe Virtues reſide in a more fix'd Matter than can be ſeparated by this Heat, are fit for Decoction. Of this Kind are the following acid, aſtringent, viſcous, aromatic, emollient, cooling, nutrimental, reſtorative, and ſaponaceous Vegetables, and all viſcid ones, that are not too reſinous.

Acacia,
Barberries,
Brook-lime,
Cinquefoil,
Comfrey,
Cranes-bill,
Currants,
Dandelion,
Dwarf Elder.
Endive.
Fern.
Fumitory.
Gentian,
Graſs,
Ground-ivy,
Hellebore,
Hypociſtis,
St. John's-wort,
Knot-graſs,
Myrtle,
Nettles,
Plantain,
Periwinkle,
Poppies,
Purſlain,
Quinces,
Rhubarb,
Roſes,
Scordium,
Shepherds-purſe.
Sloes.
Sorrel,
Speedwell,
Succory,
Sumach,
Tamarinds,
Tormentil,
Water Lily,
Wood Sorrel,
Wormwood.

To theſe may be added the freſh expreſs'd and unfermented Juice of Summer-fruits.

Let it, however, be carefully obſerved, that I do not ſuppoſe, that the peculiar Virtue of a Plant, which commonly reſides in its preſiding Spirit, ſhould always ſhew itſelf by ſome remarkable Odour, Fragrance, or aromatic Taſte: On the contrary, it may happen, that the Spirit ſhall be extremely active, without remarkably affecting the Senſes; as appears in the black Hellebore-root, the *Cicuta aquatica Geſneri*, the *Solanum maniacum*, and the like: Whence all theſe Particulars are very cautiouſly to be conſider'd, before any general Rule is laid down.

The Nature, Virtues, and Effects, of theſe Infuſions and Decoctions.

1. Theſe Preparations may paſs thro' the lacteal and meſenteric Veſſels, and mix with the venous Blood in the Vena Cava; and thus, by the vital Motion, be mix'd with the Humours of the Body, received into all the larger kinds of Veſſels, reach to the Viſcera, and all the other Parts of the Body; for they are ſaponaceous, penetrating, and miſcible with every Humour.

2. And here they may act by their own peculiar Force, remaining in the Liquor of the Infuſion or Decoction; which Faculty of Action is then greatly increaſed by the Force of the vital Motion, and thus produces ſudden Effects.

3. But they want that Efficacy which depends upon the fine volatile Spirit, that reſides in the Water, procured by Exhalation, as deſcrib'd under the Article AQUA; tho' the Infuſion contains more of it than the Decoction. But in the Decoction, however, this Want is ſupply'd by a greater Efficacy, which the boiling Heat communicates thereto, by enabling it to diſſolve, and intimately mix the Virtues of the Plant with the Water, by long boiling: Whence, if the Operation were perform'd in a Still, with its Alembic-head, and the exhaling Water return'd to the remaining Decoctions, then theſe Decoctions would become exceedingly rich in the Virtues of the Plant.

4. It muſt be well conſider'd, that the medicinal Virtue of Infuſions and Decoctions depends as much upon the Efficacy and Quantity of the hot Water received, as upon the Virtue of the Plant. This is known to Phyſicians. Were it not an Error, in condemning the Uſe of Tea, to attribute the Miſchief wholly to the Leaves, when the larger Part is hot Water? And again, when we attribute the Virtue of enlivening the Spirits to the drinking of Tea, is the diluting Virtue of hot Water to be omitted?

5. Hence may be underſtood the pharmaceutical Law, Method, Inſtrument, Subject, and Effect, of preparing Infuſions and Apozems; as alſo the Efficacy of the hotteſt Water upon the Solids of a Plant. Who, but an Eye-witneſs, would believe, that a two Days boiling ſhould not, with all its Force, deſtroy the tender Leaves of Roſemary? And, what is more, tho' the tendereſt Flower were to be ever ſo long boil'd in Water, yet, upon taking it out, and carefully examining it by the Eye, or even with a Microſcope, it will be found perfectly unalter'd. I have made the Experiment, and continued the Boiling for a very long time; yet, at length, found all the Hairs, little Riſings, Tubercles, and Fibres, the ſame, without any Difference: From hence Phyſicians may underſtand, why the ſmalleſt Veſſels of our Bodies are not diſſolved by the hot Juices they convey. Some may ſuſpect, that the mechanical Triture, which the Force of the Pulſation makes againſt the Sides of the Canals, ſhould rather break them than the Power of Heat and Moiſture; but the laſt Elements of our Solids are not ſo much ſaline, ſaponaceous, or oily, as merely terreſtrial, and join'd together by a certain Cement. For what we have above ſaid, concerning the Force of boiling Water upon Vegetables, is alſo true of the Parts of Animals, treated in the ſame manner.

6. If the Leaves, remaining after this Operation, be dried, they become ſhrunk and ſmall; but, if again ſteep'd in hot Water, they exactly recover their former Size and Figure.

7. But ſome of the peculiar Virtues of Plants are alter'd by the Boiling. *Arum* grows milder by Decoction; the crude Juice or Infuſion of *Aſarabacca* proves ſtrongly emetic; but this Virtue, by long-continued Decoction, is changed to another, which is diuretic and aperient. *Boerhaave's Chymiſtry, Vol. 2.*

The SAPA, DEFRUTUM, EXTRACT, ROB, *and* JELLY.

Having examined the Infuſions and Decoctions of Plants, it will be proper to try, firſt, what will remain upon evaporating the Water employ'd in theſe Preparations; for thus that Part of the Plant will gradually appear, which gave it its Virtues; and thence may alſo be chymically known the Nature of all thoſe Parts of Vegetables, which are ſoluble in hot Water, and may be extracted by its means.

Let the Infuſions or Decoctions, mention'd above, ſtand at Reſt for ſome Hours, in a cool quiet Place, and in a clean Veſſel, cover'd on the Top, that they may thus depoſite their gravelly Earth, and other groſs or ponderous Feculencies, not belonging to the Plant itſelf. They may alſo be paſs'd thro' a Strainer, till they become clear; but, then the gummy, ſomewhat reſinous, and viſcous Parts belonging to the Plant, will be alſo ſeparated; and thus, indeed, they may be obtain'd the purer for medicinal Uſe, tho' they loſe ſomething requiſite in their chymical Examination. The Apothecaries, requiring them extremely pure, have another Method: They intimately mix the recent White of Eggs with their Decoctions, by long whiſking them together; then boil the Whole, whereby the White of the Eggs, now harden'd by the Boiling, concretes together in the Decoction; and, at the ſame time, entangles the groſſer Matter with itſelf; ſo that now the Liquor, being ſtrain'd, leaves much groſs Feculency behind, and paſſes ſufficiently clear. And theſe are the three Ways of purifying Decoctions, that is, by Reſt, by the Strainer, and by Whites of Eggs; the former whereof is ſuited to chymical Examinations.

Let the Liquors, thus purified, be put into a clean cylindrical open Veſſel, or one which widens upwards, and ſet over a clear Fire, and there kept nearly in a State of Boiling, ſo as to exhale, and acquire the Conſiſtence of thick Honey; with Care to avoid boiling ſtrongly, for fear of exhaling off what ſhould be left behind, and to prevent Burning at the laſt, which would deſtroy the Virtue.

The ſame Preparations may be likewiſe obtain'd from the freſh expreſt Juices of Plants; particularly the Juices of Summer Fruits, and ſucculent Roots, ſuch as Liquorice:

Theſe Subjects being taken ripe, recent, and perfect; and being firſt cleanſed and bruiſed, the Juice is to be expreſs'd, diluted with Water, and purified by Reſt, and the Strainer; and then to be exhaled, in the Manner above-mention'd, to the natural Conſiſtence they had upon Expreſſion. The Juice, thus freſh expreſs'd, or reduced to its natural Conſiſtence, after having been diluted and ſtrain'd, may be call'd Muſt; and, when this Muſt is boil'd to one Half, ſo as to be long preſerved, and poſſeſs'd of its natural Taſte, it has been call'd Sapa; but, if boil'd, till only a third Part remain'd, it has been call'd *Defrutum*, which may be preſerved ſtill longer, without loſing its former Nature: But when the Liquor is at firſt extremely well purified, and again gently boil'd, till a Drop, let fall on a cold Plate, grows firm and tranſparent, almoſt like Ice, it is call'd Jelly. If it have the Conſiſtence of thin Honey, it is call'd a Syrup; if ſomewhat thicker, a Rob. All theſe Preparations are indifferently call'd Extracts, which are therefore term'd liquid, thick, or ſometimes ſolid.

The Nature, Virtues, and Uses, of the preceding Preparations.

1. All the foregoing Preparations may be diſſolved in warm Water, and then they reſemble the Decoctions from whence they were made; tho' they have, by their Boiling, loſt ſome of their former Virtue.

2. They may be long kept without ſpoiling, even for Years.

3. They retain much of the Taſte of the Vegetable, tho' the volatile Part is loſt in the Preparation.

4. They long preſerve the Virtues of Plants entire, and free from the Incumbrance of their vaſcular Parts; ſuch Virtues, we mean, as remain'd in them after this Preparation; for ſo much they long preſerve uncorrupted.

5. Hence it appears, what it is that Plants loſe by long keeping, and corrupting with Age; for hot Water extracts nothing from the Plants ſo corrupted, all the Juices being gradually waſh'd out of ſuch dead Plants, which are reciprocally penetrated, diſſolved, agitated, and dried by the Moiſture of the Air, Dew, Rain, and Heat of the Sun; whence they become effete and dry Skeletons of Plants. The Worm alſo conſumes the Juices of Vegetables, ſo as, at length, to leave nothing but a mere ſolid, inſoluble, ſluggiſh, and terreſtrial Plant.

6. They who make long Voyages may receive great Advantage from the Productions of this Proceſs. Sailors are ſubject to Diſeaſes from the Uſe of Meats much ſalted, dried, and ſmoked, which Diſeaſes are remedied by the Juices of Fruits; and thus, by diſſolving the Jelly of Oranges, Barberries, Cherries, Quinces, Lemons, *China* Oranges, Currants, Grapes, Rob of Elder, Rob of Juniper, and the like, in Water, they may have a preſent Remedy. Theſe Preparations are alſo eaſily recruited, when they touch at any Fruit-iſland; and, perhaps, nothing would more conduce to the Health of the *Britiſh* and *Dutch* Sailors, than a due Proviſion of this Kind.

It muſt, however, be obſerved, that the Juices abounding with Salt are difficultly preſerved, when thus thicken'd, from running in the Air, Salt being attractive of Water. The Method, therefore, is to keep them in well-ſtopt Glaſſes. And, laſtly, thoſe vegetable Subjects are unfit for this Operation, whoſe medicinal Virtue is volatile. *Boerhaave's Chymiſtry, Vol.* 2.

DECOLOR, ἄχροος. See ACHROI.

DECOMPOSITUM. A Word which augments the Signification of *Compoſitum*. In the *Phyſica Triſmegiſti*, *Theat. Chym. Vol.* 1. we are told, that *Compoſita* are ſuch Things as ſuffer Corruption, and are compounded; but *Decompoſita* are Things united in Compoſition, by means of Corruption and Generation. *Caſtellus*.

DECORATIO, κόσμος. A Preſervation or Reſtoration of natural Beauty, either in the whole Body, or in ſome Part of it. *Caſtellus*.

DECORTICATIO, Decortication, is when any Thing, as a Root, Seed, Fruit, or the like, is deprived of its Bark, Shell, Rind, Skin, or any of its containing Huſks. *Blancard*.

DECOSTIS. The ſame as APLEUROS, which ſee.

DECREMENTUM, παρακμὴ, a Decreaſe, is either ſpoken of that Time of Age which ſucceeds the *Ætas continens*, "the "ſtaid Age;" and is otherwiſe call'd *Ætas decreſcens*, "the "decreaſing Age;" or elſe of a Diſeaſe, in which Senſe it is the ſame as DECLINATIO, which ſee.

DECREPITATIO, or ſimply CREPITATIO, ψόφος, is the crackling Noiſe which Salts make, when ſubjected to the Fire. Hence common Salts, when expoſed to a gentle Fire, till it will decrepitate no longer, is call'd decrepitated Salt.

DECRESCENS, παρακμαστικός. See DECREMENTUM.

DECRETORIUS. The ſame as CRISIMOS, which ſee.

DECRUS. The ſame as ASCELES, which ſee.

DECUBITUS. The Manner of Lying.

Every Phyſician knows, that the principal Indications of the Strength or Weakneſs of the motive Faculty are taken from the Decubiture; and, indeed, we may, with very good Reaſon, judge of the State of that Faculty by the Decubiture itſelf; for the Motion, which is exerted at the time of Decubiture, depends on two Things; that is, the Faculty which moves the Members, and the Body itſelf, with its Members, moved of themſelves. This latter Motion is obſerved in Carcaſes, and Perſons expiring, who are impel'd downwards by the Force of Gravity; the former belongs to Perſons in Health, or juſt beginning to recover out of Sickneſs. *Diocles* was certainly in the Right, when he ſaid, that the Bodies of Animals conſiſted ἐκ τοῦ φέροντος, καὶ τοῦ φερομένου, "of the *carrying* and "the *carried*." For it is the Soul which *carries*, and the Body that is *carried*: This laſt is naturally carried downwards by its Gravity; the other moves the Members upwards or downwards, forwards, backwards, or ſideways, at Pleaſure; or holds them in a manner ſuſpended in the Air, while it contracts, extends, or ſtops the Muſcles, leſt they ſhould ſlide downwards by their proper and elementary Motion. When, therefore, it happens, that Bodies are ſcarcely moved, turn'd, or erected, but eaſily ſlide downwards on account of their Gravity, it indicates to us, that the Animal Faculty is, in a very great meaſure, extinguiſh'd and reſolved; for, while it remains entire, without Diminution, the Body is eaſily moved, turn'd, and erected at the Pleaſure of the Patient, and the Arms, Hands, and Head ſuſtain'd in the Air: And this it is to live, or this is Life, which continues ſo long as the Soul remains firmly united to the Body; but a Diſunion between them is ſucceeded by Death. In Caſes, therefore, where the Soul has great Power and Prevalence, we obſerve Decubitures of good Preſage; but the contrary, when the Faculties of the Soul are weak and languid. But, firſt, let us treat of good Decubitures, and ſhew how to form our Prognoſtics from them in acute Diſorders. In *Coac. Prænot.* 497. it is written, that the beſt Decubiture is ſuch as is uſual in Health, and very juſtly; for a Perſon, who labours under a dangerous Diſtemper, can by no means lie down in the ſame Manner, or lie in the ſame Poſture, as when in a State of Health. Where the Strength is broken, the Patient is delighted with a ſupine Decubiture, the Legs and Arms diſtended, reſtleſs, and uneaſy, incapable of continuing in one Poſture, or keeping the ſame Form of Decubiture. Perſons in a Delirium throw themſelves out of Bed, expoſe their Feet, and even Pudenda, and ſometimes leap out of Bed on a ſudden. Dying Perſons, by reaſon of Weakneſs, ſlide downwards towards the Feet. Wherefore a Decubiture uſual in Time of Health, or like that of healthy Perſons, may juſtly be reckon'd the beſt, and ſignifies, that the Diſeaſe is not malignant or dangerous. Such a Decubiture is commended alſo by *Hippocrates*, in *Prognoſt.* where he ſays, "That to lie in the Poſture "of healthy Perſons, is very ſalutary; but beſt of all, when the "Patient can eaſily turn his Body, and raiſe it with Alacrity," can lie down, or ſtand, and ſupport his Members; for a prompt and expeditious Performance of theſe Actions declares Strength in the Nerves, Plenty of Spirits, and Soundneſs of the Animal Faculty. The Author of the *Coac. Prænot.* 494. thus expreſſes it: "It is good, ſays he, when the Patient can turn his Body "with Eaſe, and raiſe himſelf up with Alacrity." And *Hippocrates, in Progn.* ſpeaking of the beſt Decubiture, ſays, "That "the Phyſician ought to find the Patient lying on the Right or "Left Side, with the Arms, Neck, and Legs, a little retracted, "and all the Body in a lax and eaſy Poſition, as is uſual with "moſt who are in Health: Now to lie in the Poſture of healthy "Perſons, is a moſt ſalutary Sign." Hence we conclude, that there are three Things requiſite in a very good Decubiture; firſt, that the Patient lie on either Side; becauſe, as *Galen* teaches, in his Comment on the Paſſage, ſuch a Decubiture indicates the Strength of the Faculty, which fixes the Body by the Muſcles; as the Weakneſs of the ſame is ſignify'd, when the Patient is incapable of lying on his Side. A ſecond Requiſite is, that the ſick Perſon lie with the Arms, Neck, and Legs, ſomewhat retracted, becauſe this is the uſual Poſture of Perſons in Health. The third and laſt Thing requiſite is, that the Body be diſpoſed in a ſoft and eaſy Poſition. *Galen*, in his firſt Book of *Humours*, *Text.* 24. ſays, that "the whole Body "ought to be moiſt, not dry;" not, as ſome think, that all Parts of the Body ought to be equally warm and ſoft; but, as *Galen* rightly obſerves on the before-quoted Paſſage, *in primo Progn.* as to the ſecond Thing required, that the Body of the Patient ought to have the Arms, Neck, and Legs, a little retracted, or drawn in, but by no means to have them retracted or extended to an immoderate Degree: And, becauſe all Things which are in a State of immoderate Tenſion, ſeem to be dry, he therefore commended a Body in a ſoft Poſition, that is to ſay, a moiſt, and not a dry State of the Body. *Galen*, in *Comment.* expreſſes the ſame thus: "Immoderate Poſ-"tures, ſays he, ſuch as an extraordinary Extenſion of the "Nerves, are pernicious; as we have before declared in our "Treatiſe of muſcular Motion." Now a Medium, between two immoderate States is by no means a State of exceſſive Tenſion; therefore he call'd it eaſy, becauſe Bodies remarkably eaſy are not in an extraordinary Degree of Tenſion. He explains himſelf yet more clearly, *Lib.* 1. *de Humoribus*, *Com.* 24. Wherefore, as he ſays, the Arms and Legs ought to be a little retracted, that the whole Body may lie in a Poſture free from Extremes: I call Extremes in Poſture, or Figure, ſuch as are form'd by a long Extenſion, or Flexure, either of the Joints or Spine, which are not effected without an immoderate Extenſion of the Nerves. So much for the beſt Ways of Decubiture, which, with other good Signs, prognoſticate a happy Event. See ACAMATOS. We proceed to treat of a bad Decubiture.

We know, in general, from the Premiſſes, that every Decubiture, or Poſture of lying, which is unlike that of Perſons in a State of Health, is to be condemned: For, as it has been already obſerved, that it is a pretty good Sign when the Patient riſes up with Alacrity, or turns in his Bed with Eaſe, becauſe it indicates the Vigour of the animal Faculty which moves; ſo when theſe Motions are performed after a dull, heavy,

heavy, and painful Manner, it shews the weak and languid State of the same Faculty. Agreeably to this, we read, *Coac. Prænot.* 493. "that a Heaviness of the whole Body, and "of the Hands and Feet, is an ill Sign;" and especially if the Muscles are not oppress'd with a Plenitude, or there has not preceded a sudden Evacuation, or some other manifest Occasion. If with this Heaviness, which shews an Injury to to the motive Faculty, says the Author of the *Coac. Præsag. Ibid.* "there be joined a Lividness of the Nails, Death "is at hand;" because the Heaviness of the Body shews a Defect of the animal Faculty; and a Lividness of the Fingers and Nails is an evident Proof, that the natural Heat, which proceeds from the Heart, is extinguished. A supine Decubiture, by *Hippocrates*, *in Prognost.* where he says, "that "to lie in a supine Posture, with Legs and Arms extended, "is but an indifferent Sign;" but, *in Coacis* 497. it is more properly pronounced "no good Sign." And *Galen*, in *Comment.* says, that such a Sort of Posture can by no means be accounted a good Prognostic, which he demonstrates from *Hippocrates*; he also says, in the same Place, that if this supine Posture be attended with a sliding downward, the Danger is the greater; as if such a Posture was not without Danger. But as for *Galen*, he thinks a supine Decubiture of no great Moment, so as to prognosticate Death or Recovery from it.

Some, however, judge a supine Decubiture to be good, because the Sick, under the vehement Fatigues occasion'd by the Distemper, find most Relief in that Posture; under which all the Muscles, except those of the Thorax, are at Rest; and by this supine Position of the Body we rest ourselves on the lowest and heaviest Part, as a Ship on its Keel; and, besides, the exhausted animal Strength and Spirits can by no other Decubiture be better supported, and such a Posture also conduces to the Expulsion of Stones from the Kidneys and Bladder. But if, on these Accounts, it may be called a good Decubiture, there are many other Reasons why it should be judged a bad and pernicious Posture of lying: For the Muscles of the Thorax, which under this Position ascend in Inspiration, are more fatigued when a Man lies on his Back, than when he is erect, or lies in any other Posture. This Decubiture also, if long continued, is the Cause of Disorders, and those of the most dangerous kind; as the Epilepsy, Incubus, Palsy, and Apoplexy: For in this supine Position the Humours and Vapours are more easily attracted to the hindermost and noblest Ventricle of the Brain, and Distillations fall upon the Thorax and Kidneys. However, our present Business is not to consider this Posture as the Cause of good or ill Effects to the Body, but as a Sign conducing to Prognostics: in which respect we say it always signifies a Weakness of the motive Faculty; for all who lie in a supine Posture, unless they are accustomed to it, are in a weak State. But then this supine Decubiture is sometimes arbitrary, and chosen out of a kind of Softness or Indolence of Mind, or from Sorrow; and sometimes the Patient lies in this Posture thro' the Vehemence of the Paroxysm, or, to mention no more, on Account of some extraordinary Evacuation: In such Cases nothing certain can be prognosticated from a supine Decubiture. But if, exclusive of these Cases, the Patient lies in a supine Posture, with his Legs and Arms extended, it is a bad Sign: And it is the same according to *Hippocrates in Prognostic.* if the Legs in this Posture are very much retracted, or drawn in, or, on the contrary, much distended or thrown abroad; for we are taught by *Galen*, that they signify a Delirium: "But if, says *Hippocrates*, the Pa- "tient, moreover, lie in a Posture of Proclivity, and slide "downwards insensibly towards the Feet, the Danger is the "greater." We may justly pronounce such a Decubiture fatal; but still the worst Decubiture of all is, when the Body lies on the Back like a projected Carcase, with all its Members prostrate, and the Head reflected on the Pillow; or when, the Chin being elevated, all the Fore-part of the Neck appears eminent; or if the Chin is contiguous to the Clavicles; these are Signs that Death is just at hand: For the Soul having lost its Power, the Body lies like a dead Weight on the Back, with the Arms and Legs projected, rolling down insensibly towards the Feet, and the Head either falling back towards the hinder Parts with the Chin and Throat erected, or in a nodding Posture resting on the Clavicles. Such a Decubiture signifies, that Death is very near. *Galen*, *de Humoribus*, *Lib.* 1. *Text.* 24. speaks of this Decubiture when he says, "You must know "that we call it a *Dejection* when the Patient is incapable of "lying like a living Person, but is carry'd downwards like a "dead and inanimate Carcase." When the Body in the Decubiture slides down towards the Feet, it is, in the Judgment of *Hippocrates*, a Sign that the Strength is exhausted to an extreme Degree. To be incapable of standing, sitting, or rising, is certainly a more tolerable State; but to lie along in the Manner of a dead Body, universally deprived of all Strength in every Part, is what the same Author, *Com.* 1. *in* 6 *Epid. Text.* 33. *Cap.* 4. informs us, ἐπίῤῥοθος, "to be precipitated," to be utterly cast down, or in a State of utmost Dejection. This *Decubitus ad pedes*, "Decubiture towards the Feet," is by *Galen*, *de Motu Musc. Lib.* 3. demonstrated to be of the utmost Fatality, from the Example of Carcases; for if you incline a dead Body any Way, it will not rest a Moment, but will immediately fall either prone or supine, as its Gravity directs it.

To lie with the Mouth gaping, is a no less fatal Prognostic, as we are assur'd by *Hippocrates*, *in Prognost.* where he says, "If the Patient sleep with his Mouth gaping, it is a "mortal Sign." The Author of the *Coac. Præsag.* 497. expresses this Prognostic after a different Manner: "It is "fatal, he says, to lie on the Back, and sleep continually "with the Mouth gaping, and the Legs much incurvated "and complicated." The Gaping of the Mouth is caused either by the Weakness of the Faculty, which moves the lower Jaw, or a violent Æstuation at the Heart, or both these Causes united, or from a particular Resolution of the Muscles, which serve to pull up the lower Jaw to the superior. *Galen* says, that the Gaping of the Mouth without Sleeping has a much more fatal Signification; and, *de Motu Musc. Lib.* 7. *Cap.* 4. he writes, "that to lie on "the Back with the Mouth gaping, is a Sign either of a "Stertor, a Resolution, Drunkenness, or Laziness." It is of as bad a Prognostication for a Person in a Delirium, or out of a Delirium, which is known by the Speech, to roll himself towards the Margin of the Bed, and first to shoot out his Feet; then to rise up in Bed, to erect his Body, and, if not prevented, to fall off the Bed, or rise. Under this obscure Delirium, attended with the before-mention'd Sign *Hollerius*, *in Coac. Præsag.* says he never knew one Person recover. We add out of *Hippocrates*, *Prognost.* that for a Person under an acute Distemper to desire to sit upright, is a bad Sign, but worse under a Peripneumony or Pleurisy. The Words of *Hippocrates* are these: "In every acute Disorder, "says he, if the Patient desires to sit up in the Height of the "Distemper, it is a bad Sign, but worst in a Peripneumony." Those who are afflicted with a Peripneumony, says *Galen*, in *Comment.* are sensible of a great Oppression of the Thorax while they lie in a supine Posture, but breathe more freely when they sit up; for when they lie on their Backs, Part of the Thorax rests on the Spine, by which means the Lungs are straighten'd, and debar'd from receiving the Air they want, by Inspiration. In other Diseases, *during the Height of the Disorder* (which Limitation is principally to be regarded) it is a very bad Prognostic when the Sick desire to sit up: For, while they are labouring under the Violence of the Distemper, they desire to lie without Motion; and, if any one endeavours to rouse them, they fight and resist: We may, therefore, well suppose, that when the Patient, in such a State, desires to sit up, it must be on account of an extraordinary Difficulty of Respiration, or Restlessness, or Delirium. Another Decubiture, like this, is described by *Hippocrates*, *in Prognost.* in the following manner: "If the Patient lies with his Feet "bare, but not very hot, and throws about his Arms, "Neck, and Legs, at random, it is a bad Sign; for it "signifies a Restlessness." In those indeed, who are of a soft and delicate Constitution, these Signs afford no certain Prognostic, for the slightest feverish Disorder disposes them to such a Decubiture; but, in others, it is owing either to some Disorder in the Mouth of the Stomach, or a great Weakness. In the *Coac. Præsag.* 497. this Decubiture is thus expressed: "If the Patient lies with his Hands and Feet bare, and is "not molested with any vehement Heat, but throw his "Legs abroad, it is a bad Sign; for it shews an Anxiety." In the last place, *Hippocrates*, *in Prognost.* condemns a Decubiture on the Belly, in such as are not accustomed to sleep in that Posture, as signifying either a Delirium, or a Pain somewhere about the Region of the Belly. *Prosper Alpinus de præsagienda Vita & Morte.*

DECURSUS, ἀποδρομὴ, generally signifies the Duration of any thing, as of Time, or a Disease. *Castellus.*

DECURTATUS, (*Pulsus*) μείωσις, or μειοῦσθαι, corruptly μύωσις, is a kind of weak and deficient Pulse, which is perpetually diminish'd, till it wholly fails; but, if it returns, and increases anew, it is call'd *Decurtatus reciprocus*, μείωσις παλινδρομῶν. *Galen. de Diff. Puls. Lib.* 1. *Cap.* 11. If it be unequal, as well as deficient, it is call'd *Deficiens inæqualis*, μείωσις ἀνώμαλος. *Idem de Caus. Puls.*

DECUSSORIUM. A Surgeon's Instrument, which, by gently pressing on the *Dura Mater*, causes an Evacuation of the Pus collected between the Cranium and the before-mention'd Membrane, thro' the Perforation made by the Trepan. *Blancard.*

See a Figure of this Instrument in *Paré*, *L.* 6. *C.* 21.

DEFECTIO ANIMI. The same as *Syncope*, or *Lipothymia*, Fainting.

DEFENSATIVUM EMPLASTRUM. A defenſative Plaiſter.

DEFENSIVUM. An Epithet for ſome chirurgical Topics, which, apply'd to the Part affected, repel; or intercept the Humours, when laid upon a Part adjacent to that affected. *Defenſiva*, in *Paracelſus*, ſignifies Cordials, exhibited internally. *Caſtellus.*

DEFERENTIA VASA are two white ſolid flatted Tubes, one lying on the Right Side, the other on the Left; from the Epididymis of which they are Continuations: Each of them runs up, in the cellular Vagina of the ſpermatic Veſſels, as high as the Openings in the abdominal Muſcles; the Blood-veſſels lying forward, and the Vas Deferens behind them.

This Faſciculus, thus form'd by the Blood-veſſels, Vas Deferens, and their common Covering, is term'd the ſpermatic Cord. The Covering is ſmoother on the outer than on the inner Side, and, for that Reaſon, it has been look'd upon as a Vagina; the internal Subſtance, which is more cellular than the external, connects all the Veſſels together, while the external forms a Covering to inveſt them.

The Vas Deferens, having reach'd the membranous Lamina of the Peritonæum, where that Lamina runs over the Orifice of the Vagina, ſeparates from the Blood-veſſels, and runs backward, in form of an Arch, in the cellular Subſtance of the Peritonæum, as far as the neareſt Side of the Bladder.

It paſſes afterwards behind the Body of the Bladder, to which it adheres very cloſely; as alſo to the Lamina of the Peritonæum, which covers it; and then continues its arch'd Courſe towards the Neck of the Bladder, where both Vaſa Deferentia meet, and their Arches terminate.

In this Courſe the Vas Deferens paſſes behind, and croſſes the neighbouring umbilical Artery, croſſes the Extremity of the Ureter of the ſame Side; in its Paſſage, between that Extremity and the Bladder, and, having got behind the Bladder, it meets the Vas Deferens of the other Side, between the Inſertions of the Ureters, and they run down together to the Neck of the Bladder.

This Canal, which, at the Origin of the Epididymis, is pretty large and plaited, becomes immediately afterwards ſmaller and ſmoother, and continues in that Form, till it gets behind the Bladder, where it begins again to be larger, and more uneven.

It ariſes from the angular Portion, or poſterior Extremity, of the Epididymis; and from thence runs forward, in a very oblique Courſe, on the poſterior Half of the Epididymis; where it is a little incurvated, as it joins the back Side of the ſpermatic Veſſels.

The Texture of the ſmooth Portion of this Canal is very ſolid, and in a manner cartilaginous, eſpecially near the Surface of its Cavity; which, tho' very narrow, is ſtill kept open by means of the Solidity and Thickneſs of its Sides.

The Cavity of the Vas Deferens is cylindrical, tho' the whole Tube is flat, and its external Circumference oval, as may be ſeen by cutting it tranſverſly; and the Cavity enlarges, as it paſſes behind the Bladder.

The Paſſage of the Vaſa Deferentia, into the Veſiculæ Seminales, is very particular. Theſe Canals are incurvated behind the Bladder, and their contracted Extremities unite at that Place. They unite in an Angle, and run between the contiguous Extremities of the Veſiculæ; and this Union is ſo cloſe, that the adhering Portions ſeem to form only one middle Septum, between two ſmall Tubes, each of which is form'd partly by the Extremity of one Vas Deferens, and partly by that of the neighbouring Veſicula.

This lateral Union of the Extremities of the Vas Deferens, and Veſicula Seminalis, on each Side, forms likewiſe a kind of ſhort Septum, which terminates in a Creſcent, like a ſmall ſemilunar Valve; and the Extremity of the Vas Deferens is narrower than that of the Veſicula. By this Mechaniſm the Fluid, contain'd in each Vas Deferens, has Liberty to enter the contiguous Veſicula; but that contain'd in the Veſicula cannot return into the other Canal.

If we blow into one of the Vaſa Deferentia, after having compreſs'd the Urethra, the Air inflates the contiguous Veſicula Seminalis, and the Bladder of Urine, without paſſing into the Veſicula, or Canal, of the other Side; except we blow with too great Violence.

Afterwards the two ſmall Tubes, form'd each by the Extremities of the Vas Deferens and Veſicula, run in between the Baſis of the Proſtate, and Canal of the Urethra; and, perforating the Sides of that Canal obliquely, they terminate in the Caruncle. See GENERATIO.

DEFIXUS. Impotent, with reſpect to Venereal Enjoyments.

DEFLUVIUM *Capillorum*. A Falling-off of the Hair.

DEFLUXIO. A Defluxion. It is defin'd a Falling of a Humour upon an inferior from a ſuperior Part. See CATARRHUS.

DEFRUTUM. Properly Muſt, boil'd to the Conſumption of one Half, or, according to others, of one Third. See DECOCTIO, and CAROENUM.

DEGLUTITIO, Deglutition. See PEPSIS.

DEGMOS, δηγμός. A biting Pain at the Orifice of the Stomach, from δάκνω, to bite.

DEHENE, Blood. *Rulandus.*

DEHENES, Ink. *Rulandus.*

DEHENEZ, *Roman* Vitriol. *Rulandus.*

DEJECTIO. A Diſcharge of the Excrements by the Anus. A Stool. See ALVUS.

Among the ſeveral Circumſtances, from which Life and Death are prognoſticated, Stools are none of the leaſt conſiderable; and, in handling this Subject, we ſhall firſt conſider thoſe, which are ſaid to be good, and from which the Phyſician concludes the probable Safety and Recovery of the Patient. Whether the Nature of Stools in general be good or bad, may be diſcovered,

Firſt, from their Degree of Concoction or Crudity.

Secondly, from the particular Times in which they appear.

Thirdly, from their Subſtance.

Fourthly, from the large or minute Quantity in which they are diſcharged.

Fifthly, from the Time during which they continue, or the Time when they ceaſe.

Sixthly, from the Advantage with which they are attended, and the Eaſe and Freedom from Pain with which the Patient diſcharges them. And,

In the ſeventh and laſt Place, from the Train of good or bad Signs, from which Prognoſtics from Stools derive their Certainty.

But to return: Stools of the good and ſalutary Kind may indicate Health in two Manners; either with reſpect to their due Concoction, in which Caſe they indicate not only the due State of the Stomach and Inteſtines, but alſo of the adjacent Parts, ſuch as the Liver and Spleen; for *Galen* determin'd, that thoſe Stools denoted the laudable and ſalutary State of the Stomach and Inteſtines, which, according to *Hippocrates*, in Prognoſt. *were ſoft, of a due Conſiſtence, diſcharged at the particular Time generally obſerv'd by Nature in a State of Health, and whoſe Quantity bears a due Proportion to that of the Aliments taken:* Another Manner, in which good Stools indicate Health, is with reſpect to the Defluxion of Humours from the Viſcera into the Stomach and Inteſtines; for *Galen* affirms, that good Stools not only indicate the due and natural State of the Stomach and Inteſtines, but are alſo a Sign, that there is no Defluxion of Humours into theſe Parts from the Liver or Spleen; for, when there is a Defluxion of this kind, not only the Colour, which is the Sign of a due Concoction, but alſo the Conſiſtence of the Stools, is vitiated. In both theſe Manners, Phyſicians form Prognoſtics from Stools; firſt, in Diſorders of the Stomach and Inteſtines, the due and natural State of which, according to *Galen*, in the ſeventh Chapter of his firſt Book *de Criſibus*, is ſignified by Stools, which are ſoft, of a due Conſiſtence, diſcharged at the Time generally obſerv'd by Nature in a State of Health, and in a Quantity bearing a due Proportion to that of the Aliments; and, as the ſame Author has added, laudable Stools ought to be of a brown Colour, and not very fetid. But the Stools, which want all or any of theſe Marks, are bad; ſuch, for Inſtance, as are hard, rough, too thin, of too high a Colour, diſcharged in a Quantity too large, or too ſcanty, in proportion to the Aliments, of an unequal Conſiſtence, fetid, frothy, or not evacuated at the Time obſerv'd by Nature in a State of Health. But, when Patients are about to recover, the Stools are changed from theſe Conditions to that laudable State, which we call Concoction. Hence *Hippocrates*, in his Prognoſtics, juſtly affirm'd, *that the Stools became of a thicker Conſiſtence, when the Diſeaſe was about to be determined.* And, in the fourteenth Aphoriſm of his ſecond Section, he aſſerts, that, *in Fluxes of the Belly, Changes of the Excrements are good, unleſs they change for the worſe.* But we far more certainly and infallibly prognoſticate the Events of Diſeaſes by the Evacuation of thoſe Humours, which fall upon the Inteſtines. The Diſorders hence ariſing, *Hippocrates* calls Abſceſſes, Dyſenteries, Teneſmi, Fluxes, Diſturbances of the Belly. Concerning Patients labouring under theſe Indiſpoſitions, in the firſt Book of his Epidemics, he tells us, *that many had their Bellies diſturb'd, but without any conſiderable Uneaſineſs, and in ſuch a manner, as to create them no great Trouble.* And afterwards he tells us, that *ſome were, on the ſixth Day, ſeized with the Jaundice; but that theſe were, in ſome meaſure, relieved by an increaſed Diſcharge of the Urine, and the Excrements.* With reſpect to Dyſenteries, he afterwards uſes theſe Words: *But ſuch Patients, as were pretty far advanced in Years, were either ſeized with a Jaundice, Diſturbances of the Belly, or a Dyſentery, which was the Caſe of* Bion, *who lay ſick in the Houſe of* Silenus; *but that many others, whoſe Diſeaſes were determined by a Criſis, were ſeized with a Dyſentery, ſuch as* Xenophanes *and* Critias. With reſpect to ſome, who recovered in the peſtilential Conſtitution, he uſes the following Words: *But, in this peſtilential State, ſuch as eſcaped, owed their Safety to theſe four Circumſtances: Either there was a plentiful Diſcharge of Blood from their Noſe; or a copious Evacuation of Urine, in which there was a large*

Quantity

Quantity of a laudable Sediment; or turbid and bilious Excrements were evacuated in the Beginning of the Diſorder; or the Patients were ſeized with a Dyſentery: So that, in many Caſes, Diſeaſes may happen to be determin'd by Diſturbances of the Belly, by Diſcharges of pituitous and bilious Excrements, and by Dyſenteries. With reſpect to *Clazomenius*, *Hippocrates*, in the firſt Book of his Epidemics, uſes the following Words: *On the thirtieth Day, a large Quantity of aqueous Excrements, like thoſe generally evacuated in a Dyſentery, were diſcharged.* With reſpect to the Patient in the Garden of *Dealces*, in the third Book of his Epidemics, Patient 3. he informs us, that, *on the fortieth Day, he went very frequently to Stool, voided a pituitous and white Matter, a profuſe Sweat at the ſame time appearing over all his Body.* In the ſame Book of his Epidemics, Patient 9. he tells us of one *Heropytus*, *that, about the hundredth Day, he began to void many bilious Stools, which continued for a conſiderable Time, till at laſt he became dyſenterical.* But we know, that theſe, and other Stools, are of the laudable and critical Kind, when, with the Signs of a manifeſt Concoction, they begin to appear on the critical Day; when the Diſeaſe is at its Height; or when they are liquid, of a yellow Saffron-colour, brown, livid, or blackiſh. But, in the Beginning of the Diſeaſe, ſuch Stools, appearing without the Signs of Concoction, prognoſticate the Death of the Patient; whereas, when they are attended with the Signs of Concoction, they prove critical and ſalutary. *Galen*, in his Comment upon the twenty-firſt Aphor. of Sect. 4. informs us, that, during a certain long Plague, he obſerv'd liquid Stools, which were firſt yellow, then brown, afterwards black, and, as it were, reſembling the Fæces of Blood, not only in thoſe who were on the Brink of Death, but alſo in thoſe who were upon the Recovery. In theſe latter, he ſays, that ſuch Stools followed after the Height of the Diſeaſe, and were ſo many Efforts of Nature to free herſelf from a ſuperfluous Load; whereas, in ſuch as died, thoſe Stools appeared either in the Beginning, or Increaſe of the Diſorder. The ſame Author, in his Comment upon the following Aphoriſm of the ſame Section, ſays as follows: "When, "therefore, after the Concoction of the Diſeaſe, any peccant "Humour is evacuated, then the Body is purged, as it were, "by Nature; and for this Reaſon black Bile, and every other "Humour of the like kind, portend a ſalutary Evacuation, "when the Signs of Concoction appear in the Progreſs of the "Diſeaſe. But, if any ſuch Humour ſhould be diſcharged "without the Signs of Concoction, the Death of the Patient is "thereby prognoſticated. Humours, therefore, of any Colour, "however prejudicial they ſhould ſeem to be in that reſpect, "nevertheleſs prognoſticate a ſalutary Termination of Diſ-"eaſes, provided they are evacuated with the Signs of Con-"coction, in the Height of the Diſeaſe, and on the critical "Day." This Doctrine *Galen* borrowed from *Hippocrates*, who, in the forty-ſeventh Aphoriſm of the fourth Section, tells us, *that, in Fevers which are not of the intermitting kind, ſpitting or vomiting Matter, which is either livid, bloody, fetid, or bilious, is a bad Sign; but that, if ſuch a Matter is duly evacuated, either by Stool or Urine, it is a good Sign.* The Author of the *Coacæ Prænotiones* 183. tells us, *that thoſe, who, labouring under a Coma, become deaf, have a Diſcharge of brown Excrements about the Criſis, by which they are relieved.* Phyſicians are alſo enabled to form Prognoſtics from the Quantity of the Stools, and the Time during which they continue. *Hippocrates* therefore, in the firſt Book of his Epidemics, writes, that many were affected with Dyſenteries and diſturbed Bellies, by which their Diſorders were critically determined. Thus, concerning *Heropytus*, *in Epidem. L.* 3. whoſe Diſorder was determin'd in a ſalutary Manner, *Hippocrates* obſerves, that, about the hundredth Day, he began to have many bilious Stools; that they continued in the manner of a Dyſentery for a conſiderable Time, and were accompanied with a Pain, by which means all his other Symptoms were alleviated. Beſides, I myſelf have known ſeveral Patients, who have been preſerv'd by bilious, porraceous, and ſaffron-colour'd Stools, together with a Diſcharge of well-concocted Urine, made by little and little, and continued for a conſiderable Number of Days. Stools of this kind, in Diſeaſes which are to terminate well, and thoſe, in which no fatal Signs appear, are, for the moſt part, accompanied with a ſalutary Hæmorrhage, copious Sweats, or ſome other Sign of a like Nature. *Hippocrates*, in the ſecond Aphoriſm of his firſt Section, lays down two Signs, by which a Phyſician may know when Stools prove a ſalutary and uſeful Evacuation, and when not; which are, when the Patients not only bear them with Eaſe, but are alſo relieved by them. Hence the beſt and moſt ſalutary Stools either put an entire Termination to Fevers, and their Symptoms, or at leaſt alleviate and abate them. With reſpect to this Subject, *Hippocrates*, in the 28th Aphor. of Sect. 4. affirms, "That, in Fevers, an Evacuation of bilious Excre-"ments is removed by a ſupervening Deafneſs, which, in its "Turn, is removed by a Diſcharge of bilious Excrements." In the ſeventeenth Aphoriſm of the ſixth Section, he informs us, *that, in an Ophthalmia, a ſupervening Looſeneſs is a Circumſtance of a lucky and ſalutary Nature.* In the forty-eighth Aphoriſm of the ſame Section, he affirms, that *a Dyſentery, ſeizing thoſe who labour under Obſtructions of the Spleen, is a good Circumſtance.* In the 29th Aphor. of Sect. 7. he alſo aſſerts, that *a violent Diarrhœa happening to a Perſon afflicted with a Leucophlegmatia, removes the Diſeaſe.* What has been already ſaid, is ſufficient for diſcovering and determining what Stools are of the good and ſalutary Kind.

But there are others of a fatal and pernicious Nature, and ſuch as prognoſticate the Death of the Patient. Theſe are known either from their Subſtance, their Quantity, their Colour, their Smell, the Manner in which they are diſcharged, the Time of their Appearance, the Changes they undergo, the Signs, which either precede, accompany, or follow them, the Degrees of Eaſe with which they are evacuated, and the Advantages they procure to the Patient. Stools then of the bad Kind differ very conſpicuouſly from each other with reſpect to their Subſtance, ſince ſome are hard, ſome rough, ſome liquid, ſome viſcid, ſome aqueous, ſome pinguious, ſome frothy, ſome mix'd with a certain Ichor, ſome unmix'd, and ſome what we call of the colliquative Kind. With reſpect to Quantity, theſe Stools vary no leſs conſiderably, ſince they ſometimes flow immoderately, and at other times in a ſmaller Quantity; ſometimes ceaſe, and at other times are totally ſuppreſſed. With reſpect to Colour, ſome are white, ſome bilious, ſome yellow, ſome of a Saffron-colour, ſome brown, ſome green, ſome porraceous, ſome livid, ſome bloody, ſome black, and ſome ting'd with various Colours. Stools alſo vary with reſpect to the Manner in which they are evacuated, ſince there is one Manner of Evacuation in a Lientery, another in a Diarrhœa, another in a Dyſentery, and a fourth in a Teneſmus. Stools alſo differ with reſpect to the Time in which they appear, ſince ſome are diſcharg'd in the Beginning of the Diſeaſe, without any manifeſt Signs of Concoction, and others in the Increaſe of the Diſeaſe. With reſpect to the Alterations they undergo, they may be chang'd for the worſe, either as to their Subſtance, their Quantity, their Colour, or their Smell. Such Stools as prognoſticate Death, may alſo be diſcover'd from their preceding, concomitant, and ſubſequent bad Signs. And, laſtly, with reſpect to the Eaſe with which Stools are voided, thoſe are accounted bad, which are evacuated with Difficulty or Pain, which afford no Relief, or which render the Patient worſe. That we may, therefore, be able to prognoſticate from Stools with the greater Certainty, I judg'd it expedient accurately to inquire into theſe Differences, beginning with thoſe Stools, which are hard or rough, ſoft or liquid. With reſpect to hard Stools, the Author of the Prorrhetics, *in* 1 *Prorr.* 41. uſes theſe Words: "When the Belly is coſtive, if a ſmall Quantity of "black Excrements, as it were, like Goats Tricklings, are "diſcharged, and if, at the ſame time, there is an Eruption of "Blood from the Noſtrils, this is a bad Sign." *Galen* affirms, that the σπυρεβώδεις, or Excrements like Goats Tricklings, are produced by the Length of their Retention, and the exceſſive Heat of the Parts; and if theſe Excrements ſhould be of a blackiſh Colour, they denote a Heat and Burning about the Centre of the Body, which is a Sign of a malignant Diſeaſe; and, if this Diſeaſe is violent, and accompanied with other bad Signs, theſe Excrements certainly prognoſticate the Death of the Patient. Liquid Stools ſometimes proceed from a moiſt Conſtitution, a State of Childhood, a wet State of the Weather, humid Aliments, or Crudities of the Stomach; or liquid Stools are produced, when moiſt Aliments are not conveyed from the Stomach through the Lacteals; or when ſome Subſtance, of a fluid Nature, falls from the Liver or Spleen into the Inteſtines; or when the Liver, or the Spleen, or the whole Body, is purged by the Liver. Among liquid Stools, *Hippocrates* pronounces thoſe of the aqueous Kind bad; becauſe, as *Galen* ſays, they are a Sign of Crudities. Stools of this Nature are perpetually bad, and prognoſticate Death in violent and bilious Diſorders, if, at the ſame time, a due Quantity of good and laudable Urine is not diſcharged; whereas, in milder and more benign Diſtempers, which are accompanied with no fatal Symptoms, they only denote a Superfluity of crude Humours, for the Correction and Alteration of which, Nature requires a long Time. But, as *Galen* informs us, pinguious Stools are diſcharged in acute Diſeaſes, when the Fat is melted down by the intenſe Heat of the Parts; but, when theſe Stools are alſo viſcid, they import, that not only the Fat, but alſo the ſolid Parts of the Animal, are colliquated. When this is the Caſe, Stools, which are pinguious, viſcid, white, ſmall in Quantity, and highly fetid, are diſcharged. But they may be diſtinguiſhed from ſuch as are diſcharged under theſe Appearances, in conſequence of eating any particular Species of Aliments; for theſe latter are more copious, and not always white. And, according to *Galen*, a fetid Smell is a Sign of Colliquation. With reſpect to Stools of this Kind, *Hippocrates*, in his Prognoſtics, informs us, *that ſuch as are ſmall in Quantity, glutinous, white, of a pale Saffron-colour, and ſmooth, are bad.* Theſe muſt perpetually, and in the very Nature of the thing, be bad; ſince a Waſting of the ſolid Parts of the Body, and a Colliquation of the Fat, are fatal Circumſtances, which, in acute Diſorders,

orders, indicate an intenſe Heat, and certain Death, if the Diſeaſe is very violent, or accompanied with bad Signs. But, in milder Diſeaſes, theſe Stools, inſtead of the Death of the Patient, prognoſticate the Protraction of the Diſeaſe. Thus, with reſpect to the Patient in the Garden of *Dealces*, *Hippocrates*, in the third Book of his Epidemics, informs us, *that, on the ſixth Day, his Stools were black, pinguious, frothy, viſcid, and fetid*; and the Diſeaſe of this Patient was only determin'd on the fortieth Day. But the Stools, in this Caſe, were not the Effects of a Colliquation of the ſolid Parts, but of the Fat, and of the ſuperfluous putrified and viſcid Humours. But ſuch Stools as are produced by a Colliquation and Waſting of the Solids, are abſolutely fatal, and are diſcharged pure and unmix'd. Thus, with reſpect to *Silenus*, *Hippocrates*, in the firſt Book of his *Epidemics*, informs us, *That, on the fifth Day, his Stools were ſincere, bilious, ſmooth, and highly pinguious.* Sincere Stools are alſo juſtly to be condemn'd in acute Diſorders; becauſe, according to *Galen*, they indicate an intenſe internal Heat, by which the ichorous Parts of the Humours are exhauſted and conſumed. Thus the Author of the *Prorrhetics* juſtly aſſerted, that *ſuch Stools as became pure and unmix'd, heighten'd the Diſorder*; and, according to *Galen*, theſe render'd it worſe. Such were thoſe of *Silenus*, *Epidem.* 1. *Patient* 2. on the fifth Day; thoſe of *Phylinus*'s Wife, *Epidem.* 1. *Patient* 4. on the ſixth; thoſe of *Euryanactes*'s Daughter, *Epidem.* 3. *Patient* 6. on the twelfth; thoſe of *Hermoptolemus*'s Wife, *Epidem.* 7. on the fifth; thoſe of *Parius*, *Epidem.* 3. *Patient* 1. on the ſeventh; thoſe of *Pythion*, *ibid. Patient* 3. and others, the Hiſtories of whoſe Diſeaſes are to be found in the *Epidemics* of *Hippocrates*.

Frothy Stools are in like manner condemn'd, becauſe they either indicate an intenſe Heat, by which the Fæces contract a Froth, like that produced on a Fluid boiling in any Veſſel; or ſome flatulent Principle, mix'd with the Humours, and reſembling that Foam of the Sea produced by tempeſtuous Winds. The former of theſe Stools are the Effects of a Heat, melting down the Body; whereas the latter are produced by an unequal Perturbation. Hence *Hippocrates*, 2 *Prorrhet.* juſtly pronounces highly frothy Stools bad, becauſe they either denote a Colliquation, or an Inequality. But thoſe are worſt, which indicate an intenſe colliquating Heat; and this Species may be known from the acute Fever, and the intenſe Heat of the Excrements themſelves, which are frothy and ſincere. Thus, in the firſt Book of the *Prorrhet.* 21. we are told, "That, in bilious and unmix'd Stools, frothy Efflorescences "are a bad Sign." In the ſame Book, 50. 'tis aſſerted, *That Stools, becoming frothy and unmix'd, heighten the Diſorder*; or, as *Galen* expreſſes himſelf, render it worſe. In the ſame Book alſo, 53. frothy Stools are ſaid to be bad in acute and bilious Diſorders. In the *Coacæ Prænotiones*, 602. we are inform'd, *That, in acute Diſtempers, frothy and highly bilious Stools are bad*; and afterwards, 613. we are told, *That Stools, which become frothy and ſincere, increaſe and heighten the Diſeaſe.* Thoſe Stools alſo, which are render'd frothy by an Admixture of a flatulent Principle, are bad; becauſe they indicate a Crudity in the Excrements.

Stools either immoderately large, or preternaturally ſmall, in Quantity, are alſo to be condemn'd. The former impair the Strength, and weaken Nature. Thus, in his *Prognoſtics*, *Hippocrates* uſes theſe Words: "But Stools, "too often diſcharged, and in too large Quantities, endanger "Faintings." The Author of the *Coacæ Prænotiones*, 609. informs us, That liquid Stools, diſcharged in large Quantities, and frequently, are bad, partly becauſe they induce Watchings, and partly becauſe they impair the Strength. Thus alſo, in the fourth Aphoriſm of the fifth Section, we are told, that "Convulſions, or a Hiccough, brought on by immode-"rate Purging, are bad."

Stools diſcharged in too ſmall a Quantity are alſo bad, both becauſe they are inſufficient for removing the Cauſe of the Diſeaſe, and becauſe they indicate a Superfluity of Humours, which, in a violent Diſorder, generally prove fatal; or becauſe they import, that the vital Powers are inſufficient to expel the noxious Humours, notwithſtanding their Efforts for that Purpoſe. This Circumſtance *Hippocrates* obſerved in the firſt peſtilential Conſtitution; with reſpect to which, in the firſt Book of his *Epidemics*, he ſays, "Theſe Symptoms "were ſucceeded by Stools, which were either greater "than the Patients could bear, or too ſmall to produce any "happy Effects; for which Reaſon the former Symptoms im-"mediately return'd, and were heighten'd." Thoſe Evacuations by Stool, which ceaſe as ſoon as they are begun, are bad, and, in acute Diſorders, fatal. Thus *Hippocrates*, in the firſt Book of his *Epidemics*, tells us, *That thoſe Patients, whoſe Bodies were ſoluble, had the Misfortune to have their Evacuations by Stool ſuppreſs'd in a malignant Manner*: And, when enumerating thoſe Symptoms, and Signs of burning Fevers, which, in the Beginning, prognoſticate the Death of the Patient, he adds, their Evacuations by Stool were ſtopt: Hence it is by no means ſafe to ſuppreſs Diarrhœas and Dyſenteries, ſince, by this means the noxious Humours are determin'd to other Parts, induce conſiderable Injuries, and, in acute Diſorders, Death.

We know Stools of a bad Kind not only from their Quantity, but alſo from their Colour. The white, thin, the bilious, the yellow, the Saffron-colour'd, or thoſe reſembling the Yolks of Eggs, the red, the bloody, the aqueous, the green, the æruginous, the livid, the black, and thoſe diverſify'd with a Variety of Colours, are all bad in acute Diſorders, unleſs critically diſcharged. White Stools are either the Effects of the Aliments taken, ſuch as Bread alone, Milk, Ptiſan, Lupins, Alica, Almonds, and other Subſtances; or, as *Galen* informs us, in 1. *Prorrh. Comment.* 13. and in 2. *Prognoſt. Comment.* 17. and 19. they are produced when the Bile is not convey'd to the Inteſtines, either on account of an Obſtruction of the biliary Duct, as in thoſe affected with the Jaundice; or in conſequence of its not being ſecreted from the Maſs of Blood, by the Glands of the Liver; or, laſtly, white Stools are produced by a Colliquation of the ſoft and recent Fat. But Stools of this Kind are ſmall in Quantity, viſcid, and highly fetid; and all of them, except ſuch as are white, in conſequence of eating ſome ſorts of Aliments, are highly condemn'd in acute Diſeaſes, and more eſpecially ſuch as are white, in conſequence of an inflam'd Brain. With reſpect to which, *Hippocrates*, in the firſt Book of his *Prorrhetics*, 13. uſes the following Words: "In phre-"netic Patients white Stools are bad, as is plain from the Caſe "of *Archecrates*." And in the ſame Book, 53. we are told, "That, in acute and bilious Diſorders, Stools which are white, "frothy, and bilious, only on the Surface, are bad." *Hippocrates*, in his *Coacæ Prænotiones*, 36. tells us, "That "thoſe who are ſeverely affected with the Jaundice, diſ-"charge white Stools, and die." This happens on account of a Retention of the Bile in the Blood; whence an Inflammation of the Brain, or Liver, which is a fatal Circumſtance; becauſe the Congeſtion of Humours to theſe Viſcera is productive of the worſt of Conſequences. We have already obſerved, that ſuch Stools as are white, ſmall in Quantity, viſcid, and fetid, are equally bad; becauſe, according to *Galen*, they import a malignant Colliquation. Thoſe Stools alſo, which are yellow, bilious, acrid, Saffron-colour'd, or reſembling the Yolk of an Egg, and ſuch as are green, are bad, unleſs critically diſcharged. The Saffron-colour'd, however, the æruginous, and the green, are the worſt; becauſe they indicate a violent internal Heat. All bilious Stools, not critically diſcharged, are alſo bad; ſince, in acute Diſeaſes, they prognoſticate Death, and, in Diſorders of a milder Nature, a Protraction of the Diſeaſe, Relapſe, and uncommon Pain.

Thus *Hippocrates*, in the ſecond Book of the *Coacæ Prænotiones*, 43. informs us, *That it is a bad Sign to have a Bitterneſs, and a biting Pain, produced by Bile, about the Mouth of the Stomach*; becauſe this Circumſtance denotes a Redundance of Bile, not only about the Mouth of the Stomach, but alſo in the Inteſtines. And *Hippocrates*, in the 47th *Aphor.* of *Sect.* 4. condemns all bilious Evacuations. Acrid Stools of this Kind, diſcharged in burning Fevers, approaching to a Dyſentery, or Teneſmus, if theſe Diſorders are as yet crude, are generally fatal; for I have, ſays *Proſper Alpinus*, obſerved them in many Patients, who all died, after having ſtruggled for a long time under their Diſtemper. Laſt Year, ſays he, I had a mournful Inſtance of this Truth in my dear Wife *Guadagnina*, who, on the ſeventeenth Day, died of a burning Fever, attended with a bilious Diarrhœa, approaching to a Dyſentery. This is beautifully obſerved by *Hippocrates*, in the firſt Book of his *Epidemics*, where we have theſe Words: "They frequent-"ly diſcharged Stools, which were bilious, ſmall in Quantity, "ſincere, and acrid." And afterwards he informs us, "That, "in the Summer and Autumn, Lienteries, Dyſenteries, Te-"neſmi, and Fluxes, raged; and that the Stools diſcharged "were bilious, thin, acrid, frequent, crude, and, in ſome "Patients, aqueous." In the ſame Book he tells us, "That "all thoſe Patients had Diſturbances of the Belly, and Stools "of the worſt Kind." And, a little after, he informs us, "That the Diſeaſes, with which they were afflicted, were "Dyſenteries, Teneſmi, Lienteries, and Fluxes." Of this we have an Inſtance in the Daughter of *Eryanax*, with reſpect to whom *Hippocrates*, in the third Book of his *Epidemics*, ſays, that "On the twelfth Day ſhe diſcharged Stools, "which were bilious, ſmall in Quantity, ſincere, thin, acrid, "and frequent."

Hippocrates, in his *Prognoſtics*, obſerves, that red and bloody Stools are not of leſs bad Preſage; for, ſays he, *in Prognoſt.* "thoſe which are aqueous, or white, or green, or "highly red, or frothy, are all bad." The Author of the *Prorrhet. in Lib.* 1. 2. affirms, "That, in all Diſeaſes, red "Stools are bad." Again, he condemns ſuch as are highly red. And, in the *Coacæ Prænotiones*, 330. 611. 613. 632. we have the following Words: "Highly red Stools are bad, eſpecially when "produced by a Fault of the Liver, as happens in Patients labour-"ing under Diſorders of that Organ." But from theſe we except Stools of this Kind, which are critical, and relieve. Green and porraceous Stools are alſo highly bad, provided they are ren-

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der'd ſo by the Violence of a Diſeaſe; becauſe, according to *Galen*, in his firſt Book *de Criſibus*, *Cap.* 11. they indicate an æruginous Bile, and an intenſe Heat.

Hippocrates, in his *Prognoſtics*, and in the 47th *Aphor.* of *Sect.* 4. pronounces livid Stools fatal in continual Fevers; becauſe, according to *Galen*, theſe denote an intenſe Cold, and, as it were, a Mortification of the inferior Parts. No leſs fatal than theſe are black Stools. According to *Galen*, in acute Diſeaſes, black Stools either indicate a Redundance of black Bile, or a parch'd and torrid State of the Blood. With reſpect to black Stools, *Hippocrates*, in *Aphor.* 21. *Sect.* 4. tells us, that "black Stools, reſembling black "Blood, and diſcharged ſpontaneouſly, either with or without "a Fever, are very bad."

Galen, in his Commentary on this Aphoriſm, aſſerts, that black Stools indicate a great Weakneſs of the Spleen and Liver, in which they alſo denote the Generation of a large Quantity of groſs and melancholic Blood: For this Reaſon black Stools are, in acute Diſeaſes, juſtly accounted fatal Prognoſtics, ſince Nature requires a long time to concoct and correct this Humour. *Galen*, in a peſtilential Conſtitution, obſerved many Stools of this Kind, which were diſcharged not only by thoſe who died, but alſo by thoſe who recover'd; but, in the former, they appear'd either in the Beginning, or the Increaſe, of the Diſeaſe. When treating of good Stools, we have ſhewn, that black Stools are ſometimes beneficial; tho' when they appear, whilſt the Diſeaſe is crude, and before the Signs of a due Concoction, they never fail to prove fatal; for then, according to *Galen*, they indicate, that an irreparable Injury is done to the Viſcera. According to *Hippocrates*, in the 23d *Aphor.* of his 4th *Section*, "If thoſe who have been emaciated by acute or "lingering Diſeaſes, by Wounds, or any other Cauſe, diſ-"charge, by Stool, black Bile, reſembling black Blood, they "die next Day."

According to *Galen*, all Stools tinged with various Colours are alſo bad, becauſe they indicate a Variety of Humours in the Body; to correct which Nature requires a long time, which ſhe cannot poſſibly have in acute and violent Diſorders, which quickly impair the Strength. *Hippocrates*, therefore, in his *Prognoſtics*, juſtly affirms, "That Stools tinged with different "Colours, tho' the Patients might ſtruggle for a long time "with their Diſeaſe, yet never fail to prove fatal." And, in the 21ſt *Aphor.* of *Sect.* 4. he tells us, that they are the more fatal, the worſe and more numerous the Colours, with which they are tinged, are. This was the Caſe of *Apollonius*, concerning whom *Hippocrates*, in the third Book of his *Epidemics*, ſays, "That he diſcharged Stools of various Colours and "Qualities, ſuch as black, virulent, pinguious, crude, and "acrid, and at laſt reſembling Milk."

Fetid Stools are alſo bad; becauſe, according to *Galen*, they are a Sign of Putrefaction. Thus *Hippocrates*, in his *Prognoſtics*, and in the 47th *Aphor.* of *Sect.* 4. condemns all fetid Stools. But ſuch as are very fetid, liquid, yellow, pinguious, and what we call colliquative, are obſerved to be ſo highly fatal in acute Fevers, that very few Patients, who diſcharge ſuch Stools, have been found to recover; becauſe they denote a predominant Putrefaction, and a Loſs of Strength. They are alſo a highly fatal Sign in continued Fevers; and Stools of this Kind reſemble the Yolk of an Egg, diluted in fat Broth; only with this Difference, that they are highly fetid. With reſpect to theſe, *Hippocrates*, in the 3d Book of his *Epidemics*, affirms, "That thoſe who labour'd under either acute "or chronical Diſeaſes, were taken off principally by Stools of "a bad Kind." And *Galen*, in his Comment on this Paſſage, uſes the following Words: "That long-continued Plague, "which appear'd in our own Age, cut off moſt of thoſe who "fell the Sacrifices of its Fury, in conſequence of their Eva-"cuations by Stool; for the Matter diſcharged was the Effect "of Colliquation." Of this Kind were the Stools of the Concubine of *Nicolaus*, as *Hippocrates*, in the ſeventh Book of his *Epidemics*, informs us.

Theſe are the various Kinds of Stools, which threaten Death, either with reſpect to their Subſtance, their Quantity, their Colour, or their Smell. Stools alſo diſcharged in a preternatural Manner, and ſuch as are either continued too long, or evacuated without the Conſciouſneſs of the Patient, are fatal; becauſe, according to *Galen*, in acute Diſeaſes, they either prognoſticate a Delirium, or a fatal Loſs of Strength. With reſpect to this, the Author of the *Prorrhet.* in the firſt Book, 78. uſes theſe Words: "Thin Stools, diſcharged without the "Conſciouſneſs of the Patient, if he is not delirious, are bad, "as it ſometimes happens in an hepatic Flux." In like manner, in continual Fevers, thoſe Stools which continue too long, either with or without a gnawing Pain, ſuch alſo as are copious, and afford no Relief, are highly bad. By theſe *Hippocrates*, in his *Epidemics*, tells us, that many were taken off: Thus, in the firſt Book, he uſes theſe Words: "In the Summer and "Autumn, Lienteries, Dyſenteries, Teneſmi, and bilious "Fluxes, raged; and the Stools diſcharged were thin, frequent, "crude, acrid, and in ſome aqueous." And, in the third Book, he tells us, "That, with reſpect to the Evacuations by "Stool, many Patients were ſubjected to terrible Diſorders, "eſpecially to a Teneſmus, which was principally incident to "Children, and thoſe who had not as yet arrived at Puberty; "many of whom died lienteric." *Hippocrates* alſo, in the 43. *Aphor.* of *Sect.* 6. informs us, "That Perſons, weaken'd "by a long-continued Dyſentery, unleſs they die of it, fall "into a Lientery, or Dropſy, which proves fatal to them." All Stools, therefore, of this Kind, are fatal, if they appear at the Beginning of the Diſeaſe, without any Signs of a previous Concoction; at which time no Evacuations are good and laudable, but ſymptomatical and bad. Stools of this Kind *Hippocrates* had in his View, when, in the third Book of his *Epidemics*, he uſes theſe Words: "Moſt had their Bellies diſturb'd; "and were ſeiz'd with Horrors and Sweats, which were not "critical." With reſpect to Stools of this Kind, in *Hippocrates*, in *Epidem. Lib.* 3. we find theſe Words: "Two Brothers, "the Companions of *Cecrops*, from the Beginning, diſcharged "Stools which were black, feculent, in Colour reſembling Ali-"ments prepared of Blood, (καχυκεδία) highly bilious, and "frothy."

Bad Stools are alſo known from their preceding, their concomitant, and ſubſequent Signs, and from their being ſo far from determining the Fever, that they rather render the Patients worſe. Thus *Hippocrates*, in the third Book of his *Epidemics*, ſays, "The Stools diſcharged did not alleviate the Sym-"ptoms." And, in the firſt Book of the *Prorrhetics*, 129. theſe Words occur: "In acute Diſeaſes, after a moderate "Eruption of Blood and black Stools, Deafneſs is bad." In the ſame Book, 81. we are told, "That, in burn-"ing Fevers, attended with ſome Degree of Shivering, "and frequent Diſcharges of aqueous Bile by Stool, a Diſtor-"tion of the Eyes is a bad Sign, whether the Patients are "ſeiz'd with a Catalepſis or not." And, in the ſame Book, 108. we are told, "That ſublivid Stools, accompanied with Per-"turbations of the Inteſtines, and a Diſcharge of thin and aque-"ous Humours, are bad." In the ſame Book, 127. after Eruptions of Blood, black Stools are ſaid to be bad; ſuch were theſe obſerved in *Silenus*, *Hermocrates*, the Daughter of *Eryanax*, the Youth lodged in the *Forum Mendacium*, the Woman at the Houſe of *Panthimides*, another Woman who ſuffer'd Abortion, another Woman in the *Forum Mendacium*, *Parius*, *Pythion*, *Apollonius*, and many others, whoſe Hiſtories occur in the Writings of *Hippocrates*; the beſt Source from which we can poſſibly learn to draw Prognoſtics from the Characteriſtics of Stools, whether of the good or bad Kind.

DEJECTORIA. Purging Medicines. See CATHARTICA.

DEINOSIS, δείνωσις, from δεινόω, to exaggerate. It ſignifies ſtrictly Exaggeration; but is by *Hippocrates*, in his Treatiſe *de Ratione Victus in Acutis*, applied to the *Supercilia*, where it imports their being enlarged and diſtended.

DEIPNON, δεῖπνον. A Supper, properly; but it implies any Meal in general.

DEIRA, δειρή. The Neck. See CERVIX.

DELATIO. The ſame as INDICATIO. *Caſtellus* from *Mich. Gaveſſetius.*

DELETERION, δηλητήριον, from δηλέω, to injure. I don't know, that the *Greeks* uſe this Word as an Epithet to any thing, except φάρμακον, having never met with it in any Gender, but the Neuter. It imports pernicious, injurious, or poiſonous. *Galen* defines *deleterious Medicines* ſuch as agree with no one, either in Sickneſs, or in Health.

DELIGATIO. The Application of Bandages.

That Bandages are very uſeful, and even neceſſary, for curing the Diſorders of the human Body, is evident, not only from the Teſtimonies of *Hippocrates*, *Galen*, and other eminent Phyſicians; but alſo from this, that there can ſcarcely be any Operation, in Surgery, perform'd ſucceſsfully without their Aſſiſtance: For, ſhould a Surgeon perform an Operation with the greateſt Judgment and Care, but miſcarry in the Application of the Bandage, all his Endeavours would be to no Purpoſe; and more eſpecially in the Treatment of Wounds, Fractures, Luxations, and Amputations. And we often find, that, in Fractures and Luxations, after a proper Reduction of the Parts, the Cure depends more on a ſkilful Application of the Bandage to the Part affected, than on the Medicines. And, in the Caſe of violent Hæmorrhages, a proper Application of the Bandage and Compreſſes proves the moſt effectual and ſpeedy Remedy, as muſt be acknowledged by every one, who has any Skill in Surgery; not to mention, that the making and applying a Bandage, after a genteel and ready manner, is juſtly reckon'd among the good Qualifications of a Surgeon, as it gains him the Eſteem of the Spectators, and the Confidence of his Patient, which is of great Influence in forwarding the Cure; for both one and the other judge of a Surgeon's other Abilities, by his Performance on ſuch Occaſions.

By

By a Bandage, we underſtand a Piece of Linen Cloth, of a Shape and Size ſuitable to the Part of the Body it is to be applied to: They are ſometimes of a ſquare Figure, not unlike a Napkin; but generally they are long and narrow, when deſign'd for Fractures, Luxations, and Wounds; or for retaining Compreſſes, Plaiſters, Lint, or the like. The *French* make a Diſtinction betwixt a Band and Bandage: By the firſt, they underſtand the looſe Cloth, before it be applied; and, by the other, the Band, when applied to the Body.

There are various Kinds of Bandages; ſome are peculiar to one, and others common to ſeveral Parts of the Body: Some, again, are ſimple, and others compound. Thoſe are call'd ſimple, which are made of one entire Piece of Linen, without any other Pieces join'd to them. With reſpect to theſe, we are to obſerve, to make them of Linen, cut according to the Length of the whole Piece, and commonly three or four Fingers Breadth, ſuitable to the Part of the Body they are to be applied to. Theſe ſimple Bandages may be roll'd up at one or both Ends, as the Surgeon ſhall think moſt proper or neceſſary.

There are four different Ways of applying the ſimple Bandage, which are diſtinguiſh'd by as many different Names. 1. The circular or annular Bandage is, when the upper Rounds come exactly over the undermoſt. 2. The obtuſe or *Aſcia*, in *French Doloires*; when the Rounds aſcend or deſcend upon each other, in the Form of a Screw. 3. The Repent, in *French Rampant*; when the Bandage is applied to the Part affected in Rounds ſeparate, and at a little Diſtance from each other. 4. Reflex, call'd by the *French Renverſé*; when the Bandage muſt be inverted, and turn'd back, as in thoſe applied to the Legs, or other Parts of the Body, of different Thickneſſes.

Compound Bandages are made of ſeveral Pieces of Cloth, ſew'd together, or of one Piece of Cloth, cut into more Heads than two, with more artificial Rounds than the former; and are commonly uſed in Fractures of the Jaw-bone, Clavicle, and Patella; ſuch are thoſe with four Heads, which are commonly call'd *Fundæ*. Some Figures of theſe Bandages may be ſeen *Tab.* 23. *d*, *e*, *f*, *g*, *h*. Add to this the Bandage of eighteen Heads, which ſome call *Aſcialis*, which is uſed in compound Fractures, repreſented in *Tab.* 30. *Fig.* 4. B, B. and many others. Of compound Bandages, ſome are applied to the Breaſt, others to the Abdomen, and others again to the Arms and Legs; and from theſe different Parts they receive their reſpective Denominations. Some take their Names from the Things they reſemble, as *Scapha*, *Stella*, *Stapes*, *Spica*; and others, again, have their Names from their principal Uſes.

The Matter of which Bandages are generally compoſed, is Linen Cloth; the neceſſary Conditions of which are, firſt, that it be clean, partly for Decency, partly that it may not be offenſive to the Wound; for, as *Galen* obſerves, a Surgeon ought to ſtudy Cleanlineſs and Neatneſs, as well as Uſefulneſs, in his Dreſſings. Secondly, that it be not quite new, but wore for ſome time, which will render it more ſoft and ſmooth; for new Cloth, by its Hardneſs and Aſperity, would irritate, inflame, and make the Parts itch; at the ſame time, it ought not to be wore thin, becauſe that would make the Bandage too weak, and ſubject to break. Thirdly, it ſhould be ſtrong, conſiſting of Threads neither very coarſe, nor very fine; ſince the firſt will make it uneaſy to the Patient, and the other will render it liable to ſtretch. Fourthly, it ſhould have no looſe Threads, Knots, or Hems, nor any Seams, that can be avoided; but, if the Length of the Bandage ſhould make Seams neceſſary, they ſhould be as even, and as few, as poſſible. Fifthly, and laſtly, as to the Length and Breadth required in a Bandage, that muſt be left to the Diſcretion of the Surgeon.

With reſpect to Bandages, it ought to be obſerv'd, that they be neither drawn too tight, nor too looſe, but retain a moderate Tenſion; for, when they are too looſe, they are of no Uſe in Fractures, or violent Hæmorrhages; and, when too tight, they will create violent Pains, Tumors, and Inflammations, a Gangrene, and even a Mortification of the Part. We may eaſily judge whether the Bandage has a proper Tenſion, by trying to put our Fingers under it, by the Feeling of the Patient, and the Appearance of the Part affected. If the Patient does not complain of the leaſt Swelling or Uneaſineſs, you may conclude the Bandage to be too ſlack; but, on the contrary, if the Part affected ſwells, and creates any great Uneaſineſs to the Patient, the Bandage, in that Caſe, muſt be too tight; or a Surgeon may eaſily diſcover, by the Swelling of the Parts neareſt to the Bandage, whether he has obſerved a due Medium in applying it; for if the Extremities, eſpecially thoſe of the Arms or Feet, in the Morning, or at Night, are hard, turgid, and affected with an acute Pain, and if, at the ſame time, the Veins of theſe Parts are preternaturally turgid, you may conclude, that the Bandage is too tight; as, on the other hand, it muſt be too lax, if there be no Swelling, ſo that you can eaſily ſlip your Finger under it. If you are to apply a Bandage, with one Head, to the Hand or Foot, it is neceſſary to fix its Beginning with two or three circular Rounds, one above another, to prevent its ſlackening; but, if the Bandage be two-headed, you muſt then apply the Middle of it firſt, and then roll the two Ends of it tight about the Limb with both your Hands; but, for the greater Security, the Extremities of the Bandage ſhould be folded in, before they be faſten'd, in order to ſecure it the better. Bandages and Compreſſes for Fractures and Luxations ought never to be applied dry, but ſhould be moiſten'd with warm Vinegar, burnt Wine, or Oxycrate, which will make the Bandage adhere more cloſely, and will both ſtrengthen the Parts, and alleviate, or prevent an Inflammation. Laſtly, if the Parts under the Bandage itch exceſſively, as they often do, the Bandage may be a little relaxed; or, if that cannot be done with Safety, the Bandage and Dreſſing muſt be frequently moiſten'd with the above-mention'd Liquors, till the Itching ceaſes. Whenever you renew a Dreſſing, great care muſt be taken not to pull it away too roughly or haſtily, leſt the Part affected be thereby greatly injured; for, if you uſe not the utmoſt Caution in taking off the Bandages, Compreſſes, and Pledgets, there will be Danger leſt the Lips of the Wound, and the Fragments of the Bone, ſhould, by ſuch Precipitation, cauſe a dangerous Hæmorrhage, and other bad Symptoms: And, for this Reaſon, whenever the Bandage adheres too cloſely to the Skin, being glued thereto by Blood, or other Matter dry'd, it is neceſſary to moiſten it with Wine, or the warm Spirit of Wine, which will make it come off more eaſily. In like manner, you ought to take care to have all the Apparatus for a new Dreſſing ready and prepared, before you take off the old; leſt the Part affected, by being long expoſed to the Air or Cold, be thereby injured.

I have above hinted at ſome general Uſes of Bandages; but, for a diſtinct Conſideration of the ſame, it will not be amiſs to ſpecify ſome of their more particular Uſes: And, firſt, they ſometimes perform a Cure of themſelves, and ſo ſupply the Place of Medicines, as in Fractures, Luxations, and violent Hæmorrhages; and they are often applied to retain the Medicines, and other Dreſſings, on the affected Parts. Sometimes Bandages are uſed to repel Swellings of the Feet; and then they are call'd *Expellents*, and, by the *French*, *Expulſives*. The Manner of applying them, for this End, is, to begin at the lower End, and, by degrees, aſcend with every Round. See *Tab.* 24. *Fig.* 1. *Let.* F. And theſe expulſive Bandages are not only uſed for ſwell'd Legs, but alſo to diſcharge the noxious Matter in Fiſtulas. Bandages are alſo of very great Uſe for reſtoring deform'd Parts to their natural State; and it is no uncommon thing to ſee Bandages, when applied to freſh Wounds, eſpecially in the fore or hinder Parts of the Head and Abdomen, unite them ſurpriſingly; and then the Bandage is commonly call'd *Uniting*. See FASCIA.

DELIQUIUM. This has two Significations in Medicine; for, firſt, it implies a Fainting, and is the ſame as SYNCOPE, which ſee. Secondly, it implies the Solution of any Body, when expoſed in a cool and damp Place, by the Humidity it attracts ſpontaneouſly from the Air. Thus Salt of Tartar, diſſolved in the manner above-mention'd, is called Oil of Tartar *per Deliquium*.

DELIRIUM, from *Deliro*, to rave, or talk idly; which is derived from *Lira*, a Ridge, or Furrow of Land. Hence *Deliro* properly imports, to deviate from the Right, that is, right Reaſon. We have no good Word in *Engliſh* to expreſs *Delirium*, unleſs *Lightheadedneſs* may be admitted.

As it is good for the Patient, under all Diſorders of the Body, to have his Mind untouched, or to have all his Actions under the Command of the ruling Faculty, as at other times; ſo, on the contrary, to be in any manner delirious, or to be deprived, in whole or in part, of the Uſe of his Reaſon, is a bad Prognoſtic, and, in acute Diſeaſes, often portends Death. For the Illuſtration of the Method of prognoſticating from this Head, it will be neceſſary to ſhew, firſt, what we mean by a Depravation of Reaſon; ſecondly, by what Signs we diſtinguiſh the preſent, or predict any future Defect of this Kind; and, in the laſt Place, to treat ſomewhat largely of the different Kinds of Madneſs and Deliriums.

As to the firſt, *Galen* calls thoſe, deſtitute of Reaſon, or delirious, who neither ſpeak or do any thing agreeable to Reaſon; but he ſeems not to have comprehended all delirious Perſons under this Deſcription, ſince not only thoſe, who, in their Speeches and Action, are inconſiſtent with Reaſon, but ſuch as, in any particular Affair, talk and act after an unuſual and irrational Manner, tho' ſeemingly wiſe in many things, are to be reckoned among thoſe who are mad, beſide themſelves, and delirious: For the great Founder of Medicine, *Hippocrates*, frequently diſcovered and judged a Delirium from a ſingle deprav'd Action of the ruling Faculty: As, for Inſtance, *Aph.* 6. *Lib.* 2. from an Inſenſibility of Pain: "They who are affected "with Pain in any Part of their Body, but are inſenſible of "the ſame, are diſorder'd in their Reaſon." And, in *Progn.* he paſſes the ſame Judgment from only the Decubiture: "To "lie on the Belly," he ſays, "not being accuſtom'd to it in "Health, prognoſticates Ill to the Patient; for it ſignifies a "Delirium, or a Pain about the Region of the Belly." *Galen* himſelf, alſo, *in* 1. *Prorrhet.* has told us, that a Delirium

may

may be known merely by the Patient's Spitting; and, in *Prognoſt.* that it may be diſcover'd by the indecent Geſticulation of the Hands, picking of Motes, or fruitleſs Hunting of Flies. The Author alſo of the *Prorrhet.* 1. ſays, "That a fierce "Anſwer from a Patient of a mild Temper, or a mild An- "ſwer from one of a fierce Spirit, ſignifies a Delirium; as "does alſo Garrulity in a Perſon of Taciturnity, and Silence "in one much given to Talking." Theſe and many other Examples prove, that a Perſon may be denominated delirious from the Depravation of one ſingle Action. We conclude, therefore, that they are to be eſteemed as labouring under a Diſorder of Reaſon, who have ſome one of the voluntary Actions exceſſive or deficient, contrary to Reaſon, and all due Decorum; as when the Hand, for Example, is employ'd after a ridiculous manner in fruitleſs picking of Motes, or catching of Flies; or when any thing is done by the Patient contrary to Cuſtom, and without a Cauſe, as when he talks much or little, contrary to his uſual Cuſtom, or talks obſcenely, or utters his Words after an incoherent and broken Manner, or fetches his Breath ſlower than Neceſſity requires, or expoſes his Pudenda to the Byſtanders. We call thoſe delirious, alſo, whoſe Mind, thro' ſome Defect of the Senſes, is incapable of receiving Ideas, or is regardleſs of them when receiv'd; among whom are certainly to be reckon'd thoſe who labour under ſome unuſual Deficiency of the Senſes without a Cauſe, or employ them in an unuſual manner; as when the Patient is either depriv'd of ſome voluntary Action, or puts it to an ill Uſe. Theſe Marks of a delirious Perſon ſeem to be very elegantly expreſs'd in *Coac. Præſag.* 47. as follows: "To do any thing contrary to "Cuſtom, as to undertake or deſire ſuch things as never before "entered into his Thoughts, or are contrary to his uſual In- "clination, is a very bad Symptom, and next in degree to "Madneſs." Every Alteration, therefore, in Motions, Geſtures, Voice, Speech, or the Judgment of the Senſes, ſhews a Man to be delirious, and out of his right Mind.

We proceed, in the ſecond Place, to treat in particular of the Signs which indicate a Delirium; where we ſhall deſire the Reader to obſerve, what *Hippocrates*, as well as *Galen*, in various Places, have ſaid on this Subject, particularly the former, 1. *Prorrhet.* 44. where we are informed, "That a fierce An- "ſwer from a Perſon of a meek and compoſed Temper, or an "unuſual Meekneſs in one of a fierce and ungovernable Spirit, "ſignify a Delirium." And, in the ſame Book, we are told, that a bold and fierce Aſpect indicates a Phrenſy; the ſame is alſo ſignify'd when the Patient is inſenſible of his Pain, or is free from Thirſt when his Tongue is ſcorched with Heat, or is contented with ſmall Draughts. Other Signs are, a Pulſation of the Hypochondria, and frequent Twitching of the Eyes, which *Galen*, on 1. *Prognoſt.* explains by ſtaring and unſteady Eyes. A lying on the Belly, contrary to Cuſtom, is accounted by *Hippocrates*, *Lib. Prognoſt.* a Sign of Deliriouſneſs; and *Galen*, in *Comment.* tells us, that the ſame is ſignify'd by a ſupine Poſture, with the Legs very much retracted, or ſpread, and an unuſual Grinding of the Teeth, which is mention'd by *Hippocrates* in the Place before quoted; alſo when the Patient, under the Height of the Diſtemper, deſires to ſit up, it denotes a Delirium; and the ſame is indicated, as was before obſerv'd, by Geſticulation of the Hands, bringing the Hands to the Mouth, fruitleſs hunting of Flies, picking of Motes, pulling Threads out of the Clothes, or Straws out of the Wall, as *Hippocrates* obſerved in the Wife of *Dealces*, who lay ſick in *Leium*. It is a moſt evident Sign of a Delirium, when modeſt Patients, eſpecially of the Female Sex, for no Reaſon, expoſe the Pudenda without any Senſe of Shame. *Hippocrates*, in *Prognoſt.* and *Galen*, in 2. *de Reſpirat. Cap.* 5. and on 3. *Epidem.* reckon a great and full Reſpiration, at Intervals, among the Marks of a Delirium; and, in *Coac. Præſag.* 282. we find a Palpitation of the Hypochondria, and the Patient's not knowing his familiar Acquaintance, to be Indications of the like Diſorder. In *Coac. Præſag.* 99. 233. the Author mentions, among theſe Signs, a Trembling of the Tongue, or tremulous Voice, frequent Spitting, Emiſſion of Urine, without remembering it, and very high-colour'd Urine, with an Enæorema. Whoever is verſed in the Writings of *Hippocrates* and *Galen*, muſt obſerve alſo, that a Shrilneſs of the Voice, Roughneſs and Dryneſs of the Tongue, æruginous Vomitings, with a Deafneſs, Ringing in the Ears in acute Fevers, throbbing Pains about the Navel, unuſual Pain of the Sides, profound Pain of the Hips, Urine with an elevated Enæorema, white aqueous Urine, with a round and elevated Enæorema, and a Pain of the Head in Patients who are reſtleſs, and afflicted with want of Sleep, indicate a Loſs of Reaſon. The Author of the *Prorrhet.* 1. 17. adds, "A Shrilneſs "the Voice, after much Loathing and Vomiting, with a dry "Concretion in the Eyes, indicate Madneſs; as it happen'd to "the Wife of *Hermozygus*, who, being ſeized with an acute "and violent Delirium, died ſpeechleſs." And, immediately after, theſe Words occur: "If, in burning Fevers, the Pa- "tients are ſeized with a Ringing of the Ears, a Dimneſs of "Sight, and a Defluxion from the Noſe, they become deliri- "ous." *Galen*, in his fifth Book *de Locis affectis*, tells us, that, to phrenitic Patients, a Delirium does not happen inſtantaneouſly, but gradually; that it does not ceaſe ſuddenly; and that it is preceded ſometimes by Watchings, and ſometimes by turbulent Sleeps, attended with ſtrong Impreſſions of the Fancy in Dreams, during which ſome Patients cry out and ſtart. Sometimes this Diſorder is accompanied with a Forgetfulneſs ſo ſurpriſing and unaccountable, that the Patients, after they have taken up the Chamber-pot with a View to make Water, forget to do ſo. Some, on the other hand, who are naturally courteous and affable, make Anſwers to the Perſons who addreſs them, with a preternatural Kind of Diſorder and Raſhneſs. Another Circumſtance, obſervable in Patients of this Kind, is, that they drink very ſparingly. They have alſo a large, but ſlow Reſpiration. Sometimes the poſterior Part of their Head is in Pain, and their Pulſe is ſmall and hard; but, when they approach nearer to a *Phrenitis*, their Eyes become highly ſqualid, and an acrid Tear ſtands in one of them. Lippitude enſues, and the Veins of the Eyes are obſerved full of Blood. Drops of Blood are alſo diſcharged from the Noſe; at which time they are incapable of making rational and coherent Anſwers, pull the Knap off the Clothes, and pick at Straws: The Fever becomes more intenſe, more equal, more uniform, and leſs ſubject to Changes: The Tongue becomes rough, and the Patients ſometimes become deaf, and ſometimes melancholy: They can ſcarce make Anſwer to any Queſtion propos'd, and are inſenſible of Pain. Theſe Signs are ſufficient for diſcovering when any Patient labours under a Delirium.

Many Circumſtances prognoſticate, that Patients will become delirious; ſuch as Watching, for Inſtance, which often precedes a Delirium, as *Hippocrates* obſerves in his Book of *Prognoſtics*; and *Galen*, in his fourth Book *de Præſag. ex Pulſibus*, informs us, that both Watchings and a Delirium are the Reſults of an over-heated and over-dry'd Brain. Sleeps which are tumultuous and diſturb'd, as alſo thoſe unſound Slumbers, during which the Patient is, as it were, half awake, or cries out, and ſtarts up, are the Forerunners of a future Delirium. Thus, in the *Coac. Prænot.* 83. we are told, "That "turbulent and ſudden Startings out of Sleep bring on a Deli- "rium." The Author of the *Prorrhetics*, *Lib.* 1. 18. obſerves, that a Noiſe and Ringing of the Ears, as alſo Deafneſs, eſpecially when attended with Urine, near the Surface of which Clouds are ſuſpended, often precede Madneſs. *Galen*, in his fifth Book *de Locis affectis*, obſerves, that Forgetfulneſs often precedes a *Phrenitis*. An intenſe and uninterrupted Pain of the Head, in acute Fevers, alſo portends a Delirium, eſpecially the Pain ſometimes obſerved in the Ears, according to *Hippocrates*, in his Book of *Prognoſtics*. It alſo prognoſticates a *Phrenitis*, when this Pain of the Head is accompanied with a Retraction of the Præcordia. Thus, in the *Coac. Prænot.* 119. we are told, "That, in acute Diſeaſes, a Pain "of the Head, accompanied with a Retraction of the Præ- "cordia, if an Hæmorrhage does not happen, terminates in a "*Phrenitis*." Watchings alſo, accompany'd with a Noiſe, and Ringing of the Ears, or with Deafneſs, prognoſticate the ſame, unleſs an Hæmorrhage happens. In the firſt Book of the *Prorrhetics*, 38. the following Symptoms, appearing together, are ſaid to prognoſticate a Delirium: "Thoſe Patients, "afflicted with a Looſeneſs, a Pain of the Head, Thirſt, "Watchings, Dimneſs of Sight, and Weakneſs, will, in all "Probability, become delirious." The Author of the ſeventh Book of the *Epidemics* affirms, that a continued Pain of the Head prognoſticates a Delirium; of which alſo a Pain of the Hypochondria is frequently the Forerunner; which Circumſtance is there remarked in a Woman three Months gone with Child. A Palpitation of the Heart, and long-continued Pains about the Navel, in acute Diſeaſes, prognoſticate the ſame Diſorder, as we are informed in the third Book of the *Epidemics*. From ſeveral Paſſages of the firſt Book of the *Prorrhetics*, we learn, "That this Diſorder is prognoſticated "by a Pain in the ignoble Parts." And, in the ſame Book, we are informed, that repeated, but not continued, Pains of the Sides portend a Delirium. And, in the ſecond Book, theſe Words occur: "If any Matter in the Urine riſes to the "Surface, if, at the ſame time, there is a latent Pain of the "Hip, it prognoſticates a Delirium, as does alſo a Ringing of "the Ears;" which *Hippocrates*, in *Epidem. Lib.* 3. tells us happen'd to a bald Man at *Lariſſa*, who, having a ſudden Pain in his Right Thigh, was forthwith ſeized with a *Delirium*. In the firſt Book of the *Prorrhetics*, 97. we are told, that, in pleuritic Patients, a Pain of the Side, vaniſhing, without ſufficient Reaſon, prognoſticates a Delirium. In the firſt Book of the *Prorrhetics*, 6. we are informed, that round Spits, and frequent Spitting without a Cauſe, indicate the ſame. *Hippocrates* alſo, in the fourth *Aphor.* of *Sect.* 5. aſſerts, that Blood, collected in the Breaſts of Women, prognoſticates Madneſs. *Galen* tells us, that Urine which is pellucid and white is bad, and generally portends a *Delirium*; as does alſo turbid Urine in acute Diſeaſes, but more eſpecially Urine with Clouds near its Surface, in Patients afflicted with turbulent Sleeps and Watchings. A Pulſation alſo under the Arm-pits, and in the Hypochondria, as alſo a

large, but ſlow, Reſpiration, denote the ſame, as we learn from the Book of *Prognoſtics*. And, in the *Prorrhetics*, *Lib.* 1. 11. the following Words occur: "In acute Diſeaſes, when the "Fauces are ſeized with Pain, become narrow, and perceive "a Senſe of Suffocation; and when the Patient, upon opening "his Mouth, cannot eaſily ſhut it again; theſe Signs portend "a Delirium, which proves fatal." Æruginous Vomitings alſo, accompanied with continual Head-achs, Watchings, and Deafneſs, are infallible Signs of an approaching *Delirium*; ſince any one of them by itſelf, much more all, or ſome of them, appearing together in an acute Fever, are Signs of this Diſorder.

Having thus enumerated the Signs of an approaching *Delirium*, we ſhall now conſider the ſeveral Species and Differences of *Deliriums*, together with the reſpective Cauſes which produce them, ſince, without a perfect Knowledge of theſe, we cannot with Judgment prognoſticate the Fate of delirious Patients. By a diſorder'd Mind, then, we mean all the ſeveral Degrees of Aberration, Inconſtancy, Hallucination, Madneſs, Privation of Judgment, Delirium, and Phrenitis; and Patients labouring under any of theſe, we call diſorder'd in Mind. In theſe Diſorders, the Powers of Reaſon and Imagination are principally affected; for, according to *Galen*, in his Book *de different. Symptom. Cap.* 3. the Imagination is either defective and ſlow in its Operations, as in a Coma and Lethargy; or it is totally deſtroy'd, as in that Species of Catalepſis call'd *Caros*; or, laſtly, it is vitiated, and its Functions are deprav'd and unſteady, as in a *Delirium* and *Phrenitis*. Juſt ſo with reſpect to Reaſon, it is either defective, diminiſh'd, or, in ſome meaſure, deſtroy'd; this is by the *Greeks* call'd *Moroſis*, and imports nearly the ſame with our *Engliſh* Word *Fooliſhneſs*; or Reaſon is entirely deſtroy'd, which is call'd *Madneſs*; or, laſtly, it is vitiated, and its Operations corrupted, which is call'd a *Delirium*. In Conjunction with the Reaſon and Imagination, it alſo frequently happens, that the Memory is affected in the ſame different Degrees and Manners. In ſome Patients, whoſe Minds are diſorder'd, the Imagination alone is affected, whilſt the other mental Powers remain entire and untouch'd, as *Galen*, in his Book *de Symptom. different. Cap.* 3. obſerved in *Theophilus*. Sometimes, on the contrary, Reaſon alone is affected, whilſt both Imagination and Memory remain ſound, and in a due State; which, as *Galen*, in the laſt-quoted Book, informs us, happened to a phrenitic Patient. But, for the moſt part, both the Powers of Reaſon and Imagination are equally vitiated, as is obſervable in thoſe delirious Patients, who either imagine ſuch things as have no real Exiſtence in Nature; or, on the contrary, imagine, that things actually exiſting do not exiſt; in conſequence of which, both their Actions and Words are entirely inconſiſtent with Reaſon, and the natural Workings of a ſound and well-regulated Fancy. All this formidable Train of Diſorders are either divided into what we call Madneſs, Ecſtaſy, Folly, Aberration, Inconſtancy, and Alienation of Mind; or into what the *Greeks* call *Paraphreneſis*, and the *Latins Delirium*; or, laſtly, into a *Phrenitis*, which *Galen*, in Imitation of *Hippocrates*, diſtinguiſhes from all theſe other Diſorders by this Circumſtance, that it is the Concomitant of a Fever. When any of the above-mention'd Diſorders happens with a Fever, it is call'd *Phrenitis*; and, without a Fever, *Mania*, or Madneſs, which is diſtinguiſhed from a Delirium by the Perpetuity or Duration of the Diſorder; for tho' a Delirium, or Paraphreneſis, happens with a Fever, yet it is not continual, as a Phrenitis is. *Galen* affirms, that, in ſeveral Paſſages, *Hippocrates* calls thoſe Patients *phrenitic*, who are perpetually delirious; whereas he calls a Paraphreneſis that Species of *Delirium*, which only appears in the Height of the moſt acute Fevers, and gradually goes off as they decline. For this Reaſon phrenitic are diſtinguiſh'd from delirious Patients, by the Continuation of the Delirium, and its appearing gradually; except in thoſe Patients who become delirious in conſequence of an Inflammation of the Diaphragm; for Deliriums of this Kind are not eaſily diſtinguiſhed from a Phrenitis, becauſe they both happen with a Fever, and laſt as long as it; from which Circumſtance the Antients imagin'd, that Perſons became phrenitic in conſequence of an Inflammation of the Diaphragm; and, for that Reaſon, call'd this Part *Phrenes*, φρένας, as tho' it were aſſiſtant τῷ φρονοῦντι, "to the "intelligent Part." *Galen*, however, makes a Diſtinction between this kind of delirious Perſons, and thoſe who are in a Phrenſy; for theſe latter have a great and full Reſpiration, and at long Intervals; whereas in thoſe who are under a *Delirium*, occaſioned by the Diaphragm, Reſpiration is obſerved to be unequal, ſo as to be ſometimes ſmall and frequent, at other times to be great and ſtraiten'd; which does not happen in a Phrenſy, unleſs ſome Organ, ſubſervient to Reſpiration, be affected with a Pain or Inflammation, as *Galen*, in his ſecond Book of Reſpiration, has ſhewn with great Accuracy. Beſides, in a Delirium proceeding from the Diaphragm, there is an immediate Tenſion of the Hypochondria, which happens later in the Phrenſy; and this Tenſion of thoſe Parts, in the Beginning, is a Symptom peculiar to that ſort of Delirium: And, in ſhort, among all the Symptoms attending a Phrenſy, ſuch as red and inflamed Eyes, with a Face all over burning with Heat, and other Marks more fully deſcribed before, there are either none, or but few and inconſiderable, to be obſerved in that Diſorder, proceeding from an Affection of the Diaphragm, which, beſides, ſeizes the Patient, as it were, on a ſudden, whereas the Phrenſy comes on by degrees.

There are many other different Kinds of Phrenſy; for there is one which is call'd the μανιώδης, "the *maniac*," in which the Patients kick, ſpurn, and bite, are in a furious Paſſion, and take all who come near them for Enemies; but, when they begin to be raging, fierce, and very miſchievous, the Diſorder is ſaid to be vehement; and, in that State, is call'd by the *Greeks* θηριώδης, (from θὴρ, a wild Beaſt) and, by the *Latins*, *Ferina*. Of this Degree of Phrenſy the Author of the firſt of the *Prorrhetics*, 26. and 123. ſpeaks, when he ſays, "A Delirium "which ſoon increaſes, and is exaſperated into a Fierceneſs, is "of the *ferine* Kind." There is alſo a mild and obſcure ſort of Delirium, under which the Patients can hardly be known to have their Reaſon affected. Theſe, in *Coac. Prænot.* 65. are call'd ſilently delirious; and theſe low Kinds of mental Diſorders are deſcribed in the 1. *Prorrhetics*, 34. as "tremulous, obſcure, at"tended with Gropings of the Hands, but very phrenitical *Deli*"*riums*;" the *Greeks* call them ἀδαῆς, (obſcure) and the *Latins obſcuras*, which often eſcape the Notice not only of the Unſkilful, but of Phyſicians themſelves. The Patients, in ſuch Caſes, ſays *Galen*, in 1. *Prorrhet.* 33. are ſo far from making Exclamations, or endeavouring to leap out of Bed, that they lie very quiet, without Speech, or altering their Poſture of Decubiture, but give Hopes to the Attendants of ſleeping, if Silence were kept, for a little time. The Attendants, therefore, ſhutting the Windows, keep themſelves quiet, ſometimes for a long time together, imagining the Patient to be aſleep, becauſe he neither ſpeaks nor moves; whereas he continues all the time waking, and gently moving his Hands, as if he were groping or ſearching about for ſomething. Some, while they do this, have their Eyelids ſhut; and, if they are interrogated about any thing, open not their Eyes: Others, after they have opened them, ſoon ſhut them again, or hold them fixed in ſuch a manner as *Galen* calls a *hectic Affection*. But this Delirium, by its Characters, agrees with what proceeds from a Coma, or Lethargy. We ought, therefore, carefully to obſerve the Alterations and Diſtinctions which occur in theſe Caſes. A Delirium attending a Coma or Lethargy, and called by ſome *Greeks*, as *Galen* ſays, *Typhomania*, happens in the Beginning of the Diſtemper, and continues a long time; but the *aſaphes*, or obſcure, Delirium, or, as *Galen* calls it, *hectic*, never happens in the Beginning, but in the Progreſs, of the Diſeaſe, after ſome vehement Madneſs. However, a lethargic or comatous Delirium may often be excited by a cold Humour, or even by a Redundance of Blood, after the Beginning of the Diſeaſe; and is ſometimes antecedent and preparatory to a good or bad Criſis, being attended with a low, hard, ſtraiten'd, and ſmall Pulſe, which Kind is not obſerv'd in the Delirium before-mention'd. But now let us treat of the Cauſes of a *Delirium*.

All *Deliria*, according to *Galen*, *Lib.* 2. *de Sympt. Cauſ.* proceed from hot and acrimonious Juices, but principally from yellow Bile, and frequently from a hot Diſtemperature of the Brain. As all Kinds of *Deliria*, *Madneſs*, and *Phrenſy*, ariſe from ſome Diſorder of the Brain, ſo particularly two Sorts of *Deliria*, I mean thoſe which are excited in the very Height of acute Fevers, and thoſe occaſioned by hot and acrimonious Vapours aſcending to the Brain. There are other *Deliria*, which, if without a Fever, the Phyſicians call *Mania*, or Madneſs; if attended with a Fever, *Galen* calls them *Phrenſies*; though they are not true Phrenſies, unleſs there be a Phlegmon in the Brain, or its Membranes. *Galen*, *de Cauſ. Sympt. Lib.* 2. *Cap.* 7. But this is a Caſe which rarely happens, and not ſo frequently as that phrenitic *Delirium*, which is excited by a Conflux of hot Humours to the Brain, or its Membranes, according to the Obſervation of *Hippocrates*, 2. *Epid.* And thoſe *Deliria* may as well ariſe from Blood as Bile, in that Part of the Brain, which is the principal Seat of the animal Faculties, according to *Galen*, *Lib.* 2. *de Sympt. Cauſ. Cap. ult.* or they may proceed only from yellow Bile, which, torrefy'd by the Heat of a burning Fever, is converted into *black*, and excites that vehement *Delirium*, which the *Greeks* call *Maniodea*, *Thericdea*, and are raging, furious, and wild, proceeding from an immoderate Dryneſs of the Brain and its Membranes, thro' aduſt Bile, by which the Patients are often thrown into Tremblings and Convulſions, which Symptoms, as *Galen* informs us, attend none but the moſt violent and pernicious Phrenſies. Thoſe *Deliriums* attending a Fever, which are call'd *phrenitic*, ariſe not only from hot Humours, but, as *Galen*, in *Lib.* 3. *Epid.* ſuppoſes, from Cold; as, for Inſtance, from pituitous Humours putrifying in the Brain, by which they contract a Heat and Acrimony very injurious to the Brain, and its Membranes, and productive of a *Delirium*. But theſe Kinds of *Deliria* are diſtinguiſhed from thoſe which are excited by hot Humours, by a Drowſineſs or Sopor; for thoſe who are delirious from a cold Humour ſleep at the

ſame time, or have ſome lethargic Affection; whereas, on the contrary, a *Delirium*, from hot Humours, ſubjects to want of Sleep. It often happens alſo, that a Mixture of hot and cold Humours produces a kind of *Delirium*, compoſed of a Phrenſy and a Lethargy, as *Galen*, in 1. *Prorrhet.* obſerves. And theſe two contrary Effects accompany the Diſorder thro' its whole Courſe; for the Patient is ſometimes afflicted with want of Sleep, at other times is oppreſſed with a Drowſineſs, and is more or leſs phrenitic or lethargic, according to the Degree of mutual Predominance of the Bile and Phlegm over one another. Theſe, then, are all the Cauſes of phrenitic *Deliria*; whence alſo a true Phrenſy, which is excited by an Inflammation of the Brain and its Membranes, has its Original, and is mildeſt when from pale Bile, more violent from yellow Bile, and moſt violent when proceeding from the ſame Humour, rendered aduſt by a febrile Heat. That obſcure *Delirium*, called by the *Greeks* ἀσάφεια, (Aſaphia) which is attended by Silence, is owing to an extraordinary Languiſhment of the animal Faculty, and, as *Galen*, *in Prorrheticis*, calls it, a hectic Sort of Temperature; and is known principally by a very low, ſmall, and hard Pulſe.

This is *Galen*'s Way of explaining the Cauſes of a *Delirium*; but, for a more rational Account, ſee FEBRIS.

Of ſalutary PROGNOSTICS *from* DELIRIOUSNESS.

A *Delirium* is leaſt to be dreaded when it holds the Patient but a ſhort time, and is attended with good, or, at leaſt, not fatal Signs. The Strength alſo ought to bear ſome Proportion, that is, to have a good Degree of Firmneſs, ſince a *Delirium* requires an extraordinary Meaſure of Strength, and can hardly be ſubdu'd by Nature without it. No *Delirium*, as *Galen*, in 6. *Aph.* 53. teaches, is without Danger: "The moſt favour-"able is what is attended with Laughter; the moſt dangerous "is the raſh and fool-hardy; of a middle Nature between both "is that which is accompany'd with Meditation." But no *Delirium*, tho' it be one of the greateſt of Evils, is, in itſelf, a certain Prognoſtic of Death, no more than Soundneſs of Mind is a ſure Sign of Recovery. However, a *Delirium*, attended with good Signs, is the leſs to be feared, and eſpecially if it be not continual, nor violent and outrageous, but rather ſlight and inconſiderable, as when the Patient's Reaſon fails him but in few Particulars; for *Galen*, *Lib. de Diff. Sympt. Cap.* 4. calls it a great *Delirium*, when various Species of *Deliria* are obſerved together in the ſame Patient. A ſmall and ſlight *Delirium*, which diſcovers itſelf only in a few Actions, is leaſt of all to be dreaded, and eſpecially if it comes only by Fits. But, in order to denominate a *Delirium* of the mild and favourable Kind, it is not enough, that it be not continual, but it ought to be void of all Ferocity, ſince the Author of *Prorrhet.* 1. ſays, "That *Deliria* which increaſe in a ſhort time to a Degree of "Ferocity, end in exceſſive Raving." Of the Patients in ſuch Caſes *Galen* thus pronounces: "When you ſee a Perſon deli-"rious to a Degree of Ferocity, tho' ſoon after he appears "calm and compoſed, know for certain, that his Reaſon is "not injured on account of the Fever, but that there is ſome "growing latent phrenitic Affection, which will at length "break out into apparent Phrenſy." We may conclude, then, that an intermittent *Delirium*, which is not vehement, but ſlight, gentle, and inconſiderable, and eſpecially when it affects a Perſon only by Fits, can by no means be accounted a fatal Prognoſtic. But Caution is here neceſſary, that we impoſe not on ourſelves, in taking a *Delirium* for ſlight and gentle; for many have been thought in a Delirium of this favourable Sort when very near their End; for, as we read, *Prorrhet.* 34. "*Deliria* which are tremulous, obſcure, and attended with Grop-"ings of the Hands, are phrenitic in a high Degree." But ſuch Caſes are eaſily diſtinguiſhed from the Lowneſs of the Strength, the continual Duration of the Diſorder, and other deſtructive Signs; for, in a mild *Delirium*, the Strength is very firm, the Diſorder not continual, and none of thoſe fatal Signs appear. Of this Nature was the Caſe of *Milidia*, in *Hippocrates*. But in the other *Delirium*, before deſcribed, the Pulſe is low, the Diſorder continual, and the Signs portend Deſtruction. All Signs, therefore, both thoſe which commence with the *Delirium*, and thoſe which appear afterwards, are very carefully to be obſerved; for they frequently precede a ſalutary Criſis, and take their Riſe, as *Galen* ſuppoſes, *Lib.* 1. *ad Glauc. Cap.* 15. from a critical Recurrence of the Blood and bilious Humour to the Head. Now a *Delirium*, which portends a Criſis, is ſometimes attended with a Pain of the Head, a Heavineſs, Deafneſs, and many other Symptoms of the like Kind; with reſpect to which, *Galen*, in 1. *Epid.* commenting on the Caſe of a Patient who lay ſick in the Garden of *Dealces*, ſays, "That a *Delirium* on the ninth Day, "with a Diſtortion of the Right Eye, are to be reckoned "among Symptoms uſually happening towards a Criſis." And, in the Caſe of the Virgin of *Abdera*, *Lib.* 3. *Epid. Stat. peſt. Ægr.* 7. a *Delirium*, with Deafneſs, preceded a Criſis, which was attended with Pains of the Feet, and an Hæmorrhage from the Noſe. And we have a much fuller Deſcription, to this Purpoſe, in the Caſe of the moroſe Woman of *Thaſus*, *ibid. Ægr.* 11. "The third Day, it is ſaid, the Convulſions "ceaſed, and were ſucceeded by a Coma and Drowſineſs, "from which ſhe awaked, grew reſtleſs, and highly delirious, "and had an acute Fever; the ſame Night a copious and hot "Sweat broke out over all her Body; the Fever left her; ſhe ſlept, "and had the free Uſe of her Reaſon." A *Delirium* alſo, obſerv'd on the ſixth Day, in the Virgin of *Lariſſa*, *ibid. Ægr.* 12. was the Sign of an approaching Hæmorrhage; which was alſo the Caſe of *Heropythus* of *Abdera*, *ibid. Ægr.* 9. A *Delirium*, therefore, attended with Pain and Heavineſs of the Head, want of Sleep, a Coma, Deafneſs, Dimneſs of Sight, a Splendor of the Eyes, involuntary Tears, Ringing in the Ears, Loſs of Underſtanding or Memory, Trembling, Anxiety, Reſtleſſneſs, Crying out, Starting up, Difficulty of Breathing, Suppreſſion of Urine, vehement Rigor, much Æſtuation, and intolerable Thirſt, or any of theſe ſurpriſing the Patient on a ſudden, is often the Forerunner of a Criſis, or an Hæmorrhage. As to an Hæmorrhage, the Author of *Coac. Prænot.* 184. ſays, "That, in "Diſeaſes where an Anxiety is ſuddenly ſucceeded by a *Deli-*"*rium*, it portends a Flux of Blood, or of Urine." Of this laſt *Hippocrates*, 6. *Epid. Sect.* 6. *Text.* 22. pronounces, "That Urine, with a copious Sediment, gives a Solution to a "*Delirium*, as in the Caſe of *Dexippus*." The ſame is effected by Sweat, according to *Galen*, *Lib.* 3. *de Criſibus*: "A "Phrenſy has its critical Solution, by a copious Eruption of "Sweat; and eſpecially if it flow plentifully, and hot, from "the Head, the reſt of the Body being, at the ſame time, in "a Sweat." And, a little after, he ſays, "Sometimes it "happens, that a Phrenſy is critically terminated by an Hæ-"morrhage from the Noſe." In *Coac. Præſag.* 483. we are told, that a *Delirium* terminates in Sweat and Sleep; and *Hippocrates*, *Sect.* 7. *Aph.* 5. has ſaid, "That, in the Caſe of "Madneſs, the Acceſs of a Dyſentery, Anaſarca, or violent "Commotion of Mind, is a good Sign." A *Delirium* then, as it is ſucceeded by ſome beneficial Evacuation, is a Prognoſtic of Health, and a kind of critical Sign; but it will prove of very bad Conſequence when preceding an Evacuation of a pernicious Kind, ſuch as Dropping of Blood from the Noſe, cold Sweats of the Head, and the like. Our Inquiry, therefore, muſt be, whether the Evacuations be good or bad; which may, no doubt, be known by a Multitude of Signs, particularly from their Quantity, Quality, Place by which they are diſcharged, the Time of the Diſeaſe, or Days in which they appear, and by the Alleviation of the Diſeaſe. They are obſerved to be beneficial, if ſufficiently copious in proportion to the Quantity of peccant Humours; if they are of the Quality of thoſe which require to be evacuated; are diſcharged by a convenient Paſſage, and in a proper Seaſon, that is, in the Height of the Diſeaſe, or on ſome critical Day; and are ſucceeded by an Alleviation of the Diſeaſe, and its Symptoms, or a total Delivery of the Patient from them. But there are three things of great Moment, which are principally to be regarded in all Predictions; and theſe are, the Pulſe, Reſpiration, and the Appetite to Food; which, if they continue firm and orderly, tho' joined with ſome pernicious Sign, afford a very good Foundation for predicting the Patient's Recovery. This appears to be the Opinion of *Galen*, who, in his third Comment on the third of the *Epidemics*, *Text.* 89. treating of the Caſe of *Heropythus*, ſays, "That a *Delirium*, attended with a ſtrong Pulſe, and a due "and orderly Reſpiration and Appetite, are undoubted Signs of "Strength of Nature ſufficient to ſupport the Patient during "the Courſe of the Diſtemper."

From the Premiſſes it appears what Judgment we are to paſs upon the Diſeaſe from Signs accompanying a *Delirium*: We are now to inquire what is to be prognoſticated from thoſe Symptoms, which are conſequent to a *Delirium*, and ſhew, in ſome meaſure, the Nature and Quality of it. Thoſe Evacuations, then, before-mention'd, are ſalutary; as copious Hæmorrhages from the Noſe, of which *Galen* treats, *Lib.* 3. *de Criſibus*, *Cap.* 8. Alſo menſtrual Purgations, attending and conſequent upon a *Delirium*; ſuch as were obſerv'd by *Hippocrates*, in the Virgin of *Lariſſa*, *Lib.* 3. *Epid. Stat. peſt. Ægr.* 12. and in the moroſe Woman, *ibid. Ægr.* 11. and were attended with a plentiful Sweat, in conſequence of which the Woman was freed from her Fever, ſlept, and recover'd the entire Uſe of her Reaſon. Hæmorrhoids alſo, conſequent upon a *Delirium*, prognoſticate Recovery, according to *Hippocrates*, *Sect.* 6. *Aph.* 21. where he ſays, "That if thoſe who are mad "come to be affected with the Varices or Hæmorrhoids, they "are freed from their Madneſs." Violent Pains in the Hips, Legs, Feet, and Hands, are of the ſame Signification, as ſhewing they are excited by an Expulſion of the Humours from the principal to the more ignoble Parts; which is a Criſis that Nature attempts by a Tranſlation of the Humours. To this Purpoſe *Hippocrates*, *Lib.* 1. *Epid. Sect.* 3. *Ægr.* 3. in his Deſcription of the Caſe of *Herophon*, ſays, "The eighth "Day he was feveriſh, his Spleen ſubſided, he underſtood "every thing, a Pain came firſt into his Groin on the ſame "Side with the Spleen, from whence it ſhifted into both "Legs." The ſame Pains, in the Wife of *Epicrates*, *ibid.*

Ægr. 5. were not the leaſt Part of the Criſis. The Patient alſo, who lay ill in the Garden of *Dealces*, *Lib.* 3. *Epid. Sect.* 1. *Ægr.* 3. on the fourteenth Day was quite delirious, on the fifteenth was ſeized with a Pain in his Knee and Legs, on the ſeventeenth had an Eruption of Sweat all over his Body, and was reſtored to his Reaſon: Thus alſo, in the Virgin of *Abdera*, *Lib.* 3. *Epid. Stat. peſt. Ægr.* 7. Pains in the Feet, on the twentieth Day, put an End to her *Delirium* and Deafneſs. Sleep, to a ſick Perſon under a *Delirium*, is always of great Moment, and eſpecially if it ſubſides, or, at leaſt, diminiſhes it, according to the ſecond *Aphor.* of *Sect.* 2. which ſays, "That if Sleep puts an End to a *Delirium*, it is a good "Sign." And there is good Reaſon for it, ſince a *Delirium* is always attended with want of Sleep, and both proceed from the ſame Cauſe: If, therefore, Sleep happens upon a *Delirium*, it is a Sign, that the Cauſe is removed. But then this Sleep is to be diſtinguiſhed from a violent or preternatural Propenſity to Sleep, as a Coma, Cataphora, or Lethargy; for, as Sleep is a good Sign, ſo any of the aforeſaid ſoporiferous Affections is a bad one, except that comatous Affection which is excited by the Influx of the Blood into the Brain, in order to a future Criſis. Sleep, therefore, is always good after a *Delirium*, and eſpecially if it be with Quietneſs, as *Hippocrates* obſerves in *Herophon*, the Wife of *Epicrates*, and in *Meton*, *Lib.* 1. *Epid. Sect.* 3. *Ægr.* 7. whoſe *Delirium* was reſolved by Sleep. For a *Delirium*, therefore, to be compoſed by Sleep, is always good, as the contrary is bad; for, according to *Aph.* 21. *Sect.* 2. Sleep, oppreſſing inſtead of relieving the Patient, portends Death. Diſtinct Dreams, ἐνύπνια ἐναργῆ, are alſo a good Prognoſtic in a *Delirium*, and eſpecially in a Phrenſy, as we read in *Coac. Præſag.* 90. which, tho' it ſeems to be contrary to 1. *Prorrhet.* 5. where it is ſaid, that ſuch Dreams ſhew a Phrenſy, is yet very true; as will appear from the following Diſtinction, which will prevent all Miſtakes in the Matter. Conſpicuous Dreams, then, which are not turbulent, but quiet and ſerene, are, in *Coac.* of good Signification, becauſe they can never be ſuppoſed, or are obſerved, to be clear and diſtinct, unleſs the Inflammation in the Brain, the febrile Heat, and the Motion excited in the Humours by the Vapours, are allay'd and appeas'd; which Effects are always reckon'd a good Prognoſtic; whereas conſpicuous, but turbulent Dreams, by which the Patient is affrighted, and ſtarts out of his Sleep, are not only owing to a Dryneſs, but indicate an Inflammation, a febrile Heat, and diſorderly Motion of the Spirits; which give Reaſon to fear, that the *Delirium* will increaſe to the Degree of a Phrenſy. But if the Queſtion, in ſhort, be, Whether a Mitigation, or a total Compoſure, of a *Delirium* be always a good Sign, we anſwer, that a *Delirium* mitigated, or totally compos'd, or reſolv'd by Sleep, a Tranſlation of the Humours to the Legs, Feet, or other ignoble Parts, or ſome critical Evacuation, gives always good Grounds for us to predict, with Confidence, the Patient's Recovery.

Of a Delirium *prognoſticating Death.*

A *Delirium*, which threatens Death, is known by its diſtinguiſhing Marks, the Time in which it appears, the extraordinary Weakneſs of the Patient, and other mortal Symptoms, which accompany or ſucceed it. Phrenitic *Deliria* are, for the moſt part, mortal, tho' all phrenitic Perſons do not die. We call all thoſe *Phrenſies*, which the *Greeks* call μανιώδεις, θρενώδεις, and ἀσαφώδεις, "Maniac, raging in the manner of wild Beaſts, "and obſcure or mopiſh;" and the *Latins*, *feroces*, *tumultuoſas*, *furioſas*, *ferinas*, *melancholicas*, *atque obſcuras ſeu blandas*; the five firſt of which expreſs the two former *Greek* Words, and the two laſt the latter. The *Aſaphodes*, *Aſaphes*, or *Obſcure*, are obſerved in the Beginning of the Diſeaſe, or after a Mania; and, proceeding, as we obſerved before, from Blood, or Bile, or a Mixture of Bile and Phlegm, or from putrid Phlegm, are reckon'd not ſo fatal; whereas a Delirium from Weakneſs, or a hectic Diſtemperature of the Brain, is the moſt mortal of all: Whence the Author of the *Prorrhet.* calls thoſe Deliria highly phrenitic, tho' before he had named them mild, obſcure, and attended with groping, or fumbling with the Hand. A diſtinguiſhing Property of theſe latter is *Silence*; of which, in *Coac. Præſag.* 65. it is ſaid, "That "a high Delirium, attended with Silence, but not a Depriva-"tion of Voice, is mortal." In phrenitic Deliria we may obſerve three Kinds of Silence; one in which the Patient ſpeaks not at all, or but very little, tho' he is capable of ſpeaking; the ſecond is attended with a lethargic Affection, or an Extinction of the natural Heat; and the laſt with an Aphony, or Privation of Voice, thro' an Oppreſſion, or almoſt Extinction, of the Animal Faculty, a Convulſion of the Organs of Speech, or an Interception of the Air which forms the Voice. A Delirium, attended with Silence, the Faculty of Speech remaining entire, a Fumbling with the Hands, a low Pulſe, with the Eyes ſometimes cloſed, as in Sleep, and ſometimes half open, proceeds from the Weakneſs of the Faculty. Of theſe kinds of Delirium, beſides what was quoted before from the *Prorrhetica*, we find it thus pronounced, *Coac. Præſag.* 76. "A Delirium, attended with Trembling and Groping, or "Fumbling with the Hands, ſhews a Phrenſy." And in the ſame Treatiſe, *Text.* 486. "A Delirium, attended with Silence, "Reſtleſſneſs, Rolling of the Eyes, and vehement Expira-"tion, is of bad Preſage." Of this ſort *Galen*, on the *Prorrhetica*, ſpeaks, where he ſays, "This Affection of the Hu-"mours is of a very depraved Kind, like that of hectic Fevers, "which, when they begin to be form'd, can hardly be cured; "but, after they are completely conſtituted, are incapable of a "Solution." And theſe comatous Affections are the more formidable, when conſequent upon a very ſevere and hot Diſtemper: Thus, if a Patient falls into a Lethargy, from a Refrigeration of the Brain, after an Inflammation, the Event is moſt fatal; for, as we are told by *Galen*, in his 3. *Comment.* on the *Prorrhetica*, a cold, ſucceeding a hot Diſtemper, is reckon'd incurable. In a violent Delirium, or Mania, the Patient, both on account of the Malignity of the Humour, and the immoderate Dryneſs, becomes not only ſilent, but affected with an Aphony, or Deprivation of Voice; as it happen'd to the Wife of *Hermozygus*, who died highly delirious and mute, as we are inform'd 1. *Prorrhet.* 17. The ſame Event, from the like Prognoſtics, befel the Man under a Phrenſy, *Lib.* 3. *Epid. Ægr.* 4. and the Wife of *Dealces*, *ibid. Ægr.* 15. And *Galen*, *Com.* 2. *in Prorrhet.* tells us, "That, under a Fever, a con-"vulſive Aphony, ending in a Delirium, attended with Silence, "is pernicious." Some Symptoms are ſuppoſed to be proper to the moſt violent Deliria; ſuch as Tremblings, Convulſions, Droppings of Blood from the Noſes, bright aqueous Urine, Geſticulations of the Hands, and the like. Tremblings and Convulſions attend not all phrenitic Deliria, but only the moſt violent; as, for Example, the ferine or raving, as *Galen*, 1. *Com. in Prorrhet. Text.* 9. remarks; and are the uſual Conſequence of fatal Emotions. Perſons in a Phrenſy are ſeiz'd firſt with a Trembling, and then die in Convulſions. The Author of 1. *Prorrhet.* 9. ſays, "That violent Phrenſies end in Trem-"blings:" And a Trembling, as *Galen* ſays, ſucceeds only the moſt violent Phrenſies; for phrenitic Perſons are a long time afflicted with Infirmities of the Nerves, from the Dryneſs of the Diſeaſe. Now the Strength and Spirits being exhauſted with Want of Sleep, and Variety of Motions, and the Nerves at the ſame time immoderately dried, the Patient is ſeiz'd with a Trembling, which indicates a vehement Dryneſs of the Nerves, from a Conflux of aduſt Bile to the Brain. This is obſerved by the Author of 1. *Prorrhet.* 14. where he ſays, "That if thoſe "who are highly delirious, are ſeiz'd with Tremblings, "it is bad." And, a little after, *Text.* 16. he tells us, "That phrenitic Perſons, drinking little, and affected with "the leaſt Noiſe, are ſubject to a Trembling." And, *Text.* 19. he obſerves, "That a Delirium, attended with "a Shrilneſs of the Voice, and convulſive Tremblings of "the Tongue, portends a high Phrenſy: In this Caſe a Hard-"neſs and Aſperity are pernicious." And *Galen*, on *Text.* 20. remarks, "That the Trembling of the Tongue, in ſuch "Patients, indicates a Weakneſs of the Faculty, and a phre-"nitical Diſorder of Mind:" Hence, in his Comments on the *Prorrhetica*, he calls them tremulous Phrenſies, which proceed from the Faculty being almoſt extinct, and are obſerved to be attended with Silence; for three Symptoms are the uſual Attendants of an increaſing Phrenſy; an ecſtatical Silence, a Trembling under a very high Phrenſy, and Convulſions at the Approach of Death. Mortal Tremblings ſucceed burning Fevers, or vehement Madneſs, from aduſt Bile, which we juſt now call'd *Ferinam & Melancholicam:* But Tremblings preceding or attending Deliria, tho' there are none of them good, excepting ſuch as are critical, do not always portend Death; but are oftentimes, as well as Convulſions, removed by a ſupervening Fever. Tremblings, therefore, are only obſerved to be mortal, when coming upon a Delirium or Madneſs; and many, at the Beginning of a Diſtemper, are ſeiz'd with a Trembling, who do not die. Of this we have an Inſtance in *Pythio*, 3. *Epidem. Ægr.* 1. Nor are Tremblings fatal Prognoſtics in all Deliria, but only in violent ones, according to *Coac. Prænot.* 93. "In a violent Phrenſy, ſupervening "Tremblings are fatal;" and *Galen* juſtly obſerves, *Com.* 1. *in Prorrh.* that not all, but the moſt violent Phrenſies terminate in Tremblings. However, theſe Tremblings are not, like Convulſions, inſeparable from thoſe in a Phrenſy, ſince there are many phrenitic Perſons, who are never affected with them; but they are conſequent upon thoſe vehement and furious Phrenſies, in which the Strength is exhauſted by much Waking and Motion, and the Nerves beyond meaſure dried and harden'd: Wherefore this ſort of Trembling, as well as thoſe fierce and outrageous Phrenſies, which are the Cauſe of them, are ſeldom obſerved; whereas all phrenitic Patients are ſeiz'd with Convulſions before their Death, and all Convulſions, acceſſory to a Delirium, and excited by a Dryneſs of the nervous Parts, are mortal; ſo that we may ſafely affirm, that all mortal Phrenſies terminate in Convulſions; but that they are terminated in Tremblings, as it is aſſerted 1. *Prorrhet.* 9. *Galen*, in 1. *Epid. Ægr.* 4. cenſures as falſe. That they end in Convulſions and Death,

Death, is confirm'd by *Hippocrates* in many Inſtances, particularly the Wife of *Philinus*, 1. *Epid. Ægr.* 4. and the phrenetic Perſon, 3. *Epid. Stat. peſt. Ægr.* 4. of whom he ſays, "That the ſecond Day, in the Morning, he was ſpeechleſs, "had an acute Fever, and Sweats, without Intermiſſion; had "Palpitations over all his Body; and, at Night, Convulſions. "On the third Day all the Symptoms were exaſperated; and, "on the fourth Day, he died." And of the Woman in *Cyzicus*, *Epidem. L.* 3. *Ægr.* 14. he tells us, "That, on the "fourteenth Day, ſhe was much afflicted with Convulſions, "her extreme Parts were cold, ſhe was quite delirious, had a "Suppreſſion of Urine, and died." *Galen* alſo, *Meth. Med. Lib.* 12. *Cap.* 8. ſpeaking of Convulſions proceeding from an immoderate Dryneſs of the Nerves, tells us, "That they are "conſequent upon the moſt mortal kind of Phrenſy; and "that he never knew or heard of any one who recover'd, "when affected with them." And, in the fifth Book of the *Epidemics*, aſcrib'd to *Hippocrates*, *Text.* 84. we read, that the Maid-ſervant of *Conon*, labouring under a Phrenſy, was taken with Convulſions, and ſpeechleſs, on the fortieth Day of her Illneſs, and ten Days before her Death. There is alſo a kind of Palpitation near akin to Convulſions, which ſome call a convulſive Trembling, others a ſpurious Convulſion, others a Sultation; in which there is a Subſultus of the Parts under the Hand, when touch'd, as if they were vellicated by ſome pungent Humour or Vapour, the Nerves ſhrinking back, and retracting themſelves from the painful Senſation; ſuch is the Palpitation of Fiſhes on dry Land. Theſe Palpitations, when conſequent on a high Delirium, are no leſs mortal than Tremblings and Convulſions. But we are to make a Diſtinction, in this Caſe, becauſe theſe Palpitations, as well as Convulſions, if excited by acrimonious Juices or Vapours, may not always be mortal; for which Reaſon we are to conſider the other concomitant and ſubſequent Signs, that we may form the better Judgment of the Event. Another Symptom, therefore, which we are to obſerve, is virulent Vomitings, in which aduſt, æruginous, or black Bile is diſcharged, as we are inform'd by *Hippocrates*, *Lib.* 1. *Epid. Sect.* 2. where he obſerves, in his ſecond State, or *Cataſtaſis* of the Seaſons, that, of thoſe who laboured under a Phrenſy, ſucceeded by Convulſions, and virulent Vomitings, ſome died ſuddenly. With ſuch Vomitings was *Philiſtes*, labouring under a mortal Phrenſy, moleſted, *Lib.* 3. *Epid. Ægr.* 2. Geſticulations of the Hands are alſo a Symptom attending a Phrenſy, when fatal, according to the Judgment of *Hippocrates*, *Lib. Prognoſtic.* where he ſays, "That as to Geſti-"culations of the Hands, we are to know, that in an acute "Fever, Phrenſy, Peripneumony, or Cephalalgia, to wave "the Hands before the Face, to ſeem to hunt after Flies, to "pick Straws, or pull Threads out of Clothes, or Motes out "of the Wall, are all bad and mortal Signs." Such were thoſe obſerved in the Wife of *Dealces*, before-mention'd. A Diſcharge of Blood, by Drops, from the Noſe, is another Symptom ſupervening on a Delirium, whoſe Event is fatal: For *Galen*, *Com.* 3. *in Prorrhet. Text.* 49. aſſerts, that ſuch an Evacuation not only implies ſome Difficulty in the Caſe, as the Author of the *Prorrhetica* pronounces it, when attended with Deafneſs and Liſtleſſneſs; but is a very bad Sign, and, if accompanied with others which indicate the Brain to be affected, is a mortal Prognoſtic.

White, aqueous, and lucid Urine alſo, with white Fæces, are very pernicious Signs in Phrenſies, according to *Hippocrates*, *Sect.* 4. *Aph.* 7. on which *Galen* ſays, "I never knew any one, "whoſe Urine anſwer'd that Deſcription, recover." Again, "Involuntary Emiſſions of Urine are of pernicious Significa-"tions," on the 1. *Prorrhet.* 29. as are alſo "white Excrements," *ibid.* 13. It ſeems alſo peculiar to the worſt Kinds of Phrenſies, that, tho' the Tongue be parch'd with Heat, the Patient feels no Thirſt, or at leaſt drinks but very little; which are bad Signs, *ibid.* 16. Among fatal Deliria are thoſe which are concern'd about the neceſſary Actions of Life, according to the Author of the *Coac. Præſag.* 98. who pronounces Deliria, about Neceſſaries, to be of the worſt Kind; and, if increaſed to an extraordinary Degree, mortal. Such are thoſe Deliria in which the Patients abhor Meat and Drink, tho' their Tongue be parch'd and dry'd with Heat. Thoſe Deliria are alſo fatal, in which the Patients undergo frequent and remarkable Alterations. Thus, 1. *Prorrhet.* "A Phrenſy, mild in "the Beginning, but often changing, prognoſticates a bad "Event." Now there are two Ways of Mutation, or Changing, one from a good to a bad State; the other, from one bad Symptom to another. To this Purpoſe we are told, *Coac. Prænot.* 101. "That frequent Mutations, in a Phrenſy, "are a bad Sign, and ſhew a Diſpoſition to Convulſions." For, certainly, ſuch a Variety of Changes ſignifies either a Redundance of Humours, or that the Brain labours under a Multiplicity of Affections; as when the Patient lies for a long time quiet, ſilent, and ſad, and, all on a ſudden, becomes talkative, laughing, and reſtleſs; as *Hippocrates* obſerved of the Wife of *Dealces* before-mention'd. "At the Beginning, he ſays, "ſhe was cover'd up, and lay continually ſilent; ſhe catch'd at "the Hairs of the Bed-clothes, and pluck'd and ſcratch'd; "now ſhe wept, then ſhe laugh'd, but did not ſleep:" And, at the End of the Relation, "ſhe was continually cover'd, "and was either full of Talk, or perpetually ſilent." All Deliria, proceeding from Weakneſs, were thought, by *Galen*, mortal, ſo as that none ever recover'd of them, as appears by his Comments on the firſt of the *Prorrhetica*: For all phrenetic Diſorders require a conſiderable Degree of Strength in the Patient, agreeably to what we read, *Coac. Præſag.* 100. "A Delirium, ſeizing a Perſon before debilitated and ex-"hauſted, threatens the worſt of Events." Deliria, in the Beginning of a Diſeaſe, are alſo juſtly formidable, as giving Suſpicion of a Phrenſy; for whatever, of this Nature, appears without Signs of Concoction, (which is the Thing to be regarded in the Beginning of any Diſorder) ſhews the Patient to be in a very bad State, as we are taught by *Galen*, in his firſt Book of *Criſes*. To proceed with our Judgment, on thoſe Signs or Symptoms which appear with a Delirium, or are excited afterwards; bad Signs appearing, together with a Deliſium, ſeem to threaten Death; but mortal Signs not only Death with Certainty, but alſo, that it is near at Hand. Among the principal bad Symptoms, a total Deprivation of Sleep, or ſuch Sleep as excites, increaſes, or not, in the leaſt, alleviates a Delirium, is a very formidable Symptom in the Opinion of *Hippocrates* and *Galen*. So, alſo, to ſleep with the Mouth conſtantly gaping, in a Delirium, is a fatal Sign. *Hippoc. Progn.* and 2. *Sect. Aph.* 1. 3. An extreme Drowſineſs, or lethargic Affection, after perpetual Watchings, from a Refrigeration of the Brain, or Decay of Strength, is mortal, according to the Obſervation of *Hippocrates*, *Lib.* 3. *Epid. Stat. peſt.* where he ſays, "None of thoſe who had a Phrenſy were diſorder'd to "a vehement Degree of Madneſs, as is uſual in other Caſes, "but ſunk under a Cataphora, or Lethargy." But ſometimes theſe Affections appear as critical, or ſignificant of a *Criſis*, and are known to be ſo by the Signs proper to a *Criſis*. To proceed: A Delirium, accompany'd with a remarkable Forgetfulneſs, Liſtleſſneſs, and Stupidity, is an evident Prognoſtic of Death, *Galen in Prorrhet. Com.* 2. *Text.* 30. ſince for a Perſon not to know his familiar Acquaintance, or not to remember paſt Facts, ſhews a Refrigeration of the Brain, which, conſequent upon a hot Affection, by which the Delirium was excited, can prognoſticate nothing but Death, as was before obſerved. If, with the before-mention'd Symptoms, a Rigor or Coldneſs is join'd, the Fate of the Patient is inevitable, according to *Galen in Prorrhet.* Of the ſame Signification is Stupidity; for, in the Opinion of *Galen in Prorrhet. Text.* 1. they alſo are to be accounted phrenetic, who, being affected with a Coma, have not the Uſe of Reaſon, but talk in a delirious Manner; and, when they are awaken'd and roufed by the Attendants, appear as if they were ſtupefy'd: For a delirious Patient not to ſee, is a moſt fatal Sign, and ſhews Death to be not far off. Eyes, alſo, avoiding the Light, involuntarily weeping, diſtorted, one bigger than another, the White turn'd red, or the Eyes replete with Blood, in the ſame Caſe, are mortal Signs, as we are taught by *Hippocrates*, *in Prognoſt.* The Face of a fiery Colour, or well-colour'd, but of a ghaſtly Aſpect, portends alſo a bad Event. 1. *Prorrhet.* 49. 67. Violent and continual Pains of the Head and Viſcera are bad Signs; as may be collected from *Aph.* 65. *Sect.* 4. A Heavineſs, Coldneſs, or Lividneſs of the whole Body, or of the Hands and Feet, are no leſs to be dreaded; as appears from *Hippocrates*, *in Prognoſt.* where, and in the *Prorrh. Coac. Prænot.* and *Aphor.* he alſo paſſes the ſame Judgment on a Loſs of Voice, the Silence of the Patient, a ſhrill Voice, a Tongue parch'd and dry, without any Manner of Thirſt, an unuſual Grinding of the Teeth, Convulſions, Palpitations, Shiverings, Rigor, Tremblings, Coldneſs of the extreme Parts, and frequent Alterations in thoſe Parts. Of no leſs mortal Signification are Reſtleſſneſs, Anxiety, Difficulty of Breathing, a Loathing of all Food, and an Averſion to Drink, virulent Vomitings, cold Sweats about the Neck and Scapulæ, and continual Sweats over all the Body, which Phyſicians call *Deſudations*, Blood flowing by Drops from the Noſe, white, aqueous, and pellucid Urine, white Stools, and a Diſcharge of great Quantities of pituitous and bilious Crudities, without alleviating the Delirium, Abſceſſes diverted inwards, Exanthemata, or other Puſtules and Efflorescences on the Skin, vaniſhing without a manifeſt Cauſe, or Pains ariſing in the ignoble Parts, and ſpeedily ceaſing: If many, or but a few, of theſe Symptoms accompany a Delirium, eſpecially of the phrenetic Sort, they prognoſticate Death. They portend the ſame Event, when conſequent upon a Delirium; and more eſpecially when it is ſucceeded by Tremblings, Convulſions, Hiccoughs, Loſs of Voice, with a Diſcharge of white, clear, and pellucid Urine, ſuch as happen'd to *Silenus* on the fifth Day. 1. *Epid. Ægr.* 2. But the moſt certain of all deadly Prognoſtics, ſupervening upon a Delirium, are an extreme Lowneſs of the Pulſe, a bad Reſpiration, a total Loſs of Appetite, and an Abhorrence of all Food, with no Senſe of Thirſt, tho' the Tongue be parch'd with

with Heat and Dryneſs. And, indeed, theſe three laſt Symptoms, that is, an extreme Lowneſs of the Pulſe, an Abhorrence of Meat and Drink, and a bad Reſpiration, are of great Moment, in all Diſeaſes, for predicting Death, and eſpecially if accompany'd with ſome of the before-mentioned Signs, which, the more they are in Number or Conſideration, the more certain and ſpeedy is the fatal Event, which they portend. So that, above all the before-mention'd Signs, theſe three laſt-named, tho' accompany'd with many other good or ambiguous Signs, are of the greateſt Moment for predicting the Death of the Patient; as the contrary Signs to theſe, which are a high Pulſe, a good Reſpiration, and a laudable Appetite, tho' accompany'd with many pernicious and threatening Symptoms, are of chief Importance towards prognoſticating a happy Event to the Diſeaſe; as *Galen* has well demonſtrated in his Comment on the Caſe of *Heropyt*'s before-mention'd. *Proſper Alpinus, de præſagienda Vita & Morte.* See FEBRIS and PHRENITIS.

DELPHINIUM.

The Characters are,

The Leaves are laciniated: The End of the Pedicle, increaſing in Thickneſs, forms a Placenta, on which grows a pentapetalous Flower, of a very ſingular Contexture; for the four lower Petals are almoſt orbicular; but the fifth, which is erect, is divided into five Parts, that is, a bifid Galea, on the Back of which riſes another kind of Petal, with two Wings, and a hollow retroflected Spur, ſheath'd in a ſmall Vagina like it, and in the Form of a Cup. The Stamina are ſo numerous, that, at the lower Part, they grow together into a Silk-like Membrane. The Ovary growing on the Placenta conſiſts of long Sheaths, or Pods, collected into a Head, having each of them its Tube, with a white Apex, opening when ripe, and replete with angulous Seeds.

Boerhaave mentions nineteen Species of this Plant.

1. Delphinium; perenne; montanum; villoſum; Aconiti folio. *T.* 426. *Aconitum, cæruleum, hirſutum, flore Conſolidæ Regalis.* C. B. P. 183. M. H. 3. 464. *Aconitum, lycoctonum, cæruleum, calcari magno.* J. B. 3. 657. *Aconitum, lycoctonum, flore Delphinii I. Sileſiacum.* Cluſ. H. 94. *Aconitum, lycoctonum, flore Delphinii.* H. Eyſt. Æſt. o. 1. F. 11. Fig. 1. *Lycoctonum, flore Delphinii.* Dod. p. 441. PERENNIAL MOUNTAIN HAIRY LARKSPUR, WITH A MONK'S-HOOD-LEAF.

2. Delphinium; platani folio; Staphis agria dictum. *Tourn. Inſt.* 426. *Elem. Bot.* 379. *Boerh. Ind. A.* 301. *Staphis agria,* Offic. Ger. 398. Emac. 495. Raii Hiſt. 1. 705. Park. Theat. 222. J. B. 3. 641. C. B. Pin. 324. Hiſt. Oxon. 3. 461. *Staphis agria, Pedicularia,* Chab. 528. *Aconitum urens Ricini fere foliis, flore cæruleo magno, Staphis agria dicta,* Pluk. Almag. 357. STAVES-ACRE.

This Plant grows to be a Foot and half, or two Foot high: The lower Leaves are large, almoſt as big as Vine-leaves, but rounder in Circumference, divided uſually into ſeven ſharp-pointed Segments, deeply cut in. The Leaves that grow on the Stalk, which is round, and ſomewhat downy, are leſs, but alike in Shape. The Flowers grow on the Tops of the Stalk, of a blue Colour, much like the Flowers of Larkſpur, but having ſhorter Heels or Spurs. Each Flower is ſucceeded by three or four crooked Horns or Pods, in which are contain'd two or three large brown wrinkled angular Seeds. It grows in *Italy*, and other warmer Countries; and flowers in *July*. The Seed only is uſed.

It is ſeldom given inwardly, being of a hot burning Taſte; tho' *Sylvius de la Boe* commends it, from twelve Grains to a Scruple, in a Doſe, which purges upwards and downwards, cauſing a great Flux of Spittle; and is ſerviceable againſt the *Lues Venerea*. It is ſometimes uſed in Maſticatories and Gargariſms, for the Tooth-ach. *Miller's Bot. Off.*

The Powder of Staves-acre is ſprinkled upon the Head, with a View of killing Lice; or the Seeds are bruiſed in Oil, and the Head is anointed therewith, for the ſame Purpoſe.

The Seeds of Staves-acre, to the Number of fifteen, bruiſed and taken in Hydromel, are ſaid potently to expel pituitous and glutinous Humours by Vomit, not without Danger of Suffocation; for they cauſe a very burning Heat and Inflammation in the Fauces. The Seeds alſo, chew'd, attract Phlegm from the Head to the Mouth; from whence we may eaſily conclude, that, if theſe Seeds are boil'd in Plenty of Water, and the Mouth is waſh'd with the Decoction, a ſlight Salivation may be excited; which, perhaps, might be more happily effected by taking not fifteen of the Seeds at once, but one or two at a time, for ſeveral Days together, and ſo exciting a ſlight Salivation by Degrees: But this I look upon as a dangerous Experiment. *Raii Hiſt. Plant.*

3. Delphinium; latifolium; parvo flore. *T.* 426. *Conſolida Regalis, latifolia, parvo flore.* C. B. P. 142. Prodr. 74. M. H. 3. 466. *Conſolida Regalis, peregrina, parvo flore.* J. B. 3. 212. BROAD-LEAVED LARKSPUR, WITH A SMALL FLOWER.

4. Delphinium; ſegetum; flore cæruleo. *T.* 426. *Conſolida, Regalis, arvenſis, flore cæruleo.* C. B. P. 142. *Conſolida, Regalis, flore minore.* J. B. 3. 210. *Delphinium vulgare,* Cluſ. H. 205. *Flos Regius, ſylveſtris.* Dod. p. 252. *Conſolida, Regalis, flore cæruleo, minore.* Camer. *a.* CORN LARK-SPUR, WITH A BLUE FLOWER.

It grows plentifully amongſt the Corn by the Foot-way, from *Cambridge* to *Feverſham*; and flowers in *July*.

Tabernæmontanus ſays, the Conſerve of the Flowers eaſes the Gripes of Children; and *Simon Paulli* affirms, that the Flowers, macerated in Roſe-water, and applied as a Cataplaſm, aſſwage the Inflammation of the Eyes. The Plant is ſaid to be vulnerary and diuretic. *Martyn's Tournefort.*

5. Delphinium; ſegetum; flore violaceo. *T.* 426. *Conſolida, regalis, arvenſis, flore ſimplici, violaceo.* H. Eyſt. Æſt. o. 2. F. 11. Fig. 1. *a.*

6. Delphinium; ſegetum; flore rubro. *a.*

7. Delphinium; arvenſe; flore verſicolore. *Cluſ. H. App.* 2. *Conſolida, regalis, arvenſis, flore variegato.* H. Eyſt. Æſt. o. 2. F. 13. Fig. 1. *a.*

8. Delphinium; ſegetum; flore albo. *T.* 426. *a.*

9. Delphinium; vulgare; flore multiplici. *T.* 426. *Conſolida, regalis, vulgaris, flore multiplici.* C. B. P. 142. *Conſolida, arvenſis, flore rubro pleno.* H. Eyſt. Æſt. o. 2. F. 14. Fig. 1. *a.* COMMON LARK-SPUR, WITH A DOUBLE FLOWER.

10. Delphinium; hortenſe; flore majore, ſimplici, ex cæruleo, purpureo. *T.* 427. *Conſolida, regalis, hortenſis, flore majore, ſimplici cæruleo.* C. B. P. 142. *Flos regius.* Dod. p. 252. *Delphinium, elatius, flore cæruleo.* Cluſ. H. 206. *a.* LARK-SPUR.

The Root of Lark-ſpur is ſmall, and full of Fibres, periſhing after Seed-time: The Leaves are roundiſh in Compaſs, divided into very fine deep Sections, of a dark-green Colour. The Stalk grows to a Yard high, much divided, and cloath'd with the like Leaves, having on their Tops long Spikes of Flowers, of an irregular Shape, made of five Leaves, with a Spur or Heel on the back Part: When theſe are fallen, there come long roundiſh ſharp-pointed Horns, or Seed-veſſels, containing black rugged angular Seed.

It is ſown every Year in Gardens; and flowers moſt Part of the Summer.

This is reckon'd among the vulnerary and conſolidating Plants, and is ſaid to be of a healing Nature; but is ſeldom or never uſed in *England*. *Miller's Bot. Off.*

11. Delphinium; hortenſe; flore majore, ſimplici, rubro. *T.* 427. *Conſolida regalis, ſimplici flore, rubro.* H. Eyſt. Æſt. o. 2. F. 12. Fig. 1. *a.*

12. Delphinium; hortenſe; flore majore, & multiplici, cæruleo. *T.* 427. *Conſolida, regalis, flore majore, & multiplici, cæruleo.* C. B. P. 142.

13. Delphinium; hortenſe; flore majore, & multiplici, incarnato. *T.* 427. *Conſolida, regalis, multiplici, incarnato flore.* H. Eyſt. Æſt. o. 2. F. 11. Fig. 2. *a.* GARDEN LARK-SPUR, WITH A LARGE DOUBLE FLESH-COLOUR'D FLOWER.

14. Delphinium; hortenſe; flore majore; & multiplici violaceo. *Conſolida, regalis, multiplicato, violaceo flore.* H. Eyſt. Æſt. o. 2. F. 11. Fig. 3. *a.* GARDEN LARK-SPUR, WITH A LARGE DOUBLE VIOLET-COLOUR'D FLOWER.

15. Delphinium; hortenſe; flore majore, & multiplici rubro. *T.* 427. *Conſolida, regalis, flore pleno, rubro.* H. Eyſt. Æſt. o. 2. F. 12. Fig. 2. *a.* GARDEN LARK-SPUR, WITH A LARGE DOUBLE RED-COLOURED FLOWER.

16. Delphinium; hortenſe; flore majore, & multiplici albo. *T.* 427. *Conſolida, regalis, flore pleno, albo.* H. Eyſt. Æſt. o. 2. F. 12. Fig. 3. *a.* GARDEN LARK-SPUR, WITH A LARGE DOUBLE WHITE-COLOUR'D FLOWER.

17. Delphinium; hortenſe; flore majore, & multiplici, argenteo. *T.* 427. *Conſolida, regalis, multiplici flore, argenteo.* H. Eyſt. Æſt. o. 2. F. 13. Fig. 2. *a.*

18. Delphinium; hortenſe; flore majore, multiplici, cinereo. *Conſolida, regalis, flore multiplici, cinericeo.* H. Eyſt. Æſt. o. 2. F. 13. Fig. 3. *a.*

19. Delphinium; hortenſe; flore majore, & multiplici, purpureo. *T.* 427. *Conſolida, regalis, flore pleno, purpureo.* H. Eyſt. Æſt. o. 2. F. 14. Fig. 3. *a. Boerh. Ind. alt. Plant.*

DELPHINUS, Offic. Aldrov. de Piſc. 701. Rondel. de Piſc. 459. Charlt. Piſc. 47. Bellon. de Aquat. 9. Geſn. de Aquat. 319. Raii Icht. 28. Ejuſd. Synop. Piſc. 12. Jonſ. Piſc. 47. THE DOLPHIN.

The Parts of this Animal, appropriated to medicinal Uſes, are the Liver, the Aſhes, the Belly, and the Fat. The Belly dried, triturated, and exhibited in ſome proper Liquor, is ſaid to cure ſplenetic Patients. It is ſaid, that the Liver roaſted, and uſed with Aliments, perfectly cures tertian and quartan Fevers; as alſo, that Species of nocturnal Fever known by the Name of *Typhus*. The Aſhes are, by *Pliny*, enumerated among the Medicines which cure the Ringworm and Leproſies.

According

According to the ſame Author, the Fat melted, and drank with Wine, cures dropſical Patients. *Dale.*

DELPHYS, δελφύς. The Uterus.

DELTA, δέλτα. The external *Pudendum Muliebre. Suidas* from *Ariſtophanes.*

DELTOIDES, δελτοειδής. The Name of a very thick triangular Muſcle covering the upper Part of the Arm, and forming what is term'd the Stump of the Shoulder. It is broad above, and narrow below, in a triangular Form; and its Name is taken from the Reſemblance it bears to the *Greek* Letter Δ *Delta*; but, to make the Compariſon hold, either the Letter or the Muſcle muſt be inverted, and the Muſcle flatten'd.

It is made up of eighteen or twenty ſmall ſingle Muſcles, in an oppoſite Situation with reſpect to each other, and united by middle Tendons, ſo that, taken all together, they form ſeveral penniform Muſcles. The outer Surface appears almoſt wholly fleſhy, but, on the inner Surface, we ſee the ſeveral Tendons.

All theſe ſmall Muſcles are diſpoſed in ſuch a manner, as to form a conſiderable Extent at the upper Part; from whence they contract gradually in Breadth, till they end in a thick ſtrong Tendon, by which the whole Muſcle terminates in an Angle or Point.

Above, it is fix'd in the whole inferior Labium of the Spina Scapulæ, in the convex or long Edge of the Acromium, and in the third Part of the anterior Edge of the Clavicle, next that Apophyſis. It ſurrounds the Angle, form'd by the Articulation of theſe two Bones, by a particular Slope and Fold, contrived for that Purpoſe.

From thence it runs down, above one Third of the Length of the Os Humeri; where it is inſerted, by a thick Tendon, in the large, muſcular, rough Impreſſion, below the bony Ridge, which goes from the great Tuberoſity of the Head of the Bone, and forms the higheſt Border of the Groove or Chanel.

This Inſertion ſeems to be immediately implanted in the Subſtance of the Bone, paſſing through the Perioſteum, which is commonly the Caſe in all Inſertions in theſe Kinds of Impreſſions, Eminences, or conſiderable Tuberoſities. It lies below that of the Pectoralis Major, and a little more forward. Some of the Fibres of this Muſcle are fixed in the Aponeuroſis, common to all the Muſcles which cover the Arm.

This Muſcle may be diſtinguiſh'd into three principal Portions, one of which is fixed in the Spine of the Scapula, one in the Acromium, and one in the Clavicle. They are ſeparated from each other by a ſmall Quantity of Fat, or cellular Subſtance, chiefly near the Baſis of the Muſcle.

The middle and ſtrongeſt Portion runs down almoſt directly to its Inſertion in the Os Humeri. The lateral Portions ſeem to end ſooner, but it is only becauſe they turn inward toward the Bone, and thereby form the biggeſt and thickeſt Part of the Tendon. The anterior or clavicular Portion ſends off ſome Fibres to the Bone, before it reaches the Tendon.

The Portion fixed in the Spine of the Scapula ſends backward a thin Aponeuroſis, which is ſtrengthen'd by another tendinous or ligamentary Series of Fibres. This Aponeuroſis is fixed in the Baſis of the Scapula, below the Spine; and from thence is extended, toward the inferior Angle. The other Series begins at the Spine, and ends near the ſame Angle, at the Beginning of the inferior Coſta. Theſe, together with the great Tendon, ſeem to contribute to the Formation of the tendinous Expanſion which covers the Muſcles of the Arm.

At its upper Part, this Muſcle joins the Inſertion of the Trapezius, and below, that of the Brachialis. Anteriorly it joins the Pectoralis Major, being diſtinguiſhed from it only by a ſmall Line of Fat, or of cellular Subſtance, and a ſmall Vein call'd Cephalica. It covers the Head of the Os Humeri, and adheres to the capſular Ligament of the Joint; and it likewiſe covers the Inſertion of the Pectoralis Major. *Winſlow's Anatomy.*

DEM. Human Blood. *Rulandus.*

DEMENTIA. Madneſs. See MANIA. Or ſometimes it implies a DELIRIUM, which ſee.

DEMETRIOS, Δημήτειος, from Δημήτης. The Goddeſs *Ceres.* The ſame as *Cerealis.* See CEREALIA.

DEMOCRATIS THERIACA. A Theriaca deſcrib'd by *Aetius, Tetrab. 4. Serm. 1. Cap. III.*

DEMONSTRATIO. Demonſtration; that is, a certain, evident, and invincible Proof of the Truth of a Propoſition. But it relates no more to Medicine, than to any other Science. It is to be lamented, that Demonſtration is much more talk'd of by Phyſical Authors, than found in their Writings.

DEMOS, δημός. Fat. But δῆμος, with a Circumflex, ſignifies the People.

DEMOTIVUS LAPSUS. Sudden Death. *Rulandus.*

DEMULCENTIA MEDICAMENTA are Medicines which render the acrimonious Humours mild. See ALTERANTIA.

DEMUSCULATUS. The ſame as AMYOS, which ſee.

DENARIUS.

The *Denarius* was the chief Silver Coin among the *Romans.* As a Weight, it was the ſeventh Part of a *Roman* Ounce.

Mr. *Greaves* affirms, that having, in *Italy* and elſewhere, peruſed many hundred *Denarii Conſulares*, he found, by frequent and exact Trial, the beſt of them to amount to 62 Grains *Engliſh*, ſuch as he had carefully taken from the Standards of the *Troy* or Silver Weights, kept in the *Tower* of *London*, and in *Goldſmiths-Hall*, and in the Univerſity of *Oxford.* He arrives very near at the ſame Concluſion, by two Experiments that were made, of the Weight of Water contain'd in the *Congius* of *Veſpaſian*, which was 10 *Roman* Pounds. One Experiment was made by *Villapandus*, on the *Congius* itſelf; and the other by *Gaſſendus*, upon a Medal. By the firſt of theſe Experiments, the Weight of the *Denarius*, or the ſeventh Part of a *Roman* Ounce, comes out 62 Grains, by the ſecond $62\frac{4}{43}$: Neglecting the Fraction, he has ſtated the Value 62 Grains, or 7 Pence 3 Farthings *Engliſh*, allowing 8 *Engliſh* Grains to the Silver Peny. This Valuation *Arbuthnot* has follow'd in the Computation of Sums; that is, ſuppoſing Silver at 5 Shillings the Ounce, which, altho' not exactly true, (for, by the preſent Standard of the Coinage, 62 Shillings, or 3 Pounds 2 Shillings, is coined out of one Pound Weight of Silver) ſince we don't know the Fineneſs of the *Roman* Money, may be a Suppoſition as good as any other, and prevent ſome Trouble in Computation.

The *Roman* Ounce is certainly our *Averdupois* Ounce; but *Arbuthnot* owns, that he has differ'd, in a ſmall Matter, from Mr. *Greaves*, in ſettling the Quantity of *Troy* Grains contain'd in an Ounce *Averdupois*; for, ſuppoſing the *Averdupois* Pound to be to the *Troy* Pound as 175 to 144, and conſiſting of 16 Ounces, makes the *Roman* or *Averdupois* Ounce to be $437\frac{1}{2}$ *Troy* Grains, and the *Roman* Pound 5250 Grains. The Proportion that was given as a true one, was 17 to 14, neglecting the laſt Figures; and conſequently the Proportion of the *Roman Averdupois* Ounce, to the *Troy* Ounce, is preciſely as 51 : 56; and by this the *Roman* Pound will conſiſt of $5245\frac{5}{7}$ Grains *Troy*, which is $4\frac{5}{7}$ Grains leſs in the Pound; and, if it be a Miſtake, is a very conſiderable one. The *Denarius*, according to *Arbuthnot*'s Suppoſition, will come out $62\frac{4}{43}$ Grains. The Fraction is not to be neglected in reckoning the Pound. This makes it highly probable, that the *Romans* left their Ounce in *Britain*, which is now our *Averdupois* Ounce; for our *Troy* Ounce we had elſewhere.

That the *Denarius* was the ſeventh Part of the *Roman* Ounce, is clear from Multitudes of Paſſages. *Celſus, Lib. 5. Cap. 17. Sed & antea ſcire volo in uncia pondus denariorum eſſe ſeptem.*

Another Way that Mr. *Greaves* made uſe of to find the Weight of the *Denarii* was, by the Weight of *Greek* Coins, eſpecially *Attic Tetradrachms*; for the *Denarius* was always reckon'd equal to the *Drachm*: But thoſe Experiments bring out the *Denarius* heavier; for, weighing many *Attic Tetradrachms*, with the Image of *Pallas* on the fore Part, and of the *Noctua* on the Reverſe, he found the beſt of thoſe to be 268 Grains; that is, each particular *Drachma* 67 Grains, and from the Golden *Didrachms* much the ſame. He mentions one from *Snellius*, that weighed 134,5 of our *Troy* Grains, which makes it $67\frac{1}{2}$. That the antient *Roman Denarius* and *Attic Drachma* were reckon'd equal, appears partly from what has been obſerved before; and further from the Teſtimony of *Pliny*, who lived from the time of *Veſpaſian* to that of *Trajan*, who affirms expreſly, that the *Drachma Attica* had the Weight of the Silver *Denarius*. *Cleopatra* affirms, that the *Italic Denarius* was one *Drachm*. *Cicero*, naming the *Donative* of *Octavius* to the veteran Soldiers, call'd it 500 *Denarii*; and *Dion* calls the ſame 500 *Drachms*. *Galen* ſaith, that by a *Drachm* is meant the ſame Weight the *Romans* call a *Denarius*. This is plain from an Interpretation of *Aulus Gellius*. *Plutarch* computes the Sums which the *Romans* expreſs by *Seſtertii*, in *Drachms*, at 4 *Seſtertii* to the *Drachm*, that is, the Number of *Seſtertii* in the *Denarius*. *Strabo* ſaith, that, in the Siege of *Caſilinum*, a Mouſe was ſold for 200 *Drachms*; this *Valerius Maximus* tranſlates 200 *Denarii*. *Athenæus* ſaith, that 400 *Attic Talents* make 240 *Myriads* of *Denarii*, that is, 2,400,000 *Denarii*, = 400 *Talents*, or one *Talent* = 6000 *Denarii*, the Number of *Attic Drachms* in a *Talent*. *Feſtus Pompeius* ſaith in expreſs Terms, that an *Attic Talent* contains 6000 *Denarii*. The ſame appears by comparing *Livy* with *Polybius*.

Arbuthnot has been the more copious in Quotations upon this Subject, to ſhew the general Conſent of Authors, of all Ages and Times, in the Equality of Value of the *Attic Drachm*, and *Roman Denarius*. And it would bring in a great Confuſion to change that Way of reckoning; but then the Difficulty is, how to preſerve the Equality between two Coins, which appear ſo different in Weight as 62 and 67 Grains.

Arbuthnot, in the firſt Place, gives you *Greaves*'s Solution of this Difficulty, in his own Words; which are, firſt, "That "the *Denarius* and *Attic Drachm* being diſtinct Coins of "different States, and not much unequal in the true Weight, "it is no Wonder, eſpecially in *Italy*, and in the *Roman* Domi- "nions, that they ſhould paſs one for another, no more than that "the *Spaniſh Rials*, in our Sea-towns in *England*, ſhould paſs

"for

" for *Teſtars*, or the Quarter of the *Dolar* be exchang'd for " our Shillings; whereas the *Rial*, in the intrinſical Valua- " tion, is better than our *Teſtar*, by four Grains and ſome- " what more; and the Quarter of the *Dolar* is better than " our Shilling by more than eight Grains, or a Peny: But, " becauſe they want the Valuation, Character, and Impreſ- " ſion of our Princes, which I call the *Extrinſic* of Coins, " therefore doth the *Spaniſh* Money fall from its true Value " with us, and ſo would ours do in *Spain*. By the ſame Ana- " logy muſt we conceive the *Attic Drachms*, tho', in the " intrinſic, they were ſomewhat better worth than the *Dena-* " *rius*. And this ſeems to be implied by *Voluſius Metianus*: " *Victoriatus nunc tantundem valet, quantum quinarius olim.* " *At peregrinus nummus loco mercis, ut nunc Tetradrachmum &* " *Drachma, habebatur*; which Words of his, *loco mercis*, " plainly ſhew they made ſome Gain of the *Tetradrachmum* " and *Drachma*, as our Merchants and Goldſmiths do of the " *Spaniſh Rials*, and Quarters of a *Dolar*, which they could " not, if they were preciſely equal, but muſt rather be Loſers " in the melting or new coining of them: And therefore all " modern Writers, that have treated of this Argument, (ſome " of them making the *Drachma* leſs than the *Denarius*, others " equal, but none greater) have been deceived by a double " Paralogiſm, in ſtanding too nicely upon the bare Words of " the Antients, without carefully examining the Things them- " ſelves: Firſt, in making the *Denarius* and *Attic Drachm* " preciſely equal; becauſe all antient Authors generally expreſs " the *Attic Drachm* by the *Denarius*, or the *Denarius* by the " *Drachm*; either becauſe, in ordinary Commerce, and vulgar " Eſtimation, they paſſed one for another in the *Roman* State; " or elſe, if any were ſo curious to obſerve their Difference, " as ſurely the κολλυβισαὶ were; yet, by reaſon of their Near- " neſs, and to avoid Fractions, and having no other " Names for their Coins, that were preciſely equal, whereby to " render them, therefore all *Greek* and *Latin* Authors mu- " tually uſed one for the other. And, ſecondly, becauſe ſome " Writers, as *Dioſcorides* and *Cleopatra*, affirm that the " *Roman* Ounce contained eight *Drachms*; therefore modern " Authors infer, that the *Denarius* being equal to the " *Drachm*, and eight *Drachms* being in the *Roman* Ounce, " (as ſo many were in the *Attic*) that therefore there are eight " *Denarii* in the *Roman*, and conſequently that the *Roman* " and *Attic* Ounces are equal: Whereas *Celſus*, *Scribonius* " *Largus*, and *Pliny*, expreſly write, that the *Roman* Ounce " contain'd, in their Time, (which was after *Dioſcorides*) " ſeven *Denarii*; and, being natural *Romans*, and purpoſely " mentioning the Proportion of the *Denarius* to the Ounce, " thereby the better to regulate their Doſes in Phyſic, it is not " probable but they muſt better have known it than the *Gre-* " *cians*." But *Arbuthnot* ſeems to be afraid this Solution will not be ſufficient to anſwer about 5 *per Cent.* Difference in the Value of the Coins. If an *Attic Drachm* of 67 Grains paſſed for a *Roman Denarius* of 62, the Exchange muſt have been very much on the *Roman* Side.

The learned Biſhop *Hooper*'s ingenious *Inquiry into the State of antient Meaſures* has given a great many new Lights into this intricate Subject; and, perhaps, what he ſuggeſts may be an Anſwer to this Difficulty: His Words are as follows, *pag.* 44. " So is the Proportion, as well of the *Attic* Weight, as " of their Coin, well known; but the Value of each Piece " not ſo well aſcertain'd as one could wiſh: For the *Drachma*, " from whence all their Money is beſt eſtimated, and which " is alſo the principal Weight, is very differently ſtated. Our " accurate Mr. *Greaves*, upon the weighing of many *Attic* " *Tetradrachms*, found ſome (the beſt, he ſaith) of 268 " Grains, which give 67 for the *Drachma*: And, examining " the Golden *Didrachms*, coined after the Example of the " old *Darici*, by *Philip* and *Alexander*, as he mentions one of " each from *Snellius*, which weighed 134,5 of our Grains; " ſo he ſpecifies three of *Alexander*'s, which he had ſeen, that " wanted but half a Grain of 134, or twice 67 Grains. Such " too Dr. *Bernard* met with; but more commonly with thoſe " of 66 to the *Drachma*. The Generality of elder Coins that " remain give it at 65 Grains, ſome *Arabian* Phyſicians at " 64,28; and it is certain, that, in the time of the firſt " *Roman* Emperors, it came to be under 63 Grains, and not very " long afterwards to be under 55, and thus to be $\frac{1}{8}$ of a *Roman* " Ounce. Thus did the Money *Drachma*, in Proceſs of Time, " decreaſe, as is found by the Trial of a Balance, and will " appear by the Teſtimony of old Authors, comparing them " with the *Roman* Weight and Money. But, all the while, " we may ſuppoſe the ponderal *Drachm* to have continued the " ſame, juſt as it happen'd to us, as well as our Neighbours, " whoſe ponderal *Libra* remains as it was, tho' the nummary " hath much decreaſed."

And, *pag.* 55. " This gradual Decreaſe, the ſucceeding " Coins of the ſeveral Ages ſhew us: And it may be conve- " nient, therefore, for the Reduction of their Money to ours, " to form different Tables for them: To one, for Example, " after *Solon*'s Standard; which may ſerve, with ſome little " Allowance, till the Days of *Alexander*: Another, more " ſuited to the Times that follow'd, unto the Subjection of " the *Greeks* to the *Romans*, and at the Rate of 65 Grains, " or thereabouts, to the *Drachma*: And a third of 92,57; " which was equal, as we ſhall find, to the *Denarii* of that " Weight under the firſt *Roman* Emperors; and had been " equal, as I ſhall ſuppoſe, for ſome conſiderable time " before."

Mr. *Greaves* is of Opinion, that the Alteration mention'd by *Pliny*, in that forecited Paſſage, *Lib.* 30. *Cap.* 3. of the *Denarius* being ordered to paſs for 16 inſtead of 10 *Aſſes*, continued from the firſt Inſtitution of it, in the ſecond Punic War, without any Interruption, to *Juſtinian*'s time; but this Opinion is contrary to the whole claſſical Style, in which a *Denarius*, 4 *Nummi Seſtertii*, and 10 *Aſſes*, are Terms equivalent, and denote the ſame Sums. To change that Way of reckoning, would be to introduce nothing but Confuſion: It is not credible, that the Writers expreſſed the Valuation of the *Denarius* according to its firſt Inſtitution, without regard to the preſent Valuation.

He is ſurpris'd at the ſtrange and unadviſed Proportion betwixt the Braſs and Silver Monies of the firſt Times; that X Pounds of Braſs ſhould be but anſwerable to the 84th Part (for ſo much, or near it, was the *Denarius*) of a Pound of Silver; or, to ſpeak more clearly, that one Pound of Silver ſhould be equal in Valuation to 840 Pounds of Braſs.

I am of Opinion, that, tho' *Pliny* gives you the true Matter of Fact, he aſſigns a falſe Reaſon for it; for he ſeems to attribute the Cauſe of the Diminution of the Weight of the *Aſſes* to the Neceſſities of the Commonwealth, whereas it was undoubtedly the Change of the Balance of the two Metals of Braſs and Silver; and, for that Reaſon, the Commonwealth gradually reduced the Weight of their *Aſſes*, finding the former Proportions too high.

Another Method which Mr. *Greaves* takes to determine the Weight of the *Denarius*, and the gradual Diminution of it, is by the Weight of ſeveral *Aurei*; it being probable, that, as the *Athenians* made their χρυσοῦς or *Aurei* double in Weight to the Silver *Drachma*, ſo, in Imitation of them, the *Romans* made their *Aureus* double in Weight to the *Denarius*; from whence it is concluded, that the *Aureus Romanus* falling in its Weight, the *Denarius* likewiſe, of Neceſſity, muſt fall. In what manner the *Aureus* was firſt coined, and how afterwards it loſt of its primitive Weight, *Pliny* informs us, *Lib.* 33. *Cap.* 3. *Aureus nummus poſt annum* LXII. *percuſſus eſt quam argenteus, ita ut ſcrupulum valeret Seſtertiis vicenis, quod efficit in libras ratione Seſtertiorum, qui tunc erant, Seſtertios* IↃↃↃↃ. *Poſt hæc placuit* XL. M *ſignari ex auri libris; paulatimque principes imminuere pondus, imminuiſſe vero ad* XLV. M. This Paſſage is corrected by *Greaves*, after the following Manner: *Poſtea placuit* X. XL. *ſignari ex auri libris, paulatimque Principes imminuere pondus, imminuiſſe vero ad* XLVIII.

It is to be obſerved, that *Pliny*, who mentions the Diminution of the Weight of the *Aurei* ſo nicely as to ſpecify the exact Proportions, ſays nothing of the Diminution of the Weight of the *Denarius*: I therefore think it is not perfectly evident, that the *Denarius* kept Pace with it, altho' it is generally agreed, that the *Denarius* fell from $\frac{1}{7}$ to $\frac{1}{8}$ of an Ounce; and the accurate Biſhop of *Bath* and *Wells* has made two different Tables for the Reduction of them to our Standard. But the *Denarius* of the claſſical Authors, which is allow'd to be the ſeventh Part of an Ounce, is made uſe of in the Computations of the *Roman* Money.

The Subdiviſions of the *Denarius* were, the *Quinarius*, or *Half-denarius*, ſo called from its Value of five *Aſſes*; the *Half-denarius* was likewiſe call'd *Victoriatus*.

Celſus divided the *Denarius* into ſix Parts, which he call'd *Unciæ*, *Uncia* being a general Word for the Diviſion of any Integer. This was done in Imitation of the *Greek* Phyſicians, who, after the manner of their Country, divided their *Drachma* into 6 *Oboli*.

The Stamp of the *Denarius* was the Image of the Conſul or Prince under whom it was coined; which is plain from thoſe now extant, and Paſſages of Authors.

The Inſcription commonly expreſs'd the Name of the Prince, and the Occaſion of the coining it.

The common Mark of the *Denarius* was an X, or ✕, in Imitation of which, among the *Latin* Phyſicians, it grew to an ✱ The *Greeks* uſed the Word δηνάριον in the neutral Gender. *Arbuthnot of Weights*, &c.

DENDE. The Oriental Name for a Species of *Ricinus*, call'd alſo ABELMOLUCH.

DENDROIDES. A Name for Plants, which grow like Trees. Arboreſcent. *Blancard.*

DENDROLIBANUS. Roſemary. *Blancard.*

DENDROMALACHE. A Name for the *Malva arboreſcens*, a large Species of Mallows. *Blancard.*

DENDRON, δένδρον. A Tree.

DENEQUAT. Borax. *Rulandus.*

DENODATIO. Diſſolution.

DENS. A Tooth.

Whoever has been afflicted ſeverely with the Tooth-ach, will think this an Article of ſome Importance; for which Reaſon I ſhall give their Anatomy, Diſeaſes, and Methods of Cure; having firſt ſpecify'd ſome Plants which are call'd by the Name of *Dens* among Botaniſts.

DENS CABALLINUS is the HYOSCYAMUS.

DENS CANINUS is a Name given to ſeveral Species of the *Panicum*; which ſee.

DENS CANIS.

The Characters are,

The Flower is ſhap'd like a Lily, hexapetalous, with long reflected Petals, naked, pendulous, and but one on a Stalk. The Fruit is roundiſh, and full of oblong Seeds; the Root is fleſhy, and ſhap'd like a Dog's Tooth; and the Leaves are like thoſe of the Cyclamen.

Boerhaave mentions five Species of this Plant; which are,

1. Dens Canis; latiore, rotundioreque, folio; flore candido. *C. B. P.* 87. *Var.* THE BROAD ROUND-LEAV'D DOG'S-TOOTH, WITH A WHITE FLOWER.

2. Dens Canis; anguſtiore, longioreque folio. *C. B. P.* 87.

3. Dens Canis; anguſtiore; longioreque; folio; flore ex albo purpuraſcente, minore.

4. Dens Canis; anguſtiore, longioreque, folio; flore ſuave-rubente. *H. R. Par.* LONG NARROW-LEAV'D DOG'S-TOOTH, WITH A FINE RED FLOWER.

5. Dens Canis; latiore, rotundioreque, folio; flore ex purpurâ rubente, majore. *C. B. P.* 87. *Var.* BROAD ROUND-LEAV'D DOG'S-TOOTH, WITH A LARGE PURPLISH RED FLOWER. *Boerh. Ind. alt. Plant. Vol.* 2.

Cluſius was told, that the Women in *Styria* uſe to ſprinkle the Flower of the dry'd Root of the firſt Species in their Childrens Pap, to kill and expel the ſmall Worms of the Belly. Drank in Wine, it is an approv'd Remedy for the Colic, and is found to be nutritive, and to reſtore loſt Strength; and, taken in Water, it cures Children of the Epilepſy.

Lobel informs us, that its hot and humid Subſtance, attended with ſomewhat of Acrimony, is a potent Provocative to Venery: Hence ſome take it for the *Satyrium Erythronium* of *Dioſcorides*, but erroneouſly, in *Parkinſon*'s Opinion, who will have the *Tulipa* to be the *Satyrium Erythronium*. *Ray.*

DENS LEONIS.

The Characters are,

It agrees, in all reſpects, with the Hawk-weed; but only in its having a ſingle naked Stalk, with one Flower upon the Top, whereas the Hawk-weed hath branching Stalks: To which may be added, the Flowers are for the moſt part fiſtulous or piped.

Boerhaave mentions twelve Species of this Plant, which are,

1. Dens Leonis; latiore folio. *C. B.* 226. *Tourn. Inſt.* 468. *Boerh. Ind. A.* 88. *Dill. Cat.* 50. *Buxb.* 96. *Dens Leonis, Taraxacum*, Offic. *Dens Leonis*, Ger. 228. Emac. 290. Raii Hiſt. 1. 244. Synop. 76. *Dens Leonis vulgaris*, Park. 780. Hiſt. Oxon. 3. 74. *Hedypnois ſive Dens Leonis, Fuchſii*, J. B. 2. 1035. *Sive Dens Leonis*, Chab. 323. DANDELION.

The Leaves of Dandelion are of a yellowiſh green Colour, ſmooth, and of four or five Inches in Length, to one of Breadth, cut into ſeveral Jags, which end in ſharp or Tooth-like Points. The Flowers grow upon round ſingle hollow Pipes or Stalks, compos'd of a great Number of ſlender, flat, yellow Petala, incloſ'd in a green Calyx. This Seed is long and narrow, ſet about the Head in a globular Form, with a Tuft of long Down at the End, by which it is eaſily wafted about by the Wind from Place to Place. The Root is about a Finger thick, long and whitiſh within, and full of a bitteriſh Milk, as is the reſt of the Plant. It grows every-where in the Fields and Meadows, flowering the greateſt Part of the Year. The Roots and Leaves are uſed.

Dandelion is cooling and aperitive, good to cleanſe the Kidneys and Bladder, and to provoke Urine; it is boil'd in Poſſet-drink, and frequently us'd in all kinds of Fevers: The Leaves, beaten to a Cataplaſm, are likewiſe applied to the Wriſts in the ſame Diſtempers. *Parkinſon* commends a Decoction of the Leaves and Roots in Wine or Broth for a Conſumption, or any ill Habit of Body. The young Leaves, when they juſt appear above Ground, and are white and tender, are much coveted by many as a Sallad, early in the Spring. *Miller's Bot. Off.*

Its Leaves are very bitter, and give a faint Tincture of red to blue Paper; the Roots give it a much deeper; they are bitter, ſtyptic, and deterſive: Its Salt very much reſembles that which *Mullerus* has called *Terra foliata Tartari*; but, in the Dandelion, this Salt is much more acid in the Roots than in the Leaves, and is united in all theſe Parts with a great deal of Oil and Earth.

Thus this Plant is aperitive, diuretic, vulnerary, and febrifugous. *Tragus* preſcribes the Water of it in internal Inflammations. *Barbette* adviſes to take the Juice of it. It purges the Blood by Urine: The Juice is ſucceſsfully uſed in a Nephritic Colic, and Retention of Urine: The Leaves of Dandelion are eaten as a Sallad, with Oil and Sugar. To abate a violent Cough, and cure Rheums, they boil, Morning and Evening, a Quarter of a Pint of Cow's Milk, and pour upon it an equal Quantity of the Decoction of Dandelion, boiling hot, and a little Sugar-candy: Its Extract is given from half a Dram to a Dram and a half: The Ptiſan of its Roots cools, provokes Urine, and is good for all Sorts of Fevers. *Martyn's Tournefort.*

2. Dens Leonis; anguſtiore folio. *C. B. P.* 126. *M. H.* 3. 75. *Aphaca, anguſtioris folii.* Cæſalp. 508.

This Species ſeems to be but a Variety of the former, which varies in the Bigneſs and Inciſure of its Leaves. *Martyn's Tournefort.*

3. Dens Leonis; Græcus; foliis Eryſimi craſſis et lucentibus. *T. Cor.* 35. *a.*

4. Dens Leonis; Monſpelienſium; Aſphodeli bulbillis. *Lob. Adv.* 83. *Obſ.* 117.

5. Dens Leonis; minimus; aſper. *T.* 469. *Hieracium, pumilum, ſaxatile, aſperum, radice præmorſa.* C. B. Prodr. 66. a.

6. Dens Leonis; ſubaſper; parvo flore. *Hieracium, dentis Leonis folio, monoclonum, ſubaſperum. C. B. P.* 127.

7. Dens Leonis; aſper; minor. *Hieracium, dentis Leonis folio, hirſutie aſperum, magis laciniatum.* C. B. P. 127. *Hieracium, dentis Leonis folio, hirſutie aſperum, minus.* C. B. Prodr. 63. 1. Ic. & Deſcr.

8. Dens Leonis; qui Piloſella Officinarum. *Tourn. Inſt.* 469. *Boerh. Ind. A.* 89. *Auricula muris, Piloſella*, Offic. Chab. 323. *Piloſella repens*, Ger. 513. Emac. 638. Raii Hiſt. 1. 242. Synop. 75. *Piloſella minor vulgaris repens*, Park. 689. *Piloſella major, repens hirſuta*, C. B. 262. Dill. Cat. 83. Buxb. 262. Dill. Cat. 83. Buxb. 260. *Piloſella majori flore, ſive vulgaris repens*, J. B. 2. 1039. *Piloſella monoclonos repens vulgaris minor*, Hiſt. Oxon. 3. 77. COMMON MOUSE-EAR.

This is a low creeping Plant, ſending from a ſmall ſtringy Root, ſeveral trailing Branches lying on the Ground, and ſhooting out Fibres from the Joints, by which it takes Root in the Earth. The Leaves grow alternately on the Stalks, of an oval Form, about an Inch long, and half ſo much broad, ſharp-pointed, green above, and whitiſh underneath, cover'd thick with ſtiff, long, brown Hairs: The Flowers ſtand upon Foot-ſtalks, four or five Inches long, of the Shape of *Dandelion*, but ſmaller, of a whitiſh yellow Colour above, with ſeveral purpliſh Streaks underneath: The Stalks, when broken, emit a whitiſh Milk, in a ſmall Quantity. The Flowers paſs away in a white Down, in which lies ſmall long Seed. It grows every-where upon Heaths and Commons, and flowers moſt Part of the Summer.

Mouſe-ear is of a bitteriſh ſtyptic Taſte, and is accounted to be drying and binding, and a good vulnerary Herb, and helpful for all Sorts of Fluxes: A Decoction of it, uſed as a Gargariſm, is commended for Ulcers in the Mouth. Dr. *Hulſe* made uſe of the Juice of Mouſe-ear, as a Remedy againſt the *Herpes miliaris*, or Shingles. *Ray*'s Catalogue.

In the old *Diſpenſatories*, there was a Syrup that took its Name from this Plant, which is now out of Uſe, and therefore left out in the new. *Miller's Bot. Off.*

This Plant is very bitter, and reddens blue Paper a little. By the chymical Analyſis, beſide ſeveral acid Liquors, it yields a good deal of Oil and Earth, a little urinous Spirit, and no concreted volatile Salt; which ſhews it to contain a Salt approaching to that of Alum, wrapped up in a good deal of Sulphur, and mixt with a little Sal Armoniac. Thus the Mouſe-ear is vulnerary and deterſive. *Tragus* affirms, that the Infuſion of it in Wine or Water, with a little Sugar, is good for the Jaundice, and to prevent the Dropſy. *Tabernæmontanus* ſays, the *Piloſella* is a Specific for Ruptures. The Extract of it is uſed for internal Ulcers and a Phthiſis. *Pena* and *Lobel* thought it to be admirable for the Stone: They affirm'd that Blades of Knives, quenched in the Juice or Decoction of Mouſe-ear, would cut Iron or Stone without blunting. *Martyn's Tournefort.*

9. Dens Leonis; præmorſâ radice; major. *Hieracium, nigrum, præmorſâ radice, majus.* C. B. P. Var. 128.

10. Dens Leonis; folio Cichorei glabro; ſeminis pappo rigido, flavo.

11. Dens Leonis; foliis Eryſimi vulgaris. *T. C.* 35. *Taraxacon humile.* Bocc. Muſ. Tab. 106. a.

12. Dens Leonis; minor; foliis radiatis. *C. B. P.* 126. *Prodr.* 62. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 88.

This Plant is of a drying, attracting, and purifying Nature; It is good for Wounds, whether external or internal: It alſo cleanſes and heals Ulcers and Wounds of the Head: It ſtops Fluxes, Dyſenteries, Vomitings of Blood, Bleedings at the Noſe, and too plentiful Diſcharges of the Menſes: It is excellent for the Breaſt and Lungs, cures the Jaundice and

Conſumption, diſſolves the Stone in the Bladder and Kidneys, and carries off Inflammations of the Spleen. *P. Poter. Pharm. Spag. L. 1. S. 1. C. 2.* A Decoction of it, drank for forty Days, is a ſovereign Remedy in obſtinate Itches. *Jul. Cæſ. Claud. Conſil. Med. 47.* The Country People boil it in Ale, which they drink, when they are indiſpos'd. The Powder of the Root, and of the Herb itſelf, is an admirable Remedy for the Ruptures of Children, if a little of it is given them every Day in their Food. See *Malach. Geſer. Delegraph. C. 6. K. Sennert. Tract. de inf. Cur. p. 2. C. 24.* This Herb, when boil'd in ſmall Beer, proves an excellent Remedy for the Tooth-ach, by waſhing the Mouth with it. If boil'd in Wine, it ſpeedily cures Ulcers of the Mouth, *Joh. Heurn. Meth. ad Prax. L. 1. p. 125.* The Herb, when bruis'd and apply'd by way of Cataplaſm, cures Runnings and Exulcerations of the Ears: The Juice is alſo excellent in Pains of the Ears. The Herb, reduc'd to Powder, and ſnuff'd up the Noſtrils, ſtops Diſcharges of Blood from the Noſe; and, if laid upon Wounds, ſtops Hæmorrhages. *Joh. Hocker. Prax. Aur. L. 1. Cap. 17.* The Water, diſtil'd from the Fruit, is good for Conſumptions, diminiſhes preternatural Heats, cures Vomiting of Blood, ſtops the exceſſive Diſcharges of the Menſes, and is good in Dyſenteries and the Jaundice. It alſo kills Worms. *Barthol. Zorn. Botanolog.*

Of the TEETH.

As every Part of the human Body loudly proclaims the ineffable Wiſdom, and diffuſive Goodneſs, of its glorious Architect and Contriver; ſo alſo the Teeth, their exquiſite Order, and curious Structure, are ſo many Proofs, richly pregnant with irrefragable Arguments for the ſtupendous and amazing Power of the Venerable Being, who form'd them. The firſt memorable Circumſtance which occurs with reſpect to the Nature of theſe Subſtances, is, that in Hardneſs, and a durable Texture, they far ſurpaſs all the other Parts of the Body. Hence, according to *Tertullian*, in his Treatiſe *de Reſurrectione*, the miſtaken Piety of the Antients induc'd them to bury the Teeth in the Earth, ſince they remain'd ſound for ſeveral Hundreds or Thouſands of Years; and their Deſign, in this Practice, was to render the Body entire at the Reſurrection. When we reflect upon the beautiful Order and Diſpoſition with which they are rang'd in the Extremities of both Maxillæ, or Jaw-bones, we cannot fail to be ſtruck with awful Impreſſions of the exquiſite Skill and ſuperior Contrivance, with which they are form'd; for they are ſo ſituated, that the ſuperior and inferior Rows are indeed capable of being join'd, tho' not all at one and the ſame time, that by this means the Actions of Inciſion and Maſtication may be varied at Pleaſure; for, when the *Dentes molares* are join'd, the anterior Teeth of the ſuperior Row project beyond, and partly cover their correſponding Teeth of the inferior Row: But when the Extremities, or Points of the anterior Teeth are join'd, the *Dentes molares* remain at a Diſtance from each other; by which means they enjoy Reſt, and are ſubjected to Action reciprocally, and by turns. This ſurpriſing Inſtance of Art and Deſign long ago appear'd to *Galen*, as we learn from his Treatiſe *de Oſſibus*, abundantly ſufficient to refute thoſe ludicrous Calumniators of Nature, who aſcribe the moſt curious of her Productions to a caſual and fortuitous Concourſe of Atoms. Without this Mill, as it may be call'd, of the Microcoſm, a due Maſtication, which, as *Helmont* excellently obſerves, in his Treatiſe *de Victus Ratione*, greatly contributes to the Preſervation of Life, cannot be perform'd. We ſhall therefore, at preſent, conſider their Nature and Structure, their Connection and Uſe, the ſeveral Cauſes by which they are injur'd, and the various Medicines accommodated to remove the Misfortunes and Indiſpoſitions to which they are ſubject.

Omitting, therefore, too minute and prolix Diſquiſitions with reſpect to the Name, we ſhall only obſerve, that in former Ages they were call'd *Dentes*, as it were, from *Edentes*. The Teeth, then, are bony Parts of the Body, conſiſting of two Subſtances; the one intenſely hard, and as it were of a ſtony Texture; and the other ſofter, but alſo of a bony Nature. Internally they are furniſh'd with a certain Cavity; they are fix'd into the Sockets of the Maxillæ, by that particular Species of Articulation, call'd *Gomphoſis*; and are deſtin'd for the Purpoſes of Maſtication, Articulation of the Voice, and Ornament. Firſt, then, we are to obſerve, that the Teeth conſiſt of two Subſtances, the exterior of which is highly hard like a Stone, tho' it does not partake of a ſtony Nature; as is obvious from putting an entire human Tooth into a ſufficient Quantity of Aqua-fortis, for ſome Hours, by which it is entirely diſſolv'd, whilſt there remains a very ſmall Quantity of a glutinous Subſtance, which ſeems to be a ſulphureous and ſomewhat pinguious Portion of the Teeth. If to the Solution, when ſufficiently ſaturated, we add Oil of Tartar *per Deliquium*, there is produc'd a highly white Magiſtery, in medicinal Virtues agreeing with that prepar'd from the Boar's Teeth, or the Elk's Hoof. But ſuch a chymical Solution cannot be produc'd with reſpect to Flints, and genuine Stones. The exterior Subſtance, however, of the Teeth is ſo hard and ſolid, that, by a violent Attrition or Concuſſion with Iron, it emits large Quantities of Sparkles. But this only holds true, with reſpect to the Dentes molares of the larger Animals, which are capable of making a conſiderable Reſiſtance: This hard and ſtony Part of the Teeth is only obſerv'd in thoſe Portions of them, which lie without the Sockets of the Gums; and, like a Bark or Covering, ſurround the bony Part of the Teeth; for the Roots of the Teeth, which are conceal'd in the Sockets and Gums, are only of a bony Nature, and, conſequently, of a Colour not ſo white and ſplendent, as the external Part which is uncover'd. But the external Part is the hardeſt, not only that, it may be Proof againſt Wounds and Injuries, but alſo that it may be the better qualified for inciding and breaking the Aliments. The interior bony Matter, on account of the greater Laxity of its Pores, is more eaſily diſſolv'd and conſum'd. Hence 'tis cover'd with an external harder Bark, leſt, perhaps, ſome of the more acrid and corroſive Parts of the Aliments ſhould injure or deſtroy it. This internal Subſtance of the Teeth is the Part principally affected in a Caries; for the external Covering is rarely ſeen totally, but only partially conſum'd. Beſides, the Structure of the external ſtony Covering of the Teeth differs from that of the internal Part; for, in the former, the Striæ or Furrows terminate obliquely in ſmall Circles: But the interior, ſofter, and principal Part of the Teeth conſiſts of ſeveral Layers of Fibres, longitudinally laid over each other. When a Reſolution is made by a long Maceration of the Bones, theſe Layers become ſufficiently conſpicuous; for the bony reticular Plates may by this means be ſeparated entire.

Above, we have obſerv'd, that a certain Cavity is found in the Teeth, which is ſufficiently conſpicuous when a Tooth is cut longitudinally in the Middle; on which Occaſion we obſerve, that all the Roots of the Teeth are furniſh'd with their peculiar Cavity, which is very conſiderable in the Baſe of the Tooth itſelf, or that Part of it which appears without the Gums; for, in the Cavities of the Teeth of every Animal, there is always found a certain mucous, membranaceous Subſtance, or a certain ſmall mucous Cord, in the Form of an oblong Bladder, compos'd of highly ſlender Blood-veſſels, nervous Membranes, and a certain glutinous Subſtance. This alſo reaches to the very Extremities of the Teeth; where its Membranes being more contracted, it appears ſomewhat harder and redder. In Fœtuſes and Children, this Cavity is ſufficiently large; and, according to *Euſtachius*, in his Treatiſe *de Dentibus*, divided till the ſeventh Year of their Age, like Honey-combs; but it is ſmaller in Adults. In Children, this Cavity is fill'd with a mucous Matter, ſurrounded with a Membrane, whoſe external Surface is reddiſh, but internally it appears more white; and the Mucus itſelf, being the genuine Nouriſhment of the Teeth, is, at laſt, converted into their Subſtance; for we obſerve, that the more ſolid and firm the Subſtance of the Teeth becomes, as in Adults, the ſmaller Quantity of this Mucus is found; whereas in Infants, whoſe Teeth conſiſt of ſmall and tender Laminæ, a larger Quantity of it is obſervable. In the Teeth of Calves, eſpecially what is call'd the *Sweet Tooth*, this Matter may be commodiouſly ſeen with the naked Eye. In its Surface ſome Traces of Blood diſcover themſelves by a reddiſh Colour; and, when the mucous Matter is compreſs'd, it actually diſcharges Blood.

It is of great Importance carefully to inveſtigate the Formation and Generation of the Teeth. Firſt, then, we muſt obſerve, that all Teeth, as well as the other Parts of the Body, have their Rudiments, and are form'd in the Womb; for the Evidence of Senſe muſt, in this Caſe, as well as all others, be ſuperior to the imaginary Force of any Arguments that can be brought to the contrary. *Euſtachius*, in his Treatiſe *de Dentibus*, informs us, that upon dividing the Jaw-bones, not only of Abortives, but alſo of Children brought into the World at the due Period, he found the *Dentes inciſores*, the *Canini*, and the three *Molares* as yet ſoft, diſtinguiſh'd by a ſmall bony Interſtice, and each having a mucous and tenacious Follicle, perforated at its Extremity, from which the Tooth proceeds. When theſe are ſkilfully ſeparated, another ſmall and latent Order of Teeth appears, which is, as it were, a Reſerve of another Set, to ſucceed the Row which firſt appears, and is afterwards ſhed; and *Veſalius*, in the eleventh Chapter of his firſt Book *de Corpore humano*, affirms, that he has found the *Dentes Sapientiæ* in Perſons who have died before theſe Teeth appear'd. *Columbus*, alſo, in the tenth Chapter of his firſt Book informs us, that in Abortives of ſeven or eight Months, as alſo in new-born Children, he found the ſeveral Teeth contain'd in their reſpective Sockets. From what has been ſaid, 'tis obvious, that no new Teeth are produc'd upon the Shedding of the old; but that ſuch as were before latent and conceal'd, appear in their ſtead. Hence it happens, that Men advanc'd in Years have Teeth appearing

ſometimes

ſometimes with a very intenſe Pain, and ſometimes with none at all. It is remarkable, that in Fœtuſes the *Dentes inciſores* are, more conſpicuouſly than the reſt, furniſh'd with a white and pretty ſolid Lamina; the *Dentes Canini* with one more ſlender, and leſs ſolid; and the *Molares* with one, which is highly ſlender, and almoſt cartaceous. For this Reaſon it is not to be wonder'd at, if ſome have their complete Number of Teeth ſooner than others; and if they are diſtinguiſh'd, in the Order of their Appearance, in the ſame Manner with their Rudiments, whilſt inclos'd in the Womb. But generally the *Dentes inciſores* appear firſt, ſometimes in the ſeventh, ſometimes in the tenth, and ſometimes after the twelfth Month; the *Dentes Canini* in the ninth or tenth Month; and the *Maxillares* ſome time or other, either in the firſt or ſecond Year. Sometimes, alſo, the inferior Teeth appear ſooner than the ſuperior; and, at other times, the latter ſooner than the former. Ten generally are ſhed of each Jaw-bone, about the fourth, fifth, or ſixth Year; that is, the *Dentes Inciſores*, the two *Dentes Canini*, and the four *Dentes Maxillares:* But the ſucceeding Teeth generally appear, either about the ſeventh or the fourteenth Year.

We have already obſerv'd, that the Matter, which ſupplies the Teeth with Nouriſhment, is of a mucous Nature. This Matter is found not only in the Teeth of Children, but more conſpicuouſly in thoſe of Fœtuſes and Abortives; in which three Parts occur, that is, firſt, A membranous, or rather a mucous Follicle, including the whole Tooth, without Difficulty ſeparated from it, and perforated at the Baſe, as well as the Root. Secondly, The Root, which is mucous, pellucid, abounding with Veſſels, diſcharging Drops of Blood, when compreſs'd, furniſh'd with a conſiderable Cavity, and, in Proceſs of Time, gradually oſſifying from the Circumference to the Centre; but, in ſuch a Manner, that a ſmall Cavity always remains. Thirdly, The Baſe itſelf, which appears like a white, tender, and excavated Lamina. This mucous and glutinous Matter is the true genuine Nouriſhment of the Teeth, by which they grow, are extended, and acquire a proper Degree of Solidity. That the Solids are produced by the Fluids, is confirm'd by Experience. This is alſo obvious from the moſt ſolid Bones of the Body, which are form'd of the terreſtrial, though fluid, Juices of the Blood; and that, in ſubterraneous Vaults, Stones are form'd of dropping Waters, is a Phenomenon well enough known to the Curious. I myſelf have found by Experiments, that common Water, by the Effuſion of any petrifying Liquor, has a Part of it been indurated, and, in Proceſs of Time, converted into a Stone. In like manner, 'tis not to be doubted, but this mucous Matter, contained in the Teeth, is converted into their bony Subſtance. The chymical Analyſis of the Teeth is an additional Proof of this; for, by *Papin*'s Digeſtor, now much improved, not only all the Bones, but alſo the Teeth, may be ſoften'd and reſolv'd into a gelatinous Juice, whilſt there remains a certain terreſtrial and mucous Subſtance; by which means the Elements or Principles of the Bones may be clearly diſcovered: For, 'tis certain, that theſe, as well as the other Solids, are made up of a terreſtrial, thick, and gelatinous Juice; whereas the ſofter Parts, ſuch as the fibrous, for Inſtance, are form'd of a more fluid and gelatinous Humour, into which all muſcular Fleſh is reſolved in the above-mentioned Machine. The mucous Matter, which nouriſhes the Teeth, is derived from the Blood, and is conveyed through their Pores by ſmall Ramifications of Arteries, ariſing from the external Carotid. We have already obſerved, that this mucous Matter, found in the Teeth, is contained in a pretty ſtrong Membrane, in which there appear Veſſels which bring the Blood to it, and convey it back. But the high red Colour of this Membrane appears moſt conſpicuouſly in the lower Parts of the Cavities of the Teeth of Animals. Hence the Reaſon is obvious, why frequently a bloody Serum drops, or may be ſuck'd, from a carious Tooth; which is an infallible Proof, that the Blood-veſſels penetrate into the Cavities of the Teeth. In my Opinion, therefore, a pellucid lymphatic Juice ouſes through the Pores of the ſmall Arteries, ſtops in the Cavity of the Membrane, and is gradually concreted; becauſe the lymphatic Veſſels, entering the Cavities of the Teeth, according to *Schenckius*, abſorb, and carry back the thinner and more liquid Part, whilſt that which is thicker, and more fit for Concretion, remains, and, by a continued Secretion of its thinner Parts, becomes ſolid; firſt, on the Surface and Circumference; and freſh Juices being pour'd into its Interſtices, it gradually acquires a greater Degree of Solidity; for the bony Parts of the Teeth are nouriſhed by the Juices conveyed through the Pores. We are convinced, that Bones are nouriſhed; becauſe, in Proceſs of Time, Tendons and Cartilages are offified, and the ſoft Bones of Children at laſt become hard. Beſides, the Juice, ouſing from broken Bones, is eaſily concreted, and contributes to the Generation of a Callus. We may therefore affirm, that Bones are not only increaſed to their juſt and ſtated Bulk, but alſo that they are nouriſhed till old Age, by a freſh Acceſſion of nutritive Matter through the Blood-veſſels: And this is the Reaſon why, by an Acceſſion of new Matter, the Teeth of Children, being gradually enlarged, at laſt appear without the Gums. The Teeth are continually nouriſhed and increaſed; otherwiſe they would ſoon be worn away by the Attrition requiſite in Maſtication. They are, therefore, increaſed in proportion as they are worn away by this Attrition. And, when the Teeth are wanting, or fall out, the Juice deſtin'd for their Nutrition is conveyed into the empty Socket, and fills it with a bony Subſtance, the Fleſh of the Gums being at the ſame time render'd harder, that it may, in ſome meaſure, ſupply the Place of the Teeth.

Having thus conſider'd the Generation and Nutrition of the Teeth, it now remains, that we explain in what manner they are poſſeſſed of Senſation, or a Power of Feeling. The Teeth, then, are veſted with this Power, not as they are bony Subſtances, for 'tis abſurd to aſcribe Senſation to Bones ſo hard, that they will ſcarcely yield to the Impreſſions of Fire or Steel, but becauſe, through the minute Pores of the Roots of each Tooth, which, in adult Perſons, are ſcarcely conſpicuous, particularly in the *Inciſores*, and the *Canini*, but ſufficiently obſervable in larger Animals, there are ſmall Nerves, ariſing from the fifth Pair, conveyed. Theſe ſmall Nerves, being wrapt up with the Blood-veſſels by means of a Membrane, run under the Teeth, and enter their Cavities. On account of theſe minute, but highly ſenſible nervous Ramifications, 'tis highly probable, that the Teeth are poſſeſſed of their ſenſitive Faculty. The all-wiſe Author of Nature knew, that, as the Teeth were naked and uncovered, they were frequently expoſed to various Accidents, Corroſions, and Fractures; for which Reaſon, that they might be longer nouriſhed and increaſed, he furniſhed them with Nerves appropriated for an Influx of the Spirits, and, conſequently, for their Accretion and Nutrition. The Nerves diſtributed through the ſuperior and inferior Jaw, and inſerted in the Teeth, ariſe from the fifth Pair; for this Nerve is diſtributed into various Ramifications, the principal of which are, the Ramus Ophthalmicus, which, entering the Orbit of the Eye, diſtributes its ſmall Ramifications to the Tunica Adnata, to the Glandula Lacrymalis, to the Eye-lids, to the Muſcles which draw the Noſe upwards, and to the Muſcles of the Forehead. The thicker and interior Branch of the Ramus Ophthalmicus, by paſſing through a particular Hole in the Orbit, and entering the Cranium, juſt by the Criſta Galli, penetrates the Dura Mater; and then emerging from the Cranium, and paſſing through a Hole in the Os Cribriforme, it enters the Noſe, and is diſtributed through its Membrane. Another maxillary Branch of the fifth Pair, through a third Hole, emerges from the Cranium, conſpicuous in ſeveral ſmall Ramifications; the firſt of which, after it has diſtributed Branches to the Maſſeter Muſcle, to the Fleſh of the Gums, and to the Roots of the Teeth of the upper Jaw, through ſmall Holes, ſufficiently conſpicuous in their poſterior Parts, enters a particular Sinus of the Bone, which conſtitutes the inferior Part of the Orbit: And, as ſoon as it emerges from the Perforation, lying under the Orbit, it is ſometimes divided into three, and ſometimes into four Ramifications, which diſtribute ſmall Branches to the Integuments of both Sides of the Face, to the ſuperior Lip, to the Muſcle which draws the inferior Part of the Noſe to one Side, as alſo to the internal Muſcle of the Noſe. Another Branch, running almoſt directly downwards about the poſterior Region of the Ducts, which go to the Fauces, is divided into two Branches; the ſuperior of which is diſtributed to the Membrana Pituitaria, which lines the internal Parts of the ſphenoidal, ethmoidal, frontal, and maxillary Sinuſes. The inferior Branch, emerging from a peculiar Perforation in the *Os Palati*, paſſes through the ſpongious Fleſh lying under the Oſſa Palati, where, in my Opinion, the ſmall nervous Ramifications enter the anterior Teeth of the ſuperior Jaw. The third maxillary Branch, commonly call'd the *Ramus Inferior*, or *Guſtatorius*, emerges through a fifth Foramen on both Sides, and is divided into three Ramifications; the firſt and interior of which is inſerted into both Sides of the Tongue, a little above its Root; and paſſes through the Middle of the Tongue, and the maxillary Glands. The ſecond Ramification enters a Sinus excavated in the Bone of the lower Jaw, where it ſends off ſeveral nervous Fibres, which penetrate the Roots of the Teeth; and, when this Nerve reaches the Root of the fifth of the *Dentes Molares*, it emerges through a Perforation in the anterior Part of the Jaw-bone, and is diſtributed to the Lip, and its Muſcles. The third Branch of this large Ramification enters the Parotid Glands, and terminates in them. From this Diſtribution, or Ramification, of the fifth Pair, we can eaſily account, why the Teeth ſhould, by Conſent, affect other Parts; and why Medicines, applied to the Noſe, the Temples, and poſterior Part of the inferior Jaw-bone, are of ſingular Efficacy in removing the Tooth-ach.

As to the Number, Bulk, Figure, and Office, of the Teeth, they are generally thirty-two in Number, ſixteen in each Row; but Women have only fourteen, for the moſt part. Nature has bountifully beſtowed on the human Species a large Number of Teeth, ſo diſpoſed, that in each Jaw-bone there

in a Row appointed for attenuating the Aliments, and preparing them for Chylification. Some are of Opinion, that the Length or Shortneſs of Life may be determined from the greater or ſmaller Number of the Teeth; for *Hippocrates*, long ago, obſerved, in the ſixth Section of the ſixth Book of his *Epidemics*, "That thoſe who were furniſh'd with a large Number "of Teeth, liv'd to a great Age:" And *Bartholine*, in his *Inſtitut. Anatomic.* uſes the following Words; "The Fewneſs "of the Teeth is a Sign both of a Penury of nutritive Mat-"ter, and a weak productive or forming Force; or it is the "Cauſe why the Aliments cannot be ſufficiently prepared, by "which means both the firſt and ſecond Concoctions are "vitiated." The Number of the Teeth is not only conſiderably large, but they are alſo ſeparate, that they may not, at the Time appointed for their Shedding, come out of their Sockets all at once, which would create an intolerable Pain. Beſides, by this Contrivance, it happens, that, when one ceaſes to perform its Office, it may be eaſily removed, without injuring the adjacent Teeth; which could not happen, if the Teeth conſiſted of one continued Bone; for, in this Caſe, if one Part of it was injured, the Diſorder would eaſily be communicated to the Whole. The Teeth, in Mankind, are of a middle Size. From their Figure and Office, they have different Names beſtowed upon them. The four anterior Teeth in each Row are call'd *Dentes Inciſores*. Theſe are broad and ſharp, that they may the more ſpeedily divide the Aliments in Maſtication. They are alſo call'd *Dentes Riſorii*, becauſe in laughing they are more diſcovered than the others. They are alſo call'd *Dentes Lactei*, becauſe they appear firſt. Theſe are ſucceeded by two in each Jaw, call'd the *Canini*, which lie next to the Inciſores, have a large Baſe, and a long Root. They are call'd *Canini*, becauſe in Shape they reſemble the correſpondent Teeth in Dogs. They are by ſome call'd *Dentes Oculares*, becauſe the pulling them out is generally thought to prove injurious to the Eyes. But Anatomiſts are not agreed with reſpect to the Cauſe of this Phenomenon. Some are of Opinion, that their large Roots are extended to the Orbit of the Eye; whereas they ſcarce reach to the lower Part of the Noſtrils. Others affirm, that the Nerve, which comes from the inferior Orbit of the Eye, and paſſes through the Perforation of the Jaw-bone, is in ſome meaſure propagated to theſe Teeth; which Opinion ſeems to be ſomewhat more probable; but, becauſe the *Dentes Canini* of the inferior Jaw receive no Portion of this Nerve, they cannot, for this Reaſon, be called *Oculares*. After theſe ariſe the five maxillary or grinding Teeth on each Side. Theſe have their Points rough, broad, and unequal, that they may ſufficiently triturate what is cut and broken by the *Inciſores* and *Canini*. Sometimes on both Sides there appear five of the Molares, and ſometimes only four; ſometimes four on the Left Side, and five on the Right; or five on the Left, and four on the Right; or four in the lower, and five in the upper Jaw: Which Difference is generally produced by the laſt Teeth, which are by ſome call'd *Genuini*; though *Cicero* call'd the *Molares* by that Name. Theſe are the Teeth which appear after Puberty, and the Uſe of Venery, ſometimes with intolerable Pain. Phyſicians, little adverting to this Circumſtance, either pull out other Teeth, or, imagining they are pain'd by a Peccancy of the Humours, order large Numbers of Medicines and Applications for removing the Pain; which, without creating any additional Pain, might be more effectually and ſpeedily done by a gentle Scarification of the Gums about the laſt Tooth, or even a ſlight Penetration of the Jaw-bone; As I myſelf have experienced, ſays *Veſalius*, when my thirty-ſecond Tooth began to grow out in the twenty-ſixth Year of my Age. As for the Colour of the Teeth, the whiter they are, ſo much the better, and the ſurer Sign of their Soundneſs. Their Whiteneſs is injured by Neglect, by old Age, and by Diſeaſes. *Verheyen*, in his Anatomy, affirms, that the yellow or black Colour of the Teeth is preternatural, and ordinarily produced by Corruption. The Teeth are generally pretty white till about the thirtieth Year of one's Age, after which they begin to aſſume a yelloviſh Colour, which is gradually heighten'd in proportion as the Perſon advances in Years. But the Teeth are never deprived of their white Colour, except by ſome preternatural Cauſe; and *Helmont* informs us, that Peoples Ages may be determined by the Colour of their Teeth. This Colour alſo varies according to different Climates. Thus, the Inhabitants of the Eaſtern Countries have whiter Teeth than thoſe of the more Northerly Climates. The *Egyptians* and *Ethiopians* excel all others in this reſpect: Of this *Helmont* takes notice, as alſo *Petrus Johannes Faber*; and *Proſper Alpinus*, in his Treatiſe *de Medicina Ægyptiorum*, informs us, that the Teeth of the *Egyptians* are always ſound and vigorous, free from Caries and Pain.

All the Teeth, without Exception, are ſo firmly fixed in their Sockets, like ſo many Wedges, by that Species of Articulation call'd *Gompheſis*, that they remain ſteady and immoveable in Maſtication. Beſides, the Teeth are not all fix'd into their Sockets by an equal Number of Roots; for the *Inciſores* are only ſecured by one. The *Canini* have alſo but one, which, however, is deeper than thoſe of the *Inciſores*, and larger in Proportion to the Strength of the *Canini*. And among the *Inciſorii*, the two in the Middle are ſecured by deeper Roots than the two lateral ones contiguous to the *Canini*, becauſe they are broader and larger. The *Dentes Molares* differ from each other with reſpect to their Roots. The ſuperior, and eſpecially the two poſterior, are ſometimes fixed with three Roots. But the inferior have only two, partly becauſe the Subſtance of the ſuperior Jaw is ſofter, and leſs compact, than that of the inferior; for which Reaſon, they could not be ſo ſecurely fixed by two, as by three Roots; and partly, becauſe the inferior preſs upon their Roots by their own Weight; whereas the ſuperior are pendulous, and conſequently require more Roots to ſecure them. The other *Dentes Molares*, ſucceeding the *Dens Caninus*, in the upper Jaw, have two Roots, and thoſe in the inferior only one. Beſides, 'tis to be obſerv'd, that the Teeth of Children are only furniſhed with imperfect, ſoft, and, as it were, medullary Roots. Hence they are generally looſe, eſpecially the Inciſores, which may be pulled out with one's Nails, or by a Piece of Thread twiſted about them. It is alſo to be obſerved, that the Roots of the Teeth are internally ſurrounded with membranous and nervous Ligaments, by which the Teeth are firmly ſecured in their Sockets; and externally the Teeth are encompaſſed by the Subſtance of the Gums, which are a kind of hard Fleſh, conſiſting of ſmall fibrous Laminæ plac'd cloſe to each other, and intermix'd with a large Number of Blood-veſſels; for which Reaſon they are intenſely red. They are, beſides, liberally furniſhed with ſlender Membranes, Glands, and Ramifications of Nerves: Hence they derive their Power of Senſation, and are obſerved to be moiſten'd with a due Humidity. This Fleſh ſurrounds the Teeth like a Rampart, and fortifies them as Muſcles do. Hence, when it is either eat away, or become preternaturally flaccid, the Teeth generally become looſe, or drop out. But the Membrane which ſurrounds the Roots of the Teeth, and that Part of them which is cover'd, as *Clopton Havers*, in his Oſteology, juſtly obſerves, is not a Continuation of the maxillary Perioſteum, but rather a Propagation of that Membrane which is contiguous to the Gums, and is common to the whole Mouth, which is really glandular, and which does not terminate with the Gums, but, as ſoon as it arrives at their Margins, is intorted and reflected betwixt the Inſide of the Gum and the Tooth: But it deſcends into the Sockets, and adheres immediately to thoſe Parts of the Teeth, which are lodg'd in them. From the Root of ſome Teeth, eſpecially thoſe in the upper Jaw, together with this Membrane, there is ſomething of a hard and fleſhy Nature communicated to the Subſtance of the Gums, by which the Teeth are the more ſecurely fixed in their Sockets. And, though the Teeth themſelves do not partake of the common Perioſteum, yet their Sockets are furniſh'd with it, and it ſo coaleſces and unites with the Membrane which covers the Teeth, that they ſeem to form but one and the ſame Body.

But 'tis neceſſary to obſerve ſtill ſomething more with reſpect to the Uſe of the Teeth. We took notice, above, that they contributed not only to the Maſtication of the Aliments, but alſo to the Formation of the Voice. But their principal Uſe is Maſtication, or the inciding, breaking, and dividing the ſolid Aliments, to which all the Teeth are requiſite; and, for this Reaſon, they have always been eſteem'd highly valuable Parts of the Body. *Moebius*, in his *Fundament. Med. Cap.* 9. beautifully ſhews, that God, under the *Moſaic* Diſpenſation, not only ordered the Servants who had their Teeth broken or beat out by their Maſters, to be manumitted, and ſet at Liberty, but alſo that the Antients, in the Temple of *Apollo*, ſuſpended a leaden Inſtrument for drawing Teeth; intimating, that the Teeth were never to be pulled out, except they were ſo looſe and carious, that they would yield to a leaden Inſtrument.

The *Turks*, in like manner, according to *Menavius*, in *Lib.* 3. *Cap.* 22. durſt never attempt the Extraction of a Tooth, till they had firſt obtain'd the Sovereign's Licence. The ſecondary and leſs immediate Uſe of the Teeth, is the Articulation of the Voice, ſince they are wiſely placed as a kind of Rampart to the Tongue, and refluent Air. Hence Infants, who have as yet got no Teeth, utter indiſtinct and inarticulate Sounds; thoſe who have two or three, liſp out broken Words; and ſuch as are furniſh'd with more, ſpeak with proportionably more Diſtinctneſs; and Adults, who have loſt ſome of their Teeth, have their Voice and Speech injur'd by that unlucky Circumſtance. Beſides theſe two Uſes, the Teeth alſo contribute to Ornament; for the Face is conſiderably deform'd, when the fore Teeth are wanting. Hence ſome Inhabitants of the *Eaſt Indies* act a fooliſh Part, who, for the ſake of additional Graces, pull out their fore Teeth, as we learn from *Hieronymus Benzo*. Black and carious Teeth are alſo accounted a Deformity.

Having thus conſider'd the Teeth in their natural State, and inquired into their Subſtance; the Manner of their Generation;

tion; the Methods in which they are nouriſh'd; whence they derive their Power of Senſation; and by what means they are ſecured in their reſpective Sockets; we are the more eaſily enabled to diſcover the Indiſpoſitions and Misfortunes to which they are ſubject, and to remove their Cauſes, whether direct and immediate, or of the more remote and ſecondary Kind.

But, becauſe we at preſent intend to take an accurate Survey of the Pathology of the Teeth, we ſhall divide the Diſorders, incident to them, into ſuch as are accompanied with Pain; ſuch as are free from it; ſuch as proceed from a depraved Nutrition; or from a Weakneſs and Fault of the Nerves, Ligaments, and Gums, contiguous to the Teeth. But we ſhall firſt conſider that moſt general Diſorder ariſing from the Subſtance of the Teeth; which is, a Caries or Corroſion. This is often ſucceeded, not only by a violent Pain and Mutilation, but alſo frequently by a putrid Stench, a Production of Vermin, and a Generation of Fiſtulas. A Caries of the Teeth draws its Origin principally from an internal Cauſe, whilſt the gelatinous Mucus, which fills the Cavity of the Teeth, by means of an impure ſcorbutic Lymph, is impregnated with a corroding and ſaltiſh Acrimony. Hence the adjacent Fleſh is, by the impure ſaline Lymph, deſtroy'd, corroded, and filled with ſmall Ulcers. The Tooth itſelf alſo, in conſequence of its peccant Nouriſhment, is ſoften'd, corroded, and gradually deſtroyed. But that all the Teeth do not ſuffer in this reſpect from the corrupted Lymph, ſeems to be owing to a Weakneſs of the Veſſels, of which particular Teeth conſiſt, or to ſome external Cauſe, which does not act upon ſuch as remain ſound; for a Caries generally begins on the external Side of the Teeth, by a ſmall black Speck or Hole, eſpecially in the maxillary Teeth, which are broad, and which, in Proceſs of Time, when the cortical Subſtance is removed, acquire Cavities in the Middle, in which ſome Parts of the Aliments remaining, and becoming acrid by their Continuance, by their putrid inteſtine Motion, eaſily excavate, and diſſolve the bony Subſtance of the Teeth. But as ſoon as, in any Part, there is a Cavity, or empty Space, form'd, there is forthwith a larger Influx and Acceſſion of Moiſture invited to it from the internal Parts; by which means the Tooth is gradually conſumed, and falls off by Bits. This Misfortune happens to the fore Teeth, without any previous Excavation; for the carious Portions, not finding a free Diſcharge, like ſo many Wedges, forthwith burſt their Sides.

When the Sanies of a carious Tooth cannot be freely enough diſcharged thro' a narrow Perforation, but is lodged near the Roots, and attacks the Sockets and Jaw-bones themſelves, a Fiſtula is produced; though, at the ſame time, this Misfortune does not always draw its Origin from the carious Tooth, but more frequently begins in the Jaw-bone, terminates in the Tooth, and renders it carious. *Zwingerus*, in *M. N. C. Dec.* 2. *a.* 7. *Obſ.* 233. gives us an Account of ſuch a Fiſtula produced by a carious Tooth; and the Fiſtula, in its Turn, render'd ſeveral Teeth carious. When the Teeth are excavated, a highly fetid Stench ſucceeds; and this proceeds from the cadaverous Sanies of the carious Tooth, which again draws its Origin from the Remains of the Aliments contracting a putrid Quality in the Cavity; for the ſalino-ſulphureous Sanies of the Tooth, in conſequence of its violent inteſtine Motion, acts upon the Remains of the Aliments, by diſſolving the Union of their component Parts. Hence a Putrefaction is produced, which is nothing but a Diſſolution of the Elements, or conſtituent Principles, of Bodies, by means of a violent inteſtine Motion; and this inteſtine Motion is always accompanied with a fetid Stench, ariſing from the Evaporation and Flying off of the minute ſalino-ſulphureous Particles. When ſuch a fetid Putrefaction of the Teeth happens, Vermin are generally obſerv'd to be produced; for nothing more directly and immediately contributes to the Production of theſe, than an inteſtine putredinous Motion, which actuates the Seeds of theſe Inſects, vivifies them, nouriſhes them, and, by its expanſive Force, ſoon excludes them. Now, as there is no Part of the human Body, in which Worms may not be generated, as we may ſee in *Foreſtus*, *Lib.* 14. and in other Authors, ſo there is no Reaſon to doubt of the Poſſibility of their being form'd in the Teeth, ſince we daily eat Aliments contaminated with the Seed of ſome Worms or Inſects. This is alſo confirm'd by Experience, ſince, upon breaking carious Teeth when extracted, Worms have been taken from them.

From a peccant Nouriſhment proceed thoſe Concretions about the Teeth and Gums, which are commonly call'd the Tartar of the Teeth. *Helmont* is of Opinion, that the Gums ſupply the Teeth with Nouriſhment; and that, when this nutritive Juice is become excrementitious, and diſcharged from the injured Gums, it indurates about the Teeth, and aſſumes a Degree of Hardneſs almoſt equal to their own. But, in my Opinion, the tartareous Matter, adhering to the Teeth, is produced partly from the Saliva impregnated with terreſtrial, tartareous, and viſcid Parts, and partly from the impure tartareous Lymph of the Gums, which, by continually moiſtening the Teeth, gradually adds viſcid and tartareous Particles to them. This Tartar, in conſequence of its Acrimony, gradually conſumes the Subſtance of the Teeth, induces a Blackneſs, and ſometimes a Caries. This tartareous Subſtance is inſtantaneouſly reſolv'd by being rubbed with Spirit of Salt, which is a Proof, that it conſiſts of an alcaline Earth. This Diſorder is generally moſt incident to Infants, and Children, who feed upon viſcid Preparations of Milk and Sweet-meats, as alſo to ſcorbutic, arthritic, nephritic, and hypochondriac Patients; becauſe their Serum abounds with impure, terreſtrial, and tartareous Parts. For this Reaſon, I think, Phyſicians ought carefully to inſpect the Teeth, becauſe, by their State, that of the Serum and Lymph are moſt ſatisfactorily diſcovered.

We now come to conſider thoſe Diſorders of the Teeth, which proceed from any Fault or Weakneſs of the Nerves: And the firſt of theſe we ſhall mention, is that ſevere Pain perceived not only in the Subſtance of the Teeth, but alſo in the Gums, and adjacent Parts, and ſometimes thro' the entire Jaw-bone; for 'tis ſufficiently known from phyſiological Obſervations, that a ſlender Membrane, furniſhed with an exquiſite Power of Senſation, is diſperſed through the Cavities of the Teeth; as alſo, that the Gums, the Sockets, and the Roots of the Teeth, are immediately ſurrounded by a nervous Coat. When therefore the Sanies of a carious Tooth preys upon the membranous Fibres contained in the medullary Subſtance of the Tooth, a moſt intenſe Pain is excited. Hence we find, from daily Experience, that a Tooth-ach is rarely excited, unleſs when the Teeth are carious; for the Humours conveyed to the Jaw-bones act principally upon thoſe Teeth, which are carious or corroded. Sometimes, whilſt the Teeth are ſound and entire, this Pain appears with a Redneſs and Swelling of the Parts, a Pulſation of the ſmall Arteries, a Redneſs of the Face, a continual Driveling of the Saliva, a preternatural Heat, a feveriſh Commotion of the Blood, and a continual Watching; all which Symptoms diſcover a ſort of arthritic Diſpoſition of the Teeth, and an Inflammation of the adjacent Parts. This Diſorder moſt frequently ſeizes plethoric and ſcorbutic Patients, Women whoſe Menſes are obſtructed, and Men whoſe accuſtomed Diſcharges of Blood from the hæmorrhoidal Veins are ſuppreſſed, as alſo thoſe who neglect Veneſection at the ſtated Time they have been uſed to it. Hence pregnant Women, on account of their plethoric State, with which a Cacochymia is often join'd, are highly obnoxious to this Diſorder; for it is produced by a Defluxion of acrid Humours ſtagnating about the Roots, the Gums, and Membranes of the Teeth. It is ſometimes accompanied with an Eryſipelas, which affects the external Integuments of the Face, the ſubjacent Muſcles, and the Parotid Glands, and is accompanied with a Pain of the Teeth; becauſe, by a ſpaſmodic Conſtruction of the Parts, it draws their Nerves into Conſent. Beſides, 'tis well known, that the Antients diſtinguiſhed Tooth-achs into ſuch as proceeded from a hot, and ſuch as aroſe from a cold Cauſe; which Diſtinction, when rightly explained, may be ſafely admitted. The Tooth-ach, ariſing from a hot Cauſe, is that, which is accompanied with intenſe and preternatural Heat in ſanguine, plethoric, and choleric Patients, or ſuch as are in the Vigour of Youth or Manhood, which ſeizes with a violent Fever, and other terrible Symptoms, ſuch as a Redneſs of the Face, and a turgid State of the Veſſels. A Tooth-ach, on the contrary, may be ſaid to proceed from a cold Cauſe, when it attacks Perſons of cachectic Habits, Patients abounding with Serum, old Men and Women, and is accompanied with a Paleneſs of the Countenance, a Weakneſs of the Pulſe, and œdematous Swelling of the Parts. And in general we are to obſerve, that, when a Tooth-ach proceeds from a hot Cauſe, the Pain is very intenſe, but not durable; whereas, when it proceeds from a cold Cauſe, the Pain is generally leſs intenſe, tho' more laſting. We muſt alſo obſerve, that a Tooth-ach, proceeding from a carious Tooth, is more conſtant than the other Kinds, tho' it may be aggravated by many Accidents both external and internal. But that Species of the Diſorder, which is of the inflammatory Kind, proceeds from a Defluxion of acrid and viſcid Humours, and generally ſeizes arthritic, rheumatic, hypochondriac, and plethoric Patients, and ſuch as have their accuſtomed Diſcharges of Blood from the Noſe obſtructed, accompanied with a feveriſh Horror, a heavy Pain of the Head, a Weakneſs of the Body, and a Diſtention of the Face, and that at certain Periods, and is terminated at ſtated Times. This Species of the Diſorder, with reſpect to its ſeizing the Patient, its Cauſes, its Symptoms, and its Method of Cure, has ſomething analogous to the Eryſipelas, the Gout, arthritic Diſorders, and the Rheumatiſm; for, in all theſe, there is an inflammatory Congeſtion of Serum or Blood, accompanied with ſpaſmodic Pains, Swelling, Redneſs, Heat, and Pulſation; and this Congeſtion requires a due Diſſipation and Reſolution.

Nor muſt we forget that Species of Tooth-ach ariſing from the Eruption of Teeth in Infants and Children, eſpecially when the *Dentes Canini*, which are harder and ſharper than the other Teeth, force their Paſſage through the Fleſh of the Gums; for theſe, in making their Appearance, more ſeverely afflict the tender Patients, becauſe they act with greater Sharpneſs upon the

Gums than the *Molares*, which are larger, and more obtuſe. The ſole Cauſe of the Pain is the Breaking, Tearing, and Irritation of the Fleſh of the Gums, which is compoſed of various Fibres, Nerves, and Membranes. From this Irritation the Pain proceeds; and from the Pain, which is always accompanied with Spaſms, and an impetuous Commotion of the animal Spirits through the whole nervous Syſtem, ariſe thoſe tormenting and ſevere Symptoms generally incident to Children during Dentition, and which are, by *Hippocrates*, enumerated in the twenty-fifth Aphoriſm of his third Section, in the following Words: "When Children begin to breed Teeth, they are "afflicted with Itchings and pricking Pains of the Gums, "Fevers, Convulſions, and Fluxes of the Belly, eſpecially "when they breed their Canine Teeth. But theſe Symptoms "moſt remarkably afflict Children, that are groſs, fat, and "coſtive." To theſe are alſo frequently added Watchings, Vomitings, frequent Diſcharges of the Saliva, Aſthmas, and Coughs; and generally theſe Symptoms, as alſo the Convulſions, are more violent, the greater the Diſpoſition is to them from the Birth. A ſickly or pregnant Nurſe, Milk coagulated in the Stomach, or tending to an acid and ſordid Putrefaction, hot Gruels, an Admiſſion of cold Air, the ſudden Diſappearance of Ulcers or exanthematous Efflorescences in the Head, or any other Parts, and the Preſence of Worms in the Inteſtines, give alſo frequent Occaſions to the Exaſperation of theſe Diſorders of the Teeth.

We now come to conſider thoſe Diſorders of the Teeth, which ariſe from any Fault or Reſolution of the Nerves, and a lax or flaccid State of the Ligaments. The firſt of theſe we ſhall mention, is what we commonly call Inſtability of the Teeth: Now, Teeth may be looſe, either in conſequence of ſome Fault of their own, or ſome Imperfection in the Gums. With reſpect to the former, the direct and immediate Cauſe of their Looſeneſs is the Laxity, the Flaccidity, the Corroſion, and Rupture, of their proper Ligaments. With reſpect to the latter, the Gums may be in the Fault, either when they are entirely relaxed, and eaten away, or only in part thus affected, attended with a Diſcharge either of pure, or, as it frequently happens, putrid and corrupted Blood.

The Ligaments of the Teeth are rendered lax and flaccid, firſt, by means of Narcotics, Opiates, Ointment of Henbane, and other Subſtances of the like Qualities; an Inſtance of which we have in *M. N. C. Dec.* 2. *an.* 2. Secondly, by external Violence, ſuch as Falls, Blows, the ſtrong Application of hard Bodies, and Filips; and this is ſo much the more dangerous in the Fore-teeth, becauſe, on account of their ſingle Root, they are eaſily looſened; and the *Inciſores*, in a particular manner, are not deep fixed in their Sockets. To this external Violence belongs the Biting of hard Subſtances, ſuch as the Cracking the Stones of Cherries and Prunes between the Teeth. Thirdly, the Ligaments of the Teeth may be rendered lax and flaccid by Convulſions; for Inſtance, in thoſe Shatterings and Colliſions of the Teeth, to which Children are ſubject. Fourthly, the Ligaments of the Teeth may be rendered lax and flaccid from a Defect of Nouriſhment in Perſons recovering from a Diſorder, and ſometimes in old People. Theſe Ligaments of the Teeth may be alſo corroded and mortified by any thing of an acrid and corroſive Nature, whether Tartar, a Caries, a Scurvy, or the Remains of Mercury. Thus *Euſtachius*, in his Treatiſe *de Dentibus*, informs us, that he often found, in the Sockets of the Teeth, ſuch a large Collection of tartareous Matter, ariſing from Defluxions to which they are ſubject, which *Ettmuller* takes for Tophs of the Teeth, that it rendered the Ligaments lax, and at laſt thruſt out the Teeth. In a legitimate Scurvy, a foreign and adventitious Acrimony, convey'd from the corroded Gums to the Roots and Ligaments, alſo induces this Corroſion. Mercury is highly prejudicial to a firm and fixed State of the Teeth; for this Subſtance, where-ever it finds Pores, which, on account of its Subtilty, it will do in very compact Bodies, inſinuates itſelf into them, and begins to act as a Corroſive; for which Reaſon it is principally injurious to the Nerves and Ligaments. This ſeems to be confirm'd by an Obſervation made by Mr. *Boyle*, in the ſixth Chapter of his Treatiſe *de Poris*; where we are told, that this Author, after a mercurial Unction, found a ſmall Drop of Mercury in the Socket of a Tooth, which was the Occaſion of its falling out. The ſame Effect is alſo produced by coſmetic Waters impregnated with Mercury; Inſtances of which occur in *Foreſtus* and *Ettmuller*. By external Violence, if not all, yet, at leaſt, ſo many of the Ligaments may be broken, that the Tooth may only remain ſlightly fixed in its Socket; and this Effect may be produced, either by Attempts to extract the Tooth, or by a Blow, or by a Fall. As for the Gums, their Tone is generally weakened, either when the Tooth-ach ceaſes, becauſe, being before inflam'd, they were, of courſe, turgid; for all inflam'd Fleſh afterwards becomes flaccid; or after a Salivation, the Gums not being previouſly ruptur'd, but only rendered lax. A Solution of the Unity of the Gums is produced in a ſimple Diſcharge of Blood, if the Saliva is impregnated with an acrid Taint, either of the ſimple or ſcorbutic Kind, which raiſes their Fleſh into a ſpongious Kind of Tumor. Hence the Gums, when gently touched, are broken, and diſcharge Blood. From what has been ſaid, we may eaſily account, both for the Falling out, and the Want or Defect, of the Teeth. They fall out, either in conſequence of their being exceſſively looſe, or by the violent Application of ſome external Cauſe. But a Defect of the Teeth is, when, in conſequence of Age, freſh ones do not ſucceed thoſe, which are fallen out.

We now come to conſider that Diſorder of the Teeth, commonly call'd a *Stupor*; which is a certain kind of Pain, in which the Membrane ſurrounding the Teeth is, in ſome meaſure, deprived of Senſation. This is principally produced, either by taking ſome acid and auſtere Subſtance, or by throwing up, by Vomit, a Subſtance of the like Nature. Hence this Diſorder is much incident to thoſe hypochondriac Patients, whoſe Diſorder draws its Origin from an acid and auſtere Principle. As for a Chattering or Colliſion of the Teeth, it is a peculiar kind of Convulſion, ariſing from a reciprocal ſpaſmodic Conſtriction of thoſe Muſcles, which are ſubſervient to the Opening and Shutting of the Jaws; for theſe Muſcles, when affected with ſuch a Convulſion, induce ſuch a Colliſion of the Teeth. The Cauſes of this Symptom are, whatever Things may contribute to produce Convulſions; intenſe Cold, for Inſtance, Pains produc'd by Worms, or a difficult Dentition, and a Suppreſſion of the Menſes.

Having now conſidered the various Diſorders of the Teeth, and inveſtigated their ſeveral Cauſes, it remains, that we point out the moſt proper Methods of curing each of them, and ſpecify the ſeveral Remedies beſt calculated for removing their Cauſes. The firſt then we ſhall take under our Conſideration, is a Caries of the Teeth, or a Deſtruction and Corruption of them by a ſanious Matter. In treating this Diſorder, we are to obſerve, that a Caries, a Corruption, or Mortification, of the Teeth can by no means be repaired; for what is corrupted and mortified, as we obſerve in a Sphacelus, can by no Art be reſtored to a ſound and live State; for what a ſphacelous Putrefaction and Corruption is in Fleſh, or the muſcular Parts of the Body, the ſame is a Caries or Rottenneſs in the Bones. We are, however, in the Beginning, to uſe our utmoſt Efforts to hinder this Diſorder, which is at firſt pretty gentle, and confined to a narrow Space, from ſpreading the Contagion through the Whole of the Tooth; for, when a Caries once begins in a Tooth, by means of the Putrefaction, which quickly ſpreads itſelf, eſpecially if a free Acceſs is given to the Air, that heavy and penetrating Body, which is continually in an inteſtine Motion, it does not ſtop, till it has conſumed the entire Tooth. 'Tis, beſides, obſerveable, that a Caries, after having conſum'd one Tooth, ſometimes attacks the next to it. To this ſpreading Corruption a Stop is, therefore, to be ſpeedily put. But all thoſe Subſtances generally uſed with Succeſs againſt a Caries of the other Bones, ſuch as Euphorbium, Camphire, Oil of Scurvy-graſs, and Cloves, are found ineffectual for this Purpoſe, partly becauſe they cannot be commodiouſly applied, and partly becauſe their Virtues are impaired by an Acceſſion of the Aliments, and a continual Admixture of the Saliva. The moſt effectual Remedy I have found for preſerving a Tooth, which is already excavated, and affected with a beginning Caries, is, to prepare ſmall Portions of Lead, which exactly fit the Cavity, and carefully to thruſt them into it. By this Method, I knew a Tooth preſerved entire and ſound for many Years; for, by the Lead, the Remains of the Aliment are hindered from entering the Cavity of the Tooth, where they degenerate into a fetid and putrid Subſtance, which not only farther preys upon the Subſtance of the Tooth, but alſo fills the whole Cavity of the Mouth with a noiſome Smell. Beſides, this Lead, by its alcaline Subſtance, temperates, corrects, and changes the cadaverous, acid, and acrid Sanies lodged in the Parts. In a Word, the Lead not only totally deſtroys the ulcerous Ferment, but, which is another conſiderable Advantage, prevents the free Acceſs of the Air.

It is well known to Phyſicians, that none are afflicted with more ſevere and terrible Diſorders of the Teeth, than thoſe, who have the Misfortune to have them corroded and excavated; for ſince, by this means, a free Paſſage into them is already open, the Defluxion of acrid Serum more readily enters them, and, by irritating the nervous Membrane, which lines their Cavity, excites the moſt cruel Pains. To prevent the Pain of ſuch a carious Tooth for the future, apply the actual Cautery, and, by its means, burn the internal nervous Membrane, which imparts Senſation to the Tooth. This Operation is performed without either Pain or Danger, with an Inſtrument made on purpoſe, as I myſelf, ſays *Hoffman*, and ſeveral others, on whom I have performed the Operation, can atteſt. After this, the Peace of Lead before-mentioned is to be thruſt into the Cavity. *Foreſtus*, in his fourteenth Book, orders the Application of the actual Cautery thro' a Cannula, and defends the adjacent Teeth with Wax, or ſome other ſuch Subſtance. *Scultetus*, in his *Armament. Chirurg.* deſcribes an Inſtrument adapted to this Uſe. We are to obſerve in general, that, in this Caſe, the actual Cautery is preferable to all thoſe of the potential Kind, ſuch as Oil of Vitriol, Aqua-fortis, and the Caput Mortuum

tuum of Vitriol; for these destroy the Texture of the Teeth, and injure the Fauces; whereas the actual Cautery, by drying up the superfluous Humidity of the Tooth, and at the same time extinguishing the Ferment, produces two happy Effects at once.

As for the Extraction of the Teeth, we affirm, that it is sometimes not beneficial or necessary, sometimes highly dangerous, and sometimes absolutely necessary. Extraction then is of no manner of Service, when an Inflammation and Exulceration possess not only the Tooth and Gum, but all the adjacent Parts, in consequence of a Congestion of impure Humours; for when no Fault is to be discovered in the Tooth itself, then the Pain is by no means to be removed by Extraction. Nor is Extraction necessary in a Tooth-ach arising from a carious Tooth; because, as we have already observed, the Tooth may be preserved, and the Spreading of the Caries, together with the Pain arising from it, prevented, by a due Application of the actual Cautery. The Extraction of the *Dentes Canini* is a dangerous Operation; because they have a pretty long and broad Root, in which there is a Portion of that Nerve, which arises from the Perforation of the Orbit. Hence acute or inflammatory Pains of the Eyes, together with Head-achs, may be produced. This is confirm'd by a memorable Observation of *Highmore*'s, in his *Disquisitiones Anatomicæ*, *Cap.* 2. Besides, the Extraction of Teeth deep-seated in their Sockets, especially in plethoric and scorbutic Patients, in Women whose Menses are about to flow, or in Patients labouring under a burning Fever, may be attended with large Hæmorrhages, which sometimes terminate in Death. Instances of this occur in *Highmore*, *Hollerius*, *Platerus*, and *Rousſetier*. Neither is a Tooth to be extracted at the time a Patient labours under a violent Head-ach, or too large a Congestion of Blood to the Head; because then all the Parts being irritated, the Extraction of a Tooth must, of course, bring on the most formidable Symptoms. When a violent Hæmorrhage succeeds the Extraction of a Tooth, the *Caput Mortuum* of Vitriol must be applied. The Extraction also of the *Dentes Molares* is attended with considerable Danger, especially of the last but one, and third Tooth of the upper Jaw, not only because they are fix'd with three Fangs or Roots, and consequently capable of doing more Injury to the Flesh of the Gums, but also because, in extracting them, the Jaw-bone is easily shattered. For the Illustration and Confirmation of this, I shall present the Reader with the following Case: Some time ago, a Gentlewoman applying to me, says *Hoffman*, complained of a Fistula in that Part of her upper Jaw, in which the last Tooth but one had been fix'd, and which, on account of the Violence of the Pain with which she was afflicted, had been extracted about a Year before. From the very Time of the Extraction, the Patient told me, that she observed the Cavity, from which it was taken, was not consolidated; but that, from it, she had a perpetual Discharge of serous Matter into her Mouth. This Cavity received a Probe three Inches long; and when, for the sake of Consolidation, *Peruvian* Balsam, or any other Remedy of a penetrating Flavour, was applied to it, the Patient perceived it in her Nostrils, just as if it had been put into them externally. She also observed, that, when the Matter was not freely discharged from her Nose, the Effusion of serous Matter from this Cavity was increased; and, on the contrary, when the mucous Matter did not flow liberally from the Cavity, it was freely and copiously discharged from her Nostrils. She consulted the most celebrated Physicians and Surgeons of several Cities, who unanimously agreed, that the Disorder was a Fistula; and accordingly prescribed the Use of hot Baths, drying Decoctions prepared of proper Woods and Roots, as also Purgatives. Externally they also applied balsamic, vulnerary, and astringent Medicines, but without any happy Effect. The Surgeons were of Opinion, that an Incision should be made; but I cannot possibly comprehend which way they must have gone to Work. Whilst she was recounting these Circumstances, and imploring my Assistance for her Relief, I concluded, that it was not a Fistula; but that, by the violent Extraction of the Tooth, her upper Jaw-bone had been injur'd; and that the memorable Cavity, so accurately described by *Highmore*, which is furnished with a pretty strong pituitary Coat for the Secretion of the Mucus, and which communicates with the Nostrils, had been open'd. The Gentlewoman herself confirm'd me in my Opinion, when she told me, that there adher'd to the Root of the extracted Tooth a large Quantity of a solid Matter, resembling a Pumice-stone. I forthwith shew'd the Patient, in a Scull I had by me, how slender the Substance of the Bottom of the Socket, in which the last Tooth but one is fixed, was near that Sinus; in which manner, when this Substance was injured, the Probe might be introduc'd to the Orbit of the Eye; and how the Sinus itself terminated in the Nostrils. I therefore concluded, that a perfect Cure was impracticable, especially in a Woman pretty far advanced in Years; and that neither any Chirurgical Operation could be perform'd, nor any internal Medicine applied: For this Reason I only ordered, that the Cavity should be stopt with a Piece of Lead, left the Air, having a free Access to the Sinus, should produce a greater Putrefaction and Corruption. Besides, I order'd her, at certain times, to draw up a proper Quantity of Balsamum Vitæ into her Nostrils; by following which Method she enjoys a good State of Health, and is free from all the Inconveniencies which before attended her Disorder.

But the Extraction of the Tooth is necessary in Fistulas, whether they draw their Origin from the Rupture of an inflammatory Tumor of the Gums and Jaw, producing a Caries of the Tooth, or from not extracting, in due time, a putrid and carious Tooth, since, by Extraction alone, a free Discharge is procured for the sanious Matter. 'Tis absolutely necessary the Matter should be discharged in this Manner, since, by stagnating, it acquires a higher Degree of Acrimony, and a more corrosive Quality. It sometimes happens, that the Callus is extracted along with the Tooth, and a Discharge of Blood from the Fistula ensues; in which Case the Cure succeeds happily, as we find in *Semertus*, *Lib.* 2. *Prax. Part* 1. *Forestus* also furnishes us with the Histories of several Fistulas, which have been cured: Thus, for Instance, in *Lib.* 14. *Obs.* 17. he describes two Fistulas of the Gums arising from carious Teeth. In the fifteenth Observation of the same Book he describes one arising from an Inflammation of the Gums, which render'd the Teeth carious; and, in the seventh Observation, he describes one of the external Parts, the virulent Matter of which was discharged on the Patient's Beard.

When carious and putrid Teeth afford a Lodging for Worms, an aking and corroding Pain is perceiv'd, and little or no Discharge of the Saliva is observ'd, as the learned *Forestus*, in the fourteenth Book of his *Observations*, takes notice. A Tooth-ach, arising from Worms, is with Difficulty cured and overcome; for it generally does not yield to the common Specifics used in other Tooth-achs. Such Medicines are, therefore, to be call'd in to our Assistance, as have the most immediate and direct Tendency to destroy Worms. For answering this Intention, *Forestus* highly extols a Decoction of Coloquintida, Pills prepared of Myrrh and Aloes, as also Worm-powders. Some, for driving out the Worms, recommend the Smoke of Henbane; but *Hagendornius*, in his *Hist. Medic.* sufficiently shews the Disadvantages attending such a Fumigation. The Smoak of Savin may be much more safely used for this Purpose. *Clauderus*, in *M. N. C. Dec.* 2. *an.* 5. orders the Extraction of the Tooth; but we are never to have recourse to this severe Remedy, except in Cases of absolute Necessity. But the tartareous and tophaceous Matter, produc'd by the Scurvy and an impure Lymph, and firmly adhering to the Teeth, is most commodiously removed by a Chirurgical Operation, performed by Instruments of Steel made for this very Purpose; for this tartareous Matter is to be abraded and removed, left it should produce a Caries, a fetid Taste in the Mouth, an unseemly Blackness, or Worms. If it adheres only gently to the Teeth, Powders of the Bone of Cuttle-fish, of calcin'd Hartshorn, calcin'd Egg-shells, vitriolated Tartar, Florentine Orris, and Musk, may be recommended for whitening the Teeth, and cleansing them from the corrosive tartareous Matter. Spirit of Vitriol also, corrected by the Syrups of Scurvy-grass and Violets, is no contemptible Medicine for removing the Tartar adhering to the Teeth; but, at the same time, it must be cautiously and prudently used, left the bony Substance of the Tooth should be corroded also by it.

We now come to consider that inflammatory Pain arising from a Defluxion either of Blood, or rather of an acrid Serum, with which the Teeth are often seized in a very severe and tormenting Manner. In Cases of this Nature we recommend all those Methods proper to be used in other Inflammations; but, above all, the Matter lodged in the affected Part is to be discussed by a gentle Diaphoresis; and the intense Pains, which sometimes produce Fevers, continual Watchings, intolerable Head-achs, and even Convulsions, are to be soothed and alleviated by Medicines of a gently anodyne and nervous Nature. When the Body is plethoric, or when any usual Evacuation of Blood is suppressed, Blood is to be taken either from the Veins of the Arm, or from the Venæ Raminæ under the Tongue. Thus *Thonerus*, in the eleventh Chapter of his *Observations*, informs us, that he freed a Woman of a plethoric Habit from a most severe Tooth-ach by a liberal Venesection at the Ancle. After these Measures are taken, 'tis expedient to use Diaphoretics mixed with Anodynes, such as the Diascordium, the Rob of Elder, Camphire, Nitre, the Theriaca Coelestis, the Essence of Scordium, Elder-flower-water, the Bezoardic Tincture, the Mixtura Simplex, the Essence of Castor, Anodynes, and Cinnabar, which may be exhibited in various Forms, and their Use continued, till a gentle Diaphoresis and Discussion of the peccant Matter are produc'd, since these, at the same time, prevent the Increase of the Fever. But Patients of this Kind must carefully abstain from a violently sudorific Regimen, since, by throwing the Blood into strong Commotions, it not only increases the Thirst, the Pain, and other Symptoms, but also speedily destroys the Strength of the Patient. In order to dissipate the Tumor, and remove the Pain, Bags prepared of the discutient Species, Sal volatile oleosum, and mild Preparations of Sulphur,

are to be apply'd warm externally. The Ingredients proper for this Purpoſe are, the Flowers of common and *Roman* Chamomile, thoſe of Elder, Melilot, and the wild Poppy; the Herbs Carduus Benedictus, Chervil, Hyſſop, and Clary; the Seeds of Aniſe, Caraway, and Dill; Juniper-berries, Camphire, Saffron, Amber, Bean-meal, common Salt, and Nitre; which are all poſſeſſed of a powerfully reſolvent and diſcutient Quality. Beſides, the Patient is carefully to abſtain from every cold Subſtance, whether fluid, or of a dry and more firm Conſiſtence. When the Pain is highly intenſe, we are to exhibit internally, eſpecially towards Night, the *Pilulæ Wildeganſii*, and the *Pilulæ Matthæi*, which conſiſt of Opium for their Baſis, excellently corrected by other Ingredients of a diaphoretic and purgative Nature. During the Paroxyſm, and when the Pain is very intenſe, I have, ſays *F. Hoffman*, often obſerved a few Drops of camphorated Spirit of Wine, or of my Balſam of Life, drawn up the Noſe, to afford immediate Eaſe; which, however, does not laſt for any conſiderable Time. This Effect ſeems to be owing to this, that the Ramification of the Nerve diſtributed to the Membranes of the Noſe ariſes from the fifth Pair, as well as that diſtributed to the Teeth. Frankincenſe alſo, diſſolv'd in Balſam of Life, and applied to the Gums on Cotton, affords preſent Relief. Nothing alſo more ſpeedily mitigates the Pain, than the Injection of a proper Clyſter. If the Patient is of a cacochymic Habit of Body, Purgatives, and Specifics prepared of the Gums, Mercurius dulcis, Salt of Amber, Reſin of Guaiacum, Extract of Aloes, and exhibited in the Form of Pills, are of ſingular Service, by carrying off the peccant Matter by Stool.

We now come to conſider, whether Cauteries and Veſicatories produce any good Effects in a Tooth-ach: Moſt Practitioners highly extol their Efficacy in the moſt violent Tooth-achs. 'Tis a common Practice to apply actual Cauteries to the Anthelix of the Ear, or the Temporal Muſcles of the affected Side, for this Purpoſe. Others burn Cotton on the Temples; but, inſtead of Cotton, the celebrated *Frankius*, according to the Direction of the learned *Sereta*, uſes *Okim*, which is an inflammable Rope, totally untwiſted. In periodical Tooth-achs, *Spigelius* ſucceſsfully uſed the actual Cautery, with which he made a Wound in that Part of the Anthelix, which is contiguous to the ſuperior Part of the Tragus; and conſolidated the Wound in the ordinary Manner. As potential Cauſtics, intended for this Purpoſe, we may uſe wild Crow-foot, Horſe-radiſh, and ſome others. In *M. N. C. Dec.* 2. *an.* 9. we are informed, that Bliſters, excited on the Cubit by an Application of bruis'd Garlick, remove the Tooth-ach. *Jacobus Wolfius* alſo, in *M. N. C. Dec.* 2. *an.* 7. informs us, that about the Bulk of a Fig of wild Crow-foot, bruiſed with Spirit of Wine, and applied to the fleſhy Part of the Arm, on the affected Side, raiſes Bliſters, which remove the Tooth-ach. *Ettmuller* affirms for a Truth, that the Root of Leadwort bruiſed, and applied for a Night to the Wriſt, in the Morning leaves a Spot of a leaden Colour, and removes the Pain of the Teeth. In *M. N. C. Dec.* 2. we are told from *Bartholine*, that the ſame Effect is produced by Applications of Horſe-radiſh, and other Subſtances abounding with a volatile acrid Salt, to the Cubit. In the laſt-quoted Work, *Dec.* 2. 'tis ſaid, that the Tooth-ach is removed by a Liniment compoſed of eight Cantharides, three Heads of Garlick, and a proper Quantity of Theriaca, applied to the Bending of the Elbow in a Linen Cloth. In my Opinion, theſe Remedies may, with Succeſs, be uſed in violent Tooth-achs, eſpecially ſuch as ariſe from an acrid and corroſive Serum lodg'd about the Nerve, partly with an Intention to eliminate this peccant Matter, and partly with a View to derive the violent and impetuous Motion of the Spirits from the Membranes of the Tooth to other Parts. Veſicatories, as alſo nervous, antiſpaſmodic, and anodyne Medicines, are with great Succeſs applied, either behind or below the Ears; becauſe the Artery, together with the Nerve and Vein lying under the Ear, enters the inferior Jaw-bone, and is diſtributed to the Roots of all the Teeth fix'd in it. By this means, therefore, the acrid Serum, flowing down to the Teeth, is moſt commodiouſly diverted, and carry'd off in another Direction, or the impetuous Motion of the Spirits in that particular Nerve is ſooth'd and abated. For this very Reaſon, a ſtrong Compreſſion with the Fingers, behind the inferior Jaw-bone, during the Paroxyſm of a Tooth-ach, generally alleviates the Pain, ſo long as the Compreſſion is continu'd. Beſides, we obſerve in Practice, that, by applying to the Temples, as alſo below the Orbit, Plaiſters prepared of nervous and antiſpaſmodic Ingredients, eſpecially Maſtich, Peruvian Balſam, Extract of Caſtor, Camphire, Oil of Nutmegs, Saffron, and, in violent Pains, expreſſed Oil of Henbane, with an Addition of Opium, quickly afford Relief, becauſe the Ramifications of the Nerve diſtributed to the Temporal Muſcles, ariſe from the ſame common Origin with the Nerves convey'd to the Cavities of the Teeth; and the Nerve under the Orbit is immediately diſtributed to the anterior Teeth of the upper Jaw.

When the Teeth are looſe, either in conſequence of a Conſumption, a Corruption, a ſcorbutic and putrid Exulceration of the Gums, or an Imbecillity and Weakneſs of the Nerves, beſides internal Antiſcorbutics, and Decoctions of the Woods, for purifying the Blood and Lymph, and removing the immediate Cauſe of the Diſorder, we are alſo to uſe external Medicines for cleanſing and ſtrengthening the Gums. In a Corroſion, or fetid Smell, of the Gums, and a Looſeneſs of the Teeth produced thereby, I recommend, above all other Medicines, the following Liquor:

> Take of Maſtich, Myrrh, and Gum Elemi, each two Drams; of the Herbs Germander, Clary, Sage, and the Leaves of Myrtle, each two Pugils; of the Flowers of red Roſes, three Pugils; of Alum, one Dram and an half; of Clove-gilly-flowers, one Dram; of red *French* Wine, eight Ounces; of camphorated Spirit of Wine, one Ounce: Let an Extract be made in a due Degree of Heat; and to the filtrated Liquor may be added different Quantities of the Spirit of Scurvy-graſs, according to the Intention of the Phyſician.

This Liquor, when frequently held in the Mouth, and applied immediately to the Gums, powerfully preſerves them from farther Putrefaction, fixes the Teeth, and regenerates the conſum'd Fleſh. But, for the ſame Intention, and with equal Succeſs, we may uſe the Eſſence of Peruvian Balſam, mixed with the balſamic Liquor, and a proper Quantity of the Honey of Roſes; which Preparation is poſſeſſed of a very remarkable cleanſing and corroborating Quality. Sometimes ſo obſtinate an Ulceration of the Gums happens, as will not yield to the moſt efficacious and beſt-choſen Remedies, but leaves open and running Ulcers; in which Caſe we are carefully to examine, whether the Diſorder does not proceed from a Caries of the Tooth; and if it does, the Caries is either to be totally extirpated and removed, or the Tooth itſelf to be extracted. Beſides, in order to preſerve the Teeth from Blackneſs, Caries, and tartareous Concretions, as alſo with a View to ſtrengthen and corroborate the Gums, it is highly beneficial ſometimes, eſpecially in the Morning before Breakfaſt, to waſh the Mouth, and rub the Teeth, with Wine in which Sage has been infuſed. This Practice is alſo to be recommended to old Perſons, whoſe Teeth are looſe in conſequence of a Weakneſs of the Nerves; as alſo to thoſe who have the Misfortune of a fetid and diſagreeable Breath. When no new Teeth ſupply the Place of the old, 'tis beyond the Power of the Phyſician to force Nature; for which Reaſon a palliative Cure muſt be uſed, and the Art of the Surgeon muſt ſupply the Defect of Nature, by providing the Patient with artificial Teeth, made either of Ivory, or the Tooth of the Sea-horſe; which, however, are rather ſubſervient to the Purpoſes of Speech and Ornament, than thoſe of Maſtication, ſince they muſt be taken out when the Patient eats. Theſe artificial Teeth are not only mutually tied to each other, but alſo to the natural and ſound Teeth, either with a ſmall Wire of Silver or Gold, or with a Piece of Thread, an Inſtance of which *Paré*, in the third Chapter of his ſecond Book, gives from *Hippocrates*. *A. Benedictus*, in the 22d Chapter of his third Book, tells us of *Merulus Alexandrinus*, that, after his natural Teeth had fallen out, he, with a Piece of Gold Wire, fixed artificial ones in his Gums, in order to aſſiſt his Pronunciation. But the Hiſtories of Teeth quickly replaced, and becoming firm in their Sockets, after having been knock'd out, are, by judicious Authors, looked upon as fabulous; as alſo the Caſe of that Lady, who, wanting a Tooth, ordered one of her Footman's to be extracted from his, and inſerted into her own Gums; upon which it is ſaid to have taken Root, and remain'd fix'd in the Socket.

When there is a violent Hæmorrhage from exulcerated or ſcorbutic Gums, which is frequently obſerved by Practitioners, and is not altogether free from Danger, beſides internal Diaphoretics, together with ſuch Medicines as correct the Acrimony, and check the Effervеſcence, of the Blood, we are alſo to preſcribe the external Uſe of ſtrongly conglutinating Applications. In Caſes of this Nature I have found ſingular Succeſs from highly rectify'd Spirit of Wine, from well ſaturated Eſſence of Amber, or from a Liquor prepared of the Decoction of Pomegranate-bark and Balauſtine-flowers, and the Syrup of acid Pomegranates; for, by theſe Preparations, the Hæmorrhage is excellently ſtopt. But if it ſhould prove ſo violent as to reſiſt all the Methods uſed for checking it, we are then, as *Tulpius* juſtly adviſes, to have recourſe to that Species of Fungus call'd *Boviſt*.

Among the ſeveral things which prove injurious to the Subſtance of the Teeth, Cold deſerves our firſt Attention; for, according to *Hippocrates*, in the eighteenth *Aphor.* of his fifth *Sect.* "Cold is an Enemy to the Bones, Teeth, Nerves, "Brain, and ſpinal Marrow." As Cold is highly prejudicial to the exſanguious Parts, as alſo to thoſe furniſhed with an exquiſite Power of Senſation, ſo, in every violent Pain or Indiſpoſition of the Teeth, I adviſe the Patient carefully to guard againſt intenſe Cold. Hence the Face ought always, but more eſpecially during the Paroxyſm, to be kept warm; neither ought

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the cold Air to have a free Acceſs to the Cheeks. This is the Reaſon why the Pain of an excavated Tooth is conſiderably abated, if the Cavity is exactly fill'd with Pieces of Lead or Nutmeg. *Foreſtus*, in the eleventh Obſervation of his fourteenth Book, in order to prevent a free Acceſs of the Air, orders a Patient, afflicted with the Tooth-ach, neither to ſleep with his Mouth open, nor to ſpeak much; for which Reaſon the Mouth is alſo to be always waſhed with warm, but never with cold, Water. But, at the ſame time, too intenſe a Heat is alſo prejudicial to the Teeth; for, according to the ſixteenth *Aphor.* of the fifth *Sect.* of *Hippocrates*'s *Aphoriſms*, "The too "frequent Uſe of hot things is attended with a Relaxation of "the Fleſh, and a Weakneſs of the Nerves; for, by too in- "tenſe Heat, the Spirits are diſſipated, and the Fibres, of "courſe, relaxed." This happens becauſe the Strength of the Nerves, which principally conſiſts in a due Degree of Dryneſs, is deſtroy'd. For this Reaſon ſcorbutic Patients, and ſuch as have looſe Teeth, or are ſubject to large Hæmorrhages from them, ought carefully to avoid every thing which is either too hot, or too moiſt. Accordingly the *Schola Salernitana* has juſtly eſtabliſhed this as a Maxim: *Pultes ferventes faciunt corrumpere Dentes:* Hot Subſtances produce a Corruption of the Teeth.

All Acids, and more eſpecially thoſe of the corroſive Kind, are highly prejudicial to the Texture of the Teeth; for, by means of theſe, a Stupor of the Teeth is not only brought on, but their Subſtance is alſo gradually diſſolv'd and deſtroy'd. Among all the Subſtances of this Kind, the Spirit of Nitre is the moſt prejudicial, ſince, in a ſhort time, it is ſaid to convert the moſt ſolid Tooth into a Fluid. Phyſicians, therefore, injudiciouſly order Patients, who are deſirous of white Teeth, to uſe theſe Spirits, becauſe they muſt neceſſarily prove noxious to the Teeth, by rendering them highly friable. Hence we are not to regard *Montanus*, who, in *Conſult. Medic.* 3. highly extols theſe acid and corroſive Liquors for cleanſing and whitening the Teeth. Large Quantities of Acids, taken internally, ſuch as aceſcent Wines and Ales, by generating a ſcorbutic Acrimony in the Blood and Lymph, contribute greatly to bring on a Corruption and Caries of the Teeth, together with a Corroſion of the Gums. Beſides, all viſcid Subſtances, Preparations of Milk, Cheeſe, Sweet-meats, and Things prepared with Sugar, are prejudicial to the Teeth; partly becauſe they ſupply the Principles of a ſcorbutic Blood, and partly becauſe, by the Groſſneſs of their Parts, they adhere to the Subſtance of the Gums, cover them with a fetid and viſcid Matter, and, by that means, obſtruct their Perſpiration: For there is no Part of the human Body, to which, on account of its Nutrition, Perſpiration is not neceſſary. Hence the tophaceous Matter, the Corruption, and the Blackneſs of the Teeth, are produced. Vegetables of the garlick Kind, as alſo all Subſtances which are too acrid, ſaline, aromatic, and ſpirituous, are injurious to the Teeth; as alſo all Subſtances which, by their ſaline and acrimonious Quality, either communicate a Taint to the Lymph, contribute to the Production of a Scurvy, or deprave and corrupt the Nouriſhment of the Teeth and Gums.

Preparations of Mercury, whether internally exhibited, or externally apply'd, are alſo highly prejudicial to the Subſtance of the Teeth; for, by mercurial Unctions, intended to raiſe a Salivation in obſtinate chronical Diſeaſes, we obſerve, that an Inſtability and Blackneſs of the Teeth, together with a fetid Corruption and Relaxation of the Gums, are produced, partly by the corroding and cauſtic Quality of the Mercury, occaſion'd by an Acceſſion of Salts, and partly becauſe, by relaxing the Fibres of the glandulous and nervous Parts, it fills them with a large Quantity of Moiſture. We muſt alſo obſerve, that Opiates never fail to prove highly injurious to the Teeth, as we may ſee in *M. N. C. Dec.* 2. *An.* 2. *Obſ.* 163. for, by preventing the Influx of the Spirit, they diſpoſe the Teeth, not only to become looſe, but alſo to fall out. In conſiderable Inflammations, the Uſe of Opium may eaſily bring on a Gangrene and Sphacelus, or even Death; an Inſtance of which occurs in *Foreſt. Obſervat. Lib.* 14. *Obſ.* 6. *in Scholiis.* But Opiates are principally injurious to old Perſons, and Patients of phlegmatic Habits; becauſe they induce Stupors, Vertigos, and Obſtructions of the Head, according to the Obſervation of *Salmuth. in Cant.* 3. *Obſ.* 32. 'Tis reported, that Tooth-drawers facilitate the Extraction of Teeth by Applications of the Seeds of Henbane and Opium; for which Reaſon, theſe Subſtances are never to be uſed, except in Caſes where the Pain is highly intenſe; and 'tis always more expedient to preſcribe them mix'd with Purgatives, Diaphoretics, and Alexipharmics, than alone. The ſmoking Tobacco, in conſequence of its anodyne and diſſipating Qualities, is not in violent Tooth-achs to be condemned, ſince we find, from Experience, that it produces happy Effects. But, at the ſame time, I will not deny, that the immoderate Uſe of it may produce an Inſtability and falling out of the Teeth, in conſequence of its narcotic Quality. With reſpect to Dentifrices, or Powders for cleanſing the Teeth, we muſt obſerve, that 'tis an idle and pernicious Practice to uſe ſharp Powders, ſuch as thoſe prepar'd of calcin'd Flint, Pumice-ſtone, and Coral, becauſe, by theſe, the Subſtance of the Teeth is conſumed and abraded. 'Tis therefore expedient, entirely to abſtain from them, and only to uſe Crabs-eyes, calcin'd Shells, and the Bone of the Cuttle-fiſh, reduced to a fine Powder; with which may be mix'd the Powders of Nutmeg, Orris, Maſtich, Alum, and a little Muſk. This is an excellent Powder, not only for cleanſing and fixing the Teeth, but alſo for rendering the Breath grateful and agreeable. With this, or ſome other ſuch Powder, the Teeth, if poſſible, are to be rub'd after every Meal, but not roughly. For this Purpoſe, we may take the large Roots of Mallows, or Marſhmallows, well clean'd, and immerſed in Vinegar of Roſes. With the Extremities of theſe Roots, bruiſed and ſprinkled with the above-mentioned Powder, we are gently to abrade and wipe away the Sordes adhering to the Teeth. *Frederic Hoffman, de Dentibus, eorum Morbis, & Cura.*

Farther Observations *of the* Tooth-ach.

The Tooth-ach ſeems to be a particular Species of Rheumatiſm; for, in Practice, we often obſerve Pains of the Joints, Scapulæ, and Shoulders, tranſlated to one Side of the Head, the Teeth of which they attack in a moſt violent manner. On the contrary, Pains of the Head and Teeth are frequently obſerved to change their Seat, and fall down upon the Shoulders, the Arms, and the Scapulæ. As a Rheumatiſm is generally produced by any Intemperature or ſudden Change of Air, ſo alſo a Tooth-ach is generally excited in ſuch as are previouſly diſpoſed to it, eſpecially if they happen to be of a cacochymic Habit, by their ſuddenly removing from a warm to a cold Air, or by the ſudden Viciſſitudes of Heat and Cold, in the Spring and Autumn. As Rheumatiſms are more incident to Women than to Men, ſo alſo are Tooth-achs, and that for the ſame Reaſons. Beſides, though theſe two Diſorders are leſs frequently incident to Men than to Women, yet they generally prove far more ſevere in the former, than in the latter. There is a certain Analogy, not only between a Rheumatiſm and a Tooth-ach, but alſo between a Tooth-ach and a Gout; for as arthritic Diſorders are accompanied with Pain, Redneſs, Swelling, and a ſlight Fever, ſo the ſame Symptoms are obſerved to attend a Tooth-ach. Beſides, 'tis confirm'd by Experience, that ſuch as are ſubject to rheumatic or arthritic Diſorders, are rarely afflicted with Tooth-achs, but, for the moſt part, have their Teeth ſound and entire; whereas thoſe who are free from thoſe Diſorders of the Muſcles and Joints, are generally, for that Reaſon, more ſubject to Tooth-achs. As in Rheumatiſms and Gouts, ſo alſo in Tooth-achs, thoſe who have been once afflicted, are eaſily, and, by every ſlight Cauſe, ſubjected to freſh Attacks of the Diſorder, on account of the Weakneſs which theſe Diſeaſes generally leave in the Parts; ſo that a Gout, a Rheumatiſm, and a Tooth-ach, ſeem to be but one and the ſame Diſeaſe, appearing with different Degrees of Strength, attacking different Parts, and therefore accompany'd with Symptoms ſeemingly different, though produc'd by one common Cauſe. Hence it follows, that the Regimen and Method of living, proper in one of theſe Diſorders, muſt of courſe be ſo in the other alſo: But theſe Things are ſo obvious to every Perſon who will only allow himſelf to think, that there is no Neceſſity for a longer or more explicit Illuſtration of them. When Tooth-achs are ſo intenſely violent, as to reſiſt the Force, and elude the Efficacy, of all other Medicines, *Hoffman* tells us, that he has obſerv'd a very ſingular and unexpected Relief, afforded by the following Pills, invented by himſelf:

> Take of the Pilulæ Aloephanginæ, one Dram; of the Pilulæ de Styrace, half a Dram; and of the Extract of Saffron, ſix Grains: Mix up into a Maſs, of which form ſixty Pills; ſix or eight of which are to be exhibited for a Doſe.

Obſervations on the Dentition *of* Children.

Nature has not thought fit, that Men ſhould be born with Teeth; but hath more wiſely provided for ſucking Infants, by making their Teeth grow by degrees. The firſt Principles of which, yet in the Womb, are merely membranous Filaments, fill'd with a nutritive Juice, which are firſt inſpiſſated into a Mucus, then harden'd to a Cartilage, and, laſtly, contract a bony Firmneſs. Though the Time of Dentition varies as much as the Conſtitution of Infants, ſome having Teeth in ſeven or nine Months, others ſcarcely in the Space of a Year, yet generally this Order is obſerved in the Eruption: The *Inciſores* are ripen'd by the Attrition of the Nipples in ſucking, and make an Eruption firſt in the lower Jaw-bone; the *Canini* ſucceed theſe; and, laſt of all, the *Molares* break out.

Though the Eruption of the Teeth be a thing evidently natural, and to ſome Infants produces no great Trouble; yet, becauſe of the various Symptoms attending it, in many Infants, it creates great Uneaſineſs; and hence ariſes a difficult Dentition,

tition, which is generally nothing but a more ſlow and painful Eruption of the Teeth through the Gums, and may be known by the following Signs: They firſt burn with a preternatural Heat, and are ſeiz'd, as it were, with ſudden Frights; you may obſerve them ſtart in their Sleep, which is very much diſturb'd, and cry more frequently; they ſuck the Milk more greedily from the Breaſt, and more frequently put their Hands to their Mouths. All this time the Jaws, in the fore Part of the Mouth, begin to ſwell, and, when ſwell'd, become white or red; a greater Quantity of Saliva is frequently diſcharged into the Fauces; a tenacious Lymph frequently hangs out at their Mouths, and the Belly is either coſtive, or the Fæces are evacuated by a Diarrhœa. Theſe Symptoms are accompanied with others much more dangerous, ſuch as convulſive and epileptic Motions, acute Fevers, violent Contorſions of the Jaw-bones, and other Symptoms of a like Nature, which have different Effects, according to the different Degrees of the Difficulty of Dentition, and the Senſibility of the tender Patients.

The Cauſe of difficult Dentition proceeds ſometimes from the Teeth, and ſometimes from the Gums: From the former, when the Teeth, endeavouring to force their Paſſage, are either too big, or too ſharp, as the *Canini*, or *Oculares*; or when, by growing too ſlowly, they corrode, pinch, and perforate the Gums, for too long a time; or when many grow out at the ſame time too haſtily: From the latter, if their Texture be ſo groſs and ſtrong, as to prevent the Teeth, which are conceal'd in the Sockets of the Jaw-bones, from making their way freely.

As the Fleſh of the Gums, which is very ſenſible, being made up of various membranous and nervous Fibres, muſt, in a great meaſure, be hurt, prick'd, and inflam'd, by ſuch a violent Protruſion of the Teeth, we are not to wonder, that an Itching, Heat, and Pain of the Gums, accompanies a ſlow Dentition; or, becauſe of the vehement Irritation, and the conſequent Commotion of the nervous Syſtem, that ſudden Frights, Startings, want of Reſt, Vomitings, Aſthmas, Coughs, and even convulſive and epileptic Fits, ſhould enſue; eſpecially if the Infants have previouſly labour'd under either a natural or adventitious Weakneſs of the Brain, or nervous Syſtem, and a Diſpoſition to ſpaſmodic Contractions; which afterwards palpably diſcovers itſelf, and is increaſed, when they are ſeiz'd with acute Pains, or the Attacks of a Fever.

Neither will it be difficult to find out the Reaſon, why the Belly, under a Difficulty of Dentition, ſhould be either preternaturally coſtive, or too ſoluble; for ſince ſuch is the Nature of any vehement Pain, and of this alſo which ariſes from the Teeth, that it excites Spaſms through the whole Body, and at the ſame time injures alſo the *Primæ Viæ*, this corrupts and ſours the Milk; and the free Diſcharge of the Belly, depending thereon, is either accelerated or retarded.

As to the Prognoſtics, we often find Dentition dangerous and fatal to Children; for thoſe violent and ſevere Diſtempers, which, as I have ſaid, either attend or follow it, frequently bring on ſuch a Weakneſs of the Parts, that the Infant has not Strength to go through the Dentition; and then the other Symptoms increaſe the more. Dentition is the moſt dangerous to Infants who are plethoric, and to thoſe alſo who become, in a manner, languid and heavy by too much Sleep; which is a Sign of a ſubſequent Convulſion, according to *Hippocrates*; who alſo aſſerts, that Infants are more ſlow in breeding their Teeth, if they have a Cough, and that their tender Bodies are more extenuated on this Occaſion; which muſt certainly be the Caſe, becauſe the Cough diminiſhes the Strength neceſſary for the Protruſion of the Teeth, and ſhews that there is a great deal of viſcid and acrid Juices in the Body; which, as they vehemently irritate the Gums, muſt undoubtedly be very troubleſome to Infants, whilſt they breed their Teeth. In like manner, thoſe are in a more dangerous Condition who are coſtive, than thoſe who are ſoluble, in their Bodies; though we know by Experience, that both the one and the other have died of Convulſions, excited by the Pain, during the Paroxyſm of the Fever. It is alſo of Uſe in this Caſe to know, whether the Infants be very delicate, or are begot by paſſionate Parents; for, if ſo, Convulſions will more certainly happen, and be of more dangerous Conſequence; though all that are ſeiz'd with Convulſions do not die. Finally, by how much greater the Difficulty, and the longer the Time, of the Eruption of the Teeth is, ſo much greater is the Danger, leſt Nature ſhould be too much weaken'd, and at laſt ſink under the Diſorder. But as to what *Hippocrates* farther advances in the above quoted Place, about Infants eſcaping Convulſions, provided they have an acute Fever, and their recovering more eaſily in Winter, than in Summer, I ſhall leave to the Experience of others.

The CURE.

He that would effectually cure thoſe Diſtempers that threaten Infants, ought, in the firſt Place, carefully to advert to the Time aſſign'd by Nature for Dentition, which is commonly about the ſeventh Month; and ſhould, before the Difficulty of Dentition begins, take care that he eats nothing which is ſolid or hot, but the moſt thin Aliments, and the thinneſt Sorbitions. And, as the Temperature of the Nurſe, and a proper Regulation of Diet, is of ſingular Uſe to the ſucking Infant, Care ought to be taken, that the abſtains from all heating Subſtances, ſuch as Wine, Aromatics, and ſuch-like; and rather make uſe of alterative and moiſtening Things, and accuſtom herſelf to the Drinking of Water. Theſe Things may and ought to be attended to at the time of the Eruption, as well as before it becomes troubleſome.

In the Method of Cure, the principal Thing to be adverted to is, to alleviate the Pain and Inflammation, which are commonly attended with ſlight Fevers, Convulſions, and Diarrhœas; as alſo to relax and ſoften the Gums, which will forward the Eruption. For anſwering this Intention, Medicines poſſeſs'd of a precipitating Quality are, of all others, the moſt effectual: Of this Kind, the principal are Jellies of Hartſhorn, diſſolv'd in ſome proper Liquor, with Eſſence of wild Poppies, and a few Drops of the anodyne mineral Liquor, exhibited at proper Intervals. A proper Doſe of the following Mixture may be alſo frequently exhibited with ſingular Succeſs:

> Take of the Waters of Lilies of the Valley, of Lime-flowers, and Cowſlips, each one Ounce; of the *Pulvis Marchionis*, and diaphoretic Antimony, each one Scruple; of Saffron, a few Grains; of the Syrups of Garden Piony, and wild Poppies, each one Dram; adding a few Drops of the Spirit of Sal Ammoniac.

As, in all violent Diſtempers incident to Infants, it is often of more Uſe to give Medicines to the Nurſe, than to the Infant; ſo in all vehement Symptoms of a ſlow Dentition, we ought to obſerve the ſame Rule. This Intention I have often ſeen excellently anſwered by exhibiting antiſpaſmodic Medicines to the Nurſe; ſuch as Powders compoſed of Piony-root, uncalcin'd Hartſhorn, the foſſile Unicorn, Amber, Caſtor, and other Ingredients of a like Nature.

Nothing tends more to increaſe and augment the Impetus of the Humours to the upper Parts, than a long-protracted Coſtiveneſs, and the Flatulencies and Spaſms thereby produced in the Inteſtines, which are lin'd with a nervous Coat. Wherefore, what a Phyſician ought principally to regard, is to render the Body of the Infant ſufficiently ſoluble by emollient and oleous Clyſters, and that of the Nurſe by proper Purgatives, leſt the Cure ſhould be either retarded, or totally prevented, by ſuch a noxious Cauſe.

But we may alſo make uſe of external Remedies, applied to the Gums; for the ſoftening and relaxing of which, Cream, ſweet Butter alone, or mix'd with Honey, conduces very much; nor is it of leſs Uſe to apply a Fig, divided in the Middle, to the Part where the Tooth is endeavouring to force its Way, and begets a Swelling, Pain, and Heat; or to apply the Marrow of Calves Legs, Mucilage of Quince-ſeed, with a ſmall Quantity of the Yolk of an Egg, diſſolv'd in Roſe-water, and the Syrup of Violets, or Hares Brains, which is reckon'd an excellent Specific in this Caſe: And what we find to be of ſingular Efficacy here is, a Liniment prepared of Sperma Ceti, the Syrup of white Poppies, Oil of ſweet Almonds, Saffron, and Nitre, and applied as an Ointment to the Fleſh of the Gum that is affected. A Cruſt of white Bread, boil'd in Milk, and mix'd with a little Oil of Roſes and Saffron, is mightily recommended by ſome, as an Anodyne for Pain and Inflammations.

But, if the Teeth ſhould not make any Eruption, we muſt make an Inciſion on the Gums, and, with a Knife, cut the Membranes next to the Extremities of the Teeth; and this Experiment I have frequently found ſucceſsful.

In difficult Dentition, all Things of a heating purgative Nature, ſpirituous Things held to the Noſtrils, and Aſtringents applied to the Gums by way of Ointment, are pernicious; becauſe, while the Motions are accelerated through the whole Body, the Symptoms are heighten'd, and the Fever, which is a more frequent, and, for the moſt part, an individual Concomitant of Pain, is thereby increaſed. And, for this Reaſon, Mothers are much to blame, who keep their Children under too hot a Regimen, or keep them in too warm Beds and Rooms, while they are ſeiz'd with thoſe Diſtempers which are attended with Pain, a Fever, and Inflammation. Since we may conceive greater Hopes of a Recovery from a free Diſcharge of the Belly, Corroboratives or Aſtringents ought not, by any means, to be uſed; for I have always obſerved them to be of dangerous Conſequence, and have ſeen Convulſions, with other Symptoms, much ſooner, and more certainly, follow thereupon. *Frederic. Hoffman.*

Chirurgical Operations relative to the TEETH.

Some Perſons have their Teeth and Jaws ſo cloſely and violently preſſed together, that they cannot be ſeparated for the Admiſſion of Food, or the clear Utterance of Speech: This

Diſorder ſeems to be owing to a Rigidity or Spaſm in the Muſcles of the lower Jaw; whence it is denominated a *Rigor* or *Spaſm* of the Jaw. This Sort of Spaſm or Convulſion proceeds not always from the ſame Cauſe; for ſometimes it is excited by a Wound in the Nerves or Tendons in ſome Part of the Body, or after the Amputation of an Arm or Leg, as I have frequently obſerved in Camps; and ſometimes it is cauſed by an Inflammation of the Jaw itſelf, or the Muſcles of the Fauces.

When the Diſorder proceeds from a Wound, you are firſt of all to examine, whether any extraneous Matter be retained in the Wound, and ſo occaſions theſe Spaſms; for when this is found and extracted, the ſpaſmodic Motions immediately ceaſe, though they obſtinately reſiſted all nervous Medicines. If no foreign Body lies concealed in the Wound, you may reaſonably conclude, that the Spaſms proceed from an Injury of the Nerves or Tendons; and muſt therefore have recourſe to the Remedies provided in theſe Caſes, ſuch as Balſam of *Peru*, Balſam of *Capaiva*, Oil of Turpentine, or a Mixture of this Oil, and Hungary-water, moderately heated, and now-and-then infuſed into the Wound; after which muſt be applied ſome digeſtive Cataplaſm, compoſed of Scordium, Wormwood, Southernwood, with Flowers of Elder, Flowers of Chamomile, and ſuch others, boil'd in Wine. If theſe, and other proper Remedies, fail of Succeſs, you are obliged totally to divide the wounded Nerve, unleſs it cannot be done without Danger of preſent Death; after which, theſe Spaſms and Convulſions will ceaſe in leſs Time than you could imagine. Sometimes the injured Nerve is ſo profoundly ſeated as to be inacceſſible, or not to be divided without imminent Danger of Death. This, indeed, is a miſerable Caſe; but yet there is one only Remedy, which is, ſpeedily to cut off the Arm or Leg, in which the injur'd Nerve is ſeated, if the Patient has Strength enough to bear it. If the Diſorder happens after the Amputation of a Limb, the Cure is much eaſier to be perform'd; for, in this Caſe, it often ceaſes of itſelf, as ſoon as the Ligature on the Veſſels, or the Ribs of Vitriol, applied to reſtrain the Hæmorrhage, are removed. In the mean time, 'tis no unuſual thing for the moſt efficacious Medicines, and the moſt proper Methods for Relief, to prove ineffectual in this Diſorder; ſo that I have frequently ſeen Patients, labouring under it, periſh in the moſt lamentable and calamitous Condition. When an Inflammation of the Tonſils, or of the Muſcles, by which the Jaw-bone is ſupported, hinders the Teeth from receding from each other, the beſt Method is to remove this Inflammation, by the ſame Meaſures uſed for the Cure of other Inflammations; for when it is removed, the Rigidity and Stiffneſs of the Jaw-bones and Mouth will, of courſe, gradually ceaſe. But leſt, during this State, the Patient ſhould be too much waſted with Hunger, 'tis abſolutely neceſſary to exhibit Broths, warm Ale, prepared with the Yolks of Eggs, Emulſions of ſweet Almonds, Jellies of Hartſhorn, and other highly nutritive Preparations, which may be ſup'd even with the Teeth cloſe. Beſides, if Neceſſity ſhould require it, nutritive Clyſters, compounded of the like Ingredients, are to be injected.

Some Phyſicians have invented Inſtruments of different Kinds for ſeparating the Jaws, commonly call'd *Specula Oris*, or *Specilla Oricularia*. By the Aſſiſtance of theſe, one of which is exhibited in *Tab.* 41. *Fig.* 12. and another *Fig.* 13. both Aliments and Medicines may, indeed, be more commodiouſly exhibited; but, at the ſame time, I am ſo far from recommending their Uſe as ſalutary and beneficial in all Caſes, that I am perſuaded every judicious Surgeon muſt look upon it as hurtful and pernicious, in ſome. Nor, indeed, can it well be otherwiſe, ſince by the violent and forcible Separation of the Teeth, the Inflammation of the Muſcles, and, conſequently, the Spaſms and Pain, muſt neceſſarily be increaſed; whereas the Patient might be much more mildly treated, and the Danger of increaſing the Inflammation ſhun'd, by the Patient's ſupping ſorbile and nutritive Preparations, in the manner before-mentioned. So that the Uſe of theſe Inſtruments may juſtly be rejected and condemned, not only as trifling and unneceſſary, but alſo as cruel, and productive of the worſt of Conſequences. Nor does the Practice of *Dionis*, a celebrated *French* Surgeon, ſeem to deſerve a more favourable Cenſure; for in Caſes where by theſe Inſtruments the Teeth cannot be ſeparated for the Exhibition of Aliments or Medicines, he forthwith orders a Tooth to be taken out, for that Purpoſe. But in Caſes where there is a Neceſſity for opening the Teeth pretty wide, either in order to diſcover ſome Diſorder of the Mouth, or to perform ſome Operation on the Palate, Tonſils, or Teeth, I am ſo far from condeming theſe Inſtruments, that, for this Purpoſe, I recommend the *Speculum Oris*, repreſented in *Tab.* 41. *Fig.* 13. or ſome other Inſtrument capable of anſwering the ſame End.

The Methods of cleanſing foul and black TEETH.

Since by means of thoſe yellow, blackiſh, and unſeemly Scales, which ſometimes cover the Teeth, the Mouth is not only conſiderably deform'd, and the Breath made diſagreeable, but alſo the Teeth themſelves render'd looſe; it ſeems highly neceſſary to cleanſe and deterge theſe rough and foul Teeth with all Expedition. For this Purpoſe, there are various Inſtruments us'd, ſuch as theſe repreſented in *Tab.* 41. by *Figures* 14. 15. 16. and 17. Some of theſe, according to their ſeveral Intentions, are narrow at the Apex, or Point A; ſome of them broad, ſome of them ſharp, and others of them arch'd, in the Form of a Scythe, as in *Fig.* 17. But all of them may be either fix'd in one common Handle, repreſented by the Letter B, in *Fig.* 14. or they may alſo be fix'd in Handles peculiar to themſelves, as in *Figures* 16. and 17. taken from *Fouchard*. Applying theſe near the Gums, and holding the Extremities of the Teeth firm with the other Hand, theſe Scales are to be render'd looſe, and gradually abraded. But this is to be done cautiouſly, leſt the Gums ſhould be dilacerated, or the Tooth itſelf raſhly pull'd out. After this, the moſt proper Method to be taken is, for ſome Days ſufficiently to rub the Teeth and Gums with *Mynſicht*'s Tincture of Lac; or with Honey of Roſes, mix'd with a few Drops of the Spirit of Salt or Vitriol; for, by this means, the Teeth are not only render'd incomparably white, but the Gums are alſo corroborated and ſtrengthen'd. Not long ago I ſaw a Tooth-cleaner in *Saxony*, who, tho' he was provided with all theſe Inſtruments, yet, by means of that ſingle one repreſented by *Fig.* 17. quickly abraded the Scales from the Teeth of ſeveral Perſons in my Preſence.

But, leſt freſh Scales and Blackneſs ſhould again deform and diſorder the Teeth, 'tis neceſſary always to have a good Dentifrice in Readineſs; by which the Teeth may be cleans'd, and render'd white and firm, every ſixth or ſeventh Day; for rubbing the Teeth too often, or with ſuch Subſtances as are too acrid, crude, and draſtic, proves almoſt as prejudicial, as a total Neglect of them. Thus, the ſharp Powder prepar'd of Pumice-ſtone, Bricks, Coral, the Aſhes of Tobacco, and other Subſtances of a like Nature, too powerfully wears away and abrades the Teeth: And Spirits, alſo, and more eſpecially thoſe of Vitriol and Salt, gradually corrode and conſume them. The ſafeſt and moſt innocent Dentifrices are prepar'd of milder Subſtances; ſuch as Crabs-eyes, Mother of Pearl, calcin'd Shells, calcin'd Hartſhorn, Chalk, Root of Florentine Orris, Myrrh, and other Subſtances of a like Nature, reduc'd to Powder, and mix'd together. When the Gums are leſs firm, we may commodiouſly add a few Drops of the Spirit of Salt, or that of Vitriol. The Compoſition for this Purpoſe may be prepar'd in the following Manner:

Take of calcin'd Chalk, of red Myrrh, of the Roots of Florentine Orris, and of calcin'd Hartſhorn, each one or two Drams; and of the Spirit of Salt, between three and ſix Drops: Mix, and reduce to a fine Powder to be kept for Uſe. Or,

Take of calcin'd Shells, and calcin'd Mother of Pearl, each two Drams; of Dragon's-blood, one Dram; and of *Japan* Earth, one Scruple: Mix, and reduce to a fine Powder.

In order to give theſe Powders a grateful Flavour, we may pour upon them a few Drops either of the Oil of Cinnamon, Cloves, or Rhodium. Aſhes of Tobacco, provided they are rarely us'd, are an excellent Remedy for Blackneſs of the Teeth; as is alſo the following Preparation:

Take of Plantain-water, one Ounce; of the Honey of Roſes, two Drams; and of the Spirit of Salt, ten Drops. Mix all together.

In this Preparation, dip a ſmall Portion of a Napkin, or Linen Cloth, with which rub the Teeth daily, till they become whiter, uſing at the ſame time ſome proper Dentifrice, every ſixth or ſeventh Day. The Cuſtom of thoſe Quacks, who, for removing Blackneſs of the Teeth, recommend the frequent and liberal Uſe of the Spirit of Salt, or Vitriol, is to be condemn'd, ſince acid Spirits of this Kind more effectually corrode and deſtroy the Teeth, than any other Subſtances whatever. But if People are reſolv'd to uſe either theſe, or any other acrid Spirits, I would adviſe them immediately after, to waſh their Mouths with pure Water, leſt ſome of the Acrimony of theſe Liquors ſhould remain about the Teeth. For what I can perceive, the moſt effectual Means of preſerving the Teeth ſound and entire, is, not only in the Morning, but after every Meal, to waſh the Teeth with pure Water, and cleanſe them with the Finger. Some good Dentifrice muſt, at the ſame time, be us'd once a Week, either by itſelf, or in Conjunction with common Salt, which I have found highly efficacious for this Purpoſe. By this means, the Teeth may not only be kept free from thoſe

tenacious

tenacious Humours, or Remains of the Aliments, which produce Scales on the Teeth, but, which is ſtill more, this is the moſt effectual Method of preſerving them from Corruption, Pains, and Diſorders of every kind.

Of corroded and carious TEETH.

When Teeth are corroded, or, what we commonly call carious, it muſt, in the very Nature of the Thing, frequently happen, that ſome Particles of the Aliments muſt inſinuate themſelves into the ſmall Cavities or Perforations of theſe Teeth; and, whilſt theſe Particles gradually become putrid and acrid, they more and more corrode the Teeth, together with their Nerves and Membranes; by which means, they not only deform, but alſo torment the Patient. Leſt Surgeons ſhould ſeem to have forgot or overlook'd theſe Diſorders, Medicines have been long ago invented, if not for removing, yet, at leaſt, for alleviating and abating them. The firſt thing therefore, to be done, in Caſes of this Nature, is by a ſmall Needle, a Tooth-picker, or any other proper Inſtrument, ſuch as thoſe repreſented in *Tab.* 41. by *Figures* 19. 20. or 21. dextrouſly to remove the Sordes from the Cavities or Perforations, which are forthwith to be fill'd either with Maſtich, or white Wax; and, if theſe Portions of Maſtich or Wax ſhould happen to fall out, new ones are forthwith to be put in their Places: By this means, the Teeth are often preſerv'd for a long time, not only from the Sordes of the Aliments, and the Effects of the Air, but alſo from farther Corruption. When the Caries is not very deep, it may often be commodiouſly remov'd, by means of a proper File: But when the *Dentes Molares* are ſeiz'd with a Diſorder of this Nature, eſpecially in the Middle, the moſt efficacious Method of Relief ſeems to conſiſt, in filling the Cavities with Shreds of Gold or Lead, by means of the Inſtruments exhibited in *Tab.* 41. by *Fig.* 20. and 21. or in inſerting a Piece of ſolid Lead into the Sinus. When the Cavities or the Caries of the *Dentes Molares* reach pretty deep, ſo that they cannot be commodiouſly cleans'd in the Manner now directed, and muſt conſequently be rack'd with violent Pains, it is expedient to drop into theſe Cavities either Oil of Cloves, Oil of Cinnamon, Oil of Guaiacum, or Spirit of Vitriol; by which means, the latent Sordes are not only conſum'd and deſtroy'd, but ſometimes alſo the Pain inſtantaneouſly alleviated and abated. If theſe Medicines ſhould prove too weak to produce the deſign'd Effect; an actual Cautery, accommodated to this Purpoſe, and exhibited in *Tab.* 24. *Fig.* 14. and 16. or in *Tab.* 41. *Fig.* 20. or 21. is to be introduc'd into the Cavity of the Tooth; for, as this Operation quickly removes the Sordes and the Pain, ſo it creates no great Uneaſineſs to the Patient, provided it is perform'd with ſufficient Caution, and without injuring the adjacent Parts. When the Cavities of the Teeth are thus cauteriz'd, they are carefully to be fill'd with ſome proper Subſtance, leſt the former Pains ſhould recur: But if all theſe Meaſures ſhould prove ineffectual, or if the Cavity of the Tooth can neither be fill'd with Gold, Lead, nor Wax, the only Method of Relief remaining, is to extract the Tooth, if no Circumſtance contraindicates.

The Method of affording Relief in TOOTH-ACHS, *by manual Operation.*

Sometimes Tooth-achs are ſo violent and intolerable, that they obſtinately reſiſt the beſt choſen and moſt efficacious Medicines; in which Caſe, the Means of Relief are only to be obtain'd from manual Operation: For, firſt, the Pains are either to be alleviated by ſcarifying the Gums, as *Pliny*, in the ſeventh Chapter of his thirty-ſecond Book, has long ago obſerv'd; and this Method is frequently practis'd: Or, ſecondly, an actual Cautery, adapted to this End, is to be plung'd into the Cavities of the carious Teeth, in the Manner already directed: Or, thirdly, the Part behind the Ear, by Anatomiſts call'd Antitragus, is to be cauteriz'd, or have an Inciſion made in it; or, according to *Schelhammer*, it is to be ſtrongly compreſs'd with the Fingers: Or, in the fourth and laſt place, the corrupted and carious Tooth is to be extracted.

The Method of correcting uneven TEETH, *and ſuch as prick the Tongue and Lips.*

Sometimes the Teeth grow in ſuch a preternatural and diſagreeable Manner, as to incline too much either to the internal or the external Parts. But it much more frequently happens, that the ſharp and pointed Parts of fractur'd Teeth protuberate in an unequal manner. In both theſe Caſes it generally happens, that the Speech and Maſtication are not only in ſome meaſure hinder'd, but alſo the Tongue or Lips are prick'd and dilacerated; in conſequence of which, Inflammations, Tumors, Ulcers, and, very frequently, Cancers, are brought on. A ſpeedy Stop muſt neceſſarily be put to the Cauſe of theſe formidable Diſorders, either by abrading theſe troubleſome and noxious Teeth, by ſuch a File as is repreſented in *Tab.* 41. *Fig.* 22. or, if the Caſe requires it, by cutting off the prominent Parts with a very ſharp Forceps. But, if neither of theſe Methods ſhould prove effectual, the Tooth which creates the Uneaſineſs is to be totally extracted.

The Methods of extracting TEETH; *and the ſeveral Cautions to be obſerv'd in performing that Operation.*

Thoſe little conſult the Intereſt of Health and Eaſe, who raſhly, and without urgent Neceſſity, ſubmit to the Extraction of Teeth, as yet firm and ſound: For, ſo long as Teeth remain firm, the Extraction is not only highly painful, but alſo frequently endangers Life; ſince they are fix'd in their Sockets, like ſo many Nails in a Piece of Wood. Beſides, Maſtication and Speech are conſiderably injur'd by extracting Teeth, eſpecially in the anterior Part of the Mouth. This Misfortune is irreparable in Adults; ſince there are little or no Hopes left, that new Teeth will ſucceed thoſe which are extracted. There are, however, a great many Caſes, in which this Operation is abſolutely neceſſary; for, firſt, in Infants, it is more expedient cautiouſly to extract the *Dentes Inciſores* when looſe and diſengag'd, than to wait till they drop out ſpontaneouſly. When, therefore, theſe Teeth firſt become looſe, they are to be mov'd backwards and forwards with the Fingers, till they are ſo effectually diſengag'd, that they may be ſpeedily extracted, either by the Attempts of the Fingers, or by a Thread twiſted about them; or, which ſeems to be ſtill more commodious, by a proper Forceps, ſuch as that commonly call'd by Surgeons the Crow's-bill; for, when theſe Teeth are allow'd to remain too long in the Gums, there is ſome Danger, leſt new Teeth, ſpringing up near them, ſhould create freſh Pain, and bring on Deformity. Secondly, it ſometimes happens, that, in Infants, Teeth ariſe in the Palate, or in ſome other preternatural and improper Place. As theſe prove a Hindrance to Suction and Speech, or bring on ſome other Inconvenience, they are, with the greateſt Caution, to be extracted, as ſoon as they appear. Thirdly, it ſometimes happens, that Teeth, eſpecially when corroded, are afflicted with ſuch violent and intenſe Pains, as will yield to no Medicines, however efficacious; in which Caſe, manual Operation becomes neceſſary. Fourthly, when Teeth are of a Bulk and Figure ſo preternatural and uncommon, as either to deform the Mouth, injure the Tongue and Lips, or prevent the Conglutination of any Wound, that may poſſibly be made in them, ſuch Teeth are, with all Expedition, to be extracted. Fifthly, ſuch Teeth as are become fiſtulous are alſo to be extracted; becauſe, for the moſt part, this Species of Diſorder cannot be remov'd without the Extraction of the Tooth affected. Teeth of this kind, are to be extracted in the following manner: If the Tooth to be extracted is lodg'd in the inferior Jaw-bone, the Patient is either to be plac'd on a low Seat, or on the Ground; but when a Tooth is to be extracted from the ſuperior Jaw-bone, the Patient is to be plac'd on a Seat ſomewhat higher, or on a Bed: Then the Surgeon is, with ſome proper Inſtrument, to pull the offending Tooth in a ſtraight Direction, from its Socket, in the ſame manner as a Perſon draws a Nail out of a Piece of Wood. In extracting the Teeth of the inferior Jaw, the Inſtrument is to be pull'd ſtraight upwards; and, in extirpating thoſe of the ſuperior Jaw, ſtraight downwards. But a great deal of Art and Dexterity is neceſſary in this Operation, leſt we ſhould either break the Teeth, or attempt their Extraction without Succeſs. As for the Inſtruments calculated for the Extraction of Teeth, they are ſo numerous and various, that every Surgeon cannot fail to be acquainted with them. Thoſe beſt known, and moſt commonly us'd, are the Pelican and Crow's-bill. Some other Inſtruments, leſs commonly us'd, we have delineated in *Tab.* 41. *Fig.* 23. 24. and 25. But the peculiar Advantages attending them, are better repreſented by Practice, and the real Application of them, than by Words. When none of the Species of Forceps prove ſufficient for extracting the Fragments or Roots of fractur'd Teeth, there are other Inſtruments, contriv'd for that Purpoſe; the moſt common and beſt known of which is, that call'd the *Pes Capræ*, or Goat's Foot; and another, deſign'd for the ſame Purpoſe, we have repreſented at *Fig.* 26. *Tab.* 41. The Inſtrument repreſented at the Letter A, *Fig.* 23. is generally us'd for the ſame Purpoſe; and the other Part of it, exhibited at the Letter B, is intended for the Extraction of the Tooth. More Inſtruments for theſe Purpoſes are deſcrib'd and delineated by *Garengeot*, in his *Traité des Inſtruments de la Chirurg.* and by *Fauchard*, who was well acquainted with the Diſorders of the Teeth, and the moſt effectual Methods of relieving them. But it is to be obſerv'd, that Teeth, tho' in ſome reſpects there ſhould be a kind of Neceſſity for extracting them, are, nevertheleſs, to have no Attempt of this Nature made upon them, when the Gums, or any of the adjacent Parts, are affected with a violent Inflammation; otherwiſe there is a Danger, leſt, by the Violence of the Pain excited, the Operation ſhould be ſucceeded

ceeded by a higher Degree of Inflammation, and other troublesome Symptoms.

The Method of fixing artificial TEETH.

The Want or Defect of the anterior Teeth is not only a considerable Deformity, but also a great Hindrance to distinct and articulate Pronunciation, as we have already observ'd, and as daily Experience confirms. That these Defects and Misfortunes may be properly supply'd, Surgeons have fallen on an Expedient to make artificial Teeth, either of Ivory, the Teeth of the Sea-horse, or the Bones of an Ox; which are to be carefully fix'd to the remaining sound and natural Teeth. When there are several Teeth, adjacent to each other, lost, there must be a proportionable Number of artificial ones, made of the same Bone, fix'd in their room; and these, either by means of their Figure, or, by the Assistance of a Piece of Gold-wire, or Silk-thread, are to be properly united to each other, and to the adjacent sound Teeth. But that these artificial Teeth may be the more effectually preserv'd from Corruption, it is expedient to take them always out before going to Sleep, carefully to cleanse them, and refix them upon getting out of Bed. If any Root or Splinter of the natural Teeth should prevent the commodious Insertion of the artificial ones; such an offending Body is either to be abraded by a File, or extracted with some of the Instruments recommended above.

Explication of the Figures in Tab. 41. *relative to Operations on the* TEETH.

Fig. 12. represents an Instrument, commonly call'd a *Speculum Oris*, furnish'd with a Screw for separating the Teeth, when any chirurgical Operation is to be perform'd in the Mouth. The Letters AA denote the Parts to be introduc'd between the *Dentes Incisores*, which may be separated at Pleasure by the Screw B.

Fig. 13. represents another Species of *Speculum Oris*, made in the Form of a Forceps; the Part A of which is apply'd to the Tongue, for suppressing and rendering it firm. The Part BB is apply'd under the *Dentes Incisores* of the superior Jaw; and by the Handles or Extremities CC the Mouth is kept open, and the Tongue depress'd at the same time.

Fig. 14. 15. 16. and 17. represent Instruments adapted for cleaning foul Teeth, and such as are cover'd with Scales. Their Points are of various Forms, according as the anterior or posterior Teeth, or those of the superior or inferior Jaw, are to be clean'd. The common Handle B, exhibited by *Fig.* 14. is so contriv'd, that all these Instruments may, in their turns, be fix'd in it, by means of the Screw CCC.

Fig. 18. and 19. are two Instruments, destin'd for the same Purposes, but somewhat larger, and such as *Fauchard* thinks best suited to the Design.

Fig. 20. and 21. exhibit two Instruments, not only for cleansing the Cavities of the Teeth, but also for cauterising them, or filling them with Shreds of Gold or Lead.

Fig. 22. represents a File for filing such Teeth as are either carious, or prick the Tongue and Lips. A exhibits the File itself; and B its Handle.

Fig. 23. represents a new Species of Tooth-drawer. The Part A may commodiously be us'd instead of the *Pes Capræ*, or Goat's-foot, for extracting the Roots of Teeth. The Part B, with the Addition of the Hook C, is accommodated to the Extraction of entire or whole Teeth; for it may not only be drawn out, by means of the Screw D, according to the Bulk of the Tooth to be extracted, but it may also be conceal'd in the Covering E, when bent back, if Convenience should require it.

Fig. 24. represents another Tooth-drawer, which, by means of the Screw A, may be render'd fit either for extracting small or large Teeth, by twisting about the Ball or Handle B.

Fig. 25. exhibits another Instrument for the same Purpose, furnish'd with three Hooks; one straight, represented by A; and two incurvated, exhibited by BC. The straight Hook is intended for the Extraction of the anterior *Dentes Molares*; and the more bended Hooks serve to extract those, which lie more remote, either on the Right or Left Side: And every one of these Hooks may be fix'd to the Body of the Machine, by means of the Screw D, according to the Position of the Tooth to be extracted. The principal Part of this Machine, F, may be set longer or shorter, as Necessity requires, by means of the Handle E, and the Screw G.

Fig. 26. represents a Hook proper for extracting some Teeth, and their Roots. *Heister. Institut. Chirurg.*

DENSITAS, πυκνότης. Denseness is sometimes oppos'd to *Raritas*, Thinness; and then signifies Closeness, or Compactness; and sometimes means the same as *Crebritas*, Frequency. The Adjective *densus* is express'd by δασὺς, (see DASYS) and also by πυκνὸς, which in *Hippocrates*, 5 *Aph.* 62. signifies Denseness of Contexture; but, apply'd to the Pulse, or Respiration, imports Frequency, as in 6 *Epid. Sect.* 4. *T.* 4.

DENTAGRA, ὀδοντάγρα, from ὀδοὺς, a Tooth, and ἄγρα, a Capture, a Surgeon's Instrument, or Forceps, for extracting of Teeth. It is also call'd ψαλὶς, and its other *Latin* Names are *Dentiducum*, *Dentarpago*, *Odontagogum*. See various Forms of these Instruments in *Paré*, *Lib.* 16. *Cap.* 27. And in *Tab.* 41. *Dentagra* signifies also the Gout in the Teeth, for which see ARTHRITIS.

DENTALIS *Lapis* is the tartareous and tophaceous Matter, which, being formed of a Coagulation of vitious Particles, adheres to the Teeth, and is consolidated into almost a stony Hardness. *Helmont*, *Alimenta Tartari insontia*, *Numb.* 23.

DENTALIUM, Offic. Schrod. 5. 328. Charlt. Exer. 63. Mont. Exot. 6. *Dentales*, Scyll. p. 136. Tab. 18. n. 7. 8. *Dentalium Conchæ Species*, Ind. Med. 45. *Dentale lævе*, *album*, *altera extremitate rufescens*, List. Hist. Conch. 14. Sect. 11. n. 2. *Dentales*, Gesn. de Aquat. 345. *Tubulus Dentalis lævis*, Lang. Meth. Testat. 5. Rondel. de Pisc. 2. 110. *Antales dicuntur alii ejusdem formæ*, *sed minores*, Bonan. 91. THE DOG-LIKE TOOTH-SHELL.

This is a small Shell, or oblong conical Tube, of a white Colour, which includes a Sea-worm. It is found on the Coasts of *England*, and is alcaline, absorbent, cordial, and astringent. There is another kind of *Dentale* found on the Coast of *Normandy*; which is no more than a small Heap of Sand, in which a Worm hides itself. *Geoffroy.*

It is not very much us'd in Medicine; but what Virtues it possesses, seem to be much the same as other testaceous Substances.

DENTARIA.

The Characters are,

It has a long Pod full of Seeds, which are, for the most part, round. When this Pod is ripe, its Valves are twisted into a spiral Form, and discharge the Seeds with Violence; the Root is squamous, fleshy, and denticulated, or cut in, as it were, with Teeth. *Boerhaave*, *Index alter*, *Pars* 2. *p.* 21.

Boerhaave mentions but one Species of this Plant, which is Dentaria; heptaphyllos; baccifera. *C. B. Pin.* 322. *Raii Hist.* 1. 784. *Hist. Oxon.* 2. 254. *Tourn. Inst.* 225. *Elem. Bot.* 192. *Park. Theat.* 619. *Boerh. Ind. A.* 2. 21. *Dentaria*, Offic. Ind. Med. 65. *Dentaria*, *Viola Dentaria*, Mont. 42. *Dentaria heptaphyllos Clusii*, Ger. 834. Emac. 985. *Coralloides altera sive septifolia*, J. B. 3. 899. *Coralloides septifolia*, *Dentaria heptaphyllos*, Chab. TOOTH-WORT.

It is frequently to be met with in the Botanic Gardens, and flowers in *April*. The Root is in Use, which is of a drying and astringent Quality. *Dale.*

DENTARIUS, ὀδοντικὸς, is a Physician or Surgeon, who professes the Art of drawing and curing of Teeth. *Gal. ad Thrasybul. C.* 24. where you meet too with OCULARIUS and AURICULARIUS, ὀφθαλμικὸς καὶ ὠτικὸς, an Eye-Doctor, and an Ear-Doctor.

DENTARPAGA. See DENTAGRA.

DENTES COLUMELLARES, in *Varro* and *Pliny*, are the same as *Varro* in another Place calls DENTES CANINI. *Castellus.*

DENTICULATA, *Boerhaave*, *Index alter*, is a Name for the *Moschatellina*, *Foliis Fumariæ bulbosæ*. See MOSCHATELLINA.

DENTIDUCUM. See DENTAGRA.

DENTIFRICIUM, ὀδοντότριμμα. A Medicine for rubbing the Teeth, and purging them from *Sordes*, and for cleaning and absterging the Gums when replete with Humours.

DENTILLARIA. A Name for the *Plumbago quorundam*. Leadwort.

DENTISCALPIUM, ὀδοντόγλυφον. A Surgeon's Instrument for cleansing the Teeth from Filth; and in *Scultetus* it signifies an Instrument for separating the Gums from the Teeth, in order to their more convenient Extraction.

DENTITIO, ὀδοντοφυΐα, *Æginet.* ὀδοντίασις, Dentition; the breeding the Teeth in Children; it differs from the ὀδαξισμὸς (Odaxismus) of *Galen*, and the οὔλων ὀδαξισμὸς of *Hippocrates*, which is the Itching of the Gums felt by Children in breeding their Teeth. *Blancard.*

DENTO. One whose Teeth are raised and prominent to an extraordinary Degree, or who is full-mouthed. *Blancard.*

DENUDATIO, γύμνωσις, Denudation; is spoken of Bones, which appear uncover'd in a Fracture, or on any other Occasion.

DEOBSTRUENS, ἀναστομωτικὸς, ἐκφρακτικὸς, deobstruent. A Quality of some Medicines, the same as *aperiens*, aperient. See ANASTOMOSIS.

DEON, δέον, from δεῖ, it ought, is what is fit, proper, becoming, *Gal. C. de Artic. T.* 50. *Hippocrates* 1. *Aph.* 1. makes the τὰ δέοντα, "Duties becoming the Station," incumbent as well upon the Patient and Attendants, as upon the Physician.

DEOPPILANTIA, DEOPPILATIVA *Medicamenta*, are aperitive or deobstruent Medicines. *Helmont*, *Aditus præcluf. ad Cond. Visc. Numb.* 3.

DEPASCENS, νεμάδης, is an Epithet of a putrid Ulcer, corroding and ſpreading itſelf over the adjacent Parts. It is more properly call'd *Phagedæna*, καγέδαινα, and *Herpes exedens*, *Gal.* 6. *Aph.* 45. Theſe Sorts of Ulcers are, by *Hippocrates*, call'd *Nomæ*, νομαί.

DEPERDITIO, ἀποφθορά. The ſame as ABORTUS, which ſee.

DEPHLEGMATIO. The ſame as *Rectificatio*, and is a Term uſed by the Chymiſts, and apply'd to Liquids, particularly Spirits, when, by Diſtillation, or ſome other means, they are ſeparated from their Phlegm.

DEPILATIO, μάδωσις, μάδησις, ψίλωσις. A Falling-off or Deflux of the Hair. *Hippocrates*, *Lib.* 1. 3. 6. *Epidem.*

DEPILATORIUM, ψιλωθρον, is a Medicine which deſtroys the Hair, and of which there are three Kinds: The firſt are call'd *Pſilothra*, or DEPILATORIA, by way of Eminence; others attenuate the groſſer Hairs, and others wholly extirpate the Hair; which laſt are dangerous, becauſe of their corroſive Quality. *Galen. de C. M. S. L. Lib.* 1. *Cap.* 4.

DEPILIS, ἄθριξ. See ATHRIX.

DEPLUMATIO, πτίλωσις. An Affection of the Eyelids with a callous Tumor, which cauſes the Hairs to fall off. According to *Aetius*, *Tetrab.* 2. *Serm.* 3. *Cap.* 78. it is a Diſeaſe of the Eye, compounded of a *Madaroſis* and a *Sclerophthalmia*.

DEPREHENSIO. The ſame as CATALEPSIS, which ſee. It has alſo the Signification of Diagnoſis. *Scribonius Largus*, *No.* 183, 184.

DEPRESSIO, ἔκθλασις, Depreſſion. The Word is often apply'd, as upon other Occaſions, ſo particularly to an Injury of the Cranium, when the Bone is broken, and forced inwards upon the Meninges. It may be alſo expreſs'd by *Impreſſio*, or *Introceſſio*, Impreſſion, or Introceſſion, according to *Hildanus* and *Scultetus*.

DEPRESSOR. A Name given to ſeveral Muſcles. Thus there are the *Depreſſor Labii ſuperioris*, deſcrib'd under the Article CAPUT. The *Depreſſor Labii inferioris*. See CAPUT. The *Depreſſor Labiorum*. See CAPUT. The *Depreſſor Maxillæ inferioris*, which is the ſame as the *Digaſtricus*. See CAPUT. And the *Depreſſor Oculi*. See OCULUS.

DEPRESSORIUM. The Name of an Inſtrument, which is repreſented *Tab.* 36. *Fig.* 7. uſed for depreſſing the *Dura Mater*, after the Operation for the Trepan. See CAPUT.

DEPRIMENS *Auriculam*. The Name of a Muſcle which depreſſes the external Ear. See AURIS.

DEPURATIO, Depuration, the ſame as Clarification, or Purification, is the Purging a Body of all the Lees, Fæces, and other groſs, coarſe, and excrementitious Parts. The Chymiſts by this Word mean an Exaltation.

DEPURATORIA FEBRIS. A Fever thus call'd by the illuſtrious *Sydenham*, which prevail'd much in the Years 1661, 1662, 1663, and 1664. This, ſays he, ſeems to be the only one, as far as I could hitherto obſerve, in which Nature regulated all the Symptoms in ſuch a manner as to fit the febrile Matter, prepared by proper Concoction, for Expulſion, in a certain time, either by a copious Sweat, or a freer Perſpiration; and, upon this account, I call it the *Depuratory Fever*. And, in reality, I am inclined to believe, that this is the capital and primary Fever of Nature, as well with reſpect to the regular Method which Nature uſes in promoting and accompliſhing the Digeſtion of the morbific Matter at the appointed Time, as alſo becauſe it occurs more frequently than other Fevers; and it ſeems reaſonable to think, that the neceſſary and excellent Rules left us by *Hippocrates*, and other antient Phyſicians, are adapted to this primary Fever; by means of which it is to be regulated in ſuch a manner, that the febrile Matter may be prepared to make a proper Criſis by Sweat.

Beſides the Symptoms which accompanied other Fevers, the preſent Fever had theſe in particular: A great Anxiety and Faintneſs, Vomiting, a dry and black Tongue, great and ſudden Loſs of Strength, a Dryneſs of the external Parts, the Urine conſtantly either turbid or thin, both of them here equally Signs of Crudity; a Looſeneſs in the Decline, (unleſs the Phyſician happen'd to prevent it, by taking proper Meaſures in the Beginning) whereby the Diſeaſe was prolonged, and render'd more obſtinate; but, in its own natural Courſe, it ſeldom laſted above fourteen or one-and-twenty Days, when it went off with Sweat, or rather a gentle Moiſture; nor did any proper Signs of Concoction appear before in the Urine, but at this time they generally did.

Other Symptoms alſo aroſe, when this Diſtemper was unſkilfully treated: However, not only theſe, but the Nature of the Diſtemper itſelf, will more clearly appear from the particular Method which I formerly adapted to this Fever, and which I ſhall here ſpecify; tho', at that time, I was not aware of there being any other Species of Fever in Nature.

My firſt Obſervation is, That the irregular Commotion rais'd by Nature in the Blood, either as a Cauſe or Concomitant of this Fever, is excited, in order to ſeparate from it a certain heterogeneous Matter contain'd therein, and prejudicial thereto; or elſe to change the Blood itſelf into a new State.

And here I rather chuſe to make uſe of the general Word *Commotion*, than Fermentation or Ebullition, in order to prevent all fruitleſs Diſputes about Words, which might ariſe from the Uſe of thoſe, which, tho' they may ſeem harſh and metaphorical to ſome, are capable of a commodious Interpretation. For tho' the Commotion of the Blood in Fevers, at different times, reſembles the Fermentations and Ebullitions of vegetable Liquors; yet there are thoſe, who think this Commotion very different from both, in more reſpects than one: For Example, they ſay, fermenting Liquors acquire a vinous Nature, ſo as to afford an inflammable Spirit by Diſtillation, and to be eaſily convertible into Vinegar, which yields an acid Spirit by the ſame Treatment; yet neither of theſe Changes have been hitherto obſerved in the Blood. Again, Fermentation and Depuration are both carried on, at one and the ſame time, in vinous Liquors; whereas the Depuration of the Blood in Fevers does not accompany, but follow the Exeſtuation; as appears, even to the Eye, by the Solution of a Fever-fit by Sweat.

As to Ebullition, this Analogy, they ſay, is ſtill more foreign, and, in many Caſes, contrary to Experience, where the Commotion of the Blood is too gentle to deſerve the Title of Ebullition. But, not to engage in theſe Controverſies, ſince the Terms *Fermentation* and *Ebullition* have prevail'd among modern Phyſicians, I likewiſe have not ſcrupled to uſe them occaſionally, meaning only to convey my Thoughts more eaſily thereby. Moreover, that this febrile Commotion of the Blood is raiſed by Nature, in order to ſeparate an heterogeneous and noxious Matter, appears from eruptive Fevers, in which an excrementitious Matter of a vitiated Quality, that lay conceal'd in the Blood, is, by means of the Ebullition, thrown out upon the Skin.

Nor is it leſs clear to me, that a febrile Commotion of the Blood often tends only to introduce a new State of that Fluid; and that a Man, whoſe Blood is pure and untainted, may be ſeiz'd with a Fever; for Fevers frequently appear in healthy Bodies, where there was before no previous Indiſpoſition, either from a Plethora, Cacochymia, or tainted Air, that could give Riſe thereto. Yet, even in theſe Caſes, upon ſome remarkable preceding Change of the Air, Diet, and others of the Non-naturals, a Fever preſently ariſes, upon account of the Blood's affecting a new State, or Diſpoſition, ſuch as this Air and Diet require; and not becauſe the Irritation of vitiated Particles, latent in the Blood, brings on the Fever: Tho' I make no Queſtion, but the Matter regularly diſcharged in the Deſpumation of the Blood, after the febrile Commotion, may prove vitiated, tho' the Blood before was in a good State; which is not more ſtrange, perhaps, than that ſome Parts of our Food ſhould corrupt, and become fetid, after having undergone a remarkable Alteration in the Body, and been ſeparated from the reſt.

With reſpect to this Diſeaſe, I judge, that the genuine Indications are, to keep the Commotion of the Blood within ſuch Bounds as ſuit the Deſign of Nature, ſo as to prevent its riſing too high, on the one hand, whence dangerous Symptoms might follow; or ſinking too low, on the other, whereby either the Excluſion of the morbific Matter might be hinder'd, or the Endeavour of the Blood, affecting a new State, be fruſtrated. And hence, whether the Fever be owing to the Irritation of any heterogeneous Matter, or to the Blood's attempting a new Change, the Indication of the Diſtemper will, in either Caſe, be the ſame; and, upon this Foundation, I proceed to the Cure in the following Manner.

When the Blood is weak, as it generally is in Children, or wants its due Proportion of Spirits, as in declining Age, or even in young Perſons worn out by a lingering Illneſs, I refrain from Bleeding: Otherwiſe the Blood, being already too weak, even without taking any of it away, might prove abſolutely unequal to the Buſineſs of Deſpumation; whence the whole Maſs becoming corrupted, Death might eaſily enſue. Thus a haſty Check can ſcarce be put to the Fermentation of Wine, without injuring the Liquor; for Nature cannot bear the corrupted Particles ſhe once began to throw off, which, tho' they were pure, whilſt equally mix'd with the Blood, now ſtrongly tend to taint the reſt of the Juices. I am well aware, however, that, where Bleeding has been imprudently put in Practice, the Patient may be ſometimes ſaved by means of proper Cordials, and the Blood reduced to a proper Temper for performing the neceſſary Deſpumation; but Prevention is preferable to a Cure.

When the Blood happens to be of a contrary Diſpoſition, as it uſually is in young Perſons of a ſtrong and ſanguine Habit, I eſteem Bleeding the firſt Step to the Cure; and that it is not to be omitted without Danger, except in the Caſes hereafter mention'd; for, without it, not only Delirium, Phrenſies, and the like Diſorders, from Inflammation, might ariſe from too great an Effervеſcence of the Blood; but alſo the Circulation might be obſtructed, or the whole Maſs, in a manner, ſtagnate from its Exceſs in Quantity.

As to the Proportion, I uſually take away no more than I conceive may prevent thoſe Inconveniences, which might proceed from an immoderate Commotion of the Blood; afterwards regulating the Degree of Heat, by repeating or omitting Bleeding

ng occaſionally, together with the free or ſparing Uſe of warming Cordials; and, laſtly, by promoting or checking the Stools, as I obſerve the Commotion to prevail or languiſh.

After Bleeding, where it was neceſſary, I carefully inquire, whether the Patient has had any Vomiting or Retching at the Beginning of the Fever; and, if he has, I order an Emetic; unleſs the tender Age, or ſome remarkable Weakneſs, of the Patient ſhould contraindicate. Where a Retching has preceded, a Vomit is ſo neceſſary, that, unleſs the Humour be expel'd, it produces ſeveral other different Symptoms, not eaſy to be removed in the Courſe of the Cure, and highly dangerous to the Patient. The principal and moſt common of theſe is a Looſeneſs, which generally happens in the Decline of the Fever, if Emetics were omitted, when they were indicated; for, in the Progreſs of the Diſtemper, when Nature has, in ſome degree, ſubdued the malignant Humour in the Stomach, and thrown it lower, it, by its Acrimony, and the conſtant Supply derived from above, ſo corrodes the Inteſtines, that a Looſeneſs muſt neceſſarily follow. I have, however, obſerved, in ſuch inflammatory Fevers as are commonly call'd malignant, that, tho' a Vomit has been omitted, when Retchings at firſt appear'd, yet a Diarrhœa does not neceſſarily follow, as it did in the preſent.

Now the Danger of this Diarrhœa lies here, that it farther debilitates the Patient, already ſufficiently weaken'd by the Diſeaſe; and, what is ſtill worſe, happens in the Decline of the Fever, when the Blood ought to collect itſelf, and exert its Force to finiſh the Buſineſs of Deſpumation, but is hinder'd by this Evacuation.

What makes it ſtill plainer, that this Humour lodged in the Stomach, if not diſcharged by a Vomit, may bring on a Looſeneſs afterwards, is, that, upon Examination, we ſcarcely find any Inſtance of a Looſeneſs attending this Fever, but where the Patient was inclined to vomit at the Beginning, and an Emetic was not given; as, on the other hand, tho' this Inclination to vomit be over, yet the Looſeneſs generally ſtops, upon giving a Vomit, provided the Patient be ſtrong enough to bear it: And I have frequently obſerved, that, upon the coming on of a Looſeneſs in this Caſe, Aſtringents, either internally or externally given, have very little, if any, Effect in ſtopping it.

The Emetics I generally uſed were of this Kind:

Take of the Infuſion of Crocus Metallorum, otherwiſe call'd Vinum Benedictum, ſix Drams; Oxymel of Squills, and compound Syrup of Scabious, each half an Ounce: Mix them for a Vomit.

I directed it to be given in the Afternoon, two Hours after a light Dinner; and, to make it work the ſafer and better, I order'd three Quarts or a Gallon of Poſſet-drink to be in Readineſs, becauſe this kind of Emetic is dangerous, unleſs plentifully diluted; and, therefore, as often as the Patient vomited or purged, he was directly to take a Draught of the Poſſet-drink; by which means Griping was prevented, and the Vomiting render'd more eaſy.

When I have ſometimes happen'd carefully to examine the Matter here thrown up by Vomit, and found it neither conſiderable in Bulk, nor of any remarkable bad Quality, I have been ſurpris'd how it ſhould happen, that the Patient has been ſo much relieved thereby; for, as ſoon as the Operation was over, the ſevere Symptoms, ſuch as the Nauſea, Anxiety, Reſtleſſneſs, deep Sighing, Blackneſs of the Tongue, and the like, uſually abated, and went off, ſo as to leave the Remainder of the Diſeaſe more tolerable.

I muſt here remark, that, in Fevers and the Small-pox, there is much Reaſon to believe, that the more modern Practice has very injudiciouſly ſubſtituted Ipecacuanha in the room of antimonial Vomits. Theſe laſt operate more roughly than the former; but at the ſame time, as I have frequently obſerved, afford more Relief.

We ſhould not omit, that, if the State of the Patient requires both Bleeding and Vomiting, it is ſafeſt to bleed firſt, and give the Vomit afterwards; otherwiſe there would be Danger, that, whilſt the Blood-veſſels are greatly diſtended, the violent Motion in Vomiting might burſt the Veſſels of the Lungs, or hurt the Brain, and occaſion a Vomiting of Blood, or a mortal Apoplexy: Of which I could give ſome Inſtances, if it were proper; but my Deſign is only to give Caution.

As to the Time of giving a Vomit, I would have it done at the Beginning of the Fever, if poſſible, in order to prevent thoſe terrible Symptoms ariſing from a Collection of Humours in the Stomach, and Parts adjacent: And thus, perhaps, the Diſtemper may be cruſh'd in its Infancy, which might otherwiſe increaſe, and prove both obſtinate and dangerous, whilſt ſupplied by theſe Humours, which, entering into the Receſſes of the Body, may mix with the Maſs of Blood; or, growing more corrupted by longer Continuance, communicate a malignant Quality thereto. We have an Inſtance of this in the *Cholera*; where, if we unſeaſonably endeavour to ſtop the Vomiting, whether by Laudanum or Aſtringents, and the Attempt ſucceeds, we ſometimes bring on a no leſs dangerous Train of Symptoms: For the acrimonious and corrupted Humours, which ought in ſome meaſure to be diſcharged, being by this means detain'd, exert their Force upon the Blood, and raiſe a Fever, which uſually proves of a bad Kind, and is accompanied with dangerous Symptoms, ſo as ſcarcely to be removed, without giving a Vomit, even tho' the Patient has then no Tendency to ſuch an Evacuation.

But if, as it frequently happens, the Phyſician is call'd ſo late, that a Vomit cannot be given at the Beginning of the Fever; yet I ſhould judge it proper to give one at any time of the Diſtemper, provided the Patient is not too weak to bear it. I have ſucceſsfully order'd an Emetic on the twelfth Day of the Diſtemper, even tho' the ſpontaneous Retchings were over; and by this means have ſtopt the Looſeneſs, which hinder'd the Blood from finiſhing its Depuration; and I ſhould not ſcruple attempting the ſame later, if the Strength of the Patient permitted.

In the Evening, after the Operation, I always endeavour to quiet the Diſturbance raiſed in the Juices by the Emetic, and to procure Sleep; and therefore direct a paregoric Draught to be taken, at Bed-time, after the following manner:

Take of the diſtil'd Water of red Poppies, two Ounces; Aqua-mirabilis, two Drams; Syrup of white and red Poppies, each half an Ounce: Mix the Whole for a Draught.

But if there be no Danger of raiſing too great an Effervescence, either on account of plentiful Bleeding, in the Courſe of the Cure, frequent Vomiting or Purging, from the Uſe of an Emetic, the preſent Diſappearance of the Fever, its Mildneſs, or its natural Decline; then, inſtead of the Draught above ſet down, I give, without Apprehenſion of Danger, a ſufficiently large Doſe of Dioſcordium, either alone, or mix'd with ſome Cordial-water: And this is an excellent Medicine, provided it be given in a due Quantity.

Under the Article of Vomits, we ſhould not omit to obſerve, that it is by no means ſafe, at leaſt in this Fever, to give ſuch as are made with the Infuſion of Crocus Metallorum, even in the ſmalleſt Quantity, to Children under the Age of Fourteen. It were, indeed, to be wiſh'd, that, inſtead of this Emetic, we had others of a ſafer Kind, yet ſo ſufficiently efficacious, as thoroughly to diſcharge the Humour, which, in the Decline of this Fever, generally brings on a Looſeneſs; or, at leaſt, that we were poſſeſs'd of ſome proper Remedy for changing or diſſolving this corroſive Matter, and blunting its Force, ſo as to hinder it from producing a Diarrhœa. It has often been a Difficulty with me, when call'd to Infants and Children in a Fever, and obſerving an Emetic indicated, whereby they might have been preſerved from Danger, that I durſt not give this Infuſion, for fear of bad Conſequences; but, in grown Perſons, I have hitherto found no ill Effect from it, provided it were given with the Cautions above-mention'd.

When the Affair of Vomiting is over, I next conſider,

1. Whether, notwithſtanding the preceding Evacuations, the Blood may not ſtill hurry on ſo faſt, as to require a Check. Or,

2. On the other hand, whether it may not languiſh ſo much as to require quickening. Or, laſtly,

3. Whether the Fermentation is now brought to ſuch a proper State or Degree, as that it may be ſafely left to itſelf.

Something muſt be ſaid to each of theſe Caſes.

1. If the Blood hurries on ſo faſt, as to give a juſt Suſpicion of a Delirium, or other bad Symptom, coming on, the Day after the Emetic I generally preſcribe a Clyſter:

Take of the common Decoction for Clyſters, one Pint; Syrup of Violets, and brown Sugar, each two Ounces: Mix them for a Clyſter.

This Clyſter I order to be repeated occaſionally; by which means the Blood is often ſo refreſh'd and cool'd, as ſufficiently to check its Effervescence. It ſometimes, likewiſe, becomes neceſſary to repeat Bleeding once or twice, as particularly in Perſons of a very ſanguine Conſtitution, and in the Vigour of Life, or ſuch as have inflamed their Blood by uſing Wine too freely; tho' there is ſeldom Occaſion for ſo capital a Remedy as repeated Bleeding; and, therefore, Clyſters may ſuffice to check the Effervescence, except in the Caſe juſt now mention'd. If, therefore, the Effervescence of the Blood be too high, I order a Clyſter to be injected, either every Day, or every other Day, as the Caſe requires; and this I continue to do, till about the tenth Day of the Diſtemper.

But, when a large Quantity of Blood has been taken away, or the Patient is in Years, I, at this time, order no Clyſter, tho' the Effervescence of the Blood ſhould be conſiderable; for, in theſe Caſes, as we need not fear its riſing ſo high, without

the Uſe of Clyſters, as to bring on any great and dangerous Symptoms; ſo, on the other hand, it is certain, that the Strength and Texture of the Blood may be ſo impair'd and relax'd by the Uſe of them, as to diſturb and hinder the Procedure of Nature, eſpecially if the Patient be in Years; for Clyſters do not ſucceed ſo well in the Old, as in the Young. But if only a little Blood has been taken away, then, as was ſaid before, I continue the Uſe of Clyſters to about the tenth, and ſometimes to the twelfth Day, as, particularly, when I durſt not bleed at all: For ſome Perſons are ſeiz'd with a continual Fever, after an autumnal Intermittent, whether tertian or quartan, from a Want of Purging at the Cloſe of the preceding Diſtemper; and, if Blood ſhould be taken away in this Caſe, there is Danger of the Sediment, depoſited in the former Fermentation, being reabſorb'd into the Maſs of Blood, and occaſioning freſh Diſorders. Inſtead of Bleeding, therefore, in ſuch Caſes, I continue to uſe Clyſters to the twelfth Day, if the Patient be young, and the Fermentation too violent.

2. On the other hand, whether Bleeding has been uſed or not, if the Effervеſcence of the Blood ſinks too low, and requires raiſing, in order to aſſiſt Nature in her Work, in this Caſe I judge, that no Clyſter ſhould be injected, even before the tenth Day, and much leſs afterwards; otherwiſe we might thus farther check the Fermentation, now already too languid of itſelf. But to uſe Clyſters after this time, that is, in the Decline of the Diſtemper, would be as abſurd as to ſtop the Fermentation of Wine, before the Deſpumation was perform'd, by opening a large Vent-hole; for a Clyſter here would hinder Nature in her vigorous Endeavour to throw off the morbific Matter.

But, when once the Patient is out of Danger from thoſe Symptoms ariſing from too great an Ebullition, either by means of proper and ſeaſonable Evacuations, or becauſe the Diſeaſe begins to decline ſpontaneouſly, the more coſtive he is kept, the more ſecure I judge him, the febrile Matter then proceeding more kindly and gently to Concoction. And, therefore, if the preceding Evacuations ſhould either actually diſſolve, or tend to diſſolve, the Maſs of Blood, or the Fever go off before its due Time, or ſhould have arrived at its full Period, I not only refrain from the Uſe of Clyſters, but alſo call in the Aſſiſtance of Cordials, and directly endeavour to prevent a Purging.

Cordials, as I have experienced, when given too ſoon, do Miſchief; and, unleſs Bleeding has preceded, may drive the crude Matter of the Diſtemper upon the Membranes of the Brain, or the Pleura; and, therefore, I never give them, when either no Blood, or very little, has been taken away; or when no other conſiderable Evacuation has been made; or the Patient has not paſs'd the Meridian of Life: For, whilſt the Blood remains rich enough of itſelf, it ſhould not be more enrich'd to the endangering the Patient; nor does it require to be raiſed, ſo long as no remarkable Evacuations have diminiſh'd its natural Heat. Such kind of Patients have Cordials within them, which render external ones either ſuperfluous, or prejudicial; and, therefore, I here either uſe none at all, or thoſe of the weakeſt Sort.

But, if the Patient ſhould be greatly weaken'd and diſpirited by copious Evacuations, or be in the Decline of Life, I uſually allow of Cordials, even in the Beginning of the Fever; and on the twelfth Day, when the Buſineſs of Separation is at hand, I judge a freer Uſe of the hotter Remedies allowable; and they might be given earlier, if there is no Danger of the febrile Matter's falling upon the principal Parts; for, at this time, the more the Blood is heated, the more the Buſineſs of Concoction is promoted.

I cannot imagine what Phyſicians mean by their frequent Precepts for giving Remedies to promote the Concoction of the febrile Matter, which they often talk of, in the Beginning of the Diſtemper; tho', at the ſame time, they order only ſuch Medicines as may moderate the Fever: For the Fever itſelf is no other than the Inſtrument of Nature, by means whereof ſhe ſeparates the vitiated Parts of the Blood from the ſound; tho' ſhe does this in a manner perfectly imperceptible at the Beginning, and even at the State, of the Diſtemper; but more manifeſtly in the Decline thereof, as appears from the Sediment in the Urine. The Concoction of the febrile Matter, here, means no more than a Separation of the morbific Particles from the healthy; whence the Way to haſten this Concoction is not by moderating the Fever, but the Effervеſcence muſt be kept up ſo long as the Safety of the Patient will give Leave: But, when the Diſeaſe is in the Decline, and the Separation becomes manifeſt, warmer Medicines ſhould be immediately given, in order to finiſh the Operation with greater Certainty and Expedition: And this is properly promoting the Concoction of the febrile Matter; whereas I have frequently found, that Evacuations and Coolers hinder the Cure, and retard the Recovery, which was now approaching. But, if the Fermentation advances ſufficiently, Deſpumation will be perform'd about the fourteenth Day; whereas if Coolers are given too late, ſo as to check the Effervеſcence, 'tis no Wonder if the Fever runs on to the twenty-firſt Day, or even much longer, in Perſons extremely weaken'd with improper Treatment.

It is remarkable here, that, tho' the Patient may ſometimes ſeem to be a little relieved by the Uſe of Clyſters, or other Purgatives, unſeaſonably directed, about the Decline of the Diſtemper, and even, perhaps, to be totally freed from the Fever; yet, a Day or two after, it happens, that the former Fever does not ſo much appear to return, as a new one to ariſe; for Chilneſs and Shivering preſently come on, and are ſoon follow'd by Heat, and a Fever; which, unleſs it happens to degenerate into an Intermittent, runs its Courſe as already deſcrib'd. In this Caſe, the Patient is to be treated in the ſame manner as if he had not had the Fever before; for, tho' it be an afflicting Conſideration to the weaken'd Patient, the Depuration, conſequent upon this new Effervеſcence, will not be perform'd in leſs than fourteen Days.

I ſhall next ſet down the Cordials which I generally uſe in this Diſtemper, the milder of which I employ at the Beginning, when the Ebullition is violent; and gradually proceed to the hotter, according as the Fever, or the Degree of Ebullition, requires; always obſerving, where Bleeding was freely uſed, or the Patient was in Years, to adminiſter thoſe of a ſtronger Kind, than when no Blood had been taken away, or the Patient was in the Vigour of Life.

The milder Cordials I mean, are ſuch, for Example, as are made of the diſtil'd Waters of Borrage, Citrons, Strawberries, the compound Scordium-water, with a Mixture of the Syrup of Baum, Cloves, or of the Juice of Citrons, and the like. But the ſtronger are *Gaſcoign*'s Powder, Bezoar, Confection of Hyacinth, *Venice* Treacle, with others of the ſame Kind. The following Preſcriptions were frequently uſed:

Take of the diſtil'd Waters of Borrage, Citron, black Cherries, and compound Scordium-water, each two Ounces; Barley Cinnamon-water, one Ounce; prepared Pearls, two Drams; fine Sugar, two Ounces, or a ſufficient Quantity: Mix them together. Take four Spoonfuls of this Mixture often in a Day, eſpecially when faint.

Take of the diſtil'd Waters of the whole Citron, and Strawberries, each three Ounces; *Aqua Cordialis frigida Saxoniæ*, one Ounce; Treacle-water, Syrup of Baum of *Fernelius*, and of the Juice of Citron, each half an Ounce: Mix them for a Julap, ſome of which is to be taken frequently.

Take of *Gaſcoign*'s Powder, Oriental and Occidental Bezoar, and *Lapis Contrayerva*, each a Scruple; a ſingle Leaf of Gold: Reduce the Whole to a fine Powder, of which take twelve Grains, as often as there ſhall be Occaſion, in Syrup of the Juice of Citron, and Cloves, each two Drams; drinking after it a few Spoonfuls of the Julap above directed.

Take of Treacle-water, four Ounces; the Seeds of Citron, two Drams: Beat them together, and make an Emulſion. To the ſtrain'd Liquor add Sugar, enough to ſweeten it to the Taſte. Take two Spoonfuls of it thrice a Day.

It would be ſuperfluous to add any more Forms of Medicines, becauſe a larger Number are, or may be, of Uſe in the Courſe of the Diſtemper, and require to be varied according to its different Stages, and the different Symptoms ariſing therein.

But when the Fermentation neither riſes too high, nor ſinks too low, I leave it in that State, without preſcribing any Medicines, unleſs thro' the Importunity of the Patient, or his Friends; and then I direct ſuch only as may ſatisfy, without doing any Injury.

I ſhould not omit, that frequently, when I was call'd to Perſons of low Circumſtances, I order'd them to do nothing elſe, after Bleeding and Vomiting, when required, but to keep in Bed, during the whole Courſe of the Diſtemper, and to ſup only Water-gruel, Barley-gruel, and the like; to drink moderately warm ſmall Beer, to quench their Thirſt; and to take a Clyſter of Milk and Sugar every Day, or every other Day, till the tenth or twelfth Day of the Diſtemper; but towards the End of the Fever, when the Separation was begun, and proceeded ſlowly, to promote it, I allow'd them, now-and-then, a little ſtronger Malt-liquor, inſtead of Cordials. And thus, without any thing farther, except a gentle Purge at the End of the Diſtemper, they generally recover'd.

If the Method above deliver'd was carefully obſerved, I commonly, about the fifteenth Day, found it proper, from the laudable Separation in the Urine, and a manifeſt Abatement of all the Symptoms, to order a purging Potion to drain off the Sediment depoſited upon particular Parts by the preceding Fermentation; and, unleſs this was ſeaſonably done, that Sediment might return into the Maſs of Blood, and occaſion a Return of the Fever; or, by its Continuance in the Parts where it lodged,

lodged, produce obſtinate Diſorders in the Body: For, the Separation being over, the groſs and vitiated Humours, tranſmitted from the Arteries to the Veins, eaſily prevent the Return of the Blood; whence various Kinds of Obſtructions, and, at length, new Ferments, ariſe.

But it may be here obſerved, that Purging is not ſo neceſſary after vernal as after autumnal Fevers, becauſe the Sediment depoſited by the former is neither ſo copious, nor of ſuch an earthy malignant Nature, as in the latter; which holds alſo in the Small-pox, and many other Diſtempers, which rage in the Spring; ſo that here, as far as I have obſerved, it is not ſo dangerous to omit Purging, as in the Caſes before-mention'd. And it ſeems to me, that more Diſtempers ariſe from an Omiſſion of Purging after autumnal Diſorders, than from any other ſingle Source.

If the Patient happens to be very weak, or the Depuration not perfectly perform'd, ſo as to render it unſafe to give a Purge on the fifteenth Day, I defer it to the ſeventeenth; and then preſcribe the following, or a ſimilar purging Potion, in proportion to the Strength of the Perſon:

Take of Tamarinds, half an Ounce; the Leaves of Sena, two Drams; Rhubarb, one Dram and a half: Boil them together in a ſufficient Quantity of Water, ſo as to leave three Ounces, when ſtrain'd off; in which diſſolve Manna, and ſolutive Syrup of Roſes, of each an Ounce: Mix the Whole for a purging Potion, to be taken in the Morning faſting.

I always order the Patient to keep his Bed, till he is purged; then permit him to riſe, and, by degrees, return to his ordinary Manner of Living. The Diet I order, to this Time, is nearly the ſame with that above-mention'd, as Water-gruel; Barley-gruel; Panada made of Bread, the Yolk of an Egg, Water, and Sugar; thin Chicken-broth; ſmall Beer; to which, when the Fever is high, a little freſh Juice of Oranges may be added, it being firſt juſt boil'd over the Fire, to take off the Crudity, with the like; tho' Water-gruel is the beſt of all. But to forbid the drinking of ſmall Beer, in ſmall Quantities, is an unneceſſary Severity, and often pernicious.

It ſometimes happens, eſpecially in the Aged, that tho' the Fever is cured, and the Body, perhaps, rather too much purged, that the Patient ſtill remains very weak; and, with coughing or ſpitting, expectorates a large Quantity of viſcid Phlegm: A Symptom terrifying not only to the Patient, but alſo to the Phyſician, if not appris'd of it, who might otherwiſe miſtake it for a beginning Conſumption; tho' I have found it no ways dangerous. In this Caſe, I order a Glaſs of old Malmſey or Muſcadel Wine, with a Toaſt; which, by ſtrengthening the Texture of the Blood, (weaken'd by the preceding Fever, and therefore render'd unfit to aſſimilate the Juices of the Aliment lately taken in) removes this Symptom in a very few Days, as I have found by repeated Experience.

By the Method here laid down, many Symptoms and Diſorders will be prevented, uſually attributed to Malignity; nothing being more common with Phyſicians, unſkil'd in their Profeſſion, than to cry out upon Malignity, when, by too cooling Remedies, or the unſeaſonable Uſe of Clyſters, they have weaken'd the Texture of the Blood, and reduced Nature ſo low, whilſt ſhe was performing the Office of Separation, as to bring on Faintings, and other bad Symptoms, which are the genuine Effects of ſuch perverted Rules of Art: But if the long Continuance of the Diſeaſe ſhould wipe off this Aſperſion of Malignity, whatever afterwards obſtructs them in the Cure, they impute to the Scurvy; tho', in reality, the Symptoms, which happen'd in the Height of the Diſeaſe, were neither owing to Malignity, nor thoſe, which appear'd in the Decline, to the Scurvy; but both of them to wrong Management, as I have frequently obſerved. Not that I, or any other Phyſician, who is acquainted with the Hiſtory of Diſeaſes, will ſay, that there are no Fevers of a malignant Nature; for there are manifeſt Signs of ſuch; nor will I deny, that a Fever may be ſometimes complicated with a Scurvy, and other Diſorders; but what I aſſert is, that both Malignity and the Scurvy are here frequently accuſed, without any Reaſon.

When the Fermentation of the Blood proceeds in a proper Manner, the Deſpumation of the morbific Matter will be finiſh'd in the Time above-mention'd; but if cooling Remedies, or Clyſters, are given too late, the Fever will run to a much greater Length, eſpecially in aged Perſons, who have been improperly treated. When I have ſometimes been call'd to ſuch, after they had ſtruggled with the Fever above forty Days, I have uſed my utmoſt Endeavours to procure the Deſpumation of the Blood, which was now ſo far weaken'd, partly by Age, and partly by Clyſters, and cooling Medicines, that I could not obtain the End propoſed, either by Cordials, or any other ſtrengthening Remedies; but either the Fever maintain'd its Ground, or, if the Patient ſeem'd free from a Fever, his Strength was almoſt quite exhauſted.

But when other Means fail'd me, I have made uſe of a ſingular Expedient with great Succeſs, that is, the Application of the Heat of ſtrong and healthy Men; nor will it be found ſurpriſing, that, by this uncommon Means, the Patient ſhould be conſiderably ſtrengthen'd, and debilitated Nature aſſiſted, ſo as to diſburden herſelf, and throw off the Remains of the morbific Matter; for it is eaſy to apprehend, that a conſiderable Quantity of ſound wholſome Effluvia will thus paſs from a robuſt, healthy Body into the exhauſted Body of the Patient; and I have never found the repeated Applications of warm Napkins to prove near ſo ſerviceable as this Method, where the Heat applied is not only more natural to the human Body, but alſo more mild, moiſt, equable, and conſtant. And this Way of tranſmitting, perhaps, balſamic Spirits and Exhalations into the Body of the Patient, has alſo ſince been ſucceſsfully us'd by others. Nor do I think it below me to mention this Expedient, whatever Cenſure may be paſſed upon me for it by ſuch as deſpiſe whatever is vulgar, becauſe, I think, the Health and Benefit of Mankind ought to be prefer'd to their falſe Opinion of things.

By carefully purſuing the Method hitherto deliver'd, the greater Part of the bad Symptoms, which either accompany or follow upon this Fever, will be prevented; which otherwiſe, in the Courſe of the Cure, frequently perplex the Phyſician, and prove fatal to the Patient, tho' the Diſeaſe itſelf ſhould have no ſuch deſtructive Tendency. But, as ſuch Accidents are common, if the Phyſician comes too late, be negligent, or unſkilful, I will here briefly treat of the Cure of thoſe Symptoms, which, when they happen, require a peculiar Treatment, tho' they might generally have been prevented, by keeping cloſe to the above-mentioned Method.

And, firſt, if a Delirium be occaſion'd, either by the early and unſeaſonable Uſe of heating Medicines, or the Patient's being naturally of a hot Conſtitution; or, which is nearly the ſame, if he has conſtant Watchings, ſpeaks haſtily, looks wild, drinks his Medicines or other Liquors eagerly, or has a Suppreſſion of Urine; in this Caſe, I bleed more freely, order Glyſters, and cooling Medicines, particularly in the Spring; at which time, ſuch as are young and florid, tho' free from this Symptom, may be treated in the ſame manner, without much Danger.

By theſe Means I endeavour to ſupport the Patient, till the Diſeaſe has run to a certain Length; when I find it eaſy to take off both that and the Delirium by a large Doſe of ſome Opiate: For Anodynes, properly given in the Decline, are very beneficial; whereas they prove of no Service whilſt the Fever is high, tho' given in the largeſt Doſe, as being unable to ſtop the violent Courſe of the Fermentation; but principally becauſe the peccant Matter, then equally mix'd with the Blood, and not ripe for Separation, is confin'd; whence the expected Depuration is hinder'd. Whether this be the Reaſon of the thing, or it proceeds from ſome more latent Cauſe, I leave to the Determination of others.

This, however, I can affirm from numerous Obſervations, that Laudanum, or any other Narcotic, us'd to take off this Symptom, whether in the Beginning, Increaſe, or Height of this Fever, was either ineffectual, or prejudicial; whereas a moderate Doſe in the Decline proved ſucceſsful. I once order'd a Narcotic upon the twelfth Day of the Diſeaſe with Succeſs; but never knew it given ſooner to Advantage; and, if it be defer'd to the fourteenth Day, when the Separation is more perfect, it will prove ſtill more beneficial; for I have frequently obſerv'd, that the Delirium may be diſregarded, till it is proper to give an Opiate, provided the Diſorder be not increas'd by the Uſe of Cordials, and heating Medicines, which may here prove mortal. The Opiates I uſually preſcribe, are either *London* Laudanum to a Grain and a half, or the following:

Take of Cowſlip-flowers, one Handful; boil them in a ſufficient Quantity of black Cherry-water to leave three Ounces, when ſtrain'd off; to which add Syrup of white Poppies, half an Ounce; Juice of Lemons, half a Spoonful: Mix the Whole together. Or,

Take of black Cherry-water, one Ounce and a half; Plague-water, two Drams; liquid Laudanum, ſixteen Drops: Mix them together.

It may be proper to add, that if this Symptom be not very urgent, and the Fever be prolong'd, ſo as that the Patient may be ſafely purg'd before an Opiate is given, it will then be attended with greater Succeſs; and therefore I uſually direct two Scruples of the Pil. Cochiæ, diſſolv'd in Betony-water, to be taken ten or twelve Hours before the Opiate; and thus the Diſturbance this warm Purgative might otherwiſe occaſion, will be prevented by the Opiate, and an agreeable Sleep procur'd. But, if the Watching continues, after the Fever, and the other Symptoms, are gone off, I have known a Piece of Linen dipt in Roſe-water, and applied cold to the Temples and Forehead, prove of greater Service, than any kind of Opiate.

'Tis uſual for the Patient to be afflicted with a bad Cough during

during the whole Courſe of the Diſeaſe, ariſing from the violent Commotion of the Blood; whereby the Juices, being broke, are ſeparated from the Maſs, in its Circulation thro' the pulmonary Veſſels, and thrown upon the internal Membrane of the Trachea, which is of a fine Texture, and extremely ſenſible. The Cough is firſt dry, the Matter being then too thin to be expectorated; but the febrile Heat gradually thickens it, and ſoon renders it more tenacious; whence it is, with Difficulty, expectorated, and becomes ſubject to cauſe a Suffocation, for want of ſufficient Strength in the Patient to diſcharge it. In this Caſe, I ſeldom uſe any other Medicine, than freſh-drawn Oil of ſweet Almonds, unleſs, as it ſometimes happens, the Patient has an Averſion to Oil; and, if ſo, I endeavour to relieve him by the common Pectorals. Otherwiſe, I prefer the Oil of Almonds to all other pectoral Medicines, principally becauſe that, to anſwer any Intention, theſe muſt be given freely, and in large Quantities; whereby the Stomach, already too weak, and ſubject to Retchings, is overcharged; and, beſides, we are ſometimes, by this means, prevented from giving what is proper upon other Accounts.

Again, neither Reaſon nor Experience have yet convinced me, that the Uſe of this Oil is not to be allowed in Fevers, becauſe it is of an inflammable Nature, and conſequently may tend to increaſe the Diſtemper; for, granting it to be naturally hot, 'tis however certainly not ſo hot, but that the Advantages ariſing from its Uſe are greater than the Inconveniencies; for it is an excellent Pectoral, opens and lubricates the Paſſages, thereby promoting Expectoration, which, when copious, frees the Blood from the noxious Humour, now ſeaſonably ſeparated, and at the ſame time tends to cool; ſo that this Symptom thus proves of conſiderable Service; for which Reaſon I am not anxious about it. Let it, however, be obſerved, that 'tis unſafe to give ſeveral Spoonfuls of Oil of Almonds at once, as Retchings, and a Looſeneſs, may thereby be occaſioned; but the frequent Uſe of it in ſmall Quantities, throughout the Day and Night, not only eaſes the Cough, by promoting Expectoration, but, which is very material, the Patient, now almoſt worn out, is, in ſome meaſure, recruited by this kindly Nouriſhment.

Sometimes a Bleeding at the Noſe happens, either from giving too warm Medicines in the Beginning of the Fever, or from not ſufficiently depreſſing the Ebullition of the Blood, the Patient either being in the Prime of Life, or the Seaſon of the Year conſpiring with the Fever. Here the Means commonly made uſe of to check the Motion of the Blood will be of little Service; ſuch as Bleeding, Ligatures, aſtringent, agglutinant, and balſamic Remedies, tho' Recourſe may be had to theſe and the like Helps, according as they ſhall be judged proper; but the principal thing is, to ſtop the violent Ebullition of the Blood by a proper Medicine, tho' in reality, if this Symptom be conſidered apart, the Remedies above-mentioned, and particularly Bleeding, ſhould ſeem to be ſerviceable therein; nor have I ſcrupled to uſe them: Yet, as they do not (Bleeding excepted) ſtrike ſufficiently at the Cauſe of this Symptom, that is, the Ebullition of the Blood, 'tis imprudent to depend upon them. Therefore, in this Caſe, when all other Means had proved ineffectual, I uſually gave the following Draught:

> Take of the diſtil'd Waters of Plantain, and wild Poppies, each an Ounce and a half; Syrup of white Poppies, ſix Drams; Syrup of Cowſlips, half an Ounce: Mix them together for a Draught.

But I judge it improper to put an immediate Stop to every Hæmorrhage after this manner; for it is frequently rather to be permitted; and may prove of great Service, ſometimes by abating the too violent Ebullition of the Blood, and at others, by proving critical, put an End to the Diſeaſe. And, in reality, no conſiderable Effect is to be expected from the above-mentioned Medicine, unleſs the Symptom has continued ſome little time, and Bleeding in the Arm preceded its Uſe. Again, it muſt be carefully remark'd, that this, and all other moderate Hæmorrhages, are peculiarly apt to return ſoon after a Stop has been put to them, unleſs a gentle Purge be given; which therefore muſt not be omitted, even tho' it ſhould ſeem too early to purge with reſpect to the Stage of the Fever, if this Symptom had not happened.

The Hiccup generally happens to the Aged, after an immoderate Looſeneſs, but principally after exceſſive Vomiting, and frequently prognoſticates imminent Death. I ingenuouſly own, that I have not been able to ſatisfy myſelf in my Inquiry into the Cauſe of this Symptom; but I have frequently obſerved it to ariſe from ſome Diſturbance raiſed in the Stomach, and adjacent Parts, by violent Medicines, not without great Danger to the Patient; becauſe Nature is unable to check and quiet this Commotion: And on this account I judged it proper to aſſiſt her by Art, by giving a large Doſe of Diaſcordium; for Inſtance, two Drams; which ſeldom fail'd to remove this Symptom, when the Seeds of Dill, and other celebrated Specifics, had proved ineffectual.

If, as above intimated, a Looſeneſs ſhould happen in the Courſe of the Diſeaſe, for want of giving a Vomit at the Beginning, when it was indicated by the Retchings, one ſhould be given at any time of the Diſeaſe, provided the Patient be ſtrong enough to bear it, even tho' the Tendency to that Evacuation has, for ſome time, ceaſed. But, as this has been largely treated of before, I ſhall only mention what is proper to be done, if a Looſeneſs ſhould happen, notwithſtanding an Emetic has been given; which is very ſeldom the Caſe, except in an inflammatory Fever, where this Symptom, ſo far from being prevented, is ſometimes occaſioned by a Vomit; which is an Obſervation of Conſequence. And here I have found the following Glyſter more efficacious, than any other Aſtringents:

> Take of the Bark of Pomegranates, half an Ounce; red Roſes, two Pugils: Boil them in a ſufficient Quantity of Milk, ſo as to leave half a Pint of ſtrain'd Liquor, in which diſſolve half an Ounce of Diaſcordium: Mix the Whole for a Glyſter.

'Tis improper to inject a larger Quantity of this Glyſter than is here directed, tho' it be naturally aſtringent; becauſe the Inteſtines may be oppreſſed by its Bulk, whence the Looſeneſs will rather be promoted than checked.

But it may be ſaid, that, if a Diarrhœa ſhould appear, eſpecially in the Decline of the Diſeaſe, it is better to encourage than ſtop it, as it is ſometimes a critical Diſcharge, and terminates the Diſtemper. This undoubtedly may ſometimes be the Caſe; but it happens ſo rarely, as not to encourage one to attempt it: Beſides, the Reaſon before alledged, in treating of the Cure of Fevers in general, which tends to ſhew the Neceſſity there is of ſtopping the Flux, holds here alſo. And to this may be added, that, in order to the genuine Depuration of the Blood, it is not only neceſſary there ſhould be a Secretion of ſome feculent Parts, but there is further required a Separation of others by way of Efflorescence, as we daily ſee in other rich and heterogeneous Liquors. Conſequently, if the Looſeneſs be too much promoted, the Depuration will not be wholly completed, and perhaps the Matter, which ought to have been laſt expel'd, will paſs off firſt. I own indeed, that after the Separation by way of Efflorescence is finiſhed, which is uſually performed gradually and inſenſibly, and by means of a freer Perſpiration, rather than of a manifeſt Sweat, if then a Looſeneſs ſhould happen, it would be attended with little Danger: For it muſt be obſerved, that now it is only owing to a Neglect of purging in time; whence the Excrements, for want of being evacuated, contracting a kind of malignant Ferment, irritate the Inteſtines to diſcharge their Contents: Beſides, the very liquid Conſiſtence of the Excrements is a Proof, that the Looſeneſs ought not to be accounted a critical Solution of the Diſeaſe.

Poſſibly the Iliac Paſſion deſerves to be enumerated among the Symptoms conſequent upon Fevers, ſince it is ſometimes occaſioned by immoderate Vomiting in the Beginning of the Diſeaſe. This terrible Diſorder proceeds only from the inverted periſtaltic Motion of the Bowels, whoſe natural Formation is ſuch, as, by their many Folds, to promote the Deſcent of the Fæces in the propereſt Manner; and therefore, whenever they are forced to yield to a Motion oppoſite to that of their Fibres, a pungent Pain is occaſioned, which remains fix'd upon a particular Part, when either the Valve placed at the Beginning of the Colon, to prevent the Return of the Excrement into the Ileum, or any other Membrane belonging to the Cavity, ſingly ſuſtains the Force of this preternatural Motion. This inverted Motion, productive of the Pain, may proceed either from Obſtruction or Irritation.

It is manifeſt, that whatever blocks up the Paſſage of the Inteſtines, muſt occaſion this contrary Motion in them; and this may happen, according to Authors, from harden'd Excrements; from Flatulencies collected in the Bowels, and, as it were, purſing them up; from Strangulation on account of a Rupture; from Inflammation; and laſtly, from large Swellings filling up their Cavity. However, 'tis plain, that the inverted Motion, proceeding from theſe Cauſes, is rather to be accounted the Motion of the Aliment taken in, than of the Inteſtines themſelves; nor is it an Inverſion of the Motion of the whole Duct, but of thoſe Parts only, which are ſituated above the Seat of the Obſtruction; for which Reaſon I call it the ſpurious Iliac Paſſion.

I conceive the Inverſion of the periſtaltic Motion generally proceeds from acrid and peccant Humours being depoſited in the Stomach and adjacent Inteſtines, from the violent Fermentation of the Blood in the Beginning of the Fever, whereby the Motion of the Stomach is firſt inverted, and its Contents thrown up with Violence; and then the ſmall Guts, which are contiguous to it, being weaken'd, yield to the violent Motion of the Stomach; and at laſt the large Guts are alſo made to ſympathize with them. This is the true Iliac Paſſion, and the Diſorder under Conſideration. The Method of curing it has hitherto remain'd a Secret, notwithſtanding the Pretenſions of ſuch as have had recourſe to Quickſilver, and leaden Bullets, which do little Service, and are frequently very dangerous.

As ſoon as it appears, from Glyſters being vomited up, and other Signs, that the Diſeaſe is a true Iliac Paſſion, I endeavour to anſwer theſe three Intentions:

1. To put a Stop to the inverted Motion of the Stomach; which produces the ſame in the Inteſtines.

2. To ſtrengthen the Inteſtines, weaken'd by the ſharp Humours. And,

3. To free the Stomach and Bowels from theſe ſharp Humours.

I. I direct a Scruple of Salt of Wormwood, with a Spoonful of Lemon-juice, to be taken Morning and Night; and, in the Intervals, give ſome Spoonfuls of Mint-water by itſelf twice every Hour; by the repeated Uſe of which the Vomiting and Pain may be ſoon remov'd.

II. At the ſame time I order a live Puppy to be applied to the Belly, till the following Purgative is given.

III. Two or three Days after the Pain and Vomiting are gone off, I give a Dram of the greater Pil. Cochiæ diſſolved in Mint-water, and direct Draughts of Mint-water to be frequently taken during the Operation of the Purge, in order to prevent the Return of the Vomiting.

I have obſerv'd, that 'tis in vain to give this, or any other the ſtrongeſt Kind of Purge, before the Stomach be ſtrengthened, and reduced, together with the Inteſtines, to its natural Motion; for otherwiſe all Cathartics will prove emetic, and conſequently be more prejudicial than ſerviceable: And this Reaſon induced me to forbear Purgatives, till I had firſt uſed Stomachics a while.

The Diet I direct is very ſparing; for I allow the Patient only to ſup ſome Spoonfuls of Chicken-broth twice or thrice a Day, and confine him to his Bed during his Illneſs, and till the Signs of Recovery appear, directing him to continue the Uſe of the Mint-water for a conſiderable time after the Cure, and to keep the Belly warm, by wearing a double Flannel; whereby a Relapſe may be prevented, which happens more frequently in this than any other Diſeaſe.

In theſe few Particulars conſiſts my whole Method of curing this Diſeaſe; which, 'tis hoped, no one will deliberately contemn on account of its Simplicity, and the Want of Elegance of Language, and the Pomp of Medicine, to recommend it.

Thus I have enumerated the Symptoms that uſually happen in this Fever; but there are others I ſhall not now mention, as they are of leſs Moment, and require no particular Treatment, but go off ſpontaneouſly, if the Fever be ſkilfully treated. And let this ſuffice for the continued Fever of this Conſtitution, with its Symptoms. *Sydenham.*

DERAS, δέρας, a Sheep-ſkin, is the Title of a Book in Chymiſtry, treating of the Art of making Gold of baſer Metals, *Langius, Lib.* 1. *Ep.* 53. *Theat. Chym. Vol.* 1. *p.* 19. *Libavius, T.* 3. *p.* 211, 234. The Reaſon of the Name is, becauſe δέρας χρυσόμαλλον is the Sheep-ſkin which bore the golden Fleece, which, *Suidas* ſays, was a Book written on Parchment, or Sheep-ſkins, teaching the Art of making Gold.

DERBIA. A Name given by ſome Surgeons to the *Impetigo. Caſtellus.*

DERIS, δέρις, in *Hippocrates, Lib. de Artic.* is the ſame as δέρμα, Leather.

DERIVATIO, παροχέλευσις, ἐποχέλευσις, a Derivation, in Medicine, is when a Humour, which cannot be conveniently evacuated at the Part affected, is attracted thence, and diſcharg'd at ſome more proper Place in its Vicinity; or is drawn from a noble to a more ignoble Part, where it is leſs capable of doing Injury. See PHLEBOTOMIA.

DERMA, δέρμα, from δέρω, to excoriate, is the ſame as DERIS, which ſee.

DERMATODES, δερματώδης, from the preceding Word, Leather-like, is an Epithet of the *Dura Mater.*

DERQUET. Veriſh. *Rulandus.*

DERSES. An occult Fume or Vapour of the Earth, from whence all ligneous Subſtances have their Riſe and Growth. *Rulandus* and *Johnſon* from *Paracelſus, Lib.* 3. *Philoſ. ad Athenienſ. Text.* 4.

DERTRON, δέρτρον, *in Lib.* 5. *Epid.* is taken by *Foeſius* for the Omentum or Abdomen; but *Linden* renders it, according to the Interpretation of *Cornarius*, the ſmall Inteſtine.

DESCENSIO, DESCENSUS, καθόδους, is properly ſpoken of the moderate or gentle Motion of the Body or Humour downwards, and is oppoſed to *Anabaſis, Aſcenſio.* The Chymiſts alſo have a Way of Diſtillation, which they call *Diſtillatio per Deſcenſum*, Diſtillation by Deſcent, which is when the Fire is applied to the Top, and all around the Veſſel, whoſe Orifice is at the Bottom; and conſequently the Vapour, being incapable of riſing upwards, is precipitated to the Bottom. There is a ſecond kind of Diſtillation by Deſcent, called *per Deliquium*, which is a natural liquefying or reſolving Salts into a Liquor, by means of Moiſture. *Deſcenſio* has alſo another Meaning among the Chymiſts; where it ſometimes ſignifies an Alteration or Deſcent from a higher to a lower Degree of Goodneſs and Purity, as of Gold to Quickſilver.

DESCENSORIUM. The Furnace in which the *Diſtillatio per Deſcenſum* is performed.

DESESSIO, from the Verb *deſidere*, uſed by *Celſus, Lib.* 4. *Cap.* 16. is a Sitting on the Cloſe-ſtool; which, in all Fluxes of the Belly, but eſpecially a Lientery, muſt not, he ſays, be indulged ſo often as Nature prompts, but only when Neceſſity requires it, that, by this very Delay, the Inteſtines may be reduced to a Cuſtom of bearing their Burden.

DESICCATIO, ξήρανσις, from ξηρὸς, dry. A Deſiccation, or Drying. Deſiccation is alſo by the Chymiſts, though improperly, refer'd to Calcination. *Caſtellus.*

DESICCATIVUM, from *deſicco*, to dry, is an Epithet of an Ointment or Plaiſter for drying up thin Humours flowing to an Ulcer. *Blancard.*

DESIDIA, ἀργία. See ARGOS.

DESIPIENTIA, παραφροσύνη. The ſame as DELIRIUM, which ſee.

DESME, δέσμη, from δέω, to bind, is the ſame as *Faſciculus*, or *Manipulus*, a Handful. The Word occurs in *Moſchion, de Morb. Mul. Cap.* 155.

DESMIDION, δεσμίδιον, is a Diminutive of δεσμὸς, (from δέω, to bind) a ſmall Handful or Parcel.

DESMOS, δεσμὸς, in *Hippocrates, Lib. de Fracturis*, is an Affection of the Joints after Luxation, in manner of a Tye or Ligature; whereby they are rendered incapable of Extenſion or Inflexion. It proceeds from an Inflammation drying and hardening the Tendons and Ligaments. The Paſſage in which the Word occurs, is as follows: φλεγμονὴ δὲ ὐ μεγάλη περιγίνεται, οὐδὲ δεσμὸς τῦ ἄρθρε, "but no conſiderable Inflam-"mation happens, nor Ligature of the Joint;" that is, after a Luxation of the Bones of the Knee.

DESPERATIO, ἀνελπισία. Deſpair. *Paracelſus* treats of Diſeaſes proceeding from Deſpair, with their Cure, *in Fragment. medicis ad Tom.* 1. *referendis, Cap. de Deſperatione*, and *Vol.* 1. *Theat. Chym. in Tract. Penoti de Medicam. Chym.*

DESPERATUS, DEPLORATUS, ἀνέλπιστος, deſperate, is an Epithet applied to incurable Diſeaſes, and to Patients labouring under them; as, for Inſtance, to a Perſon under a Dropſy, attended with a Cough. *Hippocrates, Lib.* περὶ τέχνης, calls ſuch as are affected with deſperate Diſeaſes κεκρατημένους ὑπὸ νοσημάτων, "ſubdu'd by Diſeaſes;" and forbids attempting their Cure.

DESPUMATIO, Deſpumation, is the Clarification of a Liquor by elevating its Impurities in a Spume or Froth, and then taking it off.

DESQUAMATIO, Deſquamation, generally means the ſame as ABRASIO, which ſee. It is alſo a Word to expreſs the Exfoliation of carious Bones.

DESQUAMATORIUM. An Epithet of a Trepan, call'd alſo *Exfoliativum*, for abrading a Part of the Cranium to what Thickneſs it ſhall be thought convenient.

DESTILLATIO, *ſive* DISTILLATIO, σάλαξις καταγαλαγμὸς, Diſtillation, is an equivocal Word, ſometimes ſignifying a Defluxion or Catarrh (ſee CATARRHUS); and, in Pharmacy and Chymiſtry, is an artificial Separation of the ſpirituous, aqueous, oily, or ſaline Parts of a mix'd Body from the groſſer and more terreſtrial Parts, by means of Fire. See AQUA.

DESTRUCTIO, φθορὰ, διαφθορὰ, is the ſame as CORRUPTIO; and is defin'd, in general, an Alteration of any thing from its natural State to one contrary to Nature. A Chymical Deſtruction, or Corruption, is nothing but a Reſolution of the whole naturally mixed Body into its Parts.

DESUDATIO, ἐφίδρωσις. A profuſe and inordinate Sweat, ſucceeded by an Eruption of Puſtules call'd *Sudamina*, or *Hidroa. Avicenna.*

DESURRECTIO, ἐξανάστασις. The ſame as DESESSIO, which ſee.

DETENTIO. The ſame as CATALEPSIS, or CATOCHE, which ſee.

DETERGENS, ῥύπτων, deterging. The ſame as *Abſtergens*, abſterging, See ABSTERGENTIA.

DETERSORIUM. An Apartment at the Baths, where the Sweat was deterg'd, and the Body anointed.

DETERSORIUS, ῥυπτικὸς, deterſive. The ſame as *Abſterſorius*, abſterſive, and a common Epithet of Medicines endu'd with a cleanſing Quality, whether inward or outward.

DETONATIO. Detonation. The Noiſe and Exploſion which any Subſtance makes upon the Application of Fire to it. It is alſo call'd Fulmination.

DETRACTIO, καθαίρεσις. See CATHÆRESIS.

DETRITIO, ῥάκωσις. See RHACOSIS. *Detritio* is alſo taken, in a general Senſe, for Trituration, in *Scribonius Largus, Numb.* 130.

DETRUSOR *Urinæ*. The Name of a Muſcle belonging to the Bladder. See VESICA.

DEVALGATUS, βεβλαισώμενος. The ſame as BLÆSUS, which ſee.

DEVENTRIS, ἀκόιλιος. See ACOELIOS.

DEUNX. The Weight of eleven Ounces, or eleven Twelfths of a Pound, or of any entire Quantity.

DEVOTATUS is the ſame as DEFIXUS, and ſignifies a Man render'd impotent by the Power of Witchcraft. *Apuleius, de Medic. Herb. Cap.* 7.

DEURENS (*Febris*). The ſame as CAUSOS, which ſee.

DEUSTIO, ἔγκαυσις. See ENCAUSIS.

DEUTERIA, δευτεία, δευτερία, *Deuterias*, δευτείας, *Deuterinas*, δευτείνας. All theſe Terms are uſed for a ſecondary low-priz'd Sort of Wine, made of the Huſks of Grapes, after Preſſing, macerated in Water. It is call'd, by the *Latins*, LORA, which ſee.

DEUTERION, τὸ δευτέιον, τὰ δεύτερα. The Secundines. See SECUNDINÆ and PARTUS.

DEUTEROPATHIA, δευτεροπάθεια, from δεύτερος, the ſecond, and πάθος, an Affection, Senſe, or Feeling, is as much as to ſay a Fellow-feeling. It imports the ſame as συμπάθεια, *Conſenſus*. See CONSENSUS.

DEXAMENE, δεξαμένη, from δέχομαι, to receive, ſignifies any Receptacle in general, but, in a reſtrain'd Senſe, the *Labrum* or *Solium*, that is, a ſort of deep Baſon, in which thoſe who bathed might ſwim. It was alſo call'd *Colymbethra*, and *Embaſis*.

DEXIOS, δέξιος, the Right. It is a received Opinion among the Antients, that the Parts on the Right Side, being that in which the Liver has its Situation, are hotter and more robuſt than thoſe in the Left; that Males are generally conceived and generated on the Right Side of the Uterus, *Hippoc.* 5. *Aph.* 48. that the Arteries of the Right Side are larger than thoſe of the Left; and that Diſeaſes are more dangerous on the Right Side, than on the Left. *Caſtellus.*

DEXIS, δῆξις. A Bite.

DEXTANS. The Weight of ten Ounces *Troy*, or ten Twelfths of an Integer.

DEXTER. See DEXIOS.

DIA, διά. A *Greek* Prepoſition, ſignifying of, by, thro', with, and uſually governing a Genitive Caſe, as διὰ φοινίκων, of, or made of Dates, διὰ ῥόδων, of Roſes, διὰ χυλῶν, of Liquors or Juices; where, in theſe and other like Inſtances, the Prepoſition διά, by frequent Uſe, and for the ſake of Smoothneſs or Brevity, came at length, eſpecially when *Latiniz'd*, to be incorporated with its caſual Word, and to make with it one compound Term, as *Diarrhodon*, *Diachylum*; and hence *Dia*, when it makes the three firſt Letters of a Medicinal Term, ſignifies ſomething compounded principally of the Thing meant by the Word with which it is incorporated.

DIABACANU, διὰ βακάνου. An hepatic Remedy in *Trallian*, *Lib.* 8. *Cap.* 2. taking its Name from the *Bacanon*, a principal Ingredient. See BACANON.

DIABEBOS, διαβεβώς. In *Hippocrates*, *Lib. de Art.* μὴ διαβεβῶτα σφυρά are the Malleoli, or Ancle-bones, not kept aſunder, but cloſed together, ſpeaking of a mechanical Operation for reducing a Gibboſity.

DIABESASA, from διὰ and βησσαὰ, wild Rue. See the Preparation of this compound Medicine under the Article ANGINA.

DIABETES, from διαβαίνω, to paſs off.

That Diſcharge of Urine, which the *Greeks* call διαβήτης, is when any Liquor, ſoon after it is drank, is immoderately, and without undergoing almoſt any Change, evacuated crude, and under the Appearance of Water.

In this Diſorder the Patient is continually afflicted with an inſatiable Thirſt, incapable of being removed by drinking the moſt liberal Draughts. The Liquor drank is often diſcharg'd by Urine, in larger Quantities than it was taken into the Stomach. Thus the whole Body is, by this means, conſumed, and, as it were, diſſolved; tho', in ſome Patients, the Loins, the Thighs, the Teſtes, and eſpecially the Feet, become a little turgid. In this Diſorder alſo a certain Heat is perceiv'd in the Inteſtines. A *Diabetes* is a Diſeaſe of the Chronical Kind, and depends upon the State of the Kidneys. When recent, it ſometimes admits of a Cure; but, when inveterate, and of long Standing, it becomes incurable; diſſolves, and gradually conſumes, the Body. Phyſicians maintain, that this Diſorder rarely occurs. *Lommius, Obſ. Med.*

OBSERVATION I.

A certain Girl, of eighteen Years of Age, a few Years before her Death, laboured under a *Diabetes*, and was racked with ſuch inſatiable Thirſt, that, in one Day, ſhe would ſometimes drink eight or twelve Gallons, and diſcharge as much by Urine.

Upon laying open her Body, her Kidneys were not found to be conſumed, tho' they were more flaccid than in a natural State they ought to have been; they were alſo of a cineritious, and not a bright-red Colour. *Petrus Pawius Obſervat. Anatom.* 2.

OBSERVATION II.

A certain Woman, much ſubject to nephritic Diſorders, and who had once a Stone cut from her Bladder, was at laſt ſeized with a Pain in her Left Groin, and became feveriſh. Upon this ſhe was afflicted with an intolerable Pain in her lower Belly, Reſtleſſneſs, continual Vomitings, a Pain at her Breaſt, and various other Species of Pains. In her Left Hypochondrium a large hard Tumor appeared, which induced ſome to aſſert, that the Spleen, and others, that the Kidney, was ſwell'd. She labour'd under a hectic Fever, gentle Convulſions, frequent Faintings, and a Species of Diabetes; for her Urine, which was thin, and ſometimes bloody, was diſcharg'd involuntarily. Theſe Symptoms at laſt put an End to her Life.

Upon laying open her Body, a ſmall Stone was found in her Left Kidney, which had on all Sides grown out ſo far, as in Bulk to equal that of an Ox. There was a ſmall Quantity of Sanies alſo found in it. But the Right Kidney was waſted ſo much, and become ſo little, that it was ſcarcely to be found. *Ballonius, Ephem.* 8. & *Epid. Lib.* 2.

OBSERVATION III.

A certain Gentleman of Diſtinction diſcharged large Quantities of Urine like Water, and was afflicted with an inſatiable Thirſt, which could not be removed by the moſt copious Draughts; but, at laſt, dying of a burning Fever, his Body was laid open; upon which his Lungs were found black, and highly tumid, and two large Stones in each Kidney.

OBSERVATION IV.

Tho' the Cauſe of a *Diabetes* is aſcribed to a Diſorder of the Kidneys, yet, upon opening the Bodies of ſome, who have dy'd of that Diſeaſe, their Bladders have been found plainly contracted, and Gangrenes and ſphacelous Tumors have been diſcovered in their Cavities. This Circumſtance ought to be adverted to, leſt any one ſhould be deceived. *Ballonius, Epid. Lib.* 2.

Rabbi *Moſes* affirms, the *Diabetes* is very ſeldom ſeen in the Weſtern Parts of the World, but more frequently in the hot and Eaſtern Countries; inſomuch that in *Egypt*, in ten Years Practice, he ſaw more than twenty Patients of this Kind: But we ſee a great Number, almoſt every Year, in our Weſtern World.

The Account *Aretæus* gives of the *Diabetes* is as follows:

The *Diabetes* is a ſtrange, and not very common Diſtemper, conſiſting in a Colliquation of the Fleſh and Members into Urine, and proceeding, like the Dropſy, from a cold and humid Cauſe. The Diſcharge is by the uſual Paſſages, the Kidneys and the Bladder; and the Flux of Urine is perpetual, as from an open Sluice. The Diſeaſe is of a chronical Nature, and a long time contracting; but, when arrived at its Height, the Patient continues but a ſhort time; for the Colliquation is violent, and Death approaches with Speed, and ſoon puts an End to a loathſome and painful Life. The Symptoms of this Diſorder are, an inſatiable Thirſt, and immoderate Drinking, which, however, bears no Proportion to the exceſſive Quantity of Urine; and it is as impoſſible to reſtrain the Sick from drinking, as from making of Water; for, if they refrain from all potable Liquors for the leaſt Space of Time, their Mouth is parched for want of Moiſture, their Body dry'd up, and their Viſcera ſeem to burn within them; they are moleſted with great Reſtleſſneſs and Anxiety, and die in a ſhort time, exhauſted with Heat and Thirſt, as with a Fire. No Reaſon can induce, nor Shame prevail upon, them to retain their Water; for both ſubmit to the Senſe of Pain: And, upon the leaſt Suppreſſion, they are afflicted with a Tumor of the Loins, Teſtes, and Hips; which ſubſides after a free and plentiful Diſcharge of the Urine, the redundant Humour having its Courſe diverted to the Bladder.

When the Diſeaſe is perfected, its Characters are evident; but, when it is in its Growth, the Symptoms are, a Dryneſs of the Mouth, white frothy Spittle, like that of a thirſty Perſon, but, as yet, without Thirſt, together with a Senſe of Weight on the Hypochondria. In the Progreſs of the Diſorder the Patient is affected with a Senſe of Heat or Coldneſs, which reaches from the Belly to the Bladder; and his Diſcharges by Urine are a little more in Quantity than uſual; and he grows thirſty, but not as yet to any vehement Degree.

As the Diſeaſe increaſes, it is attended with a ſmall, but biting, Senſation of Heat in the Viſcera; the Abdomen becomes wrinkled, the Veins appear prominent, and the whole Body is emaciated; the Flux of Urine, and the Thirſt, are more and more augmented; and whenever the Diſorder, by Conſent of Parts, affects the Extremity of the Penis, the Patient immediately makes Water. And hence the Diſeaſe ſeems to me to be call'd *Diabetes*, that is to ſay, a *Pipe*, becauſe, in Perſons affected with it, nothing liquid remains in their Body, but all runs thro' it, as if it ran thro' a Pipe. The Patient ſtruggles with the Diſeaſe for ſome time, but not long; for he diſcharges

his Urine with Pain, and the Colliquation is dreadful beyond measure, since nothing considerable of what he drinks is distributed over the Body, and the Flesh is continually dissolv'd, and passes away in great Quantities in the Urine.

The Causes of this Disorder may be some occult and malignant Reliques of an acute Distemper remaining after the Crisis. It is not improbable also, that something of a deleterious Quality, particularly injurious to the Kidneys and Bladder, may occasion such an Affection; for it may proceed from the Bite of the venomous Serpent the *Dipsas*, which kindles an unquenchable Thirst. The Patient drinks immeasurably, not to the Satisfaction of his Thirst, but the Repletion of his Belly. If he be in Pain from the Distention of his Belly, and abstains a short time from Liquor, his ardent Thirst compels him to fall afresh to drinking; and thus he labours under a Vicissitude of Evils, and Thirst and Drinking help one another to hasten his Destruction. Some neither evacuate by Urine, nor have any Way to discharge what they drink, but by Perspiration: Whence it comes to pass, that, thro' a Redundance of Liquor, still augmented by an insatiable Drinking, the Belly becomes more and more distended, and at last suddenly bursts. *Aretæus, de Caus. et Sig. Morb. chron. Lib. 2. Cap. 2.*

As nothing has a more direct and immediate Tendency both to discover and illustrate Truth, than a joint View of what the greatest Authors have wrote upon any Subject; and as even Errors themselves sometimes luckily point out the Way to Truth; we shall therefore enumerate the Sentiments of some of the most celebrated modern Authors, with respect to the Symptoms, the Cause, and the Cure, of a Diabetes. The learned and ingenious Dr. *Lister* informs us, that this Disorder does not seize the Patient suddenly, but, from an imperceptible Beginning, gradually acquires fresh Degrees of Strength, till at last it terminates in a formidable Disease. Upon the first Approach of this Distemper, the Patient's Mouth becomes dry and parched, his Saliva white and frothy, and his Urine more in Quantity than it was in a sound and healthy State. He is seized with a Thirst, which at first is pretty moderate, but gradually calls for larger Supplies, in proportion as the Disease advances: He begins to perceive a preternatural Heat, and gently-biting Pain, in his Bowels; his Body becomes ghastly and meagre, and his Mind restless and inconstant. When the Vessels are much relaxed, his Urine is discharg'd continually, and without Intermission, a Circumstance by which his Solids are surprisingly wasted, and, as it were, melted away. During this deplorable State of Things, his Thirst becomes insatiable; and, which is surprising, the Quantity of the Urine he discharges, surpasses that of the Liquor he drinks. If he retains his Urine for a very inconsiderable time, he is seized with a Swelling of the Loins, the Testes, and the Ilia; and the Discharge of it is attended with Pain. These Symptoms are speedily succeeded by Death. The Urine of a Patient in this Condition is of a soft and mild Taste; but Dr. *Lister* affirms, that he never met with any of it sweet; tho', at the same time, he owns the Probability of its becoming gradually sweetish, since, in the Beginning of the Disorder, it is mixed with the aqueous, and afterwards with the chylous, Parts of the Serum. This Opinion, he thinks, is confirm'd by the Sweetness of the Matter expectorated by phthisical Patients a little before they die.

The learned and judicious *Willis* informs us, that this Distemper was little known among the Antients, but is become more common among the Moderns; that it is accompanied with a continual Thirst, and a Species of slow hectic Fever; and that he himself knew a Man, who, by using *Rhenish* Wine for twenty Days as his common Drink, contracted an incurable *Diabetes*.

According to *Ettmuller*, this Disease is distinguished into three Kinds, a *true*, and a *spurious Diabetes*, and that Species which is call'd a *Cœliaca by Urine*.

The true and legitimate *Diabetes* bears a certain Resemblance to a Cœliac Passion and Lientery; for, as in these the Aliments are evacuated by Stool crude and unconcocted, so, in this, the Liquor drank is discharged by Urine, without undergoing any considerable Change with respect to Colour, Taste, and Smell, as may be observed upon the Patient's drinking red Wine: But this Species of *Diabetes* rarely occurs.

In a spurious *Diabetes*, the Urine is discharged in preternaturally large Quantities, and the Patient is afflicted with an insatiable Thirst, Loss of Strength, Leanness, a burning Heat about the Region of the Loins, a slow continual Fever, and even the Symptoms of a confirm'd Hectic. In this Species of the Disorder a pinguious Matter is sometimes discharged with the Urine; but these Symptoms prognosticate the speedy Death of the Patient.

The third and last Species of a *Diabetes*, commonly call'd a *Cœliaca by Urine*, is when the Chyle is discharged along with, or instead of, the Urine.

According to this Author, a *Diabetes* is always dangerous, and often incurable, especially if contracted by immoderate Labour, excessive Venery, and chronical Fevers, as also by a long Habit of drinking spirituous Liquors. The Urine of those afflicted with a *Diabetes* is generally sweet.

According to the incomparable *Sydenham*, the Juices, convey'd into the Blood in a *Diabetes* are discharg'd by Urine, crude and unconcocted; by which means the Strength of the Patient is gradually impair'd, his Body wasted, and its Substance, as it were, colliquated and carry'd off by the urinary Passages. The Patient, under this Disorder, is rack'd with Thirst, afflicted with a Heat of the Bowels, seized with a Swelling about the Loins and Hips, and often expectorates a frothy Matter.

Various Authors inform us, that this Distemper is seldom mention'd among antient Writers, and that it was little known among the *Greeks*, since *Galen* himself, in the third Chapter of his sixth Book, *de Locis Affectis*, confesses that he himself had only seen it twice.

The Method of Cure.

According to *Aretæus*, the Diabetes, if Regard be had to the Cause, as well as Form and Manner, of the Distemper, is a kind of Dropsy; and differs from it only in the Place by which the Liquid is discharged. For, in the Ascites, the Peritonæum is the Receptacle for the Waters, which, finding no Vent, are there collected and abound; whereas in the Diabetes, the Patient is affected with the same Colliquation and Flux of the Liquids; but then they take their Course to the Kidneys and Bladder, by which they are evacuated: Now, this is the way by which hydropical Persons find most Relief, when the Disease takes a favourable Turn; though the easing them from the present be not sufficient for removing the Cause: But in the Diabetes the Thirst is the greater, because the continual Discharge of the Liquids dries the Body.

The Remedies for putting a Stop to the Colliquation are the same as those which are proper for Dropsies; but the Thirst is to be the principal Object of our Care; for this is the most tormenting Symptom belonging to this Disorder; and, if the Patient attempts to appease it by Drinking, he immediately provokes a Flux of Urine, which carries off with it much of the colliquated Substance of the Body. Proper Medicines then are such as quench Thirst, which no drinking, how plentiful soever, can assuage. The Stomach, therefore, whence proceed the Incentives to Thirst, is by all means to be relieved; first, by purging with Hiera, and then by Applications of Epithems of Spikenard, Mastich, Dates, and raw Quinces; the Juice of which, with Spikenard, and Oil of Roses, makes an excellent Embrocation for this Purpose; and of this Pulp, together with Mastich and Dates, may be made a Cataplasm, for the same Use; and with these may conveniently be mix'd Wax and Ointment of Spikenard, or the Juice of Acacia and Hypocystis, as well for Embrocations as Cataplasms.

For Drink, let the Patient use Water boil'd with autumnal Fruits [ὀπώρηται]; and let his Food be Milk, mix'd with frumentaceous Aliments, as Amylum, Alica, and forbile Liquors. His Wine must be astringent, for restoring the Tone of the Stomach; and but little diluted, for the better Evaporation and Dissipation of the other Humours. For salt Things excite Thirst, but Wine that is both astringent and cooling, changes the Body to a good Temperament; and sweet Wine, [οἶνος γλυκὺς, *Wine made of Grapes left to dry in the Sun, Lat. Passum*, which see] moreover, restores Strength, by generating Blood. Various are the compound Medicines for these Purposes, such as Theriaca, Mithridate, and what is prepared of autumnal Fruits, with other Medicines proper for a Dropsy, and a Regimen of Diet, and Way of Living, in all Things answerable to what is prescribed for the Cure of that Distemper. *Aretæus de Curat. Morb. Chron. Lib. 2. Cap. 2.*

According to *Lister*, nothing more effectually contributes to the Cure of this Disorder, than all Preparations of Almonds, and a Milk-diet; and he himself gives us an Instance of one cured of it by drinking as much Wine, boil'd with Ginger, as his Strength and Condition would admit of, allowing him, at proper Intervals, Draughts of Milk and Water, to allay his Thirst.

According to *Willis*, few or none at all have been observed to be cured of a Diabetes by Astringents; and this Practitioner, as he himself informs us, often prescrib'd, with Success, the Tincture of Antimony, and a Solution of Quick-lime in Water, together with Sassafras, Anise-seeds, Raisins, and Liquorice. He, in Conjunction with some other Physicians, prescribed in the following manner for a certain Person of Distinction:

Take of the Tops of Cypress-tree, eight Handfuls; of the Whites of Eggs, two Pounds; of Cinnamon, half an Ounce; and of recent Milk, eight Pints: Mix all together, and subject them to Distillation. Six Ounces are to be taken for a Dose, three times a Day.

Take of Gum Arabic, and Gum Tragacanth, each six Drams; and of the Saccharum Penidium, one Ounce.

Reduce them into a Powder, of which one Dram, or one Dram and an half, are to be taken twice a Day in the above-mentioned diſtil'd Water, exhibiting a paregoric Draught every Night.

This Patient's Diet conſiſted almoſt entirely of Milk; and, by the Uſe of theſe, he recovered ſo faſt, that in a Month's time he was reſtored to a perfect State of Health.

The ſame Author gives us the Hiſtory of a Woman, of about fifty Years of Age, and of a full Habit of Body, who ſo long labour'd under a Diabetes, and a Salivation, ſucceeding each other alternately, that her Strength was highly exhauſted: For this Patient he preſcribed an Infuſion of Rhubarb, in *Canary* Wine, every Day. A few Days after, he order'd her to drink *Fuller's Decoctum Catechu Compoſitum* every Night; and, for her common Drink, *Florence* Wine diluted with *Briſtol* Waters; by which means both Diſorders were effectually removed in two or three Weeks, and the Patient enjoy'd perfect Health for ſeveral Years after.

According to *Ettmuller*, the principal Intention of Cure, in a Diabetes of every Kind, is to diminiſh the Acrimony of the Blood; and, in moſt Circumſtances, the Cure both of a ſpurious Diabetes, and that call'd a Cœliaca by Urine, is to be carried on in the ſame manner with that of hectic Fevers. He therefore orders the Cure to be begun with an Emetic, and then recommends the *Antihecticum Poterii*, Blood-ſtone, Sugar of Lead, *Crocus Martis Aluminata*, the *Trochiſci de Carabe*, the *Terra Sigillata*, and Opiates at Night; but eſpecially Quick-lime-water, chalybeated Milk, and Emulſions.

In a true and legitimate Diabetes, he recommends the Uſe of Aſtringents and Chalybeates; but, in particular, of a Decoction of Orange-peel.

The Cure of a Diabetes, according to *Sydenham*, is the ſame with that of the Fluor Albus, omitting the Circumſtances of Bleeding and Purging; ſince, notwithſtanding the apparent Differences between theſe Diſeaſes, the curative Indications are the ſame in both.

Harris ingeniouſly, and, perhaps, juſtly enough, imagined, that a Diarrhœa was a kind of Diabetes of the Belly; and a Diabetes, a Diarrhœa of the Kidnies: For which Reaſon he, with Succeſs, preſcrib'd in the following manner for a Patient labouring under a Diabetes:

Take of the beſt Rhubarb, half an Ounce; of white and yellow Sanders, each one Dram; of the ſmaller Cardamom-ſeeds, half a Dram: Mix all together, infuſe them in a Pint of *Canary*, plac'd over a gentle Heat, in a cloſe Veſſel.

This Patient took ſix Spoonfuls of this Wine, when ſtrain'd, at Six in the Morning, and ſix more at Ten; by which means the Diabetes, and all its concomitant Symptoms, were remov'd before Ten o'Clock at Night. But this celebrated Author has only one Inſtance of a Diabetes cured in this Manner.

Beſides theſe Medicines and Forms already mentioned, the *Decoctum Catechu Compoſitum*, the *Decoctum Incraſſans*, Iſinglaſs, Jellies of Hartſhorn, Rice, Tincture of Coral, and the *Trochiſci Gordonii*, are of ſingular Service. But, in the modern Practice, nothing is look'd upon as a Remedy ſo effectual for the Cure of a Diabetes, as the hot Well-waters at *Briſtol*. The following Decoction may be uſed with ſingular Succeſs:

Take of *Peruvian* Bark, reduc'd to a groſs Powder, one Ounce; and of the Tincture of Roſes, one Pound and an half: Boil it to one Pint, over a ſlow Fire; then ſtrain off the Liquor, and add half a Pint of White-wine, and two Ounces of the Syrup of Quinces: Mix all together, for a Decoction, three Ounces of which are to be taken two or three times a Day, at proper Intervals.

With reſpect to this Diſtemper, Dr. *Wynter* ſtarts a Queſtion, Whether *Briſtol* Water be ſpecific in a Diabetes? A ſpecific Remedy, ſays he, for each Diſeaſe, would prove, in Phyſic, what finding the Longitude muſt, in Navigation: We ſhould go directly to the Cure, without the Circle of the alterative Courſe: But, at preſent, there is as little Probability of diſcovering the one, as the other. We know but one Specific, and but one Diſeaſe cur'd by it, unleſs I can prove this to be ſuch in the Diabetes.

The Diabetes then is defin'd to be a too quick and large Excretion of crude, unalter'd, and ſweet-taſting Water, exceeding the Proportion of Fluids taken into the Body, accompanied with intolerable Thirſt: And a ſpecific Medicine is that which cures a Diſeaſe, without promoting any ſenſible Evacuation.

Suppoſe then a Perſon, labouring under a Diabetes, void a given Quantity of ſuch Urine, for Inſtance, four or five Quarts in twenty-four Hours; let him drink as many of this Water, and he ſhall excrete leſs daily. From whence it is manifeſt, that it proves no Evacuant. Another Argument to prove its ſpecific Quality is, that it may be uſed in as large Quantities as the Stomach will bear; and this is a very grateful Circumſtance to Perſons labouring under an inſatiable Thirſt. In all other Diſorders, where it acts by its contemperating, alterative, and heating Qualities, it alſo proves ſpecific. A third is, that we ſee, by daily Experiment, its Effect in a Diabetes more quick and ſudden, than in any other Diſtemper, the Patient being certain of a Cure in a very ſhort time. *Wynter's Cyclus Metaſyncriticus.*

A Consumption *from a* Diabetes.

A Diabetes is commonly call'd a Dropſy of the Chamber-pot, and is a continual Flux of the nutritious Juice running down through the Kidnies; which, for the moſt part, happens to thoſe that are very thoughtful, and to ſuch as are Drinkers of *French* Wines, and diuretic Liquors: Whereupon the Urine (by reaſon of the great Quantity of new Chyle, which flows to it, and mixes itſelf with it) being deprived of its Saltneſs, become ſweet, even like Honey. By the continual Efflux of the Chyle the Blood is impoveriſh'd; and thereupon the Strength of the Patient grows extremely languid. A preternatural Heat is kindled in the ſolid Parts, by which the Nerves are weaken'd; and, upon that, Convulſions, a Giddineſs, and other Affections of the Nerves, enſue; and, at length, the muſcular Parts, being deprived of their nutritious Juices, fall into an Atrophy, or Conſumption. The Way of curing this Conſumption is by a long Uſe of a Milk-diet, Conſerve of red Roſes, Bole Armoniac, Gum Arabic, and Gum Tragacanth; by drinking the *Bath* or *Iſlington* Waters, or any other mineral Water that is chalybeate, for a long time. But the Patient muſt abſtain from Wine, eſpecially *French* Wine: He muſt not bleed, nor uſe any purging Medicines, except Rhubarb, Myrobalans, and other ſuch-like gentle Things, which have alſo ſome ſtyptic and binding Particles; of the Virtue of which, in curing this Diſtemper, I ſhall preſently give a very remarkable Caſe.

CASE I.

Mr. *Petit*'s Son, upon a Diabetes, which they had a long time neglected the Cure of, was not only frequently troubled with Fits of the Falling-ſickneſs, and a Swimming in his Head, but alſo, in the Progreſs of the Diſtemper, became very conſumptive. But with the Uſe of *Tunbridge* Waters, a Milk-diet, and aſtringent Electuaries, he was perfectly recover'd, and is now, after ten Years, in perfect Health.

CASE II.

Mr. *Petit* himſelf, the Father of the Patient I juſt now mentioned, being about ſeventy Years of Age, who was brought by a Diabetes into a high hectic Fever, and to the utmoſt Degree of a Maraſmus, and kept his Bed for three Weeks, got well of his Diabetes and Fever, and at length his Conſumption too, by the Uſe of a Milk-diet, which he very ſtrictly obſerved, and of aſtringent Julaps and Electuaries; and is now, as far as I know, after five Years, ſtill living.

CASE III.

Mr. *Wheeler*, living in *Prince's-ſtreet*, though he has now three Girls living, and well, yet he loſt all his Sons, who were taken off, in their firſt Infancy, (that is, as ſoon as they began to breed their Teeth) with a Conſumption from a Diabetes. As for the Name of the Diſtemper, that he was ignorant of; but when he obſerv'd, that he loſt all his Sons in the ſame manner, and that they were extremely emaciated with a continual and unquenchable Thirſt, and a ſtrange Flooding of Urine, he at length aſk'd my Advice for his fourth, who at that time was breeding of his Teeth. And he began, juſt like the three former, that were dead, to be very thirſty, and to make Water at the ſame immoderate Rate that they had done; whereby his Fleſh was become very lank, and a hectical Heat began to ariſe. So being confirm'd in my Opinion, by ſo demonſtrative an Argument as the Sweetneſs of his Urine, being like Honey, I pronounced it a Conſumption from a Diabetes, cauſed by the Breeding of his Teeth; which could not poſſibly admit of a perfect Cure, till the Child had bred all his Teeth. Within the Space of a Month or two, the poor Infant ſeem'd to have a *Hippocratical* Face, and to be reduced to that Degree of a Conſumption, as to be arrived at the laſt Scene of his Tragedy; for he labour'd under a Colliquation, as well by a Looſeneſs, as a Diabetes, though he had no Cough, nor any other Affection of his Lungs. However, for the preſent Relief of the Symptoms, I order'd a Milk-diet to be ſtrictly obſerved, and an aſtringent Electuary; and gave Orders, that for his Thirſt, he ſhould drink nothing but Milk, mix'd with *Iſlington* Waters, all the Summer: By which means his Thirſt, and the Flux of his Urine, ſeem'd to be ſomewhat abated, and his Fleſh to be recover'd. But the Diſtemper returning by uncertain Intervals, with a remarkable Colliquation, and Expence of the Humours, as well by Stool, as by the urinary Parts, *that is*, as often as he bred any

new Teeth, according to the Prognoſtics which I at firſt made; at length I order'd him ſix, ſeven, or eight Grains of Rhubarb to be taken every Morning, and a little Diaſcordium at Night, when he went to ſleep. To the conſtant Uſe of which Remedies I left the Child, and he perſiſted in the Uſe of them for two Years at leaſt, that was, till all his Teeth were cut; by which means he continually gather'd Strength and Fleſh, and grew better every Day, though he was in ſome meaſure troubled with a Thirſt, and too great a Flux of Urine, till the time that he had got all his Teeth. But now, being four Years old, he enjoys his perfect Health, and is a luſty Boy, as if he had never been troubled with any Diſtemper. *Morton's Phthiſiologia.*

DIABIN, διάβιν, a barbarous and corrupt Word in *Myrepſus*, *Antidot.* 37. and *Paſtil.* 48. which *Fuchſius*, by the Help of *Actuarius*, amends, by reading διὰ ἰῶν, "of Violets." The *Latin* Copies of *Myrepſus*, he obſerves, render it *Diauf.*

DIABOLUS *Metallorum* is a Title beſtow'd by the Chymiſts on *Jupiter*, or Tin; becauſe, when incorporated with other Metals, it renders them incapable of Reduction, or at leaſt very difficult to undergo that Operation. *Caſtellus.*

DIABOLI INTESTINA. A Name for the *Cuſcuta. Dodder.*

DIABOTANUM, διὰ βοτανῶν, from βοτάνη, an Herb, is a Plaiſter prepared of Herbs, deſcrib'd by *Galen*, *de C. M. P. G. Lib.* 6. *Cap.* 2.

DIABROSIS, διάβρωσις. The ſame as ANABROSIS, which ſee.

DIACADMIAS, διὰ καδμίας. The Name of a Plaiſter, whoſe Baſis is *Cadmia*, in *Scribonius Largus. Numb.* 242. One like this is deſcrib'd by *Galen*, *de C. M. P. G. Lib.* 2. *Cap.* 14. which was uſed by *Lucius*, and reckon'd among the Epulotics.

DIACALAMINTHES, διὰ καλαμίνθης. The Name of an Antidote, whoſe Baſis is Calamint, in *Myrepſus*, *Antid.* 105.

DIACARCINON, διὰ καρκίνων, from καρκίνος, κάρκινος, a Crab, or Cray-fiſh. The Name of an Antidote prepar'd of thoſe Fiſh againſt the Bite of a mad Dog; which, as *Galen* ſays, *Lib.* 11. *de Simp. Facult. T. de Cancris uſtis*, was uſed by *Æſchrion*, with very good Succeſs.

DIACARYON, διὰ καρύων, from κάρυον, a Walnut, Rob of Walnuts. *Galen*, *de C. M. S. L. Lib.* 6. *Cap.* 2. See the Preparation of the Diacaryon for the Quinſey, under the Article ANGINA.

DACASSIA. See CASSIA.

DIACASTORIU, διὰ καστορίου, from καστόριον, Caſtor, is the Name of two Antidotes, in which Caſtor is a principal Ingredient. *Nicol. Myrepſ. Sect.* 6. 27. and 102.

DIACATHOLICON, otherwiſe call'd CATHOLICON, from διὰ, of, and καθολικὸς, univerſal, the univerſal Purge.

Take of the Pulps of Caſſia and Tamarinds, and of Sena-leaves, of each two Ounces; of Polypody-root, of Violet-flowers, and of Rhubarb, of each one Ounce; of Aniſeeds, white Sugar, and Liquorice, of each two Drams. Powder thoſe Ingredients together that require it: And then take of freſh Polypody-root bruiſed, three Ounces; of ſweet Fennel-ſeed, ſix Drams; and boil them in two Quarts of Spring-water, to the Conſumption of a third Part: Strain out the Liquor, and, with two Pound of the fineſt Sugar, boil it up to the Conſiſtence of a Syrup; then by degrees pour it upon the Pulps, as they ſtand over the Fire; and afterwards ſtir in the Powders, ſo as to make the Whole into an Electuary.

This is originally a Preſcription of *Nicolaus*, and the College receiv'd it into their firſt Diſpenſatory, under the Title of *Diacatholicon*; but the preceding to this varied conſiderably from that, both in the Materials, and Order of Preparation; though here, the cold Seeds, and ſome other Ingredients, of no great Conſequence to the main Intention of the Whole, are quite rejected, although, at beſt, it is but an indifferent Compoſition; and, notwithſtanding its oſtentatious Title, hardly ever preſcrib'd or made.

DIACELTATESSON. A Term in *Paracelſus*, relating to the Cure of Fevers, *Lib.* 2. *de Vita longa*, *Cap.* 5. He ſeems to mean by it a Vomit excited by Mercury. *Rulandus* and *Johnſon* read *Diateſſadelton*, that is, *precipitate Mercury.* Others will have the *Diaceltateſſon* to be crude Quickſilver diſſolved by the Liquor Alcaheſt.

DIACENES, διὰ κενῆς, διὰ κενῆς, from κενὸς, empty, vain, in *Hippocrates*, ſignify vain, fruitleſs. Thus διὰ κενῆς ἐξανασάσεις, *Lib.* 7. *Epid.* import the Patient's often endeavouring to go to Stool without Effect; and διακενῆς θηρεύειν, is ſpoken of a Perſon in a Phrenſy, who vainly employs his Hands in ſearching about, and catching at he knows not what.

DIACENOS, διάκενος, from κενὸς, empty, void, is an Epithet of porous Bodies, ſuch as a Sponge, and a Pumice-ſtone, *Gal. Lib.* 4. *de Diff. Pulſ. Cap.* 6. *Caſtellus.*

DIACENTETON. The Name of a Collyrium in *Aetius*, *Tetr.* 2. *Serm.* 4. *Cap.* 110.

DIACERATON, διὰ κέρατος, the Name of a Collyrium in *Celſus*, *Lib.* 6. *Cap.* 6. ſo call'd, he ſays, from κέρας, a Horn, becauſe burnt Hartſhorn is a principal Ingredient in it.

DIACHALASIS, διαχάλασις, from διαχαλάω, to be relaxed or opened, in *Hippocrates*, *Lib. de Vulneribus Capitis*, is a Solution of Continuity in the Sutures of the Cranium; that is, when the Bones recede from their mutual Indentations, an Accident which frequently happens in Wounds of the Head.

DIACHEIRISMOS, διαχειρισμὸς, from χεὶρ, a Hand, is any manual Operation. Διαχειρισμοὶ φαρμάκων, *Lib.* 2. *Epidem.* import Preparations, Adminiſtrations, and Diſpenſations, of Medicines.

DIACHELIDONIUM, διαχελιδόνιον, from χελιδὼν, a Swallow, is a Preparation of Swallows; which ſee under ANGINA.

DIACHOREMA, DIACHORESIS, διαχώρημα, διαχώρησις, in *Hippocrates*, ſignify, according to *Galen*, *Com. ad Aph.* 18. *Lib.* 2. all manner of Excretions or Evacuations from the Body, but more properly and frequently Excretions of the Belly by Stool; for *Hypocheresis*, (ὑποχώρησις) and *Diacheresis*, he ſays, differ in this; that the former ſignifies only Diſcharges by Stool, but the other may be underſtood of Evacuations of all Sorts. Again, *Com. ad Aph.* 68, 69. *Lib.* 7. he tells us, that *Hippocrates* calls the Stools indifferently *Hypocheremata*, and *Diacheremata*, and ſometimes applies them to Excretions by Urine.

DIACHORISIS, διαχώρισις, from χωρὶς, apart, ſignifies Separation. The Word occurs in *Moſchion*, *de Morb. Cap.* 129.

DIACHRISTA, διάχρισα, from χρίω, to anoint, in *P. Ægineta*, *Lib.* 1. *Cap.* 46. are Medicines applied to the Fauces, Uvula, Palate, and Tongue, for the Abſterſion of Phlegm.

DIACHRYSU, διαχρυσῦ, from χρυσὸς, Gold, is the Name of a Plaiſter for Fractures in *Gal. ſpurio Libro alt. de Dynamidiis*, § *ad Oſſa fracta.*

DIACHYLON, διὰ χυλῶν, from χυλὸς, a Juice, is an emollient, digeſtive Plaiſter, compoſed of Juices. *Gal. Lib.* 7. *de C. M. P. G. Cap.* 9.

There are ſeveral Plaiſters deſcrib'd by Diſpenſatory-writers, under the Name of *Diachylon*. The College order the *Diachylon Simplex*, the *Diachylon Magnum*, the *Diachylon Magnum cum Gummi*, and the *Diachylon Compoſitum*, otherwiſe call'd *Emplaſtrum è Mucilaginibus.*

DIACHYLON SIMPLEX: *Simple Diachylon.*

Take of Mucilage of Fenugreek, and Linſeeds, and of Marſhmallow-root, of each one Pound; of old Oil, that is fine, three Pound; of Litharge of Gold, one Pound and a half. To make the aforeſaid Mucilage, take of Fenugreek, and Linſeed, and of Marſhmallow-root, of each three Ounces; of common Water, three Quarts: Let the Litharge be finely powder'd, and mix'd with the Oil; then boil it over a gentle Fire, ſtirring it all the while with a Spatula, until it grows as thick as the Conſiſtence of Honey. Take it from the Fire, and let it leiſurely cool, and then mix it with the Mucilage, and gently boil it again to the Conſumption of all the aqueous Humidity, ſo as to make it into a Plaiſter. *S. A.*

This is originally preſcrib'd by *Meſue*, and is not only the moſt common Plaiſter of the Shops, as it is much us'd alone; but alſo, as it is the Baſis of many others. What is given in the *Auguſtan* Diſpenſatory under the Title of *Diachylon ſimplex, ſive album*, is exactly the ſame as this; and the *Diachylon parvum*, aſcrib'd to the ſame Author, in the ſame Collection, differs only in adding Henbane and Fleawort-ſeeds to the Mucilage. But the Simplicity of this Compoſition is ſuch, as to have admitted of very little Variation in any Hands it hath paſſed thro': However, we have ſome Dealers in Medicine amongſt us, who have have had Diſingenuity and Diſhoneſty enough to debaſe it, by the Uſe of Hog's Lard inſtead of Oil, and adding Ceruſs to it, to make it heavier; with an Omiſſion alſo of the Mucilage, only for the ſake of a greater Profit in its Sale.

DIACHYLON MAGNUM: *The greater Diachylon.*

Take of the Mucilages of Raiſins, Figs, Marſhmallow-roots, Fenugreek, and Linſeed, Bird-lime, of the Juices of Orrice and Squills, of Œſypus, or Sheeps-foot Oil, of each one Ounce and a half; of the Oils of Orrice, Chamomile, and Dill, of each eight Ounces; of Litharge of Gold, finely powder'd, one Pound; of Turpentine, three Ounces; of Reſin of the Pine-tree, and yellow Wax,

of

of each two Ounces. Let the Oil and Litharge be well ſtirred together, and then boiled over a gentle Fire, all the while ſtirring it, till they incorporate into a Body: then removing it off the Fire, till it is cold, add the Mucilages, and boil again to the Conſumption of all the ſuperfluous Humidity. Afterwards put in the Bird-lime, the Œſypus, with the Juices of Orrice and Squills, and boil again to the Conſumption of theſe Juices; and, while the Mixture is yet hot, melt in the Wax and Reſin: After it is taken off the Fire, mix in the Turpentine by briſk ſtirring; ſo that the Whole may obtain a ſuitable Conſiſtence for an Emplaſter.

This is alſo aſcribed to *Meſue*, and hath kept its Place in almoſt all the Officinal Diſpenſatories, as well as thoſe of our College, and without much Alteration. Indeed *Zwelfer* takes the Liberty to ſay, that this, and all Compoſitions of like kind, deſerve rather to be quite expung'd than mended; altho', in the ſame Place, he is at a good deal of Pains to direct the particular Manner of its Compoſition: That is, however, ſo fully done here, as not to want any of his Help. The Œſypus was frequently directed in the antient Pharmacy, particularly by *Matthiolus* and *Dioſcorides*; from whom *Schroder* teaches us, that it was made by boiling that Wool of a Sheep, which grows chiefly upon the Neck and Flanks, in Water, till the Oil was got out of it, and could be ſeparated from the Water: But the Joint-oil of the Feet, which is here ſubſtituted to ſave that Trouble, is every whit as good for the ſame Intention; it partaking as much of that ſoft mucilaginous Nature, as the other was ſuppoſed to do.

Diachylon magnum cum Gummi:

The great DIACHYLON *with Gums.*

Take of ſtrained Galbanum, three Ounces; of Bdellium, Sagapenum, and Ammoniacum, of each two Ounces. Let them be added to the preceding *great Diachylon*, after Solution in Wine, ſtraining and boiling up to the Conſiſtence of Honey; and, by this means, it becomes a *Diachylon* with Gums.

This Addition to the former was, originally, the Contrivance of *Renodæus*, except the Galbanum; but the *Pharmacopœia Regia* adds the Gums to the *Diachylon ſimplex*, which is a much leſs troubleſome way, leaving out the Bdellium, and putting in both Galbanum and Opopanax. The *Auguſtan* Diſpenſatory gives a Preſcription from another Author; but that is ſo extremely perplex'd, as to have been followed by none ſince.

Diachylon compoſitum, ſive Emplaſtrum e Mucilaginibus:

Compound DIACHYLON, *or the Mucilage-plaiſter.*

Take of the Mucilage of the middle Bark of Elm, of Marſhmallow-root, Fenugreek, and Linſeed, of each four Ounces and an half; of the Oils of Chamomile, Lilies, and Dill, of each one Ounce and an half; of Ammoniacum, Galbanum, Sagapenum, and Opopanax, of each half an Ounce; of yellow Wax, twenty Ounces; of Turpentine, two Ounces; of Saffron, two Drams. Let the Mucilages, extracted with Water, be boiled over a gentle Heat with the Oils, to a Conſumption of their aqueous Humidities; and the Wax, cut into ſmall Pieces, be melted in them, and ſtirred in with a Spatula: When they are taken from the Fire, and while hot, add, by degrees, the Gums diſſolv'd in Turpentine, and ſtir them well about: Laſtly, put in the Saffron, finely powdered, ſo that the Whole may be made into a Maſs, of a Conſiſtence fit for a Plaiſter.

This a Compoſition of *Meſue*, and hath been in all the Officinal Diſpenſatories, with little or no Alteration. It is much in Eſteem now amongſt our Surgeons, who uſe it principally as a Suppurative.

DIACHYSIS, διάχυσις, from χύω, to fuſe, or melt, is Liquefaction, or Fuſion. *Diachytica*, (διαχυτικὰ) in *Dioſcorides*, are Medicines of a diſcutient and diſſolving Quality, ſuch as he aſcribes to Aniſe and Turpentine.

DIACHYTOS, HYPOCHYTOS, διάχυτος, ὑπόχυτος, are Epithets of Wine, prepared of Grapes dry'd ſeven Days in the Sun, in an incloſed Place, on Hurdles raiſed ſeven Feet from the Ground; by which means they are defended from the Dews and Moiſture of the Night, and fit to be preſſed the eighth Day. By this Method, as *Pliny* relates, *Lib.* 14. *Cap.* 9. they make a Wine of an excellent Taſte and Flavour.

DIACINEMA, διακίνημα, from διακινέω, to move or agitate in a ſlight Manner, (ſo *Galen*, *Com.* 4. *in Lib. de Art.* explains the Verb) is a ſlight Diſlocation. Thus διακινήματα τῶν ὀστέων, *Lib. de Fract.* are ſmall and inconſiderable Diſjunctions or Removals of the Bones from their juſt Situation, as ἐξαρθήματα are perfect Luxations, when the Bone is entirely remov'd out of its Place. The *Diacinemata*, in the Language of *Celſus*, *Lib.* 8. *Cap.* 14. are *quæ paulum exceſſerunt*; and the Holiſthemata, *quæ toto loco mota ſunt.*

DIACINAMOMUM, διὰ κινναμώμου, is the Name of an Antidote in *Myrepſus*, *Antid.* 11.

DIACISSU, διὰ κίσσου. An Acopon in *Marcellus Empiricus*, *Cap.* 36. near the End; which takes its Name from κίσσος, Ivy.

DIACLYSMA, διάκλυσμα, from κλύζω, to waſh out, or rinſe, ſignifies in particular a Collution of the Mouth by Liquors held therein for a while, and then diſcharged, comprehending under it *Gargariſm* and *Apophlegmatiſm*. *Schroder.*

DIACOCCYMELON, διακοκκυμήλων, from κοκκύμηλον, a Plum. The ſame as DIAPRUNUM, which ſee.

DIACOCHLACON, διακοχλάκων, from κόχλακες, Flints, an Epithet of Milk, in which red-hot Flints have been extinguiſhed. *Hippocrates*, *Lib.* 7. *Epid.* calls it διαπεπυρωμένων.

It is remarkable, that Milk, wherein red-hot Flints have been extinguiſh'd, is a moſt powerful Sudorific.

DIACODIUM. From διὰ, and κώδεια, a Poppy-head. It is thus prepar'd:

Take of white Poppy-heads, well dried, fourteen Ounces; and, after twenty-four Hours Infuſion in four Quarts of Spring-water, boil them well; and, to the expreſſed Liquor, put twenty-four Ounces of Sugar, to be boiled into a Syrup.

The new Diſpenſatory of the College makes this differ from the former, both in rejecting the black Poppies, and in the Proportions; the white here anſwering to the Quantities of both before. This Syrup will not bear the uſual way of Clarification, without loſing much of its Strength as an Opiate. And ſuch Difference will happen on one account or other, tho' made with the utmoſt Care, as renders it difficult to be found always of the ſame Strength.

This Preparation is alſo called by the Name of *Syrupus de Meconio.*

DIACOLOCYNTHIS, διὰ κολοκυνθίδων, from κολοκυνθὶς, Colocynth; a Remedy of which Colocynth is a principal Ingredient.

The *Pilulæ Diacolocynthidos* are thus prepar'd:

Take Aloes, Colocynth, Scammony, Bdellium, black Hellebore, Gum Arabic, of each two Drams; Euphorbium and Nitre, of each one Dram: Make them into Pills with ſolutive Syrup of Roſes.

Theſe are in the *Auguſtan* Diſpenſatory by the Name of *Pil. de Nitro*; but the Compoſition has *Alexander Trallianus* for its Author, who gives it under the Title it bears here, *de Hemicrania*, *Lib.* 1. *Cap.* 12. where he pronounces it effectual in purging off viſcid, cold, pituitous Humours from the extreme Parts, and to be good to reſtore the Vigour of the Nerves, as well as to remove their Impediments. *Monardus*, *Lib.* 13. *Epid.* 6. prodigiouſly commends them in the Epilepſy; and affirms that they excel the *Hieræ*, in fortifying the Stomach, and removing Iſchiadic Pains. The Gum Arabic ſeems intended as a Corrector of the Euphorbium, as it may entangle its violent active Parts, and make its Operation more tolerable; but it is to be fear'd, that Ingredient is here in too large a Proportion, notwithſtanding ſuch Precaution. The Doſe of this is from fifteen Grains to half a Dram: And in robuſt Conſtitutions there is hardly any Cathartic of equal Efficacy to cleanſe away the moſt obſtinate Humours.

DIACOMERON. The Name of an Antidote in *Myrepſus*, *Antid. Cap.* 39.

DIACONES, δι' ἀκόνης, from ἀκόνη, a Whetſtone. The Name of a Plaiſter invented by *Crito*, and prepared of a Whetſtone. *Galen Lib.* 6. *de C. M. P. G. Cap.* 2.

DIACOPE, διακοπὴ, from κόπτω, to cut, in *Hippocrates*, 7 *Aph.* 24. and, *Lib. de Capitis Vuln.* ſignifies a deep Cut or Wound; and the Verb διακόπτω is often uſed by him to the ſame Purpoſe.

DIACOPRÆGIA, διακοπραγία, from διὰ, of κόπρος, Dung, and αἴξ, a Goat; is a Remedy prepared of Goats Dung againſt Diſorders of the Spleen, and the Parotides. *Blancard.*

DIACORALLIUM *Alexandri*, a Medicine ſo call'd, not from *Coral*, but *Corallia*, a Name of the *Anagallis*, or Male *Pimpernel*, being not of an aſtringent, but penetrating Quality.

But the *Diacorallium*, in the *London* Diſpenſatory, is call'd thus, becauſe Coral is a principal Ingredient therein. See CORALLIUM.

DIACORONOPODIUM, διὰ κορωνοποδίου. The Name of an Antidote in *Trallian*, *Lib.* 11. prepared of the Herb *Coronopodium*, or *Coronopus*, with other Things.

DIA-

DIACORUM, *διὰ κόρεως*, a cephalic Medicine prepared of the *Acorus*, or *Calamus aromaticus*; it was invented by *Meſue*, and is deſcrib'd in the *Ausburg* Diſpenſatory.

DIACRISIS, *διάκρισις*, from *διακρίνω*, to judge, diſtinguiſh, occurs in *Hippocr. Lib.* περὶ γενῶν, where we read, ἢ ἀπὸ τούτων εἰ νόσοι γίνονται, ἢ εἰ ἐκ νόσων διακρίσιες, "from theſe [four Humours] proceed Diſeaſes, with their "diſtinguiſhing Characters." *Diacriſis* is alſo a Name in *Oribaſius Med. Coll.* for the *Delphinium*.

DIACROCIUM. A Name for the *Electuarium de Ovo*, in *Platerus, de Curat. Febrium peſtilentialium, Tom.* 2. *Cap.* 2.

DIACROCU, *διὰ κρόκου, διάκροκον*, from κρόκος, Saffron; the Name of a dry Collyrium in *Ægineta, Lib.* 7. *Cap.* 16. whoſe Baſis is Saffron.

DIACURCUMA, from *Curcuma*, a Word which *Fuchſius* thinks *Meſue* uſed for Saffron; the Name of ſeveral Antidotes in *Myrepſus*, of which Saffron is a principal Ingredient.

DIACYDONIUM, *διὰ κυδωνίων* (μήλων,) from *κυδώνιον* (μῆλον,) a Quince; a Remedy prepared of the Juice of Quinces, for which ſee CYDONIA.

DIADAPHNIDON, *διὰ δαφνίδων*, from *δαφνὶς*, the Bay-tree, or Bay-berry; the Name of a drawing Plaiſter, prepared of Bay-berries and other Ingredients, and deſcribed by *Celſus, Lib.* 5. *Cap.* 19.

DIADEMA, *διάδημα*, from *δέω*, to bind, in a ſtrict Signification means a Bandage for the Head, under Pains of that Part, and a Danger of Relaxation of the Sutures. *Caſtellus.*

DIADEXIS, or DIADOCHE, *διάδεξις*, or *διαδοχὴ*, from *διαδέχομαι*, to ſucceed. A Succeſſion of Humours; or, to ſpeak more intelligibly, a Tranſmigration of Humours from one Part to another, which more generally is call'd a Metaſtaſis of the Humours, when one Diſtemper ſucceeds, or is converted into another. It is alſo call'd *Diadoche*.

DIADOSIS, *διάδοσις*, from *διαδίδωμι*, to diſtribute, diſſipate, or, in Medicinal Authors, to remit. The Diſtribution of the Aliment over all the Body; and in this Senſe it is the ſame as ANADOSIS. But this Word more frequently implies, a Remiſſion or Relaxation of a Diſeaſe, and its Symptoms.

DIÆRESIS, *διαίρεσις*, from *διαιρέω*, to divide, or ſeparate. A Diviſion or Separation of the Veſſels. *Galen* underſtands by it, any Solution of Continuity, whether brought about by a Wound, Contuſion, Eroſion, or Rupture. Hence

DIÆRETICA. Corroſive Medicines.

DIÆTA, *δίαῖα, δίαιτη*, is a Way and Method of living, comprehending what we call *Diet*, and whatever elſe concerns the Management of human Life; for we muſt not imagine that by *Diæta* we are to underſtand only Meat and Drink; for every thing which may be ſerviceable to the Body will fall within its Limits. "I call *Diæta*, ſays *Galen*, *Com.* 3. *in Lib.* 3. *Epid.*" not only what conſiſt in Eating and Drinking, "but in all other Things, as Reſt, Exerciſe, Bathing, Ve-"nery, Sleep, Waking; and whatever elſe, in any reſpect, "concerns the State of the human Body." In the ſame Senſe are *δίαιτησι* and *δίαιται* to be taken, in *Lib.* 6. *Epid. Sect.* 8. *Aph.* 43. 48. And *διαιτήμαῖα*, in *Aph.* 46. of the ſame Section, and in *Lib. de Natura Hominis*, are of the ſame extenſive Signification. In the ſame Latitude are uſed the Verbs *διαῖδεν*, and *διαῖᾶν, διαιτᾶσθαι*, and *διαιτᾶσθαι*. Thus, (*Lib.* 1. περὶ γυναικ.) *διαιτᾶν λυτρῶσι*, "Let there be a "proper *Diæta* with reſpect to Bathing." And in the ſame Book, *διαῖτωμένη δὲ ἡ γυνὴ περιγίνεται*, "The Woman, "if kept to a proper Regimen, will ſurvive, and do well." See ALIMENTA.

Tho' *Pliny* the younger uſes this Word for any Place where Aliments are eaten, or what we commonly call a Dining-room; and tho' ſome of the later and leſs pure Authors mean no more by it than a public Convention of Men for regulating Matters, or tranſacting Buſineſs of any kind; yet the *Diæta* of the *Latins*, and the *δίαιτα* of the *Greeks*, in their moſt common and genuine Signification, import no more than what we call *Diet*, or Manner of Living.

Every one who allows himſelf to think, muſt undoubtedly be convinced, that the Dietetic Part of Medicine is of the laſt Importance to Mankind, not only in preventing, but alſo in curing Numbers of thoſe Diſorders to which the State and Condition of human Nature ſubjects us; and as the celebrated *Frederic Hoffman* has not only ſhewn, that this, as well as the other Parts of Medicine, is founded upon ſcientific Principles, but has alſo given full, tho' ſhort and ſuccinct Directions, with reſpect to the Diet and Manner of Life, proper for the robuſt and vigorous, the weak and tender Perſons of different Ages, diſtinct Sexes, and oppoſite Conſtitutions, as alſo in the various Seaſons of the Year, and during the different States of the Weather; we ſhall therefore preſent the Reader with that excellent Author's Thoughts upon this Subject:

As no Subſtance is abſolutely, and of its own Nature, either ſalutary or noxious, but derives either the one or the other Quality from its particular Relation to the human Body; ſo 'tis certain, that the Effects of the Non-naturals muſt bear a direct Proportion to the different Conſtitutions of thoſe who uſe them, ſince, in theſe, their Conſequences muſt vary; and prove either of the ſalutary or the noxious Kind, according to the different Cauſes which concur to produce them.

Hence 'tis obvious, that the Phyſician acts a prepoſterous and unaccountable Part, who to every one preſcribes one and the ſame Method of living; or thinks that what contributes to the Health of one, will prove ſalutary and beneficial to all, without Diſtinction or Reſerve: For we are ſufficiently taught, by daily Experience, that all Subſtances are not equally adapted to all Patients; and that what one may bear without being ſenſible of any bad Effects, may to another not only prove prejudicial, but alſo fatal. Time itſelf has a conſiderable Influence in determining the ſalutary or noxious Effects of Aliments, ſince ſome Subſtances may ſafely, and without any bad Conſequences, be us'd at one Seaſon, which at another will contribute not a little to the Deſtruction of Health.

The ſalutary and noxious Effects of Aliments are, for the moſt part, to be accounted for from the Diverſity of Habits; for, as the divine *Hippocrates* obſerves, the Nature and Conſtitution of one Man differ from thoſe of another. This Diverſity of Natures may proceed either from a Difference with reſpect to Age, Temperament, Habit of Body, Cuſtom, and natural Diſpoſition; but moſt remarkably from a Difference with reſpect to Strength and Weakneſs.

As, in general, there is a vaſt Diſparity among Mankind, with reſpect to Strength and Weakneſs; ſo the State and Condition of vigorous and robuſt Bodies muſt be widely different from thoſe which are weak and infirm. For this Reaſon we are always to have a ſacred Regard to the Diverſity of Conſtitutions; ſince this is a Circumſtance of the higheſt Importance, in the Dietetic as well as the Therapeutic Part of Medicine.

That Man is ſaid to be ſtrong, who is furniſh'd with a remarkable Strength and Power, not only in exerting the voluntary Motions; but alſo in whom the vital and animal Actions are perform'd with Vigour and Energy; or, to render the thing ſtill more clear, who can lift heavy Burdens, undergo great Fatigue, both of Body and Mind; who eats plentifully, and regularly diſcharges the excrementitious Parts of his Aliments by Stool; who ſuſtains no conſiderable Injury by Watching, and the Uſe of various improper and leſs ſalutary Aliments.

The Man who has a robuſt and athletic Body, has alſo generally a courageous Soul, and a chearful Temper, is not readily ſubject to Diſeaſes and Diſorders of the Mind, nor eaſily hurt by external Objects.

As every moving Force depends partly upon the Inſtrument by which the Motion is immediately perform'd, and partly on the Activity and Energy of the moving Cauſe; ſo it follows of courſe, that the Strength of the human Body proceeds partly from the Hardneſs and Bulk of the Muſcles, and partly from the free and copious Influx of a laudable Blood, and nervous Fluid, into theſe Parts.

The Strength, therefore, of the Body is diſcover'd by the Largeneſs and Capacity of the Veſſels, the Thickneſs of the Nerves, and the Solidity of the Muſcles; for the Strength of the Body, with reſpect to the ſolid Parts, is deriv'd from the Diſpoſition of Parents, but, with reſpect to the Fluids, from a due and proper Regimen in the Uſe of the Non-naturals. Among robuſt and vigorous Men, we reckon ſuch common People as are accuſtomed to hard Labour, and live upon ſimple and coarſe Aliments; ſuch as are in the Flower of their Youth, and advanc'd to the State and Condition of Men; ſuch as are of a ſanguine and choleric Habit; ſuch as are not too fat, and of a ſpongious Texture, but have ſolid Bones, tenſe Nerves, firm Tendons, and capacious Veſſels. With reſpect to Nations and Climates, the *Weſtphalians*, the *Pomeranians*, and the Inhabitants of *Brunſwick* in general, belong to the Claſs of hardy and robuſt Men. But thoſe are of a more weak and feeble Nature, whoſe Fibres are either tender, and endued with an exquiſite Power of Senſation, or ſubject to undergo heterogeneous and preternatural Motions; who are eaſily diſorder'd by the Operations of their Paſſions, and whoſe narrow Veſſels are not furniſh'd with a ſufficient Quantity of laudable and ſpirituous Blood; whoſe Tendons and Nerves are ſmall and lax; whoſe Teeth are fewer than the natural Number, and who are eaſily fatigued both in Body and Mind.

Perſons of weak Habits are not only eaſily injur'd by external Cauſes, and fall into Diſeaſes on the ſlighteſt Occaſion; but alſo, when actually ſeiz'd with a Diſorder, their Condition is worſe than that of the Robuſt and Hardy, ſince their Minds are fickle and inconſtant, and their frail Bodies incapable of ſupporting the Shock of the Diſeaſe for any conſiderable Time. Among the Number of the Weakly and Tender, we may juſtly reckon Infants and old Perſons; ſuch as are addicted to an

idle Town-life, conſtant Study, and cloſe Meditation. The Generality of Women alſo belong to this Number; and the *Scrabians*, and Inhabitants of *Meiſſen*, are, if we may be allow'd the Expreſſion, nationally weak. Thoſe are alſo to be accounted among the Number of the Weak and Infirm; whoſe Strength is conſiderably impair'd by the Shock of ſome violent Diſeaſe, by long Watching, protracted Hunger, long-continu'd Grief, too liberal Veneſection, violent Hæmorrhages, or the too frequent Uſe of Purgatives. To this Claſs, in a particular manner, belong Women in Child-bed, and thoſe whoſe Menſes are immoderately diſcharg'd. Perſons of a weakly and tender Habit are diſcompos'd and diſorder'd by the Smell only of ſweet-ſcented Subſtances, have copious Evacuations from a ſmall Doſe of any emetic or purgative Medicine, and are put out of Order by Aliments either of the flatulent or acid Kind, as alſo by the moſt gentle Blaſt of cold Air.

Since the Weakneſs of the Body, and its preternatural Diſpoſition to receive the Impreſſions of morbid Motions, generally proceed from a Penury of laudable Juices, it ought therefore to be the principal Care of the Phyſician, who intends to ſtrengthen the Body, and fortify it againſt external Injuries, to fill the Veſſels and Nerves with laudable Juices, whilſt he evacuates the ſuperfluous Humours, and removes them from the Body. Hence it is obvious, that weak Perſons, who, in conſequence of their Conſtitutions, are ſubject to a Train of Diſorders, and are incapable of bearing any Exceſs, are much more ſafely and eaſily reſtored to Health, by a moderate and well-ordered Regimen, than by the draſtic and more operative Medicines of the Shops.

None certainly ought to be more careful in living up to the ſtricteſt and moſt rigid Rules of Health, than the Weak and Tender, becauſe, by the ſlighteſt Error in Diet, they are ſignally injured, and, by their Sufferings, ſufficiently prove, how great Power and Influence the Uſe or Abuſe of natural Things have on the human Body.

The Weak and Tender ought to be, in a particular manner, careful to preſerve, as much as poſſible, their Perſpiration and Concoction entire and uninterrupted. In order to aſſiſt Concoction, they muſt indulge themſelves ſomewhat freely in Sleep, before Meals ventilate their Bodies, not by vehement, but moderate Exerciſe, and eat but ſparingly. Subſtances which are acid, hard, flatulent, ſaltiſh, or ſweet, are to be carefully abſtain'd from, ſince, in Perſons of weak Habits, they are eaſily converted into a Subſtance of a ſouriſh Quality, which proves injurious to the Conſtitution. 'Tis alſo expedient they ſhould ſhun northerly Winds, preſerve a ſerene Tranquillity of Mind, and guard againſt every thing, which borders upon Exceſs or Intemperance.

Since the Man, who is robuſt, and, in every reſpect, ſound and vigorous, is not eaſily injur'd by Exceſs, for that Reaſon he ought not, according to *Celſus*, *in Lib.* 1. *Cap.* 1. "to "confine himſelf rigidly to the ſtricteſt Rules of Health, but "to vary his Method of Living, and accuſtom himſelf to every "thing." But the ſame Author, in the End of the Chapter now quoted, beautifully and juſtly obſerves, that the Vigorous and Robuſt ought to take care, "leſt, in a perfect State of "Health, thoſe Things ſhould be conſumed, which, in Sick-"neſs, are of the greateſt Benefit and Advantage;" that is, leſt the Strength, which is the moſt efficacious Medicine for ſubduing Diſeaſes, ſhould be impair'd.

The Weak and Tender, among whom *Celſus* reckons the *Literati*, who, by the conſtant Labours of their Minds, impair their Strength, and diſſipate their Spirits, ought, by all means, to uſe ſuch a Regimen and Method of Life, as may aſſiſt Concoction, promote Perſpiration, and recruit their Strength. Men addicted to Study ought, therefore, when at Meals, to be entirely free from uneaſy Cares, or deep Meditations. But the moſt favourable Time of applying to Studies is in the Morning, and when the Concoctions are finiſh'd. Studious Men ought alſo to uſe tender and light Aliments, which generate ſubtle and ſufficiently fluid Juices in the Body; but they muſt abſtain from flatulent and leguminous Aliments, Peaſe, Beans, thick Ales, and bad Wines, which oppreſs the Head, blunt the Senſes, and cloud the Genius; for Ales and Wines, the finer they are, the more they contribute to the Health of the Studious. And becauſe a due Concoction of the Aliments is highly beneficial to the Brain and Nerves, and generates a large Quantity of Animal Spirits, hence ſufficient Sleep ought warmly to be recommended to the Studious; for as much of the Sleep as is taken away, ſo much of the Strength neceſſary to go through the Studies of the Day is loſt. Men of a ſtudious Turn ought alſo to take care, leſt, by too cloſe Application, they enervate their Bodies, and render them ſubject to the Attacks of various Diſeaſes. 'Tis far more expedient and eligible to unbend the wearied Mind at proper Intervals, that thus it may return to the Exerciſe of its Functions with freſh Vigour, and a new Degree of Alacrity. Nothing alſo is more prejudicial to Health, than conſtant Sitting, a Practice too common among the Studious, and by which they bring upon themſelves thoſe hypochondriac Diſorders, and coſtive State of the Belly, uſual among the Men of this Claſs.

In the dietetic Part of Medicine, great Regard is to be had, not only to thoſe, whoſe Bodies are corpulent, and filled with a large Quantity of Humours, but alſo to thoſe, who are of a thin and ſlender Habit.

Thoſe who are corpulent, and abound either with Serum or Blood, are greatly diſpoſed to Diſeaſes, ſuffer very conſiderably, as well from Commotions of the Mind, as Things external, ſuch as Cold and Heat; and, when ſeized with any Diſeaſe, recover with Difficulty.

Thoſe, who are corpulent, and full of Humours, ought, above all things, to take ſuch Meaſures, and uſe ſuch Aliments, as extenuate the Body, and evacuate its ſuperfluous Humours. Theſe Intentions are anſwer'd by warm Water, mineral Waters, hot Baths, Watchings, violent Exerciſe of every kind, acid and ſaltiſh Subſtances, eating once a Day, gentle Vomitings and Purgings, which muſt not be excited by too ſtrong and draſtic Medicines, which generally prove more hurtful than beneficial in Caſes of this Nature.

For ſuch as are of a thin and ſlender Habit, thoſe Subſtances are moſt proper, which preſerve the Strength, and nutritious Juices, and hinder their Diſſipation: For this Reaſon, moderate Exerciſe, frequent Reſt, a ſoft Bed, Serenity of Mind, as much Aliments as the Stomach can with Eaſe digeſt, ſufficient Sleep, the Uſe of Baths after Dinner, ſweet Subſtances uſed with their Aliments, cold, and whatever generates laudable Juices, and retains them in the Body, are highly proper for Perſons of lean and ſlender Habits. But Vomiting and Purging of every kind are highly detrimental to Patients of this Claſs.

As ſome Perſons are, at certain Seaſons, coſtive, and, at others, have their Bodies preternaturally ſoluble, theſe muſt alſo uſe a particular Diet, and obſerve a peculiar Regimen.

Thoſe, who are coſtive, muſt uſe ſuch Aliments as have a Tendency to render the Body ſoluble, and Wines, eſpecially of the ſweet Kind, together with ſaline and oleous Subſtances. If theſe ſhould prove ineffectual, *Celſus* adviſes the Uſe of Aloes; but, at the ſame time, they muſt abſtain from the frequent Uſe of Purgatives. Thoſe, on the contrary, whoſe Bodies are preternaturally ſoluble, ought to reſtrain this Diſpoſition by violent Exerciſe. For Perſons in this State, Hunger is alſo proper, as alſo a ſmall Quantity of Drink, which is to be us'd rather cold than hot, if no other Circumſtance forbids it. Having thus conſider'd the Diet and Regimen proper for the Robuſt and Vigorous, and that adapted to the State of the Weak and Tender, we ſhall now take a View of thoſe ſuited to Perſons of different Temperaments, different Ages, and the various Seaſons of the Year, or States of the Weather.

A Temperament, then, is nothing but a certain Habitude and Diſpoſition, both of the ſolid and fluid Parts, to perform the Circulation of the Blood, the ſeveral Motions neceſſary in the animal Oeconomy, and the various Functions, whether natural, vital, or animal. 'Tis ſufficiently confirm'd by Experience, that the Strength of the Body bears a Proportion to the Circulation of the Blood, and its Influence on the ſolid Parts; and that, by this very means, the Digeſtion, the Secretions and Excretions, and, which is more, the Inclinations of the Mind, the Morals, and the Turn of Genius, are conſiderably vary'd; ſo that 'tis certain all theſe Changes draw their Origins from the different Manners, in which the Circulation of the Blood is carry'd on.

In what we call a choleric Temperament, the Fibres are very tender, and highly tenſe. The Veſſels alſo are narrow, and the vital Juices driven thro' them by a ſtrong moving Force. Hence it is, that, in Perſons of this Temperament, we obſerve a certain Precipitancy of Mind, and a certain Velocity or Quickneſs in the other Functions of the Body: And becauſe, in Perſons of this Temperament, the Blood is quickly forc'd through the Veſſels, it is, by this very Means, render'd hoter, and its ſulphureous Parts are exalted.

People of this Temperament ought carefully to abſtain from every thing, which can either increaſe the Heat of the Body, or accelerate the Motion of the Blood, but ought rather to uſe ſuch Subſtances, as, in ſome meaſure, check this rapid Motion, and procure to it a certain Temperature or juſt Medium, which is the beſt and moſt efficacious Preſerver of Health. For this Reaſon, choleric Perſons are conſiderably injur'd by long and violent Exerciſe; by laborious Motion; by aromatic, hot, and pinguious Aliments; by ſpirituous Liquors, eſpecially generous Wine, Brandy, and ſtrong Ale; by the ſcorching Heat of the Sun, immoderate Commotions of Mind, draſtic Medicines, Purgatives, Sudorifics, Volatiles, too long protracted Watchings; and, in general, every thing which has a Tendency, either to accelerate the ſulphureous Intemperature of the Humours, or increaſe their Heat. Choleric Patients are alſo endanger'd by all things which are exceſſively cold, whether the cold Air, or Draughts of cold Liquor, ſince theſe are of ſuch a Nature, as to reduce the Blood, already too thick, and deſtitute of its due Humidity, into a viſcid and tenacious Kind of Glew.

Hence generally ariſe the violent Inflammations and Fevers of choleric Patients. But the Health of choleric Perſons is moſt effectually provided for by warm Infuſions, liberal Draughts of ſome proper Liquor diluted with Water, boil'd Water, Water mix'd with Wine, all moiſtening Aliments, temperate Stoves, warm Beds, and ſpacious Rooms. In a Word, Perſons of this Temperament ought to obſerve a due Medium in every thing; and, if they find themſelves coſtive, their Bodies are to be render'd ſoluble, not by the more draſtic Purgatives, but by the mild and gentle Laxatives, ſuch as Raiſins, Manna, Rhubarb, Tamarinds, and Aloes.

In Perſons of melancholic Temperaments, the Blood, in conſequence of the Hardneſs and Denſity of the Fibres, is carry'd thro' the Veſſels with a ſlow and languid Motion. Hence the Humours become thick, and all the Actions, whether of the Body or the Mind, are perform'd with a certain kind of Difficulty. To Patients, therefore, of this kind, all thoſe things prove injurious, which thicken and inſpiſſate the Juices, and ſtill more retard and check their ſlow and languid Circulation. Melancholic Patients, as their Veins contain a Blood which is thick, and leſs ſuſceptible of a briſk and lively Motion, ought, for that very Reaſon, to abſtain from thick and acid Foods; from Fleſh and Fiſh of a firm and compact Texture; from Puls; from thick and ſtrong Ales, which throw the Fluids into too violent Commotions: Nor is an Air, which is either too hot or too cold, ſo proper for their Condition; becauſe the Atmoſphere, in both theſe States, diminiſhes the Fluidity neceſſary to the human Juices. All immoderate and exorbitant Paſſions ought alſo to be baniſhed from their Minds, ſuch as Anger and Dread, ſince theſe, by more forcibly impelling the inſpiſſated Blood into the Cavities of the capillary Veſſels, generally prove highly injurious to their Health. On the contrary, the Health of melancholic Perſons is provided for by proper Motion and Exerciſe, not perform'd ſuddenly, but gradually augmented; by liberal Draughts of moiſtening Liquor; by generous Wine moderately drank; by Veneſection; and by Aliments moderately ſeaſon'd with Aromatics. It is alſo expedient for Perſons of a melancholic Temperament to eat moderately, to labour, to walk abroad in a ſerene and moderately warm Air, and to uſe a Variety of innocent Diverſions and Recreations.

In Perſons of a phlegmatic Temperament, Serum abounds; the Circulation of the Humours is highly ſlow and languid; and all the Actions, whether of the Body or the Mind, are perform'd with a certain Lazineſs and Torpor. It is therefore expedient to add a *Stimulus* or Spur to the ſlowly moving Blood, to reſtore the Strength and Vigour of the Parts, and to reduce the cold and moiſt Intemperature of the Humours to a drier State.

As the Blood, in Perſons of this Temperament, performs its Circulation ſlowly, hence the Health of the Phlegmatic is excellently conſulted by roaſted Fleſhes ſeaſon'd with Salt and Aromatics, by Ale which is moderately ſtrong, and by rich Wines. Perſons of this Temperature muſt be very careful to uſe due Exerciſe, which excellently diſcuſſes and throws off the ſuperfluous Humidity and Moiſture of the Body. But 'tis abſolutely neceſſary they ſhould abſtain from autumnal Fruits, and crude Vegetables; and that they guard againſt a moiſt and rapid Atmoſphere; ſuch as that generally obſerv'd in narrow and low Places in the Autumn. They muſt alſo baniſh all ſad and melancholy Thoughts, and carefully purſue ſuch things as procure Vigour, Alacrity, and Chearfulneſs, to the Mind.

Thoſe are ſaid to be of a ſanguine Conſtitution, whoſe Habit of Body is ſpongious and lax, whoſe Veins are numerous, but ſmall, narrow, and through which the Blood flows gently and eaſily. Since, therefore, this Temperament is greatly diſpos'd to generate a large Quantity of Blood, Perſons of a ſanguine Habit ought, for this very Reaſon, to abſtain from ſuch things as generate a ſuperfluous Quantity of this Fluid.

The Health of the Sanguine is moſt effectually preſerv'd by Sobriety, Temperance, and what we call a hard Method of Living. Perſons of this Claſs ought carefully to abſtain from ſweet Subſtances; from ſpirituous Liquors, ſuch as Wine and Brandy; from eating too large Quantities of Fleſh; from nouriſhing Ales; from Pork; and from too much Sleep. Moderate Exerciſe is alſo highly beneficial to them, and they ought, if poſſible, to live in a temperate Air; ſince the Atmoſphere, when either immoderately hot, or exceſſively cold, generally proves prejudicial to their Health. Draughts of thin diluting Liquors, Infuſions of Herbs, warm Water, and Veneſections, contribute not a little to their Preſervation: And ſince the Sanguine are naturally diſpoſed and inclined to critical Evacuations of Blood, we are to be particularly careful not to ſuppreſs theſe.

As the State and Condition of the human Body, both with reſpect to its fluid and ſolid Parts, is not the ſame at all Periods of Life, ſo neither is the ſame Regimen and Method of Living ſuited and adapted to Perſons of different Ages. At certain Seaſons of Life, the human Body grows, arrives gradually at its full Vigour, and at laſt, loſing its Strength, decreaſes by degrees. In every Period of Life, the State of the Body is found to vary, becauſe not only the Fluids undergo a Change, with reſpect to their Temperature and Quantity; but alſo the Solids, with reſpect to their Fitneſs and Diſpoſition to perform their proper and reſpective Motions. Different Regimens and Methods of Life are, therefore, neceſſary for different States of the Body, and conſequently for Perſons of different Ages.

As in framing dietetic Laws, and laying down the Rules of Regimen, we ought, above all things, to have a due Regard to the Strength or Weakneſs of the Patient; ſo, in like manner, ſince the Strength of every one differs in different Periods of Life, we cannot lay down accurate and judicious Rules of Regimen, without a previous Inveſtigation of the Nature and Degree of Strength peculiar to each different Age.

Infants, Children, and old Perſons, are to be reckon'd among the Weak and Tender; whereas young Perſons, and thoſe arriv'd to the State of Manhood, are to be conſider'd as robuſt and vigorous. Different Regimens muſt, therefore, neceſſarily be preſcrib'd for Perſons in theſe ſo oppoſite States.

Infants, on account of the Tenderneſs and Senſibility of their Fibres, are eaſily injur'd, and become ſubject to Diſeaſes, by any thing of a noxious Nature; for which Reaſon the Phyſician ought to be very cautious and circumſpect in preſcribing a Regimen for them.

Human Creatures, before they arrive at the Uſe of Speech, are call'd Infants; and, from that Period, till they arrive at Puberty, they are ſaid to be Children. Infants are much ſubject to violent Diſorders of the nervous Syſtem, as is obvious from the Spaſms, Convulſions, Gripes, Epilepſies, Startings, Fevers, and Pains, with which they are afflicted. This is alſo certain from their being ſubject to the moſt terrible Diſorders, and ſometimes to Epilepſies, by ſucking the Milk of a Nurſe, whoſe Mind is diſturbed and ruffled by the Fury of tempeſtuous Paſſions. Their tender and delicate State is ſufficiently prov'd by their being frequently purg'd by the Milk of the Mother or Nurſe, who has, the Day before, taken a purgative Medicine; and by their being indiſpos'd by every conſiderable Error in Diet committed by the Woman, who gives them Suck; if, for Inſtance, ſhe has drank Brandy, admitted of the Embraces of a Man, us'd acid or flatulent Aliments, or if the cold Air has had Acceſs to her Breaſts.

As Infants, with reſpect to Strength and Weakneſs, differ very much from each other, ſo a different Diet and Regimen are to be preſcrib'd for them: Nor is one and the ſame Milk ſuited and adapted to all Children without Diſtinction; for we obſerve, that the Bodies of Infants, with reſpect to the Strength and Texture of their Parts, differ very widely from each other: For thoſe who are propagated from ſound and vigorous Parents, ſuch as the Country-people and Labourers, are neither eaſily injur'd by any thing, nor generally ſubject to Diſeaſes. On the contrary, Infants ſprung from weak Parents; from ſuch as are either too young, or too old; from ſuch as are valetudinary, or addicted to Intemperance and Drunkenneſs; are eaſily injur'd, and highly ſubject to the Attacks of Diſeaſes. Infants alſo differ with reſpect to their peculiar Habits of Body; for thoſe whoſe Fleſh is ſpongy, and riſes too ſpeedily in Fat, and ſuch as have tender Nerves and Tendons, are much obnoxious to Diſorders; nor are they ſo ſprightly and lively as thoſe of the oppoſite State. Thoſe, on the contrary, have their Health eſtabliſh'd on a ſurer and leſs precarious Foundation, whoſe Fleſh is compact and firm, whoſe Nerves are ſolid, and whoſe Tendons and Membranes are ſufficiently tenſe. We muſt alſo obſerve, that one Infant is more ſubject to ſpaſmodic Diſorders and Convulſions than another. Neither ought we to forget, that Infants ſprung from Parents who give a Looſe to their Paſſions, and indulge themſelves in delicate and high Living, which is generally the Cuſtom of the Grand and the Opulent, do not live ſo long as the Children of other People, and are principally ſubject to thoſe Diſorders, which draw their Origin from a Weakneſs of the Nerves. For Infants of this Claſs, a mild Diet, and a ſtrict Regimen, ought to be preſcrib'd.

Nothing is more deſtructive of the Health of a ſucking Child, than too liberal a Repletion with Milk; for as every kind of Repletion is hurtful to Nature, and injurious to the Digeſtion, it is, of courſe, to be ſo much the more apprehended in ſo weak and tender a Patient; for this Reaſon the univerſal Practice of Nurſes is to be condemn'd, who, when Children are indiſpos'd, or cry, force the Breaſt upon them, often againſt their Inclinations; by which means they clog the Stomach with Milk, increaſe its Crudities, and add new Vigour to the Diſorder: For all Subſtances, not duly digeſted by the Stomach, ſtagnate in the Primæ Viæ, become aceſcent, and are corrupted. Hence *Hippocrates* juſtly affirm'd, that Nurſes, by their prepoſterous Method of ſuckling Children, often put an End to their Lives.

A ſufficiently thin and fluid Milk is to be us'd by Children; for ſuch as is thick, and impregnated with too large a Quantity of buttery or cheeſy Parts, is productive of the worſt of Conſequences, becauſe it cannot be ſufficiently digeſted and diſtributed by the Stomach. 'Tis, therefore, a Circumſtance of the higheſt Importance carefully to examine the Milk of Nurſes, with a

View to diſcover its Conſiſtence, and in what Proportion it contains the ſerous, the cheeſy, and the buttery Parts. This Intention is moſt commodiouſly and accurately anſwer'd by Evaporation, by any ſtatical Inſtrument, with which the ſpecific Gravities of Ales and Waters are determin'd; as alſo by an Affuſion of highly rectified Spirit of Wine, by which the Proportion of the ſolid to the fluid Parts may be diſcover'd. The buttery Part alſo of Milk may be inveſtigated by ſuffering it to ſtand twenty-four Hours in a moderately warm Place.

Milk which is thick and pinguious, is of the worſt Kind; and that is beſt, which is neither too thick, nor too thin and ſaline, and which is yielded by a ſound and healthy Nurſe. A preternatural Thickneſs of the Milk may be corrected by moderate Exerciſe before Meals, by Infuſions of the Seeds of Fennel, Aniſe, and Cumin, prepared with warm Water, and drank in the Morning upon an empty Stomach; as alſo by abſtaining from too large a Quantity of Aliments.

During the firſt Months 'tis expedient the Infant ſhould be ſuckled with thin Milk; but in Proceſs of Time, or at a Year's End, Milk which is pretty thick, produces no bad Conſequences, tho' new-born Infants cannot well bear it; for thick Milk obſtructs the Veſſels, whoſe Diameters are as yet narrow, and ſtuffs the meſeraic Glands, and the Villi and Mouths of the lacteal Veſſels, with thick and tenacious Sordes. Beſides, a large Quantity of thick Milk is, with Difficulty, carried thro' the Meanders of the Inteſtines by the periſtaltic Motion; in conſequence of which, it becomes tartiſh, and degenerates into a colliquated and corrupted Maſs: Hence ariſe the uneaſy Inflations, the Gripes, the Spaſms, the painful Fluxes, the Watchings, the Epilepſies, and the Startings during Sleep, with which Infants are afflicted.

Infants are to be indulg'd in the Uſe of Milk for a longer time than a Year, ſince, by this means, they acquire a Degree of Strength, and a certain Firmneſs of the Parts, of which they would otherwiſe be deſtitute; but, if the Work of Ablactation is limited to ſix or eight Months, then the Infant is gradually to be habituated to Aliments which are thin, and eaſily concocted. Moſt Mothers are to be blamed, becauſe, at the very time they are ſuckling their Children, they ſtuff them with Gruels prepared of Meal, Eggs, and Milk; a Species of Aliment, which, in conſequence of its viſcid and tenacious Nature, cannot fail to prove injurious. For this Reaſon, Aliments prepared of the Crumbs of Wheaten Bread, Water, and Butter, are far better ſuited to Children. The Health of Infants is alſo preſerved by Infuſions of Liquorice-root, and of the Herbs Paul's Betony and Germander; to which may be added, a Decoction of Barley, with Lemon-peel infuſed in it. The Uſe of this may alſo be preſcribed to Nurſes, for purifying their Milk.

We ought, above all things, to take care, that Infants labouring under a painful and difficult Dentition, or any other Diſeaſe, ſhould not have too large a Quantity of Milk, becauſe, in conſequence of its Stagnation, it eaſily becomes corrupted, and exaſperates the Diſorder; for, under every violent Pain, the whole nervous Syſtem is affected, by reaſon of the ſurpriſing Conſent of the Parts; for Pain produces a ſpaſmodic Conſtriction of the nervous Parts, by which means the Tone and periſtaltic Motion of the Stomach and Inteſtines, together with the Digeſtion, and ſeveral Excretions, are greatly diſturbed, and the Evacuation of the Fæces by Stool prevented.

The younger the Infant is, the more proper it is to indulge it in long Sleep; but it is gradually to be wean'd from this Habit, in proportion as it advances in Age.

We muſt take care, that the Bodies of Infants be kept always ſoluble, and that they go frequently to Stool; for, as ſoon as they become coſtive, we may infallibly conclude, that ſome Diſeaſe or other will ſoon attack them; for, as at all Periods of Life, ſo in Infancy, the regular and orderly Evacuation of the Fæces by Stool is an excellent Sign of Health, ſince it is a Proof of the Soundneſs of the nervous Syſtem, on which the Vigour of the periſtaltic Motion of the Inteſtines depends. But a coſtive State is always to be dreaded, becauſe it denotes, that the Strength of the nervous Parts is impair'd; and, conſequently, that the Body is diſpoſed to the Attacks of Diſeaſes. *Hippocrates*, in his Treatiſe *de Dentibus*, tells us, "That thoſe Infants are ſound and healthy, whoſe Bodies are "pretty ſoluble, and whoſe Concoction is good; but that thoſe "are ſickly and indiſpoſed, who have ſcanty Diſcharges by "Stool, and who, tho' furniſhed with a voracious Appetite, "are not ſufficiently nouriſhed."

Nothing has a more direct and immediate Tendency to deſtroy the Tone of the Stomach and Inteſtines in Infants, than Purgatives of a ſtrong and draſtic Nature. Of this Kind are all Compoſitions of Jalap and Scammony; as alſo metalline Preparations, ſuch as Aurum Fulminans, and Mercurius Dulcis, which, by remaining long in the Foldings of the Inteſtines, corrode their Membranes, after having brought on an Acceſſion of acrid Humours to the Parts: For Infants, gentle Laxatives are far more proper; ſuch as Preparations of Rhubarb, joined with Abſorbents; or Preparations of Manna, mixed with Extract of Rhubarb; for tho' we are perpetually to endeavour daily to eliminate the thick and viſcid Recrements of the Milk by Stool, yet we are to be no leſs careful, that the Tone of the Stomach and Inteſtines ſhould be preſerv'd ſound and entire; for, when this is either impair'd, or totally deſtroy'd, the Inteſtines never perform their Office in a due and regular Manner. Hence the moſt general and frequent Cauſe of the Diſeaſes of Infants is to be deduc'd; for draſtic Purgatives have this Unhappineſs peculiar to them, that tho' they render the Body ſoluble for once, yet, by injuring, and perhaps deſtroying, the Tone of the Inteſtines, they afterwards produce Obſtructions, and cauſe Retentions of the Fæces; a fruitful Source of various Diſeaſes incident to Children. I have often, with Grief, obſerv'd and foretold this in Patients of Diſtinction, tho' this Truth has been the common Butt of the Ignorance and Malice of ſome Phyſicians. But this Opinion is ſupported by the Judgment of the celebrated *Ferrarius*, who, in his Treatiſe *de Art. Medend. Infant.* affirms, "That Infants, in conſequence of their ſmall "Degree of Strength, are not able to bear highly alterative "Medicines. Opiates produce the ſame Effects, prove highly "injurious to the Habits of Children, and expoſe their Bodies "to the Attacks of Diſeaſes."

Infants and Children ought to eat little, but often; becauſe the ſmaller the Quantity is, the better it is adapted for nouriſhing the Parts. This Rule of Regimen is ſupported by the Authority of *Hippocrates*, who uſes the following Words: "Thoſe "who are in a growing State have a great deal of radical or "innate Heat, and therefore require a great deal of Nouriſh-"ment, otherwiſe the Body is conſum'd:" For, that the Bodies of Infants and Children may gradually become larger, they require a large Quantity of nutritious Juice, which ought to be gradually added to their Parts; but, ſince their tender Stomachs are not able to concoct a large Quantity of Aliments, 'tis therefore expedient, that they ſhould be exhibited frequently, but in ſmall Quantities; and the better the Foods are, with reſpect to their Qualities, the more effectually they are alſo calculated for nouriſhing the Parts.

In the Uſe of all the Non-naturals, whatever exceeds a due Temperature muſt be carefully kept from Infants and Children, to whom Wine, Brandy, and all Acids, are as prejudicial as ſo many Poiſons, becauſe they not only prevent the Nutrition and Augmentation of the Parts, but alſo prove injurious to the Brain and Nerves, the former of whoſe Functions they often diſturb.

A moderate and equal Perſpiration contributes not a little to preſerve the Health of Infants and Children. For this Reaſon their Regimen is to be of the temperate Kind, and both their Beds and Chambers are to be warm, that they may be ſufficiently defended againſt intenſe Cold. If they are otherwiſe manag'd, they are generally ſeized with Gripes and Hiccoughs. *Hippocrates*, in the ſixth Section of his Book *de Alimentis*, informs us, "That thoſe who perſpire freely are weak, but healthy; "and, if ſeiz'd with a Diſeaſe, eaſily recover: Whereas thoſe "whoſe Perſpiration is obſtructed before they are afflicted with "a Diſorder, are ſtronger, but then they recover with greater "Difficulty." But a free Perſpiration is highly neceſſary to Children, becauſe they require a large Quantity of Nouriſhment, the greateſt Part of which is again to be thrown out of the Body: The more effectually, therefore, this cutaneous Excretion is carry'd on, the more genuine and ſalutary the Nouriſhment of courſe becomes.

The Health of ſucking Children principally depends on the Nature of the Milk, and the ſound or weakly Conſtitution of the Nurſe; for, ſince the Infant receives its Nouriſhment from the Woman who gives it Suck, it muſt neceſſarily ſuſtain an incredible Injury by Milk, which is either of a bad Kind, or entirely depraved. Hence it happens, that Infants are generally ſeized with violent epileptic Diſorders, by ſucking the Milk of a Nurſe whoſe Mind is diſturb'd by the Sallies of Paſſion, or diſcompoſed by the fatal Influences of Dread and Terror. When a Misfortune of this Nature happens, it is expedient to milk the Breaſts frequently, taking care, at the ſame time, that none of the Milk be exhibited to the Child for twenty-four Hours after. For this Reaſon Nurſes of good Morals, and ſweet natural Diſpoſitions, are to be choſen, if they can poſſibly be had; and we muſt always take care, that Milk of one and the ſame Nature be uſed by Children. But the Health of Infants is moſt effectually preſerved by Nurſes who are neither too old nor too young; who have only given Suck once before; and who have never ſuffer'd Abortion. A Woman is alſo better qualify'd for the Purpoſes of a Nurſe, if ſhe feeds upon laudable Aliments, drinks large Quantities of very thin Liquors, abſtains from all Acids, from ſpirituous Liquors, from Subſtances tending to Putrefaction, from acrid Purgatives, from ſleeping in the Day-time after Meals, and from Venery. It is alſo expedient ſhe ſhould, twice a Day, exerciſe the inferior Parts of her Body, and that her Breaſts ſhould not contain a thick and ſuperfluous Milk.

We are, above all things, to take care, not to throw the Bodies of Infants into too violent Commotions, either by too great a Variety of Medicines, or such as are possessed of too drastic a Quality; but we are rather to use such as are of a mild and gentle Nature, such as do no Injury to the Tone of the Intestines, whilst, at the same time, they preserve the Perspiration free, entire, and uninterrupted. Drastic Preparations are never to be exhibited to Infants; and if at any time the State of their Health should seem to require any such thing, the Medicine is much more safely exhibited to the Nurse than to the Child, since it is confirm'd, by repeated and well-vouch'd Observations, that a Purgative or Laxative, taken by the Nurse, renders the Body of the Infant soluble.

Children, to whom Nutrition and Growth is necessary, must have Aliments frequently exhibited, but in small Quantities, and such as, by their Qualities, are adapted to nourish the Parts. 'Tis also highly necessary they should use moderate Exercise, and keep up a free and uninterrupted Perspiration, because, by these means, their Health is excellently preserv'd, and their Growth promoted. Children are by no means to be indulged in the Use of sweet Substances, Milk, and Cheese, because these contribute to the Generation of Worms, and bring on a Corruption of the Humours. They must also abstain from Wine, spirituous Liquors, and too violent Exercise, lest the Humours should be over-heated, and the Body, in consequence of the unseasonable Dissipation of its Fluids, deprived of the proper Materials necessary for its Growth and Nourishment. Children, who apply themselves to their Studies, must also abstain from Aliments of a gross and coarse Texture, or of a flatulent Quality, such as Beans, Peas, Millet, farinaceous Substances, and intoxicating Ales; for these not only weaken and impair the Strength of the Body, but also clog the native Force of the Genius, and impair the Understanding.

Celsus judiciously affirms, "That 'tis a Matter of less Moment what Aliments young Men use, or what Regimen they observe;" for Persons in a youthful State are possessed of great Vigour, and an uncommon Strength of the solid Parts. For this Reason young Men are not easily injur'd, nor ought they to be rigidly ty'd down to the Laws of a strict and severe Regimen.

In a State of Youth, however, as well as that of Manhood, a proper Medium is to be observed, and Persons, in both Conditions, are to eat and drink in such a manner, as to recruit and support, but not to oppress and destroy, the Strength of the Body, and the Powers of the Mind.

Men, at this Period of Life, ought to take particular Care, that neither cold Liquor, nor a chilly Atmosphere, get the least Access to their Blood, when overheated by hot and spirituous Liquors, or Motion; since, in consequence of this, a great Number of young Men are, by fatal Inflammations, prematurely deprived of Life.

Young Men, and such as are arrived at a State of perfect Maturity, ought carefully to abstain from hot Substances, and such as throw the Blood into preternatural Commotions. They must also avoid the more drastic Purgatives, and carefully guard against indulging themselves in the immoderate Transports of exorbitant Passions. But Venesection, if Necessity requires it, is not, at this Period of Life, to be condemn'd. *Baglivi*, when delivering his Sentiments on this Subject, uses the following memorable Words: "In young Men the Humours are generally convey'd to the superior Parts; but, in old Persons, they flow to such as are inferior: This, if Conjecture is allowable, depends on the preternatural Laxity of the Solids and Fluids in old People; and the too great Strength, Tension, and Elasticity of the same, in such as are young." For this Reason, says *Duretus*, in his *Comment. in Coac. Prænot.* "Burning Fevers, in young Men, have a Solution by an Hæmorrhage from the Nose; and, in old Men, by a Dysentery. But that these may happen, as, according to the Dictates of Nature, they ought, the Mind must necessarily be free from every Care, that by this means the Spirits may, without Interruption, flow to all Quarters, and perform their Office in every Part, according to the fix'd and stated Laws of Nature; for, when the Mind is rack'd with Care, wrapt up in Study, or disturb'd and tormented with the intricate and perplexing Affairs of Civil Life, the Circulation of all the Fluids is variously disturb'd; and they are, in a tempestuous Manner, convey'd here-and-there, to Parts where they ought not naturally to be."

It contributes not a little to the Preservation of Health, to enure and habituate the Body, from the very Dawn of Youth, to hard Labour, spare Living, and rather to a cold than too hot an Air.

The Regimen and Diet of old Persons require the strictest Care and Attention, since they may be justly reckon'd among the Number of the Weak and Tender; for the more their Strength is impair'd, the more readily and effectually their Bodies are disposed to be injured by external Objects.

For Persons at this Period of Life, Moderation, Temperance with respect to Meat and Drink, and Tranquillity of Mind, cannot be too warmly recommended; for every Excess is injurious to the Nature and Constitution of old People: For this Reason, such as are pretty far advanced in Years are carefully to abstain from too liberal a Repletion with Aliments, from the frequent Use of Wine, especially of the acid and tartareous Kind, from Food of bad Qualities, from such Substances as are saline, acid, hard, and with Difficulty digested by the Stomach.

Nothing is so prejudicial to the Health of old Persons, as violent Cold, and the frequent Use of Acids; for, in the Decline of Life, the Blood moves slowly thro' the Vessels; and all the Excretions, which contribute to the Preservation of Health, become languid: Hence the Humours are inspissated, and acquire a Tendency to Stagnation. Since, therefore, Cold and Acids divest the Humours of their due Fluidity, and impair the natural Heat, the Reason is obvious, why they should be destructive of the Health of old Persons, and contribute greatly to the Production of those Disorders, with which they are generally afflicted. Some Sorts of Aliments soon become acid in the Stomachs of old Persons; for which Reason, Preparations of Milk prove highly prejudicial to them.

The Health of old Persons is best preserved by such Substances as are quickly digested, especially for Supper; since, by this means they enjoy sounder Sleep, which never fails to afford singular Relief to Persons advanced in Years.

The more nearly the Aliments of old Persons approach to Simplicity, and a due Temperature, the better they are adapted to the Preservation of their Health.

Persons advanced in Years are not, without the most urgent Reasons, to change the Method of Life, to which they have been long accustom'd, whether with respect to Exercise or Aliments.

As a moderate Transpiration is highly conducive to the Health of old Persons, this Evacuation is, therefore, to be carefully preserved, and duly carried on. Now 'tis certain, that Transpiration is excellently assisted and promoted by due Motion and Exercise in a temperate Air; as also by strong and generous Wine, which not only forwards this Evacuation, but also procures Strength and Vigour to the whole Body; for which Reason it is by some call'd the Milk of old Men. This Intention is also answer'd by Infusions of Aromatics, such as Sage and Baum, together with Lemon-peel and Cinnamon: But intoxicating and sulphureous Wines, or such as are possess'd of an acid and astringent Principle, are highly injurious to old Persons, because they render them costive, and prevent the due Discharge of the Urine.

Venesection is of singular Service to old Persons; but is principally to be used when they have sufficient Remains of Strength, when their Appetites are entire, and when the whole Body is still possess'd of a due Degree of Energy and Vigour. Most old Persons might protract Life longer than they really do, if they did not wilfully and obstinately despise Venesection; for a Redundance of Blood, to which old Persons, in consequence of their sedentary Lives, and free Living, are inclined, puts an End to the Lives of many; for it brings on Scurvies, Infarctions of the Viscera, Consumptions, lethargic Disorders, and Apoplexies.

Such old Persons, as by any means are destitute of a Power of exercising their Bodies, ought, by Frictions, to promote the due Circulation of their Blood.

Persons advanced in Years ought carefully to abstain from the too liberal Use of Flesh; and boil'd Vegetables, such as Raisins, Prunes, and Apples, are far better suited and adapted to the Preservation of their Healths. Flesh generates too large a Quantity of Blood in the Body, which, since old Persons are averse to Exercise, not only proves highly injurious to them, but is the principal Cause of the Disorders with which they are generally afflicted. The Health of old Persons is far better consulted by soft Pulses, Pot-herbs, and Fish; since these contain but a small Quantity of nutritious Juice. *Baglivi* has a memorable Observation to this Purpose: "In the Course of Practice, says he, a Physician may observe, that some Patients, subject to Defluxions, and chronical Disorders, recover in *Lent*; but begin again to languish in *Easter*, by their eating Flesh. He may also observe, that some Disorders are removed by eating Roots, Pulses, Pot-herbs, Fish, and other Aliments of a like Nature; whereas the same Disorders are augmented by Flesh, and other Aliments of rich Juices."

Old Persons are highly injured by Purgatives, and all violent Commotions of Mind; for the more weak and tender the Body is, the more Injury it sustains by any Intemperature or Excess.

At different Seasons of the Year, different Regimens are also to be used, because a Change in the State of the Atmosphere induces a proportionable Alteration in animal Bodies.

In the Winter the Fibres, in consequence of the increased Elasticity of the Air, are more strong, better qualified for performing the several Motions, and assisting the Concoction of the

the Aliments; for which Reaſon we can far better bear Aliments of difficult Digeſtion in that Seaſon, than in any other.

As, during the Winter, Tranſpiration is in ſome meaſure obſtructed, becauſe the cutaneous Ducts are braced up by the cold Air; hence the Uſe of rich Wines, and ſtrong Ales, becomes highly proper. It is alſo expedient to make frequent Uſe of warm Broths, and Infuſions; and Care is always to be taken, that the Perſpiration bear a Proportion to the Quantity of Aliment uſed.

It is a highly culpable Cuſtom which prevails, eſpecially among the *Germans*, of heating their Rooms, in cold Weather, ſo intenſely hot, that Perſons are, in a manner, ſcorch'd during their Stay in them; for when, a little after, they expoſe their Bodies to the cold Air, for the ſake of Relief, they procure to themſelves catarrhous Defluxions, Coryzas, and Weakneſs of the Head, which, in Proceſs of Time, generally bring on dangerous nervous Indiſpoſitions.

In the Spring ſomething is to be retrench'd from the Quantity of our Aliments, and the Liquor we uſually drink is ſomewhat to be enlarged. During this Seaſon, alſo, Venery is moſt ſafe, and is leſs likely to be injurious to the Health of the Body.

Thoſe but ill conſult their Health, who, in the very Beginning of the Spring, lay aſide their Winter Clothes, and uſe ſuch ſlender Garments as are only proper for the intenſe Heats of the Summer. During the Spring the State of the Atmoſphere undergoes a great Variety of Changes, and there is almoſt a perpetual Viciſſitude of Heat and Cold. If, therefore, a hot Conſtitution of the Air is ſuddenly changed into a cold State of Weather, the Cold inſinuates itſelf into the open Pores of the Skin, and contracts them: Hence the cutaneous Exhalations, the Emiſſion of which is ſo ſalutary in the Spring, are, to the great Prejudice of Health, retain'd within the Body.

An obſtructed Perſpiration is at no time to be more dreaded than in the Spring, becauſe it prepares and diſpoſes the Body for the Attacks of the moſt terrible Diſorders. This is ſufficiently proved by the various Diſeaſes and Fevers, eſpecially of the exanthematous Kind, which generally rage in the Spring, and which draw their Origin from nothing more than an obſtructed Perſpiration; for, during the Winter, the ſuperfluous Juices of the Aliments are too largely accumulated in the Body; and, in the Spring, Nature endeavours to throw them off by a greater Expanſion, both of the ſolid and the fluid Parts: For this Reaſon the taking Meaſures, in order to preſerve Health, is at no Seaſon more neceſſary than in this: Hence it is become cuſtomary to uſe Veneſection, and purify the Blood by gentle Laxatives and Infuſions, in the Spring; for, at this time, the State of the Air is highly favourable to ſuch preſervative Methods. We are, therefore, to be very careful, that, during this Seaſon, that ſalutary Perſpiration, which eliminates the Sordes of the whole Body, be not obſtructed.

No Seaſons of the Year are productive of more Diſorders than the Spring and Autumn. Now, ſince the greateſt and moſt effectual Preſervative of Health is a free Tranſpiration, our principal Care ought to be employ'd in preſerving this Evacuation entire and uninterrupted, during theſe Seaſons; for this Reaſon we are to guard ourſelves ſufficiently againſt the Inclemency of the Weather: And becauſe the Atmoſphere is, at theſe times, impregnated with many Exhalations injurious and prejudicial to Nature, we are to be highly careful not to expoſe ourſelves to the inclement Air about the Beginning of the Spring, and the End of the Autumn, that is, in the Months of *March* and *November*, as alſo in Mornings and Evenings.

In the Autumn the ſame Phænomena are to be obſerved as in the Spring, becauſe the Inclemency of the Air is the ſame, and the Changes of Weather are equally ſudden and frequent, by which means Perſpiration, which is abſolutely neceſſary to Health, is eaſily obſtructed; and becauſe, at this Seaſon, the Equinoctial happens, Diſeaſes are to be prevented by what we call preſervative Cures.

During the Summer, Health is moſt effectually preſerved by Vegetables, and Draughts of diluting Liquors; but we are to abſtain from ſuch Aliments as are heavy, and of difficult Digeſtion, from Wine and Brandy, and from the unſeaſonable and exceſſive Uſe of Tobacco; which, however, may be permitted in the Spring and Autumn. But, according to *Celſus*, Venery is to be entirely abſtain'd from during the Summer.

Different Sexes alſo require a different Diet and Regimen.

Women are weaker than Men, and, for that Reaſon, require a Diet and Regimen peculiar to themſelves: They are of a ſpongy and lax Habit, for the moſt part, addicted to Indolence and Pleaſure, drink little, have Bodies of a highly delicate and ſenſible Nature, much inclin'd to Spaſms, and convulſive Motions, and diſpoſed to generate a Redundance of Blood. Beſides, at certain fix'd and ſtated Times, they have a regular Evacuation from the Veins of the Uterus; and, in conſequence of theſe Circumſtances, 'tis neceſſary, that Women, rather than Men, ſhould have a Regimen, and Method of Living, peculiarly and accurately adapted to their Habit and Conſtitution.

The Female Sex, as we are taught by Experience, are generally in the worſt and moſt uncomfortable State of Health, when this Evacuation is diſorder'd, and irregularly carried on; on the contrary, they are in a ſound and flouriſhing State, when this Diſcharge is duly and regularly made: For this Reaſon, it ought to be the principal Care of the Phyſician always to preſerve this Evacuation in a due and natural Condition, both with reſpect to Quantity, Time, and Order; and never to ſuffer it either to be diſturb'd, or totally ſuppreſs'd, by an improper Diet, or the Neglect of a due Regimen. But nothing ſo effectually diſturbs this Evacuation, as a free Admiſſion of the Cold to the Belly, and inferior Parts, when the Menſes are juſt about to flow. This ſalutary Excretion is alſo palpably injur'd by violent Commotions of Mind, eſpecially by the Influences of Dread and Terror, the Force of which is ſo great, that it frequently puts a Stop to the Diſcharge, after it is begun. Nor, in a Caſe of this Nature, is it expedient to uſe the harſher Methods of Cure, or to excite impure and filthy Ideas in the Patient; but Tranquillity of Mind is rather to be preſcrib'd by the Phyſician, and, if poſſible, preſerved by the Patient. At the time the Menſes flow, they are to abſtain from all Acids, flatulent Subſtances, Aliments that are heavy, of difficult Digeſtion, and a refrigerating Quality; as alſo from Preparations of Milk, and Things of a viſcid Nature. They ought, alſo, carefully to avoid toaſted Bread ſoak'd with Butter, Draughts of cold Liquors, feculent Ale, and, in a Word, every thing of an aſtringent Quality.

When the Menſes are juſt about to be diſcharged, 'tis highly expedient and neceſſary to uſe all Meaſures in order to promote the free and briſk Circulation of the Blood. The liberal and copious Diſcharge of this recrementitious Fluid is excellently obtain'd by Infuſions of Herbs moderately balſamic, ſuch as Baum, Paul's Betony, Wall-flowers, and thoſe of Marigold, Cinnamon, and freſh Lemon-peel, drank every Morning inſtead of Tea. It is alſo expedient to keep the Body always pretty ſoluble; for which Reaſon, if the Patient has been coſtive for any conſiderable time, an emollient Clyſter is to be injected, or a Doſe of the balſamic Pills exhibited. Moderate Exerciſe, and a temperate warm Air, are alſo of ſingular Service; and we are always to take care, that the Feet, and inferior Parts, be ſufficiently defended from the Cold.

Pregnant Women are alſo to have a Regimen peculiar to themſelves directed for them, leſt the Mother herſelf, or the Fœtus, ſhould ſuſtain any Injury; for the Infant, included in the Uterus, is, as it were, a Part of the Mother's Body.

Such as is the Health of the Mother, the State of her Mind, and the Condition of her Humours, and their ſeveral Motions, ſuch alſo the State of the Infant is: The more ſound and robuſt, therefore, the Mother is, the more briſk and vigorous the Fœtus is obſerved to be; and whatever injures the Mother, is ſtill more prejudicial to the Health of the tender Fœtus. For this Reaſon Women, in a State of Pregnancy, ought to take particular care of their Health, and, as much as poſſible, conform themſelves to the Rules of a proper Regimen.

Women ought principally to uſe ſuch Aliments as generate a laudable and balſamic Blood in the Body, procure a due Degree of Fluidity to the Humours, and eliminate the ſuperfluous and recrementitious Parts from the vital Juices: But they ought to abſtain from all Subſtances which are not of a due Temperature, which either throw the Humours into too violent Commotions, render them impure, or generate too large a Quantity of Blood: For, ſince every Degree of Intemperature or Exceſs is prejudicial to the Health and Conſtitution of the Body, it muſt prove much more ſo to pregnant Women: For this Reaſon they ought to guard againſt the violent Sallies of Paſſion, immoderate Cold, intenſe Heat, too liberal a Repletion with Aliments, violent Exerciſe, long Sleep, Foods of difficult Digeſtion, and depraved Juices, all draſtic Emetics and Purgatives, and, in a Word, whatever, in conſequence of its Energy and Activity, throws the Humours into too violent Commotions. But the Health of pregnant Women is much more effectually preſerved by ſuch Subſtances as are of a mild and temperate Nature, generate balſamic and laudable Juices in the Body, are eaſily digeſted, and ſoon paſs thro' the Emunctories.

Since, in pregnant Women, a Ceſſation of the menſtrual Diſcharge neceſſarily throws them into a plethoric State, nothing more effectually contributes to the Preſervation of the Health, both of the Mother and Fœtus, than ſeaſonable Veneſection, which in ſome becomes neceſſary in the ſecond, but in moſt in the third Month; and this Operation is to be repeated in the ſeventh or eighth, as the Neceſſity and Condition of the Patient require it. The ſuperfluous Blood, in the Bodies of pregnant Women, is to be taken away by Veneſection; becauſe, when it is left in the Habit, it throws both Mother and Fœtus into violent Diſorders. But, becauſe ſome Women have a far larger Quantity of Blood than others, for this Rea-

ſon one Veneſection is by no means ſufficient to make a due Evacuation; but the Operation is, in theſe Patients, to be three or four times repeated; for by this means Abortion, and the other Misfortunes incident to pregnant Women, are excellently prevented.

The Plethora, generally incident to pregnant Women, for the moſt part, produces a Cacochymia. The Phyſician, therefore, to whom the Health of the Mother and Fœtus is entruſted, ought, above all things, to attempt the Prevention of this Depravity and Degeneracy of the Humours, by proper Remedies. This Intention is excellently anſwer'd by ſuch mild Evacuants, as gently eliminate the impure and peccant Humours collected in the *Primæ Viæ*. Thus *Hippocrates*, in the twenty-ninth Aphoriſm of his fifth Section, tells us, "That pregnant Wo-"men, when abounding with ſuperfluous Humours, are to be "purged, from the fourth to the ſeventh Month, tho', about "the ſeventh, not ſo much." This Intention is anſwer'd by balſamic Medicines, which, whilſt they gently evacuate, at the ſame time corroborate and ſtrengthen the Stomach, Inteſtines, and whole nervous Syſtem. Of this Kind are the *Pilulæ Becheri*, and the *Pilulæ Rhabarbarinæ*; as alſo Raiſins, impregnated with Rhubarb, with the Addition of a little Cinnamon.

Draſtic Purgatives are highly prejudicial to pregnant Women, becauſe, by affecting the Membranes of the Inteſtines, and the nervous Parts of the Body, with violent Spaſms, they ſtimulate the Uterus to the Expulſion of the Fœtus, or even deſtroy the Tone and Strength of the Stomach.

Such Subſtances as render Perſpiration free and eaſy, contribute greatly to remove the Impurity of the Juices; for which Reaſon pregnant Women ought frequently to uſe the fix'd Bezoardic Powders, the Elixir Stomachale, warm Infuſions of Herbs, moderate Exerciſe, and generous Wines; but theſe are to be uſed ſparingly, and at proper Seaſons.

During the firſt Months of Pregnancy, Women ſhould not eat very liberally; and, through the whole Courſe of Geſtation, Temperance is highly commendable; for the ſmalleſt Degree of Repletion produces Crudities, which prevent the Generation of laudable Juices. Hence 'tis confirm'd by Experience, that too liberal an Indulgence in the Uſe of Aliments, prevents or retards the Nouriſhment of the Fœtus; and we find, that fat Women frequently bring into the World weakly and extenuated Children; whereas the Infants of lean Mothers are often fat, robuſt, and vigorous.

Pregnant Women ought, above all Things, to guard againſt Commotions of Mind, eſpecially Dread, and groundleſs Fancies; which are highly injurious to the Health of the Fœtus, and diſturb or hinder the due Conformation of its Parts. 'Tis ſufficiently confirm'd, by Experience, that the deprav'd and groundleſs Imaginations of Mothers frequently imprint laſting Deformities on the Bodies of Children; and this Misfortune principally happens during the laſt Months of Geſtation. *Frederic Hoffman, Medicin. Rational. Syſtemat.*

DIÆTEMA, *διαίτημα*, the ſame as DIÆTA, tho' *Galen, ad Thraſyb.* calls the reſt of the Non-naturals, beſides Meat and Drink, by that Name. *Caſtellus.*

DIÆTETICA, from *Diæta*, is that Part of Medicine which preſcribes a due Regimen with regard to the Uſe of the Non-naturals. *Blancard.*

DIAGLAUCIUM, *Diaglauciu, διὰ γλαυκίου*, is the Name of a Collyrium, recommended by *Scribonius Largus, Numb.* 22. for beginning Lippitudes and Ophthalmies. It takes its Name from *Glaucium*, which, according to *Dioſcorides, Lib.* 3. *Cap.* 100. is the Juice of an Herb growing about *Hierapolis*, a City of *Syria*. *Dale* takes this Herb for the *purging Thiſtle*. See the Compoſition of this Remedy in *Scribonius Largus*, Numb. before quoted.

DIAGNOSIS, *διάγνωσις*, from *διαγινώσκω*, to diſcern, or diſtinguiſh, is defin'd by *Galen, Com.* 1. *in Progn.* ἡ τῶν ἐνεστώτων γνῶσις, "a Knowledge of Things, as they are in the preſent "State." This Knowledge is acquir'd by the Obſervation of certain Signs or Characters, which are therefore call'd *Signa Diagnoſtica*, the diagnoſtic Signs.

DIAGRYDIUM. See SCAMMONIUM.

DIAHERMODACTYLU, *διὰ ἑρμοδακτύλου*, a purging Remedy in *Trallian, Lib.* 11. in which the Hermodactyl is a principal Ingredient.

DIAION. The Name of a Paſtil or Troche in *Myrepſus, Sect.* 41. *Cap.* 48. It ought to be *διὰ ἴων*, of Violets, a principal Ingredient in the Compoſition.

DIAIREOS. The Name of an Antidote in *Myrepſus, Sect.* 1. *C.* 103. in which the *Iris*, Orris, is a principal Ingredient.

DIAITHROS, *διαιθρος*. This is explain'd by *Galen*, διαφανὴς, pellucid, tranſparent.

DIALACCA. The Name of an Antidote in *Myrepſus, Sect.* 1. *C.* 123. in which Lacca is a principal Ingredient.

DIALAGOOU, *διὰ λαγῶ*. The Name of a Medicine in *Alexander Trallianus, L.* 8. *C.* 2. in which the Dung of a Hare is an Ingredient. According to this Author, it is an approv'd Remedy againſt Indurations and Obſtructions of the Liver and Spleen.

DIALEIMMA, *διάλειμμα*, from *διαλείπω*, to intermit. An Intermiſſion; that is, the Interval betwixt the End of one Paroxyſm, and the Beginning of another.

DIALEPSIS, *διάληψις*, from *διαλαμβάνω*, to interpoſe, or intermit. It imports much the ſame as Apolepſis, which ſee. *Hippocrates* uſes it, *Lib. de Arte*, to expreſs the Interſtices, or Spaces left betwixt the Revolutions of Bandages.

DIALIBANON. The Name of ſeveral Medicines in *Myrepſus, Trallian*, and *Marcellus Empiricus*, in which Frankincenſe is a principal Ingredient.

DIALOES, *διὰ ἀλόης*. The Name of ſeveral Medicines whoſe Baſis is Aloes.

DIALTHÆA, *διαλθαία*. The Name of an Ointment in *Myrepſus, Sect.* 3. *Cap.* 49. from which the Unguentum Dialthææ of the Diſpenſatories ſeems to have been taken. See ALTHÆA.

DIALYSIS, *διάλυσις*, from *διαλύω*, to diſſolve, (*the Strength*) or render languid. A Diſſolution of the Strength, or Weakneſs of the Limbs.

DIAMARENATUM. From *Amarenæ*, red ſubacid Cherries. There are two Medicines call'd by this Name in *Schroder*, the Simple, and the Compound. The Simple is made of the Pulp of Cherries, (*Amarenæ*) paſſed through a Sierce, three Pounds; and Sugar, two Pounds. The Compound is made in the ſame manner, with an Addition of Aromatics. The Virtues of theſe may be known by thoſe of Cherries. See CERASA.

DIAMARGARITON, *διὰ μαργαρίτων*. The Name of an Antidote in *Myrepſus, Sect.* 1. *C.* 37. in which Pearls are a principal Ingredient.

DIAMASCIEN, or DYAMASSIEN. The ſame as *Flos Æris. Rulandus.* See ÆS.

DIAMASSEMA, *διαμάσημα*, from *διαμασάομαι*, to chew. A Maſticatory. See MASTICATORIUM.

DIAMBRÆ SPECIES. The Name of two Medicines in the *London Diſpenſatory*, one call'd *Species Diambræ ſine Odoratis*, the other *Species Diambræ cum Odoratis*.

The *Species Diambræ ſine Odoratis*, Species Diambræ, without Perfumes, is thus prepared:

> Take Cinnamon, Angelica-roots, Cloves, Mace, Nutmegs, the *Indian* Leaf or Malabathrum, and Galangal, of each three Drams; Spikenard, and the greater and leſſer Cardamoms, of each one Dram; of Ginger, a Dram and a half; of Aloes-wood, yellow Sanders, and long Pepper, each two Drams: Make them into a Powder.

This is originally a Preſcription of *Meſue*, and exactly tranſcribed from him by the College into their firſt Diſpenſatory: Afterwards, indeed, they rejected the Doronicum, or Wolf's-bane; but now not only that, but the Perfumes, are quite expung'd, as being wholly remote from the main Intentions of the Medicine, and prejudicial to many Conſtitutions: Altho' as ſome particular Caſes may require theſe very Ingredients, the College have allowed of them in the following. This is eſteem'd a great Cephalic and Cordial, and is frequently preſcribed in nervous Decays, from Apoplexies, Epilepſies, Palſies, and old Age. It ſtrengthens the Stomach in particular, raiſes the Spirits, and warms the Blood to a very great Degree; whereby it is a Provoker to Venery, but more as a Stimulus, than by ſupplying any freſh Recruits to thoſe Parts, or augmenting the Ability of Performance. Its Doſe is from ten Grains to half a Dram.

The *Species Diambræ cum Odoratis*, Species Diambræ, with Perfumes, is thus directed:

> This is made by an Addition to the foregoing Species, of Ambergriſe, one Dram and a half; and of Muſk, half a Dram.

DIAMELON. The Name of two Compoſitions in *Trallian, L.* 7. *C.* 7. in which Quinees are a principal Ingredient.

DIAMISYOS *Collyrium*. The Name of a Collyrium in *Marcellus Empiricus, C.* 8. in which *Miſy* is a principal Ingredient.

DIAMNES. An involuntary Diſcharge of Urine; that is, when the Urine is diſcharged without the Conſciouſneſs of the Patient. It is a barbarous Word, made uſe of by *Johannes Anglicus*.

DIAMORON, *διὰ μόρων*. The Name of a Preparation of Mulberries and Honey. See MORUS.

DIAMOSCHU. The Name of an Antidote in *Nicolaus Myrepſus, Sect.* 1. *C.* 223. ſo call'd from Muſk, the principal Ingredient. There is alſo a Species, directed in the old *College Diſpenſatory*, under the Title of *Species Diamoſchu dulcis*, which is left out in the laſt.

DIAMOTOSIS, διαμότωσις, from μοτὸς, Lint. The Introduction of Lint into a Wound or Ulcer.

DIANA, in Chymiſtry, is the Silver of the Philoſophers.

DIANÆ ARBOR, the Tree of *Diana*. It is prepared of a due Mixture of Silver, Mercury, and Spirit of Nitre, cryſtalliz'd together in the Form of a ſmall Tree. Thus, for Inſtance:

Take an Ounce of Silver; diſſolve it in two or three Ounces of Spirit of Nitre; evaporate your Solution in a Sand-heat, to about the Conſumption of half the Liquor: Pour what remains into a Matraſs, in which there are twenty Ounces of pure Spring-water; add two Ounces of Quick-ſilver; place your Matraſs on a ſmall Bundle of Straw, and ſuffer it to remain in a State of Reſt for forty Days; during which time, there will be a ſmall Tree produc'd with Branches; at whoſe Poins are ſmall Globules, reſembling Fruit.

Though this Proceſs is not of any formal and direct Uſe in Medicine, yet, as it is highly curious, and ſuggeſts ſome Phenomena, the Explication of which may poſſibly enlarge the Mind of the inquiſitive Chymiſt, we ſhall make ſome Remarks upon it.

Theſe Branches, then, are produc'd by the Spirit of Nitre, which, being incorporated with the Silver and the Mercury, aſſumes different Figures, according to the Quantity of Liquor in which it ſpreads and diffuſes itſelf; for if ten or twelve Ounces of Water were only uſed in this Operation, a Species of contus'd Cryſtals would only be produc'd: On the contrary, if too large a Quantity was employ'd, nothing would appear but a ſmall Quantity of a precipitated Powder. 'Tis neceſſary the Mixture ſhould remain in a State of Reſt for forty Days; becauſe the Spirit of Nitre, being pretty much weaken'd by the common Water, muſt of courſe operate very ſlowly. If we remove the Matraſs, we of courſe break and diſcompoſe the beginning Figure, which, however, will form itſelf afreſh, if the Veſſel is ſuffer'd to continue in a State of Reſt. This Proceſs is more commodiouſly carried on in a cool, than in any other Place, becauſe it is properly a Species of Cryſtallization.

This Operation has ſome Analogy with that perform'd in the Earth, in order to the Generation and Growth of Plants; for, if the Seed has too large a Quantity of Moiſture, the Spirits ſubſervient to the Dilatation of its Parts will be ſo weak, as to become incapable of acting any longer: Hence nothing at all will be produc'd. If, on the contrary, the Seed has too ſmall a Quantity of Moiſture, the Spirits, not finding a ſufficient Space to extend and diffuſe themſelves in, will either remain pent up within their former Boundaries, or evaporate themſelves in the Air. But when there is a due Proportion of Water in the Earth, then theſe Spirits, being in a proper Degree of Motion, and extending themſelves inſenſibly, rarefy and extend the Subſtance of the Seed; a Circumſtance on which the Vegetation of Plants depends. But to return to our Proceſs.

When we have a mind to ſeparate the Silver from the Mercury, the Whole muſt be ſtirr'd about, pour'd into an earthen Diſh, boil'd for half a Quarter of an Hour, taken off the Fire, and ſuffer'd to cool, till it is little more than tepid. Whilſt it is in this State, pour into it gradually a Pint of Water, in which two Ounces of Sea-ſalt have been previouſly diſſolv'd; by which means a white Precipitate will be form'd. Pour off the Water by Inclination, and dry the Precipitate; then put it into a Retort, placed in a Sand-heat; and, adapting to it a Receiver full of Water, apply a ſmall Degree of Fire at firſt, but augment it gradually, till the Retort becomes red; by which means your Quickſilver will be diſtil'd, Drop by Drop, into the Water in the Receiver. Continue the Fire, till no more is yielded in Diſtillation. Suffer the Veſſels to cool; pour the Water from the Receiver, and after having waſh'd the Mercury in it, dry it with a linen Cloth, or with the Crumbs of Bread, and preſerve it for future Uſe.

In the Retort you will find your Silver, which you may reduce to an Ingot or Wedge, by fuſing it over a briſk Fire in a Crucible, with a ſmall Quantity of Saltpetre.

I once, ſays *Lemery*, calcin'd the Precipitate in a Crucible, inſtead of ſubjecting it to Diſtillation, thinking, that, by this means, the Mercury would be evaporated, whilſt the Silver remain'd. But the Whole was diſſipated in the Air, with a certain Degree of Noiſe, and nothing remain'd in the Crucible; becauſe the Silver, in conſequence of its Conjunction with the Mercury, had been render'd volatile.

Another Species of the *Arbor Dianæ* may be produc'd in the following Manner:

Diſſolve an Ounce of pure Silver in three Ounces of Aqua-fortis, either in a Phial or ſmall Matraſs; place your Veſſel in Sand, and, by a moderate Heat, evaporate half of the Aqua-fortis. Then add three Ounces of the beſt diſtil'd Vinegar, ſomewhat warm'd. Stir the Mixture; and then diſpoſe of your Matraſs in ſome Place where it may remain in a State of Reſt for about a Month; during which time, there will be produc'd a ſmall Tree, reſembling a Fir, and whoſe Top will reach to the very Surface of the Liquor.

This Species of philoſophical Tree is alſo a kind of Cryſtallization, produc'd by the Silver, penetrated by the Acids of the Aqua-fortis, and the Vinegar. It may be again reduc'd into Silver, by pouring Water upon it, in order to make it precipitate into a white Powder, which is to be fus'd over a briſk Fire in a Crucible, with a ſmall Quantity of Borax, or Saltpetre. *Lemery, Cours de Chym.*

DIANANCASMUS, διαναγκασμὸς, from ἀνάγκη, Neceſſity, Force. The forcible Reſtitution of a diſlocated Part into its proper Place. *Hippocrates* calls an Inſtrument by this Name, which is intended for reſtoring a diſtorted Spine, in his Treatiſe *de Articulis*.

DIANISTESMOS, διανίστημι. The ſame as *Aeratiſma*, which ſee.

DIANŒA, διάνοια. The Mind. See *Animus*.

DIANTHON, δι' ἀνθῶν. The Name of an Antidote in *Nicolaus Myrepſus, Sect.* 1. *C.* 454. from *Galen*. From this, probably, the Hint of the *Species Dianthus* was taken, which is thus directed by the College:

Take of Roſemary-flowers, one Ounce; of red Roſes and Liquorice, of each ſix Drams; of Cloves, Spikenard, Nutmegs, Galangal, Cinnamon, Ginger, Zedoary, Mace, Aloes-wood, the leſſer Cardamoms, the Seeds of Dill, and Aniſe, of each four Scruples; and make them into a Powder together.

Zwelfer gives it an uncommon Recommendation for a Cardiac; and praiſes it alſo in Defluxions, and many Weakneſſes of the Conſtitution from Indigeſtion. It is certainly a very good Compoſition for all nervous Intentions, and does not give ſuch Diſorders as ſometimes thoſe with the Sweets do; it is a great Strengthener of the Brain, and a good Preſervative againſt thoſe Diſtempers which Age is ſubject to bring upon it, as Apoplexies, Epilepſies, Palſies, Loſs of Memory, and the like. It greatly warms the Stomach and Bowels, and invigorates the whole Maſs of Humours. Medicines of this Kind are of great Service in cold cachectic Habits, where the Load of Humours has been forced away by ſtrong Detergents and Cathartics, and the Fibres are left weak, ſo as to be continually liable to relapſe; becauſe they ſtrengthen the Solids, fill them with due Spirits, and procure ſuch a vigorous Vibration and Circulation, that afterwards a proper Digeſtion and Separation is made, and all Supply cut off, which might occaſion a Return. Things of this Nature are therefore indiſpenſably neceſſary after Purging in Dropſies, or to be given in their Intervals; and, for want of this Knowledge, many, whoſe utmoſt Acquaintance in Phyſic goes no farther than a few violent Purges, undertake ſuch Cures; and make ſhort ones, by carrying off the preſent Load, but cannot prevent a Return of the Diſeaſe.

DIAOPORON, διὰ ὀπωρῶν. The Name of a Compoſition deſcrib'd by *Trallian, L.* 7. *C.* 7. It is thus call'd from ὀπώρα, autumnal Fruit; becauſe Quinces, Services, and Medlars, enter its Compoſition.

DIAPASMA. The ſame as CATAPASMA, which ſee.

DIAPEDESIS, διαπήδησις, from διαπηδάω, to leap thro'. A Tranſudation of the Fluids through the Sides of their containing Veſſels.

DIAPENCIA is, according to *Rulandus*, the *Alchimilla*.

DIAPENSIA. A Name for the *Sanicula Officinarum*.

DIAPEPEREON. The Name of an Antidote deſcrib'd by *Nicolaus Myrepſus, Sect.* 1. *C.* 184. from *Galen*.

DIAPHANES, διαφανὴς. Tranſparent, or red-hot.

DIAPHILEDONU, διὰ φιλήδονε. The Name of an Antidote in *Myrepſus, Cap.* 124.

DIAPHLYXIS, διάφλυξις, from διαφλύζω, to irrigate, or moiſten, is expounded in *Galen*'s *Exegeſis* on *Hippocrates*, by ὑπερβλύσεις, Effuſions, Ebullitions.

DIAPHŒNICON, διὰ φοινίκων, from φοῖνιξ, a Date, is a Medicine made of Dates.

DIAPHORA, διαφορὰ, of διαφέρω, to differ; Difference. In Medicine it comprehends the characteriſtical Marks, or Signs which diſtinguiſh one Diſeaſe from another.

DIAPHORESIS, διαφόρησις, from διαφορέω, of διὰ, through, and φέρω, to carry; is an Elimination of the Humours in any Part of the Body through the Pores of the Skin.

DIAPHORETICA. Diaphoretics, or Medicines which promote Perſpiration. See ALEXIPHARMICA.

Hippocrates relates the Caſes of ſome Patients, whoſe Fevers were terminated after the Eruption of Sweat, whether that Sweat really put a Period to the Diſeaſe, or only appear'd at its End; as it happen'd in the Inſtances recorded *Lib.* 1. Patient 6. 7. *Lib.* 2. *Sect.* 2. Patient 7. 11. 12. in which Patients the

the Fever ſeems rather to be terminated by an Eruption of Blood than of Sweat; for Sweat, ſo far as I can perceive, is not, by *Hippocrates*, always propos'd as an Inſtrument by which the Diſeaſe is cur'd, but only as a Mark, or Sign, from which its Event or Termination may, with the greater Certainty, be prognoſticated. For this Reaſon, in thoſe Books of his, which are accounted genuine, he no-where mentions ſudorific Medicines; and even in thoſe Works, which are falſly aſcrib'd to *Hippocrates*, there is only once Mention made of a Sweat procur'd or forc'd by Medicines; for the Author of the ſecond Book of the *Epidemics* orders a Sweat to be procur'd by carefully covering the Patient with the Bed-clothes, and exhibiting Meal boil'd in rich and generous Wine. Nor does he even preſcribe theſe Meaſures as proper to be taken, except in thoſe Fevers, which ariſe from Laſſitude, or ſome other ſimilar Cauſe, ſuch as thoſe commonly call'd Diary Fevers.

Internal Medicines for producing Sweats were ſo little in Uſe among the Antients, that *Celſus* has not a ſingle Word upon this Subject. If, therefore, Sweats are of any Advantage, in Fevers of this kind, they ſeem to derive their Efficacy from Nature alone: During theſe Sweats, perhaps, the peccant Matter might be eaſily diſſipated, and carried thro' the Skin; either on account of the Temperance of the Climate, or by the good Conſtitutions of the Patients, which were not yet corrupted by Sloth and Luxury: But in the preſent Condition of Mankind we in vain expect the Solution of a Diſeaſe by Sweat, whether ſpontaneous and natural, or procur'd by Art; and I believe I may juſtly venture to affirm, that in violent Fevers the Patients are rarely reſtor'd by Sweats alone.

But from the Times of the *Arabian* Phyſicians there has appear'd ſuch a Multitude of ſudorific Medicines, that there is ſcarce any Species of Fever, againſt which ſome of the Chymiſts, or ſome curious old Woman, has not found out an Antidote, without having any manner of Regard to the Nature of the Diſeaſe. Hence that Cuſtom has been handed down to our Days, of treating feveriſh Patients with Cordials, as promiſing the moſt grateful and agreeable Cure. Thus, for the ſake of the Agreeable, we fall into an Error, which is in no Caſe more dangerous, than when the Intereſts of Health happen to be concern'd.

This Method, as conſiſting too much in hot Medicines, is juſtly rejected by *Sydenham*, tho' it does not, as yet, ſeem to be ſufficiently baniſh'd from the modern Practice; for, according to the Confeſſion of Phyſicians themſelves, the Exhibition of hot Subſtances, and ſuch as excite profuſe Sweats, accelerate the Circulation of the Blood: Hence the Fever gradually increaſing, and ſeizing the Brain, we obſerve that the Deliriums and Diſtentions of the Nerves are ſo far from being remov'd, that they are rather augmented. This is an Effect, which may be conſtantly obſerv'd by thoſe, who in the Treatment of acute Fevers, are ſo exceſſively fond of Snake-root, Salt of Hartſhorn, and other hot Subſtances. The ſame Effect is generally produc'd, when, in Fevers already remitting, the *Peruvian* Bark happens to be imprudently exhibited, by the Uſe of which Phyſicians generally find, that the Fever, which was upon the Decline, is forthwith heighten'd, and render'd more violent. When Things are brought to this deplorable State, then a Principle of Terror and Uncertainty begins to influence their Minds; they have recourſe to Vomits, Veneſection, and Veſicatories, as the laſt and moſt important Remedies. This prepoſterous Method of Cure is, therefore, attended with this ſignal Diſadvantage, that it reduces the Practitioner to a Neceſſity of taking thoſe Meaſures at the Decline of the Diſeaſe, which he ought to have taken at its Beginning. Thus thoſe Means of Relief are often tried at an unſeaſonable Time, which, when ſkilfully preſcrib'd in the Beginning of the Diſorder, generally prove highly beneficial to the Patient.

Others run into a different, tho' not a leſs fatal and pernicious Error, who, placing all their Hopes of a Cure in Acids, forthwith have recourſe to Vinegar or Verjuice; as if it was expedient to kill a Patient with Cold, becauſe it was not proper he ſhould be parch'd with Heat.

I would not, by what has been ſaid, be thought abſolutely to diſſuade the Uſe of ſuch Medicines as provoke Sweat in the Cure of Fevers; for I cannot deny, but as Sudorifics of a mild and temperate Nature are productive of happy Effects, ſo they not only may, but alſo ought to be us'd, when Circumſtances indicate their Propriety. But, ſince the reſpective Natures of the hot and cold Subſtances already mention'd recede too palpably from the due Medium, they are, therefore, to be abſolutely rejected by the Phyſician, as hurtful and injurious. Neither is it ſafe to truſt to the milder Sudorifics alone; for, by the previous Uſe of Evacuants, they not only relieve the Fever more effectually, but alſo provoke Sweat more expeditiouſly. This Circumſtance holds remarkably true, with reſpect to Opium, than which no Medicine is more effectual for opening the Pores of the Skin. *Freind. Comment. 3. in Hipp. Epidem.*

DIAPHOROS, διάφορος, in *Hippocrates*, *Lib. de Articulis*, ſignifies pertinent, or to the Purpoſe.

DIAPHRADES, διαφραδὴς, διαφραδέως; in *Hippocrates*, *de Locis in Homine*, is expounded by *Erotian*, σαφὴς, manifeſt, evident.

DIAPHRAGMA, διάφραγμα· from διαφράσσω, to make a Partition, or Incloſure; of διὰ, through, and φράσσω, to cloſe; the Diaphragm; called alſo the Midriff. It ſeparates the Thorax, and Organs of Reſpiration, from the Belly: It is frequently called by *Cœlius Aurelianus*, the *Diſcrimen Thoracis & Ventris*; and, *Cap. 12. Lib. 1. Tard. Paſſ. Diſcretorium. Pliny* calls it the *Præcordia, quod Cordi prætendatur*, "becauſe it ſtands like a Wall or Fence before the Heart." The Antients called it φρένες, as in ſeveral Places of *Hippocrates*; who alſo gave the Name of διάφραγμα to the ſtrait Place of the Fauces, between the Mouth and the Œſophagus, terming it, by way of Diſtinction, τὸ κατὰ γαργαρεῶνα διάφραγμα, "the Diaphragm by the Œſophagus." *Lib. 2. Epid. Galen* alſo, and *Rufus Epheſius*, call the cartilaginous Partition between the Noſtrils, τὸ τῆς ῥινὸς διάφραγμα, "the Diaphragm, or Partition of the Noſe."

But the only Part, which is now call'd *Diaphragma*, is that which ſeparates the Thorax from the Abdomen.

This is a very broad and thin Muſcle, ſituated at the Baſis of the Thorax, and ſerving as a tranſverſe Partition to ſeparate that Cavity from the Abdomen: For this Reaſon, the *Greeks* termed it *Diaphragma*; and the *Latins*, *Septum Tranſverſum*. It forms an oblique inclined Arch, the fore Part of which is higheſt, and the poſterior Part loweſt, making a very acute Angle with the Back.

It is looked upon as a double and digaſtric Muſcle, made up of two different Portions; one large and ſuperior, called the great Muſcle of the Diaphragm; the other ſmall and inferior, appearing like an Appendix to the other, called the ſmall or inferior Muſcle of the Diaphragm.

The great or principal Muſcle is fleſhy in its Circumference, and tendinous and aponeurotic in the Middle; which, for that Reaſon, is commonly call'd *Centrum nerveum, ſive tendinoſum*. It muſt not, however, be imagined, that this middle Part is of ſmall Extent; or that it is round, becauſe Anatomiſts have named it the Centre; for, in ſo doing, they had regard only to its Situation, not to its Form, or the Space it takes up. It is of a conſiderable Breadth, and repreſents, in ſome meaſure, a Trefoil-leaf, ſuppoſing the Part to which the Foot-ſtalk is fixed, to be ſloped, and that this Slope is turned backward, and the middle convex Part, forward; and therefore I choſe to call it ſimply, the middle Aponeuroſis, or aponeurotic Plane, of the Diaphragm.

The fleſhy Circumference is radiated; the Fibres, of which it is made up, being fixed, by one Extremity, to the Edge of the middle Aponeuroſis; and, by the other, to all the Baſis of the Cavity of the Thorax; being inſerted, by Digitations, in the lower Parts of the Appendix of the Sternum, of the loweſt true Ribs, of all the falſe Ribs, and in the neighbouring Vertebræ.

We have, therefore, three kinds of Inſertions; one ſternal, twelve coſtal, ſix on each Side, and two vertebral, one on each Side: Theſe laſt are very ſmall, and, ſometimes, ſcarcely perceivable. The coſtal Inſertions join thoſe of the Tranſverſalis Abdominis, but do not mix with them, as they ſeem to do, before the Membrane, which covers them, is removed. I need not mention here ſome communicating Fibres of the ſame Nature with thoſe found in other Muſcles; as for Inſtance, between the Obliquus Externus and Pectoralis Major.

The Fibres inſerted in the Appendix Enſiformis run from behind directly forward, and form a ſmall parallel Plane. I have ſometimes obſerved a Faſciculus of Fibres detached from the under Side of this Plane, to run down on the Inſide of the Linea Alba, in which it is inſerted near the Navel.

The firſt coſtal Inſertion runs a little obliquely towards the Cartilage of the ſeventh true Rib; a triangular Space being left between this and the ſternal Inſertion, at which the Pleura and Peritonæum meet. The Inſertion of theſe Fibres is very broad, taking up about Two-thirds of the Cartilage of the ſeventh Rib, and a ſmall Part of the Bone, from whence it reaches beyond the Angle of the Cartilage.

The ſecond Inſertion is into the whole Cartilage of the firſt falſe Rib; the third, partly in the Bone, and partly in the Cartilage of the ſecond falſe Rib; the fourth in the Bone, and ſometimes a little in the Cartilage, of the third falſe Rib; the fifth in the Bone, and a little in the Cartilage, of the fourth falſe Rib, being broader than the reſt.

The ſixth is in the Cartilage of the laſt falſe Rib, and almoſt through the whole Length of the Bone. At the Head of this Rib, it joins the vertebral Inſertion, which runs from the lateral Part of the laſt Vertebra of the Back, to the firſt Vertebra of the Loins.

Between this vertebral Inſertion, and the ſecond Muſcle of the Diaphragm, a ſmall triangular Interſtice is ſometimes left, like that which I mention'd, in ſpeaking of the firſt Inſertion. This Inſertion, and that in the laſt falſe Rib, join the upper Extremities of the Pſoas, and Triangularis or Quadratus Lumborum, and ſend off to them ſome communicating Fibres. The common Plane of theſe laſt Inſertions, by the Separation of their Fibres, forms a Hole, through which a Bundle of Nerves paſſes.

It is to be obſerved, that the lateral Inſertions of the great Muſcle of the Diaphragm, on the Right Side, appear to be lower than thoſe on the Left Side; and that the right lateral Portion appears to be larger than the Left, as being more arched.

The ſmall Muſcle of the Diaphragm is thicker than the other, but of much leſs Extent. It is ſituated along the fore Side of the Bodies of the laſt Vertebra of the Back, and ſeveral of thoſe of the Loins, being turned a little to the Left Hand. It is of an oblong Form, repreſenting, in ſome meaſure, a fleſhy Collar, the two lateral Portions of which croſs each other, and afterwards become tendinous toward the lower Part.

The upper Part of the Body of this Muſcle is fixed in the Slope of the middle Aponeuroſis of the great Muſcle. The outer Edges of the Alæ, or lateral Portions, join the poſterior Plane of the great Muſcle; and theſe Portions adhere to the Body of the laſt Vertebra of the Back. The Extremities, called likewiſe Pillars, or Crura, are inſerted by ſeveral tendinous Digitations in the Vertebræ of the Loins.

The upper Part of the fleſhy Body is formed by a particular Intertexture of Fibres, belonging to the two Alæ. Theſe two Alæ, whereof that toward the Right Hand is generally the moſt conſiderable, part from each other, and form an oval Hole, terminated on the lower Part by Fibres detached from the Inſide of each Ala, immediately above the laſt Vertebra of the Back. Theſe Fibres decuſſate and croſs each other; and afterwards thoſe that come from each Ala, join that on the other Side; ſo that each of the Crura is a Production of both Alæ.

The Fibres that come from the left Ala, croſs over thoſe from the Right Ala; and this again ſends a ſmall Faſciculus of Fibres over thoſe of the Left Ala: Afterwards the two Crura part from each other.

The Right Crus is larger and longer than the Left, and is always inſerted in the four upper Vertebræ of the Loins, and often in the fifth likewiſe, by the ſame Number of Digitations, which become more and more tendinous as they deſcend, and, at length, are expanded in form of an Aponeuroſis. This Crus lies more on the Middle of the Bodies of the Vertebræ, than on the right Side.

The Left Crus is ſmaller and ſhorter, and lies more on the Sides of the Vertebræ. It is fixed, by Digitations, to the three upper Vertebræ of the Loins, ſeldom reaching lower. The lower Part of it is expanded in the ſame manner as the other; and the two Expanſions ſometimes meet together.

The oval Opening of this inferior Muſcle of the Diaphragm gives Paſſage to the Extremity of the Œſophagus; and the Aorta lies in the Interſtice between the two Crura. Immediately above the Opening, or Hole, a thin Faſciculus of Fibres is ſent off to the Stomach; and, I have ſometimes obſerved a larger Faſciculus, at the lower Extremity of the Hole, ſent off, chiefly, from the Right Ala, and accompanied by ſome tendinous Fibres from the Left, which ſeemed to run to the Meſentery.

In the middle Aponeuroſis of the great Muſcle, a little to the Right of the anterior Part of the Slope, near the ſmall Muſcle, is a round Opening, which tranſmits the Trunk of the lower Vena Cava: The Border, or Circumference, of this Opening is very artfully formed by an oblique and ſucceſſive Intertexture of tendinous Fibres, almoſt like the Edge of a Wicker-baſket; and is, conſequently, incapable either of Dilatation or Contraction, by the Action of the Diaphragm.

We find, therefore, three conſiderable Openings in the Diaphragm; one round and tendinous, for the Paſſage of the Vena Cava; one oval and fleſhy, for the Extremity of the Œſophagus; and one fork'd, partly fleſhy, and partly tendinous, for the Aorta. The round Opening is to the Right Hand, cloſe to the upper Part of the Right Ala of the ſmall Muſcle: The oval Opening is a little to the Left; ſo that the Right Ala, which is between theſe two Holes, lies almoſt directly over-againſt the Middle of the Body of the eleventh Vertebra of the Back: The tendinous Fork is under the oval Opening, but a little more toward the Middle.

This Situation, well conſidered, will ſerve to juſtify, in ſome meaſure, the Deſcriptions and Figures of the antient Anatomiſts; eſpecially ſince the Right Ala of the ſmall Muſcle is larger than the Left; and ſince it was an eaſy Matter, in taking out the Diaphragm, and ſpreading it on a Board, to extend it too much toward both Sides. *Winſlow.*

The Veins of the Diaphragm are pretty large, and go directly to the Cava, between its Entrance into the Thorax and the Liver, where two pretty large Branches, from each Side of the Diaphragm, enter it.

It has Arteries immediately from the Aorta, and, ſometimes, from the Cœliac, and a few ſmall Twigs from the Lumbals and Adipoſe.

Verheyen mentions two Arteries and two Veins of his own Diſcovery; whereof the Right Artery, and the two Veins, are Branches of the Subclavians: The Left he dares not pretend to have ſufficiently trac'd, but ſays, that, in the Diaphragm, the Arteries and Veins inoſculate with the afore-mention'd of this kind; and that the Veins receive ſome Branches in their Return from the Diaphragm, from the Pericardium and Mediaſtinum.

It receives a pretty large Nerve from the Plexus Cervicalis on each Side, and from the ſecond Pair of the Vertebræ, which, from a triple Root, form a conſiderable Branch, which diſtributes itſelf on each Side, through the whole Body of the Diaphragm.

In Inſpiration, the Diaphragm deſcends towards the Abdomen, which is its proper Motion; which, as a Muſcle, is Contraction. In Inſpiration it is relax'd, and drawn upwards, and makes a concave-convex Figure; the concave Side toward the Abdomen. By this Alteration of Poſture, it enlarges the Cavity of the Thorax in Expiration; and, at the ſame time, leſſens the Cavity of the Abdomen, acting perpetually upon all the Contents thereof, and aſſiſting them in the Performance of their reſpective Functions, particularly the Stomach: It alſo draws the Cartilages of the ſpurious Ribs inwards, towards the Vertebræ, depreſſes the two inferior ſpurious Ribs, aſſiſts in the Expulſion of the Excrements, and of the Fœtus in Parturition.

DIAPHROS, διάφρος· from ἀφρὸς, Froth; in *Galen's Exegeſis*, is expounded by ἀφρίζων, frothy.

DIAPHTHORA, διαφθορά· from φθείρω, to corrupt; in *Hippocrates* ſignifies a Corruption of the Fœtus, an Abortion. The ſame is often expreſſed by φθορὰ, and, in the Beginning of the ſixth Epidemic, by ἀποφθορὰ, which *Galen* expounds by διαφθορὰ and ἄμβλωσις, "Abortion." The Verbs διαφθείρω, and φθείρω, are often us'd in the ſame Senſe.

DIAPHYLACTICOS, διαφυλακτικός· deriv'd from φυλάσσω, to keep; is of the ſame Import as *Prophylacticos*, preſervative.

DIAPHYSIS, διάφυσις, is an Interſtice, Diviſion, Partition, whatever intervenes between things. Διάφυσις, in *Hippocrates*, *Lib. de Fract.* as *Galen* explains it, ſignifies a certain nervous and cartilaginous Protuberance in the Middle of the Joining the Os Tibiæ with the Os Femoris, which enters that large Sinus, and makes a Separation between the lower Heads and Proceſſes of the Os Femoris, which are inſerted into the Sinus of the Os Tibiæ. This Subſtance only appears in recent Carcaſes; for it withers after Death. In *Mochl.* where he writes, πλευρὰι δὲ καλὰ τὰς διαφύσιας τῶν σπονδύλων νευρῳ περιφύκασιν, "the "Ribs at the *Diaphyſes* of the Vertebræ are connected by a "nervous Subſtance," by the Diaphyſis we are to underſtand the Interſtices, Intervals, Chinks, ſuperficiary Cavities, or Sinuſes, which are cut in the Bodies of the Vertebræ, at the Roots of the tranſverſe Apophyſes, for the Reception of the round Heads of the Ribs; and thoſe double Sinuſes, in which the Ribs make a double Diarticulation, are called by that Name. The tranſverſe Proceſſes, or Apophyſes themſelves, may alſo be called Diaphyſes, as growing in the Spaces between the Vertebræ, and join'd to the Ribs by a double Diarthroſis. In the ſame Book, τὸ σῆθος διαφύσιας ἔχον πλαγίας, "the Breaſt "having oblique *Diaphyſes*," where the Ribs are connected with it, imports, by *Diaphyſis*, what poſſeſſes the Partitions or Intervals, that is, the Cartilages at the Sides of the Bones of the Sternum, by which they are join'd by Synarthroſis with the Ribs; or elſe the Sinuſes, which are indented at the Sides and Joints of the Bones of the Breaſt, and into which the Ribs, by their cartilaginous Part, are inſerted. Again, in the ſame Book, ἐκ τῆς διαφύσιος τῶν τῆς πήχεος ὀστῶν, "from the Space between "the Bones of the Cubit," a torpid Nerve is ſaid to proceed. And (*Lib.* περὶ πήχεως) διαφύσιες are the Intervals, Diſtances, and Partitions, by and into which numerous and large Cavities of a Body are divided. The Word διάφυσις alſo, in *Hippocrates*, ſignifies the Pedicle of a Fruit. *Lib.* περὶ ἑλκεμύκ.

DIAPISSELÆON. The Name of a Compoſition in *Marcellus Empiricus*, *C.* 35. in which liquid Pitch is a capital Ingredient.

DIAPLASIS, διάπλασις, from πλάσσω, to form. Conformation. It is uſed to expreſs the Replacing a fractur'd Bone, as near as is poſſible, in its natural Situation.

DIAPLASMA, διάπλασμα. An Unction or Fomentation, applied all over the Body. *Caſtellus.*

DIAPLOCE, διαπλοκὴ, from διαπλέκω, to complicate, to twiſt, or intermix. In *Hippocrates de Alimentis*, this implies a Mixture of the Aliments; or rather a Miſcibility.

DIAPNE. An involuntary Diſcharge of Urine. *Caſtellus.*

DIAPNOE, διαπνοὴ, from διαπνέω, to perſpire. Perſpiration. Tranſpiration.

DIAPOREMA, διαπόρημα, from διαπορέω, to be in Doubt. Anxiety in Diſtempers; the ſame as ALYSMUS, which ſee.

DIAPRASIUM, διαπράσιον. The Name of a Compoſition in *Trallian*, *L.* 5. *C.* 4. ſo called from πράσιον, Horehound, one of the Ingredients.

DIAPRUNUM. The Name of two Compoſitions, directed thus in the *London* Diſpenſatory:

The DIAPRUNUM LENITIVUM.

Take of new and ripe Damaſk Prunes, one hundred; boil them in a ſufficient Quantity of Water till they are ſoft; then remove them from the Fire, and, when cold, drive the Pulp through a Sieve, and ſet by for Uſe. In the Liquor ſtrain'd from the Prunes before pulping, boil one Ounce of Violet-flowers; and, after ſtraining again, diſſolve in it two Pounds of Sugar, and boil into a Syrup; to which add of the before-mention'd Pulp half a Pound; of Caſſia and Tamarinds diſſolv'd in a little of the ſame Decoction, and pulp'd, of each one Ounce: Boil them again over a gentle Heat, and frequently ſtir the Mixture: After which ſift in the following Powders, of Coriander-ſeed, Rhubarb, Liquorice, and Marſhmallow-roots, of each a ſufficient Quantity, to make into a ſoft Electuary.

DIAPRUNUM SOLUTIVUM.

Take of the lenitive Compoſition of Prunes, four Pounds; of prepar'd Scammony, two Ounces five Drams; and mix them together into an Electuary. *S. A.*

Theſe were Preparations of *Nicolaus Myrepſus*, the firſt of which was receiv'd into the College Diſpenſatory, under the Title of *Diaprunum Simplex*, *rectius Lenitivum*; but the latter Part of it is here much abridg'd of many ſuperfluous Ingredients, as the Spodium, Barberries, and many other things of the like Nature. But neither of theſe are hardly ever preſcribed or made.

DIAPSORICUM. The Name of a Collyrium in *Marcellus Empiricus*, *Cap.* 8.

DIAPTERNES, from πτέρνα, the Heel. A Medicine made of the Heels of Animals, and Cheeſe. *Caſtellus* from *Gulielmus Budæus*.

DIAPTEROSIS, διαπτέρωσις, from πτερὸν, a Feather. The cleaning the Ears with a Feather.

DIAPYEMA, from πῦον, Pus. An Abſceſs, or Suppuration. See ABSCESSUS.

DIAPYETICA. Suppurating Medicines.

DIARRHODOMELI. The Name of a Compoſition in *Trallian*, *L.* 7. *C.* 4. prepar'd of the Juice of Roſes, Scammony, Agaric, Pepper, and Honey.

DIARIA *Febris*. A Diary Fever; one which continues only one Day. It is the ſame as EPHEMEROS.

DIAROCHÆ, διαῤῥαχαὶ. The Interſtices betwixt the Circumvolutions of Bandages. *Erotian*.

DIAROMATICUM. A Medicine compounded of Aromatics.

DIARRHAGE, διαῤῥαγὴ. A Fracture; in particular, of the Temporal Bones.

DIARRHODON. A Name for a great many Compoſitions, in which Roſes are the principal Ingredient. In the old College Diſpenſatory, one of this ſort is directed under the Title of *Diarrhodon Abbatis*; but it is omitted in the laſt.

DIARRHŒA, διάῤῥοια, from διαῤῥέω, to flow thro'. It imports what in *Engliſh* we call a Looſeneſs. See ALVUS, DEJECTIO, and CHOLERA.

A Diarrhœa is defin'd to be a frequent and plentiful Diſcharge of thin, watery, mucous, ſlimy, frothy, greaſy, bilious, or blackiſh Matter from the Inteſtines, ſometimes with, and ſometimes without, a Mixture of Excrements. It is frequently attended with Gripings; but they are not eſſential to it. The Patient is weak, makes little Urine, has a depreſſed Pulſe, impair'd Appetite, and is ſometimes feveriſh.

OBSERVATION I.

A Child about a Year and a half old, who, for ſeveral Months, had laboured under a feveriſh Indiſpoſition, a preternatural Appetite, a Flux, the Subſtance of which was mix'd with a whitiſh Matter, and a ſubſequent Leanneſs and Extenuation, was at laſt reduc'd to ſuch a low State, as to fall a Sacrifice to theſe Symptoms.

Upon opening the Body, the Liver appear'd ſo preternaturally large, as almoſt to equal that of an Adult; for it poſſeſſed the whole Cavity of the Abdomen; and the Subſtance of it was found ſcirrhous. The Gall-bladder was alſo preternaturally large, and as long as one's fore Finger. The Condition of the Spleen was found to be the ſame with that of the Liver; for it was every-where full of very hard tartareous Spots. The Glands, diſperſed through the whole Meſentery, were found ſcirrhous; which Circumſtances ſufficiently accounted for the Death of the Patient. *G. Theophilus Bierlingius Miſcell. Cur. Anno* 1671. *Obſervat.* 157.

OBSERVATION II.

A certain Man, after labouring under a Flux for ſix Years, at laſt died; and, upon laying open his Body, his whole Liver was found full of Impoſtumations, and a Part of the Meſentery deſtroyed. *Hollerius*, *Cap. de Alvi Fluxibus.*

OBSERVATION III.

A certain Man, of thirty Years of Age, happening to die of a Diarrhœa, whilſt we were laying open his Body, and attempting a Separation of the Liver from the Diaphragm, to which it adher'd for a conſiderable Space, before we opened the Liver, there appear'd a large Tumor of that Species called Atheroma. This Tumor was ſituated in the convex Part of the Liver, near the poſterior Region of the Diaphragm, hard by the Vena Cava. It was of a round Figure, in Bulk almoſt equal to one's Fiſt, and free from the reſt of the Parenchyma of the Liver. It weigh'd five Ounces ſix Drams and thirteen Grains. Its Coat was as thick as the true Skin. It contain'd two Kinds of Matter, both of them thick, and very little fluid. The one reſembled a pellucid Jelly, and the other was like thick Cream, or a white Poultice. *Boneti Sepulcr. Anat.*

OBSERVATION IV.

A certain *German* Prince, of two Years of Age, happening to die of a Diarrhœa, accompanied with an Atrophy, and other Symptoms, upon laying open his Body, we found his Liver hard, whitiſh, of an uncommon Bulk, and weighing ſeventeen Ounces and a half. Between this Organ and the Duodenum, near the Meſentery, there was a Collection of blackiſh Blood. The Gall-bladder was preternaturally large, and ſo firmly adhering to the Subſtance of the Liver, that it could not be freed from it without injuring it. In the Gall-bladder itſelf there was not a yellow Humour, but a certain greeniſh black Matter, like that which, during his Life, he had copiouſly diſcharged by Stool. Beſides, his Liver was very little, and cloſely adherent to the ſpurious Ribs and Diaphragm. Hence we may eaſily underſtand, in what manner the Functions of the Liver might be diſordered. The Stomach and Inteſtines were in their natural State, but contained no Excrements, and were ſomewhat diſtended with Flatulencies.

OBSERVATION V.

A certain Lawyer, after labouring for a conſiderable while under a Diarrhœa, at laſt died conſumptive; and, upon laying open his Body, we found a large pendulous Tumor adhering to the lumbar Muſcles on the Right Side.

OBSERVATION VI.

A certain Gentlewoman, about Ten o'Clock in the Morning, complained of a troubleſome and uneaſy Flux. I perſuaded her to go to Bed, becauſe Motion had a Tendency to increaſe her Pain, and prevent the Diſcharge of the Excrements. Her Stools were chylous, white, liquid, diſcharged in ſuch large Quantities, that ſhe filled a large Baſon every time ſhe went to Stool. Terrified at this Symptom, I deſired a Conſultation of the moſt experienced Phyſicians: Upon which we preſcribed aſtringent Liniments, medicated Bags, Julaps, and next Day an Infuſion of Rhubarb. By her frequent and copious Stools, her Strength was gradually impaired, and, before Midnight, ſhe died, when ſhe little ſuſpected ſuch an Accident.

In order to inveſtigate the genuine Cauſe of ſo ſudden and unexpected a Misfortune, I beg'd the Body might be laid open; upon which we found the Bottom of the Stomach ulcerated. *Riolanus Part. Meth. Med. Sect.* 3. *Tract.* 1.

OBSERVATION VII.

A certain Youth, about eighteen Years of Age, was ſeized with a deprav'd Appetite, eating Stones and Rubbiſh, and at laſt fell into a ſlow and gentle Fever. In Proceſs of Time his Stomach began to throw up its Contents, and he was ſeized with a Flux. This Complication of Diſorders in a few Days put a Period to his Life.

Upon laying open the Body, we found a Callus ſituated among the meſeraic Veſſels, by which, when they were ſo obſtructed, that the Blood could be conveyed no farther, the Patient muſt neceſſarily die. *Benivenius de Abditis*, *Cap.* 37.

OBSERVATION VIII.

A certain Gentleman of Diſtinction, about thirty Years of Age, of a melancholic Conſtitution, highly ſubject to Catarrhs, and addicted to the immoderate Uſe of Wine and Summer Fruits, was at laſt ſeized with a Vomiting and a Diarrhœa, which were now-and-then ſucceeded by a bloody Flux; by which means his Strength was gradually ſo exhauſted, that he died on the tenth Day.

Upon laying open the Body, I found ſeven or eight ſmall Stones

Stones as large as Chiches, in that Part of the pancreatic Duct, where it terminates in the Inteſtines. *Regnerus de Graaf Tract. de Succo Pancreatico, Cap.* 7.

Observation IX.

A certain Clergyman of Diſtinction, being, for three Weeks, afflicted with a highly bilious Diarrhœa, at laſt fell a Sacrifice to his Diſorder.

Upon laying open his Body, I found in his Gall-bladder, three ſmall hard Stones; tho' at the ſame time, during the whole Courſe of his Diſeaſe, he had frequently diſcharged highly bilious Stools, which certainly were ſupplied from the biliary Duct, which leads directly from the Liver to the Inteſtines. *Riolanus Anthrop. Lib.* 2. *Cap.* 20.

Observation X.

At *Montpelier* I had an Opportunity of ſeeing a Woman laid open, who, for fourteen Years, had been afflicted with a Diarrhœa, which, however, for ſeven Months before her Death, had been ſo violent, that ſhe was obliged to go to Stool ſeveral times in a Quarter of an Hour.

Mr. *Gintelius*, by whom the Body was laid open, could find no other Cauſe for her Death, than a Petrification of the Bile, which had formed itſelf into a hard and unequal Stone in the Gall-bladder, which it diſtended far beyond its preternatural Dimenſions. *D. Creterus, Zod. Med. Gal. an.* 3.

Observation XI.

I have ſeen the Bodies of ſeveral Patients, who died of Diarrhœas, laid open, whoſe Inteſtines were thick, tumid with Blood, and, as it were, formed into Holes like Honey-combs. Veneſection, and the due Uſe of Emetics, would, in all Probability, have contributed much to the Cure of theſe Patients. *Guarinonius, Conſultat.* 4.

A Flux of the Belly, where the Stools are liquid, and more frequent than uſual, in the Beginning, is not ſo much to be regarded; but this Diſorder is ſometimes attended with ſlight Pains, ſometimes with very ſevere ones. It is often moſt adviſable for Health to let it have its Courſe for one Day, or even more, provided there be no Fever, and the Flux ceaſes within ſeven Days; for by this means the Body is cleanſed, and the noxious Matter evacuated, to the great Benefit of the Patient. But to endure it too long is dangerous; for ſometimes it excites griping Pains, with feveriſh Diſorders, and exhauſts the Strength.

The firſt Day it is ſufficient to keep quiet, without attempting to repreſs the Efforts of the Belly. If the Flux ceaſes ſpontaneouſly, you may go into the Bath, and take a little Food; but, if it continues, it will be beſt to abſtain, not only from Eating, but alſo from Drinking. The next Day, if the Looſeneſs perſeveres, keep quiet as before, and take a little aſtringent Food. The third Day, go into the Bath, and uſe vehement Frictions of every Part, except the Belly; hold your Loins and Scapulæ to the Fire; take ſome Food of a binding Quality; and drink pure Wine, but moderately. If the Flux ſtill continues the next Day, eat more freely, and take a Vomit; and, in ſhort, reſiſt the Diſorder by Hunger, Thirſt, and Vomiting, till you have ſubdued it; for it is ſcarcely poſſible, after the joint Uſe of ſuch effectual Means, for the Belly not to be contracted and bound.

Another Way for ſuppreſſing a Looſeneſs, is to make a Supper, and afterwards to take a Vomit; to keep in Bed the next Day; in the Evening to be anointed, though but ſlightly; and then take about half a Pound of Bread ſop'd in pure *Aminæan* Wine. After this, eat ſomething roaſted, eſpecially a Bird; and, upon this, drink the Wine before-mentioned mixed with Rain-water. Continue this Courſe for five Days together, and then take another Vomit. *Aſclepiades*, contrary to former Authors, preſcribes cold Liquors, and even ſuch as are extremely cold, to be taken every Day. I believe, every Man ought to truſt his own Experience, whether it be fitteſt for him to drink cold or hot Liquors.

Sometimes it happens, that the Diſorder, being neglected for ſeveral Days together, becomes ſomewhat difficult to cure. In this Caſe, you muſt begin with a Vomit; the next Day in the Evening be anointed in a warm Place; take a moderate Quantity of Food; drink pure Wine of the rougheſt ſort; and apply Rue with Cerate to the Belly. In this Affection of the Body, neither Walking nor Friction are required; but Riding in a Chariot or Waggon, or, which, is better, on Horſeback, is of Service; for nothing more ſtrengthens the Inteſtines.

If it be neceſſary to have recourſe to Medicines, the moſt proper Remedy is what is prepared of Apples. In the time of Vintage, put into a large Veſſel wild Pears and Apples; if they are not to be had, take green *Tarentine* or *Signine* Pears, with *Scandian* or *Amerine* Apples, Myrrhapia, [*a ſort of Pears, ſo call'd from their Smell*, Plin. Lib. 15. Cap. 15. *Muſk-pears*] Quinces, Pomegranates with their Rinds, Services, and principally that Species which we call *Torminalia*: Let theſe Fruits take up a third Part of the Capacity of the Veſſel, and then fill up the ſame with Muſt: Boil the Contents all together, till they are diſſolved, and concur in forming, as it were, one Maſs. This Preparation is not ungrateful to the Taſte, and, taken upon Occaſion, gently binds the Belly, without injuring the Stomach: Two or three Spoonfuls are enough for a Doſe. Another more potent Remedy is to take Myrtle-berries, preſs out the Juice, and boil it to a tenth Part; of which take an Ounce [*Cyathum*] for a Doſe. A third Remedy, when it can be prepared, is as follows: Take a Pomegranate, and excavate it by taking out all the Inſide; then picking out all the Seeds, put the intermediate Membranes into the Shell again, and pour thereon raw Eggs, and ſtir them about with a Spattle: Then ſet it upon the Coals, and the Moiſture which is in it, while it continues, will keep it from burning: When it begins to be dry, remove it, and eat the Contents with a Spoon. This Remedy is made more effectual by ſome Additions, as when it is thrown into Diſhes highly ſeaſoned with Pepper, or mixed with Salt and Pepper, and ſo eaten. They prepare alſo a Gruel for this Purpoſe, in which they boil Part of an old Honey-comb. Alſo Lentils boil'd with Malicorium, and the Tops of Brambles boil'd in Water, and eaten with Oil and Vinegar, are effectual in this Caſe; and ſo are Decoctions of Dates or Quinces, or dry Services, or Bramble-tops; I mean on ſuch Occaſions as require an aſtringent Potion. Half a Pint of Wheat boiled in auſtere *Aminæan* Wine, and given to the Patient faſting and thirſty, and the Wine afterwards ſupped, may juſtly be accounted one of the moſt potent Remedies in this Diſorder. They preſcribe alſo *Signine* Wine, or auſtere refinated Wine, or any other auſtere ſort of Wine. They alſo bruiſe a Pomegranate with the Rinds and Seeds, and mix it with the Wine before-mentioned, which may be ſupped pure, or diluted. However, there will be no Neceſſity of uſing Medicines, unleſs the Diſtemper be violent. *Celſus, Lib.* 4. *Cap.* 19.

A Flux of the Belly, or a Diſcharge of pure and unmix'd Humours, without Inflammation, Exulceration, or conſiderable Senſe of Pain, is by the *Greeks* called Διάῤῥοια, "a Diar-"rhœa." In this Diſorder, there is an Evacuation of ſeveral ſorts of Humours, ſometimes of Phlegm, ſometimes of Bile, either yellow or black. The Origin, from whence this Flux proceeds, is ſeated in various Parts: If there be a Defluxion of Phlegm from the Brain upon the Belly, the Looſeneſs is moſt urgent by Night, and after Sleep; and the Diſcharges, according to *Hippocrates*, are thin and ſpumous. The Flux alſo has its Intervals, and is preceded by a Diſtillation and Pains of the Head, eſpecially after a ſudden Heat or Cold. The ſame Humour, if the Flux be owing to ſome Diſorder of the Inteſtines, Meſentery, or Stomach, is thick and mucous; and is diſcharg'd principally by Day, without any certain Intervals. When yellow or Lemon-coloured, an ardent, and often ſpumous Bile flows from the Liver into the Belly; it moleſts the Patient by Intervals in the Night, without any conſiderable Pains or Gripings of the Belly; but this Flux is uſually of a ſhorter Continuance than what is excited by a Diſorder of the Stomach. The ſame Conſequences uſually follow from a Flux of black Bile from the Spleen or Meſentery into the Belly; but this Caſe is far more difficult than the former, as proceeding from a worſe Humour. But here we ought to diſtinguiſh between this Humour, and Blood concreted for want of Motion, and by long Stagnation, highly torrefied, blackiſh, and very much reſembling Tar; for, if this vitiated Blood, and not a melancholy Humour, be the Cauſe, the Diſorder is attended or preceded by ſanguineous Vomitings, which ſtain Linen red; but nothing of this happens in a Flux of black Bile.

A Looſeneſs, for one Day, is often healthy, and even for ſeveral Days, provided it ſtops within the ſeventh Day, without returning upon the Patient, and is not attended with a Fever, or a vehement Thirſt: But the Danger proceeds from the Length of the Diſeaſe; for ſometimes it excites Gripings, and feveriſh Diſorders, and exhauſts the Strength. Now the Acceſſion of a Fever, and a Relapſe into the Diſeaſe, after its Ceſſation, with its growing more obſtinate, and likely to continue upon the Patient, muſt be dangerous, whether the Matter of the Flux be bilious, or crude and pituitous. There is as much Danger from an Inflammation of the Liver, Præcordia, or Belly, as from various or mix'd Stools of long Continuance, and attended with Pain.

A Flux cannot be ſuppreſſed, before its due Time, with Safety; for hence ariſe, Diſorders of the Stomach, Fevers, and Inflammations of the Viſcera; and, from a Diverſion of the morbific Matter to the ſuperior Parts, proceed Pains of the Head, Madneſs, or Lethargy, according to the Nature of the Humour. When the Stools are liquid, it is beſt when they are not diſcharg'd violently with Noiſe, but are evacuated in a gentle Manner, by degrees, nor are too frequent; for, by often going to Stool, the Patient is fatigu'd, and kept waking. If the Stools be copious, as well as frequent, there is Danger of Fainting. A Looſeneſs, after a long Duration, ſucceeded by ſpontaneous Vomiting, ceaſes; a Looſeneſs ceaſing in Seaſon is no way injurious; it is known to be ſtopped, when the

Belly

Belly being contracted, its Motion is no longer felt by the Hand laid thereon; and, beſides, the laſt Stool was ſucceeded by no Flatus. It is good to have an Alteration in the Stools, if it be not a Change for the worſe. Bilious Diſcharges ſtop upon the Acceſſion of Deafneſs; and, on the contrary, a Deafneſs has its Solution by Evacuations of Bile. Perſons who ſtammer, are ſubject to long Fluxes of the Belly, which give way to Vomiting. In any Flux, acid Eructations, not beginning with the Diſtemper, but acceding afterwards, are a good Sign. The Belly bound for ſeveral Days indicates either a ſudden Evacuation, or the Approach of a Fever. The Hiccoughs, or Loſs of Appetite, under a Looſeneſs, are bad. Perſons much extenuated by an acute or chronical Diſeaſe, or from Wounds, or ſome other Occaſion, and ſeized with a Flux of black Bile, reſembling black Blood, die the next Day; for Fæces of this kind, ſpontaneouſly diſcharged, are the worſt of Symptoms; and always ſo much the worſe, as their Variety of Colours, and theſe not good ones, is greater; but it is better to have them brought away by Medicines, particularly when they are of various Colours. A Diſcharge of aduſt Bile, in the Beginning of a Diſeaſe, is mortal; and the Danger is no leſs, if, during the Evacuation in a Looſeneſs, the Patient be ſeized with a Nauſea, Vomiting, and Delirium; or, if he be ſo far exhauſted as to have a conſtantly vermicular and formicating Pulſe, which cannot be raiſed even by generous Food. If a Looſeneſs come after a long Diſtemper, without at all mitigating the ſame, and the Patient be inſufficient to ſupport it, the Caſe is certainly dangerous. A Looſeneſs, or Diarrhœa, occaſion'd by a beginning Dropſy, or after an atrabilious Ulcer, or from an Exulceration of the ſuperior Inteſtines, eſpecially the Jejunum; or the Continuance of a Looſeneſs, after a ſudden Diſappearance of Puſtules; or its being grown to an Inveteracy in an old Perſon; or when a liquid Matter, like Water, is at firſt diſcharged, and, afterwards, a pinguious Humour, reſembling an Ointment; all theſe Caſes are to be dreaded equally with the preceding. A Diſcharge of Fæces, appearing as if they were cover'd with Oil or Fat, is familiar with thoſe who labour under peſtilential, burning, colliquative, and hectic Fevers, a Tabes, or Atrophy, and ſometimes attends an Inflammation of the Viſcera. Gripes are, very frequently, obſerved to proceed from a long-continued Diarrhœa, or one in which the Humours are evacuated pure and unmixed; and this Caſe often proves fatal to pregnant Women; or, if they eſcape, it is not without a Miſcarriage. It is uſual for ſuch Patients, after they have been long afflicted with this Diſtemper, to be affected with a Swelling of the Feet. *Lommii Medicin. Obſerv.*

Diarrhœas are frequently the direful Effects of Grief, and other exorbitant Paſſions of the Mind. They generally prove incurable, eſpecially if the Mind continues long under the Influence of that Grief or Paſſion which firſt produc'd them; becauſe, in this Caſe, they are, for the moſt part, ſucceeded by erratic Fevers, and Atrophies, which prove fatal to the Patient.

The Eruption of a Sweat, in Patients labouring under a Diarrhœa, gives a proportionable Check to the Diſeaſe.

In Diſeaſes of the Breaſt, in Women in Child-bed, and in Infants labouring under malignant Fevers, Diarhœas are highly bad and prejudicial.

The Cure of this Diſorder is not to be begun by Aſtringents; ſince by this means we induce Obſtructions of the Viſcera and Inteſtines, which are with Difficulty remov'd, and which are at laſt ſucceeded by obſtinate Dropſies.

As the eating of Fleſh increaſes a Diarrhœa, the Patient ought, for this Reaſon, to abſtain from it as much, and as carefully, as he poſſibly can.

Nothing has a more immediate Tendency to produce a coſtive State of the Belly, than the Uſe of Venery; as was long ago obſerv'd by *Hippocrates*, in the ſeventh Book of his *Epidemics*. *Aetius* alſo, in the eighth Chapter of his third Book, and *Paulus Ægineta*, in the thirteenth Chapter of his firſt Book, aſſert, that Fluxes are remov'd by the ſame Means. This was alſo obſerv'd by *Amatus Luſitanus*, in the forty-ſeventh Obſervation of his ſecond Century. See ACHROMOS.

Thoſe who are too much addicted to Study, or too keenly attach'd to the Affairs of the World, become coſtive; and this Misfortune is endemial, or peculiar to the *Roman* Climate.

The Inhabitants of this Country, by chewing Cinnamon throughout the whole Day, and ſwallowing the Saliva, in a ſhort time cure the Diarrhœas, the Languors of the Stomach, and the Dyſenteries, with which they happen to be afflicted.

Purgative Medicines generally produce a dangerous Hypercatharſis, or exceſſive Purging, which frequently brings on a ſudden Fainting. By the Preſcription of an old and experienc'd Phyſician, in one of our Hoſpitals, I was ſurpris'd to ſee a Diarrhœa both ſpeedily and ſafely ſtopt, by a Scruple, or a Dram, of the Theriaca, diſſolv'd in a ſufficient Quantity of Wine.

In an inveterate Diarrhœa, a Dyſentery, a Teneſmus, or a Relaxation of the Anus, the Fundament is to be expos'd to the Steam of Turpentine, thrown upon live Coals; by which means the Patient will be cur'd.

When in a Diarrhœa the Patients diſcharge, by Stool, a Saffron-colour'd Bile, reſembling the Ruſt of Iron diſſolv'd, or Brick-duſt; 'tis always a fatal Symptom, as I have obſerv'd in many Patients, who all died. *Cheſnau, Lib.* 3. *Cap.* 6.

A Diarrhœa, ſucceeding a violent Fit of Anger, is a lucky Circumſtance; becauſe, if this Effect is not produc'd, the Patient will, in all Probability, be ſeiz'd with a Fever.

I myſelf have often obſerv'd, and alſo been inform'd by others, that in ſome Diſeaſes, eſpecially of the chronical Kind, ſuch as a Phthiſis, and even in any other Diſorder, the Patients are frequently ſeiz'd with an irreſiſtible Stimulus to diſcharge their Fæces, and ſometimes die at the very time this Diſcharge happens. *Baglivi, de Praxi Medica, Lib.* 1.

From CAROLUS PISO.

Moſt People, who are a little too regardleſs of their Health, and who do not take care to defend their Bodies from the Injuries of the Air, at the End of Autumn, when the Leaves begin to fall, find their Bodies more ſoluble, and perceive that their Stools are not only more liquid and aqueous, but alſo bilious and ſlimy, and that, ſometimes, for ſeveral Days together. In the preſent and preceding Year, about the End of *Auguſt*, when Heat and Cold alternately ſucceeded each other, at different Hours of the Day, I obſerved many ſtudious Perſons, who liv'd temperately, and ſpent a great deal of Time on mental Speculations, to labour under Diarrhœas, and to diſcharge an aqueous Sort of Excrements, call'd by *Hippocrates* ὑδατόχλωρα ὑποχωρήσια, with a Mixture of a little Blood in ſome. Tho' a Diarrhœa of the ſame Kind frequently ſeiz'd me about the Middle of Autumn, in all the former Part of my Life; yet, in the Beginning of the Autumn, and during all the other Changes of the Seaſons of the preceding Year, I only diſcharg'd liquid Excrements for one Day, and, ſoon after, nephritic Pains ſucceeded. But in the preſent Year, about the End of *September*, I was firſt ſeiz'd with very obſtinate nephritic Pains, which were ſucceeded by a profuſe Diarrhœa, which continued about a Fortnight; but, being commonly ſerous, I bore with it the more eaſily. In Bodies, which have a Redundance of Serum, in conſequence of a Life ſpent in Eaſe, the Cold of the Autumn, whether in the Morning or the Evening, acting upon the Pores which are opened, either by the Heat of the Sun in the Day-time, or by the Warmneſs of the Bed; and, for that Reaſon, penetrating more deeply into them, drives, with great Force, the Serum both inwards and downwards from the Veſſels on the Surface of the Body; for, becauſe the ſerous Humours cannot thoroughly incorporate with the Blood, tho' they are mix'd with it throughout the whole Body, they are, in conſequence thereof, more eaſily ſeparated; and, after a Separation, becauſe they are fluid and heavy, being reverberated by the Cold, they return into the larger Ramifications of the Veſſels, and are convey'd thence to the Inteſtines.

Stools of this Sort ought not to be eſteem'd preternatural, whether we conſider, either the Quality and Condition of the Matter, its Courſe, or moving Cauſe: For, after the Serum has perform'd its proper Functions, it can be of no farther Uſe; 'tis nothing but an Excrement, and, therefore, ought to be evacuated any way.

But, as the ſerous Humours cannot find a free Paſſage thro' the Pores of the Body, when they are clos'd up by the Inclemency of the Air, 'tis but natural, that the lower Belly, and eſpecially the large Inteſtines, ſhould ſerve as a Sink to carry them off; and, therefore, ſuch Diarrhœas are not to be conſider'd as preternatural; ſince there is no way left to get rid of the Redundance of Serum, but by being evacuated as other Excrements are; and 'tis well known, that a Redundancy of Serum creates no little Uneaſineſs in our Bodies.

Laſtly, if we conſider the Occaſion; which is only a cold State of the Air, a mere external Cauſe; upon this Account alſo, the Diarrhœas here deſcrib'd, ought not to be eſteem'd preternatural: And, ſince this is the Caſe, the Conſequences are not much to be apprehended.

But, on the other hand, ſince the Serum, by returning back through the Veſſels, cannot fail to interfere with the Circulation of the Blood, in ſome degree, and even diſturb the Diſtribution of the Chyle, and its complete Elaboration in the Inteſtines; and, therefore, muſt be inconvenient; it is proper, that the Patient ſhould, with all convenient Speed, be freed from it.

In the firſt place, Patients ought to preſerve themſelves from the Injury of the Air, and ſleep in a warm Place, whereby the Force of the moving Cauſe may be moderated; and, ſecondly, they ſhould carry off the Matter of the Flux, both by a dry Regimen, and a Derivation of the Serum thro' the Kidneys; and, laſtly, they ought to corroborate the Parts which receive the Serum: And theſe Deſigns will be anſwer'd,

partly by making uſe of ſome Wormwood-wine, diluted with a Decoction of Succory, or Chalybeate Waters, or old Conſerve of Roſes; and partly, by anointing the Abdomen with Oils of Chamomile, Roſes, Maſtich, or Wormwood.

'Tis very remarkable, what happened to my Brother, in the Month of *October* this preſent Year; for, tho' he had been rack'd with the Gout all the preceding Month of *September*, he fell into a very great and unuſual Difficulty of Breathing, attended with a violent Stertor; and, after four Days, was ſeiz'd with a violent Flux, by which he ſeem'd to receive ſome Relief; but in this we were miſtaken, for he died, the Week after, of a Suffocation.

'Tis to be obſerved, in the Beginning of continual Fevers, the principal Cauſe of which reſides in the Liver, eſpecially if there is any inflammatory Diſpoſition, the Symptom of which is a Tenſion and Hardneſs of the Viſcera, that Perſons generally diſcharge aqueous and bilious Excrements, not only for a Week or two, but ſometimes even for forty Days together.

And, to paſs by Inſtances of People, who have labour'd under a Flux for a Week or two, I remember, that the Cardinal *de Giury*, whoſe Liver was greatly inflam'd, and affected with a Tumor, which by the Continuance of the Diſtemper became ſcirrhous, diſcharged liquid Stools, which were evidently bilious, in great Quantities, for the Space of forty Days.

And, the preceding Year, Baron *Ferdinand ab Honauſem*, being ſeiz'd with an inflammatory Diſorder of the Liver, and a continual Fever, which recur'd three times in the Space of a Year, diſcharged aqueous and bilious Excrements, in large Quantities, thro' the whole Courſe of the Diſeaſe. When his Body was diſſected, among other Signs of a Corruption of the Viſcera, we obſerved in his Liver an extraordinary Tumor, the Surface of which, being about two Fingers Breadth, was altogether wrinkled and flaccid, and appear'd ſoft to the Touch; but the inner Part of it was hard and dry, like a Piece of Wood.

We need not wonder, that an Inflammation of the Liver ſhould produce ſuch large Quantities of Bile; for I remember that *Franciſcus Poirotius*, an eminent Phyſician, being, in the Space of ten Months, quite worn out by an eryſipelatous Inflammation of the Liver; a little before he died, vomited up, not without great Torture, and an intolerable Heart-burn, three or four Pound-weight of green unmixed Bile. In his dead Body the Liver was found to be ſcirrhous, and of a blackiſh-green Colour.

In continual Fevers, and particularly ſuch as are conſequent to an inflammatory Diſpoſition of the arterial Blood, a Symptom of which is, a great Blackneſs and Dryneſs of the Tongue, eſpecially if the Body has any remarkable Denſity, either on account of Age, or the Conſtitution of the Seaſon; in all ſuch Fevers, we know by Experience, that Diſcharges of liquid Excrements are uſual, tho' not ſo bilious, as in ſome others. I remember the Caſe of a Patient, very much troubled with arthritic Pains, who, through the whole Courſe of a Fever, diſcharg'd by Stool a large Quantity of ſuch Serum, tho' the Fever recur'd ſeveral times in the Space of a Year, and continued forty Days. But, tho' ſuch Stools are truly ſymptomatical, as they come on with the Beginning of the Diſeaſe, and at the time of its Crudity, yet they are very ſerviceable, becauſe they leſſen the morbific Matter, which, at other times, is to be carried off either by Urine or Sweat; and therefore it ought not to be ſtopt, ſince they are not uſually exceſſive, but ſuch as Nature may eaſily bear; and I have found by Experience, that the Violence of Fevers was always conſiderably diminiſh'd by them; excepting only ſuch Fevers as are attended with an Inflammation of the Viſcera, which, being generally mortal in themſelves, render ſuch Fluxes of no Effect; and, in this Caſe, there is no room left for any other Remedies, but ſuch as we know by Experience to be not only aſtringent and corroborative, but, at the ſame time, to purge off the Serum, together with the Bile: Of this Sort, Rhubarb is the principal; therefore an Infuſion of it, with a Decoction of Myrobalans, and other ſuch Medicines, or a compound Syrup of Succory with Rhubarb, will be of conſiderable Uſe: Theſe Medicines may be repeated every fourth Day to Advantage; and, in the mean time, Alteratives, ſuch as Syrups of Poppies, the ſimple Syrup of Succory, or Conſerve of Roſes and Succory, may be alſo exhibited. But young Phyſicians ought not, after the Example of vulgar Practitioners, who mind only the Flux, Catarrh, or other Symptoms of little moment, to content themſelves with the above Medicines, but ſhould have recourſe to other Remedies, which more immediately reſolve a Fever or Inflammation, ſuch as Veneſection, and other ſuch important Remedies; which ſome People generally neglect, to the great Danger of their Patients.

Beſides the before-mentioned ſerous Stools, I have frequently obſerved, on the Decline either of intermitting or continual Fevers, Stools which were liquid, but, at the ſame time, of an aſh Colour, and as like a crude Lixivium, as Milk is to Milk.

When I attended the Medicinal Lectures at *Paris*, I obſerved, that upon the Decline of a Tertian Fever, I diſcharg'd ſuch Stools; and, ſince that time, I have obſerved the like in many others. Concerning theſe, my Opinion is, that they ought to be look'd upon as critical and ſalutary; ſince by them the febrile Heat is perfectly remov'd, ſo that there is no further Danger of a Relapſe; and ſuch a Solution of Fevers as is not attended with Excretions, is not to be depended on; and I know by Experience, that ſuch Evacuations will follow a conſiderable time after the Concoction of the morbific Humours, and not before. Mineral Springs have promoted this ſalutary Evacuation in many, who have got rid of long ſlow Fevers, conſequent upon an Infarction of the Viſcera, by drinking the Waters of *Berkenfield* near *Deux-ponts*, which brought on a cinericeous Flux. Laſtly, the great *Hippocrates* obſerves, that a ſpontaneous aqueous Diarrhœa is the moſt ſalutary Criſis of aqueous Tumors, whether of the whole Body, which is call'd *Leucophlegmatia*, (for this, ſays he, is remov'd by a Diarrhœa) or of the Abdomen in particular: An aqueous Flux, ſays he, without Crudity, cures a recent Dropſy; but if a Diarrhœa does not happen at the Beginning of the Dropſy, and before the retentive Faculties are much weakened, it proves mortal to the Patient: Beſides, Diarrhœas in this Caſe ought to be profuſe, and equal to the Diſeaſe; for no ſcanty Evacuation can poſſibly prove critical. Diſcharges of this kind muſt neceſſarily produce the Relief of the Patient; becauſe, by their means, only ſuch Humours as are peccant, are evacuated. I obſerved ſuch aqueous Stools, ſpontaneouſly recurring at different times, in a Jeſuit; by means of which, an inveterate Aſcites, of ſeveral Months Continuance, was kept down, and which, at laſt, by the Patient's obſerving an exact Regimen, decreas'd by degrees, and was entirely remov'd. *C. Piſo.*

Ettmuller informs us, that a Diarrhœa, the Matter of which is pinguious and oily, if not produc'd by the Aliments, ariſes from a Colliquation and Melting down of the Fat of the Body. See DEJECTIO.

In this Diſorder, ariſing from whatever Cauſe, the Stomach is to be ſtrengthen'd with burnt Wine, Aromatics, the Vinum Abſynthites, Preparations of Quinces, and corroborative Fomentations externally: Sudorifics, alſo, mix'd with ſuch Medicines as abſorb Acids, are to be exhibited. The Effervescence of the Humours is, by proper Medicines, to be check'd and abated; ſince, when this Effect is produc'd, the Diarrhœa of courſe ceaſes.

In all Diarrhœas and Dyſenteries, whether of the benign or malignant Kind, a Decoction of the Roots of Tormentil is a Medicine, according to this Author, of all others the moſt efficacious. Quinces, alſo, and Medlars, together with the Marmalades prepar'd of them, are by him highly recommended in this Diſorder. Jellies of Hartſhorn diſſolv'd in the Patient's ordinary Drink, and Gum Arabic diſſolv'd in the white Decoction, are by him accounted Specifics in epidemical Diarrhœas. When this Diſorder is attended with violent Gripes, and a Teneſmus, 'tis expedient to inject a Glyſter prepar'd of warm Milk, and the *Theriaca Andromachi*. In habitual Diarrhœas, protracted for a long time, Chalybeates, grateful Aromatics, and warm Baths, are, of all other Medicines, the moſt efficacious. Stubborn and long-continued Diarrhœas, may, he ſays, be cur'd in the ſame manner with a Dyſentery, by Doſes of Ipecacuanha, often repeated at proper Intervals, not neglecting the Uſe of other proper Remedies at the ſame time.

Opium, according to Dr. *Cockburn*, is of little or no Uſe in the Cure of ſerous Diarrhœas; ſince, generally ſpeaking, it only eaſes the Pain, and gives Reſt; by which means, the Stools diſcharg'd are fewer in Number, but larger, and equally thin and liquid as they were before, and, at the ſame time, more fetid.

Walker informs us, that during the Siege of *Londonderry* the Soldiers were ſo far reduc'd, that they were fond of eating a Mixture of Starch and Suet; by the former of which, they were furniſh'd with an excellent Cure for the Diarrhœa; and by the latter preſerv'd from Starving, and defended againſt the Tyranny of Hunger. *Wainwright*, in his mechanical Account of the Non-naturals, informs us, that a woolen Shirt contributes very much to the Cure of an habitual Diarrhœa: And *Fuller*, in his *Medicina Gymnaſtica*, for producing the ſame Effect, recommends Riding on Horſe-back, or in a Chaiſe; probably from *Celſus*.

There are ſeveral other Medicines, which are in a Diarrhœa ſometimes preſcrib'd with good Succeſs; ſuch as the *Laudanum liquidum cydoniatum*, the *Cataplaſma ſtomachicum*, the *Fotus aſtringens*, *Epithema ſtomachicum*, *Saccul. ſtomach.* the *Decoctum Catechu compoſitum*, the *Decoctum Fracaſtorii*, the *Decoctum ſiſtens*, the *Electuar. Corinth.* the *Enema de Malicorio*, the *Expreſſio Roſacea*, the *Miſtura Coral.* and the *Elect. ad Diarrhœam.*

The

The *Caneſſi* Bark is eſteem'd a Sort of Specific, adminiſter'd in the Manner directed under the Article CONESSI.

Clutton recommends the following Glyſter, in Diarrhœas either with or without a Fever, as preferable to Reſtringents of any Kind:

Take of the Confection of Starch, four Ounces: Let it be injected warm, once or twice a Day.

If the Flux is bloody, or the Bowels exceedingly relax'd, let the Confection be thicker, and an Ounce of *French* Brandy be added to it.

Calcin'd Cork is much recommended in a Diarrhœa, and ſeems to be a very likely Medicine. 'Tis known, that Cork will poiſon a Dog; and, upon Diſſections of Dogs thus poiſon'd, it appears that the Cork turns to a viſcid whitiſh Mucus, which contracts the Inteſtines, and, as it were, glues them together.

Wheat Flour ty'd up cloſe in a Linen Bag, and boil'd in Water for ſix Hours, is excellent in a Diarrhœa, eaten with Milk.

Solid Millet, (κέγχρος σεσεὸς) boil'd in Oil, ſtops crude and liquid Stools. *Hippocrates.*

Kermes Mineral, exhibited in ſmall Doſes, gradually changes the ſerous and crude Fæces, and renders them of a more bilious and thick Conſiſtence, by attenuating the viſcid Bile, and ſo diſpoſing it to paſs off by Stool. *Geoffroy.*

A colliquative Diarrhœa, that is chronical, is to be cured by Riding: One proceeding from Acrimony, is better cur'd by Medicines. *Fuller's Medicina Gymnaſtica.*

Morton aſſerts, that nothing more effectually promotes a colliquative Diarrhœa in Fevers, when once begun, than Beer, Poſſet-drink, or any thing elſe which has Beer in it.

Hippocrates, Aph. 12. *Sect.* 5. pronounces, that in a Conſumption, when the Hairs of the Head fall off, a ſucceeding Diarrhœa carries off the Patient. And *Aretæus* affirms more generally, that a Diarrhœa, happening in a Phthiſis, is fatal.

Aretæus alſo obſerves, *de Cauſis & Signis Acut. L.* 2. *C.* 7. that a plentiful bilious Diarrhœa ſaves the Lives of thoſe, to whom it happens in an Inflammation of the Liver; but that, three Weeks after, the Liver has a Tendency to Suppuration.

The ſame Author remarks, *de Cauſis & Signis Acut. L.* 2. *C.* 1. that a bilious and frothy Diarrhœa reſolves a Peripneumony, provided it be conſiderable.

Again, *de Cauſis & Signis Acut. L.* 1. *C.* 10. he repreſents a bilious Diarrhœa on the ſeventh Day of a Pleuriſy, as a ſalutary Sign.

In *L.* 2. *C.* 12. *de Cauſis & Signis Acut.* he informs us, that a *Satyriaſis* is frequently reſolv'd by a pituitous and bilious Diarrhœa.

Chalybeate Waters, if taken in the Quantity of three or four Quarts, for one, two, or three Days, is of itſelf a moſt excellent Medicine in Diarrhœas, and a very good Preparative before Opiates. *Jones's Myſteries of Opium reveal'd.*

Sydenham, ſpeaking of the epidemical Fever, which reign'd in 1667. and 1668. has the following Remark: Neither, ſays he, did the Looſeneſs, which often accompanied this Fever, hinder my proceeding cloſely in the above-mentioned Method; having experienc'd, that nothing proved ſo effectual in ſtopping this Diſcharge, as Bleeding, and cooling the Blood by Barley-water, Whey, and other things above enumerated, inaſmuch as this Looſeneſs proceeded from inflammatory Vapours, ſeparated from the Blood thro' the meſenteric Arteries into the Inteſtines, and vellicating theſe Parts.

A little after, he ſays, that before this Fever went quite off, and particularly in the Year 1668. a Looſeneſs became epidemical, without any manifeſt Sign of a Fever; for the Conſtitution at this time inclin'd to the Dyſentery, which prevail'd in the following Year. Nevertheleſs, I judg'd this Looſeneſs to be the ſame Fever with the then reigning variolous Fever; and that it only differed in Form, and appeared under another Symptom: For, having obſerv'd, that a Chilneſs and Shivering likewiſe ordinarily preceded this Looſeneſs; and further, that it generally aroſe from the ſame evident Cauſe with the then reigning Fever; it ſeem'd probable to me, that this Fever, with the Looſeneſs, proceeded from an inflammatory Diſpoſition of the Blood, determin'd towards the Inteſtines, and irritating them to this Diſcharge; whilſt the Blood, in the mean time, by this Revulſion, was freed from the ill Effects its Diſpoſition would otherwiſe have occaſion'd, without any viſible external Sign of a Fever. To this we may add, that the Parts below the Pit of the Stomach were ſo tender, as not to abide the Touch; which Symptom happen'd in the Small-pox, and Fever of this Conſtitution; and the ſame Pain and Tenderneſs of the Fleſh often reach'd to the Epigaſtrium; and ſometimes there was an Inflammation, which ended in an Abſceſs, and deſtroy'd the Patient; all which apparently ſhew'd this Looſeneſs to be of the very ſame Nature and Eſſence with the then reigning Fever: And this Opinion of mine was further confirm'd, from the good Succeſs, which Bleeding, and the Uſe of a cooling Regimen, always had in ſtopping this Looſeneſs; for it readily yielded to this Method, which is the ſame we uſe in the Cure of the variolous Fever: But, when it was treated in a contrary Manner, either by giving Rhubarb, and other lenient Purgatives, to carry off the acrimonious Humours, ſuppos'd to irritate the Inteſtines to theſe Diſcharges, or by adminiſtring Aſtringents; this Diſeaſe, tho' naturally gentle, frequently prov'd mortal, as the Bills of Mortality of the current Year ſufficiently teſtified. *Sydenham.*

All Sorts of Fluxes are very endemic in the *Weſt-Indies*, but more eſpecially in the rainy Seaſons; and may be imputed chiefly to the Negligence of thoſe, who too unwarily expoſe themſelves to the Injuries of the wet Weather; by which means, Perſpiration being interrupted, the thin Part of the Blood, which ſhould have been exhal'd through the Pores of the Skin, is thrown upon the Bowels, and thence diſcharg'd in looſe Stools. This appears plainly, from the great Number of Negroes, and the poorer Sort of white People, who, in theſe Seaſons, are much more afflicted with this Diſtemper, than ſuch, whoſe Condition of Life does not ſubject them to the like Inconveniencies. Beſides catching Cold, there are other antecedent Cauſes of a Diarrhœa; the principal of which are, an immoderate Uſe of crude fugacious Fruits, unwholſome Food, and Meats of difficult Digeſtion; all which, by ſtimulating the Inteſtines, will likewiſe occaſion a Diarrhœa.

When theſe laſt-mentioned Cauſes concur with a damp, rainy Seaſon, the Bowels will not only be loaded with the thin Juices, which ought to paſs off by Perſpiration, but they will alſo, by reaſon of the Stimulus lodged in them, be continually ſolicited to expel their Contents more frequently, and of a thinner Conſiſtence, than uſual. A diminiſhed Perſpiration will likewiſe contribute towards enlarging the Orifices of the hepatic and pancreatic Ducts; and, on this account, the Secretion of their reſpective Juices will be more plentifully made into the Inteſtines; and hence we have an additional Cauſe of a Looſeneſs. Theſe Circumſtances, I think, are ſufficient to account for every Species of a Diarrhœa; and, when we are once fully aſcertain'd of the Cauſe, we need not be much at a Loſs what Method of Cure ought to be purſued in each Species.

Fluxes have, very often, been neglected in the Beginning, from an Opinion, that they are ſalubrious, and of Service to the Conſtitution, by affording an Outlet to ſome offending Matter, which, if retained, would have proved prejudicial. This Remark may, in ſome Caſes, be very true; but it is not to be confided in, without great Caution, in the *Weſt Indies*, where a ſimple Flux frequently riſes up into an obſtinate Dyſentery, in three or four Days; and, when the Diarrhœa is ſuffered to continue any time, it too commonly terminates in a Leucophlegmatia, or Dropſy, to which Diſeaſe People in theſe Parts of the World are exceedingly diſpoſed.

But as a Diarrhœa is ſometimes truly critical, and contributes a great deal towards the Cure of other Diſtempers, ſuch a Diarrhœa ought, by no means, to be ſuppreſs'd, ſo long as the Strength of the Patient can ſupport him under it. The moſt general Rule I know, in this Caſe, is to obſerve diligently, whether the original Diſeaſe receives any conſiderable Abatement from the ſupervening Looſeneſs; which if it does, we have then Reaſon to believe, that the original Diſeaſe was occaſioned by the Retention of the Matter which is evacuated by the Diarrhœa, and therefore the Diarrhœa ought not to be checked.

Dr. *Cockburn* has juſtly obſerved, that a Fever may be a Symptom of a Diarrhœa, as well as a Diarrhœa may be a Symptom of a Fever.

In a Diarrhœa ariſing from ſharp fermenting Juices in the Primæ Viæ, which accelerate the periſtaltic Motion of the Bowels, the firſt Indication is to make a Diſcharge of the ſtimulating Matter; which may be effected by a Doſe or two of Rhubarb, if timely adminiſter'd, in the following manner:

Take of the beſt Rhubarb, half a Dram; and of the Powder of Cinnamon, twelve Grains: Mix for a Doſe, to be taken in the Morning; uſing, at the ſame time, a proper Regimen. Or,

Take of the Tincture of Rhubarb, prepar'd with *Madera* Wine, four Spoonfuls; and of the ſolutive Syrup of Roſes, one Ounce: Mix for a Doſe. Upon going to Bed, the Patient may take fifteen Drops of liquid Laudanum, in two or three Spoonfuls of Barley Cinnamon-water; and the Rhubarb is to be repeated till the Looſeneſs abates, which frequently happens after the ſecond Doſe.

But, as the Stomach itſelf is often in Fault, by tranſmitting an ill-concocted Saburra to the Inteſtines; the De-

fects of this Organ are to be conſidered and amended. For this Purpoſe, a Doſe of the Salt of Vitriol, or of Ipecacuanha-root, may be adminiſter'd; and when the Stomach has been cleanſed by this Operation, its Tone may be ſtrengthened, and its Fibres fortified, by ſome of the following Remedies:

Take of *Virginian* Snake-root, two Drams; of Gentian, half an Ounce; of Orange-peel, one Ounce; of Winter's Bark, and Galangals, each one Dram: Make into a Decoction with three Pints of *Madera* Wine, of which take five or ſix Spoonfuls twice or thrice a Day. Or,

Take of the Roots of Gentian and Sweet Flag, each two Drams; of the Tops of the leſſer Centaury, two Pugils; of Chamomile-flowers, one Pugil: Infuſe in two Pints of warm Spring-water; and with the Liquor, when ſtrained off, mix four Ounces of compound Gentian-water, and two Ounces of Chalybeate Wine. Of this Preparation, let the Patient drink four Spoonfuls, thrice a Day.

If the Diarrhœa continues to be violent, it will be proper to mix Aſtringents with the Rhubarb in a Bolus.

Take of the Powder of Rhubarb, half a Dram; and of Diaſcordium, a ſufficient Quantity for making a Bolus; to which add two Drops of the chymical Oil of Cinnamon.

When Cold is the productive Cauſe of a Diarrhœa, the Seat of this Diſeaſe is more remote than in the former Caſe; and the Stools are generally very thin, ſerous, and watery. This Matter is convey'd into the Bowels, by reaſon of the inſenſible Perſpiration being ſuppreſſed, ſome other of the Secretions interrupted, or the Blood having contracted an undue Craſis. If this be the Circumſtance of the Patient, we muſt endeavour, in the firſt Place, to unload the Stomach and Bowels, by evacuating the Flux of Humours forced upon them; which is to be performed by a Vomit with Ipecacuanha, and afterwards a Rhubarb-purge. But as this ſort of Diarrhœa is not uncommonly attended with a Fever, or at leaſt with feveriſh Symptoms, it is often found neceſſary to let Bleeding in the Arm precede the other two Operations, eſpecially if the Perſon be ſanguine and plethoric.

This being premiſed, we muſt have recourſe to Diaphoretics, Aſtringents, and Opiates.

Take of the compound Decoction of *Japan* Earth, one Pint; and of the *Species pro Confectione Hyacinthi*, half an Ounce: Mix theſe together, and give the Patient three Spoonfuls after every Stool. Or,

Take of the *Decoctum Fracaſtorii*, one Pint; Dragon's-blood, half an Ounce; and Gum Arabic, two Drams: Mix all together, and let the Patient drink three or four Spoonfuls, as his Condition requires. Or,

Take of the *Confectio Fracaſtorii*, two Scruples; of the Powder of Gum Arabic, one Scruple; and of the Syrup of Lemon-peel, a ſufficient Quantity for making a Bolus, to be taken every four Hours, drinking after it a few Spoonfuls of the following Julap:

Take of Barley Cinnamon-water, ſix Ounces; of Mint-water, two Ounces; and of the Syrup of Lemon-peel, two Ounces: Mix all together for a Julap.

The Patient may uſe, for his common Drink, the white Decoction, with a Diſſolution of Gum Arabic, Rice boil'd in Water with a little Cinnamon, or a Decoction of the Pomegranate-bark; and any of theſe may be made palatable with the Syrup of Citron-peel. Hartſhorn, and Calf's-foot-jelly, are of Service.

At Bed-time one of the following Boluſes may be adminiſtered:

Take of *Venice* Treacle, half a Dram; of *Japan* Earth, one Scruple; of *London* Laudanum, one Grain, or one Grain and a half; and of Diacodium, a ſufficient Quantity for forming into a Bolus. Or,

Take of Diaſcordium without Honey, one Dram; of Snake-root and Saffron, each ſix Grains; of *London* Laudanum, one Grain; and Syrup of Poppies a ſufficient Quantity for making a Bolus.

Theſe Medicines are given in order to promote Perſpiration, that the detained Matter may gain a Vent through the proper Emunctories, and not be forced inwards upon the Bowels for want of a natural and appropriated Evacuation. For this Reaſon, a Decoction of Saſſafras, Guaiacum, Juniper-berries, Chamomile-flowers, and ſuch-like, gratefully contrived, may contribute more towards the Cure of this Diarrhœa, if taken as common Drink, than any of the Preparations before-mention'd for that Purpoſe.

Sometimes the Looſeneſs is ſo obſtinate and untractable, as not to yield to theſe Endeavours; and the Patient, after ſome Continuance in this Courſe, begins to loath, and abſolutely renounce, his Medicines. We muſt therefore apply to Glyſters, as our laſt and only remaining Expedient. The following Forms may ſerve as Specimens of their Compoſition:

Take of the common Decoction for Glyſters, eight Ounces; of Juniper-berries, two Ounces; and of Turpentine diſſolved in the Yolks of Eggs, half an Ounce: Mix for a Glyſter. Or,

Take of Diaſcordium, half an Ounce; of *Venice* Treacle, two Drams: Boil in a ſufficient Quantity of Cows-milk. Let eight Ounces of this Liquor, when ſtrain'd, be injected as a Glyſter, to be repeated as often as the Condition of the Patient requires it.

It is to be obſerv'd, that theſe Glyſters muſt be injected in ſmall Quantities, and are to be retain'd as long as is poſſible by the Patient. I would not be underſtood to mean, that Glyſters are only to be uſed when the Sick rejects other Remedies; for they are of Service in every Stage of this Diſeaſe, but more immediately neceſſary in this.

There are ſeveral external Applications to the Region of the Belly, which are greatly applauded by Authors of good Credit; and, as I myſelf have found conſiderable Aſſiſtance from them, I ſhall ſubjoin three different Forms:

Take of camphorated Spirit of Wine, four Ounces; of *Venice* Treacle, two Drams; of the Oil of Cloves, twenty Drops; and of the Oil of Aniſe and Wormwood, each ſix Drops: Mix up for an Epithem.

Take of *Venice* Treacle, half an Ounce; of the Powders of Cinnamon and Cloves, each one Dram; of the Oils of Cinnamon and Mint, each eight Drops; and of the Vinegar of Roſes, a ſufficient Quantity for making a Cataplaſm.

Take of Mithridate, one Ounce; of Nutmegs and Cinnamon, each one Dram; and of the Powder of Maſtich, a ſufficient Quantity for making a Plaiſter to be ſpread upon Leather, with a little adheſive Plaiſter about the Edges, for its more commodious Retention on the Part to which it is applied.

Thoſe who are ſubject to an habitual Looſeneſs, may receive great Benefit by wearing Flannel, and by keeping their Bodies warm. *Towne's Treatiſe on the Diſeaſes of the Weſt Indies.*

A Consumption *from a* Diarrhoea.

Many times, in a ſcorbutical Diſpoſition of the Body, the Blood grows ſharp to that Degree, that, being diſturbed upon every little Occaſion, it cannot aſſimilate the new Chyle to itſelf; whereby it comes to paſs, that it is thrown out by the Glands of the Inteſtines in a continual Flux like a Stream; which Chyle, if it is benign, and more mild, forms a Diſtemper in the manner of a Looſeneſs; but, if it be ſharp, and of a malignant Nature, produces one in the Form of a bloody Flux. By this continual Efflux of the Chyle, the Blood is much impoveriſh'd, and grows hot; ſo that, although the bloody Flux or Looſeneſs be overcome by the Uſe of Opiates and binding Medicines, yet a hectical Heat ſtill remains in the Blood, together with an Atrophy, and Dryneſs of the Skin, ariſing from the impoveriſhed and diſpirited State of the Blood; as it happened to my own Son, and many others; which very often terminates in a Conſumption of the Lungs. But the Way to prevent it is (after the Looſeneſs and bloody Flux are cured by proper Medicines) by a long Uſe of a Milk-diet, the *Peruvian* Bark, the mineral Waters, which are chalybeate, and of the white Decoction for ordinary Drink. This Conſumption often happens to Children who breed their Teeth; but, by the long Uſe of the white Drink, of Pearl-julaps, and binding Medicines, mix'd with ſome little Opiate, it is eaſily cur'd.

A Case.

Mr. *Tindal*'s only Daughter, a very fine young Woman, but ſcorbutical, and ſomething melancholic, about eighteen Years of Age, upon the Suppreſſion of her *Menſes*, fell into a colliquative Looſeneſs, with Stools which came away like Water; which, by degrees, brought her into an univerſal Atrophy, even to the Degree of a Maraſmus; but without any ſenſible Fever, or Cough, or Shortneſs of Breath, or any other

Sign of any Diſtemper of the Lungs: So that ſhe was not at all taken for a conſumptive Perſon by the Phyſician, under whoſe Care ſhe was, before I was concerned. Being called to go to ſee her, as one that had only a Looſeneſs, when ſhe was now, by reaſon of her Weakneſs, almoſt always confin'd to her Bed, I found her worn away with a Conſumption even to a Maraſmus; and that I plainly told her Friends, as my Opinion, altho' her Lungs as yet ſeemed ſound; neither was there any Sign of a hectic Fever. But when this Looſeneſs, which the former Phyſician, for want either of Skill or Care, had ſuffered to run on ſo long, came once to be ſtopt by a due Government, and the Uſe of efficacious Medicines, preſently a hectic Flame began to be kindled in the Habit of her Body; and her Lungs alſo began to be affected with a Cough, that was almoſt perpetual, and a Shortneſs of Breath; which Symptoms being at length followed by colliquative Sweats, a Swelling of the Legs, and other Signs of a fatal Conſumption of the Lungs, ſoon brought her, amidſt the Lamentations of her Friends, to the laſt Period of her Life. Two things were here particularly worthy of a Remark: Firſt, that the more her Looſeneſs was ſtopt, ſo much the more always were her Lungs preſently affected. And, ſecondly, that altho' this Conſumption had prevailed upon her almoſt for the Space of a Year, even to a Maraſmus, before the Lungs ſeem'd to be in the leaſt touch'd, yet in the Body, when it came to be open'd after Death, the Lungs appeared full of little Tubercles, and that not only ſuch as were crude and hard, but alſo ſome which were ripen'd into Apoſtems. *Morton's Phthiſiologia, Chap.* 7.

For an Account of an arthritic Diarrhœa, ſee ARTHRITIS.

That what has been ſaid above, relative to Diarrhœas, may be the better underſtood, I muſt make the following Remarks:

All ſorts of Subſtances whatever, poſſeſſed of any conſiderable Degree of Acrimony, will ſtimulate the Inteſtines, accelerate their periſtaltic Motion, invite a larger Quantity of Fluids to their Glands, and cauſe a Diſcharge of their Contents by Stool. Thus all thoſe Medicines which are called Cathartics act, and produce an artificial Diarrhœa.

If alcaleſcent Aliments are taken into the Stomach in Quantities ſuperior to the Powers of Digeſtion, they putrefy, and, becoming acrimonious, by their Stimulus, provoke a Diarrhœa. Thus thoſe who eat ſtale Fiſh, fall frequently into violent Diarrhœas; and half a Grain of the putrefied Yolk of an Egg will produce a great Number of Stools.

If aceſcent Aliments are taken in too large Quantities, they putrefy, and contract an acid Acrimony. Thus Milk, if it turns acid on the Stomach, purges; as do Fruits, and other Vegetables, under the ſame Circumſtances. If the Stomach, Inteſtines, Liver, Pancreas, or any Part, which has an immediate Communication with the inteſtinal Tube, are affected with an Abſceſs, or Ulcer of any kind whatever, the acrimonious Matter diſcharged ſtimulates the Inteſtines, and produces a Diarrhœa.

In caſe of an Abſceſs in any Part at a Diſtance from the Inteſtinal Tube, ſuppoſe in the Lungs, and ſo ſituated, that it cannot be diſcharged externally; the patent Orifices of the Veins may abſorb a Part, or even all the Pus of the Abſceſs, and convey it to the Arteries. Now, as the Arteries of the Inteſtines are very conſiderable, it is eaſily conceivable, that they may depoſit this acrimonious Matter upon the Inteſtines, where it may ſtimulate them to a Diarrhœa, and make a Way for its own Diſcharge out of the Body. Or, if this ſhould not happen, the Matter may be conveyed by the Arteries to the Veins, which, by their Union, form the *Vena Portæ*; which does, in ſome meaſure, the Duty of an Artery with reſpect to the Liver: And here the Matter may be ſeparated from the Maſs of Blood, diſcharged by the biliary Ducts into the Inteſtines, and thus paſs off in copious Stools.

If any habitual Evacuation ſhould be obſtructed, Perſpiration, for inſtance, the Matter retained will acquire a Tendency to Acrimony, and be more likely to be depoſited upon the Inteſtines, than any-where elſe, as it may be ſecreted both from the inteſtinal Arteries, and the Vena Portæ.

When the obſtructing Matter, in a chronical Diſtemper, is reſolv'd, mov'd, and mix'd with the Maſs of Blood, this may, and frequently is, convey'd to the Inteſtines, and diſcharg'd by a Diarrhœa. This happens to ſurfeited Horſes, when turn'd to Graſs in the Spring, eſpecially in ſalt Marſhes; for, when the ſaponaceous Juice of Graſs has reſolv'd their Obſtructions, and the Matter thereof is mix'd with the Blood, a ſalutary Diarrhœa carries it off, and the Animal recovers his Health, and grows plump and ſleek.

Thus, alſo, People who eat large Quantities of the ſaponaceous Spring-herbs, or of ripe Fruits, fall into a plentiful Diarrhœa, attended with ſimilar good Effects.

Hence we may perceive, how careful Phyſicians ſhould be to inveſtigate the Cauſes of Diarrhœas, in order to preſcribe judiciouſly, and to avoid doing a great deal of Prejudice: For the Matter cauſing a Diarrhœa muſt be carried off, either ſpontaneouſly, or by Art, before there can be any good Reaſon for adminiſtering Aſtringents; which ſeem only to be indicated, when the Diſcharge is ſo exorbitant, as to endanger Life; or when the Emiſſaries of the Glands, which open into the Inteſtines, are too much relax'd, after the ſtimulating Cauſe is perfectly eliminated.

Deſtroying the peculiar Acrimony cauſing a Diarrhœa; when that can be done, will bid fair to cure, or, at leaſt, to alleviate, the Diſorder.

DIARTHROSIS. A Species of Articulation. See ARTICULATIO.

DIASAPONIUM. The Name of an Unguent in *Nicolaus Myrepſus, Sect.* 3. *C.* 88. in which Soap is the principal Ingredient.

DIASATYRION. The Name of an officinal Electuary, ſo call'd from Satyrion, the principal Ingredient. Its Uſe is to excite Venereal Inclinations. It is directed in the former Diſpenſatories of the College, but omitted in the laſt. It is deſcrib'd in *Nicolaus Myrepſus*.

DIASCILLION. The Vinegar and Oxymel of Squills are call'd by this Name in *Marcellus Empiricus*.

DIASCINCI *Antidotus*. A Name for Mithridate.

DIASCORDIUM, ſo call'd from Scordium, one of its Ingredients. A celebrated Compoſition, otherwiſe call'd *Confectio Fracaſtorii*, is thus directed by the College:

> Take of Cinnamon; and Caſſia-wood, of each half an Ounce; of true Scordium; one Ounce; of *Cretan* Dittany, Tormentil, Biſtort, Galbanum, and Gum *Arabic*, of each half an Ounce; of Storax, four Drams and a half; of Opium, and Seeds of Sorrel, of each one Dram and a half; of Gentian, half an Ounce; of *Armenian* Bole, one Ounce and a half; of *Lemnian* ſeal'd Earth, half an Ounce; of long Pepper, and Ginger, of each two Drams; of clarify'd Honey, two Pounds and a half; of Sugar of Roſes, one Pound; of generous *Canary*, eight Ounces: Make into an Electuary. *S. A.*

It may alſo be prepared with Diacodium inſtead of the Honey, and leaving out the Sugar of Roſes.

Quincy, a very good Judge of pharmaceutical Subjects, makes the following Remarks upon this Compoſition:

This, ſays he, is originally the Preſcription of *Hieronymus Fracaſtorius*, a moſt celebrated *Italian* Phyſician, given in his Book *de Contagio, & Morbis contagioſis, Lib.* 3. *Cap.* 7. and, for that Reaſon, is commonly, in extemporaneous Preſcriptions, call'd *Confectio Fracaſtorii*. The firſt of our College Diſpenſatories, and the *Auguſtan*, inſerted it alike; but, in ſubſequent Editions, it hath been alter'd, tho' chiefly in the Tranſpoſitions of the Ingredients. The preſent, however, is copy'd after the firſt Form exactly, unleſs in the Sugar of Roſes for Conſerve. The Emendation here, likewiſe, to be made at Diſcretion, of Diacodium for Honey, is, on many Accounts, greatly to be liked; and the Reaſons for ſuch an Alteration cannot but be obvious to every one acquainted with theſe Matters. The Scordium and Dittany are to be finely pick'd from their Stalks; and all muſt be powder'd together, except the Galbanum and Opium, which muſt be ſtrain'd, and firſt mix'd with the Honey; and then the Species muſt be ſifted and ſtirr'd in; and, after all, the Wine is to be put to it, as *Zwelfer* hath directed in his Remark hereupon. Some alſo ſtrain the Styrax, but it will paſs with the others into a Powder; but, then, it muſt be better ſettled from the Droſs, otherwiſe the Quantity will be defective. For the Sugar of Roſes, one Ounce of the Flowers are powder'd with the dry Ingredients, and ſo much the more Honey put inſtead of the Sugar. If, for the Caſſia-wood, Cinnamon be uſed, it much improves the Medicines; both as the latter is a much more aſtringent Spice, and the other, in time, gives a ſlimy Quality to the Compoſition, and ſpoils it. This is valued for its Colour, which it receives only from the Bole, the moſt indifferent Ingredient in it; but, as it is a Sign of its Freſhneſs, it is of Uſe; for this Medicine is much the worſe for Age, and is known to be ſo by the red Colour wearing off: But that, likewiſe, may be diſcover'd by the Faintneſs of its Taſte; for the Aromatics by Time exhale, and the Roughneſs of the Ingredients, in which its Aſtringency conſiſts, by long Continuance in a moiſt Form, grows ſofter and ſmoother upon the Palate. The Colour is, indeed, renewable by a little freſh Bole, but the Deceit may be diſcover'd by the Taſte. Every one knows, how much this is in Uſe, and for what Purpoſes; and, indeed, if the ſeveral Ingredients be nicely ſelected, and the Medicine freſh-made, it is excellent in all Fluxes whatſoever, and a great Strengthener both of the Stomach and Bowels. In its Influence upon Fluxes, the Opium has no ſmall Share, as may be well conceived from the Virtues of that Drug. It is given to Children, from five Grains to one Scruple, and to grown Perſons from one Scruple to two Drams for a Doſe. There is but one Grain of Opium in five Drams twelve Grains. A very miſchievous Way ſome Nurſes have got, of giving their Children this Medicine to make them ſleep, more for their own Eaſe than any thing elſe; which is frequently the Foundation of many Diſorders, from its keeping them

them too coſtive, the worſt State Children can be in. Becauſe Honey, which is certainly an Opener, and a powerful Detergent, and therefore contrary to the main Deſign of this Compoſition, is here in ſo large a Quantity, the modern Practice has very prudently order'd this Medicine to be made without it, by uſing, in its ſtead, a ſufficient Quantity of Syrup of Meconium, boil'd up to a due Conſiſtence, which greatly improves the Medicine; but the Quantity for a Doſe muſt then be proportionably leſſen'd, as the Syrup adds to its narcotic Property. Many alſo, of late, have a Way of drying the Opium, ſo as to powder with the Species, and reſerving it by itſelf; and this is the beſt Way of all to preſerve the Virtues of the ſeveral Ingredients entire, which no moiſt Form can do thoſe of an aſtringent Nature. Of the Species may be given, for a Doſe, from five Grains to one Scruple.

With reſpect to the Change of *Syrupus e Meconio* for Honey, it may be much doubted, whether this is an Improvement or not. It is very certain, that Honey, by its Fermentation, induces a very great Alteration in all the Ingredients, unites their Virtues, and, perhaps, in this Compoſition, alters the Opium for the better. Thus far, however, may be affirm'd, that Diaſcordium, without Honey, is a very different Medicine from that prepared with Honey. It may be added, that the Medicine ſeems to be intended for a ſtomachic Reſtorative, and Strengthener of the Organs of Digeſtion, and not particularly for an Aſtringent. And Honey is known to deterge and attenuate; and therefore the viſcid Humours, adhering to the Coats of the Stomach and Inteſtines, are removed, and prevented from interfering with the Functions of the Organs abovemention'd.

DIASENA. The Name of an Antidote in *Nicolaus Myrepſus*, *Sect.* 1. *C.* 112. ſo call'd from Sena, a principal Ingredient in the Compoſition. The *Pulvis Diaſenæ*, in the *London Diſpenſatory*, is very different from this. See SENNA.

DIASERICOS, *διὰ σήρικος*. The Name of a Compoſition deſcrib'd by *Trallian*, *L.* 3. *C.* 7. in which Silk is an Ingredient.

DIASMYRNON, or DIASMYRNES, *διάσμυρνον*, *διασμύρνης*. The Names of ſeveral Collyria, deſcrib'd by *Galen*, *Aetius*, and *Scribonius Largus*, in which Myrrh (*σμύρνη*) is an Ingredient.

DIASOSTICA, from *σώζω*, to preſerve. That Part of Medicine, which relates to the Preſervation of Health.

DIASPERMATON, *διὰ σπερμάτων*. The Name of a Malagma in *Galen*, *L.* 7. *de Comp. per Gen.* and of another in *Paulus Ægineta*, *L.* 7. *C.* 18. both compounded of Seeds.

DIASPHAGE, *διασφαγή*. An Interſtice betwixt two Rocks, or any Interſtice. *Hippocrates* uſes it to expreſs the Interval or Diſtance betwixt two Branches of a Vein.

DIASPHYXIS, *διάσφυξις*, from *σφύζω*, to ſtrike. The Pulſation of an Artery.

DIASTASIS, *διάστασις*, from *δίστημι*, to ſeparate. A Separation, frequently uſed with reſpect to Bones, which recede from each other. It imports alſo an Interval or Interſtice, as that betwixt the Ulna and Radius, or that betwixt the Tibia and Fibula. This Word, alſo, ſometimes ſignifies ſuch a Diſtention of the Muſcles as happens in Convulſions; and, when apply'd to the Stomach, an Effort to vomit. It farther implies the ſame as *Diaſtole*, when uſed relative to the Pulſe.

DIASTEATON, from *στέαρ*, Fat. The Name of an Ointment in *Marcellus Empiricus*, in which the Fats of the Stag, Swine, Gooſe, and Hen, are directed.

DIASTEMA, *διάστημα*, of the ſame Derivation as *Diaſtaſis*, and of much the ſame Import. *Galen* ſays, it ſignifies a Conformation of Bodies reſembling Wool. And *Hippocrates*, *L. de decenti Habitu*, uſes it to expreſs the Interval of Time betwixt one Viſit, which a Phyſician makes his Patient, and the next.

DIASTOLE, *διαστολή*, from *διαστέλλω*, to ſtretch. In Anatomy it imports the Dilatation of the Heart, Auricles, and Arteries.

DIASTOMOTRIS, *διαστομωτής*. This is uſually joined with *μήλη*, a Probe, and implies any dilating Inſtrument, as a *Speculum Oris*, *Speculum Ani*, or *Speculum Uteri*.

DIASTREMMA, *διάστρεμμα*, from *διαστρέφω*, to diſtort. A Diſtortion of the Limbs. *Diaſtrophe*, *διαστροφή*, is of the ſame Import.

DIASULPHURIS EMPLASTRUM.

Take of the Flowers of Sulphur, and *Venice* Turpentine, of each half an Ounce: Stir them over a gentle Heat, that they may incorporate together, and be in perfect Fuſion. After Removal from the Fire, put in one Ounce more of Turpentine, and ſtir them about till they are cold. Of this Mixture take one Ounce; of Wax, two Drams: Melt theſe together, and remove them off the Fire, to ſtir in of Myrrh, in fine Powder, one Ounce; of Camphire, one Dram: Mix them exactly ſo as to make into a Plaiſter. *S. A.*

This is originally aſcrib'd to *Rulandus*; and *Sennertus*, in his *Inſtitutions*, gives it a great Recommendation for the Cure of all ſorts of Ulcers. *Schroder*, and our Countryman *Bates*, have given Preſcriptions of it alike; but this differs from them both very conſiderably, in omitting the Reſin, adding Camphire, and changing, indeed, the Manner of Compoſition in moſt Parts of the Proceſs.

There are many other Preparations of Sulphur, which have the Appellation of *Diaſulphuris*.

DIATAMARON. The Name of an Antidote in *Nicolaus Myrepſus*, *Sect.* 1. *C.* 25. *Fuchſius* thinks the Reading is wrong, and that it ſhould be *Diatamoron*, or rather *Antimoron*, that is, againſt Death.

DIATASIS, *διάτασις*, from *διατείνω*, to diſtend. The Extenſion of a fractured Limb, in order to its Reduction.

Διάτασις πνεύμονος is the lower and internal Part of the Thorax, in which the Lungs are diſtended during Inſpiration.

DIATECOLITHU, *διὰ τηκολίθου*. The Name of an Antidote deſcrib'd in *Paulus Ægineta*, *L.* 7. *C.* 11. ſo call'd from the *Lapis Judaicus*, (*τηκόλιθος*) one of its Ingredients.

DIATESSADELTON. The ſame as DIACELTATESSON, which ſee.

DIATESSARON, *διατεσσάρων*. The Name of a Compoſition, ſo call'd from the four Ingredients it comprehends.

Take of Gentian-root, Bay-berries, Myrrh, and round Birthwort, of each two Ounces; of Honey, two Pounds: Mix them into an Electuary. This, with the Addition of the Shavings of Ivory, two Ounces, is intituled *Diapente*, or a Compoſition of five Ingredients.

This hath paſs'd, without Alteration, thro' all the Emendations of the College Diſpenſatories, where, at firſt, it enter'd under the Title of a Theriaca. It comes originally from *Meſue*. *Avicenna* alſo preſcribes it; but it is hardly ever order'd in the Form of an Electuary, and therefore not kept ſo in the Shops: But in its Species, with the Addition of Ivory, it is much call'd for, by the Name of *Diapente*, principally for ſome Diſtempers among Cattle.

Quincy miſtakes in ſaying, that this came originally from *Meſue*; for *Vegetius*, in his *Mulomedicina*, *L.* 1. *C.* 64. deſcribes the *Diapente* exactly as here directed; and, in *L.* 1. *C.* 16. he ſpeaks of it as a Medicine of great Importance in the Diſeaſes of Cattle.

DIATETTIGON, *διὰ τεττίγων*. The Name of an Antidote in *Paulus Ægineta*, *L.* 7. *C.* 11. in which Graſshoppers are an Ingredient.

DIATHESIS, *διάθεσις*, from *διατίθημι*, to diſpoſe; an Affection or Diſpoſition; is a Quality, which is eaſy to be removed. *Galen*, *Com.* 5. *in Lib.* 6. *Epid.* tells us, that he calls thoſe Qualities morbous Affections, *νοσώδεις διαθέσεις*, not only when the Patient actually labours under them, but when they begin to ariſe. The Word is alſo uſed by *Galen ad Thraſyb.* in the ſame Senſe as *σχέσις*, Habitude.

DIATHESMOS, *διαθεσμός*, is expounded, in *Erotian* upon *Hippocrates*, by *διάφυσις*. See DIAPHYSIS.

DIATRAGACANTHI *frigidæ Species*.

Take of Gum Tragacanth, two Ounces; of Gum Arabic, one Ounce and two Drams; of Starch, half an Ounce; of Liquorice and the Seeds of Melons, and white Poppies, of each three Drams; of the Seeds of Citruls, Cucumbers, and Gourds, of each two Drams; of Sugar-candy, three Ounces: Mix them into a Powder.

This is aſcrib'd to *Nicolaus Myrepſus*, from whom, *Sect.* 1. *Cap.* 98. it is exactly tranſcrib'd by the College into their firſt Diſpenſatory, where alſo it is occaſionally, and at Pleaſure, ordered to be made into an Electuary, with Syrup of Violets; but therein is half a Scruple of Camphire, which they ſince have thought fit to leave out; and there is added one Scruple of Water-lily-flowers; but ſuch a ſmall Proportion is of ſo little Conſequence, as to be here rejected. The *Auguſtan* Diſpenſatory likewiſe hath it both without the Camphire and Lily-flowers; where *Zwelfer*, in his Notes thereupon, recommends it as a good Pectoral, and a Cooler of the Blood; but he greatly blames it as an Ingredient in the *Aqua Dyſenterica Quercetani*, in his Remarks thereupon in the *Pharmacopœia Regia*, becauſe all the Ingredients of it are incapable of giving any Virtues by Diſtillation. This is frequently preſcrib'd in hectical Heats, where the Rapidity of the Blood's Motion is ſubject to abrade and break through its Bounds, by tearing off the Capillaries, and thereby cauſing ſometimes inward Bleeding; for this Medicine is cooling and agglutinating, whereby it helps to keep the Membranes guarded with their proper Mucus, and thereby alſo defends them againſt Acrimonies: And thus it is likewiſe of Service in choleric Conſtitutions, and where the Sharpneſs of Humours threatens Excoriations and Exulcerations. Upon this Account, too, it comes to be uſeful in many Diſtempers of the

Breaſt,

Breaſt, becauſe it will ſoften and thicken ſharp Defluxions, and eaſe the Coughs which proceed therefrom: And thus Stranguries, Heat of Urine, and the Pungency of venereal Gleets, are hereby relieved, both by ſheathing the Acrimony of the Fluids, and defending the Veſſels from their Irritations. For theſe Purpoſes this is a good Compoſition; but the Quantity of Flowers of Water-lilies is merely ridiculous, it bearing no manner of Proportion to its Virtues, ten times the Quantity that is in the Medicine not being more than a Perſon would give at one Doſe, had he any Intention of Moment to anſwer with it. The Doſe of the Whole is from half a Dram to two Drams, and frequently to be repeated. This is much the beſt when freſh-made, becauſe the Seeds, with keeping, grow rancid.

DIATRION PIPEREON SPECIES. A Compoſition in the *London* Diſpenſatory, which is thus directed:

> Take of the black, long, and *Jamaica* Pepper, of each ſix Drams and fifteen Grains; of Aniſeeds, Thyme, and Ginger, of each one Dram; and make them into a Powder.

This is preſcrib'd by *Galen de tuenda Valetudine*, where he recommends it againſt Crudities, and a Redundance of cold Humours. *Meſue* hath likewiſe given a Preſcription under the ſame Title, for the ſame Intentions, which hath alſo been inſerted in the *Auguſtan* Diſpenſatory; but adds ſome more Spices, and carminative Seeds. The College hath thought fit to receive the firſt into their Diſpenſatory, and to continue it without Alteration till the laſt, where the *Jamaica* Pepper is added, becauſe the black and white, before intended as two of the three Peppers, are but the ſame in kind, and differ only in the particular Management to make them appear of two Sorts.

DIATRITOS, *διάτετος*.

An Abſtinence for three Days was one of the moſt conſiderable Points in Practice, by which the firſt Methodics diſtinguiſhed themſelves from other Phyſicians. This Term of three Days they called *Diatritos*, and not the Abſtinence itſelf, as *Gorræus* ſuppoſed; and this Space of three Days, or the third Day, to which the Methodics were moſt ſcrupulouſly attached, procur'd them the Name of *Diatritarii*. *Gorræus* obſerves from *Galen*, *M. M. Lib.* 10. *Cap.* 6. that theſe Phyſicians ſuffered three entire Days to paſs, before they allowed any Nouriſhment to their Patients; and adds, that they began to give them ſome Food on the fourth Day, after that on the ſixth, and then on the eighth, and ſo on; ſo that the firſt Nouriſhment was not given till after the firſt *Diatritos*, or after the firſt three Days were paſt; but, from that time, every ſecond Day. It ſeems likely, that *Galen* perfectly knew the Conduct of the Methodics in this reſpect; and yet it is certain, from a Multitude of Paſſages in *Cœlius Aurelianus*, that they made their Patients faſt only the two firſt Days, and gave them ſome Nouriſhment on the third. This Difficulty may be ſolv'd by ſaying, that the Tranſcribers of *Galen* miſtook in a Figure; or that *Soranus*, whom *Cœlius* follows, and who did not agree with other Phyſicians of his own Sect, might have retrenched one Day from the *Diatritos* of *Theſſalus*, and the other Methodics. We muſt obſerve alſo, that *Cœlius* gives the Name *Diatritos*, not only to the Space of three Days, but to the third Day in particular; and that he commonly makes uſe of the Diſtinction *intra Diatriton*, and *in ipſo Diatrito*, that is, as himſelf explains it, *during the Space of three Days*, and *on the very third Day*. Hence it is, that, ſpeaking of the Term of ſeven Days, he ſays, that it comprehends three *Diatritoſes*, the fifth Day being the third, if you begin to reckon from the third Day incluſively; and the ſeventh, according to the ſame Way of counting, the third.

Antipater, a Methodic Author, quoted by *Cœlius*, ſaid, that there was a natural Reaſon, why we ſhould wait till the third Day, before we allowed the Patient any Nouriſhment; but he does not inform us of that Reaſon. *Hippocrates*, or *Polybus*, *de Morbis*, *Lib.* 4. ſeem to have been of Opinion, that there were two entire Days neceſſary for the perfect Concoction of the Food, the Diſtribution of the Juices in the Body, and the Separation and Evacuation of the excrementitious Parts; ſo that, according to theſe Authors, it was not till the third Day that the Body became free and diſengaged from the Aliment which it had received on the firſt. This Notion, perhaps, obliged the Methodics to wait till the third Day, and might be the Reaſon which *Antipater* meant. After this Abſtinence, which extended to the third Day, as we have obſerved, and not to the fourth, *Cœlius* allowed his Patients Nouriſhment one Day in two, except in Caſes of accidental Weakneſs, or Fainting, in which he diſpenſed with the ordinary Rules, and gave them Food every Day indifferently.

It is farther to be obſerved, that the third Day was appointed by *Cœlius*, not only for the beginning to nouriſh his Patients, but to commence exhibiting his moſt conſiderable Remedies. On this Day he took away Blood for the firſt time, unleſs the Violence of the Diſeaſe obliged him to do it ſooner; that is, as he expreſſes it, *intra Diatriton*, within the Space of the two firſt Days, which rarely happened. This Bleeding, which was performed the ſame Day on which he began to nouriſh his Patient, preceded the Nouriſhment; which deſerves to be conſidered by our modern Phyſicians, who are ſometimes afraid of bleeding ſome Patients faſting, leſt it ſhould weaken them too much. The Methodics were ſo far from being uneaſy on that account, that, even after Bleeding, and the Abſtinence which preceded it, they allowed the Patient but a ſlender Nouriſhment, which ordinarily conſiſted in a Broth made of Water and Wheaten-meal, prepared after a particular manner, and reduced into ſmall Grains, which they called *Alica*, that Name being common both to that ſort of Meal, and the Broth made of it. *Cœlius* prefers this Nouriſhment to the Ptiſan of *Hippocrates*, or to Barley-broth, which, he ſays, are flatulent and aſtringent.

We ſaid juſt now, that the Methodics reſerved their choiceſt Medicines for the third Day; which ſuppoſes thoſe they uſed before to be not very conſiderable. And indeed, during the two firſt Days, or the Time of Abſtinence, theſe Phyſicians only ſuffered their Patients to waſh their Mouth with Water, or to drink a little of it. And, as to their other Management, they did nothing but anoint them, and cover them with Cataplaſms, and Wool dipt in *hot* Oils, if it was a Dieaſe of *Stricture*, but in *cold* Oils for a Diſeaſe of *Relaxation* or *Flux*; to which Remedy, in this laſt Caſe, they added refrigerating Fomentations, and the Application of all manner of aſtringent Topics. And, tho' theſe Remedies may appear to us but of little Significancy, yet the Methodics had quite a different Notion of them. They believed, that, by conſtringing or relaxing the external Parts, the internal were, in like manner, conſtringed or relaxed; and they laughed at other Phyſicians, who, being of a quite contrary Sentiment, pretended, on certain Occaſions, to cure a Flux or Relaxation of the exterior Part, by opening the Pores of the interior. They did not trouble themſelves about diſcovering, to a great Degree of Exactneſs, the proper Seat of the Diſorder; but had recourſe to Relaxation and Conſtriction of the whole Body in general, in whatever Part the Flux or Stricture were diſcovered; and they continued the Uſe of theſe Remedies every ſecond Day, or the Day appointed for Abſtinence.

DIAULOS, *δίαυλος*, is one who performs a ſtrait Courſe forwards and backwards, or from the Starting-place to the Goal, and back again. The Word ſignifies alſo the Courſe itſelf, and *δίαυλοι* are accounted among the Sorts of Gymnaſtics by *Hippocrates*, *Lib.* 1. & 2. *de Diæta*.

It is derived from *δὶς*, twice, and *αὐλὴ*, a Station, becauſe the Courſe was performed back to the ſame Station; or from *δὶς*, twice, and *αὐλὸς*, ſignifying, among other things, a Stadium, becauſe the Place of the Courſe was a Stadium in Length; ſo that, by running it forward and backward, they became *δίαυλοι*, or ſuch as had run a *δίαυλος*, that is, two Stadia.

DIAZOMA, *διάζωμα*. The Diaphragm.

DIAZOSTER, *διαζωστὴρ*. A Name for the twelfth Vertebra of the Back, ſo called, becauſe the *ζωστὴρ*, Belt, lies upon it.

DICÆOS, *δίκαιος*, has a Variety and Multiplicity of Significations in *Hippocrates*; for ſometimes it is the ſame as *ἔυλογος*, or agreeable to Reaſon; ſometimes it is taken for *ὅμοιος*, equal or alike; in ſome Places it bears the Senſe of *ἴσος* and *ὁμαλὸς*, that is, equal and even, or equable: It ſignifies alſo *συμφέρων*, convenient or accommodated; alſo juſt, complete, natural, beſt, and fitteſt; in which Senſes it is applied to the Phyſician, Method of Cure, Situation of Parts, Diet, and many other things.

DICENTETON, *διὲντετον*. The Name of a hot and acrid Collyrium, deſcrib'd by *Paulus Ægineta*, *L.* 3. *C.* 13.

DICHALCON, *δίχαλκον*. A Weight equal to two Æreola, or one Third of an Obolus.

DICHASTERES, *διχαστῆρες*. The *Dentes Inciſores*.

DICHOPHYIA, *διχοφυία*. A Diſtemper of the Hairs, which conſiſts in their growing forked. *Galen*.

DICOCTA, *δίκοκτα*. Water firſt heated, and then refrigerated with Snow. *Galen. Method. Medendi*, *L.* 7. *C.* 4.

DICRÆUS, *δίκραιος*. Biſid.

DICROTUS, *δίκροτος*, from *δὶς*, twice, and *κρόω*, to ſtrike.

An Appellation of a certain Pulſe, in which the Artery beats, as it were, double. Dr. *Nihill*, a late Author, has given ſome very remarkable Obſervations relative to this ſort of Pulſe, which he calls, not improperly, the *Rebounding Pulſe*, made by Dr. *Solano*, a *Spaniſh* Phyſician, and confirmed by a great many Caſes. The *Pulſus Dicrotus*, ſays he, of the Antients, which, in *Engliſh*, may be properly called the *Rebounding Pulſe*, is a certain Sign of a future critical Hæmorrhage by the Noſe.

When the rebounding Pulſe appears at or about every thirtieth Pulſation, the Hæmorrhage follows in four Days after, ſomewhat ſooner or later; when it recurs at every ſixteenth Pulſation, the Hæmorrhage ſupervenes in three Days; when it is obſerved at every eighth Pulſation, the Hæmorrhage is to enſue in two Days and a half; laſtly, when it returns at every fourth, third, ſecond Pulſation, or is continual, the Hæmorrhage is to

be expected within the Space of twenty-four Hours. Therefore, in general, the ſhorter the Periods of Pulſation, at which the Rebounding recurs, the nearer the Hæmorrhage.

Sometimes Nature runs regularly through all the fore-mentioned Progreſſions of the critical Pulſe, from its firſt Appearance at every thirtieth, down to every ſingle Pulſation; by which the Hæmorrhage is foreſeen gradually approaching juſt in the ſame Degrees: She ſometimes inordinately haſtens or delays the Hæmorrhage, and then the Rebounding of the Pulſe recurs with more or leſs Frequency in the ſame Proportion; and when this returns in variable ſhifting Periods, the Time at which the Hæmorrhage is to happen, cannot be exactly determined.

When the Artery rebounds upon the Finger with great Celerity, and very briſkly follows the firſt Stroke, the Hæmorrhage is juſt at hand; and if then it ſhould delay a little, it will appear on the Patient's blowing his Noſe.

The Quantity of the Hæmorrhage is foreſeen by the Vigour with which the Artery rebounds, compar'd exactly with the Force of the firſt Stroke, be this either vehement or languid. Thus, when the Artery rebounds with leſs Moment than the firſt Stroke has impreſs'd on the Finger, then is the Hæmorrhage to be ſmall, and *vice verſa*; but when the Rebounding of the Artery, and the firſt Stroke, are of equal Vigour, the Hæmorrhage is to be moderate.

According as the Blood flows, the Rebounding of the Artery ſlackens gradually, until it entirely diſappears ſoon after the Criſis; and this gradual Remiſſion of the Rebounding is the Sign of an immediately preceding Hæmorrhage.

If, after the Hæmorrhage, the rebounding Pulſe ſhould continue, or appear again, it denotes another Criſis of the ſame Kind, according to the above-mention'd Rules.

When the Rebounding of the Artery is more evident in one Wriſt than in the other, the Blood frequently flows in great Abundance from the Noſtrils of the ſame Side, in which the Rebounding is more evident. *Nihill.*

Theſe Obſervations will be of very great Importance in Phyſic, provided Experience confirms the Truth of what is here laid down.

DICTAMNITES, *δικταμνίτης οἶνος*. A Wine medicated with Dittany, deſcrib'd by *Dioſcorides*, *L.* 5. *C.* 57. It is made by macerating four Drams of Dittany in eight Cotylas of Muſt. It is a good Remedy againſt Nauſeas, and promotes the Lochia and Menſes.

DICTAMNUS. Dittany. The Characters are,

The Flower-cup conſiſts of two Leaves; after that, another athwart the former; and again, a third in like manner, until a ſcaly Head be thence form'd: Out of the Centre of all theſe Scales grows a Flower, whoſe Creſt is erect, roundiſh, and bifid: The Beard is divided into three Parts; two Floſcules, one on each Side, come forth from leafy Scales, together with Whorles, collected into a long looſe Spike.

Boerhaave mentions two Species of this Plant; which are,

1. Dictamnus; Creticus. *Offic. C. B. P.* 222. *Park. Theat.* 27. *Raii Hiſt.* 1. 537. *Hiſt. Oxon.* 3. 357. *Boerh. Ind. A.* 178. *Rupp. Flor. Jen.* 191. *Dictamnus Creticus ſive vera*, J. B. 3. 253. *Dictamnus vel Dictamnum*, Chab. 420. *Dictamnum Creticum*, Ger. 651. Emac. 795. *Origanum Creticum latifolium, tomentoſum, ſeu Dictamnus Creticus*, Elem. Bot. 167. Tourn. Inſt. 199. DITTANY OF CRETE, OR CANDY. *Dale.*

The true Dittany of *Crete* is a Plant which riſes not to any great Height, having a woody fibrous Root, from which ſpring ſeveral ſquare hairy Stalks, which have two round Leaves at a Joint, cover'd over pretty thick with a white Down or Cotton: On the Top of the Stalks grow long ſcaly Heads, of a greeniſh purple Colour; among which come forth ſmall labiated purple Flowers, like thoſe of Origanum. The Leaves have an agreeable aromatic Smell. This Plant grows chiefly in the Iſland of *Crete*, or *Candy*, flowering in *June*. The Leaves only are uſed. There is a good Quantity of it put into Venice Treacle, Mithridate, and Diaſcordium. *Miller's Bot. Off.*

Geoffroy informs us, that this Leaf has always been look'd upon as an excellent Vulnerary, and powerful Cordial; it is likewiſe an Emmenagogue and Diuretic.

It has all the Virtues of the Garden *Pulegium* (Penyroyal), but in a much greater Degree; for not only when it is drank, but barely applied, or uſed in Suffumigations, it expels the dead Fœtus. They ſay, that in *Crete*, the Goats, when they are wounded with Arrows, expel them by eating this Herb. The Herb, apply'd, draws out Splinters from the Soles of the Feet, or any other Parts of the Body. It is effectual againſt Pains of the Spleen, by diminiſhing that Part. The Root is heating in the Mouth, and accelerates the Birth; and the Juice, drank in Wine, relieves thoſe who are bit by venomous Animals, which are driven away by the very Smell of the Herb, and killed by its Touch. The Juice inſtil'd into Wounds inflicted by Weapons, or venomous Bites, and drank at the ſame time, is a preſent Remedy. Thus far *Dioſcorides.*

Hippocrates, as *Galen* informs us, reckon'd Dittany as one of the beſt Medicines that he knew for expelling the Secundines, and, if drank in Wine, for a falſe Conception. It provokes the Menſes, as *Pliny* ſays, and expels the dead Fœtus, even though it lies acroſs in the Uterus; and is not only effectual in Potions, but in Ointments and Suffumigations; and ſo great is its Virtue in ſuch Caſes, that pregnant Women are not to admit it into their Chambers.

Thadæus Dunus, as *J. Bauhine* relates, being call'd to a Woman in Labour of a dead Fœtus, and given over by all, after trying other Medicines, exhibited to her, as ſhe ſat in a Bath, half a Scruple of the Powder of the Leaves of *Cretan* Dittany in Spring-water; which done, he began, as he ſaid, to entertain Hopes of Succeſs; for all Things ſeem'd to tend to the Bottom of the Belly. She paſſed that Night in a tolerable Condition, though without Sleep, and, before Day-break, was happily deliver'd of her Burden. Dittany has, moreover, this Advantage, that it is eaſy to be taken; whereas other Things, which are expulſive of a dead Fœtus, are either too bitter, or fetid, or too acrimonious, or unfriendly to the Stomach, and may poſſibly do Miſchief. *Raii Hiſt. Plant.*

2. Dictamnus; montis Sipyli; Origani foliis, *Flor.* 2. 79. *Origanum montis Sipyli.* H. L. 463. Ic. & Deſcr. *Origanum, ſpicatum, montis Sipyli, foliis glabris.* Whel. Raii Hiſt. 340. DITTANY FROM MOUNT SIPYLUS, WITH WILD MARJORAM-LEAVES. *Boerh. Ind. alt. Plant. Vol.* 1.

DICTYOIDES, *δικτυοειδὴς*, from *δίκτυον*, a Net. A Name for the *Rete Mirabile*. See CAPUT.

DIDYME, *διδύμη*. A Name for the Root of the Orchis. *Galen, Exeg.*

DIDYMÆA, *διδυμαία*. The Name of a Malagma, or Cataplaſm, in *Galen, de Comp. M.* 1. *Loc. L.* 10. *C.* 2.

DIDYMI, *δίδυμοι*, properly Twins. But the Teſticles are call'd by this Name; as alſo the ſmall Eminences in the Brain, call'd *Teſtes.*

DIECBOLION, *διεκβόλιον*. The ſame as ECBOLION, a Medicine cauſing Abortion.

DIELECTRON, *δι' ἠλέκτρου*. The Name of a Troche in *Marcellus Empiricus*, *C.* 16. ſo call'd from Amber, (*ἤλεκτρον*) a principal Ingredient.

DIEMEÆ. A Term coin'd by *Paracelſus*. It imports a kind of Spirit, which, he ſays, reſides in Stones.

DIENEZ. The ſame as Diemeæ. *Rulandus.*

DIERVILLA. The Name of a Plant ſo call'd by *Tournefort*, from Mr. *Dierville*, a Surgeon, who brought it from *Acadia*. We have no *Engliſh* Name for this Plant.

The Characters are,

It hath a Flower, conſiſting of one Leaf, which is tubulous, and divided into five Parts. The Ovary, which crowns the Pointal, is produc'd from the Centre of the two-leav'd Calyx; and, after the Flower is paſs'd, it becomes a pyramidal Fruit, divided into four Cells, which are fill'd with ſmall Seeds. *Miller's Dictionary, Vol.* 2.

Boerhaave mentions but one Species of this Plant, which is, the Diervilla; Acadienſis; fruticoſa; flore luteo. *T. Ac. Reg. Sc.* 706. *T.* 7. *F.* 1. *H.* SHRUBBY DIERVILLA OF ACADIA, WITH A YELLOW FLOWER. *Boerh. Ind. alt. Plant. Vol.* 1.

I find no medicinal Virtues aſcrib'd to this Plant.

DIESIS, *δίεσις*, from *δίημι*, to tranſmit. Tranſmiſſion, or Diviſion. It alſo imports Humectation, or Irrigation; and is then derived from *δίημι*, to moiſten.

DIEXODOS, *διέξοδος*, from *διὰ*, and *ἔξοδος*, a Way by which any thing paſſes. In *Hippocrates*, it ſignifies the Deſcent or Paſſage of the Excrement by the Anus.

DIFFLATIO. Tranſpiration.

DIGASTRICUS *Muſculus*, from *δὶς*, importing double, and *γαστὴρ*, a Belly. A Muſcle of the lower Jaw, deſcrib'd under the Article CAPUT.

DIGESTIO. Digeſtion, in Surgery, is the diſpoſing an Ulcer or Wound to ſuppurate, or diſcharge good Pus, by the Application of proper Medicines.

In Chymiſtry, it imports the expoſing a Body to a ſmall Degree of Heat for a conſiderable time, in order to open it, and diſpoſe its finer Parts to ſeparate from the reſt. Thus, in extracting Tinctures, the Body from whence the Tincture is to be drawn, is ſet, together with the Menſtruum, in a gentle Heat.

DIGESTIVUM. A Digeſtive, or Medicine apply'd to Wounds, in order to promote a good Suppuration, or Formation of Matter. Turpentine, with the Yolk of an Egg, Oleum Hyperici, Linimentum Arcæi, and Baſilicon, are generally uſed with this View.

DIGITALIS.

The Characters are,

The Leaves are produc'd alternately on the Branches. The Cup of the Flower conſiſts of one Leaf, which is divided into ſix ample long Segments: The Flower conſiſts of one Leaf, is tuberoſe and compreſs'd, and a little reflex'd at the Brim: The Flowers are diſpoſed in a long Spike, and always grow

upon

upon one Side of the Stalk: The Ovary of the Flower becomes a roundish Fruit, which ends in a Point, and opens in the Middle; has two Cells, in which are contain'd many small Seeds.

Boerhaave mentions eleven Species of this Plant; which are,

1. Digitalis; purpurea; folio aspero. *C. B. Pin.* 243. *Boerh. Ind. A.* 228. *Hist. Oxon.* 2. 478. *Digitalis.* Offic. Chab. 267. Rivin. Irr. Mon. 104. Dill. Cat. Giss. 145. *Digitalis purpurea.* Ger. 647. Emac. 790. J. B. 2. 812. Raii Hist. 1. 767. Synop. 3. 283. Merc. Bot. 1. 32. Phyt. Brit. 35. Mer. Pin. 33. Rupp. Flor. Jen. 199. Tourn. Inst. 165. Elem. Bot. 134. *Digitalis purpurea vulgaris.* Park. Theat. 653. FOX-GLOVE. *Dale.*

Fox-glove has its lower Leaves long, large, and sharp-pointed, somewhat rough, hairy, and indented about the Edges; the Stalks arise to be two or three Foot high, with several smaller Leaves growing on them. The Flowers are set in a long Spike, all on one Side of the Stalk; they are large and hollow, in Shape like a Thimble, of a reddish Colour, having the under Lip full of white Spots: These are succeeded by round oval Seed-vessels, divided into two Cells, full of small dark-brown Seed. The Root is long and large, of a brown Colour, and full of Fibres: It grows in Hedges and Lanes, and flowers in *June* and *July*.

This Plant is rarely used inwardly, being strongly emetic, and working with Violence upwards and downwards: Though *Parkinson* extols a Decoction of it in Ale, with Polypody-roots, as an approv'd Medicine for the Falling Sickness. The Ointment made of the Flowers and *May* Butter is very much commended by the late Dr. *Hulse* for scrophulous Ulcers, which run much, and are full of Matter, dressing them with the Ointment, and purging two or three times a Week with convenient Purges. Officinal Preparations are only the *Unguentum Digitalis.* *Miller's Bot. Off.*

This Plant is esteem'd a Vulnerary. *Gesner* relates, that in *Bolonia* they call it *Aralda*, and have a Proverb, *Aralda chi tutte piage salda.* *Parkinson* bruised it, and applied it with Success to scrophulous Tumors. The Ointment of Fox-glove is very resolvent. *Lobel* says, the Decoction of it purges powerfully, both upwards and downwards. *Martyn's Tournefort.*

The UNGUENTUM DIGITALIS; or, *Ointment of* FOX-GLOVE.

Take of the whole Plant of Fox-glove any Quantity, and boil it in a sufficient Quantity of fresh Butter; which press out, and boil again with more of the Plant, as before; which repeat a third time, and make into an Ointment.

2. Digitalis; rubella; folio aspero. *b.*

3. Digitalis; alba; folio aspero. *C. B. P.* 244. *M. H.* 2. 478.

4. Digitalis; Hispanica; purpurea; minor. *T.* 165.

5. Digitalis; latifolia; flore ferrugineo. *M. H.* 2. 478. *H. R. Par.* BROAD-LEAV'D FOX-GLOVE, WITH AN IRON-COLOUR'D FLOWER.

6. Digitalis; lutea; magno flore. *C. B. P.* 244. *M. H.* 2. 479. FOX-GLOVE WITH A LARGE YELLOW FLOWER.

7. Digitalis; lutea; minore flore. *M. H.* 2. 479.

8. Digitalis; Orientalis; folio tragopogi; flore albido. *T. Cor.* 9. EASTERN FOX-GLOVE, WITH A GOAT'S-BEARD-LEAF, AND A WHITISH FLOWER.

9. Digitalis; Canariensis; Acanthoïdes; frutescens; flore aureo. *H. A.* 2. 105. *H. R. D.* SHRUBBY FOX-GLOVE, WITH A GOLD-COLOUR'D FLOWER.

10. Digitalis; angustifolia; flore ferrugineo. *C. B. P.* 244. *M. H.* 2. 478. NARROW-LEAV'D FOX-GLOVE, WITH AN IRON-COLOUR'D FLOWER.

11. Digitalis; minima; Gratiola dicta. *Hist. Oxon.* 2. 479. *Boerh. Ind. A.* 229. *Tourn. Inst.* 165. *Elem. Bot.* 135. *Gratiola.* Offic. Ger. 466. Emac. 581. Raii Hist. 2. 1885. Rivin. Irr. M. 126. Rupp. Flor. Jen. 200. J. B. 3. 434. *Gratiola, Gratia Dei,* Chab. 475. Buxb. 149. *Gratiola vulgaris,* Park. Theat. 220. *Gratiola, Centaurioides,* C. B. Pin. 279. HEDGE-HYSSOP. *Dale.*

Hedge-hyssop is but a small Plant, having slender creeping Roots, from which spring several square Stalks scarce a Foot high, with two long, narrow, sharp-pointed Leaves, like common Hyssop, set at every Joint; among which come forth the Flowers, on short Foot-stalks, one at a Joint, being small, long, and hollow, not much unlike the Flowers of Fox-glove in Shape, divided at the End into four Segments, of a pale-yellow Colour; and are succeeded by oblong Seed-vessels, divided into two Partitions, full of very small Seed. It grows on the *Alps*, and other mountainous Countries; and flowers in *July*.

This is a Plant but rarely used in *England*, though it is commended by some Writers as a good Purger of serous and choleric Humours, and serviceable against the Dropsy and Jaundice; but it is of a rugged churlish Nature. *Miller's Bot. Off.*

The *Gratiola*, being analysed, yields no volatile Salt; but a great deal of Acid, Oil, and Earth: *Pena* and *Lobel* affirm, it purges strongly both upwards and downwards; for which Reason it is prescrib'd to those that have the Dropsy, Cachexy, Tertian or Quartan Ague, or are subject to the Gout and Sciatica. *Camerarius* says, that its Extract should be mixed with Powder of Cinnamon in the Dropsy; and that the Juice of Calamint should be added to it for Intermitting Fevers. One Dram of the *Gratiola* is given in Substance, and the like Quantity of the Infusion in White-wine. They infuse half a Handful of its Leaves, and two Ounces of Manna, in a Gallon of Water: Let it give one Boil, and strain the Infusion through a Cloth, and give it to drink warm. *Martyn's Tournefort.*

In the *Historia Plantarum*, publish'd under the Name of *Boerhaave*, it is said, that the first, second, third, and fourth Species, are so extremely poisonous, and are possess'd of such a Degree of Acrimony, that they exulcerate the Mouth, Fauces, Œsophagus, and Stomach; and that some, by eating accidentally the Fruit, have contracted Vomitings, and Dysenteries, which were very difficult to cure.

DIGITELLUS. A Name for several Funguses, none of which have any medicinal Virtues attributed to them, that I know of. Dr. *Martyn*, in his Translation of *Tournefort's* History of Plants which grow about *Paris*, specifies the following:

1. *Digitellus clavatus croceus. Clavaria militaris, Crocea.* Vaill. 39.

2. *Digitellus clavatus albus. Clavaria alba, Pistilli forma.* Vaill. 39.

3. *Digitellus clavatus, Ophioglossoides, niger. Clavaria ophioglossoides, nigra.* Vaill. 39.

This grows on grass Ant-hills, in a Close next *Hamplewood*; and at *Comb-Park*, in the Way to *Kingston*. *Mer. Pin.*

4. *Digitellus coralliformis, luteus, minus ramosus. Coralloides flava.* Inst. 564. *Fungus ramosus flavus.* J. B. 3. 837. This has been found on *Marlborough* Downs in great Plenty, by Mr. *Wilmer*, Apothecary of *London*. I have seen it on the *Hill of Health*, and many other Places about *Cambridge*.

5. *Digitellus coralliformis, albidus, minus ramosus. Coralloides albida.* Inst. 564. *Fungus ramosus, albidus.* J. B. 3. 837.

This differs from the preceding only in Colour.

6. *Digitellus coralliformis, candidissimus minus ramosus. Corallo-fungus candidissimus.* Vaill. 41.

7. *Digitellus coralliformis dilute purpurascens. Coralloides dilute purpurascens.* Inst. 564. XIX. *generis, esculentorum fungorum, 2 Species.* Clus. Hist. 275.

8. *Digitellus major nigricans. Hypoxylon excrementum ligni putridi fungosum, digitatum.* March. Brand. Mentz. Pug. Tab. 6. On rotten Wood, in many Places.

9. *Digitellus ramosus, niger, summitatibus pulvere albido obductis. Corallo-fungus digitatus, niger, apicibus albidis.* Vaill. 41. This was found on a rotten Tree in *Moor Barns Thicket*, by Mr. *Halfhyde*, Apothecary of *Cambridge*.

10. *Digitellus croceus, Ornithopodioides. Corallo-fungus croceus, Ornithopodioides.* Vaill. 41.

11. *Digitellus niger, compressus, varie divaricatus & implexus inter lignum & corticem. Corallo-fungus niger, compressus,* &c. Vaill. 41. This was found in *St. James's Park* by Dr. *Doody*.

DIGITUS. A Finger.

For the Anatomy of the Fingers, see BRACHIUM.

For an Account of Fractures of the Fingers, see FRACTURA.

For Luxations of the Fingers, see LUXATIO.

The Separation of FINGERS *which grow together.*

It sometimes happens, that the Toes and Fingers of new-born Children are found to be grown together: And this may happen two different Ways; for they may be very closely join'd and glued, as it were, together; or they may cohere by an intermediate Coat, like the Feet of a Goose. Sometimes the Fingers, both in young and grown Persons, will grow together, when, after being burnt or exulcerated, they are not treated carefully; and, particularly, if they are bound up without proper Caution.

As a Cohesion of the Fingers not only disfigures the Hand, but induces a great many Inconveniences, Surgeons ought to make it their Business to separate them with the greatest Dexterity: And this may be done two Ways, either by cutting away the intermediate Tunic, by the Help of a Pair of Scissars or Knife; or, if they closely cohere, without any inter-

mediate

mediate Coat, they are to be accurately ſeparated from each other by a ſmall Knife. But, leſt they ſhould grow together again during the Cure, they muſt be bound up with a narrow Roller about a Finger's Breadth, impregnated with Lime-water, Spirit of Wine, or ſome vulnerary Water; and each Finger muſt be ſeparately bound up, till all of them are perfectly heal'd. I have obſerved, frequently, ſome Fingers, after Burning, a Wound, or ſome ſuch Injury, adhere ſo cloſely to the Palm of the Hand, that they could not be extended, nor the Hand opened. But that young Surgeons may not be ignorant of what they ought to do in ſuch a Caſe, I ſhall, in a few Words, deſcribe the Method I uſed in curing three Patients. I carefully ſeparated, with a Knife, thoſe Fingers from the Hand, without doing the leaſt Injury to the Tendons; and after applying Lint, Compreſſes, and vulnerary Balſam, together with a Piece of Paſtboard, I ſo treated all the Wounds, as to preſerve the Fingers always extended, till they were perfectly conglutinated. At each Dreſſing, the Fingers are to be moved for ſome time, in order to prevent their becoming rigid. *Heiſt. Chirurg.*

DIGLOSSON, *Δίγλωσσον*, from *Δὶς*, importing double, and *γλῶσσα*, a Tongue, a Name for the *Laurus Alexandrina*, ſo call'd, becauſe above its Leaf there grows another leſſer Leaf, reſembling a Tongue. *Blancard.*

DIGNOTIO. The ſame as DIAGNOSIS, which ſee.

DIHÆMATON, *διὰ τῶν αἱμάτων*, from *αἷμα*, Blood; the Name of an Antidote againſt Poiſons, deſcrib'd by *Galen*, *Lib. 2. de Antid. Cap. 8.* and *Ægineta*, *Lib. 7. Cap. 11.* It is ſo call'd, becauſe the Bloods of divers Animals enter its Compoſition.

DIHALON, *διὰ ἁλῶν*, from *ἅλς*, Salt, the Name of a Plaiſter prepared chiefly of common Salt and Nitre, and adapted to foul Ulcers: It is deſcribed by *Ægineta*, *Lib. 7. Cap. 17.*

DIHIDROS, *Δίϋδρος*, from *ἵδρως*, Sweat, is expounded in *Galen's Exegeſis*, moiſt and ſweating.

DIIPETES, *Διϊπετὴς*, in *Hippocrates*, *Lib. 1. περὶ γυναικ.* is applied to *γόνος*, *Semen*, and imports a ſudden or immediate Defluxion.

DIKALEGI, DICALEGI, DITALEM. Tin. *Rulandus.*

DILATATIO, *ἐμπυσμὸς, ἀνευρυσμὸς, διευρυσμὸς*, a Dilatation, is an Affection of the Veſſels of the human Body, when they have their Dimenſions enlarged; and, in this Senſe, is oppoſed to *Conſtrictio*, a Conſtriction. Sometimes it means the ſame as DIASTOLE, which ſee.

DILATATORES *Alarum Naſi*, are Muſcles which dilate the Alæ of the Noſe; for a Deſcription of which ſee CAPUT.

DILATATORIUM, a chirurgical Inſtrument for dilating the Mouth. *Caſtellus.*

DILUENTIA, Diluents, are ſuch Things as cauſe or increaſe a Fluidity in Subſtances. *Blancard.*

DILUTUM, diluted, is ſpoken of what has paſſed under the Action of Diluents; but *Dilutum*, taken ſubſtantively, is a Liquid in which any thing has been for ſome time macerated and infuſed; and ſo is the ſame as *Infuſio*. *Blancard.*

DILYTÆA, *Διλυταία*, in *Myrepſus*, *Sect. 3. Cap. 12.* is, as *Fuchſius* ſays, the Fat of ſome Animal unknown.

DINICA, from *Δινέω*, to turn round, are Medicines againſt a Vertigo. *Blancard.*

DINOS, *Δῖνος*. The Vertigo. See VERTIGO.

DIOBOLON, *Διώβολον*, the Weight of two Oboli, or one Scruple: It is alſo call'd *Gramma*. *Caſtellus.*

DIOCRES, the Name of a Paſtil in *Myrepſus*, *Cap. 49. Sect. 41.*

DIODOS, *Δίοδος*. The ſame as DIEXODOS, which ſee.

DIOENANTHES, *διὰ οἰνάνθης*, the Name of an Epithem againſt the *Cholera Morbus*, in *Trallian*, *Lib. 7. Cap. 44.*

DIOLOS *Artos*, *Δίολος ἄρτος*, in *Hippocrates*, *Lib. περὶ τῶν ἐντὸς παθῶν*, ſignifies new Bread.

DIOMEDEA AVIS, the Heron, or Hern, ſo call'd from *Diomedes*, whoſe Companions, as the Fable ſays, were converted into Herns. See ARDEA.

DION, *Δῖον*, the Name of a Month in which the autumnal Equinox happen'd: It was only in Uſe among the *Macedonians*. *Gal. Com. 1. in 1. Epid.*

DIONCOSIS, *Διόγκωσις*, (from *ὄγκος*, a Tumor) Tumefaction, Ampliation, is a Word in Uſe among the Methodics, by which they intend to ſignify a Diſtention of the Body by a Coacervation of excrementitious Parts, or from a Diffuſion of the Humours. *Galen, de optima Secta.*

DIONIS COLLYRIUM, the Name of a Collyrium in *Oribaſ. Synopſ. Lib. 3.* from its Author *Dion.*

DIONYSIA, *Διονυσία*, the Name of a Plaiſter for Abſceſſes, invented by *Hera* the *Cappadocian*, and the ſame as *Dionyſiacum Emplaſtrum*; the Preparation of which ſee under ABSCESSUS.

DIONYSIANUM EMPLASTRUM. See the preceding Word.

DIONYSISCI, *Διονυσίσκοι*, certain bony Eminences near the Temples; they are alſo call'd *κέρατα*, Horns, from *Διόνυσος*, *Bacchus*, whom the Poets deſcribe with Horns. *Caſtellus.*

DIONYSIUS, *Διονύσιος*, an eminent antient Surgeon, whoſe Plaiſters and Collyria are deſcrib'd in *Celſus*, *Lib. 6. Cap. 6.* It is alſo a Name for *Lepidium*, Dittander. *Caſtellus.*

DIONYSOS, *Διόνυσος*, the Name of a Collyrium in *Aetius*, *Tetrab. 2. Serm. 3.* which may be reckon'd among the *Diaſmyrna* and *Chiaca*; for it contains Myrrh, and is levigated in *Chian* Wine. *Ægineta* has much the ſame Compoſition under the Titles of *Collyrium Malabathrinum*, and *Iſotheon.*

DIOPORON, the Name of a Medicine for the Quinſey, in *Cœlius Aurelianus*, *Acut. Morb. Lib. 3. Cap. 3.* which, as *C. Amman.* obſerves, is, perhaps, the ſame with the *Oporice*, deſcrib'd by *Pliny*, *Hiſt. Nat. Lib. 23. Cap. 14.* It is derived from *ὀπώρα*, autumnal Fruit.

DIOPSYRUS. A Name for the *Meſpilus*; *folio rotundiore*; *fructu nigro*, *ſubdulci.*

DIOPTRA, *Διόπτρα*, from *Διόπτομαι*, to ſee through. The Name of an Inſtrument for dilating the natural Cavities, in order to examine their State. Thus a *Speculum Uteri*, or a *Speculum Ani*, may be call'd a *Dioptra.*

DIOPTRON, *Διόπτρον*. A Name for the *Lapis Specularis*, Muſcovy Glaſs.

DIOPTRISMOS, *Διοπτρισμὸς*. The Operation which conſiſts in dilating the natural Paſſages with a *Dioptra*, or *Speculum.*

DIOROBON, *Διὶ ὀρόβων*. A Medicine deſcrib'd by *Trallian*, *L. 5. C. 4.* in which Vetches (*ὄροβοι*) are an Ingredient.

DIORRHOSIS, *Διόρρωσις*, or *Dioroſis*, *Διόρωσις*, from *ὀρός*, or *ὄρρος*, Serum. A Converſion of the Humours into Serum and Water. *Hippocrates.*

DIORTHOSIS, *Διόρθωσις*, from *ὀρθὸς*, right. A Rectification or Reſtitution of a fractur'd Limb into its natural Situation.

DIOSANTHOS. A Name for the *Caryophyllus*; *tenuifolius*; *plumarius*; *flore pleno*, *purpuraſcente.*

It is a kind of ſingle wild Pink, with ſmall Leaves finely jagged, like Fringe or Feathers, of a white or carnation Colour.

The Flowers are cephalic, reſiſt Poiſon, are good for the Stone and Epilepſy. *Lemery des Drogues.*

DIOSCOREA. A Plant ſo called by Father *Plumier*, in Honour of *Dioſcorides*. We have no *Engliſh* Name for it. The Characters are as follows; It has a ſpreading Bell-ſhap'd Flower, conſiſting of one Leaf, which is divided at the Extremity into ſeveral Parts; from whoſe Cup ariſes the Pointal, which afterwards becomes a triangular Fruit, divided into three Cells, in which are contained orbicular bordered Seeds.

The Species are,

1. *Dioſcorea ſcandens*; *Foliis Tammi*, *Fructu racemoſo.* Plum. Nov. Gen. CLIMBING DIOSCOREA, WITH BLACK BRIONY-LEAVES, AND THE FRUIT GROWING IN CLUSTERS.

2. *Dioſcorea ſcandens*, *Folio haſtato*, *Fructu racemoſo.* Houſt. CLIMBING DIOSCOREA, WITH A SPEAR-SHAP'D LEAF, AND CLUSTER'D FRUIT.

3. *Dioſcorea ſcandens*; *Folio ſubrotundo acuminato*, *Fructu racemoſo:* Houſt. CLIMBING DIOSCOREA, WITH A ROUNDISH LEAF, ENDING IN A POINT; AND CLUSTER'D FRUIT. *Miller's Dictionary.*

I find no Virtues aſcrib'd to this Plant.

DIOSCURI, *Διόσκοροι*. A Name in *Caſſius*, *Prob. 30.* and the Author of the *Definitiones Medicæ*, for the *Parotides*; given them, as *Caſſius* ſuppoſes, on account of their being a happy Prognoſtic of Recovery from an acute Diſeaſe; as the Appearance of the *Dioſcuri*, or *Caſtor* and *Pollux*, two Lights ſo call'd, were to Mariners a welcome Sign of the Abatement of a Tempeſt. The Word is compounded of *Διὸς*, the Genitive Caſe of *Ζεὺς*, *Jupiter*, and *κοῦροι*, for *κόροι*, Sons, that is, Sons of *Jupiter.*

DIOSPHYRON, *Διόσφυρον*, otherwiſe *Διόσπυρον*, in *Theophraſt. Hiſt. Plant. Lib. 3. Cap. 13.* is a Sort of Fruit like a Cherry; but reckon'd by *Galen*, *de Alim. Fac. Lib. 2. Cap. 38.* among the Aliments of ſmall Nouriſhment, and bad Juice. *Caſtellus.*

DIOSPOLITICON, *Διοσπολιτικὸν*, a compound carminative Medicine, of which we have two Deſcriptions in *Galen*, *de Sanit. tuenda*, *Lib. 4. Cap. 5.* And *P. Ægineta*, *L. 7. Cap. 11.* reckons it among Antidotes, by the Name of *Dioſpolites*, *Διοσπολίτης.*

DIOTA. A wooden Veſſel or Cup, incruſted with Reſin, Cinnamon, Cloves, and Ginger, in Uſe among the Inhabitants of *Lower Germany*, and other Northern Countries, with an Intent to give a greater Savour to their Beer. *Rhodius ad Scribonium Largium*, *Numb. 135.*

DIOXELÆUM. The Name of a Malagma, mentioned by *Cœlius Aurelianus*, *Chron. L. 5. C. 2.* as a proper Application at the latter End of the Gout; and deſcrib'd by *Aetius.* It is thus call'd from the Oil and Vinegar in its Compoſition.

DIOXUS. The Name of a Collyrium in *Marcellus Empiricus*, *C.* 8. thus call'd from Vinegar, with which the dry Ingredients in it are reduced to the proper Form.

DIPCADI. A Name for the *Muscari*, *obsoletiore flore, ex purpura virente.*

DIPHROS, δίφρος. A Seat or Chair. *Hippocrates* mentions a Chair, the Seat of which was to be made of twisted Rushes, for the Convenience of introducing a Pipe through it, into the Vagina of a Woman, seated upon it; and through that a Vapour, by way of Fomentation, or Suffumigation.

Moschion, in his Treatise on the Diseases of Women, *C.* 46. 47. describes a Chair convenient for Women in Labour; and *Deventer*, in his Treatise on Midwifry, does the same.

DIPHRYGES, Offic. Aldrov. Mus. Metall. 14. Worm. Mus. 133. Charlt. Foss. 55. Schrod. 3. 359. Schw. 376. Matth. Ed. 1366. *Diophryges*, Calc. Musc. 461. SCURF. *Dale.*

There are supposed to be three Species of *Diphryges*; one metallic, which is produced only in *Cyprus*, where it is taken up from the Bottom of a certain deep Pool or Gulph, mix'd with Clay and Dirt; then dry'd in the Sun, and afterwards cover'd with dry Sticks, and burnt. Hence it is call'd *Diphryges*, [διφρυγὲς, from δὶς, twice, and φρύγω, to torrefy] because it is burnt, dry'd, and, as it were, torrefy'd by the Sun, and the dry small Wood. Another Species of *Diphryges* is a sort of Sediment, or Dross, which is separated in the Working of Copper; for, after the Affusion of cold Water, in the same manner as was directed for the Flos Æris, [See the Article Æs] there will be found, after taking out the Copper, this Kind of *Diphryges*, adhering to the Bottom of the Furnace, and much resembling the Copper, both in Taste and Astringency. The third Species is made in the following manner: They take the Stone Pyrites, and calcine it for several Days together in a Furnace, till it acquires the Colour of Vermilion; which done, they take it out, and lay it aside. Some affirm this Species to be produced only of the Matter which perfects the Copper-stone, when this Matter, being torrefy'd in what they call the *Area*, is thence removed into Pits, and there burnt; for it lies all round the Pits, and is found as well after as before the Removal of the Stones. The best *Diphryges* is what tastes of Copper, is æruginous, astringent, and vehemently drying upon the Tongue; Qualities, of which burnt Oker, though sold for *Diphryges*, is destitute.

It is an Astringent, a potent Cleanser, Abstersive, and Drier; represses Excrescences of Flesh; induces malignant and spreading Ulcers to cicatrize; and, mix'd with Turpentine or Cerate, discusses an Abscess. *Dioscorides*, *Lib.* 5. *Cap.* 120.

It is a sort of metallic Recrement, which subsides by an Affusion of cold Water on the melted Copper in the Furnace. At present the Shops are unacquainted with it.

It is of a mixed Quality, containing in itself something moderately astringent, and moderately acrimonious; for which Reasons it is a very good Remedy for all stubborn Ulcers. *Dale.*

DIPHTHERA, διφθέρα. An entire Goat-skin. The same as Isale, or Ixale.

DIPLANGIUM. The same as Diploma, which see.

DIPLOE, διπλόη. The soft Meditullium, which lies betwixt the two Laminæ of the Bones of the Cranium.

DIPLOMA, δίπλωμα. A double Vessel. To boil *in Diplomate*, is to set one Vessel, containing the Ingredients intended to be acted upon, in another larger Vessel full of Water; and to this last Vessel the Fire is to be apply'd.

DIPNOOS, δίπνοος, from δὶς, importing double, and πνέω, to breathe. An Epithet of Wounds, which penetrate into some Cavity, or quite through a Part; or have two *Spiracula*, or Orifices.

DIPSA, δίψα. Thirst.

DIPSACOS, δίψακὸς, from δίψα, Thirst. A Name for the Diabetes. But, in Botany,

DIPSACUS is the Teasel.

The Characters are,

The Root lives two Years; the Leaves are conjugated and prickly on the lower Part of the Rib. The End of the Pedicle is expanded into many long and narrow Leaves, ending in a Prickle, and, like a Calyx, surrounding a conic, long, and obtuse Head. This Head consists of a long, obtuse, conoidal Axis; round which grow rigid, short, excavated, and aculeated small Leaves, furnish'd with a serrated Apex, and serving as a Calyx to the Floscules. From the lowest hollow Part of this small Leaf, arises a long tetragonal Ovary, whose Apex is furnished with a foliaceous quadrangular Crown, and terminated with a fungous orbicular Placenta; from whose Centre proceeds a long Tube, furnish'd with a large Apex. From the Apex of the Ovary, within its Crown, arise a tubulous, quadrangular, quadrifid Flosculе, furnished with four Stamina, proceeding from the internal Sides of the Flosculе, and raised far above the superior Parts of the Flosculе. All these Parts, being affixed very closely and densely to the same Axis, constitute the Head of the Plant. *Boerhaave*, *Index alter*, *Par.* 1.

Boerhaave mentions four Species of this Plant; which are;

1. Dipsacus; Sylvestris; aut Virga Pastoris; major. *C. B.* 385. *Hist. Oxon.* 3. 168. *Boerh. Ind. A.* 133. *Tourn. Inst.* 466. *Dipsacus Sylvestris sive Labrum Veneris.* Offic. J. B. 3. 74. Raii Hist. 1. 382. Synop. 3. 192. *Dipsacus Sylvestris*, Ger. 1005. Emac. 1167. Park. 984. *Dipsacus, sive Carduus Fullonum Sylvestris*, Chab. 352. *Dipsacus, Labrum Veneris ad agrorum margines*, C. B. 35. Merc. Bot. 1. 32. WILD TEASEL.

The wild Teasel grows as large and high, or rather higher than the manured, with such a stiff-crested and prickly Stalk, especially in the upper Part: The Stalk is generally single, divided into several Branches; the lower Leaves are long, narrow, and prickly underneath. The Leaves, which grow on the Stalks, are joined together, encompassing the Stalk, and catching the Rain; but it more particularly differs in the Heads, which have their Prickles growing erect, and not crooked or hooked, like the manur'd Teasel; and each Head having at the Bottom several prickly stiff Radii growing in a Circle about it: The Flowers grow in particular Cells, and are succeeded by the Seed. The Root is thick, and full of Fibres. It grows upon Banks in the Borders of Fields, and flowers in *June* and *July*.

The Virtues of both this and the manured Teasel are much the same; the Roots, which are the only Part used, being reckon'd to have a cleansing Faculty: The Antients commend a Decoction of them in Wine, boil'd to a Consistence, and kept in a brazen Vessel, to be applied to the Rhagades, or Clefts of the Fundament; and for a Fistula therein; and to take away Warts. The Water, found standing in the Hollow of the Leaves, is commended as a Collyrium to cool Inflammations of the Eyes, and as a Cosmetic to render the Face fair. *Miller's Bot. Off.*

2. Dipsacus; sativus, *C. B.* 385. *J. B.* 3. 73. *Ger.* 1005. *Emac.* 1167. *Park.* 983. *Raii Hist.* 1. 382. *Synop.* 3. 192. *Hist. Oxon.* 3. 168. *Dipsacus, sativus, Carduus Fullonum*, Offic. *Dipsacus, Carduus Fullonum*, Chab. 352. MANUR'D TEASEL. *Dale.*

The manur'd Teasel grows to be a large tall Plant, with a stiff, hard, furrow'd, very prickly Stalk. The lower Leaves are long, large, and sharp-pointed, indented about the Edges, smooth above, but having the middle Rib, of the under Part, full of sharp Prickles.

The Leaves, which grow upon the Stalks, wholly encompass them, like a Trough, or long Bason, catching the Dew or Rain which falls, and are likewise prickly underneath. The Stalks are divided into several Branches, bearing on their Tops large Heads, full of crooked prickly Hooks; among which grow several purplish hollow Flowers, each in a particular Cell; and after them come longish, square, striated Seed. The Root is pretty large and whitish.

It is cultivated in the Fields for the Use of the Cloth-workers, to dress their Cloths with, flowering in *July*. *Miller's Bot. Off.*

It agrees in Virtues with the *Dipsacus Sylvestris*.

The *Dipsacus* cures the Scrofula, and, in general, resists all Putrefaction, by a specific Quality, and is a medicinal and savoury Aliment. Boil'd in Wine, it purges by Urine as effectually as Asparagus.

The Root bruised, and mixed with Honey, has been found of extraordinary Virtue in Consumptions that have been regarded in a manner as desperate. *Raii Hist. Plant.*

3. Dipsacus; folio laciniato. *C. B. P.* 385. *J. B.* 3. 75. *M. H.* 3. 168. *b.*

4. Dipsacus; sylvestris; capitulo minori; vel Virga Pastoris; minor. *C. B.* 385. *Hist. Oxon.* 3. 168. *Boerh. Ind. A.* 133. *Virga Pastoris.* Offic. Park. 984. *Virga Pastoris vulgaris.* J. B. 3. 74. Chab. 352. *Dipsacus minor, sive Virga Pastoris.* Ger. Emac. 1168. Merc. Bot. 1. 32. Raii Hist. 1. 382. Synop. 3. 192. SHEPHERDS-ROD.

It grows in moist and watery Places by the Sides of Hedges, and flowers in *July*. The Parts used in Medicine are the Leaves; the Water of which is commended by *P. Ægineta*, for a depraved Appetite in Women; and a Dram of the Powder is prescribed, *Prax. Mayern.* for a Spitting of Blood. *Dale.*

DIPSAS, δίψας. Dry Earth. But a certain Serpent is call'd by this Name, from the immoderate Thirst which is caused by its Bite. This Animal is by some also call'd *Caustes*, and is a Species of Viper, most generally found in maritime Places, of about a Cubit in Length, thick, and becoming gradually smaller towards the Tail. Its whole Body is variegated with black and fallow Spots, and its Head is slender. Besides the other common Effects generally produced by the Bite of a Viper, those bit by the *Dipsas* are seized with a Degree of Thirst which is absolutely insatiable even by the largest Quantities of Liquor, whilst, at the same time, no Evacuations are made, either by Urine, Vomit, or Sweat. The Patients, therefore, who have the Misfortune to be bit by this

this Animal, die, either of an exceſſive Thirſt, when they do not drink; or, when they do, their Stomach, by the preternatural Repletion, is diſtended and ruptur'd; or the ſame Accident happens to the Parts about the Region of the Groins, and lower Belly, as in dropſical Patients. For the Relief of Patients of this Kind, the ſame Meaſures are to be taken as in the Bite of the common Viper; only ſuch Medicines as provoke Urine are principally to be uſed. The Body is alſo to be render'd ſoluble by purgative Infuſions; and a Vomiting is to be excited by Oil, and Decoctions proper for that Purpoſe. To the Place where the Wound is immediately inflicted, after the Extraction of the Poiſon, Scarification, the Application of Cupping-glaſſes, and Hens cut open, we are to apply Quick Lime with Oil, attractive Plaiſters, and the Theriaca. *Aetii Tetrabibl. 4. Serm. 1. Cap. 22.*

Celſus, in the twenty-ſeventh Chapter of his fifth Book, informs us, that in Wounds inflicted by the Ceraſtes, the Dipſas, or the Hæmorrhois, the Bulk of an *Egyptian* Bean of dried Aſphodel is to be divided into two Doſes, adding a proper Quantity of Rue to each. Trefoil, alſo, Horſe-mint, and All-heal, [*Panaces*] with Vinegar, are equally beneficial: Coſtus, alſo, Caſſia, and Cinnamon, may be exhibited with Succeſs.

Actuarius, in his ſixth Book *de Methodo Medendi*, informs us, that in thoſe Patients who are bit by the Dipſas, a palpable Tumor appears on the Part; and that they are ſeized with a Thirſt which neither intermits, nor is capable of Alleviation. The Wounds inflicted by the Hæmorrhois, and the Dipſas, are fatal, becauſe Proof againſt the Power and Energy of Medicines. But we are to attempt the Relief of the Patient by the actual Cautery, if the Nature of the Part does not contraindicate its Uſe, or by the Amputation of the Member. Then acrid Cataplaſms are to be applied, and Aliments of the ſame Quality are to be exhibited. The Patient is alſo to drink unmix'd Wine, bathe frequently, and carefully perſiſt in the Uſe of ſuch other Meaſures, as are thought to have a Tendency to promote his Cure.

DIPSETICUS, *διψητικός*. An Epithet for ſuch Things as cauſe Thirſt.

DIPSODES, *διψώδης*. Thirſty.

DIPYRENON, *δισύρηνον*, from *δὶς*, importing double, and *πυρὴν*, properly a Berry, or Kernel, or the End of a Probe, reſembling a Berry. The Name of a Probe, with two Buttons at one End. It is mentioned by *Cœlius Aurelianus*, *Acut. L. 3. C. 3.* and by *Galen*.

DIPYROS, or DIPYRITES, *δίπυρος*, or *διπυρίτης ἄρτος*. Bread twice baked, from *δὶς*, twice, and *πῦρ*, Fire. *Hippocrates* recommends the Uſe of this Sort of Bread in a Dropſy. *Lib. de Morbis internis.*

DIRADIATIO. The ſame as ACTINOBOLISMUS, which ſee.

DIRCÆA. The Name for the CIRCÆA, Inchanters Nightſhade. *Oribaſius, in Medic. Collect. L.* 11.

DIRECTOR. A hollow Inſtrument to guide the Inciſion-knife, from *dirigo*, to direct. *Directores* is alſo a Name for the Muſcles otherwiſe call'd ERECTORES PENIS.

DISCESSUS. A chymical Term, which the *French* call *Depart*, or *Linquart*. It ſignifies in general any Separation of two Bodies before united; but it is peculiarly applied to the Separation of Gold from Silver by *Aqua-fortis*; where the Silver is diſſolv'd by the Menſtruum, but the Gold remains untouch'd.

DISCOIDES, *δισκοειδὴς*. An Epithet of the cryſtalline Humour of the Eye, in *Aetius*, *Tetrabib. 2. L. 3. C. 1.* from its round Form, like a Diſk.

DISCRETA *Purgatio*, in *Fallopius*, is that Sort of Purgation which evacuates a certain and determinate Humour.

DISCUS, *δίσκος*. Truth, like ſome of the moſt precious Stones, is often ſo conceal'd and blended with other Things of a near Reſemblance, that it is hard to diſtinguiſh the one from the other, without the greateſt Care and Diligence. In no Inſtance does this Obſervation hold more remarkably true, than with reſpect to the *Diſcus* of the Antients, and the various Manners in which it was uſed. That it was a Body employ'd in their gymnaſtic Art, for preſerving Health, and ſtrengthening the Conſtitution, is a Circumſtance of which we are ſufficiently certain; but, as to its Form, its Dimenſions, and various Uſes, Authors diſagree ſo much, that we are, in a manner, obliged to put up with Probability, inſtead of Certainty: For ſome inform us, that the Diſcus was a certain round Inſtrument, ſometimes ſo heavy, that one Man was ſcarce capable of lifting it. Sometimes we find, that the Figure of this Inſtrument reſembled that of the Sun, ſince *Alexander Trallian* calls the Body of the Sun *δίσκος*. The Word *Diſcus* alſo ſignified, among the Antients, a certain Veſſel, in which Diſhes of various Kinds were ſerved up to the Table. *Euſtathius*, in commenting upon theſe Words, *Δίσκοισιν τέρποντο*, in the eleventh Book of *Homer's Iliad*, tells us, that the *Diſcus* was a heavy Stone, thrown in a particular Manner by thoſe who uſed it; and which, when made of Iron, they call'd *σίδηρος*. Others, with whom *Hieronymus Mercurialis* agrees, are of Opinion, that the *Diſcus* was a certain Body, three or four Inches thick, ſomewhat more than a Foot in Length, ſometimes made of Stone, ſometimes of Iron, and ſometimes of Braſs. *Hieronymus Mercurialis*, the beſt Judge of theſe Matters now extant, takes the greater Part of the *Diſci* of the Antients to have been of a plain Figure, reſembling that of a Lentil; that, by the Advantage of this Form, they might be ſecured from breaking, when they fell from conſiderable Heights. Theſe Bodies they threw into the Air; but in a manner quite different from that in which they threw their Darts; in throwing which, they extended the Arm, retracted it to a proper Degree, and then diſcharged the Inſtrument; whereas, in throwing the *Diſcus*, they brought the Arm cloſe to the Trunk of the Body, hung it downwards, and ſomewhat backwards; and thus, with a rotatory kind of Motion, threw it into the Air. That this was the manner in which it was thrown, ſeems pretty obvious from this elegant Line in the twelfth Elegy of the third Book of *Propertius*;

Miſſile nunc diſci pondus in orbe rotat.

That the Figure of the *Diſcus* reſembled a Lentil, is not only probable from *Dioſcorides*, who call'd a Lentil *δίσκος*, but, in a manner, confirm'd by the Marble Statue of a Thrower of the *Diſcus*, preſerved at *Rome*, in the Houſe of *Johannes Baptiſta Victorius*, ſince, in the Hand of this Statue, there is a *Diſcus* of the ſame Form with a Lentil. The Manner of throwing the *Diſcus* we alſo learn from the Statue of a Thrower of the *Diſcus* belonging to the Great Duke of *Tuſcany*. That there was a certain Art in throwing this Inſtrument, is certain, ſince the unſkilful Throwers were ridiculed, and frequently hurt ſome of the Spectators, in conſequence of their Want of due Dexterity. The Intentions of this Exerciſe were various: For it was uſed with a View to render Soldiers, in the Times of Peace, hardy and robuſt: Thus *Homer*, in the eleventh Book of his *Iliad*, ſuppoſes *Achilles*, when angry with *Agamemnon*, to have drawn off his *Myrmidons* from fighting, and exerciſed them on the Sea-ſhore in throwing the *Diſcus* and Darts, in order to prevent that effeminate Turn, which a State of Peace palpably generates in the Minds of Men. All Authors have alſo agreed, that the *Diſcus* was an Exerciſe uſed by the Wreſtlers in their Conteſts, either for Glory, or the Entertainment of the Public. *Galen*, on the other hand, *Aetius*, *Paulus Ægineta*, and *Avicenna*, enumerate the Throwing of the *Diſcus* among thoſe Exerciſes which were performed for the ſake of Health.

DISCUS, in Botany, is explained under the Article BOTANY.

DISCUSSIO, *διαφόρησις*. See DIAPHORESIS.

DISCUSSORIA, DISCUTIENTIA, *διαφορητικὰ*, Diſcutients, are ſuch Medicines as by their Subtilty diſſolve a ſtagnating or coagulated Fluid, and diſſipate the ſame without an external Solution of Continuity.

Doctor *Freind*, in his Hiſtory of Phyſic, whilſt giving an Account of *Aetius*, remarks, that he ſpeaks very ſenſibly of Remedies deſign'd for Diſcuſſing or Suppurating.

"When any Hardneſs," ſays *Aetius*, "begins, and ſome "Senſe of Feeling ſtill remains, emollient Medicines ſhould "be applied, ſuch as, at the ſame time, moderately diſcuſs; "and many there are, which partake of both theſe Qualities: "For violent Diſcutients, which evacuate without ſoftening, "do, indeed, leſſen the Swelling; but leave afterwards an "incurable Evil. For, the thinner Humours being exhaled, "thoſe which are more groſs and terrene ſtay behind, and are "not to be removed by Art: Therefore ſuch Applications "ſhould be uſed, as have a Mixture of both. Firſt, there- "fore, we ſhould try Emollients, then proceed to Diſcu- "tients, and mix them, by degrees, with the other. The "Habit of the Body muſt likewiſe be conſidered, as well as "the Condition of the Swelling. By this means we may "attain to a Knowledge, conjectural indeed, but not entirely "devoid of Art: And, by trying the Experiment two or "three Days, in the manner deſcrib'd, we may eaſily diſcern, "whether we ſhould diminiſh or increaſe the Force of the "Medicine." And, when he comes to mention the Diſtinction between Diſcutients and Suppuratives, he is ſtill more explicit: "Thoſe," ſays he, "who have deſcribed the Virtues "of compound Medicines, have called ſome Plaiſters draw- "ing, and ſome diſcuſſing: There are, too, thoſe which ſhare "both theſe Qualities, which have a great Affinity one with "another: For thoſe that draw, do, at the ſame time, diſ- "cuſs; and thoſe that diſcuſs, draw: And they act either "way with more Energy, according as the predominant "Quality prevails. And therefore, when we reduce them to "the Form of a Plaiſter, we mix with them ſometimes Pitch, "ſometimes Wax, ſometimes Oil, or Roſin, and the like; "ſuch Subſtances not having, in any degree, either a drawing "or a diſcutient Faculty."

And yet, when he comes to give us a Detail of theſe Plaiſters, he leaves us in Confuſion and Uncertainty as to the Operation of them; and does not diſtinguiſh enough, which are moſt proper for Diſcuſſion, and which for Suppuration; nay, often the ſame Plaiſter is recommended ſtrongly for both Intentions. What he ſays of ſome diſcuſſing Plaiſters, is very extraordinary, not to ſay extravagant; he has one, which he ſtyles a moſt wonderful Diſcuſſer of Abſceſſes; and that called *Helladicum*, he tells us, diſperſes Abſceſſes, when turned into Pus. But I may, I believe, venture to affirm, that 'tis out of the Power of any Medicine, to work ſuch a miraculous Change in Abſceſſes, which ariſe upon an Inflammation: For as many times no Application will hinder the Formation of Matter in a Tumor, ſo, when it is once made, I conceive it is certain, that no Art can give any Cure, but by letting it out. But as this Subject wants ſome farther Explanation, allow me to enlarge upon it, ſo far, at leaſt, as this Author ſhews me the Way. One would naturally think, that the Practice of outward Applications, which began ſo early, and has continued in all Ages almoſt the ſame, might have been ſettled and adjuſted to an exact Nicety. No Diſtempers have ever oftener occurred, than humeral Tumors: And yet, if we look into the Writers of Surgery, antient as well as modern, tho' they have been very luxuriant in diſtinguiſhing theſe Tumors into their proper Species and Families, we ſhall find this Subject handled with ſo much Perplexity and Confuſion, that the Indications, and the Remedies, will appear to us equally uncertain. To re-examine only the two moſt general Ways already mention'd, in which Tumors are treated, and thoſe very diſtinct from, and contrary to, one another, Diſcuſſion and Suppuration: If our Practice muſt be directed by what we read, we ſhall often find ourſelves at a loſs, which of the Methods ought to be followed; or, if we ſhould chance to find it, what Medicines muſt be applied to make that Method ſucceed; one Author extolling that for the beſt Diſcutient, which is as vehemently recommended by another to promote Suppuration; tho' ſure, if we would make uſe of the Light which Anatomy gives us, into the true Texture of the cutaneous Parts, nothing might be more clearly explain'd, than the Nature and Reaſon of theſe Operations. In order, therefore, to form a right Notion of Diſcuſſion, we muſt firſt of all ſuppoſe, that the ſeveral Fluids which make theſe Tumors, are, as yet, contain'd in their proper Veſſels: But an Obſtruction ariſing in the capillary Arteries, either from a Fault in the Blood, or from external Accidents, the Humours, which ſhould circulate, ſtagnate in the Part affected, and, by a continual Afflux, diſtend the Veſſels ſo much beyond their Dimenſions, as to raiſe a Swelling. Now from the very Account here given, of the Production of a Tumor, 'tis plain what are the proper and genuine Intentions of Diſcuſſion, which are two; that is, to open the Pores ſo, as that the redundant Matter may be, in ſome meaſure, diſcharg'd by Perſpiration; and to attenuate and alter the Humours ſo, (and not only by outward, but by inward Methods) that they may recover their uſual Courſe, thro' the capillary Veſſels: And theſe two Deſigns muſt be carried on jointly, which are the adequate Means to make the Tumor ſubſide and vaniſh: For, if we ſhould only purſue the firſt Intention, that of opening the Pores, the thinner Part of the Matter, as *Aetius* very juſtly obſerves, would fly off, whilſt the Remainder grows ſtiffer, fixes the Obſtruction, and thickens the Membranes. Hence ſo often, upon the Uſe of violent hot Diſcuſſives, which promote too free a Perſpiration, is left an incurable Induration and Scirrhus; in the ſame manner as in ſome Fevers, eſpecially what are called the Slow, too liberal a Uſe of Diaphoretics, without proper Evacuations, renders the Blood more viſcous than it was before, and more liable to Stagnation; which ill-judg'd and prepoſterous Method not only gives no Relief to the original Complaints, but lays a Foundation for many Diſtempers, and perhaps of a worſe Kind, to ſucceed. If we conſider this Matter with any Attention, we ſhall eaſily perceive, how ill Diſcuſſion is defined by ſome Writers of Inſtitutions, to be an inſenſible Evacuation; the ſecond Intention to attenuate and alter the Humours, which is of equal Neceſſity, being left out in the Definition. For this Reaſon, in order to make a right Diſcuſſion, we find *Aetius*, and, after him, *Hildanus*, adviſes always ſome Share of emollient Ingredients, whoſe Particles may ſerve to qualify the Force of the others, and reſtrain the too vehement and precipitate Diſſipation, that would otherwiſe be made thro' the Skin. And, with the ſame View it is, that ſome practical Writers commend a Mixture of ſpirituous and oily Medicines, not only to diſcuſs Swellings, but to eaſe Pain. Accordingly our Experience tells us, how effectual Oil of Turpentine, and all chymical Oils are, in theſe Caſes; which are nothing elſe but Spirits locked up, and, as the Phraſe is, concentrated by ſome oleaginous Subſtance; as we may argue from their eaſy Rarefaction, and quick Aſcent, by Fire; and therefore, upon repeated Diſtillations, being more freed from the viſcous Particles, they are converted into Spirits, and are ſo called. So neceſſary it is to carry on the Intention of Attenuating, at the ſame time that we make a Diſcharge. Hence thoſe Applications, which have a Mixture of Mercury in them, prove the moſt effectual Diſcuſſives; and a Medicine chiefly conſiſting of Cinnabar, is what is moſt recommended by *Alexander Trallian*, for diſſolving the Concretions in the Joints, which ariſe from a Rheumatiſm or Gout: Accordingly we ſhould never fail of ſeeing the ſame Effects, if Opium and Camphire, two of the moſt attenuating Subſtances which, perhaps, we have, had a larger Proportion in diſcuſſive Compoſitions. On the other hand, we muſt purſue this Deſign of Attenuating, in ſuch a manner, as not to uſe thoſe Things, which clog or obſtruct the cutaneous Paſſages. Oils, which are very glutinous, come under this Character; and therefore *Aetius*, upon the Application of the *Perſian* Plaiſter, which he deſcribes, and even commends to a degree of Rapture, gives a particular Caution, that no Oil ſhould be ſmear'd upon the Part. *Galen* expreſly ſays, that Oils ſtop the Pores; and, accordingly, adviſes Unction after Bathing, for this Reaſon, that they ſhould not perſpire too much: And Oil of Maſtich is a Remedy much eſteem'd by our Author for the Cure of immoderate Sweats, becauſe it obſtructs the Pores. Upon the ſame Principle, *Cœlius Aurelianus* argues againſt the Application of Oil of Roſes, in the Acceſſion of a Phrenſy: And it was more upon this account, no doubt, that the Athletics among the Antients uſed to anoint all their Bodies over with Oil, than for the Reaſon commonly aſſign'd, of making any faſt Hold more difficult: For Perſpiration being ſtopt, there was a larger Supply of Blood and Spirits to the Muſcles, which enabled them to exert a greater Force and Vigour, during their Exerciſes. Therefore, perhaps, the Invention of Unction is generally attributed to *Herodicus*, who was the firſt that preſcrib'd gymnaſtic Medicines. *Hippocrates* and *Galen* forbid the Uſe of Oils and Fats in freſh Wounds and Ulcers; for this Reaſon, that they keep in the Matter, which ſhould be diſcharged, and often occaſion a Fungus: And *Hildanus*, in the Compoſition of his *Unguentum Ægyptiacum*, ſo highly commended by himſelf, and others, for the Cure of Gangrenes, tho' now not ſo much in Vogue, uſes neither Oil nor Fat: And 'tis no impertinent Caution, which he gives about the Cataplaſm he recommends for the ſame Purpoſe, that great Care ſhould be taken, leſt the Flowers of Beans and Lentils he makes it with, ſhould be boiled too much, and, by that means, contract a Viſcoſity, ſo as to endanger a Stoppage of Perſpiration: And the Reaſon is plain to any one, who underſtands the Anatomy of theſe Parts: For we ſee the Plates of the Cuticle ſo diſpoſed and ranged, one over another, in ſuch a manner, that they are often ſtuck and glewed together, even by ſo thin and ſubtle a Subſtance, as that of Perſpiration itſelf: So, in Inflammations and Strains, the glutinous Oils are certainly prejudicial; and, inſtead of diſcuſſing the Swelling, bring it to Matter; and, if this be ſuperficial, and near a Bone, to the no little Hazard of making it foul. The like Obſervations have been made of ſtrong ſuppurative Medicines, uſed at firſt in a Paronychia, when the Tumor has lain deep, and cloſe to the Bone; and, in this very Caſe, you will find a different Practice marked out by *Aetius*. Our own Surgeons with great Judgment divide the Tumor lengthways, upon the Sides of the Tendon, which ſaves the Patient a great deal of Pain, and ſecures him from Danger. Wax is ranked only amongſt the Suppuratives by *Celſus*, and, no doubt, properly belongs to that Claſs: And yet, what a Share is allowed it now in diſcuſſive Applications? Gums and Roſins, tho' they are complex Subſtances, and have a Mixture of penetrating Parts, yet they contain ſome too of ſuch a glutinous Nature, as *Aetius* himſelf acknowledges, that they ſeem adapted more to cloſe the Pores, than to clear them: And therefore, by *Fallopius*, who has diſtinguiſhed better between Diſcutients and Suppuratives, than moſt Writers, are thought improper for the Intention of Diſcuſſing. *Hildanus* gives us many Inſtances of the miſchievous Conſequences of *Paracelſus*'s ſtyptic Plaiſter, ſo mightily cried up in his Time for the Cure of Wounds; and he attributes theſe ill Effects to the large Proportion the Gums have in it, which, he ſays, conſtantly increaſe the Flux of Humours to the Part they are applied to. So in Phlegmons, gummy Plaiſters laid on too early, raiſe the Swelling, and heighten the Pain: For when we rarefy and attract the Humours, and, at the ſame time, obſtruct the Pores, ſo as to hinder a free Diſcharge, we are ſo far from promoting Diſcuſſion, that we put Nature upon another, and, indeed, a quite different Effort, that of Suppuration: And yet, if we examine the Compoſition of the diſcutient Plaiſters and Ointments now in vogue, I am afraid many of them will come under this Cenſure. The Practice of the Antients was, no doubt, more ſimple and uniform. *Hippocrates*, without Diſpute, underſtood Surgery very well; and yet, we read of no Plaiſters in his Works: He uſes a few Cerates only, and thoſe but ſeldom. The Ointments he mentions were not any thing like what we call ſo now; but were either ſimple Oils, or an Infuſion of Herbs made in Oil: But we find his Practice in

Diſcuſſion ran wholly upon Fomentations; a way, perhaps, which he thought moſt proper, both to extract the Virtue of the Plants, and to convey it into the Veſſels, where the Tumor is. In *Celſus*'s Time, the *Materia Medica* was much enlarged; and, as his chief Excellency lay in the chirurgical Part of his Writings, ſo we ſee outward Applications bear the largeſt Share in them. However, if we look into the Malagma's, which he deſcribes for Diſcuſſives, we ſhall find a leſs Proportion in them of Oil, Fat, or Wax, than in our modern Receipts. The Compoſition of Medicines was ſtill much improved in the Time of *Andromachus*, and brought to more Perfection in *Galen*'s; and, even after that, as we may learn from *Aetius*, great Additions were made to this Part of Pharmacy; yet, notwithſtanding the Ingredients were numerous, they were not altogether inconſiſtent: For either there were none of thoſe groſs Subſtances mixt with the Diſcutients; or, if they were put in for the ſake of the Form, a larger Share of warm Ingredients was always added, to make Amends. Upon Examination, I believe it would appear, that theſe Rules have not been ſo well purſued in the ſucceeding Ages; particularly with regard to compound Ointments. Perhaps, what *Zwelfer* obſerves of *Agrippa*'s Ointment, may be juſtly applied to moſt of the others, which are uſed for Diſcuſſing; that the Juices or Roots, boiled, would do better without the Wax or the Oil: And therefore, in moſt Caſes where diſcutient or ſtrengthening Ointments are applied now, *Hippocrates* uſed Fomentations made of the Herbs infuſed in Water. A like Simplicity you may meet with in the Plaiſter of *Nechepſo*, mentioned by *Aetius*: where the Leaves of Cypreſs are only pounded and ſoaked in the ſecond Droppings of new Wine: This he commends for an admirable Diſcuſſive in ſtrumous Swellings, and aſſures us, it will cure in ſeven Days. He ſays there is a natural Property in this Medicine, which makes it a kind of Specific in this Caſe; and therefore adds, that if you would change it, or mix any thing elſe with it, you will do more Harm than Good. Indeed in all the Compoſitions for Diſcuſſion, the Mixture of glutinous Things ſeems not to contribute to their Efficacy, but to their Conſiſtence only. And might not this more particularly be ſaid of mercurial Ointments and Plaiſters? which, perhaps, would ſooner anſwer the End of Diſcuſſing, if the Mercury was only mixed with a little Turpentine, in the manner which *Fallopius* uſed, or with Lard, than, as is the general Practice, with an unreaſonable Heap of glutinous and mucilaginous Subſtances, which by clogging the Pores, only ſerve to hinder the Mercury in its Operation; and, in a literal Senſe, to kill it. As to the Uſe of Plaiſters in this Caſe of Diſcuſſion, *Galen* excepts againſt the very Form, as being too harden'd and ſtiff; and therefore in Phlegmons, which are to be diſcuſs'd, he adviſes Liniments only, as leſs likely to obſtruct the Pores. Of ſuch a Sort of Conſiſtence are the *Emplaſtra ex ſuccis*, deſcribed by *Aetius*, where the Juices of the Plants are boiled up in Oil only. Yet in œdematous Swellings, at leaſt, Plaiſters are proper, and may in ſome Senſe be ſaid to ſerve for a Bandage or Compreſs, to force the Humours into their uſual Chanels.

Thus we ſee what are the proper Methods, which Nature, and her beſt Interpreters, point out for Diſcuſſion: And from what has been ſaid upon this Head, we may eaſily form a right Notion of Suppuration; to effect which, we muſt, indeed ſtop the Pores, ſo as to leave no Vent thro' the Skin, but at the ſame time rarefy and attract the Humours ſo, that by the great Diſtention they make, they may burſt the Veſſels; which, when extravaſated, and brought to Digeſtion, appear in the Form of Pus. And from hence it is, that if we open a Tumor too ſoon, when the Matter is crude, we hinder it from ripening: Therefore all thoſe Medicines, which have been mention'd as improper for Diſcuſſion, are the beſt Suppuratives; accordingly *Galen* ſays, they ought to conſiſt of groſs Parts; and the *Tetrapharmacum*, compoſed of Pitch, Fat, Roſin, and Wax, is throught to be the ſtrongeſt Suppurative by *Celſus*. So in Wounds, the Matter is at length brought to Digeſtion by the Application of emplaſtic Medicines: And, as was obſerved in Diſcuſſion, that extremely viſcous things ought not to be admitted; ſo neither any thing that is very diſcutient or deterſive, ſhould be mixt in thoſe Applications deſigned only to ſuppurate; for the Reaſon *Hollerius* gives in this Caſe, becauſe we then open the Pores which ſhould be ſhut: And there have been too many unfortunate Inſtances, where the Intention has been to ſuppurate, and Applications uſed all the while to diſcuſs. For, when the Matter is of itſelf tending to Suppuration, any Endeavour, by way of Diſcuſſion, or Evacuation, does but divert it from coming to a Head, and ſo prolong, if not wholly fruſtrate, the Cure: On the contrary it is plain, that while we are carrying on the Deſign of Diſcuſſion, we ought to uſe at the ſame time all inward means of emptying the Veſſels, and removing the Obſtructions in them, as *Aetius* every-where inculcates: for elſe, inſtead of Diſcuſſing, we bring the Tumor to Suppuration. Nature is always ſimple and uniform; and Art, to ſucceed well in following her, muſt always tend to the ſame Point. And certainly, if this Part of Surgery were ſet in a more diſtinct View, by thoſe who are Maſters in that Way, and the Effects of outward Applications better adjuſted and explained, nothing would give us a greater Light into the Virtues and Operations of internal Medicines. *Freind's Hiſtory of Phyſic.*

I will not be anſwerable, that the Doctor is entirely in the right, when he ſays, that Oils, and unctuous Ingredients, are not proper for promoting the Intention of Diſcuſſion: For the Diſcuſſion of an inflammatory Tumor is, as I apprehend, brought about, rather by rendering the ſtagnating Matter, which forms the Tumor, capable of circulating in the Veſſels adapted to receive it in a State of Health, than by attenuating it to ſuch a degree, as to make it perſpire thro' the Pores of the Skin. Ingredients, therefore, of an oily Nature, relax the Part to which they are apply'd; and, in conſequence thereof, enlarge the Diameters of the too-much contracted Blood-veſſels, and render them more eaſily pervious to the obſtructing Matter, eſpecially when attenuated by warming Ingredients, apply'd at the ſame time. See ALEIPHA.

DISEPHTHOS, διςεφθος. The ſame as DIPYROS; which ſee.

DISLOCATIO. The ſame as LUXATIO; which ſee.

DISPENSATOR. The Apothecary is ſometimes ſo called; principally when conſider'd as actually preparing and compounding Medicines; for he who collects Simples, and ranges them in proper Order, is ſaid, in the Language of the Shops, to *diſpenſate*.

The Archeus is called the natural *Diſpenſator* of Minerals by *Ger. Dorneus, in Genealog. Mineral. G. 8. Vol. 1. Theat. Chym.*

DISPENSATORIUM, Diſpenſatory, is the Place, or Shop, where Medicines are prepared; but more frequently ſignifies a Book treating of the Compoſition of Remedies.

DISPLICENTIA, δυσαρέσκεια. See DYSARESTESIS.

DISPOSITIO. The ſame as DIATHESIS.

DISRUPTIO. A Species of violent Puncture, which penetrates the Skin to the Fleſh. *Caſtellus* from *Avicenna*.

DISSECTIO, Diſſection. The cutting up a Body, with a View of examining the Structure of the Parts.

DISSEPTUM. The Diaphragm.

DISSOLVENTIA. Medicines which diſſolve Concretions in the Body, that form Obſtructions, are call'd diſſolving Medicines.

In Chymiſtry, Diſſolvents are the ſame as MENSTRUA.

DISSOLUTIO, Diſſolution. It imports alſo a Syncope, that is, Fainting, or ſometimes Death.

DISSOLUTUS *Morbus*. A Name for the Dyſentery.

DISTENTIO, Diſtention. It ſignifies either ſimply Dilatation, or Pandiculation; or a Convulſion, as *Nervorum Diſtentio* almoſt always implies.

DISTICHIA, or DISTICHIASIS, διςιχία, or διςιχίασις: from δὶς, importing double, and σίχη, a Row, or Order. A Diſeaſe of the Eye-lids, which conſiſts in their having a double Row of Hairs, or, at leaſt, ſupernumerary Hairs. *Galen. Aetius.*

DISTICHUM. Of the ſame Derivation as the preceding Word. That Species of Barley, which has only two Rows of Grains. *Blancard.*

DISTORTIO, or DISTORSIO. It is apply'd to the Eyes, when a Perſon ſeems to turn them from the Object he would look at, which is call'd Squinting; or to any Part of the Body, when not in its natural Situation.

DISTORTOR ORIS. A Name for the *Muſculus Zygomaticus*. See CAPUT.

DISTRACTIO, in Chymiſtry, is a forcible Diviſion of Subſtances from each other, which were before united, either by Separation, or Calcination. *Rulandus.*

DISTRIBUTIO, Diſtribution, in Medicine, relates to the nutritious Juices, and is the ſame as ANADOSIS: Or to the Excrements, and is the ſame as *Diachoreſis*, or *Diachorema*. Or it ſometimes implies Diviſion.

DITRICHIASIS, διτριχίασις. From δὶς, importing double; and θρὶξ, a Hair. The ſame as DISTICHIA.

DIVAPORATIO, Exhalation.

DIVERSORIUM. The *Receptaculum Chyli*. *Caſtellus*.

DIVERTALLUM, in *Paracelſus* is whatever is generated of Elements. *Rulandus* defines it, *Generatio Elementorum*.

DIVIDENS FASCIA. The Name of a Bandage for the Neck. See FASCIA.

DIVINUS. A pompous Epithet for many Compoſitions, on account of their ſuppos'd Excellencies.

DIURESIS, διέρησις· from ἔρον, Urine. An Excretion of Urine. Hence

DIURETICA. Medicines which provoke a Diſcharge of Urine.

Thoſe Medicines, which eliminate the ſalt Serum impregnated with groſs, terreſtrial, and recrementitious Parts by the urinary Paſſages, are call'd *Diuretics*. The Medicines of this Kind are, by *Celſus*, in the thirty-firſt Chapter of his ſecond Book, characteriz'd and enumerated in the following Words: "Every

" Every fragrant Vegetable, which is cultivated in Gardens; " provokes a Diſcharge of Urine; ſuch as Smallage, Rue, " Dill, Baſil, Mint, Hyſſop, Aniſe, Coriander, Garden-" creſſes, Rocket, Fennel, Aſparagus, Capers, Cat-mint, " Thyme, Savory, Nipplewort [*Lampſana*], Parſnip, Skir-" ret, and Onions." But of the vegetable Kind, I recommend, ſays *Hoffman*, as Diuretics, the Roots of Parſley, Seleri, Aſparagus, Graſs, Liquorice, Madder, Parſnip, Crow-foot, Pareira-brava, Acmella; the Herbs, Parſley, Ground-ivy, Horſe-tail, Chervil, common Nettle, all Leeks, and all the Species of Garlick; the Flowers of Butchers-broom, and Blue-bottles; the Seeds of Carrot, Parſley, Seleri, Fennel, Gromwell, common Nettle, Violets, the Four greater cold Seeds, the Seeds of Club-moſs, Winter Cherries, Dog-hips, Juniper-berries, Strawberries, the Wood of the Juniper-tree, Saſſafras, and its Bark. Among Reſins and Balſams, Maſtich, Amber, the *Balſamum de Mecha*, and the Balſam Capivi. In the Animal Kingdom, Cantharides, Millepedes, May-worms, Scorpions, Toads, Earth-worms, Cochineal, and Whey. To the Claſs of Diuretics, alſo, belong all alcaline Salts prepar'd by Incineration, as alſo the Salt of Amber, the *Arcanum Duplicatum*, a Solution of Crabs-eyes and Nitre. The compound Medicines belonging to this Claſs are, the *Lixivium Benedictum* of *Mynſicht*, the Tincture of Tartar, the acrid Tincture of Antimony, the *Terra foliata Tartari*, the *Liquor Silicum*, the Lithontriptic Liquor of *Michaeli*, ſoluble Tartar, the Spirits of Turpentine, Maſtich, and Amber, Balſam of Sulphur with Oil of Turpentine, Balſam of Juniper, Oil of Juniper, *Malvaticum Juniperinum*, the *Syrupus Dialthææ* of *Fernelius*, and the *Trochiſci Alkekengi*.

As the Diſcharge of the Urine may be impair'd and render'd difficult from ſeveral Cauſes, ſuch as, firſt, a Defect of due Moiſture in the Blood, or, ſecondly, thick and tenacious Juices, obſtructing the ſmall urinary Ducts of the Kidneys, thirdly, a violent ſpaſmodic Conſtriction of the renal Ducts, or fourthly, their preternatural Relaxation and Weakneſs, ſo alſo the Medicines calculated for reſtoring a due Diſcharge of the Urine, muſt be adapted to the Removal of theſe ſeveral Cauſes. Thus, for Inſtance, ſome Subſtances, by conveying a due Degree of Fluidity to the inſpiſſated Blood, augment the Diſcharge of Urine; of which Kind are all aqueous diluting Medicines, liberal Draughts of Spring-water, whether cold or warm, eſpecially if Herbs of a diuretic Quality are infus'd in them: This Intention is likewiſe anſwer'd by Tea and Coffee, as alſo by mineral Waters, either hot or cold, as they not only dilute the Blood, but, by their alcaline Quality, diſſolve the viſcid and tenacious Humours, and remove the Obſtructions of the Kidneys. The ſame Effect is produc'd by Whey, which is poſſeſs'd of an aqueous, abſtergent, and gently ſtimulating Principle, as alſo of a ſweet nitrous Salt. Other Subſtances diſſolve the tough and viſcid Humours which obſtruct and block up the ſecretory Ducts of the Kidneys, and, by that means, render them fit for performing their Functions. Of this Kind are all fix'd Salts, and the Lixiviums prepar'd from them; as alſo Tincture of Tartar, the acrid Tincture of Antimony, the *Liquor Silicum*, the *Terra foliata Tartari*, the *Tartarus tartariſatus*, the *Arcanum duplicatum*, a Solution of Crabs-eyes, and the *Magneſia alba*, which, with the Acid of the *primæ Viæ*, is converted into an aperient Salt; as alſo, the Tincture of Quick Lime, Mother of Pearl, and Coral, prepar'd with Citron-juice; as alſo the Salts obtain'd by Exhalation from mineral Waters. Other Subſtances ſooth and alleviate the ſpaſmodic Conſtrictions of the Emunctories of the Kidneys, which obſtruct and prevent the due Diſcharge of the Urine. The moſt conſiderable and efficacious of this Kind are, Nitre, the Four greater cold Seeds, and Emulſions prepar'd of them; the Seeds of the white Poppy, of Carrot, and of Club-moſs, as alſo Winter Cherries, and Troches prepar'd of them: The ſame Intention is anſwered by the anodyne mineral Liquor, which is both a ſafe and efficacious Medicine; as alſo by Saffron, and its Eſſence; the Juice of Graſs, in conſequence of its nitrous Salt; a Decoction of the Roots of Graſs and Aſparagus, and Oil of ſweet Almonds, which is a Liquor of a highly demulcent Quality. Other Subſtances, by their oleous, ſubtile, and balſamic Principle, corroborate and ſtrengthen the Kidneys; ſuch as Maſtich, Amber, the *Balſamum de Mecha*, the Balſam of Capivi, Turpentine, the Wood and Berries of the Juniper-tree, Saſſafras, Parſley, Parſnip, Fennel, Aniſe, Crow-foot, Seleri; and the Oils, Eſſences, Spirits, Decoctions, and Infuſions of them. Other Medicines corroborate the Kidneys, by their ſtrengthening, fix'd, terreſtrial, and ſulphureous Principle. Of this Kind are Dog-hips, Rob of Juniper, and the *Malvaticum Juniperinum* prepar'd of it, dried Strawberries, Pareira-brava, Ground-ivy, the Bark of the Root of *Egyptian* Thorn, Horſe-tail, Paul's-betony, and Chervil. Laſtly, other Medicines powerfully ſtimulate the renal Ducts, when they are ſo far weaken'd as to have their Functions either impair'd, or totally deſtroy'd: Of this Kind are almoſt all Inſects, eſpecially Cantharides, Millepedes, Spiders, Scorpions, and dried Toads: And, in the Vegetable Kingdom, all the Species of Leeks and Garlick.

Since there is ſo great a Difference among diuretic Medicines with reſpect to their Principles, and Manner of Operation, their Uſe muſt, of courſe, be different, and they muſt be judiciouſly adapted to the particular Natures of different Caſes; for if to plethoric Patients, labouring under the Stone, we ſhould before Veneſection, and the Diminution of the Quantity of the Blood, exhibit hot Subſtances impregnated with a ſubtile balſamic Oil, ſuch as Preparations of Turpentine, and Juniper, or the Balſams of *Mecha*, *Capivi*, or *Peru*, or acrid Subſtances; or ſuch Inſects as abound with a cauſtic Salt, Garlick, Onions, or Leeks, we ſhould certainly injure the Patient, bring on an Inflammation of the Kidneys, and promote the Generation of Stones. On the contrary, in moiſt, leſs delicate, and more robuſt Patients, who live upon coarſe Food; as alſo in Diſeaſes ariſing from a Redundance of impure Serum, a Fluor Albus, a Gonorrhœa, a Diſpoſition to an Anaſarca, and Leucophlegmatia, theſe draſtic Medicines are of ſingular Uſe and Service.

Still greater Misfortunes are produc'd by acrid and ſtimulating Subſtances, in Caſes where, in conſequence of ſpaſmodic or nephritic Pains, a Diſcharge of the Urine is ſuppreſs'd. Diſorders of this Nature are far more ſafely and efficaciouſly remov'd, by ſuch Medicines as alleviate Pain, and relax Strictures; ſuch as Winter Cherries, the Seeds of Carrot, Club-moſs, white Poppy, and Gromwell; as alſo Emulſions of the Four greater cold Seeds, the *Trochiſci Alkekengi* with Opium, antimoniated Nitre depurated, the Waters of the Leaves of Meadow-ſweet, of the Lime-tree, and of the *Egyptian* Thorn; Oil of ſweet Almonds, ſweet Spirit of Nitre, the anodyne mineral Liquor, Whey; and externally, emollient Baths, and Fomentations; the Virtues of all which are ſo great, that, by alleviating the racking Spaſms, they not only reſtore the free Diſcharge of the Urine, but alſo facilitate the Progreſs of the Stone thro' the Ureters, and promote its Expulſion.

In Diſorders ariſing from a Redundance of Salt and tartareous Serum, which is generally the Cauſe of arthritic and rheumatic Pains, this peccant Humour is carried off by gentle Diuretics, tho' not of the hot Kind, leſt, by their means, the Spiculæ of the Salts ſhould be put into a briſker Motion, and the Parts in which they are lodg'd, be more violently rack'd. The gentle Diuretics, by which this Intention is moſt effectually anſwered, are, the Roots of Sarſaparilla, Pareira-brava, Saſſafras, and China-root; as alſo thoſe of Liquorice, Aſparagus, Madder, Succory, Fennel, Parſley, and Graſs, together with the Wood of the Juniper-tree; and the Preparations of theſe boil'd in Broth made with Fleſh, or in Water. To this Claſs, alſo, belong Whey, and, more eſpecially, the temperate mineral Waters, and warm Springs.

But in Caſes where peccant, viſcid, and tenacious Humours are lodg'd in the urinary Bladder, and eſpecially when the Intention is to expel the firſt Beginnings of a Stone, more acrid and powerful Medicines become neceſſary. This Intention is anſwered by Garlick, exhibited with Spirit of Juniper; as alſo by the Powder of Millepedes, May-worms, Eſſence of Cantharides, and Tincture of Antimony, *Liquor Silicum*, and Tincture of Quick Lime; which may alſo be cautiouſly exhibited in a virulent Gonorrhœa, when a viſcid and tenacious Matter lodg'd in the Proſtatæ, the Neck of the Bladder, or the Urethra, is to be carried off by Urine.

But the moſt ſafe and efficacious Medicines for procuring a free Diſcharge of the Urine, are all Kinds, not only of alcaline fixed Salts, but alſo thoſe call'd neutral; for they not only diſſolve the tough and viſcid Juices, which obſtruct the urinary Ducts, but alſo, by a gentle Stimulus, promote their Diſcharge. This Intention is excellently anſwer'd by Solutions of the Salt of Tartar, Pot-aſh, and fix'd Nitre, as alſo the *Tartarus vitriolatus*, Salt of Wormwood, the *Arcanum duplicatum*, a Solution of Crabs-eyes, *Tartarus ſolubilis*, the *Terra foliata Tartari*, antimoniated Nitre, and *Sal Polychreſtum*.

Theſe Medicines not only contribute to reſtore a due and natural Diſcharge of the Urine, but alſo produce ſome other excellent Effects in the Cure of Diſeaſes: For, as many of them are poſſeſs'd of an aperient and inciding Quality, as others of them are corroborative, balſamic, and reſtore the Tone of the Parts; and others of them of an anodyne Nature; ſo they prove highly efficatious in thoſe chronical Diſorders, which ariſe from an Obſtruction of the Glands of the Viſcera, and Emunctories, or from an Impurity of the Juices, or a Redundance of ſaline, acrid, and tartareous Serum. And certainly, if Relief is to be expected from any Medicines in Dropſies, œdematous Swellings, ſtony Concretions, the Gout and arthritic Pains, we are to look for it from the prudent Uſe of Diuretics: But we are to beware of all hot, acrid, and cauſtic Diuretics, and uſe thoſe which are of a milder Nature, and fit for common Uſe, ſuch as ſmall *Moſelle* Wine, the *Selteran* mineral Waters, and ſuch Ales and Decoctions as are gently diuretic. *Frederic. Hoffman. Medicin. Rational. Syſtemat.*

That

That many have been freed from Fevers after copious Discharges of Urine, we are informed of by the judicious *Hippocrates*, in his Epidemics; who, as he was a careful and diligent Observer of the various Species of Urine, so he seems principally to have drawn his curative Indications from them; but whether, in Fevers, he exhibited such Medicines as provoke Urine, is a Circumstance, of which we are not absolutely certain: Nor is there hitherto any Medicine found, which, in Cases of this Nature, is capable of provoking so powerful a Discharge of the Urine, that we have any Reason to hope for an Elimination of the febrile Matter by it, as we observe in Purging. In the Management of Fevers, therefore, Diuretics are not much to be confided in, with respect to the Evacuations they procure. The Reason of this is sufficiently obvious to any Person, who will only be at the Pains to reflect on the Structure of the Parts; for tho' the renal Arteries are almost as large as those of the Mesentery, and perhaps transmit an equal Quantity of Blood, yet since, in the Kidneys, the Vessels destined for the Secretion of the Humours are much fewer in Number than those of the Intestines, an equally large Evacuation is not, of course, to be expected from the former as from the latter. Besides, we may lay it down as a Maxim, that Diuretics are not, like Emetics and Purgatives, possessed of such a Power and Energy, as always to answer the Intention of the Physician. Tho' I cannot deny, that they sometimes provoke a copious and liberal Discharge of Urine, yet it is certain from Experience, that they often fall short of answering this Intention, as we too frequently observe in Anasarcas, and Cases where the Urine is discharged with Difficulty; which are the Disorders, in which the Relief proposed by Diuretics is principally wanted: So that, at present, that Part of Medicine, which relates to the Discharge of the Urine, is, of all others, the most uncertain and imperfect.

It is a Custom of long standing to exhibit very frequent and liberal Draughts of diluting Liquors to Patients seized with the Small-pox or Fevers. This Piece of Practice is not, as some imagine, of a modern Date, but handed down to us from *Hippocrates*, who, that he might, with the greater Accuracy, prescribe the Regimen proper in acute Disorders, has described various Kinds of Sorbitions, and more especially the Ptisan; so that those who first introduced what we call the temperate and diluting Regimen, borrowed almost the Whole of their Practice, in that respect, from *Hippocrates*'s Treatise *de Ratione Victus in Acutis*: And certainly this Method is not only highly rational in itself, but also productive of the best and most happy Effects, since, by these diluting Draughts, the febrile Heat is abated, and the Mass of Blood so attenuated and divided, as to pass freely thro' the Vessels; by which means the superfluous and peccant Matter is more effectually carried off, either by the Emunctories of the Skin, or the urinary Passages. Nor are these diluting Draughts to be classed among the Evacuants, because they provoke Urine, since they produce this Effect not so much by any inherent diuretic Quality, as because they are highly diluting, and used in large Quantities. Thus, tho' a copious Discharge of Urine be promoted, it may happen, that the Vessels may not be emptied, but continue to have the same Quantity of Humours still circulating in them. Let us, therefore, be content to ascribe only a diluting Quality to these Draughts, without running counter to Nature, by placing them among the Evacuants. *Freind. Comment. in Hippocrat.*

DIUTURNUS. Chronical, when applied to Diseases.

DIVULSIO *Urinæ* is an irregular Separation of the Urine, when the Sediment is divided, ragged, and uneven.

DIURNUS. Diseases, especially Fevers, whose Exacerbations are in the Day-time, have sometimes this Epithet applied to them.

DIWIPAHURU. A sort of *Convolvulus*, which grows in the Island of *Zeilon*, mentioned by *Breynius*.

DIYDROS, διυδρος. Very moist. *Hippocrates.*

DIYGROS, διυγρός. The same as DIYDROS.

DIYLYSMOS, διυλισμὸς, from διυλίζω, to strain. The Percolation or Straining a Liquor, in order to its Depuration.

DOCHME, δοχμὴ. A Measure, among the *Greeks*, of Length. A Palm, the Breadth of four Fingers.

DOCIMASTICE. The Art of examining Fossils, in order to discover what Metals or Minerals they contain.

DOCTILETUS, in *Paracelsus*, is a certain Medicine, which, he says, cures a Cancer; but he does not explain what it is.

DODARTIA. A Plant so called by Dr. *Tournefort*, from Monsieur *Dodart*, a Member of the Academy of Sciences at *Paris*. We have no *English* Name for this Plant.

The Characters are,

The Calyx is monopetalous, tubulous, and divided into five long Segments. The Flower is monopetalous, bilabiated, with a small, horned, bifid Galea, and a long, trifid, trisulcated Beard. It is tubulous in the lower Part, which is furnished on the Inside with four Stamina, having each two Testes. The Flowers grow always solitary, and not in Whorles. In the very Bottom of the Calyx is situated the Placenta, on which, within the Flower, grows a spherical Ovary; from the Centre of whose Apex proceeds a long Tube or Pointal, which, increasing in Bulk at the Apex, becomes a globous, bicapsular, bivalve Fruit, divided by a Partition into two Cells full of small Seeds.

Boerhaave mentions but one Species of this Plant, which is

Dodartia; Orientalis; flore purpurascente. *T. C.* 47. *Voy.* 2. 350. EASTERN DODARTIA, WITH A PURPLISH FLOWER. *Boerh. Ind. alt. Plant. Vol.* 1.

To this *Miller* adds another, which is,

Dodartia, bellidis folio, flore albo spicato. DODARTIA WITH A DAISY-LEAF, AND WHITE FLOWERS GROWING IN A SPIKE.

I find no medicinal Virtues attributed to either of them.

DODECADACTYLON, δωδεκαδάκτυλον. A Name for the *Duodenum*, because said to be twelve Fingers Breadth in Length.

DODECAPHARMACUM. A Composition, in which there are twelve Ingredients; for this Reason the *Unguentum Apostolorum* is called by this Name.

DODECATHEON, δωδεκάθεον. The Name of an Antidote consisting of twelve Simples, and described by *P. Æginet. Lib. 7. Cap.* 11.

DODRA. A kind of Potion among the Antients, made of nine Ingredients. *Castellus.*

DODRANS, σκιβάμι, is the Name both of a Weight and a Measure, signifying three Fourths of an Integer. Thus *Dodrans* is the Weight of three Quarters, or nine Ounces, of the *Libra*; and also three Quarters, or nine Inches, of the *Foot.*

DŒDYX, δοίδυξ. The same as COCHLEARE, which see. It signifies also a Pestle. *Gorræus.*

DOGGA. An *Arabic* Term for PARONYCHIA, which see.

DOGMA, δόγμα, from δοκέω, to be of Opinion; in Medicine, is a Sentiment founded upon Reason and Experience, which are the professed Rule and Principles of the Dogmatists, or Dogmatic Sect, in Medicine, as distinguish'd from the Methodics and Empirics. See a full Account of these Sects in the Preface.

DOGMATICI. The Physicians of the Dogmatic or Rational Sect. See the Preface.

DOLET. Red Vitriol. *Rulandus.*

DOLICHOLITHOS, δολιχόλιθος, from δόλιχος, a Kidney-bean. A Name given by *Velschius* to certain blackish Stones brought from *Tyrol*, of the Shape of a Kidney-bean, and emitting odorous Effluvia upon Attrition. *Castellus* from *Ephem. Natur. curios. Ann.* 1. *Obs.* 157.

DOLICHOS, δολιχὸς, imports long or prolix. But δόλιχος is a Pod, or a Kidney-bean; or a Course or Race of twelve Stadia, or, according to *Suidas*, of twenty-four.

DOLOR. Pain.

Prognostics from PAIN *in acute Diseases.*

Galen, in his first Book of Elements, has defin'd *Pain*, in Opposition to Pleasure, a disagreeable and troublesome Sensation. Of Pain there are various Kinds: One is attended with Pulsation; another with a Sense of incumbent Weight; another with a Tension. There is a Pain which attends Erosion, Incision, Punction, and Perforation, comprehended, with these and the like Differences, under the Name of *Acute*. And, lastly, there is a Pain attended with a Torpor or Numbness.

The first Kind of Pain is called by Physicians *pulsative*, which, according to *Galen*, *de Loc. affect. Lib.* 2. *Cap.* 3. always succeeds some remarkable Inflammation in the Arteries, and the containing Parts, which, oppressing and straitening them upon every Diastole or Elevation, if the Part affected be naturally sensible, causes a dolorific Percussion. Sometimes a Pain with a Pulsation is observ'd in Abscesses hastening to Suppuration.

A second Kind of Pain is call'd *gravative*, because it is attended with a Sense, as it were, of a Weight incumbent on the Place affected, which is some carnous Part; as the Kidneys or Liver suffer under an Inflammation, according to the Observation of *Galen* on 6 *Aph.* 5. That such a Pain is proper to the Kidneys, we are told by *Hippocrates*, 6 *Epid. Sect.* 1. *T.* 5. And *Galen*, *de Locis affect. Lib.* 2. *Cap.* 4. observes those gravative Pains to be incident to the Kidneys, Liver, Spleen, Skin, Glands, and Lungs; for these Parts, he says, are molested with this kind of Pain from a Distention, because the Membrane, in which these Viscera are involved, being oppressed and distended, labours under a Pain attended with a Sense of Gravity.

A *tensive* Pain, which *Archigenes* called *distending*, is excited by a Distention or Convulsion of the nervous, muscular, or membranous Parts, from some Humour, flatulent Spirit, or Inflammation.

A fourth Kind of Pain, which is called *acute*, comprehends Sensations arising from Erosion, Punction, Perforation, and the like. Substances excessively salt or acrimonious, by a violent Abstersion or Abrasion, excite an acute Pain; as under the Dysentery, and other Disorders, in which some of the Parts are corroded. Pungent Pains are proper to the Membranes affected with

with acrimonious Bile; as is the Caſe in Pleuriſies, where the Membrane called the *Pleura* is inflam'd with Bile. Much of the ſame Nature ſeem to be thoſe Pains, which are excited by a Humour inciding or perforating the Parts of the Inteſtines.

Laſtly, there are Pains attending or producing a Torpor or Numbneſs, which, by their Violence, cauſe a Reſolution of the natural Heat of the Part affected, or proceed from an Inflammation ſtrongly compreſſing the Nerves and Arteries, ſo that little or no Heat can thence be communicated; as, for Inſtance, in the Pain of the Kidneys, excited by an Inflammation, the Legs are often ſeized with a Numbneſs.

Beſides the before-mentioned, there are other Diſtinctions of Pain: Thus ſome Pains are fixed; others moveable and wandering, as it often happens in a Redundance of Humours; ſome Pains are continual, and others intermittent; ſome intenſe, others remiſs; ſome again afflict the Patient in the Beginning of a Diſeaſe, others afterwards; and ſometimes they ariſe on the critical Day, ſometimes not; and, to mention no more, ſome Pains are ſeated in the external Parts, others in the internal; ſome in the noble, others in the ignoble Parts. Theſe Diſtinctions of Pains are of great Moment in prognoſticating the Events of Diſeaſes, in the Opinion of *Galen*, *Com. in* 6 *Aph.* 5. All Pain proceeds from ſome Injury done to the Part affected; this is too clear to require a Demonſtration. *Galen*, who accurately examined into all the Cauſes of Pain, tells us, in ſeveral Places of his Works, that they proceed from one or other of theſe two Cauſes; that is, either from a ſudden Alteration of the Part, or a new Temperament ſuddenly induced, or elſe from a Solution of Continuity. Others make only one Cauſe; that is, Solution of Continuity, ſince neither Heat nor Cold excite Pain without a Solution of Continuity; and all immoderate Qualities, as they aſſert from *Galen*, effect ſuch a Solution: For *Galen* himſelf often confeſſes and teaches, that theſe Qualities cauſe a Solution of Continuity, particularly *de Simpl. Med. Fac. Lib.* 4. *Cap.* 2. *Com.* 3. *in Hip. de Fract.* and *Lib. de Inæqual. Temp. Cap.* 6. We conclude, therefore, that the Cauſe of Pain is a Solution of the Continuity of Parts, either from an immoderate Temperament ſuddenly induced, or by Inciſion, Corroſion, Fracture, or, laſtly, by Tenſion. The internal Parts ſuffer Pain from the Violence of a Fever, by which the nervous Parts are dried and vellicated; or from an Inflammation, an Eryſipelas, ſome great Obſtruction or Abſceſs in the Viſcera, or, laſtly, from a Flatus. Now, ſince Pains owe their Riſe to ſuch Cauſes as before-mentioned, they are juſtly denominated bad, as well when alone, as when attendant on other Diſtempers; for all Pain exhauſts the Strength, promotes Crudities, and impedes the Concoction of the Humours. The worſt Pains are ſuch as are excited in the Viſcera, and noble Parts; and of theſe the moſt pernicious, on all accounts, are Pains affecting the Viſcera in a violent manner, and of a long and conſtant Duration; by which the natural Heat of the Viſcera is deſtroyed or reſolved, and no room left to hope for a happy Event. Pains, which are remiſs, moveable, and of ſhort Duration, are accounted not ſo bad, becauſe not excited by an Injury of the Viſcera, but rather of ſome ignoble Part. Sometimes Pains in acute Diſeaſes, tho' in their own Nature bad, prognoſticate Good, and contribute not a little towards prognoſticating a Recovery; as, for Inſtance, ſuch Pains as affect the Patient on a critical Day, in ſome ignoble Part, as the Legs, Feet, or the like; and are attended with Signs of Concoction. But I proceed to treat of good and bad Pains in acute Diſeaſes, as they furniſh us with Grounds and Occaſions for predicting the Death or Recovery of the Patient.

Pains *conſidered as Prognoſtics of a* Recovery.

Pains affect the Patient in the Beginning of a Diſeaſe, or afterwards. In the Beginning they are, for the moſt part, to be accounted as pathognomonic Signs, ſignifying, that ſome Part among the Viſcera labours under an Inflammation. Thus it is when the Pain begins with a Fever, and a Tumor or Tenſion of ſome Part; and theſe Sorts of Pains are called inflammatory. It is beſt for the Patient, when theſe Pains are neither violent nor continual, but, after a ſhort Duration, are either quite removed, or elſe mitigated, and are, beſides, attended with no other pernicious Sign. But it is beſt of all, and ſafeſt, in ſuch a Caſe, when theſe Pains ceaſe or remit with Reaſon, or for ſome manifeſt Cauſe; as it happens when ſuch Ceſſation or Remiſſion is owing to ſome beneficent Evacuation excited by Nature, or procured by Art; ſuch as Veneſection, ſpontaneous Bleeding at the Noſe, Sweats, Stool, Spitting, or when a ſubſequent Fever removes the Pain by the Virtue of its Heat, as we learn from *Hippocrates*, 6 *Aph.* 40. where he ſays, "That a "Pain excited about the Hypochondria, without an Inflam- "mation, is removed by a ſupervening Fever." And afterwards, 7 *Aph.* 52. "They who are moleſted with Pains about "the Liver, are freed by a Fever ſucceeding them." Again, ſpeaking of ſuch Pains as are relieved by ſome Evacuation, he tells us, 1 *Prorrhet.* 152. "That Pains of the Head and Neck, "with a Weakneſs and Tremblings of the whole Body, are "reſolved by an Hæmorrhage, or are removed by Time." And in *Prognoſt.* "Pains and Elevations of the Hypochon- "dria, if recent, and without an Inflammation, termi- "nate in Rumblings in thoſe Parts, or are more effectually "relieved by diſcharging the Flatulencies and Excretions "by Stool and Urine." To the ſame Purpoſe we read, *Coac. Præn.* 67. that "a Pain of the Side in Fevers is mitigated "by a plentiful Evacuation of aqueo-bilious Matter by Stool." And, *ibid.* 172. "A Cephalalgy is relieved by a Flux of "Pus from the Noſe, or a Diſcharge of thick and inodorous "Matter by Spitting. Sometimes the Diſorder is removed by "an Eruption of Ulcers, or by Sleep, or a Flux of the Belly." Again, 6 *Aph.* 10. "A violent Pain of the Head is relieved by "a Diſcharge of Pus, Water, or Blood, through the Noſtrils, "Mouth, or Ears;" as it happened to *Echecrates* the blind Man, 7 *Epid. Text.* 95. of whom it is related, "That he was "afflicted with a violent Pain of the Head, eſpecially in the "back Part, where it is joined to the Neck, whence it "reached to the Top. At length it extended itſelf to the "Left Ear, and affected half the Head. He had a conſtant "Diſcharge of Mucus, moderately aduſt, and attended with "a ſmall Degree of Heat. His Appetite was gone, and, tho' "in the Day-time he was tolerably well, yet his Pain return'd "at Night. At laſt, towards Winter, there was an Eruption "of Pus through his Ear, when all the Symptoms vaniſhed." On theſe Conſiderations, *Hippocrates*, *Prognoſt.* condemns all Excretions which neither remove nor leſſen the Diſorder, and particularly ſuch as are of no Uſe in alleviating the Pain; as, on the contrary, he commends thoſe, by which the Pain is mitigated. We conclude, therefore, that Pains which leave the Patient for ſome manifeſt Reaſon, that is, on account of ſome proper Evacuations, give us very good Hopes of a Recovery. But Pains which are not removed, but continue for a long time, are often Prognoſtics of Abſceſſes; of which we ſhall only ſay at preſent, that they are of good Signification when affecting the ignoble Parts, provided they are not render'd of bad Preſage by other bad Signs.

As for thoſe Pains which ariſe in the Progreſs of the Diſtemper, I judge thoſe, which the Phyſicians call *critical*, to be the moſt kindly and favourable, becauſe, partly as a *Sign*, and partly as a *Cauſe*, they prognoſticate a happy Criſis. As a *Sign*, they indicate a Hæmorrhage, Vomiting, or ſome other Evacuation, agreeable to the Obſervations of *Hippocrates*, 1 *Epid. Sect.* 2. where he ſays, "In burning and other Fevers, a Pain of the "Neck, a Senſe of Weight on the Temples, and a Dimneſs of "Sight, attended with a Tenſeneſs of the Hypochondria, but "without Pain, indicate an Hæmorrhage form the Noſe; but a "Heavineſs of the whole Head, with a *Cardiogmos* and Nauſea, "precede a Vomiting of bilious and phlegmatic Humours." And, in *Prognoſt.* "If, without theſe [bad] Signs, the "Pain continues beyond the twentieth Day, and the Fever "does not leave the Patient, expect an Hæmorrhage from the "Noſe, or an Abſceſs in the inferior Parts; but, if the Pain "be recent, you are to expect, in like manner, an Hæmor- "rhage, or a Suppuration, and eſpecially if the Pain be ſeated "in the Temples or Forehead." Again, 1 *Prorrhet.* 137. "A Pain of the Neck, and great Redneſs of the Eyes, indicate "an Hæmorrhage." And, *ibid.* 142. "A Fever, with a "great Senſe of Laſſitude, ſucceeding a Rigor, prognoſticates "a Flux of the Menſes; but a Pain of the Neck, in that Caſe, "indicates an Hæmorrhage." Again, *ibid.* 247. "A Tenſe- "neſs of the Hypochondria, with a Heavineſs of the Head, "Deafneſs, and a dim and confuſed Sight, predict an Hæmor- "rhage." Alſo, in *Coac. T.* 142. we are told, that, "in a "Fever, Redneſs of the Face, with a violent Pain of the Head, "and Pulſation of the Veins, generally predict an Hæmor- "rhage."

Theſe are the Pains, which, by indicating a happy Criſis, prognoſticate a Recovery; but the moſt ſalutary, in every reſpect, are thoſe, which the Phyſicians call *critical*, on account of their being the Cauſe of a good Criſis: Such are the Pains which affect, ſometimes for a long while together, the ignoble Parts, which lie remote from the Viſcera; and are principally to be regarded, as well as other Signs, when they happen on a critical Day, with manifeſt Tokens of Concoction; in which Circumſtance we may, with Confidence, predict a Recovery, if none of the mortal Signs appear: For Nature, by this Method, has given us a plain Intimation, that the principal Members are delivered from their Burden, by the Expulſion of the noxious Humours to a remote Diſtance; and the farther they are removed, the ſooner is Health to be expected. Such a Proceeding, then, argues great Strength of Nature; and theſe Pains are often productive of Tumors, which are of the beſt kind, and ſuch as *Hippocrates* mentions, *Lib. Prognoſt.* where we read, "That, under a violent and dangerous Peripneumony, "Abſceſſes in the Legs are always of Service;" and theſe, according to *Galen*, in his Comment on the Place, are beſt, when they are removed at the greateſt Diſtance downwards, and fartheſt from the principal Seat of the Diſorder. *Hippocrates* alſo, *Coac. Prænot.* 118. informs us, "That long Fevers "produce Tubercles, or Pains in the Joints; which, however,

" are not unſerviceable." Hence Pains of the Feet, Legs, Knees, Hips, and Groin, being of conſiderable Duration, are very good, as well as thoſe in the Arms, Hands, and behind the Ears, when critically obſerved. It often happens, in acute Fevers, that Nature, having diſcharged itſelf of Part of the Humours, by expelling them to ſome of the before-mentioned ignoble Parts, is better enabled to deal with the Remainder, and attempts an Evacuation, by which, in Conjunction with the Pains, which are continually attracting the Humours to the ignoble Part, the Diſeaſe is brought to a perfect Criſis. It ſeldom happens, but that, in a Criſis occaſioned by Pain, the Patient ſuffers a Relapſe; becauſe the Matter thus thrown upon the Legs, or ſome other ignoble Part, by no means carries off the whole morbific Cauſe; but if with theſe Pains be joined ſome copious Evacuations, a perfect Criſis is happily effected.

But if theſe Pains are to be of any Service in a Fever, they ought to be long and vehement; by which means they will attract a very conſiderable Quantity of the noxious Humour, and ſo make a Revulſion of great Part of the Cauſe of the Diſeaſe; as was obſerved by *Hippocrates*, in the Caſe of *Heropytus*, 3. *Epid. Sect.* 3. *Ægr.* 9. " About the ſixtieth Day, " it is ſaid, the Bleeding at his Noſe ceaſed; but he was ſeiz- " ed with a great Pain in his Right Hip, and his Fever increaſ- " ed; and, not long after, he was affected with Pains in all his " lower Parts; and ſuch were the Circumſtances of his Caſe, " that either his Fever was more intenſe, attended with a con- " ſiderable Difficulty of Hearing; or theſe Diſorders were " remitted and alleviated, but the inferior Parts about the " Hips the more vehemently pained. About the eightieth " Day, all the Symptoms were mitigated, though none " entirely removed; for his Urine was well coloured, and had " a copious Sediment, and his Delirium was abated." And, relating the Caſe of the Wife of *Epicrates*, 1. *Epid. Sect.* 3. *Ægr.* 5. he ſays, that on the tenth Day ſhe was taken with a Pain in her Legs, which, ſome Days after, was ſucceeded by a very friendly Sweat, which allayed the Fever. But there is one thing to be regarded in relation to Pains; which is, as we obſerved before, that Pains ſeldom induce a true Criſis, of themſelves, without the Aſſiſtance of ſome other Evacuation of Humours: For which Reaſon, a Diſeaſe, owing its Criſis to Pain, is ſubject to return upon the Patient; becauſe Pains are incapable of making a Revulſion of all the morbific Matter from the Viſcera, but only a Part; whence it will be neceſſary for Nature to renew the Combat, in order totally to ſubdue the Diſeaſe. Hence proceed frequent Relapſes, according to the Obſervations of *Hippocrates* on the Wife of *Epicrates*, before-mentioned, on *Cleonactydes*, 1 *Epid. Sect.* 3. *Ægr.* 6. and the Virgin of *Abdera*, 3 *Epid. Sect.* 3. *Ægr.* 7. in deſcribing which laſt, he ſays, that " On the twentieth " Day ſhe had a Pain in her Feet, her Deafneſs and Delirium " left her, a ſmall Quantity of Blood came from her Noſe, " ſhe fell into a Sweat, and was freed from her Fever. The " twenty-fourth Day the Fever returned, with the Deafneſs; " her Feet were conſtantly pained, and ſhe grew delirious. On " the twenty-ſeventh ſhe fell into a plentiful Sweat, was free " from a Fever, and her Deafneſs was removed; the Pain of " her Feet continued, but, in all other reſpects, ſhe underwent " a perfect Criſis." *Galen*, *Comm.* 1. *in* 3 *Epid. T.* 19. gives it as his Opinion, that, in an acute Diſeaſe, a Pain and Tumor in the Left Hypochondrium and Spleen are not unſerviceable. Pains excited in the lower Belly, by acrimonious Humours vellicating the Inteſtines, frequently ſignify a Criſis by Stools. Pains behind the Ears, of long Continuance, with a ſufficient Meaſure of Strength, predict thoſe critical Tumors called Parotids. No leſs ſalutary are thoſe Pains which deſcend from the ſuperior to the inferior Parts; for it is beſt for the Patient, when the Diſeaſe, in whatever Manner, recedes to a Diſtance from the principal Parts. Of this Sort of Pains ſpeaks *Hippocrates*, 2 *Epid. Sect.* 5. " A Pain in the Head, he ſays, " deſcends from thence into the Breaſt, thence into the Hypo- " chondrium, and thence into the Hip; for all theſe Parts " cannot poſſibly be pained at the ſame time." And 1 *Prorrhet.* 114. " Pains in the inferior Parts are eaſily ſupported." The ſame is exemplified in the Caſe of *Herophon*, 1 *Epid. Sect.* 3. *Ægr.* 3. of whom *Hippocrates* obſerves, that " On " the eighth Day he had a Fever, his Spleen, before elevated, " ſubſided, and he underſtood every thing; he was affected " with a Pain firſt in his Groin, on the ſame Side with the " Spleen, and afterwards in both Legs; he had a tolerable " Night, his Urine was of a better Colour, and depoſited a " ſmall Sediment. The ninth Day he fell into a Sweat, under- " went a Criſis, and the Diſeaſe intermitted. The fifth Day " afterwards, it returned upon him, together with a Tumor " of the Spleen; he had an acute Fever, and was deaf as before; " and on the third Day after the Relapſe, his Spleen ſubſided, " his Deafneſs was diminiſhed, he had a Pain in his Legs; at " Night he fell into a Sweat; and the Diſeaſe terminated in a " perfect Criſis, on the ſeventeenth Day." Thus much have we ſpoken concerning good or ſalutary Pains; in order to deſerve which Denomination, they muſt firſt begin on ſome critical Day, with Signs of Concoction, and either follow or precede ſome very beneficial Evacuation, either by Hæmorrhage, Vomiting, Stool, Urine, Sweat, or Spitting: And that they may be juſtly called good Pains, it is neceſſary alſo, that the Patient ſhould immediately, or ſoon after, find himſelf either totally cured, or much relieved; and laſtly, they muſt be no ſmall and inconſiderable Pains, but great and afflictive; and not ceaſe after a few Moments, but endure for a conſiderable Time. In general, all continued Pains of the Extremities, eſpecially of the Feet, are of good Preſage in acute Diſtempers.

Pains *prognoſticating* Death.

All Pains affecting a noble Part of the Body are bad; whether they are produced together with the Diſeaſe, and ſo are eſteemed pathognomonic Signs, or are excited afterwards; for the former, in Conjunction with other pathognomonic or proper Signs, form a Prognoſtic: Thus a violent and continual Pain of the Head in a Phrenſy, with other proper and deſtructive Signs of a Phrenſy, is mortal. Some Pains are generally mortal from the Excellence and Uſefulneſs of the Part which they affect; thoſe, for Inſtance, which ſeize the Heart, or cauſe Strangulations in the Mouth of the Stomach, the Fauces, Head, Ears, Breaſt, or Bladder. For Pains in theſe Members are always pernicious; and eſpecially when attendant on a continual Fever, with other bad Symptoms, indicating an Inflammation, which is generally mortal. Of theſe Pains *Hippocrates*, 4 *Aph.* 64. thus pronounces: " In Fevers, a violent burning " Heat about the Stomach, with a *Cardiogmos*, or gnawing " Pain at the Mouth of the Stomach, are bad;" and *Aph.* 65. " In acute Fevers, Convulſions, and violent Pains about the " Viſcera, are bad." In 1 *Prorrhet.* 86. it is ſaid, that " a " Pain of the Fauces, without a Tumor, but attended with " an Anxiety and Suffocation, is deſtructive beyond meaſure." And *Hippocrates*, in *Prognoſt.* ſays, that this Pain, and an Orthopnœa without any Appearance of a Tumor in the Fauces, or Neck, bring very ſpeedy Death; for the Pain of the Throat indicates an internal and violent Inflammation, according to *Galen* in his Comment on the Place, which muſt of neceſſity be mortal. A conſtant and violent Pain of the Head, attending a continual and high Fever, is alſo very much to be dreaded; ſince it exhauſts the Strength, inducing Want of Sleep, and a Delirium; and, at laſt, mortal Convulſions; agreeable to the Sentiments of *Hippocrates*, *Prognoſt.* where he ſays, " that a " violent and continual Pain of the Head in a Fever, if there " are, beſides, other mortal Signs, is a very fatal Prognoſtic." Of which he gives Inſtances in *Philiſtes*, 3. *Epid. Sect.* 2. *Ægr.* 4. *Polyphantus*, 7 *Epid. T.* 120. and the Maid-ſervant of *Eualcidas*, *ibid.* 121. three phrenetical Patients. Of a Pain in the Ears, he ſays, *Lib. Prognoſt.* " that an acute Pain of " the Ears, in a continual and high Fever, is dangerous; for it " threatens a Delirium and Death." Again, concerning Pains in the Belly, we read in *Coac. Text.* 130. " that a burning " Fever, proceeding from a ſevere Pain in the Belly, is mor- " tal." And, as to thoſe in the Breaſt, we are told, 1 *Prorrhet.* 70. " that a Pain ſettled in the Breaſt, with a Numbneſs, is " bad; for if they happen to be taken with a Fever, it proves of " the burning and mortal Kind." And, of thoſe in the Bladder, *Prognoſt.* and *Coac.* 471. " A Hardneſs and Pain in the Blad- " der are very difficult and deſtructive on all Accounts, but " moſt fatal when attended with a continual Fever; for the " very Pain of the Bladder is ſufficient to deſtroy the Patient." Pains of the noble Parts therefore, if violent, are very dangerous in the Beginning of acute Diſeaſes; and, if attended with other bad Signs, mortal.

As for Pains of the Viſcera and noble Parts, which affect not the Patient in the Beginning of acute Diſtempers, but are felt afterwards in the Progreſs of the Diſeaſe; if ſevere and conſtant, they are to be eſteemed very pernicious, as ſhewing ſome noble Part of the Viſcera to be afflicted with an high Inflammation, acceſſory to the Fever, and not to be ſubdued but by extraordinary Strength of Nature. Wherefore theſe Pains are uſually ſucceeded by very formidable Symptoms; ſuch as a Coldneſs of the extreme Parts, which is the ordinary Conſequence of violent Pains, according to *Hippocrates*, 7 *Aph.* 26. where he ſays, that " Coldneſs of the extreme Parts, from a " violent Pain of the Parts about the Belly, is a bad Symptom." The Conſequences of Pains of the Head are Deliriouſneſs, mortal Phrenſies, virulent Vomitings, Convulſions, Abſceſſes, and Suppurations. The Author of the *Prorrhetics*, *Lib.* 1. *T.* 7. ſays, " that, in Pains of the Head, æruginous Vomitings, Want of " Sleep, and Deafneſs, ſignify the Patient to be near to Mad- " neſs." We find the ſame in *Coac. Prænot.* 169. In theſe Caſes virulent Vomitings are very mortal, according to the Obſervation of *Hippocrates*, 1 *Epid. Sect.* 2. " Pains and Heavineſs " of the Head and Neck, attended with a Fever, or without " a Fever, in thoſe afflicted with a Phrenſy, terminate in Con- " vulſions, or in æruginous or virulent Vomiting, in which " latter Caſe the Patient ſometimes dies ſuddenly." Again, 1 *Prorrhet.* 115. we are told, that " a Pain of the Head in " a Fever, attended with Coſtiveneſs, and a thin aqueous Sweat,

" indicates

" indicates the Patient to be ſubject to Convulſions." The ſame we find, almoſt Word for Word, in *Coac.* 154. 177. And, *Coac.* 171. it is ſaid, that " acute Pains of the Head, attend-" ed with a Torpor, and a Senſe of Weight, indicate a Diſ-" poſition to Convulſions." The ſame, in effect, is repeated, *ibid.* 174. In 1 *Prorrhet.* 104. " Suffocating Pains of the " Fauces, without a Tumor, threaten Convulſions; eſpecially " if they owe their Original to the Head." And, *ibid.* " A " Pain of the Loins, a Cephalalgia, and Cardialgia, with ſtrong " Efforts to expectorate, threaten Convulſions." From theſe and a Multitude of other Places in *Hippocrates*, it appears, that violent Pains of the principal Parts are ſometimes ſucceeded by Convulſions. Abſceſſes are, alſo, conſequent to ſuch Pains. Thus, 1 *Prorrhet.* 168. " In a Pain of the Head, a Coma " and Deafneſs indicate an Abſceſs behind the Ears." Continual Pains are Signs of a Suppuration, according to *Hippocrates*, 7 *Aph.* 22. " Pains of long Continuance, in the Parts about the " Belly, produce a Suppuration." And, in *Prognoſtic.* we are informed, that long Pains in the Region of the Thorax and Lungs, which can neither be removed by Expectoration, nor Purging, nor Phlebotomy, nor Medicines, nor Diet, indicate a Suppuration; provided, as *Galen* has it in his Comment, there be no mortal concomitant Sign. We have an Inſtance to this Purpoſe, 7 *Epid. Text.* 60. in the Son of *Hegeſipolis*.

And thus we ſee what Judgment is to be made, and what Prognoſtics to be drawn, from Pains moleſting the Viſcera, or noble Parts; but if theſe Pains are accompanied or ſucceeded by ſome mortal Sign, no leſs than the Deſtruction of the Patient is indicated. The ſame Conſequence may be prognoſticated from a Variety of Pains affecting the noble Parts, or other ſevere Symptoms of a different Kind, appearing at the ſame time; for theſe, as they are Indications of ſeveral dangerous Diſorders in Conjunction, ſo when attendant on Pain, or a Multiplicity of Pains, they portend nothing but the worſt of Events; for if Nature finds it difficult to ſubdue one conſiderable Diſtemper, it muſt certainly ſink and give way to the joint Attacks of ſo many Diſeaſes, unleſs it be endowed with an extraordinary Meaſure of Strength. To this Purpoſe we read, 1 *Prorrhet.* 38. " that in thoſe who are afflicted with a Looſe-" neſs, Laſſitude, Pain of the Head, Thirſt, Want of Sleep, " Obſcurity of the Speech, and a Feebleneſs, there is Reaſon to " fear a high Delirium." And, *ibid.* 95. " A Trembling of " the Hands, a Pain of the Head and Neck, with a Dulneſs " of Hearing, and thick and black Urine, are pernicious Signs, " and portend black Vomitings." Of different Pains affecting the noble Parts at the ſame time, he thus expreſſes his Judgment, *ibid.* 72. " A Pain of the Stomach, with Tenſion of " the Hypochondria, and an Head-ach, are malignant Signs."

We proceed to conſider the Pains of the ignoble Parts, which we have before declared to be good, if attended with a Concoction of the Humours, of conſiderable Duration, and effectual in removing, or, at leaſt, what uſually happens, in mitigating the Fever, with its threatening Symptoms, and putting the Patient in a better State. Such Pains begin, as we ſaid, on critical Days, and are not concerned in exaſperating any of the Symptoms. But Pains of the ignoble Parts in the Beginning of a Diſeaſe, when all Things are crude, by which no Symptoms of the noble Parts are removed or diminiſhed, but rather exaſperated and multiplied, and the Sick rendered worſe, are of a bad Kind. But Pains ariſing in the ignoble and remote Parts, ſuch as the Feet, Legs, Knees, Hips, Groins, and the like, are moſt to be dreaded, when ſucceeded by a Fever, and other no leſs ſevere and dangerous Symptoms, under which the Patient grows worſe and worſe. On theſe we read, in *Coac.* " Convulſions in a Fever, attended with Pains of the Hands " and Feet, are malignant; as are alſo violent Pains of the " Thigh. A Pain in the Knees is no good Symptom; but a " Pain in the Calves of the Legs is malignant, eſpecially when " there is a Cloud in the Urine." We have Inſtances of the Events of theſe Pains in the Caſes of *Crito* and *Phalacrus*, who died under them. Of *Crito*, who lived in *Thaſus*, it is related, 1 *Epid. Sect.* 3. *Ægr.* 9. " That, as he was walking, a " Pain ſeized him in the great Toe; he took his Bed the ſame " Day, being affected with a Shivering and Nauſea, and ſome-" what hotter than ordinary; at Night he was delirious. The " next Day, a reddiſh Tumor, with a Tenſion, aroſe over all " his Foot, and about his Ancle; he had an Eruption of " black Puſtules, with an acute Fever; and raved. Great " Quantities of a purely bilious Matter came away from him " by Stool; and he died the ſame Day, being the ſecond of his " Illneſs." The Caſe of *Phalacrus*, who was of *Lariſſa*, 3 *Epid. Sect.* 3. *Ægr.* 5. was as follows: " He was taken " on a ſudden with a Pain in his Right Thigh, which yielded " to no Remedies: The firſt Day an acute burning Fever came " on by ſlow Degrees, and unattended with Pains. The ſe-" cond Day the Pains of his Thigh remitted, but his Fever in-" creaſed, and he grew reſtleſs, and could not ſleep; his ex-" treme Parts were cold, and he made Plenty of Water, but " not of a laudable Kind. The third Day, the Pain in his " Thigh ceaſed, but he became highly delirious, with much " Reſtleſſneſs and Jactation of the Body. On the fourth Day, " about Noon, he died ſuddenly." In theſe two Patients the Pains of the Foot and the Thigh were of the worſt Kind, becauſe they aroſe at the firſt Commencement of the Diſorder; which Seaſon is by *Galen*, *Lib.* 1. *de Criſibus*, *Cap.* 8. reckoned the worſt for all Kinds of Pain; and were ſucceeded by an acute Fever, Delirium, Anxiety, Want of Sleep, and other dreadful Symptoms, indicating a Redundance of Humours, which affected different Parts, and produced a Variety of Diſeaſes and Symptoms. The ſame fatal Event had the Diſeaſe deſcribed 1 *Epid. Sect.* 3. *Ægr.* 12. when the Patient, being feveriſh, went to Supper; and, being taken very ill in the Night, after vomiting up all he had eaten, was ſeized with an acute Fever: After many ſevere and threatening Symptoms in the Progreſs of the Diſeaſe, on the tenth Day he was taken with a Pain in his Legs, which was ſucceeded by an Exacerbation of all the Symptoms; and the next Day he died. Another Inſtance to this Purpoſe is the Woman of *Thaſus*, 3 *Epid. Sect.* 3. *Ægr.* 2. who, being in Child-bed, was on the third Day, for want of her due Purgations, taken ill of a Fever: The twenty-ſeventh Day, being free from a Fever, ſhe was taken with a violent Pain in her Right Hip, which held her a long time; her Fever returned, her Urine became pale; after which ſhe ſtill grew worſe, and died on the eightieth Day.

Pains of the ignoble Parts are no leſs formidable, and to be ſuſpected when they vaniſh and become inſenſible on a ſudden, or when they begin in a remote Part, and thence remove towards the Viſcera; which indicates a Conflux of Humours to the noble Parts. The Author of the *Prorrhet. Lib.* 1. *T.* 170. pronounces " Pains *(about the Ears)*, ceaſing without a Criſis, a bad " Sign *." *Galen*, in his Comment on the Place, to *ceaſing* adds, *on a ſudden*; becauſe, he ſays, the Word καταλυθέντα, there uſed, imports " a gradual Ceaſing, or Solution; but dolo-" rific Affections becoming ſuddenly inſenſible, without a " manifeſt Abſceſs formed in ſome other Part, indicate a Tranſ-" lation of the bad Juices upon the Viſcera." Pains which vaniſh immediately after their Commencement, or violent Pains diminiſhed, are of very bad Signification, as indicating great Weakneſs of Nature, which is diſabled from expelling all the noxious Matter, or ſuch a Redundance of Humours, as the Part affected is incapable of containing; as *Galen* obſerves in the Caſe of *Crito* before-mentioned. To this Purpoſe, 1 *Prorrhet.* 36. we read, " that Pains in the Calves of the Legs [ſuddenly ceaſing without manifeſt Cauſe] " are ſucceeded by " a Delirium." And, *ibid. T.* 37. " If there appears a Cloud " in the Urine, after the ſudden Ceſſation of a Pain in the " Thigh, it portends a Delirium." Again, *ibid.* 97. " A " Pain of the Side, accompanied with bilious Spit, ceaſing on " a ſudden, without manifeſt Reaſon, prognoſticates Madneſs." This Event however, as *Galen* obſerves, does not always, nor for the moſt part, ſucceed ſuch a Suppreſſion; yet ſome other ſevere Diſorder, beſides a Delirium, may be excited by the Diverſion of the Humour to the Brain. We conclude, therefore, that Pains in the ignoble Parts ſuddenly ceaſing, or becoming quite inſenſible, are of a very bad Kind. No leſs are thoſe to be dreaded, which, being firſt excited in ſome Part remote from the Viſcera, aſcend afterwards to the upper Parts: On ſome Pains of this Kind *Hippocrates*, *Lib. Prognoſt.* makes the following Remarks: " Pains of the Loins, and the inferior Parts, " attendant on a Fever, if they leave thoſe Parts, and aſcend " to the Diaphragm, become highly pernicious: For which " Reaſon we are to take into Conſideration the other Signs; and, " if any one of theſe appears to be bad, the Caſe of the Patient " is deſperate; but if, upon the Tranſlation of the Diſeaſe to " the Diaphragm, no bad Signs can be perceived, there is good " Reaſon to expect an *Empyema*." A Recourſe then of the Humour from the inferior and remote Parts, to the ſuperior, is of bad Signification; which is farther confirmed by 1 *Prorrhet.* 69. where we are told, " that a Diſtortion of the Eye, from " the Recourſe, or Tranſlation, of a Pain, or Diſeaſe, from " the Loins, is a bad Sign." And, *ibid.* 83. " that a Pain " of the Loins recurring to the Mouth of the Stomach, and " attended with a Fever, Shiverings, Vomiting of much thin " and watry Matter, with a Delirium, and Loſs of Voice, " terminates in black Vomitings and Death." Again, *ibid.* 100. we read, that " Long and ſlow Pains of the Loins, " which extend themſelves about the Hips, and excite a Nau-" ſea and Fever, if communicated to the Head in an intenſe " Degree, ſoon become mortal, and the Patient dies in a " kind of Convulſions." And, *Coac.* 70. " that Pains in-" ſenſibly increaſing, if they communicate themſelves to the " Clavicles, and ſuperior Parts, become fatal." Pains then, in ſhort, which affect remote Parts, and ſuddenly ceaſe, or are tranſlated to the ſuperior Parts, are very dangerous; and, if attended with ſome bad Sign, mortal. And, laſtly, Pains in any Part of the Body, which are not felt by the Patient, are a very

* *Proſper Alpinus*, after *Galen*, reads this Aphoriſm without the Words παρ' ὃ, and ſo makes it a general Prognoſtic applicable to all Pain.

bad Prognoſtic; as ſignifying a Delirium, or an Extinction of the ſenſitive Faculty. Theſe are the Sentiments of *Hippocrates*, who tells us, 2 *Aph.* 6. that "They who are affected with "Pain in any Part of their Body, but are, for the moſt part, "inſenſible of the ſame, are not in their right Mind." *Proſper Alpinus de Præſag. Vit. & Mort.*

With reſpect to Pain; *Aſclepiades* conſidered Pain as a principal Indication for Bleeding; for he thought Pain was cauſed by a Retention of the larger Molecules in the Pores or Paſſages, (ſee the Preface) which nothing but Bleeding could diſlodge. This Rule is excellent, whatever the Reaſon he gives for it may be; for it would be difficult to lay down a Maxim in Phyſic either more univerſal, or of greater Importance. See VULNUS.

DOMESTICUS, domeſtic, in Zoology, imports *tame*; and diſtinguiſhes Animals which are nouriſhed at home, from thoſe which are wild.

In Botany, it ſignifies *cultivated*; and diſtinguiſhes Plants which are improved by Cluture, from thoſe which grow wild.

In Pharmacy, ſome Purges are called domeſtic; which are ſuch as People keep at home, or may prepare themſelves, and may take occaſionally, without the Advice of a Phyſician.

DOMINARUM AQUA, the Name of a Water deſcribed by *Mynſicht*, which he recommends for facilitating Delivery, and provoking the Menſes.

DONAX. See ARUNDO.

DORA. A Name for the *Milium Arundinaceum, ſubrotundo Semine, Sorgho nominatum.* See MILIUM.

DORCADIZON, δορκαδίζων. The ſame as CAPRIZANS, which ſee.

DOREA. A Perſon who can ſee by Day, and not by Night, is thus called by *Rhaſes*.

DORIA.

The Characters are;

It hath a perennial fibroſe Root; the Leaves are almoſt whole, and oblong; the Cup of the Flower is cylindrical, and in form of a Tube; the Flowers grow upon the Summits of the Branches, and are diſpoſed either in form of an Umbel, or in a looſe Panicle, which are radiated like the Ragwort.

Boerhaave mentions fifteen Species of this Plant, which are;

1. Doria; Narbonenſium. *Boerh. Ind. A.* 98. *Herba Doria*, Offic. *Herba Doria Lobelii*, Ger. 349. Emac. 431. Raii Hiſt. 1. 279. *Herba Doria vulgaris*, Park. Theat. 541. *Doria*, Dill. Cat. Giſſ. 164. *Virga aurea major vel Doria*, C. B. 268. *Virga aurea major carnoſis ſucculentis foliis ad caulem latis.* Hiſt. Oxon. 3. 123. *Aliſma Matthioli ſive Doria*, J. B. 2. 1064. *Aliſma ſive Damaſonium, Doria & Virga aurea Monſpelienſium*, Chab. 333. *Jacobæa pratenſis altiſſima Limonii folio*, Elem. Bot. 387. Tourn. Inſt. 485. DORIA'S WOUNDWORT.

It grows on the Banks of Rivers, and flowers in *July* and *Auguſt*. The Leaves are uſed in Medicine. It is an excellent Vulnerary, and agrees in Virtues with Golden-rod. *Dale.*

2. Doria; quæ Jacobæa; foliis integris & mucronatis. *M. H.* 3. 110. *Jacobæa paluſtris, altiſſima; foliis ſerratis.* T. 485. *Virgæ aureæ ſive Solidagini anguſtifoliæ affinis, Lingua avis Dalechampii*, J. B. 2. 1064. *Lingua major*, Lugd. 1037. *Conyza paluſtris, ſerratifolia*, C. B. P. 266. DORIA WITH WHOLE SHARP-POINTED LEAVES.

Mr. *Ray* ſays he has found it in the Fen-ditches in the Iſle of *Ely*; and particularly near *Stretham* Ferry. I have ſought for it ſeveral times in vain.

Tabernæmontanus has a good Figure of this Plant. The *Hiſt. Lugd.* has a good Figure of it alſo, and deſcribes it very well, and compares its Flower, not without Reaſon, to that of the Ragwort. But the Figure of *Camerarius* and *Thalius* are good for nothing. *Martyn's Tournefort.*

3. Doria; quæ Jacobæa; Alpina; foliis longioribus ſerratis. *Boerh. Ind. A.* 98. *Conſolida Saracenica, Solidago*, Offic. *Solidago Saracenica*, Ger. 347. Emac. 429. Raii Hiſt. 1. 279. *Solidago Saracenica vera, ſalicis folio*, Park. 539. *Virga aurea anguſtifolia ſerrata*, C. B. 268. *Virga aurea, alias Conſolida Saracenica*, Schrod. 177. *Virga aurea anguſtifolia ſerrata, ſive Solidago Saracenica*, J. B. 2. 1063. Hiſt. Oxon. 3. 124. *Virga aurea anguſtifolia ſerrata, quibuſdam etiam Solidago Saracenica dicta*, Chab. 333. *Jacobæa Alpina, foliis longioribus ſerratis*, Tourn. Inſt. 485. Elem. Bot. 387. SARACENS CONSOUND.

It flowers in *September*. The Leaves are in Uſe, which are long, broad, crenated at the Edges, and of an aromatic and aſtringent Taſte.

It is an excellent Vulnerary, and fit to be uſed either internally or externally; it alſo heals Fiſtulas, and cleanſes and heals malignant Ulcers. *Dale* from *Schroder.*

4. Doria; quæ Jacobæa; Orientalis; Limonii folio. *T. C.* 36. *H. R. D.* EASTERN DORIA, WITH A SEA-LAVENDER-LEAF.

5. Doria; Americana; lato, rigido folio. *Virga aurea Novæ Angliæ, lato, rigidoque folio*, Par. Bat. M. H. 3. 125. *Virga aurea, ex Nova York, foliis ſymphyti majoris hirſutis*, Sc. Bot. Par. t. H. AMERICAN DORIA, WITH A BROAD STIFF LEAF.

6. Doria; quæ Jacobæa; Africana, fruteſcens; folio rigido & hirſuto, major. *H. A.* 2. 149. *H. R. D.*

7. Doria; Africana; arboreſcens; craſſis & ſucculentis foliis, atriplicem referentibus. *H. R. D.* AFRICAN TREE DORIA, WITH THICK SUCCULENT LEAVES, SOMEWHAT LIKE THOSE OF ATRIPLEX.

8. Doria; quæ Jacobæa; Africana; fruteſcens; craſſis & ſucculentis foliis. *H. A.* 2. 147. *H. R. D.* AFRICAN SHRUBBY DORIA, WITH THICK SUCCULENT LEAVES.

9. Doria; quæ Jacobæa; Africana; Hederæ Terreſtris folio; repens. *H. A.* 2. 145. *H. R. D.* AFRICAN CREEPING DORIA, WITH A GROUND-IVY-LEAF.

10. Doria; quæ Jacobæa; Africana; fruteſcens; Coronopi folio. *H. A.* 2. 139. *H. R. D.* AFRICAN SHRUBBY DORIA, WITH A HARTSHORN-LEAF.

11. Doria; quæ Jacobæa; Alpina; foliis rotundis, ſerratis. *C. B. Pr.* 66. *M. H.* 3. 110. *Jacobæa Alpina, foliis ſubrotundis, ſerratis.* C. B. P. 141. T. 485. *Conyza Alpina.* J. B. 2. 1055.

12. Doria; Alpina; foliis ſubrotundis, pedunculo folioſo.

13. Doria; quæ Jacobæa; Hiſpanica; folio Roſmarini. *T.* 486. *Jacobæa, folio Crithmi Littorei.* M. H. Blæſ. M. H. 3. 111. *Jacobæa, lini folio, Hiſpanica, & Italica.* Bocc. Muſ. p. 2. T. 49. a.

14. Doria; quæ Jacobæa; Latifolia, paluſtris; ſive aquatica. *Raii Syn.* 82. *Raii H.* 285.

15. Doria; quæ Jacobæa; lacus Agnani, facie ſenecionis; odore Fœniculi. *a. Boerhaave's Index alter Plantarum*, vol. 1. p. 98.

DORIS. A Name for the ECHIUM, in *Paulus Ægineta, L. 7. C. 3. Doridis Humor* is Sea-water, in *Serenus Samonicus.*

DORONICUM.

The Characters are,

It hath an intricate knotted Root: The Leaves are produced alternately on the Branches: The Stalks are a little branch'd: The Flowers (which grow on the Tops of the Stalks) are radiated, like the greateſt Starwort. The Half-florets, in the Diſk of the Flower, are trifid. The Cup of the Flower is expanded, and cut into many Parts, almoſt to the Bottom; and is not ſcaly, but each ſingle Segment is in the Form of a Diſh.

Boerhaave mentions five Species of this Plant; which are,

1. Doronicum; maximum; foliis caulem amplexantibus. *C. B. P.* 185. *M. H.* 3. 127.

2. Doronicum; Plantaginis folio; alterum. See ALISMA.

3. Doronicum; integro & craſſo hieracii folio. *Bot. Monſp.* 295. *M. H.* 3. 128. *Jacobæa integro & craſſo hieracii folio.* T. 486.

4. Doronicum; longifolium; hirſutie aſperum. *C. B. P.* 184. *M. H.* 3. 127.

5. Doronicum; Plantaginis folio; Luſitanicum. *T.* 488.

Boerh. Ind. alt. Plant. Vol. 1.

We are inform'd in the *Hiſtoria Plantarum*, publiſh'd under the Name of *Boerhaave*, that the celebrated *Geſner*, who was a very diligent Searcher into the Virtues of Plants, took ſome of this Plant in the Morning faſting, and two Hours afterwards wrote a Letter to his Friend, in which he ſaid, That he was then in good Health; but, ſoon after, it appear'd, by Letters from other Hands, that he was taken ill, and died an Hour after he had finiſh'd and ſent away the before-mention'd Letter to his Friend: Hence *Doronicum* came to be juſtly reckon'd among poiſonous Herbs. It has been diſputed, whether *Doronicum* ought to be admitted into the Compoſition of the *Theriaca: Matthiolus* was for its Admiſſion, and aſſerted, that it had no venomous Quality.

Beſides the foregoing Species of *Doronicum*, *Dale* mentions the three following; which are,

1. *Doronicum*, Offic. *Doronicum*, Cod. Med. 46. *Doronicum Officinarum*, Rupp. Flor. Jen. 141. *Doronicum vulgare*, Park. 319. Raii Hiſt. 1. 274. *Doronicum majus Officinarum*, Ger. 600. Emac. 759. Hiſt. Oxon. 3. 127. *Doronicum radice Scorpii*, C. B. 184. Dill. Cat. Giſſ. 83. Tourn. Inſt. 487. *Aconitum Pardalianches*, Mont. Plant. Var. Ind. 35. LEOPARDS-BANE. *Dale.*

The Roots of this *Doronicum* are, by ſome, fanſied to be like Scorpions in Shape, being thick towards the Head, and narrower towards the End, with ſeveral Fibres growing on each Side. The lower Leaves are ſet on long Foot-ſtalks, and are in Shape like Violet-leaves, of a pale-green Colour, hairy and ſoft in handling. The Stalk grows to be a Foot or more high, ſtriated, and ſomewhat hairy, having the like Leaves, ſet on without Foot-ſtalks. It is divided into two or three Branches, each of which has on its Top one pretty large yellow Flower, like a Chryſanthemum, or Marigold; but having narrower Petala,

which passes away into Down, including small, long, black Seed. It grows in many Places upon the *Alps*, flowering in *May*.

The Root only is used, and that but seldom; some commending it against the Poison of Scorpions; others reckoning it a Poison itself, affirming, it will destroy Wolves, Dogs, and other Animals. They who have a mind to see the Arguments on both Sides, may consult *Lobel* and *Matthiolus*. *Miller's Bot. Off.*

2. *Doronicum minus*, Offic. Ger. 600. Park. 319. Raii Hist. 1. 277. *Doronicum minus Officinarum*, Ger. Emac. 759. Hist. Oxon. 3. 127. *Doronicum Plantaginis folio*, C. B. 184. Tourn. Inst. 487. *Doronicum folio ferè Plantaginis oblongo*, J. B. 3. 18. Chab 339. LESSER LEOPARDS-BANE.

Its Roots, especially those which are old, are Tubercles of about an Inch in Length, and about seven or eight Lines broad, vaulted on the Back, raised with some semicircular Ridges, like little Scales; their Tubercles may be compared for Shape to a Scorpion; for they are accompanied at each Rib with two or three Pair of rugged, and, as it were, scaly Pairs of Fibres, two or three Lines thick, ending in a Point, pretty like the Claws of a Scorpion: The Tail is represented by a long Fibre, which, however, is not crooked, but creeps, and serves to multiply the Plant. The Part opposite to the Tail prolongs itself after the manner of a scaly Neck, which sustains a little Root, much like the first. Below these Roots grow Fibres, more or less small, three or four Inches long, not very capillary: These Roots are fleshy, of a dirty white Colour, sweet at first like Liquorice, but afterwards leaving a little Bitterness. The Leaves usually proceed from the young Tubercles; their Pedicle is white, three or four Lines broad, hairy, then contracted to two Lines, furrow'd, pale-green, rounded and angular at the Back. These Leaves are like those of the common Plantain, veined in like manner, insipid, mix'd with a little Acrimony, four Inches long, and three broad, soft, pale-green, scatter'd with very short Hairs, and having the Edges waved, and lightly notched. The Stalks are about two Foot high, two or three Lines thick, chanelled, hollow, hairy, accompanied with some alternate Leaves, pretty distant one from another. These Leaves encompass them with two Wings, like Ears; whereas the under ones have no Ears at all. The Leaves of the Stalks are usually cut like a Heart on each Side; the last are very narrow, and pointed. Each Stalk sustains a yellow Flower, two Inches in Diameter: The Disk is convex, eight or nine Lines broad, composed of several Florets, three Lines high, fistular, cut like a Star, with five Points: They send from their Bottom a forked Thread; the Horns of which are crooked, and appear out of a chanelled Sheath: The Ray of this Flower consists of Semiflorets, about nine Lines long, and a Line and half broad, blunt and notched at the End. From their Base also, which is fistular, arises a little forked Thread: Each of the Florets and Semiflorets sits upon a greenish Embryon, which afterwards becomes a chanelled blackish Seed, one Line long, adorned with a whitish Down, two Lines and a half long. *Martyn's Tournefort.*

3. *Doronicum radice dulci*, C. B. Pin. 184. Chom. 313. Raii Hist. 1. 275. Tourn. Inst. 487. *Doronicum folio subrotundo serrato*, J. B. 3. 17. Hist. Oxon. 3. 127. *Doronicum Brachiatâ radice*, Park. Theat. 320. *Doronicum radice repente*, Ger. 621. Emac. 760. CREEPING LEOPARDS-BANE.

The Hunters and Shepherds who live on the Mountains, and call this Plant by the Name of the *wild Goat's-root*, account it, together with the largest Sort of *Doronicum*, as effectual a Remedy against the Vertigo, as the *Auricula Ursi*, with a yellow Flower; and affirm it to be of extraordinary Use for confirming their Strength. *Raii Hist. Plant.*

DORPESTOS, δόρπηστος, or δόρπησὶς, Supper, or the Time of Supper.

DORPOS, δόρπος. The same as DORPESTOS.

DORSALIS TABES. A Species of Atrophy. See TABES.

DORSIFEROUS PLANTS, of *Dorsum*, the Back, and *fero*, to bear; such Plants as are of the capillary Kind, without Stalks, and which bear their Seeds on the Backside of their Leaves.

DORSTINEA. The Name of the Plant of which the *Contrayerva* is the Root.

It was so named by Father *Plumier*, from Dr. *Dorsten*, a *German* Physician, who published a History of Plants in Folio.

The Characters are,

It hath a thick fleshy Placenta, which is flat, and situated vertically; upon which are placed many apetalous Flowers, which are succeeded by roundish Seeds, somewhat like those of Gromwell.

The Species are,

1. *Dorstinea dentariæ radice, Sphondylii folio, Placenta Ovali*, Houst. CONTRAYERVA WITH A TOOTHWORT-ROOT, COW-PARSNIP-LEAF, AND AN OVAL PLACENTA. This is the Plant already mentioned under the Name of *Contrayerva Radix* of *J. Bauhine.*

2. *Dorstinea dentariæ radice, folio minus laciniato, Placentâ quadrangulari & undulata*, Houst. CONTRAYERVA WITH A TOOTHWORT-ROOT, LESS JAGGED LEAF, AND A QUADRANGULAR UNDULATED PLACENTA.

3. *Dorstinea Sphondylii folio serrato, Placenta quadrangulari, radice dentariæ.* CONTRAYERVA WITH A TOOTHWORT-ROOT, SAWED COW-PARSNIP-LEAF, AND A QUADRANGULAR PLACENTA: This is the Plant already mentioned under the Name of *Contrayerva Officinarum.*

The first of these Plants was discovered by the late ingenious Dr. *William Houstoun*, near *Old Vera Cruz*, in *New Spain.* The second was found by the same Gentleman, on the rocky Ground about *Campechy.* The third Sort was found in great Plenty in the Island of *Tobago*, by Mr. *Robert Millar*, Surgeon. But the Roots of all these Species are indifferently brought over, and used in Medicine, and for Dying.

These Plants are at present very rare in *Europe*; nor was it known what the Plant was whose Roots were imported, and had been long used in Medicine in *England*, until the late Dr. *Houstoun* informed us; for although Father *Plumier* had discovered one Species of this Plant, and given the Name of *Dorstinea* to the Genus, yet he seems not to take notice, that the *Contrayerva* was the Root of that Plant. *Miller's Dictionary, Vol.* 2.

DORSUM. The Back.

What we commonly call a Gibbosity, is a preternatural Incurvation of the Spine of a Back, either to the posterior, or lateral Parts. This Misfortune is more incident to Infants, than to Adults; and more frequently draws its Origin from external, than from internal Causes; for it is scarce possible, but the soft and tender Bones of Infants must be violently hurt and distorted by Falls, and severe Blows, and by wearing too tight Stays, and other Garments. This Disorder may also arise from internal Causes; when, for Instance, those Ligaments which sustain the Back, are become too lax and flaccid; or when the Vertebræ themselves are become carious; though *Gouey*, in his Surgery, furnishes us with a memorable Example of the Possibility of a signal Distortion and Incurvation of the Back, in consequence of a preternatural Contraction of the Muscles of the Abdomen. And, certainly, unless this Species of Disorder be speedily relieved, the small distorted Bones of the Back are gradually indurated, and assume a Figure and Attitude so much deform'd, that 'tis impossible ever after to restore them to their natural Situation; so that 'tis not to be wonder'd at, if inveterate Gibbosities are generally entirely incurable: But, when proper Measures are seasonably and speedily taken, this Disorder sometimes admits of a Cure, or, at least, becomes more mild and tolerable.

In Cases of this Nature, the most effectual Relief is obtain'd from Stays, made either of Plates of Iron, thick Paper, or Whale-bone, and arm'd with proper Trusses, especially in the Part where the Gibbosity appears. This ought to be worn by Infants both Day and Night, till there remains no Danger of the Disorder becoming worse, and more terrible. Surgeons have also invented an Instrument on purpose for this Disorder, resembling the Figure of a particular Species of Cross, and represented by *Fig.* 5. in *Tab.* 45. The Part A A being applied to the Back, B B to the Neck, C C and D D to the Shoulders, and E E being tightly tied about the Belly, the Spine of the Back is by this means kept straight, and defended against farther Injury. By these Measures Children are either gradually restored to their former Shape, or, at least, preserv'd from greater Degrees of Calamity and Deformity. It is also highly expedient, in Cases of this Nature, carefully to anoint the Part with *Hungary Water*, Spirit of Lavender, the *Spiritus Matricalis*, described in the *Leyden Dispensatory*, or some other corroborating Spirit. It is also to be carefully cover'd with some corroborating Plaister, such as Oxycroceum, Opodeldoc, the *Emplastrum Nervinum* of *Vigo*, or others of a like Nature; not neglecting, in the mean time, proper internal Medicines, accommodated partly to strengthen the weak and infirm Members, and partly to evacuate the superfluous and peccant Humours. These Measures, unless the Disorder is inveterate, are generally of singular Service in restoring Incurvations and Distortions of the Back. *Heister. Institut. Chirurg.*

DORYCNIUM.

The Characters are,

The Leaf is divided into five Segments, quite to the Pedicle, so as to appear like five Leaves; the Pod is short, and contains only one Seed, like the *Barba Jovis.*

Boerhaave mentions but one Species of this Plant; which is,

Dorycnium Monspelienſium, *Lob. Ic.* 51. *Dorycnium Monspessulanum, fruticosum*, J. B. 1. 388. *Lotus Polyceratos, frutescens, incana, filiculis subrotundis, erectis*, M. H. 2. 178. *Trifolium, album, angustifolium, floribus velut in capitulum congestis.* C. B. P. 329. H. R. D. SHRUB TREFOIL OF MONTPELIER. *Boerh. Ind. alt. Plant. Vol.* 2.

It grows in rocky Places near *Montpelier*. *Ray*.

DORYCNIUM IMPERATI. A Name for the *Convolvulus, major, rectus; Creticus; argenteus*; which ſee.

DOSIS, δόσις, from δίδωμι, to give. A Doſe. The Quantity of a Medicine exhibited at one time.

DOSITHEI PASTILLUS. The Name of a Paſtil in *Aetius, Tetrabib.* 3. *Serm.* 1. *C.* 63. and in *Nicolaus Myrepſus, Sect.* 41. *C.* 78.

DOTHIEN, δοθιήν. A Boyl, a kind of inflammatory Tumor. The ſame as FURUNCULUS.

DOUGLASSIA. This Plant was ſo named by the late Dr. *William Houſtoun*, in Honour of Dr. *James Douglas*.

The Characters are,

It hath an anomalous Flower, conſiſting of one Leaf, whoſe lower Part is tubulous; but the upper Part is expanded, and divided into five Segments. The Fruit, which is roundiſh, is divided into two Parts, which contain two Seeds.

There is but one Sort of this Plant at preſent known, which is,

Douglaſſia fruteſcens & ſpinoſa, Liguſtri folio, flore albo. Houſt. *Paliuro affinis liguſtrifolia ſpinoſa, flore monopetalo diformi, fructu ſicco ſubrotundo.* Sloan. Cat. Jam. SHRUBBY PRICKLY DOUGLASSIA, WITH A PRIVET-LEAF, AND A WHITE FLOWER. *Miller's Dictionary, Vol.* 2.

DRABA. A Name for the *Thlaſpi. Lepidium. Leucoium*, and ſeveral ſorts of *Heſperis*.

DRACATIUM, Lead. *Rulandus*.

DRACHMA.

The *Greeks* made uſe of *Drachmæ* in reckoning Sums, either in their own or *Roman* Affairs; as the *Romans* did of *Nummi Seſtertii*, of which there are many Examples in all Authors, eſpecially in *Plutarch*.

A *Drachm* is the hundredth Part of a *Mina*.

Δραχμὴ, *quaſi* δραγμὴ, is a Thing taken or apprehended by the Hand, from δράσσομαι: or, as you would ſay, a Handful of ſix *Oboli*, which are equal in Value to it.

It is a Weight, as well as a Coin. The *Attic Drachm* is commonly reputed equal in Value to the *Denarius*; and, as amongſt the *Romans* the *Denarius*, ſo amongſt the *Greeks* the *Drachma*, was coin'd both of Silver and Gold: But, in reckoning Sums, where it is not otherwiſe ſpecified, the Silver Coin is underſtood.

The learned Biſhop *Hooper* makes the Value of the *Attic Drachma* different in different Ages; and the higheſt, according to the Weight of the Standard *Mina* of *Solon* 68,4 Grains; but he owns, that it fell afterwards to about the Value of 62,57. And upon this *Drachma*, and the Equality of it to the *Roman Denarius*, almoſt all the Computations in claſſical Authors are founded; which we did not think worth the while to change or diverſify in a few Inſtances, that may be in earlier Times. But if this Suppoſition be true, and the Reader of antient Authors is reſolved to be nice, the Value of the ſeveral Drachmas, according to the Biſhop's Suppoſition, from 70 Grains downwards, is as follows:

Weight.	Value.
gr.	d. q.
70	8 3
68,4	8 2½
65,5	8 0½
62,57	7 3¼

The *Drachma* was divided into 18 κεράτια, or *Siliquæ*, as well as into 6 *Oboli*. There were different *Drachms* in different Countries.

The *Drachma Æginæa* is commonly reckon'd to be equal to 1⅔ of an *Attic Drachm*, or 10 *Attic Oboli*. The *Athenians* call it παχεῖαν, or thick. It was the Pay of a Horſeman even amongſt the *Athenians*. There is frequent Mention of it in *Hippocrates*.

There is mention likewiſe made of the *Corinthian Drachm*; but its Value is uncertain: It is ſuppoſed by ſome Authors equal to the *Attic*.

The *Egyptian Drachm*, according to *Cleopatra*, was equal to an *Obolus*, or ſixth Part of the *Attic Drachm*.

There were coin'd likewiſe the Parts and Multiples of a *Drachma*, the *Semidrachma*, *Didrachmum*, *Tridrachmum*, and *Tetradrachmum*, which was call'd the Γλαῦξ, or Owl; likewiſe *Pentadrachmum*, and *Hexadrachmum*. In ſome Authors you find the Word *Pentecontadrachmum*, or 50 *Drachms*; which, if it were a ſilver Coin, muſt have been very large.

When the Word ἀργυρεῖα is joined with a Number, it is to be underſtood of *Drachms*.

A *Drachma* was ⅛ of the Ounce, and $\frac{1}{128}$ Part of a Mina; though, perhaps, this Way of Reckoning by Ounces and *Drachms* was borrowed by the *Greeks* from the *Romans*; for the old Diviſion of the *Drachma* was into 6 *Oboli*. *Suidas* δραχμὰ ἐξ ὀβολῶν. The *Didrachmum*, *Hemidrachmum*, &c. expreſs'd Weights, as well as Coins. The *Greeks* uſed the Expreſſion τεσσαρῶν ἡμιδραχμον, to ſignify 2½ *Drachms*, as well as τεσσαρῶν ἡμιτάλαντον.

Hippocrates divided the *Drachma* (which I will ſuppoſe to be the *Attic*, except where he mentions another) into 6 *Oboli*, according to the uſual manner of reckoning in *Greece*; and, no doubt, in Imitation of him, *Celſus* divides the *Denarius*, which was always ſuppoſed equal to the *Drachma*, into ſix Parts.

The learned and accurate Dr. *Hooper*, Biſhop of *Bath* and *Wells*, has obſerved, that the Phyſicians made their Preſcriptions by *Drachmas*; not according to the Standard-weight, but by the current Coin of their Time. He ſuppoſes, indeed, the *Denarius* to have been equal to 64 Grains: According to my Computation, it is only 62 $\frac{22}{29}$: Perhaps, he is in the Right. There is ſome ſmall Difference between us in the *Engliſh* Weights; for he aſſumes a different Proportion of the *Engliſh* Averdupois Pound to the *Troy* Pound. It is allowed, that the *Roman* Ounce is equal to the Averdupois Ounce; and, conſequently, the *Roman* Pound, conſiſting of 12 Ounces, and the Averdupois of 16, the *Roman* Pound muſt be, according to both Reckonings, ¾ of the Averdupois Pound: But he makes the Proportion of the Averdupois Pound to the *Troy* Pound, 175 to 144; perhaps a more accurate Proportion than mine: According to Dr. *Wibert*, whom Sir *Jonas Moor* quotes as very accurate, it is only as 17 to 14; and, conſequently, the Averdupois, or *Roman* Ounce, to the *Troy* Ounce, is as 51 to 56. According to the Biſhop, there are in the *Roman* Ounce 437,5 *Troy* Grains.

The *Paris* Pound conſiſts of 16 Ounces, of which the Ounce is equal to 472,5 *Engliſh Troy* Grains. The Phyſicians reckon to their Pound 12 of thoſe Ounces: Conſequently, their medical Pound is equal to 5670 *Troy* Grains, and leſs than ours by 90 Grains; and their Ounce leſs by 7½; and their *Drachm*, which is the eighth Part of their Ounce, is leſs than ours by $\frac{15}{16}$ of a Grain. But they reckoning 576 Grains in their Ounce, makes ſtill a greater Difference in the Quantity of the Grain; for 105 of our Grains make 128 of theirs. *Arbuthnot on Weights and Meaſures*.

DRACHUM is an obſcure Term in *Paracelſus, Philoſoph. Lib.* 4. *Tract.* 1. *Cap.* 3. *in Fin.* It ſeems to import the ultimate Diſſolution of the Element of Water, or its Conſumption. *Caſtellus*.

DRACO.

The Characters are,

The Leaves, which are like thoſe of Hyſſop, are produced alternately on the Branches, the lower being divided, and the upper ones whole: The Flowers are ſmall, diſcous, and diſpoſed in a long Spike.

Boerhaave mentions but one Species of this Plant; which is,

Draco Herba, *Ger.* 193. *Emac.* 249. *Hiſt. Oxon.* 3. 33. *Boerh. Ind. A.* 127. *Raii Hiſt.* 1. 373. *Dracunculus*, Offic. *Dracunculus hortenſis*, C. B. 98. *Dracunculus hortenſis ſive Tarchon*, J. B. 3. 184. Chab. 168. *Draco Herba, ſive Tarchon*, & *Dracunculus hortenſis*, Park. Parad. 500. *Abrotanum Lini folio acriori & odorato*, Tourn. Inſt. 459. *Abrotanum mas Lini folio acriori & odorato*, Elem. Bot. 364. TARRAGON.

Tarragon ſhoots up a great many round Stalks, full of Branches, cloathed with long narrow Leaves, like thoſe of Hyſſop, but ſharper pointed, ſmooth, and ſhining. On the Top of the Stalks grow the Flowers, ſmall and greeniſh, reſembling thoſe of Southern-wood, but fewer in Number, and thinner ſet, and upon longer Foot-ſtalks. The Leaves have a pretty ſtrong Smell and Taſte, ſomewhat like Fennel: It is planted in Gardens, flowering in *July* and *Auguſt*.

The Leaves, which are chiefly uſed, are heating and drying, and good for thoſe who have cold Stomachs; and to that End are frequently put into Sallads: It expels Wind, provokes Urine, and the Menſes, but is not often uſed in Medicines. *Miller's Bot. Off.*

As this Plant is endu'd with an extraordinary Acrimony, we cannot doubt but that it powerfully heats, dries, cuts, opens, and digeſts. *Tarragon*, therefore, as *Matthiolus* writes, muſt be good for a cold Stomach: It excites an Appetite, diſſipates Flatulences, ſtrengthens the Limbs, provokes Urine and the Menſes, and opens Obſtructions. Being chewed, it draws forth Phlegm and Spittle, like *Pyrethrum*; whence it eaſes the Tooth-ach, and purges a humid Brain. The diſtil'd Water, according to *Lobel*, is in principal Eſteem among the *Engliſh* againſt the Contagion of the Peſtilence, provokes Sweat, and concocts Phlegm. If we well conſider the Acrimony of this Herb, which is extremely vellicating to the Tongue, we cannot deny it a Place among the moſt potent heating Medicines. *J. B. Ray, Hiſt. Plant.* 373.

Draco marinus Offic. Bellon. de Aquat. 215. *Draco*, Jonſ. de Piſc. 60. Charlt. de Piſc. 27. Aldrov. de Piſc. 255. Rondel. de Piſc. 1. 300. *Draco*, Geſn. de Aquat. 77. Salv. de Aquat. 72. Raii Icht. 288. Ejuſd. Synop. Piſc. 91. THE WEAVER.

This

This Fish is taken in the Ocean, and also in the *Mediterranean* Sea. The Parts used, are the Head, newly burnt to Ashes, and the Bones. *Rondeletius* affirms, that the Ashes of the Head, newly burnt, are good against all Poisons; and *Pliny* writes, that the Tooth-ach is eased by scarifying the Gums with the Bones of the Fish.

Draco, sylvestris. A Name for the *Ptarmica*; *vulgaris*; *folio longo, serrato*; *flore albo.*

DRACOCEPHALO-AFFINIS. A Name for the *Moldavica*; *Americana*; *trifolia*; *odore gravi.*

DRACOCEPHALON.

The Characters are;

The Calyx is long and tubulous, and the Leaves narrower than those of the Peach-tree: The Galea is hollow, entire, opening and shutting; the Beard divided into three Segments, which are bifid, in the manner of Jaws, so that the Flower represents the open Jaws of a Dragon, or rather, the Flower of Fox-glove. The Flowers grow in thin Whorles, two or three in a Whorle, at the Joints of the Stalks.

Boerhaave mentions but one Species of this Plant, which is the Dracocephalon; Americanum. *Breyn. Prodr.* 1. 34. *Dracocephalus, angustifolius, folio glabro, serrato.* M. H. 3. 417. *Pseudodigitalis, foliis dentatis Persicæ.* Bocc. Rar. 11. *Digitalis, Indica, angustifolia, profunde serrata, Persicæ folio.* H. R. Par. *Digitalis, Americana, purpurea, folio serrato.* A. R. Par. 79. H. AMERICAN DRAGON'S HEAD.

Boerh. Ind. alt. Plant. Vol. 1. *p.* 176.

DRACONIS SANGUIS, Dragon's Blood. This is the Gum of of the

Draco Arbor, Ger. 1339. Emac. 1523. Park. Theat. 1531. J. B. 1. 402. Chab. 30. C. B. Pin. 505. Raii Hist. 2. 1598. Jonst. Dendr. 288. *Ezquahduitl*, Hern. 59. *Palma Prunifera foliis Yuccæ, fructu in racemis congestis, cerasiformi, duro, cinereo, pisi magnitudine; hujus Lacryma Sanguis Draconis dicta*, J. Comm. Hort. Amst. 261. Cat. Jam. 179. Sloan. Hist. 1. 20. Pluk. Almag. 277. Hort. Beaum. 33. *Palma foliis longissimis, pendulis absque ullo pedunculo ex caudice glabro enatis*, Boerh. Ind. A. 2. 169. THE DRAGON-TREE.

This Tree grows in the Island of *Porto Santo*, which is one of the *Canaries*, and in *Madera*. Dragon's Blood is an obscure, red Resin, easily melted by the Fire, and kindling into Flames when cast into it: When rubbed, it appears of a red sanguine Colour: It has a resinous and astringent Taste. There are two Kinds to be met with in the Shops, which differ only in being more or less pure: The most esteemed is what is imported in Drops, wrapt up in Leaves.

It is a potent Drier, Astringent, and Repellent: Its principal Use is external, in drying up Defluxions, stopping Hæmorrhages, conglutinating Wounds, and fastening loose Teeth. *Schroder.* The Learned generally take the *Sanguis Draconis* of the Moderns, for the Cinnabar of *Dioscorides*; the Cinnabar of the later Antients is *Minium*, *Raii Hist. p.* 1598. *Ray*, as well as *Parkinson*, reject, as a mere Fable, what *Monardus* relates, of the Figure of a Dragon, naturally impressed on the Fruit of this Tree. *Dale.*

Sanguis Draconis, taken inwardly, is a very great Astringent and Drier. The late *Helvetius* melted it with powder'd Alum, and then made them into Pills for Diarrhœas, Hæmorrhages, and the like; but the Patient ought first to be prepared by Bleeding, and other due Management. It is entirely soluble in Spirit of Wine. The *Dutch* counterfeit it, with Gum Arabic and Alum dissolved in Water, with *Brasil* Wood to give it the true Colour; but this factitious Kind ought not to be taken inwardly, tho' it be very proper for Painters. *Geoffroy.*

The Dragon's Blood, produc'd by the Tree above-mention'd, is esteem'd the coarsest: But a better Sort is produc'd by the *Draco Arbor Indica siliquosa, Populi folio, Angsana vel Angsoa Javanica.* Commelin. Hort. Amst. See ANGSANA. This *Commelinus* will have to produce the Dragon's Blood in Drops, tho' others much doubt it; as believing it to come from the *Arundo farcta Indiæ Orientalis Sanguinem Draconis manans*, Hist. Oxon.

The *Sang. Dracon. fundens foliis & caudice undique Spinis nigris armata* D. Sherrard. is another Plant, which affords a third Sort of Dragons Blood. This bears a small scaly Fruit, which being infused in hot Water, it extracts a red Matter from it; which subsiding, and the Water evaporated, is made up in those small Lumps we call Drops, wrapt up in Palm-leaves. *Miller's Bot. Off.*

DRACONIS SANGUIS, or *Herba Draconis*, is a Name for the *Lapathum*; *folio acuto, rubente.*

DRACONITES, DRACONTIAS, DRACHATES, δρακοντίας λίθος, a precious Stone, generated of the Brain of a Dragon; but, unless the Head be cut off while the Animal is alive, no Gem is produced; for which Reason, they cut it off, while the Dragon is asleep. *Solæus*, who writes that he saw this Gem in the King's Possession, relates, that they go a hunting for it in Chariots, and, when they see the Dragon, scatter soporific Drugs, and so take the Opportunity to cut it off; it is of a transparent Whiteness, and will not admit of Polishing or Art. *Pliny, Lib.* 37. *Cap.* 10. The *Draconites* is also pretended to be sometimes found in the Heads of *Hydri* and *Chelydri*, Kinds of Water-serpents.

Rulandus ascribes to it a Virtue of expelling all Poisons, and curing all venomous Bites. But the Whole is either a Fable, or an Imposture.

DRACONTHEMA; from δράκων, a Dragon; and αἷμα Blood; the same as *Draconis Sanguis*, which see.

DRACONTIA, DRACONTIUM, the same as DRACUNCULUS, which see.

DRACONTIDES, δρακοντίδες. A Name given, as *Ruffus Ephesius* says, to some Veins proceeding directly from the Heart. *Ruffus Ephesius, Lib.* 1. *Cap.* 33.

DRACONTIUM. A Name for the *Dracunculus, polyphyllus*, which see.

DRACUNCULI. Small long Worms, which breed in the muscular Parts of the Arms and Legs, call'd *Guinea* Worms.

Plutarch, in his *Symposiacs, L.* 8. *C.* 9. quotes *Agatharchides* for an Account of these Animals, which, he says, the People about the *Red Sea* were, at a certain time, very much afflicted with. *Plutarch* calls them δρακόντια μικρὰ, which, he says, were bred in the Arms and Legs, and which put out their Heads, and, upon being touch'd again, hid themselves in the Muscles, and caus'd an intolerable Inflammation.

Agatharchides liv'd in the Reign of *Ptolemy Philometor*, who began to reign A. M. 3770. *Vossius de Histor. Græc. Strabo L.* 14. *Le Clerc. M. H.*

Dr. *Freind* is therefore mistaken, when he says *Aetius* is the first, that gives any Account of the *Dracunculi.*

The *Dracunculus* resembles a common Worm; is sometimes great, sometimes small; is most commonly found in the Legs, but sometimes in the muscular Parts of the Arms. They are generated in *Ethiopia* and *India*, and principally affect Children; and their Generation is not unlike that of the broad Worms of the Belly. While they move under the Skin, they create no Trouble; but, in Length of Time, the Place near the *Dracunculus* suppurates, and the Animal puts forth his Head. If it be drawn, it excites a violent Pain, especially if you draw it so forcibly as to break it off; for the Part left within, creates most intolerable Torment. To prevent, therefore, the *Dracunculus* from recurring, or slipping back, the Arm must be ty'd with a strong Thread, which must be repeated every Day, that the Animal, proceeding forwards by degrees, may be included within the Ligature, and not be subject to be broken off. During this, the Place is to be fomented with Hydromel, and Oil, in which Wormwood or Abrotanum hath been boiled; but all acrimonious things are to be avoided, for fear of an Inflammation. *Aetius, Tetrab.* 4. *Serm.* 2. *Cap.* 85. from *Leonidas.*

In *India*, and the Countries above *Egypt*, certain small Animals, like Worms, called *Dracunculi*, are generated in the muscular Parts, as the Arms, Thighs, and Legs; and in Children they lodge in the Sides, under the Skin, and manifestly appear to move. In Process of Time, the Place near one End of the *Dracunculus* suppurates, and the Skin opening, the End of the *Dracunculus* appears; but, if you attempt to draw it, a Pain is excited, and, especially, if it happens to be broken off. Some, therefore, advise, to hang a Bit of Lead to the *Dracunculus*, that the Weight thereof may extract it not precipitately, but after a slow and gentle manner. Others condemn this Method, because the *Dracunculus* is no less subject to be broken off by the Weight of the Lead, and also causes a violent Pain; for which Reasons, they advise, to put the Part affected into warm Water, the Heat of which may force the *Dracunculus* to shew itself, and afford an Opportunity of extracting it Piece-meal, with the Fingers.

Soranus supposes the *Dracunculus* to be nothing of an Animal, but a Concretion of some Nerve; and that it has only an imaginary Motion: But whether this, or the former Opinion, be the Truth, it is the Advice of *Soranus, Leonidas*, and others, in such Cases, to make use of Affusions of warm Water, and digestive Cataplasms, prepared of Hydromel and Wheaten or Barley-meal; and they approve of a Plaister of the same Nature to be sometimes apply'd: A proper Plaister for this Purpose, is one composed of Bay-berries and Honey. By the Use of these Applications, the *Dracunculus*, or whatever be the Substance contained in the Part, is mortify'd, and falls out; but, if it falls not out after Suppuration, the Part is to be lanced; and, being laid open, the Contents are to be removed; after which, the Place is to be dressed with Lint, and the Cure accomplish'd by the Method of Suppuration. *P. Ægineta, Lib.* 4. *Cap.* 59.

The Worm is, sometimes, extremely long, commonly often or fifteen Palms Length: *Albucasis* tells us, he saw one of twenty; and *Rhases* mentions a Case, where a Person had forty of these Worms in his Body, and recover'd; *Avicenna* says fifty. Several Passages we may find, to the same Purpose, in modern Historians. The *Arabians* call it *Vena Medinensis*; *Vena*,

Vena, becauſe they doubted, as *Serapion* did before, whether it was a living Animal, or rather ſome concreted Subſtance, like a Nerve; and *Mediuenſis*, from its being frequent at *Medina*: And therefore *Avicenna* treats of it, not amongſt Worms, but amongſt Abſceſſes. In this, certainly, they are miſtaken; and *Leonidas*, in direct Terms, calls it an Animal. The *Vena Medinenſis* is miſtaken by many, and by Mr. *Le Clerc* himſelf, in his Supplement, for another Diſtemper deſcrib'd by the *Arabians*, the *Affectio Bovina*; which is a little Worm, and often found in Cows. But *Aetius* plainly diſtinguiſhes the two Sorts, large and little; and *Albucaſis* has two ſeparate Chapters, concerning theſe two Diſeaſes; and the Deſcription he gives of them is very different.

This Diſtemper is often attended with a Fever, for two or three Days; and ſometimes brings on terrible Symptoms, and ends in Abſceſſes, which require many Months to cure them. It is very common in *Guinea*, and, principally, amongſt the Natives: *Kempfer* found it ſo too at *Ormuz*, upon the *Perſian* Gulf; and therefore calls it *Dracunculus Perſarum*; and not only there, but in *Tartary*. He obſerves, that the Diſeaſe prevails moſt in the hotteſt Climates, and in the hotteſt Weather; and attributes the Production of theſe Worms to the ſtagnating Rain-water, which is ſo much made uſe of in theſe Countries. It is eaſier, he ſays, to be cur'd in the Climate it is bred in. He ſaw this Worm twice alive; and deſcribes the manner of extracting it, at large; which is much the ſame as the Surgeons now uſe in the *Weſt Indies*, with the Blacks.

To preſerve ourſelves from the *Dracunculus*, Regard is to be had to the Country where, and the Food of which, it is generated; and ſuch means are to be uſed, as are deſtructive of its Cauſe: Theſe are, Evacuation of the corrupted Blood, by opening the Baſilic Vein, or the Saphena, near the Part affected, with Adminiſtration of proper Cathartics; ſuch as Syrup of Myrobalans, Decoction of Epithymum, *Pilulæ Cochiæ*, and Tryphera, prepared with Sena and Fumitory. The Body is alſo to be moiſten'd with proper Food, Bathing, and a Regimen in other Points ſuited to that Purpoſe.

As ſoon as the *Dracunculus* is diſcover'd by evident Signs, it will be adviſeable, after Purging, and the Application of Leeches, to refrigerate the Part with cooling and moiſtening Cataplaſms; ſuch as thoſe prepared of the known cooling, expreſſed Juices, with Sanders and Camphire. Among Remedies by way of Inunction, there is a good Liniment prepared of Aloes, Sanders, Camphire, or Myrrh, the Seed of *Pſillium*, [Fleawort] and new Milk. If the Part be not pained, but yet a Veſicle is excited, it is ſometimes repreſſed, and vaniſhes, and the Patient is relieved, by taking a Dram of Aloes every Day, for three Days together; or by taking half a Dram the firſt Day, a full Dram the next, and a Dram and half the third Day; and by the Application of Aloes, or the viſcid Juice of recent or green Aloes to the Part, or to the Orifice at which the *Dracunculus* appears. If theſe Remedies prove ineffectual, and the *Dracunculus* comes forth, it will be proper to provide ſomething, to which you may tie it, and on which it may gently roll itſelf, by degrees, till it be all come forth, without breaking. The moſt convenient thing, on which it can roll itſelf, is a Piece of Lead, of a juſt Weight, to draw in ſo gentle a manner, as not to break off what is faſten'd to it. The utmoſt Care is to be taken to render its Paſſage eaſy, by ſtrengthening the Member, and opening the Pores, by fomenting it with warm Water, refrigerant Mucilages, and emollient Oils, endu'd with a Coolneſs, and a ſubtile Heat, and whatever other things are, for the like Reaſons, qualify'd to promote its Egreſs. Sometimes theſe Means will not anſwer the Purpoſe; and therefore we muſt have recourſe to Liniments prepared of *Oleum Cheirinum*, [Oil of the *Viola lutea*] *Oleum Jaſminum*, [Oil of Jeſſamy] or *Balaninum*, [Oil of the Ben-nut] applying thereon a Plaiſter of Pitch. If the Place ſeems to require Opening, in order to take out the *Dracunculus* entire, and nothing forbids, let it be opened, and the *Dracunculus* extracted; but if its Egreſs be not facilitated by the Method before deſcrib'd, and the Opening be impracticable, attempt the Suppuration of it with Butter; for, by this means, it will all be putrefy'd, and ſo come away. But avoid the Uſe of acrid Medicines, by which the Sore has been, ſometimes, converted into a *Phagedæna*. Moreover, if you rub its Extremities gradually, every Day, with Salt, or uſe gentle Frictions of its hinder Parts, or if the Place whence it proceeds, be tenderly and ſkilfully anointed, it will come away entire: And the Effect will be more certain, if an Inciſion be made, according to the Length of the *Dracunculus*, and it is looſen'd and rais'd, by introducing a Probe under it; and the Place, while you are removing it, is continually abſterged, in a tender and gradual manner, with Salt; for, by this Method, you will be entirely deliver'd from it: But if it breaks, and, retiring, lies conceal'd, the Place is, without the leaſt Scruple, to be lanced, that you may again take hold of it, and gently extract it; which done, the Place muſt be treated like other Wounds. *Avicenna*.

The modern Accounts of theſe *Dracunculi* agree pretty exactly with thoſe already ſpecify'd: Thus Dr. *Towne*, in his Treatiſe of the Diſeaſes of the *Weſt Indies*, informs us, that this Diſtemper is not ſo frequent any-where, as on the Gold-coaſt, about *Anambo* and *Cormantyn*.

This Worm is white, round, long, and uniform, very much reſembling white round Tape, or Bobbing; nor have I ever ſeen any of them broad and flat, as they are deſcrib'd by Authors. It is lodged between the Interſtices and Membranes of the Muſcles, where it inſinuates itſelf to a prodigious Length, ſometimes exceeding five Ells. It occaſions no great Pain in the Beginning; but, at ſuch time as it is ready to make its Exit, the Part adjoining to the Extremity of the Worm, where it attempts its Exclusion, begins to ſwell, throb, and be inflam'd: This generally happens about the Ancle, Leg, or Thigh, and rarely higher.

The Countries where this Diſtemper is obſerved, are very hot and ſultry, liable to great Droughts; and the Inhabitants make uſe of ſtagnating corrupted Water, in which it is very probable that the Ova of theſe Animalcula may be contained; for the white People, who drink this Water, are obnoxious to the Diſeaſe, as well as the Negroes.

The Surgeons ſeldom attempt to extract this Worm, by making an Inciſion; but, as ſoon as they perceive the Tumor riſe to a competent Bulk, they endeavour to bring it to Suppuration, with all convenient Expedition; and then the Head of the Worm diſcovers itſelf, which they ſecure, by tying it to a Bit of Stick or Cotton, that it may not contract, and draw itſelf up again: Thus they continue to roll it round the Stick daily, ſometimes one Inch, ſometimes two or more each Day, taking great care not to break the Worm, which if they chance to do, it will be very difficult to recover the End of it again; and an Abſceſs will be formed, not only at the ſuppurated Part, but alſo thro' the whole Winding of the Muſcles, where the dead putrifying Worm remains: So that, from an Accident of this Kind, you ſhall have Apoſtumations produced in ſeveral Places in the Limbs, which generally occaſion very obſtinate Ulcers, and give the Surgeon great Perplexity in the Cure of them.

I muſt likewiſe take notice, that, during the Extraction of the Worm, the Patient ſhould be plied with bitter aloetic, and other anthelmintic Medicines, in order to diſlodge the Worm the ſooner from his Tenement; and it is obſerved, that theſe Vermin protrude themſelves much faſter, when theſe Remedies are given.

When the Worm is totally extracted, the remaining Ulcer, thro' which it paſſed, may be treated in the ſame manner as other common Ulcers; nor does any farther Inconvenience remain in the Parts of which it had Poſſeſſion.

This Diſeaſe, ſimply conſidered, very rarely, if ever, proves mortal. I have myſelf a young, and otherwiſe hale, Negro Girl, who had nine of theſe *Guinea* Worms extracted from her, without any bad Conſequence enſuing. *Towne's Treatiſe on the Diſeaſes in the Weſt Indies.*

Under the Article BOVINA AFFECTIO, I have taken notice of a Diſorder, the only one that occurs in our Climate, in *Man*, which can properly come under this Appellation. But becauſe the *Affectio Bovina* is not unfrequent in ſome Climates, and has been confounded with the *Dracunculi*, I ſhall here inſert the *Arabian* Account of this Diſtemper.

The Diſeaſe called by the *Arabians*, or their Interpreters, the *Paſſio* or *Ægritudo Bovina*, is ſeldom known in *Europe*, and is not ſo much as mentioned by the antient *Greeks*. *Avenzoar* gives an Account of it, *Lib.* 2. *Cap.* 7. *Tract.* 20. in the following Words: Sometimes a Worm breeds between the Skin and the Fleſh; which Diſeaſe is called *Ægritudo Bovis*, "the "Diſtemper of Black Cattle," becauſe theſe are moſt ſubject to it. If the Phyſician neglects to kill this Worm, the Conſequences of ſuch an Omiſſion may be very pernicious. As ſoon, then, as you find yourſelf moleſted with this Animal, at its firſt Appearance, burn the adjacent Parts with a hot Iron, that the Heat may penetrate to the Worm, in a Degree ſufficient to kill it. This done, the Sore muſt be healed after the manner of other Combuſtions, by ſuch means as follow: Apply Lint mix'd with Barley-meal and freſh Water; apply alſo Vinegar, but in ſo ſmall a Quantity as not to give Pain, but to be ſufficient for conveying the Virtue of the Medicine to the Depth of the Burn. When the Pain is ceaſed, anoint the Place with Ointment of *Agrippa*, and Oil of Roſes, till the Tumor be removed. After this, waſh the Place with Hydromel, and ſprinkle it with Powder of Roſes. If the Fleſh be burnt away, apply ſome proper Ointment, and Powder of Roſes, till the Cavity be filled with Fleſh, and the Whole conſolidated: And this is the general Method of Cure for all Injuries by Fire. If the Patient be fearful of Burning, take a middling Walnut-ſhell, and, having excavated it, fill it up with equal Quantities of Meal of Lupines, Soot, Pepper, and Root of Scara, pounded together, and moiſtened with *Alchytran* [ſee the Word]: Then put the Shell upon the Place where the Worm lies, and hold it there, till the Virtue of the Medicine has penetrated to it. This Medicine is included in a Walnut-ſhell for the more convenient ſurrounding of the Worm on

every Side, and preventing its Eſcape, till it be killed. Purge the Patient alſo with the Medicines preſcribed for the *Vena Medinenſis*.

Albucaſis, treating of the ſame Diſorder, *Lib.* 2. *Cap.* 25. thus expreſſes himſelf: This Diſeaſe, he ſays, in ſome Parts of our Country, is called *Ægritudo Bovina*, becauſe it frequently happens among Black Cattle, being a ſmall Worm generated between the Skin and the Fleſh. This Worm takes its Courſe over the whole Body, aſcending and deſcending, and is plainly perceivable in its Motion from one Part to another, till it breaks the Skin; and where-ever it makes a Breach, there it finds an Egreſs. It is generated of the Putrefaction of ſome Humours, after the manner of Aſcarides, and Worms in the Belly, and is to be dreaded for the Miſchief it often does; for, in the Courſe of its Progreſs, when it aſcends to the Head, it frequently opens in ſo inconvenient a Place, and ſo unfortunately for the Patient, as to occaſion the Loſs of an Eye. When you have a mind, therefore, to be cured, by extracting this Animal, it will be firſt neceſſary, that it ſhould move, and that you ſhould plainly perceive it; after which, make a ſtrait Ligature above and below it; then make an Inciſion, and extract it. If it lie deep in the Fleſh, ſo as not to be found, apply an actual Cautery over it, till you have killed it. The worſt thing to be feared from it is its Corruption, which may affect and ruin the Eye, if it happens to be lodged near it. If you perceive, that it is aſcended to the Head, and arrived near the Eye, ſecure the Eyebrow under it with a good Ligature, and then cut upon the Worm, and extract it. The Patient alſo muſt take care to cleanſe his Body by Medicines which diſſolve putrid and ill Humours, and avoid ſuch Meats as are diſpoſed to generate them.

Alzaravius, another *Arabian* Author, *Sect.* 2. *Tract.* 31. *Cap.* 13. has theſe Words: The *Paſſio Bovina* is ſo called, becauſe it commonly affects Black Cattle. It is a Worm, which is generated between the Fleſh and the Skin, and takes its Progreſs over the whole human Body, till it perforates the Skin, and makes its Egreſs where-ever the Perforation happens, which may poſſibly be near the Eye, to the utter Ruin and Deſtruction of the ſame by the Worm's paſſing out that Way. This little Animal is of the Colour of the Body of the Patient, with a black Head, and is generated of the ſame Humour as Lice and Nits. This Humour putrefies under the Skin, which is a Diſorder incident to ſome Perſons in certain Countries, and known by perceiving the Motion of the Animal creeping under the Skin. The Cure preſcribed by *Alzaravius* conſiſts principally in Purging, and the Uſe of the hot Bath, as the Method is for the moiſt Scabies. The Cure, by Surgery, is the ſame as was directed by *Avenzoar* and *Albucaſis*. Thus far the *Arabian* Phyſicians.

Another *Bovinus Affectus*, of a different Nature, is very well deſcribed in a late Diſſertation *de Boum Oeſtro*, written in *Italian* by the famous *Walliſnerius*. This *Oeſtrum*, or vexatious Fly, pitches on the Backs of Black Cattle, and, with a kind of Sting growing to its hinder Part, perforates them, as with an Augre, in many Places, and into each Perforation introduces an Egg, which, ſome time after, gives Birth to a Worm, and this to a Fly, which, in due Seaſon, will, in all reſpects, be like its Parent. The Cattle very much dread this miſchievous Fly, which has Force enough deeply to penetrate the hard Skin of an Ox, exciting an intolerable Pain; and run from it with all their Might. The Worm, however, which is depoſited, grows, without any remarkable Injury to the Health of the Animal; and the Farmers are even perſuaded, that thoſe Cattle are ſoundeſt, who have this Worm lodged in their Hides. This Inſect never creeps, nor moves from Place to Place, but remains quiet in its firſt Settlement during the Winter, till, as it increaſes, a Tumor begins to appear, in which it lies concealed; and this Tumor is inſenſibly dilated to ſuch Dimenſion, that the Inſect may conveniently reſide and grow therein, till it arrives at its due Size and Perfection; after which, in the following Summer, it breaks forth, and afterwards is changed into a Chryſalis, of which Shape at length it diveſts itſelf, and aſſumes that of a Fly. *Le Clerc. Hiſt. Lumbric.*

The *Chicos* or *Chicres*, as I think they are called, may properly enough come under this Article. Theſe are ſmall Worms, which, in the warmer Parts of *America*, frequently breed in the muſcular Parts, and particularly in the Feet. The *Indians* and Negroes are very dextrous at picking theſe out; and then they cure the Sore, by rubbing it with the Aſhes of Wood.

Beſides the Worms which breed in the Skin, already mentioned, the Inhabitants of *Miſnia*, eſpecially the Children, are ſubject to another, of which *Frederic Hoffman*, in his Treatiſe on endemical Diſtempers, gives the following Account: The Children of this Country (*Miſnia*) are frequently ſeized with a Tabes or Conſumption, which ſo deſtroys their Fleſh, that they appear like ſo many Shades or Phantoms. Tho' thoſe who labour under this Diſtemper are commonly thought to be under the Influence of Witchcraft, yet ſuch as have inquired more narrowly into this Diſorder, have obſerved Worms, like black Hairs or Cords, lodged under the Skin. Theſe Animals are uſually called *Comedones*, or *Gluttons*, becauſe they intercept and devour the nutritive Juices in their Diſtribution. When the Skin is rubbed with Honey, either in a Bath, or any other warm Place, they come out; but when it is contracted, and braced up by Cold, they keep concealed within.

I don't know whether this Diſtemper is the ſame as that which the *Germans* call *Seuren*, *Sirenes*, or *Crinones*, of which *Sennertus* gives the following Account: "A Species of Puſtules, "by the *Germans* called *Seuren*, ariſe on the Palms of the "Hands, and Soles of the Feet, in which are lodged a ſmall "kind of Worms, which they call *Sirones*, or *Chirones*. The "Puſtules of this kind are principally produced in theſe Parts, "becauſe the Skin being thicker, the viſcid Ichor is detained "and pent up by it.

"That Worms are lodged in theſe Puſtules, may be known "from the greater Itching of theſe Parts, than is at other times "perceived.

"Theſe are, for the moſt part, extracted with a Needle; "and, in order to prevent their future Formation, the Parts "are to be waſhed with Wine or Vinegar, in which Salt, "Alum, or Nitre, have been diſſolved; or with a Lixivium "prepared of the Aſhes of Broom or Oak-branches. After the "Parts are waſhed and dried, they are to be anointed with the "following Ointment:"

Take of ſharp-pointed Dock, Scabious, Wormwood, Tanſey, the Leaves of the Peach and Aſh-trees, Henbane, and Acorns, each an Handful: Bruiſe all together; then add two Pounds of old Hog's-lard; and let the Whole boil to a Conſumption of the Moiſture; then add a Pound and a half of common Pitch, and ſtrain the Whole through a Cloth: Then put into the ſtrain'd Liquor Myrrh, Frankincenſe, and Maſtich, each two Ounces, reduced to a fine Powder; and ſtir all with a Spatula, till they aſſume the Conſiſtence of an Ointment, to ſix Ounces of which, when you intend to uſe it, you may add one Ounce of Quickſilver, extinguiſhed with Spittle, or the White of an Egg. By means of this Ointment, theſe Scabs may be cured, the Worms extracted, and the Itching removed, in fifteen Days. *Sennertus, Lib.* 5. *Par.* 1. *Cap.* 24.

DRACUNCULOIDES. Baſtard Dragon.

The Characters are,

The Root is white, pellucid, and conſiſts of a Multitude of oblong Tubers, without Fibres, like the Root of the Aſphodel. On the Top grows a ſmooth orbicular Tuber, as in the *Arum* or *Dracunculus*. From this Tuber ariſe thick ſucculent Pedicles, ſmooth on the back Part, and excavated on the Inſide, where, with their membranaceous Alæ, they involve the Leaves. Theſe Pedicles are of a white Colour, and painted with round Spots of a purpliſh Red. From them proceed long, broad, entire Leaves, terminating in a Point, ſomewhat like the Leaves of the *Muſa* (Plantain-tree), but leſs. From the Middle of this Tuber, amidſt the Leaves, ſprings up a tall, upright, flattiſh Stalk, ſpotted like the Pedicles of the Leaves. The Top of this Stalk is expanded into a hexapetalous Calyx, from the Centre of which ariſe many Pedicles, which ſpread themſelves almoſt in the Form of an Umbella. The Apex of each Pedicle becomes a round umbilicated Berry, containing one Seed. On the Apex of the Ovary grows an hexapetalous expanded Flower, furniſhed with ſix reddiſh Stamina. *Boerhaave, Ind. alt. Pars* 2.

DRACUNCULUS.

The Characters are,

The Leaves are deep-cut, with various, large, and profound Jags. In other reſpects, this Plant agrees with the Arum. *Boerhaave, Ind. alt. Par.* 2.

Boerhaave mentions three Species of this Plant; which are,

1. Dracunculus; polyphyllus, *C. B. Pin.* 195. *Tourn. Inſt.* 160. *Elem. Bot.* 130. *Boerh. Ind. a.* 2. 75. *Dracontium*, Offic. *Dracontium majus*, Ger. 682. Emac. 831. R. Hiſt. 2. 1211. *Dracunculus major vulgaris*, J. B. 2. 789. *Dracunculus hortenſis, ſive ſerpentaria*, Park. Parad. 529. *Arum Polyphyllon*, Rivin. Irr. Hex. Rupp. Flor. Jen. 203. *Arum Polyphyllum Dracunculus, & ſerpentaria dictum, caule maculato, majus & elatius*, Herm. Cat. Hort. Lugd. Bat. 62. *Arum Polyphyllum, ſive Dracunculus Polyphyllus*, Hiſt. Oxon. 3. 548. *Serpentaria, Dracunculus*, Chab. 259. *Erva de Sancta Maria, ſive Dracunculus major*, Piſon. 240. DRAGONS.

This Plant has a pretty thick whitiſh Stalk, made up of ſeveral Coats wrapt over one another, having the Outſide ſpotted with reddiſh and purple Streaks and Spots. It ariſes to a Foot and a half, or two Foot high, bearing on the Top two or three ſmooth, ſhining, green, winged Leaves, cut each into ſeveral Sections; among which comes forth a large Hood, green on the Outſide, and of a deep ſhining Velvet-purple within, covering a large purple Piſtillum, in Shape like that of *Arum*, but much larger, being ſucceeded by ſeveral large red Berries. The Root is large, round, and knobbed, with ſeveral Fibres at the Bottom. The Herb, with the Stalks, is uſed.

Dragons are accounted a good Alexipharmic, and uſeful in malignant contagious Diſtempers, and peſtilential Fevers; and,

as the Vulgar phraſe it, to drive any thing from the Heart. Wherefore it is given in Medicines to drive out the Small-pox and Meaſles, and cauſe Sweat. *Miller's Bot. Off.*

2. Dracunculus; polyphyllus; foliis ex luteo variegatis, *H. R. Par. co.* THE YELLOW STRIP'D LEAV'D DRAGON.

3. Dracunculus; Americanus; quod Arum hederaceum; triphyllum, & auritum, *Plum. Pl. Am.* 41. *Fig.* 51. *e.* & 58. *H. co. Boerh. Ind. alt. Vol.* 2.

Beſides the three preceding Species of the *Dracunculus*, *Dale* mentions a fourth; which is,

Dracunculus major, Offic. *Dracunculus biſtorti folio*, C. B. Pin. 194. *Dracunculus major Matthioli*, Ger. 683. Em. 832. *Arum cauleſcens Ramicis agreſtis foliis ſibi invicem implicatis Virginianum*, Pluk. Phytog. Tab. 271. Fig. 1. Almag. 50. *Arum major cauleſcens Lapathi foliis*, Hiſt. Oxon. 3. 545. GREAT DRAGONS.

It grows ſpontaneouſly in *Virginia*; and the Root is uſed in Medicine, which, according to *Dioſcorides*, is good for the Orthopnœa, Ruptures, Convulſions, Coughs, and Diſtillations. *Dale, ibid.*

Dracunculus hortenſis. See DRACO HERBA.

Dracunculus pratenſis & Alpinus are Names for ſeveral Species of the PTARMICA.

DRAGANTUM. The ſame as TRAGACANTHUM, or, according to *Rulandus*, *Spaniſh* Vitriol.

DRAGETA. The ſame as TRAGEA, which ſee.

DRAGMA. The ſame as MANIPULUS, a Handful. *Blancard.*

DRAGMIS, δραγμὶς, in *Hippocrates*, is a Pugil, or as much as can be held between the Thumb and two Fingers. It is ſometimes written with a χ, δραχμὶς, *Drachmis.*

DRAKENA. See CONTRAYERVA.

DRANGÆA. The Name of ſeveral Antidotes in *Myrepſus.* It is a Compoſition, according to *Fuchſius*, which anſwers to what the Moderns call *Tragæa.*

DRAPTA, δραπτὰ, in *Galen's* Exegeſis on *Hippocrates*, is expounded by ἐσπαραγμένα, dilacerated.

DRASTICOS, δραστικὸς, (from δράω, to act, perform, effect) draſtic, or active, is an Epithet beſtowed on ſuch Medicines as are of preſent Efficacy, and potent in Operation; and is commonly applied to Emetics and Cathartics of a violent Quality. *Caſtellus.*

DRIFF. A Name given by *Helmont* to *Butler's* Stone, or ſome other powerful fermentative Remedy of that kind. It is what is prepared of *Uſnea*, [ſee the Word] Sea-ſalt, and Ens Veneris, with a Solution of Ichthyocolla, which is accounted the *Periapton Salutis Magneticum*, that cures Diſeaſes by only touching it with the Tip of the Tongue, *Ephem. N. C. Ann.* 2. *Obſ.* 53. *Schol.* Others of the Moderns direct a Preparation of *Driff* from a Caput Mortuum of Vitriol of Copper, with the Help of volatile Salt of Urine, diveſted of its fetid Quality. This *Driff* is different from the Mercurius Diaphoreticus, and from the Oil of Vitriol of Copper. *Caſtellus.*

DRIMYLEON, DRUMYMOROS, δριμυλέων, δριμύμωρος, (from δριμὺς, eager, ſharp, ſhrewd, and the like, and λέων, a Lion, and μωρὸς, a Fool) were Terms beſtowed by *Menodotus* the Empiric, by way of Jeſt or Reproach, upon the Phyſicians and Philoſophers, who profeſſed to govern their Speculations and Practice by Reaſon. *Galen. Lib. de Subſig. Emp. Cap.* 13.

DRIMYPHAGIA, δριμυφαγία, from δριμὺς, acrid, and φάγω, to eat. The eating of acrid Subſtances.

DROMA. The Name of a Plaiſter deſcribed in *Nicolaus Myrepſus, Sect.* 10. *C.* 26.

DROMEDARIUS. The Dromedary. See CAMELUS.

DRONTE or *Dod-aers.* The Name of a Bird, a Native of an Iſland in the *Eaſt Indies*, which *Lemery* ſuppoſes to be *St. Maurice.* This Animal ſhould be very large, or very nouriſhing, or both; for the above-quoted Author informs us, that three or four of them are a ſufficient Repaſt for a hundred Men.

The Fat is eſteemed emollient and reſolvent.

DROPACISMUS, δροπακισμὸς. The ſame as DROPAX, which ſee.

DROPAX, δρωπὰξ. See CEROPISSUS.

DROSATUM, δρόσαλον. The ſame as ROSATUM.

DROSERON. The Name of an Ointment in *Nicolaus Myrepſus, Sect.* 3. *C.* 93.

DROSIOBOTANON, δροσιοβότανον. Betony. *Nicolaus Myrepſus.*

DROSION. A Name for the *Ros Solis*; *folio oblongo.*

DROSOMELI, δροσόμελι. Manna. *Galen.*

DRUPA. An Epithet for Olives, which, when ripe, fall from the Tree ſpontaneouſly. *Caſtellus* from *Paulus Ægineta, L.* 1. *C.* 81.

DRYINUS, δρύϊνος, from δρὺς, an Oak. A ſort of Serpent.

The *Dryinus*, according to *Galen*, lives about the Roots of Oak-trees, and is of ſuch a miſchievous Nature, that, if a Man ſhould happen to tread on one of them, he will find his Feet excoriated, and his Legs ſwelled; and, what is more ſurpriſing, we are told, that even Perſons who dreſs and apply Remedies to the affected Parts, will find their Hands excoriated; and that whoever kills one of them, contracts a very bad Stench, and can ſmell nothing elſe himſelf. In thoſe who are bit by the *Dryinus*, the Swelling riſes about the Place with a Redneſs, and an Eruption of Puſtules in the adjoining Parts. The Bite is attended with Pains about the Mouth of the Stomach, and Gripes; and a Diſcharge of aqueous Sanies ſometimes ſucceeds. Birthwort taken in Wine, Trefoil, and the Root of Aſphodel, taken in the ſame manner, and all Sorts of Acorns triturated and taken, are very proper Remedies in this Caſe; and the Roots of the Ilex bruiſed, and applied to the Part affected, afford great Relief. *Paulus Ægineta, L.* 5. *C.* 14.

DRYOPETIS. A ſort of green ſmall Frog, which lives in Thickets. It agrees in Virtues with other Frogs. See RANA.

DRYOPTERIS, from δρὺς, an Oak, and πτέρις, Fern, that is, Oak-fern. A Name for the *Polypodium*, *tenerum*, *minus.*

DRYPA. See DRUPA.

DRYPETES, δρυπετὴς, from δρὺς, and πίπτω, to fall. The ſame as DRUPA.

DUAMIR. A Viper. *Rulandus.*

DUBEL COLEPH. A Compoſition of Coral and Amber. *Rulandus.*

DUBELECH. The Cavity of an Apoſtem, with a manifeſt Solution of Continuity. *Rulandus.*

DUBLETUS. An incyſted Tumor, or an Abſceſs in general. *Amatus Luſitanus.* The Word is of *Arabic* Original.

DUCCIA, according to *Baccius*, and DUCIA, according to *Foreſtus*, are barbarous Terms for *Gutta*, a Drop, and imply that ſort of Bathing, which we call *Pumping*; that is, letting medicinal Waters fall on any Part of the Body. *Baccius*, in his Treatiſe of Baths, *L.* 2. lays down Rules for this Species of Bathing.

DUCTUS. A Duct or Canal, frequently applied to many Parts of the Body, which convey particular Fluids.

DUDAIM. A Name for the Mandragora. *Schroder.*

DUDASALI. A Species of *Lignum Colubrinum.* Snakewood.

DUELECH. The ſame as DULECH, which ſee.

DUELLA. The third Part of an Ounce, or eight Scruples. *Rhodius in Scribon. Larg.*

DUENEC. Mercury of the Philoſophers. *Libavius.*

DUENECH. Antimony. *Rulandus.*

DUENEZ. Filings of Steel. *Rulandus.*

DULCACIDUM. A Medicine prepar'd of acid and ſweet Ingredients; or any thing which taſtes acid, and, at the ſame time ſweet.

DULCAMARA. See AMARA-DULCIS.

DULCEDO *Saturni*, is Ceruſs.

DULCEDO *Veneris*, is the CLITORIS.

DULCHICHINUM. A Name for the *Cyperus*; *rotundus*; *eſculentus*; *anguſtifolius.*

DULCICHINUM. A Name for the BULBOCASTANUM.

DULCIS-AMARA. See AMARA-DULCIS.

DULECH, or DUELECH. A Term us'd by *Paracelſus* and *Helmont*; importing a Sort of Tartar, or ſpongy Stone, generated in the Body, and cauſing great Pain and Danger. *Paracelſus* diſtinguiſhes it from Tartar, and ſays, it is a Subſtance of a middle Nature, betwixt Tartar and Stones.

DULESH. The Name of a Species of *Alga*, which the *Iriſh* chew for their Diverſion, contorted like a Roll of Tobacco. *Raii Hiſt. Plant. Appendix.*

DUODENUM. The firſt of the ſmall Inteſtines, ſo call'd, becauſe it is about twelve Fingers Breadth in Length. For a Deſcription of this, ſee COELIA. As this Inteſtine is the Seat of many troubleſome and dangerous Diſtempers, I believe, whoever reads for Information, will not be diſpleas'd at the following Diſſertation.

Sylvius eſtabliſhes the whole Art of curing the Diſeaſes of the Body, on the following Foundation: He aſſerts, that the human Body is entirely govern'd by the Bile, Phlegm, and pancreatic Juice; and accounts not only for the Digeſtion, but alſo Life and Health, from the Temperature, Mixture, and mild Effervеſcence of theſe: As, on the other hand, he aſſerts, that all the Diſeaſes of the Body, and the very Method of Cure, ariſes from their Intemperature, their Exceſs, or Defect.

When *Sylvius* publiſh'd his Opinion, it was received with great Applauſe, becauſe there was nothing obſcure or imaginary, nothing like the Dreams of the *Galeniſts* in it, and becauſe it ſeem'd to be founded on the Nature of Things: But when this Scheme began, ſome time after, to be canvas'd, and more narrowly look'd into, it loſt much of the Character, which was given it on the firſt Publication: For Perſons ſkill'd in Phyſic and Anatomy could not fail to diſcover ſeveral Blemiſhes in it; and, particularly, his Raſhneſs in affirming, that there is an Effervеſcence of Juices in the Duodenum. To

ſupport

ſupport this Opinion, he aſſerts, that the Bile is purely alcaline: But this is a great Miſtake; for if you pour any ſtrong Acid, ſuch as the Spirit of Vitriol, upon Bile, it will make no Effervescence, but becomes a yellow and mucilaginous Maſs; and if you add the Spirit of Nitre, which is as ſtrong an Acid, they will coagulate, aſſume a green Colour, and have but very little Motion.

He is as much miſtaken, when he aſſerts, that the pancreatic Juice is acid, ſince we know by Experiments, that, whatever alcaline Subſtance be pour'd thereon, it raiſes no Effervescence, and much leſs, when mix'd with the Bile. And the celebrated *Brunnerus*, in his learned Book of the Pancreas, has demonſtrated, that Animals will breathe and live, after their Pancreas is cut out; which Experiment alone is ſufficient to overthrow *Sylvius*'s Opinion in this reſpect.

He has committed a great Error, in pretending to account for Life and Health, from his Triumvirate of Humours, if I may ſo call it; and in deriving the whole Art of Medicine, both with reſpect to Theory and Practice, from the ſame Source: For many things relative to the Uſe of Remedies, and the Explication of natural Phænomena, which cannot be well derived from theſe Principles, abundantly demonſtrate its Weakneſs and Inſufficiency. Not to ſay any thing of thoſe Diſeaſes, which are incident to certain Conſtitutions and Families, and rage at certain Ages and Seaſons; it is ſufficiently evident, that many mortal Diſeaſes may take their Riſe from the Bite of a mad Dog, the putrid peſtilential Contagion, and the Venereal Diſeaſe, and even from the Paſſions alone, without any previous Corruption of the Humours: We alſo know by Experience, that many contract Diſtempers, and even die, of a Redundance and Extravaſation of Blood, and of Corruptions of the Viſcera; and, to aſcribe theſe to Defects in the Bile, Phlegm, and pancreatic Juice, is abſurd to the laſt degree. I have the longer inſiſted on this Subject, in order to make it evident, that *Sylvius*'s Hypotheſis, tho' uſeful in other reſpects, is by no means adequate to the Explanation of the whole Art of Medicine; and, tho' it be neither univerſal, nor ſufficiently explain'd, yet it ought not to be deſpis'd, as it may be of conſiderable Uſe in Medicine, if due Care be taken, not to follow him ſo cloſely, as to adopt his Errors. He is, however, in the right, when he aſſerts, that many chronical Diſtempers are ſeated in the Duodenum, and there generated; and my Deſign, in the preſent Diſſertation, is, to eſtabliſh and explain, in a more rational Senſe, this Opinion of *Sylvius*, which is, at preſent, partly neglected, and partly exploded. When any new Opinions, of real Uſe, are advanced, it is the way of Mankind, inſtead of canvaſing them carefully, to embrace them haſtily at firſt; and, when Experience does not confirm them, to relinquiſh them as haſtily; ſo difficult a matter it is to keep a due Medium in any thing: And this exactly happened to be the Fate of *Sylvius*'s Hypotheſis; for, when it firſt appear'd in the World, it was eagerly embrac'd; but when it was found not to anſwer in all things, as it was impoſſible it ſhould, it loſt, on a ſudden, all the Reputation it had acquir'd but a little before; tho' there are, at the ſame time, a great many Truths in his Syſtem, which ought to be regarded in the Method of Cure. My Buſineſs, therefore, at preſent, ſhall be, to examine *Sylvius*'s Hypotheſis, and ſo bring it, as it were, from Darkneſs to Light.

My real and firm Opinion, then, is, that the firſt of the ſmall Inteſtines, which is call'd by the Name of *Duodenum*, performs Offices utterly remote and diſtinct from thoſe of the other Inteſtines; and, for this Reaſon, deſerves a particular Conſideration; for Nature, not content with furniſhing us with a large and ſuperior Stomach, has alſo provided us with a leſſer Stomach; and as in the former, there is a coarſer and more ſimple Solution of the Aliments, ſo, in the latter, the Solution is more refin'd and elaborate, and the Aliments more perfectly mix'd and attenuated: And as, on the one hand, this Inteſtine is of the greateſt Uſe and Service to the animal Œconomy; ſo, on the contrary, if it labours under any Diſorder, and becomes incapable of performing its Functions, it gives Occaſion for many, and thoſe very ſevere Diſtempers.

But, that the Truth of my Aſſertion may be the more evident, I ſhall conſider the Structure of the Duodentum, that thence we may form a Judgment of its Uſes. To me, the Duodenum ſeems to be a ſmall ſuccedaneous Stomach, and the great Laboratory for the Digeſtion of the Aliments. Now the principal thing requir'd in the Structure of a Stomach is, to have a Flexure, and a Bottom to retain, for ſome time, the Aliments it receives: And all Anatomiſts generally agree, that the Duodenum begins at the Right Orifice of the Stomach, and makes a remarkable Flexure towards the Spine of the Back. *Riolanus in Enchirid. Anatomic. Patholog.* ſays, that the Duodenum bends towards the Spine. *Blancard. in Anatom. p.* 410. is of the ſame Opinion: The Duodenum, ſays he, runs from the Pylorus towards the Spine, under the Stomach, almoſt round the Centre of the Meſentery; then it is join'd, by membranous Ligaments, to the Vertebræ of the Loins; and, without making any further Circumvolution, ends at the Left Kidney, where the Windings of the *Jejunum* begin. In like manner *Hornius*, in *Micraceſm.* ſays, that the Duodenum begins at the Stomach, and, making a ſmall Flexure downwards, runs directly to the Spine; and there, near the Centre of the Meſentery, lies tranſverſely on the Vertebræ of the Loins. And *Munyks, de re Anatomic.* aſſerts, that the Duodenum, the firſt of the ſmall Inteſtines, lies tranſverſely on the Spine; that it admits the biliary and pancreatic Ducts, and is connected with the broad Extremity of the Pancreas; and that, when it begins to make Circumvolutions, it acquires the Name of *Jejunum*. *Veſalius*, in *Anatom. p.* 379. expreſſes himſelf, relative to the Duodenum, after this manner: The firſt of the Inteſtines, ſays he, begins at the inferior Orifice of the Stomach, whence immediately being reflected backwards, under the poſterior Part of the Stomach, it is carry'd directly downwards upon the Right Side of the Spine, without any Circumvolutions: And therefore many Anatomiſts are miſtaken, who aſſert, that the Duodenum terminates, where the Orifice of the biliary and pancreatic Ducts opens into its Cavity; for the Extremity of this Inteſtine is more properly fix'd at the Part where its Flexure ends, and begins to form Circumvolutions. And hence *Vereheyen*, in *Anatom.* p. 41. very juſtly obſerves, that the Duodenum begins at the Right Orifice of the Stomach, then turns towards the Spine, and ends on the Left Side, where the Circumvolutions begin. *Hornius*, in *Opuſcul. Anatom.* ſays, that Authors have not determin'd where the Duodenum ends; for thoſe who will have it to be twelve Fingers Breadth long, from which it has acquir'd the Name of Duodenum, ought not to ſeek for the End of it at the Inſertion of the biliary Duct, but rather on the Left Side, where the Inteſtine begins to form Circumvolutions: And *Highmore*, in *Anatom. p.* 27. makes the End of the Duodenum to be, where the Circumvolutions begin. Another thing requiſite in the Structure of a Stomach is, to have a capacious and ample Cavity: Now tho' the Cavity of the Duodenum is not ſo large as that of the Stomach, yet it far exceeds the reſt of the ſmall Inteſtines in Capacity; and hence *Veſalius*, in *Anatom.* p. 379. obſerves very juſtly, that the Part of the Duodenum, under the Stomach, which is connected to the Spine, is found, upon Diſſection, to be more capacious than the other Parts of the inteſtinal Duct. *Veſſingius*, in like manner, aſcribes a Laxity and Largeneſs to it; which is confirmed by what *Diemerbroek* advances, *p.* 153. that anatomical Obſervations diſcover, in this Inteſtine, a remarkable Largeneſs and Laxity. *Bartholine*, therefore, *Bauhine*, and *Blancard*, with other Anatomiſts, err egregiouſly, when they aſſert, that the Duodenum is, indeed, thicker than the other Inteſtines, but leſs capacious: That the Duodenum is a ſort of Stomach, and performs the like Functions, appears from its internal Structure, which is the ſame with that of the Stomach; for the Stomach is furniſh'd with a glandulous and villoſe Coat, out of which there continually diſtils a ſolvent Juice; and the ſame Coat is continued thro' the Duodenum. This Coat abſorbs no Fluid from the Cavity of the Inteſtine, as having no patent Ducts to receive it; but it ſecretes from the Blood, a Juice of the ſame Nature with that, call'd the Menſtruum of the Stomach: And, what is particularly remarkable, beſides this glandulous Coat, the Duodenum is furniſh'd with innumerable ſmall Glands, which, upon a Separation of the *Tunica villoſa*, are very conſpicuous, and are ſituated in the nervous Coat. *Wepfer*, in *Hiſtor. Cicut. aquatic. p.* 190. informs us, that he found ſcatter'd here and there, above a Hand's Breadth from the Pylorus, a great Number of Glands in the Duodenum, which, upon taking off the fibrous Coat, appear, as it were, conglomerate; that they were about the Size of half a Hemp-ſeed; and that, being macerated in Water, they diſcharg'd a large Quantity of Mucus, even for the Space of eight Days after the Death of the Subject. The famous *Brunnerus* has the Reputation of having firſt diſcover'd theſe Glandules. See *Miſc. Natur. Curioſ. Dec.* II. *ann.* 5. *p.* 464.

Theſe Glands were certainly deſign'd to ſecrete the ſolvent Lymph, and pour it into the Cavity of the Duodenum. Another principal Quality of a Stomach is, to diſſolve the Contexture and Adheſion of the Aliments: And this Solution is principally carried on in the Bottom of the Stomach, where the Aliments continue for a conſiderable time. The Duodenum, which I call a Stomach, has, in ſome reſpects, a kind of Privilege and Prerogative above the Stomach; for the latter only receives the fermentative Juices from the glandulous and villoſe Coat; whereas the former, beſides this Coat, and its proper Glands, has alſo ſome peculiar and remarkable Ducts, which diſcharge into its Cavity a highly active Menſtruum: For the bilious Juice runs in a leſs Quantity from the Gall-bladder, but in a larger from the Liver, and its biliary Ducts; and, from ſuch a great Quantity of Juice convey'd into it, the Importance of the Duodenum is evident. In like manner the Duct emerging from the pancreatic Gland, which is remarkably large, conveys into it a great Quantity of Lymph, of a ſolvent Nature; which is a further Proof of its ſingular Uſe: And it is further obſervable, that theſe two Ducts run together in a human Body, and their Orifices end in a Papilla, and are directly

directly plac'd over the Bottom of the Flexure of the *Duodenum*, as I have frequently obſerv'd in Diſſections; that the Liquids convey'd by theſe Ducts, might deſcend in ſuch a manner, Drop by Drop, on the ſubjacent Maſs of Chyle, as to form a Menſtruum, of wonderful and univerſal Uſe in the animal Œconomy, and a true Balſamic, compos'd of Bile, which is an alcalino-ſulphureous Fluid, and the pancreatic Juice, of a very thin and ſpirituous Nature.

In the Stomach the Aliments are only diſſolv'd, and their Juices are not there ſeparated, and convey'd to the Blood; for all Anatomiſts agree, that the Stomach is not furniſh'd with lacteal Veſſels: In like manner, we do not obſerve any Lacteals in the Duodenum, and, conſequently, there is no ſuch Secretion made there, as is carried on in the other Inteſtines, particularly in the *Jejunum*; and, for this Reaſon, the Meſentery does not reach to the Duodenum, though all the other ſmall Inteſtines adhere to it; and becauſe it not only ſupports, but affords a freer Paſſage to the lacteal Veſſels, the lower and more prominent Part of the Pancreas, together with the Centre of the Meſentery, which is cloſely connected to the Vertebræ of the Back, rather poſſeſſes the Interſtice of the Duodenum. The Centre of the Meſentery is that Part of it, to which the Artery is convey'd from the Trunk of the Aorta; and where a remarkable nervous Plexus from the ſpinal Marrow conveys Nerves to the Meſentery and Inteſtines; and where a Branch is extended from the Trunk of the *Vena porta* to the Meſentery, on the Right Side.

From what has been ſaid, it evidently appears, that the Duodenum ought more properly to have the Name of a Stomach, than be rank'd among the Number of the Inteſtines, which ſerve rather for Secretion than Digeſtion; and it is ſtill a Queſtion, whether the Buſineſs of Digeſtion be not more effectually carried on in the Duodenum, or ſuccedaneous Stomach, than even in the principal Stomach, where the Aliments undergo a crude, and but imperfect Solution; whereas, in the Duodenum, the Maſs of Aliments is farther elaborated, attenuated, and reduced to a more ſpirituous Nature. In the Stomach there is only a lymphatic Juice, together with the acid Relicts of the Aliments; but in the Duodenum, beſides this Juice, there flows another of a penetrating and active Nature, far more rich, of a pinguious, viſcid, and tenacious Subſtance, which attenuates, diſſolves, and perfectly incorporates with the alimentary Juices; which is abundantly evident, from the yellow Colour of the Excrements. 'Tis very obſervable, that there is not any Animal, but what has this Flexure of the Inteſtine, or little ſuccedaneous Stomach; and that no Animal is without the bilious Juice, which is generated in the Liver, and poured copiouſly into their Duodenum; which manifeſtly proves, that Nature has exerted her utmoſt Skill in faſhioning this Part of the Body, ſo neceſſary for the Preſervation of the Life and Health of Animals.

And as the Duodenum is of the greateſt and moſt extenſive Uſe; ſo, if it labours under any Defect, if there be not a proper Temperature in the ſolvent Juices, or if the due Tone of this noble Part be any-ways injur'd or deſtroy'd, a great Diſorder through the whole Œconomy of the Body muſt, of conſequence, ariſe, and a long Train of Evils neceſſarily enſue. My principal Buſineſs, therefore, at preſent ſhall be, to inquire after what manner many morbific Cauſes may be generated in this ſmall Stomach, if it happen to be preternaturally effected. *Helmont* and *Sylvius* aver, that the Cauſe and Sources of moſt Diſeaſes are diſcoverable in the Duodenum.

No material Principle of Diſeaſes, which can come under the Denomination of morbific Cauſes, can be ſaid to reſide in the Humours, whilſt they continually circulate through the Veſſels; for ſo long as they are conveyed regularly through the Canals, which muſt prevent their Corruption, they can never ſufficiently injure any Part to cauſe a Diſeaſe; but, before the Humours can, in any Degree, be corrupted, change their natural Diſpoſition, and introduce any Diſorder in the Body, they muſt previouſly be in a State of Reſt, and ſtagnate. Now, there is no Part in the Body more ſubject to Stagnations and Corruptions of the Humours, and conſequently to the Generation of morbific Cauſes, than thoſe which have a Flexure, ſuch as the Stomach and Duodenum; for the Humours are corrupted, and have their benign innocent Nature changed into the Reverſe, firſt, merely by Stagnation; and, then, degenerate by the Admixture of other heterogeneous Subſtances.

'Tis moſt probable, that as all Humours in general, ſo the Bile in particular, if it be in an unactive State, contracts a malignant and virulent Nature: And hence *Hippocrates de Natur. Human.* ſays, "That green Bile ſettling near the Liver, "when it effervesces, generates a Corruption in the human "Body, and is a pernicious Inmate." By this is meant no more, than that the Bile, ſtagnating, is corrupted in the Duodenum, and becomes very noxious to our Bodies. There is a Paſſage in *Lib. de Medic. priſca*, much to the ſame Purpoſe, as follows: "When a certain bitter Humour, which we com-"monly diſtinguiſh by the Name of yellow Bile, is diffuſed "through the Body, it brings on great Anxieties, Heat, and "Weakneſs; but when it is purged off, either ſpontaneouſly, "or by the means of Medicine, provided this be done ſoon "enough, we are freed from all inordinate Heat and Pain. "But if, by its Continuance, it ſhould be highly exalted, crude, "unmixed, and intemperate, no Art can allay either the Pains "or Fevers thence ariſing. And, when acrid and acrimonious "Bile abound in the Body, Phrenſies, and a Gnawing of the "Bowels, with great Anxiety, ſucceed; and theſe are never "cur'd, 'till the Humour is purg'd off, render'd mild, and "mix'd with other Humours." From this elegant Paſſage we ſee, what violent Diſorders are conſequent to the Corruption of the Bile.

I ſhall firſt treat of the preternatural Stagnation of the Bile, to which not only an Inactivity and Deficience of ſalino-ſulphureous Particles in it, but alſo a Diſorder in the Tone and periſtaltic Motion of this Inteſtine, in a great meaſure contribute; for upon any Defect in the periſtaltic Motion, the Bile, which continually flows out, being collected in great Quantities in this Part, ſurpriſingly diſtends the Inteſtine: Concerning which, there is a remarkable Paſſage in *Diemerbroek, in Anatom. p.* 53. We find, ſays he, daily, by anatomical Diſſections, that this Inteſtine is ſometimes of a remarkable Largeneſs, which is conſiderably increas'd by the fermentative, acrid, and peccant Juices, which fall upon it; and hence ariſe ſtrong fermentative Effervescences, which not only diſtend it to a great degree, but create alſo moſt troubleſome Rumblings, violent lancinating Pains, and the greateſt Uneaſineſs in the Perſons affected. And we learn from *Miſcel. Natur. Curioſ. Dec.* 11. *ann.* 2. *p.* 186. that in a cachectic Patient, the Gall-bladder was utterly void of Bile, but that the Duodenum was full of bilious Humours, and dilated, like a Bag, ſo much, that it was capable of containing a Pint of Liquor: And upon opening it, more than half of the groſs Humour iſſued out, which was of a yellowiſh-black Colour; and, for all this, there remained above twelve Spoonfuls therein. It frequently happens, that too large a Collection of Bile in the Duodenum is the Cauſe of a great many Diſorders; for, when the Inteſtine is much diſtended, not only the Coats, which are endu'd with an exquiſite Senſation, are affected, but the nervous Branches of the meſenteric Plexus are diſtended, and the Blood-veſſels being compreſs'd, a Congeſtion of Blood is form'd about the Trunk of the *Vena Porta*, and the Beginning of the meſeraic Artery: Hence a fixt Pain about the firſt Vertebra of the Loins, Uneaſineſs about the Præcordia, Loſs of Appetite, Coſtiveneſs, Want of Reſt, and Decay of Strength. I have frequently obſerved theſe Diſorders in weak Perſons, in Women whoſe Menſes were deficient, in hypochondriac People, and after intermittent Fevers prepoſterouſly ſuppreſs'd; after Errors in point of Diet, but, particularly, after a Fit of Anger: And, in this Caſe, ſtomachic Carminatives, Abſorbents, and relaxing Medicines, do but little Service; and Anodynes much leſs, but are rather extremely pernicious. It would be more proper to evacuate the *primæ Viæ* of the biliary ſtagnating Juices, by adminiſtring an Emetic, with proper Caution. This Subject brings to my Remembrance the Caſe of a Gentleman, of a weak Conſtitution, who, by a conſtant Application to the Studies of his Profeſſion, and a ſedentary Life, us'd to have a great Quantity of impure Humours collected about the *primæ Viæ*. If, at any time, he had eat too large a Quantity of Aliments, of difficult Digeſtion, he found himſelf oppreſs'd with Anxiety and Heat about the Præcordia, a Pain about the Pit of the Stomach, and Right Side; he would, alſo, vomit up his Aliment, could ſleep but little, and complained of a Laſſitude all over his Body; his Skin was ting'd with a yellow, diſagreeable Colour, and ſuch Symptoms recur'd pretty frequently. Some Preparations of Rhubarb, mixt with abſtergent and aperient Salts, were of conſiderable Uſe; but they did not perfect the Cure in leſs time, commonly, than the Space of three Weeks. The Gentleman laying his Caſe before me, ſays *Hoffman*, I ſoon diſcover'd, that the principal Cauſe of his Diſtemper proceeded from a Stagnation of the bilious Humours in the Duodenum; and, for that Reaſon, I directed a gentle Emetic, for carrying off the Load of Humours. The Patient, who had not ſlept the preceding Night, but was tormented with the moſt violent Symptoms, took, next Morning, a Vomit, conſiſting of one Grain of emetic Tartar, diſſolv'd in Mint-water; and, a little after, he vomited up, into a Baſon, a conſiderable Quantity of groſs viſcid Bile, of a dark-yellow Colour; and this was ſucceeded by four Stools. After this Operation, all his Symptoms left him at once, he recover'd his Appetite, and could ſleep as well as ever, and had no bad Symptom remaining. We may learn from this ſingle Inſtance, the great Efficacy and Virtue of an Emetic, in Diſorders which proceed from the *primæ Viæ*.

A Stagnation of Bile in the Duodenum creates a Coſtiveneſs; for it ought to be obſerved, that if there be a Defect of the periſtaltic Motion in the firſt Inteſtine, the other Inteſtines muſt ſuffer alſo; ſo that the Progreſs of the Fæces, through the Inteſtines, will be retarded. This is confirmed by an Obſervation in *Miſcell. Nat. Cur.* above quoted. Beſides, the Bile remaining

remaining in the Duodenum, together with the pancreatic Juice, and the Mucus of the Aliments, excites Flatulencies, which create Pains and Uneaſineſs in the Lines, not unlike thoſe of a nephritic Colic. *Pechlinus*'s 57th Obſervation is a Confirmation of this: "That Part of the ſmall Inteſtines, ſays he, "riſing obliquely towards the Spleen, and being thence reflected "in a more acute Angle, by the very Nature of its Situation "muſt cauſe every thing, that is too viſcid, to remain the longer "in that Part, whether it be Phlegm, pancreatic Lymph, "Bile, or even Flatulencies." Women are in more Danger of contracting ſuch Diſorders in this Part, on account of lacing their Stays too tight; and if they eat immoderate Quantities of Summer Fruits, this affords abundant Matter for flatulent Crudities, and Fermentations; for the Juices being in a violent Effervescence, they require greater Room than uſual, to expand themſelves freely: And therefore, when the Hypochondria, which ought to be dilated, are compreſſed, the Juices and Flatulencies muſt fix there, and lay a Foundation for new Corruptions and Fermentations. After the ſame manner, from a Diſtention of the Duodenum by Flatulencies, there frequently ariſes a fixed chronical Pain in the Loins, as *Sylvius* obſerved in his Days; who imagined, that this Pain, which ſeems to pierce, as it were, the Loins, was ſeated in that Part where the Bile and pancreatic Juice meet together. It is well known, that febrile Paroxyſms generally begin with a fixed Pain of the Loins, in that Part where the Centre of the Miſentery is connected to the Vertebræ of the Back; and as the Duodenum likewiſe adheres to it, by the Intervention of ſtrong Membranes, it is no Wonder, that a violent Expanſion of theſe Membranes, which are poſſeſſed of an exquiſite Senſation, ſhould ſtimulate the adjoining Plexus of Nerves to Spaſms. Both Solids and Liquids ſtagnate in the Stomach and Duodenum, upon a ſpaſmodic Contraction of the latter, which obſtructs the Paſſage to the other Inteſtines. We know by daily Experience, that ſolid and liquid Aliments are diſcharged in great Quantities, even three Days after they are received into the Stomach; and that drunken Perſons frequently evacuate a ſurpriſing Quantity of Fluids twelve Hours after their Reception. Thus *Helmont*, *Lib. de Febrib. C.* 10. ſays, that "If the Pylorus be too much contracted, Drink "will ſometimes remain in it for the Space of three Days; "and more will be thrown up at one ſingle Vomit, than was "drank for two Days before." It is owing to theſe ſpaſmodic Contractions, that not only corrupted Humours, but Flatulencies alſo, ſubſiſt in hypochondriac and hyſteric Perſons; and hence it is, that in the Paroxyſms of a Fever, Anxieties, Reſtleſſneſs, Oppreſſion of the Spirits, and Pains about the Pit of the Stomach and Loins, a Nauſea and Vomitings, are produced. This Contraction of the Duodenum very frequently brings on a Jaundice; for, when its Coats are too ſtrongly contracted, the *Ductus Cholodochus*, which paſſes obliquely, about the Length of a little Finger, through theſe Coats, is ſtraitened and compreſſed, ſo that the Bile cannot eaſily deſcend to the Duodenum: Hence it is, that the Bile, ſtagnating both in the biliary Ducts and Gall-bladder, not only occaſions Pains and Spaſms, but, by returning to the Blood through the lymphatic Veſſels, overſpreads the Skin with an unſeemly yellow Colour.

There are many other Diſeaſes, which proceed from this Intemperature and Corruption of the Bile and Juices concurring in the Duodenum, ſuch as all intermitting, continual, tertian, choleric, ſlow, and burning Fevers, Small-pox, Meaſles, Diarrhœas, Dyſenteries, Heart-burns, violent chronical Coughs, Gouts, wandering Pains, and many others of a like Nature. The Humours in this Part are not only corrupted by Stagnation but alſo by their being mixed with other impure excrementitious Juices, which flow too copiouſly to the Bile and Juices there lodged, either from the Stomach, or Maſs of Blood. It alſo frequently happens, that when acid, corroſive, and ſaline Humours, which are generated in the Stomach, either by Aliments of the like Qualities, or by continuing too long there, deſcend to the Duodenum, and are there mixed with the Bile, they ſurpriſingly corrupt and contaminate the bilious balſamic Humour: And the Bile, being mixed with ſuch an Acid, is not only coagulated, and rendered corroſive, but alſo changes its natural Colour, and aſſumes a green æruginous Tincture. Whilſt ſuch a Humour reſides in the Duodenum, it corrodes and vellicates the adjoining Parts, and excites Gripes, ſpaſmodic Contractions, and violent Pains, both in the Stomach, and the more ſenſible Inteſtines; and eaſily creates Convulſions and Epilepſies in Children. If, therefore, the Excrements in ſuch Diſtempers be green, it is a very bad Sign; for in that Caſe they are ſometimes of ſuch an acrimonious Nature, as to corrode a Piece of Linen. From the ſame æruginous ſtagnating Bile ariſe Coughs of various Kinds, and that not only in Children, but alſo in Adults; and theſe Coughs are frequently attended with intermitting Fevers, and hypochondriac Diſorders, in which Caſe all ſweet and pectoral Medicines do more Harm than Good; and it is to be obſerved, that ſuch Coughs generally recur both Day and Night at ſtated Periods; for the Juice of the Aliments, mixing with this corroſive Acid, in ſome meaſure leſſens the Vellication of the ſubjacent Parts; but when the alimentary Juice recedes, and is conveyed to other Parts, the corroſive Humour, ſtill remaining, reſumes its former Force, and ſeizes upon the tender Membranes of the Duodenum, at that time diſtorted by Flatulencies: And Diſorders in theſe affect by Conſent the Diaphragm, the Meſenteric, ſtomachic and pulmonary Plexuſes, and excite a violent Cough, which is ſometimes attended with ſevere Vomitings, and Danger of Suffocation, occaſioned by the Afflux of the viſcid Serum upon the Bronchia of the Lungs. Theſe violent Coughs I have, in a ſhort time, very happily cured by a compound Powder of Crabs Claws, with the Addition of the Oil of Aniſe; giving one Dram for a Doſe twice a Day. To Children under this Diſtemper I preſcribed gentle Emetics, and an Infuſion of Rhubarb with Manna, which are of ſingular Service in carrying off theſe viſcido-bilious Collections of Humours.

When this cauſtic Bile is reſolved into Flatulencies, it produces violent Diſorders in the Parts of the Body. *Riverius*, *Cent.* 2. *Obſ.* 8. mentions a remarkable Caſe of this ſort. The Patient was every Night afflicted with a ſevere Pain, which began in his Left Side, and extended to the anterior and poſterior Part of the Thorax, to the Left Side, and the Scapulas, with ſuch Violence, that he could not obtain Eaſe in any Poſture: Theſe Pains continued till Morning, and then they were removed, and did not recur the whole Day. *Riverius* juſtly determines, that this Effect was produced by Flatulencies generated during Sleep, by the intenſe Heat of the Body, and the Collection of peccant and crude Humours lodged in the Primæ Viæ, in conſequence of his irregular Method of living. And I have frequently obſerved, plethoric Perſons, who eat too liberally, wake out of their Sleep at certain Hours after the Digeſtion of the Aliments, with a great Uneaſineſs. Shortneſs of Breath, and Danger of being ſuffocated; to whom Bleeding, Vomiting, and abſtaining from Suppers, have afforded immediate Relief. Sometimes the Effects of theſe peccant Humours ſtagnating in the Duodenum, and the firſt Inteſtines, extend to the Head, and produce Head-achs, Vertigos, and a Torpor of the Senſes, and ſometimes apoplectic Fits. *Borelli*, *Cent.* 2. *Obſ.* 1. ſays, that Bile, which, when vomited up, bubbled up like Aqua-fortis, was the Cauſe of a Hemicrania. "A certain Perſon, ſays he, in "a tertian Fever, was tormented with an exceſſive lancinating "Pain, affecting one Half of his Head, who, on taking a "Vomit, threw up a Pint of green Bile; and, diſcharging the "like Quantity at the next Paroxyſm, he found himſelf freed "from all his Pains." See *Riverius*, *Cent.* 1. *Obſ.* 27. I know a Gentleman, who, a few Days after letting Blood, indulged himſelf in drinking Wine too liberally, and eating Oyſters, and other Aliments of difficult Digeſtion: Afterwards he began to languiſh, and grow dull; and, his Appetite failing by degrees, he was ſeized at Table, on a ſudden, with a great Heat above the Præcordia, which was followed by a vehement Cold, and Fainting; and all his Senſes ſeemed to be extinguiſhed. By the Injection of a Clyſter he had ſix Stools, which gave him no ſmall Relief; and, a few Days after, he was able to walk abroad; but ſoon after, being at an Entertainment, he was ſeized with the ſame Diſtemper, though not in ſo violent a Degree. At laſt I diſcovered, ſays *Hoffman*, the Cauſe of his Diſtemper; and gave him a gentle Emetic, which made him throw up great Quantities of viſcid Matter, and green Bile. This was the Source of his Diſorder; for he immediately recovered. And it is not to be doubted, but all theſe Diſorders aroſe from a porraceous Bile, which irritated the Orifices of the Stomach.

The Cauſe of a Vertigo, a troubleſome Diſorder, frequently alſo reſides in the Duodenum; and hence it is, that it ſeizes with a Nauſea, and a bitter Taſte in the Mouth, when the Stomach is empty; and is ſomewhat mitigated after eating. *Galen* takes notice of an Epilepſy proceeding from a Diſorder of the Stomach, and conjectures that it may be owing to Bile lodged in the Duodenum. I have had, in the Courſe of my Practice, ſays *Hoffman*, a remarkable Inſtance of a Diſtemper, which proceeded from the ſame Cauſe: A *Saxon* Count, having retired hither, on account of the Troubles of the State, conſulted me about a violent Diſorder, which had afflicted him for near a Year. He, by long Grief, Errors in point of Diet, and a ſedentary Life, had contracted a cacochymico-plethoric Habit of Body; and he found himſelf every Night, about Three or Four of the Clock, ſeized with moſt violent Pains, which began about his Navel, and, paſſing along his Back, at laſt affected the Præcordia with ſuch Violence, that he was in danger of being ſuffocated: He was ſeized alſo with the greateſt Anxiety, and frequently with epileptic Contractions, and a Dulneſs of his Senſes; which Symptoms were always aggravated, whenever he was coſtive. Carminative and gently laxative Clyſters, and a Vomit, afforded him conſiderable Relief; but could not remove the Diſtemper, which was too deeply rooted. We learn from *Helmont*, as well as from daily Experience, that an Apoplexy is frequently generated in the Stomach and Duodenum; for he tells us, in the Book he wrote to prove, that all Diſeaſes proceeded from the ſenſitive Soul, that he frequently cured a recent Apoplexy by the Exhibition of a Vomit, and Aromatics. This is confirmed by *Wedelius*, *in*

Pathologia Dogmatica; who tells us, that by such Remedies he restored a Tiler of *Jena*, who was seized with an Apoplexy, to perfect Health. And we know by Experience, that Persons who have a Redundance of Blood, are frequently seized with an apoplectic Fit about the Equinoxes, at Full-moons, and in the Winter-time, after a Fit of Anger or Intemperance; and that it is either preceded or attended by Efforts to vomit, whilst what is this Way discharged, is tinged with a black and disagreeable Colour.

From such Collections of Humours residing in the Stomach and Duodenum, arise many other very severe Distempers, among which we may reckon slow Fevers, which are generated of intermitting and acute Fevers; for when they are suddenly checked by Astringents, among the Number of which is the Peruvian Bark, before the Primæ Viæ are first unloaded, the fordid Collection of Humours lodged in the Stomach may easily become the Source of more violent Distempers. The like Effects may be produced by eating too large a Quantity of Aliments, immediately after any chronical or acute Disease, where the Stomach, in consequence of the Violence of the Distemper, is too weak for the Digestion thereof. Among the Number of such Disorders we may reckon, as I have said, slow Fevers, which seize the Patient with the following Symptoms; a slow Heat of the Body, with a quick and frequent Pulse, a Lassitude, nocturnal Sweats, Faintness, and Emaciation. When, therefore, we have discovered the Source of this Disorder, we may easily perceive, that refrigerating Remedies are no ways suitable to such a Case, but do more Injury than Good: We ought rather to attempt the Cure with abstergent Salts, and gentle Emetics, relaxing and bitter Medicines, which in this Case seem to promise the most certain Relief to the Patient.

I have already shewn, that the Bile, by stagnating, and mixing with acid Humours, may become the Occasion of many violent Distempers; and, in pursuance of my Design, I shall now inquire, after what Manner its natural Texture and Temperature may be disordered and corrupted by the Admixture of other Particles; and I am inclined to think, that this is principally effected by a Suppression of other Excretions, particularly Transpiration. It is evident, of how much Importance to the Preservation of Life and Health, this Evacuation of Humours through the Pores of the Skin is; which is justly esteemed the Emunctory of the whole Body, and of the Blood: For all things, which are either superfluous or injurious, are exhaled and perspire through the Pores, and are expelled, as Sordes, out of the Limits of the vital Circulation of the Blood: Of this Sort is that salino-sulphureous and subtle aëreo-aqueous Principle, which, being retained in the Body, easily corrupts and vitiates the Blood, which is the Fountain of Life. Hence many dangerous Diseases, especially Fevers of all Kinds, and Distempers which are attended with critical Eruptions. But, in order to account for this, we may observe in general, that the Humours of our Bodies are injured by an Obstruction of the Excretions, and particularly of Perspiration; for when the acrimonious Sordes do not find a Passage, on account of an Obstruction of the Pores, they return to the Lymph and Bile, which, on that account, assume a quite different Nature; and, being thus vitiated, when it falls into the Intestines, and happens not to be evacuated in due time, but stagnates and continues long there, it changes its very Nature, and becomes a Seminary of Diseases, especially of Fevers. Wherefore it is not without Reason I assert, that the Seeds of periodical Diseases, particularly of Fevers, reside in the Duodenum: And in this the two eminent Physicians *Sylvius* and *Helmont* are on my Side. The former everywhere, throughout his Writings, assigns the Duodenum as the Seat of many Diseases; and the latter, *Lib. de Febrib. Cap.* 17. expressly affirms the same. "A Fever, says he, is caused by "a virulent Humour, which is lodged about the Pylorus, and "a little below it." And, *Cap.* 10. *N.* 3. he says, "that "the Seat of Fevers is in the *Primæ Viæ*, and extends from "the Pylorus to the Duodenum." *Fernelius* is of the same Opinion; who, *L.* 6. *C.* 7. assures us, "that the Seat of "intermitting Fevers is about the Stomach, the Duodenum, "and Pancreas."

The Seat, therefore, of these Fevers is justly determined to be in the Duodenum, since they proceed from a corrupted Lymph and Bile; and they are generally produced by a Suppression of Transpiration, a Plethora, a Weakness of the Stomach and Intestines, occasioned by Intemperance; all which greatly promote this Corruption: For, if the Sordes be not carried off by Perspiration, they communicate an Infection to the Bile, by mixing with it; and if the Tone of the Stomach be disorder'd, and Nature not strong enough to discharge it by Stool, it must be detain'd in the Intestines; and, when it is corrupted, and continues long there, it not only exercises its Tyranny in that Region, but, being conveyed to the Blood, opens a new Scene of Evils, by racking the membranous and nervous Parts of the Body with Spasms and Pains.

I have affirmed above, that the Seat of intermitting Fevers, especially those of the tertian Kind, was in the Stomach and Duodenum; which is confirm'd by the Symptoms that appear both in the Beginning and Progress of these Disorders; for, in the Beginning of them, the Patient is troubled with Flatulencies, and a Hardness of the Abdomen, a Nausea, and fixed Pain in the Back, and an Anxiety and Uneasiness about the Præcordia: Soon after, the Coldness goes off, a Vomiting ensues, the Colour of the Face turns yellow, and the Body burns with excessive Heat; the Patient is tormented with a Thirst, that no Liquor can quench; his Urine is high-colour'd; and the Stools procur'd by Cathartics are very yellow; bilious, and sometimes viscid, Matter is discharged by Vomit; and a bilious Diarrhœa not unfrequently succeeds the Exhibition of the *Peruvian* Bark, especially if the Duodenum happens to be turgid with a Redundance of Bile. The true Reason of this is, that the Bark, restoring the disorder'd Tone of the Intestines, increases their peristaltic Motion; whence they are enabled to discharge the contained Sordes. When the Bile returns to the Blood, from whence it had been before secreted, a Jaundice sometimes accompanies the Fever. All these Symptoms, however violent in intermitting Fevers, are much more so in continued Tertians, and, most of all, in those burning Fevers which the *Greeks* call'd *Causi*; because the abundant Quantity of acrid Bile stimulates the respective Parts; and, therefore, all Medicines which destroy the Acrimony of the Bile, and render its stimulating Force less active, and which carry off the Sordes from the *Primæ Viæ*, are the most powerful Remedies in such Distempers; such are, gentle Emetics, nitrous, saline, and absorbent Medicines, which have justly acquir'd great Reputation for the Cure of these Disorders: And, indeed, these Remedies ought always to be made use of in Distempers of this Kind; though they are not so efficacious, when the intermitting Fevers are extremely obstinate; for Example, in a Quartan; for, in these Cases, the Disease is sometimes too stubborn to yield to the Remedies above-specified; a plain Indication, that it is too deeply rooted, and that the Cause lies more remote, even in some of the Viscera. And it is no less evident, that the Pancreas, Liver, and Spleen, when labouring under Obstructions, must continually supply the Intestines with a corrupted Bile, and pancreatic Juice, and, consequently, furnish fresh Supplies for the Distemper. And, therefore, when Cases of this Kind occur, it will be proper to administer stronger Medicines than the above-mentioned; such as strong Aperients, Salts, and Preparations of Rhubarb, Steel, and Mercurius Dulcis. Neither will it be improper to exhibit Emetics, as they frequently penetrate to the very Viscera, and expel the Sordes retained in them. The Powder invented by *Riverius*, that successful Practitioner, may be of great Use here, as it operates both by Stool and Vomit; and the Inventor assures us, that he has carried off a Quartan above a hundred times by the means of it, as may be seen in his Observations. Intermitting Fevers, which, about the third Day, are exasperated, require the same Cure, as they in like manner arise from acrimonious corrupted Bile, as *Thonnerus*, *L.* 1. *Obs.* 1. *p.* 10. remarks.

Riverius declines giving us the Method of preparing the celebrated Febrifuge above-mention'd, unless we can guess at its Composition from the following obscure Description: "This precious Remedy, says he, is composed of a triple "*Hercules*, [perhaps Gold, Antimony, and Mercury] by "twelve Operations, [perhaps Distillations] raised to the "highest Degree of Perfection. To these three *Herculesas* "there is added a fourth Champion, [perhaps Spirit of Wine] "which renders the Remedy complete and perfect." This Medicine may be given to Children, from ten or twelve, to fifteen Grains; and to Persons farther advanced in Years, from twenty to thirty or forty Grains. It operates in a mild and easy Manner, when exhibited in a due Dose; nor does it produce any greater Commotions than the common Medicines, or the Compositions of Sena and Rhubarb. Sometimes it operates by Vomit, if any Part of the morbific Matter is lodg'd about the Stomach; for it has this Advantage peculiar to itself, that it goes directly to the morbific Matter, where-ever it is lodg'd, attacks it with Vigour, and persists in the Encounter, till it has subdued it. In some Cases, where it finds the Passages open, and no great Quantity of morbific Matter, it performs its Business without any Trouble, and with a very inconsiderable Evacuation. But, in other Instances, where the Patients have used no Remedies through the whole Course of the Disorder, where the Body is stuffed with the Juices of peccant Aliments, where the Quantity of noxious Humours is large, where the Obstructions are obstinate, or the Crudities great, it does not surmount the Disease, without exciting considerable Commotions, and creating some Uneasiness to the Patients; as happened to some poor and vulgar Persons, on whom the first Experiments, for investigating the Virtues of this Remedy, were made.

But *Hartman*, that celebrated *German* Chymist, *Ralfinkius*, and several others, have been more explicit, and given us full Directions for the Preparation of this specific Febrifuge. They direct the Process to be perform'd in the following Manner:

Take

Take of the pureſt and beſt refin'd Gold, half an Ounce; reduce it into ſmall Portions; and, in the ordinary Manner, diſſolve it in *Aqua Regia*, prepared with common Salt; but not with Sal Ammoniac, becauſe that Species of Salt renders Mercury volatile; of the Glaſs of Antimony half an Ounce; and of well purified Mercury, three Ounces: Diſſolve each ſeparately, and in different Glaſſes, by means of *Aqua-fortis*, in ſuch a manner, that the Solutions may be ſufficiently clear and tranſparent. Mix all theſe Waters together, and draw off the Waters by Diſtillation. Add a freſh Quantity of *Aqua Regia*, and draw it off frequently, till the Precipitate, when placed upon a red-hot Iron, ſends forth no Fume at all. When this is obtain'd, calcine the whole Precipitate, carefully cover'd with a Tile; by which means, all the Spirits of the *Aqua Regia* are exploded and diſſipated. Then, from this Precipitate, diſtil Spirit of Wine, ſix times, till the Mercury is in ſome meaſure fixed. Then the Mercury is to be ignited, and ſlowly calcin'd, cover'd with a Tile. *Riverii Obſervat. Cent.* 3.

Having conſider'd the Nature of Fevers, we now proceed to the Conſideration of thoſe Diſeaſes, which are attended with Eruptions: And the firſt of this Kind I ſhall mention, is the purple Fever, a kind of Diſtemper little known in other Parts of the World; but which is very frequent in theſe Parts (*Saxony*). It is generally obſerved to accompany other Diſeaſes, eſpecially when they are upon the Turn; the Reaſon of which is, that the Inteſtines being dry'd by the preceding Heat of the Fever, and, in conſequence of this, a Coſtiveneſs ſucceeding, the corrupt bilious Matter, in the *Primæ Viæ*, cannot be ſo well corrected; and, when it is not diſcharged by Medicines, it muſt mix with the Blood, and occaſion the Diſtemper we are treating of. And what makes this the more probable is, that a *Purpura* frequently happens, when the Belly is for any conſiderable time coſtive, and is not rendered ſoluble by Clyſters, and gentle Laxatives. This Diſtemper alſo frequently ſeizes Infants, together with a Vomiting, Diarrhœa, a Fever, Cough, and difficult Dentition; and, beſides, it is alſo attended with an immoderate Thirſt, an Anxiety about the Præcordia, and want of Sleep: Perſons who are accuſtomed to bleed frequently, if they neglect it for a conſiderable time, are very ſubject to this Diſorder; and it is principally carried off by purging; and, therefore, Care ought to be taken to keep the Body in a ſoluble State. Some, under this Diſeaſe, ſweat much in the Night; others in the Morning; and others there are again, who every Year are ſubject to a chronical *Purpura*, and have evident Symptoms of a Diſorder in the Liver and Bile. In ſuch Caſes, 'tis moſt proper to begin the Cure by Emetics, and gentle Laxatives, which cannot fail to be of ſingular Service, ſince this Diſtemper frequently proceeds from a Stagnation of acrid Bile. *Borelli, Cent.* 2. *Obſ.* 36. has obſerved, that perpetual Sweats, attended with an Itching, have been carried off by a like Method of Cure, and the Exhibition of a Vomit, if the Patient abſtains from Wine. The Gout alſo ſeems to have its Reſidence in this Source of chronical Diſeaſes. Men of a weak Conſtitution, who have a ſort of hereditary lax and ſoft Texture of the Membranes, and hypochondriacal Perſons, are moſt ſubject to arthritic Pains, eſpecially in the Spring and Autumn; becauſe, in theſe Seaſons, on account of the Inequality and variable State of the Air, Perſpiration is moſt ſubject to be obſtructed; and, conſequently, the tartareous Salts, which abound in ſuch Conſtitutions, are more ſlowly carried off by Urine. And, therefore, when theſe Salts have not a free Paſſage, they are conveyed to the ſalival, bilious, and pancreatic Humours, and affect the *Primæ Viæ* with various Diſorders; ſuch as Flatulencies, Pains about the Præcordia, Coſtiveneſs, a wandering Pain about the Loins, accompanied, at the ſame time, with a febrile Commotion. That the Cauſe of the Diſorder reſides in the *Primæ Viæ*, is evident from hence; that if you adminiſter a gentle Emetic, about the Approach of the Diſorder, if it does not entirely ſuppreſs, it will ſurpriſingly alleviate it. *Martianus*, in his Comments on *Hippocrates*, ſays, that he has known Perſons ſeiz'd with arthritic Pains, from peccant Acrimony in the Stomach, who, upon vomiting up acid Humours, have been either entirely delivered, or, in a great meaſure, relieved from the ſame. And this is confirm'd by *Sylvius*, who informs us, that a Vomit is the moſt proper Remedy for a Gout; and that he has known it ſucceed in many Inſtances in the Courſe of his Practice. He alſo aſſures us, that he has ſeen a Vomit not only prevent an impending Paroxyſm, but alſo to deſtroy ſo far the Seeds of the Diſtemper, as to prevent a freſh Attack. *Hildanus* is of the ſame Opinion, *Cent.* 6. *Obſ.* 84. where we read of a Vomit's removing all the Pain of a Gout, if it be adminiſtered at the Beginning of the Paroxyſm: And I myſelf, ſays *Hoffman*, have obſerved, in my Notes on *Poterius*, that the Exhibition of a Vomit, at the Beginning, has mitigated the Violence of the Pain; and, being repeated the Day after, had the ſame Effect. *Alpinus, in Medicina Ægyptiorum*, ſays, that he has obſerved many Perſons, rack'd with Gout and Stone, who have procur'd great Relief from the frequent Uſe of Vomits.

Many violent Diſorders frequently ariſe from the Paſſion of Anger, for no other Reaſon, but becauſe the Bile, being pour'd in great Quantities from the biliary Ducts, into the Duodenum, affects the Membranes and nervous Syſtem; for if there be a Redundance of Bile in the Body; but, at the ſame time, no Evacuation of it, either by Vomit or Stool, it muſt neceſſarily create a Bitterneſs in the Mouth, a Nauſea and Inclination to vomit, with many other Diſorders; and the beſt Remedies for ſuch are Abſorbents, and Preparations of Rhubarb, gentle Laxatives, and Emetics; but we muſt carefully avoid all ſpirituous volatile Salts, and warming Infuſions.

The Cauſes of the Eryſipelas, Small-pox, Hæmorrhages, Aphthæ, Diarrhœas, hypochondriac and hyſteric Diſorders, as alſo malignant and petechial Fevers, in like manner reſide in the Duodenum; ſince they ariſe from Bile, and a Stagnation of putrid Lymph lodg'd therein. And hence the practical Maxim, *That we ought principally to regard the Primæ Viæ.* But I have already treated this Subject at large under the Article BILIS, which ſee: I ſhall therefore ſuperſede any further Explanation of it.

As to Practice, and the Method of curing theſe Diſeaſes, which are ſeated in the Duodenum; from what has been ſaid, it is evident, that Emetics, carefully prepared, and prudently exhibited, afford the moſt certain, and, perhaps, the only Relief, in ſuch Diſorders: They are generous and important Remedies, and excel in Virtue all other Medicines; and, if a Phyſician would perform any remarkable Cure, he will find his Deſign beſt anſwer'd by Emetics: For ſometimes a ſevere Diſeaſe is carried off, at the Beginning, by one ſingle Vomit; and he that neither makes uſe of Emetics, nor knows how to exhibit them juſtly, in my Opinion, is quite ignorant of true Practice. For, when impure Humours abound in the Stomach and Duodenum, Emetics are abſolutely neceſſary, for ſpeedily evacuating the peccant Matter at the Beginning; becauſe it is dangerous to carry it off through the long Canal of the Inteſtines by Stool; for thus it will be more likely to paſs into the Maſs of Blood: And it is particularly worthy of Obſervation, that moſt Purgatives neither move, nor propel, the ſtagnating Matter in the Stomach and Duodenum, but rather operate upon the ſmall Inteſtines. Anatomy manifeſts the Reaſon of this; for 'tis well known, that the Stomach and Duodenum are furniſhed with a glandulous Coat, under which lies the nervous Coat. For this Reaſon, the Spicula of the Cathartics cannot ſo effectually penetrate and ſtimulate the nervous Coat, as Emetics, which are of a far more penetrating and ſubtile Nature. Liquid Emetics are always preferable to ſolid, as they do not adhere to any one Part of the Stomach, but are diffuſed equally on all Sides, and operate more eaſily, and with leſs Trouble to the Patient. In the next Place, with regard to the Diſeaſes which are ſeated in the Duodenum and Inteſtines, I would recommend all ſuch Medicines as rectify and ſtrengthen the Tone, and preſerve the periſtaltic Motion, and, by theſe means, promote the Expulſion of the Fæces, and, conſequently, render the Body more ſoluble. To this Claſs belong deterſive Salts, ſuch as Arcanum Duplicatum, Terra Foliata Tartari; as alſo bitter Medicines, mix'd with Gums and Reſins of the temperate Kind, Preparations of Rhubarb, Amber, Myrrh, and Aloes.

Whoever attempts to cure chronical Diſtempers, and ſuch as are ſeated in the *Primæ Viæ*, ought principally to regard the periſtaltic Motion of the Inteſtines; the good State of which is known by the regular Diſcharge of Stools: And, when this is the Caſe, all Diſorders are the more eaſily ſubdued. As to the Cure of Diſeaſes which ariſe from the Duodenum, abſorbent and precipitating Medicines, which deſtroy the Acrimony of the Humours, are the moſt effectual: If the Bile be too hot, acrid, and volatile, nitrous Medicines, which correct it, afford the greateſt Relief: And, if it ſhould be viſcid and unactive, it ought to be rectified by bitter balſamic Elixirs.

Laſtly, with regard to the Cure of ſuch Diſorders as ariſe from a Collection of many impure Humours in the *Primæ Viæ*, we are to conſider, that Sudorifics, hot Medicines, and volatile Salts, are not ſo proper; ſince they not only attenuate the peccant Matter, but alſo convey it to the Maſs of Blood and Humours, which may be of dangerous Conſequence; whereas it ought rather to be carried off by Stool or Vomit. I am much pleaſed with a Paſſage in *Sylvius*, *Prax. Med.* 145. in the following Words: "Whenever there is a Redundance "of impure Humours in the *Primæ Viæ*, we ought not to "exhibit Sudorifics; becauſe Sweat cannot be excited without "a Commotion of the whole Blood, which, being at that "time more fluid than uſual, muſt, of conſequence, convey "through the whole Body every Impurity, ſooner, and in "larger Quantities." 'Tis a great Miſtake, to exhibit Medicines of a hot Nature, and eſpecially Sudorifics, before the *Primæ Viæ* are clear'd; and, when they are fill'd with impure Humours,

Humours, 'tis as improper to adminiſter Anodynes; becauſe they retain the offending Matter, which ought to be evacuated. But ſhould this peccant Matter incorporate with the Blood, as happens in an Eryſipelas, the Small-pox, and Gout; in that Caſe we muſt uſe great Caution in adminiſtering Emetics; becauſe, by inviting the Matter from the Extremities to the Viſcera, they may poſſibly excite Convulſions, and other violent Diſtempers: And, therefore, we ought, in ſuch Caſes, to make uſe of gentle Abſterſives and Clyſters, and exhibit Emetics rather at the Beginning of the Diſeaſe, and when the Patient is not under an immediate Paroxyſm. *Frederic Hoffman.*

DUPONDIUM, διπόντιον. A Weight equal to four Drams. *Caſtellus* from *Galen.*

DURA MATER, or *Meninx.* The Name of the thick external Membrane, which covers the Brain. See CAPUT.

DURACENA. An Epithet for a particular Sort of Peaches, which adhere ſtrongly to the Stone. *Caſtellus* from *Langius.*

DURATUS, harden'd, properly; but uſed in *Scribonius Largus*, *Comp.* 35. to expreſs, macerated.

DURDALES, certain imaginary Spirits, which *Paracelſus* fanſied to reſide in Trees.

DURIO. The Name of a very large Tree, which grows in the *Eaſt Indies*, and bears a Fruit as big as a Melon.

The Fruit, to thoſe who never taſted it, ſmells at firſt like putrid Onions; but, after it has been once eaten, recommends itſelf before all other Food, both for Smell and Savour; and is in ſuch high Eſteem with thoſe who indulge their Appetites, that they believe it impoſſible for any Perſon to be ſatisfied with it: And yet ſo great is the Plenty of this Fruit in *Malaca*, that they are ſold for no more than four Maravedis apiece, eſpecially in the Months of *June*, *July*, and *Auguſt*; for in the other Months they raiſe their Price at Pleaſure.

The Antipathy between this Fruit and Betle is very ſurpriſing, being ſo great, that if you carry a few Leaves of Betle into a Ship, full of the Fruit of the *Durio*, or into a Houſe, or a Chamber, where they are kept, they will every one be corrupted and putrefy; and if any one has his Stomach inflamed, or oppreſſed with immoderate eating the Fruit, the Inflammation is mitigated, and the Tumor removed, by only applying a Leaf of the Betle to the Stomach; and if, after eating the Fruit, you ſwallow ſome Leaves of the Betle, you will ſuſtain no Injury, though you eat never ſo much of the Fruit. *Raii Hiſt. Plant. p.* 1652.

DYAHIBALA. A Name for the Mimoſa; non ſpinoſa; major; *Zeilanica.*

DYNAMIS, δύναμις, from δύναμαι, to be able, is the Faculty or Power from whence an Action proceeds. Hence *Galen*, *Lib. de Plenitud.* defines it δραστικὴν αἰτίαν ἢ οὐσίαν, "an "efficient Cauſe or Subſtance;" and ſays, it is no Difference, whether you call it ποιητικὴν, or δραστικὴν, αἰτίαν, or οὐσίαν. The ſame Author deſcribes τῆς δυνάμεως οὐσίαν, "the Subſtance "or Eſſence of the Faculty," to be the Quality of the Temperament of any compound Subſtance, which conſiſts in the due Temperament of each of its Parts. Δυνάμεις, in *Hippocrates*, περὶ ἀρχ. ἰητρ. are the prevailing Qualities and Forces of the Humours. The Word δύναμις is frequently uſed by *Galen* for a Preparation or Compoſition of a Medicine, ſometimes particularly of an approved Medicine. Thus *Plutarch*, in *Sympoſ.* makes mention τῆς ἀλίμου δυνάμεως, "a Medicine of "approved Virtue againſt Hunger," uſed by *Epimenides. Foeſius.*

DYOTA, or rather DIOTA. A Pelican, or circulating Veſſel, with two Ears, reſembling in Shape a Man ſtanding with his Arms a-kembo.

DYSALTHES, from δύς, importing Difficulty, and ἄλθω, to cure. Difficult of Cure.

DYSANAGOGOS, δυσανάγωγος, an Epithet for tough viſcid Matter, which is expectorated with Difficulty.

DYSÆSTHESIA, δυσαισθησία, from δύς, importing Difficulty, and αἰσθάνομαι, to feel, or perceive. A Dulneſs or Difficulty of Senſation.

DYSARISTESIS, δυσαρίστησις, from δύς, and ἀρίσκω, to pleaſe. A Moroſeneſs which frequently precedes acute Diſtempers, and Melancholy. *Aetius*, *Tetrabib. 2. Serm. 1. C. 5. Galen.*

DYSCINESIA, δυσκινησία, from δύς, and κινέω, to move. Difficulty of Motion.

DYSCRASIA, δυσκρασία, from δύς, importing bad, and κεράννυμι, to mix. Dyſcraſy, Intemperature. Such a Mixture of the Fluids in the Body, as is inconſiſtent with Health.

DYSCRITOS, δύσκριτος, from δύς, importing Difficulty, and κρίσις, a Criſis. Difficult to be brought to a Criſis, or brought to an imperfect or bad Criſis.

DYSECOIA, δυσηκοΐα, from δύς, importing Difficulty, and ἀκούω, to hear. Deafneſs, or Difficulty of Hearing.

DYSELCES, δυσελκὴς, from δύς, difficult, and ἕλκος, an Ulcer. An Epithet for ſuch Perſons, whoſe Ulcers are difficult to cure.

DYSENTERIA, δυσεντερεῖν, from δύς, importing Difficulty, and ἔντερα, the Inteſtines, is defin'd a Difficulty, or a Diſturbance, of the Functions of the Inteſtines, attended with an Exulceration. A Dyſentery, according to *Galen*, *Lib.* 6. *de Locis affect.* is properly call'd ἕλκωσις ἐντέρων, "an Exulceration of "the Inteſtines," attended in the Beginning with an Excretion of a biting bilious Humour; afterwards, of Abraſions of the Inteſtines; and, at laſt, Blood in moderate Quantities is voided; which latter Caſe only, as he informs us, *Lib.* 5. *de Sympt. Cauſis*, is by ſome taken for the proper Dyſentery. An Exulceration of the Inteſtines, according to the ſame Author, *Com. ad Aph.* 3. *Lib.* 6. is, when there happens firſt an Abraſion of the outer Superficies of thoſe Parts, and, in Length of Time, a deeper and ulcerous Putrefaction. The Author of the *Definitiones Medicæ* defines a Dyſentery to be an Exulceration of the Inteſtines, attended with an Inflammation, and an Excretion of bloody, feculent, and ſometimes ſtrigmentitious Sordes, and a Pain and biting Senſation of the Belly and Inteſtines. *Hippocrates*, *Lib.* περὶ παθῶν, ſays, that a Dyſentery is attended with Pain and Gripes in all Parts of the Belly, and Excretions of Bile, Phlegm, and aduſt Blood. In another Place of the ſame Book he tells us, that this Diſeaſe ariſes from a Settlement of Bile and Phlegm in the Veins and Belly. The Blood is diſorder'd, and depoſits its corrupted Part; the Inteſtine alſo is affected, and is abraded and exulcerated. The Diſeaſe is long, painful, and mortal; and, if the Patient be of a robuſt Conſtitution, there is room to expect a Cure; but when there is a Colliquation, and total Exulceration of the Belly, there are no Hopes of Life. Again, *Lib.* 3. περὶ διαίτης, when the Body is heated, he ſays, and there is an acrimonious Purgation, with an Abraſion and Exulceration of the Inteſtines, and bloody Stools, the Diſeaſe is call'd a Dyſentery, and is a ſevere and dangerous Diſorder. The Word δυσεντερεῖν, in *Hippocrates*, ſometimes alſo ſignifies bloody Excretions, or a bloody Flux of the Belly, without an Exulceration of the Inteſtines, as *Aph.* 65. *Lib.* 5. according to *Galen*'s Expoſition of the Place. And this Kind of Dyſentery, *Lib.* 2. *Epid.* he expreſly calls δυσεντερεῖν ἐρυθρὴν, "the red Dyſentery;" where the ſame Aphoriſm is repeated. Agreeably hereto, *Galen*, in his Comment on *Lib.* 3. *Epid.* explains δυσεντερικὰ πάθη, by bloody Dyſenteries; and informs us, that there are two Kinds of Dyſentery, one from an Ulceration of the corroded Inteſtines; another, conſiſting in an Evacuation of much Blood, proceeding from the Veins of the Inteſtines. Again, in his Comment on *Lib. de Artic.* he tells us, that *Hippocrates* ſeems not to uſe the Term δυσεντερεῖν, [in that Place] as the Generality of Phyſicians do, for an Exulceration of the Inteſtines, but for Excretions of Blood by Stool. *Hippocrates*, *Lib.* 2. *Epid. Sect.* 6. ſeems to uſe δυσεντερεῖν, in a general Senſe, for any Flux of the Belly whatſoever.

OBSERVATION I.

At a certain Seaſon, when a Dyſentery happened to be epidemical at *Amſterdam*, a Woman of about forty Years of Age, and of a corpulent and good Habit of Body, had the Misfortune to be ſeized with the reigning Diſorder, under which ſhe labour'd for three Weeks. In the firſt Stage of the Diſeaſe, her Excrements were black; but, in Proceſs of Time, aſſuming a reddiſh Colour, they were at laſt mixed with a whitiſh kind of Subſtance. Her Belly was in Pain in various Manners; for the Pain was either fix'd at her Navel, in which Caſe her Belly was depreſſed; or, if her Belly was elevated, the Pain, like a Girdle applied, affected the whole Region of the Navel. She was tormented with an intolerable Thirſt, which ſhe endeavoured to ſatiate with any Liquor ſhe pleaſed, uſing at the ſame time large Quantities of Brandy. She could not be prevailed upon to take any Medicines, except an alterative Decoction, and the *Amſterdam Pilulæ de Laudano*; by the Uſe of which, her Pain was alleviated, and Sleep, to which ſhe was otherwiſe a Stranger, procured. When ſhe went to Stool, ſhe felt a very conſiderable Pain about her *Anus.* She was ſeveral times purged during the Courſe of the Diſeaſe; ſometimes with Powder of Rhubarb alone, by which ſhe diſcharged little or nothing, without the leaſt Degree of Relief; at other times, with Powder of Rhubarb, in Conjunction with that of Jalap-root, by which copious Stools were evacuated with Eaſe. A Clyſter was alſo injected, by which ſhe was render'd worſe; neither could ſhe bear Unctions of any kind; for which Reaſon the Uſe of theſe Medicines was dropt. During the Courſe of the Diſorder, the Flux was three times ſtopt, and the Patient apparently in a fair Way of Recovery; but, as ſhe uſed a very bad and improper Regimen, ſhe relapſed, and fell a Sacrifice to her Folly.

Upon laying open her Body, the following Phænomena occur'd: Firſt, the Omentum, though of a due and natural Bulk, was yet ſphacelated, and of a blackiſh livid Colour. Secondly, the Duodenum and Jejunum were very full of Bile; a Circumſtance ſufficient to account for her inſatiable Thirſt. Thirdly, about a Cubit Length of the Ilium, where it tends towards the Inteſtinum Cæcum, was corrupted and ſphacelated. Fourthly, the Colon, for about four Fingers Breadth from the Cæcum, was ſound; but, for about eight Fingers

Finger-breadths farther, corrupted. Fifthly, the Gall-bladder was very large, and diſtended with Bile, as green as Graſs. The other Parts ſeem'd to be in an excellent State; for nothing amiſs appeared, either in the Rectum, or any of the reſt of the Inteſtines. The Liver alſo, the Spleen, and Pancreas, were in their due and natural Condition. *Alard. Herman. Cummen. in Miſcel. Curioſ. An.* 1673. *Obſervat.* 116.

Observation II.

A Dyſentery may ariſe from preternatural Tumors form'd in the Inteſtines; a memorable Inſtance of which we have in the Son of *Jacobus Fontanus*, who, in the ninth Year of his Age, died of a Dyſentery. As the preciſe Seat of the Diſorder was dubious, and its immediate Cauſes unknown, the Father took care to have his Body laid open, after his Death.

The Surgeon appointed for this Purpoſe, between the Beginning of the Colon, and the End of the Rectum, found more than two hundred round Ulcers intermix'd with Impoſtumations. Some of theſe Ulcers had corroded the whole Coats of the Inteſtine; ſome Parts of which were found ſound and entire between the Ulcers. *Jacob. Fontan. Pract. Lib.* 3. *Cap.* 23.

Observation III.

A certain young Man, accuſtomed to drink too large Quantities of Brandy, had the Misfortune to be ſeized with a Dyſentery, accompanied with violent Pain. During the Courſe of this Diſorder, he frequently diſcharged by Stool about two Pounds of concreted Blood; which, from the Fineneſs of its Colour, was concluded to have come from a ruptur'd Artery.

Upon laying open his Body after Death, I found the ſmall Inteſtines here and there ſphacelated, their Coats corroded, and in four Places totally perforated. *Barbette, Prax. Lib.* 4. *Cap.* 5.

Observation IV.

In the Year 1624. I opened the Bodies of ſeveral Perſons, who died of Dyſenteries; and, among the reſt, that of a Soldier, whoſe Diſorder had been of a long ſtanding. In this Subject I found the Inteſtines highly inflated, and their interior Coat totally abraded. And, what was ſtill more ſurpriſing and uncommon, the Gall-bladder was diſtended with a tough, viſcid, and white Humour, reſembling a Poultice of Starch, whilſt, at the ſame time, the ſmalleſt Remains of Bile were not to be diſcovered. *Bontius Med. Indorum, Lib.* 3. *Obſ.* 3.

Observation V.

A Countryman, of about forty Years of Age, after the prepoſterous and imprudent Suppreſſion of a Dyſentery, was, for ſeven Weeks, rack'd with continual Pains of his Belly, which, however, were more intenſe than ordinary at certain ſhort Intervals. Upon laying open his Body, his Liver was dry, and of a pale Colour. On the Gall-bladder there was an Abſceſs as large as one's Fiſt, which diſcharged Pus near the Cavity of the Liver. There was alſo another Abſceſs found in the Meſentery. *De Lamoniere, de Fluxu Hepatico, Cap.* 1.

Observation VI.

In the Year 1608. a certain Boy was ſeized with a Dyſentery, which only diſcovered itſelf, and exerted its Fury, at certain Intervals. This Circumſtance I ſuſpected to proceed from the Gnawing of Worms: Nor, indeed, was I wrong in my Conjecture; for, upon laying open his Body, I found the Inteſtines very full of Worms. *Jacobus Fontanus, Practicæ Lib.* 3. *Cap.* 21.

A Dyſentery, attended with a Fever, various Stools, an Inflammation of the Liver, Hypochondria, or Belly, Pain, Loathing, or Thirſt, is always bad; but the Patient, who is affected with moſt of them together, ſoon ſinks under them; and, by conſequence, he who labours under feweſt, is in leaſt Danger. This Diſeaſe is principally fatal to Children from five to ten Years old; the other Ages are more ſecure. A Dyſentery which proves beneficial to the Patient, is attended with none of theſe Symptoms. Where Blood and Strigments are voided by Stool, the Diſeaſe terminates on the ſeventh, fourteenth, twentieth, or fortieth Day, or within thoſe Periods. Theſe Sorts of Fluxes are effectual towards extirpating Diſeaſes out of the Body, the more inveterate in a longer Time, the recent, perhaps, in a few Days; for even pregnant Women often labour under a Flux of Blood, and Strigments, for many Months together, and yet ſupport themſelves under it till the Time of Birth, and afterwards, and preſerve the Fœtus, unleſs a Pain happens to moleſt them, or ſome other of the bad Signs attending a Dyſentery before-mention'd. But if any of theſe makes its Appearance, it prognoſticates Deſtruction to the Fœtus, and Danger to the Mother, unleſs the Dyſentery ceaſes the ſame Day, or in a ſhort time after the Delivery of the Fœtus, and bringing away the Secundines. *Hippocr. Prædict. Lib.* 2. See ALCALI.

Among the Diſeaſes of the Inteſtines may be reckon'd the *Tormina*, by the *Greeks* call'd δυσεντερία, "the Dyſentery." In this Diſorder the Inteſtines are exulcerated on the Inſide; Blood flows from them, mix'd ſometimes with Fæces, which are always liquid; ſometimes with a kind of mucous Excretions; and ſometimes Caruncles are diſcharged with the Excrements: There is a frequent Deſire of evacuating, with a Pain in the Anus; ſome inconſiderable Diſcharge is made with the ſame Pain, and the Torment becomes more intenſe; which, however, after ſome time, is alleviated: The Patient has very little Reſt; his Sleep is interrupted; he becomes feveriſh; and, after a conſiderable Length of Time, either periſhes under the Inveteracy of the Diſtemper, or eſcapes with much Difficulty and Torment.

Firſt of all, the Patient muſt have Reſt; for all Agitation promotes the Exulceration of the Parts: Then he muſt drink, faſting, a Cyathus of Wine, in which the bruiſed Root of Cinquefoil has been added. Apply repellent Cataplaſms to the Belly: As often as he goes to Stool, let him waſh with a Decoction of Vervain; let him eat Purſlain boil'd, or out of ſtrong Pickle, and uſe an aſtringent Diet.

If the Diſorder be of pretty long ſtanding, Clyſters are to be injected of warm Cremor of Ptiſan, or Milk, or melted Fat, or Stags Marrow, or Oil, or Butter and Oil of Roſes, or Oil of Roſes with the raw White of an Egg, or a Decoction of Linſeed; or, if Sleep be wanting, the Yolks of Eggs, with a Decoction of Roſe-leaves. Such Medicines alleviate the Pain, and are of great Service, eſpecially if a Loathing of Food be conſequent upon the Diſtemper. *Themiſon* has adviſed the Uſe of the ſtrongeſt Brine in ſuch Caſes.

The Food ought to be ſuch as gently binds the Belly: As for Diuretics, if they have their proper Effect, they are of Service, by diverting the Humour another Way; otherwiſe they increaſe the Diſeaſe: For which Reaſon they are not to be uſed, but on ſuch Subjects as have been accuſtom'd readily to receive Benefit from them. The Drink, if the Patient be feveriſh, is to be pure Water warm, and alſo Water endued with an aſtringent Quality; or, if that be wanting, thin auſtere Wine. If theſe Remedies give no Relief, after they have been uſed for ſeveral Days together, and the Diſorder grows inveterate, the Drinking of Water, of a good Degree of Coldneſs, aſtringes the Ulcers, and lays the Foundation of Recovery; but, when the Evacuations are ſuppreſſed, we are immediately to return to warm Potions.

Sometimes a putrid and very fetid Sanies is diſcharged, and ſometimes pure Blood comes away in the Stools: In the firſt Caſe, the Belly is to be well cleanſed with Injections of Hydromel, and thoſe other Remedies before preſcribed. An effectual Remedy againſt a Cancer of the Inteſtines is a Lump of Minium bruiſed, with half a Pound of Salt, or a Clyſter of the ſame, with Water: If Blood be voided in the Stools, the Patient is to eat and drink ſuch Things as are of an aſtringent Quality. *Celſus, Lib.* 4. *Cap.* 15.

The ſuperior Inteſtines, which reach as far as the Cæcum, are ſmall, and contain Bile, are called *Cholades*; whereas the Inteſtines inferior to theſe are large, carnous, and extended to the Beginning of the Rectum.

As Ulcers are formed in all theſe Inteſtines, ſo Dyſenteries, which are produced by theſe Ulcers, muſt, of courſe, be of various Kinds; for ſome Ulcers only affect the Surface of the Inteſtines, and are without Danger, when they only produce a gentle Excoriation: They are alſo ſafer in the inferior than in the ſuperior Inteſtines. But, when theſe Ulcers become pretty deep, they are certainly of a bad Kind. There are others ſtill of a worſe Kind, which do not continue in the ſame State, but are deep, corroding, glandulous, ſpreading, productive of a Sphacelus, and Death; for, whilſt they ſpread, the ſmall adjacent Veins are corroded, in conſequence of which, large Diſcharges of Blood are made into the Ulcers. There are other Ulcers of the Inteſtines, which are tumid, rough, anomalous, callous, and reſembling ſuch Knots as are generally found in the Branches of Wood. Theſe with Difficulty admit of a Cure, ſince they are not eaſily brought to a Cicatrix, and, when they are, break out again upon the ſlighteſt Occaſion.

The Cauſes of a Dyſentery are various; but the moſt conſiderable are Crudities, continued Colds, the Uſe of acrid Aliments, ſuch as the *Myttotum* [*a kind of Food made of Garlick, Onions, and Cheeſe, bruiſed together*], or Onions or Garlick, or old and acrid Fleſh, the Uſe of which generates Crudities. This Diſorder is alſo produced by drinking Liquors, to which Perſons have not been accuſtomed; ſuch as the *Cyceum*, the *Bryton*, and other Liquors uſed in various Nations for common and ordinary Drink. Wounds alſo, Cold, and the Drinking of cold Water, produce Exulcerations of the Inteſtines.

But, in different Ulcers, the Excretions, and other Signs, are different; for, if theſe Ulcers only affect the Surface of the ſuperior Inteſtines, then bilious Excrements, and ſuch as are free from all Smell, except what they contract from the Inteſtines, are diſcharged. But, when the Jejunum is exulcerated, the Excrements are more ſaturated with Bile of a Saffron-colour, and fetid

fetid Smell. This Diſcharge is made together with the Aliments, which are colliquated, but unequal; and the Smell of the Excrements is ſometimes highly fetid, and the Ulcers putrid; at other times the Humours have no other Smell than that of the Excrements. But, when the inferior Inteſtines are exulcerated, the Excrements are aqueous, thin, and inodorous. If the Ulcers are deep, an Humour like Sanies, reddiſh like Wine, or the Waſhings of Fleſh, is diſcharged, ſometimes alone, and ſometimes along with the Excrements. It is ſometimes humid, and diſſolved by the ſurrounding Fluid, without Bile, and void of Smell; or compact and dry, but ſlippery on account of the Fluid which ſurrounds it. If large and ſmooth Ulcers are form'd in the ſuperior Inteſtines, a bilious Humour is diſcharged, both on account of the Inteſtines from which it comes, and through which it paſſes. This Humour alſo ſtimulates the Anus, becauſe the Bile, eſpecially when flowing from an Ulcer, is acrid: The Bile is alſo pinguious, reſembling Fat. But thick and concreted Blood, together with Phlegm, and ſome carnous Shreds, and even entire Parts, of the Inteſtines, which are not very pinguious, are diſcharged from deep Ulcers of the inferior Inteſtines. Sometimes a white, thick, mucous Subſtance, like Fat cut ſmall, with a certain Humour, is diſcharged; but this comes from the Inteſtinum Rectum. Sometimes a mucous Subſtance, ſmall in Quantity, round, pungent, and exciting an Itching of the Parts, and a frequent Deſire of going to Stool, attended with a Senſe of Pleaſure, is evacuated. This Species of Diſorder is called *Teneſmus*. But from the Cæcum large reddiſh Portions of Fleſh are evacuated; the Ulcers are generally deep, the Blood diſcharged thick and feculent, and the Smell more fetid than that of other Humours. If the Ulcers are of a ſpreading and corroding Nature, and cannot be check'd by any means, bilious Humours, of a deep Colour, reſembling that of Saffron, frothy, ſometimes black, reſembling the Fæces of Wine, the Herb ἰσάτις [Woad], or Leeks, are evacuated. It is alſo thicker than the above-mentioned Humours, and of a putrid Smell. Sometimes the Aliment is diſcharged, as it were, undigeſted, and as if haſtily maſticated by the Teeth. If, on the contrary, the inferior Inteſtines are corroded, black Concretions, and groſs, carnous, reddiſh, grumous, and ſometimes black and much variegated, and fetid Humours are evacuated; and ſometimes there is an involuntary Diſcharge of a Liquid. Sometimes a Subſtance of a conſiderable Length, very much reſembling an entire Inteſtine, is diſcharged, and ſtrikes the Minds of the Ignorant with a Dread of having loſt Part of their Inteſtines; but this Accident is to be accounted for in the following manner: The Inteſtines, as well as the Stomach, have two Coats, one of which lies obliquely on the other. When the Union and Connection of theſe is deſtroyed, the interior Coat, being ſeparated longitudinally, is diſcharged; and the external Coat, remaining, contracts and cicatrizes; by which means the Patient is recovered: But this only happens in the inferior Inteſtines, whoſe Coats are fleſhy. But, if the Blood flows from any Veſſel, it is yellow, black, or pure, and unmixed with any Aliments, or with the common Excrements. A certain Concretion, reſembling a Spider's Web, alſo floats on its Surface; and, when it becomes cold, it is formed into grumous Clots; ſo that one could ſcarcely believe it was Blood diſcharged from the Body: But, as it is evacuated with much Wind and Noiſe, the Quantity diſcharged ſeems to the Patient to be much larger than it really is. Purulent Abſceſſes are alſo ſometimes formed in the Colon; in which Caſe there is nothing extraordinary, more than in other internal Ulcers, ſince the Signs, the Nature of the Pus, and the Method of Cure, are the ſame. But, if fleſhy Subſtances are diſcharged, hard, compact, and rough, it is a Sign, that the Abſceſs is malignant. Sometimes a large Quantity of Water is diſcharged from the Colon in the manner of a Dyſentery; by which Circumſtance many have been freed from a Dropſy. Theſe are the various Species of Ulcers, which are formed in the Inteſtines, and the different Kinds of Humours diſcharged from them.

It now remains, that we conſider the prognoſtic Signs of theſe Ulcers, whether good or bad. In general, therefore, if the Excoriation is only ſuperficial, either in the ſuperior or inferior Inteſtines, the Patients are free from every Degree of Fever or Pain, and may, without Decubiture, by a ſlender Regimen adapted to each Caſe, be reſtored to perfect Health. But if, in caſe of an Ulcer in the ſuperior Inteſtines, ſevere griping Pains are excited, as it were, by a ſmall Quantity of overheated Bile, theſe Ulcers of the Inteſtines generally come to a Suppuration, tho' at different times. The Concoction and Digeſtion of the Aliments are imperfect, tho' the Patient's Appetite does not fail him. Exulcerations happening in the inferior Inteſtines are far leſs dangerous than thoſe of the ſuperior, becauſe the former are much more fleſhy than the latter. But, if hollow and ſpreading Ulcers are formed in the ſuperior Inteſtines, acute and obſcure Fevers in the Viſcera are produced; a Chilline ſeizes the whole Body; the Patient loaths his Food, and is afflicted with Watchings, fetid Eructations, a Nauſea, a Vomiting of Bile, and a Vertigo. If there is a copious Diſcharge of bilious Matter, the Gripings continue, and the other Pains are increaſed; the Strength is rendered languid, and the Knees paralytic; the Patient is ſcorch'd with a burning Fever, becomes thirſty, is ſeized with a Nauſea, and vomits a black Matter. His Tongue becomes dry, and his Pulſe ſmall and weak. All theſe Symptoms are accompanied with others, which are fatal in malignant Ulcers. The Patient is ſeized with the cardiac Paſſion to ſuch a Degree, that he faints away, and dies, before he can be recovered. The ſame Accidents are common to Eroſions of the inferior Inteſtines, if the Ulcers are of the ſpreading Kind, and if the Diſcharge of the Humour cannot be check'd. Beſides, Gripes and Pains ariſe below the Navel, where the Ulcers are perceived, and the Humours diſcharged are ſuch as we have above repreſented them. If at firſt the Ulcers are ſmall, and do not for ſome time begin to ſpread, theſe ſmall Ulcers, like the Waves of the Sea, ſucceed each other; ſome of them ſubſiding, whilſt others riſe to an Apex. If Nature is as yet ſufficiently ſtrong, and duly aſſiſted by the Phyſician, the Ulcers may be kept from ſpreading; neither is there any Danger of Death. The Inteſtines, however, remain hard and tumid, and require a long time before they can be reſtored to their natural State.

A Diſcharge of Blood from the Inteſtines, if proceeding from ſome large Vein or Artery, ſoon proves mortal; ſince the Hand can neither have Acceſs to the Part affected, nor any Medicine be applied to the Ulcer. Beſides, though the Diſcharge of Blood ſhould be ſuppreſſed by Medicines, the Patient is not by that means placed beyond the Reach of Danger; becauſe, in ſome Caſes, the Separation of a large Eſchar renders the Orifice of the Vein or Artery ſtill larger. When the Blood is formed into grumous Concretions, and remains undiſcharged, the Diſorder admits of no Cure. A ſpeedy Stop is therefore to be put to ſuch Hæmorrhage, which, when approaching, may, though not very certainly, be prognoſticated from the following Signs; that is, a reſtleſs and uneaſy State; a Senſe of Weight in the Part where the Rupture is about to happen; and a Redneſs of the Countenance at the very Time it happens. When the Vein is recently ruptured, it is, for the moſt part, capable of being ſoon conſolidated; but, when the Rupture is of long ſtanding, it is more ſlowly, and with greater Difficulty, cured.

Theſe Ulcers of the Inteſtines happen moſt frequently in the Summer; next to which, the Autumn is the moſt general Seaſon for their Production. They happen more rarely in the Spring, and never in the Winter. Diarrhœas are principally incident to Children, and very young Perſons; whereas Perſons in the Vigour of Youth, and ſuch as are arrived at the Years of Maturity, are more generally afflicted with Dyſenteries. In old Age theſe Ulcers are with Difficulty cur'd, and require a long time before a Cicatrice is form'd on them. But in old Perſons, corroding Ulcers are ſcarce to be met with: Beſides, Diſcharges of Blood are beneficial to old Age. *Aretæus, de Cauſ. & Sign. Morb. diuturn. Lib. 2. Cap. 9.*

This Diſeaſe took its Name δυσεντερία [Dyſentery] from its cauſing the Inteſtines to perform their Function with Pain. It may be defined, A Rheumatiſm of the Belly, attended with an Exulceration; and it is preceded either by the Flux, which the *Greeks* call *Diarrhœa*, the *Cholera Morbus*, or a Tumor of the Belly. The Diſtemper is ſometimes acute, but more frequently of the chronical Kind. The Symptoms are, mucous Excretions, mix'd with Strigments, and a thick Humour: Firſt, comes away the natural Mucus of the Inteſtines; after that, the Excrements are various, as ſanguineous, bilious, ſanious, and feculent, mixed with Corpuſcles of congealed Blood, which the *Greeks* call σκίβαλα livid, carnous, mix'd with Membranes of a very great Length, intolerably fetid, attended with a Pain from the Ulcerations, a Loathing, Thirſt, and a burning Heat of the internal Parts: Theſe Symptoms are ſucceeded by a Want of Sleep, and, ſometimes, a feveriſh Diſorder, Anxiety, Toſſing, Dulneſs of the Senſes, and, in ſome Caſes, a Rumbling of the Inteſtines, with a Tenſion, Flatulencies, and a Difficulty of making Water. Sometimes the Diſorder is attended with Vomiting, and a Palpitation of the Præcordia, or a cold Numbneſs, the Tongue humid, or very dry and rough, and aſh-colour'd or livid, with Extenuation of the Body, Corruption of the Aliment from a diſtemper'd Heat, an inceſſant Deſire to excrete, attended with a biting Senſation in all the Inteſtines, the Anus, and Parts adjacent: The Ulceration happens either in the ſmall Inteſtines, as the Duodenum, Jejunum, or Cæcum; or in the great ones, as the Colon, or Rectum. But we can by no means believe the Ulceration to be univerſal in all the Inteſtines at one time, becauſe ſuch a Caſe would be prevented by the Death of the Patient. An Ulceration in the ſmall Inteſtines is known by a Pain ſeated above the Navel, or taking its Beginning from that Place, and by the conſtant and remarkable Thinneſs of the Fæces. If the great Inteſtines are ulcerated, the Pain lies below the Navel, and the Excrements appear carnous, and are frequently more ſolid and coagulated, if the Rectum be the only Part affected, and eſpecially its inferior Parts: For an

Ulcera-

Ulceration of the ſmall Inteſtines prevents a Digeſtion of the Food, and a Converſion of it into a ſtercoraceous Subſtance. Sometimes, at the End of a Stool, the Fæces, ſtriking on the Ulcers, excite a Bleeding, and Drops of Blood come away, giving manifeſt Signs of a Teneſmus; by which we know, that the Part of the Rectum near the Fundament, which the *Greeks* call ἕδρα, is ulcerated: For the Patients are affected with a frequent Irritation to Excretion, which is perform'd with much Straining and Labour, and a Tenſion of the *Nates*, and the *Perinæum*, as far as the *Pubes*, as if cauſed by ſome ſolid Body contained in them: But the Diſcharges are but ſmall, and ſomewhat mucous, mix'd with a groſs Humour; for the firſt Excretions are pinguious, the next ſanguineous, mix'd with coagulated Fæces. We are of Opinion with thoſe who comprehend a *Teneſmus* under a Dyſentery, ſince it is an Ulceration of Part of an Inteſtine; unleſs you had rather beſtow the Name of *Teneſmus* on the Tumor before Exulceration. *Cœlius Aurelianus*, *Morb. Chronic. Lib.* 4. *Cap.* 6.

Among the ſpaſmodic and convulſive Diſorders we may juſtly rank that Diſcharge of bloody Excrements, which Phyſicians, in a ſtrict Senſe, call Dyſentery, and which *Cœlius Aurelianus* defines, A Rheumatiſm of the Inteſtines, attended with an Ulcer; and, the judicious *Sydenham*, A Fever, in which the peccant Humours are thrown upon the Inteſtines: For a Dyſentery is nothing but the periſtaltic Motion of the Inteſtines, ſo increas'd, as to become a Species of Convulſion, by Humours of a cauſtic and ulcerating Quality adhering to their Coats, and which bring on a frequent Deſire of going to Stool, and as frequent a Diſcharge of mucous and bilious Sordes, ſtain'd with more or leſs Blood, or Sanies, and attended with violent Gripes, and a febrile Commotion.

This Diſorder ought to be diſtinguiſh'd from other Fluxes, tho' accompanied with Gripes, that go by the Name of Diarrhœas; for in theſe, the Gripes of the Inteſtines are not, by far, ſo violent, as in a Dyſentery, and the Humours diſcharg'd are never bloody, but only pituitous, or mix'd with a bilious Sordes; whereas, in a Dyſentery, the Humours are bloody, ſanious, putrid, and fetid. With reſpect to the Difference betwixt a *Cholera* and a Dyſentery, that has been ſpecified under the Article CHOLERA.

It requires greater Judgment, to diſtinguiſh a Dyſentery from an hæmorrhoidal Flux, which is attended with violent Gripes; for the Blood in this Caſe evacuated, is generally pure, and, as it is frequently diſcharg'd along with the Stools, it contributes, almoſt always, to the Improvement of Health; whereas, in a Dyſentery, the Blood is diſcharg'd with a troubleſome Teneſmus, and violent Gripes; and is ſeldom or never pure, but rather diluted, and mix'd with a ſanious, frothy, and fetid Matter, the Evacuation of which is not ſucceeded with an Increaſe of Strength, but rather renders the Patient worſe. Beſides, the Fever which generally attends it, and the peculiar Time of the Year it rages in, may eaſily diſtinguiſh it from an hæmorrhoidal Flux. There is alſo a Difference betwixt a Dyſentery, and that endemial Diſtemper at *Paris*, which commonly ſeizes all Strangers; tho' they reſemble one another in ſeveral reſpects; for, tho' this Diſorder be attended with frequent Stools, which are firſt mucous, and afterwards bloody, yet it is not, by far, ſo malignant and contagious as a Dyſentery; beſides, it is never accompanied with a Fever; ſeizes Perſons at any time of the Year; and, tho' it continues longer with them, yet it never hinders them from going abroad, and purſuing their Buſineſs, which is far from being the Caſe of thoſe who are troubled with a Dyſentery.

Dyſenteries are diſtinguiſh'd into benign and malignant. The former continues longer, but proceeds more gently, and is leſs dangerous: The latter is not only of a contagious Nature, but is alſo attended with ſome fatal Symptoms, ſuch as a malignant Fever, a Defect of Strength, and exanthematous Diſorders. We ought alſo to obſerve, that Dyſenteries are diſtinguiſh'd into red and white: In the former, the Humours evacuated are always bloody; but, in the latter, ſanious, and mix'd with carnous Filaments, and ulcerous Shreds, abraded from the Coats of the Inteſtines.

The Dyſentery is a peculiar Kind of Diſtemper, being ſeldom ſporadic, but generally epidemic; and then it is attended with various Degrees of Malignity. It ſpares neither Sex nor Age, but ſeizes Men, Women, and Infants, without Diſtinction; ſo that the tender ſucking Children are not exempted from its Tyranny. The People more generally ſubject to this Diſtemper, are thoſe of a plethoric or bilious Habit of Body, and ſuch as labour under a great Weakneſs of the Stomach; and it is generally moſt ſevere in Perſons that live intemperately, or eat too much Summer Fruits, eſpecially if they be unripe, and have a Tendency to Fermentation. A Dyſentery has alſo a more violent Effect on ſuch as expoſe themſelves, when they are warm, to the cold Air of the Night: And hence it is, that Soldiers in a Camp are very ſubject to it: And, for that Reaſon, it is diſtinguiſhed by the Epithet *Caſtrenſis*; and, becauſe it rages frequently and ſeverely in *Hungary*, it ſometimes acquires the Name of the *Hungarian* Diſtemper.

We ought, alſo, to advert to the Seaſon when Dyſenteries principally rage: And, if we conſult *Hippocrates* on this Head, he informs us, *Sect.* 3. *Aph.* 2. that Dyſenteries rage in thoſe Summers, which ſucceed an intenſely cold and dry Winter, and a rainy Spring: And, *Aph.* 12. that a rainy Winter, and a dry Spring, have a Tendency to produce them. The hotteſt Seaſon is obſerved to have the moſt natural Tendency to bring on a Dyſentery; and about the End of Summer, or Beginning of Autumn, that is, in *Auguſt* and *September*, when the cold Nights ſucceed the intenſe Heat of the Sun in the Day-time, this Diſtemper is obſerv'd to rage: For this Reaſon, in all hot Climates, it is found to be more frequent and ſevere; and in *Egypt*, *India*, or *Arabia*, this Diſorder is endemial. See *Bontius*, *Lib.* 2. *Hiſt. Nat. Ind. Orient.* Malignant Dyſenteries are alſo obſerv'd to rage, when great Numbers of Flies, Caterpillers, Spiders, and other Inſects, are obſerved in the Air.

A conſiderable time before People are ſeiz'd with a Dyſentery, they are obſerved to complain of a Wearineſs of Body, of a Swelling and other troubleſome Motions in their Bellies. And *Cœlius Aurelianus*, *Lib.* 4. *Morb. Chron. Cap.* 6. long ago obſerv'd, that a Diarrhœa, a Cholera, or a Swelling of the Belly, uſually precedes Dyſenteries. This Diſorder often begins with feveriſh Cold, or at leaſt ſome Shivering of the Body; which is ſucceeded by a Heat more or leſs violent, which accompanies the Diſeaſe thro' all its Stages, and is attended with a quick Pulſe, and intenſe Thirſt. Vehement Gripings, in the lower Part of the Belly, either precede, or very ſoon ſucceed, this feveriſh Chilneſs: Then the Belly becomes ſoluble: And, firſt, the Fæces, Crudities, and mucous Humours, are diſcharg'd: A little after, pinguious, and almoſt oleous Juices; and laſtly, a frothy Matter, mix'd with Blood, ulcerous Sanies, Shreds, and membranaceous Filaments, generally evacuated in ſmall Quantities. Perſons that have a great deal of Sordes in their Stomachs, are troubled with a Nauſea, a great Deſire of Vomiting, and, frequently, actual Evacuations of that Kind. Many are afflicted with a vehement Cardialgia, and an Anxiety about the Præcordia. Every one under this Diſtemper is afflicted with a perpetual Deſire of going to Stool, and ſuch a ſtrong Teneſmus of the Anus, that a moſt irkſome Falling down of the ſame frequently enſues: Every Stool is preceded, accompanied, and followed by moſt violent and ſevere Gripes; and that not in one Part, but thro' the whole Canal of the Inteſtines; and, when the Patient goes to Stool, he feels, as it were, all his Bowels deſcend with exquiſite Pain. Laſtly, Perſons under this Diſtemper loſe all Appetite for Food, and are oppreſs'd with Reſtleſſneſs, becauſe of the Frequency of Stools; Sleep is baniſh'd, and their Strength much impair'd.

Theſe are the ordinary Symptoms of Perſons in a Dyſentery, which, upon the Increaſe of the Diſtemper, are followed by others much more dangerous and fatal: For ſome, while they are cold without, are burnt up within, and tormented with continual Heats and Pulſations of the Inteſtines. Hickups, cold Sweats, Paleneſs of the Viſage, Leanneſs, Inflammations and Aphthæ of the Fauces, ſoon ſucceed theſe. It rarely happens, that Dyſenteries are free from Pain. See *A. N. C. Dec.* 1. *anno* 2. *Obſ.* 43. and *Act. Med. Haffn. Vol.* 2. *p.* 138. Sometimes Perſons, in the Extremity of the Diſtemper, loſe all Senſe of Pain, feel no Thirſt, make an involuntary Diſcharge of Excrements, which are of an highly fetid and cadaverous Smell, and the Pulſe becomes ſmall, and then certain Death enſues. It ought, alſo, to be remark'd, that a Dyſentery has often prov'd contagious: Thus, contrary to what commonly happens, the Infection has been propagated to others ſolely by the Smell of the diſcharg'd Sordes, as we find in *A. N. C. Dec.* 2. *Ann.* 6. *Obſ.* 25. And we have ſome Inſtances of Mothers labouring under a Dyſentery, who have propagated the ſame Diſorder to their ſucking Infants. *A. N. C. Dec.* 2. *Ann.* 6. *Obſ.* 195. Whilſt we are giving this hiſtorical Account of Dyſenteries, it will not be improper to make ſome Remarks on the anatomical Diſſections of Perſons that have died of this Diſtemper: And, firſt, all Writers affirm, that, in Subjects of this Sort, both the large and ſmall Inteſtines are inflamed, mortified, or exulcerated, and overſpread with Bile, after Death, as may be ſeen at large in *Bartholine*, *Cent.* 6. *Inſt.* 2. and *Barbette*, *Lib.* 4. *Cap.* 3. And particularly *Joannes de la Moniere*, in his Treatiſe *de Fluxu dyſenterico* ſays, he ſaw the Pylorus, and ſmall Inteſtines, inflam'd. That the ſmall Inteſtines have been found of a livid Colour, and overſpread with Bile on the Outſide, and gangren'd on the Inſide, appears from *A. N. C. Dec.* 2. *Ann.* 6. *Obſ.* 104. And *Platerus*, *Lib.* 3. *p.* 875. and *Riverius*, *Cent.* 3. *Obſ.* 2. have obſerved the large Inteſtines, in like manner, livid, and affected with a Gangrene. And the ſame *Platerus*, *Mantiſſ. Obſ. p.* 25. found a Gall-bladder, entirely deſtitute of Bile; but the Ileon and Colon, which abounded with Ulcers on the Inſide, were ſtain'd with Bile. *Bontius*, inſtead of Bile, found in the Gall-bladder, a Liquor very much reſembling Chyle; and the *A. N. C. Dec.* 2. *Ann.* 6. teſtify, that the Bile,

Bile, in Perſons who have died in this Diſtemper, is of a porraceous Colour, or nearly that of Graſs.

By comparing carefully theſe things with the Symptoms of the Diſtemper, it will be an eaſy matter to diſcover the true Seat of a Dyſentery. It lies in the large Canal of the Inteſtines, which, according to *Sydenham, Sect. 4. Cap. 3.* are ſucceſſively affected, till the whole Violence of the Diſtemper fall down on the Inteſtinum Rectum, which is tormented above the reſt with an exceſſive Pain, and a vehement Teneſmus. Nor can I deny, but that the adjoining Parts, eſpecially the Liver and biliary Ducts, may, thro' Sympathy, feel the Tyranny of the Diſtemper: But, as to the Inteſtines, we can eaſily diſcover which of them ſuffers moſt: For, if the Vehemence of the Pain be felt about the Navel, and if ſlower Stools follow thereon, we may infallibly conclude, that the Seat of the Diſorder lies in the ſmall Guts: But when, on the other hand, the Violence of the Gripes falls either on that Part of the epigaſtric Region, where the Colon is ſituated, or on the hypogaſtric Region, and the Fæces are ſoon after diſcharg'd, in that Caſe, 'tis evident, that the Diſtemper is ſeated in the larger Inteſtines: And, laſtly, when People under this Diſtemper, have a continual, tho' fruitleſs, Inclination to go to Stool; or when they void nothing but a tough, clammy, acrid, and virulent Mucus, and that but in ſmall Quantities; it ſeems highly probable, that there is an Ulcer in the *Inteſtinum Rectum.*

'Tis not my Buſineſs, at preſent, to enlarge on the Structure of the Inteſtines, much leſs to enumerate the various Names, Situations, and Windings of the ſame; but it may not be improper to take notice of ſome Particulars, that have a more immediate Connection with our preſent Deſign. Both the larger and ſmaller Inteſtines, like the Stomach, are made up of four Coats: The muſcular Coat is made up of two Series of Fibres, one longitudinal, the other ſpiral, by the Help of which the periſtaltic Motion is perform'd: The nervous Coat is furniſh'd with a large Number of Blood-veſſels, which ſeem to make a peculiar Coat of themſelves, the Inſide of which is cover'd with a great Number of ſmall Glands, which by their excretory Ducts ſecrete from the Maſs of Blood, into the Cavity of the Inteſtines, not only that ſerous and mucous Humour, which, like Glue, adheres to the Tunica Villoſa, and defends both that and the ſubjacent nervous Coat from the Acrimony of the Subſtances uſed as Aliments; but alſo another Liquor, of a ſtill more excrementitious Nature: For it is carefully to be obſerv'd, that the Humours, eſpecially of the ſerous Kind, are ſecreted in any Parts, the Bulk of whoſe Pores is proportion'd to the Particles to be ſecreted: Thus, the more ſubtile Parts of theſe Liquors are exhaled through the Pores of the Skin. What is proportionably groſſer, is convey'd to the Kidneys; and what is ſtill thicker, is carried to the Inteſtines, as the common Receptacle of all the groſſer Humours.

From what has been ſaid, we may more eaſily diſcover the genuine Nature of a Dyſentery, and account for the ſeveral Symptoms with which it is accompanied. That the ſecondary and remote Cauſe of it conſiſts in the periſtaltic Motion of the Inteſtines, ſo increaſed as to become a Species of Convulſion, is obvious to every one, who but allows himſelf to reflect on the violent Pains and Gripes, with which thoſe labouring under this Diſorder are afflicted: Nor can it be denied, that its more direct and immediate Cauſe conſiſts in a highly acrid and cauſtic Humour, which vellicates and ſtimulates the Coats of the Inteſtines. But the Qualities of this Liquor, and the Method in which it is generated, are Points hitherto ſo obſcure and latent, that Phyſicians and Anatomiſts run into different Opinions concerning them.

Some of the Antients maintain'd, that this Humour, in its Nature and Qualities, reſembled Coloquintida: And, if we compare the Effects produc'd in the human Body by Coloquintida, and which are enumerated by *Stalpart Vanderwiel*, in *Obſ.* 41. with the Symptoms attending a Dyſentery, we have ſome Reaſon to conclude, that they were pretty much in the right. But the Opinion moſt generally received is, that the immediate Cauſe of a Dyſentery is ſeated in the Inteſtines, and is a highly acrid Humour, generated by Summer Fruits, eſpecially when unripe, fermenting with the other Juices, eſpecially thoſe of the bilious Kind, and vellicating, corroding, and excoriating, the nervous Coats of the Inteſtines. Tho' I readily grant, that this Cauſe may often concur to the Production of a Dyſentery, yet I will not affirm, that the Diſorder proceeds univerſally from it, ſince a Dyſentery is of ſo contagious a Nature, as to ſeize Perſons who have eaten no Kind of Fruits, as alſo ſucking Infants: For this Reaſon, others have had recourſe to a certain ſpecific kind of Miaſma, whoſe particular Quality it is, to ferment in the Inteſtines with the Bile eſpecially, and then to corrode them. But neither can I agree, in every reſpect, with this Opinion, when I conſider, that ſometimes an Humour is diſcharg'd from the Inteſtines, ſo highly acrid, as to corrode Silver Veſſels, tho', at the ſame time, the Coats of the Inteſtines are neither corroded by it, nor ſo violent Gripes excited, as in a Dyſentery. Nor is it ſufficient to retort, that in a Dyſentery the villous Coat is firſt abraded, and then the nervous Coat vellicated; for the ſame Effect may be produc'd by any other acrid Humour; and 'tis, beſides, confirm'd by Experience, that the Gripes of dyſenteric Patients begin with the very firſt Appearance of the Diſeaſe, before the villous Coat of the Inteſtines could poſſibly be abraded.

For this Reaſon I am inclin'd to think, that the genuine and moſt immediate Cauſe of a Dyſentery, which produces the ſevere Gripes, and all the other Train of Symptoms, is principally lodg'd in the Blood-veſſels, which ſurround the nervous Coat of the Inteſtines: And I am of Opinion, that this Cauſe is nothing more than a ſerous, lymphatic, and mucous Matter, coaleſcing into a viſcid and cauſtic Maſs with the ſaline, acrid, and ſulphureous Particles fluctuating in the Maſs of Blood, and ſometimes mixing with an adventitious Taint, convey'd to the Body by external Cauſes: For this Matter being, by a certain febrile Motion, ariſing from a Conſtriction of the Surface of the Body, convey'd thro' the Blood-veſſels into the nervous Canal of the Inteſtines, does, partly by its Acrimony, vellicate, corrode, and ſtimulate their delicate Coats ſo as to bring on Gripes and Conſtrictions; and, partly by its Viſcidity and Toughneſs, diſtend and rupture the Veſſels in which it is lodg'd. Hence we diſcover the Origin of the Convulſions and Gripes, which are heighten'd, and render'd more atrocious, in proportion to the Quantity of the acrid Sordes contain'd in the Inteſtines. During theſe violent Contractions of the Inteſtines, their Contents muſt neceſſarily, and in the very Nature of the Thing, be evacuated; for, after the remaining Crudities of the Aliments are eliminated, the Conſtriction continuing, the Mucus, which covers the villous Coat, is forcibly abraded and diſcharg'd with the more or leſs noxious Humour dropping from the Glands of the Inteſtines, under the Form of a pinguious and oleaginous Mucus. Whilſt theſe Effects are producing, and whilſt the biliary Ducts, together with the Gall-bladder, are, by the Conſent of Parts, violently compreſs'd, they diſcharge all their Bile into the inteſtinal Duct; and this Bile is evacuated by Stool, along with the reſt of the Mucus. Beſides, ſo long as this Diſtention of this membranaceous Canal continues, the Blood-veſſels, already turgid with the Blood convey'd to them, are compreſs'd, the Regreſs of the Blood thro' the Veins is hinder'd, and its Afflux being ſtill continued, it ſtagnates, breaks thro', or extravaſates itſelf into the Inteſtines. Hence the Excrements appear ting'd with Blood, or a dangerous Inflammation of the Inteſtines is brought on, and is to be diſcover'd by the continual Senſe of Heat, and a beating Pain. This Inflammation either degenerates into a ſanious Ulcer, which preys upon the villous Coat of the Inteſtines; and, in this Caſe, an ulcerous Sanies is evacuated by Stool, along with fleſhy Filaments; or it plainly terminates in a Gangrene, or fatal Mortification, which is accompanied with no Degree of Pain; and the Excrements, in in this Caſe, diffuſe a cadaverous Smell.

We now come to inveſtigate thoſe procatarctic Cauſes, which by giving Birth to this noxious Humour, produce a Dyſentery: And the Cauſes of this kind may, in my Opinion, be principally reduced to three Claſſes; the firſt of which is, the State of the Weather; for after a long-continued Series of hot and dry Weather, when, for the moſt part, cold Nights ſucceed the intenſe Heat of the Sun, Dyſenteries are obſerved to rage. Diſorders of this Kind, ariſing from too dry a State of the Atmoſphere, are deſcribed in *A. N. C. Dec. 2. an. 4. Obſ.* 24. Beſides, this Diſorder is principally incident to Patients, who, being over-heated, and ſweating too copiouſly, during the Day, allow the cold Air of the Night too free an Acceſs to their Bodies by being ſlightly covered. The Reaſon of this is ſufficiently obvious; ſince, by the long-continued Heat and Drineſs of the Air, the Maſs of Blood is reſolved and colliquated, and the Sweat flows too copiouſly. Hence the finer, more fluid and balſamic Juices being diſſipated, the remaining Humours become mucous, acrid, impure, and ſulphureous; and the Patients are by this means rendered proportionably weaker. If therefore, to a Body thus diſpoſed, the cold and pinching Night Air is freely admitted, its Surface is by this means conſtricted, and the farther Diſſipation of the more ſubtle and ſulphureous Sordes obſtructed: Hence theſe Sordes, uniting with a mucous Lymph, degenerate into a tough and highly acrid Matter; which, by the febrile Motion, is conveyed to the Inteſtines, as the largeſt Receptacle and Strainer of mucous Sordes, where it generates and produces a Dyſentery. That Species of Dyſentery which is peculiar to Camps, is alſo generated in the ſame manner; and may be produced without the Concurrence of any malignant and external Taint.

When, to the now mentioned State and Conſtitution of the Atmoſphere, there are added any Exhalations of a virulent Nature, which conſtitute another Claſs of procatarctic Cauſes; then are produced epidemical Dyſenteries, more or leſs malignant and contagious; and rage far and near, ſpreading their baleful Influences over large and ſpacious Tracts of Land. Thus

Fernelius,

Fernelius, de abd. Rer. Cauſ. Lib. 2. *Cap.* 13. makes mention of an epidemical Dyſentery, which, in the Year 1538. raged over all *Europe*. Theſe Miaſmata are either generated in the Air, from the malignant Effluvia ariſing from the Earth, and the particular Conſtitution of the Winds; and then they are drawn into the Body in Inſpiration: Or when Aliments, eſpecially hot Herbs, and Summer Fruits, covered with the malignant Eggs of the Inſects at theſe Seaſons obſerved to be very numerous in the Air, are eaten, theſe ſmall Eggs are mixed with the Chyle, and conveyed to the Maſs of Blood. But it is to be obſerved, that, during ſuch a Conſtitution of the Atmoſphere, the Contagion received into the Body lies latent for ſome time, and waits for ſome accidental Cauſe to make it exert its Virulence. For this Reaſon I have often obſerved, that, during Seaſons of this Kind, the ſlighteſt Stimulus of the Inteſtines, brought on by a Purgative, forthwith produces a Dyſentery. Beſides, the Cauſe and Origin of the Contagion is to be accounted for, from the Evacuations, the Milk, or the Sweat exhaling from the Bodies of dyſenteric Patients.

A third Claſs of procatarctic Cauſes, concurring to the Production of a Dyſentery, is the too liberal and immoderate eating of Fruit, eſpecially if unripe; or if fermentative Liquors are drank after them. The Fruits which have the moſt direct and immediate Tendency to produce this Diſorder, are ſweet Cherries, Peaches, and Plums, eſpecially thoſe of the yellow Kind; the frequent bad Effects of which are ſhewn by *Foreſtus*, *in Lib.* 2. *Obſ.* 23. Impure fermentative Liquors, when copiouſly drank, alſo contribute to the Production of this Diſorder; ſuch as Muſt, and Ales, which at theſe Seaſons are generally in a bad State. They have alſo a Tendency to produce the ſame Effect, when recent, impure, thick, and loaded with Fæces, as alſo when they are acid; for when Subſtances of this Kind, furniſhed with an acrid fermentative Juice, are mixed with the Bile in the Duodenum, they undergo a violent Fermentation with it; by which means not only ſubtile and highly acrid Vapours are conveyed into the Maſs of Humours, but alſo the Sordes are rendered thicker, and of a more cauſtic Quality; which, remaining within the Inteſtines, corrode their nervous Coats, and ſurpriſingly increaſe the Gripes. To this Collection of impure and ſordid Humours ſtagnating in the Stomach and Duodenum, we are principally to aſcribe the Nauſea, the Retchings to vomit, and the Vomitings themſelves, which ſometimes accompany a Dyſentery. But thoſe are exempted from theſe Symptoms, who, without this concurring Cauſe, are ſeized with the Diſorder; as is obvious from the Dyſenteries, which, in the Year 1726. raged in *Germany*, ſince theſe, in the Month of *June*, when there is no Fruit to be had, either ripe or unripe, raged with uncommon Fury; but were not, at the ſame time, attended with Vomitings.

But, with reſpect to this, we muſt obſerve, firſt, that theſe Fruits alone are ſufficient to generate a Dyſentery: When, for Inſtance, the acrid Vapours, ariſing from their Fermentation with the Bile in the Stomach, are conveyed into the Maſs of Humours, they there corrupt the laudable Juices, and by that means diſpoſe the Habit for generating the Matter of a Dyſentery. But this Matter, the Stimulus of the Inteſtines produced by the Sordes lodged in them concurring as an accidental Cauſe, is by a certain febrile Motion conveyed from the Surface of the Body to the Inteſtines. Secondly, we muſt obſerve, that, in ſuch Caſes, a certain Weakneſs of the Stomach and Inteſtines muſt neceſſarily be brought on. Hence we may be enabled to aſſign a Reaſon, why ſome great Devourers of Fruit ſhould be ſometimes free from Dyſenteries; whereas others, who either eat no Fruit at all, or, at moſt, uſe them very moderately, are ſeized with this Diſorder. For ſo long as the Primæ Viæ are ſtrong, and in a good State, the Errors committed will eaſily be corrected, and the noxious Sordes carried off: Whereas thoſe, in whom theſe Parts have a weaker Tone, and are filled with an acid Sordes, its perpetual Concomitant, generally pay dear for the Indulgence they grant themſelves in this way. Thirdly, very often the immoderate Uſe of Summer Fruits, and fermentative Liquors, is to be conſidered as the concurring and additional Cauſe of a Dyſentery; whereas the principal Cauſe is to be aſcribed to an obſtructed Perſpiration, or a Reception of the Contagion into the Body. In this Caſe the Symptoms of the Diſorder, produced by the united Agency of two Cauſes, muſt, in the very Nature of the Thing, be ſurpriſingly exaſperated.

Having thus conſidered the Nature, and productive Cauſes, of a Dyſentery, we now come to take a View of its Prognoſtics. Dyſenteries, then, happening to Women in Childbed, are highly dangerous. And this Diſorder is more fatal to old Perſons and Children, than to thoſe of a middle Age; as we are informed by *Hippocrates*, *Sect.* 2. *Text.* 30. as alſo by *Sennertus*, *in Lib.* 3. This Diſeaſe generally proves fatal, when it ſeizes Patients who are cachectic, ſcorbutic, phthiſical, weak, or who by long Afflictions of Mind are become extenuated: It is alſo highly dangerous, when it ſeizes Perſons who have Worms lodged in their Inteſtines. Dyſenteries, accompanied with Vomiting and a Hiccup, are not without Danger, ſince they lay a Foundation for an Inflammation of the Stomach. Nor is it a leſs inauſpicious and unlucky Omen, when green, black, and highly fetid Excrements are diſcharged, together with a Species of Caruncles; ſince, according to the 26th Aphor. of the fourth Section of *Hippocrates*, theſe Signs generally indicate an Ulcer of the Inteſtines. Dyſenteries, in general, are more or leſs mild, in proportion as the Inteſtines are more or leſs exulcerated. It is a highly unlucky Sign, either when Clyſters injected immediately ſlip back again, or when the Anus is ſo cloſely ſhut up, that nothing can be injected; ſince the former Symptom indicates a Palſey of the Inteſtines, eſpecially of the Rectum; and the latter a violent ſpaſmodic Stricture of the ſame Inteſtine. An unlucky Event is alſo to be expected, if, whilſt the Pulſe is weak, the Extremities are cold, and the internal Parts either burnt with Heat, or entirely free from Pain: Alienation of Mind, Inflammation of the Fauces, Aphthæ, or ſuch a total Palſey of the Œſophagus, that the Aliments cannot be ſwallowed without a certain Noiſe, are alſo bad Signs. We muſt alſo obſerve, that this Diſorder, eſpecially if joined with a malignant Fever, ſometimes makes a quick Progreſs; and often deſtroys the Patient within ſeven, nine, or fourteen Days; whereas at other times it is protracted for many Days, perhaps to the fortieth, or farther; that when it has become inveterate, and of long ſtanding, it either cuts off the Patient; or, if it ſhould happen to terminate without Death, afflicts him very ſeverely, as *Celſus* has obſerved in the 15th Chapter of his 4th Book; that it often degenerates into a Dropſy or Lientery, according to the Obſervation of *Hippocrates*, in the ſixty-third Aphoriſm of his ſixth Section; as alſo, that it is frequently changed into the Cœliac Paſſion, a Conſumption, or an incurable Hectic.

The Method of CURE.

There is ſcarce any Diſeaſe, in the rational Cure of which the Skill and Judgment of the Phyſician is more neceſſary than in a Dyſentery; ſince there is a great Variety of Medicines preſcribed in this Diſorder, which are ſo far from being equally beneficial to all Patients, that we often find what is of Advantage to one, proving highly noxious and injurious to another. But, generally ſpeaking, theſe following are the principal Intentions of Cure: Firſt, that the peccant, acrid, and cauſtic Matter, of whatever Kind, be corrected, and carried through its proper Emunctories. Secondly, that the violent Gripes and ſevere Spaſms of the Inteſtines be ſoothed and alleviated. And, thirdly, that the Inteſtines themſelves, whether exulcerated or weakened, ſhould be relieved by proper and well-choſen Remedies.

As for the firſt of theſe Intentions, the prudent Phyſician ought carefully to obſerve, whether any groſs Crudities are lodged in the alimentary Tube; which he may diſcover partly by a previous Error with reſpect to Regimen, ſuch as the eating too liberally of Summer Fruits; and partly by the Nauſea, Cardialgia, and Retching to vomit, with which the Patient is afflicted. In Caſes of this Nature, Phyſicians highly extol one Scruple, or half a Dram, of Ipecacuanha, in Conjunction with Crabs Eyes, exhibited by way of Vomit, in the Beginning of the Diſtemper; and to be frequently repeated, drinking a large Quantity of warm Water after it. Nor is it leſs expedient to carry off the groſs and acrid Sordes by Stool: This Intention is moſt effectually anſwered by the Powder of Rhubarb mixed with Abſorbents; becauſe, beſides its detergent and laxative Effects, it gently corroborates and reſtores the Tone of the Inteſtines. The Pilulæ Balſamicæ are alſo of ſingular Service in Caſes of this Nature, ſays *Hoffman*, when prepared in the manner directed by *Becher*, *Stahl*, or myſelf; and more eſpecially when mixed with Extract of Rhubarb.

It will alſo be expedient to correct the Acrimony, and allay the corroding cauſtic Quality, of the Sordes in the Inteſtines; to which End mucilaginous Preparations, given inwardly, will conduce very much; ſuch as the recent Oil of Sweet Almonds expreſſed without Fire; recent Sperma Ceti, which is not rancid; with Decoctions of Barley, Oats, the Shavings of Hartſhorn, the Roots of Vipers-graſs, and China-root; Emulſions alſo prepared of ſweet Almonds, and Pine-kernels; pectoral Waters, and ſweet Whey; as alſo the Selteran Waters, mixed with Aſſes Milk. Theſe Medicines excellently anſwer the Intention by ſheathing up the Acrimony, and lubricating the Paſſages. This Effect is alſo produced, and the Sordes at the ſame time evacuated, eſpecially from the large Inteſtines, by emollient Clyſters, prepared of Barley-water boiled with Bran, ſweet Whey, the Yolks of Eggs, Oil of Chamomile, ſweet Almonds, and Goats Greaſe.

In like manner we ought to take great Care to correct and carry off, through the Surface of the Body, the ſubtle Impurities, more or leſs malignant, that are yet fluctuating in the Maſs of Blood, and to mitigate the concomitant Fever, becauſe by this means the Afflux of the Sordes is drawn back from the Inteſtines to the Surface of the Body. And, for anſwering this Intention, Abſorbents mixed with fixed Diaphoretics are much commended. We may alſo, in theſe Caſes, exhibit Powders of calcined or philoſophically prepared Hartſhorn, foſſile Ivory, Terra Sigillata, Armenian Bole, diaphoretic and chalybeated Antimony,

Antimony, Amber, Crabs Eyes, red Coral, Mother of Pearl, and eſpecially mountain Cryſtal; to which, if there be an exceſſive Heat and Thirſt, a ſmall Doſe of Nitre, and, for allaying the Vehemency of the Pains, Caſcarilla-bark, or a Grain or two of the Theriaca cœleſtis, may be added. But particularly, for expelling a malignant Taint got by Contagion, half a Grain of Camphire, mixed with Nitre and Abſorbents, is of great Uſe and Efficacy.

In order to anſwer the ſecond Intention, and to reſtrain all violent and exceſſive Commotions, ſafe Anodynes, and mild Aſtringents, ought to be uſed alternately with the above-mentioned Medicines. The moſt conſiderable of theſe are the Theriaca Medicines. The moſt conſiderable of theſe are the Theriaca cœleſtis, the Aqua theriacalis, the Diaſcordium, the Pilulæ de Styrace, the Pilulæ de Cynogloſſo, the Pilulæ Wildeganſii, and *Sydenham*'s Liquid Laudanum. But the Anodyne Liquor, mixed with a ſmall Quantity of the Balſamum Vitæ, is a much ſafer and moſt effectual Remedy in more Caſes: I have, ſays *Hoffman*, exhibited about twenty Drops of it, three or four times a Day, with great Succeſs. To this Claſs, alſo, may be referred, on account of their antiſpaſmodic Virtue, the diſtilled Waters of the Lily of the Valley, of the Flowers of the Alder, Lime, Oranges, Mint, black Cherries, and Caſcarilla, in which the above-commended Powders may be exhibited. External Paregorics may alſo be uſed; of which, if the Gripes be very violent, a Liniment may be compounded in the following manner:

> Take of the Oil of white Lilies, one Ounce; of the diſtilled Oil of Mint, of Wormwood, (which is an excellent Anodyne) of Nutmegs, and of Caraway, each half a Dram; and of Camphire, one Scruple.

Anointing the Abdomen with this Liniment will be of ſingular Service in abating the Violence of the Pain; and by that means the other Medicines will more eaſily operate on the material Cauſe of the Diſeaſe, and more ſucceſsfully conquer it.

When the peccant Humours are thus carried off, and the Spaſms ceaſe, we ſhould next ſuccour the injured Inteſtines; in which, if there yet remain any Ulcers, beſides the Continuation of Abſtergents given inwardly, we ought to uſe frequent Injections of Clyſters, mixed with Goats and Deers Suet, the Yolks of Eggs, Turpentine and *Lucatellus*'s Balſam. But it generally happens, that, after we have got the better of the Diſeaſe, there remains a Want of the due Tone in the Inteſtines; which may be reſtored by the Exhibition of corroborative Remedies, the moſt conſiderable of which are, the Bark of the Caſcarilla, exhibited either in the Form of an Eſſence, a Powder, or an aqueous Extract; or even Peruvian Bark reduced to an Electuary, with abſtergent and corroborative Extracts, or the Eſſence of Orange Peel, mixed with the Eſſence of red Gentian and Amber. The external Application of Spirit of Wine rectified is of conſiderable Uſe in this Caſe, as alſo Hungary-water, or the Spirit of the Flowers of Roman Chamomile mixed with the diſtilled Oil of Mint.

The before-mentioned Remedies will not anſwer the Deſign, if we are not very careful to obſerve a ſtrict Regimen; and we ought to preſerve, as much as poſſible, an equal Temperament of Air about the Patient: For, as all Refrigeration, either by external Cold, or by drinking cold Liquors, is manifeſtly dangerous, ſo exceſſive Heat and Exæſtuation, occaſioned either by the Room's being too warm, or by heaping on too many Bed-clothes, muſt increaſe the febrile Heat, and be of as dangerous Conſequence. Therefore Perſons labouring under a Dyſentery, and who ſtudy Eaſe either of Body or Mind, ſhould neither have too warm Beds nor Rooms; and the Liquors they uſe for Drink ought to be tepid, or moderately warm. Malt Liquors are by no means proper for them; but rather gelatinous Decoctions, Infuſions by way of Tea, Whey; and, about the End of the Diſtemper, at proper times, a Draught of generous Wine, for ſtrengthening the Inteſtines. They ought to make uſe of ſoft Aliments, and ſuch as are of eaſy Digeſtion, as the Yolks of Eggs and Rice, Broths made of Veal, Hens, Roots of Vipers-graſs, Succory, China-root, Juice of Plantain, and bruiſed Crabs, which with ſome are in great Repute for conſolidating the Ulcers of the Inteſtines.

The beſt way to prevent a Dyſentery, when it becomes contagious and epidemical, is to ſhun all Exceſſes, and ſudden Changes of the Air, and not to come nigh ſuch as labour under the Diſtemper. A Man may with greater Certainty preſerve himſelf from that Species of it which derives its Source from other Cauſes, provided he guards againſt the Injuries of the Air, abſtains from eating Summer Fruits, eſpecially if they be unripe, and keeps his Body ſoluble. And, at the time when the Dyſentery rages, a Man ought to take all proper Care to cover himſelf in the Night-time, leſt Perſpiration be obſtructed. And, if he is to be purged, he ought not to make uſe of acrid Purgatives; becauſe, as I have before obſerved, they have a great Tendency to excite the Contagion, and bring on the Diſeaſe.

Cautions *to be obſerved in* Practice.

Perſons labouring under a Dyſentery ought by all means to abſtain from groſs Opiates, Aſtringents, and Styptics, ſince theſe are ſo far from alleviating, that they aggravate the Diſtemper; for, if they be exhibited at the Beginning of the Diſeaſe, the cauſtic Matter, lodged in the Habit, induces a great Uneaſineſs about the Præcordia, Hiccups, Aphthæ, and dangerous Inflammations: If at the Height of the Diſorder, when the Strength of the Patient is much impaired and weakened, they eaſily induce a Gangrene, and change the preſent Inflammation into a mortal Sphacelus: See *Thonerus Obſ. Lib.* 3. *Obſ.* 8. *p.* 167. *M. N. C. dec.* 2. *anno* 3. *Obſ.* 88. Laſtly, the ſame Medicines, being adminiſtred on the Decline of the Diſeaſe, create ſpaſmodic and œdematous Diſorders, Languors, and a Fever. *Galen*, 2 *Simpl.* 12. & 14. informs us, that a Dyſentery, unſeaſonably ſtopt, has been ſucceeded by Melancholy; and, according to *Heller*, by an Epilepſy and Paleſy. *Martinus*, *de Morb. Meſent.* alſo informs us, that it brings on Inflammations and Abſceſſes in the Meſentery, with many dangerous Diſtempers; and even haſtens Death itſelf, which may be confirmed by many Examples, according to *Crato*, *Conſil.* 22. *Lib.* 5. In which Caſe it is expedient to provoke the obſtructed Evacuations by Stool, by Clyſters, and prevent the threatening Inflammation by Abſorbents and fixed Diaphoretics, taken inwardly.

Remedies taken from the Animal Kingdom, which are ſedative and anodyne, may be uſed with the greateſt Safety to the Patient in ſuch Diſtempers. Among the Number of theſe Remedies we reckon the Spine and Liver of Vipers, the Shavings of the Teeth of the Sea-horſe, or Sea-cow, the Penis of a Whale, and the Powder of a human Secundine dried; all which, being mixed with lenient bezoardic Powders, are of excellent Uſe in compoſing the ſpaſmodic and convulſive Strictures of the Inteſtines.

Tho' gentle and lenient Laxatives are known to afford great Relief in a Dyſentery; yet we ſhould take care to uſe them with the utmoſt Caution. For, firſt, the more acrid Cathartics, which have a Mixture of Jalap, Scammony, and Coloquintida, act like ſo many Poiſons in exaſperating the ſpaſmodic Motions; and Mercurial Preparations produce the ſame Effect. For this Reaſon I cannot but wonder at ſome Writers, and particularly Mr. *Boyle*, who recommends Mercurius dulcis in a Dyſentery; for it is of ſuch a Nature, that, when mixed with acrid Salts, which in this Diſtemper always abound in our Bodies, it is rendered cauſtic. Laxatives which are ſweet, and eaſily undergo a Fermentation, are by no means proper in this Diſorder; and therefore a Patient ought to abſtain from Decoctions of Prunes, Sena-leaves, and laxative Syrups. Though the Pilulæ Polychreſtæ, and temperate balſamic Pills, exhibited in ſmall Doſes frequently are of ſingular Service, the firſt Days of the Diſeaſe, for correcting and evacuating; yet when the Diſtemper ſeizes plethoric Perſons with Heat, and a quick Pulſe, I have frequently obſerved theſe Pills of dangerous Conſequence. In ſuch a Caſe, it will be better judged to abſtain from all Laxatives, that raiſe even the leaſt Commotion of the Humours, and rather attempt a gentle Evacuation, by a Decoction prepared of Whey, Tamarinds, and Rhubarb. When the Diſeaſe begins with violent Gripes in the lower Belly, I uſually preſcribe Anodynes, in Conjunction with Evacuants; and, for this End, I generally exhibit, with good Succeſs, two or three Doſes, in twenty-four Hours, of the Pilulæ Aloephanginæ, or rather Becherianæ, mixed with an equal Quantity of the Pilulæ de Styrace.

And I have frequently obſerved, that a laxative Infuſion of Manna, taken at the End of a long-protracted Dyſentery, and when all dangerous Symptoms have ceaſed, has again brought on the Gripes, and other noxious Diſtempers: The Cauſe of ſuch a Cataſtrophe muſt be owing to the Deſtruction of the Tone of the Inteſtines, which was before impaired by the violent Spaſms; and, therefore, the beſt Way to reſtore this loſt Strength, is by an Exhibition of proper Corroboratives.

The Root of Ipecacuanha, which by many is accounted a Specific againſt a Dyſentery, ſee *A. N. C. Dec.* 2. *Anno* 10. *Obſ.* 115. does not want its Uſe, though it very frequently produces unhappy Effects. It may be exhibited with the greateſt Succeſs to robuſt Patients, as well as to thoſe of a moiſter Nature, ſuch as Women.

An Exhibition of it may be alſo expedient, when a redundant Collection of Crudities adheres in the Primæ Viæ, or when a contagious Miaſma is recent, and afflicts the Patient with a Nauſea, a Retching to vomit, an Uneaſineſs about the Præcordia, and a cutting Pain. It will be proper to adminiſter a Remedy of this Sort, during the firſt Days of the Diſtemper; and if the Patient be ſeized with a Plethora, or Fever, it will be expedient previouſly to open a Vein. But when the Diſeaſe becomes more inveterate, and Stools which are both bloody and mucous are diſcharged, it may then be exhibited; for it checks them a little, though, at the ſame time, it creates a greater

greater Uneaſineſs about the Præcordia; ſo that we frequently find it neceſſary to reſtore the Evacuation by Stool, by means of emollient Clyſters. Laſtly, if a Redundancy of Crudities be lodged in the Primæ Viæ, it will be moſt proper to exhibit half a Dram of this Root, with a laxative Decoction prepared of Manna, Rhubarb, and Tamarinds.

We ſhould never make uſe of ſuch Remedies as ſtimulate the Inteſtines, ſuch as all neutral and digeſtive Salts, as the Tartarus Vitriolatus, the Arcanum Duplicatum, and the Salts obtained from hot mineral Waters. And yet Nitre, as alſo Sal Prunellæ, which is greatly extolled by *Riverius* for its refrigerating and temperate Quality, is ſometimes recommended as a proper Remedy; and it ſhould be mixed with abſorbent Powders, if the Patient is either oppreſſed with Heat and Thirſt, or of a choleric and bilious Conſtitution.

It is the general Opinion of many Phyſicians, and even of *Hippocrates* and *Galen*, as alſo of *Martian in Comment. in Lib. Hippocratis de Ratione Victus in Acutis*, that Veneſection ought not to be uſed in a Dyſentery: And this may be laid down as a Maxim to be obſerved in Practice by our Countrymen (the *Germans*). But, after a long Courſe of Experience, I can affirm, that if the Patient is plethoric, and accuſtomed to drink Wine, and is, at the ſame time, ſeized with a continual Fever, together with the Dyſentery, it is highly neceſſary to open a Vein, at the Beginning of the Diſtemper: For it is vain to dread a Diminution of Strength by Veneſection, ſince not only more People, who labour under a Dyſentery, die of an Inflammation of the Inteſtines, but alſo plethoric Subjects, when oppreſſed with continual Fevers, die of Stagnations, Gangrenes, and Sphacelus, which are occaſioned by nothing but a Redundance of Blood. And, therefore, Veneſection is the moſt proper Remedy for preventing Diſtempers of ſuch a dangerous Conſequence. And there are not wanting Teſtimonies of the moſt approved Writers, who greatly extol this kind of Remedy. Thus *Julius Cæſar Claudinus* informs us; that he has cured many of a Dyſentery, by letting Blood. And *Riverius*, *Cent.* 2. *Obſ.* 37. & 44. *Amatus Luſitanus*, *Cent.* 2. *Obſ.* 48. *Altomarus de Medend. Corp. human. Malis Cap.* 74. *Botallus*, *Cap.* 4. *Sydenham*, *Oper. Med. Cap. de Dyſent.* and, among the more modern Authors, *Paſcoli*, have ſupplied us with Obſervations of this Kind.

I have been told by a Phyſician, who attended a Camp, that in curing a Dyſentery, which raged there, upon the firſt Suſpicion of the Contagion, and even when the Signs appeared pretty evidently, a Diaphoretic, prepared of calcined and philoſophically prepared Hartſhorn, of diaphoretic Antimony, of the volatile Salt of Hartſhorn, and Saffron, each ten Grains, exhibited with a warm Vehicle, produced excellent Effects, by diſpoſing the Body to Sweat, and, after a Repetition of ſome Doſes, checking the pernicious Violence of the Diſtemper. But ſhould a great Quantity of Sordes be lodged in the Primæ Viæ, I am inclined to think, that a Remedy of this kind may be much more ſafely uſed after the previous Exhibition of a proper Evacuant. It is a very common and fatal Miſtake of Phyſicians, when, in order to cure a violent Dyſentery, they make an immoderate Uſe of the alexipharmic and theriacal Remedies, ſuch as Electuaries made of Diaſcordium, Theriaca Andromachi, Mithridate, and the Pulvis Pannonicus ruber, alexipharmic Eſſences, and bezoardic Tinctures; for I have frequently obſerved, that the Symptoms of an epidemic Dyſentery have been exaſperated by too large an Exhibition of ſuch hot and dry Remedies; and that Fevers, a Thirſt, and great Heat within, have been occaſioned by the Uſe of them: And our Reaſon may inform us, that Medicines, which raiſe Commotions in the Blood, can by no means be proper Remedies in a Diſeaſe which derives its Source from a long-continued inward Heat, which changes the ſweet and temperate Humours of the Body into thoſe of the bilious and ſalino-ſulphureous Quality.

In a Dyſentery, many Phyſicians, in order to correct the Acrimony of the Humours, to ſoften the Malignity of the Ulcers, and conſolidate the corroded Subſtance of the Inteſtines, make too much uſe of glutinous and mucilaginous Remedies, as well internally as externally, eſpecially in the way of Clyſters; ſuch as the Milk of various Animals, Decoctions of Sheeps-feet, Solutions of Gum Tragacanth and Gum Arabic, Jellies of Animals, Sperma Ceti, and the Root of the larger Comfrey. Though theſe Remedies ſhould not be entirely exploded, yet Phyſicians ſhould obſerve a proper Medium, and proceed with great Caution in exhibiting them; for theſe glutinous Subſtances, when injected into the Anus, produce a certain Vicidity, render the Ulcers much worſe, and hinder their Cicatrization: And it frequently happens, that, upon a Suppreſſion of the Flux, they occaſion a greater Collection of Sordes in the Belly, which induces more violent Spaſms and Gripes.

Milk alone is not a proper Remedy in a Dyſentery, eſpecially if there be a Redundance of Sordes in the Primæ Viæ, becauſe of the Coagulum which it eaſily undergoes there, and the Symptoms which are to be dreaded from thence; but if it be boiled and mixed with pure running or Fountain-water, or even *Seltern* Mineral-waters, it will be of conſiderable Uſe. And Whey, which is ſo highly commended by *Hippocrates* for its Efficacy in moderating Heat and Thirſt, and for correcting, in ſome meaſure, the Acrimony of the Humours, is no contemptible Remedy in a Dyſentery, and is much extolled by *Raymundus A Fortis*, *Conſult. Cap.* 2. and *Sydenham*. Beſides, pure Fountain-water, either chalybeated, or boil'd with the Sea-unicorn or calcin'd Hartſhorn, or Bole, is an excellent Drink for Patients of all Ages for allaying Thirſt and Heat, and diluting the acrimonious Humours. *Sydenham*'s Decoction may be alſo very proper in this Caſe, which is made of Fountain-water, calcin'd Hartſhorn, and the Crum of Bread made of the fineſt Flour. And 'tis well known how much celebrated the Waters in *Italy* are for curing Dyſenteries; ſuch are thoſe of *Tutia*, *Villa*, and ſome others; concerning which ſee *Fallopius de Thermis*, and *Cæſalpinus in Quæſt. Med.* 21. *L.* 2. *de Medic. Facul. Cap.* 10. The *German* Waters are of excellent Uſe in curing Dyſenteries, as you may ſee *A. N. C. Dec.* 1. *Anno* 2. *Obſ.* 213. As there is no kind of Diſtemper ſo loathſome, naſty, and abominable, or which infects and vitiates the Air with putrid Exhalations ſo much as a Dyſentery, we ought to direct the Patient not to diſcharge his Stools in the ſame Room he ſleeps in, but rather in ſome one adjoining to it, if it be tolerably warm, and he has Strength to retire to it; and they ſhould be forthwith removed. The noxious Quality of the Air ſhould alſo be corrected by Suffumigations of Maſtich and Amber. For this Purpoſe I alſo warmly recommend to my Patients, in all contagious Diſeaſes, to have Camphire about their Necks, if they can poſſibly bear the Smell of it. If Perſons who labour under this Diſeaſe, have Strength to get out of Bed, it is proper for them to have ſome Veſſel convenient for receiving the Excrements under their Beds, upon which they may ſit down, and eaſe Nature, provided it be firſt tinctured and ſeaſoned with a warm Decoction of the Flowers of Mallows, Elder, and Fenugreek-ſeed.

There is ſcarcely any Diſeaſe, wherein a Refrigeration of the Feet is attended with ſuch dangerous Conſequences as a Dyſentery. This is confirmed by Experience, and we ſee it frequently brings on Death. By this means I have often obſerved an Inflammation of the Inteſtines, which ended in Death, brought on; for the Feet being refrigerated, the Skin is contracted, and the peccant Humours flow in greater Quantities into the Inteſtines: For which Reaſon it is highly expedient always to keep warm Bricks at the Soles of the Feet. Nothing is a greater Affliction to Perſons labouring under this Diſtemper, than the perpetual Deſire of going to Stool, and a moſt troubleſome Teneſmus, in which they evacuate either nothing at all, or a very ſmall Quantity of Mucus, more or leſs mixed with Blood: In which Caſe, the moſt efficacious Remedy is a Fomentation, prepared of Milk, in which Chamomile and Elder-flowers are boiled; or a Portion of the Mucilage of Fleawort, or of Quinces, or of Oil of ſweet Almonds and the Yolk of Eggs, mixed with Saffron, injected into the Anus. Thoſe who, after a long-protracted Dyſentery, begin to recover, and gather Strength, in order to regain the former Strength of their Stomach and Inteſtines, which has been much weakened by the Diſeaſe, ought to be particularly careful in obſerving a ſtrict and exact Regimen; for I have frequently obſerved a Lientery, ſlow Fevers, a Conſumption, and other chronical Diſtempers, follow a Neglect of this Kind. *Frederic Hoffman.*

The incomparable *Sydenham*, treating of the epidemical Diſtempers which raged in 1669. 1670. 1671. and 1672. gives the ſubſequent admirable Obſervations, relative to a Dyſentery.

In the Beginning of *Auguſt* 1699. the dry Gripes appeared, and, during the Courſe of that Autumn, equalled, or rather exceeded, the Dyſenteries which began to appear with them, with reſpect to the Numbers they attacked. Sometimes a Fever accompanied them, and ſometimes not; but they exactly reſembled the Gripes which attended the Dyſentery, that prevailed at the ſame time; for they were extremely violent, and attacked at Intervals, but no natural or mucous Stools ſucceeded. They prevailed equally with the Dyſentery throughout this Autumn; but appeared no more epidemically in the following Years of this Conſtitution. As theſe dry Gripes differ little either in their Nature, or the Method whereby they are to be cured, from the Dyſentery, I proceed to treat of this laſt Diſtemper.

The Dyſentery generally makes its firſt Attack, as it did at this time, in the Beginning of Autumn, and diſappears for a time, upon the Approach of Winter; but when a Number of Years tend much to produce it epidemically, it may ſeize a few at any other time; and abundance at the Beginning of Spring, or, perhaps, earlier, if warm Weather immediately ſucceeds a ſevere Froſt, that went off ſuddenly. And though very few may be attacked with it, yet as this happens at ſo unuſual a Time, I am well convinced, that the Conſtitution eminently favours this Diſeaſe. And thus it happened in thoſe Years wherein the Dyſentery was very epidemical;

mical; for ſometimes it ſeiz'd a few towards the End of Winter, or Beginning of Spring.

It ſometimes begins with a Chilneſs and Shivering, immediately ſucceeded by a Heat of the whole Body, as is uſual in Fevers; and, ſoon after, Gripes and Stools ſucceed: It is indeed, frequently, not preceded by a Fever; but the Gripes attack firſt, and Stools ſoon enſue: Intolerable Gripings, however, and a painful Deſcent, as it were, of all the Bowels, always accompany the Stools, which are very frequent, and all mucous, not excrementitious, unleſs ſometimes an excrementitious one intervenes, without any conſiderable Pain: The mucous Stools are generally ſtreak'd with Blood; but ſometimes not the leaſt Blood is mixed with them, throughout the whole Courſe of the Diſeaſe: Nevertheleſs, if they be frequent, mucous, and accompanied with Griping, the Diſtemper may as juſtly be intituled a Dyſentery, as if Blood was diſcharged along with them. Further, if the Patient be in the Vigour of Life, or has been heated by Cardiacs, a Fever ariſes, and the Tongue is covered with a thick white Mucus; and, if he has been very much heated, it is black and dry; great Loſs of Strength, Lowneſs of Spirits, and all the Signs of an ill-conditioned Fever, are joined with it. This Diſeaſe occaſions extreme Pain and Sickneſs, and greatly endangers Life, if unſkilfully treated; for when the Spirits are much exhauſted, and the vital Heat diminiſhed, by frequent Stools, before the Matter cauſing the Diſeaſe can be expel'd from the Blood, a Coldneſs of the Extremities enſues, and the Diſorder terminates in Death in as little time, as that in which acute Diſeaſes prove fatal: But if the Patient eſcapes for this time, ſeveral Symptoms, of a different Kind, ſucceed: For Inſtance; ſometimes, in the Progreſs of the Diſeaſe, inſtead of thoſe ſanguineous Filaments which are uſually mix'd with the Stools in the Beginning, a large Quantity of pure Blood, unmix'd with Mucus, is voided at every Stool; which, as it manifeſts an Eroſion of ſome of the larger Veſſels of the Inteſtines, threatens Death. Sometimes, alſo, the Inteſtines are affected with an incurable Gangrene, cauſed by the violent Inflammation ariſing from the plentiful Afflux of the hot and ſharp Matter to the affected Parts. Moreover, at the Decline of the Diſeaſe, *Aphthæ* frequently affect the internal Parts of the Mouth, eſpecially when the Patient has been kept very hot for a long time, and the Evacuation of the peccant Matter check'd by Aſtringents, the Matter of the Diſeaſe not having been firſt carried off by Cathartics: Theſe Aphthæ generally portend approaching Death.

But if the Patient ſurvive the before-mentioned Symptoms, and the Diſeaſe proves laſting, the Inteſtines, at length, ſeem to be affected ſucceſſively downwards, till it be driven to the Rectum, and ends in a Teneſmus; upon which Occaſion, the natural Stools (otherwiſe than it happens in a Dyſentery) occaſion great Pain in the Bowels, the Fæces, in their Paſſage thro' them, abrading the ſmall Inteſtines, ſtill very tender, whereas the mucous Stools only offend the Rectum, during the time that the Matter is form'd therein, and diſcharg'd. But tho' this Diſeaſe often proves mortal in grown Perſons, and eſpecially in the Aged, it is, nevertheleſs, very mild in Children, who have it ſometimes for ſome Months, without any Inconvenience, provided the Cure of it be left to Nature.

What Similitude there is between the Dyſentery here deſcrib'd, and the endemic Dyſentery of *Ireland*, I know not, having hitherto had no Account of the latter. Neither have I diſcovered how far this Dyſentery reſembles thoſe happening in other Years here in *England*. For poſſibly there may be as many Species of Dyſenteries, as there are Kinds of Small-pox, and other epidemical Diſtempers, peculiar to different Conſtitutions, and which may therefore require a different Method of Cure in ſome Particulars. Nor ſhould this Procedure of Nature ſo much raiſe our Wonder, ſince 'tis univerſally acknowledged, that the further we penetrate into any of her Works, the clearer Proofs we have of the exceeding Variety, and almoſt divine Contrivance of her Operations, which far ſurpaſs our Comprehenſion. So that whoever has undertaken to fathom theſe Matters, and ſearch after the various Operations of Nature, will find himſelf diſappointed in his Expectation, and not ſucceed in the Attempt; and beſides, if he be a judicious Perſon, he may expect to be cenſured for making the moſt uſeful Diſcoveries, for no other Reaſon but becauſe he was the firſt Inventor.

It muſt be further obſerv'd, that all epidemical Diſtempers, at their firſt Appearance, as far as can be judg'd from their Phænomena, ſeem to be of a more ſpirituous and ſubtile Nature, than when they become older; and, that the more they decline, the more groſs and humoral they daily grow: For whatever kind of Particles thoſe are, which, being intimately mix'd with the Air, are eſteem'd to produce an epidemical Conſtitution, 'tis reaſonable to conclude, that they are poſſeſſed of a greater Power of acting at their firſt Appearance, than when their Force is weaken'd. Thus, in the Infancy of the Plague, ſcarce a Day paſſed but ſome of thoſe who were ſeized with it, died ſuddenly in the Streets, without having any previous Sickneſs; whereas, after it had continued for ſome time, it deſtroy'd none, unleſs a Fever and other Symptoms preceded: Whence it clearly follows, that this Diſeaſe, tho' it then took off fewer Perſons, was more violent and acute in the Beginning, than afterwards, when its Influence was more extenſive.

In like manner in the Dyſentery under Conſideration, all the Symptoms were moſt ſevere in the Beginning, tho', with reſpect to the Numbers affected thereby, it increaſed daily, till it came to its Height, when, conſequently, more Perſons died than in the Beginning: Yet the Symptoms in the Beginning were more violent than in its Height, and much more ſo, than in the Decline thereof: And, at firſt, abundance more periſhed, in proportion to the Numbers of thoſe affected. To this may be added, that the longer it continued, the more humoral it ſeemed to be: For Inſtance, the firſt Autumn, ſeveral had no Stools at all: But, with reſpect to the Severeneſs of the Gripings, the Violence of the Fever, ſudden Decay of Strength, and other Symptoms, it much exceeded the Dyſenteries of the following Years. And further, the Dyſentery accompanied with Stools, which appeared firſt, ſeemed to be of a more ſpirituous and ſubtile Nature, than thoſe that ſucceeded; for in the firſt Dyſenteries, the Inclination to Stools and Straining were greater and more frequent; and the Stools, eſpecially the natural ones, leſs, both in point of Quantity and Frequency: But generally as the Diſeaſe proceeded, the Gripings abated, and the Stools became more natural; and, at length, the epidemical Conſtitution declining, the Gripes were ſcarce felt, and the excrementitious or natural Stools exceeded the mucous ones in Number.

To proceed, at length, to the curative Indications: After having attentively conſidered the various Symptoms attending this Diſeaſe, I diſcovered it to be a Fever of a particular Nature, turned inwards upon the Inteſtines; by means of which, the hot and ſharp Humours that were contained in, and agitated by the Blood, were thrown off by the meſeraic Arteries, upon theſe Parts, whence Blood was diſcharged by Stool, the Mouths of the Veſſels being opened by the Impulſe of the Blood and Humours flowing thereto: And by the violent and frequent Efforts of the Inteſtines, to diſcharge the ſharp Humours that continually vellicate them, the Mucus, wherewith their Inſide is naturally covered, is diſcharg'd more or leſs copiouſly at every Stool. The Indications of Cure, therefore, ſeem to be obvious: For nothing more appears to be neceſſary, than, firſt, to make an immediate Revulſion of theſe ſharp Humours by Bleeding; and, afterwards, to reduce the Remainder to a due Temperature; and, then, to evacuate them by Purgatives.

I therefore uſed the following Method: Upon being call'd in, I immediately directed Bleeding in the Arm, gave an Opiate the ſame Evening; and, the next Morning, this gentle purging Potion, which I frequently uſe:

> Take of Tamarinds, half an Ounce; the Leaves of Sena, two Drams; Rhubarb, one Dram and an half: Boil them together in a ſufficient Quantity of Water, to leave three Ounces of the ſtrain'd Liquor; in which diſſolve Manna, and ſolutive Syrup of Roſes, of each an Ounce: Mix them together for a purging Potion, to be taken in the Morning early.

I commonly prefer this Draught to an Electuary made of a ſmall Quantity of Rhubarb; for tho' this Root be exhibited to evacuate Choler, and acrimonious Humours, yet, unleſs a proper Quantity of Manna or ſolutive Syrup of Roſes be mixed with it, to quicken its Opeeation, it avails little in curing the Dyſentery. And becauſe it is certain, that the moſt gentle Cathartics ſometimes increaſe the Gripings, and occaſion a general Depreſſion and Diſorder of the Spirits, by the adventitious Commotion they raiſe in the Blood and Humours, during their Operation, I therefore commonly give an Opiate earlier than is uſual after Purging; for Example at any Hour in the Afternoon, provided it ſeems to have done operating: And this I do, in order to quiet the Diſturbance I have raiſed. I repeat the Cathartic twice more, interpoſing a Day between each, and exhibit an Opiate after every Purge, at the Time above-mentioned; and direct it to be repeated Morning and Night, on the intermediate Days, in order to diminiſh the Violence of the Symptoms, and obtain a Reſpite, whilſt I am employed in evacuating the peccant Humour. The Opiate I principally uſed was liquid Laudanum, in the Quantity of ſixteen or eighteen Drops, in any cordial Water, for a Doſe.

After Bleeding and Purging once, I allowed ſome mild Cardiac to be taken between whiles, throughout the Courſe of the Diſeaſe, as Plague-water, compound Scordium-water, and the like: For Inſtance,

> Take of the diſtilled Waters of black Cherries and Strawberries, of each three Ounces; Plague-water, compound Scordium-water, and ſmall Cinnamon-water, of each an Ounce; prepared Pearl, one Dram and an half; fine Sugar,

Sugar, enough to ſweeten it; and half a Dram of damaſk Roſe-water, to give it an agreeable Taſte: Mix all together for a Julap; of which let the Patient take four or five Spoonfuls, when faint, or at Pleaſure.

But I uſed theſe principally, in aged and phlegmatic Perſons, in order to raiſe their Spirits in ſome meaſure, which are much depreſſed in this Diſeaſe by the Violence of the Stools. Their Drink was Milk, boil'd with three times as much Water, or the white Decoction, as it is called, made of burnt Hartſhorn, and the Crumb of white Bread, of each two Ounces, boil'd in three Pints of Water to two; and afterwards ſweetened with a ſufficient Quantity of fine Sugar, and ſometimes Poſſet-drink; or, where the Loſs of Spirits required it, they drank cold, for their common Drink, a Liquor made by boiling half a Pint of *Canary*, and a Quart of Spring-water together. Their Diet was ſometimes Panada, and ſometimes Broth, made of lean Mutton. I kept the Aged more in Bed, and allowed them a freer Uſe of any cordial Water they had been accuſtom'd to, than was proper for Children, or young Perſons. This Method exceeded all thoſe I had hitherto experienced, in conquering this Diſeaſe, which, for the moſt part, yielded to the third Purge.

But, if it proved ſo obſtinate as not to yield to theſe Means, I gave the former Opiate every Morning and Evening, till it went quite off; and the more effectually to conquer it, I have ventur'd to give a larger Doſe of Laudanum, than that above ſpecified, that is, twenty-five Drops every eighth Hour, if the former Doſe proved too weak to ſtop the Flux. I likewiſe ordered a Glyſter, made of half a Pint of Milk, and an Ounce and half of *Venice* Treacle, to be injected every Day, which is, in effect, an admirable Remedy in all kinds of Looſeneſſes. Nor indeed have I hitherto found the leaſt Inconvenience happen from ſo frequent a Repetition of Opiates, (whatever Miſchief the Unexperienced imagine will follow from hence) tho' I have known ſeveral who have taken them every Day, for ſome Weeks, when the Diſeaſe prov'd inveterate. But it muſt be noted here, that when the Flux amounts only to a Looſeneſs, omitting Bleeding and ſtrong Purging, it will ſuffice to give half a Dram of Rhubarb, more or leſs, in proroption to the Strength of the Patient, every Morning, made up into a Bolus, with a ſufficient Quantity of Diaſcordium, adding to it two Drops of Oil of Cinnamon; and exhibiting an Opiate the following Evening: For Example,

Take of ſmall Cinnamon-water, one Ounce; liquid Laudanum, fourteen Drops: Mix them together.

In the mean time uſe the Diet above ſpecified in the Cure of the Dyſentery, and inject the Glyſter there commended, every Day, if there is Occaſion.

Now to evince the Excellence of the Method here deliver'd by a ſingle Inſtance; for I will not trouble the Reader unneceſſarily with many: The Rev. Mr. *Belke*, Chaplain to the Earl of *St. Albans*, being ſeized with a violent Dyſentery, during this Conſtitution, ſent for me to attend him, and he was recovered by this Method.

Children affected with this Diſeaſe are to be treated in the ſame manner, but the Quantity of Blood to be taken away, and the Doſes both of the Purgative and Opiate muſt be diminiſhed in proportion to their Age; ſo that, for Inſtance, two Drops of liquid Laudanum is a ſufficient Doſe for a Child of a Year old.

The liquid Laudanum, which I conſtantly uſe, as above intimated, is prepar'd in the following manner:

Take of *Spaniſh* Wine, one Pint; Opium, two Ounces; Saffron, one Ounce; Cinnamon and Cloves, reduc'd to Powder, of each one Dram: Infuſe them together in a Bath-heat for two or three Days, till the Tincture becomes of a due Conſiſtence; and after ſtraining it off, ſet it by for Uſe.

I do not indeed judge that this Preparation is to be prefer'd to the ſolid Laudanum of the Shops, on account of its Virtues; but I give it the Preference for its more convenient Form, and the greater Certainty of dividing it into Doſes, as it may be dropt into Wine, a diſtil'd Water, or any other Liquor. And here I cannot forbear mentioning, with Gratitude, the Goodneſs of the Supreme Being, who has ſupplied afflicted Mankind with Opiates for their Relief; no other Remedy being equally powerful to overcome a great Number of Diſeaſes, or to eradicate them effectually. And, notwithſtanding there are Perſons who endeavour to perſuade the Credulous, that almoſt all the Virtues of Opiates in general, and of Opium in particular, chiefly depend on their artful Preparation of them; yet whoever puts it to the Teſt of Experience, and uſes the ſimple Juice as frequently, and as cautiouſly, as any of its Preparations, will certainly find very little Difference between them, and be convinced, that the wonderful Effects of Opium are owing to the native Goodneſs and Excellence of the Plant that affords it, and not to the Dexterity of the Artiſt. Moreover, this Medicine is ſo neceſſary an Inſtrument in the Hands of a ſkilful Perſon, that the Art of Phyſic would be defective and imperfect without it; and whoever is thoroughly acquainted with its Virtues, and the manner of uſing it, will perform greater things than might reaſonably be expected from the Uſe of any ſingle Medicine. For it muſt certainly argue Unſkilfulneſs, and a very ſlender Knowledge of its Virtues, to underſtand only how to apply it, in order to procure Sleep, eaſe Pain, and check a Looſeneſs, ſince it may be ſuited to ſeveral other Purpoſes, and is, indeed, a moſt excellent Cardiac, not to ſay the only one hitherto diſcover'd.

Dyſenteries were in general to be treated in this manner: But it muſt be obſerved, that as this Dyſentery was of a more ſpirituous and ſubtile Nature at firſt, when it appear'd, than in the ſubſequent Years, it yielded leſs readily to Purgatives, than to thoſe Medicines that diluted and cooled the Blood, as well as the ſharp Humours ſeparated from it into the inteſtinal Duct: And therefore, during the firſt Autumn, wherein the dry Gripes and Dyſentery prevail'd, I always uſed the following Method with Succeſs for both, till colder Weather ſucceeded, when I found it leſs effectual, even in the ſame Year; and in the following Years, when the Diſeaſe had loſt much of its Subtilty, and prov'd more humoral, it availed not at all. I proceeded in this manner: If the Patient was young, I directed Bleeding in the Arm, and, an Hour or two after, a large Quantity of Liquor to be taken, with a View of diluting, according to the Method I practis'd in the *Cholera Morbus*; except that here, inſtead of Chicken-broth or Poſſet-drink, I ſubſtituted Whey to be drank cold, in the ſame Quantity as in that Diſeaſe, but ordered the Glyſters of the ſame to be injected warm, without an Admixture of Sugar, or any other Ingredient. I always found the Gripes and bloody Stools go off upon the Diſcharge of the fourth Glyſter. This Buſineſs being over, and all the Whey evacuated, which, if the Patient diligently purſues it, takes up only two or three Hours, he was immediately put to Bed, where he ſoon fell into a ſpontaneous Sweat, (occaſion'd by the Mixture of the Whey with the Blood) which I ordered to be continued for twenty-four Hours, but not at all provok'd by Medicines; allowing him nothing more than warm Milk during this Time, which he likewiſe uſed, without any thing elſe, three or four Days after he left his Bed. If a Relapſe happens, either from riſing, or leaving off the Milk-diet, too ſoon, the ſame Proceſs muſt be repeated. Now if this Method be certain and ſpeedy, no judicious Perſon will reject it, becauſe it does not come recommended with a pompous Multiplicity of Remedies.

That a Fever, attended with ſuch Symptoms as we have enumerated above, happens in thoſe Countries, and at thoſe Times, wherein Dyſenteries prevail epidemically; and that the Method of Cure, here delivered, is agreeable thereto; is ſtill further confirmed by the Teſtimony of Dr. *Butler*, who accompanied his Excellency *Henry Howard*, Embaſſador from his *Britannic* Majeſty to the Emperor of *Morocco*, in *Africa*. This Gentleman aſſured me, that the Dyſentery raged at that time epidemically, in that Kingdom, as it generally does; and that the Fever accompanying it, reſembled the Fever above deſcribed, which he treated according to our Method, with conſtant Succeſs, both at *Tangier*, and other Places, whether the Patients were *Moors* or *Engliſhmen*. Now neither of us was obliged to the other for this Method; but, being at ſo vaſt a Diſtance we both caſually fell upon the ſame. And he alſo informed me, that the Method of diluting plentifully in the Dyſentery ſucceeded admirably in thoſe Parts; and, indeed, I conceive it reaſonable, that this Method ſhould be attended with greater Succeſs in that hot Climate, than in *England*.

In the firſt Autumn wherein this Conſtitution prevail'd, Dr. *Cox*, being ſeiz'd with a very acute Dyſentery, by my Advice, followed the above-mentioned Method, whereby he was ſoon, ſafely, and expeditiouſly cured: For after the Diſcharge of the fourth Glyſter, at which time I happened to be with him, the Gripes and bloody Stools diſappear'd; and there was occaſion for nothing further to complete the Cure, except keeping his Bed for the Time above ſpecified, and uſing a Milk-diet. And this Gentleman afterwards recovered ſeveral by the ſame Method, at the Cloſe of Autumn; but the following Year, making Trial of it again, he found it fail him.

We have already taken notice, that when this Diſeaſe runs to a great Length, it often affects all the Inteſtines gradually downwards, till at length it fixes in the Rectum, with a continual Inclination to go to Stool; whereby only a Mucus, ting'd with Blood, is diſcharged. In this Caſe, I conceive, it would be uſeleſs to attempt the Cure, either by any of the above-mentioned Methods; by detergent, agglutinant, or aſtringent Glyſters, which are ordinarily injected, according to the different States of the ſuppoſed Ulcer; or by Fomentations, Baths, Fumigations, and Suppoſitories, ſuited to the ſame Purpoſes: For 'tis apparent, that this Diſorder does not proceed

proceed from an Ulcer of the Rectum, but rather from this, that in proportion as the Inteſtines recover their Tone, they depoſit the Remains of the morbific Matter on this Part, which, being continually irritated thereby, diſcharges Part of the mucous Matter at every Stool, wherewith the Inſide of the Inteſtines is naturally covered. For this Reaſon, the Part affected muſt be ſtrengthened to expel the ſmall Remains of the morbific Matter, as the other Inteſtines have already done. And this Purpoſe is only anſwered by ſuch Medicines as ſtrengthen the Body in general; for the Application of any kind of Topic to the Part affected, being incommodious, will rather debilitate than ſtrengthen it. The Diſeaſe, therefore, muſt be borne, till the Strength can be recovered by a reſtorative Diet, and the freer Uſe of ſome particularly grateful cordial Liquor; for the Teneſmus will go off ſpontaneouſly, in the ſame Degree as the Strength returns.

It ſometimes happens, tho' very ſeldom, that a Dyſentery, ill-treated in the Beginning, afflicts a particular Perſon for ſeveral Years, the whole Maſs of Blood having obtain'd a dyſenteric Diſpoſition; whence the Inteſtines are continually ſupplied with hot and acrimonious Humours, whilſt the Patient, in the mean time, continues pretty capable of following his Buſineſs. I met with an Inſtance of this lately in a Woman, who was perpetually afflicted with this Diſeaſe, during the three laſt Years of this Conſtitution; and as ſhe had Abundance of Medicines before applying to me, omitting other Remedies, I only directed Bleeding, and was encouraged to repeat it frequently, at conſiderable Intervals, as well from the Colour of the Blood, which reſembled that of pleuritic Patients, as from the great Relief the Patient obtained by every Bleeding: By which means ſhe at length recovered her former Health.

Before I finiſh, this Particular is to be remarked; which is, that tho' in thoſe Years, wherein Dyſenteries rag'd ſo epidemically, the above-mention'd Evacuations were abſolutely neceſſary to be made, previous to the Uſe of Laudanum; yet in any Conſtitution, which has a leſs Tendency to this Diſeaſe, they may ſafely be omitted, and the Cure completed by the ſhorter Method, that is, by exhibiting Laudanum alone, in the manner already delivered. And let this ſuffice for the Dyſentery. *Sydenham.*

The illuſtrious Author above-quoted was too honeſt a Man to diſguiſe any Hints he had taken from practical Authors, and conceal their Names; otherwiſe one would be inclin'd to think, that *Alexander Trallian* had furniſh'd him with Part of the Doctrine he lays down, relative to the Cure of a Dyſentery. This Author inſiſts ſtrongly on the Excellencies of Milk, and recommends Bleeding in that Kind of Dyſentery, which he calls Rheumatical, to two Heminas. He very juſtly condemns the raſh and undiſtinguiſhing Practice of ſome, who immediately throw in Opiates; for theſe do but bind up the Humours for a time, affect the Head and Strength, and occaſion a more violent Return of the Flux afterwards. He takes notice, that in a true Dyſentery, where there is an Exulceration, Matter is often miſtaken for Slime: And I believe, ſays Dr. *Freind*, we often meet with Miſtakes, which are quite the reverſe, of Slime being taken for Matter.

Pliny recommends quenching hot Iron in Water for a Dyſentery. *Dioſcorides* quenches it in Wine too for the like Purpoſe.

Avenzoar gives an account of being cured of a Dyſentery by wearing an Emerald upon his Belly; and, in the like Caſe, he adviſes the giving it in Powder, to about ſix Grains.

Dr. *Barry*, in his Treatiſe of a Conſumption, gives a Caſe of a Perſon cured of a ſcorbutic Dyſentery, by taking no Nouriſhment for three Weeks, but the Whites of new-laid Eggs, diſſolved in the white Decoction prepared with Lime-water. By theſe Means, and the Uſe of Oil of ſweet Almonds, and Sperma Ceti, he was quickly cured, though before deſpair'd of.

Jo. Ger. Hen. Kramerus aſſures us, we may depend upon a very good Effect, in the Cure of a Dyſentery, from a Decoction of common Millet-ſeed, call'd St. *Ambroſe*'s Syrup.

According to *Heurnius*, in his Commentary on the Aphoriſms of *Hippocrates*, *L.* 4. *Aph.* 5. Patients who have a Leg, or any other Member, amputated, are ſometimes ſeized with a bloody Dyſentery. See ARTHRITIS, INTESTINA, and DIARRHOEA.

DYSEPULOTOS, δυσεπίλωτος, from δύς, importing Difficulty, and ἐλὼ, a Cicatrix. An Epithet for an Ulcer which is difficult to be heal'd. *Dyſepuloticus* is the ſame.

DYSEXANALOTOS, δυσεξανάλωτος, from δύς, importing Difficulty, and ἀναλίσκω, to conſume. An Epithet for any thing not eaſily conſumed, or digeſted. *Caſtellus.*

DYSEXODOS, δυσέξοδος, (from δύς, importing Difficulty, or Malignity, and ἔξοδος, an Egreſs, Paſſage, or going out) what is difficult to be forc'd out or remov'd. The Word, in this Senſe, occurs in *Lib.* 4. *Epid. Ægr.* 30. where it is ſpoken of lax Tumors affecting the Thighs in a *Leucophlegmatia.*

DYSIATOS, δυσίατος, from δύς, importing Difficulty, and ἰάομαι, to heal, or cure. Difficult of Cure.

DYSODES, δυσώδης, from δύς, importing bad, and ὄζω, to ſmell, of an ill Smell, fetid. By δυσώδης κοιλία, we are to underſtand, in *Hippocrates*, as *Foeſius* ſays, a fetid Diſorder of the ſmall Inteſtine; or, as he expreſſes it, 1 *Prorrhet.* 158. εἰλεὸν δυσώδη. *Dyſodes* is the Name of a Malagma for the Pleuriſy, and of an Acopon; the Compoſitions of which are deſcrib'd by *Galen*, *de C. M. P. G. Lib.* 7. *Cap.* 12, 13. and by *Paulus*, *Lib.* 7. *Cap.* 18, 19.

DYSONEIROS, δυσόνειρος, from δύς, importing bad, and ὄνειρος, a Dream. Producing troubleſome Dreams. *Dioſcorides*, *L.* 5. *C.* 7. informs us, that new Wine has this Effect.

DYSOREXIA, δυσορεξία, from δύς, importing bad, and ὄρεξις, Appetite. A bad or diminiſh'd Appetite.

DYSORGIA, δυσοργία, from δύς, importing Malignity, and ὀργὴ, Anger, Wrath, in *Hippocrates*, πρὸς ἀρχ. ἰσῆς. and πρὸς χυμῶν, is implacable Anger or Reſentment.

DYSPEPSIA, δυσπεψία, from δύς, importing difficult, or bad, and πέσσω, to concoct. Difficulty of Digeſtion; or rather a deprav'd Digeſtion, when the Aliments in the Stomach, for want of a due Strength of the digeſtive Organs, follow their ſpontaneous Tendency, and contract an alcaline or acid Putrefaction. *Galen*, *de Sympt. Different. C.* 4.

DYSPHONIA, δυσφωνία, from δύς, importing difficult, and φωνὴ, the Voice. A Difficulty of Speech.

DYSPHOROS, δύσφορος, from δύς, importing difficultly, and φέρω, to bear, difficult to be borne, almoſt intolerable, is a Word applied by *Hippocrates* to various Subjects, with little Difference in the Signification, which imports the ſame as here given. Agreeable to this, *Heſychius* expounds δύσφορος by χαλεπὸς, vexatious, troubleſome.

DYSPNOEA, δύσπνοια, from δύς, importing Difficulty, and πνέω, to breathe.

Dyſpnœa, δύσπνοια, is defin'd by *Galen*, *Lib.* 1. περὶ δύσπ. βλάβη τις τῆς ἀναπνοῆς, "ſome Injury, or injurious Affection "of Reſpiration;" as the Name itſelf, he ſays, imports. *Hippocrates*, in many Places, uſes the Word δύσπνοον, (*Dyſpnoon*) in the ſame Senſe; as, for Inſtance, in *Coac.* where he ſays, τὸ ῥιγῶδες καὶ τὸ δύσπνουν ἐν τοῖσι πόνοισι σημεῖα φθινώδεα, "Shiverings, with a Difficulty of Breathing, under Pains, are "Prognoſtics of a Conſumption." Thus μακρόπνουν, and βραχύπνουν, are expounded in *Galen*, *Lib.* 3. περὶ δυσπν. by μακρόπνοια, and βραχύπνοια, "long Breathing, and ſhort Breathing." Δυσπνοικοὶ, (*Dyſpnœci*) in the Author of the *Definitiones Medicæ*, are ſuch as draw their Breath, as it were, through a ſtrait Paſſage; and *Galen*, *de C. M. S. L. Lib.* 7. *ad Finem*, ſays of them, they have the Bronchia of their Lungs ſtuffed with groſs and viſcous Humours.

Aſthma, ἆσθμα, in *Hippocrates*, is a quick and difficult Reſpiration, increaſed to a great Degree, as it happens to Perſons after ſwift Running, or violent Exerciſe, and that without a Fever. To this Purpoſe *Galen*, *Com. ad Aph.* 26. *Lib.* 3. ſays, that an Aſthma, which is the Name by which the *Greeks* call a quick Reſpiration, or ſuch as is incident to thoſe who run, or uſe any other violent Motion, happens in theſe Caſes, becauſe an Animal in Exerciſe wants much Reſpiration; but, when not cauſed by Exerciſe, it proceeds from a Straitneſs of the Cavities of the Lungs, which are ſtuffed with Defluxions from the ſuperior Parts. The ſame Author, *Com. ad Aph.* 46. *Lib.* 6. ſays, that there are many Sorts of *Dyſpnœa*; among which *Hippocrates* uſes to call by the Name of *Aſthma* that only, in which there is a quick and denſe Reſpiration; for though we now uſe ἀσθμαίνειν to expreſs ſuch a Reſpiration which is conſequent upon Running, and vehement Exerciſe, yet thoſe who lived next after *Hippocrates*, call'd a certain chronical Diſeaſe, ſome of them ſimply, Aſthma, others *Orthopnœa*; in which the Patients labour under a continual Difficulty of Reſpiration, or *Dyſpnœa*, without a Fever. Again, *Com.* 4. *in Lib.* 6. *Epid.* he writes, that when this Kind of *Dyſpnœa* is increaſed to a vehement Degree, it is called an *Aſthma* and *Orthopnœa*, being without a Fever, and cauſed by thick and viſcous Humours, obſtructing the Paſſage of the Breath, or ſome crude Tubercle in the Lungs: And, a little after, he ſays, that the Humour contained in the Tubercle being communicated to the *Aſpera Arteria*, the Shortneſs of Breath happened to be increaſed, and was then no longer call'd πυκνύπνοια, (*Pycnopœa*) ſhort or quick Breathing, but took the Name of *Aſthma*. *Paulus* alſo, *Lib.* 3. *Cap.* 29. gives the following Deſcription of Aſthmatics: They, ſays he, who, without a Fever, fetch their Breath ſhort, as when after ſwift Running, are, from that Symptom, call'd *Aſthmatics*; and the ſame Perſons, becauſe, out of Fear of Strangulation, they keep the whole Body of the Thorax in a ſtrait or erect Poſture, are call'd *Orthopnoics* [from ὀρθὸς, ſtrait or direct, and πνέω, to breathe]. This Affection proceeds from a Stuffing of the Bronchia of the Lungs with groſs and viſcous Humours; but a *Dyſpnœa* is a common Symptom to this and many other Diſeaſes. This Deſcription *Paulus* has borrow'd from *Galen*, *de C. M. S. L.* who adds, that the Patients are obliged to raiſe the upper Parts of their Bed, on which they reſt their Thorax, for fear of Strangulation in their Sleep; for their Inſpiration, he ſays, is not ſufficient

to

to ſerve their Reſpiration, though their Thorax be dilated to the utmoſt; whence there appears to be ſome preternatural Conſtriction or Straitneſs within that Part, of which the Patients themſelves are plainly ſenſible. Thus *Galen*.

Orthopnœa, ὀρθόπνοια, from ὀρθὸς, ſtrait, or erect, and πνέω, to breathe, is breathing with the Neck in a ſtrait and erect Poſture; for the Patient, under this Diſorder, is affected with ſo great a Difficulty of Reſpiration, that he dares not lie down for fear of Suffocation, but is obliged to fetch his Breath with his Neck and Thorax in an erect Poſture. The Cauſe is a Straitneſs of the Lungs, and its Veſſels, occaſion'd by an Inflammation, or ſome Humour contained in the Cavities of the Lungs. *Galen*, *Com.* 2. *in Prorrhet.* ſays, "He, (*Hippocrates*) and all others, call, by the Name of *Orthopnœa*, that "Species of a *Dyſpnœa*, in which the Patients are ſuffocated "when lying down, and are hardly able to ſupport themſelves "with the Thorax erect, without ſomething at their Backs. "For the *Aſpera Arteria*, which has its Beginning at the "Larynx, and is diſtributed in the Lungs, is, together "with the Neck, dilated, by extending the Thorax in an "erect Poſture; and all its Branches, which diſperſe themſelves "over the Lungs, are at the ſame time dilated, and the in"ternal Capacity of the Lungs enlarg'd. Hence it is, that "from a Peripneumony, and thoſe which are call'd aſthmatic "Affections, ariſes an *Orthopnœa*, as it does, for the ſame "Reaſon, in a very ſevere Quinſey, where the internal "Muſcles of the Larynx, being inflam'd, obſtruct the Paſſage "of Reſpiration; for this Diſorder alſo is exaſperated by a de"cumbent Poſture, from an Increaſe of the Straitneſs of the "Parts." Again, *Com.* 4. *in Lib. de R. V. I. A.* explaining "the dry *Orthopnœa* of *Hippocrates*, he ſays, "What he "(*Hippocrates*) calls a dry *Orthopnœa*, is a *Dyſpnœa*, which, "without Cough or Spitting, is ſo violent upon the Patient, "as not to ſuffer him to lie down without being ſuffocated." In *Lib.* 7. *Epid.* the Siſter of *Harpalides*, four or five Months gone with Child, is deſcrib'd as labouring under a dry Cough, Orthopnœa, Aſthma, and ſometimes a Suffocation, ſo that ſhe was always obliged to ſit up in her Bed, and to ſleep in that Poſture. She continued thus near two Months, and was then relieved by a Cough, in which ſhe expectorated great Quantities of mature, pituitous, and white Matter, and was at laſt delivered of a Female Child.

Dyſpnœa, in general, implies a Difficulty of Breathing, which, in a greater Degree, is call'd Aſthma; but, in an extreme Degree, it is call'd *Orthopnœa*.

A Difficulty of Breathing may be cauſed by every Diſtemper which can affect any Part of the Thorax, particularly the Heart, large Arteries, and Lungs; as an Eryſipelas, or Inflammation of the Lungs, crude Tubercles, Vomicas, Polypuſes, and many other Diſorders, which are taken notice of under their reſpective Articles. But our preſent Subject is, that Species of *Dyſpnœa*, which is uſually call'd an *Aſthma*, and, by the Vulgar, a *Phthiſic*.

CASE I.

The Son of Mr. *Haltzvvelt* became Aſthmatic, in conſequence of a Fall, which produced a Concuſſion of his Brain; and at laſt, an uncommon Load of Humours falling on his Lungs, he died.

Upon opening his Body, all the Parts of his Lungs were found ſtuff'd with phlegmatic and viſcid Humours. *Fabr. Hild. Cent.* 1. *Obſervat.* 2.

CASE II.

Mrs. *Rouquetre*, a Woman of ſixty Years of Age, very fat, corpulent, and accuſtom'd to a ſedentary Life, about fifteen Years ago, began to labour under a Difficulty of Breathing, which gradually increaſed to ſuch a Degree, that, when ſhe went up any Stairs, ſhe was obliged to ſtand ſtill, and recover her Breath, on every third or fourth Step. But, about the Beginning of *January* 1642. happening to take a Journey when the Winds were ſoutherly, and the Weather rainy, ſhe was ſuddenly ſeiz'd with a Defluxion of Humours, partly on her Lungs, and partly on her Jaws. By this means her Difficulty of Breathing was increaſed. and a Tumor appearing on her Right Cheek, her Jaws could not open farther than to allow her to ſip a little Broth. She had alſo, for ſeveral Years, been troubled, now-and-then, with an Eryſipelas of her Left Leg, which frequently uſed to exulcerate, and with which Symptom it had more remarkably appear'd, before ſhe was ſeiz'd with this Defluxion of Humours. Being call'd to her on the eighth Day of her Diſorder, I found her Pulſe unequal, intermitting at every third or fourth Stroke, and her Reſpiration carried on with the greateſt Difficulty. From theſe Symptoms, I ſuſpected that there muſt be ſome terrible Diſorder, not only in the Lungs, but alſo in the Heart itſelf, or in the Veſſels contiguous to it. And, indeed, this Prognoſtic was ſtill more confirm'd by the Ulcer of the Eryſipelas becoming ſuddenly dry, according to Aphoriſm 25. 6. Beſides, the Tumor of her Cheek diſappearing a few Days after, her Jaws nevertheleſs remained cloſed; and then, indeed, it appear'd, that their Conſtriction proceeded from a Convulſion of the Muſcles appointed for moving them. On the fifteenth Day of the Diſeaſe, pretty early in the Morning, her Right Eye was found ſhut, the other at the ſame time remaining open. This Symptom ow'd its Birth to a Palſey of the Eye-brow, and was the unlucky Omen of a more terrible Diſorder; for that ſame Afternoon ſhe was ſeiz'd with a ſlight Apoplexy; from which ſhe in ſome meaſure recover'd, in the Space of two Hours; but her Left Side became paralytic, and, her Strength gradually decreaſing, ſhe died three Days after. Through the whole Stages of the Diſeaſe, neither a Cough nor Stertor accompanied her Difficulty of Breathing, except on the Day before ſhe died.

Upon opening her Body, I found her Spleen ſo putrid, that, by a gentle Compreſſion, it would fall to Pieces. The Subſtance of her Lungs was of a livid Colour, moiſten'd with a watery Humour; and one of their Lobes, lying on the Left Side, was fill'd with putrid and purulent Phlegm. The Right Ventricle of her Heart appear'd, without its internal Membrane, ſo putrid alſo, and exulcerated, that its fleſhy Fibres, upon being touch'd with the Points of one's Fingers, fell to Pieces. Its Right Auricle appear'd preternaturally large, and was filled with a certain fleſhy Subſtance, which, being partly red, and partly blackiſh, reſembled concreted Blood, but could not be divided with one's Hands. I am of Opinion, that theſe two Diſorders of the Right Ventricle and Auricle were the Cauſes of the Inequality and Intermiſſion of her Pulſe, whilſt the Heart, endeavouring to throw off the uneaſy Load, was agitated with various Commotions. To this the Interruption or Interception of the natural Pulſe was owing. It is, on the other hand, ſufficiently plain, that her Difficulty of Breathing proceeded from the Infarction of her Lungs. *Riverius*, *Cent.* 2. *Obſ.* 77.

CASE III.

The illuſtrious Cardinal *Caetanus*, after the Cloſing up of an Iſſue in his Right Leg, was for four Months troubled with a Reſpiration preternaturally quick, frequent, and reſembling that of thoſe who are overheated by ſome violent Exerciſe; but his Inſpiration was attended with a greater Difficulty than his Expiration. His Thirſt was great, his Face high-colour'd, and his Nights paſſed without Sleep. What he ſpit up was in ſmall Quantity, and ſomewhat ſaltiſh. A ſlow Fever at the ſame time accompanied all theſe Symptoms; and, in three Months time, his Diſorder put an End to his Life.

Upon opening his Body, his Lungs were found full of Veſicles; which, when open'd, yielded a Water of a yellowiſh Colour. *Lælius a Fonte*, *Conſultat.*

CASE IV.

A Tubercle of the Lungs may be of two Kinds, one crude, and incapable of Suppuration, ſuch as the *Steatoma* or *Atheronia*: Tumors of this Kind, *Columbus* [*Lib.* 15.] ſays, he has often met with in diſſecting the Bodies of thoſe, who, during their Lives, had been afflicted with a Difficulty of Breathing. The other Kind tends to Suppuration, ſuch as that under which the Daughter of *Ageſis* labour'd, mention'd by *Hippocrates*, 4. 6. *Epid.* 4. which was, nevertheleſs, not accompanied with a Fever. Hence I infer, that Pus may be contained in the Lungs without any concomitant Fever. *H. Saxonia*, *Prælect. Pract. Part* 1. (26. §. 4.) I diſſected two, who were both afflicted with a Difficulty of Breathing on account of Tubercles, which were at firſt crude, but which afterwards came to Suppuration; the one, two, and the other three Months after the Beginning of the reſpective Diſorders. Both Patients ſpit up Blood, mix'd with a little Pus, and ſome ſmall Pieces of the Lungs. One of the Patients, before his Death, was afflicted with a pretty large Tumor of his Liver. Upon diſſecting both their Bodies, the Right Lobes of their Lungs were internally quite corrupted, and externally adherent to the Pleura. *Columbus apud Schenckium.*

A crude, viſcid, and conſiſtent Humour, congeſted and pent up into a crude Tubercle, and contain'd in a Cyſtis, may be form'd in the Subſtance of the Lungs; an Inſtance of which I met with in diſſecting the Body of a young Gentleman of Diſtinction. *Car. Piſo de Morbis a Ser. Sect.* 3. *Cap.* 4.

CASE V.

Mr. *Sebottendorf* had for ſeveral Years been almoſt cloſe confin'd to his Bed, and, at ſtated Hours, had his Reſpiration almoſt entirely obſtructed. This Diſorder, ſcorning to yield to any Remedies whatever, at laſt put an End to his Life.

Upon opening his Body, I found his Peritonæum ſufficiently putrid, his Stomach almoſt empty, without any Chyle, or other humoral Matter, and, conſequently, little, and, as it were, ſhrivel'd up. His Inteſtines alſo were void of Fæces, and his Liver corrupted, eſpecially in that Part where it was cover'd

by the Ribs. The Left Side of his Spleen was disjoined from its Ligaments, as it were doubled, and every-where half-rotten. Upon laying open his Diaphragm, I found a very hard Mass, filled with a large Quantity of small Stones, adhering to the Substance of the Lungs. This Mass I extracted with my Hands. The Lobes of the Lungs adhered so firmly to their main Body, that they were become incapable of communicating any Motion to it. By his voracious and often repeated Eating of fat Fleshes, so much indurated Fat adhered to his Arteria Trachea and Pharynx, that he was not only often afflicted with an uncommon Difficulty of Breathing, but also became incapable of taking any Food for some Days before his Death; so that, being supported by Drink alone, I am inclined to think, Hunger would have soon put an End to his Days, tho' the Violence of his Disease had spared him. Besides, he assigned this as an external Cause for his Disorder, that, being on his Return from *Italy*, when he first fell sick, he had called an unskilful Surgeon, who, upon the very first Sight of him, boldly affirmed, that he laboured under a *Lues Venerea*, of which, by the way, he had never in his Life had the least Taint. This Surgeon prepared an Ointment of Quicksilver, which he had not been at Pains to extinguish sufficiently; and, using this by way of Unction, he, by the penetrating and resolving Efficacy of the Quicksilver, became daily worse and worse, till Death put an End to his Misery. I believe the Cause of this Disorder to be nothing else than the Quicksilver penetrating into the very Substance of the Lungs, in consequence of their loose and porous Texture. *Schenkius ex M. Joh. Fabr. Observat.*

There are great Reasons to believe, that this could not be effected by the mercurial Ointment. See MERCURIUS.

CASE VI.

M. *Lælius Lombard* of *Geneva*, a slow dull Man, of fifty Years of Age, died suddenly in the Year 1646. He was subject to an Asthma, a Disease hereditary to his Family. Upon going into a Wine-cellar during the Season of the Vintage, when the Must was fermenting, he was seized with so violent a Paroxysm, that he was scarce sooner laid in Bed, than he breathed out his last. Upon opening his Thorax, his Lungs appeared without any Stain, or vitiated Colour; only in Bulk they equalled those of an Ox.

We have Reason to believe, that the Nourishment of the Lungs is increased, as often as they, retaining their natural Consistence and Substance, yet grow to an enormous Bulk, and so fill the Cavity of the Breast, as rather to hinder Respiration altogether, than render it difficult; Instances of which I have more than once met with in dissecting dead Bodies. *Fr. Sylvius Praxeos, Lib. 1. Cap. 24. p. 12.*

CASE VII.

On the 11th of *May* 1676. I opened the Body of a young Man of twenty-two Years of Age, who, about eight Years before, contracted a Pleurisy, in consequence of his catching Cold after being overheated by running. Neglecting his Pleurisy, and not calling in Venesection to his Assistance, a terrible Asthma, accompanied with purulent and often bloody Expectoration, ensued. He had a violent Pain, resembling Gravel, in the Region of his Loins, and was always melancholy and dejected.

His Gall-bladder was very small, remarkably thick, and filled with a very black viscid Matter, which felt hard upon being touched. Its interior Crust was also thick, very black, and, as if it had been a special Coat, easily separable from the rest. His Liver was very large, and, beyond the Spleen, adhered pretty strongly to the Diaphragm, by means of a transverse Ligament reaching so far. It was very much covered with Tubercles, and every-where sufficiently scirrhous. Both Kidneys were entire; and the back Part of the Spleen was adherent to the Diaphragm. The Belly was distended with a clammy viscid Water, of a darkish Colour. In the Thorax, the Lungs adhered inseparably to the Ribs on both Sides, especially near the Vertebræ themselves. They were also almost corrupted as far as the lower Part of the Diaphragm. The Pericardium was filled and distended with above thirty Ounces of a very limpid Water, which was of a sweet Taste. The Pericardium being remov'd, the Heart, and its Right Auricle, appeared of an uncommon Size. Having tied all the other Vessels, we drew more than twenty Ounces of fluid Blood, tough Phlegm, and black Gore, from the Auricle. *G. Blasius Observ. Med.* 19.

CASE VIII.

In the Year 1646. at *Vallogne*, the Body of a Man of Fifty Years of Age, who had been wore away, and at last killed, by a severe Asthma, was opened; upon which the Lungs were found without Blood, their Parenchyma, and all their minute Passages, obstructed, filled, and, as it were, drenched in a thick viscid Phlegm, while, at the same time, there appeared many small Impostumes in the Parenchyma itself. On both Sides also the Lungs adhered so firmly to the Pleura, that a considerable Strength of the Hands was necessary to separate them. Their Colour was pale and blackish; so that they were quite destitute of Strength to throw the Matter off; and there was no Place for the Ventilation of the Heart, because the perceptible and pervious Passages of the Aspera Arteria and Arteria Venosa were plainly blocked up by the Abundance of the Matter; which Cause at last, by retaining the Sordes, overpowered and extinguished the vital Heat of the Heart.

Bad Diet, and the Viscera absolutely necessary for performing the Functions of Nature, being weakened by that means, were the Causes of so lamentable a Disorder; for the Stomach itself was become little, languid, and of a very slender Substance; the Omentum was plainly extenuated, and destitute of Fat; the Liver was pale and small; which Circumstances sufficiently shewed, that neither the first nor second Concoctions were duly carried on. *Ottho Heurnius, Histor.* 9.

CASE IX.

In the Year 1592. I opened a Woman big with Child, who had died apoplectic. In her Thorax I found her Lungs joined in some Places by strong nervous Filaments to the Ribs of the Right Side; and in both Sides they had assumed a preternatural Colour. *Petrus Paavius, Observ. Anat.* 6.

CASE X.

An illustrious Prince, about sixty Years of Age, was, twice or thrice in a Year, afflicted with a Defluxion of thin Humours on his Breast, which brought on an Orthopnœa, and a Danger of Suffocation. Upon dissecting his Body, in his Thorax I found all the Lobes of his Lungs blackish, both internally and externally; they were also turgid with black Blood; their Substance was equable, but their Right Lobe adhered to the Pleura; and both Sinuses of the Heart contained a certain Substance. *Bonet. Lib. 2. Vol. 1. p. 514.*

CASE XI.

By the Dissection of Bodies we come to know, that, by the immoderate Use of Repellents, the Thorax is filled with a bloody Serum. An Instance of this occurred in the Year 1553. in a certain Merchant, who, before his Death, laboured under a terrible Difficulty of Breathing. He spit up little or nothing, and at last died. However, upon dissecting his Body, four *Pitcherfuls* of Serum were found in his Thorax.

I imagine, this had been occasioned by a Lamina or Plate of Lead, which he always wore on his Breast, on which there was a cancerous Tumor, and by the strong refrigerating and repellent Medicines he used even after it came to a Suppuration. It is certain, that the Blood had ousted back into the Breast, since the Tumor itself was very large, and became much less after the Use of these Medicines; and tho', before that, he had no Difficulty of Breathing, yet, from that very time, till the Day of his Death, he was afflicted with that Symptom. The Serum was bloody, that is, a little Blood appeared dissolved in it; nor was it such Serum as is found in the Peritonæum and Pericardium. *Rondeletius Meth. Cur. Morb. Lib. 2. Cap. 23.*

CASE XII.

A Shoemaker, of about thirty Years of Age, who died of a Dropsy, brought on by an Asthma, was, in the Year 1586, opened. Before his Belly began to swell, in the Region of the Back, on the Right Side, he had a fleshy Tumor, not receding from the natural Colour of the Skin; which when a Barber laid open with a Knife, nothing flowed from it for some Days, except Water; and the Wound was afterwards cured. But, when he was racked with a violent Cough, when his Belly and Feet began to swell, and a Difficulty of Breathing appeared, he took the Advice of some Physicians, and at last consulted myself. After he had used such things as were rather palliative, than effectual in promoting a real Cure, he began to recover at certain Intervals; but, immediately relapsing, he died.

Upon opening his Abdomen, four Brass Barbers Basons were filled with a Citron-coloured Water, which flowed from it. All the Viscera contained in the Abdomen were in a good Condition, except the Omentum. The Diaphragm was not pressed upwards by the Liver, but was remarkably depressed by the Matter lodged in the Thorax. Upon opening the Thorax, three Brass Basonfuls of purulent Matter flowed from the Right Side, on which the Lungs were converted into Pus, the Left remaining sound, and in a good State. Hence, that is, from the Ulcer of the Lungs, arose the Asthma, hence the Cough, and hence the Dropsy. *Caspar Bauhinus de Observat. propriis.*

CASE XIII

A certain Man, who laboured under an *Asthma* and Consumption, happening to die, his Lungs were suspected to be the principal Seat of his Disorder; but, upon opening his Body, nothing uncommon was found about them; only the Heart,

which

which is indeed a ſurpriſing Circumſtance, was as large as a grown Perſon's Head, and had increaſed to ſuch an immenſe Bulk, that there was a *Conflux* and *Concourſe* of all the Blood and Spirits to it. *Ballonius Epid. & Ephem. L. 2. p. 144.*

CASE XIV.

Dr. *Walter Needham* informed me, that he knew a Butcher, who, having long laboured under a periodic *Aſthma*, which generally returned every Fortnight or three Weeks, at laſt died under an immediate Paroxyſm of it.

Upon opening the Body, all the Viſcera, and more eſpecially the Lungs, were found ſound; neither were there the leaſt Traces to be obſerv'd of an excrementitious Matter collected in the Bronchia, or of any Quantity of Blood having ſtagnated in the Veins. The only preternatural Phenomenon to be obſerv'd was, that the Gall-bladder contained ſeveral ſmall Stones; ſo that, if there was any other Diſorder, added he, it was either to be aſcribed to the nervous Syſtem, or to ſome other occult and unknown Cauſe, which could not be diſcovered by the Eyes. *Thom. Willis Pathol. Cap.* 12.

CASE XV.

Zecchius, Conſ. 18. informs us, that Cardinal *Palliot* laboured at once under an Aſthma, and a Heat and Difficulty of Urine; and that his Caſe had this Peculiarity in it, that when he was afflicted with the Heat and Difficulty of Urine, the Difficulty of breathing was perceptibly leſſened; and when the Strangury ceas'd, his Aſtma returned with redoubled Force. Concerning theſe Symptoms, I am of the following Opinion: The Aſthma proceeded from the thin Humours lodg'd in the whole Maſs of Blood; and theſe are oftener carried to the pulmonary Veins, from the Head, which, according to *Hippocrates*, contains more Blood, or more Veins, than the Lungs; for this Reaſon, no Cough precedes, but ſometimes a heavy Pain of the Head does. This Humour does not flow from the Head, through the Aſpera Arteria. This accounts for the Patient's not being troubled with a Cough. The Paroxyſm of the Aſthma was ſometimes put an End to, when the Strangury began; for this Reaſon, that the thick Humour is carried to the Kidney, whereas the thin is left in the Lungs. This is, likewiſe, the Reaſon why the Aſthma ceaſes, the Swelling of the Feet increaſing, as I have often ſeen, and the Diſcharge by Urine, as *D. Joh. Rhodius* affirms. *Schneiderus, Lib. 3. de Catarrh. C.* 6. See *Sennert. Lib.* 62. *Pract.* 45.

CASE XVI.

A certain Man, after having taken ſome Doſes of Mercurial Pills, in order to carry off ſome Venereal Buboes, was ſeized with a Difficulty of breathing, and a Fever, which cut him off in two Days time.

When his Body was opened, by Mr. *Gaute*, the King's Surgeon, there was found, in the Baſe of his Heart, a certain Excreſcence, as large as a Pigeon's Egg, and ſurrounded with many ſmaller ones, whoſe Surfaces were ſmooth and even, (for they were all formed by the Production of the proper Membrane of the Heart) had no fleſhy Fibres within, but only a ſoft Matter, in Colour and Conſiſtence not unlike the thick Dregs of Wine. This Matter was full of white, lucid, and metallic Corpuſcles, which, in every body's Opinion, were the Particles of the Mercury: The Probability of which is ſhewn by Mr. *Lemery*, and ſeveral other learned Men, in their medicinal and chemical Works. *D. Gaute in Zodiaco Med. Gallico, p.* 156.

CASE XVII.

In the Year 1649. I diſſected, in our Hoſpital, a Stone-cutter's Servant, who died of an Aſthma. In his Lungs I found a great Quantity of Stone-duſt, which he had drawn in, with the Air, in Inſpiration, and which had ſo ſtuffed up almoſt all their Veſſels, that in cutting the Lungs, which were very hard, my Knife ſeemed to paſs through a Heap of Sand. Now, ſince the Veſicles of the Lungs were filled with this Duſt, they could not poſſibly admit the inſpir'd Air, ſo that the Patient died aſthmatic.

In the following Year, in the ſame Hoſpital, I ſaw, and exhibited, two Caſes of the like Nature; that is, two Stone-cutters, cut off in the ſame manner, and their Lungs affording the ſame Appearances.

I alſo ſaw a Man, who died after having labour'd long under an Aſthma; and, as in his Life-time he had been accuſtomed to cleanſe and prepare ſuch Feathers as Beds are uſually ſtuff'd with, the Veſicles of his Lungs were full of the Down of theſe Feathers. *Bonet. Sepulchret. Anat.*

It is an old, but true Maxim, not only of Phyſicians, but alſo of the vulgar and illiterate Part of Mankind, that Life and Reſpiration are ſo inſeparably connected, as to go hand-in-hand. That Life, and all the ſeveral Functions ſubſervient to its Preſervation, are ſupported by that univerſal Circulation of the Blood from the Heart to all the Parts, and thence to the Heart again, is a Circumſtance abſolutely certain. But, at the ſame time, it is found equally true, that this Circulation, and conſequently Life, cannot ſubſiſt without that partial and leſs general Circulation of the Humours, which is performed thro' the Lungs, from the Right to the Left Ventricle of the Heart; ſince, when this latter ceaſes, Life, and all the Functions of the animal Œconomy, are forthwith at an End. Since, therefore, this Circulation of the Blood through the Lungs cannot be performed without a free Reſpiration, we may eaſily judge how much an eaſy and natural Breathing contributes to the Preſervation of Life, and how detrimental to it, a diſorderly, ſuppreſſed, or totally obſtructed Reſpiration muſt neceſſarily be. This Truth is ſufficiently evinced by thoſe Diſeaſes, which are accompanied with a Difficulty of breathing.

There are ſeveral very formidable Diſorders, which, among other direful Symptoms, are accompanied with a difficult and laborious Reſpiration. The Diſeaſes of this kind are principally ſuch as have their Seat fixed in the Lungs; a Pleuriſy, for Inſtance, a Peripneumony, a Cough, a Phthiſis, Scirruſes, Tubercles, and Impoſtumations of the Lungs. But, beſides theſe, there are many Cauſes, both within and without the Thorax, which, proving offenſive to Reſpiration, and the vital Circulation of the Humours, threaten the higheſt Danger, and produce that Diſorder which the *Greeks* called *Aſthma*; and which, in my Opinion, may be defined, a difficult and laborious Reſpiration, ariſing from various Cauſes, and accompanied with an intolerable Uneaſineſs and Straitneſs of the Præcordia, which, as it diſturbs the free Circulation of the Blood through the Lungs, muſt, of courſe, endanger a Suffocation.

As this Diſorder, in general, may ariſe from various Cauſes, ſo there are various Kinds of Aſthmas: Thus, for Inſtance, there is a gentle Dyſpnœa, or Difficulty of breathing, which is familiar to ſuch Perſons as are fat, corpulent, or full of Juices, eſpecially after any violent Motion or Exerciſe of the Body. This Species of the Diſorder depends upon a difficult Circulation of the Blood through the Lungs, and a preternatural Expanſion of the Veſſels, by which a ſufficient Ingreſs of the Air is prevented: But this Degree of the Diſeaſe is free from Danger, and of a tranſitory Nature. There is alſo a pituitous Aſthma, which, being accompanied with a moiſt Cough, and an Expectoration of viſcid Phlegm, racks the Patient both Day and Night, in whatever Poſture the Body happens to be: This Species of the Diſorder draws its Origin from a copious Congeſtion of viſcid Mucus in the Lungs; which blocks up the pulmonary Veſicles, and prevents the free Ingreſs and Regreſs of the Air. But our principal Intention, at preſent, is to conſider that Species of Aſthma, which ariſes from a ſpaſmodic Stricture of the Parts ſubſervient to Reſpiration, produced by various Cauſes both within and without the Thorax: This is what is commonly called a ſpaſmodico-flatulent, and a convulſive Aſthma.

This convulſive Aſthma is widely different from the convulſive Suffocation of hyſteric Patients, which only conſiſts in a ſpaſmodic Conſtriction of the upper Parts of the Fauces, as alſo of the Pharynx and Larynx, by contracting and leſſening the Cavity of which latter, it prevents the free Paſſage of the Air to the Lungs; whereas, in a convulſive Aſthma, the Paſſage through the Aſpera Arteria is ſufficiently free and pervious, and the Fault rather reſides in the Lungs themſelves; ſo that, ſometimes, only Inſpiration is difficult, while Expiration is duly and eaſily performed. We muſt, alſo, diſtinguiſh between a convulſive Aſthma, and a ſuffocative Catarrh; ſince this latter, which is accompanied with a Redneſs of the Countenance, and a Stertor, partakes, in ſome meaſure, of the Nature of a Palſy, and in a few Days comes to a Solution; whereas the former is entirely free from a Stertor, and belongs to the Claſs of Chronical Diſeaſes.

The Signs of an approaching Aſthma are, by *Aretæus, L.* 1. *Chronic. Morb. Cap.* 11. beautifully deſcribed in the following Words: "The Patient is ſeized with an Oppreſſion of the "Breaſt, a Liſtleſſneſs in his uſual Employment, or any other "Undertaking; in Running, or aſcending a riſing Ground, "his Breathing is difficult and laborious, he becomes hoarſe and "coughs, is afflicted with Flatulencies of the Præcordia, and "rack'd with uneaſy Eructations; he is ſubject to Watchings, "and in the Night-time very little, and almoſt imperceptibly, "hot; his Noſtrils, alſo, become too much contracted for a "free and eaſy Reſpiration. If the Diſorder is degenerating, "and becoming more formidable, the Cheeks become red, and "the Eyes prominent, like thoſe of ſtrangulated Perſons; he "ſnores whilſt awake, but much more when aſleep; his Voice "is indiſtinct, languid, and faint; he is fond of a free and "cold Air, and loves to walk in the open Fields, becauſe a "Houſe is a Scene too narrow and confin'd for his breathing "with the Freedom he wiſhes. He breathes in an erect "Poſture, and is eager to attract all the Air he poſſibly can: "For this Purpoſe, he opens his Mouth wide; and ſeems diſ-"concerted, becauſe it is too ſmall for his Purpoſe. His Face, "except the Cheeks, which are red, becomes pale; a Sweat "breaks

" breaks out about his Forehead and Neck, he is rack'd with " a ſharp and continual Cough, and expectorates a ſmall " Quantity of thin, cold, and, as it were, frothy Matter. " In Inſpiration his Neck becomes tumid, and there is a " Retraction of the Præcordia. His Pulſe is ſmall, frequent, " and depreſſed; his Legs, alſo, become ſmall and ſlender. If " theſe Symptoms ſhould happen to be increas'd, they ſome- " times ſuffocate the Patient, in the ſame manner an Epi- " lepſy does; but if they are alleviated and leſſen'd, the " Cough becomes leſs frequent, and returns at longer Intervals; " a large Quantity of ſanious and moiſt Spit is expectorated: " copious and aqueous Stools are diſcharg'd; the Urine, alſo, " is evacuated in large Quantities, though nothing, as yet, ſub- " ſides in it. His Voice becomes more clear and ſonorous; " his Sleeps longer, and ſufficient for the Support of Nature. " His Præcordia are relax'd, and render'd eaſy; and his Pain, " upon its Remiſſion, is ſometimes tranſlated to the Scapulæ; " he breathes at longer Intervals, and more eaſily, though with " a certain Roughneſs."

The more old and inveterate the Diſorder is, the more violent and terrible all theſe Symptoms are. Under this Diſtemper the Patient is generally coſtive, and the Urine diſcharged is thin and aqueous. Very frequently Tumors appear on the Feet, the Hands, the Face, and the Back; the Arms are ſeized with a preternatural Torpor, the Countenance becomes unſeemly, and mark'd with Spots of a leaden Colour. To theſe Symptoms is alſo joined a ſlight anomalous Fever, which is exaſperated towards the Evening. This Train of Symptoms is ſucceeded by a cacthetic Defedation of the Body, accompanied with œdematous Swellings of the Feet, a Dropſy of the Breaſt, or even an Aſcites, or Anaſarca. At laſt, one of the Sides, or, at leaſt, one of the Arms, becomes paralytic; or, which is remarkable, inſtead of this Symptom, an Amauroſis, which is a Palſy of the Eyes, happens, as was obſerv'd by *Gohlius*, in his Diſſertation *De Aſthmate convulſivo a Polypo Cordis*. Becauſe this Species of Aſthma for the moſt part terminates in a Suffocation, it is for that Reaſon called a Suffocative Aſthma.

Experience and accurate Obſervation ſufficiently inform us, that Perſons of a ſanguine Habit, and ſmall, but numerous Veſſels, as alſo thoſe who are corpulent, plethoric, or what we call *narrow-cheſted*, are moſt generally ſubject to Aſthmas, after any violent Commotion either of Body or Mind, eſpecially in the Spring and Autumn. Perſons of this kind are ſtill more expoſed to the Shocks of this Misfortune, if they either labour under an immoderate Flux, or a total Suppreſſion of the Menſes, or hæmorrhoidal Diſcharges; or neglect their accuſtomed Evacuations of Blood, whether by Scarification, or Veneſection. They are alſo ſubject to the ſame Diſorder, if they are hypochondriacal, or if the Stomach and Inteſtines, in conſequence of a diſturbed and irregular periſtaltic Motion, abound with Flatulencies, or are rack'd with Spaſms: And they are ſtill more infallibly expos'd to this direful Train of Calamities, if the Excretions of the peccant and acrid Serum, by whatever Emunctories, are either totally ſuppreſſed, or carried on in a faint and languid manner.

Upon the anatomical Diſſection of Subjects who have fallen a Sacrifice to this Diſeaſe, we generally find Fluctuations of Water in the Thorax, accompanied with polypoſe Concretions of the Heart. Inſtances of this nature are given by *Carolus Piſo, de Morbis ex Colluvie ſeroſa*; by *Scultetus, in Append. Obſ.* 31. and in the *Act. Medic. Berolin. Dec.* 2. *Vol.* 7. In ſome Subjects there is only found an Extravaſation of Serum in the Thorax, without any polypoſe Concretions in the Heart; an Inſtance of which Kind we find recorded in the *Act. Medic. Berolin. Dec.* 2. *Vol.* 8. in which Caſe the Aorta was alſo found offified. In other Subjects the Lungs are found ſtuff'd with a black ſtagnating and extravaſated Blood; an Inſtance of which occurs in *Willis*'s *Pharm. Rational. Sect.* 7. *Cap.* 3. Sometimes the Lungs and Bronchia remaining ſound and entire, there are only polypoſe Concretions found in the Heart; Inſtances of which are to be met with in *Pezoldus*, *Obſervat.* 58. and in the *Ephemerides Naturæ curieſ. Dec.* 3. *An.* 2. *Obſervat.* 185. and in *Dec.* 1. *An.* 4. *Obſervat.* 11.

But, that we may be able more diſtinctly to comprehend the Manner in which an Aſthma is produced or generated, it is neceſſary to premiſe ſome things with reſpect to Reſpiration. In order, therefore, to a free and natural Reſpiration, it is abſolutely requiſite, that the Lungs, which conſiſt of numberleſs Blood-veſſels, both of the arterial and venous kind, as alſo of membranaceous Ducts and Veſicles, ſhould be ſufficiently expanded and dilated by the Air, that ſubtle, elaſtic, and ethereal Fluid, when the Cavity of the Thorax is enlarg'd by the Elevation of the Ribs. By means of this Expanſion, the Blood is more freely and quickly convey'd through the venous and arterial Ramifications of the Lungs, which were before much complicated and compreſs'd, to the Left Ventricle of the Heart, becauſe the Preſſure, made upon the Blood-veſſels by the Veſſels diſtended with Air, facilitates the Motion of the Fluids through them. But ſince the Air, within the Lungs, which is impregnated with humid Vapours, and deprived of its Elaſticity, cannot make an Exit for itſelf; and ſince, in its room, freſh expanſive Air ought to ſucceed; it is abſolutely neceſſary, that the Thorax ſhould, in ſome meaſure, be contracted, and have its Cavity rendered leſs. This alternate Dilatation and Contraction of the Thorax, the Expanſion and Collapſing of the Lungs, the ſufficient Ingreſs and Egreſs of the Air, together with a due and equable Motion of the Heart, produce a free and natural Reſpiration; which is highly neceſſary to the Preſervation of Health and Life. But when any Cauſes occur, which either obſtruct the Ingreſs and Egreſs of the Air from the Lungs, diſturb the dilatatory and contractile Motion of the Muſcles of the Thorax, Abdomen, or Diaphragm, or diſorder the due Syſtole and Diaſtole of the Heart; forthwith an Aſthma, the Generation of which we have been accounting for, is produc'd.

Taking the above-enumerated Circumſtances for ſo many Data, it will be no difficult Taſk to render the *Ætiology* of an Aſthma ſufficiently obvious and eaſy: And, becauſe there may be various Cauſes of this Diſorder, we ſhall firſt conſider that which ariſes from ſome Fault or Imperfection of the Blood: We obſerve, then, that ſevere and violent Aſthmas are produc'd by a Redundance of Blood and Humours, by their preternatural Thickneſs, or their Congeſtion in the Præcordia; for, when the Maſs of Blood and Humours is too copiouſly and impetuouſly convey'd to the Right Ventricle of the Heart, it muſt, of courſe, be alſo more copiouſly carried to the Ramifications of the pulmonary Veſſels; by which means, the elaſtic Force of the inſpir'd Air is, in conſequence of the ſtrong Reſiſtance of the Blood, conſiderably impair'd. The Blood, therefore, which is not briſkly enough propel'd thro' the pulmonary Vein, ſtagnates in its ſmall Ramifications; and the freſh Supplies of Blood, convey'd by the continual Pulſation of the Heart, diſtend and dilate the Ramifications of the Veſſels: Hence ariſe a Difficulty of Breathing, great Uneaſineſs, a Tremor and Palpitation of the Heart, together with an unequal, ſmall, quick, and frequent Pulſe. This Aſthma ariſing from a Redundance of Blood, ought, alſo, to be diſtinguiſhed by the Epithet Spaſmodic, becauſe the ſtagnant Blood not only preternaturally diſtends the Veſſels, and ſmall Ramifications of the Nerves, but alſo compreſſes the membranous Veſicles. Now, 'tis to be eſtabliſh'd as an infallible Maxim, that a preternatural Expanſion of the nervous Coats, by a large Quantity of Blood ſtagnating in them, lays a Foundation for a ſpaſmodic Conſtriction; and, *vice verſa*, this Conſtriction contributes very much to the Stagnation and Congeſtion of the Humours: This ſeems to be confirmed by thoſe Patients, whoſe Lungs, after Death, have been found ſtuff'd with a black, ſtagnant, and extravaſated Blood. *Willis*, in his *Pharm. Rational. Sect.* 7. *Cap.* 3. furniſhes us with an Inſtance of this, in a Man belonging to the Prieſthood, an Order more expoſed to this Misfortune than others, in conſequence of the Congeſtion of Humours to their Lungs, occaſion'd by their frequent Declamations in Public.

This Species of Aſthma is very common in hypochondriac Patients; becauſe in them the vital Humours, which are generally pretty thick, are, in conſequence of the Stricture of the inferior Parts, forc'd in too large Quantities to the Præcordia: In Patients of this Claſs, this Diſorder is almoſt always complicated with Flatulences of the Stomach, and Diſtentions of the *Primæ Viæ*, by which the primary Diſeaſe is render'd worſe; for ſince the Diaphragm touches immediately upon the Stomach, when the latter is diſtended with Flatulences, the former muſt, of courſe, be forthwith proportionably affected, and its free Motion prevented: Hence, alſo, the due Expanſion of the Lungs is obſtructed. Beſides, it frequently happens, that the Diaphragm, which is a nervous Membrane, is ſpaſmodically contracted; by which means, the Œſophagus, which perforates it, is ſo contracted, that a free Paſſage cannot be afforded to the Vapours ſtruggling for an Eruption: Hence the Uneaſineſs of the Præcordia is ſurpriſingly increas'd; and the Flatulences, being afterwards, in ſome meaſure, ſet at Liberty, diſcharge themſelves in loud and copious Eructations, which proportionably alleviate the Diſeaſe.

That Species of Aſthma which ſtrictly deſerves the Name of Convulſive, and which frequently occurs in Practice, is, without the Concurrence of any perceptible material Cauſe, produc'd by a ſpaſmodic Conſtriction of the Parts ſubſervient to Reſpiration, eſpecially of the Membranes ſurrounding the pulmonary Veſſels; for, when the nervous Coats of the Diaphragm, the membranous Parts of the intercoſtal Muſcles, and the delicate Membranes which every-where incloſe the pulmonary Veſicles, are ſpaſmodically conſtricted, the Cavity of the Thorax is, by that means, leſſen'd, the Expanſion of the Lungs check'd, the due Ingreſs of the Air into the pulmonary Veſicles prevented, and the Paſſage of the Blood thro' the Lungs, together with its Circulation from one Ventricle of the Heart to the other, ſurpriſingly retarded: Now, ſince the contracted Parts of the Breaſt receive their Nerves from the vertebral and dorſal Pairs, which alſo ſend off Ramifications to the Arms,

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'tis ſufficiently obvious, why the whole Breaſt and Arms ſhould be oppreſs'd and tenſe, the Scapulæ, Back, and Sternum, afflicted with Pain, and the Arms affected with a Torpor, and, at laſt, a Palſy; becauſe the Stricture prevents a due Influx of the nervous Fluid.

Theſe ſpaſmodic Conſtrictions are excited by an acrid, ſubtile, cauſtic, and, often, virulent Matter, lodg'd about the nervous Parts of the Præcordia. This peccant Matter is, originally, generated by the Repulſion of Sweats, eſpecially in ſcorbutic Patients; as alſo, by the inſufficient Evacuation, or prepoſterous Repreſſion of exanthematous Diſorders, of Efflorescences, of all Kinds of Excretions of the acrid Lymph and Serum, or of Defluxions of Matter on the Joints. Thus we are taught, by daily Experience, that an Aſthma is produc'd by an Eryſipelas, the Small-pox, and, eſpecially, the Meaſles; the purple Fever, as alſo ſcorbutic Spots, and Puſtules of every Kind; when the peccant Matter is either not ſufficiently forc'd to the Surface of the Body, or injudiciouſly repel'd, by the prepoſterous Uſe of Aſtringents. This Diſorder, alſo, ariſes from the Itch, the Tinea, or Achors of the Head, and the Cruſta Lactea, when prepoſterouſly dried up by oleous and pinguious Subſtances, or Linen-cloths impregnated with Sulphur. An Aſthma may alſo ariſe, from a Repreſſion of the fetid Sweat of the Feet, or a ſudden and univerſal Suppreſſion of Tranſpiration; as alſo, from chronical Ulcers, or Fontanels unſeaſonably and injudiciouſly heal'd: Thus I have ſeen an Inſtance of a convulſive Aſthma, ariſing from the drying up of a ſerpiginous Ulcer in the Scrotum: An Aſthma may, in like manner, be produc'd by a Gout, or any arthritic Diſorder, retiring to the more noble Parts, partly in conſequence of a Defect of Strength, and partly in conſequence of prepoſterous and ill-choſen Meaſures.

To this Claſs of Diſorders belongs that dry ſpaſmodic Aſthma, which, by means of metallic, ſaturnine, ſulphureous, poiſonous, and arſenical Exhalations, as, alſo, by thoſe of foſſile Coals and *Aqua-fortis*, is principally incident to thoſe who work in Metals, ſuch as Miners, and ſome Kinds of Smiths. In the *Acta Medica Berolinenſ. Dec.* 1. *Vol.* 6. we have an Inſtance of a Smith, who, by attracting the metalline Particles, in ſtriking Braſs with a Hammer, fell into a convulſive Aſthma; for theſe noxious and virulent Exhalations, when drawn in by Inſpiration, fix on the nervous Membranes of the pulmonary Veſicles; and, by conſtricting them, prevent the free and perfect Acceſs of the Air into them, and therefore threaten this terrible Diſorder.

The ſpaſmodic Stricture of the Diaphragm alone, without any Fault or Imperfection of the Lungs, is ſufficient to diſturb the Work of Reſpiration, and induce a ſudden Suffocation. I have ſtill freſh in my Memory, two memorable, but mournful, Inſtances of this Kind, in which the Patients, tho' before ſound in every reſpect, by being ſtruck on the Pit of the Stomach, and the Region to which the Diaphragm is annexed, ſuddenly died of a Suffocation: Upon laying open their Bodies, nothing amiſs appear'd, except a Stricture of the Diaphragm, and a gentle Sugillation of its tendinous Part. Nor is it leſs effectually confirm'd by Experience, that Wounds inflicted by Puncture in the Centre of the Diaphragm, have produc'd an inſtantaneous Suffocation; not to mention the intolerable Difficulty of Breathing, which is perceiv'd in conſequence of an Inflammation of the Diaphragm, which is a nervous Subſtance: Nor is it hard to aſſign a Reaſon for this, ſince the conſtricted Diaphragm retains a convex Figure, which in Inſpiration ought to be plain: Now, on this account, it ſo contracts the Cavity of the Thorax, that the Lungs cannot be ſufficiently expanded.

Nor are we to forget that ſpaſmodic Aſthma, which, in cachectic Patients draws its Origin from œdematous Swellings of the Feet, repel'd by any means, and is accompanied with a violent Oppreſſion and Uneaſineſs of the Breaſt. This Diſorder is to be accounted for, almoſt in the ſame manner with that Aſthma, which ariſes from a Redundance of Blood; for, when a Stricture is brought upon the Feet, that thick and vapid Serum ſtagnating in them is forc'd upwards, abſorb'd by the Blood-veſſels, and convey'd to the Præcordia; where being, with the reſt of the Maſs of Humours, carried from the Right Ventricle of the Heart, into the pulmonary Artery, and its Ramifications, it ſo fills theſe, that, by compreſſing the pulmonary Veſicles, it reſiſts the entering Air, and prevents a ſufficient Ingreſs of it for propelling the Blood thro' the Veins: This Blood, therefore, which is impregnated with a viſcid Serum, ſtagnates in the ſmall arterial Ramifications, diſtends them in a violent manner, and, by that means, induces the higheſt Uneaſineſs, a Difficulty of Breathing, and, ſometimes, a ſudden Suffocation. This laſt Misfortune almoſt infallibly happens, if œdematous Swellings of the Feet are repel'd in thoſe Patients, in whoſe Hearts there are polypoſe Concretions. I have obſerv'd, that in Patients of this Kind, when ſeiz'd with intermittent Fevers, if the Swelling of the Feet has ſuddenly diſappear'd, under the cold Paroxyſm; theſe Fevers have brought on an intolerable Difficulty of Breathing, and, always, at the third cold Fit, a ſudden Suffocation.

There is another Species of Aſthma, which ſtill better deſerves the Name of Suffocative, and ariſes from polypoſe Concretions form'd about the Ventricles of the Heart. This Diſorder frequently terminates in a ſudden, Suffocation; and upon laying open the Bodies of thoſe who have died of it, nothing preternatural is diſcover'd, except the polypoſe Concretions themſelves. Obſervations confirming this are found in *Riverius*, *Centur.* 1. *Obſ.* 82. *Tulpius*, *Lib.* 1. *Cap.* 27. *Pezold. Obſervat.* 58. and in the *Ephemerides*, *Nat. curioſ. Dec.* 3. *An.* 2. *Obſ.* 185. For ſince the polypoſe Concretions, eſpecially about the Left Auricle of the Heart, block up the Paſſage of the Blood about to return from the Lungs, this Blood is accumulated in the pulmonary Veſſels, by diſtending which, it hinders the free Acceſs of the Air; and, unleſs the polypoſe Concretion is remov'd, terminates in a total Stagnation, and fatal Suffocation.

A Dropſy of the Breaſt, tho' generally the deplorable Effect of a convulſive Aſthma, yet, when ariſing from this, or any other Cauſe, ſuch as an Inflammation of the Lungs, or an external Injury, lays a Foundation for a violent ſuffocative Aſthma. This Dropſy of the Breaſt may be known, from the following Diagnoſtics: Œdematous Tumors appear, not only in the Feet, but the Hands, the Swelling of which Parts is by the ingenious *Baglivi* acknowledged as the pathognomic Sign of this Diſorder: For, ſays he, in his *Prax. Med. Lib.* 1. 11. "Thoſe who labour under a Dropſy of the Breaſt, are affected "with a Swelling of the Hands, and, ſometimes, of the Arms "themſelves, as far up as the Elbows." In thoſe afflicted with a Fluctuation or Dropſy of the Breaſt, we alſo obſerve, eſpecially when they incline their Bodies to one Side, a Tremor of the Heart, a Torpor and Palſy of the Arms, a dry Cough, ſometimes accompanied with the Expectoration of a pellucid Serum, and an anomalous Fever. When this Diſorder is complicated with a Polypus of the Heart, which it generally is, the Patient is ſeiz'd with Palpitations of the Heart, and his Pulſe is of the intermitting Kind.

A Dropſy of the Breaſt is an Extravaſation of Lymph and Serum in its Cavity, and is produc'd in the following manner: That the external Coat of the Lungs is copiouſly furniſh'd with lymphatic Veſſels, is beautifully ſhewn by the celebrated *Nuck*, in his *Adenogr. curioſ.* Theſe Veſſels, as well as the other Lymphatics, found in many Parts of the Breaſt, carry back their Contents to the thoracic Duct, in order to be convey'd thence thro' the Subclavian Vein, and the Vena Cava, to the Right Ventricle of the Heart. When, therefore, the Paſſage of this Lymph is ſo obſtructed, that it cannot reach the thoracic Duct, the lymphatic Veſſels are too much ſtuff'd, and at laſt, being diſtended beyond their due Sphere of Elaſticity, they are ruptur'd, and diſcharge their Contents into the Cavity of the Breaſt. Since, therefore, ſpaſmodic Strictures of the Parts ſubſervient to Reſpiration, and eſpecially of the Lungs, which produce a convulſive Aſthma, check and retard the Conveyance of the Lymph to the thoracic Duct, 'tis no difficult Matter to conceive in what manner they may at laſt produce a Dropſy of the Breaſt. On the other hand, this Collection of Waters in the Breaſt, by filling the whole Cavity of the Thorax, and preſſing upon the Diaphragm, leaves no Space for the Lungs to expand themſelves in; and therefore, by preventing the free Ingreſs of the Air and Blood into them, and hindering the Circulation of the latter thro' them, induces a ſuffocative Aſthma, ſo call'd, becauſe it puts an End to the miſerable Patient's Life by a Suffocation. This extravaſated Water, in the mean time, not only colliquates the Lungs which float in it, but, in Proceſs of Time becoming acrid, alſo corrodes, and almoſt conſumes them with Putrefaction, as *Harderus* has obſerv'd, in *Lib.* 1. *Obſ.* 51. As for the Dropſy of the *Pericardium*, it may not only be produc'd, in the ſame manner, from the lymphatic Veſſels ſurrounding the Surface of the Heart, but is alſo increas'd by the Secretion of the Serum from its Auricles, when they are ſtuff'd with ſtagnating Blood.

Nor are we to overlook that Species of Dropſy in the Breaſt, the Waters of which are included in Hydatides, as in Bags, and which, for the moſt part, is found to have its Seat within the Subſtance of the Lungs. In practical Authors many Inſtances occur of theſe Hydatides, not only in the Lungs, but alſo in the Pleura, the Diaphragm, and the external Surface of the Heart. For Caſes of this Nature, ſee *Otto Heurnius*, *Obſ.* 18. *Bartholine*, *Cent.* 2. *Obſ.* 61. *Acta Hafnienſ. Vol.* 3. *Obſ.* 76. and the *Ephemerides Nat. Curioſ. Cent.* 3. & 4. *Obſ.* 115. Theſe Hydatides ſeem to be generated in the Lungs themſelves, by the lymphatic Veſſels contain'd in their Subſtance being ruptur'd, and diſcharging their Contents into their ſmall Cells and Veſicles; and 'tis highly probable, that, in conſequence of a Rupture of theſe Veſſels, the Serum may be extravaſated into the Subſtance of the Lungs, and induce a ſudden Suffocation. From this Circumſtance we

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ſo account for that limpid Matter, which is ſometimes expectorated in certain Kinds of Coughs.

If any accidental Cauſes can concur to the Production of a convulſive Aſthma, certainly external Cold, that formidable Enemy to the nervous Syſtem, is none of the leaſt conſiderable of this Kind. Hence, in the Winter Seaſon, and when the Winds blow from the northerly Quarters, this Diſorder becomes more violent, and is alſo increas'd by drinking cold Liquors. I have, in a particular manner, obſerv'd that thoſe Perſons who do not carefully cover their Breaſts, but fooliſhly expoſe them to the Cold, eſpecially in the Night-time, are often ſubject to this Misfortune.

From what has been ſaid, we underſtand the various Manners in which both convulſive and ſuffocative Aſthmas are generated and increaſed. We ſhall, therefore, now conſider the Prognoſtics of theſe Diſorders. When the Misfortune is recent, and only depends upon the ſpaſmodic Conſtriction of the Precordia, ſome Hopes of the Patient's Recovery are left; eſpecially if the arthritic and gouty Defluxions, Ulcers, and exanthematous Eruptions are drawn back to their proper Places. A Diſcharge of Blood either from the Uterus, or the hæmorrhoidal Veins, happening to thoſe Patients who are ſeiz'd with an Aſthma, and hypochondrial Complaints, in conſequence of a Suppreſſion of theſe Evacuations, alleviates the Diſorder; and, if it is recent, produces a perfect Cure: But if it ſhould happen to be inveterate, or treated with prepoſterous and improper Medicines, it degenerates into a Dropſy of the Breaſt, Obſtructions and Infarctions of the Viſcera of the lower Belly, œdematous Swellings of the Feet, a Cachexy, and, at laſt, an univerſal Dropſy: For 'tis certain, that the Vena Cava, which conveys the Blood from the lower Belly to the Heart, paſſes thro' the tendinous Centre of the Diaphragm: Nor is it leſs certain, that the free Motion of the Diaphragm aſſiſts and promotes the Circulation of the Blood thro' the Liver, which is naturally languid. When, therefore, the free Aſcent of the Blood thro' the Vena Cava is hinder'd, its Circulation thro' the Liver muſt, of courſe, become more ſlow. Hence the Humours, eſpecially in thoſe Parts of the Body which are more remote from the Heart, ſuch as the Feet, ſtagnate, and depoſit a ſerous Subſtance, which is the Cauſe of the œdematous Swellings. Afterwards the Humours move with Difficulty thro' the Viſcera of the lower Belly, and ſtagnating in them, produce Infarctions, Scirrhuſes, Cachexies, and Dropſies. Experience alſo, as well as the Obſervations of the ingenious *Lower* teach us, that when the Vena Cava is tied near the Diaphragm, a Dropſy is forthwith produced. In general, we muſt obſerve, that all convulſive Aſthmas either produce a ſpeedy Death, and ſudden Suffocation, eſpecially in Caſes where there are polypoſe Concretions of the Heart; or they are protracted for a conſiderable time, and induce a Dropſy, which proves mortal, if the Patient is ſeiz'd with a ſlow Fever, has an unequal and intermitting Pulſe, is affected with the Palſy of the Arms, a continual Palpitation of the Heart, a preternaturally ſmall Diſcharge of the Urine, and a Syncope: When theſe Symptoms appear, we may be pretty certain the Death of the Patient is not far off. Some aſthmatic Patients are cut off by a ſupervening Inflammation of the Lungs; and the more violent this Species of the Diſorder is, the more languid alſo is the Pulſe. When old Perſons are ſeiz'd with an Aſthma, the Diſorder generally accompanies them to the Grave; and that Species of Aſthma which ariſes from a Diſlocation of the Vertebræ, admits of no Cure, till theſe are reduc'd. The longer, the more frequent and violent the Paroxyſms of an Aſthma are, the greater Danger of a Suffocation is.

The CURE.

In an Aſthma, the moſt important Intentions of Cure are theſe following: Firſt, to ſooth and alleviate the ſpaſmodic Strictures of the Breaſt, and Parts ſubſervient to Reſpiration: Secondly, to derive Humours to the exterior and inferior Parts of the Body, and to procure a due and equable Circulation of them: And, thirdly, to remove the ſeveral Cauſes which ſupport the Diſorder, by Medicines adapted to their reſpective Natures. As the two firſt of theſe Intentions are principally to be anſwer'd immediately under the Paroxyſms, ſo the laſt is to be carried on in the Intervals between them.

Becauſe under the immediate Shock of the Paroxyſm the Patient is generally coſtive, and the Humours convey'd to the ſuperior Parts along with the Flatulences, no Medicines afford a more inſtantaneous Relief, than emollient and carminative Clyſters, injected twice or thrice, as the State and Condition of the Patient ſhall require. Theſe Clyſters are to be prepar'd of the Flowers of Elder, Melilot, Mullein, Piony, white Lilies, and common Chamomile, the Four carminative Seeds, and Oil of Chamomile by Infuſion, together with the Addition of a Dram or two of common Salt, or Sal Gemmæ, by way of Stimulus. Excellent Effects are alſo produced by Frictions of the Feet, which are almoſt always cold, as alſo by Immerſions of them into moderately warm Water. When the Præcordia are rack'd with violent Spaſms, we may, for removing this Symptom, with ſingular Advantage, apply to them warm Fomentations, or Bladders fill'd with warm Milk. Theſe Spaſms are alſo, ſometimes, ſucceſsfully allay'd by nervine Liniments, which I generally prepare in the following manner:

> Take of the *Aqua Anhaltina*, two Ounces; of the Spirit of Sal Ammoniac, of Earth-worms, of the Eſſence of Saffron, and of Caſtor, each two Drams; of the Oil of Nutmeg, or Mace, one Dram: Make into a Liniment, to be apply'd to the Neck, the Scapulæ, the Muſcles of the Thorax, and the Spine of the Back.

With reſpect to internal Medicines, the beſt and moſt powerful are Antiſpaſmodics, in Conjunction with mild Diaphoretics, which, by diſcuſſing the peccant Matter, and relaxing the ſpaſmodic Strictures, produce the moſt happy Effects. Of this Kind are, Mixtures of the analeptic Waters, prepar'd of the Flowers of the Lime, Piony, Primroſes, Lilies of the Valley, *Egyptian* Thorn, and Meadow-ſweet; the *Pulvis Marchionis*, native Cinnabar, the *Spiritus Nitri dulcis*, or the anodyne mineral Liquor, the *Mixtura Simplex*, and the Syrup of wild Poppies: Theſe Mixtures are to be frequently exhibited; or they may be given alternately, with proper Doſes of the anodyne Liquor, in Conjunction with the *Spiritus Bezoardicus Buſſii*, or ſuccinated Hartſhorn. Beſides, the Patient's Body is, as much as poſſible, to be kept moderately warm; nor is it proper and expedient to attempt any thing more under the immediate Attacks of the Paroxyſms.

During the Intervals of the Paroxyſm, our principal Intentions ought to be, to diſcuſs the Humours ſtagnating in the Breaſt, to reſtore their free and equable Circulation, and, at the ſame time, to remove the material and immediate Cauſes of the Diſorder. When, therefore, an Aſthma is brought on by too large a Congeſtion of the Blood in the Thorax; after checking and allaying its Ebullition, by correcting Powders and Mixtures, we are to leſſen its Quantity: This Intention is excellently anſwer'd by Veneſections in the Foot, at proper and ſtated times, eſpecially in Patients accuſtom'd to the Uſe of Wine. Scarifications may alſo, now-and-then, be uſed, in Patients habituated to them. In aſthmatic Patients, labouring under a Suppreſſion of the hemorrhoidal Diſcharge, Leeches, applied to the Veins of the Anus, are productive of very happy Effects. Mild and gentle Laxatives, for eliminating the Sordes of the *Primæ Viæ*, and promoting the Circulation of the Blood thro' the Abdomen and the *Vena Porta*, proper Exerciſe, a ſlender Regimen, and light Liquors, drank in large Quantities, are alſo to be recommended in Caſes of this Nature: And, if hypochondriacal and flatulent Symptoms appear, with ſo much the happier Succeſs are gentle Laxatives and Clyſters exhibited, in Conjunction with the Uſe of the *Elixir Viſcerale*, and a proper Regimen: But particularly in Patients, labouring under a Suppreſſion either of the Menſes, or the hæmorrhoidal Diſcharge, nothing is more beneficial than the warm *mineral Waters*, to be us'd both internally and externally; or the *Selteran Acidulæ*, which are to be drank warm'd, with an Admixture of Milk. Theſe Meaſures are, alſo, to be taken in the Cure of that Aſthma, which draws its Origin from a Polypus of the Heart.

When an Aſthma draws its Origin from the Retroceſſion or Repulſion of an arthritic, gouty, ſcabious, purpuraceous, or ulcerous Humour; that is, from the Tranſlation of an acrid, peccant, and cauſtic Serum to the nervous Parts of the Breaſt, nothing is more ſafe and expedient, than by mild and gentle Diaphoretics, which promote a free Perſpiration, to drive out the peccant Humour to the Surface of the Body, or force it back to the Parts whence it was repel'd. This Intention is excellently and ſpeedily anſwer'd by the anodyne Liquor, mix'd with the *Spiritus Bezoardicus Buſſii*; or by the bezoardic Powders, compos'd of diaphoretic Antimony, Nitre, the *Pulvis Marchionis*, prepar'd Amber, and a ſmall Quantity of Camphire. This Medicine is moſt properly and commodiouſly us'd in the Morning, drinking after it ſome Cups of an Infuſion, prepar'd, after the manner of Tea, of the Herbs Germander, and Paul's-betony; the Flowers of Elder and the Lime; the Seeds of Fennel, and the *Aniſum Stellatum* (ſee ZINGI); after which, a gentle Sweat is to be promoted. In Caſes where Scabs or Ulcers are either repel'd, or too ſoon heal'd, Preparations of Sulphur are of ſingular Service, ſince they are highly efficacious in repelling the Sordes to the Surface of the Body; for, as, in theſe Diſorders, Preparations of mineral Sulphur, externally apply'd, are highly pernicious; ſo, on the contrary, when internally exhibited, by corroborating the Tone of the Parts, they contribute not a little to the Diſſipation and Perſpiration of the heterogeneous Matter: Nor, in Caſes of this Nature, are we to neglect the Uſe of gentle Laxatives, and mild Diuretics, ſuch as the Tincture of Tartar, and ſome others of a like Nature; ſince, by theſe the groſs

groſs Sordes of the *Primæ Viæ*, and other Parts, are carried off by Urine. Waſhing the Feet is, alſo, of ſingular Service, by inviting the arthritic and gouty Matter to them.

When an Aſthma ariſes from the Repulſion of œdematous Swellings of the Feet, either by violent Diſorders of Mind, ſudden Frights, exceſſive Cold, or a febrile Paroxyſm, 'tis then no eaſy Taſk to diſcuſs the Congeſtion of viſcid Serum in the Breaſt, and recal it to the external Parts of the Body. In Caſes of this Nature, I have ſeen the following diaphoretic Powder exhibited with ſignal Succeſs:

> Take of the Ceruſs of Antimony, and calcin'd Hartſhorn, each one Dram; of the *Cinnabaris Medicinalis*, two Scruples; and of the corrected Sulphur of Antimony, four Grains: Reduce all into a fine Powder; of which I generally give two Scruples for a Doſe, ordering the Patient a Draught of ſome proper Infuſion after it.

Beſides, the Feet are to be kept warm, and carefully ſubjected to Frictions, in order to relax their Spaſms, and expel the Cold. Clyſters are, alſo, to be injected, and Laxatives, tho' of the moſt mild and gentle Kind, preſcrib'd.

In a dry Aſthma, ariſing from external Cauſes drying the Bronchia and pulmonary Veſicles, ſuch as the Steams of Lead, an Atmoſphere impregnated with the Exhalations of Quick Lime, or the Smoak of foſſile Coal, the ſeveral Intentions of Cure are moſt effectually anſwer'd by thoſe Medicines, which moiſten the Parts, correct the Acrimony of the Humours, and relax the Fibres; ſuch as Milk, Cream, Oil of ſweet Almonds, Emulſions, Sperma Ceti, and the Fats of Animals, us'd both internally and externally.

When ſulphureous or arſenical Steams, or the Effluvia of *Aqua fortis*, or Spirit of Vitriol, are received into the Lungs, (as it frequently happens to Miners, and ſuch as are much engaged in chymical Preparations of theſe Bodies) moſt violent aſthmatic Diſorders and Peripneumonies are thence produced; In this Caſe, the Vapour of putrid Urine, with the Salt of Tartar diſſolv'd in it, and immediately received into the Lungs, is the moſt effectual Pectoral; the acid, corroding Particles irritating the Lungs, being thereby corrected, and changed into an innocent, inactive, neutral Salt. *Barry, of a Conſumption.*

In thoſe Aſthmas, where a Dropſy of the Breaſt is already form'd, the Cure is highly dubious and uncertain: In ſuch Caſes, the only Method of Relief ſeems to be a *Paracenteſis*, or Tapping of the Thorax; an Operation, highly extol'd by ſome, particularly the celebrated *Carolus Piſo*, *Scultetus*, in *Obſ.* 31. and *Sylvius*, in his *Oper. Medic. Cap.* 50. Nor is there any Neceſſity for our declining this Operation, ſince, when perform'd by a ſkilful Hand, it is entirely free from Danger: But 'tis by ſome diſputed, whether it always affords a certain and infallible Relief. *Hippocrates*, in his ſecond Book *de Morbis*, judiciouſly adviſes, that this Operation ſhould be perform'd, before the Diſorder has made any conſiderable Progreſs, or injur'd any of the Viſcera: And, indeed, when the Viſcera happen to be injur'd, or exulcerated, I would not adviſe this Operation to be raſhly ventur'd upon; but ſo long as theſe remain in a ſound and natural State, it promiſes very conſiderable Relief. Beſides, we muſt, in Conjunction with theſe means already mentioned, uſe mild Diuretics and Laxatives, eſpecially ſuch as are ſaid to operate gradually, and without promoting a too ſenſible Evacuation; and theſe Meaſures are to be taken in the Beginning of the Diſeaſe, when 'tis, as yet, free from every Degree of febrile Exacerbation.

Before we quit this Subject, we think it expedient to ſubjoin thoſe Remedies, which *Celſus*, in the fourth Chapter of his fourth Book, recommends in a Difficulty of Breathing: "Veneſection, ſays he, unleſs contra-indicated by ſome important Circumſtance, affords Relief. Nor is this, of itſelf, "ſufficient; for warm Goat's-milk is to be exhibited every "Morning; and, if the Patient is not feveriſh, his Belly is "to be render'd ſoluble. Extenuated Patients, when beginning to breathe more freely, are, ſometimes, to be pretty "briſkly purg'd, and, ſometimes, only to have their Bodies "render'd gently ſoluble. The Head is to be laid high in "Bed; the Thorax is to be reliev'd with warm Fomentations "and Cataplaſms, either of the moiſt or dry Kind: Beſides "theſe Meaſures, the Patient is to uſe Sorbitions, and mild "Aliments, ſometimes ſmall Wine, and ſometimes an Emetic: Thoſe Medicines which provoke Urine are, alſo, beneficial; but nothing is more ſo, than walking ſlowly till "the Patient is moderately weary, and uſing frequent Frictions, eſpecially of the inferior Parts, either in the Sun, or "before a Fire, both by one's ſelf, and by the Aſſiſtance of "others, till an Eruption of Sweat is produc'd."

Cautions and Admonitions to be obſerv'd in Practice.

Acrid Purgatives, ſuch as Jalap, Gamboge, Coloquintida, Elaterium, and Spurge, as alſo draſtic Emetics, eſpecially thoſe prepar'd of Antimony, are, in this Diſorder, to be avoided with the utmoſt Care, ſince they more effectually diſpoſe the nervous Syſtem to Spaſms: But in that Species of cachectic Aſthma, where the Breaſt is full of ſerous and viſcid Humours, I generally, with great Succeſs, exhibit ſmall Quantities of emetic Tartar, in Conjunction with an Infuſion of Manna, in order to reſtore ſuch a Degree of Strength to the weaken'd Lungs, as may enable them to reſiſt the ſtagnant Juices. In Caſes of this Nature, well-corrected Sulphur of Antimony is, alſo, highly beneficial: Squills, in like manner, cautiouſly exhibited, are, in this Diſorder highly extol'd, as productive of the happieſt Effects, both by their inciding and reſolvent Virtues. See an Account of the *Kermes Mineral*, under the Article ANTIMONIUM.

It is a common, but a monſtrous and pernicious Piece of Practice, to attempt the Removal of thoſe œdematous Swellings, which frequently accompany an Aſthma, by means of draſtic Purgatives; ſince nothing elſe can be expected from ſuch a Method, but that the Patient ſhould fall a more early Victim, than he would have otherwiſe done. Repelling Plaiſters, and ſuch as dry up and conſolidate Ulcers of the Legs, are alſo highly injurious in aſthmatic Caſes. Nor are the Laconic Baths, with Spirit of Wine, always to be us'd with Safety; becauſe they dry the Body too much, and repel the Tumors. But we may at once, with more Safety and Benefit, uſe dry Fomentations, and diſcutient Bags; exhibiting, at the ſame time, internally, Diaphoretics mix'd with Antiſpaſmodics. Diuretics may alſo be ſafely and advantageouſly us'd, and pretty acrid Clyſters injected.

Veneſection ought never to be inſtituted during the Paroxyſm of an Aſthma, ſince, by that means, the Diſorder becomes worſe, and more obſtinate; nor in the Intervals of the Paroxyſms will it be of any Advantage, except in that Species of Aſthma which ariſes either from a Redundance, or preternatural Thickneſs, of the Blood, in Conjunction with a Polypus of the Heart; or from a Suppreſſion of accuſtomed Evacuations of Blood: In which Caſes, Veneſection about the Equinoxes, with a prophylactic Intention, is highly expedient. But 'tis to be obſerv'd, that a Clyſter, in order to diſpel the Flatulencies, and render the Body ſoluble, is always, with great Advantage, injected before Veneſection.

Hot mineral Waters, eſpecially in the Beginning of the Diſeaſe, as alſo the *Acidulæ*, which ought to be uſed warm, are of ſingular Advantage, both for the Prevention and Cure of this Diſorder; eſpecially when ariſing from a ſcorbutic Cacochymy, an Infarction of the Viſcera, or a Suppreſſion of critical Evacuations of Blood. On the contrary, when the Diſeaſe is become inveterate, when polypoſe Concretions are already form'd in the Heart, or when a Dropſy of the Breaſt is brought on, the Drinking of theſe accelerates the Death of the Patient, as I have found in various Inſtances; for, in Patients of this Kind, we find at once a ſurpriſing Relaxation of the Solids, and Obſtructions of the Viſcera; for which Reaſon, theſe mineral Waters cannot paſs duly through the Emunctories, but, ſtagnating in different Places, not only increaſe the extravaſated Serum in the Breaſt, but alſo produce new Tumors or Swellings in various Parts.

Greater Dependence is juſtly to be had on the external Uſe of hot Baths, eſpecially of ſuch as are not of an aſtringent, calcareous, and chalybeate Quality, but rather of thoſe whoſe Waters are ſubtile, light, and impregnated with a certain alcaline Salt. In Caſes of this Nature, I have ſeen very happy Effects produc'd by the Waters of *Toeplitz* and *Piperen*, ſince, by their relaxing and emollient Virtues, they ſurpriſingly ſoften and ſolace the rigid Fibres, and, at the ſame time, render Perſpiration more free and copious. But in Caſes where polypoſe Concretions, or extravaſated Waters, are ſuſpected, theſe are by no means to be uſed. It is alſo to be obſerv'd, that Baths are of far more Efficacy for the Prevention, than for the Cure, of Aſthmas.

In a cachectic State, accompany'd with an Aſthma, Diuretics are found to be highly beneficial: Thus *Johannes Rhodius*, in *Lib. 3. Obſervat.* 27. aſſures us, that an Aſthma of this Kind was cur'd in twenty-four Hours, by an Evacuation of thirty-ſeven Pints of Urine. With reſpect to Diuretics, *Baglivi*, in his Obſervations, has the following Words: "I have often "obſerv'd, that in Diſeaſes of the Breaſt, Nature herſelf indicates the Propriety of conveying the peccant Matter to "the urinary Paſſages; for 'tis obvious, that there is a ſenſible and manifeſt Conſent between the Legs, the Pudenda, "and the Breaſt. But Diuretics, prepar'd of lixivial and "acid Salts, are not ſafe in Diſeaſes of the Breaſt, becauſe "they excite Coughs, and exaſperate the Diſorder." On the contrary, Powder of Millepedes, Preparations of Turpentine, moderately ſpirituous, but ſufficiently alcaliz'd, Eſſence of Amber, Balſam of the Sulphur of Antimony, Decoctions of the aperient Roots, and *Fernelius's Syrup of Marſhmallows*, powerfully provoke Urine, whilſt, at the ſame time, they are not in the leaſt injurious to the tender Membranes of the Lungs.

In ſpaſmodic Aſthmas, accompany'd with Cardialgias, as alſo in thoſe ariſing from Strictures of the Diaphragm, I have often obſerv'd, that demulcent and anodyne Liniments, prepar'd

par'd of the recent Fats of Animals, the Fat of a Capon ſubtiliz'd by the Heat of the Sun, and the *Emplaſtrum Barbetianum*, enrich'd with Soap and Camphire, are far more effectual than hot and ſpirituous Subſtances.

In the Prevention, as well as in the Cure, of an Aſthma, the Force and Efficacy of other Medicines is excellently aſſiſted by the Air; which, the more pure, fine, and ſerene it is, the greater Relief it affords the Patient. Every one knows, that this Diſorder is remarkably increas'd only by a Change of the Weather. The Antients, in this, as well as in other Diſeaſes, accounted the Air a Circumſtance of the laſt Moment and Importance. Thus *Cœlius Aurelianus*, *Chronic. L.* 3. *C.* 1. informs us, "That in caſe of Stricture, 'tis expedient the "Patients ſhould be lodg'd in a Place moderately light and "warm; that they ſhould uſe Abſtinence till the third Day, "and be kept in a State of Reſt both with reſpect to Body "and Mind; applying, at the ſame time, to the Neck and "Thorax, fine ſoft Wool, ſoak'd in ſweet warm Oil."

In order to corroborate the nervous Parts of the Breaſt, and prevent Aſthmas, beſides the drinking cold, but pure and light Water, nothing is more beneficial than the Country Air, which *Baglivi* recommends in the following Words: "In "inveterate Aſthmas, whether of the humoral or convulſive "Kind, I order the Patient to retire to the Country Air, and "to frequent Fields under Tillage. He ought, therefore, to "follow the Labourer, walk in the Furrow, and draw in "the nitrous, ſaline, and ſulphureous Exhalations, ariſing "from the freſh-turn'd Glebes of Earth. The Tone of the "Lungs, weaken'd by a long-protracted Diſeaſe, is, by "the nitrous and ſaline Subſtance of the central Heat of "the Earth, corroborated, ſtrengthen'd, and reſtor'd; by "which means the Circulation of the Blood is freely carried on "through the minute Veſſels of the Lungs, and the Diſeaſe "remov'd."

Both in the Relief and Cure of an Aſthma, it is a Circumſtance of great Moment, what Kind of Liquor the Patient drinks. All Ales, and eſpecially that prepar'd of Wheat, are in this Caſe to be condemn'd. As rich and generous Wine creates an Ebullition of the Blood, it muſt of courſe increaſe the Congeſtion of the Humours, the Oppreſſion of the Breaſt, and the Difficulty of Breathing; eſpecially in Patients of a plethoric Habit. As Wine of an aqueous Nature, ſuch as that produc'd on the Banks of the *Moſelle* and *Neckar*, when recent, is ill calculated for corroborating the Fibres of the Stomach, and, conſequently, for promoting Digeſtion; ſo it produces Flatulences, eſpecially in hypochondriacal Patients. In aſthmatic Caſes, the moſt proper Liquor I have hitherto found, is old *Rheniſh* Wine, mix'd with three or four Parts of pure Spring-water, or of the *Selteran* Waters. Beſides, Infuſions, by way of Tea, prepar'd of Hyſſop, Paul's-betony, Garden Crowfoot, Ground-ivy, Liquorice-root, the Tragus [*Seagrape*], and the Flowers of the Daiſy, are highly beneficial in all Aſthmas, from whatever Cauſe they may ariſe.

Such Subſtances as are too ſweet, or prepar'd with Sugar or Honey, are in every Species of Aſthma, but more eſpecially thoſe of the ſerous and hypochondriacal Kind, to be carefully abſtain'd from; ſince, by injuring the Tone of the Stomach, they deſtroy Digeſtion, and, by that means, lay a Foundation for the Generation of Flatulences. *Frederic Hoffman.*

Other Authors mention ſome Things omitted by *Hoffman* in the preceding Treatiſe, and differ widely from him in many Circumſtances, relative to the Method of Cure. Thus, in that Species of Aſthma which is call'd *Idiopathic*, and which is a difficult Reſpiration, ariſing either from ſome Imperfection of the Lungs, or ſomething of a noxious and peccant Quality contain'd in them, the celebrated *Pitcairn* orders the following Meaſures to be taken.

If the Aſthma is highly dangerous, that is, if the Difficulty of Breathing is ſo great, that the Patient runs a Riſque of being ſuffocated before Purgatives can be exhibited, and produce the deſign'd Effects, a Vein is always to be open'd; becauſe Veneſection never fails to leſſen the Paroxyſm, relieve the Patient, and afford a due Time for providing and exhibiting other Remedies. If a ſudden Rarefaction of the Blood, or a Plethora, under which Word I comprehend a Suppreſſion of any accuſtom'd Evacuation of Blood, ſhould either produce or accompany an Aſthma of this Kind, 'tis abſolutely neceſſary the Patient ſhould be blooded; ſince, in this Caſe, Veneſection removes the Diſorder.

In all Caſes where this Diſorder is neither produc'd nor accompany'd by a Plethora, a Vomit muſt always be exhibited at the Beginning; ſince, by the Concuſſion of the Body, it derives the peccant Matter from the Lungs; as it does in a ſenſible Manner from the Glands of the Eyes, the Noſtrils, and Fauces. Nor is a Vomit to be only once exhibited, but frequently repeated, till the deſign'd Effect is produc'd.

Though, on account of my long Experience of the Virtues of antimonial Preparations, I prefer them to all other Emetics; yet, in this Caſe, I recommend between a Dram, and half an Ounce, or a whole Ounce, of Tobacco-leaves, boil'd in ſix Ounces of Spring-water, till the Liquor is reduc'd to four. This Liquor, when expreſs'd, ſtrain'd, and edulcorated with Sugar, is a highly beneficial Vomit. Half of the Decoction may be taken at firſt; after which, the Patient is to wait till he vomits; but, if it ſhould not produce this Effect, he is to take the other Half, drinking, at the ſame time, either warm Water, ſmall Beer, or Beer Poſſet-drink.

If after the Vomit, or even when that Circumſtance has been neglected, the Strength of the Patient ſhould be found low and impair'd, a Purgative of the Juice of common Orrice-root, or that of the Dwarf-elder, is to be exhibited in the Interval of the Paroxyſms; or the following Pills, with a proper Addition of *Mercurius Dulcis*, may, with great Advantage, be us'd:

Take of Gum-ammoniac, Diagrydium, and Reſin of Jalap, each half a Scruple; of the volatile Salt of Amber, five Grains; and of Elixir Proprietatis, a Quantity ſufficient for forming a Maſs of Pills to be taken for one Doſe.

Once every Day, on which the Patient is not purg'd, or at leaſt when the Courſe of Purging is at an End, we muſt exhibit alternately the Juice or Infuſion of twenty-five or thirty live Millepedes in four Ounces of *Spaniſh* or *Rheniſh* Wine, or one Scruple of Gum Ammoniac, diſſolv'd in two Ounces of warm Penyroyal-water.

But to theſe I preſer half a Dram of Sperma-ceti, exhibited in warm Wine or Ale; for this Medicine is of ſo great Efficacy in preventing the Paroxyſm, that, next to Veneſection, it deſerves the higheſt Encomiums; and, in weak Conſtitutions, is even to be prefer'd to it. Next to this, I eſteem the expreſs'd Juice, or an Infuſion of Millepedes; then Gum Ammoniac, diſſolv'd in *Aqua Vitæ*, or any ſpirituous Water: The next in Efficacy are, the Flowers of Benzoin, any volatile Salt, either diſſolv'd or dry, and the Powder of Millepedes. All theſe Medicines are proper during the Paroxyſm.

Great Advantage is alſo perceiv'd from a Decoction of the Wood and Bark of Guaiacum and Saſſafras, or of the Root of the greater Burdock, in Spring-water. Nor is any Medicine more effectual than Ale, impregnated with Millepedes; ten or more of which, taken alive, and gently bruiſed, and bound up in a Cloth, are to be allow'd for each Pint of fermenting Ale. This Liquor is to be uſed as the Patient's ordinary Drink; or let a ſufficient Quantity of the following Tincture be exhibited:

Take of *Spaniſh* Wine, one Pint; of the Flowers of Sulphur, two Drams; and of the volatile Salts of Hartſhorn and Amber, each two Scruples: Let them ſtand in Digeſtion for four Days. This was the Secret of the celebrated *Willis.*

Sir *John Floyer* was afflicted with an Aſthma from the ſeventeenth Year of his Age to the Time of his Death, which happen'd when he was conſiderably above fourſcore. As he had read more than moſt Gentlemen of his Profeſſion, his own Diſorder, and others which he attended, afforded him infinite Opportunities of comparing the Phænomena of this Diſeaſe, with what he found in Authors; and, as he has taken notice of many Circumſtances relative to Practice, I ſhould adviſe the Reader to conſult his Book on an Aſthma, which is too long to be inſerted in this Place.

DYSRACHITIS, δυσραχίτις. The Name of a Plaiſter deſcrib'd in *Galen*'s Treatiſe *de Comp. Medic. per Genera*, *Lib.* 5. *Cap.* 3. and recommended for Fiſtulas and callous Sinuſes.

DYSTHANATOS, δυσθάνατος from δύς, importing Difficulty; and θάνατος, Death. This Adjective is apply'd to any thing which either induces or prognoſticates a laborious and painful Death; or it is apply'd to a Perſon who dies a lingering or painful Death.

DYSTHERAPEUTOS, δυσθεράπευτος from δύς, importing Difficulty; and θεραπεύω, to heal. Difficult to heal.

DYSTHESIA, δυσθεσία from δυσθετέω, to be uneaſy; Moroſeneſs, or Impatience, under Diſtempers.

DYSTHRAUSTOS, δύσθραυστος from δύς, importing Difficulty; and θραύω, to break; not eaſily broken.

DYSTHYMIA, from δύς, importing Uneaſineſs; and θυμός, the Mind; Anxiety, Deſpondence, or Dejection of Mind.

DYSTOCHIA, from δύς, importing Difficulty; and τίκτω, to bring forth Young; difficult Labour, or Child-birth. See PARTUS.

DYSTŒCHIASIS, δυσταχίασις from δύς, importing bad; and στοῖχος, Order; an irregular Diſpoſition of the Hairs in the Eye-lids. *Caſtellus* from *Foreſtus.*

DYSTROS, δύστρος. The *Macedonian* Name for the Month of *March*. It occurs in *Aetius*, *Tetrabib.* 1. *Serm.* 3. *C.* 164.

DYSURIA, δυσουρία from δύς, importing painful; and οὖρον, Urine: It implies a rendering of the Urine with a Senſation of

Heat and Pain: It is diſtinguiſhed from a Strangury, as, in the laſt, the Urine is voided by only a Drop, as it were, at a time, but, however, with Pain; and from an Iſchury, as in this Diſorder there is an almoſt total Suppreſſion of Urine. A Dyſury conſtantly attends a virulent *Gonorrhœa*, accompanies many other Diſtempers, as a Symptom; and is frequently excited by very acrimonious Medicines, and the external Application of Cantharides. In a Dyſury, emollient and mucilaginous Medicines, as Gum Arabic diſſolv'd in Barley-water, Emulſions, and Decoctions, with an Addition of Nitre, copious Draughts of diluting Fluids, and Camphire, are uſually preſcrib'd.

See the Article CALCULUS, where the various Cauſes of Dyſuries are more fully treated of.

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E. The antient *Greeks*, as we are told by *Galen*, *Com.* 3. *in* 6. *Epid. T.* 40. had but one Character, which was H, to expreſs their *Epſilon* and *Eta*, or *e* ſhort, and *e* long: He makes the ſame Obſervation on the O, *Omicron*, and Ω, *Omega*, which were formerly, he ſays, expreſs'd alſo by one Character. And this Multiplication of Letters, he obſerves, has been the Occaſion of Multitudes of Errors in Tranſcribers, by making Permutations of the Letters, contrary to the Senſe of Authors.

For the Signification of E in the chymical Alphabet, ſee ALPHABETUM.

EBEL. The Seed of Sage, or of Juniper. *Rulandus.*

EBENUS ÆTHIOPICA, Offic. *Palma Haira*, Park. Theat. 1667. *Palma Americana ſpinoſa*, C. B. Pin. 507. Raii Hiſt. 2. 1363. Pluk. Almag. 277. Phytog. 103. *Palma tota ſpinoſa major, fructu pruniformi*, Cat. Jam. 177. Sloan. Hiſt. 2. 119. *Palma Braſilienſis ſexea Airi*, Piſ. (ed. 1658.) 129. *Palma Partoricenſis, ſpinoſiſſima, vinifera*, Hort. Beaum. 32. *Palma facie Haira*, J. B. 1. 393. *Palma Americana Haira ſive Ayri*, Jonſ. Dendr. 144. THE MACOW OR EBONY-TREE.

It grows in *America*: Its Wood, which is black, and of a very denſe and ſolid Subſtance, is us'd. *Plukenet*, deſcribing the Tree, ſays, that its Wood is like black Marble, and ſinks in Water like Iron.

There are two Species of Ebony in Uſe among Mechanics; but whether either of them be the true and genuine Ebony of the Antients, remains a Controverſy. *Dioſcorides* deſcribes two Species: "The firſt, he ſays, is brought from *Ethiopia*, "is black, and has no Veins interſpers'd; is ſmooth like po- "liſh'd Horn: When broken, appears of a denſe and cloſe "Subſtance; and has a pungent Taſte, with an Aſtringency. "The other Sort comes from *India*, is interſpers'd with white "and yellow Lines, and ſpotted; but the firſt Species is the "beſt." *Pliny*, in his Deſcription of it, ſays, "It was a "rare Tree, and grew in the Country between *Siene*, the "Limit of the Empire in *Egypt*, and *Meroe* in *Ethiopia*, "which produced no other Trees, but thoſe of the Palm- "kind. *Fabianus* ſays that it will not flame, but will, how- "ever, burn; during which, it emits a pleaſant Smell. There "are two Species: The rare Ebony, which is the beſt, grows "to a Tree, whoſe Trunk is without Joints; the Wood "black and ſhining, and very pleaſant to the Sight, in its "native Beauty; the other Species is a Shrub, reſembling the "Cytiſus, and grows in all Parts of *India*."

Ebenus Offic. C. B. Pin. 448. J. B. 1. 394. Jonſ. Dendr. 423. Raii Hiſtor. 2. 1805. *Ebenum ſive Lignum Indicum*, Camel. Syll. 64. EBONY.

I take this Tree, ſays *Dale*, with *Camellus*, to be the true *Indian* Ebony of the Antients: It is a bacciferous or Berry-bearing Tree, with Leaves of the Size of thoſe of the Walnut-tree. *Camellus* makes ſeven Species of Ebony, the firſt of which is the *Ebenus Æthiopica*, laſt deſcribed under that Title.

The Part in Uſe is the Heart, or medullary Subſtance, of the Wood, which is black, and extremely hard. Ebony, by all the Antients, was accounted good for the Eyes. The Powder of it, ſays *Pliny*, is reported to be a Specific for the Eyes; and the Wood, triturated with Paſſum, to cure Dimneſs of Sight. *Zacutus Luſit.* ſays it is of Service in flatulent Convulſions. Ebony, as *Dioſcorides* ſays, has an exterſive Virtue in cleanſing the Pupil of the Eye, from whatever darkens the Sight; and is good for inveterate Rheums and Puſtules in the Eyes: If it be uſed inſtead of a Stone in Triturations for preparing of Collyria, theſe Medicines will have the better Effect. An excellent Ingredient in Collyria is prepar'd of the Duſt or Shavings of Ebony, macerated a Day and a Night

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in *Chian* Wine, and then carefully triturated: Some, after Trituration, paſs it through a Sierce, and ſo uſe it; and ſome again put Water inſtead of Wine. They burn it, alſo, in a crude, or unbak'd, earthen Pot, till it be reduced to Coals, and waſh it in the manner of burnt Lead: Thus prepared, it is effectual in dry and ſcurfy Ophthalmies. *Dioſcorides, Lib.* 1. *Cap.* 129.

Another Species of the Ebony is the

Alcoa arbor Populnea fronde, tota argentea, quinque capſularis, ſeu Ebenus, viridis ex Inſula S. Helenæ, ubi ab Anglis illic degentibus, BLACK-WOOD AND EBONY, *i. e. Lignum Nigrum, & Ebenus nominatur*, Raii Hiſt. 3. 520.

Mr. *Ray* was of Opinion, that this is the genuine Ebony of the *Indians*. It is diſputed, at preſent, what was the Ebony of the Antients; ſome taking it for a Species of Palm-tree, others of Guaiacum, others of Cytiſus: But there are two Species of Wood found in the Shops of Joiners, and other Mechanics; one imported from the *Eaſt Indies*, as *Helbigius* obſerves, which is that here meant; the other is of a ſiliquous or Pod-bearing Tree of *America*, as we are informed by that very learned Botaniſt Sir *Hans Sloane*; which being of no Uſe in Medicine, we ſhall ſay no more concerning it. *Dale.*

EBISCUS. A Name for the ALTHÆA, which ſee. *Blancard.*

EBRIECATUM. A Term us'd by *Paracelſus*, to expreſs the partial Loſs or Depravation of Reaſon, as it happens during Drunkenneſs.

Ebriecatum Cœleſte, in the ſame Author, ſeems to import ſuch a divine Enthuſiaſm, or Inſpiration, as the *Sibyls* among the Antients boaſted of, and, among the Moderns, the *French* Prophets, and many other religious Sects. *Paracelſus* himſelf, as it ſhould ſeem, pretended to be under ſome ſuch Influence. But it is paying Heaven a very indifferent Compliment, to attribute unintelligible Nonſenſe, ſuch as a Perſon utters when drunk or mad, to divine Inſpiration.

EBRIETAS, Drunkenneſs.

Among the Aphoriſms of *Hippocrates*, there is one, 5 *Aph.* 5. which reſpects Ebriety, and is thus expreſs'd: "If a drunken "Perſon loſe his Voice on a ſudden, he dies in Convulſions, "unleſs a Fever ſeizes him, or his Voice returns at the going "off of the drunken Fit." Here *Galen* obſerves, "that it "is uſual with *Hippocrates* to call thoſe who labour under a "*Carus*, by the Name of ἄφωνοι, "mute, or depriv'd of "Voice." But a *Carus*, *Galen* ſays, is a ſudden Inſenſibi- "lity and Immobility of the whole Body; which Diſpoſition "is, by *Hippocrates*, uſually denominated from one of its "moſt remarkable Symptoms. He names no particular Time "for the Solution of the drunken Diſorder, becauſe none can "be aſſign'd, ſince all are not circumſcribed by the ſame "Meaſure: Some recover their Senſes the next Day, others "the Night following, and ſome not till the third Day, in "proportion to the Quantity and Strength of the Wine "(*Liquor*), and the Nature of the Perſon who drinks it; for "as the ſame Meats require different Times for Digeſtion in "different Bodies, ſo it is with Drink. We ought, there- "fore, to be perfectly acquainted with the Nature of the "Perſon, or obſerve the Time when he comes to himſelf; "and if, at that Term, he is free from a Fever, and has not "recover'd his Speech, he will die in Convulſions."

Though Sleep, ſays *Proſper Alpinus*, in Drunkenneſs, as ſome are of Opinion, can neither be abſolutely approv'd, nor condemn'd, yet we have known ſeveral drunken Perſons, who, after continuing a Day and a Night in a profound Sleep, never more revived. *Proſper Alpinus de Præſag. Vit. & Mort.*

See ALCOHOL.

EBRON,

EBRON, Paradiſe, in the Phraſe of *Paracelſus*; that is, the Place inhabited by our firſt Parents.

EBSEMECH. *Langius*, in his *Harmonia Chymica*, uſes this Word to expreſs Quickſilver, ſublim'd from *Cambar*, perhaps meaning *Cinnabar*.

EBULLITIO, Ebullition. This is, properly, a violent Degree of Boiling, till the Liquor bubbles. But the Chymiſts apply it, analogically, to the Bubbling of any Fluid during Effervescence or Fermentation.

EBULUS. A Name for the *Sambucus Humilis*, Dwarf Elder. See SAMBUCUS.

EBUR, Ivory. See ELEPHAS.

ECAPATLI. A Name for the *Senna Orientalis*; *fruticoſa*; *Saphera dicta*.

ECBOLICA, from ἐκβάλλω, to caſt out. Forcing Medicines, which forward Delivery; or Medicines which cauſe Abortion.

ECBRASMATA, ἐκβρέσματα· from ἐκβρέχω, to caſt out, as the Sea does the Wreck of a Ship; or from βράζω, to be very hot. Fiery Puſtules breaking out on the Surface of the Body. *Galen. Paulus Ægineta. Virgil* calls theſe *Ardentes Papulæ*, *Georg.* 3. *V.* 564. and repreſents them as the Effects of wearing Cloths made of the Wool of Sheep, that dy'd of a Murrain he there deſcribes.

ECBYRSOMATA, ἐκβυρσώματα· from βύρσα, a Skin. Eminences or Protuberances of the Bones at the Joints, which appear thro' the Skin. *Galen.*

ECCATHARTICA, from καθαίρω, to purge. According to *Gorræus*, Eccathartics are Remedies, which, apply'd to the Skin, open the Pores: But, in general, they are underſtood to be Deobſtruents; but ſometimes imply expectorating Medicines; and, at others, ſimply, Purgatives.

ECCHYLOMA, ἐκχύλωμα· from χυλὸς, Juice. An Extract. *Ecchyloſis* implies Extraction, or the making an Extract.

ECCHYMATA, ἐκχύματα· from ἐκχύω, to pour out. The ſame as ECBRASMATA.

ECCHYMOSIS, or ECCHYMOMA, ἐκχύμωσις, or ἐκχύμωμα· from ἐκχύω, to pour out; or, perhaps, from ἄ, without; and χυμὸς, Juice, or Humour. A Diſorder of the ſuperficial Parts of the Body, which happens, when by a Contuſion the capillary Veſſels are broken, and their contain'd Fluids extravaſated; which, ſtagnating, change the natural Colour of the Part, to brown, livid, or black. The Ætiology of an *Ecchymoſis*, and its Diſtinction from a Sugillation, is ſpecify'd under the Article CONTUSA, which ſee.

ECCLISIS, ἔκκλισις· from ἐκκλίνω, to bend, or turn aſide. In *Hippocrates*, *Lib. de Articulis*, it imports a Receſſion of a Bone from its proper Situation; that is, A Luxation.

ECCOPE, ἐκκοπὴ· from κόπτω, to cut; *Exciſion*, or Cutting out; properly of a Bone in a fractur'd Skull. *Galen.*

ECCOPEUS, ἐκκοπεὺς· of the ſame Derivation with the preceding Word. A chirurgical Inſtrument us'd by the Antients for the ſame Purpoſes, as the modern Surgeons employ a Lenticular, or Raſpatory. It was a Knife for cutting out Bones, particularly of the Head; and for raſping or ſcraping down morbid Eminences.

ECCOPROTICA; from κόπρος, Dung. Mild Cathartics, whoſe Operation extends no farther than the inteſtinal Tube, and whoſe Contents only they evacuate.

ECCRINOLOGICA; from ἐκκρίνω, to ſecrete, or ſeparate: That Part of Medicine which relates to the Doctrine of Excretions, or the Diſcharge of Excrements out of the Body.

ECCRISIS, ἔκκρισις. An Excretion of excrementitious or morbid Matter, by any of the Emunctories, as it happens in a perfect *Criſis*. The Matter, thus excreted, is, alſo, ſometimes call'd by that Name.

ECDORA, ἐκδορὰ· from δέρω, to excoriate; Excoriation in general; and, particularly, of the Urethra, in *P. Ammannus*.

ECDORIOS, ἐκδόριος· of the ſame Derivation as the preceding Word. An Epithet for cauſtic or eſcharotic Medicines, which have the Power of excoriating the Parts, to which they are apply'd.

ECHECOLLON, ἐχέκολλον· from κόλλα, Glue. A glutinous, tenacious, and adheſive Topic, or external Medicine.

ECHEL. The Sun. *Laurentius Ventura*, *de Ratione conficiendi Lap. Philoſoph.*

ECHELION, ἐχέλιον. The Name of a certain Plant. The Word occurs in *Nicolaus Myrepſus*, *Sect.* 8. *C.* 56. But it is not known what Plant he means, unleſs it be, as *Fuchſius* conjectures, the *Echium*.

ECHINEIS, ἐχινηὶς. The Fiſh call'd REMORA, or Sea-Lampry. See REMORA.

ECHETROSIS, ἐχέτρωσις. The Name by which *Hippocrates* calls the white Bryony, in his Treatiſe *de Natura Muliebri*, and in the firſt Book *de Morbis Mulierum*.

ECHIDNA, ἔχιδνα. The Viper. See VIPERA.

ECHINIDES, ἐχινίδες in *Hippocrates*, ſeem to be a ſmall Kind of Sea-hedghogs; of which he makes frequent Uſe in his Treatiſes on the Nature and Diſeaſes of Women; or elſe Sea-thiſtles, call'd by him (*Lib.* περὶ γυναικ. φυσ.) τείβολοι θαλάσσιοι, and much us'd in Purgations of the Womb. The ſame in *Athenæus* are called ἐχῖνοι, and ἐχινόπεδες, from their being thick-ſet with Prickles, like the *Echinus*, or Hedghog. This Water-thiſtle is of a cold and aſtringent Quality, and, therefore, effectual in Inflammations and Defluxions, *Galen. Lib.* 8. *Simpl. Med.* The ἐχῖνος is, alſo, an Herb, *Lib.* 6. *Med. Simpl.* called, alſo, ἔχινος· and, by the *Latins*, *Ocymum aquaticum*; whoſe Fruit is a Repellent, and a Drier, and, conſequently, accommodated to Defluxions. The Body of the Sea, as well as the Land Echinus, is of an exterſive and digeſtive Quality. *Cornarius*, for ἐχινίδες, in *Hippocrates*, reads κιρσίδες, and expounds it of the Fruit of the Lentiſk-tree. *Calvus* renders it, *Quernos erinaceos*, "Oaken Hedghogs;" perhaps becauſe ἐχῖνοι, in *Heſychius*, are ſaid to be δρυῶν τὶ κύτταροι, "the Cups of Acorns." So in *Lib.* περὶ γυναικ. φυσ. for ἐχίνου *Cornarius* read φύλλου, "(the Leaves) of the Lentiſk-"tree:" ἐχῖνος in *Heſychius*, is alſo the Fruit of the Plane-tree, and a Kind of Pomegranate: ἐχῖνος, alſo, in *Hippocrates* ſignifies a great wide-mouth'd Pot. There are ſeveral other Significations of the Word in Grammarians, which would be ſuperfluous in this Place.

ECHINATE SEEDS; of *Echinus*, a Hedghog; ſuch Seeds of Plants as are prickly and rough.

ECHINOMELOCACTOS. A Name for the *Melocactos Indiæ Occidentalis*; and for the *Melocactos*; *Americana*; *minor*.

ECHINOPHTHALMIA; from ἐχῖνος, a Hedghog; and ὀφθαλμία, an Inflammation of the Eye. An Inflammation of thoſe Parts of the Eye-lids, which are beſet with Hairs.

ECHINOPHORA.

The Characters are;

The Calyx conſiſts of one quinquefid ſtellated Leaf, including the Pedicle of the Umbella: The Fruit conſiſts of one echinated or prickly Capſula, containing one long Seed.

Boerhaave mentions but one Species of this Plant; which is,

Echinophora; Paſtinacæ folio. *T.* 656. *Paſtinaca*, *Echinophora*, *Apula*, & *ſcandix*. Col. 1. 101. *Paſtinaca*, *ſylveſtris*, *anguſtifolia*, *fructu echinato*. C. B. P. 151. ECHINOPHORA WITH A PARSNIP-LEAF.

Boerh. Ind. alt. Vol. 1. *p.* 64.

I don't find any medicinal Virtues attributed to this Plant.

ECHINOPODA *Cretenſibus*. J. B. *Echinopoda frutex Creticus*. Park. *Geniſta-ſpartium ſpinoſum Aphyllon alterum*, *tribus aculeis ſemper junctis*, *floribus luteis*, C. B. *An Scorpius ſecundus*, Cluſii?

This ſmall thorny Buſh grows up with many thorny green Sprigs and Branches, ſet cloſe together, having always three Prickles, or Thorns, growing together; and is ſeldom ſeen to have any Leaves there, becauſe they fall away ſo quickly (*Alpinus* ſaith it never beareth any). The Flowers hereof grow at the Tops of the Branches in great Plenty, (but *Alpinus* denies it, and ſays, it bears but very few) are yellow, whereof the Bees never taſte, ſtanding in whitiſh-green Huſks, a little hoary all over, and theſe are ſucceeded by ſmall Pods, with very ſmall Seeds in them. This is very tender to keep, not enduring any cold Place, Summer or Winter.

It not only grows in *Crete*, but in the Iſland of *Chios*, and all over *Greece*.

ECHINOPUS.

The Characters are;

It has the Appearance of a Thiſtle; the Leaves grow in alternate Order: The Floſcules conſiſt of one ſmall fiſtulous Leaf, divided into five Segments, which are rolled outwards; theſe grow on the Top of the Ovary, within its downy Crown; and are collected into one ſpherical, echinated, or prickly Head, without a common Calyx, or Crown, to ſurround them. The Ovary ariſes out of a Calyx, conſiſting of many ſmall ſcaly Leaves, and is of a cylindrical Form, adorned with a downy Crown. All theſe Parts being cloſely and denſely compacted, adhere to an Axis, ſo as to form one ſpherical Head.

Boerhaave takes notice of five different Species of this Plant:

1. Echinopus; major, *J. B.* 3. 69. *Tourn. Inſt.* 463. *Boerh. Ind. A.* 135. *Crocodilion*; Offic. *Echinopus*, Chab. 351. *Scabioſa Cardui folio*, *Sphærocephala elatior*, Herm. Cat. 539. *Carduus globoſus*, Ger. 990. Emac. 1151. *Carduus Sphærocephalus latifolius vulgaris*, C. B. 381. Raii Hiſt. 1. 383. Hiſt. Oxon. 3. 163. *Carduus Sphærocephalus ſive globoſus major*, Park. Parad. 332. GLOBE-THISTLE.

This Plant is cultivated in Gardens, and flowers in Summer. The Parts us'd in Medicine are the Root and Seed. The Root, drank, excites a copious Hæmorrhage at the Noſe, and is given with good Succeſs in Diſorders of the Spleen. The Seeds provoke Urine. *Dioſcorides*.

Crocodilion is deſcrib'd by *Dioſcorides* "as having the Appearance of the black Chamæleon, to grow in Woods, to have a long, ſmooth, and ſomewhat broad Root, and an acrimonious Smell, like *Naſturtium*." But what is the Plant here meant, though there be ſeveral in Botanic Writers call'd by that Name, is not eaſy to determine. Some will have it to be the *Carline Thiſtle*, others *Eryngo*; who are both confuted by *Matthiolus*, whoſe Reaſons are here omitted for the ſake of Brevity. *Andreas Lucana*, the Authors of the *Adverſaria*, and *Lobel*, in his *Obſervations*, give the Name of *Crocodilion* to the Plant here exhibited; to whoſe Authority, ſays *Dale*, at preſent, I ſubmit my Opinion, becauſe it ſeems beſt to agree with the Deſcription above given. *Dale*.

2. Echinopus; major; humilior; floribus albidis, *Flor.* 2. 57. *Carduus, Sphærocephalus, latifolius, vulgaris, flore albo*, C. B. P. 381. Var. GREATER DWARF GLOBE-THISTLE, WITH WHITISH FLOWERS.

3. Echinopus; major; flore candido, ſtaminibus in medio cœruleis, *T.* 463. *Carduus, Sphærocephalus, latifolius, vulgaris, flore ſtaminibus in medio cœruleis*, C. B. P. 381. Var.

4. Echinopus; folio acanthi aculeati tenuiter laciniato; flore albo, *Boerh. Ind. A.* 135. *Spina alba*, Offic. *Spina alba quibuſdam capite echinato*, J. B. 3. 71. *Acantha Caucas ſive Spina alba*, Chab. 351. *Carduus globoſus acutus*, Ger. Emac. 1151. *Carduus Sphærocephalus acutus minor*, Park. 977. *Carduus Sphærocephalus capitulo longis ſpinis armato*, C. B. 382. Hiſt. Oxon. 3. 163. Raii Hiſt. 1. 383. *Echinopus Creticus capite magno aculeato*, T. Coroll. 34. *Scabioſa acanthoides conglobato capite longis ſpinis munito*, Pluk. Almag. 333. PRICKLY GLOBE-THISTLE. *Dale*.

This Plant is cultivated with us in the Gardens of the Curious, and flowers in Summer. The Root and Seed are uſed in Medicine; the Root is effectual in the Cœliac Paſſion, provokes Urine, and in a Decoction cures the Tooth-ach; the Seeds help Convulſions in Infants, and the Bites of Serpents. *Dioſcorides*.

The *Spina alba* of *Dioſcorides* is deſcrib'd "to have the "Leaf of the white Chamæleon, but narrower and whiter, "and ſomewhat rough and prickly, a Stalk above two Cubits "high, and as big as a Man's Thumb, or bigger, whitiſh, and "hollow, bearing on its Top a prickly Head, like that of the "*Echinus marinus*, but leſs, and of an oblong Figure. The "Flowers are purple, and the Seed like that of the *Cnicus*, "only rounder."

This Plant is alſo controverted, and has exerciſed the Wits of ſome learned Men, and divided them into Parties. *Anguillarius*, and others, aſſert it to be the ſame we have here ſpecify'd, whoſe Opinion ſeems moſt probable, as agreeing beſt with the Deſcription; for which Reaſon we have beſtow'd that Name upon it. *Dale*.

5. Echinopus; minor; annuus; capite magno, *T.* 463. *Carduus, Sphærocephalus, annuus minor*, M. H. R. B. *Scabioſa, Cardui folio annua*, Par. Bat. *Carduus, Sphærocephalus, annuus, Luſitanicus, tenuiter laciniatus*, M. H. 3. 164. *a*. LESSER ANNUAL GLOBE-THISTLE, WITH A LARGE HEAD. *Boerh. Ind. alt. Plant. Vol.* 1.

The *Hiſtoria Plantarum*, attributed to *Boerhaave*, remarks, that theſe Plants are taken little Notice of in Medicine, but are balſamic and glutinous.

ECHINUS is the prickly Head or Cover of the Seed or Top of any Plant; ſo call'd from its Likeneſs to a Hedghog.

ECHINUS, Offic. Jonſ. Exang. 39. Aldrov. de Exang. 403. Bellon. de Aquat. 384. Charlt. Exer. 62. *Echinus marinus*, Liſt. Hiſt. A. A. 169. Mer. Pin. 192. *Echinus major*, Geſn. Aquat. 350. *Echinus Ovarius*, Riolan. 1. 578. *Echinus Ovarius rotularis dictus, ſubflaveſcens, viginti ſtriis, quarum decem e papillis, & aliæ decem e tranſverſis lineolis conflatæ ſunt, interſtitia ſtriarum, punctulis minimis occupantibus*, Lang. Hiſt. Lap. 124. Tab. 35. *Echinus Cidaris milliaris baſi pulvinata; rarioribus & minoribus eminentiis*, Klein. Echinod. 17. Tab. 2. C. D. *Echinus Ovarius ſecundus*, Mort. North. 231. Tab. 10. Fig. 3. *Echinus Ovarius*, Plot. Hiſt. Oxon. 107. Tab. 5. n. 5. Liſt. Hiſt. A. A. 222. Tab. 7. n. 23. *Echinus ex alterâ parte planus, ex alterâ ſubſphæricus purpuraſcens, aculeorum veſtigiis parum eminentibus*, Ejuſd. App. 27. THE SEA HEDGHOG.

It is taken in the main Sea: As to its Virtues, it is friendly and beneficial to the Stomach and Belly, and provokes Urine. The crude Shell, toaſted, is a good Ingredient in Medicines for abſterging the Pſora; and the Aſhes of it, burnt, cleanſe foul Ulcers, and repreſs proud Fleſh. *Dale* from *Dioſcorides*. See ECHINIDES.

ECHINUS OVARIUS, Plot. Hiſt. Oxon. 126. Tab. 5. Fig. 4. Mort. Woodw. Attempt. Tom. 1. P. 11. n. 178. North. 232. Tab. 10. Fig. 5. *Echinometra circinata papillis maximis*, Breyn. Sched. 55. Tab. 1. Fig. 1, 2. *Echinus ſpoliatus a ſpinis ſuis*, Aldrov. Exang. 403. Jonſ. Exang. Aquat. Tab. 12. *Echinites albo cinereus*, Liſt. Hiſt. A. A. 221. Tab. 7. n. 22. *Echinites Ovarius ſubluteus major quinis ſtriis incurvatis è duplici ſerie tranſverſarum lineolarum conflatis, quolibet interſtitium ſtriarum decem ſcutillis, reliquum vero ſpatium innumeris minimis papillis occupantibus*, Lang. Hiſt. Lap. Helv. 123. Tab. 35. F. 1. *Echinites orbiculatus laticlavius medius*, Luid. Lithop. Brit. 45. n. 915. *Echinites cidaris mamillata*, 11. Klein. Echinod. 19. Tab. 7. A. *Iſtrice dimare petrificato*, Scill. le vana Specul. 148. Tab. 24. *An Ovum agrinum*, Boet. de Lap. 347. Laet. de Lap. 109. THE GREAT SEA URCHIN. *Dale*.

The Part in Uſe is the Glandule or Spike, call'd the *Jews-ſtone* of the Shops. See farther of it, with its Virtues, under JUDAICUS LAPIS.

ECHINUS TERRESTRIS. See ERINACEUS.

ECHIS, ἔχις. The Male Viper.

ECHIUM.

The Characters are,

The Calyx is very large, and divided into five long ſlender Segments. The Flower is monopetalous, cylindrical at the Bottom, Funnel-ſhap'd, and inflected; the upper Part extends above the other, in ſuch a manner, as to form a bifid Galea, and a trifid Lip or Beard; it is furniſh'd with five Stamina, which are inflected, and in a manner corniculated; the Seeds are like a Viper's Head.

Boerhaave mentions eleven Species of this Plant; which are,

1. Echium vulgare, *C. B. Pin.* 254. *Raii Hiſt.* 1. 498. *Synop.* 3. 277. *J. B.* 3. 586. *Hiſt. Oxon.* 3. 440. *Tourn. Inſt.* 135. *Boerh. Ind. A.* 194. *Ger. Emac.* 802. *Park. Theat.* 414. *Rupp. Flor. Jen.* 176. *Mer. Pin.* 34. *Buxb.* 100. *Chom.* 100. *Phyt. Brit.* 36. *Echium*, Offic. Chab. 517. Rivin. Irr. M. Dill. Cat. Giſſ. 96. VIPERS BUGLOSS.

The lower Leaves of Vipers Bugloſs are pretty long and large, broadeſt at the End, ſomewhat round-pointed, hairy and rough, almoſt to Prickline's; the Stalk grows to be about a Foot high, or more, round, rough, and prickly, having many ſmaller, narrower, and ſharp-pointed Leaves, growing alternately without Foot-ſtalks. The Flowers grow in Spikes, curl'd inward, like a Scorpion's Tail, and opening gradually; they are large and gaping at the Mouth, the upper Lip being much longer than the lower, of a blue Colour, with ſeveral red Stamina, ſtanding in hairy Calyces, in which grow four rough Seeds, in Shape like Vipers Heads. The Root is thick and brown, not much branch'd, but growing deep in the Earth.

The Leaves are us'd, being eſteem'd to be good for the Biting of Vipers, and other venomous Creatures. *Dioſcorides* ſays, that, if it be held in the Hand, no venomous Creature will come near the Perſon to ſting him for that Day. *Miller's Bot. Off.*

I find nothing related with Certainty concerning the Virtues of this Plant. *Wittenbergius* preſcribes half a Dram of the Powder of the dry'd Root, to be taken in Wine or Beer, for the Epilepſy, and unnatural Heats. *Ray* from *J. Bauhine*. *Dioſcorides* ſays, that it cures Pains in the Loins.

2. Echium; Creticum; latifolium; rubrum, *C. B. P.* 254. *M. H.* 3. 441. BROAD-LEAV'D CANDIA VIPERS BUGLOSS, WITH A RED FLOWER.

3. Echium; Creticum; anguſtifolium; rubrum, *C. B. P.* 254. *M. H.* 3. 441. NARROW-LEAV'D CANDIA VIPERS BUGLOSS, WITH A RED FLOWER.

4. Echium; ſylveſtre; hirſutum; maculatum, *C. B. P.* 254. *M. H.* 3. 440.

5. Echium; majus; & aſperius; flore dilute purpureo, *Bot. Monſp. M. H.* 3. 440. GREAT ROUGH VIPERS BUGLOSS, WITH A FLOWER OF A PALE PURPLE COLOUR.

9. Echium; procumbens; annuum; floſculis atro-rubentibus, *M. H. Blæſ.*

7. Echium, Ægyptiacum; ferox; flore albo, *Boerh. Ind. a.* 194. *Lycopſis*, Offic. Chab. 516. *Lycopſis Ægyptiaca*, C. B. Pin. 255. Park. Theat. 518. Raii Hiſt. 1. 499. *Lycopſis Dioſcoridis quibuſdam*, J. B. 3. 584. *Lycopſis Dioſcoridis & Rauwolfii*, Hiſt. Lugd. App. 28. *Echium Orientale longioribus floribus*, Hiſt. Oxon. 3. 441. *Echium latiſſimo folio, Lycopſis dictum, flore dilutè purpuraſcente*, Herm. Hort. Lugd. Bat. 225. WALL BUGLOSS.

It grows about *Aleppo*, and the Root is uſed in Medicine; which, as *Dioſcorides* ſays, made into a Cataplaſm with Oil, is a Cure for Wounds; and, with *Polenta*, cures an Eryſipelas; triturated, and uſed by way of Unction with Oil, it provokes Sweat.

There is a great Controverſy among Botaniſts about the *Lycopſis*; ſome aſcribing that Name to one Plant, others to another. *Matthiolus, Lacuna, Dalechampius*, and *Caſtor Durantes*, will have it to be the *Cynogloſſum*; and we are told by *Matthiolus*, that *Ruellius* and *Fuchſius* were of the ſame Opinion. But *Ruellius*, upon comparing the Deſcriptions of both Plants, aſſures us, that the *Lycopſis* cannot be the *Cynogloſſum*, as many Herbariſts of his Time would have it to be. *Cordius* takes the *Echium vulgare*; *Dodonæus*, (in the *French* Edition) the *Bugloſſum majus*; *Loniceus*, the *Bugloſſum ſylveſtre*, to be the true *Lycopſis* of *Dioſcorides*. For my part, I am

am of a different Opinion from all the above-mention'd Authors; and am more inclin'd to think the Plant discover'd by *Rauwolfius* to be the genuine *Lycopsis* of *Dioscorides*, than any of the preceding, or that which is exhibited by *C. Bauhine*, under that Name. *Dale.*

8. Echium; majus; & asperius; flore albo, *C. B. P.* 254. *M. H.* 3. 440. GREAT ROUGH VIPERS BUGLOSS, WITH A WHITE FLOWER.

9. Echium; folio ampliſſimo; Luſitanicum, *T.* 135. PORTUGAL VIPERS BUGLOSS, WITH A LARGE LEAF.

10. Echium; foliis anguſtis & villoſis, *T.* 136. *Anchuſa, anguſtis, villoſis, foliis*, Bocc. Muſ. 2. 84. T. 78. VIPERS BUGLOSS, WITH NARROW HAIRY LEAVES.

11. Echium; annuum; folio Lithoſpermi arvenſis; flore cœruleo, parvo, *Micheli. Boerh. Ind. alt. Plant. Vol.* 1. *p.* 194.

Echium Fuchſii, ſive Borrago ſylveſtris. A Name for the BUGLOSSUM SYLVESTRE.

Echium, ſcorpioides, arvenſe. A Name for the *Heliotropium; minus; anguſtifolium; arvenſe; ſeu hirſutum.*

Echium, ſcorpioides, paluſtre. A Name for the *Heliotropium; minus; anguſtifolium; paluſtre; ſeu glabrum.*

ECHOS, ἦχος. A Sound. In *Hippocrates*, this frequently imports what the *Latins* call *Tinnitus Aurium*; and the *Engliſh*, a Ringing of the Ears; a Symptom very frequent in acute Diſtempers.

ECLAMPSIS, ἔκλαμψις, from λάμπω, to ſhine, is a Splendor, Brightneſs, or Effulgence, in 6. *Epid. Sect.* 1. *Aph.* 4. τῶν παίδων ἐκλάμψιες ἅμα ἥβῃ, ἐσιν. ἔστι μεταβολὰς ἰσχυραὶ ἀλλαι. "The Flaſhes of Light, or Scintillations, [a Symptom "of the Epilepſy, and put by *Hippocrates*, as he is generally "underſtood, for the Diſeaſe itſelf] of Children, undergo "Mutations, in ſome Subjects, at the Age of Puberty, and "at other Times." The Word ἐκλάμψιες is by all refer'd to the Epilepſy; and they underſtand by it, the Change which Children undergo at the Age of Puberty, when Nature ſhines forth, and ſparkles with freſh Luſtre, and diſplays itſelf to more Advantage, both with reſpect to Strength and Underſtanding. This ſeems to be the Senſe in which the Author of the *Medicus* underſtood this Sentence, when he ſays, that "the Epilepſy in Children is cured by Nature, ἐκλάμψασα, "*ſhining forth*, and exerting itſelf at the Age of Puberty, "when the natural Heat, by drying up the Cauſes, puts an "End to the Diſeaſe by a Criſis." But, moſt probably, the Word ἐκλάμψιες was intended to ſignify thoſe reſplendent Flaſhes and Sparklings which ſtrike the Eyes of epileptic Patients, and are call'd by *Cœlius Aurelianus*, *Tard. Paſſ. Lib.* 1. *Cap.* 4. *Scintillarum Micæ, & circuli ignei*, "Scintillations; "and fiery Circles." Thus, *Lib.* 7. *Epid. Hippocrates*, deſcribing the Caſe of *Phœnix*, affected with epileptical Symptoms, ſays, that from his Right Eye, τὰ πολλὰ ὥσπερ δεξιὴν ἐκλάμπειν ἐδόκει, "Coruſcations, like Flaſhes of Lightning, fre-"quently ſeem'd to dart forth." The Verb ἐκλάμπω is uſed, *Lib.* 1. *Epid. Sect.* 3. to expreſs the higheſt Degree of a Fever, juſt before and at the Criſis, when it is thoroughly kindled, and ſhines forth and ſparkles in all its Splendor, or exerts itſelf with its utmoſt Violence. In the ſame Senſe we read, *Lib. de priſca Med.* ὀξύταλος ὁ πυρετὸς ἐκλάμπει, "a "moſt acute Fever ſhines forth like a Flame, or ſhews itſelf in "its utmoſt Fury."

ECLECTICA MEDICINA, from ἐκλέγω, to elect. Certain Phyſicians among the Antients, of whom *Archigenes* was one, ſelected from all the other Sects, what appear'd to them the beſt, and moſt rational; hence they were call'd *Eclectics*, and their Medicine was denominated *Eclectic Medicine*. See the PREFACE, *Page* lix. and the Article ARCHIGENES.

ECLECTOS, ἐκλεκτὸς, from λείχω, to lick. A certain Form, in which pectoral Medicines are frequently directed. A Lambitive, Linctus, or *Lohoch*. See LINCTUS.

ECLEGMA is of the ſame Derivation as *Ecleictos*, and imports the ſame Thing. See LINCTUS.

ECLYSIS, ἔκλυσις, from ἐκλύομαι, to be looſen'd, extremely weaken'd or enfeebled, is a general Faintneſs and Feebleneſs of all the Parts of the Body. Thus, 7. *Aph.* 8. αἱ μετ' ἐκλύσιος ἀφωνίαι, is a Loſs of the Voice, attended with an utter Decay of Strength; but ἔκλυσις κοιλίης, *Coac.* is a Looſening of the Belly by a free and copious Diſcharge by Stool.

ECMAGMA, ἔκμαγμα, in *Galen*'s *Exegeſis*, is explain'd a kneaded or work'd Maſs, or the Crocomagma. The Word occurs, *Lib.* περὶ ἀφίξεων.

ECNEPHIAS, ἐκνεφίας, of ἐκ, from, and νέφος, a Cloud, is a ſtormy Wind breaking out of a Cloud; ἐκνεφίας ὄμβρος, in *Galen*'s *Exegeſis*, is a Shower in Sun-ſhine; in *Heſychius*, a Shower breaking out of the Clouds; and ἐκνεφίας πυρετὸς, according to *Galen*, is a Fever, which is at once both humid and igneous, as the Sun breaking out of a Cloud, which has alſo the Epithet of *Ecnephias*.

ECNYPE, ἐκνύπη, in *Galen*'s *Exegeſis*, is expounded by ἐξεπλωμένη, explicated, expanded.

ECPEPIESMENOS, ἐκπεπιεσμένος, from ἐκπιέζω, to depreſs, or preſs outwards. An Epithet for Ulcers with protuberating Lips. *Hippocrates*, *Lib. de Fract.*

ECPHRACTICA, from ἐκ, and φράσσω, to obſtruct. Deobſtruent Medicines.

ECPHRAXIS, ἔκφραξις, of the ſame Derivation as the preceding Word. An Opening of the Pores.

ECPHYAS, ἐκφυὰς, from ἐκ, and φύω, to produce. An Appendix, or Excreſcence. The *Appendicula Vermiformis* is thus call'd by ſome Writers.

ECPHYSESIS, ἐκφύσησις, from ἐκ, and φυσάω, to breathe. A quick Exſpiration or Expulſion of the Air out of the Lungs.

ECPHYSIS, ἔκφυσις, of the ſame Derivation as ECPHYAS. A Proceſs, Apophyſis, or Appendix. It is alſo a Name for the Duodenum, in *Galen*, *de Uſu Part. L.* 5. *C.* 3.

ECPIESMA, ἔκπιεσμα, from ἐκ, and πιέζω, to preſs. A Sort of Fracture of the *Cranium*, when the Bones are much ſhatter'd, and, preſſing inwardly, affect the Membranes of the Brain.

Ecpieſma alſo ſignifies the Maſs remaining after the Juices of Vegetables have been preſs'd out; and, in this Senſe, it is the ſame as *Magma*. It ſometimes farther imports the Juice preſs'd out. In the former Senſe *Dioſcorides* uſes it, *L.* 4. *C.* 160. ſpeaking of *Balanus Myrepſica.*

ECPIESMOS, ἐκπιεσμὸς, of the ſame Derivation as the preceding Word, implies, in general, Expreſſion, or Preſſing out. But a Diſorder of the Eye is call'd *Ecpieſmos*, which conſiſts in a very great Prominence of the entire Globe, thruſt, as it were, almoſt out of the Orbit, by a great Flux of Humours, or Inflammation.

ECPLEROMA, ἔκπλήρωμα, from πληρόω, to fill, in *Hippocrates*'s *Mochlicus*, and *Lib.* περὶ ἀρθρων, are ſmall hard Balls of Leather, or any other Subſtance, adapted to fill up the Cavities of the Arm-pits, while, by Help of the Heels, placed againſt the Balls, and repreſſing the ſame, the luxated *Os Humeri* is reduced into its Place. The Operation is deſcrib'd at large in the before-mention'd Book *de Artic.*

ECPLEXIS, ἔκπληξις, from ἐκπλήσσω, to terrify or aſtoniſh, in 7 *Aph.* 14. is a Stupor, or Stupefaction, deſcrib'd by *Galen*, in his Comment on that Aphoriſm, to be when the Patient lies without Motion, with his Eyes open, like one in a Trance, and neither ſays nor does any thing. Ἔκπληξις, in the *Definitiones Medicæ*, is a Tranſport of Mind (διανοίας ἔκστασις) proceeding from ſome ſudden Perturbation.

ECPNEUMATOSIS, from ἐκ, and πνεῦμα, Breath. The ſame as ECPNOE.

ECPNOE, ἔκπνοὴ, from ἐκ, and πνέω, to breathe. Exſpiration. That Part of Reſpiration in which the Air is expel'd out of the Lungs.

ECPTOMA, ἔκπτωμα, from ἐκπίπτω, to fall out. A Luxation or Diſlocation of a Bone. It alſo implies a Falling off, ſpeaking of corrupted Parts; the Excluſion of the Secundines after the Birth of a Child; a Falling down of the Womb; and a Deſcent of the Omentum, or Inteſtine into the Scrotum.

ECPTOSIS, ἔκπτωσις, the ſame as ECPTOMA.

ECPYCTICA, from πυκάζω, to condenſe. Condenſing or incraſſating Medicines.

ECPYEMA, or ECPYESIS, ἐκπύημα, or ἐκπύησις, from πύον, Pus, or Matter. A Collection of Matter, Vomica, or ſuppurated Abſceſs.

ECREGMA, ἔκρηγμα, from ἐκ, off, and ῥήγνυμι, to break. A Part, Piece, or Segment. Ἐκρήγματα περὶ ὀσφῦν, *Lib.* 7. *Epid.* ſeem to mean Eruptions about the Loins.

ECREXIS, ἔκρηξις, from ῥήγνυμι, to break. A Rupture. It is uſed by *Hippocrates* to expreſs a Rupture or Laceration of the Womb.

ECRYTHMOS, ἔκρυθμος, from ῥυθμὸς, Harmony or Metre. Irregular, diſorderly. It is apply'd to the Pulſe.

ECROE, ἔκροὴ, from ἐκρέω, to flow out. An Efflux, or the Courſe by which any Humour, which requires Purging, is evacuated. Thus ἐκροαὶ, *Lib.* 2. *Epid.* are the Ducts, Paſſages, and Sluices, appointed by Nature, for diſcharging the Humours, and eliminating the morbific Matter. In another Place of the ſame Book, *Hippocrates* uſes the Word ἐκλεγὴ in the ſame Senſe.

ECRUSIS, ἔκρυσις, of the ſame Derivation as ECROE, in *Hippocrates*, *Lib.* περὶ ἑπταμήνου, is an Efflux of the Semen not mature enough to be call'd an Abortion, as having not receiv'd the Conformation of a Fœtus. "In theſe Days, [the firſt-"and ſeventh] he ſays, happen Multitudes of Abortions; but "ſuch as theſe are call'd *Ecruſis*, ἐκρύσεις, Effluxes, and not-"Abortions." *Ariſtotle* alſo, in his Hiſtory of Animals, *Lib.* 7. *Cap.* 3. tells us, that Miſcarriages, under ſeven Days, are call'd ἐκρύσεις, *Effluxes*; above theſe, and under forty Days, they are call'd ἐκβασμοὶ, Abortions.

ECSARCOMA, ἐκσάρκωμα, from σὰρξ, Fleſh. A fleſhy Excreſcence.

ECSTASIS, ἔκστασις, from ἐξίσταμαι, to be out of one's Senſes. It imports, in *Hippocrates*, a Loſs of the Senſes, or Delirium.

ECSTRO-

ECSTROPHIUS, ἐκστρέπτος, from ἐκστρέφω, to invert or turn out. An Epithet for any Medicine, which makes the blind or latent Piles appear externally, that proper Applications may be made to them.

ECTASIS, ἔκτασις, from τείνω, to extend. An Extenſion of the Skin, the Reverſe to Corrugation or Wrinkling.

ECTEXIS, ἔκτηξις, from τήκω, to liquefy or conſume. A Colliquation of the Solids, or Emaciation.

ECTHELYNSIS, ἐκθήλυνσις, from ἐκθηλύνω, to render effeminate. Softneſs or Emaſculation. It is applied to the Skin and Fleſh, when lax and ſoft; or to the Legs, when in the ſame State; or to Bandages, when not ſufficiently tight.

ECTHLIMMA, ἔκθλιμμα, from ἐκθλίβω, to daſh or preſs out or againſt. In *Hippocrates de Fract.* it implies Exulcerations on the Surface of the Skin, made by Colliſion or Compreſſion.

ECTHLIPSIS, ἔκθλιψις, of the ſame Derivation as ECTHLIMMA. Eliſion or Expreſſion. Ἔκθλιψις ἔξω σφοδρὴ ὀμμάτων, *in Coac.* 218. "a vehement Expreſſion of the Eyes "outward," oppoſed to κοιλότης, "Hollowneſs;" and is accounted, as well as that, a bad Sign. In the ſame Sentence occurs λαμπεδόνες ἔκθλιψις, "an Expreſſion or Eliſion of a "Splendor," ſpoken of the ſame ſwelled and prominent Eyes, when they dart forth reſplendent Rays and Coruſcations of Light hither and thither, like Eyes which are continually rolling. This is alſo condemned as a bad Symptom. Some Copies for ἔκθλιψις read ἔκλαμψις· which, tho' it be frequently ſpoken of reſplendent Eyes, has not the Force and Significancy of ἔκθλιψις in this Place.

ECTHYMA, ἔκθυμα, from ἐκθύω, to break out. A Puſtle, or cutaneous Eruption.

ECTILLOTICA, from ἐκτίλλω, to pull out. Medicines which conſume callous Tubercles and Corns; or which aſſiſt in pulling off ſuperfluous Hairs from any Part. *Blancard.*

ECTOMÉ, ἐκτομή, from ἐκ, out, and τέμνω, to cut. Exciſion.

ECTOMIAS, ἐκτομίας, or ἔκτομας. A caſtrated Animal.

ECTOMON, ἔκτομον. Black Hellebore. *Galen.*

ECTRAPELOGASTROS, ἐκλεπτελόγαστρος, from ἐκλεπτέλεος, indecent, filthy, and γάστηρ, the Belly. An Epithet for a Perſon, whoſe Belly is of an unnatural and enormous Size.

ECTREPSIS, ἔκτρεψις, from ἐκτρέπω, to divert, or turn aſide, in *Hippoc. κατ' ἰητρ.* is an Inclination or Converſion to one Side, as *Galen* explains it in his *Comment.* This Word ἔκτρεψις is ſubſtituted by *Foeſius*, and *C. Hoffman*, for ἔκλειψις, which is read in all the Copies, becauſe, ſay they, it is plain from the Context in the fore-mentioned Place, that the Thing intended by the Word is a Change in the Poſture of the Body for its more convenient Treatment, by an Inclination of it to one Side; which is moſt fitly expreſſed by this Term ECTREPSIS.

ECTRIMMA, ἔκτριμμα, from ἐκτρίβω, of τρίβω, to rub, is an Attrition or Galling. In *Hippocrates, Lib. de Fract.* ἐκτρίμματα are Exulcerations of the Skin about the Os Sacrum, contracted by long lying in one Poſture under a Fracture of the Thigh.

ECTRIPSIS, ἔκτριψις, of the ſame Original as the preceding, is expounded by *Galen*, in his *Exegeſis*, by τὴν ἐς τὰ σπλάγχνα ἔσαν παρέλλαξιν, "a Permutation, [a Change of "State] with reſpect to the Viſcera." But *Foeſius* thinks we ſhould read ἔκτρεψις, and, inſtead of *Galen*'s Expoſition above-quoted, ἐς τὰ πλάγια παράλλαξιν, "a Permutation of Sides, "or ſhifting from one Side to another." See ECTREPSIS.

ECTROPE, ἐκτροπή, from ἐκτρέπω, to divert, pervert, or invert, is any Duct, Paſſage, or Drain, by which the Humours are diverted and drawn off. Thus, *Lib.* 2. *Epid. Sect.* 1. ἀποστάσιος, *&c.* "an Apoſtaſis is made by the Veins, Bones, "Nerves, or Skin, ἢ ἐκτροπέων ἑτέρων, or by other Ways "or Paſſages." See ECROE. *Ectrope*, in *Paulus*, *Lib.* 3. *Cap.* 22. is an Affection of the lower Eyelid, the ſame as ECTROPIUM, which ſee.

ECTROPIUM.

When the Eyelids are ſo inverted or retracted, that their interior red Skin becomes prominent, and the Eye cannot be ſufficiently covered by them, the Diſorder is, by the *Greeks*, called *Ectropium*, from the Word ἐκτρέπω, to invert. Hence it may properly enough be called an Inverſion, or an Everſion, of the Eyelids. When this Misfortune happens in the ſuperior Eyelid, in conſequence of its Reſemblance to a Hare's Eyes, it is by the *Greeks* called *Lagoptbalmus*, or Hare's Eye. But ſome, juſtly enough, diſtinguiſh between the *Ectropium* and the *Lagopthalmus*, the latter of which is, when the ſuperior Eyelid is not inverted, but only, like a Hare's Eye, retracted by any Cauſe, in ſuch a manner, that it cannot ſufficiently cover the Eye. The like Misfortune is alſo frequently obſerved in the inferior Eyelid, without any Degree of Inverſion, though few have mentioned this Symptom. Hence it may juſtly be eſteemed a Species of *Ectropium*. Sometimes this Diſorder appears ſingle, and by itſelf, whilſt at other times 'tis complicated with Inflammations of the Eyes, Sarcomas, that Species of Diſorder called Encanthis, or an encyſted Tumor. When the *Ectropium* or *Lagopthalmus* appear ſingle, and by themſelves, they generally ariſe either from bad Cicatrices form'd after fortuitous Wounds, the Extirpation of Tubercles, an Exulceration or Burning of the Eyelids, or from ſuch a preternatural Increaſe of the internal Fleſh, after ſevere and frequent Inflammations, as is ſufficient to invert the Eyelid; various melancholy Inſtances of which I myſelf, ſays *Heiſter*, have ſeen. Theſe Diſorders may alſo be produced by too ſtrong aſtringent ophthalmic Medicines, which powerfully conſtrict and condenſe the Skin.

The Cure of theſe Diſorders is often pretty difficult, and conſiſts principally in a ſufficient Reduction of the conſtricted or retracted Skin of the Eyelid. If, therefore, the Diſeaſe is not inveterate, the Cure may be attempted by moiſtening and emollient Medicines. The Cicatrix and adjacent Skin are alſo to be ſoftened and enlarged by proper Meaſures. For this Reaſon it is highly expedient, when this Diſorder begins, carefully to foment the Eyelids and Cicatrices, either with the Steam of warm Milk, or Water, or with the Oil of ſweet Almonds, or of Olives, Mucilage of Quince-ſeeds, Hares Suet, Ointment of Marſhmallows, or any other emollient Ointment or Plaiſter. At the ſame time, if the ſuperior Eyelid is affected, it is often to be drawn downwards; whereas, if the inferior is in the like Condition, it is to be drawn upwards. It is alſo proper, eſpecially in the Night-time, to apply Plaiſters and Compreſſes, drawing the Eyelids together; which Practice is to be carefully continued, till they are reduced to their natural State and Condition. But, if theſe Meaſures ſhould prove ineffectual, we are to have recourſe to manual Operation, which ſometimes produces happy Effects, tho', at other times, the Diſorder is abſolutely incurable, in conſequence of the violent Contraction of the Skin.

The moſt commodious Method of performing the Operation is, at a ſmall Diſtance from the Eyelaſhes, to make an Inciſion in Form of a Creſcent, whoſe Horns, in the ſuperior Eyelid, are to be made downwards, and in the inferior upwards; as in *Tab.* 36. *Fig.* 26. *Lett.* A A: So that, by means of the Inciſion, the Skin may be ſufficiently lengthened. When the Eyelid wants little of its natural Largeneſs, one Inciſion is ſometimes ſufficient for a due Relaxation of the Skin, as in *Fig.* 26. But, when it deviates very much from its due Dimenſions, two or three of theſe Inciſions muſt be made parallel, and at a very ſmall Diſtance from each other. Then, ſtretching the Skin ſufficiently, the gaping Wounds are to be filled with ſmall Portions of dry Lint, which muſt be ſecured with a proper Compreſs and Bandage. At the ſubſequent Dreſſings, the Lint muſt be immerſed in ſome proper vulnerary Ointment. By this means a freſh Coalition of the Skin is not only prevented, but alſo new Fleſh is raiſed from the Bottom of the Wound, which gradually fills the Chaſm of the Skin, and conſequently extends and enlarges it. That the Cure may be the more ſpeedily performed, 'tis expedient, by narrow Slips of ſome proper Plaiſter, to draw the ſuperior Eyelid downwards, and the inferior upwards. Theſe Meaſures muſt be perſiſted in, till the Wounds are filled with new Fleſh, and the Eyelid, by that means, ſufficiently enlarged.

If an Inverſion, eſpecially of the inferior Eyelid, ſhould happen, in conſequence of a violent Inflammation producing fungous and luxuriant Fleſh internally, the moſt proper Method of Cure is, by well-choſen Medicines, to allay the Inflammation, and then cautiouſly to conſume and extirpate the luxuriant Fleſh by the *Lapis Infernalis*: But, in this Attempt, the Eye is to be carefully defended; for, when the Cauſes of the Diſorder are removed, it muſt, of courſe, ceaſe, and the Eyelid be reſtored to its natural State. When this Misfortune ariſes from an *Encanthis*, an *Hyperſarcoſis*, a *Sarcoma*, or Excreſcence of Fleſh, as in *Fig.* 27. 28. and 29. theſe are to be removed in the manner directed under their reſpective Articles.

When the Eyelids are immenſely diſtorted and contracted, or when the Diſorder has remained from the Patient's Birth, ſcarce any Meaſures of Relief can prove effectual. Sometimes this Misfortune is produced without any Cicatrice in the inferior Eyelid, eſpecially in old Perſons, by a Debility or relaxed State of the orbicular Muſcle. In this Caſe, the Operation is of no manner of Uſe, and greater Benefit is to be expected from Liquors, Spirits, Balſams, and Ointments, of a corroborating and ſtrengthening Nature. But of the longer ſtanding the Diſorder is, the more it is Proof, both againſt the Operation, and the Influence of Medicines; for the Eyelids, in this Caſe, gradually habituate themſelves to Diſtortion, and ſo loſe their natural Figure, that they can never be reſtored to their former State and Condition. *Keckius*, in the Year 1733. publiſhed a learned Diſſertation on the *Ectropium*, to which the Curious may have recourſe for their Satisfaction. *Heiſter. Chirurg.*

Galen, in the *Definit. Med.* makes *Ectropium* an Everſion of the Eyelids in general. But, according to *Paulus Ægineta*, *L.* 6. *C.* 12. the *Ectropium* is peculiar to the inferior Eyelid; whereas the ſame Diſorder in the ſuperior he calls *Lagophthalmus*.

ECTROSIS, ἔκτρωσις, from ἐκτιτρώσκω, to miſcarry. A Miſcarriage.

ECTROTICA,

ECTROTICA, of the same Derivation as the preceding Word. Medicines which cause Abortion, or a Miscarriage.

ECTYLOTICA. A Word coin'd by *Horstius*, from τύλος, a Callus, to express Remedies appropriated to consume Callosities.

ECZEMA, from ζέω, to boil, or be very hot. A Pustule which is hot and painful. *Eczesma* is the same, and is esteemed the better Reading by *Puchsius*, in his Notes on *Nicolaus Myrepsus*, *Sect.* 10. *C.* 64.

EDELPHUS, in the Jargon of *Paracelsus*, imports a Person who makes Prognostics from the Nature of the Elements.

EDENTULUS. Without Teeth.

EDERA QUINQUEFOLIA. A Name for the *Vitis*; *quinquefolia*, *Canadensis scandens*.

EDERA TRIFOLIA. A Name for the *Toxicodendron*; *triphyllum*; *glabrum*.

EDES, EDETZ, *Aurum Elimpius*, that is, as *Castellus* expounds it, Amber. *Rulandus*.

EDESSENUM *Pelarium*. The Name of a Collyrium in *Aetius*, *Tetr.* 2. *Serm.* 3. *Cap.* 101. reckoned among the *Collyria Monohemera*, or such as cure in one Day, [see MONOEMEROS] and called, among others, *Pelarium*, from its feculent Composition. [See PELARION]. It is supposed to have its Epithet *Edessenum* from the City *Edessa*, where it was probably invented, or much used. It is prepar'd in the following manner:

Take of Gum Tragacanth, Gum Arabic, Acacia, Amylum, Sarcocolla, each two Drams; Opium, four Drams; Ceruss, eight Drams; Cadmia, sixteen Drams: Make them into a Composition with Water.

EDIC, EDICH, or EDIR. Iron. *Rulandus*.

EDULCORATIO. Sweetening with Sugar or Honey. But, in Chymistry, it imports the rendering Preparations sweet, that is, mild, by depriving them of their Acrimony. This is generally done by repeated Affusions of Water.

EFFERVESCENTIA. Effervescence strictly signifies a slight Degree of Ebullition in Liquors exposed to a due Degree of Heat. But it is applied by the Chymists to that Ebullition, which is excited when two Substances of different Natures, an Alcali, for Example, and an Acid, are mixed together. If the Effervescence produces a Heat in the Substances so mixed, it is called a hot Effervescence; but, if no Heat is excited, it is a cold Effervescence. It is, by former Writers in Chymistry, confounded with Fermentation. But *Boerhaave* has very judiciously limited the Signification of Fermentation to that intestine Motion of Vegetable Juices, which produces a vinous Liquor, or Vinegar; and calls all other Ebullitions, produced by the Mixture of Bodies, Effervescences.

EFFIDES. Cerus. *Rulandus*.

EFFILA. Freckles. *Rulandus*.

EFFLORATIO. The same as EXANTHEMA, which see.

EFFLORESCENTIA. The same as EXANTHEMA.

EFFLUVIA. Minute Particles which exhale from Bodies. Thus the Particles perpetually flowing from odoriferous Bodies, and which affect the Organs subservient to the Smell, are call'd *Effluvia*. Thus, also, the minute Particles, which are conveyed through the Skin in Transpiration, are called *Effluvia*. By these Effluvia from morbid Bodies, Contagion is propagated.

EFFRACTURA. A Species of Fracture of the *Cranium*, when the Bone is broken, and much depressed, by a violent Blow. *Paré*.

EGELO. A Name for the *Cytisus*; *Alpinus*; *angustifolius*; *flore racemoso*, *pendulo*, *longiori*.

EGESTIO. Excretion, generally used relative to Evacuations by Stool.

EGOITAS. A Term coin'd by *Helmont*, to express the Light of the Understanding, by which we contemplate, or reflect internally.

EJACULANTIA, or EJACULATORIA VASA, are the Vessels which receive the seminal Matter elaborated in the Testicles, and convey it to the Penis. These are the *Epididymis*, the *Vasa Deferentia*, the *Vesiculæ Seminales*, and *Prostatæ*.

EIDECHTHES, εἰδέχθες, from εἶδος, Shape or Aspect, and ἔχθος, Hatred or Enmity, is apply'd to whatever has an odious or deformed Aspect, as it is expounded by *Hesychius*. In *Hippocrates*, *Lib.* 2. περὶ γυναικ. it is an Epithet for a putrefy'd Egg, and for Things of an abominable Smell, in Opposition to εὐωδέα, "Things of a grateful Odour."

EIDOS, εἶδος, a Form, a Kind, is used, by *Hippocrates*, in various Senses. *Galen*, 2 *Com. Lib. de Nat. Hum.* expounds τὰ εἴδη, by τὰς τῦ σώματος φύσεις, "the Natures of Body," consisting of a Mixture of the four Qualities. In the Additions to the same Book, we are taught, "that a Physician ought to "hold himself provided for all Diseases, Natures [εἴδεσι], Seasons, and Ages." He uses the Word in the same Sense, for Nature, Form, or Constitution, in several other Places of that Treatise; and, 2 *Epid. Sect.* 2. expresses the same by ἰδέα. In *Lib. de salubri Vict.* τὰ εἴδη are explained, in *Galen*, by ἀι τῦ σώματος ἕξεις καὶ ἰδέαι, "the Habits and Forms of Body." Thus again, *Lib.* 2. *Prorrhet.* τὰ εἴδεα τῶν ἀνθρώπων, are the particular Nature, Habit, or Constitution of every Person, tho' even acquir'd by Custom, and Length of Time; which sort of Habit is called by *Galen* ἕξις, (*Scheses*). Εἶδος also signifies the same as *Res*, "Thing"; or Ingredients in a Mixture, as (*Lib.* 2. περὶ γυναικ.) ὄξος σὺν τοῖς εἴδεσι ἢ ὄινον, (mix) "Vinegar, or Wine with these Things;" that is, with Juniper-berries, Sage, and other Ingredients. *Galen*, *Com.* 1. & 2. *in Lib.* καὶ ἰητρ. explains εἴδη, as signifying "Kinds." And by τὰ εἴδεα τῶν πυρετῶν, 3 *Epid.* we are to understand the different Kinds or Species of Fevers.

EJECTIO, in Medicine, implies much the same as EXCRETIO.

EILAMIDES, εἰλαμίδες, from εἰλέω, to involve. The Meninges, or Membranes of the Brain, the *Pia Mater*, and DURA MATER.

EILEMA, εἴλημα, from εἰλέω, to form Convolutions. In *Hippocrates*, *Lib. de Flatibus*, this Word imports painful Circumvolutions of the Intestines, occasioned by Flatulences. It also, sometimes, imports an *Involucrum*, or Covering.

EILEON, εἰλεὸν, from εἰλέω, to wind. A Name of the Intestine, call'd the *Ileum*, according to *Gorræus*; but I don't recollect, that this Word occurs in any *Greek* Author.

EILEOS, εἶλεος, from εἰλέω, to form Convolutions. The Iliac Passion. See ILIACA PASSIO.

EILÆTHERES, εἰλαθηρὲς, from ἥλιος, the Sun, and θέρω, to heat. Heated by the Sun. *Hippocrates*, *de Morbis*, *Lib.* 2.

EIRION, εἰρίον, Wool. See *Lana*.

EIROS, εἶρος. This was explained by some, according to *Erotian*, the Circumscription of a scirrhous Tumor of the Spleen; and, by others, a bad Affection of the whole Body. But *Erotian* disapproves of both these Explications, and says it imports a Species of Fever in *Hippocrates*: The Word, however, does not occur in the Works of *Hippocrates*, now extant.

EISBOLE, εἰσβολὴ, from εἰς, into, and βάλλω, to cast. It signifies, strictly, an Injection: But is used to express the Access or Attack of a Distemper, or of a particular Paroxysm. It also, sometimes, implies an Irruption.

EISPNOE, εἰσπνοὴ, from εἰς, in, and πνέω, to breathe. Inspiration.

ELA-CALLI. The Name of a Shrub which grows in sandy Soils, in some Parts of the *East-Indies*, about twice as high as a Man. The Bark of its Root triturated, and drank in Water in which Rice has been boil'd or wash'd, is recommended against the Dropsy, and is said to be a very mild Medicine; which Mr. *Ray* justly wonders at, since the Plant is full of an acrid and caustic Milk; which, however, when exhibited with Butter in which it has been boil'd, proves a mild and gentle Purgative. The Leaves, heated at the Fire, provoke Urine; and the Steam or Vapour of a Decoction of them contributes to alleviate and remove Pains in any Part of the Body: The Juice, express'd from the Leaves either warm'd or a little toasted, cures Pains of the Ears, if put into them. It also removes Specks of the Eyes, if dropt into them; and contributes to the Cure of Swellings in the Pudenda, if the Body is wash'd with it. *Raii Hist. Plant.*

ELÆAGNUS CORDI. A Name for the GALE; *Frutex Odoratus Septemtrionalium*, which see. But, according to *Miller*, the *Elæagnus* is a Name of the *Oleaster*, Wild Olive.

ELÆOMELI, ἐλαιόμελι, from ἔλαιον, Oil, and μέλι, Honey.

In *Palmyra*, a Country of *Syria*, the *Elæomeli*, which is an Oil thicker than Honey, and of a sweet Taste, flows from the Trunk of a Tree. Two Cyathi of this Oil, drank with one Hemina of Water, evacuate crude and bilious Humours by Stool. But the Patients who use this Medicine, are seiz'd with a Torpor, and Privation of Strength; there is, however, no Necessity for being terrified at these Symptoms. In this Situation, they are to be carefully rous'd, and not allow'd to fall into a deep or profound Sleep.

This Oil is also prepar'd of the Fat of the oleaginous Buds of the Tree; and, of this Kind, that is best which is old, thick, pinguious, and not turbid. It is of a heating Nature, and, if apply'd by way of Ointment to the Eyes, contributes to the Cure of Dimness of Sight. It also contributes to the Cure of the Leprosy, and Pains of the Nerves. *Dioscor. L.* 1. *C.* 37.

Hermolaus Barbarus, in his Commentaries on the first Book of *Dioscorides*, thinks, that the ἐλαιόμελι is the same with the Manna, mentioned in Scripture; and only differs from it in this, that the ἐλαιόμελι is used in Medicine; whereas the Manna might be eaten for common Food.

ELÆON, ἔλαιον, Oil. See OLEUM.

ELÆOSACCHARUM, from ἔλαιον, Oil, and σάκχαρ, Sugar. A Term in Pharmacy, importing, a Mixture of distil'd Oils with Sugar.

After

After the Chemiſts had ſhewn Phyſicians, that the Spirit reſiding in eſſential Oils contained, in a ſmall Volume, all the particular Virtues of the Plant; Phyſicians prudently reflected, that they had hence an excellent Inſtrument in their Art; but that the unctuous Tenacity of the Oil ſtill prevented its being uſed with Safety; becauſe theſe Oils being extremely ſharp, and, by their Tenacity, remaining fixed to one Part, occaſioned Inflammations. Hence they began to think of a Method of rendering theſe Oils miſcible with Water, and uniformly conveying their entire Virtues to the Places intended; and this they found might be effected by the Means of Sugar.

Grind, therefore, an Ounce of dry Loaf-ſugar to an impalpable Powder, in a Glaſs Mortar, with a Glaſs Peſtle; and, by degrees, add thereto a Dram of any eſſential Oil, or half a Dram, if the Oil be very tenacious; and continue rubbing them together, till all the Oil is perfectly mix'd, and drank into the Sugar. The Oil, in this Operation, uſually diffuſes a Fragrancy to a great Diſtance; the Operation, therefore, ſhould be perform'd quick, and the Mortar be covered with a Cloth, ſurrounding the Peſtle. If a little freſh White of an Egg be added in the Grinding, and mix'd in with the Sugar and Oil, the Oil thus becomes more eaſily miſcible; but the Mixture will not thus keep ſo long, without turning rancid. And thus Sugar, which is a very pure Soap, or a true eſſential oily Salt, divides the glutinous Tenacity of the Oil, interpoſes itſelf betwixt the Principles thereof, unites them cloſely with itſelf, and makes an extemporaneous Soap; which may thus be commodiouſly diluted with Water, for medicinal Uſes: For though this Mixture is not ſo perfect as in an actual Soap, or true eſſential Salt, yet it ſuffices for Uſe; nor is there Reaſon to apprehend any Inconvenience from the Sugar, in this Preparation; for Sugar is unjuſtly ſaid to be unwholſome, as there are no Proofs extant thereof. On the contrary, it is a wonderful Salt, that perfectly mixes with Water, and ferments therewith into Wine: And yet, what is exceedingly ſurpriſing, it appears oleaginous, and perfectly inflammable in the Fire; whence it is known to conſiſt of Oil and Salt.

If theſe Elæoſacchara be well prepared, dried, and put into clean Glaſſes, exactly cloſed with Glaſs Stoppers, they may long be preſerved perfect; and, in this manner, very effectual Medicines might be commodiouſly carried from Place to Place; and, upon occaſion, be directly uſed on a Journey, by adding a little of the Elæoſaccharum to a Glaſs of Wine. An Elæoſaccharum might, alſo, be made, by grinding an eſſential Oil with a fix'd alcaline Salt; by which means, alſo, a kind of Soap is obtained: But Alcalis thus deſtroy the grateful Properties of the eſſential Oils, and change their natural Taſtes and Odours. Such Elæoſacchara, alſo, would preſently reſolve in the Air, and thence be eaſily ſpoil'd. By the former Method, therefore, Phyſicians may prepare an excellent Medicine, rich in Virtues: For if the Elæoſaccharum of Mint be diſſolv'd in diſtil'd Mint-water, then ſtrengthened with the Addition of the Spirit of Mint, and the Mixture ſweetened with the Syrup of the ſame Plant, the whole Virtues of Mint may thus be obtained.

REMARKS.

Hence appears the ſaponaceous Property of Sugar, which fits it for breaking and dividing the Bodies of Oils, as if they were in a manner fermented with Sugar; and, at the ſame time, it does not diminiſh, but rather improves, the particular Virtue of theſe Oils: Whence the Antients, who were unacquainted with Sugar, mixed Oils with Honey, for the like Purpoſes. And hence we learn the Virtue of Sugar in the Body; where, being diluted with the natural Juices, it affords a ſaponaceous Lixivium, which, by the Force of Circulation, diſſolves unctuous and viſcous Subſtances: Whence it does not generate, but diſſolves Phlegm; nor does it increaſe the Bile, nor turn into it, but opens, thins, and divides it; though, by diſſolving the Oils too much, it may occaſion Leanneſs; as, by attenuating too much, it produces a Weakneſs and Relaxation of the Parts, and is, therefore, often found prejudicial in the Rickets, and the Scurvy. In the mean time, this Production of Nature and Art is, as we above obſerved, very ſingular and extraordinary; for it entirely diſſolves in Water, melts in Fire, ſhoots like a perfect Salt into perfect Cryſtals, is manifeſtly fix'd, and, if diſtil'd in cloſe Veſſels, affords an acid penetrating Spirit: In an open Fire it becomes wholly inflammable; it is fermentable, and thus convertible into ſtrong Wine, which will afford Alcohol; and, laſtly, it may be converted into ſharp Vinegar. If it be call'd a Salt, we may aſk how it comes to be inflammable in the Fire? if an Oil, how it comes to cryſtallize? if an eſſential Salt, how it comes to ferment? So that, perhaps, in all Nature there is no other Body found, in which all theſe Properties conſpire. *Boerhaave's Chemiſtry.*

ELAMBICATIO. A Method of analyſing mineral Waters, to inveſtigate their Virtues. *Caſtellus* from *Fallopius.*

ELANULA. Alum, as hard as Iron.

ELAPHICON. A Name for the ELAPHOBOSCUM, in *Oribaſius, Medic. Lib.* 1.

ELAPHOBOSCUM, from ἔλαφος, a Stag, and βόσκω, to feed. A Name for the *Siſarum Germanorum.*

ELAPHOS, ἔλαφος. The Stag. See CERVUS.

ELAPHOSCORODON. The ſame as OPHIOSCORODON.

ELAPS, ἔλαψ. The Name of a Serpent, mentioned by *Aetius, Tetrab. 4. Serm. 1. Cap.* 32. the Bite of which induces ſomething like the Iliac Paſſion. It is cur'd, he ſays, by the uſual Remedies for theſe venomous Bites, and principally by thoſe which eaſe Gripings, and provoke Urine.

ELAQUIR. Red Vitriol. *Rulandus.*

ELAS MARIS. Burnt Lead. *Johnſon.*

ELASIS, ἔλασις, from ἐλαύνω, to impel, or repel. See ELASTICITAS.

ELASMA, ἔλασμα, from ἐλαύνω, to impel. A Lamina, or Plate, of any Kind. But it is uſed to expreſs a Clyſter-pipe.

ELASTICITAS. Elaſticity. A Word much in Uſe among the modern Philoſophers, coin'd from ἐλαύνω, to impel, or repel. It imports that Power or Property in natural Bodies, by which they reſtore themſelves ſpontaneouſly to the Figure and Dimenſions, which they had loſt by the Action of ſome other Body applied to them. Thus a Spring, or a Bow, when bent, reſtore themſelves, by their Elaſticity, to the Form they obtain'd before any external Force was applied to them. And thus the Arteries, after being diſtended by the Impulſe of the Blood, contract, and reſtore themſelves, by their Elaſticity, to the ſame Form and Dimenſions they had before thus diſtended. Whoever is more inclined to inquire into the Cauſes of Elaſticity, than to cure Diſeaſes, may find a great deal upon this Subject, in the Writings of the *Carteſian* and *Newtonian* Philoſophers; in which, however, they will find very little Satisfaction, without a ſufficient Share of philoſophical Enthuſiaſm. See STRICTURA, and LAXITAS.

ELATE, ἐλάτη. The Fir. See ABIES.

ELATER. The ſame as ELASTICITAS.

ELATERION, ἐλατήριον, from ἐλαύνω, to exagitate. This imports, in general, any purging Medicine; and particularly, thoſe which operate with Violence. Hence the Name was transferred to the wild Cucumber, and the Preparations thereof. In the Writings of *Hippocrates*, Elaterium is frequently mention'd as an external Application of a digeſtive and detergent Nature. Its internal Uſe is, however, in all Probability, recommended, when the τὰ ἐλατήρια, or agitating Medicines, are mention'd. In the fifth Section of the ſixth Book of his Epidemics, for purging Children, he preſcribes the Milk of a Goat, or Woman, who hath eaten Elaterium or wild Cucumber. Where the Word Elaterium ſeems to imply white Hellebore, which the Goats eat.

The Characters of the Elaterium, or wild Cucumber, are,

The Leaves and Branches are without Tendrils; the Fruit prickly, and burſts, and flies abroad with a great elaſtic Force; the Juice is violent in Operation. *Boerhaave Ind. alt. Part.* 2. *p.* 77.

Elaterium Officinarum; Cucumis; ſylveſtris; aſininus dictus. *Boerh. Ind. A.* 2. 77. *Cucumis agreſtis*, Offic. *Cucumis agreſtis, ſive aſininus.* Park. Theat. 161. *Cucumis ſylveſtris, ſive aſininus.* J. B. 2. 248. Chab. 135. Raii Hiſt. 1. 647. *Cucumis aſininus.* Ger. 766. Emac. 912. *Cucumis ſylveſtris aſininus dictus.* C. B. Pin. 314. Tourn. Inſt. 104. Elem. Bot. 87. Hiſt. Oxon. 2. 33. *Cucumis Elaterium Rivini.* Rupp. Flor. Jen. 41. *Guareiva-oba, ſive Cucumis aſininus.* Piſ. 264. WILD CUCUMBER.

This Plant has ſeveral rough Stalks, which creep upon the Ground, whoſe Leaves are ſet on long hairy Foot-ſtalks; they are pretty large, greeniſh above, and hoary underneath, ſomewhat triangular, and indented about the Edges, rough and hairy. The Flowers grow on the Rudiment of the Fruit, being much ſmaller than the Flowers of the Garden Cucumbers, of one ſingle pale-yellow Leaf, cut into five Parts. The Fruit is as big as a large Olive, cover'd all over with harmleſs Prickles, and full of a pulpy Juice, containing ſeveral brown oval Seeds, which, when ripe, upon handling, or gently preſſing, will ſquirt forth at the End with great Violence. It is ſown in Gardens, flowering in *July*, and the Fruit is ripe in *September*.

This is a very ſtrong purging Plant, the Fæcula of whoſe expreſs'd Juice is the Elaterium of the Shops, and is one of the ſtrongeſt Cathartics we have, carrying off ſerous watery Humours, both upwards and downwards, with great Violence; whereby it is of ſingular Uſe in the Dropſy, when the Bowels are not decay'd. It likewiſe forcibly brings down the Catamenia, and even deſtroys the Fœtus in the Womb, and is therefore only fit to be adminiſtred by a ſkilful Hand. *Miller's Bot. Off. Dioſcorides* and *Aetius.*

As for the Antiquity of Elaterium, *Theophraſtus* informs us, that he ſaw ſome of it two hundred Years old, in the Cuſtody of a Phyſician of indiſputable Veracity; and that its Virtues were, as yet, entire: So that the Elaterium muſt have

been known long before the Days of *Hippocrates*, since *Theophraſtus Ereſius* flouriſhed very ſoon after him.

Dioſcorides, in the 155th Chapter of his 4th Book, gives us the following Directions for preparing Elaterium: "Chuſe "ſuch Cucumbers as, when touch'd, burſt, as it were, and "diſcharge their contain'd Juices. Theſe are to be kept for "a Night, and, next Day, put into a wide Sieve, laid over "the Mouth of a Veſſel. Then, with a Knife, whoſe Edge "is turned upwards, divide the Cucumbers, one by one, and "expreſs the Juice, through the Sieve, into the Veſſel plac'd "under it; then ſqueeze the fleſhy Part of the Cucumbers, "adhering to the Sieve, that it may be alſo paſs'd through it. "Pour this expreſs'd Juice into another Bowl, or Baſon. "The Parings, or Shreds, are to be laid in the Sieve, waſh'd "with pure Water, expreſs'd, and thrown away. The Juice, "receiv'd into the Baſon, is to be agitated and mix'd; after "which it is to be cover'd with Linen Cloth, and expos'd "to the Sun. But, when it coagulates, the Water floating "above it, together with the frothy Concretions on its Sur-"face, are to be pour'd off; and this is to be done ſo long "as any Water appears. After this Water, if any ſhould "remain, is diligently pour'd off, Drop by Drop, the Sedi-"ment itſelf is to be triturated in a Mortar, and reduced to "ſmall Cakes. Some, in order more expeditiouſly to expreſs "a large Quantity of Juice from the Elaterium, ſift Aſhes "upon the Ground; then, making a ſmall Hollow in the "Middle, they cover it with a threefold Linen Cloth, into "which they pour the Elaterium, with its Moiſture; and, "when this latter is drain'd off, they make up the former, "when dry, into Cakes, in the manner already directed. "Others, in order to waſh this Maſs, uſe Sea-water, mix'd "with freſh Water; while others, in the laſt Waſhing, uſe "Mulſum. That Elaterium is counted beſt, which is white, "moderately moiſt, ſmooth, bitter to the Taſte, and eaſily "kindled upon the Application of a lighted Candle to it. "But that which is porraceous, rough, of a turbid Appear-"ance, heavy, and full of recrementitious Parts, is bad. "Some, in order to procure a due Degree of Smoothneſs and "Whiteneſs to the Elaterium, mix Amylum with it. "It retains its purgative Quality for ten Years after it is "made. The largeſt Doſe is an Obolus [about twelve Grains], "and the ſmalleſt a Semi-obolus [or ſix Grains], and to "Children two Areola [or four Grains]; for larger Doſes of "it are dangerous. This Medicine evacuates Bile and Phlegm, "both by Vomit and Stool. Thoſe who labour under a Diſ-"ficulty of Breathing, receive great Advantages from the "Evacuations made by this Medicine. If the Intention is "to evacuate by Stool, adding a double Quantity of Salt, "and as much Muſtard as is ſufficient to colour the Maſs, "form Pills of the Bulk of a bitter Vetch; after the Exhi-"bition of which, let the Patient drink a Glaſs of warm "Water. But if the Intention is to evacuate by Vomit, "the Elaterium is to be diluted in Water, in which a Feather "is to be immers'd, and the Parts lying under the Tongue are "carefully to be anointed with it: But if the Patient is "difficult to vomit, the Elaterium may be diſſolv'd in Oil, or "the Ointment of Orris; but he is not to be ſuffered to ſleep. "If too ſtrong and violent Evacuations by Stool ſhould be pro-"duced by this Medicine, we muſt frequently exhibit to the "Patient Wine mix'd with Oil; for the Patients are free from "this Symptom, when Vomitings are brought on. When, "on the contrary, too frequent Vomitings are excited by "the Elaterium, cold Water, Polenta [ἄλφιτον], and Oxy-"crate, Apples, and Subſtances capable of ſtrengthening the "Stomach, are to be exhibited. Elaterium, us'd by way of "Peſſary, provokes the Menſes, and kills the Fœtus. When "injected into the Noſtrils, with Milk, it removes the Epi-"lepſy, and long-continued Pains of the Head. In Quinſeys "it is ſucceſsfully us'd, as an Ointment, in Conjunction with "old Oil, Honey, or the Gall of a Bull. A Dram of the "Root of Garden Cucumber, reduced to Powder, and exhi-"bited in Hydromel, excites Vomiting. But if the Patient, "after Supper, deſires to vomit gently, and without Uneaſi-"neſs, two Oboli [or twenty-four Grains] will prove a ſuffi-"cient Doſe."

Elaterium is one of the moſt violent and draſtic Hydragogues of any in the Materia Medica. It is a Species of wild Cucumber, differing principally from thoſe of the Garden Kind by the Smallneſs of its Fruit, being no larger than a *Spaniſh* Olive, which it reſembles pretty much in Figure. When it is ripe, it falls from its Stalk, upon the gentleſt Touch, or the ſlighteſt Gale of Wind; and throws its Seeds, with Violence, a conſiderable Way round it. It is called Elaterium; but this Name is now principally given to an Extract which the Antients prepared from it.

In order to render the Preparations of this Plant more mild and gentle, Mr. *Boulduc* has been at incredible Pains; and, in the Courſe of his Experiments, found, that this Plant has ſcarcely any ſulphureous Principles; becauſe Brandy and Spirit of Wine hardly act upon it at all, and becauſe the Principles they draw from it are only Salts, diſſolv'd and carried off, not by the Sulphur of theſe Menſtruums, but by the Phlegm they always retain. The wild Cucumber, then, contains only ſaline Parts, in which its Virtues conſiſt: And, as it is a ſtrong Purgative, we may, from this Circumſtance conclude, that Salts are as properly Purgatives as Sulphurs, though this Quality is not ſo generally aſcrib'd to the former as to the latter.

Mr. *Boulduc* was convinced, that Juices obtained by Expreſſion have leſs Virtue than Decoctions and Infuſions. In the former of theſe Proceſſes, we leave, as uſeleſs, a Maſs, which is not, in reality, ſo; and which contains Principles of the Plant, the Union of which with the others would be neceſſary, either to correct or augment their Qualities. By the latter of theſe Proceſſes, that is, Decoction or Infuſion, every Principle is equally drawn out; and even though the compound Subſtance ſhould be peccant with reſpect to Strength and Acrimony, the Principles united and mix'd, drawn from it, are ſuch as were moſt eaſily diſengag'd, and, at the ſame time, moſt mild and gentle.

After trying an incredible Number of Experiments, ſometimes on all, and ſometimes only on ſome of the Parts of this Plant, Mr. *Boulduc*, at laſt, fell upon a Method of preparing, from the dry Root, a ſimple Decoction, or Extract, preferable to what can be obtained from all the other Parts, and which he has found, from Experience, to be a very mild, and, at the ſame time, a very powerful Hydragogue. The Doſe is from twenty-four to thirty Grains, in Conjunction with a few Grains of Mechoacan or Rhubarb, and Salt of Wormwood, incorporated with Extract of Juniper.

As the Cucumbers, produced by this Plant, do not ripen all at once, they muſt be gathered immediately before the preciſe Moment of their perfect Maturity, becauſe ſoon after they would fall, and ſpread their Seeds, which would render them uſeleſs. Mr. *Boulduc* thinks, that the Method of preparing the Elaterium us'd among the Antients was highly difficult; and poſitively affirms, that it was loſt a long time ago. This Art he has attempted to recover, and, by preſerving every thing that was eſſential and important in it, has found the means of preparing an Elaterium, not only as good, but apparently better than that of the Antients; ſince ſix Grains of it purge very well, and without Violence. It muſt be exhibited in Conjunction with ſome Powder of Rhubarb, and ſome alcaline Salt.

But the moſt ſimple Elaterium is that which he made, when he imagin'd, that moſt of the good vegetable Remedies come, as it were, prepar'd from the Hands of Nature. Accordingly he dried the wild Cucumber very well, and reduc'd it, together with its Seeds, to a Powder, which he found a very good Hydragogue. *Hiſt. de l'Acad. Royale, An.* 1719. *p.* 54.

The Root, and inſpiſſated Juice, of the *Cucumis ſylveſtris, or aſininus*, are the principal, if not the only Parts of the Plant us'd in Medicine. This Juice, prepared in a certain Manner, is call'd Elaterium, of which there are two Kinds mentioned by the Antients; that, for Inſtance, of *Theophraſtus*, which is green, and, in all Probability, made of the inner Subſtance of the Pulp of the Fruit; and that of *Dioſcorides*, made only of the thin and wateriſh Parts, which is white, and which, for that Reaſon, is accounted beſt by him and *Meſue*. The Green is not half ſo ſtrong in promoting Evacuations, either by Vomit, or Stool, as the White, of which one Grain, diſſolved in any Liquor, operates very powerfully on People of weak Conſtitutions. This Medicine powerfully eliminates aqueous and viſcid Humours collected about the Joints. The Juice of the Root produces the ſame Effect, and is, therefore, properly uſed in Clyſters, or laid as a Plaiſter, or Poultice, to the Parts affected, in ſciatic Pains. This Juice, alſo, when boil'd with Wormwood, in Water and Oil, cures inveterate Megrims, if the Temples are frequently bath'd with it, and ſome of the Leaves and Roots beaten together, and applied to them as a Poultice. When this Juice of the Root is injected into the Noſtrils with Milk, it is ſaid to produce the ſame Effect. When mix'd with Goats Dung, and applied, by way of Plaiſter, to any hard Tumors or Swellings, it is ſaid powerfully to reſolve them. According to *Meſue*, the Juice, not only of the Fruit, but alſo of the Root, or a Decoction of either, if drank, affords Relief in the Dropſy, the Jaundice, and all Obſtructions of the Liver and Spleen. *Dioſcorides*, for the Cure of a Dropſy, orders half a Pound of the Roots to be bruis'd, and put into three quarters of a Pint of ſtrong Wine, three Ounces of which are to be exhibited for three or four Days, till the Dropſy is remov'd, which it carries off without creating any Uneaſineſs to the Stomach. According to *Caſtor Durantes*, a few Grains of Elaterium, mix'd with Conſerve of Roſes, will produce the ſame Effect. The Powder of the Root, mix'd with Honey, removes the Marks of Sugillation. The Root boil'd, or ſteep'd, in Vinegar, cures the Morphew, and removes Specks and Freckles. The Powder of the dry'd Root, according to *Dioſcorides*, cleanſes the Skin of the Face from all Scurf, and the unſeemly Remains of Scars. The Juice of the Leaves, dropt into the Ears, removes Pains, Noiſe, and Deafneſs. A Decoction of the Root removes Tooth-achs, if the Teeth are waſh'd with it. The

Powder

Powder of the Root, mix'd with Honey, deterges, incarns, and cicatrizes old Ulcers and Sores. In the Shops, the Root of the wild Cucumber is generally us'd as a Succedaneum, for that of the Coloquintida or Bitter Apple; since the latter is not so easily obtain'd as the former.

The present Method of preparing Elaterium is thus given by *Lemery*. Elaterium is, properly, the Juice of the wild Cucumber, as soon as it is extracted from it; but, as it is uncapable of being preserv'd, for any considerable time, in this State, it is, therefore, to be prepar'd in the following manner:

Bruise ripe wild Cucumbers, in a Stone or Marble Mortar. Let them digest cold, for four or five Hours: Then heat them, and squeeze their Juice through a Linen Cloth. This Juice is to be put into a glass or earthen Vessel, and the Moisture evaporated, till what remains assumes the Consistence of an Extract, or becomes capable of being form'd into Pills: And this is what they call Elaterium. Some suffer this Juice to continue in a State of Rest for some time, and separate from it the Fæces, which they dry in the Sun, and which they call Elaterium. Others throw away the Fæces, and evaporate the depurated Juice, to the Consistence of an Extract: But I am of Opinion, that the Qualities of the wild Cucumber are more effectually obtain'd without this Depuration.

Elaterium powerfully evacuates, by Stool, thick Phlegm, melancholy and serous Humours. It is us'd in Apoplexies, Lethargies, Dropsies, and hypochondriac Melancholy. The Dose is from three Grains to half a Scruple. The Cucumbers, when bruis'd, are left in Digestion some Hours, that their viscid Parts being rarefied, the Juice may be more easily extracted from them.

Mr. *Soame* relates, from *Reusner's Observations*, publish'd by *Velschius*, that an Empiric us'd to give two Pills, of the Size of Chiches, compos'd of wheaten Meal, and the Juice of the wild Cucumber, to Patients labouring under a Dropsy, which was succeeded by a plentiful Purgation of Water. After this, with a Lotion for the Legs, made of a Decoction of the Stalks, he drew the Matter downwards, and then exhibited another like Dose of his Pills; and, by this means perform'd very many Cures. *Raii Hist. Plant. p.* 648.

In exhibiting Elaterium, great Caution should be us'd with respect to the Dose; for half a Scruple is too much; seldom more is exhibited at once than five Grains.

ELATINE MAS. A Name for the *Linaria*; *hirsuto folio, subrotundo*; *flore ex herbido flavescente.*

ELATINE FŒMINA. A Name for the *Linaria*; *hirsuto folio, acuminato, in Basi auriculato*; *flore luteo minimo.*

ELATINUM OLEUM, ἐλάτινον ἔλαιον. The Name of an Oil describ'd by *Dioscorides*, *Lib. 7. Cap.* 54.

ELECTIO. Election. This is, by some Writers, made a Part of Pharmacy, which consists in a Knowledge of the various Simples which compose the Materia Medica; and directs the Choice of Drugs, distinguishing the good from the bad. For an Account of the Doctrine of Elective Purges, see CATHARTICA.

ELECTRODES, ἠλεκτρώδης, from ἤλεκτρον, Amber. An Epithet for Stools which shine like Amber, in *Hippocrates*, *Epid.* 4.

ELECTRUM, ἤλεκτρον. Amber. See AMBRA.

ELECTUARIUM. An Electuary. A Form in which both officinal and extemporaneous Medicines are frequently made. It may be considered as a Number of Boles united together; but is made somewhat softer, by an Addition of a due Proportion of Preserves or Syrups. When the Consistence is very soft, it is call'd sometimes by the Name of Opiata. The Rules laid down for the Composition of a Bolus, may be justly applied to an Electuary.

The principal Considerations in prescribing officinal Electuaries are, that such Things only be put together, as will not, by any opposite Qualities, destroy one another, or lose their natural Properties, by lying long in this manner; and, likewise, that the Whole be of a Consistence that will hold Ingredients of different Gravities in equal Mixture. Thus, in all Electuaries where the testaceous Powders are ordered, or any thing of an alcaline Nature, no Acids, or any thing that will turn acid, ought to be mix'd, because they will ferment; their Weight, likewise, requires a thicker Consistence than can be well given by a Syrup, to hold them in Suspension; and, for offending in both these respects, the College have now expung'd the *Confectio de Hyacintho*, which consisted chiefly of testaceous and heavy Ingredients, and was made up with Syrup of Lemons. Things which are most liable to grow worse in this Form, chiefly affect the astringent Compositions; because that Roughness, or Asperity, in which their Astringency consists, by long lying in Moisture, grows softer, and, consequently, less efficacious in any such Intentions. This Change is very manifest, in comparing old Diascordium, or Conserve of red Roses, with new.

Extemporaneous Electuaries differ, principally, from the officinal, in that the latter are confin'd to such things as will, for a long time, keep together; whereas the former may be ventured upon with Materials, which will not long remain without Change, provided they agree in Intention; as Conserves, with the testaceous Powders, Preparations of Steel, and the like, will continue together long enough for present Use, but will not lie many Days without fermenting and spoiling.

Yet, in the Prescription of extemporaneous Electuaries, there is some Care requisite, even for their convenient keeping a few Days fit for taking: Thus, if the lighter Species be made into an Electuary with Syrups only, it will, in a Day's time, grow too dry for taking, without fresh Moisture; which Inconvenience is often experienced with the Bark; and the Necessity of having enough of it in a tolerable Dose, is the only Excuse for so ordering it; for a sufficient Quantity of any Conserve, to preserve a Consistence, which is the only way in this Case, would increase a Dose of the Bark, in Electuary, to an unreasonable Bulk. The testaceous and heavier Powders, likewise, make an Electuary very disagreeable, without the Interposition of some Conserves: So that a Conserve seems a necessary Ingredient in this Form, only as a Vehicle to other Things; and the Consistence requisite in these Cases is, that a Dose may be taken up with the Point of a Knife, or any such thing; and not to be too hard to swallow without Trouble.

But, next to a due Consistence, a very material Circumstance in an Electuary is, that it be uniformly smooth, and as sightly as possible; for the Manner of taking it makes an Error in either of these respects very offensive. As Conserves, therefore, are, generally, in themselves, coarse enough to be knotty in the Mouth, and subject to grow more so, by candying in keeping; whenever they are ordered in an Electuary, they should previously be pulp'd through a Sieve, with a sufficient Quantity of some Syrup, suitable to the Intention: If any thing should be, likewise, added, which, by beating or rubbing on a Tile, cannot easily be rendered thus smooth, as Sperma Ceti, or the like, it may be thus drove through a Sieve with the Conserve, and the Species, or any dry Substances, put in afterwards. In regard to Colour, also, which is no slight Circumstance as to the taking of a Medicine, a good deal may be contrived to Advantage without Prejudice to its Efficacies. On this Account the Æthiops, or crude Antimony, if possible, should be kept out of this Form, because they give such an unsightly Black; and, for this Reason likewise, most Preparations of Steel make very unsightly Electuaries. But besides avoiding, as much as possible, those things which give ill Colours; others, which have not this Inconvenience, may yet be improved by suitable Mixture: Thus the Cinnabar, which of itself is an agreeable Red, loses its Beauty in any of the brown or green Conserves; but is improved by that of Roses or Hips, and especially if they be a little acidulated with Spirit of Sulphur. The Conserve of Roses is, likewise, so much improved in its Colour with every Acid, that, whenever it comes into an Electuary, it should be thus managed, unless the Intention absolutely forbids it, which can hardly be in any Instance, so as to make it hurtful.

There are some other Circumstances, likewise, in the Prescription of an Electuary, worth Consideration, and, particularly, with relation to the Efficacies of some things: Thus the stronger Cathartics ought not to be trusted in this Form; because the Manner of taking does not sufficiently ascertain the Dose. And the same Objection, likewise, holds against Opiates. The most powerful Alexipharmics, also, which are commonly given in acute Cases, are not conveniently thus trusted; so that an Electuary is hardly ever met with in a Fever. The Dearness of some things may be a farther Bar to this, as the Prices usual for an Electuary will by no means answer them: Thus Bezoar, or the Gascon's Powder, would make a reasonable Demand look like Extortion, which is what common Prudence would avoid.

The Quantity of an extemporaneous Electuary should seldom exceed three Ounces; and thereabout will an Ounce and half of Conserve, two Drams of the common Powders, with a sufficient Quantity of Syrup, amount to; though Cinnabar, and some of the heavier things, will not take up so much. And if this Rule, as to Quantity, be not observ'd by the Prescriber, but more be ordered, it is a common thing for the Compounder to do it for him by proportioning the Materials suitable thereto; as by making up half, or a third, of what is directed.

ELECTUARIUM AMARUM: *The Bitter Electuary.*

Take of Epithymum, half an Ounce; of Angelica-roots, three Drams; of Gentian, Zedoary and Acorus, of each two Drams; of Cinnamon, one Dram and a half; of Cloves, Mace, Nutmegs, and Saffron, of each one Dram; of Aloes, six Ounces; and with the Syrups of Citron and Orange-peels, and Sugar, each a sufficient Quantity, make them into an Electuary.

ELECTUARIUM DE BACCIS LAURI:

Electuary of Bay-berries.

Take of the Leaves of dried Rue, ten Drams; of the Seeds of Bishops-weed, Cumin, Lovage, Origany, Caraway, wild

wild Carrot, and Parſley, of black and long Pepper, of wild Mint, Calamus Aromaticus, Bay-berries, and Caſtor, each two Drams; of Sagapenum, half an Ounce; of Opopanax, three Drams; of clarified Honey, one Pound and an half: Powder all theſe Ingredients that require it, and make the Whole into an Electuary, by adding the Gums at laſt, after they are well diſſolv'd in White-wine.

This Electuary is much commended for the Uniformity and Efficacy of all its Ingredients, either in the Intentions of a Carminative or Hyſteric, which Purpoſes are advantageouſly enough aimed at by the ſame things in many Inſtances; as there is ſomewhat in them peculiarly aſſiſting to each other. The Gums, as in all Compoſitions of this Make, are to be diſſolv'd in as little White-wine as will ſerve to ſtrain them; and then they are to be mix'd with Honey juſt warm'd; after which the reſt are to be ſifted in, when powder'd. This is very conveniently preſcrib'd, from half a Dram to a Dram, in a Bolus, for any extemporaneous Occaſion, and cannot well be mended by any Additions.

ELECTUARIUM CARYOCOSTINUM. See CARYOCOSTINUM.

ELECTUARIUM DIASPERMATON: *An Electuary of Seeds.*

Take of the greater and leſſer Four cold Seeds, of the Seeds of Aſparagus, Pimpernel, Baſil, Parſley, and Winter-cherries, of each two Drams; of Gromwell, and Juice of Liquorice, each three Drams; of Cinnamon and Mace, each one Dram; of white Sugar diſſolv'd in Water, eight times as much as the Whole: And make into an Electuary. S. A.

ELECTUARIUM EX ELLEBORO:

An Electuary of Hellebore.

Take of the Roots of white Hellebore ſliced, one Pound; of Spring-water, ſix Quarts: Macerate them together for three Days, then boil to the Conſumption of half; ſqueeze out the Liquor by a ſtrong Expreſſion; and to it add three Pounds of Honey, and boil up to a due Conſiſtence.

This Electuary is but the ſame as the *Mel Helleboratum*, which was more proper, it being by no means to be called an Electuary, but only a thick Syrup. Its Doſe is from half an Ounce to an Ounce and an half, or two Ounces.

ELECTUARIUM LENITIVUM: *Lenitive Electuary.*

Take of ſton'd Raiſins, freſh Polypody of the Oak, and the beſt Sena, each two Ounces; of Mercury, one Handful and an half; of Figs, Number twenty; of Maiden-hair, Violet-leaves, and cleans'd Barley, each one Handful; of Damaſk-prunes and Tamarinds, each ſix Drams; of Liquorice, half an Ounce: Boil them together, S. A. in ten Pints of Water, to the Conſumption of a third Part, and ſqueeze out the Liquor by a ſtrong Expreſſion; and in Part of it, while warm, diſſolve the Pulps of Caſſia, Tamarinds, new Prunes, and of Sugar of Violets, each ſix Ounces: In the other Part of the ſtrain'd Liquor melt two Pounds of the fineſt Sugar; and, laſtly, add one Ounce and an half of Sena-leaves in Powder, and of Coriander-ſeeds, powdered, one Ounce to every Pound of the Electuary, ſo that it may be brought into a due Conſiſtence for that Form. S. A.

We ſhall, ſays *Quincy*, offer an Alteration of this Compoſition, which any one may make uſe of at Pleaſure. Take Polypody of the Oak, and French Barley, of each four Ounces; Mercury, and Maiden-hair, of each two Handfuls; Liquorice-root, four Ounces: Boil theſe in a ſufficient Quantity of Water, to two Pounds, or thereabouts; to which add two Pounds of red Sugar, and ſtrain them through a Flannel together hot: Then to this Syrup put the Pulps of Tamarinds, Caſſia, and Prunes, of each ſix Ounces; Powder of Sena, half a Pound; of Aniſe-ſeeds, one Ounce; or, in its room, becauſe the Seeds are difficult to powder fine, of the Oil, one Dram, or ſixty Drops. Great Care muſt be taken, that the Pulps do not burn, or run into Knots, which is to be prevented by having the Fire ſlow, and ſtirring it well during Evaporation to a due Conſiſtence: And when it is high enough, let it be almoſt cold, before the Powders are ſifted in, becauſe they will then mix the ſmoother. Few boil this Medicine up high enough, which makes it fret and ferment, and ſour in hot Weather; and then it gripes, and operates much rougher than is intended: It ought therefore, to be of ſuch a Conſiſtence as will not ſtir by the greateſt Heat, but keep its Form. This gently relaxes the Belly, and, in coſtive Habits, where ſuch things are often wanted, it may rather be taken at any time, to the Quantity of a Nutmeg, than as a Cathartic; but when it is ſo given, the Doſe is from two Drams to one Ounce. A due Conſiſtence gives about one Dram of Sena, in Powder, to every ſix Drams of the Medicine.

ELECTUARIUM PECTORALE: *The Pectoral Electuary.*

Take of the Juice of Liquorice, and of ſweet Almonds, of each half an Ounce; of Pine-leaves, one Ounce; of Hyſſop, Maiden-hair, Florentine Orris, Nettle-ſeeds, and round Birthwort, each one Dram and an half: Seeds of Creſſes and Elecampane-root, of each half a Dram; of Honey, fourteen Ounces: And make into an Electuary.

It is deſign'd for Diſtempers of the Breaſt, to ſoften, cool, and heal the Lungs; but the common Practice hath no Regard to it.

ELECTUARIUM E SASSAFRAS: *Electuary of Saſſafras.*

Take of the beſt-ſcented Saſſafras, two Ounces: of Spring-water, one Quart; boil to the Conſumption of a third Part, adding, towards the latter End, of broken Cinnamon, half an Ounce: When the Liquor is ſtrain'd, boil it again, with one Pound of the fineſt Sugar, to the Conſiſtence of a thick Syrup: And ſtir into it, of the Powder of Saſſafras, one Ounce; of Cinnamon, one Dram; and of Nutmegs, half a Scruple; ſo that it may be made into an Electuary. S. A.

It is a very grateful Medicine to take, and good in all Caſes where Abſorbents and Sweeteners are ordered. Its Doſe is from half a Dram to two Drams, two or three times in a Day.

ELECTUARIUM E SUCCO ROSARUM:

Electuary of the Juice of Roſes.

Take of Sugar, and the Juice of Damaſk-roſes, each one Pound four Ounces; of the three Kinds of Sanders, of each half an Ounce; of Maſtich, three Drams; of Diagrydium, twelve Drams. Let the Sanders be reduced to a Powder, and mix'd with the Diagrydium and Maſtich, after they have been ſeparately powder'd; and then mix'd with the Juice of Roſes and Sugar, boil'd up into a Syrup, while it is warm, ſo as to make them all together into an Electuary.

This is, originally, a Preſcription of *Nicolaus Myrepſus*, and receiv'd by the Auguſtan and College Diſpenſatories exactly alike; but in the new one are rejected Spodium and Camphire, both which were in before, but of no Service to the Medicine.

Medicines in this Form abound in Pharmaceutical Writers. The Curious may conſult *Lemery*'s *Pharmacopée Univerſelle.*

Proſper Alpinus gives a very extraordinary Account of the Effects of an *Indian* Electuary, much in Uſe among the *Egyptians*, call'd *Bernavi.*

The Electuary of *Bernavi* is prepared in thoſe Parts of the *Indies* which lie neareſt to *Egypt*; and though the *Egyptians* receive it thence in large Quantities, they are entirely ignorant of the Ingredients of which it is compos'd; and yet it is a Medicine of uncommon Virtue and Efficacy; for they who take an Ounce of it, firſt become chearful, talk much, ſing Love-ſongs, laugh heartily, and are guilty of ſeveral other Inſtances of Mirth and Foolery. This Turn of Mind continues for about an Hour, after which they become fierce and wrathful; but they do not remain in this State for any conſiderable Time; for they become ſad, melancholy, and dejected to ſuch a degree, that they continually lament and bewail their Fate, till, at laſt, being ſeiz'd with a deep Sleep, they eliminate the offending Matter, and awake in their former State of Health. *Proſper Alpinus de Medicina Ægyptiorum.*

ELELISPHACOS, ἐλελίσφακος. Sage. See SALVIA.

ELEMENTA. The Elements or Principles of which all Bodies are compounded, and into which they are again reſolvable. Philoſophers have not yet agreed what theſe Elements are; neither have they ſaid any thing relative to them, which has not been ſhewn by the Favourers of other Sects, to be falſe and abſurd. As I do not apprehend, that a Diſquiſition on the Elements of Bodies would convey any conſiderable Knowledge relative to the Cure of Diſeaſes, I ſhall enter no farther into this Subject.

ELEMENTATUS. An Adjective us'd by *Paracelſus*, importing exceſſive, either with reſpect to Heat or Cold.

ELEMI GUMMI. The Tree, which produces this Gum, is thus diſtinguiſh'd:

Arbor Braſilienſibus gummi Elemi ſimile fundens, foliis pinnatis, floſculis verticillatis, fructu Olivæ figura & magnitudine, Raii Hiſt. 2. 1546. *Icicariba & illius Reſina Icica*, Piſon. (ed. 1648.) 59. *Icicariba & illius Gummi Icica ſive Elemi*, Ejuſd. (ed. 1658.) 122. *Icicariba Braſilienſibus, cujus Reſina dicitur Icica*, Marcg. 98. *Elemnifera Curaſſavica Arbor*, Parad. Bat. Prod. 332. Pluk. Phytog. 173. *Prunus Javanica Atriplicis foliis Commelini Kakoufa Javanis*, Ejuſd. 218. Hort.

Beaum.

Beaum. 35. *Pruniſera Fago ſimilis Arbor Gummi Elemi fundens, figura & magnitudine Oliveæ ex Inſula Barbadenſi*, Pluk. Almag. 306. *Arbor ex Surinama, ſive Americana, Myrti Laureæ foliis, Elemi Reſinam fundens*, Breyn. Prod. 2. 19. Ind. Med. 47. *Elemi Gummi*, Ejuſd. *Kækuria, Myrobalanus Zeylanica, ex qua Gummi Elemi*, Herm. Muſ. Zeyl. 48. *Kækuriaghaka*, Ejuſd. 52. *Gummi Elemi Officinarum*, C. B. Pin. 504. *Gummi Elemi*, Park. Theat. 1586. Raii Hiſt. 2. 1847. *Elemi*, Mont. Exot. 11. *Elemi Reſina*, J. B. 1. 535. THE GUM ELEMI-TREE.

This is a ſoftiſh, reſinous, eaſily inflammable Gum, of a pale yelloviſh white Colour, of a pleaſant agreeable Smell, eſpecially when melted. It comes to us from the *Spaniſh Weſt Indies* in long roundiſh Cakes, wrapt up in Flags or Leaves.

This Gum is ſeldom given inwardly, but is of great Service outwardly, being uſed frequently in all Kinds of Wounds, but eſpecially thoſe of the Head and Nerves, being mollifying, ripening, and eaſing Pain.

There is an Ointment in the Shops, called *Unguentum e Gummi Elemi*, and, ſometimes, *Linimentum Arcæi*; which takes its Name from this Gum. *Miller's Bot. Off.*

It heats, mollifies, digeſts, reſolves, ripens, eaſes Pain, is ſerviceable in Affections of the Head and Nerves, and Wounds of the ſame; and, in particular, is a Specific for Wounds of the Cranium: It is good for Contuſions of the Joints, and provokes Urine and the Menſes. *Dale* from *Schroder*.

There is contain'd in it an eſſential Salt, invelop'd in a great Quantity of Oil, with a little Phlegm and Earth; it is only uſed externally in Ointments and Plaiſters. *Lemery des Drogues*. See BALSAMUM.

UNGUENTUM E GUMMI ELEMI, *ſive* LINIMENTUM ARCÆI:

Ointment of GUM ELEMI, *or* ARCÆUS's LINIMENT.

Take of Gum Elemi, Turpentine of Fir, of each one Ounce and a half; of old and depurated Mutton-ſuet, two Ounces: Mix them, and make an Ointment. S. A.

This moſt commonly goes by the Name of *Linimentum Arcæi*, from *Arcæus*, its Inventor; who, in a Treatiſe, *de recta Vulnerum Curatione, Lib.* 1. *Cap.* 4. greatly extols this Balſam, as he calls it, particularly in Wounds of the Head; and our Surgeons ſay it digeſts and incarnates much better than the Baſilicon, which is apt to foul a Wound, and generate fungous Fleſh.

ELENGI. The Name of a tall Tree, which grows in *Malabar*; from the Flowers of which, the Inhabitants diſtil a fragrant Water, which is ſaid to be ſerviceable in Melancholy and Fevers.

ELEOSELINUM; from ἕλος, a Fen; and σέλινον, Parſley. A Name for the APIUM, Smallage.

ELEPHANTIASIS, or ELEPHAS; ἐλεφαντίασις, or ἐλέφας. A Species of Leproſy. It is ſo call'd, becauſe it affects the Legs in ſuch a manner, as to make them appear like thoſe of an Elephant. See LEPRA.

ELEPHANTINUM EMPLASTRUM. A Plaiſter deſcrib'd in *Oribaſius*'s *Synopſis*, *L.* 3. There is one, alſo, under this Title, deſcrib'd by *Celſus*, *L.* 5. *C.* 19. *Sect.* 24. which is very different from that of *Oribaſius*.

ELEPHANTOPUS; of ἐλέφας, an Elephant; and πούς, a Foot; Elephant's Foot; a Plant ſo called by Monſieur *Vaillant*; becauſe, he ſays, the Under-leaves of the firſt Sort ſomewhat reſemble an Elephant's Foot.

The Characters are;

It hath a diſcous Flower, compoſed of ſeveral Florets, which are hermaphrodite, contained in one Flower-cup, which is cut into ſeveral Segments, almoſt to the Bottom; the Bottom of the Calyx is flat, and filled with Ovaries, which are beſet on the Top with Hairs: The Diſks are jointed upon a common Placenta, and form a Sort of Sheaf, garniſhed with a Foliage.

The Species are;

1. *Elephantopus Conyzæ folio*. Vaill. Mem. Acad. Scien. 1719. ELEPHANT'S FOOT WITH A FLEABANE LEAF.

2. *Elephantopus folio ſinuato*. Vaill. Mem. Acad. Scien. 1719. ELEPHANT'S FOOT WITH A SINUATED LEAF.

3. *Elephantopus Helenii folio, flore purpuraſcente*. ELEPHANT'S FOOT WITH AN ELECAMPANE-LEAF, AND PURPLISH FLOWERS.

ELEPHAS. This Word has many Significations. In Zoology it imports the

Elephas Offic. Schrod. 5. 285. Schw. de Quad. 87. Raii Synop. A. 131. Aldrov. de Quad. 17. Geſn. de Quad. 376. Charlt. Exer. 4. THE ELEPHANT.

The two large Teeth in the ſuperior Jaw are the Parts of the Elephant principally us'd in Medicine, as well as Mechanics.

It is called *Ebur* Offic. Mont. Exot. 5. Ind. Med. 47. IVORY.

Ivory is a Refrigerant and Drier; is moderately aſtringent, inciding, and a Strengthener of the Viſcera: It ſtops uterine Hæmorrhages, affords Relief in the Jaundice, expels Worms, is good for inveterate Obſtructions; cures Pains and Weakneſs of the Stomach, and the Epilepſy; preſerves from Melancholy; and reſiſts Poiſons and Putrefaction. *Dale* from *Schroder*.

Much the ſame Virtues are aſcrib'd to Ivory as to Hartſhorn. See CERVUS. See, alſo, the Article ALIMENTA, for a farther Account of Ivory.

Elephas, in Chymiſtry ſignifies *Aqua-fortis*. *Rulandus*.

In Botany, it imports a Plant call'd by *C. Bauhine*, *Scordio affinis Elephas ob Florem*; and, by *Parkinſon*, *Scordio affinis Elephas Columnæ*.

ELEPODATUM. Filed. *Rulandus*.

ELERSNA. The ſame as MOLYBDÆNA. *Rulandus*.

ELESMATIS. Burnt Lead. *Rulandus*.

ELETTARI. A Name for the CARDAMOMUM MINUS. *Boerhaave*.

ELEVATIO, Elevation. Chymical Sublimation is, ſometimes, thus call'd: And a Tumor is frequently call'd an Elevation of the Part affected.

ELEVATORIUM. An Elevator. A chirurgical Inſtrument, of which there are many Sorts, that are deſcrib'd under the Articles of the Operations where they are us'd.

ELICHRYSON. The ſame as *Helichryſon*, which ſee.

ELIDRION, imports Maſtich, or Mercury, or Rhaphontic, or a metallic Maſs, of three Parts, one of Silver, one of Braſs, and one of Gold. *Rulandus*.

ELIGII MORBUS. A Fiſtula. *Johannes Anglicus*.

ELIGMA. A Linctus. *Nicolaus Myrepſus*, *Sect.* 13.

ELIXIR. *Lemery* derives this Word from ἕλκω, to draw, or extract; becauſe in making Elixirs, the pureſt Part of the Ingredients is extracted by the Menſtruum; or from ἀλέξω, to help; becauſe of the Aſſiſtance receiv'd from Medicines of this Kind, in the Cure of Diſeaſes. Theſe Derivations, however, ſeem to be very remote from the true one, which is *Arabic*: *Al-eckſir*, or *Al-ekſir*, is Chymiſtry: Hence *Elixir*, a Medicine prepar'd by the chymical Art, is appropriated, by way of Eminence, to a Tincture extracted by a proper Menſtruum, from many efficacious Ingredients; for the Difference betwixt a Tincture, and *Elixir*, ſeems to conſiſt in this, that a Tincture is drawn from one Ingredient, ſometimes with an Addition of another to open it, and diſpoſe it to yield to the Menſtruum; whereas an *Elixir* is a Tincture extracted from many Ingredients, at one and the ſame time: Add, that an Elixir is not ſo clear, but of a ſomewhat thicker Conſiſtence than a Tincture. *Lemery* informs us, that an *Elixir* is, ſometimes, call'd an *Enchiloma*.

There are a very great Number of Elixirs deſcrib'd by chymical Writers, and in the Diſpenſatories, of which I ſhall ſpecify thoſe which follow.

ELIXIR PROPRIETATIS, *with diſtilled Vinegar*.

Take choice Aloes, Saffron, and Myrrh, of each half an Ounce; cut and bruiſe them, put them into a tall Bolt-head, pour twenty times their own Weight of the ſtrongeſt Vinegar thereon; let them ſimmer in a gentle Sand-heat for twelve Hours: Now ſuffer the Whole to reſt, that the Fæces may ſubſide; and gently ſtrain off the pure Liquor, thro' a Linen Cloth. Put half the Quantity of diſtilled Vinegar to the Remainder; boil, and proceed as before, and throw away the Fæces: Mix the two Tinctures together, and diſtil, with a gentle Fire, till the Whole is thicken'd to a Third: Keep the Vinegar which comes over for the ſame Uſe; and what remains behind, is the *Elixir Proprietatis*, made with diſtil'd Vinegar.

REMARKS.

Thus we obtain an acid, aromatic Medicine, of great Uſe in the Practice of Phyſic; for, when externally applied, it cleanſes and heals putrid, ſinuous, and fiſtulous old Ulcers, defends the Parts from Putrefaction, and preſerves them by a true embalming Virtue: It alſo heals Ulcers, and cures Gangrenes in the Lips, Tongue, Palate, and Jaws. It has the ſame Effects in the firſt Paſſages, when uſed internally, as often as putrefied Matter, corrupted Bile, concreted Phlegm, Worms, and numberleſs Diſtempers proceeding from theſe four Cauſes, are lodged and ſeated therein. Again, it has nearly the ſame Effects in the Blood and Viſcera, as may eaſily appear, from knowing the Virtues of the three Ingredients, when diſſolved in a ſubtile Vinegar. It is to be taken in a Morning, upon an empty Stomach, at leaſt twelve Hours after Eating: It is given from a Dram to two

or three for a Dose, in sweet Wine, Mead, or the like, walking after it, or having the Belly gently rubbed. If taken in a larger Dose, and with a somewhat cooler Regimen, it always purges; if in a less Dose, and often repeated, it cleanses the Blood, by secreting thick Urine; and generally performs both these Operations successively: But, if taken plentifully, while the Patient is in Bed, and the Body well covered, it acts as an excellent Sudorific; and, afterwards, usually purges, and proves diuretic; and thus becomes every way useful. Hence I conceive, that this is the best acid *Elixir Proprietatis*, good in numerous Cases, and, at the same time, safe. *Paracelsus* declared, that an Elixir made of Aloes, Saffron, and Myrrh, would prove a vivifying and preserving Balsam, able to continue Health and long Life to the utmost possible Limits: And hence he calls it, by a lofty Title, the Elixir of Propriety to Man: But conceal'd the Preparation; in which *Helmont* asserts the Alcahest is required. *Crollius* formerly used the Oil of Sulphur made by the Bell, as a Menstruum in this Case, upon considering, according to the Doctrine of *Paracelsus*, that an hungry Acid was proper in stomachic Remedies; but when this is used, the Aloes and Myrrh are scorched, and acquire a stony Hardness, so as not afterwards readily to dissolve in Alcohol: For this Use they require, that the strong Acid of the Sulphur should be diluted: Hence, I conjectured, that a mild, oily, vegetable Acid, would prove a commodious and proper Solvent, in this Case, for medicinal Uses; and, upon adding an equal Quantity of Alcohol to the Elixir prepared in this manner, it becomes more balsamic, mild, and effectual. It, in every respect, resembles the *Pilulæ Ruffi*, and may be successfully used in their stead.

Elixir Proprietatis, *with a distil'd Water.*

Reduce equal Quantities of Aloes, Saffron, and Myrrh, to Powder; put it into a tall chymical Glass; add twenty times their Weight of distil'd Scurvygrass-water; and proceed as above directed.

REMARKS.

This Elixir, tho' excellent, has this Inconvenience, that, when long kept, it grows mothery; but it has extraordinary Virtue in the Body, like those described above, excepting that it wants the Acid. It is an excellent Purge, and, instead of Scurvygrass-water: Any other aromatic Water may be employed.

Elixir Proprietatis, *with a fixed Alcali.*

Take the same Species as above, put them into a Bolt-head, and pour as much Oil of Tartar *per Deliquium* to them, as will make them into a moderately thin Paste, which is to be digested in a gentle Sand-heat, of an hundred Degrees: The longer the Digestion is continued, the better; the Vessel being stopped: And thus, in time, the Alcali will intimately dissolve the Aloes and Myrrh for this Purpose. When the Matter is thus prepared, let it be treated with any distilled aromatic Water, as above described; and thus there will be obtained an alcalized *Elixir Proprietatis*, with a distil'd Water. Or else, to the Species prepared as above, add twenty times their Weight of pure Alcohol, and boil them for twelve Hours: When cold, carefully pour off the upper Liquor from the Fæces; add more Alcohol to the Remains, and proceed as before, till all the Virtue be drawn out; then thicken the Tinctures together by gentle Distillation, till the Liquor acquires the Consistence of Oil of Almonds; and keep it under the Title of *Elixir Proprietatis, with Alcali and Alcohol:* The Virtues of which Preparation cannot be sufficiently recommended: Or, if, instead of Alcohol, common Spirit be used, a thicker, and no less noble Elixir will be obtained. In this Preparation I have sometimes used, instead of Alcohol or Spirit, the simple or compound Spirit distil'd from Aromatics; as, the simple aromatic Spirit of Lavender-flowers, the simple aromatic Spirit from the dry Leaves of Mint, and the simple aromatic Spirit from the green Leaves of Rosemary, and, sometimes, with a compound Spirit; and the Elixir, so prepared, has proved excellent.

REMARKS.

These Elixirs are of frequent and excellent Use in all Distempers proceeding from austere, aqueous, cold, phlegmatic, and scirrhous Causes, or Obstructions without Inflammations; they purge generally by all the Emunctories of the Body; and are, at the same time, grateful to the Nerves and Spirits. They excellently forward the Birth, promote the Menses, bring down Milk, kill Worms, and supply the Defect of the Bile; whence Practitioners cannot be without them. They act by means of the Alcali, the dissolved Ingredients, the Spirit, and the Waters, employed in various ways.

Elixir Proprietatis, *with tartarisated Tartar.*

To the same Ingredients, reduced to Powder, pour thrice their Weight of the Liquor of tartarisated Tartar; digest them in a close Vessel, for three Days, in an Heat of an hundred and fifty Degrees; and thus the Ingredients will be entirely dissolv'd into an uniform pappy Mass, much better than by Vinegar, Water, or alcaline Liquor: Then pour on twenty times the Quantity of Alcohol, in respect of the Ingredients, and boil them, gently, for twelve Hours: Let all cool, and stand at Rest; then decant the clear Liquor, and treat the rest with more Alcohol, as before, till nearly the Whole be dissolved; for little Fæces will here be left. Inspissate all the Elixirs, with a gentle Fire, to the Thickness of Oil; preserve the Alcohol for the same Use; and thus will be obtained the *Elixir Proprietatis*, with tartarisated Tartar and Alcohol.

REMARKS.

This Elixir, being prepared with a compound, and wonderfully opening Salt, has greater Virtues than the foregoing; so that it is admirable in old inveterate Obstructions, which it powerfully resolves, without offending by any acid or alcaline Property; for these compound Salts, along with what they resolve, generally pass quick through the Vessels of the Body.

Elixir Proprietatis, *with regenerated Tartar.*

Put the above-mention'd Species into a tall Glass, and pour thereto thrice their Weight of the Liquor of regenerated Tartar; digest for three Days, and the Aloes and Myrrh will be thus almost entirely dissolved, and the Saffron thoroughly open'd; then add twenty times the Weight of pure Alcohol, with respect to the Powder, boil them gently for twelve Hours; and, in other respects, proceed as before: There will remain a few Fæces, which may be thrown away. Inspissate the Elixir to an half; reserve the Alcohol for the like Use: The Elixir will be, and always continue, thick and turbid.

REMARKS.

In this last Preparation, the Ingredients are almost wholly dissolved, so as to become uniform and potable; whence I have found this Elixir to have an incomparable opening and dissolving Virtue, in most chronical Diseases; where it mightily liquefies the Concretions in the Vessels, agreeably stimulates the nervous System, so as to throw off the Matter thus dissolved, and prevents Putrefaction, which, in these Cases, is so frequent and destructive. Hence it relieves the Viscera, restores their Action, impaired by an obstructing Matter, resolves the Tumors, and thus cures numerous Distempers, scarce otherwise curable: Whence I have been almost inclined to esteem this Elixir, as the Elixir of *Paracelsus* and *Helmont*.

In all these Processes we have an Example of the chymical Solution and Preparation of the same thing, by various Solvents; and learn by what means these Solutions have different Virtues, according to the Difference of the Menstruum; and that these Elixirs ought to be prepared with different Menstruums, for daily Use, according to the Intention of the Physician: So, likewise, they act differently, according as they are determined by the Prescriber: Thus, if taken with *Venice* Treacle, they prove sudorific; if along with a Cathartic, they purge; and, if along with Whey, or mineral Waters, they prove diuretic, provided the Patient walks abroad in the cool Air. They all of them preserve the Bodies of Animals from Putrefaction, if suspended therein, except that prepared with Water: They are all of them excellent in case of carious Bones, except those prepared with Acids; and hence they should always be ready at hand for Practice, as being almost general Medicines; and no Wonder, since Saffron is a true Exciter of the animal Spirits; Aloes, an excellent and innocent Purgative; and Myrrh, the highest Antiseptic; but, in those Distempers, where the Blood is too much broke, in large Bleedings, or the Hæmorrhoids, or where the Humours are in too violent a Motion, they are by no means proper, but pernicious.

Boerhaave's Chymistry, Vol. 3. Proces. 81. &c.

The *London* Dispensatory directs two Processes for preparing the *Elixir Proprietatis*, both different from the preceding. The first is call'd, simply,

ELIXIR PROPRIETATIS.

Take of choice Myrrh, of the beſt Aloes, and of Saffron, of each three Ounces; when they are powder'd, pour upon them a Quart of rectify'd Spirit of Wine: Digeſt them four Days, to an Extraction of the Tincture, which pour off: To the Remainder, pour on more Spirit of Wine; digeſt, and pour off as before; and, afterwards, draw away ſome of the Spirit by Diſtillation: It is made acid, by an Addition of the Spirit of Sulphur; any Quantity, at Diſcretion.

This may be given from ten to thirty Drops to Children; and to grown Perſons, from twenty to ſixty Drops, or more.

It is particularly good in pale, wan Complexions; and will, itſelf, frequently cure the Green-ſickneſs; but in hot, florid Conſtitutions, it does not ſo well agree, eſpecially in thoſe ſubject to the Gravel. It is accounted very good to deſtroy Worms in Children; and, certainly, there is nothing better to keep the Bowels clear of thoſe ſlimy and viſcid Humours, the Effects of Indigeſtion, which breed them, than this Medicine, if long and frequently taken, as twice or thrice a Day, for three or four Weeks together.

The other is under the Title of

ELIXIR PROPRIETATIS HELMONTII.

Take of red Tartar, and Nitre, each twelve Ounces: Let them be powdered, and, by degrees, put into an hot Crucible; let then the calcined Matter be poured into a Glaſs Mortar, whereupon pour two Pints of White-wine, and make a Lixivium: In this Lixivium, put Aloes and Saffron, each one Ounce and an half, ſo as to make a Tincture.

Take of Sal Armoniac, eight Ounces; diſſolve it in twenty Ounces of Spring-water; and, when ſtrained, evaporate it to a Dryneſs: Of this Salt take one Ounce; of White-wine, one Pint; and make a Lixivium, in which diſſolve one Ounce and an half of Myrrh, ſo as to make a Tincture. Mix all theſe Tinctures together in a Veſſel, well ſtopped, ſo as to make them into an Elixir.

ELIXIR VITRIOLI: *Elixir of Vitriol.*

Take Cinnamon, Ginger, and Cloves, of each three Drams; Calamus aromaticus, one Ounce; Galingal, an Ounce and an half; Sage and Mint dry'd, of each half an Ounce; Cubebs, and Nutmegs, of each two Ounces; Wood of Aloes, and Citron-peel, of each one Dram: Powder them together, and add to them white Sugar-candy, three Ounces; Spirit of Wine, three half Pints; and Oil of Vitriol, one Pound: Digeſt them together for twenty Days; and then pour off the Liquor, and filtre it for Uſe.

This is now tranſplanted into the College Diſpenſatory; where it is aſcribed to *Mynſicht* for its Author. The Spirit had better be digeſted upon the Ingredient ſome time by itſelf, becauſe the Oil of Vitriol gives a Thickneſs to it, and diſables it from taking out the Virtues of the Spices; and, when it is put in, it muſt be done very gradually, becauſe it will otherwiſe cauſe ſo ſudden an Heat, as to endanger burſting the Veſſel. Many have got a way of putting in *Jamaica* Pepper, for all the Spices; but it is not ſo juſt to vary from the Receipt, when there is no Reaſon for it but Cheapneſs, and the Medicine thereby becomes the worſe; which it certainly does in this Inſtance, becauſe that is a more oily Spice than thoſe here order'd, and therefore cannot make ſo good a Stomachic. This Medicine is greatly come into Practice of late, and very deſervedly; for it mightily ſtrengthens the Stomach, and will do good Service, ſometimes, where Bitters avail nothing, eſpecially in Relaxations from Debauches and Over-feeding. This very well imitates the Virtues of the celebrated Bark, and is properly given in all Intentions, where that is found to ſucceed; ſo that, by its Help, Intermittents, and many Diſorders from too lax a State of the Solids, may be remov'd, with a much leſs Quantity of the Bark than they might otherwiſe require. It has an Influence, alſo, over many Diſtempers of the Head to Advantage, and preſerves againſt Epilepſies, Apoplexies, Palſies, and rheumy Defluxions. It may be given from ten, to thirty or forty Drops, in any ſuitable Vehicle, once, twice, or thrice a Day; obſerving to take it when the Stomach is moſt empty, as in the Morning faſting, a little before Dinner, and in the Afternoon. This is the very Medicine which Mr. *Fuller*, Author of the *Medicina Gymnaſtica*, gives an Account of, in his Appendix, to have been order'd to him by a Phyſician; and by the ſole Help of which he was recover'd from a moſt deplorable Decay of Conſtitution, particularly of the Stomach, and continual Reachings to vomit for ſome time; tho', from a Return afterwards into the ſame Irregularities, which was, driving away hypochondriac Complaints by ſpirituous Liquors, he relapſed, and died.

ELIXIR SALUTIS.

Take of Sena-leaves, cleared of their Stalks, four Ounces; of Guaiacum-chips, of dry'd Elecampane-root, of the Seed of Aniſe, Caraway, Coriander, and of Liquorice-root, of each two Ounces; of Raiſins ſton'd, eight Ounces; of *French* Brandy, three Quarts: Steep them together cold for four Days, and then ſtrain out the Spirit for Uſe.

This is in *Shipton's Additamenta*, where he ſays, that ſome, likewiſe, add Salt of Tartar, Rhubarb, Scammony, and Jalap, in order to make it operate more briſkly; for, as here directed, the purgative Ingredient, which is the Sena only, bears ſo ſmall a Proportion to the Quantity of Spirit, in a Doſe ſufficient for a Purge, that it is too ſtrong for moſt Perſons, who have not been accuſtomed to ſpirituous Liquor: It, therefore, is now to be deemed rather a Carminative than a Cathartic; and, in ſome colic Pains it gives great Relief: The Doſe is, one or two Spoonfuls at a Night, and three or four in the Morning.

Daffy's Elixir is ſaid to be little more than this.

Whereas I have frequently, in my Quotations from *Frederic Hoffman*, mention'd his *Elixir Balſamicum*, *Balſamum Vitæ*, and *Balſamum Liquidum Spirituoſum*, by which I apprehend he means the ſame Medicine; it will be proper in this Place, to communicate ſo much as is known of its Preparation.

ELIXIR BALSAMICUM HOFFMANNI.

This Preparation is found under the Title of *Balſamum Vitæ Hoffmanni*, in the *Straſburg* and *Ratiſbon* Diſpenſatories; and is taken, with a little Variation, from the Author's Notes on *Poterius*; where the following Directions are given for its Preparation:

Take of the freſh-diſtil'd Oils of Lavender, Marjoram, Cloves, Cubebs, Cardamomis, and Citron, each one Scruple; of the diſtil'd Oil of Mace, two Scruples; of the Oil of Cinnamon, twenty-four Drops; of the Oils of Rue, and white Amber, each half a Scruple: Let theſe Oils be mix'd together, and ſtand for ſome Weeks.

When, therefore, we want the extemporaneous Balſam of Life, let ten Drops of theſe Oils be pour'd into an Ounce of highly rectify'd Spirit of Wine. And if we intend, that it ſhould be render'd more grateful, half a Scruple of Ambergriſe may be previouſly diſſolv'd in the Oils. But this Balſam will ſtill be impregnated with higher and richer balſamic Qualities, if to one Ounce of it we add half a Dram of Peruvian Balſam; by which it is render'd good againſt Apoplexies, and is of ſingular Uſe both internally and externally. Internally it may be given from ten to twenty Drops in Weakneſſes, colic Pains, Faintings, and Lowneſs of Spirits; and, externally, it may be applied to the Noſe, the Wriſts, the Nape of the Neck, and the Crown of the Head; in all Weakneſſes of the Head, as alſo in ſpaſmodic and lethargic Diſorders.

But, according to *Schulzius*, in his *Prælectiones*, this is not the Deſcription of that liquid ſpirituous Balſam which the Author has for many Years prepar'd in his own Houſe; for, ſays he, I am abſolutely certain, that no one has got the Preparation from himſelf. However, the Circumſtance of the moſt Importance conſiſts in the Purity of the diſtil'd Oils, and their not having chang'd or loſt the fine and ſubtile Nature of their æthereal Particles by Length of Time; for which Reaſon, he not only diſtils a great many vegetable Oils himſelf, but alſo ſubjects ſuch as are a Year old to a new Diſtillation; that, by depoſiting their recrementitious Parts, they may recover their due and natural Fineneſs; for he imagines, that the finer theſe Oils are, the more readily they paſs through the Emunctories, and are, conſequently, fitter and better accommodated to internal Uſe. With reſpect to the various Uſes of this Elixir, whether internal or external, the Author is very full in ſeveral Parts of his Works. The Doſe is from ten to fifteen, or twenty Drops. See the Article BALSAMUM.

ELIXIS, ἔλιξις, from λείχω, to lick. An Eclegma, or Linctus.

ELIXIVIATIO, Elixiviation; that is, the Operation by which a fix'd Salt is extracted from the Aſhes of Vegetables, by an Affuſion of Water.

ELIZ, or ELZIMAR, or ELZ. Flos Æris. *Johnſon.* See Æs.

ELLEBORINE. See HELLEBORINE.

ELLEBORITES. See HELLEBORITES.

ELLEBORUS. See HELLEBORUS.

ELLOBOS, ἔλλοβος. An Epithet for ſuch Seeds or Fruits as are contain'd in Pods or Lobes.

ELLYCHNIOTOS, ἐλλυχνιωτὸς, from ἐλλύχνιον, the Wick of a Lamp or Candle. A Sort of Lint us'd by the antient Surgeons, thus call'd, either becauſe it was made up in the Form of a Wick of a Lamp; or, rather, becauſe it was made of the ſame Materials.

ELLYCHNION, ἐλλύχνιον from λύχνος, a Lamp; the Wick of a Lamp, or Candle.

The *Ellychnium* of the Antients was a certain Kind of Matter, which ſerv'd them for a Wick to their Lamps or Candles. This appears from *Galen*, who, *Lib.* 14. *M. M.* directs the Uſe of *Ellychnium*, eſpecially the ſofteſt, ſuch as that of *Tarſus*, inſtead of a Sponge; but of what particular Stuff or Materials this *Ellychnium* of *Tarſus* was compoſed, we have no Information: For, tho' *Pliny* mentions ſome *Ellychnia*, ſuch as that compoſed of the Fruit of the *Ricinus*, which he commends for its extraordinary Clearneſs, and that made of the *Papyrus*, and another prepared of the *Phlomis*, which Plant is therefore called *Lychnitis*, and, by ſome *Tryallis*, having thick fat Leaves, very well adapted for the Purpoſe; and, laſtly, that compoſed of a kind of Sulphur; yet, he no-where ſays a Word of the *Ellychnium Tarſenſe*: The only one who mentions it is *Galen*, who, *Lib.* 13. *M. M.* ſhewing the Method of bringing Ulcers to a Cicatrix, ſpeaks of this *Ellychnium*; and, *Lib.* 14. *ibid.* teaching a Way to cure an œdematous Swelling, he adviſes to uſe a Sponge dipt in Oxycrate; and, for want thereof, an *Ellychnium* of *Tarſus*. *Cornarius*, *Comment. in* 3. *κατ. τοπ.* endeavours to prove it a kind of terreſtrial Fungus, which is accommodated to ſerve inſtead of Wicks for Lamps or Candles, and, alſo, uſed inſtead of Spunges, eſpecially when they are new: But the learned *Mercurialis*, *Var. Lect. Lib. Cap.* 17. explains it of a Kind of Wood, called by the *Greeks* ξύλον (*Xylon*), that is, Cotton.

ELMINTHES, or HELMINTHES, ἕλμινθες. Worms.

ELOANX, or ELOME. The ſame as AURIPIGMENTUM.

ELODES, or HELODES. An Epithet for a Species of Fever, attended with profuſe Sweats, ſomething like the SUDOR ANGLICUS.

ELOGIUM. This Word is us'd by *Paré*, in the ſame Senſe as *Renunciatio*; which is, the Judgment or Report of a Phyſician, relative to the State of the Sick.

ELOME. See ELOANX.

ELONGATIO. An imperfect Luxation; when the Ligaments of a Joint are ſtrain'd, and the Limb lengthen'd, without being perfectly out of Joint.

ELOPITINUM. Vitriol. *Rulandus.*

ELOS *Maris*. Burnt Lead. *Rulandus.*

ELOXOCHITL. The Name of an *Indian* Tree, mention'd by *Ray*, under the Article *Banana*, without aſcribing any medicinal Virtues to it.

ELPIS. The Scoriæ of Silver. *Rulandus.*

ELTZ. See ELIZ.

ELUTRIATIO. The pouring a Liquor out of one Veſſel into another, in order to ſeparate the ſubſiding Matter from the clear and fluid Part.

ELUVIES, in *Pechlinus*, imports the Humour diſcharg'd in a *Fluor Albus*.

ELUXATIO. The ſame as LUXATIO.

ELYMAGROSTIS. A Name for the *Gramen*; *Panicum*; *Panicula ſimplici*. See PANICUM.

ELYMOS. A Name for the PANICUM. *Blancard.*

ELYTHROIDES. The *Tunica Vaginalis* of the Teſticles.

ELYTRON, ἔλυτρον from ἑλύω, to involve, or cover. An Involucrum, Covering, Vagina, or Sheath of any Kind. *Hippocrates* calls the Membranes which involves the ſpinal Marrow, ἕλυτρα.

ELZIMAR. See ELIZ.

EMANSIO. *Ettmuller* thinks *Emanſio Menſium*, would be a more proper Term than *Suppreſſio Menſium*, to expreſs a Cohibition of the Menſes. This Obſervation appears very trifling.

EMBAMMA, ἔμβαμμα from βάπτω, to immerge, or dip. A Sauce, or Pickle, to dip Victuals in, as it is eaten. Muſtard is a Sort of *Embamma*.

EMBAPHION, ἐμβάφιον. An *Acetabulum*, or Cruet, for holding *Embammas*. In *Hippocrates*, it ſometimes imports a Meaſure, the ſame as *Acetabulum*.

EMBASIS, ἔμβασις from ἐν, in, and βαίνω, to go. A bathing Tub, or Veſſel, fill'd with warm Water.

EMBATE, ἐμβάτη. This Word is in *Hippocrates*, *de Morbis internis*. It is explained a leathern Garment. But ſome take it to ſignify the ſame as EMBASIS.

EMBOLE, ἐμβολὴ from ἐμβάλλω, to put in. The Reduction or Setting of a diſlocated Bone.

EMBORISMA. A barbarous Word, importing an *Aneuriſm*.

EMBOTUM. A Funnel, for conveying Fumes into any Orifice of the Body.

EMBREGMA, EMBROCHE, ἔμβρεγμα, ἐμβροχὴ from ἐμβρέχω, to irrigate, or moiſten; an Embrocation. It is an external Kind of Remedy, which conſiſts in an Irrigation of the Part affected, with ſome proper Liquor, by means of a Woollen or Linen Cloth, or a Spunge dipt in the ſame. Its Uſe is either to attenuate and diſlodge ſomething obſtructed underneath the Skin, to eaſe Pain, or to irritate the Part into more Warmth, and a quicker Senſe of Feeling.

EMBROCATIO. The ſame as the preceding Word; which ſee.

EMBRONTETOS, ἐμβρόντητος from βροντὴ, Thunder; is, properly, one Thunder-ſtruck; but is, from a Similitude of Effects, apply'd to a Perſon ſeiz'd with the Apoplexy.

EMBRYO, EMBRYON, ἔμβρυον (from ἐν, in, and βρύω, to pullulate, or bud forth; *παρὰ τὸ ἐσω βρύειν, ἢ ἐντὸς τῆς γαστρὸς αὔξεσθαι*, "becauſe it pullulates in the internal "Parts, and grows within the Womb") in the Senſe of *Hippocrates*, is the Child, or Fœtus, in the Womb; as appears from 5 *Aph.* 31. 48. 60. and other Places of his Works. *Galen*, *de Symptom. Cauſ. Lib.* 1. *Cap.* 7. ſays, that the Fœtus, under two Months old, is not call'd in *Greek*, *Embryon*, but κύημα, *Cyema*; "a Conception." *Marcellus*, in *Fœtura Hominis* obſerves, that the *Embryo* is what the pregnant Woman carries in the Womb, and is called by that Name as long as ſhe carries it. *Dioſcorides* uſes the Word in the ſame Senſe in many Places. This Term *Embryon* is apply'd by *Homer*, and frequently by *Ariſtotle*, to the Fœtus of Brutes; and, by *Theophraſtus*, to the Seeds of Plants; in which he is follow'd by modern Authors.

EMBRYONATUM *Sulphur*. The Chymiſts, particularly *Gerard Domneus*, diſtinguiſh Sulphur into three Kinds: The firſt is the univerſal Sulphur, or Reſin of the Earth, not united with any thing; by which they ſeem to mean, the univerſal Acid. The ſecond is, the *Sulphur Embryonatum*; that is, the ſame Sulphur, united to Minerals and Metals. The third is the ſame Sulphur, ſeparated from Metals and Minerals by Art.

EMBRYOTHLASTES, ἐμβρυοθλάστης from ἔμβρυον, a Fœtus; and θλάω, to break. An Inſtrument contriv'd for breaking the Bones, for the more ready Extraction of the Fœtus, in difficult Labours. *Hippocrates* calls it σίδηρον.

EMBRYOTOMIA; from ἔμβρυον, a Fœtus, and τέμνω, to cut. An Exſection of the Child out of the Womb. It differs from the *Cæſarean* Section in this, that in the laſt the Child is taken out entire, by an Inciſion made in the Abdomen of the Mother; whereas, in this, the Child is cut into Pieces whilſt in the Womb, for the more eaſy Extraction, without injuring the Mother.

EMBRYULCUS, ἐμβρυουλκὸς from ἔμβρυον, a Fœtus, and ἕλκω, to draw. A Hook, for the Extraction of a Child in a difficult Labour. It is alſo call'd ἑλκυστήρ. See *Tab.* 54. *Fig.* 16. 17. 18. 19. 20. and 21.

EMBULA. A Pipe. *Rulandus.*

EMBULARCHI *Suffumigium*. A Suffumigation deſcrib'd in *Aetius*, *Tetrabib.* 4. *Serm.* 4. *C.* 122.

EMBYAYEMBO. The Name of a Plant, which grows in *Braſil*. *Raii Hiſt. Plant.*

EMERICUS. Emery. See SMYRIS.

EMERUS.

The Characters are;

It has the Leaves and Appearance of the *Colutea*; and bears a ſlender Pod, full of cylindrical Seeds.

Boerhaave mentions two Species of this Plant; which are,

1. Emerus *Cæſalp.* 117. *Colutea, ſcorpioïdes, major & elatior, fruteſcens.* M. H. 2. 122. SCORPION SENA.

2. Emerus; minor. *Tourn. Inſt.* 650. *Elem. Bot.* 510. *Boerh. Ind. A.* 2. 49. *Emerus*, Offic. *Colutea humilis*, Park. Theat. 227. *Colutea Scorpioïdes humilis*, Ger. 1117. Emac. 1300. Raii Hiſt. 1. 924. J. B. 1. 382. Chab. 81. *Colutea Scorpioïdes humilior & minor*, Hiſt. Oxon. 2. 122. *Colutea ſiliquoſa minor*, C. B. Pin. 397. *Colutea ſiliquoſa ſeu Scorpioïdes minor*, Jonſ. Dendr. 378. *Coronilla montana*, Rivin. Irr. Tetr. Rupp. Flor. Jen. 216. Buxb. 85. LESSER SCORPION SENA.

This Plant grows in hilly Places, and flowers in *June*. The Leaves are uſed; but *Boerhaave* is unacquainted with any medicinal Virtues belonging to them. *Ruppius* writes, that the common People ſubſtitute the Leaves, inſtead of thoſe of Sena; and *Buxbaums* tells us, that the old Women, who pretend to Medicine, call it SENES BLATTER, and uſe it inſtead of Sena-leaves. *Dale.*

EMESIA, and EMESMA, ἐμεσία, ἔμεσις, and ἔμεσμα from ἐμέω, to vomit. The ſame as EMETOS, which ſee.

EMETICA, from ἐμέω, to vomit. Emetics, or Medicines which induce Vomiting.

Hippocrates, as a powerful Preſervative againſt Diſeaſes, ordered Emetics, which were to be exhibited once or twice a Month, during the Winter and Spring. The moſt ſimple of theſe Emetics conſiſted only of a Decoction of Hyſſop, with the Addition of a ſmall Quantity of Salt and Vinegar. This Preparation was to be taken, faſting, by thoſe who were in good

Plight

Plight of Body; whereas those who were lean and extenuated, were to use it after Dinner or Supper.

We learn from *Diodorus Siculus*, that the Practice of the antient *Egyptian* Physicians consisted pretty much in provoking to vomit, together with Clysters and Abstinence.

Asclepiades, notwithstanding his Aversion to Purges, yet ventur'd to vomit his Patients sometimes, particularly after Supper. *Plutarch*, however, appears to have been a very great Enemy to Emetics, as well as Cathartics, if we may judge of his Sentiments by his Writings.

Among the several Medicines of the evacuating Kind, Emetics, or such as excite Vomiting, are none of the least considerable. These are either mild and gentle, or of a more strong and drastic Nature. Among the former, we may justly reckon common Water render'd tepid, with the Addition of a little Salt and Honey, or express'd Oil, or Fat, or made into a Decoction with the Seeds or Bark of Horse-radish, or the Seeds of Dill; or the Waters of warm Mineral Springs, drank in large Quantities at a time.

Among those of the more violent and drastic Kind, the Vegetable Kingdom supplies us with these following: The Leaves and Root of Asarabacca, white Hellebore, the Juice of the middle Bark of the Elder-tree, Gamboge, Ipecacuanha, and all the drastic Purgatives exhibited in too large Quantities; among Metals and Minerals, all Preparations of Copper, such as white *Cyprian* Vitriol, the Gilla of *Paracelsus* and *Angelus Sala*, prepared of the *Caput Mortuum* of the Oil of Goslar Vitriol, which partakes of the Nature of Copper; the Crystals of Verdegrise; the Emetico-diaphoretic Salt of *Moebius*, prepar'd of equal Quantities of Goslar Vitriol and Nitre; as also such Substances as receive their emetic Qualities from the reguline Part of Antimony they contain, such as emetic Tartar, Glass of Antimony, and the *Aqua Benedicta* of *Rulandus*, prepar'd of it; the *Mercurius Vitæ*, especially when prepar'd of rectified Butter of Antimony, by Precipitation with common Water, or Oil of *Tartar per Deliquium*; the *Pulvis Monckii*, prepar'd of two Parts of the chalybeated Regulus of Antimony, and one of Nitre; the Golden Sulphur of Antimony corrected, and the *Panacea Glauberiana*, or *Conordingiana*, if five or six Grains of them are exhibited.

The milder Emetics, and such as are pretty much of a dietetic Nature, were principally used by *Galen*, and the Antients, since they are safe, and generally, by their Quantity, stimulate the Stomach to vomit, especially when it is weak, and dispos'd to throw up its Contents, which may be discover'd by a Nausea, Eructations, Bitterness of the Mouth, and the uneasy State of the Patient. But these do not act beyond the Limits of the Stomach, from which they very advantageously evacuate crude, phlegmatic, and bilious Humours, produced by improper Aliments, or a bad Digestion.

The more strong and drastic Emetics, when exhibited in a small Dose, by their fine, caustic, saline-sulphureous Acrimony, act, not only on the nervous Coat of the Stomach and Intestines, by spasmodically constricting them; but, if exhibited in a somewhat larger Dose, they penetrate beyond the Stomach, into the highly nervous biliary Ducts, into the Glands of the Intestines, Mesentery, and Pancreas, as also into the Liver, and expel their contain'd Humours from these Parts. Sometimes, also, they affect the whole nervous System, and prove highly injurious to the Constitution.

Practical Corollaries.

The Antients, as an Emetic of the most drastic Kind, us'd white Hellebore, as *Celsus*, in the 13th Chapter of his second Book, informs us; and that in Epilepsies, Madness, and other terrible Disorders, when not accompanied with a Fever. But he justly advises, that the Body should be duly moisten'd, before this Medicine is used. But in our Times, as we have more safe Emetics, we justly abstain from this drastic Medicine, and make Choice of such of the above-mention'd, as are more friendly to Nature, and the nervous System, and may be exhibited with less Danger: Among which we may justly give the Preference to that *American* Root Ipecacuanha, half a Dram, or more, of which may be exhibited for a Dose. This Root, besides its saline, subtile, and acrid Principle, also contains one of a balsamic and corroborating Quality, and has this peculiar Advantage attending it, that it soon produces its Effects; for which Reason it is very properly used where Delays might be attended with bad Consequences. And because, in Vomiting, the peristaltic Motion of the Stomach, and by Consent that of the Intestines, is inverted, if the Vomiting is very intense in a Diarrhœa, or Dysentery, the Flux is by that means check'd and stopt for some time. Hence *Celsus*, in the third Chapter of his first Book, justly affirms, that Vomits stop Fluxes, and render the Body soluble, when costive. The most commodious Succedaneum for Ipecacuanha is Asarabacca, the Root and Leaves of which are possess'd, not only of a subtile, acrid, volatile, and caustic Principle, which in Boiling easily exhales, but also of a corroborating and balsamic Quality, and afford singular Relief in inveterate Fevers of the tertian and quartan Kind, as also in Dropsies, and the Jaundice. Among antimonial Preparations, we give the Preference to emetic Tartar, prepar'd of the *Crocus Metallorum*, and not of Glass of Antimony, which is as strong again. Three or four Grains of this Tartar, either alone, or in a smaller Dose with Ipecacuanha, prove an excellent Vomit. And if the Intention is to purge and vomit at one and the same time, two or three Grains of emetic Tartar may be added to a Decoction of Manna. With the same Intention we may use five or six Grains of the *Panacea Glauberiana*, exhibited with one Scruple of Cream of Tartar; and in a pituitous Asthma, this End is sometimes very commodiously answered by two or three Ounces of Oxymel of Squills. But as for the emetic Preparations of Copper, which, by their constrictive Quality, long exagitate the nervous Coats of the Stomach, and other Parts; as also the reguline Powders of Antimony, the Pulvis Monckii, the Glass of Antimony, and the Mercurius Vitæ, whose Effects cannot be depended on, since they act either too strongly, or too weakly, according to the State and Disposition of the Humours in the Stomach, we ought carefully to abstain from them, and may be very well without them in the Materia Medica.

Drastic Emetics are sometimes not only useful, but absolutely necessary for expelling Poisons, especially of the narcotic Kind; as also the infectious Particles which exhale from Patients labouring under contagious Disorders, and which, descending to the Stomach, there mix with the Juices, and, unless soon carry'd off, are convey'd into the Mass of Blood. In like manner, drastic Emetics are necessary for evacuating the corrupted and peccant Humours arising from the Commixture of heterogeneous Aliments, the Bile, and fermenting salival Humours, which, stagnating in the Stomach and Intestines, especially the Duodenum, become corrupted by their Continuance there, and frequently give Rise to Fevers of the slow, the quotidian, and the quartan Kind; as also to chronical Coughs, to violent Disorders of the Head, Melancholy, a Hemicrania, and sometimes to an Epilepsy, or Apoplexy.

In Diseases arising from a thick Bile form'd, as it were, into a viscid Coagulum, and obstructing the biliary Ducts, such as the black and yellow Jaundice, a Cachexy, and some others, Emetics are sometimes used with Success, when other Medicines prove ineffectual; since they attenuate the bilious Sordes, which are the Causes of these Disorders.

In Anasarcas, Leucophlegmatias, œdematous Swellings of the Parts, and a curable Ascites, Emetics, exhibited in a pretty large Dose, frequently carry off by Stool, but rarely by Vomit, the aqueous Serum from the Liver, and the Ducts and Glands of the Intestines, Mesentery, and Pancreas.

In all feverish Paroxysms, Inflammations of the Stomach, or Cases where it is affected with Spasms, as, for Instance, in Cordialgias, violent Anger, hysteric and hypochondriac Spasms, and where there is a Disposition to a Spitting of Blood, or an immoderate Discharge either by the Menses, or hæmorrhoidal Veins, as also in all Diseases arising from a Congestion of Humours to the Head, such as Apoplexies, Palsies, Vertigoes, violent Head-achs, a Loss of Hearing or Sight, Vomits are never to be used; nor are they to be exhibited to plethoric Patients, till the Plethora is removed by Venesection, nor to those whose Intestines are stuff'd with Fæces, till these are previously evacuated, and purged off.

'Tis proper, in order to make Emetics work more easily, to exhibit them always in a liquid Form, or in a sufficient Quantity of some moistening, relaxing, and pinguious Vehicle; for Vomiting not only requires a powerful Constriction of the Pylorus, and Bottom of the Stomach, but also a Relaxation of the superior Orifice of the Œsophagus.

During the Operation of Emetics, and after it is over, the Patient is carefully to guard against Cold, to abstain from cold Liquors, from the Sallies of Passion, from hot and stimulating Medicines, from acrid and salt Aliments, and rather to use such as are of a demulcent Nature, afford laudable Juices, and are of easy Digestion. It is of singular Use to drink a few Ounces of Asses Milk, if it can be had, about four Hours after the Operation of the Vomit is over. *Frederic. Hoffman. Medic. Rational. Systemat.*

Sydenham lays it down as a Rule, that, whenever a Vomit and Bleeding are necessary, Bleeding should always precede the Exhibition of an Emetic. The principal Vomit recommended by the last-quoted Author was the emetic Wine; and I much question whether we have improv'd his Method, by substituting Ipecacuanha in its stead, especially in Fevers, febrile Disorders, and the Small-pox. At least, our Ipecacuanha does not succeed so well with us, as his emetic Wine is represented to have done with him. If we consider with due Attention what has been said under the Article *Duodenum*, the Reasons for this Difference will be pretty obvious.

Alexander Trallian recommends Vomits above all Things in Tertians, and much more in Quartans, taken before the Fit, and of the latter he has cur'd the most inveterate by this Remedy alone. This is a Practice, which, *Freind* observes, is mention'd, tho' little insisted upon, by the rest of the Antients; but consonant

conſonant to Reaſon, and of great Advantage, not only in theſe, but in many other Caſes.

Dr. *Harris*, in his Diſſertations, informs us, that antimonial Vomits are ſafe in the Heat of the Summer, but are very dangerous in the Cold of the Winter. The ſame Author, alſo, tells us, that white Vitriol is an excellent, mild, and ſafe Emetic, in a Doſe of four Scruples. He alſo informs us, that, where Carduus and Aſarabacca are thought too mild, Fox-glove, in Decoction, will anſwer the moſt violent Intentions, as an Emetic.

Dr. *Cheyne*, in all his Works, recommends Vomits as the moſt effectual Means of Relief in nervous Caſes.

There is, or at leaſt was very lately, a Man in *Cheſhire*, commonly call'd the Vomiting, or Straw-hat Doctor, who render'd himſelf famous for exhibiting a particular Sort of Emetic, which he kept as a Secret. This Vomit has the Reputation of operating very ſoon, with great Eaſe, and good Effect.

I am inform'd, that his Vomit is the following Water; and my Authority for this is very good:

Take of the Leaves and Flowers of the common Meadow Crow-foot. Let them be diſtil'd in a common Alembic, in the ſame manner as common Simple Waters, as long as any Pungency remains in the Liquor. The diſtil'd Water is very hot and pungent, and requires lowering with common Water, till it may be drank. The Method of taking it is, to fill the Stomach firſt with about a Quart of warm Water; then give an Ounce of the Liquor, which in a few Minutes brings up the Water without any Violence. This is to be repeated, till the Patient has vomited ſufficiently.

Common Salt is us'd to check the Operation of Emetics; which it will certainly do, and make them run off by Stool. Violent Vomitings are, alſo, ſtopt by copious Draughts of warm diluting Fluids; by mild Oils; by Opiates, Aromatics; by grateful Acids, and corroborating Medicines, either taken internally, or apply'd externally to the Region of the Stomach.

EMETOCATHARTICUM. A Medicine which both vomits and purges.

EMETOLOGIA. From ἔμετος, a Vomit, and λόγος, Diſcourſe. That Part of Medicine which treats of Emetics.

EMETOS, ἔμετος, from ἐμέω, to vomit. A Diſcharge of the Contents of the Stomach by Vomit. See VOMITUS.

EMEU, or EME, Cluſ. EMEÜ, vulgo *Caſoaris*. The Name of a very large Bird of the Oſtrich-kind, call'd *Caſoar*, which is found in the *Molucca* Iſlands. The Fat of this is the only Part recommended in Medicine; which is ſaid to be emollient, reſolvent, nervous, and digeſtive.

EMIAI, ἐμίαι. *Galen* ſays, that this is an *Attic* Word, importing Vomitings.

EMINENTIA. Any Protuberance, or preternatural Tumor, is thus called.

EMISSARIUM, in Medicine, is any Orifice of the Body, either natural or morbid, out of which any thing is emitted.

EMMENAGOGA, ἐμμηναγωγὰ, from ἐμμήνια, the menſtrual Diſcharges; and ἄγω, to draw, lead, or force. Emmenagogues, or Medicines which promote the menſtrual Flux; tho' *Frederic Hoffman* ſeems to include, under this Name, thoſe Remedies which cauſe a Diſcharge of Blood from the hæmorrhoidal Veins.

Among thoſe which beſt and moſt commodiouſly anſwer this Intention, we may juſtly reckon the Roots of Birthwort, Zedoary, and the Five aperient Roots; the Herbs Mugwort, Calamint, Feverfew, Peny-royal, Baum, Savin, Polium Montanum, Rue, Marjoram, Roſemary, Wall-flowers, Saffron, Bay-berries, Juniper-berries; the Gums Bdellium, Myrrh, Galbanum, Opopanax, Sagapenum, and Amber: Among purgative Subſtances, Aloes, Rhubarb, and Bryony; as alſo Aromatics, and animal Salts; Caſtor, and chalybeate Preparations, which excel all others of the mineral and chymical Kind.

The more theſe Excretions are ſubſervient to Life and Health, the more it were to be wiſh'd, with *Hippocrates*, that we had certain and efficacious Medicines for regulating them, and by that means preventing and curing ſeveral very terrible Diſorders. But as theſe Excretions are principally the Work of Nature, and in Women appear, return, and end, at certain Periods; but are neither incident to all Men, nor ſo periodical as the Menſes; and as a certain Redundance of Blood, together with a certain State of the Veſſels of the Anus and Uterus, diſpoſed to a ſpontaneous Evacuation, are requiſite, in order to theſe Diſcharges; and as theſe Evacuations may be obſtructed, or totally deſtroy'd, by various Cauſes; it muſt of courſe be a difficult Taſk to fall upon effectual Means of reſtoring theſe Evacuations when ſtopt, or enlarging them when impaired; neither of which Ends can ever be obtain'd without knowing the Cauſe from which the Misfortune proceeds.

But, ſuppoſing that there is a Redundance of Blood, the principal Cauſe of this Evacuation; ſuppoſing, alſo, that the Veſſels of the Uterus and Anus are ſo diſpos'd, that they may be diſtended by a large Quantity of Blood flowing to them, and be capable of diſcharging this Blood; yet, if the Excretions are not duly carried on, either on account of Obſtructions, or ſpaſmodic Conſtrictions of the ſmall lateral Veſſels of the Arteries; in conſequence of which, the Blood does not circulate naturally; or on account of a Diminution of the ſpirituous Principle of the Blood, and the elaſtic contractile Force of the Heart and Arteries; then the above-enumerated Medicines afford the deſired Relief: For the capillary Veſſels are excellently open'd, and Obſtructions remov'd, by the Five aperient Roots, Birthwort, Rhubarb, Bryony, and Wall-flowers, eſpecially if exhibited by way of Decoction with ſome ſaline Stimulus, ſuch as Borax. This Intention is alſo excellently anſwered by the Gums exhibited with Aloes, and other Purgatives, in the Form of Pills. The ſmall and capillary Ducts, when ſpaſmodically conſtricted, or preternaturally contracted, are excellently relax'd and open'd by Mugwort, which is of a demulcent Nature, as alſo by Yarrow, Saffron, and Caſtor. In order to reſtore the ſpirituous Principle of the Blood, ſtrengthen the Solids, and confirm the Tone of the Fibres and Veſſels, ſuch Corroboratives are to be uſed, as operate by their fine volatile and oleous Salt; among which we may reckon all Aromatics, Myrrh, the Berries of the Bay and Juniper-trees, Roſemary, Peny-royal, Baum, Savory, Savin, Wall-flowers, Calamint, Amber, Filings of Steel, chalybeate Tinctures, and volatile oleous Salts.

When the Evacuation is impair'd, or render'd ſlow, by a Redundance of Blood, which too powerfully reſiſts the Elaſticity of the Veſſels, the Emmenagogues already mention'd, eſpecially thoſe of the hotter Kind, are by no means to be exhibited; for by theſe the Blood is thrown into violent Commotions, and a Train of formidable Symptoms are frequently brought on. In this Caſe, therefore, Veneſection in the Feet is to be recommended, ſince, by means of that alone, theſe ſalutary and critical Evacuations are often happily reſtored.

Nor are the Emmenagogues already enumerated proper, in Caſes where there is a Deficiency of Blood, and laudable Juices, as in Perſons recovering from the Shock of a Diſeaſe, thoſe whoſe Primæ Viæ are ſtuffed with viſcid Sordes, or thoſe the villous Coats of whoſe Stomachs are lin'd with a viſcid Mucus, and by that means Digeſtion and Chylification unduly carry'd on. In Caſes of this Nature, the principal Intention of the Phyſician ought to be, not only the Regeneration of a good and laudable Blood by nutritive gelatinous Subſtances, and Broths, eaſily convertible into Blood and Juices; but alſo, if neceſſary, the Reſtitution of the Digeſtion and Elaboration of the Chyle by Emetics, gentle Purgatives of a ſaline aperient Nature, and bitter Stomachics.

Theſe Evacuations are frequently ſtopt by Obſtructions and Infarctions of the vaſcular Subſtance of the Anus in Men, and the internal Part of the Uterus and Vagina in Women; in conſequence of which they admit no Blood, however ſtrongly propel'd to them. In theſe Caſes forcing Medicines are not only ſuperfluous, but pernicious, unleſs the indurated and infarcted Veſſels are previouſly relax'd and ſoften'd by proper Medicines. And this Intention can neither be more ſpeedily nor efficaciouſly anſwered, than by Baths, or Fomentations, or Vapour-baths, ſo contriv'd, that a Veſſel, full of warm Water, impregnated with Mugwort, Peny-royal, and Chamomile-flowers, may be placed under the Abdomen in ſuch a manner, that the Steam may aſcend and penetrate into the Uterus, and adjacent Parts. This is to be done in a warm Room, with the Patient's Body well cover'd; and, in order to keep the Water warm, red-hot Flints are now-and-then to be put into it. Frictions of the Legs and Thighs with warm Cloths, eſpecially after Bathing with ſweet Water, alſo contribute very much to the Production of this Effect.

But in thoſe Diſorders ariſing from a Suppreſſion, a Defect, or Irregularity of the Menſes, or hæmorrhoidal Diſcharge, nothing is more certain, ſafe and effectual, than a prudent Uſe of mineral Waters, eſpecially the mild *Caroline* Springs for internal, and thoſe of *Toeplitz* for external Uſe, ſince by theſe all the Intentions of Cure are excellently anſwered; for, by drinking the former of theſe Waters, the viſcid Humours are attenuated and evacuated, and the Obſtructions of the capillary Veſſels remov'd, whilſt by bathing in the *Toeplitz* Waters, which are highly light, and deſtitute of a conſtricting earthy Principle, the Stricture of the Parts is remov'd, and the Veſſels ſo enlarg'd, as readily to admit the Blood, and again diſcharge it.

As in Medicine 'tis a difficult Taſk to keep the menſtrual Diſcharges in a due and natural Order, ſo 'tis ſtill more difficult to manage the hæmorrhoidal, when a large Quantity of Blood attempts its Diſcharge by the Veins of the Anus, but does not find them diſpos'd for its Evacuation; but the Diſcharges of this Kind, are, among all other Subſtances, moſt powerfully promoted by Pills prepared of Aloes, which by their highly ſubtile, reſinous, and ſulphureous Particles, not only excite a violent Orgaſm in the whole Maſs of Blood and Humours, but alſo by ſtimulating the Coats of the Colon and Rectum, by their tenacious, viſcid, and reſinous Parts, excite a greater Afflux

of Blood to these Parts: Yet when the Blood, after it has arrived here, cannot make its Way through the Vessels, it partly protrudes them, like so many Tubercles, accompanied with Pain; and partly, stagnating between the nervous Coats of the Intestines, and pressing them, produces violent Inflations, Spasms, and other terrible Disorders of the Abdomen. *Frederic Hoffman.*

EMMENIA, ἐμμήνια, from μὴν, a Month. The menstrual Discharges.

EMMOTOS, ἔμμοτος, from μοτὸς, Lint. In *Hippocrates*, it is an Epithet for Persons, Parts of the Body, or Disorders, which require the Introduction of Lint for their Cure.

EMODIA. A barbarous Word, importing a Stupor of the Teeth.

EMOLLIENTIA. Emollient or softening Remedies. See ALTERANTIA.

EMOTIO. This Word is us'd with respect to the Mind, and then imports a Delirium; or relative to some Bone, and then implies Luxation.

EMPASMA, ἔμπασμα, from πάσσω, to sprinkle upon. The same as CATAPASMA, or DIAPASMA. See CATAPASMA.

EMPEIRIA, ἐμπειρία, from πείρω, to try. Experience.

EMPEROS, ἔμπηρος, the same as πηρὸς, mutilated.

EMPETRUM.

The Characters are,

It has the Leaves and Appearance of *Heath*; the Flower is Male, has no Petals, and consists of Stamina; the Fruit, which grows in a different Part of the Plant, is like a Berry, and full of hard stony Seeds.

Boerhaave mentions two Species of this Plant; which are,

1. Empetrum; montanum; fructu nigro, *T.* 579. *Erica, baccifera, procumbens nigra*, C. B. P. 486. *Erica, baccifera, Matthioli*, J. B. 1. 526. Lugd. 188. *Erica, Coris folio*, 11. Clus. H. 45. BLACK-BERRY'D HEATH, CROW-BERRIES, OR CRAKE-BERRIES.

2. Empetrum; Lusitanicum; fructu albo, *T.* 579. *Erica, erecta, baccis candidis*, C. B. P. 486. *Erica, baccifera, Lusitanica*, T. B. 1. 528. *Erica, Coris folio*, 10. Clus. H. 45. *Erica*, 7. Clus. Lugd. 190. H. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 173.

Besides the two foregoing Species of *Empetrum*, *Dale* mentions a third:

Empetrum, Offic. *Thymelæa foliis Kali lanuginosis, salsis*, C. B. Pin. 463. Tourn. Inst. 594. Elem. Bot. 467, Raii Hist. 2. 589. Jonst. Dendr. 236. *Sanamunda secunda Clusii*, Ger. Emac. 1595. J. B. 1. 594. Chab. 48. *Sanamunda altera Clusii*, Park. Theat. 203. SEA-HEATH SPURGE. *Dale.*

It grows spontaneously on the Sea-coasts of *Andalusia*, and flowers in *February*. The Root is in Use; a Dram of which, taken in a Decoction of Chiches, is a potent Cathartic. About *Gibraltar* it is call'd *Burhalaga*, and used only for heating of Ovens. *Raii Hist. Plant.*

EMPHRACTICA, ἐμφρακτικὰ, from φράσσω, to obstruct. Obstructing Topics, such as, when applied to the Body, adhere, and stop the Pores.

EMPHRAGMA, ἔμφραγμα, of the same Derivation as the preceding Word. An Impediment, or Obstruction. Thus some Parts of a Child, presenting in an unnatural Posture, are said, by *Hippocrates*, to be an *Emphragma*, that is, to obstruct the Birth, in his Treatise, *de Septimestri Partu.*

EMPHRAXIS, ἔμφραξις, of the same Derivation as EMPHRACTICA. An Obstruction.

EMPHYSEMA, ἐμφύσημα, from φυσάω, to inflate. Any flatulent Tumor. It is generally taken for a soft Tumor, arising from Air, contain'd in the Cells of the *Membrana Cellulosa.*

See that Part of the Article CAPUT, which treats of Wounds of the Head. See also CELLULOSA MEMBRANA.

In *Hippocrates* it imports an Inflation of the Belly; and sometimes a Tumor in general.

It is surprising to what a Degree the cellular Membrane will be inflated by the Air retain'd and rarefy'd in its Cells. To this Purpose, Mr. *Mery* gives a very remarkable History in the Memoirs of the *Royal Academy of Sciences* for 1713: which the Curious may consult.

EMPIRICA SECTA. The Empiric Sect. See the PREFACE.

Empiricus is deriv'd from πεῖρω, to experience.

EMPLASTICA, ἐμπλαστικὰ, from ἐμπλάσσω, to obstruct, or spread upon. The same as EMPHRACTICA.

EMPLASTRUM, ἔμπλασσος, of the same Derivation as the preceding Word. A Plaister.

No Part of the Apparatus for Dressing is of more Importance than Plaisters; the Nature of which is so well known, that it would be ridiculous to attempt a Definition of them. There are various, and almost innumerable Kinds of Plaisters; the most considerable of which, together with their Composition and Preparation, are found in the several Dispensatories; but especially in the *Pharmacopœia Augustana*, the *London Dispensatory*, that of *Brandenburg*, and *Lemery's Pharmacopée Universelle.* Most of these Plaisters are spread upon Linen Cloth, Leather, or Silk, according to the different Conditions of Wounds, and the various States of Patients. When Plaisters are to be applied to hairy Parts of the Body, those Parts are previously to be shav'd, that the Plaister may adhere more firmly, and be removed more easily, and with less Pain to the Patient. But that they may be still more commodiously apply'd, their Form is to be adapted to that of the particular Part, for whose Relief they are intended. Thus some Plaisters ought to be round, others square, others triangular, others oval or elliptical, others in the form of a Crescent, others shap'd like the Letter T, and others in the Form of a *Maltese* Cross, as in *Tab.* 23. *Fig.* 1, 2, 3, 4, 5, 6, 7, 8. Others have either one or both of their Sides slit, according to the Intention proposed, as in *Fig.* 9. and 10. To these we may add that kind of Plaister, which being perforated in the Middle, is destin'd for Fractures, accompanied with adjacent Wounds; that, by this means, the Wounds may be commodiously cleansed and dressed without removing the Plaister, as in *Fig.* 11. 11. 11. However various the Forms of Plaisters may be, as is obvious from what has been said, yet such as are either square or round, are most generally used; since there are few Parts of the human Body to which these may not be commodiously apply'd, especially if their Edges are slit with a Pair of Scissars.

The Bulk, as well as the Figure, of Plaisters, is various; for their Largeness ought always to correspond to the Wound, or Part affected. As for the Use of Plaisters, it is found to be very various and extensive; for they not only serve to retain Balsams, Ointments, Lint, Tents, and other Applications, to Wounds, but also contribute very effectually to *generate* Pus, to digest and maturate Tumors, to conglutinate and cure Wounds, to unite fractur'd Bones, to heal Burns, to alleviate Pains, and to corroborate such Parts of the Body as are weak and infirm.

It is to be remark'd, that the best way of giving a Plaister a good Consistence, is a Prejudice to many Intentions; and that is done with Litharge, or Minium, and Oil; for when these are boiled, so as to incorporate, they make a Body very suitable for this Form; but then they are opposite in Virtues to the warmer Gums, which are frequently mix'd with them. The other Ways, therefore, of giving a Consistence to this Form, either with Wax, Resin, or Pitch, may be preferable as to Intention or Efficacy; but these also have their Inconveniences in other respects; for those Plaisters which take in much Wax, are difficult to spread; because, when warm, they are not glutinous enough to stick well. Resin likewise is troublesome to spread, and, where it abounds, sticks too much; and Pitch of any kind, especially when join'd with Turpentine, though made into an hard Consistence, yet will not hold its Form in Rolls, but run flat, as is commonly observ'd in the *Emplastrum Cephalicum*, and *Adhæsivum*; for which Reason they are frequently confin'd in Bladders.

In the Prescription of extemporaneous Plaisters, the greatest Regard is to be had to that particular Consistence which the Part can most conveniently bear, whereupon the Application is to be made. Thus Plaisters to the Breast and Stomach, especially in the Intentions of Emollients or Discutients, should be yielding and soft, as in the officinal *Emplastrum Stomachicum magistrale*; but to the Loins, or any of the Limbs, where warm Discutients and Strengtheners are to be applied, an higher, and more adhesive Consistence is to be sought for. The emollient Plaisters likewise should be laid on thick, and frequently repeated, if the Symptoms continue; because their better Parts are soon spent. Discutients also, applied to hard Tumors, require Repetition; but the Strengtheners, which are on purpose contrived of a strong adhesive Consistence, are permitted to lie on, till they grow dry, and come off spontaneously. In some flatulent Tumors, where a Plaister alone does not prevail, they are at Intervals taken off, and discutient Fomentations or Lotions made use of; such as are composed of Bitters, Carminatives, and take in lixivial Salts, or alcaline Spirits.

There are a great Number of Plaisters describ'd in the Dispensatories above-quoted. Those in the *London Dispensatory* are the following:

EMPLASTRUM ADHÆSIVUM: *The sticking Plaister.*

Take of the simple Diachylon, and Diachalcitis, of each one Pound; of Burgundy Pitch, six Ounces; of Turpentine, one Ounce; of Gum Sarcocolla, four Ounces: Make into a Plaister. *S. A.*

The College have taken this from *Bates*, with some little Variations in the Quantities. The Pitch, and Gum Sarcocolla, must be very carefully strained, or else the Plaister will be almost useless. There are, indeed, many Compositions of this kind in Practice amongst our Surgeons, who vary them at their own Discretion; and most of them omit the Sarcocolla, as giving more Trouble to make it smooth, than its Qualities are judg'd to deserve.

EMPLASTRUM EX AMMONIACO. See AMMONIACUM.

EMPLASTRUM E BACCIS LAURI: *Plaiſter of Bay-berries.*

Take of Bay-berries, having their Huſks clear'd off, two Ounces; of Frankincenſe, Maſtich, and Myrrh, of each half a Dram; of Cypreſs, Coſtus, yellow Wax, Turpentine, and Oil of Bays, each one Ounce; of deſpumated Honey, juſt made warm, four Ounces. Powder together the Cypreſs, Coſtus, and Bay-berries, to be mixed with the Honey: Let the Frankincenſe, Maſtich, and Myrrh, be ſeparately reduced, and mixed with the Honey; and then add the Oil of Bays, the Turpentine, and Wax, all melted together, ſo as to make a Plaiſter. *S. A.*

EMPLASTRUM DE BETONICA. See BETONICA.

EMPLASTRUM CÆSARIS: *Cæſar's Plaiſter.*

Take of red Roſes, one Ounce and a Half; of Biſtort-root, of Cypreſs-nuts, of all the Sanders, of Mint, and Coriander-ſeeds, of each three Drams; of Maſtich, half an Ounce; of Hypocyſtis, Acacia, Dragon's Blood, ſealed Earth, true Bole, and red Coral, of each two Drams; of Turpentine, waſh'd in Plantain-water, four Ounces; of Oil of Roſes, three Ounces; of white Wax, twelve Ounces; of Reſin of the Pine-tree, ten Ounces; of Pitch, ſix Ounces; of the Juices of Plantain, Houſleek, and Orpine, of each one Ounce. Let the Wax, Reſin, and Pitch, be melted together; then add the Turpentine and Oil, the Hypocyſtis and Acacia, diſſolved in the ſaid Juices; and, laſtly, the Powders, ſo that the Whole may be made into a Plaiſter. *S. A.*

EMPLASTRUM CEPHALICUM: *Cephalic Plaiſter.*

Take of tranſparent Reſin, two Ounces; of black Pitch, one Ounce; of Labdanum, Turpentine, Bean and bitter Vetch-flowers, and Pigeons-dung, of each half an Ounce; of Myrrh, and Maſtich, of each one Dram and an half; of Gum, Juniper, and Nutmegs, of each two Drams. Let the Myrrh and Labdanum be diſſolved in a warm Mortar; and, with an Addition of the reſt of the Ingredients, make into a Plaiſter. *S. A.* If it be deſired ſtronger, add the Powders of Euphorbium, Pellitory, and black Pepper, of each two Scruples.

This is much uſed in common Preſcription, to apply to the Feet, as well as the Head.

EMPLASTRUM E CICUTA CUM AMMONIACO. See CICUTA.

EMPLASTRUM E CYMINO. See CUMINUM.

EMPLASTRUM DIACHALCITEOS: *Compound Plaiſter of Chalcitis.*

Take of old unſalted Hogs-lard, cleanſed from its Membranes, two Pounds; of old Oil of Olives, of the Litharge of Gold, powder'd and ſifted, of each three Pounds; of white Vitriol, calcin'd and powder'd, four Ounces: Let the Litharge, Lard, and Oil, be boiled together, over a gentle Fire, with a little Plantain-water, and continually ſtir'd with a Spatula, to the Conſiſtence of an Emplaſter; and when this is taken off the Fire, ſtir in the Vitriol, ſo as to make it into a Maſs. *S. A.*

EMPLASTRUM DIASULPHURIS. See DIASULPHURIS.

EMPLASTRUM EPISPASTICUM PRIMUM: *The firſt Bliſtering-plaiſter.*

Take of the ſimple Melilot-plaiſter, one Pound and a half; of Cantharides, in fine Powder, twelve Ounces; of the Seeds of Biſhops-weed, one Ounce and a half; of Vinegar, half a Pint; and make into a Plaiſter. *S. A.*

EMPLASTRUM EPISPASTICUM SECUNDUM: *The ſecond Bliſtering-plaiſter.*

Take of Burgundy Pitch, twelve Ounces; of Venice Turpentine, four Ounces; of the Powder of Cantharides, ſix Ounces: Mix, and make them into a Plaiſter. *S. A.*

EMPLASTRUM GRISEUM DE LAPIDE CALAMINARIS: *The Calamine-plaiſter.*

Take of prepar'd Calamine, one Ounce; of Litharge, two Ounces; of Ceruſs, half an Ounce; of Tutty, one Dram; of Turpentine, ſix Drams; of white Wax, one Ounce and an half; of Sheep's-ſuet, two Ounces; of Frankincenſe, five Drams; of Maſtich, three Drams; of Myrrh, two Drams; of Camphire, half a Dram. Let the Turpentine, Wax, and Suet, be all melted together; then put in the Frankincenſe, Maſtich, and Myrrh, in Powder; and after they are very well mix'd, add the Calamine, Litharge, Ceruſs, and Tutty, alſo in fine Powder. Laſtly, before they are quite cold, put in the Camphire, diſſolv'd in a little Spirit of Wine; and make all into a Plaiſter.

This is recommended for a great Healer of Ulcers.

EMPLASTRUM AD HERNIAM: *Plaiſter againſt Ruptures.*

Take of Galls, Cypreſs-nuts, Pomegranate-peel, Balauſtines, Acacia, the Seeds of Plantain, Fleawort, and Creſſes, Acorn-cups, roaſted Beans, long and round Birthwort and Myrtles, of each half an Ounce. Let all theſe be powder'd and macerated four Days in Vinegar of Roſes, and afterwards dried: Then take of the greater and leſſer Comfrey; of Horſe-tail, Woad, Ceterach, Roots of Oſmund-royal, and Fern, of each one Ounce; of Frankincenſe, Myrrh, and Maſtich, of each two Ounces; of Armenian Bole, waſhed in Vinegar; of prepar'd Calamine, Litharge of Gold, and Dragon's-blood, of each three Ounces; of Pitch, two Pounds; of Turpentine, a ſufficient Quantity to make the Whole into an Emplaſter. *S. A.*

This is not only intended for what is ſignified by its Title, but for the ſtrengthening any weak Part.

EMPLASTRUM DE MASTICHE: *The Maſtich-plaiſter.*

Take of Maſtich, two Ounces; of Armenian Bole, waſh'd in red Wine, one Ounce and an half; of red Roſes, ſix Drams; the Raſpings of Ivory, and Myrtle-berries, of each half an Ounce; of Turpentine, Colophony, Tacamahaca, and Labdanum, of each two Ounces; of yellow Wax, half a Pound; of the Oil of Myrtles, four Ounces. Let thoſe Things be powder'd apart, which require it; then melt the Wax in the Oil, and to them, when taken off the Fire, add the Turpentine; afterwards mix the Bole, Roſes, and Ivory, in Powder, and laſt of all the Maſtich; then briſkly ſtir them about in a warm Mortar, ſo as to bring them to a Plaiſter. *S. A.*

EMPLASTRUM DE MELILOTO SIMPLEX: *Simple Melilot-plaiſter.*

Take of freſh Reſin, eight Pounds; of yellow Wax, four Pounds; of Sheep's-ſuet, two Pounds: After theſe are melted together, put in five Pounds of green Melilot, cut ſmall; and make into a Plaiſter. *S. A.*

This is but a modern Contrivance, and is now greatly in Uſe, principally for dreſſing Bliſters.

EMPLASTRUM MERCURIALE: *The Mercurial Plaiſter.*

Take of Quickſilver, which hath been ſtrained through Leather, eight Ounces; of liquid Storax, one Ounce and an half; of Venice Turpentine, one Ounce. Let the Whole be work'd together in a Mortar, to an entire Incorporation of the Mercury: Then take of the Diachalcitis-plaiſter, one Pound; of Gum Ammoniac, half a Pound. Melt them, and put them into a Mortar, and work them about until cold, and become a Plaiſter.

EMPLASTRUM DE MINIO: *Red-lead Plaiſter.*

Take of Red-lead, nine Ounces; of the Oil of red Roſes, one Pound and an half; of White-wine Vinegar, ſix Ounces; and boil them to a perfect Conſiſtence of a Plaiſter.

EMPLASTRUM E MUCILAGINIBUS. See DIACHYLON COMPOSITUM.

EMPLASTRUM NIGRUM: *The Black Plaiſter.*

Take of white Ceruſs, one Pound; of Linſeed Oil, two Pounds; and boil them to a ſufficient Conſiſtence, ſtirring all the while with a Spatula.

EMPLASTRUM A NOSTRATIBUS FLOS UNGUENTORUM DICTUM: *A Plaiſter call'd, in our Country, The Flower of Ointments.*

Take of common Reſin, Reſin of the Pine-tree, yellow Wax, Sheep's-ſuet, of each half a Pound; of Olibanum, four Ounces; of Turpentine, two Ounces and an half; of Myrrh and Maſtich, of each one Ounce; of Camphire, two Drams; of White-wine, half a Pound: Boil them together into a Plaiſter.

It is pretty much in Uſe amongſt our Surgeons for a warm Suppurative.

EMPLASTRUM OPODELDOC: *Opodeldoc-plaiſter.*

Take of Bdellium, Ammoniacum, Galbanum, Sagapenum, and Opopanax, of each two Ounces: Melt theſe together, and add to them half a Pound of *Strasburgh* Turpentine, four Ounces of Oil of Bays, two Ounces of Amber; and ſtir them together, over a gentle Fire. Take of Litharge, one Pound; Calamine, one Pound and an half; of Oil of Olives, two Pounds; of Linſeed-oil, one Pound: Boil theſe likewiſe over a gentle Fire, ſtirring all the while with a Spatula; and when theſe are all mixed, add of yellow Wax, and Colophony, of each one Pound; and, after theſe are melted and mixed with the preceding, boil again, and ſtir, until all are incorporated: Then gradually put in of the aſtringent Saffron of Mars, Loadſtone, red Colcothar,

Colcothar, Olibanum, Myrrh, Amber, Maſtich, Sarcocolla, Dragon's-blood, and Camphire, of each one Ounce; of round Birthwort-root, two Ounces; and let them ſtand over the Fire, till the Whole hath obtained a due Conſiſtence.

This Compoſition hath been greatly extol'd heretofore, and particularly by *Paracelſus*, who frequently mentions it in is chirurgical Writings.

EMPLASTRUM OXYCROCEUM. See CROCUS.

EMPLASTRUM DE SAPONE: *Soap-plaiſter.*

Take of common Oil, two Pounds; of red Lead, one Pound. Let them be put upon a Fire, and briſkly ſtirred about a good while, until they are very well mixed; then take the Mixture off the Fire, and before it is quite cold, ſtir in of Venice Soap, cut into Slices, half a Pound; and make into a Plaiſter. *S. A.*

This is much in Eſteem amongſt ſome Perſons; principally, for diſcuſſing gouty Tumours, and the Juices ſtagnating after Strains.

EMPLASTRUM STICTICUM: *Stictic Plaiſter.*

Take of the Oil of Olives, ſix Ounces; of yellow Wax, one Ounce and an half; of ground Litharge, four Ounces and an half; of Gum Ammoniacum, and Bdellium, of each half an Ounce; of Galbanum, ſix Ounces; of Opopanax, Oil of Bays, Calamine, both the Birthworts, Myrrh, and Frankincenſe, of each two Drams; and of fine Turpentine, one Ounce: Let the Oil and Litharge be boil'd and incorporated together, ſtirring with a Spatula, till it ceaſes to ſtick to the Fingers: Then, removing it off the Fire, melt in it the Wax; next, the Turpentine mix'd with the Gums; and, laſt of all, the Powders: When all is cold, put in the Frankincenſe, and Oil of Bays, ſo as to make the Whole into a Plaiſter. *S. A.*

EMPLASTRUM STOMACHICUM MAGISTRALE:

The Magiſterial Stomach-plaiſter.

Take of Mint, Wormwood, Stœchas, and Bays, of each one Dram; of Marjoram, red Roſes, and yellow Sanders, of each two Drams; of Calamus aromaticus, Aloes-wood, Flowers of Lavender, Nutmegs, Cubebs, Galangal, long Pepper, and Mace, of each one Dram; of Maſtich, three Drams; of Cloves, two Drams and an half; of the Oils of Mint, one Ounce and an half; of Nard, one Ounce; of Spike, one Dram; of Reſin, and Wax, of each four Ounces; of Labdanum, three Ounces; of ſtrain'd Storax, half an Ounce: Make into a Plaiſter. *S. A.*

This is now much in Eſteem to ſtrengthen the Stomach, inſomuch that there are hardly any Shops without it.

EMPLASTRUM TONSORIS.

Take of hard Pitch, two Pounds; of Wax, one Pound; of Reſin of the Pine-tree, half a Pound; of Fenugreek-flower, and the Powder of black Chameleon, and Bryony-root, of each four Ounces; of Cumin-ſeeds finely powder'd, two Ounces: Make into a Plaiſter. *S. A.*

Lemery deſcribes a great Number of Plaiſters in his *Pharmacopée Univerſelle*. Of theſe I ſhall only deſcribe the *Emplaſtrum Abbatis de Grace*, and the *Emplaſtrum Andreæ a Cruce*, which I have frequently mention'd.

EMPLASTRUM ABBATIS DE GRACE.

Take of the Oil of Roſes, ſixteen Ounces; of the depurated Juice of pale Roſes, and prepar'd Litharge of Gold, each nine Ounces, and of prepar'd *Venetian* Ceruſs, two Ounces: Boil to the Conſiſtence of a Plaiſter, and then add four Ounces of yellow Wax.

The Litharge, the Ceruſs, the Oil of Roſes, and the depurated Juice of pale Roſes, muſt be boil'd together in the ſame Veſſel, continually ſtirring them with a wooden Spatula, till they aſſume the Conſiſtence of a Plaiſter. Then cut the Wax ſmall, and let it melt along with them. When the Mixture is almoſt cold, it is to be made up in Rolls.

This Plaiſter is proper for drying Wounds and Ulcers, and is frequently us'd, by way of Plaiſter, in applying potential Cauteries.

EMPLASTRUM ANDREÆ A CRUCE.

Take of Roſin, two Pounds; Gum Elemi, four Ounces; Venice Turpentine, and Oil of Bays, of each two Ounces: Make them into a Plaiſter, according to Art.

Theſe Drugs muſt be all melted together, and paſſed through a Linen Cloth to ſeparate the Fæces; and by this means we ſhall have a Plaiſter fit to be reſerved for Uſe.

It is ſerviceable in Wounds of the Breaſt, and other Parts; it cleanſes, conglutinates, and conſolidates; it is good for Contuſions, Fractures, and Diſlocations.

This Plaiſter muſt be kept in a Pot; for, if it be form'd into Rolls, it runs. *Lemery, Pharmacopée Univerſelle.*

EMPLATTOMENA, ἐμπλαττόμενα. The ſame as EMPLASTICA.

EMPNEUMATOSIS, ἐμπνευμάτωσις, from ἐμπνέω, to blow into, or inflate. An Inflation of the Stomach, according to the Author of the *Definitiones Med.* But it is applied to other Parts, as the Womb, by *Paulus Ægineta, in Lib. 3. Cap. 70.*

EMPRION, ἔμπριον, from πρίω, to ſaw. Serrated, or ſaw-like. A Sort of Pulſe mentioned by *Galen.* In this the Artery is diſtended in one Part more than in another, and feels indented; or like a Saw. It is ſaid to attend all inconſiderable Inflammations.

EMPROSTHOTONOS, ἐμπροσθότονος, from ἔμπροσθεν, forwards, and τείνω, to bend. A Species of Convulſion of the Muſcles of the Neck. According to *Celſus, Lib. 4. Cap. 3.* an *Emproſthotonos* is a convulſive Stiffneſs of the Neck, when the Chin is immoveably fix'd on the Breaſt: An *Opiſthotonos*, when the Head is bent backwards, in ſuch a Manner as that the Head reſts on the Scapulæ: And a *Tetanus*, when the Head is upright and immoveable.

EMPSYCHOSIS, ἐμψύχωσις, from ψυχὴ, the Soul. The Union of the Soul with the Body: Animation.

EMPTYSIS, ἔμπτυσις, from πτύω, to ſpit out. *Aretæus, Acut. Lib. 2. Cap. 2.* limits the Signification of this Word to a Diſcharge of Blood by Spitting, when it comes only from the Mouth, Fauces, and Parts adjacent.

EMPYEMA, ἐμπύημα or ἐμπύησις, from ἐν, within, and πύον, Pus or Matter.

Aretæus, Lib. 1. de Cauſ. & Sign. Morb. Chron. Cap. 9. ſays, "that they who are affected with purulent Abſceſſes in "the Cavities of the Body, whether within the Thorax, or "below the Diaphragm, if the Pus be diſcharged upwards, are "called ἔμπυοι, *Empyi*; if downwards, ἀποπυήσιας, *Apoſtematiæ.*" And, *ibid. Cap. 8.* he tells us, that "If there "be a Suppuration of the Thorax, or Ribs, and the Pus be diſ-"charged through the Lungs, it is called ἐμπύη."

"Thoſe who have a Collection of Pus, ſays *Galen, Com. 3. in Prognoſt. Text. 60.* "whether it be all within the Body, "or contain'd in ſome Part affected with an Inflammation; "either before or after an Eruption, we call ἔμπυοι, *Empyi* "(afflicted with a Purulency or Suppuration)." But our Phyſicians beſtow that Name principally on thoſe who are affected with a Suppuration in the Thorax and Lungs. In this Caſe, the Pus, after an Eruption, is contained between the Thorax and the Lungs; and, unleſs it be ſpeedily expectorated, the Patient dies of a Conſumption, with a ſlow Fever, which is always exaſperated in the Night. The Antients called a Collection of Pus, in any Part of the Body, *Empyema*; and ſuppurating Medicines, were, for that Reaſon, by ſome call'd *Empyemata*, by others, *Diapyemata.* Some will have thoſe who are affected with a Collection of Pus in any one of the Viſcera, to be called *Empyi*; others, as we ſaid, will allow that Name to none but thoſe who have a Settlement of Pus between the Thorax and the Lungs; for the Diſeaſe is form'd in a Place affected with an Inflammation, and of an Effuſion of Pus within the Thorax, from the inflam'd Part. Pus is generated whenever the Matter of an Inflammation is not reſolved, and carried off, but there ſettling, is, by Heat, concocted and converted into Pus. *Hippocrates, 7 Aph. 38.* thus expreſſes it; "Defluxions "on the Thorax [τὴν ἄνω κοιλίην] come to a Suppuration in "twenty Days." And, more clearly, *5 Aph. 8.* where he ſays, that "In thoſe who labour under a Pleuriſy, if the pec-"cant Matter be not diſcharg'd in fourteen Days, it turns to "a Suppuration." For pleuritic Pains, if not remov'd, either by Expectoration, or Purging, or Bleeding, or Diet, or other Medicines, excite a Suppuration, or ſuffocate the Patient. This is well expreſs'd by *Galen, in Prognoſt. Com. 2. T. 55.* "All Pains, he ſays, affecting the Thorax, at the Seat of the "Lungs, which will not yield to Medicines, if nothing elſe "afflicts the Patient, and no other deſtructive Symptom ap-"pears, give Reaſon to expect a Suppuration." The Inflammation, then, being ſuppurated, and its Humours converted into Pus, unleſs this be diſcharged by ſpitting, there enſues a Rupture of the Impoſtume, and an Effuſion of the Pus into the Cavity of the Thorax and Lungs, under which Circumcumſtance the Patients are truly and properly *Empyi.* By this Pus they are either ſuffocated, or freed from it by a free Expectoration in the Term of forty Days, as we are taught by *Hippocrates, 5 Aph. 15.* "Whoever, ſays he, become *Empyetic* "from a Pleuriſy, if cleans'd in forty Days from the Time of "the Rupture, recover; otherwiſe they fall into a Conſum-"ption." On which *Galen*, commenting, ſays, "Unleſs "the Pus be all diſcharged, by Expectoration, in that Term of "Days, it putrifies, and in that Quality corrodes the Lungs, "and induces a Conſumption:" Which is an Extenuation of the

the whole Body, because of the incurable Ulcers of the Lungs, and a Leanness, in Conjunction with a slow Fever; which Affection the *Greeks*, and especially the *Athenians*, as *Galen*, *Com. 7. Aph.* 16. informs us, properly call'd φθόη, *Phthoe*, and *Hippocrates*, φθίσις, *Phthisis*. When this Disease is come to its Extremity, the Case is desperate, the Hair falls off, the Belly suffers under a Flux, from mere Imbecillity of the Faculty, as *Galen* expresses it, and the Spit is retain'd; for, however extenuated, the Patients live, as long as they are able to clear their Lungs by coughing and spitting; but by the Matter, which should be expectorated, remaining within, the Passages of Respiration are obstructed, and the Sick, by that means, suffocated.

In order to prognosticate with more Clearness and Certainty from an Empyema, or to predict the Fate of *Empyi*, or those who are affected with Pus from the Rupture of an Impostumation in the Thorax, we are to inquire, first, whether the Suppuration proceeds from a Pleurisy, Peripneumony, or Quinsey; secondly, what are the Signs by which we distinguish them; thirdly, we are to inform ourselves when the Rupture happens; and, lastly, we are to treat of those who recover, as well as those who die, and the fatal Signs attending their Disorder.

When we are to expect an Empyema, we are taught by *Hippocrates*, in the following Words, *Prognostic.* "Whatever Pain "affects these Parts [*the Region of the Thorax*], and cannot "be removed, either by Expectoration, or Purging, or Bleed-"ing, or Medicines, or a Regimen of Diet, must be expected "to produce a Suppuration." But as *Hippocrates*, 2 *Aph.* 47. has told us, "that Pains and Fevers are more incident at a "time when Pus is generating, than after it is generated; "they must of Necessity be increas'd, as Matters tend to the "Suppuration." The same Author, in the Book before-quoted, gives us a Direction to "compute the Beginning of "an Empyema from the Day in which the Patient was taken "with a Fever or Rigor, and, instead of a Pain, complain'd "of a Weight in the Place which was before affected with "Pain; for thus it happens about the Beginning of a Suppu-"ration; and from this time you are to expect a Rupture of "the Suppuration, at the End of the before-mentioned "Terms." *Galen*, in his Comment on this Place, says, that the Signs of a Suppuration are a Weight instead of a Pain, a Rigor, or Shivering, and a remarkable Exacerbation of the Fever. Besides a Sense of Weight, *Hippocrates* reckons a Heat in the Sides, or in one of them, if the Suppuration be only in one Side, as a Symptom; for thus he proceeds, *ibid.* "If the "Suppuration be only in one Side, it will be proper to cause "the Patient to turn, and to examine him, whether he has a "Pain in one Side, and whether it be hotter than the other; "and, when he lies on his sound Side, it is fit to ask him, "whether he has a Sense of a Weight pressing upon him; "for, if so, the Suppuration lies in the Side, which ever it be, "where the Pain is felt." A Suppuration, then, is discover'd by these Signs, which are, as we said, a Rigor or Shivering; which is excited, as *Galen* supposes, from the Acrimony of the Pus infesting the inflam'd Parts, an Increase of the Fever, and a Sense of a Weight in the Sides, or in one of them, if the Collection of Pus be only in one Side: I add to these Signs the Sense of a Heat in the Sides, or one Side, if the Pus be only collected in that Side. If this Increase and Collection of Pus, concocted by Nature, after its Eruption, happens to be expectorated by coughing, the *Empyi* recover; but if the Pus can no way be discharged, through Want of Strength, the Patient is either suffocated, or dies of a Consumption. Hence we are told by *Hippocrates*, in the *Prognostics*, that "The "Disease is more fatal to old Persons than young;" because, as *Galen* says, "Old-age is infirm, and great Strength of "Nature is requir'd for Discharges by coughing and spitting; "and none can recover without a very copious Expectoration "of Pus, by means of a Cough." *Galen*, *de Loc. affect. Lib.* 5. *Cap.* 3. tells us of *Empyi*, or Persons affected with a Collection of Pus within the Thorax, who have expectorated, or spit out, the Quantity of fifteen Heminæ, or half Pints, of Pus, and recover'd. Those, therefore, who spit plentifully, escape; which is the Import of what *Hippocrates* says, 5 *Aph.* 15. "They who become *Empyi*, after a Pleurisy, if cleans'd "by Expectoration in forty Days from the time of the Rupture "of the Abscess, are freed from the Disease." When Expectoration cannot be effected, the Patient is sometimes suffocated through the gross and viscous Quality of the Pus, and the Denseness, or close Contexture, of the Membrane surrounding the Lungs, and the Weakness of the Faculty, which is known by a Respiration, in which the whole Thorax is elevated, and yet nothing is expectorated. *Galen*, *de Loc. affect. Lib.* 4. *Cap.* 7. tells us, "that they who are *Empyi*, on account of a "Collection of Pus between the Thorax and Lungs, and "elevate the whole Thorax in Respiration, do the same thro' "Weakness, and Inability to discharge the Pus." If the Patient escapes Suppuration, he dies of a Consumption, as *Galen* observes, wasting away under a slow Fever, the Heat constantly increasing more or less in the Night, and the retain'd Pus putrifying within, and corroding and ulcerating the Lungs.

The Signs of a Consumption succeeding an Empyema are thus express'd by *Hippocrates*, *Prognost.* "First, the Fever "never leaves the Patient, but is more moderate in the Day-"time, and exasperated at Night, with copious Sweats, a "Cough, and much Desire to expectorate, but to little Pur-"pose. These Symptoms are attended with Hollowness of the "Eyes, Redness of the Cheeks, and Crookedness of the Nails "of the Fingers; there is, also, a Sense of Heat of the Fingers, "and especially at the Tops; the Feet swell, the Appetite is "lost, and there is an Eruption of Pustules about the Body." *Galen*, commenting on this Description, says, that the Fever never ceases, because the solid Parts of the Body are heated; for which Reason, also, the Fever keeps one constant Tenor, retaining a Heat like Chalk or Lime-stone, gentle to the Touch; and this Heat, which is the proper Diagnostic of a hectic Fever, is increas'd after Eating and Drinking, in like manner as it is in Chalk upon Affusion of Water; and the Flesh becomes much hotter to the Touch. The continual Sweating is owing to the Weakness of the Patient, and the Dissipation of the distributed Aliment. The Patient has an Inclination to cough, and strives to expectorate, but discharges nothing worth Consideration, on account of the Grossness and Viscidity of the Pus, the Density of the Membrane inclosing the Lungs, and the Weakness of the Faculty. Hollowness of the Eyes, which is a Symptom common to all long Fevers, is from Driness, and Redness of the Cheeks from the Heat of the Lungs and the Cough; both which heat the Face, and the whole Head, because the Vapours, which arise from the Defluxion oppressing the Lungs, ascend thither in great Redundance. The Nails are crooked, because the Flesh, which should support them on each Side, is consum'd. The Fingers, as in all hectic Fevers, are remarkably hot, and appear to be so at the Inside of the Tops, as being more carnous, and abounding with Humour. At length the Feet swell, the Extinction of the natural Heat commencing in those Parts which are farthest distant from its Original. The Appetite is lost, that, as well as all other Faculties, being under a Decay; and there is an Eruption of Pustules from an Effusion of corroding Ichor upon the Skin: Thus far *Galen*. These, then, are the Signs of a Consumption from an Empyema, under which the Patients live as long as they can spit, and discharge the Pus. 7 *Aph.* 16. One thing worthy of Remark, in relation to the Spitting, and which is observ'd by *Galen*, in the third of the *Epidemics*, in desperate Consumptions, is, that no Sign of Concoction appears. The Spitting, at last, is suppress'd, and a Looseness succeeds, with a Swelling of the Feet, and other Symptoms; which convinces the Patients themselves, that their Case is desperate. In the first place, then, the peccant Humour, which is the Cause of the Pleurisy, or Peripneumony, being not discharg'd, putrefies, and is changed into Pus; then breaks, and is expectorated by coughing. But this Collection of Pus, in the Thorax and the Lungs, makes its Eruption in a determinate Time, which is generally twenty Days, and sometimes sooner or later. The prognostic Signs of an Eruption are describ'd by *Hippocrates*, *Lib. Prognost.* in the following Manner: "Whether an Em-"pyema will break sooner, or later, may be thus known: "If there be Pain at the Beginning, and the Difficulty of "Breathing, with the Cough and Spitting, continue, the Eru-"ption may be expected on the twentieth Day, or sooner; "but if the Pain be gentle, and all the other Symptoms mode-"rate in proportion, the Eruption may be longer delay'd: "However, a Pain, Difficulty of breathing, and Spitting, must "precede an Eruption of the Pus." Hence *Galen* infers, that the Prognostics of a Rupture of the Impostume are a Pain, Difficulty of Breathing, Cough, and Spitting, which, if they are continual and violent, prognosticate a speedy Eruption; if otherwise, a slower. However, as the Body inclosing the Pus is corroded by its Acrimony, there must of necessity be a Pain, Cough, and Spitting, because some of the thinner Part of the Sanies penetrates through the involving Substance; and a Difficulty of Breathing is unavoidable, both on account of the bad State of the whole Body, and more especially of the Pain. The Reason or Cause of the Eruption is referred to the motive Force of Nature, the Quantity of Pus, or its deprav'd Quality, irritating the expulsive Faculty to an Expectoration. The Rupture happens before due Time, or before the Pus is concocted, either by means of some pure Bile, which, not being thoroughly mix'd with the Matter, nor reduced to a moderate and natural Temperament, corrodes the Bag containing the Pus, or from the Redundance or Virulence of the Pus, or both of them together, irritating the expulsive Faculty. This is a symtomatical Eruption, and such as is condemn'd; but, when the Pus is duly and perfectly concocted, the Eruption is, from the Disposition of Nature, critical and laudable, and the Pus appears white, pure, equal, and smooth; whereas, in the premature and symptomatical Eruption, the Pus is crude, of a Mixture of Colours, and fetid, or yellow, and mix'd with Plenty of Bile. The

Author of the *Coac. Præsag.* 392. speaking of this latter Eruption, says, "They who expectorate purulent and bilious "Matter, whether separately, or mix'd together, generally die "on the fourteenth Day."

These things being premised, we are now to consider what may be predicted from an Empyema: And, first, with respect to a Recovery: We are taught to prognosticate the Recovery of a Patient, labouring under an Empyema, by the following Signs, mention'd by *Hippocrates* in his Book of *Prognostics*: "Among good Signs, he says, may be reckon'd, for the "Patient to support the Distemper with Ease, to breathe "freely, to be free from Pains, to expectorate with Facility, "for his Body to appear of an equal Warmth and Softness in "every Part; that he has no Thirst; that his Urine, Stools, "Sleep, and Sweat, are all laudable, and such as were before "requir'd [*in this Book*]: If all these Symptoms concur, the "Patient, we may be assur'd, will not die." And, a little after, he says, "They have most Reason to expect a Recovery, "whom the Fever leaves the same Day after the Eruption, "whose Appetite speedily returns, and Thirst ceases; when the "Stools are small in Quantity, and consistent; and when the "Pus is white, smooth, of one Colour, and free from Phlegm, "and expectorated without much Difficulty, or violent Coughing. Under all these Requisites, the Patient is most happily "and speedily reliev'd; but, if the Case be less favourable, "they are surest to recover, whose Symptoms most resemble "those before describ'd."

The Signs prognosticating Death, under an Empyema, are principally these, as enumerated by *Hippocrates*, in the same Book of his *Prognostics*; and are directly contrary to the former: As, "When the Patient supports himself with Difficulty "under the Disease; when Respiration is great and full; when "the Pain is continual; Expectoration is perform'd with much "Labour and Coughing; there is a great Thirst; the Fever "affects one Part of the Body more than another; the Belly "and Sides are in a vehement Heat; but the Forehead, Hands, "and Feet, are cold; and the Urine, Stools, Sleep, and Sweats, "are all bad, or contrary to those in the former Case; if any "of these Symptoms appear under Expectoration, the Patient "will die before the Term of fourteen Days; or the ninth, "or eleventh Day." And again, a little after: "They die [*of an Empyema*], "if the Fever does not leave them, or returns "after it had seem'd to have left them; if there be a Loss of "Appetite, with a Looseness; or if the Pus they expectorate "be greenish and livid, or pituitous and frothy; under all "these Symptoms Death is inevitable." Whatever is expectorated by Spitting, but gives no Relief to the Patient, is condemn'd, *Coac.* 390. The Wife of blind *Meander*, *Lib.* 4. *Epid.* 7. 4. immediately expectorated greenish and purulent Matter on the sixth Day, and died about the twentieth Day. The Son of *Amphiphrades*, 7 *Epid.* 7. 4. expectorated a greenish Sort of Matter, and died on the twenty-eighth Day. *Hermoptolemus*, *ibid. T.* 16. on the fifteenth Day of his Illness, expectorated a palish Matter, and died the next Day. And, to conclude, *Hippocrates*, 7 *Aph.* 44. assures us, "that *Empyi*, "or those who labour under an Empyema, if, after cauterizing, the Pus flows pure and white, recover; but if it be "somewhat bloody, dirty, and fetid, they die."

From comparing the Passages above-quoted, with modern Authors, and his own Practice, *Boerhaave* seems to have collected the following Particulars relative to an Empyema, which he lays down by way of Aphorism.

When Matter or Pus is collected in the Cavity of the Breast, betwixt the Lungs and the Pleura, the Disorder is called an Empyema.

This is properly enough an Empyema; but the Matter may happen, also, to be collected in the Duplicatures of the Mediastinum.

The Disorder above-mentioned supposes a previous purulent Abscess within the Breast; which, breaking, discharges its Contents into the Cavity of the Thorax.

These Abscesses are seated, first, in the Lungs; and are caus'd either by Inflammations, Ruptures of the Vessels, or considerable Obstructions by Substances not easily resolvable.

Secondly, in the Pleura, arising either from an Inflammation, a slight Wound heal'd too precipitately externally, a Contusion, or Rupture of this Membrane.

Thirdly, in the Diaphragm; when an unresolv'd Inflammation of this Part suppurates, and breaks on that Side next the Breast.

Fourthly, in the Mediastinum; when that Part is, in like manner, inflam'd.

Fifthly, In the Pericardium, after an Inflammation thereof.

An Empyema may be prognosticated from an Inflammation of any of the Parts above-mentioned, which has not been resolv'd by means of Coction, Revulsion, a Crisis, or Medicines; but which terminates with a Shivering, a Fever which increases in the Evening, a wandering Heat, a Sense of Weight on the Part, a Difficulty of Breathing, Loss of Appetite, and Thirst.

An Empyema is known to be form'd, first, from a Duration of such a Disorder, as is mentioned above, for twenty Days, without a due Expurgation by Expectoration.

Secondly, by the Discontinuance of the Signs of an Abscess in any of the before-mention'd Parts.

Thirdly, from a new Pain, together with a Difficulty of Breathing, and Discharge of Saliva, which soon after cease.

Fourthly, from a dry Cough, a Weight on the Diaphragm, an Impossibility of lying on one of the Sides, a Noise made by the fluctuating Pus or Matter upon Motion, a slow Fever, Redness of the Cheeks, Hollowness of the Eyes, Heat at the Extremities of the Fingers, Incurvation of the Nails, and Tumor of the Abdomen.

The Consequences of the Rupture of an Abscess or Vomica, so as to form an Empyema, are, first, a continual Accumulation of Pus or Matter from the Ulcer, not yet heal'd; nor deterg'd.

Secondly, a continual Agitation, a Degeneracy, Fetidness, Putrefaction, and Attenuation of the Pus or Matter, thus confin'd in a warm and moist Place.

Thirdly, a difficult Elevation of the Diaphragm, and Extension of the Lungs: Hence Respiration is render'd short, difficult, and not easily perform'd, unless in an erect Posture; Danger of Suffocation when the Patient lies down, which, however, it is not possible for him to do on the unaffected Side; a perpetual dry Cough, and Anxiety.

Fourthly, a Maceration, Corrosion, and consequent tabid State of the Lungs, Pleura, Diaphragm, Mediastinum, Pericardium, and of the Heart itself; a hectic Fever, attended with a small and quick Pulse; Redness of the Cheeks; perpetual Thirst; utter Loss of Appetite; extreme Weakness and Faintings.

Fifthly, hence an Unfitness of all the Fluids for Nutrition, Circulation, Secretion, and Excretion; whence a Consumption and Atrophy, a Resolution of the Fibres, a Putrefaction of the Liquids, and their Discharge through the corroded Lungs; or a sanious and fatal Diarrhœa, with nocturnal Sweats after Sleep, Pustules on the Face, Incurvation of the Nails, a shining Yellowness of the Skin, and an Hippocratic Countenance.

The Cure of this Disorder is to be varied according to the different Causes and States thereof. For, first, when it is known, that there is an Abscess of the Lungs, Pleura, Diaphragm, Mediastinum, or Pericardium, for the Signs of which see PERIPNEUMONIA and PLEURITIS, all Endeavours are to be us'd to break it as soon as is possible, and to determine it towards the external Parts. This is to be done by the actual Cautery, the Knife; and by Medicines, or proper Motion. By Medicines, I suppose, *Boerhaave* means, suppurating Topics, applied externally to the Parts; for, if the Pleura is affected, these may invite a Tumor outwards; from whence the Matter may be discharged by Incision or Burning. When it is known, that the Abscess is broken, the Matter discharg'd must immediately be brought away, either by the Mouth, provided Nature shews the Way, by exciting a considerable Expectoration; or by the urinary Passages, if there are Signs of the Excretion of Pus in the Urine; or by the Operation for the Empyema, which is to be perform'd, by a proper Instrument, on the Side affected, betwixt the fifth and sixth, or fourth and fifth Ribs, reckoning from the lowest Rib. The Pus is there to be evacuated gently, and by degrees; the Ulcer is to be deterged by Injections of soft and mild Decoctions, with an Addition of Honey; and, after that, the Wound is to be heal'd.

If the Pus or Matter discharg'd appears white, soft, uniform, void of Smell, and communicating no Colour to the Probe upon Contact; if the Patient is free from Fever, Thirst, and a Diarrhœa; if he eats and digests tolerably well, and is, in other respects, in a pretty good State of Health; and if the Access of Air to the Cavity of the Thorax is, by all possible means, prevented; there are Hopes of his Recovery.

If, on the contrary, the Pus is brown, ichorous, mix'd with small Fibres, or Blood, fetid, tinges the Probe applied to it, and bursts out all at once, there is the utmost Danger of Death, or a Consumption.

If the Mediastinum is corroded and perforated, upon opening the Thorax, a sudden Suffocation frequently ensues.

If the Empyema is of long Standing, if the Patient is extremely weakened, if the Hairs begin to fall off, if a colliquative Diarrhœa is already begun, and there is a great Extenuation of the Body; this Operation, generally, accelerates the Death of the Person on whom it is perform'd.

The Operation for the EMPYEMA.

The Operation for the Removal of Pus, or Matter, extravasated in the Cavity of the Thorax, is called *Paracentesis*; which is also perform'd in the Abdomen, and Scrotum, for evacuating Pus, Water, Blood, or any other foreign and preternatural Substance. But the *Paracentesis*, or Perforation of the Breast between the Ribs, becomes necessary,

First,

First, not only in the *Empyema*, ſtrictly ſo call'd; but, alſo, ſecondly, when any Quantity of Blood is diſcharg'd internally from a Wound of the Thorax, thro' which it cannot be extracted, but induces various formidable Symptoms: But, in this Caſe, the Operation is, by the *French*, improperly call'd the Operation for the *Empyema*; ſince Pus is abſolutely requiſite to conſtitute an Empyema; for which Reaſon it is, more properly call'd a ſimple *Paracenteſis*, or Perforation of the Breaſt.

Thirdly, this Operation becomes neceſſary, when the Waters in a Dropſy of the Breaſt are to be evacuated. When, therefore, the Diſeaſe itſelf, and its ſeveral Symptoms, ſuch as a Difficulty of Breathing, and a Senſe of unuſual Weight and Fluctuation in the Breaſt, indicate a foreign and preternatural Humour lodg'd within, we are to have recourſe to the Operation, ſince the noxious and peccant Matter can ſcarcely, if at all, be evacuated by any other means: But, before the Operation is attempted, 'tis to be carefully conſider'd, whether the Patient, in the Situation he is in, can receive any Relief from it. When, therefore, the Strength is much impair'd and exhauſted, this Operation is, generally, highly dangerous; for the Patient, for the moſt part, either dies under it, or ſoon after. His Fate is alſo the ſame, if, in conſequence of the inveterate Nature of the Diſeaſe, the internal Parts are corroded and corrupted; or if the Patient labours under a Fever, a Flux, an intolerable Difficulty of Breathing, frequent Faintings, or cold Sweats; for all theſe Symptoms pronounce the Diſeaſe deſperate, and almoſt always prognoſticate a ſpeedy Death. In theſe Caſes the Operation, inſtead of being attended with Succeſs, procures Infamy and Diſgrace to the Surgeon, ſince he is generally charg'd with having kill'd a Patient, who, in reality, fell the genuine Victim to his own Diſorders. But when none of theſe Symptoms appear, when the Patient is yet ſufficiently ſtrong, and the Diſeaſe recent, the Operation is frequently attended with due Succeſs, becauſe the Breaſt may be perforated without any Danger, provided the Surgeon is ſufficiently cautious, ſince there is no Neceſſity for making an Inciſion in any Part beſides the Skin, Fat, Muſcles, and Pleura.

But before the Operation is attempted, we muſt carefully advert to two Circumſtances:

Firſt, in what Side of the Breaſt the noxious Matter is lodg'd: For, when the ſound and unaffected Side is perforated, the Operation is to no Purpoſe.

Secondly, what particular Part of the Breaſt ought to be perforated. But, in order the more infallibly to diſcover in what Side of the Breaſt the noxious Matter is lodg'd, we are diligently to conſider, firſt, in what Side the Patient before felt Inflammation and Pains. Secondly, in what particular Part the Patient perceives a Senſe of Weight, and a certain Kind of Fluctuation. Thirdly, on what Side the Patient lies moſt commodiouſly; for in it the Matter is generally lodg'd; ſince he cannot lie, without great Uneaſineſs, on the ſound Side. Fourthly, a certain Swelling, accompanied with a violent and intenſe Heat, generally diſcovers the affected Side. When we are thus ſatisfied with reſpect to the affected Side, if it ſhould happen to be the Left, the Operation is moſt commodiouſly perform'd between the ſecond and third; and, if the Right, between the third and fourth ſpurious Ribs, counting from the loweſt, about an Hand, or five Fingers-breadth, or, in large-ſiz'd Patients, ſix Fingers-breadth from the Spine of the Back, and lower Angle of the Scapula; for, if the Perforation was made higher, the malignant Matter, collected in the lower Part of the Cavity of the Thorax, could not be commodiouſly diſcharg'd. *Boerhaave*, in *Aphor. N.* 303. treating of Wounds of the Thorax, orders the Perforation to be made between the ſecond and third of the inferior true Ribs; but all good Surgeons diſſent from him, becauſe that Place is by far too high. The ſame Author, however, *Aphor.* 1191. ſpeaking of an Empyema, directs the Operation to be perform'd betwixt the fifth and ſixth, or fourth and fifth Ribs, reckoning from the loweſt Rib. On the contrary, if the Perforation ſhould be made lower than the Part we have directed, we are in Danger of wounding the Diaphragm, eſpecially on the Right Side, where the Liver is connected to it.

In like manner, when the Perforation is made nearer the Spine of the Back, the Operation is far more tedious and doubtful, ſince the thick Muſcles muſt not only be pierc'd, but ſince there is alſo the greateſt Danger of wounding the intercoſtal Arteries and Veins, or other large Veſſels, which, in this Part, are not inſerted in the Sulci, or Furrows, of the Ribs; ſo that the Part directed by us is at once more commodious and ſafe for having the Perforation made in it, than any others.

This Part is to be mark'd with Ink; and the Patient reclining his Body a little, the Surgeon, and an Aſſiſtant, are, with their Fingers, to raiſe the Skin; after which an Inciſion, about three Fingers-breadth in Length, is to be made in the Part mark'd, that the Fleſh may afterwards be perforated with the greater Eaſe. Surgeons make this Perforation in two different manners; for they either thruſt a ſharp and triangular Inſtrument included in a Tube, by the *French* call'd *Trocar*, and repreſented in *Tab.* 45. *Fig.* 1. ſo far into the Fleſh, till its Extremity is perceived to have penetrated into the Cavity of the Breaſt: Then they extract the Inſtrument, repreſented by *Fig.* 2. and evacuate the noxious Matter by the Pipe left in the Wound, and repreſented by *Fig.* 3. This Evacuation is to be continued as long as the Patient's Strength will bear it; for when we perceive a fainting Fit approaching, or find a large Quantity of the noxious Matter diſcharg'd, removing this Pipe, we introduce into the Perforation, another ſhorter Pipe, made either of Lead, as in *Tab.* 23. *Fig.* Q; or of Silver, and flexible, as in *Tab.* 26. *Fig.* 9. Theſe are carefully to be ſecur'd by Strings tied about the Breaſt, and by Plaiſters over the Pipe: A thick Compreſs is to be apply'd, and ſecur'd by a particular Species of Bandage, by Surgeons call'd *Mantile cum Scapulari*; the Scapulary and Napkin. Sometimes the Skin, Fleſh, and Pleura, are all perforated at one time by the Trocar; but as the Lungs, which frequently adhere to the Pleura, may poſſibly be injur'd by this Method, the more ſkilful and judicious Surgeons uſe the following Method. Having cautiouſly made an Inciſion, of about three Fingers-breadth in Length, in the Skin and Fat, they afterwards make a tranſverſe Inciſion into the Fleſh and Pleura, between the two Ribs above-mention'd, with the Knife G or H, in *Tab.* 22. after which they introduce the Pipe already mention'd, and evacuate the noxious and peccant Matter: But in making this Inciſion, we muſt take care, that the Body of the Patient be, in ſome meaſure, inclin'd forwards; ſince, by this means, the Interſtice between the Ribs is render'd larger, and, conſequently, more Space allow'd for the Inciſion; which when made ſufficiently large, the Finger is to be introduc'd into it, and the Lungs, if adhering to any of the adjacent Parts, are to be ſeparated, that the noxious Humours may be the more eaſily evacuated. Tho' this laſt Method of performing the Operation requires more Diligence in the Surgeon, and more Reſignation in the Patient, yet 'tis, for ſeveral Reaſons, preferable to the other; for, beſides that the Lungs, if we perceive them to adhere, may in this Caſe be thruſt back, either with the Finger, or a Probe, and, by that means, ſecured from Injury, the bloody or purulent Matter is capable of being far more effectually evacuated, in conſequence of the Largeneſs of the Inciſion. According to Mr. *Petit*, we ought abſolutely to abſtain from Pipes and Tents, on account of the Diſadvantages attending them; and rather introduce into the Inciſion a Piece of ſoft Linen Cloth, made up in form of a Tail, by which means the Wound is not only kept open, but alſo the peccant Matter continually and commodiouſly diſcharg'd: Over the Linen Cloth introduc'd into the Wound, we are to lay a Portion of Lint, with a Thread fix'd to it, and over this, more Linen; all which muſt be ſecur'd with a Plaiſter, and a tight Bandage.

On the ſubſequent Days, the Wound is to be dreſs'd once, twice, or thrice, according to the Uneaſineſs of the Patient; and, when as much of the noxious Matter is evacuated as the Patient's Strength can bear, we muſt twice or thrice, at every Dreſſing, inject ſome cleanſing Liquor warm, which is again to be carefully evacuated: What is generally, and, at the ſame time, moſt efficaciouſly, us'd for this Purpoſe, is a warm Decoction of ſome vulnerary Herb, ſuch as Paul's Betony, Scabious, or *Saracens* Conſound, mix'd with Honey of Roſes, and Oil of Myrrh, and, unleſs the Patient is afflicted with a Cough, with a little of the Eſſence of Myrrh, or the pectoral Balſam of *Wurtzius: Garengeot* highly recommends, for this Purpoſe, a Decoction of the *Perſicaria*; and, if the Diſorder ariſes from a Pleuriſy or Peripneumony, a Decoction of Marſh-mallows; But common Spirit of Wine, impregnated with the Sulphur of Antimony, is equally efficacious, both in cleanſing and healing the Wound: Others recommend Lime-water, mix'd with Honey of Roſes, as the moſt proper Liquor for this Purpoſe. After theſe Meaſures have been taken for ſome time, we are carefully to obſerve, whether the injected Liquor returns pure and free from any Remains of the peccant Matter; for then we may conclude, that the Cavity of the Breaſt is ſufficiently purg'd; after which, the Piece of Linen Cloth, or Pipe, is to be extracted, and the Wound conglutinated, like other Wounds of the Breaſt: But that the Liquors injected may be again diſcharg'd more effectually, the Patient muſt be ordered to recline his Body on the Part where the Wound is made, and breathe ſtrongly. In the Cure, we are, above all things, to take care, that proper internal Medicines, eſpecially vulnerary Decoctions and Balſams, together with a due Regimen, be not neglected.

We muſt alſo obſerve, that the corrupted Matter generated by the Inflammation, does not always fall down to the inferior Part of the Breaſt, but rather penetrates thro' the Fleſh, and forms a Tumor and Abſceſs on the external Parts of the Breaſt. When this happens, we are not to make the Inciſion in the poſterior Part of the Thorax, as already directed, but immediately on the Part affected, and appearing externally tumid, whether anterior or poſterior. Sometimes this Diſorder is ſo violent,

violent, that the Matter diffuſes an highly fetid Smell, and corrodes the Ribs; and if the vitiated Parts of theſe cannot be removed, the Diſorder is generally incurable.

When under the Sternum, and between the Membranes of the Mediaſtinum, any Abſceſs is form'd by a Fall, a Blow, or a Fracture of the Sternum, the peccant Matter can ſcarcely be evacuated by any other means than a Perforation of the Sternum. When, therefore, an Abſceſs of this Kind is ſuſpected by ſkilful Phyſicians and Surgeons, tho' both the Nature of the Diſorder, and Experience, convince us of the Difficulty of determining certainly in this Caſe, the Operation is to be perform'd in the following manner: The Patient muſt be laid on his Back, and a crucial Inciſion made in the lower Part of the Sternum, where the Abſceſs ſometimes diſcovers itſelf by a ſmall Hole; then drawing aſide the Lips of the Wound, the Sternum is to be perforated in the ſame manner with the Head, when trepan'd. When the Perforation is made, the Patient is to lie on his Breaſt, for the more commodious Diſcharge of the corrupted Matter. When the Abſceſs is ſufficiently cleans'd, eſpecially with the Injections already recommended, the Wound is to be dreſs'd, and conglutinated, almoſt in the ſame manner with Wounds of the Head, made by the Trepan. Some are of Opinion, that this Perforation of the Sternum is not ſo dangerous as that of the Cranium, becauſe the noble and important Parts of the one may be more readily injur'd than thoſe of the other: Yet 'tis not to be deny'd, that the Signs by which a Collection of Matter under the Sternum is diſcover'd, are highly dubious and uncertain. *Columbus*, however, and *Caſpar Hoffman* inform us, that if Humours are preternaturally collected in this Cavity of the Mediaſtinum, they may be ſafely evacuated, by perforating the Sternum. *Dionis* alſo tells us, that he ſaw this Operation perform'd, but that the Patient died ſoon after: Great Caution is, therefore, neceſſary in an Attempt of this Kind. *Petit* recommends the Perforation of the Sternum, when, after a Fracture of it, however reduc'd, a Pain remains under it, longer than might be reaſonably expected; for, ſays he, this is a Sign, that an Abſceſs ſtill is conceal'd under it. In his Treatiſe on the Bones he affirms, that the Sternum is ſometimes perforated by the Pus lodg'd under it, and which is, in ſome meaſure, diſcharged from it: But, becauſe the Ulcer can neither be ſufficiently deterg'd, nor the Pus effectually diſcharg'd, by ſuch a ſmall Perforation, he orders it to be enlarg'd by a Perforator, and the Wound cleans'd in the manner already directed. *Heiſter. Chirurgia.*

With reſpect to the Operation above-deſcrib'd, *Heiſter*, we ſee, and the beſt Authors extant, approve it; amongſt whom is *Boerhaave*, who, in *Aphoriſm* 303. directs it, when a conſiderable Quantity of Blood is extravaſated in the Thorax, by a Wound; in *Aphoriſm* 1191. when Pus is lodg'd in the Cavity of the Breaſt, and can neither be brought away by Expectoration, nor diſcharg'd by the urinary Paſſages; and, in a Dropſy of the Breaſt, *Aphoriſm* 1219. I find, however, that Mr. *Sharp*, in his Treatiſe of the Operations of Surgery, ſpeaks of this Operation as ſuperfluous, or even prejudicial, for the Evacuation of Blood, or Pus, diſcharg'd into the Cavity of the Thorax. "The Fluids," he ſays, "deſcribed as neceſſary to be voided by this Operation, are Blood, Matter, and "Water; but I am inclin'd to think, that upon Inquiry, "either into the Reaſon or Succeſs of practiſing in all theſe "Inſtances, we ſhall be induced to diſcard it as uſeleſs and "pernicious in the two firſt, and confine its Advantages wholly "to the laſt.

"When Blood is the Fluid ſuppos'd to require Evacuation "by this Method, 'tis always extravaſated through ſome "Wound of the Veſſels of the Lungs or Thorax, and, being "diſcharged in great Quantities on the Diaphragm, is ſaid to "oppreſs Reſpiration, till let out by ſome convenient Perfo"ration, made in the moſt depending Part of that Cavity, "which is the only Kind of Perforation into the Thorax, "diſtinguiſh'd by the Name of the Operation for the Em"pyema: But, if the Blood-veſſels wounded are very large, "the Opening at the Bottom of the Thorax can be by no "means adviſable, whilſt the Hæmorrhage continues, ſince it "will be a Drain for a dangerous Effuſion of Blood, which, "perhaps, would otherwiſe be choak'd up, and ſtopt, for "want of a ready Iſſue.

"I know there are ſome Surgeons who admit of this Rea"ſoning, yet ſtill judge it neceſſary to perform the Operation, "when the Hæmorrhage is ſtopt: But ſince, in Wounds of "the Lungs, we ſee the Blood not only for the moſt part "finds ſome Vent by the external Wound, if left open, but "is conſtantly ſpit up by the Trachea, had we no other Proofs "of this abſorbent Power in the Lungs, we might from hence "be perſuaded of the Probability of its being more ſafely car"ried off ſo, than by any artificial Opening we can poſſibly "contrive in the Thorax.

"Or if it be thought, that the extravaſated Blood, being "coagulated in the Thorax, cannot be taken up by the Veſ"ſels of the Lungs, yet, even in this Caſe, the Operation "uſually practis'd will not anſwer the Purpoſe; for, beſides "that the Lungs frequently adhere to the Pleura, in the Place "of Inciſion, which would abſolutely prevent any Advantage "from it, the Depth and Narrowneſs of the Orifice, and its "Height above the Diaphragm, on which the congeal'd Blood "is ſuppos'd to lie, will make the Succeſs, at beſt, very "precarious.

"If, then, the Attempt to diſcharge the Blood, by this "Operation, be not eligible, when we know of its Extrava"ſation, it will be ſtill leſs ſo, in Caſes that are doubtful; "nor will the Uſe of Tents and Injections for that Purpoſe "be adviſeable.

"If I have ſhewn the Impropriety of the Operation for the "Empyema, in relation to Wounds of the Thorax; its Un"fitneſs, alſo, in thoſe Caſes where Matter is ſuppos'd to lie "looſe in the Thorax, will as readily appear; for, if we mean "by it to give Iſſue to an Abſceſs of the Lungs, it will be "needleſs; ſince an Abſceſs of the Lungs, when they do not "adhere, and ulcerate outwards through the Ribs, will, almoſt "always, be diſcharged by the Trachea; which is ſo gene"rally true, that, upon opening ſeveral, who have loſt a great "Part of their Lungs by Impoſtumation, I do not remember "to have found any looſe Matter in their Thorax: And it is "notorious, that many conſumptive People die of the Diſ"charge they ſpit up from their Lungs: From whence it may "be infer'd, that the Operation is not, with any good Pro"ſpect, to be undertaken on this Account: There poſſibly "may have been ſome few Impoſtumations, form'd between "the Mediaſtinum and Lungs, which have been diſcharged "into the Cavity; but here, if the Matter is in a ſmall Quan"tity, the Lungs will take it up; and if in a large one, the "Evacuation will do but little Service: Beſides, theſe Inſtances "are but very few, and the Symptoms of an oppreſs'd Dia"phragm, from that Cauſe, but very doubtful; ſo that I "think the Operation is not adviſeable, upon ſuch a Pre"ſumption. Generally ſpeaking, in any Inflammation of the "Pleura, or Lungs, an Adheſion of both enſues; in conſe"quence of which, Nature finds a Diſcharge outwardly, it "being moſt frequent for Abſceſſes of the Pleura, and inter"coſtal Muſcles, and not uncommon, even for Abſceſſes of "the Lungs, to break externally. In caſe of an Adheſion, no "farther Operation is requir'd, than opening the Tumor, when "ſuppurated, with a Lancet; and if the Diſcharge is ſo great as "to forbid the healing the external Ulcer, it may be kept open "with an hollow Tent; by which manner of Treatment many "have liv'd, a long time, with a running Fiſtula."

I would not conclude the laſt-quoted Author to be wrong, with reſpect to the diſcarding this Operation, upon the Authority above-mentioned, or any other; but would chuſe to conſult Reaſon and Succeſs, to which he himſelf appeals, upon this Occaſion: But I ſhall here confine myſelf to the Propriety of the Operation, when Pus is diſcharg'd into the Cavity of the Breaſt, and forms what is properly call'd an *Empyema*.

When, therefore, we are certain, from the Signs of a preceding Inflammation, Suppuration, and Rupture of an Abſceſs, in any Part within the Cavity of the Breaſt, that a large Quantity of Matter is there lodg'd, and, at the ſame time, no conſiderable Expectoration, nor any Appearance of a Diſcharge of Matter enſues, the Patient, unleſs reliev'd, muſt neceſſarily die tabid: But if a violent and ſudden Diſcharge of Matter is made by the *Aſpera Arteria*, the Patient periſhes by Suffocation, as we learn from *Hippocrates*, and Experience. Now in the firſt of theſe Caſes, and when the other is to be apprehended, I think it highly reaſonable to try an Operation, which is not very hazardous, rather than ſuffer the miſerable Patient to periſh without any Proſpect of Relief; eſpecially as the Caſes annex'd to this Article ſhew, that large Quantities of Matter are ſometimes contain'd in the Cavity of the Thorax, which may by a Perforation be let out.

As to the Succeſs of this Operation, many Hiſtories occur, in medicinal Writers, much in its Favour; and I have myſelf been a Witneſs, more than once, of the ſudden Recovery of Patients by means thereof, who, in all human Probability, muſt otherwiſe have periſh'd; and I have heard of many more, both from Phyſicians who have directed it, and Surgeons who have perform'd it. Among others, the following Caſe is remarkable, and comes up to my preſent Purpoſe.

Robert Kidwell, a Gardener, at this time, in *Lambeth-marſh*, near the End of the new Bridge, was ſome Years ago, being, at that time, about Eighteen, ſeiz'd with a violent Pleuriſy, in conſequence of Bathing in cold Water, immediately after working very hard: He was blooded copiouſly ſeveral times, and other Meaſures were taken, in order to reſolve the Inflammation; but to no Purpoſe; for it was ſucceeded by Shiverings, and all the Signs of the Formation of Matter; and afterwards, by the Signs of a Rupture of the Abſceſs, and a Diſcharge of Pus into the Cavity of the Breaſt. Mr. *Weſtbrook*, a Gentleman well diſtinguiſh'd by his Abilities in his Profeſſion, at this time viſited him, and found him labouring for Breath; his Breaſt ſeem'd much diſtended; his Face was pale, ſhining,

ſhining, and œdematous; and he was ſo weak, as not to be able to lift up his Hands, which hung down by his Sides, much ſwell'd, utterly uſeleſs. Mr. *Weſtbrook* judg'd, that as he could not poſſibly live many Hours in this Condition, the only way to ſave his Life, was to perform the Operation. He accordingly made a Perforation into the Thorax with an Inciſion-knife, about two or three Fingers-breadth directly below the Left Breaſt, which Place he thought the moſt prominent. An exceſſively fetid Pus immediately burſt out with ſuch Violence, that it flew all over the By-ſtanders, and wetted a large Sheet; beſides which, more than a Pint was collected in a Porringer. The ſame Quantity, that is, more than a Pint, was diſcharged at every Dreſſing for ſeven or eight Days. During the Courſe of the Cure, the Orifice, by ſome Accident, clos'd ſo much, as to make it neceſſary to dilate it; which was accordingly done, and a very conſiderable Diſcharge of Pus follow'd. In three Days the Patient was able to walk up and down Stairs; in about eight Weeks the Orifice was clos'd, and perfectly heal'd; and, a very little time afterwards, he was ſtrong enough to beat two Men, with whom he had a Quarrel. It is remarkable, that his Cure was ſucceeded by an Abſceſs, and conſequent Fiſtula, in the Anus, of which he was cured; and is at this time a very hearty and ſtrong Man.

Observation I.

Carolus Piſo ſays, that though, according to *Hippocrates*, a Pleuriſy does not tend to a Suppuration before the fourteenth Day, yet he has in the Courſe of his own Practice known this happen, not only in young Perſons, but alſo in thoſe arrived at the Years of Maturity, in ſeven, or even in four Days; the Suppuration in the mean time palpably diſcovering itſelf by a Shivering, and ſubſequent Fever, ſeizing the Patient on theſe Days, and recurring every Day following. Thus, in a certain young Gentleman of Diſtinction, a Shivering and Fever appearing on the fourth Day, and recurring on the fifth, ſixth, and ſeventh Days, prognoſticated a Suppuration.

The laying open this Patient's Body, before the ſecond Week of the Diſorder was expired, ſufficiently demonſtrated, that a perfect Suppuration had happen'd before the Time ſpecified by *Hippocrates*, ſince his whole Thorax was found ſtuffed with Pus. Beſides, I remember, ſays he, to have ſeen Pus in the Thorax of a certain Clergyman, who died on the ninth Day of a Pleuriſy, becauſe he had been ſo ill-adviſ'd, as to uſe Purgatives, neglecting at the ſame time Veneſection, till the ſixth Day of his Diſorder, when I was call'd. *Carolus Piſo, de Morbis ab Illuvie Seroſa.*

Observation II.

Upon diſſecting the Body of a Patient, in whom an internal Suppuration had happen'd, I found the Left Lobe of the Lungs entirely wanting, and the Left Cavity of the Thorax filled with purulent Water; notwithſtanding which, the Patient, during the two Months he had been afflicted with this Diſorder, laboured under no Difficulty of Breathing, and had only a gentle Cough, without any Expectoration of the morbific Matter. *Dom. Panarolus Ponſi, C. 1. Obſervat. 46.*

Observation III.

In a certain Perſon, on whom the Operation for the Empyema was perform'd, the Lungs appeared ſufficiently ſound and firm; but a Matter diſcharged from an internal Abſceſs of his Side, into the Cavity of his Thorax, ſo compreſs'd the Diaphragm, that he could hardly breathe. The Surgeon, without the Uſe of any Cauſtic, introduced his Knife between the ſixth and ſeventh Ribs; after which, putting a Pipe into the Orifice, a bloody Ichor was firſt diſcharged, and at different times taken away in moderate Quantities. For three Days this Matter was evacuated without any fetid or noiſome Smell; but afterwards, every time the Perforation was opened, a highly fetid Smell was diffuſed, till by Decoctions of Myrrh and bitter Herbs, prepared with Water and Wine, and frequently injected every Day, the morbific Matter and Sordes, producing this Smell, were totally attenuated, and waſh'd away. After this the Diſcharge entirely ceaſing, and the Perforation being conſolidated, the Patient remain'd in a perfect State of Health.

Upon laying open the Body of a Patient, who would not ſubmit to the Operation for the Empyema, I found that a certain Quantity of Pus, diſcharged from an Abſceſs in the Pleura, and intercoſtal Muſcles, had ſphacelated the Part affected, and the contiguous Portion of the Lungs; after which, corroding the Diaphragm, ſo as to make a Perforation in its Right Side, it had fallen down upon the abdominal Viſcera, and not only diſcoloured, but corroded their external Coats. Then the purulent Matter, corroding and perforating the Inteſtinum Rectum, was at laſt diſcharged with the Excrements. As this Patient was naturally robuſt, and had an Averſion to all Kinds of Medicines, he ſupported his Diſorder for two Months, during which he laboured under a ſlight Fever, Thirſt, Reſtleſſneſs, an uneaſy Senſation at the Stomach, frequent Vomitings, and a Privation of Sleep.

Upon opening the Body of another, who died of an Empyema, I did not find ſuch a large Collection of purulent Matter; but there was a purulent Ulcer in the Pleura, which continually diſcharged Pus in large Quantities into the Cavity of the Thorax, and contaminated the Lungs, which were in a manner immers'd in it. This Patient during his Diſorder was afflicted with a kind of ſlow Fever reſembling a Hectic. *Willis Pharm. Rat.*

Observation IV.

A certain Man, about thirty Years old, when drinking Wine, was ſo fooliſh, as, by way of Oſtentation, to break and chew the Glaſſes; but at laſt a Fray happening between him and ſome of his Companions, he was ſoundly beat and kick'd. Upon this he was not only ſeiz'd with an Aſthma, accompanied with a pungent Pain of his Side, but alſo diſcharged large Quantities of Blood, both by Vomit and Stool. Various Methods were taken for his Relief, but to no Purpoſe; for as the purulent Matter contained in the Cavity of his Thorax could not be evacuated by Expectoration, and as he abſolutely declin'd the Operation for the *Empyema*, he at laſt fell a Sacrifice to his Obſtinacy.

After his Death we carefully opened his Abdomen, and took an accurate Survey of his Stomach, Inteſtines, Liver, Spleen, Kidneys, Meſentery, Omentum, and Bladder; in which we found no Marks of any Injury, much leſs any Traces of chew'd Glaſs in his Stomach and Inteſtines; the Circumſtance to which his Antagoniſts aſcribed his Death. But afterwards, laying open the Cavity of his Breaſt, which, eſpecially on the Right Side, we found ſtuffed with a large Quantity of acrid, purulent Matter, as far down as the Diaphragm, after wiping up this Matter with Sponges, we found not only the Pleura, but alſo the whole Pericardium, corroded all around, and the Right Lobe of the Lungs ſo flaccid, tabid, and collaps'd, that, of all its Subſtance, there only ſeem'd to remain a ſlender kind of membranaceous Part, with ſome few Veſſels in it. From theſe Circumſtances it is ſufficiently obvious, that this Patient, as the Matter could not be expectorated, died not only for want of the Operation for the Empyema, in order to give Vent to the pent-up Matter, which produced the Corroſion and Corruption of theſe Parts, but alſo on account of the flaccid and collaps'd State of the pulmonary Veſicles, by which a free Reſpiration muſt neceſſarily be prevented. *D. Eberhard. Geekelius, in Miſcellan. curioſ. Decur. 2. An. 7.*

I cannot finiſh this Article, without giving a Paſſage from *Hippocrates*'s fourth Book *de Morbis*, extremely pertinent to the preſent Subject. This Author, after giving the Methods proper for promoting Expectoration, proceeds thus:

If Pus be generated from Spit left in the Lungs, the Patient is moleſted with a dry Cough; a Fever ſeizes him with a Shivering; he labours under an Orthopnœa, with a ſhort and thick Reſpiration; his Voice becomes of a deeper Tone; and a high Colour, with a Heat, overſpreads his Face. In Proceſs of Time the Diſeaſe ſhews itſelf by more evident Signs. If the Pus cannot be evacuated, there is an Eruption of it from the Lungs into the Thorax; after which the Patient ſeems to be well, the Pus being tranſlated from a narrower into a larger Capacity, and the Function of Reſpiration being freely diſcharged by the Lungs. But, in Proceſs of Time, the Thorax is filled with Pus; and the Cough, and the Fever, with all the other painful and troubleſome Symptoms, return with more Violence; and the Diſeaſe manifeſts itſelf in all its Forms. In this Caſe it will be convenient to let the Patient alone till fifteen Days after the Eruption, that the Pus may have time again to maturate, ſince by its Tranſlation into a larger Place, and its Refrigeration by attracting to itſelf the Humidities of the Thorax, it muſt of neceſſity be no more than half putrefy'd or digeſted. If, in the Time before-mentioned, Expectoration begins ſpontaneouſly, it is well; if not, we are to aſſiſt the Patient, in ſome of the ſaid fifteen Days, with Medicines and Potions in order to his Refreſhment, and to recruit his Strength before his Body be too much enfeebled, and to preſerve the Head pure and clean from all Matter which may cauſe a Defluxion. But if there be no Diſcharge by Expectoration, and there be plain Indications, that the Streſs or Tendency of the Pus is towards the Sides, make no Scruple to uſe the Knife or Cautery. If there be no Signs of this Nature, nor yet any Expectoration, let the Patient, after bathing in Plenty of hot Water, faſting, and without the leaſt drinking, be firmly ſeated in a Chair; and, ordering an Attendant to lay faſt hold of his Shoulders, ſhake him well yourſelf, clapping your Ear to his Ribs, that you may diſcover the Part whence the Indications are to be taken. And here it is to be wiſhed, that the Place affected might lie towards the Left Side, becauſe Burning or Cutting are moſt fatal on the Right; for the ſtronger the Parts are on the Right Side, the more violent are the Diſeaſes in thoſe Parts. If there be no Fluctuation, becauſe of the Thickneſs of the Humour, and conſequently no Noiſe to be heard in the Breaſt, but the Patient fetches his Breath ſhort, his Feet ſwell, and he is moleſted with a Cough, you may aſſure yourſelf, that the Thorax is full of Pus. Dip, therefore, a thin

Linen

Linen Cloth in a warm Infuſion of Eretrian Earth finely triturated, and lay it all over the Thorax; and in that Part where you find the Cloth firſt dry'd, make the Section, or apply the Cautery, in ſuch manner as to approach very near the Diaphragm, but without touching it. You may, if you think fit, anoint the Part with the Eretrian Earth, and make the ſame Obſervation as in the Linen Cloth: Many uſe the Unction with the other Method, leſt the Parts which are firſt anointed, ſhould be dry'd. After the Operation by Burning or Inciſion, introduce a Tent made of Tow, and evacuate the Pus by little and little. When you have determin'd on Cutting or Burning, it will be very proper to make a Mark on the Skin, within whoſe Limits you are to confine the Direction of your Knife or Cautery, and ſo avoid carrying them too high, or too low. All Food which is diſpoſed to excite Coughing, is to be avoided, leſt it ſhould cauſe a Revulſion of the Pus into the Lungs, which would be bad for the Patient; but the Pus is to be ſuffered to dry as ſoon as poſſible, in order to its Diſcharge by the Inciſion. At the End of twelve Days, evacuate the reſt of the Pus; and, ſtopping the Hole with a Linen Tent, draw out the Pus twice in a Day, preſcribing alſo a Diet proper for drying the inner Region of the Thorax [ἀνακοπάν]. And this is the Method of examining and curing an Empyema, whether proceeding from a Wound, Peripneumony, or violent Catarrh, occaſioning a Preſſure of the Lungs againſt the Side.

EMPYOS, ἔμπυος, is one affected with an EMPYEMA; which ſee.

EMPYREUMA, ἐμπύρευμα, from ἐμπυρεύω, to kindle, of πῦρ, Fire, according to *Galen*, *Lib.* 9. *de S. Fac. in Princip.* is a ſort of Ignition, or dry adventitious Heat, which Bodies receive from igneous Particles, and depoſit afterward in Lotions. *Empyreuma* alſo ſignifies the Remains of the febrile Heat after the Paroxyſm of a Fever. *Empyreuma*, in Chymiſtry, is the offenſive Smell and Taſte, which diſtil'd Waters, or other Subſtances, receive from being too much expos'd to the Fire.

EMPYROS, ἔμπυρος, one labouring under a Fever. *Hippocr. Lib.* 2. *de Morb.*

EMULGENTES *Venæ & Arteriæ*, the emulgent Veins and Arteries. See RENES, ARTERIÆ, and VENÆ.

EMULSIO. An Emulſion. I have given an Account of Emulſions made of oleous Vegetables, under the Article CHYLUS. But Medicines of any Kind, made in a Form reſembling Milk, are call'd Emulſions. Thus Solutions of Gums, Reſins, or Sperma Ceti, made by means of the Yolk of an Egg, in a proper Vehicle, are call'd Emulſions.

EMUNCTORIUM, *Emunctory*, the Paſſage by which any thing vitiated or uſeleſs is evacuated: Thus the Skin is call'd the *Emunctory* of the Body; the Noſe is call'd the *Emunctory* of the Brain; the Glands are alſo call'd *Emunctories*.

EMUNDANS *Medicamentum*, an external deterſive Medicine. *Blancard.*

ENÆ (*Chartarum*) in *Marcellus Empiricus*, is a corrupt Word for INÆ; ſignifying the ſlender Threads of Paper, which being raiſed, render it rough. *Salmaſius in Solin.*

ENÆMOS, ἔναιμος, ἐναίμων, from αἷμα, Blood, is an Epithet often apply'd, by *Hippocrates* and *Galen*, to ſuch topical Medicines as are appropriated to a Wound newly inflicted, before the Blood be ſtopt. *Celſus*, *Lib.* 5. *Cap.* 19. deſcribes ſeveral vulnerary Plaiſters, which, he ſays, the *Greeks* call ἔναιμα, *Enæma*. Ἔναιμον σῶμα, in *Hippocrates*, is a Body abounding with Blood.

ENÆOREMA, ἐναιώρημα, from ἀωρέω, to exalt, of ἀωρὸς, ſublime, is the pendulous Subſtance which floats in the Middle of the Urine; call'd by Phyſicians alſo *Sublimamentum*. *Hippocrates* frequently expreſſes it by νεφέλη ἐπιφερομένη, which *Celſus* renders *Nubecula ſuſpenſa*, "a ſuſpended Cloud." Thus, *Prognoſt.* it is ſaid, that "Of Clouds ſuſpended in the Urine, "the white ones are good, but the black, bad." Again, a little after, "The Clouds in the Urine are to be inſpected, whe"ther they are in a high or low Situation, and what Colours "they repreſent; for thoſe which tend downwards, and are of "the Colours above-mention'd, are good and laudable; but "thoſe which tend the contrary Way, with the Colours above"deſcribed, are bad, and to be condemned." *Galen*, in his Comment on the foregoing Paſſage, ſays, that "He calls an "*Enæorema*, that thick and whitiſh Subſtance in the Urine, "which neither ſwims at the Top, nor ſinks to the Bottom, "but is ſuſpended in the middle Region, either exactly in the "Middle, or tending downwards, rather than upwards. *Hip*"*pocrates* calls the ſame a Cloud, becauſe it has a like Situa"tion in the Urine as a true Cloud in the Air; for it is of a "groſſer Subſtance than the circumfuſed Liquid, in like man"ner as a Cloud is more ſubſtantial than the ſurrounding Air."

Ἐναιωρήματα γονοείδεα, 1 and 3 *Epid.* are *Enæoremas* reſembling the ſeminal Matter, being a ſort of grandinous and grumous Subſtance, conſiſting of much vitreous and viſcid Phlegm, with a great Quantity of crude Matter.

Ἐναιωρήματα στρογγύλα, διεσπαρμένα, οὐχ ἱδρυμένα, "the *Enæo*"*remas* were of a round Figure, ſcattered, and had an unſettled "Situation," in *Lib.* 1. *Epid.* Theſe portended a Delirium."

Ἐναιώρημα μετέωρον, "ſublime *Enæorema*," in *Lib.* 3. *Epid. Ægr.* 3. 9. 12. portended a Delirium, as indicating the Matter to be carry'd upwards by the Flatulences, to the Diſturbance of the Brain.

Ἐναιωρέμενοι ὀφθαλμοὶ, "Eyes lifted up," *Prognoſt.* as explain'd by *Galen*, are Eyes which are inconſtant, and always in Motion. The ſame ſeems to be a proper Expreſſion for Eyes which are drawn upwards, and held ſuſpended; as in dying and fainting Perſons, when the Pupil of the Eye is covered by the upper Eyelid, as we read *Coac.* 218. where the Author ſeems to expreſs the *Enaiorumeni Ophthalmi*; and ſuch were the Eyes of *Æniates*, *Lib.* 7. *Epid. Ægr.* 35. when they are deſcribed as in the Poſture of thoſe who are in a Lipothymy, by which his ſpeedy Death was indicated.

ENANTESIS, ἐνάντησις, from ἀντάω, to meet, of ἀντὶ, againſt, is a Word by which *Galen* expreſſes the near Approach, and almoſt Meeting, of the aſcending and deſcending Blood-veſſels.

ENARGES, ἐναργὴς, from ἀργὸς, white, evident, manifeſt, is an Epithet apply'd by *Hippocrates* to Dreams, 1 *Prorrhet.* and *Coac.* 90.

ENARICYMON. The ſame as ARICYMON; which ſee.

ENARTHROSIS; ſee ARTICULATIO.

ENAULIA, ἐναυλία; ſee AULOS.

ENCANTHIS, ἐγκανθὶς, from ἐν, in, and κανθὸς, an Angle of the Eye.

In the larger Canthus, or Angle of the Eye, there ſometimes ariſes a certain Tubercle, either from the Caruncula Lacrymalis, or from the creſcent-like red Cuticle adjacent to it: Sometimes this Tumor or Swelling increaſes to ſuch a ſurpriſing Bulk, as not only to cover the *Puncta lacrymalia*, but alſo the greateſt Part of the Pupil. When this happens, the Tears continually trickle down the Cheeks, the Sight is impaired, the Countenance deformed, and the Eyes inflamed. See *Tab.* 36. *Fig.* 27. This Diſorder was by the *Greeks* call'd *Encanthis*. There are two Kinds of it; the more mild and benign of which is neither accompanied with Hardneſs nor Pain; whereas that which is more obſtinate and malignant, is accompanied with Pain, livid, and in ſome meaſure partaking of the Nature of a Cancer.

When the Encanthis is of the mild and benign Kind, frequent Scarification, or Inciſion, as alſo gently corroding Medicines, generally contribute much to a Cure, if us'd in the Beginning. But the beſt corroding Medicine, of a mild and gentle Kind, is a Powder prepared of four Parts of Sugar-candy, and one Part of white Vitriol, or a fifth Part of burnt Alum. This Powder is frequently and cautiouſly to be ſprinkled on the Tumor, and the Eye is afterwards to be waſh'd with lukewarm Water, till the Diſorder is found to be totally remov'd. If this Powder ſhould not produce the deſign'd Effect, the Tumor may, now-and-then, be cautiouſly touch'd with the Lapis Infernalis: But that a more effectual Revulſion of the Humours may be made from the Eyes, and the Return of the Diſorder more infallibly prevented, Fontanels and Setons, together with ſuch Medicines as render the Body ſoluble, and purify the Blood, are highly neceſſary. But if no Medicines are ſufficient for conſuming the luxuriant and ſuperfluous Fleſh, or if, in the more malignant Sort of this Diſorder, the Application of corroding Medicines ſhould ſeem leſs ſafe, the Tubercle muſt be extirpated with a Hook, like thoſe repreſented in *Tab.* 36. *Fig.* 30 and 31. or with a Forceps; and, if it is very large, a Thread may be paſſed thro' it, with a Needle, by means of which it is to be carefully raiſed, and cautiouſly cut out; for in this Operation uncommon Care is to be taken, that no Part either of the Eye itſelf, or of the Caruncula Lacrymalis, be cut; for as this Caruncle retains the Tears in the great Canthus from continually trickling down, if it ſhould be imprudently injured, the Humours muſt of courſe continually trickle down, and produce what we call a Weeping Eye. 'Tis, therefore, more expedient to leave a ſmall Portion of the luxuriant Fleſh in the Eye, than totally to extirpate it; for the remaining Portion may afterwards be remov'd with Caution, either by a Pair of Sciſſars, or the Aſſiſtance of ſome corroding Medicine. When the Tubercle is thus remov'd, drying and conglutinating Medicines are to be us'd, till the Wound is healed. This Intention is anſwer'd by a Collyrium prepared of Tutty, Myrrh, and Aloes.

In an obſtinate Encanthis, and ſuch as already tends to a Cancer, it is more expedient to uſe drying, refrigerating, and lenient Collyriums and Ointments, than to have recourſe to the Operation, and burning Medicines; becauſe, by theſe laſt, the Diſorder, as in Cancers, runs a Riſque of being augmented. *Purman* gives us a memorable Inſtance of a large Tumor of this Kind, which he himſelf happily extirpated, by paſſing a Ligature about it, elevating it ſufficiently, and applying the actual Cautery to its Roots. *Heiſter. Chirurg.*

ENCARDION, ἐγκάρδιον, from καρδία, the Heart. The Heart or Pith of Vegetables. *Dioſcorides.*

ENCARPOS, ἔγκαρπος, from ἐν, in, and καρπὸς, Fruit. A Woman with Child is thus figuratively call'd. *Suidas.*

ENCATALEPSIS, ἐγκατάληψις. The ſame as CATALEPSIS.

ENCATANTLESIS, ἐγκατάλησις. The ſame as EPANTLESIS.

ENCATHISMA, ἐγκάθισμα, from ἐγκάθημαι, to ſit in. The ſame as SEMICUPIUM, which ſee.

ENCAUMA, ἔγκαυμα, from καίω, to burn. A Puſtule contracted by a Burn. The Mark left by a Burn.

Encauma alſo imports a Sort of Ulcer in the Eye. Thus *Aetius*, *Tetrabib.* 2. *Serm.* 3. *C.* 25. informs us, that thoſe ſuperficial Exulcerations of the Eyes, which ariſe from Defluxions of Humours, are call'd by different Names. A *Caligo*, for Inſtance, is a ſuperficial Ulcer form'd in the Black of the Eye, covering moſt of it, and of a bluiſh Colour; but, when this Ulcer is form'd in the Pupil of the Eye, the Patient's Sight is conſiderably impair'd. A *Nubecula* is a ſmaller, deeper, and whiter Ulcer, form'd alſo in the Black of the Eye. On the contrary, an *Epicauma* is ſaid to be form'd, when the Surface of the Black of the Eye becomes rough, appears parched, and aſſumes a cineritious Colour. An *Encauma* is an Ulcer generally ariſing from a Fever, and producing an impure and ſordid Cruſt, either in the Black or White of the Eye. When 'tis deep-ſeated in the Black, in attempting the Cure, a violent Corroſion of the Coats for the moſt part happening, the Humours are gradually diſcharged, till the whole Eye at laſt drops out. When theſe ſuperficial Ulcers happen, either with or without a Fever, the firſt Step to be taken is to evacuate the Fæces by Clyſters. Then we are to drop into the affected Eye the *Collyrium Nili ex Roſis*, much diluted; and, in the Intervals between the Uſe of this *Collyrium*, Milk is alſo to be dropt into it. After theſe Meaſures are taken for a few Days, we are to mix the *Chiacum Apollonii*, or ſome aromatic Subſtance, with the *Collyrium Nili*: After this we are to uſe theſe Subſtances alone, ſince they ſoon induce ſlender, and ſcarce perceptible, Cicatrices.

ENCEPHALOS, ἐγκέφαλος, from ἐν, within, and κεφαλή, the Head. The Brain. See CAPUT.

ENCERIS, ἐγκηρὶς, from κηρὸς, Wax. Small Grumes or Concretions of Wax, which will ſometimes be found in Plaiſters, as they cool. *Galen*, *de C. M. P. Gen.*

ENCHARAXIS, ἐγχάραξις, from χαράσσω, to ſcarify. Scarification. *Galen.*

ENCHEIRESIS, ἐγχείρησις, from χεὶρ, the Hand. *Galen* has made this Word a Part of the Title to one of his Works, which treats on the Method of diſſecting the Parts of the Body. His Interpreters tranſlate it by *Adminiſtratio*. It imports the Handling, or manual Treatment, of any Subject whatever.

ENCHEIRIA, ἐγχειρία. The ſame as ENCHEIRESIS, and of the ſame Derivation. It occurs in *Hippocrates*, *Lib. de Artic.*

ENCHONDROS, ἔγχονδρος, from χόνδρος, which ſignifies both a Grain, and a Cartilage. Hence it implies both *granulated* and *cartilaginous.*

ENCHORIOS, from ἐν, in, and χῶρος, a Region, or Country. Endemial. See ENDEMIUS.

ENCHRISTA, ἔγχριστα, from χρίω, to anoint. Liquid Medicines, with which any Part is anointed.

ENCHYSA. The ſame as ANCHYSA. Alkanet. *Blancard.*

ENCHYMA, ἔγχυμα, from ἐγχέω, to infuſe. Infuſion. What the Phyſicians call *Plethora ad Vaſa*, that is, a Fulneſs of the Veſſels ſimply conſider'd as relative to themſelves, is alſo call'd, πλῆθος κατὰ τὸ ἔγχυμα, a Fulneſs from Infuſion, or on account of having too much Blood infuſed into them.

But *Enchymata* are liquid Medicines, to be infuſed into the Eyes or Ears, or injected into the Thorax.

ENCHYMOMA, and ENCHYMOSIS, ἐγχύμωμα, and ἐγχύμωσις. A ſudden Effuſion of Blood into the cutaneous Veſſels; ſuch as happens upon Joy, Anger, or Shame; and, in the laſt Inſtance, is call'd *Bluſhing*. This is very different from ECCHYMOSIS; which ſee. It is of the ſame Derivation as ENCHYMA.

ENCHYTOS, ἔγχυτος, of the ſame Derivation as ENCHYMA. An Epithet for any thing infus'd or inſtil'd into any Cavity of the Body, but particularly the Eyes.

Blancard interprets *Enchyta* a Funnel, by which any thing is inſtil'd into the Eyes, Ears, or Noſtrils.

ENCLYSMA, ἔγκλυσμα, from κλύζω, to waſh. A Clyſter. *Dioſcorides.* See ENEMA.

ENCOELIA, ἐγκοιλία, from κοιλία, the Belly. The abdominal Viſcera; that is, all the Contents of the Abdomen.

ENCOLPISMOS, ἐγκολπισμὸς, from ἐγκολπίζω, to inſinuate or introduce into a Sinus or Cavity. A uterine Injection. *Moſchion de Morbis Mulierum.*

ENCOPE, ἐγκοπὴ, from κόπτω, to cut. An Inciſion; and figuratively, an Impediment or Interception.

ENCRANIS, or ENCRANION, ἐγκρανὶς, or ἐγκράνιον. The *Cerebellum*. See CEREBRUM.

ENCRASICULUS. The Anchovy. See APUA.

ENCRIS, ἐγκρὶς. A ſort of Cake made of fine Meal boil'd in Oil, and then ſweeten'd with Honey.

ENCRYPHIAS, ἐγκρυφίας. An Epithet for a ſort of Bread. See ARTOS. It is derived from ἐγκρύπτω, to hide, or cover.

ENCYMON, ἔγκυμων, from ἐγκύω, to conceive. Pregnant, with Child.

ENDEDINEMENOS, ἐνδεδινημένος, from ἐνδινέω, to turn round like a Vortex. An Epithet for Eyes which are perpetually turning round in their Orbits.

ENDEIXIS, from δείκνυμι, to ſhew or indicate. An Indication. See INDICATIO.

ENDEMIUS, Endemial. An Epithet for Diſeaſes to which the Inhabitants of particular Countries are ſubject more than others, on account of their Air, Water, Situation, and manner of living.

ENDESIS, ἔνδεσις, from δέω, to tie. A Ligature, Band, or Connexion. Ἔνδεσις τῦ ποδὸς, "the Connexion of the Foot," in *Hippocrates*, *Lib.* περὶ ὀστέων φύσ. is that Part of the Foot where the Bones of the Tibia end, and which is connected by Ligaments to the Ancle-bones.

ENDICA, according to *Rulandus*, is *Fæces in Fundo*, "the Fæces in the Bottom." *Morienes*, he ſays, has thus written of it: "Seek the *Endica* in Glaſs-veſſels, and repoſit "it, till it turns acid; for with dulcid Matter there is nothing "to be effected. This *Endica*, added to Bodies, changes them "into Earth, and preſerves them from being burnt; for, when "Bodies loſe their Soul, they are eaſily burnt. *Endica* is "ſerviceable to all Bodies, rendering them uſeful and vital, "and preſerving them from Putrefaction and Burning." It is alſo call'd *Moſe hazuania.*

ENDIVIA LUTEA. A Name for the *Zacintha ſive Cichoreum verrucarium*, the *Rhagadiolus alter*, and the *Hedypnois*; *annua.*

ENDIVIA VULGARIS. A Name given to ſeveral Species of the *Cichoreum*, which ſee.

ENDIVIA ERECTA. A Name for the *Hyoſeris anguſtifolia.*

ENDOSIS, ἔνδωσις, from ἐνδίδωμι, to remit. A Remiſſion. The Verb, whence it has its Signification, is uſed by *Hippocrates*, as *Galen* ſays, *Com.* 3. *in Prognoſt.* and by all others ſince his Time, to expreſs a Remiſſion of Affections or Symptoms; as when they ſay of an Inflammation, Tumor, Hardneſs, Tenſion, or Pain, it begins ἐνδοῦναι, that is, to remit. Ἔνδοσις, in *Galen*, *Com.* 3. *in Epid.* is a Remiſſion in continual Fevers, after their Exacerbations; where he makes ἔνδοσις to ſignify a Remiſſion in continual Fevers, and ἀπυρεξία (*Apyrexia*) in intermittent; but comprehends both their Significations under the Verb διαλείπειν.

ENDROMIS, a coarſe ſhaggy Garment, uſed after Bathing, or violent Exerciſe.

ENEDRE, ἐνέδρη, from ἐν, in, and ἕδρα, a Seat; in *Hippocrates*, is an Inſeſſion, Location, and, *Lib. de Fract.* παρθήκαι ἐνέδρεσι, as *Galen* explains it, are Impoſitions (ἐπιθέσεις) of Splints; where he ſays, that *Hippocrates*, by ἐνέδρας, meant the ſame as ἕδρας, but added the Prepoſition ἐν, to make the Signification of the Word clearer. Ἐνέδραι, *Lib. de Aere, Loc. & Aq.* are ſuch as ſit with great Firmneſs on Horſeback.

ENELLAGMENOS, ἐναλλαγμένος, from ἐναλλάττω, of ἀλλάττω, to change. An Epithet applied to the Joints of the Vertebræ, becauſe of their alternate or mutual Reception and Inſertion.

ENEMA; from ἐνίημι, to inject. A Clyſter.

The Words *Enema*, *Clyſter*, and *Lotio*, are equivalent to each other, and ſignify any liquid Medicine, injected into the Anus, for the Cure of various Diſorders incident to the human Body. The firſt of theſe Words is derived from the *Greek*, ἐνίημι, to inject, or thruſt in; the ſecond from κλύζω, to waſh, or cleanſe; and the third, which is the Word uſed by *Celſus*, to expreſs the ſame Thing, from the *Latin* Word *lavare*, to waſh. From this laſt, in all Probability, the *French* borrow the Word *Lavement*, which among them ſignifies a Clyſter. In *Germany* and *Holland*, the Bladder of a Calf, a Sow, or an Ox, perforated at both Extremities, is almoſt univerſally uſed for this Purpoſe; ſee *Tab.* 55. *Fig.* 12. *Lett.* A A. Theſe, for Children, may be ſmall; but for Adults, muſt be ſo large as to contain a Pint of Liquor, or more. In one of the Perforations or Extremities, a Pipe of Bone, repreſented by B B, is carefully fixed. Immediately above this the Bladder is tied cloſe, by means of the large Thread C C, in order to hinder any of the Liquor from paſſing through the Pipe, till the Operator intends it ſhould. At the other Perforation, a Liquor ſuited to the peculiar Nature of the Diſeaſe is to be poured into the Bladder; after which, this Extremity of the Bladder, repreſented by D, is alſo to be firmly tied, that no Part of the Liquor may be loſt, whilſt the Operator injects it into the Anus. Then the Pipe of Bone is to be anointed with Butter or Oil, and cautiouſly introduced into the Anus of the Patient, lying upon either Side, with his Head and Body lower than his Buttocks. Then looſing the Ligature C, made immediately above the Pipe, the Bladder is to be ſtrongly compreſſed by the Hands

Hands of the Operator, in order to force the Liquor into the large Inteſtines. When this is done, the Pipe is to be retracted, and the Patient ordered to remain, as nearly as he can, in the ſame Poſture, till the Medicine injected attempts its Regreſs or Diſcharge with a kind of Force or Violence; for, as *Celſus* obſerves, *the Patient is not to yield to the firſt Inclination of diſcharging this Liquor, but to retain it as long as he can.*

The *Dutch*, the *French*, and ſome other Nations, inſtead of a Bladder, uſe a Syringe made of Tin, and capable of containing a Pint, or more, of Liquor. The Pipe of this Syringe, which is introduc'd into the Anus, is not unlike that affixed to the Bladder; but 'tis ſufficiently obvious, that by this means, Liquors are more quickly, more ſtrongly, and, conſequently, farther, convey'd into the Inteſtines, than by the Bladder, which, however, may be more eaſily carried about and conceal'd than a large Syringe; as alſo uſed with leſs Trouble and Pain for Infants, and Women in Child-bed. But as ſome Perſons have ſo rigid a Regard to Decency, that they would rather ſubmit to any Hardſhip, than expoſe their Poſteriors to open View, thoſe fall upon a proper Expedient, who apply to this Syringe a flexible leather Pipe, about half an Ell long, and furniſhed at its Extremity with a ſmaller Pipe of Bone, which the Patient himſelf, with his whole Body cover'd, may introduce into his Anus, and either inject the Liquor himſelf, or give the Syringe to ſome other Perſon, for that Purpoſe. The Reader, who deſires to know more of this, may conſult *Hildanus*, *Cent.* 1. *Obſ.* 78. *Bartholin. Hiſt. Anat.* 66. *Cent.* 6. *De Graaf*, in his Book *de Clyſteribus*; *Juncken*, in his Surgery; as alſo *Valentini*'s *Polychreſta Exotica*, where theſe Syringes, together with the leather Pipe, and Method of uſing them, are delineated. But we muſt take care, that the Liquors uſed for Clyſters be neither too hot, nor too cold, but tepid, or moderately warm; for the Inteſtines are generally greatly injur'd by Liquors either exceſſively hot, or exceſſively cold.

Celſus, in the ſixteenth Chapter of his ſecond Book, has the following Paſſage: "When, ſays he, the Caſe only requires "a gentle Clyſter, pure Water may anſwer the End. But "if one ſomewhat more powerful is wanted, Hydromel muſt "be uſed. If a lenitive Preparation of this kind is wanted, "let Water, in which Fenugreek, Barley, Mallows, or any "other emollient Herb, have been boiled, be uſed for that "Purpoſe. If a Clyſter of a reſtringent Quality is deſired, let "it be prepar'd of *Vervain*. [Celſus, *in all Probability, by the "Word* Verbena, *means all corroborating Herbs in general.*] "If an acrid Clyſter is deſired, it may conſiſt of Sea-water, or "common Water, with an Addition of Salt; but both of "theſe are ſo much the better, if boil'd. A Clyſter of a ſtill "more acrid Nature, may be obtain'd by an Addition of Oil, "Nitre, or Honey, or all theſe together. The more acrid a "Clyſter is, the more Matter it evacuates, but is leſs eaſy "to be ſupported by the Patient." If a lenitive or demulcent Clyſter is to be injected in the Stone or Dyſentery, for Inſtance, we may either uſe warm Milk alone, or Milk boil'd with Chamomile, or Male Speedwell, with an Addition of Honey, or the Theriaca. Sometimes, in Imitation of *Galen*, Oil alone is injected in a Colic.

As for Clyſters, they are very properly uſed, firſt, in Caſes where a too coſtive State is to be removed, and the Body render'd ſoluble. Secondly, for alleviating thoſe Pains which ariſe from the Colic, the Stone, the Dyſentery, painful Hæmorrhoids, and other Diſorders of the Abdomen. Thirdly, for making Revulſions from the Head in Lethargies, Apoplexies, Deliriums, Phrenitis, and other Diſorders of the Head. Fourthly, for promoting difficult Labours, whether the Fœtus is dead or alive, eſpecially if the Mother is coſtive; as alſo for expelling the Secundines, when adhering too ſtrongly to the Womb, or remaining longer in it than they ought. Fifthly, Clyſters contribute not a little to the Nouriſhment of thoſe, who, in conſequence of an impair'd, or totally deſtroy'd, Deglutition, can eat little, or, perhaps, none at all. For this Purpoſe nutritive Liquors muſt be uſed, ſuch as Broths of Fleſh, Milk, or Ale; or Broths of Barley or Oats, duly prepared; to which a little Wine, if not contraindicated by the Nature of the Diſeaſe, may be added, for corroborating the Patient. By frequently injecting ſuch Preparations, as far as they poſſibly can, into the Anus, the Patient is to be ſuſtained and ſupported, till his Diſorder and Difficulty of Deglutition are gradually removed. Theſe nutritive Clyſters are no new Invention, but were recommended by the antient Phyſicians, eſpecially *Celſus*, who for this Purpoſe order'd Ptiſan, or the Cremor of Alica. *Oribaſius* alſo, and *Aetius*, recommend theſe Sorts of Clyſters; as does alſo *Avenzoar*. Though this Fact be ſufficiently confirmed by Hiſtory, yet it is equally certain, that there were among the Antients, and ſtill are among the Moderns, Phyſicians who look upon them as entirely ſuperfluous and uſeleſs. But, to paſs over other memorable Inſtances recorded by Authors, I ſhall only take notice of the Woman mentioned in *Garengeot*'s *Operat. Chirurg.* who, notwithſtanding a total Abſtinence from Aliments for fourteen Days, in conſequence of an obſtructed Deglutition, was not only ſupported, but cur'd, by means of nutritive Clyſters; for in the large Inteſtines there are lymphatic or lacteal Veſſels, capable of abſorbing and conveying to the Maſs of Blood the nutritive Liquors injected; by which means it frequently happens, that the Clyſter does not return, but is totally retained.

An uncommon and efficacious Clyſter, in Compariſon of the others, is the Smoke of Tobacco, invented, in all Probability, by the *Engliſh*, and afterwards uſed by other Nations; for when other Clyſters have proved ineffectual for rendering the Body ſoluble, eſpecially in Perſons labouring under an incarcerated Hernia, the Iliac Paſſion, or other Diſorders, the End has been obtain'd by injecting a large Quantity of the Smoke of Tobacco into the Anus, by means of ſome proper Inſtrument. This affords a ſpeedy Relief in the moſt obſtinate Coſtiveneſs, provided it is uſed in due Time. The moſt conſiderable of the Machines uſed for this Purpoſe, are deſcribed by *Bartholine*, *Stiſſer*, *Dekker*, and *Valentini*. See *Tab.* 55. *Fig.* 13. But however much theſe Machines may vary, yet they all agree in this, that they conſiſt of a Braſs or Iron Kind of Box, A, of ſuch a Size, as to contain about half an Ounce of Tobacco, and furniſhed with two Pipes; one of which, B, is made of Bone, in order to be introduced into the Anus; and the other, C, in the Form of a Pipe, uſed for Wind in muſical Inſtruments. It is made of Braſs, Bone, or Ivory; and either the Patient himſelf, or ſome ſtrong Man, blows the Smoke of the Tobacco in the Box A through the Pipe B into the Anus. This Smoke muſt be injected, till the Patient perceives a ſtrong Stimulus to diſcharge his Excrements. If performing this Operation once does not render the Body ſoluble, it is to be repeated, till that End is obtained. In like manner, if the common Tobacco ſhould prove too weak, we are to uſe ſuch as is ſtronger; for when, in an obſtinate incarcerated Hernia of the Scrotum, no Effect could be produced by common Tobacco, I myſelf, ſays *Heiſter*, have ſeen the Intention anſwer'd by ſuch as was ſtronger, when the Patient's Life was deſpair'd of. This Method has always ſucceeded ſo happily with me in this Diſorder, that I was never reduced to a Neceſſity of having recourſe to the Knife; for the acrid Smoke of Tobacco ſo ſtimulates the Inteſtines, as to contract their Diameters, and by that Contraction the prolapſed Inteſtines are retracted into the Abdomen. *De Graaf*, and *Lanzonius*, have publiſhed Diſſertations on Clyſters; to which the Reader may have recourſe. *Heiſter*, *Chirurg.*

Among the Medicines of the internal, domeſtic, and eaſily prepar'd Kind, we may juſtly reckon Clyſters, which are generally but a Decoction, prepar'd of certain Ingredients, and, with various Intentions, injected into the Anus, by means of a Syringe, or Bladder. Theſe have many Things in common with Baths; for theſe latter waſh the external Parts; whereas the former cleanſe, abſterge, and unload the large Inteſtines of their Contents. Baths are either emollient or corroborative. Clyſters, in like manner, according to the Ingredients of which they conſiſt, either ſoften and relax the Solids, when affected with Rigidity, Tenſion, or Stricture; or they corroborate and brace up ſuch Parts as are relaxed, and deprived of their due Tone. As Baths only, by an external Application to the Body, convey a certain Virtue to the whole Maſs of Blood and Humours, ſo as to render their Circulation more free, and facilitate the ſalutary Secretions; ſo alſo Clyſters not only influence the Maſs of Blood and Humours, as is obvious from the Change they induce on the Pulſe; but alſo, beſides the Evacuation they procure by Stool, promote the Excretion by Sweat and Urine. Baths are poſſeſſed of an excellent antiſpaſmodic Virtue, which is ſo extenſive as to influence the moſt remote Parts of the Body. This Quality is no leſs remarkable in Clyſters, as Practitioners well know. As, by Bathing, preternatural and dangerous Congeſtions of Humours in certain Parts are derived to other external and inferior Parts, that they may circulate more freely and equably, ſo in like manner Clyſters are highly efficacious in deriving Congeſtions of Blood from the Head and Breaſt, which are the Cauſes of very terrible Symptoms.

Clyſters are prepared of different Ingredients, according to the different Intentions propoſed; and, as in Practice the four principal Intentions are to alter and change, to evacuate, to corroborate, and to allay and mitigate Pain, ſo Clyſters of different Kinds are ſo calculated, as either to ſoften the indurated Fæces, correct the highly acrid, acid, and ſaline Recrements, evacuate the Contents of the large Inteſtines, corroborate the weak and languid Fibres of the Inteſtines, and augment their impair'd periſtaltic Motion; or, laſtly, to mitigate the Spaſms of the inteſtinal Coats, and relax their conſtricted Fibres. When the Intention is to lubricate and ſoften dry and indurated Fæces, or to obtund acrid, ſaline, corroſive, and acid Humours, in the large Inteſtines, Clyſters are moſt properly prepar'd of emollient and demulcent Subſtances; of which Kind are the Milks of Animals, Decoctions of the Shavings of Hartſhorn, Sheeps and Calves Feet, as alſo of Oats, pinguious Fleſh-broths, the Fats of Animals, freſh Butter, Decoctions of Figs, Honey, Manna, Sugar, De-

coctions of the Roots of Marſh-mallows, white Lilies, Linſeed, Fenugreek, and the Flowers of Chamomile, Mullein, and Melilot. As all theſe Ingredients are poſſeſſed of a Power of relaxing Spaſms, ſo they are of ſingular Service in all ſpaſmodic Diſorders, Fevers, Pains, Congeſtions of Blood, and Caſes where the Patient is coſtive, either in conſequence of Spaſms, or an Induration of the Fæces.

When the Intention is, at one and the ſame time to evacuate the Fæces, and carry off the ſtagnant Humours, Salts added to the above-mentioned Decoctions excellently anſwer the End; ſuch as common Salt, Sal Gemmæ, *Epſom* and *Sedlitz* Salts, the digeſtive Salt of *Sylvius*, and Sal Ammoniac: And 'tis certain, that half an Ounce of Salts added to a Clyſter is more efficacious in evacuating the Contents of the Inteſtines, than ſome Ounces of the Electuaries prepar'd of purgative Ingredients. For anſwering this Intention, *Celſus* orders Brine to be injected into the Anus; and the ſame Effect is produced by our Brine, which is a powerful Purgative, whether drank, or injected as a Clyſter: The ſame holds true of the *Sedlitz* Waters: Among theſe we may alſo claſs the Clyſters prepared of human Urine, or that of other Animals, in order to eliminate the tough and viſcid Humours. *Venice* Soap diſſolv'd is alſo an excellent Ingredient for Clyſters, eſpecially in Caſes where an acid, green, and corroſive Bile proves highly offenſive to the Inteſtines of ſucking Infants. But in Caſes where a more powerful Stimulus is requir'd, 'tis more ſafe and expedient to mix Emetics with Clyſters, than ſtrong and draſtic Cathartics; for which Reaſon, *Derebeque*, in his Obſervations, orders emetic Wine to be mix'd with Clyſters, exhibited in Dropſies and Apoplexies.

Corroborating Clyſters are intended not only for the Inteſtines, but alſo for other Parts depriv'd of their due Tone; for which Reaſon they are alſo compos'd of various Ingredients, according to the Intentions propos'd: Thus, when the weak and languid Coats of the Inteſtines are to be corroborated, Carminatives are to be uſed, which diſcuſs Flatulences, and promote the Evacuation of any recrementitious Matter, that may be lodg'd in the Inteſtines. The moſt conſiderable and efficacious of theſe are, the Four greater carminative Seeds, the Oils prepar'd from them, and the Berries of the Bay and Juniper-trees: In violent Diſorders of the Head; ſuch as Apoplexies, Palſies, Lethargies, and Dulneſs of Hearing, or Weakneſs of Sight; the Herbs Rue, Marjoram, Roſemary, Savory, Thyme, Sage, and the Flowers of Lavender and Spike, are commodiouſly added to Clyſters. In Diſorders ariſing from a bad State of the Womb, eſpecially a Want of due Tone in its Fibres; the Herbs Peny-royal, Mugwort, Feverfew, Savin, Mint, Wall-flowers, Marigolds, the Root of Birthwort, as alſo Myrrh and Galbanum, are poſſeſs'd of a ſingular and ſpecific Kind of Quality; and Clyſters prepar'd of them, if frequently injected, are of ſingular Efficacy in reſtoring the Menſes, and expelling Moles.

I myſelf, ſays *Hoffman*, have alſo found, from Experience, that in chronical Diſorders, ariſing from an Impurity of the Juices, a bad State of the Viſcera, Infarctions, or Stagnations of the Humours, but eſpecially in a Cachexy, a Scurvy, the hypochondriac Diſorder, a Suppreſſion of the Menſes, and Hæmorrhoids, excellent Effects are produc'd by Clyſters, with which bitter and balſamic Subſtances are mix'd; of which Kind are Marſh-trefoil, the Tops of the leſſer Centaury, Carduus Benedictus, Gentian-root, Spleenwort, Rhubarb, Eſſence of Rhubarb, Elixir Proprietatis, the alcaliz'd Eſſence of Soot, Spirit of Hartſhorn, and the Pilulæ Balſamicæ. *Hercules Saxonia, in Lib. 1. Prax. Cap.* 16. informs us, that, by the Uſe of ſuch Clyſters alone, he had recover'd Patients ſo far gone in hypochondriac Diſorders, that their Recovery was abſolutely deſpair'd of. Excellent corroborative Clyſters, ſays *Hoffman*, may alſo be prepar'd of Wine; to which, if the Patient's Strength is languid, and his Conſtitution not over-delicate, may be added, a ſufficient Quantity of my Balſam of Life, deſcrib'd under the Article ELIXIR. In the *Philoſophical Tranſactions*, mention is made of a Clyſter, prepar'd of *Spaniſh* Wine, Pepper, and the Yolk of an Egg: This is ſaid to be of ſingular Efficacy; becauſe, being retain'd all Night, it warms the Inteſtines, and, a few Hours after its Injection, excites a Diaphoreſis: Beſides, ſo remarkable is the Power of Clyſters, in corroborating the whole nervous Syſtem, that in intermittent Fevers the Paroxyſms are mitigated and ally'd by them; for *Helvetius*, in a particular Treatiſe concerning the Method of curing Fevers without the Aſſiſtance of internal Medicines, affirms, that they may be excellently cur'd only by injecting Clyſters, conſiſting of a Decoction of *Peruvian* Bark with Water, to which may be alſo added a little Wine: And *Albrecht*, in *Miſcel. Nat. curioſ. Decad. 3. an. 3. Obſ.* 127. gives us five Inſtances of Fevers cur'd by this means. The *Egyptians*, in quartan Fevers, as an Arcanum, uſe a Clyſter prepar'd of one Pint of the Decoction of Marjoram, and three Ounces of the Oil of Bays, as we are inform'd by *Proſper Alpinus, de Medic. Method.* where we find this Paſſage: "Some time ago, I myſelf, when labouring under a quartan "Fever, found ſingular Benefit from this Clyſter; and I have "known ſome totally cur'd of the ſame Diſorder, by having "it only thrice injected."

The laſt Species of Clyſters are thoſe of the ſedative Kind, or ſuch as are calculated for alleviating Pain, and removing Spaſms: Among theſe are Clyſters conſiſting purely of Oils, the Fat of Animals, and freſh Butter; which are of ſingular Efficacy, when the Coats of the Colon are ſo violently and ſpaſmodically conſtricted, that its Cavity is contracted, the Flatulences retain'd, and violent Gripes produc'd, as in the convulſive Colic, and, eſpecially in the hæmorrhoidal Colic, and that which is excited by the Repulſion of an acrid cauſtic Matter from the Surface of the Body. Among the Antients *Aetius* beſtows large Encomiums on Clyſters of this Kind; and, in *Book* 9. *Cap. de Colica*, orders an antiſpaſmodic Clyſter to be prepar'd of freſh Butter, the Fat of a Gooſe, and of an Hen, the Marrow of an Hart, the Fat of a Bear, Cumin, the Leaves of Rue, Celtic Spikenard, Caſtor, and the Oil of Rue, adding the following Direction: "Uſe, ſays he, this "Clyſter in the moſt violent Pains, previouſly procuring an "Evacuation by means of another Clyſter; an Hour after "which, inject a moderately ſmall Cupful of this Clyſter, "tepid, ordering the Patient to keep himſelf in a State of "Reſt, and to retain it for ſome time; by which means you "will be convinced of its divine and ſingular Virtues." But if to Spaſms an intenſe Heat, and Orgaſm of the Blood, are join'd, as in Hæmorrhages, or Pains of the Head and Joints, Clyſters prepar'd of Whey or Milk, with emollient and anodyne Subſtances, are moſt properly injected; ſuch as the Flowers of common Chamomile, Elder, Mullein, and Melilot, as alſo Saffron, depurated Nitre, and Oil of ſweet Almonds: In ſpaſmodic Diſorders, epileptic and convulſive Motions, 'tis cuſtomary to add the Specifics for thoſe Diſorders. In hyſteric Affections, Sagapenum, Aſa-fœtida, and Caſtor, are properly added to them; and, in epileptic and convulſive Paroxyſms, the Roots, Seeds, and Flowers of Piony, the Juice of Earth-worms, and the ſuccinated Spirit of Hartſhorn, are, with great Advantage, mix'd with the Clyſters to be injected. *Harder*, in *Miſcellan. Nat. curioſ. Decad. 3. an. 2. Obſ.* 100. informs us, that he knew a Woman, in her firſt Labour ſeiz'd with an Epilepſy, ſurpriſingly reliev'd by a Clyſter of this Kind, prepar'd of antiepileptic Ingredients, and Tincture of Caſtor.

Clyſters then, according to the different Intentions of the Phyſician, are of ſingular and various Uſes; which by *Celſus*, in the twelfth Chapter of his ſecond Book, are ſuccinctly enumerated in the following Words: "We muſt not forget to "render the Body ſoluble, by the Injection of one, or, at "moſt, of two Clyſters. When the Head is afflicted with "a heavy Pain; when the Sight is dim; when the Patient is "ſeiz'd with a Diſorder of the large Inteſtine, by the *Greeks* "call'd *Colon*; when there are Pains of the Abdomen and "Hips; when there is a Collection of bilious Matter in the "Stomach; or, when Phlegm, or any Humour reſembling "Water, is lodg'd in it; when Reſpiration is difficult; when "nothing can be evacuated by Stool; when the Fæces are "near the Anus, but yet cannot be voided; when the Patient, "voiding nothing by Stool, perceives the Smell of Fæces in "his Breath; when the Matter evacuated by Stool is cor"rupted; when Abſtinence, in the Beginning of a Fever, "does not remove it; when the Strength will not admit of "Veneſection, when otherwiſe indicated, or when the pro"per Seaſon for Veneſection is already paſt, or when the "Patient has drank much before his Diſorder; or when Per"ſons often ſubject to a ſpontaneous or accidental Purging, "ſuddenly become coſtive." Beſides what has been above obſerv'd, with reſpect to the Uſe of Clyſters in various Diſeaſes, we muſt alſo take notice, that, in general, they are excellently calculated for thoſe who, being coſtive, have, at the ſame time, Stomachs ſo weak, as not to bear purgative Medicines. In all continual and exanthematous Fevers, 'tis alſo moſt expedient to attempt the Cure by Clyſters and Veneſection, if neceſſary; and if, after the Veneſection, the Patient ſhould remain coſtive, the Uſe of Clyſters is to be ſtill perſiſted in. *Chriſtianus Langius, in Miſcel. Nat. curioſ.* warmly recommends the Uſe of Clyſters to all wounded Patients, leſt a coſtive State of the Body ſhould increaſe the Inflammations or Stagnations of Blood. Clyſters may alſo be calculated for other Purpoſes, than thoſe already enumerated, according to the reſpective Cauſes and Natures of Diſorders: Thus in Diarrhœas, Dyſenteries, and Corroſions of the Inteſtines, Clyſters are with great Advantage injected, not only with a View to correct the acrid Humours, but alſo to conſolidate the excoriated and corroded Parts: The Clyſters for this Purpoſe ought to be compos'd of Decoctions of Calves Feet, Yolks of Eggs, Goat's Suet, *Armenian* Bole, Tragacanth, the Juice of the Cray-fiſh, Sperma-ceti, and the Balſams of Capivi and of Sulphur, with Oil of Turpentine.

Tho' Clyſters only immediately affect the Inteſtines, and tho' the Materials of which they are compos'd do not paſs

beyond

beyond the large Inteſtines; yet their Virtues are not only convey'd from the Inteſtines, which, being nervous Parts, have an exquiſite Conſent with others of the ſame Kind, to the remote Parts of the Body, but alſo inſinuate themſelves into the Maſs of Blood and Lymph: The former of theſe Aſſertions is obvious from this, that too acrid Clyſters, according to *Avicenna*, *Can. Med. Lib.* 1. *Sect.* 4. *Cap.* 17. bring on Fevers; and thoſe mixed with Emetics, excite Vomiting: Pains alſo of the ſuperior Part of the Body are remov'd by them: The latter is confirm'd by their nutritive, comforting, and ſtupefying Quality, as alſo by a Circumſtance mentioned in the *Philoſophical Tranſactions*, which is, that Brandy injected into the Anus, intoxicates more effectually, than the ſame Quantity drank by the Mouth: But the Effects of Clyſters are moſt conſpicuous in the ſmall Inteſtines, when afflicted with Pains and ſpaſmodic Conſtrictions; for this Reaſon, that the Colon, the largeſt of the great Inteſtines, ſurrounds the ſmall ones: Wherefore, when an emollient and paregoric Clyſter is injected into it, the Clyſter, by its mild and grateful Tepidity, affects the contiguous Inteſtines at the ſame time; and its Vapours, penetrating their Coats, convey the ſame Virtues into them, juſt as a Bladder, fill'd with an emollient Decoction, and applied externally, affords a ſingular Relief, in violent Pains, Spaſms, and Inflammations of the internal Parts.

But that the ſalutary Effects of Clyſters may be the more ſucceſsfully obtain'd, they muſt, like other Medicines, be cautiouſly and circumſpectly us'd; for there are ſome Perſons of ſo tender and delicate a Make, that their Inteſtines are abſolutely incapable of bearing Clyſters; and I myſelf have ſeen Colics, and other Diſorders, increas'd, by injecting Clyſters, tho' theſe very Patients were afterwards remarkably reliev'd by a proper Laxative, exhibited internally: As, in Patients of this Kind, the Injection of Clyſters is not to be inſiſted on; ſo alſo acrid Clyſters are not to be at firſt us'd in Caſes where the Excrements are too long retain'd, leſt they draw more to the infarcted Inteſtines, and confirm the Obſtruction; but, before theſe, we are rather to inject ſuch Clyſters as relax, lubricate, and ſoften the Fæces, and prepare a Way for their Evacuation, as *Mercatus*, in *Book* 1. with Judgment adviſes. Immediately after Meals, the Injection of Clyſters is leſs commodious and beneficial, becauſe they diſturb the Concoction and Digeſtion of the Aliments, prevent the Extraction and Elaboration of the Chyle, and promote too ſpeedy an Evacuation of what the Patient has eat.

Nor is it expedient too frequently to render the Body ſoluble by the Injections of Clyſters, both becauſe they weaken the expulſive Faculty of the Inteſtines, and render Nature, when accuſtom'd to them, forgetful of her Office; and becauſe, by a ſudden and frequently repeated Injection of Clyſters, that are either too hot, or too cold, the due and natural Tenſion of the inteſtinal Fibres is injur'd, and preternatural Commotions produc'd; and ſince no Clyſter can be injected, without conveying Air along with it, 'tis to be dreaded, leſt too frequent an Uſe of them ſhould generate Flatulences: Beſides, as the large Inteſtines are Parts of a very nervous Contexture, all Subſtances which are unfriendly to the Nerves, ſuch as cold, acid, auſtere, draſtic, virulent, and aſtringent Subſtances, as alſo the more acrid Salts, Opiates, and Narcotics, are by no means to be us'd in Clyſters, leſt the periſtaltic Motion of the Inteſtines ſhould be injur'd or deſtroy'd; which, when entire, aſſiſts greatly in carrying on the Digeſtions, and the ſalutary Secretions and Excretions: But when it is injur'd or deſtroy'd, the Inteſtines are rack'd with Spaſms, fill'd with Fæces or Flatulences, and ſubjected to various Diſorders. *Celſus* gives us, alſo, the following Directions: "We "are not to uſe Clyſters, ſo long as the Humours are crude, "nor in weak Conſtitutions, and ſuch as are exhauſted by "chronical Diſorders; nor in thoſe who have, daily, ſufficiently large Evacuations by Stool, or who diſcharge liquid "Stools; nor are Clyſters to be us'd in the immediate Paroxyſms of Diſorders; becauſe what is then injected, being "forcibly retain'd, affects the Head more, and renders the "Danger greater." *Frederic. Hoffman.*

The common Decoction for Clyſters is thus directed to be made in the *London* Diſpenſatory:

> Take of the Leaves of Mallows, Violets, Pellitory of the Wall, Beets, and Mercury, each one Handful; of Chamomile-flowers, two Pugils; of ſweet Fennel-ſeed, half an Ounce; of Linſeed, two Drams; and boil them in a ſufficient Quantity of common Water to ſtrain off one Pint.

With reſpect to the emetic Power of Clyſters, mention'd above, I muſt remark, that in a maniacal Caſe, where there was great Difficulty in exhibiting proper Medicines by the Mouth, and where the Patient was ſo obſtinately coſtive, that no Evacuations could be procur'd without immoderate Doſes, I directed a Clyſter, with which an Ounce of *Mel. Hellebaratum* was mix'd: This prov'd a violent Emetic, and was afterwards repeated ſeveral times, with very good Effects.

It is to be obſerv'd, that the Practice of the antient *Egyptian* Phyſicians turn'd very much upon Clyſters; which, as *Pliny* informs us, they learnt from the Bird *Ibis*, who was obſerv'd, upon any Diſorder, to inject Water into the *Anus*, by means of its Beak: And *Aſclepiades*, however he might diſapprove of Purges, us'd Clyſters in almoſt all Diſorders.

ENEOS, ἐνεός· the ſame as CENOS; vain, empty, uſeleſs: in which Senſes the Word is us'd by *Hippocrates*, ἐς τῶ κεῖ ἰπῆ. The *Greeks* call ſuch as are born deaf, and are unable to ſpeak, or perform the common Offices of Life, ἐνεοί· And in the ſame Senſe is the Word expounded by *Heſychius*.

ENEREISIS, ἐνέρεισις· from ἐρείδω, to lean, lay a Streſs, or be incumbent; is a Preſſure, or violent Compreſſion: Thus, in (*Lib.* κατ' ἰητρ.) μηδὲ πάσθῃσιν ἐνέρεισις ἔῃσι, "and that there "be no Compreſſion from the Splints." *Galen* explains the Words ἐνέρεισις, by βία, and θλῖψις, "violent Preſſure."

ENERGIA, ἐνέργεια· from ἔργον, a Work. Efficacy.

ENERGOS, ἐνεργός· from the ſame as the preceding. Active, and diligent. In *Hippocrates*, *Lib. de Aere, Locis, & Aquis*, ſignifies beneficent, civiliz'd, and humane.

ENERVATIO is an equivocal Word, ſignifying either the ſame as APONEUROSIS, which ſee, or *Debilitation: Adipis ſuillæ enervatæ curatæ*, is an Expreſſion in a medicinal Compoſition, taken by *Marcellus Empiricus*, *Cap.* 31. *in Princip.* from *Scribonius Largus*, *No.* 222. who has it *Adipis ſuilli curati*; where *Rhodius*, in his Notes on this latter Author, obſerves, that *enervatæ* is a barbarous Sort of Interpretation of *curatæ*, and intended to ſignify, *cleanſed from the little Fibres and Membranes*, which is the Meaning of *curatæ*. *Apicius Cœlius*, *Lib.* 5. *Cap.* 4. uſes indeed, *Cerebella enervata*, in the Senſe of *Marcellus*; but then, as *Rhodius* obſerves, he wrote in a Time when Barbariſm began to ſpread.

ENGASTRIMUTHOS, ἐγγαστρίμυθος· from ἐν, in; γαστὴρ, the Belly, and μῦθος, a Speech. A Ventriloquiſt. See ÆSCULAPIUS.

ENGISOMA, ἐγγίσωμα, ἐγγίσωμα. A chirurgical Inſtrument, uſed about Fractures of the Cranium. See another Signification of it, under the Article CAMAROSIS.

ENGOMPHOSIS, ἐγγόμφωσις· The ſame as GOMPHOSIS; which ſee.

ENGONIOS, ἐγγώνιος· from γωνία, an Angle; angular; in *Hippocrates*, when apply'd to the Cubit; as ἐγγώνιος πῆχυς, ſignifies the Flexure thereof at right Angles; as *Galen* explains him in many Places.

ENGUAMBA URUVAPENSIUM, *De Laet.* is a Tree of a moderate Bigneſs, growing in a ſtony Soil; with a reddiſh Bark, a dark-colour'd Wood, a paliſh medullary Subſtance, broad and concave Leaves, diſtinguiſh'd by red and yellow Fibres; with pendulous, herbaceous, and cluſter'd Flowers; and a black Fruit full of Kernels: From this Fruit they expreſs a yellow Oil, which is good for Wounds, and to diſſolve Tumors. *Ray*, *Hiſt. Plant.*

ENHÆMON, ἔναιμον. The Name of a Plaiſter in *Myrepſus*. See ENÆMOS.

ENIAUSION, ἐνιαύσιον· from ἐνιαυτὸς, a Year; yearly, annual. Ἐνιαύσιον νόσημα, in *Hippoc. Lib. de Nat. Humana*, as *Galen* explains it, is a Diſeaſe, which leaves the Patient after a full Year from its firſt Beginning; or after a Period of ſeven Years; as others do after ſeven Months.

ENITÆON, ἐνίταῖον. The Name of a Simple in *Myrepſus*, *Antid.* 332. which his Annotator *Fuchſius* ingenuouſly confeſſes himſelf ignorant of.

ENIXA; the ſame as PUERPERA, or a Woman in Childbed. *Enixum*, among the Chymiſts, is an Epithet apply'd to Salts of a third Kind, generated of an Acid and an Alcali; which is otherwiſe call'd *neutral*, and *third*, according to *Glauber*.

The *Sal Enixum Paracelſi* is the *Caput Mortuum* of the *Spiritus Nitri cum Oleo Vitrioli*, or what remains in the Retort, after the Diſtillation of this Spirit; of a white Colour, and pleaſant acid Taſte. If it be diſſolv'd in hot Water, and cryſtalliz'd, it will be yet a more elegant Medicine, and endu'd with the ſame Virtues as the Tartarum Vitriolatum.

Its Operation is diuretic: The Doſe is from one Scruple to one Dram, in Broth, or Water-gruel.

ENNEAPHARMACOS, ἐννεαφάρμακος· from ἐννέα, nine, and φάρμακον, a Medicine; a medicinal Compoſition, conſiſting of nine ſimple Ingredients. It is the Name of a Peſſary preſcrib'd in Inflammations of the Uterus and Anus, *Gal. L.* 9. *de C. M. S. L. Cap.* 6. *Æginet. Lib.* 7. *Cap.* 24. *in Fin.* It is a Name, alſo, for the *Antidotus Heraclidis*. *Galen*, *Lib.* 2. *de Antid. Cap.* 4. and for ſeveral Plaiſters in *Aetius* and *Celſus*. *Caſtellus*.

ENNEAPHYLLUM, ἐννεάφυλλον· from ἐννέα, nine, and φύλλον, a Leaf; a Name in *Ray* for the *Helleboraſter*; becauſe its Leaves are often ſubdivided into nine leſſer ones.

ENOCH is, by the ſpagirical Writers, generally ſuppoſed to be the ſame with *Hermes Triſmegiſtus*. *Theatrum Chymicum.*

ENOCHDIANUS, in *Paracelſus*, is one who equals the Prophet *Enoch* in Longevity: Hence *Enochdiana Vita*, with him, ſignifies an extraordinary long Life.

ENODIOS, ἐνόδιος· from ἐν, in, and ὁδὸς, Way; ſituated or placed in the public Way; is an Epithet of *Diana*, *Hecate*, or *Proſerpina*; becauſe her Image was commonly erected in croſs Ways; whence ſhe was called *Diana Trivia*. The Word ἐνόδιος occurs in *Hippocrates*, *Lib. de Morbo ſacro*; where, ſpeaking of popular Prejudices, in attributing the Cauſe of the Epilepſy, which they called νόσος ἱερὴ, *Morbus ſacer*, in a particular manner, to the Divinity, he goes on to obſerve, that they aſcribed the Cauſe of every Species or Symptom of this Diſorder, to ſome particular Deity: Thus, for Inſtance, if the Patient, ſeized with a Fit of the Epilepſy, made a bleating Noiſe like a Goat, they attributed the Cauſe of the Diſtemper to the Mother of the Gods; if he cry'd out with a ſtronger and ſhriller Voice, they reſembled it to the Neighing of an Horſe, and made *Neptune* the Author; if the Patient, as it ſometimes happened, could not retain his Excrements, Ἐνοδίη περέχειαι ἢ περιωνυμίη, the Diſeaſe took its Appellation from *Hecate Enodia*; if he evacuated but little, and frequently, like the Muting of Birds, *Apollo Nomius* was angry; and, if he frothed at the Mouth, and kick'd with his Heels, *Mars* was the Cauſe.

ENOMOS, ἐνωμὸς· from, and the ſame as, ὠμὸς, crude; is expounded by *Galen*, *Com. in* 5. *Aph.* by σκληρὸς καὶ ἀνθίτυπος, "hard and reſiſtent;" as it is there oppoſed to χαῦνος, ſoft, lax.

ENRYTHMOS, ἔνρυθμος. See ARYTHMUS.

ENS. It is not my preſent Buſineſs to give the different Significations of this Word, as us'd by the Metaphyſicians and Philoſophers: It may ſuffice to obſerve, that *Ens* implies an Entity, or Thing really exiſting. In *Paracelſus*, however, *Ens* imports the Power, Virtue, and Efficacy, which certain Beings exert upon our Bodies: Thus he mentions the *Ens Aſtrorum*, the *Ens Veneni*, the *Ens Naturale*, the *Ens de potentibus Spiritibus*, and the *Ens Dei*. This Author, in his Treatiſe *de Renovatione & Reſtitutione*, ſpeaks much of the *Ens Primum* of Minerals, Gems, Herbs, and Liquors; by which he means, the Parts in which their Virtue or Efficacy reſide, or the very Virtue or Efficacy itſelf.

With reſpect to the *Ens Primum* of Plants, there is the following celebrated Paſſage in *Boyle*:

If we may believe the ingenious Chemiſt to the *French* King (M. *le Febure*) a ſingle Herb, by pure Skill, without the Aſſiſtance of Fire, may afford a nobler Medicine than any of the elaborate Compounds to be met with among vulgar Chemiſts. This efficacious Part of a Plant, *Paracelſus* calls its *Ens primum*, whoſe Proceſs for obtaining whereof I ſhould never have thought worth trying, but for what the experienced Chemiſt above-mention'd told me, from his own Obſervations; for he, as well as *Paracelſus*, aſcribes a renovating Power to the Ens primum of Balm; and aſſured me, in the Preſence of a famous Phyſician, to whom he appeal'd for the Truth of his Relation, that an intimate Friend of his, being poſſeſs'd of this Preparation, made Trial thereof upon himſelf, by taking a ſmall Quantity every Morning, in Wine, for a Fortnight; long before the End of which, he found the Nails of his Fingers and Toes to looſen; which, at length, falling off inſenſibly, he proceeded no farther, being ſatisfied with the Tokens, which he reſerv'd as a Rarity. But, upon giving the ſame Medicine, for ten or twelve Days, to a Woman about ſeventy Years of Age, without acquainting her with what he expected therefrom, it brought her Menſes down upon her again, ſo freſh as to frighten her, and ſtop the Proſecution of the Experiment. He added, that he alſo gave ſome Drops of it to an old Hen, for a Week; and, about the ſixth Day after, ſhe began to moult, and continued ſo, gradually, till all her Feathers dropt off; but regain'd new ones in a Fortnight. My Author alſo acknowledged, he had obſerv'd great Virtues in the Ens primum of the great Scrophularia.

His Method was to collect the Plant at a convenient Seaſon of the Year, and proper Time of the Day; to beat it well in a Stone Mortar, and place it in a Bolt-head, and digeſt it for forty Days in a Dunghil; after which, he opens the Veſſel, ſeparates the groſſer Part of the Liquor, and digeſts it in a gentle Bath, that the remaining Groſſneſs may ſubſide; then, filtring the Juice, he adds to it the fix'd Salt of the groſſer Parts above-mention'd, dry'd and calcin'd. To this prepar'd Liquor, he puts good Sea-ſalt, purified, melted, and ſuffer'd to run *per Deliquium*. Then the Whole, ſeal'd up in a convenient Glaſs, is expos'd to the Sun, for about ſix Weeks; after which, there ſwims, on the Top of it, the Ens primum of the Plant, in a liquid Form, tranſparent, and either green, or red, or, perhaps, of ſome other Colour, as the Nature of the Vegetable determines.

The *Ens appropriatum* of Vegetables is, according to *Paracelſus*, the peculiar medicinal Virtue or Efficacy of Vegetables, which is different in every Plant, and appropriated to every individual Plant.

ENS VENERIS.

1. Take the Colcothar, remaining after the Diſtillation of Spirit and Oil of Vitriol, from Goſlar Vitriol; put it into a large Crucible, cover it with a Tile, and ſet it in the hotteſt Part of the reverberatory Furnace; and there let it ſtand ignited the whole time of the Operation: By this Calcination it will turn very red. Then boil this Colcothar in Water, keeping it well ſtirred in a Glaſs Veſſel; ſtrain the Liquor hot; it will have the Taſte of Vitriol; pour freſh Water to the Remainder; boil, and ſtrain, as before; and continue this ſo long as the Water, even by boiling, acquires any Taſte. At length, keep the remaining fine red Powder, under the Title of the dulcified Calx of Vitriol. If the former pure Liquor be inſpiſſated, it will ſtill yield a kind of yellow Vitriol: Whence we learn how wonderful a Body Vitriol is, with reſpect to its Fixedneſs in the Fire, even in its ſaline Part.
2. Take an equal Part of this dulcified Calx of Vitriol, and the dried Flowers of Sal Ammoniac; grind them in a hot Glaſs Mortar, with a Glaſs Peſtle, for a conſiderable time, till they are perfectly mixed, but with Care to prevent their growing moiſt: For this Reaſon they ſhould be ground on a clear dry Day, and in a warm Place. Put the Powder into a low earthen Body; fit on a wide Alembic-head, with a wide Pipe; apply a ſmall Receiver; place the Veſſel in a Sand-furnace, ſo as almoſt to touch the Iron Pot; half-bury the Body in Sand, and raiſe a Fire by degrees. There firſt comes over a ſharp, volatile, yellowiſh Liquor, of an intolerable Odour, and an exceeding ſharp fiery Taſte, the Fire being increaſed, and the Liquor drove over: Firſt white, then yellow, and ſoon after very red Flowers will riſe: Continue the Fire for ſix Hours, making it ſo ſtrong, at laſt, as to almoſt ignite the Iron Pot. Let all cool; there will be found, in the Head, and upper Part of the Body, a beautiful red, ſaline, aſtringent Sublimate, very like the Flowers of Iron. Let it all be carefully taken out, and directly put into a dry Glaſs: A Matter will be found at the Bottom, of an auſtere Taſte, that eaſily ſwells, and, in ſome meaſure, runs in the Air. But the Production will be different, according as the Vitriol was from Copper, or Iron.

REMARKS.

Here we ſee the metallic Part of Vitriol, that remained ſo fixed in the Fire, is rendered volatile by Sal Ammoniac. The Nature of this Iron, from Vitriol ſo calcined, is nearly the ſame in the Flowers, as in crude Iron ſublimed with Sal Ammoniac; and might, therefore, rather be called *Ens Martis*, than *Ens Veneris*. When prepared from the Calx of blue Vitriol, it then deſerves to be called *Ens Veneris*. And hence we may underſtand the Death and Reſurrection of Metals, mentioned by *Paracelſus*. A ſmall Proportion of this Sublimate turns a large one, of the Infuſion of Galls, to Ink. Mr. *Boyle* promiſes great Effects from this Remedy, in Diſtempers proceeding from a Weakneſs of the Solids, as in the Rickets, or the like; and it is highly ſerviceable therein. *Helmont*, alſo, in the Treatiſe he intitles *Butler*, greatly commends a like Preparation. But as even after the utmoſt Violence of the Fire ſuſtained, both in a cloſe and an open Veſſel, there remains ſomething vitriolic, it is no Wonder, that the Fumes of Vitriol continually remain, how long ſoever the Diſtillation be continued: Doubtleſs this wonderful Body deſerves to be examined. *Boerhaave's Chemiſtry.*

Boyle ſays, that the Ens Veneris ſhould be of a yellow Colour; and, if not, he directs it to be return'd to the Caput Mortuum, and to be re-ſublimed.

This Ens Veneris, ſays the above-quoted Author, has proved ſo ſucceſsful, that I may ſafely ſay, two or three hundred Children have, through my means, been cured by it; and that almoſt always without the Help of other inward Medicines, or topical Application.

The Doſe is two or three Grains, to little Children; ten, or twelve, to grown Perſons, and ſometimes twenty or thirty, in diſtilled Water, or ſmall Beer, but not in Milk. It may be given at any time, upon an empty Stomach; but I moſt commonly give it at Bed-time. When it operates ſenſibly, it is by Sweat, and ſometimes by Urine. I exhibit this Medicine, alſo, in Fevers, and other Diſeaſes, to procure Sleep; which it does more ſafely than opiate Preparations. It is alſo powerful againſt Worms, Obſtructions of the Menſes, and to ſtrengthen the Appetite.

ENSIFORMIS, ξιφοειδὴς. The Name of a Cartilage, which grows to the lower Part of the Sternum; and is so called because it resembles a Sword.

ENSTACTON, ἔνσταγμον from στάζω, to distil. Instillatious. The Name of a liquid Collyrium in *Galen*, *Lib.* 4. *de C. M. S. L. Cap.* 7. called by *Ægineta*, *Lib.* 7. *C.* 16. σταλτικὸν, *Stalticon.*

ENSTASIS, ἔνστασις, from ἐνίστημι, (of ἐν, in, and ἵστημι, to stand, to stand in, to inhere, or be fixed in a Station) Lodgment, or Inhesion, was a Word very familiar with *Erasistratus*, and *Asclepiades*, who was a Follower of *Democritus*, and taught, that Diseases were caused by an Ingress of Molecules into the Vacuities of the Pores, and obstructing them; which Ingress and Infixion he expresses by the Term ἔνστασις. Thus much we may learn from *Celsus*, in his Preface. And *Cœlius Aurelianus*, in his Preface to acute Distempers, tells us, that *Asclepiades* defined a Phrensy, to be a Station, or Obstruction, of Corpuscles in the Membranes of the Brain. This ἔνστασις is also mentioned by *Plutarch*, in his Precepts for Health; and *Galen*, *Com. in* 6 *Aph.* 31. And *Cassius*, who is supposed to have been of the Sect of the Rationalists, *Prob.* 76. expresses the same in very plain Words.

ENTALE. A Vessel. *Rulandus.*

ENTALI. Fossile Alum. *Rulandus.*

ENTALIUM, Offic. Schrod. 5. 328. Charlt. Exer. 63. Scyll. 137. Tab. 18. n. 6. *Dentalium primum & quartum.* Aldrov. de Aquat. 283. *Autales.* Gesn. Aquat. 345. *Tubulus dentalis striatus.* Lang. Meth. Testat. 5. *Tubulus, aut Siphunculus maris.* Bonan. 91. *Dentale viride striatum, maximis striæ raræ majusculæ admodum extantes, minimis striæ densæ & tenuiores.* List. Hist. Conch. 4. Sect. 2. n. 1. *Denticuli Elephantis*, Rumph. 125. Tab. 41. 1. Valent. Mus. Mus. 187. THE ENTAGLIA.

This is much longer and thicker than the Dentalium, but very like it in other respects, only deeply striated, or ridged; and the Ridges are, for the most part, of a green Colour. It is imported from the *East Indies*: And both this and the Dentalia are but little used in Medicine; though, probably, they may be serviceable for the same Purposes, and in the same Disorders, as other Substances of the testaceous Kind. The Entalia are Shells, or Coverings, for a Sort of Sea-worm.

The modern *Italians* call all Stones, Metals, or Woods, cut in with Lines or Figures, or barely chaneled, *Entaglia*; from whence, and from the Nearness of the Word *Dentalium*, the learned and ingenious Dr. *Lister* conjectures the Name *Entalium* to have its Original. *Dale.* See ANTALIUM.

ENTASIS, ἔντασις, from τείνω, to distend, or stretch. A Distention. The Word is used by *Hippocrates*, *de R. V. I. A.* and in the *Epidemics*. Sometimes he uses τάσις, τάσις, and ξύντασις, *Xuntasis*, in the same Sense. Ἔντασις, in *Hippocrat. Lib.* περὶ εὐσχημοσ. signifies a decent and commanding Austerity becoming a Physician, when he reprehends the Patient, for indulging his Desires in Prejudice to his Health, or transgressing the Rules prescribed. Τὰ ἐντατικὰ, *Medicamenta entatica*, are Medicines for provoking Venery, called by *Cœlius Aurelianus*, *Acut. Morb. Lib.* 3. *Cap.* 18. *Satyrica.* And *Paulus Ægineta*, *Lib.* 7. 17. prescribes a Plaister, which he calls ἐνατικὸν, for the same Purpose.

ENTATICOS, ἐντατικὸς, from ἔντασις. See the preceding Article.

ENTERADENES, ἐντεραδένες, from ἔντερον, an Intestine, and ἀδὴν, a Gland. The Intestinal Glands.

ENTERENCHYTÆ, ἐντερεγχύται, from ἔντερον, the Viscera, and ἐγχύω, to infuse. Chirurgical Instruments for administring Clysters. *Scultet. Armament. Chirurg.*

ENTERIONE, ἐντερεώνη. The same as ENCARDIUM, which see.

ENTEROCELE, ἐντεροκήλη, from ἔντερον, an Intestine, and κήλη, a Hernia. An Intestinal Hernia. See HERNIA.

ENTEROEPIPLOCELE, ἐντεροεπιπλοκήλη, from ἔντερον, an Intestine, ἐπίπλοον, the Omentum or Cawl, and κήλη, an Hernia. A kind of Hernia; for which see HERNIA.

ENTEROHYDROCELE, from ἔντερον, an Intestine, ὕδωρ, Water, and κήλη, an Hernia. A Dropsy of the Scrotum, complicated with a Descent of the Intestine. See HERNIA.

ENTEROMPHALOS, ἐντερόμφαλος, from ἔντερον, an Intestine, and ὀμφαλὸς, the Navel. An *Hernia umbilicalis*, the same as OMPHACELE, which see.

ENTERON, ἔντερον, from ἐντὸς, within. Internal, an Intestine. See COELIA. Ἔντερον, in *Hippocrates*, 6 *Epid. Sect.* 4. *Aph.* 3. signifies, simply, the Colon, as *Galen* observes in his Comment on the Place, where he rejects the Opinion of those who take it for the Cæcum. Ἔντερα, in *Lib.* 3. *de Morb.* signifies Sacks, or Bags, in which were inclosed Medicines for Fomentations; perhaps, as *Foesius* says, because not only the Bladder, but the Intestines, may be accommodated to that Use.

ENTEROPHYTON VULGARE. *Fucus tubulosus intestinorum forma.* Inst. *Lactuca marina tubulosa.* Raii. SEA CHITTERLING.

This is a submarine Plant, so called from its being hollowed like an Intestine. It grows in deep Ditches, principally near the Sea.

I do not know that it is used in Medicine.

ENTERORAPHE. A Suture of the Intestines. See ABDOMEN.

ENTEROSARCOCELE. A Species of Hernia; which see under the Article HERNIA.

ENTEROSCHEOCELE, ἐντεροσχεοκήλη, from ἔντερον, an Intestine, ὄσχεον, the Scrotum, and κήλη, an Hernia. An Hernia, when the Intestines descend into the Scrotum.

ENTHEASTICOS, ἐνθεαστικὸς, from ἔνθεος, divinely inspired, of Θεὸς, God, in *Paulus Ægineta*, *Lib.* 4. *Cap.* 14. is one under a melancholy Affection, who imagines himself divinely inspired, and able to predict future Events.

ENTHEMATA, ἐνθέματα, from ἐντίθημι, to put in. Medicines applied immediately to recent Wounds, in order to prevent an Inflammation, and stop the Hæmorrhage.

ENTHETOS, ἔνθετος, from the same as the preceding, signifies, in general, any thing introduced; but, in particular, used to express such Medicines as are applied to the Nose, in order to stop an Hæmorrhage. They are called, 4. *Epid.* τὰ ἐντιθέντα.

ENTHLASIS, ἔνθλασις, from ἐν, in, and θλάω, to break or bruise, is an Illision or Contusion, which makes such an Impression, as leaves an external Cavity. *Hippocrates*, *de intern. Affect. Galen*, *Lib.* 2. *de Caus. Morb.*

ENTHUSIASMUS, ἐνθουσιασμὸς, from ἐνθουσιάζω, to be divinely inspired, of Θεὸς, God, is defined by the Author of the *Definitiones Medicæ*, to be a fanatic Perculsion, or divine Inspiration; as when a Person, in performing the holy Rites of divine Worship, loses his Reason, and, in an Ecstasy, sees strange Sights, or hears the Noise of Drums or Pipes.

ENTOMON, ἔντομον, from ἐν, in, and τέμνω, to cut. An Insect. See INSECTUM.

ENTRICHOMA, ἐνθρίχωμα, from ἐν and τρίχωμα, the Hair. A Name given by some to the utmost Edge or Extremity of the Eyelids, whence the Hairs grow.

ENTRIMMA, ἔνθριμμα, from ἐνθρίβω (of ἐν and τρίβω), to rub, grate, triturate. The same as INTRITUM; which see.

ENTROPE, ἐνθροπὴ, ἐνθροπία, from ἐνθρέπω, to abash, or make ashamed. In *Hippocrates*, περὶ εὐσχημοσ. it signifies Modesty; and is a Qualification he requires in a Physician.

ENTYPOSIS, ἐνθύπωσις, from ἐνθυπόω, to make an Impression, of τύπος, a Type, or Image formed by Impression. The Acetabulum of the Humerus; otherwise called the *Omocotyle* by *Pollux*; who says, it is the Articulation of the Shoulder and Arm.

ENUCLEATIO, Enucleation, is the taking out the Nut or Kernel of any Fruit.

ENULA CAMPANA. Elecampane. See HELENIUM.

ENULON, ἔνυλον, from ἐν and ὕλη, the Gums. According to *Pollux*, it is the internal Flesh of the Gums; as the ὖλον (*Ulon*) is the external; and ἁρμὸς (*Harmus*), the Flesh of the Gums between the Teeth.

ENUR. The occult Vapour of Water, of which Stones are generated. *Rulandus. Johnson.*

ENYPNION, ἐνύπνιον, from ἐν, and ὕπνος, Sleep. A Dream. See INSOMNIUM.

ENYPOSAPROS, ἐνυπόσαπρος, from ἐν, within, ὑπὸ, a Prepositon having the Force of a Diminutive, in Composition, and σαπρὸς, putrid. Somewhat putrid within. An Epithet in *Coac.* 446. applied to the Spit of hepatic Patients.

ENYSTRON, ἔνυστρον, according to *Aristotle*, *Lib.* 2. *Animal.* is a second Ventricle, or a thick Part of the Stomach, in ruminating Quadrupeds, in which the Food is elaborated and concocted. *Gorræus* makes it the same with the ABOMASUM; which see.

EON, ἠών. The whole Ambit, or Compass, of the Eye. *Gorræus* from *Pollux.*

EPACMASTICOS, ἐπακμαστικὸς, from ἀκμὴ, the Top, or Summit. An Epithet of a Fever, which is continually increasing; and is the same as ἀναβατικὸς (*Anabaticus*). See ANABASIS.

EPACROS, ἔπακρος, from ἄκρον, the Top. Ending in a sharp Point. *Hippocrates*, *Lib.* 2. *de Morb.* and *Galen*'s *Exegesis.*

EPAGOGION, ἐπαγώγιον, from ἐπάγω, to induce, or cover over. The Prepuce. *Dioscorides*, *Lib.* 3. *Cap.* 25.

EPANACLESIS, ἐπανάκλησις, from ἀνακαλέω, to recal. A Recalling or Revocation. Ἐπανάκλησις θερμῆς, "A Revo-"cation of Heat." 5 *Aph.* 21. & *Lib.* ὑγρ. χρησ.

EPANADIDONTES PURETI, ἐπαναδιδόντες πυρετοὶ, in 6 *Epid. Sect.* 6. *Aph.* 17. are Fevers, which, in the Beginning, are not mordacious [δακνώδεες] to the Hand; but, in their

their Progreſs, increaſe in Heat, and are ſenſibly biting to the Touch. They are oppoſed, as *Galen* ſays, to thoſe Fevers, which are acute, but ἐναντίους τῆς χειρὸς, "gentle, and yielding to the Touch."

EPANADIPLOSIS, ἐπαναδίπλωσις, from διπλῶς, double. A Reduplication. The ſame as ANADIPLOSIS, which ſee.

EPANALEPSIS, ἐπανάληψις, from ἐπαναλαμβάνω, to repeat. A Repetition. The ſame as ANADIPLOSIS, which ſee.

EPANASTASIS, ἐπανάστασις, from ἐπανίστημι, to excite, or raiſe. A Tumor, or Tubercle. The Word occurs in *Coac.* 220. where we are told, that Tumors about the Eyes [ἐπανάστασις περὶ ὀφθαλμῶν], upon the Recovery from a Diſtemper [ἐν τῇσιν ἀσαμοιδήσι], prognoſticate a Flux of the Belly.

EPANCYLOTOS, ἐπαγκυλωτὸς, from ἀγκύλος, crooked, winding. A ſort of Bandage in *Oribaſius.*

EPANTHEMA, ἐπάνθημα, or,

EPANTHISMA, ἐπάνθισμα, from ἄνθος, a Flower. An Efflorescence. *Hippocrates*, 1 *Prorrhet.* and *Coac.*

EPANTLESIS, or ENCATANTLESIS, ἐπάντλησις, from ἐπαντλέω, to pour upon. In *Lib. de Rat. Vict. in Morb. acut.* ſignifies a Perfuſion with Water, as performed by the Attendants on the Baths.

EPAPHÆRESIS, ἐπαφαίρεσις, from ἐπὶ, importing Repetition, and ἀφαίρεσις, a Removal, or taking away. In *Galen*, it ſignifies, particularly, a repeated Evacuation by Phlebotomy.

EPAPHROS, ἐπαφρὸς, from ἀφρὸς, Spume. Spumous, frothy. Frequently applied by *Hippocrates* to the Stools.

EPAR. See HEPAR.

EPARGEMOS, ἐπάργεμος. An Epithet for a Perſon affected with that Diſorder of the Eye called ARGEMON, which ſee.

EPARITA. A Sort of argillaceous Earth, of the Colour of Liver *(Epar). Paracelſus.*

EPARMA, ἔπαρμα, or,

EPARSIS, ἔπαρσις, from αἴρω, to elevate. Any Sort of Tumor, but frequently applied to a Parotis.

EPAZOTL. A Name for the BOTRYS MEXICANA, which ſee.

EPENCRANIS, ἐπεγκρανὶς. A Name by which *Eraſiſtratus* called the Cerebellum. *Galen, de Uſu Part. L.* 8. *C.* 13.

EPERLANUS. The Smelt. *Lemery*, in his Treatiſe on Foods, tells us, that you are to chuſe Smelts that are fair, ſhining, of a Pearl-colour, ſoft, tender, delicious, juicy, and ſmelling like Violet.

The Smelt yields pretty good Nouriſhment, and is eaſy of Digeſtion. It is looked upon to be opening and good for the Stone and Gravel.

We do not find it to produce any ill Effects.

It contains much Oil, and volatile Salt.

It agrees, at all times, with any Age and Conſtitution.

REMARKS.

A Smelt is a ſmall Fiſh, that is bred in the Sea, and gets up into Rivers, where they fiſh for it. There are great Numbers of them in the *Seine*, at *Roan*; they aſſure us, they are more plentiful, and taſte better, towards the End of Summer, or the Beginning of Autumn, than at any other times of the Year. This Fiſh is about the Length of one's Finger, and the Thickneſs of one's Thumb; and feeds upon Flies and Inſects, and in Shape and Virtue is much like a Gudgeon: However, 'tis more delicious, by reaſon of the violet Taſte it has, which probably ariſes from the Principles of the Smelts, being a little more exalted than thoſe of the Gudgeon, and more freed from groſs Matters; and therefore they make a more nice and finer Impreſſion upon the Senſe of Taſte.

A Smelt, in *Latin*, is called *Eperlanus, à Perlâ*, a Pearl; becauſe 'tis like it in Colour: They call it alſo, *Viola marina*, becauſe it ſmells like a Violet.

EPHEBÆON, ἐφήβαιον· the Pubes; from ἥβη, the Pubes, or Puberty.

EPHEDRA.

The Characters are;

The Root is perennial: The Plant has the Appearance of a Shrub; and the Stalks, Branches, and Leaves, reſemble thoſe of *Horſe-tail.* The Flower is Male; has no Petals, but conſiſts of teſticulated Stamina, growing on a thin Subſtance, the Congeſtion of which furniſhes the Floſcule with a ſort of Calyx: Theſe are the Flowers which grow on the Male or Hermaphrodite Plant.

The Fruit, which either grows on another Part of the ſame Plant, or on another Plant which bears no Flowers, is a red juicy Berry; conſiſts of a Pair of ſquamous or ſcaly Subſtances, laid acroſs, upon a Pair of others like them, and upon that a third, and over this a fourth Pair, in like Order as the firſt and ſecond; the Series gradually increaſing from the leaſt and loweſt Scales, to the uppermoſt and greateſt, which in a bifid Cleft, a little gaping, contains two ſmooth oval Seeds, gibbous on the back Part, and flat on the other, and cover'd with a coriaceous Membrane. *Boerhaave.*

Boerhaave mentions two Species of this Plant; which are,

1. Ephedra; maritima, major. *Tourn. Inſt.* 663. *Elem. Bot.* 514. *Boerh. Ind. A.* 2. 107. *Ephedra*, Offic. Mont. Ind. 42. *Tragus ſive Uva marina major*, J. B. 1. 406. Chab. 87. *Uva marina major*, Ger. Emac. 1117. Raii Hiſt. 2. 1638. *Uva marina*, Ger. 959. *Polygonum bacciferum maritimum majus*, C. B. P. 15. *Polygonum bacciferum ſive Uva marina major*, Park. Theat. 450. *Equiſetum Polygonoïdes bacciferum majus*, Hiſt. Oxon. 3. 621. SEA-GRAPE OR SHRUB HORSE-TAIL. *Dale, p.* 324.

It grows in *Sicily*, and other maritime Places. Ten Kernels of the Grapes, drank in Wine, give Relief under the Cœliac Paſſion, and to Women in a Fluor Uterinus. *Dioſcorides, Lib.* 4. *Cap.* 51.

The Hiſtory of Plants, attributed to *Boerhaave*, informs us, that this Plant is aſtringent, and good in Hernias, Diarrhœas, and Hæmorrhages.

2. Ephedra, maritima, minor. *T.* 663. *Polygonum, bacciferum, maritimum, minus.* C. B. P. 15. *Tragus, ſive Uva marina.* J. B. 1. 406. *Equiſetum* IV. *Matthioli.* Lugd. 1071. *Racemoſa, Equiſeti facie.* Lob. Adv. 355. *Hippuris, minor, congener cum majori Equiſeto.* Lob. Obſ. 461. *Equiſetum, Polygonoides, bacciferum minus.* M. H. 3. 621. H. LESSER SEA HORSE-TAIL. *Boerh. Ind. A. Plant. Vol.* 2. *p.* 107.

EPHEDRA is alſo a chirurgical Inſtrument, mention'd by *Joh. Laurentius*, for the Reduction of luxated Bones.

EPHEDRANA, ἐφέδρανα, the Buttocks.

EPHEDRON, ἔφεδρον· from ἕδρα· a Seat firmly fix'd. It occurs in *Hippocrates de Fract.* and *de Morbis L.* 2. and 3.

EPHELCIS, ἐφελκὶς· from ἕλκος, an Ulcer. The Cruſt of an Ulcer; or a ſmall Abraſion, or bloody Fragment, ſometimes brought up by Coughing in an HÆMOPTYSIS.

EPHELIS, ἐφηλὶς.

This Word among the *Greeks*, imported what we call Sun-burning; as is obvious by its Derivation, from ἐπὶ, and ἥλιος, the Sun. *Celſus*, in the fifth Chapter of his ſixth Book, treats of this, and ſome other Diſorders of a ſimilar Nature, in the following Words: "'Tis almoſt needleſs to attempt a "Cure of Pimples, Freckles, and Sun-burning: But the "Care of a Woman's Complexion is a Principle ſo throughly "interwoven with her Nature, that it can hardly be eradi-"cated, or ſeparated from her Being. Pimples and Freckles "are generally known; tho' that Species call'd φακία by the "*Greeks*, which is only a red and unequal Freckle, rarely "occurs. The *Ephelis* is unknown to moſt People, and is "nothing more than a certain Roughneſs and Hardneſs, ac-"companied with a bad Colour of the Skin: The other Ble-"miſhes happen only in the Face; tho' Freckles appear ſome-"times alſo in other Parts."

Pimples are moſt commodiouſly remov'd, by applying to them Reſin, mix'd with an equal Quantity of ſciſſile Alum, and a little Honey. Freckles are remov'd, by the Application of Galbanum and Nitre, triturated, and made up with Vinegar, into the Conſiſtence of Honey: With this Preparation the Skin is to be anointed. Next Morning, the Parts to which it is apply'd, are to be waſh'd, and gently anointed with Oil.

The *Ephelis*, or Sun-burning, is remov'd by an Application of Reſin, to which a third Part of foſſile Salt, and a little Honey, are added: But all theſe Diſorders, as alſo the unnatural Colour of Cicatrices, are remedied by the following Preparation, aſcrib'd to *Trypho* the elder:

> Take equal Quantities of Myrobolans, Crocomagma, *Cimolian* Earth of a bluiſh Colour, bitter Almonds; the Meals of Barley and Bitter-vetch; Dyers-weed [*Struthium album*]; and the Seeds of Melilot [*Sertula Campana*]: All theſe are to be triturated together, and made up with the moſt ſharp Honey: With this Preparation, the Parts affected are to be anointed at Night, and the Medicine is carefully to be waſh'd off next Morning.

EPHEMERA; from ἡμέρα, a Day. A diary Fever. In this Diſorder, a Heat reſembling that obſerv'd in Perſons under the Influence of Anger, or thoſe whoſe Stomachs are overloaded with Wine, is diffus'd over the whole Body: This Species of Fever has this peculiar to it, that the Pulſe is, at firſt, large; but, as it afterwards becomes moderately quick and frequent, ſo 'tis equal, ſoft, and regular, as in a natural State. The Urine undergoes little or no Change; nor is the Diſorder preceded by a Loathing of Food, a ſpontaneous Laſſitude of the Body, diſturb'd Sleep, preternatural Yawning, or Horror; but it ſeizes the Patient ſuddenly, and afflicts him with no other Symptoms than a Pain of the Head and Stomach; a Nauſea,

Nauſea, Heat, and Reſtleſſneſs. This Diſorder is ſometimes imperceptibly determin'd, without any ſenſible Evacuation; but more frequently by copious Exhalations thro' the Skin, a moiſt Diaphoreſis, or by gentle and not very profuſe Sweats: 'Tis alſo to be obſerv'd, that a diary Fever is almoſt always produc'd by evident Cauſes; ſuch as Watching, Anxiety, Grief, Anger, the Heat of the Sun, Wearineſs, Drinking to Exceſs, Hunger, and other things of a like Nature; and that it generally terminates in one Day: But if it ſhould paſs this Day, and continue beyond the third, it ceaſes to be a diary Fever, and degenerates into one of the putrid Kind. In this Caſe, if the Patient's Habit is exceſſively dry, an hectic Fever is alſo to be dreaded. 'Tis eaſier to cure, than really to know and diſtinguiſh, every Fever of the diary Kind; for which Reaſon, it generally happens, that a diary Fever proves injurious to the Patient, before it can be diſtinguiſhed for the Diſeaſe it really is. This Diſorder is not only more generally incident, but alſo more dangerous, to Men of bilious Conſtitutions, and ſuch as are engag'd in much Buſineſs. *Lommii Medicinal. Obſervat.*

EPHEMERIDES. *Helmont* calls thoſe Diſeaſes, which ſeize the Patient at particular times of the Moon, *Ephemerides Ægrorum*, the Almanacks of the Sick.

EPHEMERUM.

The Characters are;

The Calyx conſiſts of three Leaves; the Flowers of three Petals, expanded in form of a Roſe, and furniſh'd with three Stamina, ſurrounding the Ovary. The Fruit is oblong, tricapſular, and full of Seeds, like Grains of Wheat.

Boerhaave mentions four Species of this Plant; which are,

1. Ephemerum; Virginianum; flore azureo, majori. *T.* 368. VIRGINIAN SPIDERWORT, *with a large azure Flower, commonly call'd the* SAVOY SPIDERWORT.

2. Ephemerum; Virginianum; flore albo. *T.* 386. VIRGINIAN SPIDERWORT, *with a white Flower.*

3. Ephemerum; Virginianum; flore ex albo & violaceo vario. *T.* 368.

4. Ephemerum; Virginianum; flore purpureo, minore. *T.* 368. VIRGINIAN SPIDERWORT, WITH A SMALL PURPLE FLOWER. *Boerh. Ind. alt. Vol.* 2. *p.* 133.

I can find no medicinal Virtues attributed to either of theſe Plants.

Dale mentions another Species of the *Ephemerum*; which is quite different from any of the preceding, and is thus diſtinguiſh'd:

Ephemerum, Offic. Chab. 225. DEADLY SAFFRON.

It grows in Woods, and ſhady Places; and is thus briefly deſcribed by *Dioſcorides*: "The Leaves and Stalks are like "thoſe of the Lily, only thinner; the Flower white and "bitter, and the Seed ſoft: It has but one Root, of the "Thickneſs of a Finger; long, aſtringent, and ſweet-"ſcented.

"The Root is excellent for the Teeth, if they be waſhed "with its Decoction: The Leaves, boiled in Wine, diſcuſs "Tumors and Tubercles, which have, as yet, contracted no "Moiſture." *Dioſcorides*, *Lib.* 4. *Cap.* 85.

The *Ephemerum* of *Theophraſtus* ſeems to be a deleterious Plant, as *Chabræas* juſtly obſerves; but *Dioſcorides* aſcribes no deadly Quality to the *Ephemerum*: *Pliny* affirms it to be not only harmleſs, but wholſome. Theſe various Accounts have occaſion'd many Doubts and Diſputes among the Learned, about this Plant; nor are they, as yet, agreed where to fix the genuine *Ephemerum*. *C. Bauhine* propoſes two Plants to be called by this Name: *Columna* takes a Species of *Digitalis* for the *Ephemerum*; but the *Arabians*, and the Phyſicians of the laſt Age, who follow'd them, have confounded the Ephemerum with Hermodactyls. *Dale.*

EPHESIS, ἔφεσις. This is, properly, a Law-term, importing an Appeal from one Court to another: But it alſo ſignifies Deſire, or Appetite. *Caſtellus* quotes *Moſchion* for a different Senſe of this Word, *Cap.* 128. and 138. But, as there is no Foundation for what he ſays, in the Paſſages he quotes, where Epheſis only ſignifies, ſimply, Deſire; it is not neceſſary to give *Caſtellus*'s Interpretation.

EPHESIUM *Emplaſtrum*. The Name of a Plaiſter deſcrib'd in *Celſus*, *L.* 5. *C.* 19. *Text.* 21.

EPHIALTES, ἐφιάλτης· from ἐφάλλομαι, to ruſh upon. The *Incubus*, or Night-mare. See INCUBUS.

EPHIALTIA. A Name for the *Pæonia*, Peony.

EPHIDROSIS, ἐφίδρωσις· from ἐφιδρόω, to break out into a Sweat, or languiſh under a Sweat. It is not certain, in *Galen*'s Opinion, whether *Hippocrates*, by this Word, means a ſlight and unpromiſing Sweat, which is not critical, but ſymptomatical, breaking out all over the Body; or that ſymptomatical Sweat, which only appears on the Head, Neck, and Breaſt. Upon comparing the Paſſages, in which the Word occurs, it ſhould ſeem, that it imports both, or either. As in the Days of *Hippocrates*, ſo at this time, both are of bad Preſage; tho' they are, not unfrequently, miſtaken, by the undiſtinguiſhing, lower Claſs of Practitioners, for critical Sweats; and are, accordingly, promoted by cordial Powders, and heating Medicines, to the Deſtruction of the miſerable Patient.

EPHIPPIUM, ἐφίππιον, properly a Saddle, is, in Anatomy, the *Sella Turcica*. See CAPUT.

EPHODOS, ἔφοδος· from ἐπὶ, upon, and ὁδὸς, a Way; has three Significations in *Hippocrates*: Firſt, it ſignifies the Ducts, Ways, or Paſſages, by which the Recrements of the Body are eliminated, 6 *Epid. Sect.* 2. *Aph.* 25. Secondly, it means the periodical Attack of a Fever, as *Lib. Prognoſtic.* where *Galen*, in his Comment ſays, that the *Greeks* commonly uſe the Word ἔφοδος, to ſignify the Invaſion or Attacks of Enemies or Thieves; whence it is transfer'd by *Hippocrates*, to the Periods or Circuits of critical Days. Laſtly, he often uſes it to ſignify the Acceſſion of ſimilar or diſſimilar Things, which may be injurious or beneficial to the Body, as *Lib.* 1. *de Diæta.*

EPIALOS, ἐπίαλος. An Epithet of a Fever; ſo called, as *P. Ægineta* ſays, *Lib.* 2. *Cap.* 25. either from ἤπιος, gentle, and ἅλς, the Sea; becauſe the Sea appears gentle, but is very dreadful when diſturbed; or, becauſe this Fever, ἠπίως ἀλεαίνει, "gently heats." It is defin'd by *Galen*, *Lib.* 2. *de Diff. Feb. Cap.* 6. "A Fever, in which the Patient labours "under a preternatural Heat, and ſhivers with Cold at the "ſame time." It may be call'd a ſhivering, or a ſhaking Fever: And the antient *Latins* gave it the Name of QUERCERA, "the quaking Fever." It proceeds, according to *Galen*, from an acid and vitreous Phlegm, moderately putrify'd. The Name ἐπίαλος, as we are inform'd by *Heſychius*, was by ſome given to the cold Shivering, preceding a Fever; and *Galen*, in the Chapter above-quoted, takes notice of the ſame. Ἐπίαλος σωφρὼν is, by Interpreters, taken for a mild and gentle Fever; and is incident, according to *Hippocrates*, *Lib.* περὶ ἐπτάμηνου. to Virgins grown mature, on Defect of their menſtrual Purgations. He mentions this Sort of Fever alſo, *Lib. de Aere, Locis, & Aquis*; where *Cornarius* tranſlates it, "mild Fevers." And, *Lib.* 4. *Epidem.* cold and ſhivering Fevers are called ἐπιαλώδεες, according to the Expoſition of *Erotian.*

EPIALTES. The ſame as EPHIALTES, which ſee.

EPIBROCHE, ἐπιβροχή· from ἐπιβρέχω, to irrigate, or pour upon. A Perfuſion, or Irrigation.

EPICÆROS, ἐπίκαιρος· from ἐπὶ, and καιρὸς, Time. Beſides the common Signification, which is, opportune, it implies in *Hippocrates*, conſiderable, remarkable, large, and ſometimes malignant.

EPICANTHIDES, ἐπικανθίδες. The two Angles of the Eyes.

EPICARPIUM, ἐπικάρπιον· from ἐπὶ, upon, and καρπὸς, the Wriſt. An external Remedy apply'd to the Wriſt. See PERICARPIUM.

EPICAUMA, ἐπίκαυμα· from καίω, to burn. A Sort of Ulcer in the Black of the Eye. See ENCAUMA.

EPICERAS, ἐπικέρας. Fenugreek. *Galen.*

EPICERASTICA, ἐπικερασικὰ· from κεράννυμι, to mix, or attemperate. Medicines which attemperate or obtund the Acrimony of the Humours, and mitigate the uneaſy Senſation of the Parts thence ariſing. Among Medicines of this Kind, are reckon'd emollient Roots; as thoſe of the Marſh-mallow, Mallow, and Liquorice.

The Leaves of Mallows, Water-lily [*Nymphæa*], the large Houſleek, Purſlain, and Lettuce.

The Seeds of Barley decorticated, white Henbane, Lettuce, Flax, white Poppy, and Rue.

The Fruits, Jubebs, Raiſins, ſweet Apples, ſweet Prunes, Sebeſtens, ſweet Almonds, and Pine-nuts.

Among Juices and Liquors; Almond-milk, Starch, Barley-water, pinguious Broths, the Milk of the Sow-thiſtle, Cremor of Ptiſan, and the Juices of the Leaves of Night-ſhade, and Winter-cherry.

Among the Parts of Animals; the Whites of Eggs, Butter, Milk of all Kinds, Whey; the Head and the Feet of a Calf, and alſo a Sheep's Head, and Broths prepared of them; Jellies of Hartſhorn, and Ivory.

Among Mucilages; the Seed of Fleawort, Quinces, of the Seed and Root of Marſh-mallows; of the Seed of Flax, Mallows, and of the Root of Borrage.

Among Oils; Oil of Olives, Violets, ſweet Almonds, expreſs'd Oils of the Seed of the Gourd, white Henbane, and white Poppy.

Among Ointments; the *Unguentum Roſatum*, and *Unguentum album camphoratum.*

Among Syrups; the Syrups of Violets, of Apples, of Marſh-mallows of *Fernelius*, of Liquorice, Jubebs, Poppies, and of Purſlane.

Among the various Shop Preparations; the Pulp of Caſſia, Diacodium, Diapenidium, Sugar of Violets, Julap of Violets, Honey of Violets. *Morellus, de Materia Medica.*

EPICHEIRESIS. The ſame as EXCHEIRESIS, which ſee.

EPICHEIRON, ἐπίχειρον· from ἐπὶ and χεὶρ, the Hand. This does not relate to Medicine, farther than as it imports a Fee.

EPICHNOUS, ἔπιχνος· from χνόη, a lanuginous Concretion. An Epithet for Eyes abounding with lanuginous Concretions.

EPICHOLOS, ἐπίχολος· from χολὴ, Bile. Bilious.

EPICHORDIS, ἔπιχορδὶς· from χορδὴ, an Inteſtine. The Meſentery.

EPICHORIOS. The ſame as EPIDEMIUS, which ſee. It is deriv'd from ἐπὶ, upon, and χώρα, a Region.

EPICOELIS, ἐπικοιλὶς. The ſuperior Eyelid, or *Cilium*.

EPICOLICÆ *Regiones*. The lateral, or lumbar Regions. Thoſe Parts of the Body, which are adjacent to the *Colon*.

EPICOPHOSIS, ἐπικώφωσις. The ſame with κώφωσις, Deafneſs.

EPICRASIS, ἐπίκρασις· of the ſame Derivation as EPICRASTICA. It ſignifies an Attemperation of the Humours. A Cure perform'd in the alterative Way, by degrees, and with temperating Medicines, is call'd a Cure *per* EPICRASIN.

EPICRATIS, ἐπικρατὶς. A Handkerchief, or Linen Cloth to wipe off Sweat; or a Woman's Head-clothes.

EPICROUSIS, ἐπίκρουσις· from κρόω, to ſtrike. A ſort of Percuſſion with light Ferulas, which the Slave-merchants us'd to apply to the Limbs of Boys, which were naturally too ſlender, in order to plump them up.

EPICTENION, ἐπικτένιον, the Pubes. It alſo ſeems to imply, in *Hippocrates*, *de Morbis Mulierum*, *L.* 1. a fine Lint, or Hurds of crude Flax, which adheres to the Hatchel, or Card, whilſt Flax is dreſſing. This he directs as an Ingredient in a Peſſary.

EPICYEMA, ἐπικύημα· from κύω, to conceive. This Word, in *Hippocrates*, imports a Fœtus conceiv'd in the Uterus, after the Conception of a former Fœtus; and ſometimes a Mole.

EPICYESIS. Of the ſame Derivation as the preceding Word. Superfetation; that is, the Conception of one Fœtus upon another conceiv'd before. *Hippocrates* has wrote a Treatiſe on this Subject.

EPIDELOS, ἐπίδηλος· from δῆλος, manifeſt, conſpicuous; is an Epithet apply'd by *Hippocrates*, *Lib. de Carnibus*, to Man in the Time of his Growth, who is there ſaid to be ἐπίδηλος, that is, diſcloſing, and rendering himſelf more and more conſpicuous; and this, he ſays, is moſt obſervable (ἐπίδηλος μάλιστα γίνεται) from ſeven to fourteen Years of Age. Ἐπίδηλοι ἡμέραι, 2 *Aph.* 24. is the conſpicuous or remarkable Day, ſuch as the fourth, eighth, and eleventh; which indicates what Manner of Criſis may reaſonably be expected on the critical Day.

EPIDEMIUS, ἐπιδήμιος, or ἐπίδημος· from ἐπὶ, upon, and δῆμος, the People. Epidemical. An Epithet of Diſeaſes, which at certain times are popular, and attack great Numbers at or near the ſame time. It differs from *Endemial*, which imports Diſeaſes peculiar to ſome particular Country, Region, or People; whereas epidemical Diſeaſes are ſuch as are peculiar to certain Seaſons.

Pertinent to the preſent Subject are the Obſervations of the celebrated *Boerhaave*, on epidemical Diſeaſes: We muſt remark, ſays this Author, that tho' every particular Diſeaſe of the Fluids, in various epidemical Conſtitutions, appear, to unattentive Obſervers, the ſame with regard to their Names, Signs, and their Conſequences in ſome meaſure, yet the ſame Diſeaſes, appearing in one epidemical Conſtitution, differ exceedingly from thoſe produc'd in another, with reſpect to their obſcure Natures; their Appearances not obſervable, except by the Judicious; the various Times of their Increaſe, State, Coction, Criſis, Effect, Event, and Method to be purſu'd for the Cure. Hence it is evident, that they require a different Adminiſtration of the Non-naturals, different Treatment, and Medicines: This Variety, however, in epidemical Diſtempers, is ſo obſcure, that Phyſicians have not yet been able to deduce it from any Abuſe of the Non-naturals: And yet there are many Circumſtances which make it highly probable, that the Cauſes reſide in the Air, but depend more upon the inexplicable Variety of Exhalations contain'd therein, which, by their Mixture with the Fluids of the Body, or their Stimulus, injure the human Machine, than upon any Change in the ſenſible Qualities thereof. But it is very ſurpriſing, that theſe epidemical Diſorders ſhould be principally propagated by Contagion, receiv'd from one by another Perſon unaffected.

Upon the Invaſion of any unknown epidemical Diſtemper, the Phyſician will receive ſome Information with reſpect to the Cure: Firſt, by reducing the Diſtemper to ſome more known Species, which it moſt reſembles.

Secondly, by obſerving its Tendency at the vernal and autumnal Equinoxes; at which Seaſons it is generally moſt prevalent.

Thirdly, by attending to the ſpontaneous Phænomena, which precede, accompany, or follow, the Death or Recovery of the Patient, and the better or worſe State of the Diſorder.

Fourthly, by diligently remarking the Benefit or Injury receiv'd, from whatever the Patients are unavoidably oblig'd to do; whatever is taken into; or diſcharged out of, the Body.

Fifthly, by comparing the Caſes of a great many Patients labouring under the Diſtemper at the ſame time.

Sixthly, by abſtaining from all Remedies which are dubious, which exagitate, and induce a conſiderable Change in the Humours, and thereby obſcure the Genius of the Diſeaſe.

From theſe Circumſtances, duly attended to, the curative Indication ariſes.

EPIDERIS, ἐπιδηρὶς. The *Clitoris*.

EPIDERMIS, ἐπιδερμὶς· from ἐπὶ, upon, and δέρμα, the Skin. The Cuticle. See CUTIS. In *Hippocrates*, it includes alſo the *Cutis*, or true Skin.

EPIDESMOS, ἐπίδεσμος· from δέω, to bind. A Bandage by which Bolſters, or Splints, or any thing apply'd to any Part of the Body, are ſecur'd.

EPIDIDYMIS, ἐπιδιδυμὶς· from ἐπὶ, upon, and δίδυμος, a Teſticle.

The Epididymis may be reckon'd a Production of the Teſticle, or a Kind of *Teſtis acceſſorius*; and it reſembles, in ſome meaſure, an Arch, ſupported by its Centre or Frame. It is more contracted at the Middle than at the Extremities, by which it is cloſely united to thoſe of the Teſticle.

Between its Extremities it does not immediately touch the Teſticle, but is only looſely connected to it, by the Duplicature of a very fine and almoſt tranſparent Membrane, as by a kind of Ligament. This Membrane is the Continuation and Duplicature of the Tunica Albuginea, or proper Coat of the Teſticle, which, having ſupplied the Place of a Ligament to the *Epididymis*, afterwards inveſts it.

The *Epididymis* is flat, a little concave on the under Side, or that next the Teſticle, irregularly convex on the upper Side, or that turned from the Teſticle: And theſe two Sides are diſtinguiſhed by two angular Edges; by the innermoſt of which it is connected to the Teſticle, but the outer Edge, and flat Side, are looſe and free.

The anterior Extremity, or Head, of the *Epididymis* ariſes from the Teſticle; and the poſterior Extremity or Tail, which likewiſe adheres very cloſely to it, is incurvated from behind, forward, and a little upward; and, contracting by degrees, forms a particular Canal, termed Vas Deferens. See DEFERENTIA VASA. *Wiſlow's Anatomy*.

EPIDORPION, ἐπιδόρπιον· from ἐπὶ, upon, and δόρπον, a Supper, or Meal. A Deſſert, or Courſe of Sweet-meats or Fruits.

EPIDOSIS, ἐπίδοσις· from ἐπιδίδωμι, to add to a Gift. Augmentation or Increaſe. It is us'd with reſpect to the Growth of the Body, or to the Increaſe of a Diſeaſe.

EPIDROME, ἐπιδρομὴ· from ἐπὶ, upon, and δρέμω, to run. An Afflux of Humours; as it happens when a Ligature is made upon any Part.

EPIGASTRIUM, ἐπιγάστριον· from ἐπὶ and γαστὴρ, the Belly. The ſuperior Part of the Abdomen.

EPIGENEMA, ἐπιγένημα· from ἐπιγενάω, to generate over and above, or anew; ſometimes ſignifies the ſame as σύμπτωμα, "a Symptom," as we are told by *Galen*, *Lib.* 3. *de Diff. Sympt.* ſometimes a thing grown, or cloſely adhering to another, as the Word is ſpoken, *Coac.* 230. of the white Saliva generated and adhering to the Tongue of the Patient; for if this ἐπιγένημα (*Epigenema*) be thick, it indicates a Remiſſion of the Fever the ſame Day.

EPIGINOMENA, ἐπιγινόμενα· from ἐπιγίνομαι, to ſucceed, to ſupervene, to be an Accretion or Acceſſion; are, agreeably to *Galen. Comment. in Aph.* 35. *Lib.* 6. thoſe Symptoms which naturally ſucceed, or may rationally be expected, in the Progreſs of a Diſeaſe. But in *Aph.* 32. *Sect.* 8. *Lib.* 6. *Epid. Foeſius* will have the τὰ ἐπιγενόμενα to mean new Acceſſions of ſome other Affection to Diſeaſes, which never happens but in ſtubborn and malignant Diſorders, as *Galen* ſays, *Com. ad Aph.* 21. *Lib.* 7. where he ſays, that one *Praxagoras* wrote a Volume on *Epiginomena*; and the whole ſeventh Book of the Aphoriſms is by ſome intituled, περὶ τῶν ἐπιγινομένων, "of *Epiginomena*," or Acceſſions to Diſeaſes; and of ſuch Acceſſions, *Lib.* περὶ παθῶν, *Hippocrates* pronounces, that they are for the moſt part mortal.

EPIGLOSSUM. A Name for the *Laurus Alexandrina*; or *Ruſcus; Latifolius, fructu folio inſidente*.

EPIGLOTTIS, ἐπιγλωττὶς. A ſmall Cartilage, in the Shape of a Tongue, which covers the Orifice of the Windpipe. See LARYNX.

EPIGLOTTUM. The Name of an Inſtrument mention'd by *Paracelſus*, for elevating the Eyelids.

EPIGLOUTIS, ἐπιγλουτὶς. The ſuperior Part of the Buttock.

EPIGONATIS, ἐπιγονατὶς, from ἐπὶ, upon, and γόνυ, a Knee. The *Patella*. See CRUS.

EPIGONON. The ſame as EPICYEMA.

EPIGOUNIDES. The Muſcles inſerted into the Knees. *Ruffus Epheſius*, *L.* 1. *C.* 16.

EPILAMPSIS. The ſame as ECLAMPSIS; which ſee.

EPILENTIA. A Name for the Epilepſy, in *Paracelſus*.

EPILEPSIA, ἐπιληψία, or ἐπίληψις, from ἐπιλαμβάνω, to ſeize, invade, or oppreſs. The Epilepſy, or Falling-ſickneſs; call'd, alſo, *Comitialis Morbus*.

Among the ſeveral Calamities to which human Nature is ſubjected, none is more juſtly formidable, than that univerſal and involuntary Concuſſion, and violent Agitation, of the external Parts, which is accompanied with a Suſpenſion both of the internal and external Senſes, and which we commonly call an Epilepſy; for, during the Shocks of this terrible Misfortune, the Body is not only variouſly diſtorted and deform'd, but alſo the Mind, as it were, unhing'd, and depriv'd of its genuine Powers. The forbidding Aſpect of epileptic Patients, and the Violence of the Symptoms with which their Diſorder is accompanied, ſeems to be the Reaſon why the Antients diſtinguiſh'd this Diſeaſe, by the pompous Epithets, *Great*, *Herculean*, *Divine*, and *Sacred*. It is call'd Great, and Herculean, on account of its Violence; and becauſe it can hardly be conquer'd and remov'd by human Art. It is ſtyl'd Divine, either becauſe it is impiouſly ſuppos'd to be ſent from Heaven as a Curſe upon Earth; or becauſe its Cure eludes the greateſt Reach of human Art, and calls for an immediate Interpoſition of Omnipotence. And, laſtly, it receives the Epithet, Sacred, becauſe it affects the Mind, the moſt noble and ſacred Part of a rational Creature.

But, waving Diſquiſitions of this Kind, we define an Epilepſy, an involuntary, preternatural, highly violent, and convulſive Concuſſion of the nerveo-membranous, and conſequently of the muſcular Parts of the whole Body, attended with an Abolition of the Senſes, and drawing its Origin from a ſpaſmodic Stricture of the Membranes ſurrounding the Brain, the ſpinal Marrow, and the Nerves; by which means the ſubtile nervous Fluid is copiouſly and impetuouſly convey'd into the Organs of Motion, but in a ſmaller Quantity, and with leſs Impetuoſity, into thoſe ſubſervient to the Purpoſes of Senſation.

The Progreſs and Symptoms of this Diſorder vary in different Patients: For ſometimes it ſeizes ſuddenly and unexpectedly; for which Reaſon it is, by the *Greeks*, call'd *Epilepſia*: But, more frequently, a certain Train of Symptoms precede, and indicate a Paroxyſm of it. The moſt conſiderable of theſe Symptoms are, a Wearineſs of the whole Body, an oppreſſive Pain of the Head, accompanied with a certain Perturbation of the Senſes, interrupted and unſound Sleep, unuſual Dread and Terror; together with the Ringing of the Ears. In ſome Patients the Heart begins to palpitate very ſtrongly, the Præcordia are inflated, Reſpiration is obſtructed, Rumbling is perceived in the Abdomen, fetid Stools are diſcharged, large Quantities of Urine evacuated, and the Joints rendered cold. Some Patients perceive a kind of cold Air, or Vapour, gradually aſcending from the Extremities to the Heat and Brain: Some, which is the Reaſon why this Diſorder is call'd *Morbus caducus*, or the Falling-ſickneſs, ſuddenly and unexpectedly drop down on the Ground; their Thumbs are ſo firmly brac'd up in the Palms of their Hands, that uncommon Force is neceſſary for their Extraction; their Eyes are ſo diſtorted and inverted, that no Part of them, except the White, can be ſeen; all Senſation is ſo totally deſtroy'd, that the Patient can neither be rous'd and brought to himſelf by the ſhrilleſt Cries, the moſt ſtimulating Odours, nor the ſmarteſt Pinching. A Froth burſts from the Mouth with a kind of hiſſing Noiſe, the Tongue is lacerated by the Teeth, and the Joints are ſeiz'd with a violent Trembling and Succuſſion. But both the Convulſions and Privations of the Senſes vary in Degree, as well as Species; for ſometimes, inſtead of the convulſive Motions, highly rigid Spaſms ſeize all the Members of the Body, to ſuch a Degree, that ſcarcely any Force is capable of bending them; and the Patient reſembles a firm and inflexible Statue of Wood. In Infants the Penis is erected, in young Men the Seed ejected, and the Urine frequently diſcharg'd to a conſiderable Diſtance. At laſt, theſe Symptoms, ſometimes at a ſhorter, and ſometimes in a longer Interval, gradually remit, and go off; but the Patients as yet complain of Pain, Liſtleſſneſs, Stuffing of the Head, and Wearineſs of the Joints. Among the Antients, *Cœlius Aurelianus* and *Aretæus* have been very diſtinct in enumerating the preceding Signs, the concomitant Symptoms, and the Conſequences, of this Diſorder. According to the former of theſe Authors, "There are two Species of Epilepſies, one "reſembling a deep and profound Sleep; and the other rend-"ing and diſtorting the Body in various Manners: But the "former of theſe is eſteem'd moſt dangerous, ſince it ap-"proaches to the Nature of an Apoplexy. A Complication "and Mixture of theſe may produce a third Species; for moſt "Patients, who are firſt afflicted with Diſtortions and Con-"tractions of the Body, are afterwards generally ſeiz'd with "an inſurmountable Drowſineſs. But a Knowledge of theſe "different Species of the Diſorder generally contributes no-"thing to its Cure. Thoſe who are inclin'd to this Diſorder, "or juſt about to fall into it, are ſeiz'd with all the common "Symptoms attending the other Diſorders, which draw their "Origin from a bad or injur'd State of the Meninges; ſuch "as a Stuffing of the Head, a Vertigo, a certain Noiſe per-"ceiv'd within the Cranium, an uneaſy Senſation in the Occi-"put, an Immobility of the Eyes, a Ringing of the Ears, or "Difficulty of Hearing, a Dimneſs of Sight, accompanied "with a Vertigo; or certain imaginary minute Objects re-"ſembling the Spots of Marble, and by the *Greeks* called "*Marmarygmata*, and *Marmarygmæ*, or like Spiders Webs; "or ſlender Clouds, or ſmall fluttering Inſects, ſuch as Gnats, "are perceiv'd to fluctuate and dance before the Eyes; or the "Patients obſerve ſmall Sparkles, or, as it were, fiery Circles, "vibrating before their Eyes. The Tongue, alſo, becomes "inflexible, a kind of ſubſultory Motion is perceiv'd in the "Tendons, and a Pain in the Shoulders, between the Scapu-"læ. Theſe Signs are ſucceeded by a Hardneſs of the Throat, "a continual Inflation of the Præcordia, a Yawning and "Sneezing, a Diſcharge of the Saliva; and either a Loathing "of Food, or an immoderate Appetite for it. Continual "Watchings, or long and unrefreſhing Sleeps, frightful "Dreams, and a ſmall, or totally obſtructed Evacuation of "the Fæces by Stool, an Erection of the Penis without "any manifeſt Cauſe, and a preternatural Inclination to Ve-"nery. Sometimes, alſo, the Seed is diſcharg'd during Sleep, "which the *Greeks* call ὀνειρόγονον. The Mind is anxious "and uneaſy, prone to Anger on the ſlighteſt Occaſions, for-"getful of Circumſtances almoſt immediately before tranſ-"acted, and ready to be clouded and overcaſt with the Im-"preſſions of Gloom and Melancholy. When the Diſorder "comes on, and has already ſeiz'd the Patient, there is a "Privation of the Senſes; and in ſome Patients the Paroxyſm "induces a perfect Immobility, accompanied with a Gaping "of the Mouth, a preternatural Paleneſs, a ſlow Reſpiration, "a large Pulſe, and a kind of Oppreſſion reſembling an in-"ſurmountable Drowſineſs. Other Patients have the Mem-"bers of their Bodies twiſted and thrown into various ſubſul-"tory Motions, whilſt, at the ſame time, their Countenance "and Eyes are ſtrangely diſtorted; and this Diſtortion, ſome-"times continuing after the Paroxyſm, renders the Patients "ſquint-ey'd. On the contrary, thoſe who are only ſeiz'd "with a ſlight and gentle Paroxyſm, ſeem to retain their na-"tural Sight; and the Acceſſion is ſucceeded by a Rattling in "the Throat, a Hiccup, a Redneſs of the Countenance, an "Inflation of the Veins, and ſometimes a Ceſſation of the "Pulſe and Reſpiration. The Patient ſeems to be favour'd "with a kind of Reſpite at certain Intervals, and the Eyelids "remain immoveable. The Teeth ſtrike and grind upon each "other, and the Tongue, hanging out of the Mouth, is fre-"quently cut by the Violence of their Colliſion. The Præ-"cordia are drawn upwards, the Fæces and Urine involun-"tarily diſcharg'd, and a dewy Sweat excited over all the "Body, which, on this Occaſion, is ſtiff and rigid. Some "Patients, during the Paroxyſm, emit a kind of faint and "inarticulate Sounds; and before its Remiſſion, diſcharge a "Froth from their Mouths and Noſtrils. When the Pa-"roxyſm ceaſes, the Patient is entirely ignorant of every "thing that happen'd during it; he rolls on the Ground, and "has his Countenance overcaſt with Horror and Sadneſs; "then he begins to yawn, ſtretch his Body, and, in doing "theſe, to make unuſual Efforts. He walks ſlowly, and his "whole Body has a ghaſtly and unſeemly Aſpect. His Eyes, "alſo, remain turbid and diſordered, and the Veins of his "Forehead diſtended and prominent. Some Patients, alſo, "ſeem affected with an Alienation of Mind to ſuch a Degree, "that they know not thoſe they were before well acquainted "with. At other times, after the Paroxyſm is over, many of "the antecedent Symptoms, above-enumerated, ſeize the Pa-"tient; ſuch as a Privation or Dimneſs of Sight, when he "ſets about any Buſineſs which requires a ſtooping Poſture of "the Body, looks at a Ship under Sail before a briſk Gale of "Wind, beholds the quick gyratory Motion of a Wheel, "views an impetuous Current of Water, looks up at a very "high Building, or the Eminence of a Rock, hears a ſudden "and ſhrill Noiſe, is expoſed to exceſſive Cold, uſes too hot "Baths, or has a ſtrong Impreſſion made upon the Organs of "Smell, either by fragrant or fetid Effluvia; ſuch as thoſe diſ-"fuſed by burning Storax, Frankincence, Bdellium, the La-"pis Gagates, Bitumen, or Hartſhorn. Sometimes the Pa-"roxyſms return at fix'd and ſtated Periods, whereas at others "they are irregular and anomalous, ſometimes returning at "longer Intervals, ſuch as a Year, for Inſtance, and at other "times frequently ſeizing the Patient more or leſs ſeverely, "each Month, or perhaps each Day. Some by their reſtleſs "and uneaſy State in the Night-time, and other antecedent "Signs, are rendered previouſly ſenſible of an approaching "Paroxyſm;

" Paroxyſm; whereas others are inſtantaneouſly ſeiz'd, with-
" out any previous Signs of their approaching Misfortune; a
" Circumſtance in conſequence of which they are expos'd to
" imminent Danger; for ſome, advertis'd of the approaching
" Fit by certain Signs, provide againſt it, by betaking them-
" ſelves to Houſes, and chooſing Places where they may ſafely,
" and without being expos'd, ſtruggle with the Shocks of their
" Calamity; whereas others, without being appris'd of their
" approaching Fate, are, by falling in public Places, at once
" expos'd to the Eyes of the World, and additional Degrees
" of Danger, which are not naturally connected with the Diſ-
" order. Some, for Inſtance, fall in Rivers, or the Sea, or
" are indecently compel'd to diſcharge their Excrements in the
" public Baths: After the Remiſſion of one Paroxyſm, the
" Signs denouncing the Approach of another are thoſe by
" which the Acceſſion of the firſt were indicated, ſuch as
" diſturb'd and diſorderly Sleep; a Corruption of the Aliment
" without any ſenſible Cauſe; an Erection of the Penis with-
" out any apparent Reaſon; a preternatural Propenſity to
" Venery; an Emiſſion of the Seed during Sleep, which the
" *Greeks* call ὀνειρόγονον· a Propenſity to Anger, Dejection
" of Mind, and the other Signs before-enumerated; as alſo
" Slowneſs and Reluctance to the Patient's uſual Buſineſs; an
" oppreſſive and drowſy-like Sadneſs of Countenance, which
" is now diſcolour'd, and preternaturally inflated, together
" with an unſeemly Aſpect of the Eyes, and a kind of down-
" caſt Look; for the Patient cannot, without Difficulty, look
" upwards; and, if he ſhould make an Attempt of this Kind,
" the State of his Eyes becomes ſo uneaſy, that he is forth-
" with obliged to turn them downwards. Upon every ſudden
" Turning of his Head to any Side, he is ſeiz'd with a Vertigo,
" a Trembling, a Torpor, a Contraction of his Fingers, and
" an uneaſy Senſation in his Legs, and in the Extremities of
" his Feet and Hands. When we have not an Opportunity of
" gaining that certain and irrefragable Knowledge of the Diſ-
" eaſe, which our being preſent at the Approach of a Paroxyſm
" would afford us, or when, in conſequence of Non-age, or
" any other Cauſe, the Patient cannot enumerate his Sym-
" ptoms, we may, from being inform'd of all or ſome of the
" above-mention'd Circumſtances, prognoſticate a Paroxyſm,
" gueſſing as nearly as we can at the particular Time of its
" Approach, ſince this Diſorder generally ſeizes the Patient
" at fix'd and ſtated Intervals. Epilepſies are more frequently
" incident to Children, eſpecially during Dentition, to Per-
" ſons in the firſt Stages of Life, or of a middle Age, than to
" thoſe pretty far advanced in Years. The Diſorder is alſo
" more ſevere upon Infants, than upon Children farther ad-
" vanc'd, and older Perſons; ſince the weak and languid
" Strength of the former is more unequal to the Shocks of
" this violent Diſeaſe. In young Women this Diſorder is ge-
" nerally carried off about the Time of Puberty, in conſe-
" quence of ſome happy Change of Temperament induced by
" the Eruption of the Menſes, or the Birth of their firſt Child.
" But, if this lucky Circumſtance ſhould not happen, the Diſ-
" order generally laſts during the Patient's Life, unleſs by the
" long and vigorous Efforts of Nature, or the diligent Exhibi-
" tion of powerful Medicines, it ſhould be happily routed and
" vanquiſh'd. Epilepſies ſeize at all Seaſons of the Year, but
" moſt generally in the Spring. Women, in conſequence of
" a Suffocation of the Uterus, are frequently afflicted with
" Symptoms reſembling thoſe of an Epilepſy; for they are, in
" the ſame manner with an epileptic Patient, depriv'd of their
" Senſes; and the only Circumſtance, which diſcriminates the
" one Diſorder from the other, is, that in a Suffocation of the
" Uterus, the Patient does not, towards the End of the Pa-
" roxyſm, diſcharge a frothy Matter from the Mouth and
" Noſtrils."

As this Account of the preceding, concomitant, and ſubſe-quent Symptoms of an Epilepſy, given by *Cœlius Aurelianus*, in the fourth Chapter of his firſt Book of Chronical Diſeaſes, is ſo full and explicit, that ſcarce any thing can be added to it, we ſhall, without farther quoting *Aretæus*, or any other Author, proceed to give the Sentiments of *Hoffman*, from whom the firſt Part of this Article is taken.

The Paroxyſms of this Diſorder, which, according to the Diverſity of their productive Cauſes, are longer or ſhorter, fewer or more frequent, generally return at ſtated Periods, on certain Days, for Inſtance, Hours, or even Months, about the Changes and Quadratures of the Moon, eſpecially about the New and Full Moons. The Women are moſt commonly ſeiz'd with them about the Returns of their monthly Evacuations; and what deſerves our Attention is, that they are frequently excited by the ſlighteſt, and, ſeemingly, moſt inconſiderable Cauſes; ſuch as any ſudden Commotion of Mind, a Fright, a Sally of Paſſion, the tumultuous Workings of ſudden Joy; Meditation, or cloſe Application of Mind, intoxicating Liquors, exceſſive Heat or Cold, and the Uſe of Venery.

'Tis alſo to be remember'd, that no Period of Life is more ſubject to the Tyranny of this Diſorder, than that of Infancy; for which Reaſon 'tis, by ſome, call'd *Morbus Infantilis*, and *Puerilis*. Hence, 'tis obvious from daily Experience, that the far greater Part, if not Half of the Children yearly cut off, fall a Sacrifice to Convulſions, either excited by difficult Dentition, or produc'd by violent Gripes of the Inteſtines ariſing from bad and corrupted Milk, or a Retention of the Meconium. And, that almoſt all the Diſeaſes incident to Children, whether of the acute, or chronical Kind, eſpecially when complicated with Worms, are generally attended with convulſive and epileptic Motions, is ſufficiently obvious; as may appear in the Meaſles and Small-pox. Beſides, thoſe who are in the leaſt converſant in the Practice of Medicine, cannot fail to obſerve, that this terrible Diſorder is more frequently incident to ſuch Patients as are of a ſpongious, ſoft, and ſucculent Habit, or of a delicate Make, both with reſpect to Body and Mind, than to thoſe who are bleſs'd with a more hardy, vigorous, and robuſt Conſtitution. This is ſufficiently confirm'd by the Children of Country-people, who, during the Expulſion of the Small-pox, the Uſe of Milk, corrupted either by improper Aliments, or diſorderly Paſſions, or during the Eruption of their Teeth, are not, by far, ſo much ſubject to Epilepſies, as weak and tender Infants, delicately nurs'd and brought up in Towns and Cities.

No Diſeaſe is more palpably hereditary, or more readily convey'd from Parents to Children, than an Epilepſy. This is to be accounted for from the Parents conveying to their Children ſuch a Texture and Diſpoſition of the nervous and membraneous Parts, as is too delicate, and ſubject to anomalous and irregular Commotions. Nor are thoſe leſs expos'd to the Attacks of this Diſorder, who either naturally, or in conſequence of an improper and erroneous Regimen, have the Misfortune to have weak and infirm Heads, who are ſubject to Coryzas, Defluxions of the Eyes and Ears, Swellings of the Glands of the Neck, Achors, and ſcal'd Heads; or who, in the firſt Stages of their Lives, have been frequently ſubject to Hæmorrhages from the Noſe.

Theſe Things being premis'd, we now come to conſider the Cauſe and Seat of an Epilepſy. That the former of theſe is a certain Indiſpoſition of the Brain, is a Truth which no one has as yet call'd in Queſtion: But in what this Indiſpoſition conſiſts, or by what means it is produc'd, are, in my Opinion, Circumſtances which have not hitherto been ſufficiently explain'd and accounted for. Thoſe who love to cloke their Ignorance by a pretended Veneration for Religion, and Things ſacred, do not heſitate to call the Epilepſy, Τὸ θεῖον, ſomething of divine Original, not reflecting, in the mean time, that 'tis far from being fair and equitable, to make God the immediate Cauſe of an Effect, becauſe it, perhaps, cannot be eaſily comprehended, or accounted for from known and inconteſtable Principles. Others have recourſe to an intoxicating, narcotic, and ſtupefying Poiſon; others to a peculiar and ſpecific Ferment; others to an acrid Matter, ſtimulating the Nerves; and others to a preternatural exploſive Force of the animal Spirits acting upon the muſcular and nervous Fibres; whilſt others, neither deſirous nor capable of being underſtood, aſcribe the Cauſe of this Diſorder to the Fury of *Archæus*; and others, to a certain tumultuous and confus'd Motion of the vital Principle, or rational Soul. But theſe are the idle Figments of that deſpicable Claſs of Phyſicians, who, inſtead of the real Cauſes of a Diſorder, are content with certain vague and unintelligible Names, which neither diſcover its Nature, nor account for its ſeveral Symptoms. Thoſe, on the contrary, who go more rationally to work, and prefer ſuch Cauſes as are ſubjected to their Senſes, before unphiloſophical, and even unintelligible Conjectures, generally give their Suffrage to the Opinion of *Carolus Piſo*; who, as the true and genuine Cauſe of an Epilepſy, aſſigns a Collection of peccant Serum, which either obſtructs the Pores of the Brain, or prevents the due and equable Influx of the animal Spirits to thoſe Parts, into which, in a ſound and natural State, they ought to be convey'd.

But we, ſatisfied only with phyſico-mechanical Cauſes, derive the Source of an Epilepſy from an undue and unnatural Motion and Circulation of the Humours through the Veſſels of the Brain; for, as, when there is a free and equable Circulation of a laudable Blood through the Veſſels of the Brain, and conſequently a due Secretion and Diſtribution of a ſpirituous Lymph through the Nerves, all the animal Functions are regularly carried on; ſo, on the contrary, in every violent Diſorder of the Head, where Senſation, and voluntary Motion, are conſiderably injur'd, as in an Epilepſy they manifeſtly are, we may reaſonably conclude, that the Circulation of the Blood through the Head is not carried on in a free, natural, and uninterrupted manner. This was long ago obſerv'd by *Hippocrates*, who, in his Book *de Flatibus*, uſes the following Words: " The Epilepſy is produced, when various Kinds of Obſtructions
" happen in the Veins, and ſo intercept the Motion of the
" Blood, that in ſome Parts it ſtands ſtill, enters others ſlowly,
" and others more quickly; and this undue and unequable
" Conveyance of the Blood of courſe affects the whole Body."
This Doctrine of *Hippocrates*, now the Circulation of the Blood, which is the principal Baſis and Foundation of Medi-

cine,

eine, is diſcover'd, ſufficiently accounts for the Cauſe and Origin of an Epilepſy.

But ſince the Circulation of the Blood through the Head and Brain is of a peculiar Nature, and differs from that carried on in the other Parts, we ſhall inquire a little more narrowly into it, that, by this means, the Ætiology of an Epilepſy may be the more diſtinct and comprehenſible. Firſt, then, we muſt conſider, that, as ſoon as the Arteries enter the Head, they loſe their ſtronger Coat, and, conſiſting only of a thin Membrane, deſtitute of Senſation and Motion, are diſtributed through the internal cortical Subſtance both of the Cerebrum and Cerebellum, in order to ſeparate that ſpirituous Lymph, which is neceſſary for the ſeveral Purpoſes of Motion, and which, for that End, is convey'd to the Nerves, and the nervous Membranes; whilſt, at the ſame time, the Blood left diſperſed thro' the venous Sinuſes in the *Dura Mater*, is, by means of the jugular Veins, carried back to the Heart, the original Source of the circulating Motion of the Fluids. We muſt alſo carefully advert to the ſingular Structure of the *Dura Mater*, which is compoſed of a peculiar Apparatus of nervous and muſcular Fibres; the latter of which are diſtributed both in direct and oblique Lines, and are found more incurvated and circular about the lateral Sinuſes; whereas the former, being nervous and fleſhy, are found to run like ſo many Columns or Pillars, from the one Side to the other of the three large Sinuſes, when diſſected, where we alſo obſerve oval Cellulæ, diſpoſed according to the Direction of the Veins which enter them. Theſe Fibres not only hinder the Sinuſes from being too much dilated by the influent Blood, but alſo, by producing a ſucceſſive and alternate Contraction in them, render the Progreſs of the Blood to the jugular Veins more quick and expeditious. The Office, on the other hand, of the Columns or Pillars, is, the better to attenuate and divide the returning Blood, which is ſomewhat thick, in conſequence of its being deſtitute of the ſubtile Lymph. And, laſtly, the oval Cellulæ are like ſo many Valves, which hinder the Blood, once diſcharg'd, from returning into the ſame Veſſels. This peculiar and remarkably curious Structure of the venous Sinuſes ſufficiently demonſtrates, that, in order to promote the Circulation of the Blood to the Heart, they are furniſh'd with a kind of ſyſtaltic and diaſtaltic Motion, not unlike to thoſe of the Arteries or Auricles of the Heart.

Beſides this peculiar Motion of the venous Sinuſes, there is alſo a tonic, or rather elaſtic, Motion to be aſcribed to the *Dura Mater*, and which is found in all the other nerveo-muſcular Parts of the Body, which are animated by an Influx of the nervous and arterial Fluids; for the dilatatory and contractile Motion of the *Dura Mater*, which covers, ſurrounds, and embraces, not only the Brain and Cerebellum, but alſo the ſpinal Marrow, and all the Nerves of the Body, contributes not a little, both to the Circulation of the Blood through the Head, and the better Secretion of the ſpirituous Fluid undulating in the Nerves; for when, by the Pulſation of the Arteries, this elaſtic Membrane of the Brain is elevated and expanded, the ſmall Cavities of the Nerves are by that means render'd more fit for receiving the ſubtile nervous Fluid. But when, after the Expanſion of this Membrane, it, by its own Elaſticity, which is increaſed by the Afflux of the arterial Blood from three conſiderable Ramifications, that is, the internal and external Carotids, and from the vertebral Artery, as alſo by the Influx of the nervous Fluid, again contracts itſelf, it in ſome meaſure compreſſes the cortical Subſtance of the Brain; by which the fine nervous Fluid is the more effectually forced out of it, to the medullary Subſtance, and Beginnings of the Nerves. When, therefore, theſe reciprocal ſyſtaltic and diaſtaltic Motions of the *Dura Mater*, and its larger Sinuſes, are duly perform'd, the Circulation of the Blood through the Head, and the Functions depending upon it, are excellently carried on; whereas, when theſe ſeveral Motions are diſordered and irregular, very terrible Diſeaſes of the Head are produced. Theſe Things are more fully explained by *Baglivi*, who firſt introduced the Nature and Motion of the Solids into Pathology. *Lib.* 1. *de Fibra Motrice.*

If therefore a thick Blood, or too large a Quantity of Blood, ſhould happen to ſtagnate in the Sinuſes of the *Dura Mater*, its ſyſtaltic Motion, and the Regreſs of the Blood to the Heart, depending upon it, is by that means eaſily hinder'd; and hence there is in that Part ſo large a Congeſtion of Blood conveyed by the Arteries, that the highly fine and ethereal Particles can no longer enter the ſmall Veſſels of the Brain and Nerves, but only ſuch Particles as are coarſe, aqueous, aereo-elaſtic, more expanſive, and have a Tendency to produce an incredible Diſorder in the Powers of Senſation and Motion. By this Blood, alſo, ſtagnating in the Sinuſes of the *Dura Mater*, and jugular Veins, the Veſſels are too much dilated: Hence the nervous Fibres are compreſs'd, and a ſpaſmodic Stricture induced on the *Dura Mater*, which is a nervous Membrane; and this ſpaſmodic Stricture is the immediate and principal Cauſe of an Epilepſy; for it is of ſuch a Nature, as to compreſs too violently the ſmall arterial Veſſels of the *Pia Mater*, and the cortical Subſtance of the Brain: Hence, without the Influence of the Will, the ſubtile Fluid contain'd in them is copiouſly, and with a ſtrong Impetus, forc'd into the Brain, and Cavities of the Nerves. But ſince, according to the Opinion of almoſt all Anatomiſts, the *Dura Mater* is the Root and Source of all the Membranes, it muſt neceſſarily have a near Connection with them, and a mutual Communication of irregular and inordinate Motions. But becauſe, by this ſpaſmodic Stricture of the *Dura Mater*, the Nerves ſubſervient to Senſation are ſo conſtricted, as almoſt totally to intercept the Influx of the nervous Fluid, by this means it happens, that in a perfect Epilepſy there is a Ceſſation of all the Senſes both internal and external; on the contrary, the Influx of the fine and highly moveable nervous Fluid into the Parts ſubſervient to Motion is render'd ſtronger, and more violent; and hence ariſes that terrible Diſtention, Contraction, Succuſſion, and Agitation of the Joints and Muſcles. Beſides, 'tis certain, that the eighth Pair of Nerves, call'd alſo the *Par vagum*, diſtributes its Branches to the principal Viſcera, and nervous Parts, ſubſervient to the Purpoſes of Senſation and Motion; into which Branches whilſt the nervous Fluid flows with a more violent Impetus, theſe Parts are, under the Paroxyſm, drawn into Conſent, and partake of the preternatural and violent Commotions. Hence the Heart is ſeiz'd with a Palpitation; the Pulſe becomes quick and unequal; Reſpiration is laborious, and accompanied with a Stertor; Saliva is diſcharged from the Mouth; the Patient loſes the Uſe of his Speech; and Rumblings and Murmurs are perceived in the Inteſtines.

From what has been ſaid, 'tis ſufficiently obvious, that the immediate Cauſe of every Epilepſy is a Stricture of that Membrane which ſurrounds the Brain, the ſpinal Marrow, and the Nerves. But as the more remote and ſecondary Cauſes which induce this Stricture, and render the Circulation of the Humours through the Head and Brain diſorderly and irregular, are very various, ſo there ariſe hence different Species and Denominations of epileptic Fits. Hence we are enabled to comprehend the Difference between an idiopathic and ſymptomatic Epilepſy; for, when the Cauſes are lodg'd within the Brain itſelf, it is call'd an idiopathic Epilepſy; whereas, when its Cauſes ariſe from any Fault of other Parts transfer'd to the Head, it is call'd a ſymptomatic Epilepſy.

An Epilepſy of the idiopathic Kind moſt frequently ariſes from external Violence; for 'tis well known by Phyſicians and Surgeons, that violent, and ſometimes mortal, Epilepſies are brought on by ſevere Wounds, Fractures, Blows, and Depreſſions of the Cranium. Theſe are generally preceded by a Pain of the Head, and a Torpor of the Senſes; and, after the Patient's Death, either corrupted Blood or Serum is found ſtagnating between the *Dura* and the *Pia Mater*, or between the Cranium and the *Dura Mater*; or Splinters are found impacted in the *Dura Mater*. It alſo frequently happens, that a chronical Epilepſy, returning at certain ſtated Periods, is excited by acute bony Protuberances, ariſing internally in the Baſis of the Cranium, and ſometimes in the lateral or falciform Sinus. Though this Species of Epilepſy is abſolutely incurable, yet by prudent Meaſures the Brain may be ſo diſpos'd, and put into ſuch a State and Condition, that its Preſſure on theſe Protuberances may not be ſo great as to produce an Epileptic Fit.

Among the Cauſes of an idiopathic and mortal Epilepſy, we may juſtly reckon an Obſtruction of the jugular Veins, or of the Sinuſes of the *Dura Mater*, eſpecially of the falciform Sinus, ariſing from a viſcid Blood, or polypoſe Concretions. Three Inſtances of this Kind have occur'd to me in the Courſe of my Experience; and many more may be ſeen in *Bonetus's Sepulchretum Anatomicum*. Of this Kind alſo is the Caſe related by *Sponius*, *in Aphor. Lib.* 2. 19. in which the Patient firſt became drowſy, then epileptic, and then died. Upon opening his Cranium, the various Ramifications of the jugular Veins were found ſo obſtructed with a viſcid and tartareous Matter, that they ſeem'd, as it were, to be ſtuff'd with Plaiſter. Beſides, there was a certain Quantity of Blood extravaſated in the Ventricles of the Brain. When, alſo, an Epilepſy is complicated with acute Diſorders of the Head, ſuch as a Phrenitis, or with thoſe of a chronical Nature, ſuch as Madneſs and Melancholy, thoſe Infarctions of the Veſſels, by a thick Blood, are found in the Patients after Death. But this Species of Epilepſy is, in my Opinion, juſtly to be eſteem'd of the idiopathic Kind.

Beſides, the Paſſions of the Mind, eſpecially Anger and Dread, contribute very conſiderably to the Production of an idiopathic Epilepſy; for theſe act immediately and directly on the nervous and membranous Parts of the Body, either by conſtricting them too powerfully, or dilating them preternaturally; by which means they diſturb all the Motions ſubſervient to the Preſervation of Life and Health. But 'tis pretty ſurpriſing, that violent Paſſions of the Mind ſhould alſo convey their Influence to the fluid Parts of the Body. This is ſufficiently obvious from the Inſtance of Nurſes, who, if they happen to give the Breaſt to Children, immediately after an exceſſive Fit of Paſſion or Dread, ſoon after

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render them epileptic by that very means. 'Tis alſo no uncommon thing for Children, whoſe Mothers, when pregnant with them, indulg'd themſelves in the moſt violent Commotions of Mind, to become ſubject to epileptic Fits in their Infancy. Among practical Authors, Inſtances every-where occur, of ſome Perſons, who, by the Dread and Terror excited by the Aſpect of epileptic Patients, have been ſeiz'd with the like Diſorder. It may alſo be confirm'd, by ſeveral memorable Inſtances, that a ſtrong Propenſity to Venery, ariſing from a Redundance of Seed, and ſuppreſſed from a Principle of Chaſtity, has brought on an Epilepſy: 'Tis alſo certain, that Women, otherwiſe chaſte and modeſt, have been ſeized with this Misfortune, in conſequence of a ſtrong and ardent Love; in which Caſe, Marriage is the ſureſt and moſt effectual Remedy, both with a prophylactic and curative Intention.

In cachectic and hypochondriacal Patients, or thoſe whoſe Stomach and Inteſtines are diſtended with Flatulences, ſpaſmodically conſtricted, or have their periſtaltic Motions, together with their Secretions and Excretions, impair'd and injur'd, an Epilepſy frequently ariſes from a too copious and impetuous Tranſlation of an impure and ſerous Blood to the Head; for when we inquire into the antecedent Cauſes, not only of an Epilepſy, but alſo of all violent and inveterate Diſorders of the Brain, we generally find the Patients labouring under them, to be either hypochondriacal, ſubject to the Hæmorrhoids, melancholic, or cachectic; for 'tis certain, both from Experience, and the Obſervations of good Authors, that the Evacuations by the hæmorrhoidal Veins in Men, and the Menſes in Women, when either too ſcanty or immoderate, lay a Foundation for this Diſorder; in which Caſe, it is juſtly call'd a ſymptomatic Epilepſy, either of the ſerous, hypochondriac, or cachectic Kind; and, like other Diſorders ariſing from Spaſms of the *Primæ Viæ*, returns at certain fixed and ſtated Periods.

But this Species of ſymptomatic Epilepſy ariſes not only from a large Quantity of viſcid Blood or Serum ſtagnating in the Veſſels, obſtructing them, and by that means preventing the due Circulation of the Humours; but alſo from an impure, acrid, and cauſtic Matter, convey'd to the *Dura Mater*, by means of the ſerous arterial Blood, and ſtimulating the nervous Fibres, and adjacent Parts, to ſpaſmodic Conſtrictions. This Accident happens in chronical as well as acute Diſorders. 'Tis well known, that ſuch an acrid and corrupted Serum, firmly adhering to the *Dura Mater*, in exanthematous and petechial Fevers, Small-pox, Meaſles, and purple Fever, either before the Eruption of the Spots, or upon their Retroceſſion, frequently induces an Epilepſy, which is generally fatal. 'Tis alſo confirm'd, by numberleſs Obſervations, that an Epilepſy may be produced by conſolidating old and inveterate Ulcers, repelling the Itch, cutaneous Eruptions, Achors, and ſcal'd Heads, ſince, by ſuch a prepoſterous Practice, the vitious and peccant Matter is driven inwards.

There is alſo another Species of Epilepſy, call'd Sympathetic, and which ariſes from violent Pains and Spaſms of other nervous Parts, propagated and conveyed to the *Dura Mater*, in conſequence of the Conſent between the latter and the former; for Children are frequently ſeized with an Epilepſy on account of a difficult Dentition; and ſevere Tooth-achs, in tender and delicate Patients, ſometimes bring on Epilepſies. 'Tis alſo well known, that Epilepſies are ſometimes produced by violent Spaſms of the Stomach, eſpecially ſuch as are excited by cauſtic Poiſons, the imprudent Uſe of Emetics and Purgatives, or immoderate Anger; for the Cauſe of ſuch a periodic and chronical Epilepſy is often ſeated in the Stomach or Duodenum, in which the Bile and Saliva, being corrupted by a preternatural Fermentation, are, at ſtated Periods, thrown into violent Commotions, and excite, firſt, a Cardialgia, attended with Faintings, and then by Conſent an Epilepſy; which, in this Caſe, is generally habitual to the Patient. That an Epilepſy may alſo accompany violent Pains and Spaſms of the Ileum or Colon, is ſufficiently certain from the Caſe of ſucking Children, who are frequently afflicted with this Misfortune, in conſequence of an acid and corrupted Milk, which corrodes the Membranes of their Inteſtines, and tinges their Excrements with a greeniſh Colour. Beſides, there are a great many Inſtances of Epilepſies produced, even in Perſons well advanced in Years, by the Pains ariſing from Stones ſticking in the Ureters, or Entrance of the Bladder; and this Species of the Diſorder may be juſtly call'd a nephritic Epilepſy. In Child-bed Women alſo, in conſequence of ſome Fault of the Uterus, or a Retention of the Lochia, and, in others, on account of a Defect in the Menſes, firſt, violent Spaſms of the Inteſtines, and adjacent Parts, are obſerv'd to happen; and then an Epilepſy, which is diſtinguiſh'd from the other Species of this Diſorder by the Epithet *Hyſteric*. Nothing is alſo more common than the Production of an Epilepſy, accompanied with terrible Diſtortions, eſpecially in Children, by Worms either corroding the nervous Coats of the Inteſtines, or, if dead, ſtimulating them by their ſubtile and putrid Exhalations. This Species may, for the ſake of Diſtinction, be call'd the verminous Epilepſy. Beſides, that the Diſorder of which we now treat, may be produced by the Bite of a mad Dog, is ſufficiently certain from the Obſervations of practical Authors.

Among the more remote and ſecondary Cauſes of an Epilepſy, we may almoſt reckon every thing which has a Tendency to impair the Strength and Tone of the nervous and membranous Fibres, or weaken the elaſtic Force of the Veſſels; for, though the immediate and formal Cauſe of an Epilepſy conſiſts rather in a ſpaſmodic Stricture, than a Privation of Tone in the Parts, yet, ſince, by the Laws of Motion peculiar to the human Body, Conſtrictions and Spaſms are ſucceeded by a Privation of Tone in the Parts, and a ſubſequent Congeſtion of Humours; and this Congeſtion is again productive of Spaſms; 'tis not to be wonder'd at, if ſuch Cauſes, as impair and diminiſh the Tone and Strength of the Parts, ſhould greatly contribute to the Production of ſpaſmodic Strictures, and the more frequent Returns of the Paroxyſms. Among the Cauſes of this Kind, we may reckon, among the Non-naturals, a vapid Air, eſpecially impregnated with the noxious Steam of Coals; ſleeping in low and too cloſe Chambers; uſing ſuch Aliments as generate Flatulences, and ſtuff the Head with Vapours; ſuch as all the Species of Garlicks, Onions, and Smallage, Summer Fruits, and all ſweet fermentable Subſtances; the immoderate Uſe of Wines, eſpecially ſuch whoſe Fermentation is not finiſh'd, or which are impregnated with the Steam of Sulphur; the Drinking of thick Ales, ſtrongly hopt, and eſpecially to ſuch Exceſs, as to produce Intoxication and Crapulas. Among the medicinal Subſtances, Narcotics, Opiates, and ſtrong-ſcented Subſtances, contribute conſiderably to the Production of this Diſorder. To theſe we may, alſo, add immoderate Hæmorrhages, whether from the Noſe, the Veſſels of the Uterus, or the Anus, ſince theſe remarkably impair the Strength of the Parts, and conſequently fill the Body with a large Quantity of ſerous and recrementitious Particles. An immoderate Uſe of Venery in the firſt Stages of Life, long-continued Sadneſs, cloſe Study, an intenſe Application of the Mind to ſerious and important Subjects, greatly contribute to the Production of this Diſorder, in conſequence of the Weakneſs they induce on the nervous Syſtem. I remember to have ſeen a young Man, who, upon fatiguing his Genius or Memory too much, was forthwith ſeized with a kind of ſlight Epilepſy, a Palpitation of the Heart, a Diſtraction and Eccſtaſy of the Spirits; whereas he was always in an eaſy and healthy State, when he did not apply to his Studies.

But, waving any farther Inveſtigation of the Cauſes, we now come to conſider the Prognoſtics of an Epilepſy. 'Tis, therefore, confirm'd by the Experience of *Hippocrates*, as related in the twenty-eighth Aphoriſm of the third Section, that in Boys this Diſeaſe is determin'd about the ſeventh Year of their Age; or about the fourteenth, or ſeventeenth, which are the Years of Puberty; and in Girls about the Eruption of their Menſes, which is the fourteenth Year of their Age, and productive of a very conſiderable Change in the animal Œconomy. 'Tis alſo certain, from various Obſervations, that chronical Epilepſies have been ſpontaneouſly cur'd, not only by a Change of Age, but alſo by a Change of Places, Diet, and Regimen, without the Aſſiſtance of Medicines or Phyſicians. Thus *Hippocrates*, in *Aph.* 45. *Sect.* 2. juſtly obſerves, that, if young Perſons are freed from the Epilepſy, it depends principally upon the Change of Air, Climates, and Regimen. It alſo happens, that, upon the Approach of a quartan Fever, convulſive and epileptic Fits, as well as ſome other terrible Diſorders, are totally removed, as *Hippocrates* has juſtly obſerved in *Aph.* 70. *Sect.* 4. as alſo in *Epidem. Lib.* 6. *Sect.* 16. for, when intermittent Fevers are duly managed, they free the Body from its Load of peccant Humours, and render it more pure and dry; which Effect ought alſo to be produced by proper and well-choſen Remedies. 'Tis alſo well known, that by an Eruption of the Itch, Ulcers, and Exanthemata, as alſo of the Meaſles, Small-pox, and purple Fever, the Epilepſy remits, and is ſometimes totally removed. All Hopes of Cure are not, therefore, to be laid aſide, when the Diſorder is not inveterate, when its Fits are not long, when it is not hereditary, and when the Patient is but very young; or when it ariſes from a Fault of the *Primæ Viæ*, Worms, a bad Regimen, or an ill-cur'd ſubcutaneous Diſorder. Neither is the Cure to be deſpair'd of, if the Degree of the Epilepſy is but ſlight; if the Patient is previouſly ſenſible of an approaching Fit, by a Cold which riſes gradually from his Feet to his Back, Præcordia, and Head, and when it is preceded by Uneaſineſs, Loſs of Strength, and a Propenſity to vomit; or when, under the Paroxyſm, the Senſes are not entirely aboliſhed, but only impair'd; or, laſtly, when the Diſorder ſeizes in the Night-time, without the Clenching of the Thumbs.

On the contrary, 'tis certain from Experience, that an hereditary Epilepſy, though treated with the moſt proper and beſt-choſen Remedies, is very difficult to be cured; nor is there a ſmall Difficulty to be ſurmounted in the Cure of an Epilepſy which is habitual and chronical, which has laſted for many Years, and by long and frequent Paroxyſms enervated the

Body, and, as it were, chang'd the Conformation of the Veſſels and Membranes of the Brain. But that Epilepſy terminates leſs happily, which is not remov'd about the Years of Puberty; or, in Women, about the Eruption of the Menſes; as alſo that which appears after theſe Years, or even after the twenty-firſt Year of the Patient's Age; for then it, for the moſt part, diſcovers ſome hereditary Taint. Thus *Hippocrates*, in his Book *de Morbo Sacro*, informs us, "that few Patients, "after the twenty-firſt Year of their Age, are ſeized with an "Epilepſy, unleſs that Misfortune ſhould happen to be here-"ditary to them." 'Tis a bad Sign, when the Paroxyſms become more frequent than uſual; for, by this means, the animal Functions are often ſo deſtroy'd, that the Memory, Genius, and Judgment, are not only impair'd, but alſo Stupidity and Folly produc'd. 'Tis a bad Sign, when an Epilepſy terminates in Blindneſs, Folly, or Loſs of Memory; but 'tis abſolutely fatal and mortal, when it terminates in a Palſy, or degenerates into an Apoplexy. And, upon diſſecting Patients who have died in this manner, Blood, or more frequently Serum, is found extravaſated and corrupted in the Ventricles, or Baſe of the Brain. But this Circumſtance is falſely aſſign'd as the Cauſe of the Epilepſy. There are but faint Hopes to be entertain'd of the Patient's Recovery, when, in the Height of an acute Fever, a Phrenitis, Petechiæ, Meaſles, or Small-pox, he is ſeized with epileptic Fits. Nor are the Epilepſies of Children, ariſing from difficult Dentition, or Gripes of the Inteſtines, free from Danger, when they afflict the Patient without Intermiſſion. Nor is it an uncommon Thing for an hereditary, idiopathic, and inveterate Epilepſy, to degenerate into Melancholy, Madneſs, and Folly; eſpecially if the Patient uſes an improper Regimen, or indulges himſelf in the exorbitant Tranſports of Paſſion.

The CURE.

In attempting the Cure of the Epilepſy, our firſt Intention muſt be to correct, and expel from the Body, the remote material Cauſes of the Diſorder. Secondly, we muſt endeavour to mitigate and allay the violent Spaſms of the Dura Mater, and nervous Parts. This laſt Intention is principally anſwered by Medicines of two Kinds; that is, by thoſe of a ſedative, and thoſe of a corroborative Nature. The former check and allay the fierce and impetuous Motions of the Fluids; whereas the latter excellently contribute, not only to remove the Weakneſs, and Want of Tone, left by the Violence of the Spaſms, and which lay a Foundation for future Paroxyſms; but alſo to reſtore the due Tone, and natural Elaſticity, of the Parts.

Sedative Medicines are ſuch as, by their Steams and Exhalations of a mild ſulphureous Nature, check the exorbitant Motions of the nervous Fluid. Of this Kind, in the vegetable Kingdom, are Herbs and Flowers moderately fragrant, and Waters diſtilled from them; ſuch as the Waters of Meadow-ſweet, Baum, Sage, Baſilicon, Cowſlips, Lilies of the Valley, white Lilies, Roſes, Limes, Egyptian-thorn, Piony, Orange-flowers, Citron-flowers, the Roots of Piony and Valerian; as alſo, the Waters diſtilled from the Stones of Cherries, Peaches, and Prunes. To this Claſs, alſo, belong Saffron, Poppy-flowers in form of an Extract, the Seeds of Club-moſs, and white Poppies; and, among aromatic Subſtances, Nutmegs. In the Animal Kingdom, the moſt celebrated Medicines of the antiepileptic Kind, are ſuch as prove highly friendly to the Nerves, by certain ſubtile, temperate, and ſulphureous Exhalations. Of this Kind, among the harder Subſtances, are the Shavings of the Teeth of the Sea-horſe, of Ivory, Hartſhorn, the Bone found in the Head of the Sea-cow, called Manati, the true Unicorn, the human Cranium, and the Ancle-bone of the Hare; but theſe muſt be recent, otherwiſe they will be of little Efficacy. To this Claſs, alſo, belong Preparations of the Viſcera, and ſofter Parts, of Animals, moderately dried, and reduced to a Powder. Of this Kind are Earth-worms, Caſtor, human Secundines, the Blood of a healthy Perſon moderately dried, the Hearts and Livers of Frogs and Moles, the Powder of Swallows, and, eſpecially, the Fœtus of a Hare cut out of its Mother's Belly, and dried. Theſe Subſtances, by their grateful ſulphureous Exhalations, have a happy Influence on the nervous Parts, and check their exorbitant and irregular Motions. Among chymical Medicines, I can, from Experience, recommend, above all others, the Spiritus Nitri Dulcis, duly prepared; or, rather, the Anodyne Mineral Liquor.

Theſe are the principal Ingredients of the ſpecific antiepileptic Powders, which may commodiouſly be mixed with Abſorbents. Among the celebrated Powders of this Kind, the Draco Figens, which *Dolæus*, in his *Encyclop. Med.* affirms he has found ſucceſsful in a thouſand Inſtances, deſerves our Regard and Attention. It is prepared thus:

Take of Nutmegs, a Dram and an half; of the Aſhes of Moles, two Drams; three Ancle-bones of the Hare; of the Powder of Carduus Benedictus, four Scruples; of Elk's Hoof, white Amber, Miſleto, each two Scruples and an half; of prepared Pearls, one Dram; of calcined Hartſhorn, half a Dram; of the true Unicorn, one Scruple; of human Cranium, three Drams; of Piony-ſeeds, one Dram and an half; of Sugar-candy, two Ounces; and of Leaf-gold, a ſufficient Quantity: Make into a fine Powder; the Doſe of which may be half a Dram, or four Scruples.

The *Pulvis Epilepticus Anodynus* of Dr. *Weiſmann*, a Phyſician of *Windſheim*, is thought to be poſſeſſed of no leſs Efficacy; and is prepared in the following Manner:

Take of uncalcin'd Elk's Horn, Shavings of Elk's Hoof, Tooth of the Sea-horſe, the true Unicorn, the Lapis Manati [a Bone found in the Head of the Sea-cow], red Coral, white Amber, common Cryſtal, Emerald-ſtone, Powder of Earth-worms, the Spines of Eel-pouts, the Sulphur vegetabile Corallinum, or the Seeds of Club-moſs, and oriental Pearls, each one Dram; of native Cinnabar, two Drams; of the Theriaca cœleſtis, one Scruple; and of the Powder of Caſtor, half a Scruple: Reduce all to a Powder; a Doſe of which is to be exhibited, either in the Water of Lime-flowers, Lilies of the Valley, black Cherries, Piony, Swallows with Caſtor, or the Aqua Epileptica of *Langius*.

I frequently, ſays *Hoffman*, preſcribe an antiepileptic Specific, much of the ſame Nature; by means of which, if duly and regularly uſed, I have ſeen ſingularly happy Effects produced in chronical Epilepſies.

Among the antiepileptic Corroboratives, the moſt efficacious of the vegetable Kind are the Flowers of Lavender and Spike; the Herbs Baum, Roſemary, Rue, and Marjoram; Amber, Aloes-wood, yellow Sanders, Cardamoms, and Cloves; together with the Oils, Eſſences, Decoctions, Balſams, and Liniments, prepared from them. Among compound Medicines, the Aqua Epileptica of *Langius*, the Water of Swallows, the Balſam of Life, and ſome others of a like Nature. But in Epilepſies Ambergriſe is preferable to all other antiepileptic Medicines, both on account of its ſedative and corroborating Qualities. The Spirit of Hartſhorn, or of Ivory, either ſimple or ſuccinated; the Spiritus Buſſii; and the Oil of Hartſhorn, or of Ivory, reduced to the greateſt Purity by Rectifications, are, alſo, ſingularly efficacious. Decoctions of the Woods, eſpecially Guaiacum, Saſſafras, and Sanders, are far from being deſpicable Remedies, in Caſes of this Nature, on account of the reſinous Principle they contain. The Uſe of theſe, in epileptic Diſorders, was long ago celebrated among Practitioners. Thus *Alphonſus Ferrius* and *Jachinus* inform us, that they have known many epileptic Patients cured by taking ſix or eight Ounces of the Decoction of Guaiacum, twice a Day; uſing, at the ſame time, a weaker Decoction of the ſame for ordinary Drink: And theſe Decoctions are ſtill more efficacious, if Piony-root, or any other antiepileptic Specifics, are added to them. The Uſe of them, according to theſe Authors, is to be perſiſted in for thirty or forty Days, adding a few Drops of Spirit of Vitriol to each Doſe.

Medicines which are calculated for ſtrengthening the Nerves, and reſtoring the Tone of the Parts, are, alſo, of ſingular Service, when applied externally. Thus, Powders prepared of the Herb Marjoram, the Flowers of Lilies of the Valley, and Spike, Marum, Amber, Powder of Cloves, Benjamin, and Nutmeg, I have often found, ſays *Hoffman*, to be of ſingular Service; ſince, beſides their nervous Quality, they alſo incide the thick and viſcid Humours. Hence the Snuffing them up the Noſtrils excellently contributes to the Colliquation of the tenacious Phlegm. The Medicines above-mentioned, eſpecially in Habits abounding with Serum, or ſuch as are inclined to a Cachexy, and in chronical Epilepſies, are, if duly and properly exhibited, of ſingular Efficacy, both for the Purpoſes of Prevention and Cure.

But, before they are exhibited, it is neceſſary the material Cauſes ſupporting the Diſorder ſhould, as much as poſſible, be removed. For this Reaſon, if the Epilepſy proceeds from a Collection of Blood, ſtagnating and pent up in the Veſſels and Membranes of the Brain; and if, by this means, the Veſſels are rendered turgid with Blood; or that Fluid too impetuouſly conveyed to the Head, which frequently happens in hypochondriac and melancholic Patients, as alſo in Women who are either pregnant or hyſteric; then Veneſections, and Revulſions of the Blood from the Head, eſpecially by opening the Veins of the Ancles; as alſo the Application of Leeches to the Veins of the Anus, are not only uſeful, but abſolutely neceſſary. In this Piece of Practice the moſt ſkilful, both of the antient and modern Phyſicians, agree; among whom the Reader may conſult *Galen, de Curatione per Sanguinis Miſſionem*, *Hieronymus Mercurialis*, *Zacutus Luſitanus*, *Lib. 1. de Med. Princip. Hiſt.* *Celſus*, *Rhaſes*, *Schenkius*, *Lib. 1. Obſ. 3.* *Rhodius Cent. 1. Obſ. 64, 65.* as alſo *Sylvaticus*, *Cent. 1. Conſ. 45.* who,

who, for the ſake of Revulſion and Derivation, orders four Ounces of Blood to be taken, twice a Month, from the Veins of the Anus. Sometimes it is, alſo, proper to open the external jugular Veins, in order to procure a freer Diſcharge and Motion to the Blood, ſtagnating in the Sinuſes of the Dura Mater. Thus, in the *Ephemerides Nat. curioſ. Dec.* 1. *An.* 1. *Obſ.* 244. we have an Inſtance of an Epilepſy cured by opening the jugular Veins. Nor is it an uſeleſs Piece of Practice to apply Cuppings, with Scarification, to the Neck, and Parts contiguous to the Head; provided, if there is too large a Quantity of Blood in the Veſſels, it is previouſly drawn to the inferior Parts by Veneſection.

But a quite different Method of Cure becomes proper and requiſite, when the Diſorder ariſes from an impure Serum lodg'd in the Veſſels and Membranes of the Head, which frequently happens in cachectic and ſcorbutic Patients, by a prepoſterous Cure of œdematous Tumors of the Feet, by a too ſpeedy Conſolidation of old Ulcers or Fontanels, by a Repulſion of the Itch, or ſcal'd Head, or by an imprudent Cutting of the Hairs in that Diſorder called the Plica Polonica. In this Caſe, the moſt important Intention of Cure conſiſts in the Diſcuſſion, Evacuation, and Derivation of the impure Serum to other Parts. With this View, beſides thoſe Medicines which evacuate Serum by Stool, and purify the corrupted Humours, the Antients, as well as the Moderns, have, for eliminating the vitious Matters, recommended Setons, Fontanels, Cauteries, and Veſicatories. See *Hippocrates, de Morbo Sacro*, *Tulpius*, *Lib.* 1. *Cap.* 8. Thus, by *Victor Trincavelius*, we are informed, that a Man, of fifty Years of Age, was cured of an Epilepſy by the Eruption of filthy and malignant Eruptions over all his Body. And *Willis*, in the third Chapter of his Book, *De Morb. Convulſivis*, informs us, that an epileptic Girl, falling headlong into the Fire, and, by that means, having her Head accidentally cauterized, was free from her Diſorder, ſo long as the Ulcers, remaining uncured, diſcharged a Sanies; but that the Epilepſy returned, when theſe were conſolidated.

When, in conſequence of an Indulgence in violent Paſſions, eſpecially Anger, an acrid, bilious, cauſtic, and volatile Acrimony, conveyed from the Primæ Viæ to the nervous Syſtem, produces an Epilepſy; beſides the Powders proper for correcting and qualifying this Acrimony, Whey, as alſo temperate mineral Waters, uſed for ſome Months, in Conjunction with a proper Regimen, are of very ſingular Service. Acidulated Medicines are alſo highly efficacious in this Diſorder; ſuch as the Philoſophic Spirit of Vitriol, or the Spirit of Nitre well rectified, reduced into the Form of a Tincture, with Flowers of the wild Poppy and Piony, and exhibited with large Quantities of temperating, diluting, and antiſpaſmodic Waters. Common Spring-water, or pure Rain-water, liberally drank, are, alſo, of ſome Service in theſe Diſorders in the Head; ſince, beſides their temperating Quality, and their Power of diluting the Acrimony of the Humours, they alſo reſtore Strength, and a due Tone, to the weakened and relaxed Parts.

When an Epilepſy ariſes from an Exceſs of Pain, from a Stone, for Inſtance, lodged in any of the Ureters, a violent Tooth-ach, a Pain of the Ear, Spaſms of the Stomach and Inteſtines; in theſe Caſes Clyſters of pure Oil, that of ſweet Almonds, for Example, are to be injected; after which, if the Patient is plethoric, Veneſection is to be inſtituted; and a Mixture, compoſed of the antiſpaſmodic Waters, the Anodyne mineral Liquor, the Pulvis Marchionis, Cinnabar, a few Grains of the Pilulæ Wildeganſii, and Syrup of white Poppies, is to be exhibited internally. In thoſe Epilepſies incident to Children, either from the Gripes of the Inteſtines, corrupted Milk, or a difficult Dentition, nothing is more expedient, than by proper Medicines to eliminate the acrid Saburra from the Primæ Viæ. This Intention is excellently anſwer'd by frequent Injections of Clyſters, conſiſting of Milk, with a little Venice Soap previouſly diſſolved in it. The internal Exhibition of the Pulvis Marchionis, with a little Cinnabar, or any epileptic Powder, reduced into an Electuary, with Extract of Rhubarb, Syrup of Succory with Rhubarb and Manna, generally affords very ſingular Relief. I have, ſays *Hoffman*, alſo found the following Mixture to produce very happy Effects:

> Take of the Waters of Lilies of the Valley, Primroſes, Lime-flowers, and Black Cherries, each one Ounce; of Crabs-eyes, and the Pulvis Marchionis, each one Dram; of the volatile oleous Spirit of *Sylvius*, and the Anodyne mineral Liquor, each ten Drops; of oriental Muſk, well mixed with Sugar, two Grains: Mix all together, and exhibit. For I have had frequent Experience of the Virtue of Muſk, in mitigating the epileptic Diſorders of Children.

When an Epilepſy ariſes from Worms corroding the nervous Coats of the Inteſtines; in this Caſe, after the Exhibition of antiepileptic, demulcent, and oleous Medicines, we muſt uſe anthelminthic Specifics, and gentle Purgatives; the moſt conſiderable and efficacious of which are Tanſy, Garlick, Camphire, Aſa-fœtida, Worm-ſeeds, Mercurius dulcis, Æthiops Mineral, and the Extract of Spurge.

Practical Cautions *and* Observations.

When an Epilepſy returns at ſtated Periods, or at the Quadratures of the Moon, the Cauſe of the Diſorder is generally lodged in the Stomach, or rather in the Duodenum, and its adjacent Parts, the biliary Ducts, or Pancreas. In this Caſe it is expedient, a few Days before the ſtated time of its Return, to inject a Clyſter, and exhibit a Vomit, calculated for cleanſing and unloading the Primæ Viæ. The moſt ſafe and efficacious Vomit for this Purpoſe is that compos'd of half a Dram of Ipecacuanha-root, mix'd with a Decoction of Raiſins. After theſe Meaſures are taken, antiepileptic Specifics will prove more efficacious than otherwiſe they would have done.

Under the Paroxyſms, we are carefully to abſtain from the Uſe of Subſtances that are too volatile, ſpirituous, fragrant, or fetid; ſince theſe fill the Head with their Vapours. Nor is it expedient to preſcribe ſuch Subſtances as either excite Sneezing, or Vomiting; ſince theſe derive the Humours to the Head, and often recal the Paroxyſms. It is rather expedient to keep the Patient in an erect Poſture, and carefully to rub his Hands, and his Feet; for dry and warm Frictions are of ſingular Service in Epilepſies accompanied with Spaſms of the Extremities. Though Veſicatories, Setons, and Applications of the actual Cautery to the Neck, in ſuch Epilepſies of Children as ariſe from a Collection of ſordid Serum, are not altogether uſeleſs; yet they ſometimes prove prejudicial, and leave a certain Languor, or Stupor of Body, behind them. On the contrary, in obſtinate chronical Epilepſies, as alſo thoſe ariſing from an acrid ſcorbutic Lymph, Fontanels and Veſicatories applied to the Legs produce far more happy Effects: Hence the *Indians*, in Epilepſies, with ſingular Succeſs, burn the Heel, at the Inſertion of the Tendon of *Achilles*, and keep the Ulcer open for ſix Months.

In every Species of Epilepſy it is expedient to abſtain from Wine and Malt Liquors, and rather to uſe pure Water; ſince I have frequently obſerved, ſays *Hoffman*, that this Liquor has either mitigated, or abſolutely removed, not only obſtinate, but even hereditary Epilepſies. With reſpect to Veneſection, it is to be obſerved, that it is to be inſtituted in the Angles, when the Patient is plethoric, when the Paroxyſms ſeize about the Equinoxes, or Solſtices, and eſpecially if the Patients are hypochondriac, ſubject to the Hæmorroids, or melancholic; but a Clyſter muſt be previouſly injected, in order to evacuate the viſcid Humours, together with the Flatulences. When the hypochondriac Paſſion ſuſtains and ſupports the Epilepſy, in this Caſe, after bleeding the Patient as his Condition ſhall require, I have known the Paroxyſms remarkably mitigated by drinking temperate mineral Waters; but Bathing is to be abſtained from.

Before the Uſe of antiepileptic Specifics, evacuant, temperating, and alterative Medicines muſt be previouſly exhibited, otherwiſe they do more Harm than Good. When an Epilepſy draws its Origin from external Injuries done to the Head, and the Stagnations, or Extravaſations of the Humours are produced by them, then Preparations of Cinnabar, reduced to a fine Powder by Trituration and Levigation, that their Particles may mix with the Maſs of Blood, are to be exhibited in pretty large Quantities, in Conjunction with other Cephalics and Diaphoretics; ſince they powerfully reſolve and diſcuſs the Lymph ſtagnating in the Brain. Among external Medicines calculated for checking the Violence of the Paroxyſms, I have found none, ſays *Hoffman*, more effectual, than a Liniment compoſed of human Fat, one Ounce; expreſſed Oil of Nutmegs, half an Ounce; and of the Oils of Roſemary, Lavender, and Rue, each a Dram. The Neck and Spine of the Back are to be anointed with this Liniment. When the Patient is ſo fortunate as to be previouſly ſenſible of the approaching Fit, it is expedient, if poſſible, to prevent it, or at leaſt to mitigate its Fury, by Clyſters, Frictions of the inferior Parts, and a proper Regimen.

Opiates, and too volatile Subſtances, muſt be cautiouſly exhibited to Children, and Patients of delicate Habits; ſince they bring on an uncommon Weakneſs, and Want of Tone, in the Brain and nervous Parts. Thus, I once knew, ſays our Author, an Infant ſeized with a mortal Epilepſy, by the frequent Uſe of Diacodium. I have alſo obſerved, ſays he, that the anodyne Powders, and Preparations of the Theriaca, frequently exhibited to Children, have produced a kind of Stupor of Mind, which remained with them for a long time.

When an Epilepſy is of ſuch a Nature as to return upon the ſlighteſt Cauſes, and be augmented by a Farrago of Medicines, it is expedient to abſtain from a Multiplicity of them, and, by an obſtinate Perſeverance in a proper Regimen, to combat, and, if poſſible, prevent this Diſorder. The Regimen proper in this Caſe is ſuccinctly, but accurately, deſcribed by *Celſus*, in the 23d Chapter of his 3d Book, in theſe Words:

"The

" The Patient, says he, must screen himself from the too violent Influences of the Sun, abstain from Bathing, keep at a " Distance from the Fire, shun all heating Substances, Cold, " Wine, Venery, the Sight of Precipices, and all terrible " Objects, Vomitings, Weariness, Anxiety, and every kind of " Business: He must, also, abstain from Food one Day in " four." Epileptic Patients, especially Children, are also to abstain from all sweet fermentable Substances, Summer Fruits, and others of a like Nature. And young Persons, subject to this Disorder, are carefully to abstain from Venery; for *Hieronymus Mercurialis, in Prælect. Patav.* justly affirms, " that " many of the *German* Youth become epileptic by an immoderate Use of Venery." Intense Thoughtfulness, or Fatigue of Mind, is also be guarded against by epileptic Patients; for, according to *Celsus*, Application of Mind is not safe for those who are subject to this Disorder, or have their Heads any ways affected. *Galen*, in the 5th Chapter of his 5th Book *De Loc. affect.* gives us a memorable Instance of this in the following Words: " A certain young Schoolmaster, says he, when " he had either taught with too much Assiduity, thought too " attentively, or abstained from Aliments so long as to become " excessively hungry, was seized with an epileptic Fit." The like is also reported of *Franciscus Petrarcha*, who, after many abstruse Meditations, is said to have been seized with epileptic Paroxysms. But, above all things, every Occasion of Terror, Dread, or Anger, is to be carefully avoided; because these have a strong Tendency to bring on the Paroxysms. *Frederic. Hoffman.*

Dr. *Pitcairn*, when arrived at the last Stage of his Life, and seemingly under the Influences of Religion, and a sincere Regard for the Happiness of Mankind, as a kind of sacred and inestimable Legacy, leaves the following Directions for the Management of epileptic and paralytic Cases.

" In an Epilepsy, says he, or a Palsy, after the repeated " Use of Emetics and Vesicatories, let the antiepileptic Tincture be exhibited. To young Persons, and those not far " advanced in Years, Mercury, and Broths prepared with " Earth-worms, are to be exhibited. The antiepileptic Tincture is prepared in the following Manner:

Take of wild Valerian-root, and bastard Dittany, each six Drams; of Pigeon's Dung, and Castor, each half an Ounce; of Misleto, six Drams; of Cinnamon, and the Tops of Rosemary, each half an Ounce; of Sena-leaves, two Ounces; of Jalap, and Turbith, each half an Ounce: Infuse in a cold Place for ten Days, in eight Pints of white French Wine. To the Liquor, when strained off, add of the Shavings of a human Cranium, and Elk's Hoof, each two Drams; and four Ounces of Sugar, with which four Scruples of the Oil of Amber, and two Drams of the Spirit of Castor, are duly mixed. Of this Preparation let two Ounces be exhibited as a Dose to Patients of about seven Years of Age; and, to Adults, Four.

" In paralytic Cases it is often expedient, in the Decline of " the Disease, to exhibit this Tincture without the purgative " Ingredients. It is also proper, after liberal Frictions of the " affected Members before a Fire, to immerse the Patient in " cold Water."

Cheyne is of Opinion, that the Epilepsy differs very little, or not at all, or, at most, in a few Circumstances only, from hypochondriac and hysteric Fits; which last, when violent, terminate always in these epileptic Fits; as they, on the other hand, when they become weak, dwindle into the hysteric Kind. In this Case, the Diet must be much more strict, cool, and moderate, than in hysteric and hypochondriac Disorders; and the Medicines stronger, and oftener repeated, especially Vomits, Steel, and Bitters. Dr. *Taylor*, of *Croydon*, says *Cheyne*, cured himself entirely and absolutely of the most violent, constant, and habitual Epilepsy that, perhaps, ever was known, after having, in vain, tried all the Methods and Medicines advised by the most eminent Physicians of his Time, by a total Diet of Milk, without Bread, or any other Vegetable, or any thing, (besides a Spoonful of compound Peony-water, sometimes, to prevent its curdling) confining himself to a Pint in a Morning, a Quart at Noon, and a Pint at Night, of the Milk of grass-fed Cows in the Summer, and those fed with Hay in the Winter; the Milk of Cows fed with Grains always inflating him, and lying uneasy at his Stomach. He had continued in perfect Health and Vigour (having had several Children) seventeen Years, when I saw him, and received this Account from him, insomuch that he could have played four or five Hours at Cricket, on *Banstead-Downs*, without Weariness, or profuse Sweating; and probably might have continued many Years longer in perfect Health, (as he did seven or eight Years more) had he not entered upon a different Regimen of Diet, and come to eat animal Food; by which, in a short time, he was destroyed. Some others have been cured, by me, by a Regimen of Diet less strict, and the Medicines already suggested; but I believe none ever were cured, who have become to Maturity, without a very exact low Regimen, continued during all their Lives; the transgressing it, for any long time, always bringing their Disorders back, if not something worse. And I believe a total Milk and vegetable Diet as absolutely necessary for the total Cure of the Epilepsy, as it is for the Gout, or a Consumption. *Cheyne's English Malady.*

Erasistratus advis'd epileptic Patients to eat and drink but little, to bathe seldom, to use a great deal of Exercise, and to avoid every thing that induces to sudden Change in the Body. *Galen de Venæsect. adverss. Erasistratæss.*

Apuleius, in his first Apology, quotes a Treatise of *Theophrastus* concerning the Epilepsy, wherein the Author says, that the Exuviæ of that Kind of Lizzard call'd Stellio is a Cure for this Distemper; but that it is difficult to be got, because the Animal eats it as soon as 'tis cast off.

Asclepiades us'd to bleed in the Epilepsy.

We learn from *Cœlius Aurelianus*, *Lib.* 1. *Cap.* 4. that the Antients gave in an Epilepsy human Flesh, and that of Weasels dry'd for a long time, as also of Horses, who have leprous Warts growing upon their Legs, of Asses or Mules. They gave also the Member and Testes of the River or Sea-dog, and Millepedes; as also Scales of Iron, with Water in which Iron had been extinguish'd: They prescrib'd, also, the Brain of a Camel, dry'd and cut; and order'd Children to smell of it, but Adults to drink it, with Hydromel and Vinegar, in the Quantity of three Cyathi; the Heart of an Hare, and the Brain of the *Gavia*, an aquatic Fowl. They also us'd Asses Milk with Salt; and human Blood, and that of a Sea-tortoise, or Sea-calf; and not only Blood, but also *Coagula*: Bulls Blood is also recommended; but *Cœlius Aurelianus* thinks that dangerous, and brings the Example of *Themistocles*, who was poison'd with it, to support his Opinion.

Oribasius describes the Cure of an Epilepsy, both in the acute and chronical Sort, that is, in the Fit, as well as out of it: When the Fit is over, he orders Bleeding; and, after four or five Days, when the Body is a little recruited, Purging; three Days after, Cupping and Scarifying: He repeats these Evacuations, and sometimes Sinapisms, at convenient Distances, and, in the Intervals, gives proper Nourishment, and uses warm Medicines, such as Castor, Rue, Mint, and the Cyrenaic Juice. He mentions Peony-root, in the Form of an epileptic Necklace; however lays the greatest Stress, where it ought to be laid, upon Evacuations. *Galen*, in his Epistle to *Cecilianus*, writes on purpose upon this Argument, and describes the Manner of Diet at large.

Trallian recommends the Hoof or Skull of an Ass, as a precious Secret, which he learnt in *Spain*.

The Antients us'd to give one Dram of the Root of the white Bryony, for a whole Year, to those that were subject to Epilepsies. *Harris Dissert.*

Paracelsus speaks of a Preparation, of which the Flowers of Antimony are the Basis, which, he says, is an excellent Remedy for an Epilepsy; but he does not tell us the manner of preparing it. *Paracelsus* fixes the Dose of this Arcanum at nine Grains before the Paroxysm, and eighteen in it.

He also recommends his Sulphur of Vitriol for this Disorder; but owns, that Opium has a marvelous Effect in their Cure.

A tart Liquor ousing from the Root of the Walnut-tree, when cut off in the Month of *May*, is found an excellent Remedy in an Epilepsy.

Gordonius, who wrote in 1305. in his *Lilium Medicinæ*, describes the *Pulv. ad Guttetam*, famous then in *France* for the Cure of an Epilepsy.

John of *Gaddesden* recommends, in epileptic Cases, a Boar's Bladder boil'd, Misleto, and a Cuckow.

The Powder of the Lycopodium is us'd in *Germany*, in the Cure of Epilepsies in Children, from ten Grains to thirty. *Geoffroy.*

Essential Oil of Rue is a most excellent Remedy for an Epilepsy proceeding from a cold Cause. *Boerhaave's Chym.*

A Jay dry'd and powder'd is a Specific for an Epilepsy.

Epilepsies, whose Causes reside in the Primæ Viæ, are sometimes cur'd by a few Drops of the Liquor of the Solution of Copper by Sal Ammoniac, given in the manner as directed under the Article *Æs*.

Rue-water, prepar'd by repeated Cohobations, is excellent in Epilepsies and Hysterics.

Tincture of Amber is very strongly recommended by *Boyle* and *Helmont*, as a very excellent antiepileptic Medicine.

It may be taken three times a Day, in *Spanish* or *Canary* Wine, after the Stomach has been first emptied and cleansed.

Galen gives us an Instance of the surprising Effects of Effluvia, with respect to Peony-root, which he, by repeated Experiments, satisfied himself, cured a Lad of an Epilepsy, by being hung about his Neck; for the Distemper return'd, if this was taken off.

I knew

I knew a young Lady that was afflicted with a radicated Epilepsy; who, after numberless Medicines prescrib'd by Physicians had prov'd ineffectual, and after her Fits came upon her severely eight or ten times a Day, was cured by the Powder of true Misleto of the Oak, continued for some Days, near the full-Moon, in the Quantity that would lie upon a Sixpence, every Morning, in black Cherry-water, or Beer. And tho' this Remedy had scarce any visible Effect upon her, yet, after the first Day it was taken, the Fit never return'd but once. The Person who advised this Remedy, profess'd he had therewith constantly cured that Distemper, when he could procure the genuine Simple. *Boyle.*

Half a Dram of choice Amber, finely powder'd, being exhibited for six or seven Weeks together, once a Day, when the Stomach is empty, in about four Ounces of good White-wine, is recommended by *Boyle*, in the Cure of an Epilepsy.

In epileptic Patients, Urine unusually thin and crude, if there be no Repletion, signifies an approaching Fit; and so much the more if it be accompanied with a Pain or Tension of the Acromium, Neck, or Back, or Stupor of the Body, or troublesome Dreams. *Hippocrat. Coac. Prænot.*

Panarolus, and *Fabius Columna*, are very copious in their Praises of the Root of the *Valeriana sylvestris major*; one or two Doses of which, he affirms, will generally cure an Epilepsy. He tells us, that he presented it to many of his Friends, who, next to the divine Blessing, professed that they ow'd the Restitution of their Health to the Powder of this Root. The Dose is half a *Cochleare*, in Wine, Water, Milk, or any other proper Liquor; to Children a less Quantity is given in Milk.

Dr. *Cheyne* remarks, that the *Valeriana sylvestris major* is certainly one of the most active and volatile of the Vegetable Kingdom, and seems to act chiefly by promoting Perspiration, and a gentle Diaphoresis. The Root powder'd, and given with Cinnabar of Antimony, and Powder of Hellebore, has frequently good Success; and a Tea, made of its Leaves, is an admirable Diluter, and may be long continued with Advantage in nervous Cases.

Native Cinnabar is, also, much recommended by *Crato*, for the Cure of an Epilepsy; whence it is call'd the *Magnes Epilepsiæ*.

The celebrated *Boerhaave* remarks, that as all the Variety of Motions, in epileptic Fits, consist in irregular Contractions of the muscular Parts, they must proceed from various involuntary and anomalous Influxes of the nervous Juices into these Parts, press'd into the Nerves from the common Sensory by as various Causes.

The principal of these Causes are, according to him, first, either hereditary, and receiv'd immediately from the Parents; or, perhaps, from some of the Ancestors, the Distemper having lain dormant in the Parents.

Secondly, they may be born with the Patient; being excited by the Mother's Imagination, upon seeing a Person in epileptic Fits.

Thirdly, Injuries done to the Meninges, Superficies, Substance, or Ventricles of the Brain, either by Wounds, Contusions, Abscesses, Pus, Sanies, Ichor, Blood, acrid and fetid Lymph, bony Excrescences of the internal Parts of the Cranium, Depressions of the Skull, a cartilaginous State of the Sinuses of the Dura Mater, Fragments or Splinters of Bones, or of Instruments wounding the Meninges or Brain, or Quick-silver by any means convey'd to the Brain, may cause an Epilepsy: Or it may arise from ill Impressions on the Brain from Inflammations, Corruptions, or Erosions of the Meninges, from a Caries of the Bone, black Bile, or Venereal Gummata. But all these Causes are enhanc'd by whatever causes an Afflux of Blood to the Head; as a Plethora, Motion, Heat, Drunkenness, Gluttony, Venereal Enjoyments, an extraordinary Quickness of Parts, and profound Genius, deep Meditation, great Affections of the Mind, a strong Imagination, and particularly Fear and Terror.

Fourthly, all things violently affecting the nervous System may produce an Epilepsy; as great and periodical Pains, the hysteric Passion, Rosions and Irritations of the intestinal Tube by Worms, difficult Dentition, any acrid Humour, the curdled, acrid, and acid Milk in the Stomachs of Infants, the Meconium retain'd, variolous Contagion, the Heart-burn, any ulcerous Matter contain'd in any Part of the Body, Hunger, a Surfeit, all Sorts of acrid Meats, Drinks, Medicines, and Poisons.

Fifthly, an Epilepsy may arise from a Suppression of some habitual Evacuation, whether of Sanies, Pus, the menstrual, lochial, or hæmorrhoidal Discharge, or of Urine.

Sixthly, Fumes arising from distant Parts of the Body, where the immediate Cause resides, may ascend to the Brain, and excite an epileptic Paroxysm; and in this Case there is a Sensation of a sort of Vapour ascending to the Head.

It appears from Observation, and Dissections, that these are the genuine Causes of Epilepsies.

In consequence of an Epilepsy, first, the Brain is impair'd by so many violent and repeated Convulsions; whence Vacillation of the Memory, Dulness of the Senses, Idiotism, Palsies, Apoplexies, and Death.

Secondly, the Nerves and Muscles are injur'd; whence these, and consequently the Limbs, are contracted, distorted, and deform'd.

Thirdly, the violent Spasms excite an Inflammation, Gangrene, and Blackness of the Parts; those especially which are adjacent to the Muscles convuls'd.

Fourthly, many involuntary Secretions are made during the Violence of the Paroxysm: Thus Meat, Drink, Lymph, Bile, Froth, Mucus, and Saliva, are discharg'd upwards; and green Faces, Seed, and Urine, downwards; and Blood both ways.

An hereditary Epilepsy is incurable. An idiopathic Epilepsy, or that whose Cause resides within the Cranium, is very difficult of Cure, because the Parts affected are, in some degree, out of the Reach of Medicines: But a symptomatic Epilepsy is often to be cur'd.

From what has been said relative to an Epilepsy, it appears, that various Remedies and different Methods of Cure, are requir'd in this Disorder; which must be determin'd from a Knowledge of the Cause of the offending Matter, of the Part to which Remedies are to be directed, and of the Emunctories by which the Matter producing the Disorder is to be expel'd.

In order to treat an Epilepsy judiciously, we must first examine strictly, and inform ourselves, whether it is hereditary, idiopathic, or symptomatical; and then diligently search where the stimulating Matter resides, which causes the Epilepsy: And by this means we may be able to adapt a proper Remedy to the Cause of the Distemper; and not run into the Error of those who treat all Kinds of Epilepsies in the same manner, by which the Disease is often render'd much worse.

Those Epilepsies which arise from the first and second Causes above-mentioned, that is, those which are hereditary, or brought into the World with the Patient, admit of no radical Cure; but the remote Causes which excite the Paroxysm, and which are continually renew'd, may be safely remov'd: These are infinite, and can be learnt by Observation only; they are, therefore, diligently to be remark'd; and, when known, treated according to their respective Natures.

Tho' it may not be possible to remove entirely the first Cause of an Epilepsy, yet 'tis in our Power always, to take away the exciting Causes: For Example, if an Excrescence within the Cranium is the original Cause of an Epilepsy, tho' that cannot be remov'd, yet we may prevent the Brain from being forc'd against it by a Plethora, or extraordinary Motion of the Blood.

Epilepsies, produc'd by the third Causes mentioned above, are distinguish'd by other Symptoms of an injur'd Brain, accompanying them, or preceding them; as Pain, Heaviness, Fulness, a Wound of the Head, a Vertigo, universal Tremor, Sparkling, or Immobility of the Eyes, Circumgyration of the Head, or of the whole Body. It is very difficult to remove Causes of this Kind, because it is no easy Matter to be particular in distinguishing them, as they reside within the Cranium: Revulsion, however, Evacuations, discutient and depuratory Remedies, are of Use: Hence Bleeding, Cathartics, Emetics, Applications of the actual Cautery, Issues, Setons, Epispastics, Incisions of the Head, Trepanning, Antihysterics, and Opiates, are serviceable; and the Choice of these must be directed by the immediate Cause, when that can be discover'd.

The Method of treating Epilepsies arising from the fourth Class of Causes must be adapted to the particular immediate Cause: Hence Anodynes, Paregorics, Narcotics, Antihysterics, Anthelminthics, Medicines which attemperate the Humours, and correct Acrimony, a proper Incision of the Gums, a Removal or Correction of ulcerous Matter, are, when properly apply'd, Antiepileptics.

When the fifth Cause, that is, a Suppression of some habitual Evacuation, causes an Epilepsy, the immoveable and stagnating Matter must be resolv'd, the Passages relax'd, and the Matter evacuated: Hence Vesicatories, Caustics, Issues, Setons, Medicines which promote the lochial, menstrual, or hæmorrhoidal Discharges, and Diuretics, are frequently of singular Benefit.

Epilepsies arising from the sixth Cause may be remov'd by curing the Weakness of the too easily irritable nervous System: This is to be accomplish'd by Exercise and Motion of all Kinds, as Riding on Horseback, or in a Chariot; by the Use of Aromatics, Steel, and corroborative Medicines; as also by deep and long-continued artificial Exulcerations of the particular Part where the Cause resides, either by Incision, Caustics, or Vesicatories, which are to be kept running for a long time; by the Application of Suppuratives mix'd with Corrosives; and, lastly, by Ligatures, which compress the particular Nerves affected.

Some People ſubject to Epilepſies at firſt complain of a Senſation like the Dropping of cold Water on ſome Part, where the Fit always begins, as the Calcaneum, Calf of the Leg, Shoulder, &c. and then this Senſation gradually aſcends towards the Head. In ſuch Caſes, if a Ligature can be made before this Senſation aſcends as far as the Trunk, the Paroxyſm is prevented: But if, in the Aſcent from the inferior Parts, it once reaches the Left Hypochondrium, the Fit begins; as it does, when it reaches the Neck, if it proceeds from the Shoulders or Arms.

The following Caſe, from the *Edinburgh Medical Eſſays*, and thoſe given under the Article ALBADARA, relate to this Species of Epilepſy:

In *July* 1720, a Woman about thirty-eight Years of Age was brought to me; ſhe had labour'd twelve Years under an Epilepſy, which, from one Fit a Month, was come to four or five violent ones every Day, each continuing an Hour, or an Hour and an half; by which ſhe was render'd mopiſh and ſilly, and incapable to take care of her Houſe and Family: Her Huſband was reduced in his Circumſtances, from his Affection and Care for her, having got and followed all the Advice he could. Evacuations of all Kinds had been tried; the epileptic and cephalic Tribe of Medicines had been ranſack'd, and many other Medicines had been tried in vain, the Diſeaſe growing more ſevere: Her Fit always began in her Leg, toward the lower End of the Gaſtrocnemii Muſcles; and in a Moment reach'd her Head, threw her down, foaming at her Mouth, with terrible Diſtortions of the Mouth, Neck, and Joints. Whilſt I talked to her, ſhe fell down in a Fit: I examined the Leg, and found no Swelling, Hardneſs, Laxneſs, or Redneſs, different in that Place from what was in the other Leg; but ſuſpecting, from her Fit beginning always at that Part, that the Cauſe of her Diſeaſe lay there, I immediately plunged an Inciſion-knife about two Inches into it; where I found a ſmall indurated Body, which I ſeparated from the Muſcles, and then took it up with a Forceps: It proved an hard cartilaginous Subſtance or Ganglion, about the Size of a very large Pea, ſeated on a Nerve, which I cut aſunder, and took out the Tumor. She inſtantly came out of the Fit, cried out ſhe was well, and never after had a Fit, but recovered her former Vigour both of Body and Mind. *Med. Eſſays, Vol.* 4. *p.* 416.

From what has been ſaid, it evidently appears, how little Dependence is to be had upon all the boaſted antiepileptic Specifics; that a genuine Epilepſy is always immediately caus'd by too forcible an Action of the Brain on the Nerves adminiſtring to muſcular Motion; whilſt thoſe ſubſervient to Senſation are depriv'd of a due Influx of the nervous Fluid; and that the Cauſes exciting a Paroxyſm are very different and numerous.

Hence alſo the Origin, Nature, Effects, and Cure, of thoſe ſingular Species of Convulſions call'd *Opiſthotonos*, *Emproſthotonos*, and *Tetanus*, are evident, as they are only particular epileptic Paroxyſms. *Boerhaave Aph.*

Salt of Tin was once thought, by the celebrated Author above-mentioned, a ſort of Specific in the Cure of an Epilepſy, from ſome ſucceſsful Experiments he made with it; but farther Experience convinc'd him, that it was a Cure only for that Species of Epilepſy, which is caus'd by an Acid ſtimulating the nervous Coats of the Stomach and Inteſtines.

Henricus a Bra, a Phyſician of *Zutphen*, has wrote a Book expreſly upon the Subject of antiepileptic Specifics. It is printed *Leovardæ* 1616. 12mo.

EPILESMON, ἐπιλήσμων· from ἐπιλανθάνομαι, to forget; one who has loſt his Memory. *Coac.* 161. where it is ſaid, that an Apoplexy, Epilepſy, or Loſs of Memory may be expected from a Cephalalgia without a Fever, a Scotomia, a Slowneſs of the Voice, or a Numbneſs of the Hands.

EPILOGISMUS, ἐπιλογισμὸς· from ἐπιλογίζομαι, to infer by Ratiocination; is the Method of acquiring Knowledge, founded on common Reaſon, and univerſal Aſſent; as *Analogiſmus* collects it from things evident. *Galen, Com.* 1. *in Progn.* Ἐπιλογισμὸς is, alſo, ὁ φαινόμενος λόγος, "an apparent "Reaſon;" or Way of Reaſoning, which taking its Beginning from things manifeſt, and never loſing Sight of them, makes its way to Objects, which, tho' ſenſible, are yet obſcure. *Idem, de Sectis ad eos qui introducuntur:* And, in the laſt Senſe, ἐπιλογισμὸς is an empiric Way of Ratiocination, which is converſant about Things; as ἀναλογισμὸς has for its Object Things occult and obſcure. *Idem, de Subfigurat. empirica.*

EPILOGOS, ἐπίλογος· from ἐπιλέγω, to add to what has been ſaid; in *Hippocrates, de Nat. Hum.* bears a peculiar Senſe, and ſignifies a Way of Reaſoning, or Ratiocination.

EPIMEDIUM.

The Characters are;

The Leaves are like thoſe of Ivy, and grow three on the Top of each Branch: The Stalk is divided into three Branches at each Joint, and the triple Diviſion is continued in the Subdiviſions: The Calyx is compos'd of four Leaves: The Flower conſiſts of four Petals, which are tubulated and hollow'd into blind Canals, and furniſhed with four Stamina: The Ovary is ſeated in the Bottom of the Calyx, and is furniſh'd with an erect Tube or Pointal, which becomes an unicapſular bivalve Pod, containing round flat Seeds. *Boerhaave, Index alter, Part.* 1. *p.* 307.

Boerhaave mentions but one Species of this Plant; which is,

Epimedium, *Offic. Ger.* 389. *Emac.* 480. *Raii Hiſt.* 2. 1330. *C. B. P.* 323. *Hiſt. Oxon.* 2. 196. *Park. Theat.* 1365. *Tourn. Inſt.* 232. *Elem. Bot.* 199. *Boerh. Ind.* 307. *Epimedium quorundam*, J. B. 2. 395. *Epimedium quorundam floribus purpureis cum apicibus luteis*, Chab. 165. BARRENWORT.

It is cultivated with us in Gardens, and the Root and Leaves are the Parts uſed in Medicine: The Leaves triturated, and made into a Cataplaſm with Oil, and ſo apply'd to the Breaſts, prevent their farther Growth: The Root cauſes Barrenneſs: The Leaves triturated, and drank to the Quantity of five Drams, in Wine, for five Days together, after the menſtrual Purgation, effectually prevent Conception. *Dioſcorides, Lib.* 4. *Cap.* 19.

EPIMELIS, ἐπιμηλὶς. *Galen*, in his *Exegeſis*, ſays, that *Dioſcorides*, in the firſt Book of his *Materia Medica*, makes the *Epimelis* a kind of Medlar, call'd alſo *Sitanian*. But ſome take it for a ſort of ſmall wild Apple, call'd alſo AMAMELIS, which ſee.

EPIMORIOS, ἐπιμόριος, from μέρος, to divide; ſuperpartial, in *Galen, de Diff. Pulſ. Lib.* 1. *Cap.* 9. is an Epithet of the Difference of Pulſes with reſpect to their Inequality of the Rythm or Time which they keep in beating. All Rythms (or Modulations of the Pulſe, with reſpect to Number) conſiſt; he ſays, of equal or unequal Proportion; of equal, when the Time of the Diſtention is equal to the Time of Contraction; unequal, when one exceeds the other; and this Inequality may ariſe from certain or uncertain Exceſſes; the certain Exceſſes may either be in multiple Proportion, or as Number to Number, which is call'd EPIMORIOS. See ARYTHMOS.

EPIMULIS, ἐπιμυλὶς, the ſame with ἐπιγονατὶς, (Epigonatis) or μύλη, (*Myle*) the *Patella* of the Knee.

EPINEMESIS, ἐπινέμησις ἢ ἐπινέμησις, from νέμω, to diſtribute, *Hippoc.* ἐν παραγγελ. is a juſt and prudent Management requir'd in a Phyſician, under the various Alterations of the Diſeaſe, as it is exaſperated or remitted.

EPINENEUCOS, ἐπινενευκὼς, from νεύω, to nod, incline, is an Epithet of a Pulſe which beats unequally in different Parts of the Artery, as when it riſes ſtrong againſt the two middle Fingers of the Phyſician who feels it, and weaker at the Extremes; it is alſo call'd περινενευκὼς, (Perineneucos) and is familiar, as *Galen* ſays, to Hectics.

EPINEPHELOS, ἐπινέφελος, from νεφέλη, a Cloud, cloudy; is an Epithet applied to an Enæoremia in the Urine, which appears like a Cloud, as in *Ægr.* 1, 3, 5. *Epidem. Lib.* 3. It is ſometimes taken ſubſtantively, and has ἐρυθὸς, "red," join'd with it, as 4 *Aph.* 70. where it is ſaid, that when the Diſeaſe comes to a Criſis on the ſeventh Day, a red Cloud appears in the Urine on the fourth Day.

EPINOEMA, ἐπινόημα, from ἐπινοέω, to excogitate, an Invention. *Hippocrates de Art.*

EPINOTION, ἐπινώτιον, from ἐπὶ, upon, and νῶτος, the Shoulder; *Omoplata*, or Shoulderblade.

EPINYCTIS, ἐπινυκτὶς, from ἐπὶ, on, and νὺξ, Night, is a very bad Sort of Puſtule, as *Celſus* ſays, of a white or ſomewhat livid or black Colour, the ſame as its Humour, and attended with a violent Inflammation all around it; when it is open'd, there is an Efflux of Sanies, and a mucous Exulceration is found within. The Pain is more violent than in proportion to its Magnitude; for it is no bigger than a Bean. It ariſes in the upper Parts, and breaks out ſpontaneouſly, and generally by Night; whence it took its Name *Epinyctis*. Thus *Celſus*. We are told by *Paulus* and *Aetius*, that it creates no great Pain to the Patient in the Day-time, but is very painful and troubleſome in the Night; whence it had the Name. Now, both Sides may be in the Right; for, it is probable, that the Hour of its Eruption might be alſo that of its Exacerbation: In the other Characters they agree with *Celſus*; nor does it hinder, that he calls them Puſtules, and they ſmall Ulcers; for Puſtules are really ſuch; or that he deſcribes them of various Colour, and they reddiſh; for under this are comprehended the ſublivid and the blackiſh. The *Epinyctis* is defin'd by *Pliny, Lib.* 20. *Cap.* 6. a nocturnal Puſtule of a livid Colour, and moſt troubleſome in the Night. They are reckon'd by *Celſus* among thoſe Kinds of Puſtules which infeſt the Skin; and, by *Galen*, among preternatural Tumors, which deform the Skin, in *Lib. de Aere, Locis, & Aquis, Epinyctides* are accounted among endemic Diſtempers.

In the Cure of this, as well as all other Eruptions of Puſtules, the firſt Thing is, to walk much, and to uſe Exerciſe, if the Diſeaſe will not admit of Geſtation: The ſecond Means is, to diminiſh the Food, and abſtain from all acrimonious and extenuating Meats, and to make the Nurſe do the

ſame, if it be a ſucking Child who is affected in this manner. Beſides this, if the Puſtules be ſmall, and the Patient robuſt, he ought to ſweat in the Bath; and, at the ſame time, to ſprinkle Nitre upon the Puſtules, and anoint himſelf with a Mixture of Wine and Oil, and then deſcend into the Solium. If this Method be ineffectual, or if the Puſtules be remarkably large, an Application of Lentils is to be made; and the Cuticle being removed, we muſt proceed to mild Medicines. The *Epinyctis*, in particular, after the Uſe of Lentils, is ſucceſsfully cured by the Uſe of the *Herba Sanguinalis*, and green Coriander. Ulcerations from Puſtules are healed by Litharge, mixed with the Seed of Fenugreek, and moiſten'd with Oil of Roſes, and Juice of Endive, to the Conſiſtence of Honey. For Infants, in particular, affected with the Puſtules, take of the Stone call'd *Pyrites*, eight Drams twenty Grains, with fifty bitter Almonds; and mix them with a Quarter of a Pint of Oil, and anoint the Parts; but, before this is uſed, the Puſtules muſt be anointed with Ceruſs. *Celſus, L.* 5. *Cap.* 28.

EPIOS, ἤπιος, mild, gentle, an Epithet beſtow'd by *Hippocrates*, in the *Epidemics*, on Fevers of a favourable Kind.

EPIPACTIS, ἐπιπακτὶς, by ſome call'd *Helleborine*, is a ſmall Shrub, with very ſmall Leaves; it is good, being drank, againſt Poiſons, and hepatic Diſorders. *Dioſcorides, Lib.* 4. *Cap.* 109.

Boerhaave takes this to be the *Helleborine latifolia montana*.

EPIPAROXYSMUS, ἐπιπαροξυσμὸς, (from ἐπὶ, a Propoſition importing Addition to the Word with which it is compounded, and παροξυσμὸς, a Paroxyſm, or Exacerbation) is, when the Patient ſuffers more Exacerbations than are uſual in a Fever.

EPIPASTON, ἐπίπαστον, (φάρμακον) the ſame as CATAPASMA, which ſee.

EPIPECHY, ἐπίπηχυ, from ἐπὶ, above, and πῆχυς, the Cubit, is the Part of the Arm above the Cubit, as the *Agoſtus* (which ſee) is the Part below it.

EPIPEPHYCOS, ἐπιπεφυκὼς, from ἐπὶ, upon, or cloſe to, and φύω, to grow, ſignifies the ſame as ADNATA, which ſee.

EPIPHÆNOMENA, ἐπιφαινόμενα, from ἐπὶ, importing Addition, and φαινόμενον, a Phænomenon, or Symptom, in 1 *Aph.* 12. are thoſe adventitious Symptoms which appear not before the Diſeaſe is actually form'd, and ſeem to be much the ſame with the EPIGINOMENA, which ſee.

EPIPHANIA, ἐπιφάνια, from ἐπὶ, upon, and φαίνομαι, to appear, was a Word, uſed by one *Theon*, a Phyſician, to ſignify the exterior Habit of the Body. *Galen, de Sanit. tuend. Lib.* 3. *Cap.* 8.

EPIPHLEBOS, ἐπίφλεβος, from ἐπὶ, and φλὲψ, a Vein, is one whoſe Veins appear prominent and conſpicuous, as in thoſe who are lean, and of a hot Temperament. The Word occurs 6 *Epid. Sect.* 4. *Aph.* 23. and in *Aretæus, de Curat. Acut. Morb. Lib.* 2. *Cap.* 2.

EPIPHLOGISMA, ἐπιφλόγισμα, from ἐπὶ, and φλογίζω, to inflame, of φλὸξ, a Flame, in 5 *Aph.* 23. is a violent Inflammation, attended with a Pain, and a Tumor of a ſort of reddiſh and ſanguineous Colour, from the Blood which lately flow'd to the Part, where *Galen* expounds ἐπιφλογίσματα, by an Ardor and Fervor, like that of a Flame, from the exceſſive Heat of the Humours.

EPIPHORA, ἐπιφορὰ, from ἐπιφέρω, to carry with a Force, ſignifies, in a medicinal Senſe, an impetuous Flux of the Humours, eſpecially an inflammatory one of the Blood, to the whole Body, or any Part thereof; but is more particularly uſed for an inflammatory Influx of the Humours upon the Eye. *Galen, de C. M. S. L. Lib.* 4. *Cap.* 7.

What Phyſicians call *Epiphora*, or a weeping Eye, is that Species of Diſorder in which the Tears do not, as they ought, deſcend from the *Puncta Lachrymalia*, but drivel from the Eyes, over the Cheeks, in ſuch a manner, as at once to produce Deformity and Pain in the Patient. Some confound this Diſorder with a *Fiſtula Lachrymalis*, but improperly; ſince, in the latter, pure Tears are not diſcharged, but Tears, mix'd with a purulent Matter, flowing from a latent Ulcer in the *Saccus Lachrymalis*. But, that we may the more eaſily and accurately diſcover the Nature of both theſe Diſorders, we ſhall, as briefly as poſſible, exhibit the State, Figure, and Situation, of the lachrymal Ducts or Paſſages. In *Tab.* 37. *Fig.* 6. the Letters *a a* repreſent the Puncta Lachrymalia in the Eyelids; and *b*, the Caruncula Lachrymalis. *Fig.* 7 and 8. repreſent the Ductus Lachrymales of both Eyes, entire, ſeparate, and in ſuch a State as they paſs from the Eyelids to the Noſtrils. The Letters *a a* exhibit the Saccus Lachrymalis; *b b*, the Puncta Lachrymalia, with their Ducts or ſmall Tubes, *c c c c*, running off to the Saccus Lachrymalis. The Letters *d d* repreſent the naſal Duct; and *e e*, its Mouth, opening in the Noſtrils. *Fig.* 9. repreſents the Communication of theſe Ducts with the Eyes; *a a*, the Puncta Lachrymalia; *b*, the Caruncula Lachrymalis; *c c*, the Ducts running from the Puncta Lachrymalia to the Saccus Lachrymalis *d*; *e*, the naſal Duct; and *f*, its Extremity, opening into the Noſtrils.

This Diſorder may ariſe from various Cauſes; for whatever prevents the Courſe of the Humours from the Eye through the Puncta Lachrymalia and naſal Duct to the Noſtrils, produces an *Epiphora*, or weeping Eye; for ſo long as the Eye and lachrymal Duct are ſound and entire, that Liquor diſcharged from the Glandula Lachrymalis, for moiſtening and cleanſing the Eye, inſenſibly drops through the Puncta Lachrymalia, the Saccus Lachrymalis, and the naſal Duct, into the Noſtrils. A weeping Eye, or the Oculus Lachrymans, is produced,

Firſt, when any Tumor, or Tubercle, ſuch as an Encanthis, appears in the greater Canthus, or that which is next to the Noſe, and diſorders the Puncta Lachrymalia.

Secondly, when, after an Exulceration, Burn, or any other Misfortune of the Eyelids, the Puncta Lachrymalia are cloſed up and obſtructed.

Thirdly, when the naſal Duct is either obſtructed, or totally conglutinated; for when the Saccus Lachrymalis is ſo full, that no more can enter therein, it muſt neceſſarily happen, that the Humours continually diſcharged in large Quantities from the Glandula Lachrymalis, muſt run down the Cheeks. The naſal Duct is generally obſtructed, when it is either filled with a thick, viſcid, and glutinous Matter, or when juſt by the Noſtrils it is affected with an Inflammation capable of conglutinating it.

Fourthly, the Epiphora may be produced by a Polypus, a Caruncle, or fleſhy Excreſcence of the Noſe; for theſe Subſtances obſtruct and compreſs the Ductus Lachrymalis Naſalis.

Fifthly, this Diſorder may ariſe from a Fiſtula Lachrymalis.

Sixthly, from an Inverſion of the Eyelids, or that Species of Diſorder call'd ECTROPIUM, which ſee.

Seventhly, from an Eroſion or Defect of the Caruncula Lachrymalis.

Eighthly and laſtly, from a Wound of the lachrymal Ducts, and their Agglutination by a bad Cicatrice.

The Preſence of this Diſorder may be eaſily known, both from the Relation and Aſpect of the Patient; but 'tis no ſuch eaſy Taſk to find out its true and genuine Cauſe; which, however, is more readily diſcovered in ſome than in other Caſes; for when it ariſes from a Defect of the Caruncula Lachrymalis, a Diſtortion of the Eyelids, an Encanthis in the greater Canthus, or a Polypus in the Noſe, the Cauſe is immediately ſubjected to our Senſes. But when the Diſorder ariſes from a Conglutination of the Puncta Lachrymalia, the genuine Cauſe can ſcarce otherwiſe be inveſtigated than by a careful Conſideration of previous Injuries, ſuch as Burning and Exulceration, together with an accurate Inſpection of the Puncta Lachrymalia themſelves. When the Diſorder ariſes, either from the Obſtruction or Conglutination of the naſal Duct, the Puncta Lachrymalia are open, and the Tears flow through them into the Saccus Lachrymalis; but becauſe, in conſequence of the Obſtruction of the naſal Duct, they cannot be convey'd to the Noſtrils, they ſtagnate in the Saccus Lachrymalis, and generally diſtend it like an Hernia; for which Reaſon, this Species of the Diſorder is call'd Hernia Lachrymalis. And *Anel*, in his *Diſſert. ſur la nouvelle Decouverte de l' Hydropſie du Conduit Lachrymal*, Paris, 1716. calls it a Dropſy of the Saccus Lachrymalis. When the Saccus Lachrymalis, or the Part between the Caruncula Lachrymalis and the Noſe, is preſs'd with the Finger, [See *Tab.* 37. *Fig.* 10. *Lett.* A] it generally diſcharges an Humour, not, as it ought, into the Noſtrils, but only through the Puncta Lachrymalia into the Eye itſelf; for the Succus Lachrymalis, in conſequence of the Tears collected in it, often becomes ſo tumid as to appear externally; and when this Tumor is preſſed with the Finger, and its Contents expreſſed, it either totally diſappears, or, at leaſt, is conſiderably leſſen'd. If there is a Fiſtula Lachrymalis, it is diſcover'd when the Saccus Lachrymalis is compreſs'd by a purulent Matter flowing from the larger Canthus, or Angle of the Eye; whereas in an *Epiphora* an aqueous Liquid is only diſcharged.

The Prognoſtics, and Method of Cure, in this Diſorder, are various, according to the different Cauſes from which it may poſſibly proceed; for if a Tumor of the larger Canthus, a Polypus of the Noſe, a Diſtortion of the Eyelids, or a Fiſtula Lachrymalis, ſhould produce an *Epiphora*, or weeping Eye, the Diſorder cannot be removed, till its reſpective Cauſes are taken away. When the *Epiphora* ariſes from a Conglutination of the Puncta Lachrymalia, we ought carefully to examine, whether their Ducts *c c*, in *Fig.* 7. and 8. are totally conglutinated, or whether their Mouths, *b b*, are only cloſed up by a ſlender Cuticle; for when the Ducts of the Puncta Lachrymalia are totally conglutinated, either by ſome internal Cauſe, or Cicatrices form'd after Wounds or Burns of the lachrymal Ducts, there remain little or no Hopes of a Cure. But if a ſlender Cuticle ſhould only block up the Ducts of the Puncta Lachrymalia, which ſometimes happens, the moſt proper Method is cautiouſly to perforate that Cuticle with a Needle, and

then to paſs a Hog's-briſtle, or a Piece of ſlender ſilver Wire, anointed with Oil of Eggs, into the Perforations. Various Wires for this Purpoſe are repreſented by *Fig.* 11, 12, and 13. *Tab.* 37. and theſe Meaſures muſt be perſiſted in, till the Mouths of the Perforations are ſo effectually indurated as to prevent a future Conglutination.

But if, in this Diſorder, the Puncta Lachrymalia are ſound, and ſufficiently pervious, the naſal Duct muſt neceſſarily be obſtructed. And this Obſtruction, when proceeding from a glutinous Matter, which, by long Continuance, is not preternaturally indurated, is very often capable of being removed. For this Purpoſe the Patient is frequently every Day to be laid upon his Back, and have reſolvent Liquors dropt into the greater Canthus; then the Saccus Lachrymalis is carefully to be compreſs'd with the Fingers, leſt the Humours, by remaining long in it, ſhould contract a certain Acrimony, corrode the lachrymal Ducts, and gradually produce a Fiſtula Lachrymalis. Among the reſolvent Medicines ſuited to this Intention, the moſt conſiderable are, Eſſence of Aloes, prepar'd with the Aqua Ophthalmica; Eſſence of the Gall of the Eel-pout, prepar'd nearly in the ſame manner; warm Infuſions of the Herbs Hyſſop and Paul's Betony; Mineral Waters, ſuch as thoſe of *Wisboden*, the *Caroline* Springs, thoſe of *Emſer*, the *Selteran*, the *Sedlitz*, and other Waters of a like Nature, or any ophthalmic Waters, to be frequently dropt warm into the Eye, with an Admixture of a ſmall Portion of mineral Salt, obtain'd from the above-mention'd Waters. Beſides theſe, 'tis expedient ſometimes to draw up the Noſtrils an Errhine, or mild Sternutatory, prepar'd of Marjoram, Lilies of the Valley, Marum, and other Herbs of a like Quality. Spirit of Hartſhorn, or of Sal Ammoniac, may alſo be applied to the Noſtrils. If all theſe Medicines ſhould prove ineffectual, it will be expedient to uſe that new Method of Cure in a Fiſtula Lachrymalis, recommended by *Anel*, in which a certain ſlender ſilver Probe, like thoſe repreſented in *Tab.* 37. *Fig.* 11, 12, and 13. is cautiouſly and dexterouſly paſſed to the Noſtrils through the ſuperior Punctum Lachrymale, the Saccus Lachrymalis, and the Lachrymal Duct of the Noſe. But in performing this Operation, the Situation and Structure of the Lachrymal Ducts muſt be carefully adverted to, the Operator's Eye muſt be quick and diſcerning, his Hand ſteady, and well-accuſtomed to the niceſt chirurgical Operations; otherwiſe he will hardly ſucceed in the Operation. This Method ought to be perſiſted in for ſome Days; and every Morning and Evening, after introducing the ſilver Probe or Wire now mentioned, a ſmall Quantity of the above recommended Liquors, is, by means of the ſmall Syringe, repreſented in *Tab.* 37. *Fig.* 14. to be injected into the inferior Punctum Lachrymale, in order to cleanſe the Lachrymal Ducts, leſt the Paſſage of the Tears to the Noſtrils ſhould again be obſtructed. When this Species of Diſorder continues long, it generally degenerates into a Fiſtula Lachrymalis, and is to be treated as ſuch. When an *Epiphora* ariſes from a total Want of the Caruncula Lachrymalis, all Attempts of Relief are unſucceſsful; becauſe that Gland cannot be reſtor'd. *Heiſter*, *Chirurg.*

EPIPHYLLITIS. A Name for the *Opuntia*, *folio plano*, *glabro*, *ſcolopendriæ*. *Boerhaave*, *Index alter*.

EPIPHYLLOSPERMOPHEROUS Plants, (of ἐπὶ, upon, φύλλον, a Leaf, σπέρμα, Seed, and φέρω, to bear) are ſuch as bear their Seeds on the Back of their Leaves; as do all capillary Plants.

EPIPHYSIS, ἐπίφυσις, from ἐπιφύω, to grow to, or upon. An Epiphyſis, or Appendix; ſo called becauſe it appears as a Part added to a Bone, and is ſtill diſtinguiſhed from it by the Intervention of another ſofter Subſtance, called a Cartilage, the Thickneſs of which diminiſhing with Age, it becomes, at laſt, almoſt inſenſible; ſo that what was an Epiphyſis in a Child, has the Appearance of an Apophyſis in a Perſon full grown; as we ſee in the Extremities of the Os Humeri, Bones of the Leg,, and in other Parts.

Some Epiphyſes have Apophyſes belonging to them, as in the lower Extremity of the Tibia; and, on the contrary, there are Apophyſes which have Epiphyſes joined to them, as in the great Trochanter; and the Head of the Os Femoris is really an Epiphyſis of that Part of the Bone which is termed its Neck. *Winſlow*. See APOPHYSIS.

EPIPLASMA, ἐπίπλασμα, in general, is the ſame as CATAPLASMA, which ſee; but is a Name, in particular, for an Application of wheaten Meal, boiled in Hydrelæum, to Wounds. *Galen*, *de. C. M. S. L. Lib.* 3. *Cap.* 2. *in principio*.

EPIPLEROSIS, ἐπιπλήρωσις, from ἐπὶ, importing Addition, and πλήρωσις, Repletion. A Super-repletion. This Epipleroſis, as *Eraſiſtratus* called it, happened, in his Opinion, in the Arteries, when, in their Dilatation, they were repleniſhed with Spirit, emitted by the Heart, which was the Occaſion of their Diſtention. *Galen*, *de Diff. Pulſuum*, *Lib.* 4. *Cap.* 6. 27.

EPIPLEXIS, ἐπίπληξις, from ἐπιπλήσσω, to reprove, rebuke; *in Lib. περὶ δύσχημ.* is a Faculty of rebuking with a becoming Sharpneſs and Severity, which is a Talent required by *Hippocrates*, in a Phyſician; as fit to be exerciſed in caſe of tumultuous Noiſes, or Neglects of Duty in thoſe who attend the Sick.

EPIPLOCE, ἐπιπλοκὴ, from ἐπιπλέκω, to make a Mixture, or Contexture, is the ſame as Symploce, or COMPLEXIO, which ſee.

EPIPLOCELE, ἐπιπλοκήλη, from ἐπίπλοον, and κήλη, an Hernia, is an Hernia, in which the Omentum is fallen down. See HERNIA.

EPIPLOSCHEOCELE, ἐπιπλοσχεοκήλη, from the Words in the preceding Article, and ὀσχέον, the Scrotum. An Hernia attended with a Deſcent of the Omentum into the Scrotum.

EPIPLOOCOMISTES, ἐπιπλοοκομιστὴς, from ἐπίπλοον, the Omentum, and κομίζομαι, to poſſeſs, or have; is an Epithet beſtowed on Man, as having a very large Omentum, in compariſon of Brutes; though *Veſalius* affirms the contrary, and underſtands the Word to mean a Perſon furniſhed with an extraordinary, and, in a manner, preternaturally big Omentum. Or, laſtly, the Term may be applied to a Perſon labouring under an Epiplocele; as in *Galen*, *Adm. Anat. Lib.* 6. *Cap.* 5.

EPIPLOOMPHALON, ἐπιπλόομφαλον, from ἐπίπλοον, the Omentum, and ὀμφαλὸς, the Navel. An Hernia Umbilicalis, proceeding from the Omentum fallen out into the Region of the Umbilicus. *Galen*, *in Definit.*

EPIPLOON, ἐπίπλοον, ἐπίπλων· from ἐπιπλέω (of ἐπὶ, upon, and πλέω) to ſail upon, to float. The Omentum, or Cawl.

The Omentum is a large, thin, and fine membranous Bag, ſurrounded on all Sides by numerous Portions of Fat, which accompany, and even inveſt, the ſame Number of Arteries and Veins, adhering cloſely to each other.

The greateſt Part of it reſembles a kind of flat Purſe, or a Sportſman's empty Pouch; and is ſpread, more or leſs, on all the ſmall Inteſtines, from the Stomach to the lower Part of the Umbilical Region. Sometimes it goes down to the lower Part of the Hypogaſtrium, and ſometimes does not reach beyond the Epigaſtric Region. It is commonly plated, or foliated, in ſeveral Places, eſpecially between the Bands of Fat.

It is divided into a ſuperior and inferior, an anterior and poſterior, and a right and left Portion. The ſuperior Portion is, in a manner, divided into two Borders, one of which is fixed along the great Curvature, or convex Side of the Arch of the Colon, and the other along the great Curvature of the Stomach. The Commiſſure, or Union, of theſe two Borders, on the Right Side, is fixed to the common Ligament, or Adheſion of the Duodenum and Colon, and to the contiguous Parts of theſe two Inteſtines. That on the Left Side is fixed to the longitudinal Fiſſure of the Spleen, to the Extremity of the Pancreas, and to the convex Side of the great Extremity of the Stomach: It is likewiſe fixed to the membranous Ligament, which ſuſtains the Ductus Cholidochus, and connects it to the Vena Portæ Ventralis.

Below theſe Adheſions, the other Portions, that is, the anterior, poſterior, two lateral, and inferior Portions, which laſt is the Bottom of the Sacculus Epiploicus, have commonly no fixed Connexions, but lie looſe between the Foreſide of the Cavity of the Abdomen and Inteſtines. The anterior and poſterior Portions are generally called the Laminæ of the Omentum; but, as that Term is ordinarily employed to expreſs the Duplicature of ſome compound Membrane, it would be more convenient to call them Folia, Alæ, or ſome ſuch Name.

The Membrane of the Omentum is, through its whole Extent, made up of two extremely thin Laminæ, joined by a cellular Subſtance, the Quantity of which is very conſiderable along the Blood-veſſels, which it every-where accompanies in broad Bands, proportioned to the Branches and Ramifications of theſe Veſſels. Theſe cellular Bands are more or leſs filled with Fat, according to the Corpulency of the Subject; and, for that Reaſon, I have called them Bands, or Portions of Fat.

Beſides this large membranous Bag, which I name the great Omentum, there is another, much ſmaller, which differs from the large one, not only in Size, but alſo in Figure, Situation, and Connexion; and this I name the little Omentum. This ſmall Bag is fixed, by its whole Circumference, partly to the ſmall Curvature of the Stomach, and partly to the concave Side of the Liver, before the Sinus of the Vena Portæ, ſo as to ſurround and contain the prominent Portion of the Lobule.

The little Omentum is thinner, and more tranſparent, than the other; and its Cavity diminiſhes gradually from the Circumference to the Bottom, which, in ſome Subjects, terminates in ſeveral ſmall Cavities, or Foſſulæ, more or leſs pointed. Its Structure is pretty much the ſame with that of the great Omentum, it being compoſed of two Laminæ, with a Mixture of the ſame Portions of Fat, which are conſiderably finer than in the other.

We ſee, from this Situation of the two Omenta, that, in the Space left between the lower Side of the Stomach and upper Side of the Meſocolon, they have a very broad Communication with each other; ſo that if either of them contained, in its Cavity, any Fluid, that Fluid might readily get between the Stomach and Meſocolon, and ſo paſs into the other Bag, eſpecially when the Stomach is empty, and, conſequently, its Situation eaſily changed.

Therefore, by means of this Interſtice between the Stomach and Meſocolon, the two Omenta form one Cavity, which opens into the Cavity of the Abdomen by one common Orifice, ſituated near the Commiſſure, on the Right of the great Omentum. This Orifice is ſemilunar, or ſemicircular, and form'd by the Union of two membranous Ligaments, whereof one connects the Beginning of the Duodenum, and the Neck of the Gall-bladder, to the Liver; the other connects the contiguous Portion of the Colon to the ſame Part, and extends to the Pancreas. From thence ariſes an incurvated Border, which ſurrounds the Root of the Lobule, leaving an Opening wide enough to admit the End of the Finger.

To diſcover this Orifice of the Omentum, we need only raiſe a little the great Lobe of the Liver, and find out the Root of the Lobule, and apply to it a large Pipe, wrapt round with Cotton, Wool, or Tow, to hinder the Regreſs of the Air; then, if we blow gradually, the Air will inflate the Sides of the great Omentum, and give it the Appearance of a large Bladder, irregularly divided into ſeveral Lobes, or Tubercles, by the Bands of Fat, which appear, in this State, like ſo many Frena between the Lobes.

To be ſure of ſucceeding in this Experiment, the two Omenta muſt be in their natural State, and they muſt be handled very gently, with the Fingers dipt in Oil. It ſucceeds better in young lean Subjects, than in old or fat Subjects.

When we touch the Membranes with dry Fingers, they ſtick to them ſo cloſely as hardly to be ſeparated without being torn, as we ſee by the reticular Holes which appear in thoſe Portions of the Membranes that have been thus handled. In that Caſe it will be to no Purpoſe to blow through the natural Orifice already mentioned; and it is owing to theſe ſmall Holes, that the Membranes of the Omentum have been ſuppoſed to be naturally reticular.

The membranous Laminæ of the little Omentum are continuous partly with the external Membrane of the Liver, partly with that of the Stomach, and a little with the Membrane that lines the neighbouring Portion of the Diaphragm. Thoſe of the great Omentum are continued partly with the ſame Coat of the Stomach, and partly with the external Covering of the Colon, and conſequently with the Meſocolon; and they, likewiſe, communicate with the Covering of the Spleen.

We may ſatisfy ourſelves concerning theſe Continuations, by making a ſmall Hole in one of the Laminæ of the Omentum, near the Stomach, and Colon, and by blowing into that Hole, through a Pipe well fitted to it; for the Air will gradually inſinuate itſelf under the common Coats of theſe Viſcera: But, if the Parts be dry, they muſt be moiſtened a little before the Experiment is made.

The fatty Appendices of the Colon and Rectum have always appeared to me to be a kind of ſmall Omenta, or Appendices Epiploicæ. They are ſituated at different Diſtances along the Inteſtines, being particular Elongations of their common or external Coat. They are of the ſame Structure with the great Omenta, and there is a cellular Subſtance contained in their Duplicature, more or leſs filled with Fat, according as the Subject is fat or lean.

Next the Inteſtine, each of them forms a broad thin Baſis, and they terminate by irregular Papillæ, thicker than their Baſes. Theſe Baſes are at firſt diſpoſed longitudinally, then obliquely, and, laſtly, more or leſs tranſverſely, eſpecially near the Rectum, and upon that Inteſtine.

Theſe Appendices are, for the moſt part, ſeparated from each other; but ſome of theſe, which have longitudinal Baſes, communicate together, the Veſtiges of their Communications being very narrow, and not very prominent. By blowing through a ſmall Hole made in one of the Appendices, it is inflated, like a ſmall irregular Bladder; and the Air paſſes under the adjacent Coat of the Colon, or Rectum.

Beſides theſe Appendices Epiploicæ, we obſerve, at different Diſtances, along the Colon, between the ligamentary Band, which lies hid, and one of the other two, that is, on both Sides of the Adheſion of the Meſocolon, ſeveral adipoſe Strata, which may likewiſe be looked upon as Appendices, of the ſame Nature with the former; but theſe Strata are very ſeldom obſerved between the two apparent ligamentary Bands of the Colon.

The Arteries and Veins of the great Omentum are Branches of the Gaſtricæ, and, for that Reaſon, go by the Name of Gaſtro-epiploicæ dextræ and ſiniſtræ. The Arteries, on the Right Side, anſwer to the hepatic Artery; and thoſe on the Left Side, to the ſplenic; and both communicate with the Arteria Ventriculi Coronaria, and reſpectively with the Arteriæ Meſentericæ. The Gaſtro-epiploic Veins anſwer, in the ſame manner of Diſtribution, to the Vena Portæ.

The Veſſels of the little Omentum come principally from the Coronariæ Ventriculi; and thoſe of the Appendices and Strata are Ramifications from the reticular Texture of the Arteries and Veins of the Colon and Rectum. *Winſlow's Anat.*

EPIPOLÆUS, ἐπιπόλαιος, from ἐπιπολὴ, the Superficies; (of ἐπὶ, upon, or above, and πολέω, to act, or be concern'd) ſuperficial, ſlight, gentle, is applied, by *Hippocrates*, to Wounds, Thirſt, Fevers, which are mild, gentle, ſlight, and no way dangerous.

EPIPOLASIS, ἐπιπόλασις, in *Hippocrates*, *Lib. de Humoribus*, is a Redundance and Fluctuation, from ἐπιπολάζω, to be redundant; uſed *de Nat. human.* 1 *Epid.* & *Lib.* 2. *de Diæt.*

Epipolaſis, in Chymiſtry, is when what is ſublimed aſcends only to the Surface, and there ſettles. Eſſences are principally concerned in this Operation, when ſublimed from the Centre to the Surface; though, ſometimes, Repurgation is perform'd the ſame way. *Rulandus.*

EPIPOROMA, ἐπιπώρωμα, from πῶρος, a callous Concretion, is a Tophus, or tophaceous Callus, moleſting the Joints. *Hippocrates*, 2 *Prorrhet.*

EPIRRHOE, ἐπιῤῥοὴ, from ἐπιῤῥέω, to flow into; is an Influx of Humours into any Part. *Hippocrates*, 5 *Aph.* 23.

EPISARCIDIUM, ἐπισαρκίδιον, from σὰρξ, the Fleſh; is the ſame as ANASARCA.

EPISCHESIS, ἐπίσχεσις, from ἴσχω, to ſtop, retain, is a Suppreſſion of due Excretions. *Galen*, *Com.* 2. *in* 3 *Epid.*

EPISCHION, ἐπισχίον, from ἐπὶ, upon, and ἰσχίον, the Iſchium; is the Pecten, or Os Pubis. *Caſtellus.*

EPISCOPALES VALVULÆ, the ſame as the Valvulæ Mitrales, are, particularly, two Valves in the pulmonary Vein, which prevent the Reflux of the Blood to the Heart. *Blancard.*

EPISEION, ἐπίσειον. The Pubes. *Hippocrates*, *Lib.* 1. περὶ γυναικ.

EPISEMASIA, ἐπσημάσια, from ἐπσημαίνω, to indicate; is the ſame as ANNOTATIO, which ſee. The Verb ἐπσημαίνειν, in *Hippocrates*, *de Morbo Sacro*, bears a very peculiar Senſe, ſignifying to receive a Mark, or Characteriſtic, from the Paroxyſm of an Epilepſy, as a Diſtortion of an Eye; whence ſuch Patients are called ἐπίσημα παιδία, "characterized Children;" and ſuch as have no ſuch Diſtinction, take the Appellation of ἄσημα, "uncharacterized." *Caſtellus.*

EPISION. The ſame as EPISEION. *Blancard.*

EPISPASMOS, ἐπισπασμὸς, from ἐπισπάω, to attract, in *Hippocrates*, according to *Galen*, *Com. in* 6 *Epid. Sect.* 5. *Aph.* 30. is the ſame as εἰσπνοὴ, "Inſpiration;" or, as others will have it, a more quick and frequent Inſpiration than is natural. What Kind of ſorbile Liquors *Hippocrates* means by his ἐπισπαστικὰ ῥοφήματα, *Lib. de R. V. I. A. Galen*, in his Comment, ſays, cannot be determined. But *Hor. Augen. Epiſt.* & *Conſil. Med. T.* 2. takes them to be ſorbile Aliments, mix'd with Purgatives. In a particular Senſe, *Epiſpaſticum Medicamentum*, a dry Medicine, prepared for the Cure of malignant Ulcers by Inſperſion, and *Epiſpaſticum Emplaſtrum*, in *Scribonius Largus*, *N.* 216. is a drawing Plaiſter, for extracting of Pus, or whatever elſe requires Extraction. *Caſtellus.*

EPISPASTICA, ἐπισπαστικὰ, from ἐπισπάω, to attract. Epiſpaſtic. See VESICATORIA and CANTHARIDES.

EPISPHÆRIA, ἐπισφαίρια, from σφαῖρα, a Sphere. The Turnings and Windings of the exterior Subſtance of the Brain. *Blancard.*

EPISTASIS, ἐπίσασις, from ἐφίσημι, to reſtrain, repreſs; in many Places of *Hippocrates*, ſignifies the ſame as EPISCHESIS, which ſee. But, *Lib. de Inſom.* and 7 *Aph.* 34. it ſignifies the Subſtance ſwimming on the Superficies of the Urine; in Oppoſition to *Hypoſtaſis*, the Sediment at the Bottom.

EPISTAXIS, ἐπίσαξις, from ἐπὶ, importing Addition, or Repetition, and σάζω, to diſtil, is uſed by *Hippocrates*, to ſignify a repeated Diſtillation of Blood from the Noſe; as, for Inſtance, on the critical Day, after a preceding Diſtillation on the indicatory Day, or EPIDELUS, which ſee.

EPISTOMION, ἐπιστόμιον, from στόμα, a Mouth. A Stopper. But it is uſed by ſome Chymiſts to ſignify the Mouth, or Vent-hole of a Furnace, called a Regiſter.

EPISTROPHE, ἐπιστροφὴ, from ἐπιστρέφω, to invert or diſtort. It implies an Inverſion, Diſtortion, or a Relapſe.

EPISTROPHEUS, ἐπιστροφὲυς, from ἐπιστρέφομαι, to turn, or be incurvated. The Name of the ſecond Vertebra of the Neck. See SPINA.

EPISYNTHETICI, ἐπισυνθετικοὶ, from ἐπισυνίθημι, to accumulate. Certain Phyſicians among the Antients, of which *Leonidas*, mentioned by *Cœlius Aurelianus*, ſeems to have been the moſt celebrated. We know little, or nothing, of their Syſtem; but, by the Derivation of the Word, it ſhould ſeem, that they were attached to no particular Sect; but either reconciled

ciled them all together, or else chose out of each what they most approved.

EPITASIS, ἐπίτασις, from ἐπιτείνομαι, to be augmented, heightened, in *Hippocrates* signifies the Increase and Beginning of the Paroxysm of a Fever. *Lib. de R. V. I. A.* Ἐπίτασιν, also, seems sometimes to signify the same as ἐπίκρισις, "a Suppression;" as 2 *Prorrhet.* But some Copies have ἐπίκρισις, though *Galen*, after *Dioscorides*, reads ἐπίτασις.

EPITECNOS, ἐπίτεκνος, from ἐπὶ, to, or towards; and τέκνον, a Child, Offspring; signifies fruitful, or well-disposed towards the Office of Generation; and is spoken of both Sexes. 5 *Aph.* 62.

EPITEDEUMA, ἐπιτήδευμα, from ἐπιτηδὲς, fit, disposed; is the Way of living, or Course of Life, which any Person prescribes to himself; whether for sake of Profit, or Necessity; called by *Cœlius Aurelianus*, *Vitæ Affectiones*; and by *Celsus*, *Vita proposita*.

EPITEX, ἐπίτεξ, from ἐπὶ, towards, and τέξις, Birth. An *Ionic* Word, applied to a Woman, and importing her being near her Time of Delivery. *Hippocratis*, *de Mulierum Morbis*, *Lib.* 1.

EPITHEMA, ἐπίθημα, from ἐπιτίθημι, to lay upon, or apply. In *Hippocrates*, it signifies a Lid, or Cover; but later Authors use the Word to express a certain topical Medicine, of different Consistences, neither of the Nature of an Ointment, nor that of a Plaister, to be applied to the Surface of the Body, for various Purposes and Intentions. When this Species of Medicine is applied warm, it is called a Fomentation.

There are three Kinds of Epithems; first, the liquid; secondly, the dry, or solid; and, thirdly, those of the soft and poultice Kind. The two former retain the general Name of Epithem, and the latter is called Cataplasm, Poultice, or Malagma. See CATAPLASMA.

A liquid Epithem, called also, sometimes, a Fomentation, is a medicated Liquor, either simple or compound, applied either cold or hot, by the Intervention of a proper Vehicle, to the Surface of the Body; and calculated, either for inducing such a Change on it, or the subjacent Parts, as the Intention of the Physician shall require.

The Liquors for these Intentions may be Water, Milk, Wine, Vinegar, Spirit of Wine, liquid Juices, Oil, or Urine, either simple by themselves, or variously prepared, and mix'd either with each other, or with other officinal and extemporaneous Medicines, of whatever Consistence, such as distilled Waters of all Kinds, Vinegars, infused Oils, Decoctions, aromatic Spirits, Tinctures, Essences, saline Liquors, Lixiviums, Forge-water, Lime-water, and, especially, Infusions and Decoctions prepared from these and other proper Materials, expressed Juices, Emulsions, and Mixtures of various Kinds.

The Choice of the Physician, with respect to proper Materials, is to be directed by the Nature of the Part to be changed, or to which the Application is made, the malignant or benign Nature of the Symptoms, and the particular Quality of the Liquor to be used.

The same Cautions are to be used in the Management of these, as in that of such Forms for internal Use: Only, as in the former Case it is not necessary we should regard the Taste, the Smell, or the Colour of the Medicines; so, for this Reason, we are to omit the Sugars and Syrups used for correcting internal Remedies.

A pretty thick Consistence is no Disadvantage to liquid Epithems, though, at the same time, when a deep Penetration into the Part affected is required, those of a less thick Consistence are, when all other Circumstances are alike, to be preferred.

As a Change of the Part only, to which the Application is immediately made, is not always intended, but, sometimes, also, of the Viscera and Organs lying under it; so the Substances most proper for Applications of this Kind are those, whose Virtues consist in their volatile, highly fine, and penetrating Principles, especially when a Change of the internal Parts is intended: For this Reason, Substances of an earthy or stony Nature, Astringents, and Materials of an inspissating Nature, can possibly be of no Service for this Purpose; since, in consequence of their Thickness, they either cannot be absorbed, or, by bracing up the Mouths of the Pores, prevent their own Ingress. But, perhaps, better Effects may be produced by adding some penetrating Aromatic, or Spirit, to gentle Astringents.

It is also to be carefully considered, whether the Nature of the Part, to which the Application is immediately to be made, is such, as, without being injured, is capable of bearing the Liquor, whether Oil, Water, Spirits, or acrid Fluids; lest, whilst we do Service to one Part, we should injure or hurt another.

Such Substances as are rarely, or never, exhibited internally, are used for preparing Epithems of this Kind; such as the most acrid and mercurial Preparations, Preparations of Lead, Alcohol of Wine alone, Henbane, Mandrake, Nightshade, and Hemlock. But, in the Use of these, and other drastic Materials, we are carefully to remember, that the whole Surface of the Body is of a bibulous Nature; and that the Substances it absorbs are conveyed into the Mass of Blood, without passing through the Stomach.

Their Quantity is not confined to Measure or Weight, but is to be determined by the Largeness of the Part to be cherish'd, and the greater or less absorbent Quality of the Substance, by whose Intervention the Liquor is applied. Woolen are preferable to Linen, and double, or threefold, to single Cloths, because they imbibe more Liquor.

As the general Quantity is seldom less than half a Pint, so it usually amounts to one, two, three, or more Pints, according as the Part to be cherished is small or large; according as there is only one, or more Parts to be so treated; according as the Vehicle is more or less bibulous; according as the Fomentation is to be continued for a longer or shorter time, or renewed at longer or shorter Intervals; or, according as the Liquor itself is more or less subject to Corruption, or prepared with Ease or Difficulty. It is more expedient rather to prepare too much, than too little; especially if more Parts than one, or those of the larger Kind, are to be fomented; lest the Liquor should fall short too soon, or immediately after the first Application.

The mutual Proportion of the Ingredients is to be determined by the various Intentions of the Physician, and the known Virtues of the respective Materials. However, so great Accuracy is not required in preparing Epithems for external, as Forms for internal Purposes; only we must have a due Regard to their Consistence, lest by their Thickness they should be rendered of a less penetrating Nature.

The Parts to be cherished by Epithems are either, first, external, and capable of having the Liquor immediately applied to them. With respect to these, as being directly subjected to our Senses, I shall only observe, that when there are Wounds or Ulcers in them, these ought previously to be covered with proper Medicines, lest the Epithem should by burning, or some other Circumstance, so far incommode them, as to prevent their Conglutination. Or, secondly, the Parts to be changed by Epithems are internal. For this Purpose, a proper external Region must be chosen for the Application, according to the Situation of the internal Part, and the various Intentions of the Physician. For this Reason, it is of the highest Importance accurately to know, and consider, the Situation and mutual Consent of the Parts, together with the Course and Direction of the Vessels. When the Epithem is intended to act immediately on the Part affected, either by corroborating, softening, moistening, refrigerating, resolving, or dissipating, the Matter impacted on it, the Application is most properly and commodiously made, where the Integuments are softest, and least thick. Where Revulsion or Derivation are intended, then the Epithem is to be applied either above or below the Part affected, according to its Situation, and its greater or less Consent with particular external Parts. When Epithems are intended to act upon the whole Mass of Blood, the most proper Places for their Application are those external Parts where the Vessels are largest, and least covered, such as the Temples, the Neck, the Arm-pits, the Wrists, the Groin and the Hams.

As for the Vehicles of liquid Epithems, these are very various, such as Linen or Woolen Cloths of various Colours, but especially red Silk, Stupes, toasted Bread, Crumb of Bread, Sponge, dry Epithems, or Bags: Sometimes the Liquor is, also, included in a large Hog's Bladder. The Vehicles of these Epithems are to be determined by the different Intentions of the Physicians, and Natures of the Parts affected, as also by the Ease and Quickness with which some are prepared in Comparison of others. When a large Quantity of Liquor is to be applied, and its Heat long preserved, Woolen Cloths, Stupes, and Sponges, answer the Intention best. A Bladder prevents the Dissipation of the Liquor, preserves its Heat, and does not stain the Part to which it is applied; but it only slowly transmits the more fine and subtile Particles: And from this Circumstance we are to form a Judgment of the Cases in which it may be properly used. When the Part to be cherished is tender, and when the Epithem is applied cold, or where there is no urgent Necessity for preserving the Heat, we may for a Vehicle use Linen Cloths, either double, triple, or more folded, in proportion to the Quantity of Liquor to be applied.

The Intention of the Physician, the Nature of the Part, and the Qualities of the Epithem, must concur to determine whether one of the cold or hot Kind ought to be applied. When the Intention is powerfully to resolve, penetrate, and attract, those of the hot Kind are most commodious and advantageous: But Heat is injurious to Parts constricted by intense Cold, as also spirituous and volatile Liquors; and those that are cold, or at least tepid, are to be us'd. The Coldness of the Liquor may, if 'tis thought proper, in some measure be taken off, by heating the Vehicle before 'tis soak'd with the Liquor.

The Epithem is to be ſecur'd by Bandage; but when a long Application of the Liquor, and Continuation of the Heat, are requir'd, 'tis proper to lay an Hog's Bladder, previouſly anointed with Oil, over it; and, over all, a Bag full of hot Sand, Bricks, or any other hot Body which retains the Heat long; and theſe, when become cold, are to be remov'd, and warm'd again; the Epithem, in the mean time, remaining on the Parts.

There is a very great Variety with reſpect to the Time they are to be left on the Part affected, how long their Uſe is to be continued, and the particular Seaſons at which they are to be renew'd: Sometimes they are remov'd, when the Symptoms for the Removal of which they were applied, ceaſe; when, for Inſtance, the Pain, the Watchings, the Cold, the Heat, the Uneaſineſs, the Vomiting, the Hæmorrhage, the Loſs of Strength, the Delirium, or any other Symptoms, remit: At other times they are remov'd, when the Virtue and Energy of the Liquor is diſſipated; when, for Inſtance, it is become coſd, or the Vehicle is render'd dry: At other times, ſtated Periods are fix'd for their Removal, ſuch as the Morning, the Evening, once or twice a Day, or every two or three Hours; but, in particular Caſes, the Times may be eaſily regulated by a Phyſician, who duly conſiders his own Intention, the Genius of the Diſeaſe or Symptom, the volatile or fix'd Nature of the Liquor, the Matter of the Vehicle, and the Eaſe or Difficulty with which it is prepar'd.

Epithems of this Kind are of very univerſal Uſe, by affording Relief in acute and chronical, external and internal Diſorders: They are beneficial both to the Solids and Fluids, either by their emollient, aſtringent, corroborating, repellent, attracting, heating, refrigerating, diluent, diſſolvent, diſcutient, ſoothing, and exciting Qualities; or thoſe by which they are proper for correcting Acrimony, and allaying Pain: They are alſo conducive both to the Production and Promoting of Evacuations almoſt of all Kinds: They are proper for Patients of all Ages, provided the Materials are choſen with Judgment, and the Application ſeaſonably made. By Epithems, internal Medicines are ſometimes excellently ſupply'd in Infants, and others who either abhor internal Medicines, or cannot ſwallow them; but to others, the Application and Renovation of them is more troubleſome and uneaſy, than the Uſe of Internals. Epithems ſometimes prove hurtful, by being unſkilfully us'd, ſince they remove the Symptoms, without deſtroying the Cauſe of the Diſorder: But this principally holds true with reſpect to ſtupefying Epithems, or in Caſes where Repellents, when the Matter of the Diſeaſe is not ſufficiently moveable, by conſtricting the Veſſels, render it more compact; or when Epithems, which were requir'd hot, are, by their long Application, become cold. But as theſe Diſadvantages only attend the Abuſe of Epithems, they may be avoided by the Skilful and the Cautious.

A dry Epithem is a medicated Powder, for the moſt part ſew'd up in a Cloth, and apply'd to the Surface of the Body, with various Intentions, for changing both internal and external Parts: It is call'd *Sacculus*, *Saccus*, *Cucupha*, *Cucullus*, *Frontale*, *Scutum*, *Lectulus*, and *Pulvinar*; according to the various Parts and Uſes to which it is apply'd.

The Powders us'd for this Purpoſe are generally groſs, or but moderately fine, becauſe the Adheſion of their Particles, or their falling thro' the Cloth in which they are included, is not intended.

The Materials of theſe are Powders in general, and whatever elſe of a like Nature is judg'd proper for external Uſe: The Choice of theſe Materials is to be determin'd by the Intention purſued, and the Relation betwixt that Intention and the Ingredients us'd. However, the drier Parts of Animals, Roots, Barks, Leaves, Flowers, Seeds, Berries, Aromatics, indurated Juices, and the officinal Species compounded of theſe, are moſt generally us'd for this Purpoſe.

When in theſe a penetrating Quality is requir'd, 'tis often cuſtomary, not only for the ſake of Conſiſtence, but alſo of Efficacy, to add liquid Epithems, that by their means the dry Materials may not only be render'd more active, but alſo prove a Vehicle to the other.

In preparing thoſe Species of dry Epithems, call'd *Lectuli*, or Couches, and *Pulvinaria*, or Cuſhions, Chaff is uſually mix'd with the medicated Powder, in order to diſperſe it the better: But in preparing Cucuphas, or other Bags of a like Nature, which are requir'd ſoft, and not much moiſten'd, 'tis ſometimes better to uſe Cotton, or the Wool of ſome Animal.

To this Claſs alſo belong Bags fill'd with Sand, when us'd either alone, or with a liquid Epithem, in Caſes where a long-continued Heat, either of the dry or moiſt Kind, is requir'd.

The Quantity of the Materials is to be limited by the Largeneſs of the Bag to be fill'd, which is again to be proportion'd to the Surface of the Part to be cheriſh'd: Hence both are very various. That Part of the Head which is cover'd with Hairs, the Stomach, and the Liver, generally require two, three, or four Ounces; the Heart, the Spleen, and Kidneys, one or two Ounces; and the other Parts, a Quantity proportion'd to their reſpective Bulks. Couches, or Cuſhions, to lie or ſit upon, require a conſiderable Number of Pounds.

The various Ages of Patients, and the different States and Conditions of the Parts affected, require Materials and Management of widely different Natures.

The Bags muſt not be too hard ſtuff'd, but only fill'd in a looſe and ſpongious Manner, that they may be ſufficiently pliant and ſoft.

The general Quantity of the Materials is to be determin'd from the Largeneſs and Number of the Bags to be fill'd; for frequently a conſiderable Number are preſcrib'd, either to be apply'd to different Parts all at once, or to the ſame Parts ſucceſſively and alternately.

The mutual Proportion of the Ingredients is, as in other Epithems, to be determin'd by the Intention of the Phyſician, and the Qualities of the ſeveral Subſtances.

The Powders, employ'd for theſe Purpoſes, are ſometimes prepar'd by cutting down, but more generally by a coarſe and groſs Trituration; after which they are to be carefully mix'd: Sometimes ſome only, or all of the Ingredients, are order'd to be roaſted in a Frying-pan, that their Virtues may be either augmented, or their Qualities chang'd; but in volatile Subſtances this Practice is hurtful. At other times the Materials are, before they are put into the Bag, ſprinkled with efficacious and aromatic Liquors, Spirits, Oils, and Tinctures.

The Bags for theſe Epithems are, for the moſt part, made of coarſe Linen Cloth, pretty much wore, as alſo of fine Linen, or Silk, but rarely of Woolen Cloth. We are to be directed in our Choice of the Cloth for this Purpoſe, by the Nature of the Part to be cheriſh'd, the Quantity of the Powder, its Quality, the greater or leſs Streſs the Bag is to bear in the Application, the Price of the Cloth, and the Inclination of the Patient. The Figure of the Bag is to be accommodated to the Part it is to be apply'd to, and the Intentions propos'd: For the Head 'tis commonly made in the Form of an Hood; for the Forehead, of an oblong ſquare Figure; for the Heart, pyramidal; for the Stomach, in the Form of a Shield; for the Liver, in the Form of a Creſcent; for the Spleen, in the Form of an Ox's Tongue; and for the Navel, round: Couches and Cuſhions are to be made ſo large as to anſwer the End, but retain the uſual Form and Shape: Sometimes their Breadth and Length, correſponding to the Part to be cover'd, are confin'd to a particular Number of Inches; at other times the Part to be cheriſh'd is only mention'd, and the reſt left to the Skill and Judgment of the Apothecary: The Number alſo, when more than one are to be made, is to be ſpecify'd.

Before the Bag is fill'd, the Powder is to be mix'd with Chaff, Cotton, or Wool; and the Materials thus prepar'd are, for the moſt part, ſew'd up in the Bag: But ſometimes 'tis ſufficient only to tie or fold them up, when an exact Figure, or long Application, are not requir'd: Large Bags are ſew'd in ſuch a manner, as comes near to what we call Quilting, leſt the included Powder ſhould be form'd into Concretions, or unequally collected to one Part.

Epithems of this Kind are apply'd either, firſt, by themſelves, dry, and, for the moſt part, previouſly warm'd; or, ſecondly, previouſly impregnated with the medicinal Virtues of other Subſtances, in order to render them more efficacious; for this Reaſon they are often, before their Application, moiſten'd, macerated, ſprinkled, or boil'd with a liquid Epithem: At other times they are impregnated by the Steam of ſome proper Decoction, or the Smoke of a kindled Fumigation: Or, thirdly, they are us'd over the Applications of liquid Epithems, in order to preſerve their Heat, or increaſe their Virtues.

Their Uſe is the ſame with that of liquid Epithems, only their penetrating Quality is leſs, and their Operation ſlower, without the Addition of one of the liquid Kind: There are, however, ſome Caſes, in which a dry Heat is at once more beneficial, and more eaſily born. To this Claſs of Medicines, alſo, belong Epithems of live Whelps, Pigeons, and Chickens, laid open; the Omentum, and other Parts of Animals, as yet poſſeſs'd of the vital Heat; Bread, as yet warm from the Oven; and ſome others of a like Nature, which may be either apply'd alone, or in Conjunction with other Subſtances, which are judg'd more efficacious. *Gaubius, de Formulis Medicamentorum.*

EPITHESIS, ἐπίθεσις. Of the ſame Derivation as EPITHEMA. In Surgery it imports the Rectification of crooked Limbs, by means of Inſtruments or Machines. *Caſtellus.*

EPITHYMBRUM. A Species of Moſs, which grows on the *Thymbra*, Winter Savory.

EPITHYMUM. See CUSCUTA.

EPITOCOS, ἐπίτοκος. from τίκτω, to bring forth; in *Hippocrates*, ſignifies with Child. *Epidem. L.* 6.

EPOCHE, ἐποχή. The ſame as EPISCHESIS, in Medicine.

EPOCHETEUSIS, ἐποχέτευσις· from ἐποχετεύομαι, to be derived or diverted into ſome new Canal or Duct. Derivation of the Blood, or Juices, from one Part to another.

EPOSCHION, ἐπόχιον. A Tendril of a Plant. *Galen. Exeg.*

EPODE, or EPODOS, ἐπῳδή, or ἐπῳδός· from ἐπὶ, on, or over, and ᾠδή, a Song. The Method of curing Diſtempers by Incantations. *Galen*, in the laſt Chapter of his Work *de Uſu Partium*, has this remarkable Paſſage relative to *Epodæ*. "This laſt Book, he ſays, which is the ſeventeenth of my "Work *de Uſu Partium*, like a good *Epodos*, explains the "Uſes and Advantages of the Whole. When I ſay *Epodos*, "I would not be thought to mean one who uſes *Epodæ* (In-"cantations); but as our lyric Poets make the Action of the "Chorus to conſiſt in the *Strophe*, and *Antiſtrophos*, and in a "third Part, which is the *Epodos*, wherein they ſtand before "the Altars, and ſing an Hymn in Honour and Praiſe of the "Gods, I was determin'd, that as this Book agrees in Office "with the Part of the Chorus now mentioned, it ſhould bear "the ſame Title, and be called the *Epodos*."

EPOMIS, ἐπωμὶς· from ἐπὶ, upon; and ὦμος, the Shoulders. That Part of the Body, which lies betwixt the Articulation of the Humerus with the Scapula and the Neck.

EPOMPHALION, ἐπομφάλιον· from ἐπὶ, upon, and ὀμφαλὸς, the Navel. A Medicine which purges, by being apply'd to the Region of the Navel.

EPOPS, ἔποψ. The Bird call'd UPUPA; which ſee. *Caſtellus.*

EPOS, ἔπος. *Hippocrates*, in his Treatiſe *de internis Affect.* uſes this Word to expreſs a ſteep Place.

EPOSILINGA. Scales of Iron. *Rulandus.*

EPULIS, ἐπουλὶς· from ἐπὶ, upon, and οὖλα, the Gums.

A Species of Tubercles growing on the Gums, of which there are two Kinds; for ſome are entirely without Pain, whilſt others afflict the Patient in a moſt terrible manner, becauſe they are of a malignant Nature, and gradually degenerate into a Cancer. Tubercles of this Kind are alſo in ſome meaſure diſtinguiſh'd from each other, by their different Bulks and Conditions; ſince ſome are as big as a large Nut, and others no bigger than a ſmall one; ſome hard, others ſoft; ſome have a ſlender, and others a larger and broader Root: When theſe Tubercles are of the large Kind, they not only diſtend and deform the Jaws, but alſo prove a conſiderable Obſtruction to Maſtication and Speech; for which Reaſon, they require a ſpeedy and expeditious Cure: Now no Method of Cure is more expeditious, than a total Extirpation of theſe Caruncles, as is uſual in other Tubercles of a like Nature: When, therefore, the Roots are ſmall, a Thread is carefully to be paſs'd about them, with which they are to be tied pretty tight: But when the inferior Part of the Tubercle is pretty large, the Uſe of ſome gently corroſive Medicine is proper; and this Intention is excellently anſwer'd, by Oil of Tartar *per Deliquium*, or a Solution of Sal Ammoniac. But in Caſes of this Nature we are abſolutely to abſtain from the more draſtic and poiſonous Corroſives, ſince, for the moſt part, they not only excite violent Inflammations and Exulcerations of the Mouth, but may alſo produce the Death of the Patient, if they ſhould happen to be unfortunately ſwallow'd: For this Reaſon, in Caſes where the milder Corroſives are not ſufficient, 'tis more expedient and ſafe to ſeek the means of Relief from the Knife, whilſt theſe Caruncles, being laid hold of by a Pair of Forceps, or a ſmall Hook, are to be extirpated and cut out, either by the Knife, or a Pair of Sciſſars: But this is to be done cautiouſly, leſt, by cutting out the whole Subſtance of the Gum at the ſame time, a Caries ſhould be excited in the denudated Bones of the Jaw. The Diſcharge of the Blood is to be permitted for ſome time; but if it ſhould continue too long, in order to ſtop it the more eaſily, and cleanſe the Blood out of the Mouth, 'tis highly proper to make the Patient often waſh his Mouth with warm Wine, eſpecially of the red and aſtringent Kind, or with Oxycrate, mix'd with a little Alum, till he has ſpit out all the Blood: When the Diſcharge of the Blood is ſtopt, the Wound is to be daily anointed, till heal'd, with Oil of Myrrh *per Deliquium*, or Eſſence of Myrrh mix'd with Honey of Roſes. If any Part of the Tubercle ſhould remain, or if it ſhould begin to appear afreſh, it is with all Expedition to be conſum'd by the Corroſives already mentioned, or by blue Vitriol, or any other corroſive Medicine; or it may be again extirpated by means of the Sciſſars or Knife. The actual Cautery is by ſome recommended in Caſes of this Nature, and Inſtances of Cures happily perform'd by it alledg'd; but 'tis not only incommodious to apply, but alſo excites intolerable Pain; 'tis however to be us'd, when the Tubercle cannot be repreſs'd by other means. *Meckren*, in his twenty-eighth Obſervation, gives us a ſingular Inſtance of a Cure of this Diſorder, together with the Deſcription of a Knife, accommodated to this Purpoſe. *Sculletus*, in his thirty-fifth Obſervation informs us, that by means of a Forceps us'd in eradicating Polypuſes, he happily extirpated a Caruncle of this Kind, adhering to the Gum of the anterior Teeth, hard by the Palate. Some Years ago, I myſelf, ſays *Heiſter*, ſaw ſuch a Caruncle in the Palate of a Monk, behind the *Dentes Inciſores*; but becauſe his Misfortune was complicated with a Spina Ventoſa in the Bones of the Palate, and becauſe he would not ſubmit to the Uſe of the actual Cautery, the Caruncle could not be totally remov'd; but the Patient, gradually loſing his Strength, at laſt died. *Heiſter. Chirurg.*

EPULOTICA, ἐπουλωτικὰ, from οὖλη, a Cicatrix. Topical Medicines, which apply'd to Wounds, or Ulcers, dry up the ſuperfluous Humidity, repreſs fungous Fleſh, and diſpoſe them to cicatrize.

EQUICERVUS. The Elk. See ALCE.

EQUISETUM.

The Characters are;

The Root is very creeping: The Leaves are round, hollow, and articulated by a pyxidated Inſertion, or after the manner of Boxes, a leſs within a greater: The Flower has no Petals, is ſtamineous, or thready, has a fungiform or muſhroom-like Head, and is Male in one Plant: The Fruit conſiſts of black, rough Grains, growing cloſe together on the Plant, which bears no Flowers.

Boerhaave mentions ten Species of this Plant; which are,

1. Equiſetum; paluſtre; longioribus ſetis, *C. B.* 15. *Tourn. Inſt.* 533. *Boerh. Ind. A.* 2. 106. *Dill. Cat.* 55. *Cauda Equina, & Equiſetum majus*, Offic. *Equiſetum majus*, Ger. 935. Emac. 1113. Raii Hiſt. 1. 128. Synop. 42. *Equiſetum majus paluſtre*, Park. 1200. *Equiſetum majus aquaticum*, J. B. 3. 729. Chab. 551. Hiſt. Oxon. 3. 621. GREAT MARSH HORSETAIL.

The great Horſetail has many hollow, whitiſh-green, ſmooth, and neatly chanel'd round Stalks, having many Joints at ſome Diſtance one from another, the uppermoſt being always ſet-in or articulated into that next under it: They grow to be a Foot and half, or two Foot high, taper, and ſcarce a Foot thick: They are ſurrounded at every Joint, with a great Number of long, very ſlender, rough Leaves, which, like the Stalks, are jointed one within another, and ſtand ſo thick, that the whole Stalk appears like an Horſe's Tail: Early in the Spring, before the Stalks come up, there ariſe from the Root ſeveral ſhort Stalks, without Leaves, but jointed as the others, having at their Tops a browniſh round Head like the Top of an Aſparagus, in which lies the Seed: The Root is long and ſlender, full of Joints, and ſpreading much. It grows in Ditches and marſhy Grounds.

Horſetail is reſtringent, drying, and binding; good to ſtop Bleeding in Wounds, and all Hæmorrhages in any Part of the Body, redundant Catamenia, and the Fluor Albus, for Ulcerations in the Kidneys or Bladder, and is uſeful in all Kinds of Ruptures. *Miller's Bot. Off.*

Horſetail has an herby, ſaltiſh Taſte; it is deterſive, and gives hardly any Tincture of Red to blue Paper: Its Salt ſeems to reſemble that of Coral; but it is mixed with a little Sal Ammoniac and Sulphur: By the chymical Analyſis, it affords ſeveral acid Liquors, a little Oil, a great deal of Earth, no concreted volatile Salt, but a little urinous Spirit: Its fixed Salt does not eaſily diſſolve in the Air, neither does it give an orange Colour to the Solution of corroſive Sublimate.

All Authors agree, that the Horſetail is very vulnerary and aſtringent: Its Decoction is preſcribed for Spitting of Blood, the immoderate Flux of the Piles, Menſes, and all Sorts of Hæmorrhages. *Tabernæmontanus* preſcribes a Dram of the Powder of the Root for Spitting of Blood: He mix'd the Powder of the whole Plant in the Food of conſumptive Perſons; and gave two or three Ounces of its Juice, to thoſe that had the Dyſentery. *Tragus* preſcribed this Juice to thoſe that made bloody Urine, or had Ruptures: The ſame Juice is very good for Wounds and Ulcers. *Martyn's Tournefort.*

Frederic Hoffman recommends a Decoction, or Infuſion, by way of Tea, made of this Plant, as excellent in the Stone; and *Fuller* gives a Decoction thereof, intended againſt Ulcers of the Bladder.

2. Equiſetum; paluſtre; brevioribus ſetis. *C. B. P.* 15.

3. Equiſetum; paluſtre; brevioribus foliis; polyſpermum, *C. B. P.* 15. *Hiſt. Oxon.* 3. 621. *Raii Hiſt.* 1. 129. *Synop.* 42. *Boerh. Ind. A.* 2. 107. *Polygonum fœmina*, Offic. *Equiſeti facie Polygonum fœmina*, J. B. 3. 732. Chab. 552. *Cauda Equina fœmina*, Ger. 957. Emac. 1114. *Equiſetum alterum brevioribus ſetis*, Park. 1201. *Pinaſtella Ruppio*, Buxb. 261. *Pinaſtella ſurrectior*, Rupp. Flor. Jen. 275. FEMALE HORSETAIL.

It grows in Pools and Lakes, and by the Banks of Rivers: The Herb is in Uſe, and accounted a Vulnerary. *Dale.*

4. Equiſetum; paluſtre; tenuiſſimis, & longiſſimis, ſetis. *C. B. P.* 16. *Prodr.* 24. 3. *J. B.* 3. 729.

5. Equiſetum; ſylvaticum; tenuiſſimis ſetis. *C. B. P.* 16.

6. Equiſetum; pratenſe; longiſſimis ſetis. *C. B. P.* 16. *Hippuris, frontalis.* Lob. Obſ. 461.

This is found betwixt *Wandſworth* and *Wimbleton*, in the Mid-way in the Meadows.

7. Equiſetum;

7. Equiſetum; arvenſe; longioribus ſetis. *C.B. P.* 16. *Park.* 1202. *Raii Hiſt.* 1. 128. *Synop.* 42. *Hiſt. Oxon.* 3. 621. *Tourn. Inſt.* 533. *Dill. Cat.* 38. *Boerh. Ind. A.* 2. 107. *Cauda Equina minor & Equiſetum minus.* Offic. *Equiſetum ſegetale.* Ger. 956. Emac. 1114. *Equiſetum minus terreſtre.* J. B. 3. 730. Elem. Bot. 424. *Equiſetum minus terreſtre ſive arvenſe.* Chab. 351. CORN HORSETAIL. *Dale, p.* 62.

It bears its Flowers, or Aſparagi, ſeparate from the Stalks, which bear the Leaves. They appear in *April* and *May*.

This Species of Equiſetum is a potent Aſtringent: Whence a Dram of the Herb pulverized, and drank in Wine or Water, or four Ounces of the Decoction, in Wine, taken Morning and Evening, or three Spoonfuls of the diſtil'd Water, taken for two or three Days together, are a noble and effectual Remedy for vomiting of Blood, and for Fluxes of the Uterus; eſpecially the red Flux, and for the Dyſentery, and other Fluxes of the Belly. It alſo cures Hæmorrhages, whether they proceed from an *Anaſtomoſis*, or a *Diæreſis*, and Exulcerations of the Kidneys and Bladder.

The Inhabitants of *Tuſcany*, as *Matthiolus* informs us, eat the young Sprouts, ſometimes for want of better Food, and ſometimes for the Dyſentery, and other Fluxes of the Belly; and ſometimes find themſelves ſo much bound by them, as to be affected with the Colic. The Herb, uſed in a Plaiſter, conglutinates the largeſt Wounds; and even thoſe where the Nerves are divided. *Dioſcorides* ſays it provokes Urine. For Spitting of Blood, exhibit a Dram of the Root dry'd and powder'd, with the Juice of four Pomegranates. For Ulcers of the Breaſt and Lungs, drink three Ounces of the Decoction, Morning and Evening, warm, or two Ounces of the Juice. *Caſp. Hoffman* aſſures us, that he and others had done ſurpriſing Cures with it in long, and even malignant Fevers. A Dram of the Powder taken in three Ounces of Plantain-water, Morning and Evening for ſome Days together, is recommended for the Phthiſis. *Raii Hiſt. Plant.*

8. Equiſetum; foliis nudum; non ramoſum; ſive Junæum; ἵππουρις ἄφυλλος. *C. B. P.* 16. *M. H.* 3. 621. NAKED HORSETAIL.

This bears its Flowers at the Extremities of the Stalks, which are chaneled.

This is uſed by Artificers to poliſh; whence it is called *Shave-graſs*. It is not common in *England*. Mr. *Ray* mentions it to grow at *Middleton* in *Warwickſhire*, and *Broadſtitch* Abbey in *Wiltſhire*. *Martyn's Tournefort.*

9. Equiſetum; foliis nudum; ramoſum. *C. B. P.* 16. *M. H.* 3. 621. BRANCHED NAKED HORSETAIL.

It flowers in *May*, and bears its Flowers at the Extremities of the Stalks, which are very ſmooth, and not at all chaneled. *Martyn's Tournefort.*

10. Equiſetum; fœtidum; ſub aqua repens. *C. B. P.* 16. *Prodr.* 25. 5. *M. H.* 3. 621. Common in ſtanding Waters. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 106.

EQUITATIO. Riding. In Medicine conſider'd as an Exerciſe. See the Article FIBRA. See alſo *Fuller's Medicina Gymnaſtica.*

EQUUS. Offic. Schrod. 5. 285. Aldrov. de Quad. 12. Mer. Pin. 166. Geſn. de Quad. 403. Jonſ. de Quad. 1. Scha. Quad. 89. Raii Synop. A. 62. THE HORSE.

The Parts uſed in Medicine are the Blood, Rennet, Milk, Dung, Warts [*Lichen*], Teſticles, Fat, Hoofs, Hairs, Saliva, Teeth, the Stone found in the Stomach or Inteſtines, which, for its Figure and Structure, conſiſting of Laminæ, is not unlike the *Weſt-Indian* Bezoar.

The Blood is mixed with Cauſtics and Septics: The Rennet, called *Hippace*, is particularly ſerviceable in the Cœliac Paſſion, and the Dyſentery. The Milk is thought to be good in the Epilepſy, Phthiſis, Cough, and Aſthma. The Dung, uſed externally, ſtops Hæmorrhages, and expels the dead Child and Secundines; internally, it is exhibited in the Colic, Strangulation of the Uterus, Pleuriſies, and, alſo, for the Expulſion of the dead Child and After-birth; where that of a Stone-horſe is moſt effectual. The Warts are particularly recommended in Hyſterics, and for the Stone and Epilepſy. The Teſticles are a preſent Remedy for expelling the Secundines, and are recommended in Colics. The Fat is uſed to good Purpoſe in anointing Luxations, and the Hairs repreſs an Hæmorrhage; the Saliva, or Spume of the Mouth, drank for three Days, cures a Cough, and mitigates the violent Heat of the Fauces. The Teeth, when they firſt begin to appear, are ſaid to facilitate Dentition in Infants. The Stone, called the *Hippolithus*, is ſuppoſed to be endu'd with the ſame Virtues as the *Weſt-Indian* Bezoar. *Dale* from *Schroder.*

The Dung of a Stone-horſe ſeems to be a popular Remedy; but I can ſay very little of its Virtues from my own Experience. *Quincy* gives the following Account of it:

It ſeems to owe its preſent Credit in Medicine to the modern Practice. It is certainly of great Efficacy in Pleuriſies, Inflammations, and Obſtructions of the Breaſt: In Aſthmas, and Difficulty of Breathing, alſo, it ſometimes prevails, where the moſt powerful Balſamics and Pectorals have been tried in vain; in all theſe Intentions it is now very much preſcrib'd. It is beſt in Decoction, wherein it is ſometimes join'd with other Pectorals, more or leſs warm and deterſive, as the Caſe and Conſtitution ſeem to direct. The ſimple Waters of Peny-royal, or Hyſſop, are as good as moſt Liquors to infuſe it in. It ought to have but a gentle Heat, and to be kept cloſe ſtopt. White-wine ſeems beſt to take off its Nauſeouſneſs, but may not be ſo agreeable, in ſome Circumſtances, as ſofter or more oily Vehicles. But whatſoever it is infuſed in, I never obſerv'd it the leſs effectual for Clarification; and that will bring the Liquor to look fine, and be leſs nauſeous, tho' it will not deſtroy its natural Smell, but that the Patient may ſtill diſcern it.

EQUI *Clibanus*, in Chymiſtry, is the Heat of Horſe-dung.

ERADICATIVUS. An Epithet for ſtrong and draſtic Cathartics, us'd by *Fallopius.*

ERAGROSTIS, ἐραγρωστις. A Name for the *Gramen paniculis elegantiſſimis. Boerh. Index alter.* See PHALARIS.

ERANTHEMUS. A Name for the ADONIS FLOS, Pheaſant's Eye. See ADONIS.

ERASISTRATUS. The Name of a celebrated Phyſician among the Antients; for an Account of whom ſee the Preface.

ERAWAY. A Name for the *Ricinus Vulgaris minor.*

EREBINTHUS. A Name for the CICER.

ERECTORES *Penis.* The Name of two Muſcles belonging to the Penis, which ſerve to erect it when they act. See GENERATIO.

EREGMOS, ἔρεγμος, from ῥήγνυμι, to break, properly ſignifies a Bean decorticated, and broken into ſmall Particles; and is the ſame with reſpect to the Bean, as Ptiſan to the Grain of Barley, or Alica to Zea. But ſometimes it ſignifies other leguminous Fruits decorticated and broken in like manner. *Eregmos* alſo ſignifies, according to *Foeſius*, Bean-meal; but this is deny'd by *Gorræus*. In *Erotian*, and *Galen's* Exegeſis, Eregmos is expounded a Bean divided into two Parts; it is otherwiſe written ἔρεγμα, *Eregma*, and ἔριγμα, *Erigma.*

EREISMA, ἔρεισμα, from ἐρείδω, to lean againſt, ſignifies, in *Hippocrates*, a Stay or Support, with reſpect to Bandages; or an Impreſſion or Illiſion, with regard to Things apply'd forcibly to the Body. *Lib. de Fract.*

ERETHISMOS, ἐρεθισμὸς, from ἐρεθίζω, to excite, irritate. Any thing which irritates. "Under the Term ἐρεθισμὸς, "ſays *Galen*, *Com.* 2. *in Lib. de R. V. I. A.* he (*Hippocrates*) "comprehends whatever reduces the Faculty (δύναμιν) to an "infirm State; among which may be reckon'd acrimonious "and pungent Humours in the Inteſtines or Stomach, parti-"cularly in the Mouth of the Stomach; alſo want of Sleep, "Anger, Sorrow, Worms aſcending from the Inteſtines to the "Stomach, and nocturnal Itchings of the whole Skin, or ſome "Parts of it, which not only by their Irritation, but by Pre-"vention of Sleep, exhauſt the Strength." So *Hippocrates*, in the ſame Book, by σημεῖον ἐρεθιστικὸν, intends to ſignify whatever ſolicits and exhauſts the Strength of Nature; and again, in the ſame Book, among the Cauſes of Imbecillity, he reckons ἄλλο τινα ἐρεθισμὸν, "ſome other Irritament;" which *Galen* expounds by ſome biting Pain of the Belly or Inteſtines, want of Sleep, or ſome Affection of the Mouth of the Stomach. Ἐρεθισμὸς, in particular, ſignifies an Irritation of the Belly, from thin and acrimonious Humours diſcharging themſelves in liquid Stools; as in 1 *Epid. Ægr.* 2. and *Ægr.* 12. In general, whatever is an Obſtacle to Nature, or retards its Motion towards a Criſis, whether it be Aliment, Medicine, Phlebotomy, topical Remedies, or any other Affection of the Mind or Body, may be termed an *Erethiſmos*. *Aretæus, curat. acut. Morb. Lib.* 1. *Cap.* 1. for ἐρεθισμὸς uſes ἐρεθμὸς, in the ſame Senſe. Οἱ καλὰ φάρυγγα ἐρεθισμοὶ, *Coac.* 264. are Irritations or Vellications of the Fauces, from a Deflux of acrimonious Humours, which excite Tumors of the Glands of the Ears.

ERETRIA TERRA.

Terra Eretria. Offic. Matth. 1392. *Terra Eretria cinerea ultramarina, qua Medici utuntur.* Kentm. 1. ERETRIAN EARTH.

There are two Sorts of *Terra Eretria*; the one white, the other aſh-colour'd. What is moſt eſteem'd, approaches to an Aſh-colour, and is very ſoft, and drawn over Copper-plates, leaves a Line of a Violet-colour.

According to *Dioſcorides*, it has an aſtringent and refrigerating, with ſomewhat of a mollifying Virtue; incarnates, and conglutinates recent Wounds. *Dale.*

ERETRIS, ERETRIAS TERRA, ἐρέτρις ἢ ἐρετριὰς γῆ, the ſame as the preceding. *Hippocrates*, *Lib.* 3. *de Morbis*, directs rubbing of it on the Breaſt, in order to diſcover in what Part thereof Pus lies concealed. See EMPYEMA.

EREUMENA URA, ἐρεύμενα ὦρα ὑποσήσεσθαι ἐν μέσῳ, in *Coac.* 532. according to *Foeſius*, are "Urines aſſuming a "cloudy Conſiſtence in the Middle;" where *Foeſius* expounds ἐρεύμενα by μέλαμβάφεια, aſſuming, becauſe ἐρεύμενον, in *Heſiod*, is thus expounded by *Varinus.*

EREUXIS, ERYGE, EREUGMOS, ἔρευξις, ἔρυγὴ, ἐρεύγμὸς, from ἐρεύγω, to belch; Eructation, or an Excretion of Flatulences by the Mouth.

ERGALIA, in *Libavius*, *Alchym. Lib.* 1. *Cap.* 2. & 3. is the Part of Alchemy, explaining the Inſtruments thereof. *Caſtellus* from *Libavius*.

ERGASIMA. A Name for the worſt Sort of Myrrh. *Dioſcorides*, *Lib.* 1. *Cap.* 77.

ERGASTERIUM, ἐργαστήριον, from ἐργάζομαι, of ἔργον, a Work, or Operation, is the ſame as *Laboratorium*, a Laboratory. *Ergaſterion*, in particular, ſignifies, alſo, that Part of the Furnace in which the Copel, Alembic, Retort, or other Inſtrument, containing the Matter to be acted upon, is repoſited.

ERGATA. The Name of a Piece of Machinery, which concurs in the Conſtitution of the Female Screw. *Oribaſ. de Machinament.*

ERGON, ἔργον, Work, Action, or Function. In *Hippocrates*, it frequently implies ſomewhat of Difficulty.

ERICA.

The Characters are;

The Leaves are ſmall and evergreen; the Flower monopetalous, Bell-ſhaped, naked, and often ſhap'd like a Pitcher. The Ovary in the Bottom of the Flower becomes a roundiſh Fruit, gaping in four Places, divided into four Cells full of ſmall Seeds, and cover'd with the lower Part of the Flower, as with a Calyx.

Boerhaave mentions eight Species of this Plant; which are,

1. Erica, vulgaris glabra. *C.B.Pin.* 485. *Dill. Cat. Giſſ.* 171. *Buxb.* 104. *Tourn. Inſt.* 602. *Elem. Bot.* 475. *Boerh. Ind. A.* 1. 221. *Erica* Offic. Ind. Med. 48. Mont. Ind. 42. *Erica vulgaris*, Park. Theat. 1480. Raii Hiſt. 2. 1713. Synop. 3. 470. Merc. Bot. 1. 33. Phyt. Brit. 38. *Erica vulgaris ſeu pumila*, Ger. 1196. Emac. 1380. Mer. Pin. 36. *Erica vulgaris flore purpureo & albo*, Rupp. Flor. Jen. 71. *Erica vulgaris humilis, ſemper virens, flore purpureo & albo.* J. B. 1. 354. *Erica, vel Erice*, Chab. 75. *Erica folio Myricæ vulgaris glabra*, Jonſ. Dendr. 449. COMMON HEATH. *Dale*, *p.* 334.

Matthiolus's Figure of this Plant is better than thoſe of any other Authors. *Cluſius* and *J. Bauhine* took the Flower to be tetrapetalous, whereas it is monopetalous; but the Empalement of this Species is often miſtaken for the Flower.

The Flower of this Plant is of a very ſingular Structure. It is a little Bell prolonged and double. The outer one, which is the longeſt, is formed by four Petals, encompaſſing the other, which ſeems to be monopetalous, open only at the fore Part, and cut into four equal Segments. The Cavity of this inner one is filled with eight Chives, diſpoſed round a Pointal, which does not exceed the Thickneſs of a middling Pin's Head, and is raiſed with eight rounded Ribs, and ſurmounted by a Style, terminated with a Button, which uſually juts out of the Flower. Theſe Parts are ſuſtained by a little Empalement, like a Cup, cut to the very Baſe into four equal Parts. This double Flower is Purple, as is alſo the Style; but the Chives are white.

The Decoction of Heath is diuretic. *Cluſius* affirms, that *Rondeletius*, the famous Profeſſor of Phyſic at *Montpelier*, uſed the Oil of its Flowers for Tetters, with a great deal of Succeſs. *Tabernæmontanus* ſays, that it is a Specific for theſe Sorts of Diſeaſes; and that a Fomentation, with the Flowers of Heath, eaſes the Pain of the Gout. For the ſame Diſeaſe they prepare a Vapour-bath, with its Leaves and Flowers. *Martyn's Tournefort.*

The Juice of Erica, or the diſtil'd Water of the Flowers, cures Redneſs of the Eyes, and mitigates Pains in them. A Decoction of the Leaves of *Erica*, taken warm, to the Weight of five Ounces, Morning and Evening, three Hours before Meat, for thirty Days ſucceſſively, is effectual for breaking and expelling the Stone in the Bladder, as *Matthiolus* experienced; but he obſerves, that this Remedy becomes more ſucceſsful, if the Patient, after the ſaid Term of thirty Days, bathes himſelf in a Decoction of *Erica*, and, while he is therein, ſeats himſelf on the boiled Plant, and repeats the ſame Practice ſeveral times. *Matthiolus* adds, that he knew ſome, who, obſerving an accurate Regimen of Diet, by only drinking this Liquor, voided Stones from the Bladder, crumbled into very ſmall Particles.

The *Scotch* Highlanders often make their Beds of *Erica*, placing the Roots downwards, and the Leaves upwards, in ſo artificial a Manner, that they are as ſoft as Feather-beds, and much wholſomer. For the Erica, by its natural drying Quality, exhauſts the ſuperfluous Moiſture, and by that means reſtores Vigour to the Nerves; ſo that they, who went to Bed weak and fatigu'd, riſe the next Morning full of Spirit and Alacrity. *Ray, Hiſt. Plant.*

2. Erica; vulgaris; flore albo. *C. B. P.* 485. COMMON HEATH, WITH A WHITE FLOWER.

3. Erica; Myricæ folio; hirſuta. *C. B. P.* 485.

4. Erica; maxima; alba. *C. B. P.* 485.

5. Erica; maxima; purpuraſcens; longioribus foliis. *C. B. P.* 485.

6. Erica; humilis; cortice cineraceo; Arbuti flore. *C. B. P.* 486.

7. Erica; humilis; cortice cineraceo; Arbuti flore albo. *H. R. Par.*

8. Erica; Africana; arboreſcens; tenui folio; ramis arcte ſurſum unitis. *H. Boerh. Ind. Alt. Plant. Vol.* 1. *p.* 221.

ERICERUM, ἐρικηρὸν, the Name of ſeveral *Gallyria*, in *Aetius*. *Tetrab.* 2. *Serm.* 3. *C.* 102. ſo call'd from *Erica*, Heath, a principal Ingredient. Theſe are much recommended for drying up ſuperfluous Moiſture. See ACHARISTON.

ERICIS, ἐρικὶς, from ἐρείκω, to break. Barley groſly divided, or ſplit in two. *Galen. Exegeſ.*

ERIEN. A Name for the APOCYNUM. *Raii Hiſt. Plant.*

ERIGERUM. See SENECIO.

Erigerum quartum. A Name for the *Conyza*; *cærulea*; *acris.*

Erigerum tomentoſum. A Name for the *Jacobæa*; *Pannonica.*

ERIMOIDES. A Word peculiar to *Paracelſus*, which ſhould ſeem to import Sand ſubſiding in the Urine.

ERINACEUS. The Urchin, or Hedghog. See *Herinaceus.*

ERINEOS, ἐρινεὸς, ſignifies the *Caprificus*, Wild Fig-tree.

ERINOS, ἔρινος. The Name of a Plant in *Dioſcorides*, *L.* 4. *C.* 29. He ſays it grows near Rivers and Fountains, with Leaves like the *Ocymum*, but leſs, and divided on the ſuperior Part; it has five or ſix Branches about a Span long. The Flower is white, but the Seed black, ſmall, and rough to the Taſte; the Leaves and Stalks are full of Juice. Two Drams of the Seeds, mix'd with four Drams of Honey, reſtrain Rheums of the Eyes, if they are therewith anointed. The Juice, mix'd with Sulphur, which has never been melted, and Nitre, and pour'd into the Ears, relieves Pains therein.

J. Bauhine mentions two Plants by this Name; the *Erinos major Fab. Columnæ*, *Rapunculo affinis*, which ſeems to correſpond with that above-deſcrib'd, from *Dioſcorides*; and the *Erinos Fab. Columnæ minor.* And *Muntingius* takes notice of a third.

ERION, ἔριον, Wool. See LANA.

ERIOPHORON, ἐριοφόρον. A ſort of woolly Bulb, mention'd by *Theophraſtus.*

ERIPHOS, ἔριφος. A Kid.

ERITHRONIUM *Satyrium.* The Name by which *J. Bauhine* calls the *Dens Canis*, *latiore, rotundioreque Folio.*

ERIX, ἔρις, in *Galen's Exegeſis*, is explain'd, the ſuperior Part of the Liver. But *Foeſius* is of Opinion, that *Galen* read ἔρις, inſtead of σύεργξ, becauſe the former Word does not, in our Copies, occur.

ERMESIA, ἑρμεσία. *Gorræus* informs us, that this was the Name of a Compoſition us'd by the Magi, in order to enable them to get ſtrong and handſome Children. It conſiſted of Honey, Myrrh, Saffron, and Palm-wine, beat together, which was to be taken in Milk. The Women, it ſeems, were to take this, as well as the Men. As *Gorræus* has not quoted his Author for this, I don't know his Authority.

ERODENTIA. Eroding or corroding Medicines.

ERODINIUM. A Word us'd by ſome of the enthyſiaſtical Chymiſts to expreſs, as it ſhould ſeem, a Prognoſtic.

EROSIO. Eroſion, or Corroſion.

EROTION. A Name for the APIASTRUM. *Marcellus Empiricus*, *C.* 28.

EROTYLUS. A Name for the *Fungus*; *Coralloides*; *Encephaloides*; *fuſcus*; *Gyris in Medio ſulcatis, lamellatis, ſeratis.*

ERPES. See HERPES.

ERRATICUS. Erratic, wandering, irregular. The ſame as ATACTOS; which ſee.

ERRHINA, ἔρρινα, from ῥὶς, the Noſe. Medicines which, when ſnuff'd up the Noſe, promote a Diſcharge of Mucus from that Part.

The Excretion of the mucid Lymph, ſecreted in the Glandular Pituitary Membrane, which lines the Cavities of the Noſtrils, and the twelve Sinuſes of the Brain, is excellently promoted by *Errhines* and *Sternutatories*; the former of which only gently, but the later more forcibly, ſtimulate the Coats, and excite them to an excretory Motion. Among the milder Kind, or the Errhines, we juſtly reckon Marjoram, Baſilicon, Thyme, Hyſſop, Savory, Marum Syriacum, the Tops of Origanum, Flowers of Lilies of the Valley and Benjamin, the Reſin of Guaiacum, fine Raſpings of Aloes-wood; dry volatile Salt of Sal-ammoniac perfum'd with Oil of Marjoram; as alſo white Vitriol. On the contrary, violent Sneezing is produc'd by Euphorbium, and the Powder of white Hellebore; and, in a milder Degree, by the various Kinds of Snuffs, precipitate Mercury, and Pepper.

Sternutatories draw the Humours from the Coats of the Noſtrils in the ſame manner Purgatives do from the glandulous Coats of the Inteſtines; that is, by their ſubtile and highly acrid Salts, which ſtimulate, and, as it were, produce a Criſpature of theſe Coats. But, as acrid Purgatives, ſo alſo Sternutatories ought to be very rarely us'd, becauſe, in the Work of Evacuation, Nature rather delights to be gently led, than forc'd and compel'd. But Errhines, which are more friendly to the Conſtitution and Nerves, by their ſubtile, acrid, and volatile

Salt, gently ſtimulate the pituitary Membrane, draw the mucid Humour from it, and are much ſafer than Sternutatories, ſince theſe latter induce a kind of convulſive Motion on the Nerves, and, by Conſent, on the whole Breaſt; whereas the former, in their Operation, rather corroborate the Nerves and nervous Coats.

Errhines prepar'd of Cephalic Herbs, eſpecially Marjoram, Marum Syriacum, Flowers of Benjamin and Lilies of the Valley, and Raſpings of Aloes-wood, with the Addition of a Grain or two of Ambergriſe, are of ſingular Service in oppreſſive Pains of the Head, a Hemicrania, lethargic Diſorders, Weakneſs of Memory, Stuffing of the Head, a Coryza, Dulneſs of Hearing, a pituitous Cephalalgia, eſpecially that which has its Seat in the Bones of the Forehead, and for the moſt part ariſes from a Suppreſſion of a Coryza, mucous Defluxions of the Eyes, Drowſineſs, Vertigoes, and in Caſes where malignant Humours, generated by a Lues Venerea, are lodg'd in the Membranes of the Noſtrils. And theſe Errhines, beſides the Evacuations procur'd by them, convey a certain Vigour and Energy to the animal Functions. A few Grains of the volatile Salt of Sal-ammoniac mix'd with the Balſamic Elixir, and put up the Noſtrils, are of ſingular Efficacy in Dulneſs of Hearing, Dimneſs of Sight, and lethargic Diſorders; and as this Preparation excites Sneezing in delicate Conſtitutions, 'tis often advantageous in paralytic and apoplectic Caſes, where the Humours of the Head are to be ſtimulated to a briſker Motion.

At preſent, Smoaking, and taking Snuff, are more uſed than is conſiſtent with Health; for by continually ſnuffing up the Powder of Tobacco, the Smell, in conſequence of the Obſtruction, and, as it were, Induration of the nervous Papillæ of the Membranes, which cover the Oſſa Squamoſa, and Noſtrils, is not only injur'd, but the Voice, which was before clear, becomes hoarſe, by a Congeſtion of Humours to the Parts. *Frederic. Hoffman.*

ERRIPSIS, ἔρριψις, from ῥίπτω, to precipitate.

When us'd with reſpect to the Body, it imports that utter Dejection, and Proſtration of Strength, which ſuffers a Perſon to ſink down like a Carcaſe, as is explain'd under the Article *Decubitus*. When apply'd to the Eyes, it ſignifies a very great Weakneſs, which prevents their being kept open.

ERROR LOCI. This is a Term introduc'd, as far as I remember, by *Boerhaave*. This celebrated Author informs us, that in the Body there is a decreaſing Series of Veſſels; by which he means, that the firſt Order of Veſſels are adapted to receive the red Globules of the Blood; the next are, perhaps, ſmaller, and convey the Serum; the next the Lymph; and the next in Order, yet finer Fluids. Now, when the red Globules of the Blood are propel'd into the Veſſels deſtin'd for the Conveyance of Serum, or when the Serum gets into Veſſels, in which only a finer Fluid ought to circulate, this he calls an *Error Loci*.

ERVADO *Capitaon*. The Name of a Plant which grows in *Braſil*; call'd, alſo, by *Margrave*, *Cotyledon, repens, Braſilienſis*.

ERUCA.

The Characters are;

The Pod is full of roundiſh Seeds, and the Plant has a particular Taſte, and a particular fetid Smell above all others.

Boerhaave mentions ſeven Species of this Plant; which are,

1. Eruca; ſylveſtris; major; lutea; caule aſpero. *C. B. Pin.* 98. *Tourn. Inſt.* 227. *Boerh. Ind. A.* 2. 15. *Eruca ſylveſtris*, Offic. Ger. 191. Emac. 246. Raii Hiſt. 1. 807. Synop. 3. 296. Merc. Bot. 1. 34. Phyt. Brit. 39. *Eruca ſylveſtris major vulgatior fœtans*, Hiſt. Oxon. 2. 231. *Eruca tenuifolia perennis flore luteo*, J. B. 2. 862. Chab. 276. WILD ROCKET. *Dale*, *p.* 203.

This Rocket has a long white Root, with many Fibres at the Bottom; from which ariſe a great many ſtriated Stalks a Foot or two high, full of narrow, long, and deeply laciniated Leaves. The Flowers are pretty large and yellow, of four Leaves apiece, which are ſucceeded by long, narrow, angular Pods, full of ſmall, hot, bitteriſh Seed. The whole Plant has an ungrateful, fetid Smell. It grows frequently upon old Walls, as on the Walls of the City of *London*, in great Plenty; flowering great Part of the Summer.

This Rocket is hot and dry, and much of the Nature of the following; but is very rarely uſed in Phyſic. *Miller's Bot. Off.*

This Plant is of a Taſte altogether acrid and burning, mixed at laſt with a little Bitterneſs; it gives a pretty deep Tincture of Red to the blue Paper, and its Smell reſembles that of fetid Oils rectified over Quick-lime; which makes us believe, that it contains a Salt very acrid, which in ſome meaſure reſembles the Sal-ammoniac, mixed with a great deal of fetid Oil and Earth.

Thus it is no Wonder, that the Plant, of which we are ſpeaking, ſhould be aperitive, inciſive, and diuretic. *Matthiolus* affirms, that, being boiled with a little Sugar, it is good for the Cough in Children, which is generally occaſioned by glutinous Matters, irritated in the Bronchia and Veſicles of the Lungs. *Martyn's Tournefort.*

2. Eruca; major; ſativa; annua; flore albo; ſtriato. *J. B.* 2. 859. *Raii Hiſt.* 1. 806. *Hiſt. Oxon.* 2. 228. *Boerh. Ind. A.* 2. 15. *Eruca*, Offic. Chab. 276. *Eruca latifolia alba ſativa Dioſcoridis*, C. B. P. 98. Tourn. Inſt. 227. Elem. Bot. 193. *Eruca ſativa*, Ger. 191. Emac. 246. Park. Parad. 502. *Eruca ſativa alba*, Park. Theat. 816. GARDEN ROCKET. *Dale*, *p.* 203.

The common Garden Rocket has a ſlender white woody Root, of a hot biting Taſte; the Leaves ſomewhat reſemble Muſtard in Shape, but are much ſmoother; the Stalks grow to be two or three Foot high, cloathed with leſſer Leaves, having on their Tops many Flowers of a whitiſh-yellow Colour, full of dark-purple Veins; the Seed-veſſels, which ſucceed them, are long, ſlender and ſmooth, parted in two by a thin Membrane, and opening at the Sides when the Seed is ripe, which is very ſmall, of a rediſh yellow Colour, and a roundiſh Shape, and hot Taſte. It is ſown in Gardens, and the Seed is ripe in *July*.

Rocket is eaten frequently among other Herbs as a Sallad, tho' many People diſlike it for its ſtrong, ungrateful Smell; it has the Name of a Provocative, and Exciter to Venery, and is likewiſe a good Diuretic. *Matthiolus* commends the Leaves, boil'd with Sugar, to be given to Children for a Cough: I ſuppoſe he means, that they ſhould be made into a Syrup. *Camerarius* ſays, that an equal Part of the Powder of Rocket and Cumin-ſeed is a mighty Preſervative againſt an Apoplexy. *Miller's Bot. Off.*

The Seed bruiſed and drank in Wine, kills Worms, and reduces a tumid Spleen. The Leaves bruiſed and apply'd to the Eyelids, ſharpen the Sight. The Seed mix'd with Honey removes all Spots and Freckles from the Face, and more effectually with an Addition of Ox-gall. The Root, boiled in Water, and apply'd, draws out Fragments of Bones. *Ray's Hiſt. Plant.*

3. Eruca; follo bellidis. *M. H.* 2. 231. *a.* DAISY-LEAV'D ROCKET.

4. Eruca; tanaceti folio. *H. R. Par.* TANSY-LEAV'D ROCKET.

5. Eruca; ſativa; foliis magis diſſectis. *H. Edinburgh.* GARDEN ROCKET WITH DEEP-CUT LEAVES.

6. Eruca; cœrulea; in arenoſis creſcens. *C. B. P.* 99.

7. Eruca; tenuifolia; perennis; flore luteo. *J. B.* 2. 861. *a.* NARROW LEAV'D PERENNIAL ROCKET, WITH A YELLOW FLOWER.

Boerhaave, Ind. alt. Plant. Vol. 2. *p.* 15.

ERUCA. Offic. Schrod. 5. 341. *Eruca Braſſicaria maximè vulgaris, nigro, luteo, & cœruleo coloribus variegata.* Raii Inſect. 113. THE CATERPILLER.

It is the Fœtus of a Sort of Butterfly, and undergoes the ſame Metamorphoſis as the Silk-worm, and at length paſſes into a Butterfly. There are many Species; but that which ought to be uſed in the Shops, is an Inſect known to every body, that feeds upon the Leaves of the Cabbage.

Caterpillers bruiſed, or the Powder of them, raiſe a Bliſter like Cantharides, and take off the Skin. *Mouffet* ſays, they will cauſe the Teeth to fall out of their Sockets; and *Hippocrates* writes, that they are good for a Quinſey.

The Caterpillers of Pine-trees are mentioned by *Dioſcorides*, without any Deſcription. *Matthiolus* informs us, that they are frequently found on the Pine-trees about *Trent*: And, as far as may be collected from his Deſcription, they are gregarious, like ſome of the ſeparian, or incloſing, Kind, which incloſe themſelves in one large Web. *Dale.*

ERUCAGO.

The Characters are;

The Fruit is like a quadrangular and creſted Club, divided, generally, into four Cells, full of roundiſh beaked Seed.

Boerhaave mentions but one Species of this Plant, which is,

Erucago; ſegetum. *T.* 232. 108. *Sinapi echinatum.* Lugd. 647. J. B. 2. 858. *Raphaniſtrum, diſpermum, Monſpeliacum, ſilicula quadrangula, echinata.* H. L. 520. CORN-ROCKET. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 10.

Lemery ſays, it is inciſive, and attenuating, proper to rarefy the pituitous Humours of the Brain, and to provoke Sneezing.

The Hiſtory of Plants, attributed to *Boerhaave*, mentions it as an Antiſcorbutic.

ERUCTATIO. Eructation, or Belching.

ERVILIA. A Name for the *Ochrus, folio integro, Capreolos emittente.*

ERUPTIO. Eruption. It imports a ſudden and copious Excretion of Humours, for Example, of Pus, or Blood. But it alſo ſignifies the ſame as Exanthema.

ERVUM.

The Characters are;

The Pods are articulated, and undulated on both Sides, as if knotted, and full of roundiſh Seeds. The Leaves grow by Pairs, as if conjugated to a middle Rib.

Boer-

Boerhaave mentions two Species of this Plant; which are,

1. Ervum; verum. *Tourn. Inſt.* 398. *Elem. Bot.* 317. *Boerh. Ind. A.* 2. 47. *Orobus, Ervum.* Offic. Chab. 148. *Orobus ſiliquis articulatis, ſemine majore.* C. B. P. 346. *Orobus receptus Herbariorum.* Ger. 1051. Emac. 1225. *Orobus vulgaris Herbariorum,* Park. Theat. 1025. *Orobus ſativus, ſive Ervum ſemine anguloſo, ſiliquis inter grana junctis.* Hiſt. Oxon. 2. 74. *Orobus, ſive Ervum multis.* J. B. 2. 321. Raii Hiſt. 1. 915. BITTER VETCH.

This Vetch ſeldom grows to above a Foot and an half, or two Foot, high; full of weak angular Stalks, having many winged Tare-like Leaves, whoſe obtuſe Pinnæ are more numerous and ſlender. The Flowers grow at the ſetting on of the Leaves, ſingly, in Shape like the Flower of a Tare, or Vetch, but leſs, and of a white Colour; and are ſucceeded by ſmall round Pods, containing two or three large round white Seeds, which ſwell out the Pod, making it appear, as it were, jointed: It grows in *Italy*, and ſome Parts of *France*; and flowers in *June*.

The Powder of bitter Vetch, mixed with Honey, is accounted good to cleanſe the Lungs of tough Phlegm. It is a ſtrong Diuretic, and expels the Stone and Gravel; but, if taken too frequently, it cauſes bloody Urine: It is but ſeldom uſed. The Meal of it was formerly employed to make up the Trochiſci Scillitici; but now we make them up with the Meal of the Cicers. *Miller's Bot. Off.*

It is ſometimes, though but rarely, cultivated in Gardens, and flowers in *June*. The Part in Uſe is the angulous, roundiſh, brown, rediſh Seed, or Grain, which is of a leguminous, bitteriſh, and ungrateful Taſte. In its farinaceous Subſtance it anſwers to the Fenugreek, and contains a diuretic Salt; on which Account it is commended, as good to expel the Stone. *Dale.*

2. Ervum; Orientale; alopecuroides; perenne, fructu longiſſimo. *T. C.* 27. *H. R. D.* ORIENTAL PERENNIAL ERVUM, WITH A VERY LONG FRUIT. *Boerh. Ind. alt. Plant. Vol.* 2.

Miller takes notice of two more Species.

ERYGE, ἐρυγή. An Eructation. See RUCTUS. Hence Erygmatodes, ἐρυγμαλώδης, flatulent; attended with Eructations.

ERYNGIUM.

The Characters are;

The Leaves grow alternately on the Stalks, which are remarkably ſmooth; the Flowers conſiſt of five ſmall Petals, which are reflected, or turned backwards, towards a common Centre, and infixed in a tubular quinquefid Calyx, bearded on the lower Part, and ſquamoſe within; and are collected into a ſcaly echinated, or prickly, Head, which, at the Baſe, is ſurrounded with a radiated prickly Crown; and theſe Heads are diſpoſed in form of an Umbella. The Ovary conſiſts of two Seeds, which are ſometimes foliated, ſometimes plain.

Boerhaave mentions eleven Species of this Plant; which are,

1. Eryngium; maritimum. *C. B. P* 386. *Hiſt. Oxon.* 3. 165. *Tourn. Inſt.* 327. *Elem. Bot.* 278. *Boerh. Ind. A.* 134. *Eryngium.* Offic. *Eryngium marinum.* Chab. 355. Ger. 999. Emac. 1062. Park. Theat. 986. J. B. 3. 86. Raii Hiſt. 1. 384. Synop. 3. 222. Mer. Pin. 36. *Eryngium marinum, ſive vulgare.* Merc. Bot. 34. Phyt. Brit. 39. ERYNGO. *Dale.*

This Eryngo has pretty large, white, and long Roots, which ſpread much in the Earth, and run deep in it. The Leaves are hard, ſtiff, and veiny, narrow at Bottom, and broad and roundiſh at the End, with ſeveral Laciniæ terminating in ſharp Prickles; the Stalk ariſes not to any great Height, being ſmooth, creſted, and chaneled; the Leaves on the Stalks are leſs, and rather ſtiffer, ſet on without Foot-ſtalks, with prickly Edges. At the Ends of the Branches come forth round and ſomewhat prickly Heads, beſet with ſtiff narrow Leaves, growing like a Star, under them. The Flowers are ſet in theſe Heads, of a greeniſh white Colour, each in a ſeparate Calyx, like the Teaſel, ſucceeded by flatiſh Seed. It grows by the Sea-ſide, in many Places, in ſandy Ground, and flowers in *June* and *July*. The Roots only are uſed.

Eryngo-roots are hepatic and diuretic, opening the Obſtructions of the Liver, helping the Jaundice and Dropſy, provoking Urine, and eaſing the Strangury. Candy'd with Sugar, they are accounted very reſtorative, good for conſumptive Perſons, and thoſe waſted with long Illneſs, and too much Venery; they being reckoned Strengtheners to the Parts of Generation. They are recommended by ſome for the Lues Venerea and Gonorrhœa, as taking off the Acrimony and Heat of Urine uſually attending thoſe Diſtempers, by their balſamic ſoftening Qualities. *Miller's Bot. Off.*

The Root is nephritic and alexipharmic, and is of principal Service in Obſtructions of the Menſes, Urine, the Liver, Gall, Spleen, and other Parts: Whence it is effectual in the Jaundice and Colic. *Dale* from *Schroder.*

2. Eryngium; vulgare. *Offic. C. B. P.* 386. *J. B.* 3. 85. *Raii Hiſt.* 3. 384. *Synop.* 222. *Tourn. Inſt.* 327. *Elem. Bot.* 278. *Rupp. Flor. Jen.* 222. *Buxb.* 105. *Boerh. Ind. A.* 134. *Hiſt. Oxon.* 3. 165. *Eryngium.* Chab. 354. *Eryngium Mediterraneum.* Ger. 999. Emac. 1062. *Eryngium Mediterraneum, ſeu Campeſtre.* Park. Theatr. 986. COMMON ERYNGO. *Dale.*

Cæſalpinus ſays, there is no diſcovering any Flower upon this Plant. *Dodonæus* affirms its Flower to be blue, and ſeldom yellow. For my Part, I have obſerved it to conſiſt of five whitiſh Petals.

One finds ſome Acrimony in the Eryngo, upon chewing it; its Leaves give a faint-red Colour to the blue Paper; its Roots give it a deeper: So that it is likely, that their Salt, in ſome meaſure, reſembles Sal Ammoniac; but that it is joined with ſome Sulphur, and terreſtrial Subſtances.

There is an indifferent Quantity of concreted volatile Salt, and a great deal of Oil and Earth, obtained from this Plant by the chymical Analyſis. *Martyn's Tournefort.*

It is ſcarce in *England*, but common in foreign Countries; it flowers in *July*; and the Root is uſed, which has the ſame Virtues as the preceding. *Dale.*

3. Eryngium; latifolium; planum. *C. B. P.* 386. *M. H.* 3. 165. BROAD-LEAV'D PLAIN ERYNGO.

4. Eryngium; latifolium; caule ex viridi palleſcente, flore albo. *C. B. P.* 386.

5. Eryngium; latifolium; caule & flore Amethyſtino pulcherrimo.

6. Eryngium; Orientale; foliis trifidis. *T. Cor.* 23. *H.*

7. Eryngium; planum; minus. *C. B. P.* 386. *M. H.* 3. 166.

8. Eryngium; Orientale; tenuiſſime inciſum, capite ſtellato. *T. Cor.* 23. *H.*

9. Eryngium; planum; latifolium; Creticum; flore cœruleo ex albo miſto variegato. *Sher. H. Maurocen.*

10. Eryngium; maritimum; Luſitanicum; folio ampliori. *T.* 327. *H. R. Par. M. H.* 3. 165. *H.*

11. Eryngium; Hiſpanicum; annuum; folio cæſio, ſplendente; floſculis vix conſpicuis. *a.*

Boerh. Ind. alt. Plant. Vol. 1. *p.* 134.

Beſides the above-mentioned Species of this Plant, *Dale* mentions the following:

Eryngium trifolium. Offic. Alpin. Exot. 153. Park. Theat. 987. Raii Hiſt. 386. Hiſt. Oxon. 3. 167. TREFOIL ERYNGO. *Dale.*

The Root provokes Urine, and excites to Venery. *Ray.*

ERYSIMUM.

The Characters are;

It has a long, thin, ſlender Pod, full of very ſmall round Seeds; and it has a peculiar Appearance.

Boerhaave mentions eleven Species of this Plant; which are,

1. Eryſimum; vulgare. *C. B. Pin.* 100. *Hiſt. Oxon.* 2. 218. *Tourn. Inſt.* 228. *Elem. Bot.* 194. *Boerh. Ind. A.* 2. 14. *Rupp. Flor. Jen.* 65. *Dill. Cat. Giſſ.* 93. *Buxb.* 109. *Eryſimum.* Offic. *Eryſimum Dioſcoridis Lobelii,* Ger. 198. Emac. 254. *Eryſimum vulgare, ſive Irio.* Mer. Pin. 36. *Eryſimum Tragi floſculis luteis, juxta muros proveniens.* J. B. 2. 863. *Irio, ſive Eryſimum.* Chab. 278. Merc. Bot. 1. 44. Phyt. Brit. 621. *Iris, ſive Eryſimum vulgare.* Park. Theat. 833. *Eruca ſiliquâ cauli appreſſâ, Eryſimum dicta.* Raii Hiſt. 1. 810. *Eruca hirſuta ſiliqua cauli appreſſa Eryſimum dicta.* Synop. 3. 298. HEDGE-MUSTARD. *Dale.*

The Root of Hedge-muſtard is long, whitiſh, frequently crooked, and full of ſmall Fibres. The Stalk ariſes to be a Foot and an half, or two Foot, high, tough and pliant, branching out, uſually, on all Sides, like a Shrub, or Buſh. The lower Leaves are long and narrow, cut into ſeveral jagged Segments, ſet oppoſite to one another, with one more blunt at the End, and are ſomewhat hairy; the Leaves, which grow on the Stalks, have fewer Segments, the upper many times but three, appearing like the Head of an Halbert; the Flowers are yellow, very ſmall, and four-leaved, growing thick together at the lower End of the Branches; which flowering gradually, and the Stalk ſtill extending itſelf, the Spikes of the Seed-veſſels grow to a great Length, being round, ſharp-pointed, clapping cloſe to the Stalks, and are full of hot biting Seed. It grows every-where, by the Way-ſide, flowering good Part of the Summer. The Herb is uſed.

Hedge-muſtard is hot and dry, opening and attenuating, and, by its warming Quality, is good to diſſolve thick, groſs, ſlimy Humours in the Lungs, to help a Cough, and Shortneſs of Breath; and it is particularly recommended againſt an habitual Hoarſeneſs, to recover the Voice. *Riverius* praiſes a Decoction of it, in Wine, againſt the Colic.

The only officinal Preparation of this Plant is the *Syrupus de Eryſimo. Miller's Bot. Off.*

Hedge-muſtard has an herby Taſte, a little ſaltiſh, and glutinous. It gives a pretty deep red Colour to the blue Paper; which gives us Reaſon to believe, that it contains a Salt reſembling Sal Ammoniac, tempered with Phlegm, Sulphur, and

and Earth: Thus, the Hedge-muſtard is proper for all the Diſeaſes of the Lungs, where a condenſed Lymph is to be diſſolved, which adheres to the Bronchiæ, and Veſicles, as it often happens in old Coughs, and in an Aſthma. They preſcribe a Handful of it in Cock-broth. They macerate cold, in Water, this Plant, haſhed coarſe. The Syrup, made with the Juice, is very good. The Syrup, deſcribed in *Rondeletius's* Diſpenſatory, printed in the Memoirs of *Pena* and *Lobel*, and publiſhed in 1605. is too compound. *Martyn's Tournefort.*

The Eryſimum is a good external Remedy for Cancers not exulcerated, and for hard Tumors. *Ray.*

SYRUPUS DE ERYSIMO: *Syrup of Eryſimum.*

Take of Hedge-muſtard, freſh gathered, ſix Handfuls; of Elecampane-root, and Coltsfoot, alſo very freſh gathered and Liquorice-roots, of each two Ounces; of the Leaves of Borrage, of Succory, and Maidenhair, of each one Ounce and an half; of the cordial Flowers, and the Flowers of Roſemary and Betony, of each half an Handful; of Aniſe-ſeeds, half an Ounce; of ſton'd Raiſins, two Ounces: Let them infuſe together, a whole Day, in Water and Mead, of each two Pints and an half; and of the Juice of Hedge-muſtard, eight Ounces. Boil them in a Bath-heat; and to the Liquor, ſtrongly preſſed out, and clarified, put four Pounds and an half of Loaf-ſugar; and boil to a Syrup, in the ſame Heat. *S. A.*

2. Eryſimum; alterum; ſiliquis Erucæ. *C. B. P.* 101.

3. Eryſimum; anguſtifolium; majus. *C. B. P.* 101. *Rapiſtrum ſylveſtris, Irionis folio, λεπιομαιεοκίεςλον.* T. Cor. 266. *Rapiſtrum Italicum, ſiliquis longiſſimis.* C. B. P. 95. GREAT NARROW-LEAV'D HEDGE-MUSTARD.

4. Eryſimum; Genuenſe; ſylveſtre. *Flor.* 1. *Sinapi Genuenſe, ſylveſtre.* J. B. 2. 858.

5. Eryſimum; Genuenſe; ſylveſtre; flore ſulphureo. *Ind.* 143. *a.*

6. Eryſimum; Polyceratium, vel corniculatum. *C. B. P.* 101. HEDGE-MUSTARD WITH MANY CROOKED PODS.

7. Eryſimum; ſemine minimo pallido; ſiliquis Erucæ. *a.*

8. Eryſimum Orientale; folio Sonchi; flore ſulphureo, ſiliquis longiſſimis. *a.*

9. Eryſimum; Orientale; ſiliquis ſtrictiſſimis. *Sher. a.*

10. Eryſimum; minimum; flore albo; Montis Aurei. *Vaill.*

11. Eryſimum; Monſpeſſulanum; ſmapios foliis. *Raii Hiſt.* 1. 812. *Boerh. Ind. A.* 2. 14. *Eryſimum latifolium.* Offic. *Eryſimum latifolium majus glabrum.* C. B. Pin. 101. Chom. 105. Tourn. Inſt. 228. Elem. Bot. 194. Hiſt. Oxon. 2. 218. *Eryſimum latifolium Neapolitanum,* Park. Theat. 298. Raii Hiſt. 1. 811. Synop. 3. 298. *Eryſimum hirſutum, foliis Erucæ.* Flor. Pruſſ. 69. *Sinapi ſylveſtre Monſpeſſulanum, lato folio, floſculo luteo minimo, ſiliqua longiſſima.* J. B. 2. 858. BROAD-LEAV'D HEDGE-MUSTARD. *Dale.*

The Figure which *Columna* has given, is good. Some make the Syrup of Eryſimum with the Juice of this Species. *Martyn's Tournefort.*

It agrees in Virtues with the common Eryſimum. *Dale.*

ERYSIPELAS, ἐρυσίπελας. An Eryſipelas, or St. Antony's Fire. This Diſtemper ſeems to have taken its Denomination from the Colours which it induces on the Parts it affects; and to be derived from ἐρυθρὸς, red, and πελὸς, livid, or black.

The Nature of an Eryſipelas, and the Characters by which it is diſtinguiſhed from a Phlegmon, are thus deſcribed by *Galen*: "If a Fluxion, ſays he, be mixed of Blood, and yellow Bile, immoderately hot, or only of fervid and very thin Blood, the Affection is called an Eryſipelas, and is much hotter than a Phlegmon, and of a yellower Colour; and, if you touch it, the Blood eaſily retires from the Place, and flows thither again, being exquiſitely thin, and red to the Sight. Beſides, it is not attended with a Pain, as in a Phlegmon, nor reſembles any Species of Plegmon, either in Pulſation, Compreſſion, or Tenſion; but is ſometimes very favourable to the Patient, and eſpecially when it is effuſed, or ſpends its Force only upon the Skin, leaving the ſubjacent Fleſh unaffected. And thus it is, indeed, for the moſt part, or whenever it is a perfect and genuine Eryſipelas; whereas one that injures the ſubjacent Fleſh, being not conſtituted of an exquiſitely thin Flux, is not a ſimple Eryſipelas, but a Diſorder compoſed of an Eryſipelas and a Phlegmon; in which, ſometimes, the proper Symptoms of an Eryſipelas are moſt predominant, and then it is called, by our modern Phyſicians, a Phlegmonoide Eryſipelas; ſometimes theſe of a Phlegmon, in which Caſe they give it the Name of an Eryſipelatous Phlegmon: But if the Symptoms of neither prevail above thoſe of the other, but there appears an Equality between them, they ſay the Diſeaſe is a Complication of a Phlegmon and an Eryſipelas. A true and perfect Eryſipelas, therefore, is an Affection of the Skin alone; but a Phlegmon, though not alone, yet principally, of the ſubjacent Fleſh, and ſometimes, alſo, of the Skin; which latter, in other reſpects, is no leſs painful and afflictive than the other, but is not attended with a Pulſation." *Lib.* 2. *ad Glauc.* The ſame Author, *Lib.* 14. *Meth. Med.* ſpeaks in the following Manner: "There is another Diſeaſe, not much different from a Phlegmon, which is called Eryſipelas, conſiſting of a bilious Humour: Some Characters it has in common with a Phlegmon, as a preternatural Tumor, and an Heat; but there is a Difference between them, which conſiſts, firſt and principally, in Colour: While the Colour appears red, it is called a Phlegmon; but when pale, or yellow, or mixed of theſe two, it acquires the Name of Eryſipelas. Moreover, the Pulſation is a proper Symptom of a great Phlegmon, becauſe this Diſorder is generally profoundly ſeated in the Body; but an Eryſipelas affects the Skin more than the Parts underneath; for the Humour of the pale Bile is of a thin Conſiſtence, ſo as to be eaſily tranſmitted through the carnous and rare Parts of the Body to the very Skin; but the Denſeneſs of the Skin is not, in like manner, pervious to this Bile, unleſs it be extremely thin and aqueous, much of the ſame Nature with what is eliminated every Day in Sweat." In another Place of the ſame Book, he tells us, "that, if the Humour be immoderately thick and acrimonious, it excoriates the Epidermis, and, in time, corrodes the ſubjacent Parts; ſo that there are two Kinds of Eryſipelas, one attended with an Exulceration, the other not." And the ſame Diſtinction is expreſſed by *Hippocrates*, 5 *Aph.* 23. See INFLAMMATIO.

In eryſipelatous Fevers, which are juſtly claſſed among thoſe of the exanthematous Kind, the Blood and Humours being in an intenſe Motion, an acrid Serum, of a ſulphureous and cauſtic Nature, is, by that means, propelled to the Surface of the Body; and produces a Swelling, accompanied with Redneſs, Heat, and Pain.

An eryſipelatous Fever is ſo far from being ſo innocent and ſimple as is generally thought, that it is often violent, dangerous, frequently mortal, and nearly allied to a peſtilential Fever, the moſt formidable of all Diſorders; for, as this laſt-mentioned Diſeaſe ſeizes ſuddenly with an intenſe Horror, Heat, Proſtration of the Strength, a violent Pain of the Back and Head, Vomiting, and a Delirium; ſo eryſipelatous Fevers are, in the Beginning, accompanied with the ſame Symptoms. As in a peſtilential Fever the malignant Matter is, between the third and fourth Days, propelled to the Surface of the Body, by which the Violence of the Symptoms is diminiſhed; ſo the ſame happens in eryſipelatous Fevers. As in peſtilential Fevers the poiſonous Matter affects the Glands, eſpecially thoſe of the Groin, and firſt produces a Pain and Tenſion of them; ſo, in a violent Eryſipelas, a Swelling, Redneſs, and Pain, are firſt perceiv'd in the inguinal Glands; after which a Matter of a hot and burning Nature deſcends to the Legs. As in peſtilential Fevers the peccant Matter, moſt frequently, fixes its Seat in the mammary, axillary, and parotid Glands; ſo the ſame happens in an Eryſipelas, which, when it ſeizes the Head, firſt affects the parotid Glands; and, when it ſeizes the Breaſt, the axiliary Glands. As in peſtilential Fevers the noxious Matter forms Abſceſſes in the Glands, and readily induces a Gangrene and Sphacelation on the external Parts; ſo in an Eryſipelas the Glands, eſpecially thoſe of the Axillæ and Breaſts, are often ſo burned, as to contract Pus, whilſt, at the ſame time, the Joints are affected with an unſeemly Corruption, as is ſufficiently known by every one in the leaſt converſant in the Practice of Phyſic. Laſtly, as in the the Plague nothing is more dangerous than a Retroceſſion of the expelled Matter from the Surface to the internal Parts of the Body, ſo the ſame Danger and Diſadvantages are produced by the Retroceſſion of the Matter in eryſipelatous Caſes.

But an eryſipelatous differs from a peſtilential Fever in this, that the former is not produced by Contagion, but by an internal Cauſe. It does not, by the Exhalations of the Body, infect thoſe who are ſound; nor is it ſo violent, and immediately productive of the Death of the Patient, as a Fever of the peſtilential Kind. Eryſipelatous Inflammations are diſtinguiſhed from others by this, that in the former the Tumor is more depreſſed, the Pain not ſo tenſive, and the Colour of the Skin more red and florid than in the latter, where it is rather darker. A Phlegmon is diſtinguiſhed from an Eryſipelas by this, that in the latter the Swelling is more ſuperficial, ſpreads farther, and, when preſſed, loſes its Colour; the Matter is, alſo, thin, and ſmall in Quantity; whereas in a Phlegmon the Inflammation is deeper, affecting not only the Skin, but the ſubjacent Fat and Muſcles; and ſo hard, that it does not loſe its Colour upon being preſſed. It is produced by an impure and ſtagnant Blood, and eaſily degenerates into a Gangrene.

An Eryſipelas is, by Phyſicians, commonly diſtinguiſh'd into that of the legitimate Kind, which is alſo call'd ſimple; and that of the ſpurious Kind, which is alſo call'd ſcorbutic.

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The ſimple Kind only affects the Surface of the Skin, and eaſily yields to the Influence of proper internal and external Medicines. But that of the ſpurious or ſcorbutic Kind is of a more chronical Nature, more deeply ſeated, in conſequence of the Impurity of the Juices, not to be cured without Difficulty, and eaſily degenerating into Ulcers of a bad Kind. The ſpurious or ſcorbutic Eryſipelas is ſubdivided into that with, and that without, Exulceration. In the former, more Trouble is created to the Phyſician, and more Danger to the Patient; ſince the Ulcers are often with Difficulty conſolidated after a long time. Beſides, eryſipelatous Fevers are ſometimes of the idiopathic or primary, and ſometimes of the ſymptomatic and ſecundary Kind; for in an Anaſarca, an Aſcites, as alſo in a long-continued Jaundice, whether of the black or yellow Kind, it frequently happens, that a ſymptomatic Eryſipelas ſoon deſtroys the Patient. This Diſorder is alſo frequently complicated with Wounds of the nervous Parts, eſpecially of the Cranium, and its Membranes, as alſo with Fractures of the Bones; in which Caſes, the Patient's Life is in Danger. *Frederic Hoffman.*

An Eryſipelas is diſtinguiſh'd into that of the ſimple, and that of the exulcerated Kind. Both theſe generally begin with a Horror and Fever, but never come up to the State of a real Inflammation; afterwards they become painful, turgid, and diffuſe themſelves over a great Part of the Surface of the Body. They are of a reddiſh-yellow Colour, which diſappears when the Part affected is preſs'd with the Finger, but returns upon its Removal. They are not accompanied with Pulſation, much leſs with any Degree of Tenſion. They alſo remove from one Place to another, and excite a gnawing and burning Senſation in the Part affected.

A ſimple Eryſipelas diſcovers itſelf by a Heat, or a certain Burning and Redneſs of the Parts, without any Ulcer. *Hippocrates*, in his Aphoriſms, calls this Diſorder ἐπιπλόγισμα, but the Moderns ſtyle it the *Roſe*, from the Reſemblance its Colour bears to that of this Flower. According to the now quoted Author, this Diſorder, when ſuddenly ſtriking inwards, after it has once appear'd on the Breaſt, proves very terrible and fatal by means of the Quinſey it excites.

In an Eryſipelas of the ulcerated Kind, which is properly call'd the *Ignis Sacer*, the Surface of the Skin is ſometimes cover'd with ſmall Scales, reſembling Bran; at other times, the whole Skin is ulcerated, and the Puſtules, breaking, diſcharge a purulent Sanies. An Eryſipelas frequently appears on the Face, and ſometimes ſpreading over the Whole of it, ſo diſtends and tumefies it, as to endanger a Suffocation, unleſs the Patient is ſpeedily relieved by proper Remedies. An Eryſipelas, ariſing from a fractur'd or denudated Bone, is generally of bad Preſage. 'Tis always proper and beneficial to force an Eryſipelas from the internal to the external Parts; whereas 'tis prejudicial, if not fatal, to repel it from the latter to the former. In this Diſorder, a Putrefaction or Suppuration happening, are bad Signs; but theſe ſcarce ever occur in a ſimple Eryſipelas, which is, for the moſt part, inſenſibly diſſipated by cutaneous Perſpiration. *Lommii Medic. Obſervat.*

This Diſeaſe affects every Part of the Body, but eſpecially the Face; and it happens at all times of the Year, but principally at the Cloſe of Summer, at which time it frequently attacks the Patient whilſt he is abroad. The Face ſwells of a ſudden, with great Pain and Redneſs, and Abundance of ſmall Pimples appear; which, upon the Increaſe of the Inflammation, often riſe up into ſmall Bliſters, and ſpread conſiderably over the Forehead and Head, the Eyes, in the mean time, being quite cloſed by the Largeneſs of the Tumor. The Country-people term it a Blaſt, or Blight; and, in reality, it differs little from thoſe Symptoms which accompany the Wounds made by Stings of Bees, or Waſps, excepting only that there are Puſtules. And theſe are the Signs of the common and moſt remarkable Species of the Eryſipelas.

But whatever Part is affected by this Diſeaſe, and at whatever time of the Year it comes, a Chilneſs and Shivering, unleſs they preceded a Day or two before, as it ſometimes happens, generally attend this Inflammation, with Thirſt, Reſtleſſneſs, and other Signs of a Fever. As the Fever in the Beginning occaſion'd the Pain, Swelling, and other Symptoms, (which, increaſing daily, terminate in a Gangrene) ſo in the Courſe of the Diſeaſe theſe Symptoms greatly conduce to the Increaſe of the Fever, till both are taken off by proper Remedies.

There is another Species of this Diſeaſe, though it happens leſs frequently. This attacks at any time of the Year, and is moſtly owing to too free an Uſe of ſubtle attenuating Wines, or ſome ſimilar ſpirituous Liquor. It begins with a ſlight Fever, which is immediately ſucceeded by an Eruption of Puſtules, almoſt over the whole Body, reſembling thoſe occaſion'd by the Stinging of Nettles; and ſometimes they riſe up into Bliſters, and ſoon after diſappear, and lie concealed under the Skin, where they cauſe an intolerable Itching, and, after gentle ſcratching, come out again. *Sydenham.*

An Eryſipelas is that Species of Inflammation, which, ariſing in the Skin, and its ſubjacent Fat, ſometimes ſpreads itſelf very far, and is accompanied with Redneſs, Heat, and Pain. The Part affected, when preſſed with the Finger, becomes remarkably white; but, ſoon after its Removal, reſumes its former Redneſs. Though Inflammations of this kind moſt frequently ariſe in the Arms and Legs, yet they ſometimes happen in the Neck, the Head, the Shoulders, the Noſe, and other Parts. Upon the firſt Approach of this Diſorder, the Patient is almoſt always ſeiz'd with a Shivering and Coldneſs, which are ſoon ſucceeded by a Degree of Heat, equal to that perceiv'd in burning Fevers: For this Reaſon, 'tis, both by antient and modern Authors, call'd *Ignis Sacer. Heiſter.*

An Eryſipelas is not always of the ſame Nature, and equally violent, in all Patients; for in ſome, eſpecially young Perſons, the Matter being neither very virulent, nor very large in Quantity, the Diſeaſe is but ſlight and benign; becauſe it neither poſſeſſes the Glands, nor excites an intenſe Fever, but appears on the ſecond Day, with Redneſs, Swelling, and Pain of the Feet; and, by means of a due Perſpiration, or the Uſe of gentle domeſtic Medicines, is quickly diſcuſſed. But, in old Perſons, and Patients of cacochymic and impure Habits, where the Matter is larger in Quantity, and of a worſe Quality, the Syſtem of the Nerves and Veſſels is more violently agitated, the Fever is more violent, the Pain and Uneaſineſs more intenſe, and, unleſs treated with ſuitable Remedies, afflicts the Patient for a long time, and proves very obſtinate. Eryſipelatous Diſorders are different, and attended with diſtinct Symptoms, according to the different Parts of the Body they ſeize. When this Diſorder ſeizes the Feet, it produces a ſhining Colour of the Shins; and, if it ſhould happen to be more violent, this Colour is propagated to the whole Legs, and accompanied with Pain, ſo that the Parts are exaſperated by the gentleſt Touch. When this Diſorder ſeizes the Face, it becomes gradually tumid and red, with a large Number of aqueous Veſicles interſperſed; the Eyes are cloſed up by the Swelling; the Patient breathes with Difficulty; the Noſtrils and Fauces are parch'd and dry; a Torpor and Drowſineſs generally accompany this Species of Eryſipelas; and, upon account of its Vicinity to the Brain, 'tis to be dreaded, leſt it degenerate into a Phrenitis, or a mortal Lethargy. When an Eryſipelas affects the Breaſts, theſe become tumid, often indurated like a Stone, exquiſitely painful, and a Suppuration eaſily enſues. An Eryſipelas appearing under the Armpits, and affecting the Glands lodg'd there, is attended with a moſt intenſe Pain, and generally terminates in an Abſceſs. This Diſorder in Infants frequently appears in the umbilical Region, and ſpreading thence over the Abdomen, produces violent Symptoms, and generally proves mortal.

There is a particular Species of Eryſipelas not very common among the Moderns, and but little adverted to by the Antients, call'd by *Pliny Zoſter*, and among us the *Girdle*, or Shingles. This diſcovers itſelf by violent Symptoms, and above the Navel ſpreads from the Præcordia round the Back like a Belt, for the moſt part, a few Inches broad, with an intenſe Heat, and highly acrid Puſtules, which burn, as it were, like Fire. This Species is of a pernicious, and ſometimes of a mortal Nature. But the moſt malignant Species of all is that, which after a great Languor of the Strength appears in old Perſons, and ſuch as are of highly cacochymic Habits, ſometimes, alſo, in malignant and peſtilential Fevers, under the Nipples, and on the Region of the Heart, or even on the Hands, and other Parts poſſeſs'd of a more exquiſite Senſation. This Species is, at firſt, of a livid Colour, and, afterwards becoming black, is ſoon ſucceeded by Gangrene and Death. *Platerus* has deſcrib'd it under the Name of *Macula lata.*

As for the Cauſes of this Fever: The material Cauſe does not at all ſeem to be of a ſimple, bilious, or ſaline, but rather of a cauſtic, acrid, and putrefying Nature; for it operates in a very violent manner, on the nervous Parts; ſurpriſingly diſturbs the Œconomy of the animal Functions, and induces Watchings, Deliriums, Reſtleſſneſs, Anxiety, Toſſings, Votings, and a Diſorder of the Senſes. It is ſtill more formidable, when the Matter returns backwards after it has been once expel'd, ſince in this Caſe, like as much Poiſon, it ſoon excites Deliriums, internal Inflammations, convulſive Aſthmas, and ſpaſmodic Strictures, which often prove mortal. Beſides, the Gangrene and Sphacelus, which readily ſucceed an ill-treated Eryſipelas, are ſufficient Proofs of the virulent Quality of the Matter which produces it: But whence this Matter draws its Origin, is not ſo eaſy to determine; I am, however, inclin'd to think, that it conſiſts of Bile corrupted, and render'd peccant by various Cauſes; which, ſtagnating long in the Flexure of the Duodenum, and there putrefying together with the pancreatic Juice, and aſſuming a cauſtic and acrid Quality, is thence gradually convey'd to the Maſs of Blood, and Membranes of the Brain and ſpinal Marrow, indiſpoſes the whole nervous and vaſcular Syſtems, and excites a Fever, till it is at laſt driven out to the Surface of the Body.

Perſons of ſanguine, ſanguineo-choleric, and plethoric Habits, young Perſons, Men, and pregnant Women, are more diſpos'd than others to generate this Matter of the Eryſipelas, which

which in them, however, is generally of a pretty mild Nature: But in old Perſons, thoſe of a ſcorbutic or cacochymic Habit, as alſo in Women labouring under a total Suppreſſion, or an undue Retention, of the Menſes, it is of a far worſe Kind: Thoſe, alſo, are frequently and eaſily obnoxious to this Diſorder, who are born of Parents ſubject to it; as alſo thoſe, who, having been once ſeiz'd with it, have had frequent Returns of the Misfortune; and more eſpecially if they are old, or of ſcorbutic Habits. I myſelf, ſays *Hoffman*, have obſerv'd an Eryſipelas returning every Year, every Equinox, and alſo every Month: But, with reſpect to theſe, eſpecially in old Perſons, and thoſe of cacochymic Habits, I have obſerv'd that Aphoriſm of *Hippocrates* verified, where 'tis ſaid, that ſuch as are often ſeiz'd with an Eryſipelas, are at laſt deſtroyed by it.

But there are ſeveral of the Non-naturals, capable of unfolding and bringing this latent material Cauſe of an Eryſipelas into Action: But the moſt conſiderable of theſe are violent and exorbitant Paſſions, eſpecially Anger and Dread. Thus *Fallopius* furniſhes us with an Inſtance of a Woman, who, every time ſhe was vex'd, began to be ſeiz'd with an Eryſipelas, which was eaſily diſcuſs'd by drinking Barley-water. The Matter of an Eryſipelas is alſo put in Action by a too hot Atmoſphere, an intenſe Heat of the Sun, as alſo by a ſudden and alternate Heating and Cooling the Body or Feet: The ſame Effect is produc'd by hot Aliments, hot Drink, frequent Drinking to Exceſs, or the Uſe of too hot Baths. But nothing contributes more to the Production of this Diſorder, than the Omiſſion of artificial Evacuations of Blood, whether by Scarifications, or Veneſection, and the Suppreſſion of the natural Evacuations, whether from the Noſe, the Uterus, or the hæmorrhoidal Veins. An Eryſipelas of the Head, in a particular manner, happens moſt frequently to thoſe who remain long, eſpecially in the Night-time, under a moiſt and rainy Air, as alſo to old Perſons. This Diſorder frequently appears in the Breaſts of Child-bed Women, eſpecially if giving Suck, after any violent Fright; in which Caſe the Diſcharge of the Milk is forthwith ſtopt, and the Breaſts become hard, and are render'd tumid by the coagulated Milk. *F. Hoffman.*

The Cauſes of an Eryſipelas are the ſame with thoſe of all other Inflammations: But none have a more powerful and immediate Tendency to produce it, than a ſudden Cold, contracted after immoderate Heat, or profuſe Sweats; an obſtructed Perſpiration, Surfeits, the habitual Uſe of too ſtrong and generous Liquors, or a too hot and acrid State of the Blood; for all theſe things are of ſuch a Nature, that they eaſily inſpiſſate and coagulate the Blood, in ſuch a manner as to produce Stagnations of it. *Heiſter.*

When an Eryſipelas breaks out ſoon, and without any violent Commotion; when the Juices of the Body are not highly corrupted; when the Part affected by it is not of the more noble Kind, or does not communicate with nervous Parts, it is not highly dangerous: But by a free Perſpiration, and the Uſe of proper Remedies, the Tumor, after a Day or two, gradually ſubſides, the Heat and Pain vaniſh, the ruddy Colour is chang'd into that of yellow, the Skin breaks, is ſeparated in the Form of Scales, and the Diſeaſe has an agreeable Termination put to it. An Eryſipelas is, ſometimes a ſalutary Sign; and I myſelf, ſays *Hoffman*, have known Diſeaſes, eſpecially convulſive Aſthmas, and convulſive Colics, happily remov'd by a ſupervening Eryſipelas.

But when an Eryſipelas is large and deep, when the Juices of the Body are highly impure, or the Part affected poſſeſs'd of an exquiſite Senſation, the Diſorder is not without Danger; for, in this Caſe, either the rediſh Colour become livid and black, and ſoon degenerates into a fatal Sphacelus; or the Inflammation, becoming incapable of Diſcuſſion, is ſuppurated, and induces malignant Ulcers, Fiſtulas, and a Gangrene. After an Eryſipelas, in ſanguineo-phlegmatic and cacochymic Habits, there ſometimes remains a violent Swelling of the Feet, ſo that the Legs appear three times as large as in their natural State; and this Swelling is not, without great Difficulty, remov'd: But thoſe who die under this Diſorder, are cut off by a Fever, which, for the moſt part, is accompanied with a difficult Reſpiration, ſometimes with a Delirium, ſometimes with a Drowſineſs; and generally the fatal Cataſtrophe happens within the ſeventh Day.

An Eryſipelas, when prepoſterouſly treated, alſo, terminates in an unlucky manner; for 'tis an old and true Obſervation made by *Hippocrates*, in the twenty-fifth Aphoriſm of his ſixth Section, that if the Matter is repel'd, the Diſeaſe is not only pernicious, but fatal, which it frequently proves. I myſelf, ſays *Hoffman*, knew an Eryſipelas, retiring inwards after a Vomit, and a draſtic Purgative, ſucceeded by an Inflammation of the Stomach, and Death: I have alſo, ſays he, obſerv'd the Matter driven inwards by Veneſection, and the Diſeaſe afterwards render'd erratic, and more troubleſome than before. I have alſo, ſays he, obſerv'd, that an Eryſipelas repel'd in the Legs, by Camphire, Minium, and Bole, has been ſucceeded by an intenſe Fever, an intolerable Pain of the Stomach, and difficult Reſpiration, bilious Vomitings, Languor of the Strength, Loſs of Appetite; and that theſe Symptoms did not ceaſe, till antiſpaſmodic and gently diaphoretic Medicines were exhibited, and the Matter of the Eryſipelas was recal'd, by a Veſicatory, to its former Seat. I have known, from Experience, that the treating an Eryſipelas of the Head with Repellents, cold Medicines, Aſtringents, too ſpirituous Subſtances, and camphorated Liniments, has brought on Vertigos, lethargic Diſorders, Quinſeys, a Phrenitis, and Palſies of the Tongue; which Diſorders have frequently prov'd mortal to old Patients, and ſuch as were of ſcorbutic Habits: Cold Medicines, Preparations of Lead, oleous Subſtances, ſpirituous Liniments, and Medicines richly camphorated, when apply'd externally, produce equally unlucky Terminations of eryſipelatous Diſorders, ſince they make them degenerate into malignant Ulcers, Gangrenes, and Sphacelus; as is confirm'd by ſeveral Inſtances given by *Hildanus*, *Cent.* 1. *Obſ.* 82. *Moinichen. Obſ.* 2. and *Timæus a Guldenklee*, *Lib.* 6. *Caſe* 33. *Frederic Hoffman.*

With reſpect to the Termination of this Diſorder, 'tis to be obſerv'd, that it is accompanied with no great Danger, if the Inflammation is only ſlight, and proper Meaſures of Relief are ſeaſonably purſu'd: On the contrary, when the Inflammation is violent, the Conſtitution infirm, the Regimen faulty, the Part affected expos'd to the Cold, and the Cure negligently or unſkilfully manag'd, 'tis not to be wonder'd at, if it ſhould terminate in a burning Fever, a violent Exulceration, a Gangrene, or a Sphacelus. In this Diſorder, the external Application of ſuch Medicines as are cold, pinguious, or oleous, as alſo the internal Uſe of generous Liquors, Wine, Brandy, or hot Medicines, are productive of the moſt imminent Danger. *Heiſter. Chirurg.*

The moſt judicious Method of curing an Eryſipelas conſiſts in purſuing theſe three Intentions: Firſt, that the febrile Motion of Nature be by no means hinder'd, but rather promoted, if it is defective; and brought to a due Temperament, if it is exceſſive. Secondly, that the ſubtile cauſtic Matter lodg'd in the nervous Parts be corrected, and prepar'd for Secretion and Excretion: And, thirdly, that the inflammatory Stagnation of putrid and cauſtic Lymph in the external Parts be diſcuſs'd and perfectly expel'd.

Among the Remedies which excite and promote the febrile Motion of Nature when languid, the moſt conſiderable are, the *Mixtura ſimplex*, mix'd with the *Spiritus Nitri Dulcis*, or rather with the anodyne mineral Liquor, or the Eſſence of Germander or white Burnet, not very ſpirituous and concentrated, mix'd with an equal Quantity of the anodyne mineral Liquor, and twenty or thirty Drops exhibited for a Doſe. The Expulſion is, alſo, aſſiſted by an Infuſion prepar'd of Germander, Elder-flowers, and Fennel-ſeeds, as alſo by Bezoardic Powders. The exceſſive Commotions and Spaſms are mitigated by an Emulſion prepar'd with the Waters of the Flowers of Elder, the Lime, and the *Egyptian* Thorn, together with the Four greater cold Seeds, as alſo the Seeds of the *Napus Dulcis*, eſpecially when us'd as a Vehicle, with which the Bezoardic Powder, either alone, or with a few Grains of Nitre and Cinnabar, may be taken. The ſame Effect is produc'd, and the Expulſion promoted, by a Mixture prepar'd of one Part of the Bezoardic Spirit of *Buſſius*, and three Parts of the anodyne Liquor. When the febrile Motion is of the legitimate Kind, and neither too languid nor too impetuous, the following domeſtic Remedy is of excellent Service:

> Take of the Rob of Elder, one Ounce; and of calcin'd Hartſhorn, one Dram: Mix together, and exhibit in Elder-flower-water.

To this Preparation, when the Patient is very hot, I generally add, with Succeſs, ten or twelve Grains of pure Nitre.

In order to correct the Acrimony of the Humours, and duly prepare the Matter, beſides the Medicines already mentioned, Decoctions of the Shavings of Hartſhorn, the Roots of Vipers-graſs, Marſh-mallows, Liquorice, and China-root, with Fennel-ſeeds, as alſo Water-gruel, us'd as ordinary Drink, are of ſingular Service. The Diſcuſſion of the inflammatory Stagnation is to be obtain'd by Topics: But, among theſe, ſcarcely any can be applied without Danger, except a Powder prepar'd of Elder-flowers and Liquorice-roots, now-and-then ſprinkled on the Part, when it is moderately warm, either in Bed, or by means of a Stove. But all unctuous, ſpirituous, earthy, aſtringent Subſtances, as alſo all Preparations of Lead, are abſolutely to be rejected.

'Tis a perpetual Rule in Practice, that in Fevers of the acute and exanthematous Kind, the Body is always to be preſerv'd in a mild and continual Diaphoreſis, that by this means the Motion of the Blood to the Surface of the Body may be render'd equal, and the recrementitious Matter, being continually carried along with it, diſſipated, and carried through the Pores: Hence the ſame Rule is to be obſerv'd in an Eryſipelas, both with reſpect to the whole Body, and more eſpecially the Part affected; that by this means the Pain may be mitigated, and the Diſcuſſion of the Matter the better promoted.

Great Caution is neceſſary in the Uſe of external Medicines, leſt they ſhould prove injurious, either by repelling or converting the Eryſipelas to an Ulcer: Beſides, as almoſt every Perſon has an Idioſyncraſy, or ſpecific and individual Senſibility, eſpecially in the Skin and nervous Parts, we are, for this Reaſon, to be highly cautious in the Application of Topics; becauſe every Remedy is neither ſuited to every Perſon, nor to every Part of the ſame Perſon; for I have often obſerv'd, that in an Eryſipelas of the Breaſts, by applying an innocent, and in other Caſes an approv'd Plaiſter, the Inflammation and Pain have been ſoon increas'd, tho' both forthwith remitted upon the Removal of the Plaiſter: Hence 'tis ſafeſt to apply nothing externally, except, perhaps, paregoric Species, conſiſting of the Flowers of Chamomile, Elder, and Melilot, Liquorice-root, and Bean-meal, either in the Form of a Bag, or a Powder.

If notwithſtanding the Exhibition of internal, and the Application of external Diſcutients, tho' of an highly efficacious Nature, the eryſipelatous Tumor ſhould ſtill remain, the red Colour begin to turn livid, and the Pain be lodg'd deep, as if it reach'd to the Perioſteum; the Eryſipelas has a Tendency to Exulceration: In this Caſe we are to have recourſe to ſuch Medicines as promote Suppuration, at the ſame time that they prevent putredinous Corruption. This Intention is excellently anſwer'd by ſimple Diachylon duly prepar'd, adding a ſufficient Quantity of Camphire and Saffron, or by the Emplaſtrum Saturninum of *Barbet*, made up with Soap, applying over them ſuch balſamic Epithems as prevent Corruption: When Pus is contracted and deep-ſeated, the Tumor is to be open'd with a Lancet, and the Pus to be evacuated gradually, and not all at once: But leſt the Abſceſs, eſpecially in glandulous Parts, ſhould degenerate into fiſtulous and malignant Ulcers, after the Evacuation of the Matter, a balſamic Liquor prepar'd of the Tincture of Flowers of St. John's-wort, Eſſence of Peruvian Balſam, the beſt Myrrh, and a few Drops of the Spirit of Turpentine, is to be injected.

When a deep and large Eryſipelas is threaten'd with a ſupervening Sphacelation, which may be known by the browniſh-red Colour, and the Continuance of the Symptoms after the Expulſion, beſides ſuch internal Medicines as reſiſt Inflammation and Putrefaction, Nitre with a little Camphire, ſpirituous and corroborating Liquors prepar'd of Quick-lime-water, camphorated Spirit of Wine, Wine Vinegar with Litharge mix'd with the Eſſence of Germander and Myrrh, are to be frequently apply'd warm with folded Linen Cloths externally.

Veneſection is ſometimes beneficial, and ſometimes hurtful, in an Eryſipelas. Leſt, therefore, the Practitioner ſhould commit a Miſtake in this reſpect, 'tis to be laid down as a Rule, that when an eryſipelatous Fever ſeizes Perſons of a plethoric Habit, or ſuch as are accuſtom'd to drink ſpirituous Liquors, a Vein is to be open'd in the Arm in the Beginning of the Diſorder; for by this means the Circulation of the Blood becomes more free, and the Expulſion of the Matter to the Skin is promoted. This Practice is ſo much the more uſeful when an Eryſipelas ſeizes the Head, ſince by its means violent Symptoms are prevented. 'Tis ſometimes expedient, inſtead of Veneſection, to uſe Cupping with Scarification in the Neck. But, after the Evacuation of Blood, we are always to be careful, that Perſpiration be kept free and equal.

In a ſcorbutic Eryſipelas of long ſtanding we are to uſe ſuch Medicines as purify the Blood, gentle Laxatives, and Diaphoretics, in ſuch a manner, that during a few Days the Inteſtines may be purg'd: Then, for ſome time, Diuretics and Diaphoretics are to be ſubjoin'd; and theſe are to be alternately repeated, whilſt for common Drink the Patient uſes a correcting Decoction, prepar'd of mucilaginous Woods and Roots, with Bitters, but eſpecially with the Roots of Succory and Dandelion, together with Raiſins.

An Eryſipelas which often recurs, is not without Danger; for which Reaſon the Phyſician is to be highly ſolicitous to free the Body from this Diſorder. For obtaining this End, I have found nothing more effectual than a due Uſe of mineral Waters, in Conjunction with a proper Regimen, after the Body has been previouſly prepar'd, either by Laxatives or Veneſection. This Intention is beſt anſwer'd by the Acidulæ of *Egra*, the hot Waters of *Embſen*, and the milder *Caroline* Springs: When theſe cannot be had, Veneſection, eſpecially in the Spring and Autumn, Purging, and ſuch Medicines as purify the Blood, together with a proper Regimen, are the moſt effectual Means of Relief. *Frederic Hoffman.*

The Cure of an Eryſipelas is moſt ſucceſsfully and happily attempted by diluting the inſpiſſated, and reſolving the ſtagnating Blood; which Intentions are moſt effectually anſwered by a frequent Exhibition of thin warm Sorbitions and Potions, by which a gentle and uninterrupted Sweat is excited: For by this means the inſpiſſated Blood is diluted; that which is acrid, corrected; that which is coagulated and ſtagnated, reſolv'd; and that which is ſuperfluous, or corrupted, eliminated by the ſmall cutaneous Emunctories; and conſequently a natural Perſpiration, the moſt ſafe and effectual Cure of an Eryſipelas, reſtor'd. Heating Medicines of all Kinds, eſpecially the Tinctura Bezoardica, the Spiritus antipeſtilentialis, and other Spirits of a like Nature, as alſo ſtrong and heating Eſſences, are, in my Opinion, ſays *Heiſter*, to be totally abſtain'd from in this Diſorder; ſince by theſe the Heat of the Blood is, generally, rather increas'd than diminiſh'd. On the contrary, we may with greater Propriety, Safety, and Efficacy, uſe temperating and moderately-cooling Medicines; the moſt valuable of which are, in this Caſe, Preparations of Elder: Thus 'tis expedient frequently each Day to exhibit half an Ounce, or a Spoonful, of the Rob of Elder, diluted with Elder-water, drinking at the ſame time a few Cups of Tea, Coffee, or an Infuſion of ſome proper Herbs: The Body is alſo to be carefully defended againſt the Influences of the Cold, and continually kept in a mild and uninterrupted Sweat. When the Patient is rack'd with a violent Thirſt, a Decoction of Barley, or warm ſmall Beer, may, with great Advantage, be exhibited; ſince by Warmneſs, and Draughts of thin diluting Liquors, the Diſorder is moſt generally remov'd, and the Patient ſav'd. If Rob of Elder ſhould happen to be ungrateful and diſagreeable to the Patient, in order to promote a gentle Sweat, we may chooſe for a Succedaneum, or at leaſt for a Medicine to be exhibited alternately with it, ſome diaphoretic Powder prepar'd of Shells, Crabs-eyes, and Mother of Pearl, or diaphoretic Antimony, or any other Medicine of a like Quality, mix'd with a ſmall Quantity of Nitre, and exhibited in Elder-water, not neglecting at the ſame time the liberal Uſe of warm, thin, and diluting Potions.

When, in an Eryſipelas, the Inflammation is very mild and gentle, it may be often remov'd only by external Warmth: But, if the Inflammation ſhould happen to be more violent, external Heat alone is not ſufficient, without the Concurrence of proper Topics: Rob of Elder may, therefore, be ſpread on coarſe Paper, or a Piece of Linen Cloth, and apply'd to the Part affected with warm Linen Cloths, or a Bag fill'd with reſolvent Ingredients over all. But this Medicine, as well as the Theriaca, mix'd with Salt of Wormwood, tho' highly efficacious in mitigating Inflammations, are yet rarely us'd in Caſes of this Nature, on account of the Sordes and Impurities they contain: For this Reaſon the digeſtive Powders are far more frequently us'd: Among theſe, the moſt valuable and effectual ſeems to be that prepar'd of Elder-flowers, triturated Liquorice, prepared Chalk, Ceruſs, and Myrrh, mix'd in equal Quantities, wrapt up in coarſe Paper, or a Linen Cloth, and apply'd warm to the Part affected; after which, the Whole is to be cover'd with proper Bags, or Cuſhions: To this we may add, the *Pulvis contra Eryſipelas Mynſichti*, (See PULVIS) which is not only well-known in the Shops, but alſo highly efficacious for anſwering Intentions of this Nature. 'Tis not neceſſary I ſhould here inſiſt upon the ſingular Virtues of the middle green Bark of Elder, in mitigating and allaying Inflammations, ſince the Efficacy of that Subſtance, in Caſes of this Nature, is long ago experimentally known to moſt Perſons.

Tho' ſome Authors in the Cure of an Eryſipelas pronounce liquid Medicines highly prepoſterous and improper, yet I myſelf can from Experience affirm, that in the Cure of this Diſorder excellent Effects are produced by warm and camphorated Spirit of Wine, either by itſelf, or mix'd with Saffron, or the Theriaca, and apply'd with a folded Linen Cloth, or coarſe Paper, as alſo by Quick-lime-water, mix'd with camphorated Spirit of Wine, and apply'd in the ſame manner. *Scultetus, in Obſervat.* 93. affirms, that he never found a more effectual liquid Remedy, than the following, againſt an Eryſipelas, complicated with an Œdema.

> Take of a mild Lixivium of the Aſhes of the Vine, one Pound; of Nitre, one Dram and an half; of common Salt, one Dram; of the beſt Wine-vinegar, one Ounce: Mix all together.

After the previous Uſe of Univerſals, this Mixture is to be apply'd warm to the Part affected, with a double Compreſs, which is to be ſecur'd with a proper Bandage: When apply'd in this manner, it remarkably diſcuſſes Swellings of this Kind, even when a Gangrene is endanger'd. But all other liquid Medicines, which are either too acid, or of an obſtructing and aſtringent Quality, together with pinguious and oleous Subſtances, are, in this Caſe, to be carefully avoided; for 'tis ſcarce credible how powerfully theſe obſtruct the Pores, hinder the Elimination of the peccant Blood thro' them, and conſequently expoſe the Patient to more imminent Danger.

Veneſection and Purging do not ſeem ſo neceſſary in an Eryſipelas, as in a Phlegmon; for, as in an Eryſipelas the peccant and corrupted Humours are lodg'd contiguous to the Skin, they are moſt commodiouſly expel'd by a gentle Diaphoreſis: However, when the Pulſe is too violent, and the Patient either preternaturally hot or plethoric, Veneſection is by no means improper; and, in order to render the Body ſoluble, Clyſters are rather to be us'd, than Purgatives of any other Kind.

It frequently happens, that an Eryſipelas terminates in a Suppuration; and hence generally ariſe chronical and wide-ſpreading Ulcers. If a Misfortune of this Nature ſhould happen, the Ulcer is carefully to be cleans'd, and the Acrimony of the Serum corrected by Applications of the *Unguentum Saturninum*, the *Unguentum de Lithargyrio*, or the *Unguentum de Ceruſſa*, together with the *Emplaſtrum Saturninum*. 'Tis alſo expedient to uſe ſuch internal Medicines, as purify and correct the Blood; exhibiting now-and-then, in the Intervals, ſuch as eliminate the acrid Humours by Stool: A ſtrict and exact Regimen is alſo to be us'd, till theſe Ulcers are conglutinated; tho', at the ſame time, in old, valetudinary, and cachectic Patients, they ſcarce admit of Conſolidation, eſpecially when ariſing in the Legs and Feet. *Heiſter. Chirurg.*

In order to the Cure, I conceive that the peccant Matter, which is mix'd with the Blood, muſt be evacuated in a proper manner, that the Ebullition of the Blood muſt be check'd by cooling Remedies; and, laſtly, that the Matter, thrown out and fix'd upon the Skin, muſt be diſcuſſed. To anſwer theſe Purpoſes, as ſoon as I am call'd, I direct a ſufficient Quantity of Blood to be taken away from the Arm, which generally reſembles the Blood of Pleuritics: The next Day, I give my common purging Potion, and exhibit a paregoric Draught at Bed-time, in caſe it has operated briſkly; for Example, Syrup of white Poppies, in Cowſlip-flower-water, or ſomething of the ſame kind. After Purging, I order the Part affected to be fomented with the following Fomentation:

Take of the Roots of Marſh-mallows and Lilies, of each two Ounces; the Leaves of Mallows, Elder, and Mullein, of each two Handfuls; the Flowers of Melilot, the Tops of St. John's-wort, and the leſſer Centaury, of each one Handful; Linſeed, and Fenugreek-ſeed, each half an Ounce: Boil them in a ſufficient Quantity of Water to leave three Pints; ſtrain off the Liquor, and, when 'tis uſed, add two Ounces of Spirit of Wine to every Pint thereof. Let the Part affected be fomented twice a Day with ſoft Flannels dipt in this Fomentation hot, and wrung out; and, after fomenting, bathe it with the following Mixture:

Take of Spirit of Wine, half a Pint; *Venice* Treacle, two Ounces; long Pepper and Cloves, reduced to Powder, of each two Drams: Mix them together; cover the Part affected with brown Paper, moiſtened with this Mixture.

Moreover, I order the Patient to ſup only Barley-broth, Water-gruel, and eat roaſted Apples, to drink ſmall Beer, and to refrain from Bed ſome Hours every Day. By this Method the Fever, and other Symptoms, are generally ſoon taken off; if not, I repeat Bleeding; and ſometimes 'tis neceſſary to bleed a third time, interpoſing a Day between each Operation, that is, if the Blood be greatly vitiated, and the Fever high. On the intermediate Days of Bleeding, I order Glyſters made of the diſtilled Waters of Water-lilies, *&c.* to be uſed very often in a Day. But a ſingle Bleeding, and a Purge, generally effect the Cure, provided they be uſed in time. The ſame Method is to be uſed in that Species attended with Itching and a Redneſs, and reſembling the Stinging of Nettles; only external Applications are leſs neceſſary here. *Sydenham.*

In an Eryſipelas of the Head, which is a highly dangerous Diſorder, when the Fever does not abate, Purgatives are ſo ſurpriſingly beneficial, that ſometimes the Cure cannot be obtain'd without their Aſſiſtance. Tho' this Diſeaſe has been handled at great Length by ſeveral Authors, and eſpecially by *Hieronymus Fabricius*, yet all of them are ſo far from being diſtinct and intelligible with reſpect to the Uſe of Purgatives in the Violence of the Fever, that they are not only diffident of their own Sentiments, but alſo vary and diſſent from each other, ſince ſome do not approve of Purgatives, except when the Body abounds with Bile, and the Diſorder is violent; whilſt with *Tragaultius*, *in Inſtit. Chir. Lib.* 1. 8. they maintain, that the Phyſician, inſtead of evacuating, ought rather to refrigerate. Others, who agree in the Propriety both of Evacuations and Refrigeration, do nevertheleſs, with *Paré de Tumor. Lib.* 6. 15. maintain, that greater Relief is obtain'd by Sweats than by Purging. Others, who grant that Purgatives may properly be exhibited, yet aſſert, that when the Fever is ſo intenſe as to bring on a Delirium and Phrenitis, we ought rather to preſcribe ſuch Medicines as reſiſt Malignity; and that we are not to exhibit Purgatives till the febrile Heat is extinguiſh'd; or, at leaſt, that if Purgatives are at any rate to be us'd, Preparations of Scammony are abſolutely to be avoided, leſt they ſhould increaſe the Fever. *Sennertus* tells us, that as this Diſorder is highly familiar and endemial to the *Germans*, ſo we may more ſafely take the Methods to be obſerv'd in its Cure from the Experience and Practice of the *Germans*, than from the Works of Phyſicians of other Nations. But *Sennertus*, tho' himſelf a *German*, borrows moſt of what he ſays on an Eryſipelas, from *Fabricius* an *Italian*, but ſuppreſſes the Directions of that Author with reſpect to Purging, when the Increaſe of the Diſeaſe is at an End. *Ettmuller*, who was alſo a *German*, in his *Medic. Chirurg.* informs us, that, when an Eryſipelas ſeizes the Head, the Cure is to be accompliſh'd by internal Sudorifics and Cephalics, but that Purging of every Kind is to be carefully abſtain'd from. Thus, when the Diſorder is in its moſt dangerous State, Authors have either given no Directions at all with reſpect to its Treatment, or ſuch as are full of Cowardice and Heſitation; as if it was conſiſtent with Reaſon, and common Senſe, for a Phyſician to be leſs bold and hardy, when his Patient's Life is in the moſt imminent Danger, than when there is not the leaſt Suſpicion of Danger.

But I can from Experience affirm, that in an Eryſipelas of the Head, when the Brain being affected, a Coma, a Delirium, or Convulſions are brought on, there either remain no Hopes of the Patient's Recovery, or the moſt happy Effects will be produc'd by Purgatives. Nor are we in this Extremity, which alſo holds true in the Small-pox, to wait till the Fever is abated, or the Tumor quite ſubſided; for to encounter this Species of Fever with cardiac and refrigerating Medicines, or to apply Topics, is only to trifle, till at laſt the Patient falls a Sacrifice to the Phyſician's Cowardice or Folly. If, therefore, Purging is capable of removing this Diſorder, when arriv'd at its moſt dangerous State, the ſame, ſooner call'd in to the Patient's Aſſiſtance, muſt, *a fortiori*, prevent its Progreſs and Spreading. As a Confirmation and Illuſtration of this Truth I ſhall ſubjoin the following ſingular Hiſtory.

A young Lady of uncommon Diſtinction had her Face ſwell'd by an Eryſipelas. The Diſorder was, as uſual, preceded by a gentle Horror, and a ſlight Fever. Next Day, not only her Face, but alſo the Skin about her Ears and Neck, was become turgid and red. The Fever increas'd, and the Patient was ſomewhat delirious at certain Intervals. In this State of things a Veſicatory was apply'd to the Nape of her Neck.

Notwithſtanding this Step for her Relief, the Swelling became very large, and as it was intenſely red, appear'd to be an Eryſipelas of that Kind, which *Fabricius*, in Imitation of *Galen*, calls *Phlegmonodes*; for, according to this Author, an Eryſipelas of the ſimple or uncomplicated Kind is ſcarce ever to be found in the Face. Towards Night the Patient became quite delirious. Mr. *Burges*, the Apothecary, in the mean time, apply'd Veſicatories to her Arms, and injected Clyſters, which were diſcharg'd without any Advantage, ſince all the Symptoms were exaſperated, inſtead of being abated.

When I firſt ſaw her, which was in the Afternoon, her Delirium was very violent, and accompanied with a Fever: She ſpoke a great deal, but all her Words were incoherent and impertinent: Sometimes ſhe lay, as it were, like one in a Lethargy, and was now-and-then ſeiz'd with Convulſions, eſpecially about the Hands and Shoulders: The Swelling remained almoſt in the ſame State and Condition, only its Redneſs was ſomewhat abated: Her Pulſe was rather quick than ſtrong. I therefore order'd a Veſicatory to be apply'd to each Side of her Neck; and I am much ſurpris'd to find no mention of this Piece of Practice in the Authors already quoted, eſpecially as Veſicatories are of ſingular Efficacy in this, if in any Species of Diſorder whatever. But becauſe ſhe ſeemed to be in the moſt imminent Danger, and becauſe I concluded, that Veſicatories alone would not be ſufficient, unleſs another Means of carrying off the peccant Matter was alſo called in to their Aſſiſtance, ſhe had the following Purge exhibited at Three o' Clock:

Take of the *Decoctum Senæ Gereonis*, three Ounces; of the *Tinctura Sacra* prepar'd with White-wine, one Ounce; and of the purgative Syrup of Buck-thorn, ſix Drams: Mix all together.

By this Preparation ſhe was not in the leaſt purg'd; for which Reaſon, about the Middle of the Night, two Ounces of the *Tinctura Sacra* were exhibited to her; notwithſtanding which all her Symptoms remain'd the ſame, only ſhe lay more quiet, or rather more ſunk, by the Violence of her Diſeaſe; and, being as yet coſtive, about the Middle of the next Day the following Cathartic was exhibited:

Take of the *Tinctura Sacra*, two Ounces; and of the cathartic Syrup of Buckthorn, one Ounce: Mix together for a Doſe.

But neither was ſhe purg'd by this Medicine: Towards Evening Veſicatories were apply'd to both her Wriſts.

Notwithſtanding theſe Meaſures, all her Symptoms remain'd the ſame; only the Heat ſeem'd to be ſomewhat abated. Early in the Morning, the laſt-mentioned Cathartic was again exhibited, and procur'd a very ſmall Evacuation by Stool, which afforded her but little Relief: An acrid Clyſter was alſo, to no Purpoſe, injected. I order'd the Purgatives to be taken thus ſucceſſively, becauſe I had intimated, that the Uſe of this

Practice was not to be given over, till it anſwered the End; and, if it did not anſwer the End, there were no other Methods of relieving the Patient. For this Reaſon, though Purgatives had been four times exhibited to no Purpoſe, yet I was firmly reſolved to perſiſt in their Uſe; for in this State and Condition of the Diſeaſe, as in the Small-pox, the febrile Matter is neither diſſipated through the Tumor, nor can it be carried off by any other means, than by making a Way for it through the inteſtinal Glands.

Accordingly, the State of the Patient becoming ſtill worſe and worſe, ſhe had the following Medicine exhibited:

Take of the Pilulæ ex duobus, fifteen Grains, diſſolved in an Ounce of Treacle-water; and of the purgative Syrup of Buckthorn, half an Ounce. Mix all together for a Doſe.

By this Preparation having procured five Stools, ſhe recovered her Senſes, but remembred nothing of what had happened during the ſix preceding Days. The Tumor gradually ſubſided, and the Fever was ſo far removed, that, by twice exhibiting the ſame Cathartic, ſhe was entirely reſtored to her former State of Health.

This Medicine, a conſiderable Part of which conſiſted of Scammony, which is, by moſt, diſcarded, as abſolutely pernicious in this Diſeaſe, freed the Patient from the moſt imminent Danger; for which Reaſon, the Aſſertions of the moſt ſkilful and celebrated Phyſicians are not to be taken for Rules of Practice, unleſs they have a ſufficient Sanction from Experience. *Freind. Comment. in Hippocrat. Epidem.*

Riverius, as a Topic, recommends a Decoction of Sage, with Venice Soap diſſolved therein; and an Infuſion of Sage ſometimes ſupplies its Place, with the ſame Soap, and an Addition of a ſmall Quantity of camphorated Spirits.

Turner directs an Application of Oil of Elder ſhook up with Lime-water, with a little camphorated Spirits. And Ointment of Elder is mentioned, by the ſame Author, as an excellent Application, which is, alſo, a popular Remedy among the Country-people. *Turner*, alſo, in caſe of Exulceration, recommends his Cerate of Lapis Calaminaris.

An Erysipelas *of the* Lungs.

An Eryſipelas ſometimes affects the Lungs; in which Caſe the Patient is ſeized with a highly burning Fever, and an acute Pain, both in the anterior and poſterior Parts of his Body, but eſpecially about the Spine; for the Breaſt is not very violently oppreſſed and contracted. The Patient, alſo, breathes with an erect Neck; through an Exceſs of Heat dilates his Noſtrils, like a Horſe overheated by running; and, like a panting Dog, hangs his Tongue out at his Mouth. He vomits ſometimes a bloody Matter, and ſometimes one of a livid Colour; ſometimes Bile, and at other times Phlegm. He is alſo ſeized with frequent Faintings, the common and familiar Sign of this Diſorder. His Cough is either dry, or he expectorates a yellow Spit, not much tinged with Blood. This Diſorder ſcarce ever fails to prove mortal; only there is a Poſſibility of the Patient's being preſerved, if the Eryſipelas quits the internal Parts, and appears externally. *Lommii Medicinal. Obſervat.*

ERYSIPELATODES, ἐρυσιπελατώδης, from ἐρυσίπελας, an Eryſipelas, and εἶδος, a Form, or Likeneſs. A Tumor, reſembling an Eryſipelas, or a ſpurious Eryſipelas. *Blancard.*

ERYTHACOS, ἐρυθακὸς, from ἐρύθω, Redneſs. The ſame as Rubecula, which ſee.

ERYTHEMA, ἐρύθημα, the ſame as ἔρυθρα in *Hippocrates*. The Redneſs of the Face, or Cheek, under a violent inflammatory Fever. Ἐρυθήματα *(Eruthemata)* are, alſo, the red and fiery Tumors which ariſe from an Inflammation, or fervid Blood, as in an Eryſipelas.

ERYTHRINUS, ἐρύθεινος, ἐρυθεῖνος, from ἐρυθρὸς, red. A Fiſh, called, by *Pliny*, *Rubellio*. The Roach. See Rutilus.

ERYTHRION, ἐρύθειον, from ἐρυθρὸς, red. The Name of a Malagma, deſcribed by *Ægineta*, *Lib.* 7. *Cap.* 18.

ERYTHRODANUM. A Name for the *Rubia Tinctorum*. Madder. See Rubia.

ERYTHROEIDES, ἐρυθροειδὴς, from ἐρυθρὸς, red, and εἶδος, a Form, is an Epithet of the innermoſt Coat of the Teſtes.

ERYTHRONIUM, or ERYTHRAICUM, ἐρυθρήϊνον, ἢ ἐρυθραϊκόν. A Species of Satyrion, in *Dioſcorides*, *Lib.* 3. *Cap.* 144. See Satyrion.

ERYTHROXYLON, ἐρυθρόξυλον, from ἐρυθρὸς, red, and ξύλον, Wood; a Name for the *Poinciana flore pulcherrimo*.

ES. *Johnſon* explains this by *Corpus*, Body.

ESAPHE, ἔσαφὴ, from ἐσαφάω, to feel with the Fingers. The Touch; that is, feeling the Mouth of the Uterus, in order to diſcover its State. *Hippocrates.*

ESCHARA, ἐσχάρα. An Eſchar, relative to Wounds, Ulcers, or Cauſtics. But

Eschara, alſo, imports a ſort of ſubmarine Plant, which grows in form of a Net, or Cobweb.

Boerhaave mentions three Species of this Plant; which are,

1. Eſchara Rondeletii, 133. *J. B.* 3. 809. *Retepora Eſchara marina.* Imper. 630. *Porus Reticulatus*; & *Eſchara marina.* Imper. C. B. P. 367.

2. Eſchara; marina; frondipora. *J. B.* 3. 809. *Frondipora Eſchara marina.* Imper. 631. *Frondipora.* Imper. C. B. 367.

3. Eſchara; qui Porus cervinus. Imper. 630. *Alga marina ἀλλύκεσσι ποροσα.* J. B. 3. 809. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 6.

In medicinal Virtues it reſembles Coral.

ESCHAROPEPA, ἐσχαροπέπα, from ἐσχάρα, a Fire-place, and πέπτω, to bake. An Epithet in *Hippocrates*, *Epid. Lib.* 4. for coarſe Barley-meal, which has been torrefied over the Fire.

ESCHAROTICA. Eſcharotics, or Medicines which induce an Eſchar.

ESCHATIÆ, ἔσχατιαι. The Extremities of the Limbs. *Hippocrates.*

ESCHYNOMENOUS. See Æschynomenous.

ESCULUS. A Name for the *Quercus parva*; *ſive Phagus Græcorum*, & *Eſculus Plinii*. See Quercus.

ESCURA. The ſame as Eſchara. *Rulandus.*

ESDRÆ *Antidotus.* The Name of an Antidote deſcribed in *Paulus Ægineta*, *Lib.* 7. *Cap.* 11.

ESEBON, or *Alſebon.* Common Salt. *Rulandus.*

ESOCHE, ἔσωχὴ, for ἐξωχὴ, from ἐξέχω, to protuberate. An Eminence, Excreſcence, or Tubercle, about the Anus.

ESPHLASIS, ἔσφλασις, from ἐσφλάομαι, to recede inwards, is an Intropulſion, or a Receſſion, of a Part inwards, from ſome violent outward Impreſſion. The Word is uſed by *Hippocrates*, *Lib. de Vuln. Capitis*, with and without ἔσω, "inwardly;" and ſpoken of Wounds in the Cranium, when, as *Celſus* expreſſes it, *Medium (os) deſidet, & intro deprimitur*, "the "Middle of the Bone ſubſides, and is depreſſed inwards."

ESSATUM *Potentiale.* The medicinal Power, or Virtue, which reſides in Vegetables and Minerals. *Rulandus.*

ESSATUM *Vinum.* Spirit of Wine impregnated with the medicinal Virtues of Vegetables. *Rulandus.*

ESSENTIA. The Eſſence of any thing; it is that which diſtinguiſhes it from every other thing. From Philoſophy the Word has been transferred to Chymiſtry, where it ſeems ſtrictly to import the Eſſence, or diſtinguiſhing Part, of medicinal Simples, ſeparated from all other Parts of the Body which contained it. Hence

ESSENTIALIS. Eſſential. An Epithet for Salts procured from vegetable Juices by Cryſtallization. I have given an Example of the Manner by which theſe Salts are procured, under the Article Acetosa.

The Proceſs, however, may be performed upon the Juice of any other ſucculent Vegetable; but a different Salt will be always produced, according to the different Nature of the Plant employed. If the Juices were either manifeſtly and purely acid, or acid with ſome Degree of Auſterity, the Salt will reſemble the Tartar of acid auſtere Wines. If a perfectly ſucculent Plant were choſe, and neither acid or oily, as many medicinal ones are, the Salt will be of another particular Nature, perhaps, reſembling Nitre. Such a Salt is afforded by Brook-lime, Endive, Fumitory, Dwarf-elder, Graſs, Knot-graſs, Plantain, Self-heal, Succory, Water-creſſes, Water lilies, *&c.* Whence the Juices of theſe Plants are greatly medicinal, as abounding with this Kind of nitrous Salt, ſo as to open inveterate Obſtructions, reſolve the black bilious Juice, and cure chronical Diſeaſes. But when the viſcous Juices of Vegetables are uſed in this Proceſs, as thoſe of Purſlain, Comfrey, or the like, their Salt cannot be obtained without a previous Fermentation, to diſſolve their Tenacity. In like manner, all the Juices abounding with Oil are unfit for this Purpoſe; for though they contain a Salt, yet it is ſo entangled with the tenacious Oil, as to prevent its uniting with the Particles of its own Nature, and forming Cryſtals; for Oil always prevents the Cryſtallization of Salts; and, again, Plenty of Oil occaſions a Loſs of Salt, and *vice verſa*, as well in Animals as Vegetables; on which account thoſe Salts are not eaſily obtained from ſuch aromatic Plants as abound with Oil and Balſam.

Hence we learn the Nature of the Salt, thus obtained, as it is in Plants. It is ſoluble in Water, compounded of Oil and Salt, frequently acid, and never alcaline; for when it is alcaline in the Boiling and Inſpiſſation, it is moderately fixed, and eaſily changed; it mixes with the Juices, and enters many of the fine Veſſels of the Body, where, therefore, it may exert its Virtue. When dried, it, in ſome meaſure, burns in the Fire, and is convertible into a fixed alcaline Salt. *Boerhaave's Chymiſtry.*

The Oils, alſo, peculiar to different Vegetables, are called Eſſential Oils. See Oleum.

Some Fevers are, alſo, called Eſſential, by way of Diſtinction from ſymptomatic Fevers.

ESSERE. This is a Species of Tumor, not mentioned by the *Greek* and *Latin* Authors, but only by the *Arabians*, who call it *Eſſere*, *Sera*, and *Sare*. It frequently occurs in ſeveral Parts of *Europe*, and appears by the ſudden Eruption of ſmall Tubercles, of a reddiſh Colour, all over the Body, and accompanied with an uncommon Itching, juſt as if the Patient had been ſtung by Bees, Waſps, or Gnats, or by Nettles. But ſoon after theſe Tubercles diſappear, and no Ichor, or Moiſture, being conveyed to them, the Skin recovers its former Smoothneſs. Some claſs theſe Tumors among the Epinyctides of the *Greeks*, but very improperly, ſince the Epinyctides and Eſſere are Tumors of a quite different Nature; for the former diſcharge an Humour from them; which the latter do not, but diſappear without the Diſcharge of any Humour. Beſides, the Epinyctides afflict the Patient principally in the Night-time, from which Circumſtance they derive their Name; whereas the Eſſere rarely appears in the Night-time, but, for the moſt part, in the Day. Theſe Tumors, alſo, require a different Method of Cure.

It is to be doubted, whether this Kind of Tumor was known among the *Greeks*, ſince no legitimate Species of it is mentioned in their Writings, unleſs we refer it to exanthematous Eruptions without Exulceration.

Serapio, in the eighth Chapter of his *Breviarium*, conſtitutes two Kinds of this Tumor, according to their different Cauſes. The one proceeds from a bilious Blood, and the other from a ſaline nitrous Phlegm; but this latter occurs more rarely than the former. Since no Moiſture is diſcharged, others affirm, that this Species of Tumor ariſes from Vapours of an intenſely hot Blood, or from a Mixture of bilious and ſaline Humours.

The Man who is acquainted with the Nature of ſerous Humours, cannot deny but ſuch Tumors may be produced by them, ſince they are acrid, moveable, and capable of being eaſily diſcuſſed. This is alſo confirmed by another Circumſtance, which is, that by Veneſection, which powerfully checks the Effervescence of the ſerous Part of the Blood, this Diſorder is removed: But that this ſerous Humour is of different Qualities, ſometimes mild, ſometimes acrid and hot, ſometimes thin, and ſometimes thick, is ſufficiently obvious from the Itching, which is ſometimes greater, ſometimes leſs. This is alſo certain from this Circumſtance, that I have often obſerved, that theſe Tubercles ariſe when the Patient is in a warm Bed; and diſappear when he is expoſed to a cold Air: That at other times they riſe in a cold Air, and diſappear in one that is warm. The former of theſe Phenomena ſeems to be produced for this Reaſon, that the Humour is highly fine and moveable, and, conſequently, capable of being forthwith drove inwards, by the cold Air: Whereas the latter ſeems to be owing to this, that the Humour is not ſo moveable and fine, but ſomewhat thicker, and, conſequently, cannot tranſpire in a cold Air, though it is capable of doing ſo in a warm Atmoſphere.

This ſerous and thin Humour is, for the moſt part, generated by ſome Diſorder of the Liver, which by ſome preternatural Cauſe is diſpoſed to generate this Humour. But this Humour is put into a State of Effervescence, by the procatarctic Cauſes which agitate the Maſs of Blood. This Diſorder is alſo more frequent in Winter than in Summer, in cold than in hot Climates.

This Diſorder is eaſily known by the Marks above laid down; for it is ſometimes preceded by a ſpontaneous Laſſitude, after which, itchy Puſtules appear over all the Body, as if the Patient was ſtung by Bees, or pricked by Nettles.

Theſe Tubercles, in a ſhort time, and without any Care, ſpontaneouſly diſappear, without coming to Suppuration, or diſcharging any Matter. And, if this laſt Accident ſhould at any time happen, it is rather owing to the Scratching, on account of the violent Itching, than to the Nature of the Tubercles themſelves.

Sometimes the Eſſere precedes bilious Fevers; and they who are frequently afflicted with this Diſorder, ought not to neglect its Cure, leſt they ſhould fall into Fevers, or ſome other violent Diſeaſe.

In the Cure of this Diſorder, there is, for the moſt part, no Neceſſity for Topics; but if, by Veneſection, and the Exhibition of Alteratives, the Heat of the Blood is abated, the Tubercles diſappear, and the natural Colour and Smoothneſs of the Skin return. The firſt Step to be taken is, to open a Vein, and take away as much Blood as the State of the Patient requires. After this, if it is found neceſſary, the bilious and ſerous Humour is to be evacuated by Tamarinds, Myrobalans, and Rhubarb. After this, let the Juices and Syrups of Pomgranates, red Currants, and unripe Grapes, as, alſo, Whey, ſour Milk, and Emulſions of the Four cold Seeds, be exhibited. The Patient may, alſo, be immerſed in a Bath of tepid Water; and the Diet ought, in this Diſorder, to be refrigerating and moiſtening. *Sennert.*

ESSODINUM. A certain Preſage of a future Event, drawn from the Signs which indicate it. *Rulandus.*

ESTHIOMENOS, ἐσθιόμενος, from ἐσθίομαι, to eat. Depaſcent, eating, corroding. An Epithet for ſome Sorts of ſpreading Ulcers.

ESULA. A Name for ſeveral Species of the TITHYMALUS, which ſee.

ESULA INDICA. Bont. 153. Raii Hiſt. 1. 873. *Eſula Indica Bontii, ſive Euphorbio affinis Indica Sedi folio.* Hiſt. Oxon. 3. 345. *Tithymalus Orientalis arboreſcens, triquetrus ſpinoſus, Taluikghaba.* Herm. Muſ. Zeyl. 56. *An Daluk. Eſula Indica.* Ejuſd. 67?

Of the Juice of the Eſula Indica is prepared an Extract, which is of good Service in the Cachexy, Dropſy, Palſy, and other cold and ſtupid Diſeaſes.

The Plant which produces the yellow Tear, corruptly called, in our Shops, *Gutta Gemou*, differs not at all from the abovementioned in Form, or Manner of Growth. But we are to obſerve, with Dr. *Sydenham*, that there are two Sorts of *Gotta Gumma*, or *Gutta Gamba*, ſold by the Merchants, which are, the common Sort, collected from a Plant, nearly reſembling the Eſula Indica, and called, by the *Indians*, *Lonan Cambodia*; and another, which is the beſt, and diſtils from a Tree in the *Eaſt Indies*, called *Codampulli*, and *Cartapuli*, or *Kanna Gborika. Dale.*

The *Lonan Cambodia* is ſo called, becauſe it is produced in *Cambodia*, a Country near *China*, famous, alſo, for Plenty of hepatic Aloes. This Juice is much ſafer taken prepared, than crude; for in the Preparation it depoſites, in a great meaſure, its emetic and antiſtomachic Quality. The Way of preparing it is as follows: Take a Pound of *Gutta Cambodia*, bruiſe it groſsly, and then infuſe it in a large Glaſs Phial, in the ſtrongeſt diſtilled Vinegar, which muſt riſe above it by about three Fingers Breadth; then expoſe the Glaſs to the Sun's Rays, which, in many things, perform the Office of a chymical Fire. At the End of eight or ten Days, let it be paſſed through a very fine Strainer; and, after that, be inſpiſſated to the due Conſiſtence of an Extract; of which exhibit from twelve to twenty Grains, in the ſolid Form of Pills, or diluted with Wine; by which Method they will purge plentifully, without Gripings, only by Stool. And this Extract I ſhould prefer before Scammony, in theſe hot and moiſt Countries. *Ray, Hiſt. Plant.*

ESURINUM. Eſurine, or hungry. Vinegar, rectified by means of Verdegriſe, as deſcribed under the Article ACETUM, is called *Acetum Eſurinum.*

ETESIÆ, ἐτησίαι. Certain Winds, frequently mention'd by *Hippocrates*. They are cool Winds, which are ſaid to blow from the North-eaſt, and to temperate the Heat of the Atmoſphere. *Pliny* informs us, that North-eaſt Winds (*Aquilones*) blow eight Days before the Dog-ſtar riſes, and that theſe are called *Prodromi*; and that, two Days after the Riſing of the Dog-ſtar, the Eteſian, or North-eaſt, Winds ſet in, and continue for forty Days.

According to *Proſper Alpinus*, the Eteſian Winds begin to blow, in *Egypt*, when the Sun enters *Cancer*; and blow very conſtantly the whole Months of *July* and *Auguſt*, as well as almoſt all *June*. At the Riſing of theſe Winds, which happens nearly at the time when the *Nile* begins to increaſe, all peſtilential Diſtempers, which were before very common, while the contrary Winds blew, are extinguiſhed. For as, he ſays, the Southerly Winds, which the People of the Country call *Campſin*, (as he ſuppoſes, from *Campſis*, a General, who, with his whole Army, was ſuffocated in the Sand driven upon them by theſe Winds, as we read in the Life of *Alexander* the Great) induce a morbous and diſtemper'd Conſtitution of the Air; it is but natural to expect, that the Eteſian Winds, which are directly contrary to them, ſhould purge the Air, and render it wholſome. Beſides, the Nature of the Eteſian Wind is oppoſite to peſtilential Conſtitutions, as much as the Southerly Winds are obſerved to promote Putrefaction; agreeable to that of *Galen*, *Lib.* 1. *de Temp.* where he ſays, "that all "Things are preſerved for a very long time from Putrefaction "by the North Wind, which is cold and dry by Nature; but "are very eaſily putrefied by Southern Blaſts." And, in many Places, he affirms, that the former Winds induce a healthy and ſalubrious State of the Air; as in his *Com. in* 3 *Epid.* "If the Eteſian Winds, he ſays, blow in the Summer, they "prevent many Miſchiefs and Diſorders, which otherwiſe "would happen." And, ſpeaking of a peſtilential Air, he ſays, "If the Eteſian Winds had blown at this Seaſon, they "had cleanſed the Conſtitution of the human Body from all "Diſtempers." And he aſſures us, in ſeveral Places of his Writings, that the Summers in which the Eteſian Winds did not blow, were very ſickly. *Hippocrates*, alſo, deſcribing a peſtilential Summer, ſays, "the Summer was fair and hot, "and the Seaſon was very ſultry, the Eteſian Winds blow"ing only by weak and ſcattered Blaſts."

Proſper Alpinus, de Med. Ægypt.

All this is very conſonant to Reaſon, if we reflect, that the Winds which blow from the North and Eaſt, bring with them, in great Abundance, the Acid of the Air, the grand Reſiſter of Putrefaction. See ACIDA.

ETHEES, precious Gold. *Rulandus.*

ETHEL imports both Fire and Blackneſs. *Ethelia* is a dry aduſt Body, red and white. *Auricolla Ethela* is a red Tincture; and the white Flower of Gold. *Rulandus.*

Ethel, Terra alba, Sulphur album, Fumus albus, Auripigmentum, and *Magneſia,* in the Chymical Art, ſignify all the ſame Thing. *Dav. Lagneius, Harm. Chem.* in *Theat. Chym. Vol.* 4. *p.* 729.

ETHESIUS LAPIS, the *Chryſolith. Rulandus. Johnſon.*

ETHICA, the ſame as HECTICA; which ſee.

ETHMOIDES, ἠθμοειδὴς, from ἠθμὸς, a Strainer, and εἶδος, a Form, or Likeneſs, an Epithet apply'd to a Bone at the Root of the Noſe, the *Os Ethmoides*; for which ſee CAPUT.

ETNOS, ἔτνος, in *Hippocrates,* ſignifies, according to *Galen,* all Kinds of Food, whether ſolid or liquid, prepared of leguminous Fruits decorticated and bruiſed, and then boiled.

ETRON, ἦτρον, the HYPOGASTRIUM; which ſee.

ETTALCHE. A Name for the *Cedrus, Folio Cypreſſi, major, fructu flaveſcente.* See CEDRUS.

ETYMODRYS. A Name for the *Quercus; cum longo Pediculo.*

EVACUATIO, κένωσις, Evacuation, natural or artificial.

EUÆMIA, εὐαιμία, from εὖ, importing Good, and αἷμα, Blood; Goodneſs of Blood. *Fernel. Pathol.*

EUALTHES, εὐαλθὴς, from εὖ, importing Eaſe, and ἄλθω, to heal; eaſy to be healed. *Hippocrates de Articulis.*

EUANALEPTOS, εὐαναλήπτος, (from εὖ, ſignifying Eaſe, and ἀναλαμβάνω, to amend, recover) is eaſily recover'd, or repair'd. *Hippocrates,* 6 *Epid. Sect.* 4. *Aph.* 7.

EUANASPHALTOS, εὐανάσφαλτος, from εὖ, importing Eaſe, and ἀνασφάλλω, to recover Strength, is one who eaſily recovers, or is ſoon reſtored to Health. *Hippoc.* περὶ τροφῆς, in Oppoſition to δυσανάσφαλτος, *dyſanaſphaltos,* one who is difficult to be reſtored.

EUANTHEMON, εὐάνθεμον, the ſame, according to *Galen*'s Exegeſis, as the *Anthemis* and *Chamæmelum.* The Word occurs *Lib.* 1. περὶ γυναικ.

EUANTHES, εὐανθὴς, from εὖ, well, highly, in a great Degree, and ἄνθος, a Flower, highly florid. Thus, *Coac.* 631. εὐανθεῖς θρόμβοι αἱματώδεις, are highly colour'd or florid grumous Concretions of Blood; and εὐανθὲς ἔξον highly florid Urine, ſeems to be what has a ſpumous Efflorescence on its Superficies. But ſome take εὐανθὲς ἔξον, to be pellucid and pure Urine, which comes nearly to the natural Colour of Urine, and, by its florid Brightneſs and Tranſparency, prognoſticates a ſafe and ſpeedy Criſis.

EUAPHION, εὐάφιον, from εὖ, denoting Eaſe, and ἁφὴ, the Touch; a Medicine for the Hæmorrhoids, ſo named for its Gentleneſs, mention'd by *Galen, de C. M. S. L. Lib.* 9. *Cap.* 7.

EVAPORATIO. Evaporation; that is, a Diſſipation of the finer Parts of any Fluid, by means of the Sun, or a Fire. Tho' Chymical Evaporation is always carry'd on by means of Heat, yet Cold and Winds cauſe Water to evaporate; and even the hardeſt Ice is not exempt from Evaporation, as Mr. *Gauteron* informs us, in the Memoirs of the Royal Academy of Sciences for 1709; and as we learn from Dr. *Halley.*

EUCARDIOS, εὐκάρδιος. Grateful to the Stomach.

EUCATASCEPTON, εὐκατάσκεπτον, from εὖ, importing Eaſe, and καθασκήπτω, to be incumbent. An Epithet in *Hippocrates, de Fract.* for a Wound, importing its being properly ſuſtain'd, or ſupported, by lying upon ſomething ſoft.

EUCHARISTOS. An Epithet for an Antidote in *Nicolaus Myrepſus, Sect.* 1. *C.* 278.

EUCHROEA, εὐχροια, from εὖ, importing Goodneſs, and χρόα, or χροία, Colour; Goodneſs of Colour, Floridneſs, a healthy Countenance. But *Euchroon* is the Name of a Plaiſter in *Scribonius Largus,* 203. and in *Galen, de Comp. Med. S. L. L.* 4. *C.* 7.

EUCHYLOS, εὔχυλος, from εὖ, importing Goodneſs, and χυλὸς, Humour, Juice; abounding with good Humours or Juices. *Euchymus,* εὔχυμος, has the ſame Signification.

EUCHYMIA, εὐχυμία, from εὖ, denoting Goodneſs, and χυμὸς, Humour, Juice, is Goodneſs of the Humours or Juices, as well in Aliments, as in the human Body.

EUCINETOS, εὐκίνητος, from εὖ, importing Eaſe, and κινέω, to move, is eaſy to be moved. *Hippocrates,* 3 *Aphor.* 17.

EUCOILIA, εὐκοιλία. An Epithet for Cherries, in *Dioſcorides, L.* 1. *C.* 1. 57. importing, that they render the Belly ſomewhat ſoluble.

EUCRASIA, εὐκρασία, from εὖ, good, and κεράννυμι, to mix. A good Temperament.

EUDIA, εὐδία, Serenity, Calmneſs, and Mildneſs of the Weather. *Hippocrates.*

EUELPIDIUM. The Name of a liquid Collyrium; call'd alſo *Diarrhodon,* and *Diaſmyrnon.*

EUELPISTI *Emplatrum.* The Name of a Plaiſter, deſcrib'd in *Scribonius Largus,* Nº 85. ſo call'd from *Euelpiſtes,* the Son of *Phleges,* a Surgeon mention'd in the Preface to the ſeventh Book of *Celſus.*

EUEMBOLOS, εὐέμβολος, from εὖ, well; and ἐμβάλλω, to put in. A Surgeon ſkilful at reducing luxated Bones.

EVENTUS, in Medicine, is generally underſtood of the Termination of a Diſeaſe, whether in Death, Recovery, or another Diſeaſe.

EUERES, εὐήρης, from εὖ, well; and ἐρετμὸς, an Oar. It imports, eaſy to be row'd, well-trim'd, relative to a Boat. But *Hippocrates,* who ſometimes makes uſe of naval Phraſes, applies it to Medicinal Inſtruments, in his Book *de Medico*; where it imports ready, or handy.

EVERRICULUM, in *Paré,* is a Sort of *Specillum,* or Spoon, us'd to clear the Bladder of Gravel, and Grumes of Blood, after Lithotomy.

EVERSIO. The ſame as *Ectropium*; which ſee.

EVESTRUM, in *Paracelſus,* ſeems to mean a prophetic Spirit, which preſages, with Certainty, future Events.

EUEXIA, εὐεξία, from εὖ, well, and ἕξις, Habit. A good Habit of Body.

EUGEOS. A Name by which the Uterus is ſometimes call'd, on account of its Fertility, from εὖ, well, and γῆ, the Earth; and ſometimes, the Hymen has this Appellation.

EVISTIOLA, in *Paracelſus,* ſeems to import a leprous Diſorder in the Nape of the Neck.

EULE, εὐλὴ, a Worm, properly one that is bred in Ulcers.

EULOGIUM, in *Foreſtus,* from *Rhaſes,* imports an exanthematous Diſorder, the Small-pox, or Meaſles. *Caſtellus.*

EUNUCHION. The Lettuce; ſo call'd from its being ſuppos'd to reſtrain Venereal Inclinations; becauſe, according to the Antients, *Venus* lay upon a Bed of Lettuces, after the Death of *Adonis.*

EVOMITIO. A Vomiting. I don't know that it occurs in any Claſſical Author.

EUONYMOIDES.

The Characters are;

The Leaves are alternate, not conjugate; the Pedicle ends in a monophyllous, quinquefid, ſtellated, Calyx. The Flower is roſaceous, pentapetalous, furniſhed with five Stamina, and the Flowers are diſpoſed in Spikes. The Ovary grows to the Placenta in the Bottom of the Calyx, is furniſh'd with a Pointal, having a rough Apex, and becomes a globous Capſula, with three Cells, each Cell containing two Seeds immers'd in a Pulp. *Boerhaave* mentions but one Species of this Plant, which is, Euonymoides; Canadenſis. *Saraz.*

EUONYMUS.

The Characters are;

The Calyx is monophyllous, and quinquefid, or quadrifid; the Flower roſaceous, tetrapetalous, and ſometimes pentapetalous, and furniſh'd with four or five Stamina. The Ovary, in the Bottom of the Calyx, is furniſh'd with a bifid Tube, or Pointal, and becomes an angulous, membranaceous Fruit, divided into four or five Cells, full of oblong Seeds. *Boerhaave, Index alter, Part* 2. *p.* 237.

Boerhaave mentions four Species of this Plant, which are;

1. Euonymus; vulgaris; granis rubentibus. *C. B. P.* 428. *Jonſ. Dendr.* 387. *Tourn. Inſt.* 617. *Elem. Bot.* 490. *Boerh. Ind. A.* 2. 237. *Dill. Cat. Giſſ.* 66. *Buxb.* 106. *Rupp. Flor. Jen.* 74. *Euonymus,* Offic. Chab. 62. Ind. Med. 49. *Euonymus, Fuſanus,* Mont. Ind. 42. *Euonymus Theophraſti,* Ger. 1284. Emac. 1468. Merc. Bot. 1. 34. Phyt. Brit. 39. Mer. Pin. 37. *Euonymus vulgaris,* Park. Theat. 241. Raii Hiſt. 2. 1621. Synop. 3. 468. *Euonymus multis, aliis Tetragonia,* J. B. 1. 201. THE SPINDLE-TREE. *Dale, p.* 321.

They ſay, its Fruit purges both upwards and downwards: The Peaſants make uſe of the Powder of its Fruit, to kill Lice; or elſe waſh their Hair with the Decoction of its Seeds. *Martyn's Tournefort.*

It grows frequently in the Hedges, and flowers in *May.* The Fruit is in Uſe, but of a noxious Quality, and not to be taken inwardly without Danger; externally uſed, it is an Emollient and Reſolvent, kills Lice, and deterges furfuraceous Heads. *Dale.*

Theophraſtus affirms, that it is noxious to Cattle; in Confirmation of which, *Matthiolus* and *Ruellius* both relate, from their own Experience, that neither Sheep, nor Goat, how greedy ſoever of young Sprouts of Trees, will ever touch this Plant. *Cluſius,* on the contrary, ſays, that in *Hungary* he has obſerv'd Goats to feed very greedily on the Leaves of this Tree, without receiving any Prejudice; which however, conſidering the ungrateful Smell, and cathartic Quality of this Plant, does not ſeem very probable. Three or four of the Berries purge upward and downward; boiled in a Lixivium, they dye Hair of a yellow Colour. Of the Wood, in *France* and *Germany,* are made the beſt Spindles: Whence it is call'd *Fuſanus* and *Fuſaria. Raii Hiſt. Plant.*

2. Euonymus, latifolius, *C. B. P.* 428. BROAD-LEAV'D SPINDLE-TREE.

3. Euonymus; Africanus Lycii craſſioribus foliis; ſempervirens; capſula triloculari, aſperata rubente. *Rhamno ſimilis, triloculari*

tricularí fructu, foliis Pyracanthæ Africanæ, dictæ. Lycium, Africanum, fructu rubro, petius Euonymo affinis. Ind. 246. *Lycium Æthiopicum. Pyracanthæ folio.* H. A. 1. 163. EVERGREEN AFRICAN SPINDLE-TREE, *commonly call'd* AFRICAN BARBERRY.

4. Euonymo affinis, Æthiopica; sempervirens; fructu globoso, scabro; foliis Salicis, rigidis, serratis. *H. L.* 239. *Pluken. Phyt.* 176. 3. *Lauro serratæ, odoratæ, Stapelianæ similis, indora, Capitis bonæ Spei,* Breyn. Prodr. 1. *Laurus non odorata, fructu globoso, Africana.* Sterbeeck, Citric. 248. *Arbor, Africana, facie Loti Arboris vulgo. Evergreen* Ethiopian SPINDLE-TREE, *with a globular Fruit, and stiff serrated Willow-leaves. Boerh. Ind. alt. Plant. Vol.* 2. *p.* 237.

EUPATORIOPHALACRON. *Naked-headed Agrimony.*

The Characters are;

It is a corymbiferous Plant, which in some Species have radiated Flowers, whose Flowers are Hermaphrodite, and the Half-florets are Female; but, in other Species, the Flowers are produced in a Disk, and are for the most part Hermaphrodite. The Ovaries have naked Heads, and are placed on a woolly Placenta. All these Parts are contained in a Flower-cup, which is divided into many Parts to the Placenta. To these Notes must be added, the Leaves growing opposite on the Branches.

Miller, in his Dictionary, takes notice of ten Species of this Plant; none of which, at present, have any Medicinal Virtues attributed to them, that I know of.

EUPATORIUM.

The Characters are;

Its Root is fibrous and perennial; the Leaves grow two, three, or four together at Intervals; the Calyx is long, smooth, and scaly. The Flowers form an Umbella, furnished with many long bifid Capillaments, or Threads.

Boerhaave mentions four Species of this Plant; which are,

1. Eupatorium; cannabinum. *C. B. P.* 320. *Park.* 595. *Tourn. Inst.* 455. *Boerh. Ind. A.* 118. *Dill. Cat.* 140. *Raii Hist.* 1. 293. *Synop.* 83. *Eupatorium Avicennæ, Eupatorium Cannabinum,* Offic. *Eupatorium canabinum alterum,* Ger. 574. *Eupatorium Cannabinum vulgarè, foliis trifidis profundè dentatis.* Hist. Oxon. 3. 97. *Eupatorium adulterinum,* J. B. 3. 1065. Chab. 334. Schw. 69. HEMP AGRIMONY. *Dale, p.* 91.

This Species of *Eupatorium* has a spreading stringy Root; from which arise redish square Stalks, two or three Foot high, somewhat woolly, having at each Joint two Leaves divided into three long narrow serrated Hemp-like Sections, green above, and whitish underneath. The Flowers grow on the Tops of the Stalks in Clusters, Umbelwise, each being somewhat slender and naked, composed of several fistular Flowers, of a purple Colour, divided into five Parts at the Top, and passing away into Down. It grows by Rivers and Ditch-sides, and flowers in *July*.

Schroder commends this as a very good vulnerary Plant, used inwardly, but especially outwardly, and useful to correct an ill Habit of Body, and cure Coughs and Catarrhs; tho' *Gesner*, upon Trial, found the Root to be a strong Purger. It is but seldom used. *Miller's Bot. Off.*

Two Ounces of the Juice of the Leaves of this Plant, or a Dram of its Extract, and a Ptisan of it, drank by Glassfuls, are very good for Obstructions of the Bowels, especially those which succeed intermitting Fevers, in which the Blood is very much deprived of its natural Balsam. A Tea, or Broth, of its Leaves, given after the Legs have been bathed with a Decoction of the whole Plant, affords great Ease in the Dropsy. For the Green-sickness, Itch, and other cutaneous Diseases, it is mixed with Fumitory in Whey, Broths, and Ptisans: The Tops, charged with Flowers, are very vulnerary; the Roots purge considerably, both upwards and downwards. This Experience *Gesner* himself had of it: "I lately boiled, he says, "some Fibres of the Root of *Eupatorium aquaticum*, or *Avi-*"*cennæ quorundam*, in Wine, and drank the Decoction after "it was strained: In an Hour after, it began to purge plenti-"fully by Stool, Urine, and Vomiting; and work'd near "twelve times afterwards, evacuating vast Quantity of Phlegm "in a much easier and safer Manner, than is done by Helle-"bore."

The Leaves of this Plant are very bitter, and do not stain the blue Paper: It is probably endowed with the natural Salt of the Earth, with hardly any other Alteration, than being united with a great deal of Sulphur and Earth. *Martyn's Tournefort.*

Tragus says, that at *Strasburg*, they only use it for the Diseases of their Cattle; and it appears, by *Gesner's* Experiment, that its Operation is too violent to be trusted on a human Body, unless in small Quantities, and mix'd with other Things to correct it. The People of the *Low-countries* use the Decoction of it with Success in the Jaundice. A certain Person in an Hospital had his Intestines corroded to such a Degree, that the Fæces came out at the Perforations; and, his Case being almost desperate, he try'd a Decoction of this Plant, in Wine, drinking it, and infusing it also into his Ulcers, the Effect of which was a perfect Conglutination and Cure. *Ray's Hist. Plant.* 293.

2. Eupatorium; Urticæ foliis; Canadense; flore albo. *H. L. App.* 667. *Eupatorium, Scrophulariæ foliis glabris, flore albo.* M. H. 3. 98. *Valeriana, Urticæ folio, flore albo.* M. H. 3. 97. Corn. 20. CANADA HEMP AGRIMONY, *with Nettle-leaves, and a white Flower.*

3. Eupatorium; Novæ Angliæ; Urticæ foliis; floribus purpurascentibus; maculato caule. *H. L. App.* 667. NEW ENGLAND HEMP AGRIMONY, *with Nettle-leaves, purplish Flowers, and spotted Stalks.*

4. Eupatorium; folio oblongo, rugoso; caule purpurascente. *T.* 456. CANADA HEMP AGRIMONY, *with a long rough Leaf, and a purplish Stalk. Boerh. Ind. alt. Plant. Vol.* 1. *p.* 117. See AGRIMONIA.

EUPEPSIA, εὐπεψία, a good Digestion; from εὖ, well, and πέσσω, to digest.

EUPETATON. A Name in *Oribasius, Medic. Collect. L.* 7. *Cap.* 26. for the *Daphnoides*, which is the *Thymelæa*; *Laurifolia; Sempervirens; seu Laureola mas.*

EUPHORBIUM. The Name of a Plant, said to be thus call'd from *Euphorbus*, Physician to the famous *Juba*, and Brother to *Antonius Musa*. But *Salmasius* proves this to be a Mistake, by shewing, that this Plant was known by the Name of *Euphorbium*, many Ages before *Euphorbus* was born.

The Characters are;

The Flower, Fruit, and Milk, are like those of the *Tithymalus*; the Form is angulous like the *Cereus*, prickly for the most part, and almost bare of Leaves.

Boerhaave mentions twelve Species of this Plant; which are,

1. Euphorbium; Cerei effigie; caulibus crassioribus; spinis validioribus armatum. *Breyn. Prodr.* 2. *M. H.* 3. 344. *Euphorbium.* Dod. p. 378. *Euphorbium; cerei effigie.* H. A. 1. 21. *Tithymalus, Mauritanicus, aphyllos, angulosus, spinosus, ex quo Euphorbium Officinarum.* H. L. THICK-STALK'D CEREUS-LIKE EUPHORBIUM, ARM'D WITH STRONG SPINES.

2. Euphorbium; Cerei effigie; caulibus gracilioribus. *Tithymalus, Mauritanicus, aphyllos, angulosus, spinosus minor.* Ind. 107. *Tithymalus Africanus, spinosus, Cerei effigie.* Excod. Compt. M. H. 3. 343. SLENDER-STALK'D CEREUS, SHAP'D LIKE EUPHORBIUM.

3. Euphorbium; heptagonum; spinis longissimis, in apice frugiferis. EUPHORBIUM, *with seven Angles, and long Spines, bearing Fruit upon the Tops.*

4. Euphorbium; Afrum; polygonum: spinosum; caule tuberibus ornato. *Tithymalus, aizoides, Africanus, validissimis spinis ex tuberculorum internodiis provenientibus.* Comm. Præl. 59.

5. Euphorbium; tetragonum, & pentagonum; spinosum; Canarinum. *Boerh. Ind. A.* 258. *Euphorbium.* Offic. Mil. Cat. 42. *Euphorbium tetragonum & pentagonum spinis geminis aduncis munitum.* Act. Reg. Par. anno 1720. Edit. 8vo. p. 500. *Euphorbium quadrangulare, sive tetragonum,* Hort. Bos. 47. *Tithymalus aizoides fruticosus Canariensis aphyllos, quadrangularis, & quinqueangularis, spinis geminis aduncis atronitentibus armatus.* Hort. Amst. 2. 207. Raii Hist. 3. 429. Comel. Præl. Bot. 20. *Tithymalus aizoides lactifluus, seu Euphorbia Canariensis quadrilatera & quinquelatera Cerei effigie, ad angulos per crebra intervalla spinis vectis atronitentibus, Gazellæ Cornua referentibus armata.* Pluk. Phytog. 320. f. 3. Almag. 370. *Tithymalus quadrangularis spinosus seu spinis geminis aduncis ex eadem sede ortis armatus, succo lacteo acerrimo turgidus.* Hort. Beaum. 41. CANARY EUPHORBIUM. *Dale.*

6. Euphorbium; Afrum; caule squamoso; tuberoso. *Tithymalus aizoides, Africanus, caule simplici squamoso.* Comm. Præl. 57. AFRICAN EUPHORBIUM, *with scaly Stalks, and a tuberose Root.*

7. Euphorbium; Afrum; caule squamoso, tuberoso; minus. *Ex horto amplissimi Simonis Beaumont.* LESSER AFRICAN EUPHORBIUM, *with scaly Stalks, and a tuberose Root.*

8. Euphorbium; Afrum; caule crasso squamoso, ramis in Capitis Medusæ Speciem cincto. AFRICAN EUPHORBIUM, *with thick scaly Stalks, and branching at the Top like Medusa's Head, commonly called* THE SNAKE EUPHORBIUM.

9. Euphorbium; Afrum; facie fructus Pini. *Tithymalus, Africanus, arborescens, squamato caule spinoso.* M. H. 3. 344. *Planta lactaria, Africana, Pini fructuum facie.* Breyn. Prodr. 2. 100. AFRICAN EUPHORBIUM, *with the Face of the Pine-fruit, commonly called* LITTLE MEDUSA'S HEAD.

10. Euphorbium; verum; Antiquorum; scadida Calli. Hort. Malab. *Raii Hist.* 1. 873. *Volk. Flor. Norr.* 158. *Hort. Amst.* 1. 23. *Boerh. Ind. A.* 259. *Euphorbium.* Offic. *Euphorbium verum.* Com. in Not. *Euphorbium antiquorum verum, sive Scadidacalli.* Hort. Bos. 47. *Euphorbium trigonum spinosum rotundifolium.* Act. Reg. Par. anno 1720. Ed. 8vo. p. 500. *Euphorbium Indicum Opuntiæ facie caule geniculato, triangulari.* Breyn. Prodr. 2. 44. Flor. Mal. 108. Hist. Oxon. 3. 345. *Tithyma-*

ius aizoides nodosus & spinosus lacte turgens acri. Pluk. Almag. 370. Commel. Prælud. Bot. 21. *Tithymalus Indicus spinosus & angulosus lacte turgens acri.* Hort. Beaum. 41. *Schadida Calli.* Hort. Mal. 2. 81. THE EUPHORBIUM-TREE. *Dale.*

Euphorbium is the inspissated Juice, or Gum, of a thorny Plant, which grows in *Barbary*, and the *East Indies*. It is called, by *Herman*, *Tithymalus Mauritanicus aphyllos angulosus & spinosus, ex quo Euphorbium officinarum. Schadida Calli Horti Malabarici, Vol.* 2. *Tab.* 81. It is a different Plant from the Euphorbium of *Gerard*, *Parkinson*, and *Bauhine*, having several triangular, succulent, jointed, thick Stalks, beset with a double Row of small, stiff, hard Prickles, coming off in Pairs; and, if we compare small things with great, like the Horns of a young Steer join'd to a Piece of the Skull. On the Top of the Stalks grow pentapetalous Flowers, succeeded by triangular Seed-vessels, containing each three Seeds. The whole Plant is full of a caustic Milk, which, when dried, is the Euphorbium. It is brought over in small brown-yellow Drops, of a gummy resinous Substance, of little Smell, but burning the Nose, causing violent Sneezing, and inflaming the Mouth and Throat.

It is but little us'd inwardly, on account of its hot, caustic, acrimonious Quality; though it was given antiently to cure the Dropsy: But, we having safer and milder Remedies, it is now in Disuse. It is a violent Sternutatory, and is sometimes used in Apoplexies and Lethargies. It is used outwardly to clean foul and rotten Bones, and to be put into drawing Plaisters.

Officinal Preparations are the *Oleum Euphorbii simplex & compositum. Miller's Bot. Off.*

Geoffroy says, it is so violent a Purgative, that it cannot safely be taken inwardly; but, when dissolved in the Yolk of an Egg, and afterwards diluted with Oil of sweet Almonds, some venture to give it as a Clyster, in the Quantity of twelve Grains, in lethargic Cases, and stubborn Palsies. It is, likewise, used in some Snuffs, mixed with Tobacco; but it would be better to mix it with Juice of Liquorice. Euphorbium may, also, be used to separate the carious Parts of Bones. *Geoffroy.*

OLEUM EUPHORBII: *Oil of Euphorbium.*

Take six Drams of Euphorbium, five Ounces of the Oleum Cheirinum, and three Ounces of aromatic Wine; which boil together, in a double Vessel, till the Wine is wasted by Evaporation.

OLEUM DE EUPHORBIO COMPOSITUM:

Compound Oil of Euphorbium.

Take of Staves-acre, and Soapwort, of each half an Ounce; of Pellitory of Spain, six Drams; of dry mountain Calamint, one Ounce and an half; of Costus, ten Drams; and of Castor, five Drams: Bruise, and macerate these for three Days, in three Pints and an half of fragrant White-wine; and then boil with one Pound and an half of the Oil of Wall-flowers; adding, before the Wine is quite consumed, of Euphorbium, half an Ounce; and then finish the Boiling, *S. A.*

11. Euphorbium; angulosum, foliis nerii latioribus. *Tithymalus, aizoides, arborescens, spinosus, caule angulari, Nerii folio.* Comm. Præl. 56. ANGULAR EUPHORBIUM, *with broad Oleander-leaves.*

12. Euphorbium; quo Anteuphorbium. *Dod. p.* 378. *Lob. Obs.* 643. *Lugd.* 1692. *C. B. P.* 387. THE ANTI-EUPHORBIUM. *Boerh. Ind. alt. Vol.* 1. *p.* 258.

See CATHARTICA.

EUPHORIA, εὐφορία· from εὖ, well, and φέρω, to bear. The easy bearing a Disorder, or the Operation of a Medicine.

EUPHRASIA.

The Characters are;

The Leaves are small, conjugated, roundish, and serrated; the Flower monopetalous, anomalous, personated, bilabiated, the upper Lip erect, and multifid; the lower divided into three Parts, each bifid; the Fruit is an oblong bicapsular Pod.

Boerhaave mentions three Species of this Plant; which are,

1. Euphrasia; Officinarum. *C. B. P.* 233. *Hist. Oxon.* 3. 430. *Tourn. Inst.* 174. *Elem. Bot.* 142. *Boerh. Ind. A.* 235. *Rupp. Flor. Jen.* 195. *Buxb.* 107. *Euphrasia.* Offic. Ger. 537. Emac. 633. Dill. Cat. Giss. 138. Rivin. Irr. M. 90. J. B. 3. 432. Chab. 475. Raii Hist. 1. 771. Synop. 3. 284. *Euphrasia vulgaris, sive alba.* Merc. Bot. 1. 44. Phyt. Brit. 40. *Euphragia vulgaris.* Park. Theat. 1329. *Euphragia, sive Euphrasia.* Mer. Pin. 37. EYEBRIGHT. *Dale.*

Eyebright has a small woody Root, full of Fibres, from which springs, usually, one Stalk, branched out into several smaller, somewhat of a reddish brown Colour. The Leaves are small, set on by Pairs, opposite, without Foot-stalks, hard, and veiny, roundish, but indented at the Ends. The Flowers grow at the Tops, among the Leaves, small and white, and gaping, or galeated, with a yellow Spot in the Middle, and several black Stripes running lengthways; after the Flowers are fallen, come small, long, flattish Seed-vessels, containing very small Seed. Eyebright grows in Fields and Commons, and flowers in *July.* The whole Plant is used.

This is a Plant famous for all Disorders and Distempers of the Eyes, especially for Dimness of Sight, and to strengthen it when weak and decayed, either given in the Juice, or a Decoction of the Powder of the Leaves. A Powder, made of two Ounces of Eyebright, and half an Ounce of Mace, is very much commended for the same Purposes, especially after proper Evacuations. Some commend it as good against the Jaundice.

The only officinal Preparation is the *Aquæ Euphrasiæ.*

Miller's Bot. Off.

It is very bitter, and gives a faint Tincture of Red to the blue Paper; which makes us conjecture, that the Sal Ammoniac, though involved in a great deal of Oil and Earth, may predominate in this Plant. It dissolves the Humours, disposes them to circulate, and carry off the obstructing Particles. Every body agrees, that it clears, strengthens, and even restores the Sight. The Powder is given from one Dram to three, in a Glass of Fennel, or Vervain-water. The Use of the Conserve, alone, or mixed with Wormwood-leaves, continued for a long time, is good for the same Purposes. *Arnaldus de Villanova*, in his Treatise, concerning medicinal Wines, very much commends that of Eyebright. In Vintage-time they put this Plant in Must, and drink it, when it is well clarified. *Pena* and *Lobel* prefer the Use of the Powder, to the Wine: They affirm, that one of their Friends in *Switzerland*, who had but a slight Defluxion in his Eyes, had like to have lost his Sight by drinking Eyebright-wine, for three Months.

Martyn's Tournefort.

PULVIS HELIDÆI.

Take of Mace, half an Ounce; of Eyebright, two Ounces; and reduce them to a very fine Powder. The Dose, after due Evacuations, is two Drams; it is effectual in a Scotomy, and Images dancing before the Sight.

Dodonæus adds the Seeds of Fennel, and Sugar: *Fuchsius* commends it in Cataracts.

Fabricius Hildanus, a celebrated Author, on whose Veracity we may depend, assures us, that so great is the Virtue of Eyebright against Weakness of Sight, that Persons of seventy Years of Age, who, by much Watching, and hard Study, had lost their Sight, have recovered it, in that decrepit Age, by the Use of this Plant. Dr. *Tancred Robinson* observes, that Oculists, both in *England*, and in foreign Parts, prescribe the Use of this Herb, in Sallads, and in Broths, baked in Bread, and infused in what we commonly drink; and apply it outwardly, in Collyria, and Fomentations. *Raii Hist. Plant.*

2. Euphrasia; pratensis; rubra. *C. B. P.* 234. *M. H.* 3. 431. *Euphrasia altera.* Dod. p. 55. Col. 1. 200. *Pedicularis, serotina, purpurascente flore.* T. 172.

3. Euphrasia; ramosa; pratensis; flore albo. *H. Eyst. Æst. o. Arb. F.* 13. *F.* 3. BRANCHED MEADOW-EYEBRIGHT, *with a white Flower.*

Boerh. Ind. alt. Plant. Vol. 1. *p.* 236.

EUPHROSYNE. A Name for the *Euphragia.*

EUPHYIA, εὐφυΐα· from εὖ, importing Goodness, and φύω, to be born, or derive a Beginning. A good natural Disposition of the Parts, or Habit of the Body.

EUPNOIA, εὐπνοια· from εὖ, denoting Facility, and πνέω, to breathe. Easy Respiration.

EUPORIA, εὐπορία· from εὖ, importing Ease, or Expedition; and πορέω, to give, or afford. Easiness, Facility. Hence,

EUPORISTA. Medicines easily procured, or prepared.

EUROEOS, εὐροιῶ. A Name for the LAPIS JUDAICUS.

EUROS, εὐρώς. Rottenness, Filthiness, or Putrefaction.

EURUS, εὖρος. The East Wind. It was, among the Antients, and still is, in warm Climates, esteemed salubrious; and very justly, because it cools the Air, and prevents Putrefaction.

EURYCHORIA, εὐρυχωρία· from εὐρὺς, wide, capacious, and χωρίον, a Region, or Place. An internal Sinus, or Cavity.

EURYTHMIA, εὐρυθμία· from εὖ, importing right, or just, and ῥυθμὸς, Order and Harmony, properly in Music. It either imports a Dexterity in a Surgeon, with respect to the handling of his Instruments; or a Fitness, or Aptness, of the Pulse, proportioned to Ages, Natures, or Constitutions.

EUSCHEMOSYNE, εὐσχημοσύνη· from εὖ, importing Ease and Propriety, and σχῆμα, the outward Form, or Habit. The Elegance of Behaviour, Dignity, and Decorum, which a Physician ought to observe in his Conduct. It includes all the Qualities and Qualifications necessary to constitute a

fine Gentleman. *Hippocrates* thought this of ſo much Importance, that he wrote a Treatiſe expreſly on the Subject, in which ſome excellent Maxims are contain'd.

EUSTATHES, εὐσταθὴς· from εὖ, ſignifying well, juſt, right, and ἵστημι, to ſtand, or be eſtabliſhed. Conſtant, regular, preſerving the natural Tenor. It is applied to the Seaſons, and to Diſeaſes; and, in the laſt Caſe, it implies ſomewhat of Mildneſs.

EUTAMIEUTOS, εὐταμίευτος. Ready, eaſy, prompt. *Hippocrates.*

EUTHENIA, εὐθηνία. Vigour, Fulneſs of Health.

EUTHESIA, εὐθεσίη· from εὖ, importing right, juſt, well, and θέσις, Situation, Order, and the like. An innate ſtrong Habit of Body, as explained by *Galen.*

EUTHYMIA, εὐθυμίη· from εὖ, well, right, and θυμὸς, the Mind. Serenity or Tranquillity of Mind. *Hippocrates, Epidem. Lib.* 5.

EUTHYORIA, εὐθυωρεία· from εὐθὺς, ſtrait, direct. The ſame as Ixis, which ſee.

EUTHYPNOUS, εὐθύπνους. This Adjective, according to *Galen*, imports Breathing eaſily. It occurs in *Hippocrates, Epid. Lib.* 6. *Sect.* 2. 8.

EUTHYPOROS, εὐθύπορος, from εὐθὺς, ſtraight. Direct. It is an Epithet of Extenſion, made with a View to reduce a fractured Limb, in *Galen, Method. Medendi.*

EUTROPHIA, εὐτροφία· from εὖ, importing good, and τροφὴ, Nutriment. Good and plentiful Nutrition.

EVULSIO. Evulſion, or Drawing out. Applied to the Hairs, Teeth, or Fragments of Bones.

EUZOMON. A Name for the Eruca, Rocket. *Aetius Tetrabib.* 1. *Serm.* 1.

EXACERBATIO. The ſame as Paroxysmus; which ſee.

EXÆRESIS, from ἐξ, out of, or away, and αἴρω, to remove. That Part of Surgery which conſiſts in removing Superfluities.

EXALIPTES. The ſame as *Alipta.* See Aliptæ.

EXALLAGE, ἐξαλλαγὴ, from ἀλλάσσω, to change, of ἄλλος, another, with the Addition τῆς χροὸς, "of Colour," is a Mutation of Colour; and reckoned among the Diſorders of the Eye, from a Depravation of the Humours, as in the Jaundice.

EXALMA, ἔξαλμα, from ἐξάλλω, of ἐξ, out, and ἄλλω, to leap; is a leaping, or ſtarting; and is applied, in particular, by *Hippocrates, de Artic.* to the Starting or Expulſion of the Vertebræ out of their proper Places.

EXALSIS, ἔξαλσις. The ſame as Exalma.

EXALTATIO. Exaltation is a Word in Uſe among the Chymiſts, and ſignifies an Operation by which a Subſtance has its Properties changed, and raiſed to an higher Degree of Dignity and Virtue. Of Exaltation there are two Kinds; firſt, *Maturation*, which is nothing but the raiſing and promoting a thing from a crude to a mature and perfect State; and this is ſubdivided into four Species, *Digeſtion, Circulation, Fermentation*, and *Projection*, which ſee under their ſeveral Articles. The ſecond Kind of Exaltation is *Gradation.* Exaltation is otherwiſe defined, a micro-chronic [μικροχρονικὴ] Subtilization, by which a thing, by a gradual Diſſolution, is tranſpoſed into a pure and more exalted Degree of its Virtue; and this is effected either by *Circulation* or *Ablution. Rulandus.*

EXAMBLOSIS, or EXAMBLOMA, ἐξάμβλωσις, or ἐξάμβλωμα, from ἀμβλόω, to miſcarry. A Miſcarriage. See Abortus.

EXANASTOMOSIS. The ſame as Anastomosis, which ſee.

EXANASTROPHE, ἐξανάστροφὴ. Reconvaleſcence, or Recovery of Health.

EXANGUIS. Without Blood. The white Parts of the Body, as the Bones and Cartilages, are called the exanguious Parts.

EXANIMATIO. Exanimation. It ſignifies either Death, or a Syncope.

EXANTHEMATA, ἐξανθήματα, from ἐξανθέω, to ſpring forth, or blow like a Flower. Puſtules, or Eruptions.

EXANTHISMATA, ἐξανθίσματα. Small Puſtules, or Eruptions.

EXANTHROPIA. The third Degree of Melancholy, according to *Wedelius.*

EXAPSIS, ἔξαψις, from ἅπτω, to kindle. An Acceſſion. *Hippocrates* applies it to Aliments, eſpecially Cheeſe, which, when corrupted in the Stomach, raiſe a Heat, and excite Thirſt.

EXARAGMA, ἐξάραγμα. A Colliſion, Attrition, or Breaking. *Galen. Exegeſ.*

EXARMA, ἔξαρμα, from ἐξαίρομαι, to be elevated. An elevated Tumor.

EXARSIO. A hot Intemperature, attended with Drineſs; ſuch as happens in hectic Fevers. *Fallopius, de Tumoribus.*

EXARTEMA, ἔξάρτημα, from ἐξάρομαι, to be ſuſpended. An Amulet.

EXARTHREMA, ἐξάρθρημα, ἐξάρθρωμα, or ἐξάρθρωσις, from ἐξαρθρόω, of ἐξ, out, and ἄρθρον, a Joint. A ſimple Luxation of a Joint, without Fracture.

EXARTHROS, ἔξαρθρος, in *Hippocrates*, is an Epithet for a Perſon, whoſe Joints are naturally large and prominent.

EXARTICULATIO. The ſame as Exarthema.

EXASPERATIO, Exaſperation. It imports either rendering the Skin rough, or the Increaſe or Augmentation of a Diſorder.

EXASTIAS, ἐξασίας. Flocks, Threads, or Eminences, upon Linen Cloth; or the Ravelings (as the Women call them) of Linen Cloth, when cut.

EXCATHISMA. The ſame as Semicupium; which ſee.

EXCESTRENSE OLEUM. *Exeter* Oil.

Take of Wormwood, the Leſſer Centaury, Eupatorium, Fennel, Hyſſop, Bays, Marjoram, Savine, Sage, and Thyme, of each four Ounces; of Southernwood, Betony, Ground-pine, and Lavender, of each ſix Ounces; of Roſemary, one Pound; of Chamomile, and Broom-flowers, of Cumin, and Fenugreek-ſeeds, of black and white Hellebore-root, and of Lemon-peels, of each four Ounces; of Euphorbium, Muſtard, Caſtor, and Pellitory, of each one Ounce; of Oil, two Gallons; and of Wine, three Pints. Let the Herbs, Flowers, Seeds, and Euphorbium, be bruiſed; the Roots, Peels, and Caſtor, ſliced, and macerated together twelve Hours, in a Bath-heat, with the Wine and Oil: Then, after a gentle Boiling, till the Wine is all conſumed by Evaporation, let the Oil be ſtrained out, and kept for Uſe.

EXCIPIENS. In Preſcriptions that is call'd the Excipient, which receives the other Ingredients, and gives them a proper Form; as officinal Electuaries, Conſerves, Confections, Robs, or Honey.

EXCIPULUM. A Receiver, in Chymiſtry.

EXCLUSORIUM. A Medicine which cauſes Abortion.

EXCORTICATIO. The ſame as Decorticatio; which ſee.

EXCREMENTUM. An Excrement. It is applied to whatever requires to be diſcharged out of the Body.

EXCRESCENTIA. An Excreſcence; that is, any thing which grows preternaturally upon any Part of the human, or any other Body.

Excrescentia Faba Bengalensis, Offic. Raii Dendr. 134. BENGALA BEAN.

It is round, flat, wrinkled, hollow'd in manner of an Umbilicus, large, brown on the Outſide, and blackiſh within, of a ſtyptic and aſtringent Taſte, and no Smell.

It is a powerful Aſtringent, and highly ſerviceable in repreſſing all Sorts of Hæmorrhages, particularly a Spitting of Blood, moderately incraſſating the Blood, and ſhutting the Mouths of the Veins and Arteries, conſolidating Ruptures, and tempering and allaying acrimonious and corroſive Humours.

D. *Marloe*, who gives the foregoing Account of its Virtues, was the firſt, as far as I know, ſays *Dale*, who communicated this exotic Medicine, with its Uſes, to the learned World, under the Name of *Faba Bengalenſis.* Hence ſome took it for a Fruit which comes from *Bengal*, others for a Species of Myrobalans, and others again for the Flower of the Citrine Myrobalan; becauſe it is very often found among thoſe Fruits. But to me, ſays *Dale*, it ſeems to be a kind of Excreſcence excited by the Puncture of a certain Inſect, or more properly the wounded Fruit itſelf of the Citrine Myrobalan, which, from the Venom of the Stroke, aſſumes this monſtrous Form. I have very often myſelf, he ſays, obſerv'd Plums depriv'd of their natural Shape by a Wound of this Nature inflicted by an Inſect, and render'd hollow, without any Stone. *Dale.*

EXCRETIO. Excretion. It either imports the Action of Excretion, or the Excrement excreted.

EXCUSSIO. A Term uſed by *Bonetus. Sepulchret. Anat. L.* 2. *Sect.* 8. *Obſervat.* 31. ſpeaking of a Palpitation of the Heart, he ſays, it proceeds either from Oppreſſion or Excuſſion. That from Oppreſſion is, when it is cauſed by ſomething which reſides in the Heart itſelf; that from Excuſſion, when it proceeds from ſome other Part.

EXCUTIA VENTRICULI.

This is a Name, by modern Surgeons, given to that Inſtrument repreſented in *Tab.* 42. *Fig.* 11. It is generally made of ſoft Briſtles form'd into a Bundle, and fix'd to a flexible braſs or iron Wire BBB, which may have flaxen or ſilken Thread cloſely wrapt about it. Authors of very conſiderable Note aſſert, that this Inſtrument is highly commodious, not only for removing ſmall Bones from the Fauces, but alſo for cleanſing the Stomach. When 'tis to be uſed for this latter Purpoſe, they lay down the following Directions, as neceſſary to be obſerved:

observed: A small Draught of warm Water, or, according to others, of Brandy, is to be taken before the Instrument is used; since, by this means, the Mucus and Sordes are the more easily resolv'd and attenuated in the Stomach. Then the Excutia A is to be immers'd in some proper Liquor, and, by means of the Wire B B, gently pass'd through the Oesophagus, as far as the Stomach. Then it is to be mov'd up and down through the Fauces, like the Sucker of a Siphon or Pump, but must be soon totally extracted. These Authors order the Excutia, and repeated Draughts of the above-mentioned Liquor, to be used, till no more Sordes can be brought away from the Stomach. This Practice is, according to them, so highly beneficial, that by its means the Lives of Men may be protracted to an uncommon Age, especially if it is repeated every Week, every Fortnight, or every Month. However great the Encomiums bestow'd on this Practice may possibly be, yet, 'tis certain, we have very few Instances of Cures happily brought about by its means; since the Sense of Pain, and the Danger of Suffocation, attending the Use of this Instrument, must certainly create a just Aversion to it. But these Points are at greater Length discussed by *Wedelius*, and *Teichmeierus*, in their *Disputationes de Ventriculi Excutia*. These Authors have also shewn, that this is not altogether an Instrument of modern Date, but long ago describ'd by some Authors. With respect to this, the Reader may consult a small Book, intituled *Sorberiana. Heister, Chirurg.*

EXECHEBRONCHOS, ἐξεχέβρογχος, from ἐξέχω, to jut out, or be prominent, and βρόγχος, the Throat. An Epithet for a Person who has a prominent Throat. *Hip. de Artic.*

EXECHEGLUTOS, ἐξεχέγλυτος, from ἐξέχω, to jut or stand out, and γλουτὸς, the Nates; one who has prominent Nates, as when there is a Luxation of both the Thighs outwardly. *Hip. de Artic.*

EXEGESIS, ἐξήγησις, from ἐξηγέομαι, to expound; an Exposition or Declaration. Ἐξήγησις, as *Galen* says, *Com.* 2. *in* 1 *Epid.* is properly concern'd about obscure Words; but Interpreters have abused the Word to signify an Exposition of the Causes of Obscurities in Words.

EXELCOSIS, ἐξέλκωσις, from ἕλκος, an Ulcer; an Exulceration. *Moschion, C.* 135.

EXELCYSMUS, ἐξελκυσμὸς, from ἑλκύω, to draw, in the *Definitiones Medicæ*, is the Depression of a Bone or Bones from the Superficies inwards; but the Author here says, that the true Reading is εἰσελκυσμός.

EXENTHROPISMENOS, ἐξανθρωπισμένος, from ἐξανθρωπίζομαι, (of ἄνθρωπος, a Man) to be accommodated to the Nature and Use of Mankind. The Word is applied to Food, and occurs *Lib. de Octimest. Partu.*

EXERAMA, ἐξέραμα· from ἐξεράω, to eject by Vomit; is the Matter discharg'd by Vomiting. The Verb is us'd by *Hippocrates*, *Lib.* 4. *de Morbis.* It signifies, also, to exhaust, *Lib.* 2. *de Morbis.*

EXERCITATIO, ἄσκησις, Exercise, is either of the Body or Mind; both are necessary to be known in Medicine, and of Service, tho' sometimes, by Abuse, injurious. Exercise of the Body consists in an uncommon Exertion of the natural Forces in the local Motion of the Body and its Members. The several Kinds of it with respect to Medicine are called Gymnastics, and may be found under their proper Articles. Acute Exercise, γυμνάσιον ὀξύ, whose Motions are swift, extenuates the Body; the contrary increases its Bulk; much Exercise dries the Body, moderate induces an Obesity. *Galen. de Sanit. tuend. Lib.* 5. *Cap.* 3. The Exercise of the Mind consists in Cares, and the diligent Study of some Art or Science.

EXERRHOSIS, ἐξέῤῥωσις· EXERRHYESIS, ἐξερρύησις· EXERRHEUSIS, ἐξέῤῥευσις· from ἐξ, out, and ῥέω, to flow; is an Efflux, Effluvium, or Evaporation by insensible Perspiration; and is much the same as ECRHOE, which see. The Word ἐξερρώσιες occurs in 6 *Epid. Sect.* 6. *Aph.* 27.

EXFOLIATIVUM. A Rugine, or Raspatory.

EXHALATIO. Exhalation. It either imports the Action of exhaling, or the Matter exhal'd.

EXINANITIO. See CENOSIS.

EXIPOTICOS, ἐξιπωτικὸς, from ἐξιπόομαι, to press out, or filtre. An Epithet for digesting or deterging Medicines. *Galen, de Comp. Medic. P. G. L.* 7. *C.* 9. calls them the same as Drawers, or Epispastics.

EXISCHIOS, ἐξίσχιος, from ἐξέχω, or ἐξίσχω, to stand out, or be prominent; signifies jutting out, or prominent; and in that Sense *in Mochlico*, is apply'd to Joints; for there are some Persons who have their Joints naturally protuberant or prominent, as if out of their Place, whom *Hippocrates* calls ἐξαρθρους, and charges the Surgeon to be very careful in his Observations on this Head, when he is concern'd in reducing a Fracture or Luxation. Ἐξίσχιος, *in Mochl.* is also the same as ἐξεχέγλυτος. See EXECHEGLUTOS.

EXITELOS, ἐξίτηλος, slight, weak, slender, soon vanishing: Apply'd by *Hippocrates*, *Lib.* περὶ τροφῆς, to slender and weak Aliments, which afford little or no Nourishment, or such as is soon dissipated.

EXITURA. By some of the barbarous Writers this Word is us'd to express a suppurated Abscess. But *Paracelsus* applies it to all Sorts of putrid Excrements.

EXMIRALDUS. The Name of a precious Stone, the Composition of which is obscurely describ'd by *Raymond Lully*.

EXOCHE, or EXOCHAS, ἔξοχὴ, or ἔξοχὰς· from ἐξέχω, to protuberate. A Tubercle or Condyloma of the *Anus*.

EXOMPHALOS, ἐξόμφαλος· from ἐξ, out, and ὀμφαλὸς, the Navel. It signifies any Protuberance of the Navel; as an *Omphalocele*, or a Person labouring under such a Disorder. See HERNIA.

EXONCOMA, ἐξόγκωμα· from ἐξ, out, and ὄγκος, a Tumor. A very large Swelling or Protuberance.

EXONEIROSIS, ἐξονείρωσις, from ἐξ, out, and ὄνειρος, Sleep. A nocturnal Pollution. This, if rare, may be a Sign of redundant Vigour; if frequent, it proceeds from Weakness of the seminal Vessels, which is most frequently the Case.

EXOPHTHALMIA, ἐξοφθαλμία, from ἐξ, out, and ὀφθαλμὸς, the Eye. A Protuberance of the whole Eye, out of the Orbit.

EXORESCENTIA. Exacerbation.

EXOS. A Leech; and the Name of a Fish. See EXOSSIS.

EXOSIS, ἔξωσις, from ἐξ, out, or from, and ὦθω, to remove by Force. Expulsion.

EXOSSIS. A Name for the Isinglass-fish. See ICHTHYOCOLLA.

EXOSTOSIS, ἐξόστωσις· from ἐξ, off, or out; and ὀστέον, a Bone. A preternatural Excrescence of a Bone. See Os.

EXOTICOMANIA.
A mad Fondness for exotic Medicines.

EXPECTORANTIA. Medicines which promote Expectoration, or a Discharge of any thing which is offensive to the Lungs, and Aspera Arteria.

Among the several Species of Evacuants, none are, perhaps of more Importance than those which eliminate the viscid Lymph secreted from the arterial Blood, and remaining in the Glands, or rather the glandulous Coats and Emunctories. But in no Part of the Body is there a larger Secretion of mucous Lymph than in the internal Ducts of the Aspera Arteria, and the Bronchia of the Lungs, which are internally lin'd with a glandular Coat: Hence very often a serous, pituitous, viscid, and, sometimes, a purulent Matter, is, in Coughing, expectorated, and especially in Disorders immediately affecting the Lungs, whether of the acute or chronical Kind. The Medicines which promote this Evacuation from the Cavity of the Thorax are call'd *Expectorants*; of which the most considerable in the Vegetable Kingdom are, the Roots of Elecampane, Arum, Florentine Orris, and Liquorice; the Herbs Paul's-betony, Chervil, Scabious, Mouse-ear, Germander, Hyssop, and the Tarragon; the Flowers of Violets, Mallows, red Poppies, and Saffron; the Seeds of Anise, and Fennel; the Bark of Sassafras; and, among resinous Gums, Benjamin, and Gum Ammoniac; among Fruits, Raisins, Figs, Jujubes, and Pine-kernels; Honey, Liquorice-juice, and Oil of sweet Almonds; among animal Substances, Sperma Ceti, and Fats; among mineral Substances, Sulphur, together with its Flowers and Milk; among compound Substances, the anisated Balsam of Sulphur, the anisated Spirit of Sal Ammoniac, the *Lohoch Sanum*, the Syrup prepar'd of the Lungs of a Fox, the pectoral Elixir, the pectoral Balsam of *Meibomius*, and the asthmatic Spirit of *Michaeli*.

As all Substances which promote Excretion do not operate in the same manner, since some render the Matter moveable, and dispose it for Evacuation; others open the Emunctories, that it may be separated from the Juices, and others stimulate the Vessels and Ducts to an excretory Motion; so Expectorants operate pretty much in the same manner; for if the Humour secreted is thin and acrid, and the Ducts and Pores of the Glands from which it is to be thrown, too much constricted, those Substances are most properly exhibited, which soften the Passages, obtund the Acrimony, and coagulate the too thin and fluid Parts of the Humours. These Intentions are best answer'd by the Juice of Liquorice-root, Saffron, Sperma Ceti, the Flowers of Violets, Mallows, and red Poppies, Cream, Oil of sweet Almonds, Fats of Animals, the Syrup prepar'd from the Lungs of a Fox, the Syrup of Violets, the Syrup of white Poppies, and the *Pilulæ de Styrace*, especially exhibited with some diluting Liquor, such as a Decoction of Oats, or of the Shavings of Hartshorn in the Form of a Jelly. But when a large Quantity of thick and viscid Matter is lodg'd in the Bronchia of the Lungs, it proves prejudicial to Respiration; and when, for this Reason, some Stimulus to Expectoration becomes necessary, the tough and viscid Matter is excellently resolv'd by Infusions of Paul's-betony, Hyssop, Scabious, and Germander; as, also, by the *Terra foliata Tartari*, a Solution of Crabs-eyes, and antimoniated Nitre. The nervous Coats of the Bronchia are stimulated to an excretory Motion by a certain acrid, subtile, and oleous Principle, found in Gum

Ammo-

Ammoniac, and its Eſſence, the aniſated Spirit of Sal Ammoniac, Myrrh, Benjamin, Powder of the Roots of Elecampane, and Florentine Orris, Flowers, Milk, and Balſam of Sulphur. When a ſtronger Stimulus is requir'd, as in a pituitous Aſthma, and a ſuffocative Catarrh, Oxymel of Squills, or the *Spiritus Aſthmaticus* of *Michaeli*, which is prepar'd of Gum Ammoniac, and the green Cryſtals of Copper, may be exhibited.

In the Exhibition of Expectorants, great Caution is to be us'd on account of their different Methods of Operation; and the Phyſician who preſcribes them promiſcuouſly, without any Regard to Time, or the State and Condition of the peccant Matter, certainly does more Harm than Good: Hence, when in epidemical Coughs, raging in the Spring and Autumn, highly ſtimulating Expectorants are exhibited, before the thin acrid Matter is corrected; or, on the contrary, when after the Matter is concocted and prepar'd, emollient and relaxing Medicines are exhibited; more Harm than Good is produc'd by ſuch Pieces of Practice.

In Coughs of the moiſt and chronical Kind, as alſo in a pituitous Aſthma, in which large Quantities of Phlegm fall into the Bronchia of the Lungs, ſweet Subſtances, Linctuſes, Syrups, and oleous Medicines, weaken the Stomach, whoſe Strength and Tone are already too much impair'd, diminiſh the Appetite, Digeſtion, and Chylification, and not only promote the Generation of more recrementitious Matter, and the Increaſe of the Diſeaſe, but alſo diſpoſe the Patient to a Cachexy, œdematous Tumors, or even a Dropſy. In theſe Caſes 'tis therefore more expedient to uſe balſamic Pectorals, which are grateful to the Stomach, ſuch as the pectoral Elixir, the Eſſences of Myrrh, Gum Ammoniac, and the Tincture of Tartar.

Expectorants ought alſo to be cautiouſly us'd in a Phthiſis, and Spitting of Blood; as alſo in dry Coughs, Difficulties of Breathing, and oppreſſive Pains of the Breaſt, which rather ariſe from a Congeſtion of Blood, than Matter to be expectorated; ſince, in theſe Caſes, Expectorants, either by ſoftening or ſtimulating, augment the Congeſtion of Blood and Humours, inſtead of removing it.

In acute Diſorders of the Breaſt, ſuch as a legitimate Pleuriſy, and a Peripneumony, Expectorants are alſo to be cautiouſly us'd, eſpecially in the Beginning, leſt by their means the inflammatory Stagnation of the Blood ſhould be increas'd. But when theſe Diſorders are on the Decline, and when the greater Part of the Inflammation is diſcuſs'd, they are very properly and commodiouſly us'd, in order to draw the concocted and viſcid Matter out of the pulmonary Canals. *Frederic. Hoffman. Medicina Rationalis Syſtematica.*

EXPIRATIO. Expiration. That Part of Reſpiration, in which the Air is forc'd out of the Lungs.

EXPLORATIO. Exploration, in Surgery, is the probing a Wound, or Ulcer.

EXPLOSIO. Exploſion. In Chymiſtry it is call'd Detonation, or Fulmination.

EXPRESSIO. Expreſſion. In Pharmacy, is the Squeezing, or Preſſing out the Juice from moiſt Subſtances, either by the Hands, or Inſtruments.

EXSUCCATIO. An Ecchymoſis, or Sugillation. See Ecchymosis.

EXTASIS. A Species of Catalepsis (which ſee); when a Perſon remembers perfectly, after the Paroxyſm is over, the Ideas he conceiv'd during the Time it laſted.

EXTENSOR. A Name given to ſeveral Muſcles, by Anatomiſts. Thus there is the

Extensor Carpi Radialis;

By ſome called *Bicornis*, and *Radiæus Externus*. It hath two Beginnings, and, indeed, ſeems to be two diſtinct Muſcles; the outermoſt ariſing fleſhy above the external Protuberance of the Os Humeri, immediately below the *Supinator Radii longus*, in its Deſcent becoming a fleſhy Belly, and growing tendinous above the Middle of the *Radius*: The other Beginning of this Muſcle is partly fleſhy, and partly tendinous below the former, either from the Apex of the outward Extuberance of the Os Humeri, or the ſuperior Part of the *Radius*; and continues fleſhy ſomewhat lower than the other, both Tendons marching under the *Extenſores Pollicis*, run under the *Ligamentum Annulare*, and are inſerted into the ſuperior Parts of the Oſſa Metacarpi of the fore and middle Fingers.

Extensor Carpi Ulnaris.

This hath an acute tendinous Beginning from the outward Extuberance of the Os Humeri, and becomes fleſhy, as it deſcends according to the Length of the Cubit, growing tendinous again as it marches over the inferior Part of the Ulna; and, paſſing under the annular Ligament, it is inſerted into the ſuperior Part of the metacarpal Bone of the little Finger.

If this Muſcle and the *Ulnaris Flexor* act, they move the Hand ſideways towards the Ulna; and, in like manner, if the *Radialis Flexor* and *Extenſor* act, they move it towards the *Radius*. It is well obſerved by moſt Authors, that the Extenders, whether belonging to the Fingers or Carpus, ariſe from the outward Extuberance of the Os Humeri, and their Antagoniſts the Flexors from the internal Protuberance of the ſame Bone, as alſo from the ſuperior and external Part of the Ulna, next the *Anconæus*.

Extensor Digitorum Communis, seu Digitorum Tensor.

This has an acute tendinous Origination from the outward Extuberance of the Os Humeri, between the *Extenſores Carpi*; and becoming fleſhy, in leſs than half its Progreſs is divided into three Portions, which become ſo many Tendons, (of which the middlemoſt is the longeſt) paſſing under their annular Ligaments between the lower Parts of the Ulna and Radius; then marching ſeparately over the Back of the Hand, and remitting tendinous Filaments to each other, before they paſs the firſt Internodes of each Finger, they are afterwards inſerted into the ſuperior Parts of the firſt, ſecond, and third Bones of the fore, middle, and third Fingers.

There being little Force required in the Extenſion of the Fingers, we need not wonder that the Muſcles, employed in that Office, are no longer, in proportion to their Antagoniſts.

Extensor Digitorum longus.

This is a long Muſcle, fleſhy in the upper Part, and tendinous in the lower, lying between the *Tibialis Anticus* and *Peronæus Maximus*.

It is fixed above by fleſhy Fibres, in the Outſide of the Head of the Tibia, and Inſide of the Head of the Fibula, in the upper Part of the interoſſeous Ligament, thro' three-fourths of the Length of the Fibula, and through the ſame Space, in the tendinous Septum belonging to the anterior Angle of that Bone.

It ſeems to mix ſome Fibres on each Side, with the two firſt *Peronæi* and *Tibialis Anticus*; and it is very cloſely united with the Peronæus Minimus, which has for that Reaſon been looked upon as a Portion of this Extenſor.

It contracts in Breadth a little above the annular Ligament, and, in paſſing through it, is divided into three Tendons, the firſt of which is afterwards divided into two. Theſe four Tendons are inſerted along the upper or convex Side of the four ſmall Toes.

Extensor Digitorum brevis.

This is a ſmall complex Muſcle, lying obliquely on the convex Side of the Foot, being alſo termed *Pedicus*.

It is fixed in the upper and outer Side of the anterior Apophyſis of the Aſtragalus, and in the neighbouring Part of the upper Side of that Bone. From thence it runs obliquely from without inwards, under the Tendons of the Peronæus minimus, and Extenſor Digitorum longus, being divided into four fleſhy Portions, which terminate in the ſame Number of Tendons.

The firſt Tendon is inſerted in the upper or convex Part of the firſt Phalanx of the great Toe: The other three, joining with thoſe of the *Extenſor longus*, are inſerted along the convex Sides of all the Phalanges of the three following Toes; and when there is a fifth Tendon, which happens very ſeldom, it goes in the ſame manner to the little Toe.

As this Muſcle is ſituated obliquely, its Tendons, and thoſe of the Extenſor longus, croſs each other a little; and, after their common Inſertion in the firſt Phalanges of the Toes, thoſe of the ſhort Extenſor run along the two other Phalanges, almoſt on the Outſide of the others. All theſe Tendons communicate by Aponeuroſes, in the ſame manner as thoſe of the Hand.

Extensor Indicis, seu Indicator,

Ariſes fleſhy from the Middle of the external Part of the Ulna next the Radius, immediately below the *Extenſores Pollicis*; and, deſcending obliquely, becomes tendinous, as it paſſes under its annular Ligament, at the lower Part of the Radius and Carpus; then, paſſing over the Os Metacarpi Indicis, and joining with the Tendon of the *Extenſor Communis*, it is inſerted with it into the ſuperior Part of the third Bone of the fore Finger. The Tendon of it is ſometimes divided. Its Name declares its Uſe.

Extensor minimi Digiti.

This ariſes partly tendinous at the Extremity of the external Apophyſis of the Os Humeri, and partly fleſhy from the ſuperior Part of the Ulna, between the *Extenſor Communis Digitorum*, and *Muſculus Ulnaris Extenſor*; and, becoming tendinous as it paſſes under the *Ligamentum Annulare* at the *Carpus*, it is there divided into two, ſometimes three Tendons, which are united into one at its Inſertion into the ſuperior Part of the third Bone of the little Finger. Its Name declares its Action.

Extensor primi Internodii Pollicis.

This ariſes partly tendinous, but chiefly fleſhy, from the upper Part of the Ulna, immediately below the *Supinator Radii brevis*, ſoon growing fleſhy, and becoming tendinous again, as it deſcends obliquely over the Tendons of the *Radialis Extenſor*, and is inſerted into the lower Part of the firſt Bone of the Thumb. This we have ſometimes found divided into two, and ſometimes three diſtinct Muſcles.

Extensor secundi Internodii Pollicis.

This ariſes broad and fleſhy, from that Part of the Radius next the Ulna; and becoming tendinous, paſſes under the ſame Involucrum with the Tendons of the preceding, to its Implantation at the lower Part of the ſecond Bone of the Thumb.

Extensor tertii Internodii Pollicis.

This has a broad, partly tendinous, but principally fleſhy Origination from the Ulna, immediately below the Beginning of the *Extenſor primi Internodii*, or between it and the *Indicator*, as alſo from the Ligament between the laſt-named Bone and the Radius; whence deſcending obliquely, it becomes tendinous, as it marches in a proper Sinus on the inferior Appendix of the Radius, wherein it is incloſed by its annular Ligament, and paſſes over the two Tendons of the *Radialis Extenſor*, to its Inſertion at the lower Part of the third Bone of the Thumb.

When this acts, it does not only extend the Thumb, but brings it ſomewhat backwards, inſomuch that ſome Perſons can bring it over the ſuperior and back Part of the Oſſa Metacarpi.

Extensor Pollicis longus.

This Muſcle doth not ariſe, as moſt deſcribe it, from the Tibia, or from the Ligament between it and the Fibula. Its Beginning is large and fleſhy from the fore Part of the Fibula, from immediately below its ſuperior Appendix, to four Fingers-breadth above the inferior one; and, deſcending under the annular Ligament of the Tarſus, between the Tendon of the *Tibialis Anticus*, and thoſe of the *Extenſor Digitorum Pedis longus*, and marching along the ſuperior Part of the Foot, it is inſerted into the upper Part of the ſecond Bone of the great Toe.

Its Name intimates its Uſe.

This Muſcle, juſt where it paſſes under the annular Ligament, ſends off a ſmall Tendon, which is inſerted into the upper Part of the firſt Bone of the great Toe externally and laterally, as has been frequently obſerv'd and demonſtrated by that inquiſitive and accurate Anatomiſt, Mr. *Joſeph Tanner*.

Extensor Pollicis brevis.

Though this Muſcle is not mentioned by Anatomiſts, yet we conſtantly obſerve it in Diſſection. It hath been commonly taken for Part of the *Extenſor Digitorum brevis*, but we frequently find it diſtinct.

It ariſeth fleſhy from the fore Part of the *Os Calcis*, and, being dilated into a fleſhy Belly, ſoon becomes a long ſlender Tendon, paſſing obliquely over the upper Part of the Foot; and is inſerted into the ſuperior Part of the firſt Bone of the great Toe, which it extends, or pulls upwards.

EXTENUATIO. Extenuation.

Diſeaſes are ſometimes obſerved to cauſe a remarkable Leanneſs, or Extenuation, and ſometimes a Tumefaction of the Body, the Knowledge of which Habits is of great Importance towards predicting the Fate of the Patient. We ſhall therefore firſt ſhew what a lean, ſqualid, and waſting Habit of Body ſignifies in Diſeaſes: Now it is certain, that Bodies become lean or extenuated for want of Nutrition: This the *Greeks* call ἀτροφία, "an Atrophy;" and we in *Latin*, *Innutritio*, "Innutrition," or Want of Nutrition; in which, as *Galen* ſays, *de Sanit. tuend. Lib.* 3. *Cap.* 13. Bodies receive no Benefit from Aliments. This is what is meant by *Hippocrates*, 2 *Aph.* 8. where he ſays, "That if a Perſon juſt out of a Diſeaſe receives no Strength from the Aliments he takes, it indicates that he uſes too much Aliment; but if the Caſe be the ſame, when the Party takes no Food, Evacuation is indicated." And to the ſame Purpoſe he ſpeaks afterwards, 2 *Aph.* 31. "If, after a Sickneſs, the Body receives no Benefit from Food taken with a good Appetite, it is a bad Sign." And this is the Atrophy, or Innutrition, which is obſerv'd in Bodies free from febrile Heats, or labouring under a long, but ſlow Fever: Wherefore in long and tedious Diſtempers, tho' it be natural for the Body to be emaciated, and the Fleſh to be very much waſted; yet if, in the Decline of the Diſeaſe, the Strength and bodily Habit of the Patient receives no Improvement, tho' he eats with an Appetite, it predicts a Relapſe. In an hectic Fever, Phthiſis, or Peripneumony, an incurable Leanneſs and Emaciation is a very bad Prognoſtic; but, when it proceeds from a Spitting of Blood, attended with a ſlow, but continual Fever, it portends nothing but Death: And where a Phthiſis is ſuſpected, what principally abates the Hopes of the Phyſician, is the obſtinate Leanneſs and Extenuation of the Patient, and his labouring continually under a Fever. They, alſo, who have long labour'd under burning Fevers, and are very much emaciated, and falling into a Maraſmus, are incureable. We may conclude, therefore, that an inveterate Leanneſs, Thinneſs, or Extenuation of Body under a Pleuriſy or Peripneumony, where the peccant Matter is not duly diſcharged by Expectoration, is a mortal Sign, as indicating a Phthiſis.

But we ſhall proceed to treat of *Extenuation* in acute Diſeaſes, and particularly at their Commencement, which is of great Moment in Prognoſtics, according to the Judgment of *Hippocrates*, 2 *Aph.* 28. where he pronounces it "a bad Sign "for the Body, under a conſiderable Fever, not to be waſted "at all, or to an immoderate Degree, that is, beyond what "Reaſon requires; for the latter indicates a great Decay of "Strength, and the other prognoſticates the long Duration of "the Diſeaſe." Now it is no more than what Reaſon requires, that a violent Fever ſhould cauſe a ſpeedy Extenuation, like that from long Diſeaſes, and moſt eaſily in Children and old Perſons; in theſe, becauſe of the Weakneſs of the Faculty; and in the others, from their hot and moiſt Temperament; whence they ſuffer under a profuſe Colliquation, and are ſoon extenuated. We may add, as Cauſes, the Climate, with an hot and dry Seaſon of the Year. In theſe Circumſtances there is Reaſon for the Patient's Extenuation, as well as from a copious preceding Hæmorrhage, much Sweating, Plenty of Urine, Vomiting, or Looſeneſs, long Faſting, Want of Sleep, and Solicitude of Mind: *Galen* adds to theſe Cauſes the Laxneſs of the Body, and the Thinneſs of the Humours, which occaſion an extraordinary Diaphoreſis and Extenuation: All theſe Things waſte and extenuate the Body, without enabling us to pronounce any thing with Certainty, on the Event of the Diſeaſe. But for the Patient, in the Beginning of the Diſtemper, on account of none of theſe external Cauſes before-mentioned, but with a cold and dry Body, in the Winter Seaſon, and a cold Conſtitution of the Air, in the Vigour of his Age, with groſs Humours, and a denſe Skin, ſpeedily to fall away, and be emaciated, muſt be a very bad Sign. *Galen*, commenting on this Aphoriſm, gives a Reaſon why the Continuance of the Body in the ſame State, without Exhauſtion or Diminution, ſhould be reckon'd a bad Prognoſtic; which is, he ſays, becauſe ſuch a Diſpoſition indicates a Groſſneſs of the Humours, and a Denſeneſs of the Skin.

Of all the Parts of the Body, the Face is the firſt extenuated in acute Diſeaſes, becauſe the acrimonious Heat, aſcending like a Flame, conſumes the ſmall Parcels of Fleſh which are incumbent on the Bones and Cartilages; and the Leanneſs appears more conſpicuous in the Face, becauſe that Part is leſs furniſh'd with Fleſh. A Face which threatens the greateſt Danger is deſcribed by *Hippocrates Prognoſt.* in the following Manner: "The Noſe is ſharp, the Eyes hollow, the Tem"ples depreſs'd, the Ears cold and contracted, and their Lobes "inverted; the Skin about the Forehead hard, tenſe, and "dry, and the whole Face of a pale-green, black, livid, or "leaden Colour." This Sort of Face, which commonly goes, among Phyſicians, by the Name of *Facies Hippocratica*, is uſually ſeen in hectical and phthiſical Patients, who are very much extenuated; and if it appears in two or three Days from the Commencement of the Diſtemper, without any preceding extrinſic Cauſe, as from ſome remarkable Evacuation by an Hæmorrhage, Sweats, Stool, or Urine, or from Want of Sleep, Faſting, or Trouble of Mind, nor has for its Subject a Child, or decrepit Perſon, whoſe Habit of Body is eaſily diſſoluble by a ſlight Cauſe, but happens to one of adult Age, of a denſe Habit, and, what is principally to be regarded, in a frigid and dry Temperament, in the cold and moiſt Seaſon of the Winter, and a ſuitable Conſtitution of the Air, prognoſticates the worſt of Events: For, as *Galen* ſays, in his Comment on the Place, ſuch Symptoms proceed either from ſome Cauſe which corrupts and conſumes the fleſhy Parts, or from the Defect of the natural Heat, which is too weak to extend itſelf to the extreme Parts of the Body, but keeps its Reſidence in a feeble State in the Viſcera; whence thoſe Parts are deprived of their uſual Supplies of Blood and Spirits. This Extenuation of the Face then proceeds from an intenſe Heat, which ſpeedily conſumes the natural Moiſture, or corrupts the ſame by its Malignity, and from a Decay and Languiſhment of the natural Heat, thro' the Force of the Diſeaſe: And if there be no Reaſon to be given for this Symptom, ſuch as a preceding Abſtinence, Want of Sleep, or Solicitude of Mind, this Habit of Face is a mortal Indication. *Hippocrates* has expreſs'd himſelf to this Purpoſe, in the following Manner, *Prognoſt.* "If ſuch be the Countenance of the Patient," [as before deſcrib'd] "and we have no other Signs by which to "form a Judgment, it will be proper to inquire of the ſick "Perſon,

" Perſon, whether he has been affected with Want of Sleep, " or a violent Flux of the Belly, or has faſted a conſiderable " time; and, if he confeſſes any of theſe Circumſtances to " have preceded, his Caſe is leſs dangerous; and, if ſuch a " Viſage be owing to any of the forementioned Cauſes, we " may paſs a Judgment on them in a Day and a Night; but " if none of theſe appears to be in the Fault, and the Face " continues under the ſame Aſpect, during the time juſt men- " tion'd, it is a mortal Prognoſtic." But how we may know, without interrogating the ſick Perſon, whether there has been any preceding Watching, Faſting, or immoderate Evacuation, we are taught by *Galen*, in his Comment on the Place, as follows: " You may know at firſt Sight of the Patient, whe- " ther he has been long without Sleep; for you may obſerve " his Eyes to be very ſqualid, and to a greater Degree than " they are from an evident and immoderate Evacuation: Be- " ſides, he will hardly be able to lift up his Eyelids, but will " wink, and move his Eyes in the ſame unſteady and irregular " Manner, as in a Coma: And tho' you have never ſeen the " Patient before, you will be enabled to form ſome Judg- " ment of him from the Pulſe, which will always preſerve " ſome Indication, however ſmall it be, of an immoderate " Evacuation, if that be the Caſe; but, if Want of Sleep " be the Cauſe of ſuch an Aſpect, the Pulſe will reſemble " the Vibrations of an extended Cord. But if ſuch a " Countenance proceed only from Abſtinence, or Want of " Food, none of the Signs which indicate an immoderate " Evacuation, or Want of Sleep, will appear; for which Rea- " ſon there will be more Grounds to judge from accidental " than proper Signs, that the Patient is affected in this man- " ner for Want of Food, eſpecially when the Fever, upon " due Conſideration, does not appear, in the leaſt, to have the " Property of a colliquative Heat; for, if that were the Caſe, " this Extenuation of the Countenance might be owing to the " Fever, rather than any extrinſic Cauſe. You ought, there- " fore, to be the longer in feeling the whole Hand of the " Patient, and not only the Wriſt, but the Parts above it; " and carefully obſerve, whether the Parts you touch, emit " not only an acrimonious, but a ſubſtantial Plenty of Effu- " via, which like a Flame pervade the Skin of your Hand, " with which you touch the Skin of the Patient, and inſinuate " themſelves deeply therein; for ſuch are the Fevers, which " render the Face of ſuch an Aſpect."

From a due Conſideration of the Premiſſes you will be en- abled to pronounce, whether the *Facies Hippocratica* proceeds from Watching, Faſting, or evident and immoderate Evacua- tion; and if, in the Beginning of acute Fevers, the Face ap- pears extenuated, in the manner deſcribed, it predicts nothing but Death: But in ſome chronical Diſeaſes, as in hectic Fe- vers, and a Phthiſis, not only the Face, but the whole Body, is render'd ſqualid and dry, and reduced to Skin and Bone.

But we ſhall now briefly conſider, what may be infer'd, or prognoſticated, from a Tumidneſs of the Body: For the Body to be inflated and tumefy'd, is never a good Sign, ſince in acute Diſeaſes the Face is ſwelled, either by the Redundance of the Blood in the Veſſels diſtending the Veins, and by the Vapours, whence proceeds an Heavineſs of the whole Body, as in continual Fevers; or from an Inflammation with an Afflux of Humours, as in the Parotides; or, laſtly, on ac- count of a windy and vaporous Crudity, from a vitiated San- guification, as in pituitous Fevers, and the Leucophlegmatia, or Anaſarca: A Tumefaction from the two firſt Cauſes is not ſo very bad, nor can any thing, with Certainty, be prognoſti- cated from it; but in the laſt Caſe, where there is a Tumid- neſs or Bloatedneſs from a groſs Vapour diſtending the Skin, and occaſion'd by a refrigerated Liver, and a vitiated Sanguifica- tion, the Deſtruction of the Patient may be often prognoſticated. To this Purpoſe, the Author of the *Coac. Præſag. T.* 139. ſays, that thoſe who labour under a Lethargy, are ſwelled, or bloated, and have their Cheeks inflated. From the ſame Cauſe, that is, a Refrigeration of the Liver, under a very hot and acute Diſtemper diſſolving the natural Heat of that Part, the Hypochondria, Belly, Feet, Hips, and Face, are oedema- touſly affected, not without great Danger of Life: This is the Caſe of thoſe who fall into a Dropſy, and what is meant by *Hippocrates*, *Prognoſt.* when he ſays, " that all Dropſies pro- " ceeding from acute Diſeaſes are bad; for they allay not the " Fever, and are, beſides, very painful and mortal, and gene- " rally commence at the Ilia and Loins, and ſometimes at the " Liver." In many Perſons affected with an *Empyema*, or *Phthiſis*, at the Approach of Death, the Feet, Legs, and Face appear ſwell'd and cadaverous, from no other Cauſe than the extreme Decay of Heat in the Liver; and I have known ſeveral Inſtances of Perſons, who, at the Approach of Death have had the whole Bulk of their Bodies tumefy'd and inflated.

Hence we conclude, that an Inflation of the Body under acute Diſeaſes is never good; but in an *Empyema*, or *Phthi- ſis*, mortal to the laſt Degree. However, for the Parts to appear tumid, is not always a bad Sign in acute, and much leſs in chronical Diſtempers; for in many of theſe latter, the natural Heat being debilitated by the long Courſe of the Diſeaſe, the Feet are tumefy'd; which afterwards, as the Heat recovers Strength, from a Diſcuſſion of the Vapours, and a Deſiccation of the Humours, are reſtored to their former Habit; and in acute Diſeaſes Nature often, by way of Criſis, throws off the Humours on the Legs and Feet: Sometimes it happens, that, in acute Diſorders, the Face, as we ſaid, ſwells, from Va- pours excited by the febrile Heat, and not diſcuſſed; but, on their Diſcuſſion, is ſoon afterwards freed from the Inflation. We muſt be cautious therefore in our Predictions from Tume- faction of the Face in Diſeaſes, and not preſume to progno- ſticate from it, without a thorough Inſpection and Conſidera- tion of the other Signs which appear in the Countenance. *Proſper Alpinus de Præſag. Vit. & Mort.*

EXTIRPATIO. Amputation.

EXTRACTIO, Extraction, in Surgery, is the drawing from, or out of the Body, any thing which is offenſive. In Pharmacy, Extraction is the Separation of the pure from the impure Part of a Body, by means of a proper Menſtruum. See DECOCTIO.

EXTRACTUM, an Extract, in Pharmacy, is uſually underſtood to mean a Solution of the purer Parts of a mix'd Body, inſpiſſated by Diſtillation, or Evaporation, nearly to the Conſiſtence of Honey.

The Directions given by the College for preparing Extracts, are thus:

Extracts may be made almoſt of any Part of the *Materia Medica*, or from any Medicine, (whether ſimple, as Herbs, Flowers, Seeds, and the like; or compounded, as Species, Pills, and the like) that is ſuited to give Tincture to any Menſtruum, in which it is cuſtomarily infuſed: And therefore take any thing within this Compaſs, which cut, bruiſe, or any other way manage, as the Nature of it requires for Infuſion: Pour upon it Spirit of Wine, or any diſtilled Waters, moſt accommodated to the Preſcriber's Intention, a ſufficient Quan- tity: Let it continue in Infuſion in a Bath, or any other ſlow Heat, for two Days or more, according as the Hardneſs or Softneſs of the Matter requires, until the Liquor is impreg- nated with the Tincture of the Thing infuſed. Then let the tinged Liquor be ſeparated by Inclination, pouring on freſh Menſtruum, infuſing and ſeparating as before, as long as any Tincture can be obtained. Let all the Tinctures be put toge- ther, and filtred through Cap-paper; and then in a Bath Heat evaporate the Humidity, until the Matter left is of the Con- ſiſtence of Honey; which muſt be kept for Uſe: And to this Extract, for the ſake of preſerving it moiſt, may be added ſome Portion of Salt, or ſome other thing ſuitable alſo to the main Intention; as two Scruples, for Inſtance, or half a Dram, to every Ounce of Extract.

The *Extractum Thebaicum* conſiſts only of Opium, diſſolv'd in Water, ſtrain'd and evaporated to a Conſiſtence.

The *Extractum Rudii* is the ſame as the *Pilulæ Rudii*.

EXTRAVASATUS. Extravaſated. This is apply'd to any Sort of Fluid, which is got out of the Veſſels, in which it ought to be contain'd. Thus, in an Ecchymoſis, Sugilla- tion, or Aneuryſm, the Blood is ſaid to be extravaſated.

EXTRAVERSIO, Extraverſion, in Chymiſtry, is the rendering manifeſt any thing ſaline, alcaline, or acid, conceal'd in mix'd Bodies; and is juſt the Reverſe to one Species of Concentration.

EXTREMITATES. The Extremities, or extreme Parts.

The extreme Parts, according to *Galen*, in his Comment on the *Prognoſtics*, are the Ears, Noſe, Hands, and Feet; and theſe Parts, in acute Diſeaſes, often afford great Matter for Prognoſtication, ſince Death never happens without ſome Alteration in thoſe Parts from their natural State: For, in dy- ing Perſons, the extreme Parts are neceſſarily refrigerated, and turn livid and black; and oftentimes the Hands and Feet are ſubject to odd and irregular Motions. An Heat of the Extremities, therefore, is never a bad Sign; but their Cold- neſs is always bad, and worſt of all when the inward Parts are hot, and parch'd with Drought. This is well expreſs'd by *Cel- ſus* from *Hippocrates*: " When the outward Parts, he ſays, " are cold, and the inward Parts ſo hot, as to cauſe a Thirſt, " the Fever not at all remitting, it is a mortal Prognoſtic." And, tho' a Coldneſs of the extreme Parts in continual Fevers be always a formidable Symptom, it is moſt pernicious when it continues with little or no Abatement; and, if theſe Parts at the ſame time appear livid or black, mortal in a very high Degree.

Hippocrates, ſpeaking of Patients under acute Fevers, from a predominant Conſtitution of the Air, 1 *Epid. Sect.* 1. tells us, " that their extreme Parts were very much refrigerated, " ſo that it was ſcarce poſſible to provoke any Heat in them." And, a little after, *Sect.* 2. deſcribing the Symptoms of a con- tinual Fever, from a particular Conſtitution of the Seaſon, he ſays, among the reſt, " that the Extremities were remarkably " cold, and it was very difficult to recal the Heat into them." The ſame was obſerv'd of *Philiſcus*, when given over, 1 *Epid.*

Sect. 1. *Ægr.* 1. "His extreme Parts were every-where refri-
"gerated, and the Heat never returned into them."

The same Prognostics are to be drawn from the Colour of the Extremities; for their best Colour is the same as when the Patients were found in Health; tho' it may perhaps, under a Crisis, be sometimes red and inflamed, from the Blood then settling in those Parts; but the worst and most fatal Colour is the livid and black.

In acute Diseases, then, for the extreme Parts to appear black or livid, is a mortal Prognostic, as indicating either an Extinction of the Heat, or the Height of Putrefaction in the Humours. These Colours of the Extremities were observ'd by *Hippocrates* in *Philiscus* and *Silenus*, when dying; of the former of whom he says, 1 *Epid. Ægr.* 1. "that he was in "a cold Sweat, and his extreme Parts were livid;" and of *Silenus*, *ibid. Ægr.* 2. "that he sweated a little about his "Head; that his Extremities were cold and livid; and that he "was very restless."

For the Hands and Feet to be moved and agitated after an odd and disorderly Manner, is condemn'd by *Hippocrates*, *Lib. Prognost.* where he says, "that they who under an "acute Fever, Delirium, Peripneumony, or Cephalalgia, "wave their Hands at every turn before their Face, or pick "Motes, or pull Hairs out of the Clothes, or pick Straws "from the Wall, are all in a bad and very dangerous State." It is a Symptom no less to be dreaded, for the Patient to have his Feet uncover'd, and not warm; of which we read, *ibid.* "If the Sick have his Feet naked, without any considerable "Heat, and throws about his Hands, Neck, and Legs, in a "loose disorderly manner, it is a bad Sign, as indicating an "Anxiety." *Prosper Alpinus de Præsag. Vit. & Mort.*

EXUBERES. Children which are wean'd, are thus called.

EXULCERATIO. Exulceration.

EXUMBILICATIO. A Protuberance of the Navel.

EXUNGULATIO. Exungulation. Is cutting off the *Ungues*, or white Part, of the Petals of Roses.

EXUROS, ἐξυρὸς, from ἐυρὰ, a Tail. Taper, in the Form of a Tail; in which Shape *Hippocrates* directs Pessaries to be made, *de Morb. Mulier. L.* 2.

EXUVIÆ. The Sloughs of Serpents; that is, the Skins which they cast in the Spring. These, when tied to the Abdomen, or Loins, are thought to facilitate the Delivery of Women in Labour; and, when form'd into Gargarisms, to alleviate the Tooth-ach. They cure the Impetigo, when reduc'd to a Powder, or burnt to Ashes, and applied to the Part affected. If the Head is rub'd with them, they prevent a Falling off of the Hairs, and make them grow. *Schrod. Pharmacop. Med. Chym.*

EZEPH. The Sun, *Johnson.*

EZEZICH. Salt. *Rulandus.*

EZULA. The same as ESULA.

F.

F, In the chymical Alphabet, signifies, as it is explain'd *Luna clara*; probably relative to Silver.

FABA. The Bean.

Faba, was called by the *Greeks* κύαμος by the *Falisci*, a People of *Hetruria*, now *Tuscany*, *Haba*; whence the Name *Faba* seems to be taken. *Martinius* derives the Word from πάω [*pao*], to feed; as if it were *Paba*; *Isidorus*, from φάγω [*fago*], to eat. *Dodonæus* gives this Kind of Pulse, or leguminous Fruit, a Name with a *Latin* Termination, and calls it *Boona*, from the *High-Dutch Boon*, to shew his Learning, as *J. Bauhine* says; but this Name *Boon*, as well as *Bean*, seem both deriv'd from the *Italian* Word *Baiana*, by which Name young Beans are cry'd to be sold all over *Lombardy*, and the State of *Genoa*, as *Hermolaus* assures us. The *Greek* Name κύαμος is supposed to be given them, because they are εἰς τὸ κύειν δεινοί, καὶ ἄγειν τὰ κύεα, potent Stimulators to Venery.

The Characters of the Bean are;

It has a long unicapsular Pod, full of reniform Seeds: The Stalks are firm, and the Leaves grow in Pairs, and, as it were, conjugated to a Rib, which ends in a Point. *Boerhaave*, *Pars* 2. *p.* 45.

Boerhaave mentions six Species of this Plant; which are,

1. Faba, *Offic. C. B. Pin.* 338. *Raii Hist.* 1. 909. *Synop.* 3. 323. *Boerh. Ind. A.* 2. 45. *Faba hortensis major*, Ger. 1036. Emac. 1209. Mer. Pin. 38. Park. Theat. 1054. *Faba, Cyamus leguminosa*, J. B. 2. 278. *Faba, Bona major*, Hist. Oxon. 2. 83. *Faba, flore candido, lituris nigris conspicuo*, Tourn. Inst. 391. Rupp. Flor. Jen. 212. Buxb. 107. *Faba major recentiorum*, Elem. Bot. 312. *Faba major vulgaris, sive Phaseolus major*, Merc. Bot. 1. 35. Phyt. Brit. 40. GARDEN-BEANS.

Garden-beans are known to every body to have hollow, angular, pretty firm Stalks, growing to be two or three Foot high, set alternately with Leaves composed of several large oval Pinnæ, which usually, though not always, stand opposite; at the Foot of the Leaves grow the Flowers, several together, which are large and papilionaceous, or like a Pea's Blossom, white, with two large black Spots in the under Leaves: These are succeeded by large, erect, somewhat flat Pods, woolly within, in each of which lie two or three flatish Beans, mostly white, but sometimes red, having the Head a little compress'd, with a little Hilus, or Spot: They are sown in Gardens, flowering in *May*; and the Beans are ripe in *June* or *July*.

They are frequently eaten for Food, in the Summer-time, while they are young, being a pleasant, and to most People a grateful Dish; and, though somewhat windy, are not more so than most other Puls. The distil'd Water from the Flowers is used by many as a Cosmetic; and that from the Pods is accounted good for the Wind and Gripes in Children. The Bean-meal or Flour is rarely us'd inwardly, though commended by some for a Looseness and the Bloody-flux; but it is frequently made use of in outward Applications, in Cataplasms, against Inflammations, and to dissolve Swellings or Tumors.

Officinal Preparations are, *Aqua Florum, & Siliquarum Fabarum.* *Miller's Bot. Off.*

Beans, in many Countries, are a great Part of their Food, during Spring, and throughout the Summer. We are of Opinion, with *Tragus*, that the young Beans are wholsome Aliment, and generate good Juices. The Antients, with *Dodonæus*, *Casp. Hoffman*, and some others of the Moderns, tell us, that Beans are flatulent, and the greener they are, the more flatulent, and, consequently, the more difficult of Concoction: "However, we, says *Ray*, do not find this to be "true, tho' we frequently feed upon Beans in the Summer: "Nor do we approve of the Opinion of *Dodonæus*, who pre-"fers the old and dry Beans before the green ones, because "he thinks them less flatulent; but, with *Tragus*, leave them "to our Horses: Nor do I see why they should not fatten "Men, as well as a Swine, and other Animals."

Dr. *Mundy*, in his Treatise of Foods, says, that he knew a Peasant, who, in a great Dearth of Provisions, fed his Children with nothing but boil'd Beans; and yet you should hardly see Boys of a better Colour, or Habit of Body; which proves, that dry Beans afford a copious Nutriment, when the Stomach is once accustom'd to bear them.

As to the astringent Quality of Bean-flour, and its consequent medicinal Uses in the Dysentery, Authors, I find, differ. *Casp. Hoffman* says, it would be vain to expect astringent Effects from the Flower of Beans, which the Antients called *Faba fresa*, and *Lomentum Fabæ*, because it is prepared without the Cortex, or Skin, in which lies all the Astringency. And hence it appears, he says, how much they are in the wrong, who ascribe the Use of Bean-flour, boiled in Vinegar alone, or in Vinegar and Water, for Fluxes proceeding from a Debility of the retentive Faculty; for, unless you boil them whole, they signify nothing.

Dodonæus, on the contrary, says, that Beans, with their Skins, or Husks, are neither slow, nor very quick, in passing through the Body; but that without their Husks they are binding. "We, says *Ray*, incline to *Dodonæus*'s Opinion; since "we find, that in Wheat the Flour, separated from the Bran, "binds the more powerfully; and that the Bran is detersive,

"and

it and promotes the Paſſage of the Flour. However, we "leave the Matter to be decided by Experience."

Bean-flour is not only good internally in Diarrhœas and Dyſenteries, but outwardly for Sun-burning, and other cutaneous Deformities, and for obliterating the Marks of Sugillations. The diſtilled Water of the Flowers is diuretic, and of very great Uſe in clearing the Face of all Kinds of Spots or Bleminſhes, being an excellent Coſmetic. The Flowers have a moſt fragrant Smell, ſo that a Field, or Garden, ſet with Beans, when in Bloſſom, may be ſmelled at a good Diſtance.

Whether the *Bœna*, or *Bean*, be the *Faba* of the Antients, is much diſputed among Botaniſts. It is certain, that the *Faba* of the Antients was ſmall and round, as appears from an infinite Number of Places in *Theophraſtus*, *Dioſcorides*, and others. On the other Side, it ſeems impoſſible, and is hardly credible, that a leguminous Fruit, ſo common, and of daily Uſe, ſhould have grown into Diſuſe, or have changed its Name; and that the *Bœna* ſhould come to ſucceed it, without any Perſon's Knowledge: The Arguments, ſays *Caſpar Hoffman*, of thoſe who oppoſe this Opinion, are faulty in this, that they inſtitute the Compariſon between the *Faba* of the Antients and our larger Bean, whereas the Compariſon ought to be inſtituted between that and our ſmaller Bean.

For Diſorders of the Kidneys: Take the Aſhes of Bean-ſtalk, make a Lixivium of them; ſtrain through *Hippocrates*'s Sleeve, and edulcorate the ſtrained Liquor with Sugar, and Cinnamon: Of this Preparation ſix Ounces are to be taken for a Doſe.

—*Guido de Cauliaco* informs us, that by means of this Remedy he was freed from a violent Pain of the Kidneys, in the Beginning of a double tertian Fever; for it provokes Urine, cleanſes the Paſſages, expels Pus and Gravel, and promotes the Menſes. Dr. *Hulſe* juſtly thinks, that this Effect is to be aſcribed to the Salts contained in the Lixivium: For, ſays he, I myſelf, for a Woman much ſubject to nephritic Pains, and whoſe Legs were conſiderably ſwelled, ordered a Diet-drink, in which a large Quantity of the Aſhes of Broom was boil'd. By this means a great Number of ſmall Stones were diſcharg'd from her Kidneys, but with ſo intenſe a Pain, that ſhe was forced to deſiſt from the Uſe of it.

Hence, in order to provoke Urine, Mr. *Cheſneau* recommends eight Grains of the Salt, extracted from the Stalks of Beans, to be exhibited in ſome proper Liquor; or, if this Salt cannot be had, he orders ſix Ounces of the Lixivium, prepared of the Aſhes, and clarified, to be mixed with one Ounce of the Syrup of Marſhmallows.

Simon Pauli, in his *Botan. Quadripartit.* informs us, that he knew a Perſon, who, for four Months, had voided bloody Stools, perfectly cured only by the Uſe of red Beans, boiled by way of Pudding, and taken every Night and Morning, after all other Medicines had proved entirely ineffectual.

The Precept of *Pythagoras*, which injoins Abſtinence from Beans, is variouſly interpreted by antient and modern Writers. Some underſtand it ſimply of Beans; Abſtinence from which, they ſuppoſe, *Pythagoras* injoined, becauſe they were flatulent, and a Stimulus to Venery, deſtructive of the Tranquillity of the Mind, and productive of turbulent Dreams. Others, according to *Pliny*, in the 12th Chapter of his 18th Book, think, that *Pythagoras* diſcharged the eating of Beans, becauſe the Souls of the Dead were lodged in them, and becauſe on their Flowers there were found unlucky Letters. Others are of Opinion, that Teſticles are ſymbolically and enigmatically called Beans, becauſe the one reſembles the other; and that for this Reaſon *Pythagoras* did not condemn the Uſe of Beans, which he eat frequently himſelf, but the immoderate Uſe of Venery. Some others, and, among the reſt, *Plutarch*, think, that *Pythagoras* injoined to abſtain from bearing any Offices of State; for, in the Choice of Magiſtrates, the antient *Greeks* uſed Beans inſtead of Stones. *Ray*, *Hiſt. Plant.*

The young Leaves, boiled in Broth, are eſteemed highly emollient.

2. Faba. *C. B. P.* 338. *Siliqua, & ſemine, latiore.* K. a.

3. Faba; minor; ſeu Equina. *C. B. P.* 338. THE SMALL, or HORSE-BEAN.

Theſe grow, in all reſpects, like the Garden-beans, ſaving that they are leſs in all the Parts; the Pods, as well as the Beans, being rounder as well as ſmaller. They are ſown in the Fields, flowering and ripening ſomewhat later than the Garden-bean.

They are uſed outwardly for the ſame Purpoſes as the above-mentioned; but are moſtly ſpent in Food for Horſes.

Miller's Bot. Off.

4. Faba; rotunda, oblonga, ſeu cylindracea; minor; ſeu Equina, nigra. *M. H.* 2. 85.

5. Faba; rotunda, oblonga, ſeu cylindracea; minima; pluribus, quinis, ſenis ſiliquis uno pediculo exortis, ſeu Hattoniana. *M. H.* 2. 86.

6. Faba; fructu ex rubicundo colore purpuraſcente. *C. B. P.* 338. *Var.* 1. *a. Boerh. Ind. alt. Plant. Vol.* 2. *p.* 45.

FABA STI. IGNATII. Offic. *Nux Pepita, ſeu Faba Sancti Ignatii.* Act. Philoſ. Lond. N°. 249. p. 44. *Igaſur, ſeu Nux Vomica legitima Serapionis.* Ejuſd. 88. Fig. 4. 5. 6. *Igaſur, ſeu Nux Vomica legitima Serapionis Camelli, Faba Sancti Ignatii vulgo.* Raii Dendr. 118. *Cucurbitifera Malabathri foliis ſcandens Catalongay, & Contara Philippinis Orientalibus dicta, cujus Nuclei Pepitas de Byſayas, aut Catbalogan & Fabæ Sancti Ignatii ab Hiſpanis, Iſagur & Manangog, i. e. Victorioſi, Inſulanis nuncupati.* Pl. Mant. 60. ST. IGNATIUS'S BEAN.

Of this Fruit Sir *Hans Sloane* gives us the following Account:

It is about the Bulk of a Nutmeg, and triangular. The Shavings of it, drank in cold Water, are highly beneficial for evacuating Poiſons by Vomit, as alſo for the Cure of Bites inflicted by venomous Animals, if, at the ſame time, a few of the ſame Shavings are applied to the Bite: Theſe Shavings, alſo, afford great Relief, when applied to a Part ſpaſmodically conſtricted, and ſtop Hæmorrhages when applied to Wounds. In the Year 1692. a Woman, who had, for a long time, been afflicted with Floodings, was reſtored to perfect Health, by drinking theſe Shavings in ſome proper Liquor. The ſame Year, an Infant, labouring under an highly intenſe Fever, by drinking theſe Shavings, had its Diſorder forthwith removed in my Preſence. They, alſo, afford Relief to Women in Labour, and facilitate their Delivery. I myſelf have found from Experience, that this Bean is of ſingular Service in all Kinds of Repletion, and Crudities of the Stomach, as, alſo, in a Dyſentery and Teneſmus.

Divide each Bean into three Parts; and, when there is a Neceſſity, put one of theſe into the Mouth, for a Quarter or half a Quarter of an Hour, ſwallowing the Saliva diſcharged. Then drink about two or three Ounces of cold Water, and the Effects of the Medicine will be ſenſible.

Another Manner of uſing this Bean is to put it into the concave Part of a hard Shell with a little Water, and rub it up and down. This Water is to be put into a Veſſel with ſome of the Shavings; and the like is to be done, till you have two Ounces of the Water thus prepared, which are to be taken for a Doſe.

When this Bean, divided into Pieces, is rubbed in the concave Part of a Shell, with Oil, eſpecially that of Olives, this Oil produces the ſame Effects with the former Preparation, when drank; and is an excellent Medicine when applied to Wounds, or Members ſpaſmodically conſtricted.

The moſt ordinary Method of uſing this Nut is to put it entire into a little warm Water, till the Water is rendered bitter; and this Infuſion is afterwards to be exhibited. Others uſe a little of the Powder in Subſtance; others ſwallow a Piece of the Bean; and others wear a whole Bean, hung about their Necks, by way of Amulet.

When Poiſon is ſuſpected, and, in Caſes where there is an immoderate and tumultuous Conflict of the Spirits, it is to be uſed without any Regard to Time. In other Diſeaſes, it is to be uſed in a Morning, faſting. But when the Intention is to vomit, it is moſt conveniently exhibited an Hour or two after Eating: The Doſe is half a Scruple, in Conjunction with other gentle Emetics.

The Powder, an Infuſion, or the Oil, of this Bean are exhibited in tertian and quartan Fevers. It is alſo uſed for provoking Urine, the Menſes, and ſuppreſſed Labours; for facilitating the Birth, expelling the Secundines, the Fœtus when dead, and Worms; in all which Caſes I have found it effectual. It is alſo exhibited in Colics, Crudities of the Stomach, an injured Concoction, Diarrhœas, Teneſmus, Obſtructions of the Liver and Spleen.

It is produced in the *Philippine* Iſlands, and thoſe adjacent to them; but we are ignorant what Kind of Plant it grows on; only I learned, from *Raphael de Roa*, a learned *Spaniard*, who lived long in theſe Iſlands, that it was a convolvulous Plant, twiſted itſelf round the talleſt Trees, and bore a Fruit as large as a Nutmeg. *Philoſ. Tranſact.*

FABA ÆGYPTIA. Offic. Bod. a Stapel. 437. Raii Hiſt. 2. 1322. *Faba Ægyptia Dioſcoridis & Theophraſti; cujus radix Colocaſſia dicebatur.* Park. Theat. 375. *Faba Ægyptia legitima Dioſcoridis.* Camel. Syllab. 39. *Faba, ſive Cyamus Ægyptia.* J. B. 3. 774. *Fructus valde elegans, Faba forte Ægyptia Dioſcoridis.* Ejuſd. 715. Chab. 562. *Fabæ Ægyptiacæ affinis.* Ger. Emac. 1552. *Fabæ Ægyptiacæ Dioſcoridis affinis.* C. B. Pin. 196. *Nymphæa Indica flore purpureo.* Bont. 128. *Nymphæa Indica maxima.* Parad. Bat. Prod. 358. *Nymphæa Indica Faba Ægyptia dicta, flore incarnato, Nelumbo Zeilonenſium.* Parad. Bat. 205. *Nymphæa glandifera Indiæ paludibus gaudens, foliis umbilicatis, amplis, pediculis ſpineſis, flore roſeo purpureo & flore albo.* Pluk. Almag. 267. *Nymphæa Madaraſpatana Naſturtii Indici ſcutato folio, ſolidiori; venis atris, pediculo ſpinulis aſperato.* Pluk. Phytog. Tab. 207. Fig. 5. Tab. 322. Fig. 1. *Nymphæa flore ſuave purpuraſcente Japonica,*

rica. Breyn. Prod. 2. 77. *Nymphæa affinis glandifera Ægyptiaca flore pleno pulchro purpureo.* Hiſt. Oxon. 3. 514. *Nymphæa affinis Malabarica, flore amplo roſaceo, albicante colore.* Commel. in Not. Hort. Mab. Flor. Mal. 191. *Nymphæa affinis Malabarica, folio & flore amplo, colore candido.* Ejuſd. *Tamara.* Hor. Mal. 11. 39. Tab. 30. *Bem Tamara.* Ejuſd. *Nelumbo Zeylanenſium.* Tourn. Inſt. 261. *Nelumbo Nymphæa alba Indica maxima, flore albo, fabifera.* Herm. Muſ. Zeyl. 66. *Lien Sinarum.* Ogilb. China. 2. 681. EGYPTIAN BEAN. *Dale.*

The *Egyptian* Bean, by ſome called the *Pontic* Bean, is not only copiouſly produced in *Egypt*, but, alſo, in ſome marſhy Grounds of *Aſia* and *Cilicia*. It has a very large Leaf, a Stalk a Cubit long, as thick as one's Finger, and a Flower whoſe Colour reſembles that of a Roſe, and which is as large again as a Poppy-flower. But, when the Flower falls, it bears ſmall Pods, almoſt reſembling little Bladders, and in which the Bean is ſomewhat prominent above its Covering, in the Form of a Bubble. They call it *Ciborium*, or *Cibotium*, from the Manner of Planting it; which is, firſt, to lodge it in a moiſt Clod, by way of a Caſe, or Box, which is afterwards immerſed in Water. Its Root is thicker than that of the common Reed. This Root is eaten, both raw and boil'd, and is called *Colocaſia*. The Bean itſelf is, alſo, eaten green; but, when dry, becomes black, and in Bulk exceeds the *Grecian* Bean. It is of an aſtringent Quality, and good in Diſorders of the Stomach. In conſequence of its aſtringent Nature, an Inſperſion of its Flower, inſtead of Polenta, is highly beneficial to dyſenteric Patients, and ſuch as labour under the Cœliac Paſſion. This Flower is, alſo, uſed by way of Poultice: But the Huſks, made into a Decoction, with Mulſum, prove more effectual, if three Cyathi of the Mulſum are exhibited for a Doſe. This Bean, if boil'd in Oil of Roſes, relieves Pains of the Ears, if dropt into them; becauſe, in the Middle of the Bean, there is a green Subſtance, highly bitter to the Taſte. *Dioſcorides.*

The Root of this Bean, triturated, and made up, with Sugar, in form of a Preſerve, is exhibited for the Hæmorrhoids. The Juice, extracted from the Flowers, ſtops immoderate Diſcharges of the Menſes. *Dale* from *Henricus Adrianus Van Rheede.*

FABACIUM. A ſort of Cake, made of Bean-meal, us'd as an Aliment.

FABAGO. The Name of a Plant; called, alſo, *Fabago, ſive Leguminoſa.* Park. *Capparis Portulacæ.* C. B. *Fabaginea, ſive Peplios Lutetianorum.* J. B. *Telephium Dioſcoridis & Plinii.* Col. *Capparis Fabago.* I find no medicinal Virtues attributed to this Plant, except, that the *Syrians* uſe it to kill Worms, on account of its Bitterneſs.

FABARIA. A Name for the ANACAMPSEROS, Orpine; which ſee.

FABER. The Name of a Fiſh mentioned by *Columella*, and *Aldrovandus*. *Fabrorum aqua* is Water in which the Smiths quench their Iron.

FABRILIS RUBRICA. See RUBRICA FABRILIS.

FACH. The Name of a *Turkiſh* Medicine, celebrated for its Efficacy againſt Poiſons.

FACIES. The Face. See CAPUT.

PROGNOSTICS *from the* FACE.

Hippocrates, in his Book of *Prognoſtics*, directs us, "in "acute Diſeaſes, to conſider, firſt, the Countenance of the "ſick Perſon, as whether it be like that of Perſons in Health, "or, what is more to be regarded, the ſame as when himſelf "was in a ſound State; for, if it appears in this Manner, it "affords the moſt hopeful Prognoſtic; as the very Reverſe to "this carries the moſt Danger in it." *Galen*, commenting on this Paſſage, ſays, "that the Parts affected are to be com-"pared with the ſame when ſound, and, if they appear alike, "it is a good Sign; if otherwiſe, the contrary." In ſhort, if the Face, in acute Diſtempers, appears like that of ſound Perſons, we have good Grounds to hope for a Recovery, becauſe it ſignifies, that the Diſeaſe is neither violent, nor very malignant. But from an Alteration of the Countenance, as to a State of Extenuation, and that not in the Beginning, but in the gradual Progreſs, nothing of Certainty can be predicted, any more than if ſuch a Change ſhould be effected, not by the Diſeaſe, but by ſome other extrinſic Cauſe; as, for Inſtance, by an immoderate Paſſion of the Mind, Want of Sleep, Flux of the Belly, Abſtinence, or the like; which frequently cauſe an Extenuation of the Face; which, for that Reaſon, in ſuch Caſes, can afford no certain Prognoſtic.

As to the Colour; a florid Colour of the Face is ſometimes good, as when it indicates a future Hæmorrhage at the Noſe; and is the more to be depended upon, if attended with other Signs prognoſticating the ſame Event, according to the Judgment of *Hippocrates*, *Coac. Prænot.* 142. "Perſons under a "Fever, ſays that Author, if they appear red in the Face, and "are, beſides, moleſted with a violent Pain of the Head, accompanied with an high Pulſe, are generally ſeized with an "Hæmorrhage."

But all the other concomitant Symptoms deſerve, alſo, our Attention; ſuch as Splendors, Flaſhes of Light, or Miſts, paſſing before the Eyes; beſides a Redneſs of the Face, and, frequently, a tenſive and gravative Pain of the Head, a Tenſeneſs of the Hypochondria without Pain, and a Difficulty of Reſpiration. From ſuch Signs *Galen* predicted an Hæmorrhage in a young Man at *Rome*, in the Preſence of many *Roman* Phyſicians, as he relates, *Lib. de Præſag. ad Poſthum.* "While the "Phyſicians, ſays he, were in Surprize, the Patient raiſed "himſelf up, as though he would throw himſelf out of Bed; "and being aſked, why he would attempt to run out of Bed, "when there was nothing preſent to excite him, he anſwer'd, "that he was frighted at the Sight of a Serpent, of a red Co-"lour, creeping over the Cieling, which, if it ſhould chance "to ſlip, would tumble down upon him; and, for that Rea-"ſon, he was eager to fly out of Bed. The reſt, who at-"tended him, did not imagine, that this Phænomenon was of "any Signification towards a future Hæmorrhage; but I, ſeri-"ouſly conſidering every other Symptom, and particularly "perceiving the Redneſs, which before, though obſcurely, ex-"tended from the Right Side of the Noſe to the Cheek, to be "very much increaſed, regarded the ſame as a manifeſt Indica-"tion of an approaching Hæmorrhage at the Right Noſtril." But, in predicting an Hæmorrhage, we are to conſider all the other Signs, as well as Redneſs of the Face, and eſpecially thoſe of Concoction. For, in a crude Diſeaſe, there rarely happens an Eruption of Blood, but what diſtils by Drops; which Kind of Evacuation in burning Fevers, and moſt of all in Fevers attended with a Phrenſy, is much ſuſpected. To this we may add, that a Redneſs of the Face is, ſometimes, a Prognoſtic of an Abſceſs behind the Ears, or the Parotides; of which *Hippocrates*, according to *Galen*, is to be underſtood, 6 *Epid. Sect.* 2. *T.* 11. where, after deſcribing ſome Symptoms, which prognoſticated a Defluxion on the Limbs, he ſays, "that moſt of thoſe [*whoſe Caſe was before deſcribed*], who "were, by Nature, of a pretty white Skin, were intenſely "red in the Face, and yet had little or no Hæmorrhage from "the Noſe." *Galen*, commenting on this Place, ſays, that "an intenſe Redneſs of the Face, under a long and favourable "Illneſs, gives Expectations of a Criſis, by an Abſceſs, or "Defluxion upon ſome of the Limbs, unleſs prevented by a "copious Hæmorrhage from the Noſe." In the ſame Senſe are we to underſtand the Author of 1 *Prorrhet.* 165. when he tells us, "that they who labour under a Coma, with a Reſt-"leſſneſs, a Pain in the Hypochondria, and ſlight Vomitings, "give Indications of ſucceeding Parotides; but firſt we are "to conſider the Habit of the Face." Here *Galen*, in his Comment, ſays, "Before the Generation of the Parotides, "we are to regard the Signs afforded by the Face; ſuch are "Redneſs, a preternatural Tumor, Humidneſs of the Eyes, "Dimneſs of the Sight, and the like." From the Premiſes, we may infer, that a Redneſs of the Face is often good by Accident; and may be called a critical Sign, whenever it precedes an Hæmorrhage from the Noſe. But this Habit of the Face appears principally in the Height of the Fits, and eſpecially in a Synochus, and a burning Fever, or where there is an Inflammation of the Lungs, in which the Cheeks, according to *Hippocrates*, in his *Prognoſtics*, contract a Redneſs. However, there is nothing to be predicted, with Certainty, from this Habit of the Face alone; unleſs its Indication be confirm'd by ſome other Signs, either good or bad. What has been ſaid, relates to a good Face: We now proceed to inquire, what bad Prognoſtics may be drawn from an Alteration in that Part.

Firſt, then, *Hippocrates*, in his *Prognoſtics*, aſſures us, that, in the Beginning of a Diſeaſe, a Face which, without the Concurrence of ſome external Cauſes, becomes unlike what it was in Health, is a bad Sign, and, if it be quite the reverſe, a pernicious one; and in acute Diſtempers portending nothing but Deſtruction. Such is that Habit of Face, in which, as *Hippocrates*, in the Beginning of his Prognoſtics, deſcribes it, "the "Noſe is ſharp, the Eyes hollow, the Temples ſunk, the Ears "cold and contracted, and their Lobes inverted, the Skin "about the Forehead hard, tenſe, and dry, and the whole "Countenance of a pale, greeniſh, black, livid, or leaden Co-"lour." This is what Phyſicians juſtly call a *cadaverous* Face; and if it appears in the Beginning of an acute Diſeaſe, that is to ſay, within three Days, it indicates nothing but Death.

The Face, in ſome chronical Diſtempers, from a Refrigeration of the Liver, and a depraved Sanguification, is obſerved to be tumid, juſt as it is in a Phthiſis, and an Empyema; in which Caſes it generally appears in that manner on the Patients, when dying. As to a red Face, when of bad Indication, the Author of the *Prorrhetica*, *Lib.* 1. *T.* 49. ſays, "that a good "Colour in the Face, accompany'd with a ſorrowful Aſpect, "is a bad Sign," as it indicates, according to *Galen*, in his Comment on the Place, a hot Affection ſcorching the Blood;

whence ſuch a Floridneſs of the Countenance is, by ſome, ſuppoſed proper to a melancholy Affection. But, in this Redneſs of the Face, we are to have regard to other concomitant Signs; and, if they are bad, it is pernicious; for a red Face, attended with bad Signs, ſometimes indicates a Phrenſy, and ſuch a one as is fatal, and ends in Convulſions: Thus a Redneſs of the Countenance, with a fierce Look, a Delirium, or ſome phrenetic Symptom, is mortal. Of ſuch Patients we read, *Coac.* 162. "They, ſays the Author, who labour under a Cephalalgy, and "a Catochus, accompany'd with a Delirium, a Conſtipation "of the Belly, a fierce Look, and a florid Countenance, are "affected with an Opiſthotonos;" which is a ſort of Convulſion that draws the Head backwards, and fixes it on the Scapulæ, and is a mortal Symptom. But if the Face be not only hot, but of a fiery Red, it is ſtill worſe, if attended with bad Signs. Of this Caſe, alſo, the Author of the *Coac.* 7. ſpeaks in the following Manner: "A Rigor, attended with a Coma, is "not without Danger; and if the Face be alſo of a Flame-"colour, and in a Sweat, it indicates a Malignity." And more fully to the Purpoſe is it expreſs'd, 1 *Prorrhet.* 67. "A "comatous Rigor carries Danger in it, and, if attended with a "Flame-colour of the Face, and a Sweat, is deſtructive." *Galen*, in his Comment hereon, ſays, "We know, that a "Flame-colour of the Face, attended with a Sweat, though "without a Rigor, is a bad Indication, becauſe a Sweat is one "of the critical Signs; and therefore, if it determines nothing, "ſhews the Malignity of the Diſeaſe." A fiery Face then, with ſome critical Sign, as a Sweat, Vomiting, Flux of the Belly, or an Hæmorrhage, indicates Malignity, and is generally mortal. We are to obſerve alſo, on this Head, that the Face appears red in pulmonary Diſorders, but in theſe the Cheeks principally contract a Redneſs; for which Reaſon, when this Symptom appears in Fevers, we juſtly ſuſpect a Peripneumony, or an Empyema. Hence, we are told by *Hippocrates*, *Prognoſt.* that a Redneſs of the Cheeks is one Sign of an Empyema. And this Colour, attended with bad Signs, and eſpecially bad critical Signs, that is, ſuch Signs as determine nothing, preſages Death. The Fate of the Patient, under ſuch Circumſtances, is pronounced by the Author of the *Coac.* 67. in the following Words: "They, ſays he, who in a Fever labour under an "Averſion to Food, with Sweats, and have a good Colour in "the Face, accompany'd with a Looſeneſs, and a Cardialgia, "after a long Illneſs, die after the Manner of thoſe who are "affected with a Peripneumony, or other pulmonary Diſor-"ders." Such was the Fate of the Wife of *Polycrates*, 7 *Epid. Text.* 9. "Who, under a Fever, was affected from the very "Beginning with a Cough, and Spitting, like thoſe in an Em-"pyema, accompany'd with a Hoarſeneſs and Wheeſing in the "Aſpera Arteria, and Fauces. Her Face was of a good Co-"lour, and there was a Redneſs in her Cheeks, tho' not in-"tenſe, but moderately florid." This Woman was firſt affected with a Peripneumony, then with an Empyema, and dy'd at laſt of a Phthiſis. A Redneſs of the Cheeks, therefore, in long and ſlow Fevers, is an Indication either of a Peripneumony, or an Empyema, which end in a Conſumption, if attended with a dry Cough, tho' never ſo ſlight; provided, alſo, that the Patient be ſubject to Exacerbations or Inequalities of Heat in the Fever, tho' never wholly free from it.

FACINUM is Metal, or Metallic Ore. *Rulandus.*

FACULTAS, a Faculty, is the Power of performing any Action. Thus Medicines are ſaid to have a Faculty of Purging, Vomiting, or of performing any Action in the Body. In Phyſiology it imports juſt the ſame. Thus the Animal Faculty is that Power in the Body by which all the Animal Actions are perform'd; the Vegetative Faculty is that Power by which Generation, Nutrition, and Accretion are carried on; and the natural Faculty is that, by which the natural Actions are perform'd. Every particular Organ is alſo ſaid to have their Faculties, or Powers of Acting; as the retentive, expulſive, attractive, and many other Faculties.

FÆCULA is a Medicine which conſiſts of the Fæces of Vegetable Juices, principally thoſe of Roots. The Manner of making a Fæcula may be readily comprehended by the following Example from the College Diſpenſatory.

Fæcula Bryoniæ.

The Fæcula of Bryony.

Take of the Roots of Bryony, any Quantity: Let them be ſcraped ſmall with a Knife, and ſqueeze out their Juice with a Preſs, after a few Hours, in Veſſels that are without any Motion: There will be a very white Sediment like Starch, and it muſt be dried in glazed Pans, after the watery Part is poured off by Inclination.

After the ſame Manner is prepared the Fæcula of Arum, wild Radiſh, Orrice, and the like.

FÆX is properly the Sediment, Lees, or Grounds, of any fermented Liquor; but in Medicine, it is generally underſtood of Wine; tho' the Sediment of any Fluid is ſometimes call'd *Fæx*, or *Fæces*, by which, alſo, ſometimes the Excrements of the Belly are underſtood.

As to the Medicinal Virtues of the Fæces or Lees of Wine, *Dioſcorides*, *L.* 5. *C.* 132. ſays, that thoſe of old *Italian* Wine are to be prefer'd; for the Sediments of Vinegar are poſſeſs'd of ſtronger Qualities. Theſe Fæces are to be burn'd like the Alcyonium, after they are diligently dried. Some put them into a new earthen Pot, and burn them over a briſk Fire, till they are red-hot. Others cover a Lump of them over with live Coals, till they are alſo red-hot. 'Tis a Sign, that they are ſufficiently burnt, when they aſſume a light whitiſh Colour, and ſeem to burn the Tongue, when apply'd to it. The Lees of Vinegar are to be burn'd in the ſame manner. The Lees of Wine are highly cauſtic, detergent, cicatrizing, aſtringent, corroding, and drying. They muſt be us'd recent, becauſe they quickly evaporate, and loſe their Strength; for which Reaſon they muſt be kept in a cloſe-ſtopt Veſſel. Thoſe Lees which have not been burn'd, either by themſelves, or in Conjunction with Myrrh, check œdematous Swellings, if apply'd to them, as alſo Defluxions of the Stomach, and Inteſtines. If apply'd to the Abdomen and Pudenda of Women, they ſtop immoderate Diſcharges of the Menſes. They diſcuſs thoſe Tumors call'd Pani, which are not exulcerated, as alſo Tubercles. Breaſts render'd turgid, and painfully diſtended, with Milk, are reliev'd by being anointed with them, in Conjunction with Vinegar. But the burn'd Lees, in Conjunction with Reſin, remove Roughneſs of the Nails; and the Hairs, if anointed with them, together with a little of the Oil of Maſtich, become yellow in a Night's time. When waſh'd, they are mix'd with Medicines for the Eyes, ſuch as Spodium; and, when us'd for this Intention, remove Films and Specks.

FAGARA, Offic. Ger. 1365. Emac. 1548. *Fagara major*, J. B. 1. 350. Chab. 26. Raii Hiſt. 2. 1814. *Fagara ſeu Cayutana Luzonis*, Camel. Syllab. 74. *Cubebis affinis Fagara major*, C. B. Pin. 412. *Dale.*

It is found in the *Philippine* Iſlands. The Part uſed in Medicine is the Berries, and eſpecially their outer Rind, which is tender and blackiſh, and of an aromatic, and ſomewhat acrimonious Taſte. Theſe Berries, when mature, break, and yield a black, ſhining, and pretty ſolid Kernel, void of Taſte and Smell.

The Berries are heating and drying, and are good for a cold Stomach and Liver, help to promote Concoction, and bind the Belly. *Dale* from *Avicenna.*

FAGONIA. This Plant was ſo named by Dr. *Tournefort*, in Honour to Dr. *Fagon*, who was Superintendant of the Royal Garden at *Paris.*

The Characters are;

The Flower conſiſts of many Leaves, which are placed orbicularly, and expand in form of a Roſe; out of whoſe Centre riſes the Pointal, which afterward becomes a chaneled round pointed Fruit, conſiſting of many Cells, and compoſed of many Huſks, each containing one roundiſh Seed.

Miller takes notice of two Species of this Plant, neither of which has any Medicinal Virtues aſcrib'd to it at preſent.

FAGOPYRUM.

The Characters are;

The Root is fibrous and annular; the Calyx conſiſts of five Petals, which by their Colour, and radiated Expanſion, reſemble the Petals of Flowers; the Calyx, when ripe, forms Capſules for the Seed. The Flowers grow in Spikes, or Tufts, or Bunches, and are furniſhed with eight Stamina. The Ovary grows in the Bottom of the Calyx, in a Placenta elegantly adorn'd with Globules rang'd in a Circle; and is of a triangular Figure, producing three Pointals, and becoming a triangular, blackiſh, farinaceous Seed.

Boerhaave mentions two Species of this Plant; which are,

1. Fagopyrum; vulgare; erectum, *Elem. Bot.* 412. *Tourn. Inſt.* 511. *Boerh. Ind. A.* 2. 88. *Buxb.* 108. *Fagopyrum*, Offic. Raii Hiſt. 1. 182. Synop. 57. Schw. 273. *Fagopyrum*, Hiſt. Oxon. 2. 590. Volck. 160. *Fagotriticum*, J. B. 2. 993. Chab. 312. *Fagopyron*, Ger. 82. Emac. 89. Park. 1141. *Frumentum Saracenicum*, Herm. Hort. Lugd. Bat. 263. *Eryſimum Theophraſti folio hederaceo*, C. B. 27. BUCKWHEAT, OR BRANK.

It is ſown in Fields, and flowers in *July.* It is leſs nutritive than Barley or Rye, tho' more than Panic or Millet. Piſan and Broths prepared of the ſame, unhuſked, are eaſily digeſted, and generate a moderate Quantity of Blood, and are good for thoſe who are afflicted with a Cough, or a Dyſury. *Dale* from *Schroder.*

It is not certain where it grows ſpontaneouſly: It is ſaid to be originally of *Africa*, but it thrives in almoſt every Soil, delights in wet Weather, ſoon ſprings up, and quickly ripens. The moſt ſkilful Botaniſts are of Opinion, that this Plant was unknown, and conſequently unnamed, by the Antients. The Peaſants, ſays *Matthiolus*, make Bread of this Grain, and thick Broths, which are not ungrateful when well made. *Dodonæus* ſays, that Puddings and Cakes, made of the Flour of *Fagopyrum*,

are eaſily concocted, are quick in Paſſage, and afford, tho' very little, yet not bad Nutriment. Bread, which ſometimes in a Dearth is made thereof, or with a Mixture of it, is of a humid Quality, and quicker in Paſſage, but more flatulent, than Rye. The green Herb, before the Seed is ripe, is good to feed Cattle; and the Seed very ſoon fattens Poultry. *Ray, Hiſt. Plant.*

2. Fagopyrum; vulgare; ſcandens. *T.* 511. COMMON CREEPING BUCKWHEAT. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 88.

FAGOTRITICUM. See FAGOPYRUM.

FAGUS.

The Characters are;

The Leaves much reſemble thoſe of the Hornbeam; the Flower is maſculine, amentaceous, glomerated, conſiſting of Stamina, which ariſe from a Bell-ſhaped Calyx. The Fruit is produced at a remote Diſtance from the Flower, on the ſame Tree; and is a callous Subſtance, acuminated, gaping with a quadrifid Apex, and incloſing two triangular Seeds, or Nuts: *Boerhaave, Index alter, Pars* 2. *p.* 178.

Boerhaave mentions but one Species of this Plant; which is;

Fagus, *C. B. Pin.* 419. *Raii Hiſt.* 2. 1381. *Synop.* 3. 419. *Ger.* 1255. *Emac.* 1444. *Park. Theat.* 1403. *Aldrov. Dendr.* 240. *Jonſ. Dendr.* 207. *Mont. Ind.* 42. *Tourn. Inſt.* 584. *Elem. Bot.* 456. *Boerh. Ind. A.* 2. 178. *Mer. Pin.* 38. *Merc. Bot.* 1. 35. *Phyt. Brit.* 40. *Dill. Cat. Giſſ.* 55. *Rupp. Flor. Jen.* 264. *Buxb.* 108. *Chab.* 57. *Fagus Latinorum, Oxya Græcorum,* J. B. 1. 117. THE BEECH-TREE.

Tragus affirms he has cured Scabs, Itch, Tetters, and other Itchings of the Skin, with the Water found in the Clefts of old Beech-trees. *Martyn's Tournefort.*

It grows frequently in the Woods and Hedges in the Southern Parts of *England*, and the Maſt is in Uſe, which agrees in Properties and Virtues with the Cheſnut. Its Fruit and Seeds are good to expel Gravel and Mucus from the Kidneys.

Bellonius, Dalechampius, and *J. Bauhine*, very fully prove, that this Tree, and not the *φηγὸς*, *Phege*, is the *Oxyas* of the *Greeks*. This they infer from comparing the Deſcription of the *Oxyas* in *Theophraſtus*, with that of the *Fagus* in *Pliny*; which agree in ſo many Things, that there is no Doubt, but the latter tranſcrib'd his Deſcription from the other; to which, for a further Proof, we may add, that *Bellonius* obſerves, that the *Fagus* in Mount *Athos* is ſtill to this Day called *Oxya*, and, in *Macedonia, Oxyas*. It delights to grow on Hills, but ſuch as are moiſt; and loves a chalky and rocky Soil; and is found as frequently in *England*, as in *Germany*; which makes it the more ſurpriſing, that *Cæſar*, in his Commentaries, ſhould deny the Beech to be of *Britiſh* Growth.

The freſh Leaves of the Beech, bruiſed, and apply'd to hot Tumors, diſcuſs them, and corroborate the Limbs, affected with a Numbneſs, as we are aſſured by *Matthiolus*, who alſo affirms, that, being chewed, they are an excellent Remedy for the Diſeaſes of the Lips and Gums. The Maſt of Beech, burnt, and mixed with the Fat of Swine, and apply'd hot to the Loins, is affirm'd by ſome to be good for the Stone. Eaten plentifully, eſpecially green, and before it is dry'd, it is obſerv'd to diſturb the Head, like Solium, or Darnel; and it is affirm'd, that Swine, by eating it, are much diſorder'd, till at length they fall aſleep; and the Fat of thoſe which are fed with the Maſt is commonly thought to be the ſofter, and more ſubject to be liquefy'd in the Dreſſing; and the ſame Effect is ſaid to follow from their feeding on Acorns. *Ray, Hiſt. Plant.*

FALCANOS. Arſenic. *Rulandus.*

FALCIFORMIS. An Epithet for a Proceſs of the *Dura Mater*, call'd, alſo, *Falx*. See CAPUT.

FALCINELLUS, or *Falcata*. A ſort of Bird mention'd by *Johnſon*, which is ſo call'd from the Curvature of its Beak. It is a ſort of Heron. The Fat is recommended as good to fortify the Nerves, as a Reſolvent, and proper to cure *Nubeculæ* of the Eyes.

FALCO. The Falcon. A ſort of Hawk. The Fat is of Uſe in Diſtempers of the Eyes, to diſſolve Tumors, and to mollify and ſtrengthen the Nerves. The Dung is a Diſſolvent, being apply'd to the diſeaſed Part; it may alſo be taken inwardly, in order to provoke Sweat; its Fleſh is eſteemed good againſt Diſtempers of the Brain. *Lemery des Drogues.*

FALDELLA. Contorted Lint, us'd by way of Bolſter, or Compreſs.

FALERNUM. Falernian Wine, the ſame as AMINÆUM; which ſee.

FALSODICTAMNUM. See PSEUDODICTAMNUS.

FALTRANC, from the *High-Dutch, fallen*, to fall, and *Tranck*, Drink, that is to ſay, a Drink for ſuch as have receiv'd a Fall, is a Drink prepared of the principal vulnerary Herbs, pitch'd and dry'd for Decoction, or Infuſion, particularly the Leaves of Periwincle, Sanicle, Paul's Betony, Bugle, Lions-foot, St. John's-wort, Harts-tongue, the different Sorts of Maidenhair, Lungwort, Mugwort, Betony, Vervain, Figwort, Agrimony, the leſſer Centaury, Mouſe-ear, Mint, and the like; for there is a very great Number of vulnerary Herbs. The choiceſt are thoſe which grow on the *Alps*, and the Mountains of *Switzerland*, becauſe they are moſt expoſed to the Sun; and they ought to be gather'd when in Flower, and in their Vigour. The beſt way to dry them is, firſt to diſtribute them into ſmall Parcels; then wrap them in brown Paper, and hang them up againſt Boards, and there let them dry; by which means they will preſerve their Colour, and their Virtues, againſt the Injuries of the Air, and be ſecur'd from Duſt, and the Dung of Flies.

Faltranc is proper for thoſe who have fallen from an Eminence, for the Aſthma, Phthiſis, intermittent Fevers, to remove Obſtructions, provoke Urine, for inveterate Rheums, and the Jaundice. Some add Wormwood, and the Root of Gentian, to make it the more bitter, and to excite an Appetite. Others, in order to communicate to it a cephalic Virtue, mix therewith the Leaves of Tea-ſage, Cowſlips, Marjoram, and Baſil; it is drank hot after the manner of Tea, firſt putting therein a little Honey or Sugar. *Lemery des Drogues.*

FALX. See FALCIFORMIS, and CAPUT.

FARCIMINALIS. The ſame as ALLANTOIS; which ſee.

FARCTURA, in Pharmacy, is the ſtuffing any exenterated Animal, or excavated Fruit, with medicinal Ingredients.

FARFARA. A Name for the *Tuſſilago*; *vulgaris*.

FARFARUS. A Name for the white Poplar. *Blancard.*

FARINA. Meal.

Rye-meal well dry'd, mix'd with common Salt, and apply'd warm with Elder-flowers to an Eryſipelas, is an excellent Diſcutient; and the ſame Meal, mix'd with Honey, contributes effectually to the Maturation of Apoſtems, and is daily us'd with ſingular Succeſs for that Purpoſe. Bran is principally commendable for its abſterſive Quality, and its Power of removing Sweat and Sordes of the Head. A Bath, prepar'd of Bran and ſweet Water, adds freſh Degrees of Strength to the Joints, when weaken'd by whatever Cauſe; and, if Chamomile-flowers are added, it may be us'd as an *Euporiſton*, or Remedy eaſily prepar'd, in all Caſes where Bathing is neceſſary. I have ſeen a heavy Pain of the Head, accompany'd with Tenſion, and a Ringing of the Ears, remov'd by rubbing the Head with warm wheaten Bran. Barley boil'd in Water till it burſts, with an Addition of the Roots of Vipers-graſs, and Citron-juice, affords an excellent Decoction for allaying Heat, and quenching Thirſt in Fevers, eſpecially of the bilious Kind. This ſame Decoction, with an Addition of Figs, is of ſingular Efficacy in almoſt all acute Diſorders, and Indiſpoſitions of the Breaſt, where the Acrimony of the Humours is to be corrected, and Expectoration promoted. Beſides, of this Decoction of Barley, and ſweet Almonds, ſome prepare an Emulſion, which in the Small-pox, even of the confluent Kind affords ſingular Relief, and comes next to the *Hydrogala*, or Preparation of Milk and Water, liberal Draughts of which *Sydenham* found ſo beneficial in the Small-pox of a confluent Kind from the Beginning accompanied with a copious Diſcharge of Saliva. But this Decoction of Barley is ſtill more efficacious and beneficial in the Small-pox, and other Diſorders, if proper Quantities of calcin'd Hartſhorn, and Syrup of Orange-juice, are added to it. Of how great Importance *Hippocrates* thought Ptiſan in the Cure of acute Diſorders, is ſufficiently obvious from his Writings, and eſpecially from his Book *de Ratione Victus in Acutis*, where he uſes theſe Words: "Ptiſan ſeems juſtly "preferable, in all acute Diſorders, to all other frumentaceous "Preparations; and I approve of the Practice of thoſe who "give it the Preference; for it is gently viſcid, pleaſant, lubricating, moderately moiſtening, proper for extinguiſhing "Thirſt, and eaſily carry'd off, and waſh'd away, if there "ſhould be a Neceſſity for it. Beſides, it neither renders the "Patient coſtive, excites Gripes, nor diſtends and tumefies the "Abdomen." Hence 'tis obvious, what happy Effects the Antients expected from Ptiſan, in the Cure of acute Diſeaſes. But they prepar'd their Ptiſan ſometimes in one, and ſometimes in another manner; for ſometimes they us'd decorticated Barley, boil'd for a ſufficient time; and this they call'd the Whole of the *Ptiſan*: At other times they ſupt the ſtrain'd Liquor, or, as *Celſus* calls it, the Cream of Ptiſan: Sometimes, alſo, they render'd the Body ſoluble, by injecting this Cream by way of Clyſter. According to *Galen*, they took ten Parts of Water to one of Ptiſan; and, after theſe were boil'd, they added a little Oil, Vinegar, and Salt. But the Method in which the Antients us'd their Ptiſan, is a Circumſtance, with reſpect to which we are pretty much in the Dark, if we may believe *Langius*, in *Epiſt. Med. Lib.* 1. *Epiſt.* 57. As for Oats, a Decoction of them with Water, adding the Roots of Succory, Poppy-flowers, Nitre, and Honey, us'd as common Drink, is of ſo great Efficacy in all acute Diſorders, and eſpecially in arthritic Pains, that it produces far happier Effects than the moſt celebrated Medicines. Beſides, a Decoction of decorticated Oats is of ſingular Service, as common Drink, in all thoſe Diſorders where the Blood, or Humours, in the Primæ Viæ, are of too acrimonious a Nature, ſuch as Coughs, Catarrhs, Coryzas, Purple-fevers, Small-pox, Meaſles, choleric bilious Fevers, Fluxes ariſing from a Redundance of acrid Bile,

and

and Corroſions of the Inteſtines. In this Decoction I often boil a few Pugils of common Chamomile-flowers, adding Sugar, and Oil of ſweet Almonds. This Preparation I have with great Succeſs recommended in the foregoing Diſeaſes, not only to be drank, but alſo to be injected by way of Clyſter, ſince by its viſcid Nature it excellently obtunds the Acrimony of the Humours. *Hoffman de Præſtantia Remediorum Domeſticorum.*

FARRA. The Name of a River Fiſh, mentioned by *Johnſton*, *Rondeletius*, and *Lemery*. It is ſomewhat like a Trout, is eſteem'd nutritive, and good for Diſorders of the Lungs and Breaſt.

FARRAGO. A Name for the ſecond Species of ALCYONIUM; which ſee.

FARREA NUBES. The Name of a cutaneous Diſtemper, call'd alſo PITYRIASIS, or FURFUR.

FASCIA LATA. The Name of a Muſcle, or muſcular Ligament.

The *Faſcia Lata* is a muſcular Ligament, very conſiderable both for its Extent and Strength, being made up principally of two Planes of Fibres, of which the external are more or leſs longitudinal; the internal more or leſs tranſverſe. It is further ſtrengthened in ſome Places by a great Number of other Fibres, which augment its Thickneſs, and form particular Expanſions. The tranſverſe Fibres are much ſtronger than the longitudinal.

It is fixed above to the Edge of the *Criſta* of the *Os Ilium*, from the large Tuberoſity, to the anterior ſuperior Spine, to the Ligamentum Fallopii, and to the Aponeuroſis of the Obliquus Externus of the Abdomen, on which it runs up by a thin Lamina. It is likewiſe fixed in the lateral inferior Part of the *Os Sacrum*, and to the neighbouring Parts of the Ligaments, by which that Bone is connected to the Bones of the *Ilium* and *Iſchium*.

From thence it advances over the Glutæi and Thigh, between the Membrana Adipoſa, and Muſcles, all the Way to the anterior and outer Parts of the Knee. It is very thin on the Patella, but may be ſeparated from it. It is alſo continued over the external anterior Part of the Tibia, covering the Muſcles which lie there; and is ſtrongly inſerted in the Head and Criſta of that Bone, and in the upper Part of the Fibula.

It ſends off Elongations, which, like ſo many Septa, run in between the Muſcles, and ſometimes meet in ſuch a manner, as to form Vaginæ. It is ſtrongeſt on the anterior and outer Parts of the Thigh, growing gradually thinner on the inner and back Parts.

It is ſtrongly inſerted in the Linea Femoris Aſpera, between the Vaſtus externus, and Biceps, forming a ſort of Septum between theſe Muſcles. It furniſhes particular Vaginæ to the Muſcles, which lie on the Inſide of the Thigh; and, tho' theſe Vaginæ are thin, they are nevertheleſs pretty ſtrong, being principally made up of tranſverſe Fibres.

The *Muſculus Faſciæ Latæ* is a ſmall and pretty long Muſcle, ſituated a little obliquely upward and downward, on the fore Part of the Hip.

It is fixed above to the Outſide of the anterior ſuperior Spine of the Os Ilium, between the Inſertions of the Glutæus Medius, and Sartorius. From thence its fleſhy Fibres run down a little obliquely backward, forming a very flat Body, four Fingers-breadth in Length, and two in Breadth.

This Body lies between two Laminæ of the Faſcia Lata, and is inſerted therein by ſhort tendinous Fibres, which diſappear at that Place where the Faſcia adheres to the great Trochanter and Tendon of the Glutæus Maximus. We ought by no means, therefore, to look upon the Faſcia as a tendinous Expanſion of this Muſcle. *Winſlow's Anatomy.*

FASCIA, in Surgery, is a Fillet, Roller, or Bandage. It is extremely difficult to form an Idea of Bandages, without ſeeing them made. Learners, however, may reap ſome Advantages from Deſcriptions and Figures. I have treated of Bandages in general, under the Article DELIGATIO, and now proceed to particular Bandages.

Of Bandages belonging to the Head; and, firſt, of the triangular Bandage.

It is plain from the Writings of *Galen* and others, that the Antients had a ſurpriſing Variety of Bandages, for the various Diſorders of the Head. But, as ſo great a Number ſeemed uſeleſs, *Verduc*, *Le Clerc*, and other Moderns, have, for the greater Eaſe of Learners, recommended ſuch only as are adapted to the ſeveral Diſorders and Operations of the Part, and rejected moſt of thoſe that are obſolete and unneceſſary. The firſt is the *triangular* Kerchief: This is made of a ſquare Handkerchief, Napkin, or any other Piece of ſquare Linen, folded in the Form of a Triangle, and the Middle of it applied to the Forehead, bringing the two Ends round the Head, and tying them behind, as is commonly practis'd by Men in hot Weather. See *Tab.* 58. *Fig.* 1. *a*, *a*, *b*. The *French* call it the *Couvre chef en triangle*. As the Application is eaſy, ſo are the Uſes numberleſs: Nor is it ſerviceable in Wounds only, but may be ſucceſsfully applied to almoſt any Diſorders of the Head; and ſerves, alſo, to retain any Dreſſings put to the Eyes: But if the Knot *b*, at the Occiput, proves troubleſome, it may be brought round to the Forehead, and there pin'd.

Of the grand Kerchief.

The next and larger Bandage, belonging to the Head, is termed the *Grand Kerchief (le grand Couvre-chef)*. This is generally uſed after trepanning, or boring the Cranium; and, in dangerous Wounds of the Head, defends it from the Cold. See *Tab.* 24. *Fig.* 1. A.

It is commonly made of a Napkin, or ſome ſoft Piece of Linen, in a ſquare Form: It is doubled in ſuch a Manner, that the lower Part is about four Fingers-breadth wider than the upper: The middle Part of this Cloth is placed ſo upon the Head, that the fore Part may reach almoſt as far as the Eyes; the four Extremities or Corners of it hanging over the Cheeks; the two Corners of the upper, or narrower Part, are to be tied under the Chin, at the ſame time the Corners of the lower or wider Part are to be brought towards the back Part of the Head, and tied together, or faſtened with a Needle and Thread: The fore Part, which was extended towards the Eyes, is turned back as far as the Crown of the Head; the two Parts that hang over the Neck, almoſt to the Shoulders, are alſo to be turned back, and faſtened behind the Ears, with a Needle and Thread. This Kind of Bandage, when it is neatly made, ſticks cloſe to the Head, and is an excellent Contrivance to preſerve it from the Injuries it might receive from cold Air; for which Reaſon it is, at preſent, in great Uſe and Eſteem: You may, in ſome meaſure, form an Idea of the Appearance it makes upon the Head, by conſulting *Tab.* 24. *Fig.* 1. A. But the Method of applying it muſt be learnt from ſome ſkilful Artiſt; for it will eaſily appear from this one Inſtance, how difficult it is to deſcribe the Art of applying Bandages by Words, and how impoſſible it is to learn this Art from ſuch Deſcriptions.

Of the Sling with four Heads.

The third is termed, *The Sling with four Heads*, *Tab.* 23. *Fig. d.* Its Length, in my Opinion, ought to be four Feet, and its Breadth ſix or eight Fingers; though ſome will allow it to be but three Feet long; but this depends upon the Size of the Head, and Method of applying it. Its Uſe is to retain the Dreſſings on a Wound of the Head, more particularly in hot Countries and Seaſons, where the other two, eſpecially the *grand Kerchief*, would be troubleſome to the Patient, and ſtill more ſo, if it was prepared and bound in the Manner deſcribed by ſome. This ſhould be ſlit at each End, ſo as to leave only one or two Hands-breadth in the Middle undivided. (See *Tab.* 23. *Fig. d.*) If it is to be applied, for Example, to a Wound in the upper Part of the Head, the middle or entire Piece muſt be fix'd upon the Dreſſings, and there held by the Hand of an Aſſiſtant, to prevent its ſlipping: Then the two poſterior Heads muſt be brought under the Chin, and tied, as in *Tab.* 24. *Fig.* 1.; or, if it be long enough, carried back from thence to the Neck, and there tied or pin'd: The two foremoſt Heads muſt be tied under the *Occiput*; or, if there is Length enough, they may croſs each other there, like an X; and then be carried up over the Ears to the Forehead, or brought back again to the Chin, and there faſtened by a Knot.

Of the Sling with ſix Heads.

Some uſe *a Sling with ſix Heads*, about three Feet long, and twelve or fourteen Inches broad, which takes in the whole Head. You may form ſome Idea of this, from *Tab.* 58. *Fig.* 19. ſuppoſing there were no Apertures. The Middle of this is applied to the Vertex, and held by an Aſſiſtant: Then the two middle Heads are to be tied under the Chin, (ſee *Tab.* 58. *Fig.* 2. *a*, *a*, *a*) the two anterior tied or pin'd under the Occiput *b*, and the poſterior upon the Forehead *c*, *c*, *c*, with a Knot *d*. Some will have it larger, and chuſe to begin with the poſterior Heads; but this is not material. As this Bandage is ſo ſerviceable in retaining the Dreſſings upon any Part of the Head, and ſticks ſo cloſe, I think it ought not to be rejected.

Of the uniting Bandage.

The fourth is the *uniting* or *incarnating* Bandage. It is about eight Feet long, and two Inches broad: It has in the Middle a ſtraight Slit, about the Length of three or four Fingers-breadth. (See *Tab.* 23. *Fig. f.*) It is rolled up at each End. The principal Uſe of it is, to cloſe the Lips of a rectilinear Wound in the Forehead, Vertex, or any other Part, as in *Tab.* 58. *Fig.* 3. and 4. *a*, *a*; but more particularly in the Eyebrows, when it muſt be narrower. The Method of applying it is this: The Wound being dreſſed with proper Balſams, and Plaiſters, and a narrow Compreſs laid on each Side, the ſlit Part of the Bandage *b* muſt be fixed near the Wound, in ſuch a Manner, that one of its Ends *c* being carried round the Head, and its Roller paſſed through the Slit, both of them

d d are drawn tight, and the Lips of the Wound cloſed. Each Roller being then exchanged, and croſſed upon the Forehead and Occiput, as in *Fig.* 3. and under the Chin, and upon the Vertex, as in *Fig.* 4. as long as the Bandage will permit; each End muſt be ſew'd or pin'd: If the Lips of the Wound cannot be thus drawn together, it will not be amiſs to make another Slit in a convenient Part, exchanging and paſſing your Rollers as before; this will greatly conduce to the Cloſure of the Wound, and Uniformity of the *Cicatrix*. This ſhould not be remov'd for ſix or eight Days, or longer, unleſs any extraordinary Symptoms require it.

N. B. In *Tab.* 58. *Fig.* 3. and 4. at *a, a*, a rectilinear Wound ought to have been expreſs'd, reaching from the Forehead towards the Noſe, which the Engraver has omitted.

Of the Bandage after Bleeding in the Forehead.

The Bandage uſed after Bleeding in the Forehead, is about twelve Feet long, and two Fingers broad. It has one Head, but there are two Ways of applying it; the firſt called *Diſcrimen*, the other *Scapha*.

The *Diſcrimen* is thus: The Bandage is held with the Left Thumb, upon a Compreſs, covering the Wound *a*, *Fig.* 5. ſo that about a Foot of it hangs down from the Forehead over the Face; then the Roller is carried round the Temples and *Occiput*, in the circular Direction *b, b*, till it returns to *a*; then the Part, which hung down, is turned back upon the Forehead, *Vertex*, and ſagittal Suture *c*, and brought to the Occiput; and there, after rolling it ſeveral times about the Head, pin'd or ſew'd.

The *Scapha* is carried round the Head in an oblique Circle; from the Forehead it paſſes between the Ear and *Vertex*, as *Fig.* 6. *a, b*, to the Occiput, and then returns by the oppoſite Side, under the left Ear *b* to the Forehead; then the Part, which hung down, is obliquely reflected on the other Side *c*, forming a kind of Angle there, and upon the Forehead, ſo that the Parts *a, b, c*, inveſt the Head like a Boat: Hence it is termed *Scapha*. The Remainder muſt be carried circularly round the Temples and *Occiput*, and then faſtened.

Of the Bandage for Arteriotomy.

This Bandage for the Head is called *Knotted*, from its many Croſſings on the Temples, likewiſe *Stellar* or *Solar (Gall. le Solaire)* from its Reſemblance of the Sun or a Star. It is very ſerviceable when the temporal Artery is divided, either in *Arteriotomy*, or by an accidental Wound, and ſeldom fails to ſuppreſs an Hæmorrhage. It ſhould be twenty or twenty-four Feet long, two Fingers broad, and double-headed. The Method of applying it is thus: The Wound muſt be covered with three thick Compreſſes, each larger than the other; then the Middle is to be placed in ſuch a Manner upon the ſound Temple oppoſite to the Wound, (*Tab.* 58. *Fig.* 7.) that one Head of it muſt be brought round the Forehead *a*, the other round the *Occiput b*, till they meet at the Part affected *c*; and there croſſing each other, and forming a ſort of Knot, one is to be carried under the Chin *d*, and the other over the *Vertex e*, croſſing again upon the ſound Temple, whence they are carried round the Forehead and *Occiput* to the Compreſſes on the Wound *c*: This is to be repeated as long as your Bandage will permit, when the Ends muſt be ſewed.

The Bandage proper after an Extirpation of the Parotis.

Almoſt the ſame Kind of Bandage may be uſed to the neighbouring Parts, which ſeldom fails of Succeſs in ſuppreſſing an Hæmorrhage, after Wounds in, or an Extirpation of, the parotid and maxillary Glands, when they are ſcirrhous. In theſe Caſes, the Wound being dreſſed with a large Quantity of Lint, and thick Compreſſes, the Bandage is to be fixed on the ſound Side, as after Arteriotomy. (See *Fig.* 8. *a, b, c, d, e.*) When the firſt Circumvolution is made, the Folds *d, e*, over the *Vertex*, and under the Chin, muſt be repeated oftener than in the foregoing Caſe, and thoſe round the Forehead and *Occiput* ſeldomer: And in this Bandage, different from the Method of the preceding, the Knots muſt be upon the Part wounded *f*, under the Ear: By this means, the Lint and Dreſſings are ſo cloſely preſs'd upon the Part, that there is very little Danger of an Hæmorrhage: The Extremities ſhould be ſewed. *Heiſter* ſays he contrived this Bandage, when he firſt made an Extirpation of the fore-mention'd ſcirrhous Glands; and from its many Croſſings called it *Knotted*.

The Capeline for an Hydrocephalus.

The reflex Bandage of the Head, (by the *French* call'd *Capeline de la Tête*) for an *Hydrocephalus*, is a double-headed Roller, about twenty-four Feet long, and two Fingers broad. The Middle is fixed to the *Occiput*; and, after two or three circular Rounds, the Rollers interſect each other upon the Forehead and *Occiput*: Then one Roller being reflected over the *Vertex*, or ſagittal Suture, to the Forehead, *Fig.* 9. *a*, the other continued in a circular Tract *b, c*, they croſs each other upon the Forehead: After which Croſſing, the firſt Head is carried back obliquely towards the *Occiput c, d*, and reflected by the Side of the other *a*; the laſt is continued in the circular Direction *b, c*; but the firſt is brought again from *e* to *f*, then from *g* to *h*, the other ſtill continuing its circular Courſe. This is to be repeated, till the Head is entirely covered; and, when your Bandage is almoſt ſpent, that you may faſten the oblique Reverſions *c d, e f, g h*, you muſt bring one End over the ſagittal Suture *a*, and the other circularly round the Head *b, c*. Some recommend this Bandage for the Head-ach: *Nuck, in Exper. Chirurg.* 17. has obſerved, that it is of very little Service in an *Hydrocephalus*.

The Monoculus.

We come now to theſe Bandages of the Head, which are proper for the Eyes. Of theſe there are two Kinds: The firſt is called *Monoculus*, or rather *Monophthalmus*; the other *Binoculus*. The Monoculus is ten or twelve Feet long, and two or three Fingers broad, according to the Size of the Patient. It retains the Dreſſings either on one Eye or Eyelid. The End of this Bandage, for it is ſingle-headed, is fixed upon the *Occiput*, and from thence carried obliquely round the Head and Ear of the wounded Side, till it croſſes the Compreſs and Dreſſings upon the Eye, (See *Fig.* 10. *a, a*) and ſo obliquely over the Forehead *b*, till it returns to its Beginning: Having thus carried it thrice obliquely round, the Remainder is to go circularly *c c c*, about the Temples, *Occiput*, and Forehead, as long as the Bandage will permit, and then ſew it. A clean Napkin or Handkerchief (See *Fig.* 11.) will anſwer the End of a *Monoculus*.

Of the Binoculus.

The *Binoculus* retains the Dreſſings on both Eyes: It is twelve Feet long, and about two or three Fingers broad. It is variouſly applied, as it is either double or ſingle-headed: 1. If it is ſingle-headed, the End is held upon the *Occiput*; from thence it is carried round obliquely by the Ear, (*Fig.* 12. *a*) and the Eye *b*, to the Right Side of the Forehead *c*, and then back again to the Place where it began; from whence it aſcends to the Forehead *d*, then deſcends to the Eye *e*, traverſing the Noſe in the Shape of an X, and terminates once more in the *Occiput f*. When you have repeated theſe oblique Circles thrice, the reſt of the Roller is to be ſpent in plain Circles round the Head, Temples, and Forehead, *g, g, g*; then faſten it. 2. If it is double-headed, the Middle is fixed upon the *Occiput*, and the Ends carried round on each Side by the Ears, and over the Eyes, (*Fig.* 12. *a, b, f, e*) to the Forehead, when they croſs one another upon the Noſe like an X; and then changing the Rollers, they return over the Temples *d, c*, to the *Occiput*; where being changed and croſſed again, they return by the Ears, Eyes, and Forehead: Having repeated theſe Turns likewiſe three times, the reſt muſt be carried round the Head in circular Directions *g g g*, that the Bandage may adhere more ſtrongly. But here we muſt obſerve, that this Bandage may be very well ſupplied by the Napkin (*Fig.* 11.) even when both Eyes are affected, if the Ends are tied in a Knot upon the *Occiput*, or, croſſing each other there, pin'd near the Ears or Temples.

Of the Sling for the Noſe.

The Bandage for the Noſe has *four Heads*, and is eight Feet long, and two or three Fingers broad. It is ſlit at each End, and left entire about two Fingers-breadth. Between the two Slits there is a ſmall Aperture to receive the *Apex* of the Noſe, and keep the Bandage firm, *Fig.* 13. *a*. This is generally applied to a fractured Noſe, or to retain the Dreſſings in a Wound, or Inflammation, or after the Extirpation of a *Polypus*, or making a Perforation when the Noſtrils are obſtructed. The Method of uſing it is, to fix the Middle upon the *Apex* of the Noſe, and carry its two upper Heads *b b* backwards to the Neck on each Side; there croſſing, they are brought up round the Forehead *c c*, and tied with the Knot *d*, or pin'd to the Patient's Cap; but the lower Heads *e e* are carried a little upward over the Cheek and Temples *f*; and, like the former, tied upon the Head and Forehead *g g*. Here we may obſerve in general, that in all Bandages of four Heads, the two uppermoſt are never to be carried directly backwards, but a little obliquely downward, and the lower a little obliquely upward, ſo as to croſs at *e e*, and hold the Parts more firm.

The ſingle Bridle.

The ſingle *Bridle* is of Service, when the lower Jaw is fractured or luxated on either Side. It is a ſingle-headed Roller, about ſixteen Feet long, and two or three Fingers broad. After reducing the *Maxilla*, and applying an adheſive Plaiſter with a ſtiff Paſteboard Splint (See *Tab.* XXIX. *Fig.* 9.) to the affected

Part, first covering this Splint with several Folds of Linen, and moistening it in warm Wine, invest the Whole in the Manner directed under the Article FRACTURA, for Fractures of the Jaws; then the loose End is to be applied to the Occiput, and there fastened, after rolling it twice round the Forehead, *Fig.* 14. *a b*, *Tab.* LVIII. then the Remainder being pin'd or sewed to the other Part upon the Temple of the affected Side *b*, which we here suppose to be the Left, is carried down over the Left Cheek *c*, and under the Chin *d*, and then it is carried up again near the Cheek and Temple of the sound Side to the Vertex *e*, from whence it is convey'd down to the affected Side *b c d*. When these Circles have been repeated thrice, your Bandage must be carried from the Throat to the Neck, and from thence under the Ear to the fore Part of the Chin, and the affected Jaw *f g*, from thence under the Ear on the sound Side round the Neck, and so over the Chin once more. Lastly, the remaining Part, if there is any, must be conveyed from the Occiput to the Forehead, falling into the Circle *a b*. Observe, the Crossings of this Bandage at *b f* ought to be pin'd or sewed together, to prevent its slackening. This Bandage, which we have propos'd for Fractures of the Jaw-bones, is also highly proper in Luxations thereof.

Of the double Bridle.

If both Sides of the Jaw are fractured, after the Reduction, you must use the *double Bridle:* This is twenty-four Feet long, and two or three Fingers broad. In every Fracture and Dislocation, the Part must be reduced, and immediately a proper Plaister applied; and some recommend (though that indeed is unnecessary) a *Ferula* of Pasteboard in the Shape of the Jaw, covered with Linen, and perforated in the Middle to receive the fore Part of the Chin. (See *Tab.* XXIX. *Fig.* 10.) This *Ferula* is to be held by an Assistant, and the Middle being put under the Chin, the Rollers are conveyed up on each Cheek, and the Temples (*Fig.* 15. *a b*. *Tab.* LVIII.) to the *Vertex c*; there crossing each other, they are carried down again under the Chin, where they begun: You must repeat this thrice; then, having exchanged the Heads, they descend from the *Vertex* to the Neck; and from thence, after crossing, are conveyed on each Side, so as to pass round the anterior Part of the Chin, and lower Jaw *d e*, and then again to the Neck; from whence, after crossing, they proceed to the Forehead, where, when they have formed the circular Directions *b*, *f*, *f*, not only the Extremities, but every Crossing, should be fastened either by pinning, or sewing. The *simple Bridle* will answer every End proposed as well.

Of the Sling with four Heads for the Jaws.

Some Surgeons, instead of either of these Bridles, use a four-headed Bandage, a little above four Feet long, and four, five, or six Fingers broad, being perforated in the Middle, which, though it is more simple, is equally serviceable. (See *Tab.* LVIII. *Fig.* 16.) For when they have reduced the Fracture or Luxation, and apply'd proper Dressings, they let the Chin into the Aperture *a* in *Fig.* 17.; and then the upper Heads are carried back to the Neck, and being crossed and exchanged there, ascend to the Forehead *c c*, where they are tied with the Knot *d*. But the two lower Heads *e* are convey'd upwards by the Cheeks *f* to the *Vertex*, and there tied in a Knot *g*; or else, if the Bandage will permit, carried down again, and tied under the Chin.

Of the Bandage for the Lips.

Surgeons likewise apply a four-headed Bandage, not unlike the Sling described for the Nose, about an Inch broad, to Hare-lips, and Wounds in those Parts, to retain the Dressings. The Middle, which is not to be perforated, is fixed upon the Lip *a*. (See *Fig.* 18.) The upper Heads are first brought to the Neck *b b*, from thence to the Forehead *e*, where they are tied in a Knot, or pin'd: The lower *d d* ascend upon the Cheeks *e e* up to the *Occiput*; from thence are brought round to the Forehead, where they are fastened in the same Manner. I know it has been the Practice of some, to use the uniting Bandage for the Hare-lip, *Tab.* XXIII. *Fig.* F, about four Feet long, and one Finger broad, with a Slit in the Middle about two Fingers-breadth: Almost the same we described above (*Fig.* 3. *Tab.* LVIII.). This, as it presses the Needles too close, is not only inconvenient, but Reason and Experience also assure us, that it is frequently hurtful and improper.

Of the Mask.

If the whole Face is burnt by Gun-powder, or any other Fire, the Application is a kind of Linen Mask, with Slits for the Eyes, Nose, and Mouth. This Cloth, moistened with proper Remedies, is put upon the Face. It is tied behind the *Occiput* with six Tapes, or Pieces of the same Linen. (See *Tab.* LVIII. *Fig.* 19.) This will also retain the Dressings for a *Phlegmon*, or an *Erysipelas* of the Face.

Of Bandages for the Neck.

The Divider.

Among the Bandages proper for the Neck, the principal is that called the Dividing Bandage, twenty-four Feet long, and two or three Fingers broad, rolled into two Heads. This is generally applied to a burnt Neck, especially if it happens in the fore Part, to prevent the Head from growing to the Breast, or being contracted forwards. After having dressed the Wound, the Middle is placed upon the Forehead, and, forming two circular Directions round the Head, (see *Tab.* LVIII. *Fig.* 20. *a a*) one Roller is conveyed under the Right Armpit *b*, the other under the Left *c*, and two Circles made round the Breast *d d*, to keep the Head erect. Each Crossing upon the Head must be fastened together, either with Pins, or to the Cap (*Fig.* 21. *a*). When this is done, the two Rollers are carried again to the Neck, and from thence, crossing, like an X, to the Forehead; and from the Forehead they return to the Neck, and so under the Arms, and thus keep the Head upright. The Remainder may be spent in plain Circles about the Forehead and Occiput. This Bandage must be continued, or, if necessary, renewed, till there is no Danger of Distortion. Some recommend it for a Weakness in the Muscles of the Heads of Children. But it is to be observed, that when Bandages are passed under the Armpits, these Parts ought to be previously guarded by thick Compresses; otherwise, the Skin is easily ruffled, and great Pain, by that means, created to the Patient.

Of the Retentive Bandage for the Neck.

The next Bandage for the Neck is called the Retentive, as it keeps on the Dressings after Bleeding, Burns, or any chirurgical Operation. This is generally made of two simple Bands, one four, the other six Feet long, the first a Thumb or two Fingers-breadth, the last three. Having applied the Dressings, the shorter is laid over the Head, cross the Vertex, in such a Manner, that the two Extremities hang down over the Shoulders (see *Fig.* 22. *a a*); the longer is conveyed circularly round the Neck *b b*, and retains the Dressings and the other Band *a a*, but not so tight as to obstruct the Breath; then fasten it with a Pin. Lastly, the two Heads of the first Band *a a*, which hang on the Shoulders, are to be brought back over the Circles *c*, and pinned by the Ears, to prevent the circular Bandage from descending. But, to confess the Truth, this shorter *a c* is of very little Service; for the Shoulders, as Experience proves, will keep the circular Bandage from slipping.

Of the Bandage for Tracheotomy.

The third Bandage for the Neck is usually applied after the Operation of Tracheotomy. This is the Method: A proper Tube is placed in the Aperture made in the Aspera Arteria, and then a common simple Bandage, two Feet long and two Fingers broad, perforated in the middle, with a Plaister and Compress, likewise perforated, is drawn circularly round the Neck, and tied in a Knot. Or you may use a single-headed Bandage, three Feet long, and two Inches broad. The End is to be fixed upon the Neck; then make two circular Rounds about it; but, as often as it comes to the Canula, inserted in the Trachea, it must be perforated, to give free Admission to the Air: The Extremity must be pinned. This Bandage should not be removed, till the Patient has recovered his Respiration; then, the Wound being dressed with a vulnerary Balsam, and adhesive Plaisters, the Lips should be brought together by an Uniting Bandage (*Tab.* XXIII. *Fig. f*) four Feet long, and two Fingers broad, as in oblong Wounds of the Forehead, *&c.* (*Tab.* LVIII. *Fig.* 3. *a.*)

Bandages for the Clavicles are described under the Article CLAVICULÆ.

Of Bandages for the Humerus and Scapula.

Simple Spica.

For a Luxation of the Shoulder, after it is reduced, you must apply the Simple Spica, with a Ball under the Axilla, to prevent its slipping. The Compress must be a Foot in Length, and an Hand in Breadth, slit at each End, so as to have four Heads (see *Tab.* XXIII. *Fig.* 18.); and being expressed out of warm Wine, Spirit of Wine, or Oxycrate, is placed under the Arm with its Middle upon the Ball; the Heads come up over the Shoulder, which they are to invest. Then the Simple Spica is fixed upon a square thick Compress, under the Axilla of the sound Side, to prevent the Skin from chafing. See LUXATIO.

The Double Spica.

If both Shoulders are dislocated, the double Spica will be most commodious. A Ball, or Pellet, of Linen being fixed (as I have already directed) under each Axilla, with a proper Compress,

Compreſs, you are to take a Band, twenty-eight or thirty-two Feet long, and three or four Fingers broad, double-headed; 2nd, placing its Middle under either Arm, for Inſtance, at *d*, (*Tab.* LVIII. *Fig.* 25.) you croſs the two Heads upon the Shoulder *e*, and carry one over the Breaſt *b*, the other over the Back, to the oppoſite Arm *a*. From hence, after croſſing them, you convey them up, over the other Shoulder, as before; from whence they return, over the Back and Breaſt again, croſſing each other, like an X, to *d*, where they began. This Proceſs is to be continued two or three times; then the Remainder may terminate either in plain Circles round the Body, or one of the Arms, faſtening the Ends with Pins. The Double Spica is, alſo, of ſingular Service, not only in Luxations of the Humerus, but, alſo, in Caſes where the Scapulæ, or both Clavicles, are fractured near the Humerus, and when there is a Neceſſity for applying Bandages to both Shoulders at one and the ſame time, for any Reaſon whatever.

Of Bandages for fractured Scapulæ.

When the fractured Scapula is replaced, and ſecured by Compreſſes, and Splints of Paſteboard, you may apply either of the three following Bandages: I. Double Spica, deſcribed in the laſt Paragraph. II. The Capeline. Or, III. The Stellate. Which laſt is generally uſed; but obſerve, that the Scapulæ and Dreſſings are to be retained in their proper Place: Tho', when both Scapulæ are fractured, it muſt be acknowledged, that the Double Spica is moſt advantageous, becauſe it covers and ſecures them both.

An Explanation *of the* Fifty-eighth Plate.

Fig. 1. Denotes the *triangular*, or ſimple, *Kerchief* for the Head, *Gall. Couvre-chef en triangle*; *n a a*, the Middle of it, which inveſts the Forehead, Vertex, and Occiput; *b*, its Corners, tied upon the Occiput.

Fig. 2. Shews the Manner how the ſix-headed Bandage is applied; *a a a*, the middle Corners, hid under the Chin; *b*, one of the anterior Corners, which, with its Companion, is carried round the Occiput, and faſtened near the Ear; *c c*, the poſterior Heads, brought from the Occiput to the Forehead, and there tied in the Knot *d*; *e e*, the Middle, which inveſts the Head.

Fig. 3. Exhibits the Uniting Bandage for the Forehead; *a*, the longitudinal Wound in the Forehead; *b*, the Slit in the Bandage, upon the Wound, through which the other Part, *c*, is paſſed; *d d*, the two Heads of the Bandage, by drawing which the Lips are joined; and ſo kept, by forming Circles round the Head, with the Remainder.

Fig. 4. Repreſents the ſame Bandage, on a longitudinal Wound, near the Vertex.

N. B. In *Fig.* 3. and 4. the Engraver has omitted expreſſing the Wound, which ſhould have been at *a a*.

Fig. 5. Shews the Diſcrimen; *a*, the Place where it begins; *b b*, the circular Directions round the Head; *c*, the Part reflected back from the Forehead to the Occiput.

Fig. 6. Repreſents the Scapha; *a*, the Beginning of the Bandage; *b b*, its firſt oblique Round, about the Neck; *c*, the Beginning of the ſecond Round, which is reflected back to the Left Side of the Occiput, and there forms the Shape of a Boat; *a d d*, the Circles about the Head, where it terminates.

Fig. 7. Demonſtrates the Knotted or Solar Bandage, for Arteriotomy in the Temples; *a b*, the firſt Round made by the two Heads from the ſound Temple to *c*, when they are croſſed upon the divided Artery; *d e*, the other Round, under the Chin, and over the Vertex, to the oppoſite Temple, where they croſs again, in the ſame manner as at *c*.

Fig. 8. *a*, *b*, *c*, *d*, *e*, exhibit the ſame Bandage; but *f*, the Part where the Knot is to be made after the Extirpation of the ſalival Gland.

Fig. 9. Shews the Capeline for an Hydrocephalus; *a*, the depending Head, reflected back to the Occiput; *b c*, the circular Round, about the Head; *d*, *e*, *f*, *g*, the other reflex Turns, inveſting the Head.

Fig. 10. Repreſents the Monoculus, a Bandage uſed for the Deligation of one Eye; *a a*, the firſt Round, which paſſes from the Occiput, by the Ear and Cheek, over the Left Eye, and from thence, by *b*, to the Occiput, where it began; *c c c*, the circular Turn about the Temples, where it ends.

Fig. 11. Demonſtrates how the Monoculus, made of an Handkerchief, or Napkin, may be commodiouſly tied about the Head.

Fig. 12. Exhibits the Method of binding both Eyes. This Bandage is carried from the Forehead, by the Direction *a b c*, over the Left Eye, to the Occiput; and from thence returns there again, over the Right Eye, in the Courſe *d*, *e*, *f*. *g g g*, the circular Turns, which are made round the Eyes, till the Whole is ſpent.

Fig. 13. Shews the Manner of applying the Sling for the Noſe; *a*, the Middle, which receives the Tip; *b b*, the upper Heads, which are carried round the Occiput and Temples, to the Forehead *c c*; and tied by the Knot *d*; *e e*, *f f*, *g g*, denote the ſame, with reſpect to the lower Heads.

Fig. 14. Repreſents the Single Bridle; *a b*, the Circles round the Head, where the Bandage begins; *b*, the Part where it is faſtened, and then, by the Direction *c d e*, is carried about the Cheeks, Chin, and Vertex; *f g*, the Turn from the Neck, over the Jaw.

Fig. 15. Demonſtrates the Double Bridle. This is formed with a double-headed Roller; the Middle is fixed under the Chin, and, then, ſeveral times conveyed on each Side, in the Direction *a b*, to the Vertex *c*; from thence to the Neck, and over the Jaw, *d e*, where the Heads are croſſed at *e*; Then they return to the Neck and Occiput, and from thence to the Temples and Forehead, *f f*, *b*.

Fig. 16. Repreſents the four-headed Sling for the Chin; *a*, the Aperture, which intercepts the Chin; *b b b b*, the four Heads.

Fig. 15. Shews the Method of fixing it upon the Chin and Lower Jaw, and the Ends tied about the Head.

Fig. 18. Exhibits the Manner of uſing the Sling for the Upper Lip; *a*, the Middle, without a Perforation; *b b*, the two Heads, tied at *c*; *d d*, the two lower Heads, which are carried up over the Cheeks *e e*, to the Occiput, and then tied upon the Forehead.

Fig. 19. Denotes the Maſk for the Face; *a b*, the Maſk itſelf, which inveſts the Face, and is tied by the ſix Ends *c*, *c*, *c*, *d*, *d*, *d*, upon the hinder Part of the Head.

Fig. 20. Demonſtrates the anterior Part of the Dividing Bandage; *a a* are the Circles ſurrounding the Head, where it begins; *b*, the Direction, which paſſes under the Right Arm; *c*, that which paſſes under the Left, to the Back, where the Heads are exchanged, and then brought, circularly, about the Breaſt *d d*.

Fig. 21. Repreſents the poſterior View of the ſame Dividing Bandage; *a*, the Parts where the Heads interſect each other like an X; *b*, *c*, the circular Turns, which paſs under the Arms; *d d*, the Circles which inveſt the Breaſt and Back.

Fig. 22. Shews the Capeline for a fractured or diſlocated Clavicle; it has two Heads; *a b*, the firſt Round of the anterior Head; *c*, *d*, *e*, the Rounds of the poſterior; *f*, *g*, *h*, ſecures thoſe, reflected before and behind.

Fig. 23. Denotes the Stellate Bandage, for the Clavicle and Scapula. It may begin under the Arm *a*; then *a b* repreſents its firſt Progreſs; whence it returns under the Arm *c*; and then over the Shoulder *d*, to *a*, where it began; *e*, the Croſſings, whence it is called *Stellate*, from its imaginary Reſemblance to the Rays of a Star. You may begin either at *b*, or *c*, or *d*, as you pleaſe, carrying the Rollers in the ſame manner.

Fig. 24. Exhibits the Simple Spica, for the Axilla. It begins under the ſound Arm *a*; then aſcends in the Direction *b c*; then is reflected back, under the Arm *d*; from whence it aſcends again to *e*, and from thence, over the Back, to its Beginning; the ſame Courſe muſt be repeated often.

Of the Bandages for the Præcordia and Breaſts.

The Bandage after Amputation of the Breaſt.

The Bandage to be applied, after the Amputation of a Breaſt, is twenty-four Feet long, three or four Fingers broad, and double-headed. After proper Dreſſings, you fix its Middle under the Right Arm (for we ſuppoſe the Left Breaſt taken off, or a large Scirrhus extirpated from it); ſee *Tab.* LIX. *Fig.* 1. A. You then carry the two Rollers upwards, and croſs them upon the Shoulder B; from thence the anterior Head paſſes obliquely over the Breaſt C; and the poſterior over the Back, to the Left Axilla D; where they are again croſſed, and drawn tight upon the Compreſſes of the Breaſt: Hence the poſterior paſſes in the Direction C, to B; the anterior, under the Arm D, over the Back, to the ſame Letter B, where they interſect each other once more. Theſe Turns muſt be often repeated; only remember, in uſing the reſt of your Bandage, to be more frequent in the Croſſings upon the Wound, than under the Axilla D; for, by this, your Dreſſings will be more ſecure, and an Hæmorrhage, perhaps, prevented. Laſtly, ſome circular Rounds ſhould be made about the Thorax, from D to A, to ſecure the firſt; and, then, ſome oblique ones from D to B; but obſerve to terminate your Bandage in Circles about the Breaſt, and lower Part of the Dreſſings; then pin or ſew it.

Of the Bandage of Heliodorus, *commonly called the* T *Bandage.*

In moſt Diſorders of the Breaſt, the Bandage of *Heliodorus* is commonly uſed. It is formed of two ſimple Bands, one joined, perpendicularly, to the Centre of the other, reſembling the Letter T, whence its Name; though the perpendicular Part is ſlit up almoſt to the End, (as *Fig.* 11.) ſo that it forms a four-headed Bandage, *a a*, *b b*; or two diſtinct Pieces may be ſewed on, (as *Fig.* 10.) which makes it reſemble the *Greek* Π. The tranſverſe Part *a a* (*Fig.* 10, 11.) muſt be long enough

enough to go round the Body, and tie upon the Back, or Side, and two or three Inches broad: The direct muſt be long enough to paſs over the Shoulder, and tie round the circular Band, upon the Back, and broad enough to retain the Dreſſings upon the Breaſt. In an Inflammation, Tumor, Abſceſs, Gangrene, or any ſuch Diſorders of the Breaſts, it is thus applied: You place the tranſverſe Part under the Breaſts, round the Thorax, (*Fig.* 2. *a a*) ſo that its two Extremities may be tied on the Back; then you paſs the two ſlit Ends over the affected Breaſts, Dreſſings, and Left Shoulder, provided the Left Breaſt is affected, and tie them with the circular Round on the Back. Some apply the two Heads *b b* in a croſs Manner, in order to retain the Dreſſings more firmly; they proceed in the ſame Method with the Bandage (*Fig.*11.). But it is certain, that what we propoſe, (*Fig.* 12.) of paſſing the two Heads *b b* on each Side the Neck *d*, will anſwer the Purpoſe as well; for this prevents their ſliding off the Shoulders; and they may be tied behind the Neck, without laying the Patient's Back naked, which is often diſagreeable to weak or modeſt Perſons, and the cold Air may prove very prejudicial.

Slings for the Breaſts.

As I obſerved theſe Inconveniences in *Heliodorus*'s Bandage, and that it was not proper for an ulcerated Cancer, extending itſelf towards the Axilla; I contrived a four-headed one, which has anſwered my Expectations. I made a Sling, four Feet long, and about ſix Inches broad, unſlit about a Foot in the Middle. This entire Part (*Tab.* LIX. *Fig.* 3.) I applied to the Compreſſes, on the affected Breaſt, which is here ſuppoſed the Left; then carried the two upper Heads *b b* over the Right Shoulder, and the two lower *c c* under the Left Arm, towards the Right Scapula, on the Back; and there tied them in two Knots, near *d*. I have found this a convenient Bandage, as it retains the Dreſſings more firmly, and is leſs troubleſome to the Patient; while *Heliodorus*'s, by making the Skin chafe about the Breaſt and Thorax, gives a great deal of Pain. Sometimes I have, with good Succeſs, uſed a Napkin, or Towel, in the manner directed for the Eyes, *Tab.* LVIII. *Fig.* 11.

The Napkin and Scapulary.

The Bandage which the Surgeons call the *Napkin and Scapulary*, is very commodious (*Gall. la Serviette avec le Scapulaire*). This is applicable in Wounds, Ulcers, Fiſtulæ, and a Paracenteſis of the Breaſt; likewiſe in Fractures of the Sternum, or the Spina Dorſi, and in fractur'd or diſlocated Ribs. It is made of two Pieces of Linen: The firſt is like a Napkin, four Foot long, for Adults, but, for fat Perſons, it may be ſix, or more, folded together four or ſix times, till it is about the Breadth of eight or ten Fingers, according as Circumſtances require. Then it is applied to the Dreſſings on the affected Part, and pin'd upon the Breaſt, if the Diſorder is before; if behind, to the Back (ſee *Tab.* 24. *Fig.* 1. B). Then, leſt this Band ſhould ſlip or fall off, apply the Scapulary, a Piece of Linen three Feet long, and four or ſix Fingers broad, ſlit in the Middle enough to let the Head through, (ſee *Tab.* XXIII. *Fig.* 9.); then bring the two Ends, one over the Breaſt, the other upon the Back, in ſuch a manner, that they may reach the circular Band, both before and behind, to which you pin them (ſee *Tab.* XXIV. *Fig.* 1. B, C). This laſt is called *Scapulary*, becauſe a great Part of it is ſuſtained by the *Scapulæ*. Some ſlit this Bandage at one End, almoſt up to the Middle; then fix the entire Part on the Back, and the two Heads on the Side of the Neck, croſſing them upon the Sternum (ſee *Tab.* LIX. *Fig.* 4. F); and faſten them, as before, on each Side of the Breaſt, to the Napkin.

Of Bandages for the Sternum and Ribs.

The Quadriga.

From what has been already ſaid, it is ſufficiently manifeſt, that you may apply the Napkin and Scapulary to a fractured Sternum after the Reduction, and dreſſing with an adheſive Plaiſter, Compreſſes dipt in Spirit of Wine, and Splints of ſtiff Paſte-board. But the more general Method is, to uſe a peculiar and ſtronge Bandage, termed *Quadriga*, or *Cataphracta*, twenty-four Feet long, and three or four Fingers broad, with two Heads; this binds up the Sternum and Thorax more firmly. The Middle of this Bandage is fixed under either Arm, for Inſtance, the Left (*Tab.* LIX. *Fig.* 4. *a*). The two Heads are carried upwards, and interſect each other, upon the Shoulder *b*; then they deſcend obliquely, one croſs the Breaſt *c c*, the other over the Back to the oppoſite Axilla *d*; here, being croſs'd, they aſcend to the Right Shoulder *e*, where they are croſs'd again; and then the anterior Head is convey'd over the Breaſt *e f*; the poſterior over the Back, to the Left Arm *a*, where it began. The Remainder is ſpent in circular, or, rather, obtuſe ſpiral, Directions *g*, round the Thorax, traverſing each other, either before or behind, more firmly to bind the Sternum, (ſee *Tab.* LVIII. *Fig.* 21. *d d*) till the whole diſorder'd Part of the Thorax is thus inveſted. The ſame Kind of Bandage may be applied after the Amputation of a cancerous Breaſt: But obſerve to fix it upon the Wound and Dreſſings in ſuch a manner as to prevent an Hæmorrhage; which may be done by changing the Ends, and croſſing them upon the affected Breaſt, after the firſt Round.

Bandage for the Ribs and Spine.

As to Fractures and Diſlocations of the Ribs and Spina Dorſi, after Reduction, and ſecuring with Splints of Paſte-board, and Compreſſes dipt in warm Spirits of Wine, you may uſe the Sling for the Breaſt, or the Scapulary with the Napkin, deſcribed above.

Of Bandages for the Abdomen, and Private Parts.

The Napkin and Scapulary are, at this time, the moſt uſual Bandage for the Abdomen, after a Wound, Suture, or Paracenteſis, and, indeed, the moſt commodious, applied in the Manner we have already deſcrib'd (ſee *Tab.* XXIV. *Fig.* 1. B, C). But the Scapulary muſt be longer for the Abdomen, than the Thorax; as is evident from the Make of the Body.

Circular Bandage of the Abdomen.

The Antients, and ſome Moderns, uſe a ſingle or double-headed Bandage, about twenty-four Feet long, and four Fingers broad, for Diſorders in the Abdomen. They begin upon the upper Part, and continue two or three circular Rounds, and then go downwards ſpirally, till they have ſecured the affected Part and Dreſſings: They pin, or ſew, the End; and then faſten it to a Scapulary, that it may not ſlip. The Quadriga (*Tab.* LIX. *Fig.* 4.) may be commodiouſly applied on theſe Occaſions, with this Difference, that, after making the Turns *a*, *b*, *c*, *d*, *e*, *f*, the Round *g* muſt be circular, or ſpiral, about the affected Part of the Belly; ſo that there is no Neceſſity for a Scapulary, as the Circles ſupply its Place.

Uniting Bandage of the Abdomen.

Longitudinal Wounds of the Abdomen, if not very large, are often ſucceſsfully healed by the Uniting Bandage, without Suture. This Bandage ought to be twenty-four Feet long, and four Fingers broad. In the Middle there is an Aperture, about four Fingers-breadth long; the Ends are rolled up with two Heads (ſee *Tab.* XXVI. *Fig.* 8.). The Method of uſing it may be very eaſily learn'd from what has been ſaid of the Uniting Bandage for the Forehead (*Tab.* LVIII. *Fig.* 3.). The Slit is plac'd upon the Wound; one Head carried round, and then paſſed round the Aperture, and drawing the two Heads tight, the Lips of the Wound are joined; then conveying them both to the Spine, they are there croſs'd, and brought round again to the Wound, where they traverſe each other, and approximate the Lips. This Bandage is continued till the Whole is ſpent; then it is pin'd or ſew'd.

Bandage for the Omphalocele.

For the Umbilical Hernia, take a Leathern or Cotton Belt, either round, (as in *Tab.* XLV. *Fig.* 6. A) or ſquare (as *Tab.* LIX. *Fig.* 5. *a*); after reducing the Hernia, place it upon the Navel; then faſten it round the Abdomen, either by the Strings B B, or the Buckle C, (*Tab.* XLV. *Fig.* 6.) or any other Way. But leſt the Belt B B, (*Tab.* LIX. *Fig.* 5.) eſpecially in fat Perſons, ſhould ſlip, you muſt faſten it, both before and behind, to the Scapulary C, made of ſtrong Linen; and, to prevent its ſliding upwards, faſten it with a Piece of Linen, or Calicoe, with two Heads, under the Compreſs A; this, being brought round the Nates, on each Side of the Scrotum, is faſtened to the Belt B B, near the Groin, by Pins, or Suture.

The T *Bandage for the Scrotum, &c.*

The uſual Bandage for Fiſtulæ, or Abſceſſes of the Anus, a Fracture of the Os Sacrum, a Diſlocation of the Os Coccygis, violent Hæmorrhoids, after cutting for the Stone, or any other Wound or Diſorder of the Perinæum, is the T Bandage of *Heliodorus* (See *Tab.* XXIII. *Fig. b.* and *Tab.* LVIII. *Fig.* 10, 11.). After having applied proper Dreſſings, the tranſverſe Head of the Bandage (*Fig.* 14. *a a*) is carried round the Belly; and the perpendicular Part hangs down upon the Os Sacrum *b*, and betwixt the Thighs *d d*, and from thence aſcends to the tranſverſe Part, to which it is tied in a Knot, near the Groin. This Bandage is, alſo, ſuitable to the Hydrocele, Sarcocele, and other Tumors of the Scrotum and Groins, or an Inflammation of the Teſticles, where, however, the tranſverſe Part (*Fig.* 7, 8, 12. *a a*) muſt be fixed in ſuch a Manner, that the Perpendicular *b b* (*Fig.* 6, 7, 8, 9, 10, 11, 12.) may retain the Dreſſings upon the Groin, (*Fig.* 7. *b*) or upon the private

vate Parts (*Fig.* 8, 12. *b b*); and then, being brought between the Thighs, be tied, either on the hinder Part of the Body, (as in *Fig.* 7.) or the Side of the Thigh, (as in *Fig.* 8, 12. *b b*) or the anterior Part of the Belly (as in *Fig.* 12. *c c*, *d*). In many Caſes it may be proper to apply the Scapulary, without the Napkin, for the better Security of this Bandage. The Figure of the T Bandage varies, according to particular Uſes: For that of *Fig.* 6. is proper for the Groin (ſee *Fig.*7.); that of *Fig.* 9. for the Scrotum; that of *Fig.*10, 11. for any Diſorders in the Breaſt, Anus, Scrotum, and Perinæum; and that of *Fig.* 13. is generally uſed for Tumors of the Scrotum; and, therefore, called *Bourſe*, or *Sacculus*, for the Scrotum.

Arnaud's *Bandage for the Anus.*

There is a new Bandage for Fiſtulæ and Abſceſſes of the Anus, invented by *Arnaud*, a *French* Surgeon, and recommended by *Garengeot*. Firſt, the Scapulary, (as in *Tab.* XXIV. *Fig.* 1. *c*) but longer, ſo that it may reach down to the Bottom of the Belly, is applied round the Body, with the Napkin B; then, near the Joining of the Napkin and Scapulary, upon the Back, (ſee *Tab.* LIX. *Fig.* 14.) in the Interſtices *a a*, you muſt ſew three or four Strings of Tape. Then take another Band, of more than four Feet long, and ſix Fingers broad; ſlit this up, ſo as to leave not above two Hands-breadth whole at one End, like *b* in the ſame Figure; upon the Sides of this *c c* ſew three or four other Pieces of Tape, which are to be tied in ſingle Knots, to the Strings of the Napkin *a a*; theſe the Patient may untie, and renew the Bandage, at his Pleaſure, without any Trouble. After proper Dreſſings, the before-mentioned Strings of each Bandage are to be tied in Knots about the Back *a a* and *c c*; then the two ſlit Ends *d d*, being paſs'd over the Anus, betwixt the Thighs, aſcend, and join the Napkin, one on the Right, the other on the Left Side of the Abdomen. Laſtly, if there be a profuſe Diſcharge of Blood after the Inciſion, which ſometimes happens, let an Aſſiſtant preſs the Part cloſely, with his Hand, for an Hour or two. The chief Advantage, aſcribed to this Bandage by *Garengeot*, is, that it adheres ſtrongly to the Body, and retains the Compreſſes firmly, by means of the Scapulary, upon the Shoulder. But I think the T Bandage (*Fig.* 11.) will anſwer all the ſame Purpoſes; eſpecially if the Whole, or, at leaſt, the tranſverſe Part, which is fixed upon the Abdomen, be made of Ticking.

The Knotted Bandage for the Perinæum.

As few of the preceding Bandages ſeemed to me, ſays *Heiſter*, capable of checking an *Hæmorrhage*, after cutting for the *Fiſtula* of the *Anus*, or a Stone, and none of our Writers, tho' there are frequent Inſtances of Patients being loſt by it, have propoſed any, I thought it might be worth while to contrive one; and, upon mature Deliberation, I think the following will prove effectual. Take a double-headed Bandage of twenty-four Feet long, and three Fingers broad. After Dreſſing the Wound with Doſſils of Lint, and thick Compreſſes dipt in *Alcohol of Wine*, as in other profuſe Bleedings, fix the Middle of it upon the *Perinæum*; then bring the anterior Head over the Left Groin, (*Tab.* LVII. *Fig.* 15.) from *a* to *b*, over the *Os Ilei c*, and the poſterior between the *Nates*, to the ſame Place, where you muſt tie and croſs them; then bring the anterior Head over the *Abdomen d*, and the poſterior directly croſs the Back or Loins to the Right *Ileum e*; and there croſſing them again, the anterior muſt deſcend over the Right *Inguen f*, and the poſterior over the Right Buttock to the *Perinæum*; here they traverſe each other, and are exchanged, ſo as to form a kind of Knot, like the Bandage for *Arteriotomy* (ſee *Tab.* LVIII. *Fig.* 7. *c*). Hence they aſcend again over the Left Groin and Buttock, *a*, *b*, *c*, continuing in the ſame Direction, as before, always obſerving to fix your Knots upon the *Perinæum*, after cutting for the Stone; and upon the *Anus*, after cutting for a *Fiſtula* in the *Anus*. This may properly be denominated the *Knotted Bandage* for the *Perinæum*, as it inveſts the Part ſo cloſely. If a tighter Bandage be thought neceſſary, after the firſt Circle over each *Inguen* and *Ileum*, and a ſecure Knot upon the *Perinæum*, the anterior Head may be carried obliquely from the Left Groin *a*, over the *Abdomen* and Right Shoulder, in the Courſe of the prick'd Line, and the poſterior brought over the Back to the ſame Place: They are there decuſſated, and carried down again, in the ſame Direction, to the *Perinæum*; and there again they form a Knot, after which they aſcend in the ſame manner by the prick'd Line *g*, *d*, *i*, to the Left Shoulder; there they are exchanged, and go, in the ſame Direction as before, to the *Perinæum*, where they are formed in a Knot, the better to compreſs the bleeding Veſſels. Laſtly, you muſt continue thoſe Circles, which go only from the *Perinæum*, to the *Ilea*, and round the Belly, till the Whole is ſpent; then faſten it well. But, if you follow the laſt Method, you ought to have a Roller thirty-two Feet long, to allow for thoſe large Turns.

Spica Inguinalis.

There is a peculiar Kind of Bandage, called *Spica Inguinalis*, for the Cure of Inteſtinal *Hernias*, the *Bubonocele incarcerata*, a Diſlocation of the Thigh, and a Fracture of the *Os Ilei*. It may be differently uſed, like the *Spica* for the Shoulder, and is either ſingle or double-headed. The ſingle-headed Roller muſt be twenty-four Feet long, and three Fingers broad. The End is placed on the *Os Ilei* of the ſound Side (*Tab.* LIX. *Fig.* 16 *a*). Hence the Head of the Roller paſſes round the Bottom of the Belly *b b*, and the Hip *c*; then, going to the back Part of the Thigh, comes up between the Thighs at *d*, and is conveyed over the Compreſs at the Groin *e*. When this is done, you muſt carry it over the Back to its Beginning. This muſt be repeated, as often as the Bandage will permit; or, after three Repetitions of the firſt Courſe, you may ſpend the reſt circularly about the *Abdomen* for Security; then faſten it with a Suture, and pin the Bandage and Compreſs together, on the Groin, with two or three Pins, leſt the Compreſs ſhould ſlip, or the X, made there, change its Poſition, which it will do, unleſs you pin it very well. But after an Operation for the *Hernia incarcerata*, if by any means you have wounded the *Scrotum*, or were oblig'd ſo to do, having repeated the firſt Courſe three times, you may pin the Bandage at the Left Groin; then bring it up under the *Scrotum f*, by the Right *Inguen g*, to the Left *Inguen d*, *e*; then pin it once more. This muſt be frequently repeated to retain the Dreſſings. This Bandage, when applied to one Groin only, is called the *Spica inguinalis ſimplex*.

Simple Spica with two Heads.

This *Spica* may be made commodiouſly with two Heads, twenty-four Feet long, and three Fingers broad. Its Middle is placed upon the Right Hip *a*, *Fig.* 16. From thence the two Heads are carried round, one before, and one behind, to the other Hip *c*; there they are croſſed, and paſſed down to the *Perinæum d*, where, being changed again, they are brought to the Hip *c*, and there croſs'd a ſecond time, and from thence round the Back and Abdomen, to the other Hip *a*. This is to be continued, till the Bandage is ſpent; or you may place the Middle at the *Perinæum d*; from hence the Heads aſcend obliquely to the Hip *c*, from whence they paſs before and behind to the other Hip *a*, repeating the ſame Courſe, till your Roller terminates; then faſten it by Pin or Suture.

The double Spica Inguinalis.

The *double Spica Inguinalis* is applied on each Side, when there is a Diſorder in both Groins. This Bandage is double-headed, twenty-four Feet long, and three Fingers broad. Its Middle is generally fixed to the Back upon the Loins, and brought round the Body to the anterior Part of the *Abdomen*, where the Ends are changed; then they go round the Outſide of the Thighs, paſs under the Buttocks, and aſcend on each Groin; there, having ſecur'd the Dreſſings, they aſcend over the *Oſſa Ilia* to their Beginning, where the Heads are again changed, and brought round to the *Abdomen*, where they are again changed, and then they deſcend on each Side of the *Scrotum*, and go round the Buttocks to each Groin, and ſo to the *Abdomen*, where they are again changed; and then they aſcend the *Oſſa Ilia*, as before, to their Beginning. This Direction muſt be repeated often, and the Ends faſtened with Suture. This Bandage may alſo be uſed in the ſame manner as the knotted Bandage deſcribed above for the *Perinæum*, omitting the Knot between the Thighs. Its Middle is then applied to the *Perinæum* (ſee *Tab.* LIX. *Fig.* 15. *a*); the Heads aſcend on each Side in the Courſe *b*, to the Hip *c*; then croſſing, they paſs round the Body to the oppoſite Hip *e*, and from thence deſcend by the *Inguen*, *f*, *g*, to the *Perinæum*, where croſſing again, they return in the ſame Courſe *f*, *g*, to the Hip *e*, and from thence round the Body to the other Hip *c*, till at laſt they return over the Left Groin *b*, to the Place where they began. Repeat this till your Bandage is ſpent; then faſten it. The *double Spica Inguinalis* may be applied for a Diſlocation of both the Thigh-bones, or a Fracture of both their Necks, or after the Operation for Ruptures on both Sides.

Bandage for Bubos.

The T Bandage is uſually applied to *Bubos*, and other Tumors, in the Groins, or elſe that deſcribed (*Tab.* LIX. *Fig.* 6.) uſed much after the ſame manner. But as one of the tranſverſe Heads *a a* is ſhort, it is fixed in ſuch a manner upon the Belly, that it faſtens on one Side, that the Patient may tie or untie it without any Trouble. The largeſt Part *b* deſcends over the *Inguen*, betwixt the Thighs, and is reflected back over the *Nates*, to the tranſverſe End, to which it is tied upon the Loins on one Side. We have (in *Tab.* LIX.) repreſented only the Bandage adapted to the Left Groin; but this, if turned on the other Side, will be proper for the Right. The ſame Courſe is to be obſerved as before.

Bandages for the Scrotum.

There are frequent Occaſions for Bandages to the *Scrotum*, not only to retain Cataplaſms on an *inflam'd Scrotum*, or ſwell'd Teſticles, but alſo, in many *Hernias*, the Cure principally depends upon a proper Application of them. The Surgeons uſe three Sorts: 1. The moſt commodious is the T Bandage. The perpendicular Part muſt be about two Hands broad, with an Aperture to receive the *Penis* (ſee *Tab.* LIX. *Fig.* 9.) *c*, and the End ſlit up, till it reaches within two Hands-breadth of the tranſverſe Part, ſo as to form the two Heads *b b*. When therefore the tranſverſe Part has been brought round the Body, the *Penis* tranſmitted through the Hole *c*, and the two Heads *b b* have interſected each other on the *Perinæum*, the *Scrotum* and Dreſſings are retained ſecurely, if the Extremities *b b* are reflected back over each Thigh, and tied on the Hip (ſee *Fig.* 8. *c*). 2. Sometimes a four-headed Bandage, of four Feet long, ſix Fingers broad, and ſlit up at each End, is proper to retain the Dreſſings and Compreſſes on the *Scrotum*. The entire Part is placed upon the *Scrotum*, with two Heads tending upwards; the other two downwards. Let the *Penis* be tranſmitted between the two ſuperior Heads, which come upon the ſound Part, and then, going round the Body, are tied upon the Loins; while the inferior, traverſing each other upon the *Perinæum*, are brought forward over the Buttocks; that of the Right Side to the Left Groin, and that of the Left to the Right, (ſee *Fig.* 12.) and then tied. Laſtly, ſome Surgeons make uſe of a Bandage reſembling a Purſe (*Gall. la Bourſe*). It is made of ſtrong Linen, with four Heads, proper Strings, and Holes to receive thoſe Strings (ſee *Tab.* LIX. *Fig.* 13.); A A is the Purſe for the *Scrotum*; B B is the two Swaths, which, ſurrounding the Body, are tied by the Strings *b*; the *Foramen* C tranſmits the *Penis*, and the two inferior Heads D D are convey'd between the Thighs, and by the *Nates*, up to the Hips, where they are tied by the Strings E E, in the Eyelet-holes *d d*, and are thus faſten'd to the ſuperior Part B B. Some term this the *Suſpenſor* of the *Scrotum*. *Gall.* SUSPENSOIRE.

All the Bands here, except the Bag-truſs, ſeem to be very ill adapted; and as that is ſubject to gall, none is found ſo uſeful as the Purſe, which is a Piece of Linen or Woolen Cloth, according as the Caſe requires, made round, to receive the *Scrotum*, with the Dreſſings, if any be, and a Perforation for the *Penis*; To each Side of this is ſewed a Piece of broad Filleting, about a Yard and half long, each End paſſing from the Purſe over the *Oſſa Ilia*, croſſing on the Back, then brought forward, and tied on the *Abdomen*; with this you may ſuſpend the *Scrotum* much higher than you can with the others; and it has this Advantage, of ſitting eaſy, and not galling in walking, as the other always does.

As to Bandages for Ruptures, ſee BUBONOCELE and HERNIA.

Bandage for the Penis.

The little Bandage uſually applied to the *Penis* for Wounds, Abſceſſes, Phlebotomy, a *Phimoſis*, and other Diſorders, is about two Feet long, and an Inch broad; one End is perforated about an Inch long, and the other is ſlit up about the Diſtance of two or three Inches, according to the Size of the *Penis* and Dreſſings; then the ſlit End is tranſmitted through the oblong Aperture, which we ſuppoſe to lie on the upper Side of the *Penis*; and theſe Ends, coming one on one Side, and one on the other, from below, inveſt the *Penis* and Dreſſings in a kind of Sling; then roll up the two Ends moderately round, in oppoſite Directions; and faſten them, where they terminate, with a Knot or Suture. For an Abſceſs of the *Glans*, or *Præputium*, it is propereſt to apply a Compreſs and Plaiſter, in the Shape of a *Malta* Croſs, with an Aperture for emitting the Urine, large enough to contain the *Glans* and Dreſſings. Laſtly, in a preternatural Rigidity and Inflammation of the *Penis*, which often happen in a *Priapiſm*, *Paraphimoſis*, and *Gonorrhœa*, ſome very juſtly recommend the putting the *Penis* in an oblong Linen Bag fitted to it, which may be tied by two long Strings, either round the Waiſt, or upon the Groins.

Of Bandages for the Arm.

A Bandage for a fractur'd Humerus.

We have hitherto treated of Bandages adapted to the Head, Neck, and Trunk; now we ſhall deſcribe thoſe for the extreme Parts of the Body, the Arms and Legs. In a Fracture of the *Os Humeri*, after Reduction, apply a Linen Cloth, an Hand's-breadth, and a Span long, ſlit into four Heads, (ſee *Tab.* XXIII. *Fig.* 18.) expreſs'd out of warm Wine or *Oxycrate*, ſo that the Heads may exactly meet, the one oppoſite to the other, on the Fracture; then take a Bandage twenty-four Feet long, and about three Fingers broad, with one Head; paſs this thrice round the fractur'd Part, immediately above the former; then aſcend, by degrees, in obtuſe ſpiral Directions, (*Gall. Doloires*) up to the Shoulder; and, after making a Circumvolution round the *Thorax*, and under the Arm of the ſound Side, (which ſome omit) return to the affected Shoulder; then deſcend gradually in the like ſpiral Courſe, till your Roller again forms three Circles upon the fractur'd Part. Before Application moiſten your Bandage with warm Wine, *Spirit of Wine*, or *Oxycrate*, in order to retain the Fracture more firmly. The Roller at laſt muſt deſcend ſpirally to the Elbow, ſo as to form two or three ſpiral Circumvolutions round it below its Flexure, leaving the *Olecranum* diſengaged, and free for Motion; by which means it will adhere more firmly to the Part. After this you lay four Splints, ſix or eight Fingers long, and two broad, according to the Length of the Bone, upon the Fracture, at equal Diſtances, firſt moiſtening them with warm Wine or *Oxycrate*; then you proceed again ſpirally from the Elbow to the fractur'd Part, where having form'd three Circles, your Bandage muſt aſcend in ſpiral Directions to the Shoulder. If the Splints are well cover'd, and there is ſtill a Remainder, that muſt deſcend ſpirally, though at greater Diſtances, upon the Arm, for the better Security of the former Rounds, pin it where-ever it terminates. Laſtly, it is uſual to apply three or four Plates, of about a Span long, and two or three Fingers broad, made of Wood, Steel, or thin Braſs, though commonly of ſtiff Paſteboard, according to the Length of the fractur'd Arm (ſee *Tab.* LII. *Fig.* 17. *a a a*); theſe Plates are tied with three Tapes, about two Feet long, beginning firſt with the middle String; let the Knots be upon the external Part of the Arm, for the greater Conveniency of tying and untying them. See *Tab.* LIX. *Fig.* 17. *b b b*.

Treatment after the Bandage.

Having thus completed the Deligation, the Arm is to be ſuſpended in a Sling, (*Gall. Eſcarpe*) and inflected ſo that the Hand may come over the *Scrobiculum Cordis*. If the Fracture be oblique, it is more proper for the Weight of the Arm to be leſs ſupported, leſt the lower Fragment ſhould ride over the upper; but, if it is tranſverſe, the Sling ſhould be ſhorter: For this Uſe, a large fine Napkin is proper, folded in ſuch a manner, that the Middle *c c c c* may ſuſtain the Elbow of the fractur'd Shoulder, and its Extremities be tied about the Neck at the Knot *d* upon the ſound Shoulder. Some Surgeons, inſtead of one long Roller, uſe three ſhort ones, for a fractur'd *Humerus*: The firſt eight Feet long, or, according to ſome, but ſix; the next ſix; and the other ſix and an half. The firſt is ſpent in aſcending Revolutions, the ſecond in deſcending, and the third in Circles about the Fracture itſelf. This Method is convenient enough. Some apply the Plates deſigned for retaining and ſtrengthening the Bone, upon the Compreſſes; and ſpend the third Bandage, or laſt Part of the long one, in ſecuring them upon the Part. This likewiſe will anſwer the End propoſed. Obſerve, the firſt Bandage ſhould not be taken off, unleſs upon ſome extraordinary Occaſion, before the fourth or fifth Day; nor the ſecond till the eighth; nor the third till the twelfth or fourteenth, when the Fragments of the Bone may be ſuppoſed to cohere firmly; which, as Experience ſhews us, is completed in this Bone within forty Days.

How to prevent an Anchyloſis.

After the Bandage has been renew'd a third time, the Arm muſt be gently bent, to prevent an *Anchyloſis*, or Stiffneſs of the Elbow. If it has already contracted any Degree of this Diſorder, uſe proper Ointments, Fomentations, or Cataplaſms, move the Joint often, and let the Patient ſwing round a Weight every Day in his Hand. It is very ſerviceable, in this Caſe, to put the Arm into the Belly of an Animal juſt kill'd; becauſe this Warmth will conduce very much to reſtoring its Mobility; but, for the Uſe of aſtringent Spirits, which ſome recommend, they are very injurious.

When the Fracture is near the Humerus.

If the Fracture of the *Os Humeri* is in its Neck, or near the Shoulder, the Caſe is dangerous, and the preceding Bandage will be of little or no Service. Apply therefore the *ſimple Spica* recommended above, with this Difference, that the Deligation about the Shoulder be more exact and firm. PETIT, *Lib. de Morb. Oſſ.* thinks the Bandage of eighteen Heads (ſee *Tab.* XXX. *Fig.* 9.) adapted to this Fracture; but this will not ſufficiently retain the fractur'd Parts.

Bandage for a fractur'd Cubit.

For a Fracture of the lower Arm or Cubit after Reduction, according to the Directions given under the Article *Fracture*, apply cloſely round the Fracture a Linen Cloth of a Span long, and an Hand's-breadth, ſlit on each Side, as we deſcribed for a fractur'd *Humerus*, (ſee *Tab.* XXIII. *Fig.* 18.) dipt in *Oxycrate*, or Spirit of Wine; after this apply two thick Compreſſes, in Length almoſt equal to the *Ulna*, one on each Side over Splints of equal Length, made either of Wood or thick Paper: Then fix a ſingle-headed Roller, of about eight Feet long, and three Fingers

broad,

board, upon the Compreſſes and Splints, or, if you omit the Splints, upon the Compreſſes only; which, after forming two or three circular Rounds about the fractur'd Part, muſt aſcend gradually in a ſpiral Direction above the *Cubit*, and there form two or three more Circles, before it terminates; then, upon the End of this, you fix another Roller, faſtening it by a circular Turn or two, which deſcends by degrees ſpirally down to the Hand; and, taking in the Thumb, as in a Loop, is drawn back to the *Carpus*; and there, after forming a Circle or two, is pin'd. You are next to take two Splints of thick Paſteboard, almoſt the Length of the *Ulna*, and broad enough to inveſt the Part; and, dipping them in *Spirit of Wine* or *Oxycrate*, place them, one on the Outſide, and the other on the Inſide, of the Elbow; theſe are to be retain'd by a Bandage twelve Feet long, and almoſt three Fingers broad, which is fix'd to make ſome circular Rounds about the Middle; then aſcend ſpirally to the Flexure of the *Cubit*, and then deſcend again. The Extremity muſt be pin'd or ſew'd; though there is no Objection againſt retaining this Bandage by three or four Strings, as repreſented (*Tab.* LIX. *Fig.* 17. *bbb*) for the *Os Humeri*. There are Surgeons, who, after the Deligation, uſe but one Paſteboard-ſplint, in which they place the Arm, as in a Trough. This, they think, promotes Agglutination (ſee the Repreſentation, *Tab.* XXIX. *Fig.* 8. and the Application, *Tab.* LIX. *Fig.* 17. *ee*). When theſe Directions have been follow'd, the Arm muſt be ſuſpended in a Sling about the Neck (ſee the ſame *Fig. cccc*). Thus a Fracture of the *Cubitus* may be perfectly cur'd within thirty Days.

Bandage for a fractur'd Carpus.

For a Fracture of the *Carpus*, after Reduction, apply round the Part, in three circular Turns, a ſingle-headed Roller, twenty or twenty-four Feet long, and two Fingers broad; then carrying it between the Thumb and fore Finger, from the Back of the Hand into the Palm, from thence reflect it over the Ball of the Thumb, and back Part of the *Carpus*, (by which Turn the Bandage reſembles the Letter X, immediately above the Thumb) rolling it thrice round the *Carpus* again; after this, it muſt aſcend ſpirally above the Juncture of the Elbow; then, having fix'd two Compreſſes, one on the Outſide, and the other on the Inſide of the *Carpus*, equal to its Breadth, it deſcends to the Hand, to retain the Compreſſes firmly. Laſtly, you place two Paſteboard-ſplints over the Compreſſes, which muſt be bound very exactly by the Remainder. The Arm is to be carried in a Sling, as at *Fig.* 17.

Bandage for the Metacarpus.

After the Reduction of any of the metacarpal Bones, the preceding Bandage for the *Carpus* may be applied in three circular Rounds about the injur'd Part; then, paſſing it between the Thumb and fore Finger, it is carried round the *Carpus*; after which it returns to its former Courſe, by croſſing over the Back of the Hand like an X. This being thrice repeated, it is brought ſeveral times round the *Metacarpus*, and then by degrees aſcends ſpirally above the Elbow, as we ſaid. After this, you apply two Compreſſes, with Paſteboard-ſplints, one to the Palm, the other to the Back of the Hand, (ſee *Tab.* LVII. *Fig.* 5.) which are bound tight by the Remainder.

Bandage for a Luxation of the Cubit.

For a Diſlocation of the Elbow, after reducing it, a Linen Cloth dipt in *Wine*, *Spirits of Wine*, or *Oxycrate*, and ſlit, (as in *Tab.* XXIII. *Fig.* 18.) muſt be applied round the Flexure of the Elbow. Then take a ſingle-headed Bandage, about twenty Feet long, and two Fingers broad; with that make two Circles above the Bending of the *Cubit*, as after Phlebotomy, and likewiſe two under it; then let your Roller aſcend again obliquely up the Inſide of the Arm, and interſect the former; after which, make two more circular Rounds about the lower Head of the *Humerus*, ſo that your Bandage may reſemble the Figure of 8. This done, the whole Arm is to be rolled up in a large Linen Cloth dipt in warm *Spirit of Wine* or *Oxycrate*, and inveſted ſpirally by a Roller. Though ſome are of Opinion, that this long Linen Cloth is entirely needleſs, ſince the Cure may be performed by a ſimple ſpiral Bandage continued up and down the Arm, after it is moiſten'd with the forementioned Liquors; but it may be of Service to prevent Tumors and Inflammations. Laſtly, after this Deligation, the Arm ſhould be ſuſpended in a Sling; but, to prevent a Stiffneſs, let it be ſometimes gently bent and extended.

Bandage for a Luxation of the Carpus.

For a Diſlocation of the *Carpus* after Reduction, the preceding Bandage, carried thrice round the affected Part, will prove commodious; then paſſing it between the Thumb and fore Finger, go backwards round the Ball of the Thumb, traverſing it on the Back of the Hand, and carrying it in a circular Turn round the *Carpus*; after repeating this ſeveral times, bind the *Carpus* with two thick Paſteboard-ſplints, about two Hands-breadth long; then put a Ball in the Patient's Hand, to extend his Fingers; all which are to be ſecur'd by ſpiral Turns above the Elbow, to prevent Tumor and Inflammation.

Bandage for Bleeding in the Arm.

After bleeding in the Arm, the Bandage ſhould be four, or rather ſix Feet long, and two Fingers broad: It is variouſly applied; but, in my Opinion, the beſt way is, to fix its End upon a ſquare Compreſs, which covers the Orifice; and let about a Span of it hang down above the Outſide of the Flexure of the Elbow; then it deſcends obliquely over the Inſide of the Arm, and, forming a Circle below the Bending of the *Cubit*, aſcends again obliquely to the ſame Place, and reſembles a Figure of 8: The Turns interſect each other in the Middle of the Flexure: This Courſe of the Figure of 8 is to be repeated, till the Bandage is near ſpent; then the Ends are to be tied on the Outſide above the Elbow (ſee *Tab.* XXIV. *Fig.* 1. D). If a String is faſten'd to each End, as is frequent in *Germany*, the Deligation may be very neat; for they make but a very ſmall Knot, and the Roller need not be above four Feet long. The Method of Application is the ſame.

Bandage for a Puncture of the Artery in Bleeding.

For a Puncture of the Artery in opening the Vein of the Arm, let the Patient bleed *ad deliquium*; then fix two or three Compreſſes, in one of which put a Piece of Money, for the greater Preſſure of the Bandage upon the affected Artery; after this, take a ſingle-headed Bandage, of twenty or twenty-four Feet long, and two Fingers broad; and, rolling it two or three times above the Elbow, you proceed as after Phlebotomy, but bind it ſomething tighter. Having made five or ſix Turns like a Figure of 8, apply a narrow oblong Compreſs from the Bending of the Elbow to the Axilla, on the Inſide of the Arm, ſo as to lie exactly on the primary brachial Artery; then your Roller muſt aſcend gradually, by pretty thick ſpiral Turns, to the Top of the Shoulder, to ſuppreſs the Flux of Blood through that Artery; from thence paſs it obliquely over the Breaſt, under the oppoſite *Axilla*; and, bringing it round again to the Shoulder of the injur'd Arm, deſcend upon the Arm in ſpiral Turns, contrary to the preceding. Faſten it where-ever it terminates. If you have not a Bandage of a proper Length ready, apply a ſhorter, and let an Aſſiſtant compreſs the Wound and brachial Artery with his Hand; for too long Delay would expoſe the Patient to a dangerous Hæmorrhage; for there is no Objection to applying the long Roller over the ſhort one, with proper Compreſſes, and in the manner directed. After Deligation, the Arm muſt be ſuſpended in a Sling about the Neck, (as at *Tab.* LXI. *Fig.* 17.) without the Trough *ee*. Let the Patient abſtain from Motion, heating Diet, and ſpirituous Liquor.

Bandage for an Aneuriſm.

The preceding Bandage may be applied to ſmall *Aneuriſms*, both where the Operation is neceſſary, and alſo where Bandage alone is ſufficient. Firſt compreſs the Tumor with your Finger, ſo that the extravaſated Blood may return to the Artery; then apply an aſtringent Plaiſter, and a thick Compreſs, with a Piece of Money, or other hard Subſtance, included in it; theſe muſt be proportionable to the Size of the Arm; upon this firſt Compreſs, fix ſeveral others, in the manner deſcribed under the Article ANEURISMA. This Bandage muſt be worn a conſiderable time. *Hildanus* has given us Inſtances of Cures perform'd in this manner, in *Centur.* III. *Obſ.* 43, 44.

Bandage for Phlebotomy in the Hand.

After opening a Vein in the Hand, particularly the *Saluatella*, apply two ſmall Compreſſes, and carry your Roller above four Feet long, without any Strings, in two Circles, round the *Carpus*; then over the Back of the Hand, between the Ring and little Finger; next reflect it back again, between the firſt and middle Finger, to the other Side of the *Carpus*, croſſing like an X. This Direction round the Ring Finger and *Carpus* muſt be thrice repeated; and then, making as many Circles round the latter, as the Bandage will permit, faſten it.

Bandage for a burnt Hand.

After the Application of Remedies proper for a Burn, take a Bandage, twenty-four Feet long, and an Inch broad; carry it in two Circles round the *Carpus*; hence croſs the Palm of the Hand to the little Finger, which is firſt to be inveſted by ſpiral aſcending Turns; and then, by deſcending from thence, paſs it to the Ring Finger, which is to be cover'd in the ſame manner; and then to the middle and fore Finger (ſee *Tab.* LIX. *Fig.* 18. *a*, *b*, *c*, *d*). After this, convey it in ſeveral Circles round the *Metacarpus*, betwixt the Thumb and fore Finger *eee*; having thus involved the *Metacarpus*, inveſt the Thumb *f*, as you did the Fingers; then the inferior Part of the *Metacarpus* is to be inveſted in ſpiral Circles *ggg*, and the Remainder to terminate circularly upon the *Carpus h*, where it began.

Bandage for a Fracture of the Thumb.

For a Fracture of the Thumb after Reduction, take a ſingle-headed Roller, an Inch broad, and ſix or eight Feet long; faſtening this with two circular Turns round the *Carpus*, carry it to the fractur'd Part, and inveſt that by three Circles; then fixing two Splints of thick Paſteboard, one on the Inſide, the other on the Outſide of the Thumb, form three more Circles upon that. Laſtly, bring your Bandage to the *Carpus*; and, after two or three Rounds, faſten it. If both Internodes of the Thumb are fractured, uſe the ſame Roller, with this Difference only, that you repeat the Circles on each Fracture ſeparately, and extend the Splints over each Joint.

Bandage for a fractur'd Finger.

For a Fracture of the Finger, apply the preceding Bandage in the ſame manner, only obſerving to bind the next ſound Finger to the fractur'd, which will ſupport it, till the Fragments are united.

Bandage for ſeveral fractur'd Fingers.

For a Fracture of ſeveral Fingers, after Reduction, with a Bandage twelve Feet long, and two Fingers broad, make two circular Turns about the *Carpus*; from hence carrying it over the Back of the Hand to the fractured Fingers, bind it round each Finger ſeparately, as in the preceding Bandages, and afterwards bind it round them all, ſo as to leave no Part uncovered; then put a proper Piece of that thick Paſteboard into the Palm of the Hand (ſee *Tab.* LVII. *Fig.* 5.) and bind it tight: Though ſome direct to retain the Fingers a little inflected, by putting a Ball into the Patient's Hand, which is alſo to be bound tight. But whatever Method you take for ſupporting the Fingers, the Roller muſt always paſs from each Finger, after it is rolled up to the Carpus, round which give it a Turn, and then proceed and roll up the next, and then place the Hand in a Sling, faſtened about the Neck.

Bandage for diſlocated Fingers.

Diſlocated Fingers in general may be eaſily cured by Extenſion, without any Bandage. But if, through Neglect or Weakneſs of the Joint, a Bandage ſeems requiſite, uſe the following Method: Take a Roller, ſix Feet in Length, and a Finger in Breadth, and make two circular Rounds about the *Carpus*, as in Fractures; then bring it over the Back of the Hand to the luxated Finger; there bind it about the affected Joint, and, croſſing it, let it return to the *Carpus*; this being thrice repeated, faſten it about the *Carpus*, where it terminates. If more Fingers than one are diſlocated, let each be bound up ſeparately, in the ſame manner. The *French* call this Kind of Bandage, *le demi Gantelet*, the half Glove, as it covers the Hand only, without the Fingers.

Bandage for an amputated Finger.

When Part of a Finger has been cut off by Accident, or on account of a Mortification, *Sphacelus*, or *Caries* of the Bone, after the Application of proper Remedies, uſe the Bandage directed for the Penis, *viz.* firſt ſome ſcraped Lint, then a Plaiſter and Compreſs in the Form of a *Malta* Croſs (ſee *Tab.* XXIII. *Fig. e*); then bind a Fillet a Foot long, and a Finger broad, (ſee *Tab.* XXIII. *Fig. e*) round the affected Part.

Bandage for an Amputation of the Hand or Cubit.

After an Amputation of the Hand or Elbow, having applied proper Remedies, Lint, and Compreſſes, a Bandage, with two unequal Heads, twenty or twenty-four Feet long, and three Fingers broad, muſt be fixed about an Hand's-breadth above the mutilated Place *c* (*Tab.* LIX. *Fig.* 19.): then make three or four Circles, to ſecure the Dreſſings *a* upon the Wound; next carry one of the Ends from *c* over *d*, and aſcend on the other Side, croſſing it by the other End, which binds it down, and continues moving round the Limb; after this, the firſt Head is returned obliquely over the Stump to its Beginning, as in the *Capeline* for the Head and Clavicle. This Courſe muſt be repeated, till the affected Part and Dreſſings are well-covered and ſecured; the Extremity of the ſhorter Head muſt be faſtened by the ſpiral Rounds upward and downward of the longer, faſtening the laſt, where-ever it terminates, by Suture. Always obſerve to tighten this Bandage, which will retain the Dreſſings more firmly upon the affected Part, and, by its Compreſſure, prevent Bleeding. When the Surgeon has performed his Office, let the Patient be put into Bed, and the affected Limb laid upon a Pillow: Further, an Aſſiſtant ſhould hold the Parts with his Hand, till there is no Danger of an Hæmorrhage. Laſtly, when the Patient is allowed to leave his Bed, the affected Arm ſhould be ſuſpended in a Sling about the Neck, (ſee *Fig.* 17. *c c*) till the Wound is healed.

Bandage for an amputated Arm.

When the Arm is cut off above the Elbow, after tying up the Arteries, the Deligation muſt be performed almoſt in the preceding Manner: But, in this Caſe, your Roller muſt be twenty-four Feet long, and fixed upon a narrow, thick Compreſs, which is placed on the Inſide of the Arm, upon the brachial Artery. If the Arm happens to be taken off near the Shoulder, the Remainder being but three or four Fingers-breadth long, after tying up the Blood-veſſels, you muſt uſe a Bandage thirty-two Feet long, and three Fingers broad, ſo that the Head, which, in the former croſſed over the Stump, may be brought round the *Thorax* under the ſound *Axilla*, to the amputated Part, and cloſely inveſt it; for otherwiſe the Roller will not adhere firmly, but eaſily ſlip off the Shoulder. If there is little or no Stump left, it will be proper to follow the Method we ſhall preſently lay down for an Amputation of the Arm in its Articulation with the *Scapula*.

Bandage for an Amputation at the Joint of the Shoulder.

After an Amputation of the Arm in its Articulation with the *Scapula*, proceed thus: Take a ſingle-headed Roller, forty or forty-eight Feet long, and two Fingers broad; place it under the ſound Arm, and let an Aſſiſtant hold it with his Fingers; from thence carry it over the *Thorax* to the amputated Shoulder; over that bring it back to the ſound *Axilla*: This Courſe muſt be repeated again; after which, the Roller paſſes from under the ſound Arm, over the ſame Shoulder, to the Back and affected Part; from thence over the Breaſt under the ſound Arm, and paſſing round the ſame *Humerus*, returns and croſſes upon the Breaſt: After a frequent Repetition of this Courſe, the Remainder is ſpent in Circles about the *Thorax*, and amputated Part, to retain the Dreſſings; ſew it where it terminates.

Of Bandages for the Leg and Thigh.

Bandage for a fractured Thigh.

For the Fracture of the Thigh, the Bandage muſt be different, according to the different Circumſtances, as it happens ſometimes in the Neck of the Bone, ſometimes in the lower, middle, or upper Part of it; beſides, it may be tranſverſe, or oblique, and then the Application muſt be different. If the Fracture is below the Neck of the *Femur*, either in the Middle, or towards the Knee, after following the Method propoſed under the Article FRACTURA, you muſt apply three Bandages, two of which muſt be ſixteen Feet, and the other twelve in Length; each three, or, if it is neceſſary, four Fingers broad, all of them ſingle-headed: But, before the Application of the Roller, dip a ſingle Piece of Linen, ſlit into four Heads, (as in *Tab.* XXIII. *Fig.* 18.) in warm Wine, Spirit of Wine, or *Oxycrate*; fix it round the fractured Part with the Heads croſſing each other; then a thick Compreſs of a proper Length muſt be laid upon the Thigh, to fill up the poſterior natural Cavity of the Bone, leſt without this the Bandage ſhould ſtraighten and elongate the Bone too much: Afterwards two Aſſiſtants, holding the Thigh above and below the Fracture, ſhould elevate it, while the Surgeon proceeds in the following Method: He muſt firſt fix the ſhorteſt Roller in three tight Circles round the fractured Part, as we directed for the Arm; then it aſcends ſpirally towards the Groin, and is there faſten'd, after ſome circular Turns. Next he takes one of the long Rollers, and forming three Circles more, but in an oppoſite Direction, and fixing a Compreſs thick enough to make the inferior Part equal to the ſuperior, he deſcends ſpirally to the Knee, where, after three circular Rounds, the End is to be faſten'd. It is neceſſary to obſerve, that an oblique Fracture requires a tighter Bandage than a tranſverſe. Further, he applies four Compreſſes of a Span long, and three Fingers broad, each covered with a Splint of the ſame Length and Breadth, for retaining the Fragments of the Bone, as we have directed in a Fracture of the Arm. In the next Place, the third Roller, twelve Feet long, muſt be faſtened, beginning with three circular Rounds over the Fracture, from thence aſcending by ſpiral Turns upwards, and then deſcending in the ſame manner, till the Splints are covered. The End muſt be well faſtened where-ever it terminates. Laſtly, the whole Thigh muſt be inveſted by two larger Splints of thick Paſteboard, dipt in warm Wine or *Oxycrate*, and tied with three or four Strings, as we directed for the Arm (ſee *Tab.* LIX. *Fig.* 17. *a a a*, *b b b*).

Poſition of the Femur after the Bandage.

When the Deligation is thus perfected, the next Conſideration is a convenient Poſition of the Thigh. A Linen Mattreſs, with two cylindrical Sticks covered with Straw, which the *French* call *Fanons*, the *Germans Strohlade*, and ſome a Straw-bed, ſeems to me the moſt commodious for this Purpoſe (ſee *Tab.* XXX. *Fig.* 5.). But here the two Sticks A, A, A, A, muſt

muſt not be of the ſame Length, as for the *Tibia* or Leg, for which (*Fig.* 5.) is adapted; for that which is put within the Legs, ſhould reach from the inner Ancle to the Groin, and the external one from the outward Ancle to the Hip, or, according to ſome, up to the *Axilla*; for if they are too ſhort, eſpecially in an oblique Fracture of the Thigh, it is more than probable the Patient will be lame. When the Limb is thus carefully extended, ſo that the great Toe lies in a direct Line with the *Patella*, or a little more outward, the intermediate Spaces between the Ancle and Ham muſt be filled up with Lint or Tow. Some Surgeons inveſt the whole Thigh and Leg with large Compreſſes, to ſecure the Bandage more firmly, and prevent any Injuries from the external Ligatures: Others think this ſuperfluous, and it is moſt uſual to faſten the Straw-caſe about the whole Leg and Thigh, with ſeven Strings, each a Yard long, three upon the *Tibia*, (ſee *Fig.* 20. A, B, C) three upon the Thigh, and the ſeventh, which muſt be the longeſt, upon the *Abdomen*; though, inſtead of this laſt, ſome fold a Napkin round the Belly. I ſhall obſerve with regard to theſe, not only that they ought to be put under this Straw-caſe, before the Leg is put into it, to prevent Danger by moving, but alſo the middle String ſhould be tied firſt; and laſtly, that the Knots ſhould be on the Outſide of the Bed, both for Neatneſs and Conveniency. Place the Sole of a Slipper or Paſteboard, cut into a proper Shape, (ſee *Tab.* 30. *Fig.* 6. 7.) at the Bottom of the Foot; tie it on by the three Strings *a*, *a*, *a*, ſo that thoſe two on the Sides may interſect each other (ſee *Tab.* 59. *Fig.* 20. *e*, *f*); then pin them to the Roller; but the third and and uppermoſt *g* may be faſtened to the moſt convenient Part of the Straw-caſe: Thus may the Limb be retained in its natural Poſture, and, after the Completion of the Cure, the Patient be capable of ſtanding upon his Leg. It may be proper, for preventing too hard a Preſſure of the Foot-board, to put a convenient Compreſs between that and the Sole. (See *Tab.* 30. *Fig.* 7.) Likewiſe fix a large Bolſter of Tow, made in the Form of a Ring, to admit the Calcaneum (ſee *Fig.* 8. *a*); and tie it round the Tarſus, with the Strings *b b*, to prevent an Inflammation, which often ariſes from a long Preſſure of the *Calcaneum* againſt the Bed. If this Contrivance does not ſucceed, and the inferior Part of the *Tendo Achillis* is hurt by this Sling, you muſt take a Roller, about five Fingers broad, roll'd up into two large Heads; which Heads fix with Suture about an Inch Diſtance from each other; then place them under the Ancle, ſo as the Ancle may reſt upon the Habena, between the two Heads, which will ſuſpend the Calcaneum, and keep it from preſſing upon the Bed, which is a thing of great Conſequence. Laſtly, if this ſhould prove troubleſome, as it ſometimes happens, you may put ſome ſoft Lint between them; after this, place a ſoft Pillow under the Leg and Thigh, but lower under the Thigh than the Leg. Some put a ſmooth Board under this Pillow, to keep the whole Limb, from the *Calcaneum* to the Hip, in its natural Poſture; and, leſt it ſhould decline to either Side, you muſt faſten theſe Ligatures to the middle String on the Leg, and to Nails drove on each Side of the Bedſtead; then roll up a Pair of large Sheets, and lay them on each Side of the Limb. This Method is equally adapted to Fractures of the Thigh, as well as the Leg. Laſtly, ſome apply a kind of Arch, made of a Portion of ſmall wooden Hoops, which *Scultetus* repreſents *Tab.* LVI. or half a Drum, or of a Sieve, that the Bed-clothes may not preſs upon and hurt the Part affected. For what further concerns the Poſture of the Patient, conſult the Rules we have already laid down.

Bandage for an oblique Fracture of the Thigh.

In an oblique Fracture of the *Femur*, the Surgeon ought to take particular Care, that the Deligation is tighter, and the Limb kept duly extended. Let a large Linen Cloth be placed between the Thighs in ſuch a manner, that one Part may be brought over the Groin of the affected, the other under the Buttock of the ſound Thigh, both faſtened with Nails to the Bedſtead, that the Patient's Body may not ſlip. Likewiſe, a ſtrong Ligature muſt be made above the Knee, and faſten'd to the Bottom of the Bedſtead, to keep the injur'd Limb from ſlipping upwards. If theſe prove troubleſome, you are to change them, by paſſing the upper one under the Buttock of the affected, and over the *Inguen* of the ſound Thigh. As to the Stay above the Knee, it will certainly prove troubleſome; but, before you undo it, a ſtrong Ligature muſt be made above the Ancle, (with a Piece of Cloth under it to keep it from galling) and faſten'd to the Bottom of the Bed; and this may be done alternately, till the Fragments may be judged to be firmly united, always obſerving to fix the one before you undo the other. Beſides, it will be very proper to fix a little Block covered with Linen, at the Bed's Feet againſt the ſound Foot, that the Patient may raiſe himſelf, and extend the other, when he finds he has ſlipt down. This Method is as convenient for the Cure of tranſverſe, as oblique Fractures of the Thigh.

Method of renewing the Bandage.

This Bandage, without an extraordinary Occaſion, ſhould not be taken off before the eighteenth or fourteenth Day: But if it proves too tight, too lax, or any other unforeſeen Accident renders it neceſſary, remove and renew the upper Bandage with the utmoſt Caution. It is no leſs hazardous to take off the ſecond or third, within a Fortnight; and indeed the laſt ſhould continue till the Cure is complete, which is generally ſix Weeks, tho' in Patients of a bad Habit of Body, or advanced in Years, it is ſometimes eight, nine, or ten Weeks, before the Fragments of this large Bone are agglutinated: And, when the Cure ſeems to be accompliſhed, the Patient ſhould not, for ſome time, walk without Sticks or Crutches, leſt the Bone, ſo lately reduced, ſhould relapſe into a ſecond Fracture.

Bandage for a Fracture in the Neck of the Femur.

For a Fracture in the Neck of the *Femur*, apply the *ſimple Spica inguinalis*, deſcribed above (*Tab.* 59. *Fig.* 16.). But your Roller muſt be ſixteen or twenty Feet long, and three or four Fingers broad; bind it very tight, and keep the Limb well extended downward; for otherwiſe the ſtrong femoral Muſcles will draw the lower Part of the Bone above the upper, and ſo prevent the uniting with the Head; conſequently that Leg will be ſhorter than the other, and the Patient be lame. Terminate the Roller by Circles round the Thigh, and then pin or ſew it. The Limb muſt be put into a Straw-caſe, as before, and the Patient ordered to lie very quiet.

Bandage for a Luxation of the Femur.

A Diſlocation of the Thigh, contrary to the common Opinion, very ſeldom proceeds from any external Violence, but generally from ſome internal Diſorder, *viz.* a Collection of viſcid Humours. Therefore, when the Head of the Thigh is thruſt out of its Socket, and its Ligaments debilitated by the Humours, it is very difficult to diſperſe them, and the Patient generally halts afterwards. However, to give the beſt Aſſiſtance we can, firſt moiſten a Compreſs in warm Wine or *Oxycrate*; then lay it round the Joint of the affected Thigh, and ſecure it by the *Spica Inguinalis* (*Tab.* 59. *Fig.* 16.). Let the Patient keep his Bed for a whole Month. If it proceeds from a Diſtortion of the Ligament, you ſhould repeat, ſeveral times in a Day, Fomentations of rectify'd Spirit of Feverfew, Roſemary, or Lavender, to the Part; or cheriſh it with Baths, and comforting Vapours; or cover it with ſtrengthening Plaiſters.

Bandage for a direct Fracture of the Patella.

We have already obſerv'd, that a Fracture of the *Patella* may be tranſverſe, or direct: For a direct Fracture, after Reduction of the Fragments, and defending the Tendons in the Ham with a thick Compreſs, apply the *uniting Bandage*, (ſee *Tab.* XXIII. *Fig. f*) of twelve Feet long, and two or three Fingers broad, ſlit in the Middle longitudinally, about three Fingers-breadth, and rolled up with two Heads: It is uſed much after the ſame manner, as that for perpendicular Wounds in the Forehead (*Tab.* LVIII. *Fig.* 3.). The Middle of the Aperture is laid on the *Patella*, and one of the Heads, being brought round the Ham, paſſes through the Slit; then they are both to be drawn tight, and inveſt the Fragments; then each is carried above and below the Knee, till the Bandage is ſpent. In the mean time, examine with your Finger, whether the fractured Parts are duly conjoin'd: After this, you fix on the *Patella* a Compreſs, and under the Ham a ſtrong Paſteboard-ſplint, both dipt in warm Wine, and ſecured by a Bandage eight or twelve Feet long, in ſpiral Turns, that the Knee may be properly extended, till the Fracture is conjoined, and has acquired an equal *Callus*. Laſtly, the Straw-caſe (ſee *Tab.* XXX. *Fig.* 5.) is apply'd, and ty'd with three or four Strings, as at *Tab.* LIX. *Fig.* 20.

Bandage for a tranſverſe Fracture of the Patella.

When the *Patella* is fractur'd in a tranſverſe Direction, which is the moſt common Accident, after the Extenſion of the Limb, and Reduction of the Parts, with the uſual Plaiſter, you take a Bandage twelve Feet long, and three Fingers broad, which is either double or ſingle-headed: The firſt is apply'd juſt above the Knee (ſee *Tab.* LIX. *Fig.* 22. *a*) by making a circular Round about the Thigh *d*; then croſſing them at the Ham, you bring them obliquely below the Knee at *e*; they are then reflected back, and the ſame Direction repeated above and below the *Patella*, as long as the Roller laſts: Be very careful to keep the fractured Parts together, in their due Poſition.

2. If the Bandage is ſingle-headed, fix its End above the *Patella a*; then make ſome Circles round the Thigh *b*, to faſten the End *d*; from hence you convey it obliquely under the Ham, to the upper Part of the Leg, where you form the circular

cular Turn *e*, close to the lower Half of the *Patella*; thence bringing it obliquely cross the Ham, and intersecting the former, you go round the Bottom of the *Femur d*. Continue this Course as long as your Bandage lasts. Observe to keep the fractur'd Parts adequately together, during the Operation; and, when it is performed, place upon the *Patella* a Compress moisten'd with warm Wine or *Oxycrate*, and upon the Ham a Splint; these must be retained by another Bandage carry'd spirally, that the Knee may not have the least Motion, which would be very prejudicial. Some use a peculiar Instrument to keep the Leg extended, and from moving, and not without Success. Lastly, you may use the Straw-case (See *Tab.* LIX. *Fig.* 20.). But, since the Limb must be kept thus extended and bound for nine or ten Weeks, so that it may not be inflected before a complete Conjunction, the Patient must necessarily have more or less of a Rigor or Anchylosis; which will render him lame on that Leg, and which you must endeavour to mitigate, by frequently applying emollient Topicals, as Ointments, Fomentations. We shall conclude with the common Observation, that Men, who have once fractured this Bone, will, from the Weakness of the Joint, be ever afterwards liable to fall, and break it again, which is attended with a continual Halting.

A third Bandage for a fractur'd Patella.

As it is so difficult a Task to retain the Fragments of a transverse Fracture of the *Patella*, there is a third Bandage contrived, which is made of Linen thrice folded, about two Feet long, and eight Inches broad. One End A (see *Tab.* LIX. *Fig.* 23.) is left entire; they cut a Piece C D, two Inches broad from the other B B; the entire End is fixed upon the anterior Part of the *Femur*, (see *Fig.* 22. *d b*) in such a manner, that the excavated Part invests the *Patella*; then they apply the single-headed Roller, as before, in three Circles, round the Thigh, over the Compress, in the Direction *d*, *Fig.* 22. over these Circles they reflect the entire End of the Linen, and then repeat the Round at *d*, three times more, to fasten it. In the next place, an Assistant draws the two Heads B B, *Fig.* 23. tight, so as to bring the superior Half of the *Patella* to the inferior; then the Roller, crossing over the Ham, makes three Circles below the *Patella e*; after this, the two Heads are reflected upwards over these Circles, and secur'd by several other Rounds. The Remainder is spent in circular Turns above and below the *Patella*, and fasten'd by a Pin or Suture. Observe the former Directions for keeping the Patient quiet. You may also use the double-headed Roller.

Another Bandage for a transverse Fracture of the Patella.

In a transverse Fracture of the *Patella*, the Dressings are these: First, fold a Napkin in three; and, rolling it up at both Ends, you put a Piece of Pasteboard in the Middle, which is to be applied to the Ham, to keep the Leg from being bended; the two roll'd Ends are apply'd to the Sides of the Joint; a Sling, with four Tails, with a Hole in its Middle for the *Patella*, is apply'd along the Thigh and Leg; then, pressing down the superior Part of the *Patella*, you put a very thick Compress above it; and, pressing up the inferior Part, you put such another Compress below it; then you take a double-headed Roller, and begin on the superior Compress, cross in the Ham, (where you must also have a Compress) and upon the inferior Compress, and so on, until the two Pieces of the *Patella* be secur'd in mutual Contact; and, after applying a square Compress, dipt in a proper Liquor, to the bare *Patella*, you bring down one of the Tails of your Sling, laying the Tail at the opposite Corner above it, and so of the other two Tails; then fix them, and apply the Napkin, as before directed, making it fast with the same Band as for the Luxation of the *Cubitus*. The Advantage of this way of Dressing is, that you can have a View of the *Patella* at Pleasure, without being in Danger of disturbing the Fracture, it being secur'd by the first double-headed Roller; and if you find any Distance betwixt the two Pieces of the *Patella*, you can bring them nearer, by pulling the two Tails of the Sling in opposite Directions.

Bandage for a Luxation of the Knee.

There can be no Bandage more commodious for a Dislocation of the Knee, than those directed for the *Patella*, especially that for the transverse Fracture of the *Patella*. In this Case, the Patient should remain quiet for eight Days, till the Ligaments are supposed to be sufficiently firm.

Bandage for a Fracture of the Tibia.

For a Fracture of the *Tibia*, two Bandages are requisite, one twenty, the other twelve Feet long, each three Fingers broad; to these add four Compresses, and as many Splints, each a Span long; and, lastly, every thing order'd above for a fractur'd Femur. First, apply a Piece of slit Linen, (see *Tab.* XXIII. *Fig.* 18.) dipt in *Oxycrate*, or *Spirit of Wine*, to the fractur'd Part, so that the Heads may cross each other; then form three circular Turns with the first Bandage over this Linen; from whence gradually ascend in spiral Rounds above the Knee, without covering it; then return in the same manner; and, having form'd three Circles upon the affected Part, descend upon the *Calcaneum*, reinversing the Roller, by reason of the unequal Thickness of the *Tibia*. You next apply the same Compresses and Splints as for a fractur'd Arm; but the Compresses must be folded together towards the Bottom, in such a manner, that the *Tibia* may be equally bound every-where (see *Tab.* XXX. *Fig.* 13.). Lastly, apply two Pasteboard-splints, dipt in warm Wine or *Oxycrate*, and tied with three or four Strings; then put the Limb into a Straw-case, (see *Tab.* XXX. *Fig.* 5. and *Tab.* LIX. *Fig.* 20.) which must reach not much below the Ancles, nor more then an Hand's-breadth above the Knee, which is likewise tied with three or four Strings *a*, *b*, *c*, *d*; the vacant Spaces must be fill'd with Lint or Tow. And lastly, a Foot-board, with its Sling for the Heel, (*Tab.* XXX. *Fig.* 6, 7, 8.) must be plac'd at the Bottom of the Foot, as represented *Tab.* LIX. *Fig.* 20. C.

Bandage for a Fracture of the Tarsus *and* Metatarsus.

For a Fracture of the *Tarsus* and *Metatarsus*, you may use either a single or double-headed Roller; if you apply the latter, it must be twelve Feet long, and two or three Fingers broad. It is put round the Ancle (see *Tab.* LIX. *Fig.* 24. A) over a Compress slit at both Ends, (see *Tab.* XXIII. *Fig.* 18.) dipt in *Oxycrate*; and having there form'd a Circle, the two Heads cross over the Juncture of the Foot, are carried down round the *Tarsus* and *Metatarsus* B; then, crossing again under the Sole of the Foot, they ascend, and traverse each other upon the *Tarsus*, till the whole Foot is duly cover'd; then they go again round the Ancles, and, after two or three circular Turns, are fasten'd.

A single-headed Roller must be used in the following manner: After having fasten'd the Head by two or three circular Turns about the Ancle, descend obliquely over the *Tarsus* to the Bottom of the Foot; from thence ascend, and renew the former Course, crossing upon the *Tarsus* up to the Ancles, so that it resembles a Figure of 8 about the Foot and Ancle. When you have invested the affected Part by some spiral Turns, the Roller must be carried two or three times round the Ancle, and there fasten'd. If the Fracture is very bad, a Straw-case, with its Foot-board, *Fig.* 20. will be very serviceable. The same Deligation is proper for Fractures of the Toes, provided you invest them with spiral Turns. This Bandage is termed by the Antients *Sandalina* or *Sandalium*, a kind of Slipper worn by them.

Bandage for a Luxation of the Foot.

For a Luxation of the *Tarsus* or Ancle, you proceed in your Deligation as for a Fracture. The Patient ought to keep his Bed for some Days, and bathe the Part with some strengthening Spirit, till the Ligaments recover their antient Vigour, and the Pains cease.

Bandage for Phlebotomy in the Foot.

The Bandage for Phlebotomy in the Foot is made of a single-headed Roller, six Feet long, and two Fingers broad. The End is laid on the Outside of the Foot, so that about a Span hangs down, as we directed in the Deligation after Phlebotomy in the Arm: It is held on a Compress by the Left Thumb; then it is carried twice or thrice circularly like a Stirrup over the Wound and Compress, and from thence obliquely over the *Tarsus* to the Ancle; after this, it passes again obliquely over the Compress, under and round the Foot, and returns once more to the Ancle. Having repeated this, till your Bandage is almost spent, fasten it on the Outside of the *Tibia* (see *Tab.* XXIV. *Fig.* 1. E). Some begin their Bandage round the Ancle, then carry it obliquely over the *Tarsus* to the Bottom of the Foot, and from thence again to the *Tarsus*, where they make several circular or spiral Turns, which invest the Compress almost in the same manner, as in *Tab.* LIX. *Fig.* 24. A, B. They fasten the End with a Pin, or rather with a Suture. There are several other Methods; but, as in all of them there is some Resemblance of a Stirrup, this Bandage is call'd *Stapes*.

Bandage for an Amputation of the Leg or Thigh.

It is superfluous to be very exact in the Explanation of Bandages for an Amputation of the Leg or Thigh; for, after suppressing the Blood, the Capeline describ'd above, and represented *Tab.* LVIII. *Fig.* 19. is proper; except that the Leg and Thigh require a longer Roller than the Arm.

Bandage for a Fracture of the Tibia *with a Wound.*

After reducing the Fragments, cleansing the Wound, and laying on proper Remedies, the Surgeon's next Care is a convenient Bandage: And there is one peculiarly adapted to a compound Fracture, with eighteen Heads or Leaves, like a Book, (see *Tab.* XXX. *Fig.* 4. B B) by the *Germans* call'd a

Beck-

Book-band. It is inconceiveable how commodious this is, as it may be open'd and bound up again, without moving the Limb, while thoſe long ones, uſed in ſimple Fractures, would prove very incommodious and hurtful, as they oblige you to agitate it ſo often. We ſhall therefore be very exact in our Deſcription of this Bandage.

Previous Diſpoſition of the Bandage.

When a Fracture of the *Tibia* is attended with an external Wound of the Skin, as *Tab.* XXX. *Fig.* 4. A, after Reduction, cleanſing the Wound, and dreſſing with Lint, and proper Remedies, take the Straw-caſe, *Fig.* 5. A A, B B; put three or four Pieces of Tape, each a Yard long, under it; then lay as many tranverſely over it, and upon them the eighteen-headed Bandage, as at *Fig.* 4. B B; and *Tab.* LIX. *Fig.* 25. C C, D D, E E. Thus you have the whole *Apparatus* for the Reception of the Leg.

The Application.

In the next Place, while an Aſſiſtant holds up the Leg in a convenient Poſture, you apply two middle Leaves tranſverſely over the fractur'd Leg and Dreſſings, firſt having dipt them in warm Spirit of Wine or *Oxycrate*, (ſee *Tab.* XXX. *Fig.* 4. and *Tab.* LIX. *Fig.* 25.) then the two lower, and then the two upper, of the firſt Order, not in an exact circular Direction, but ſomewhat obliquely, and acroſs each other, as at *Tab.* LIX. *Fig.* 25. *c c c*, *d d d*. Proceed then with the Leaves of the following Order in the ſame manner, beginning with the middle ones, and ending with the uppermoſt, which muſt be drawn round the Leg, as at *Fig.* 25.

Application of the Splints and Compreſſes.

After the Application of this Bandage, you lay two Compreſſes, of a Foot long, and two or three Fingers broad, folded towards the Ancle, as before directed (ſee *Tab.* XXX. *Fig.* 13.) and dipt in warm *Spirit of Wine*, on each Side of the *Tibia*, to which they muſt be equal in Length; one muſt be laid at C C C, *Fig.* 25. *Tab.* LIX. the other on the oppoſite Side at D D D; over theſe you place the ſix largeſt Leaves of the laſt Order E E, F F, G G; then you apply two Compreſſes, with a Splint of thick Paſteboard, which are tied round the *Tibia* on the Outſide, with three Tapes put under it, for that Purpoſe.

Poſture of the Leg after Deligation.

After the Deligation is completed, your next Care ought to be, to diſpoſe the Leg in the moſt convenient Poſture for Reſt. The Antients faſten'd a Pillow round the *Tibia*, as appears from the Writings and Figures of *Solingius*, *Purmannus*, and others. But, as this does not ſeem adapted to retain the Leg firmly, I would adviſe the Uſe of the Straw-caſe. As for what regards the quiet Poſture and Support of the Leg, conſult what we propoſed, where we treated of the Bandage for a fractur'd *Femur*; and ſee the Repreſentation, *Tab.* LIX. *Fig.* 20.

Renewal of the Dreſſings.

As to the Renewal of the Dreſſings, it may be done daily, or every other Day, according to the Quantity of the Diſcharge: During the Performance of this, an Aſſiſtant muſt hold the Leg up, that the Fragments may not be diſturb'd; and, after cleanſing the Wound, proceed as directed above. This muſt be repeated, till the Wound is entirely heal'd; and, if that happens before the Fragments are well united, you may apply a common Bandage, as in ſimple Fractures. Laſtly, if the Bandage and Dreſſings are foul, they may be changed, while two Aſſiſtants hold the Leg up carefully; but let your clean Band be ſew'd at one End, to the End of the foul one, before the Limb is remov'd, that at the ſame time you take out one, you may gently draw the other into its Place. As to the wooden Caſe of SCULTETUS, (*Tab.* LVI.) there are two ſufficient Objections againſt it: For, firſt, it is very troubleſome to the Patient; and, next, it is difficult to be procur'd in Camps, where theſe Fractures are very frequent; otherwiſe it is no contemptible Machine.

Machines for a fractur'd Tibia, *with a lacerated or contuſed Wound.*

As a fractur'd *Tibia*, with a lacerated or contuſed Wound, requires a more exact Reſt than the Straw-caſe will afford, there is a peculiar Machine contriv'd, which conſiſts of three braſs Plates joined together with Hinges, *Tab.* XXX. *Fig.* 9. theſe are uſed with the Foot-board, *Fig.* 6, 7, 8. Yet ſome prefer the Straw-caſe. But PETIT has contriv'd a curious Machine, not only for this, but all other Fractures, which is accurately deſcrib'd both in the Author's Treatiſe on Diſeaſes of the Bones, and in the Hiſtory of the Royal Academy of Sciences at *Paris* for the Year 1718. We have repreſented it *Tab.* XXX. *Fig.* 11, 12. and deſcrib'd it in the Explication of that Table.

Treatment of other compound Fractures.

If a Fracture of the Thigh is accompanied with an external Wound, apply the Bandage recommended for the *Tibia*. But both that, and the Straw-caſe, muſt be larger; and, though you may conveniently inveſt a compound Fracture of the Shoulder or Elbow with it, yet there is no Reaſon, why you ſhould not uſe the ſame Deligation, as in ſimple Fractures; becauſe, as the Bones are pendulous, they may be better ſecur'd by the common Roller, ſeeing it often happens, that the eighteen-headed Bandage cannot be apply'd to theſe Parts with ſo great Advantage as to the Leg and Thigh.

An Explanation of the Fifty-ninth Plate.

Fig. 1. Repreſents the Bandage for an Amputation of a cancerous Breaſt, where A, B, C, D, point out the firſt Courſe of the Roller; E E, the Compreſſes applied to the Breaſt.

Fig. 2. Shews the Method of applying the T Bandage for Diſorders of the Breaſt; *a a*, the Part which goes round the Body under the Breaſts; *b b*, the two Heads, which paſs over the Shoulders; *c*, the Part covering the Breaſt; *d*, the Neck, contain'd by the Slips *b b*.

Fig. 3. Denotes the four-headed Bandage for Diſorders of the Breaſts; *a*, the entire Part covering the Breaſt; *b b*, the two ſuperior; *c c*, the two inferior Heads; *d*, the ſound Shoulder, where they are tied together.

Fig. 4. Gives a View of the *Quadriga*, where the Letters *a*, *b*, *c*, *d*, *e*, *f*, *g*, ſhew the firſt Turns of the Roller.

Fig. 5. Repreſents the Bandage for an umbilical Rupture; A, the Compreſs to prevent a Falling out of the Inteſtines and *Omentum*; B B, the Girdle inveſting the Body; C, the *Scapulary* which ſecures the other; *d d*, the two Leaves of the Bandage which paſs between the Thighs, and are faſten'd with Strings at B B, that the Compreſs may be retain'd ſecurely upon the Navel.

Fig. 6. Denotes the Bandage for the *Inguen*; *a a*, its tranſverſe Part ſurrounding the Body; *b b*, its perpendicular Part going between the Thighs; *c*, its ſuperior and larger Part, which inveſts the Groin.

Fig. 7. Shews the ſame Bandage applied to the Body.

Fig. 8. Gives you a View of the Method of applying the Bandage for Diſorders of the *Scrotum*.

Fig. 9. Repreſents the Bandage itſelf; *a a*, the tranſverſe Part; *b b*, the perpendicular Slit in the Middle; *c*, the *Foramen* to tranſmit the *Penis*.

Fig. 10, and 11. Repreſent the different Forms of the double T Bandage for different Uſes.

Fig. 12. Shews the manner of applying the laſt to the Body for inveſting the *Scrotum*.

Fig. 13. Exhibits a compound Bandage for the *Scrotum*, called the *Suſpenſor* (*Gall. la Bourſe*); A A, the Part which receives the *Scrotum*, like a Purſe; *b b b*, the tranſverſe Part ſurrounding the Body; one End whereof *a* is tied to the other *b*; C, the Aperture for tranſmitting the *Penis*; B B, the two Heads which paſs betwixt the Thighs, and, being carried round them, are faſten'd by the Holes *d d*, with the Strings E E.

Fig. 14. Shews the manner of applying the T Bandage, repreſented by *Fig.* 11. for Diſorders of the *Anus*; *a a*, the tranſverſe Part faſten'd round the Body; *b*, the entire End of the perpendicular Part, retaining the Dreſſings on the *Anus*; *c c*, the Place where it is join'd to the other Part; *d d*, the two lower Heads carried between the Thighs, and faſten'd at the *Pubes*, or on each *Inguen*, as in *Fig.* 12.

Fig. 15. Repreſents the *double inguinal Bandage* for various Uſes, eſpecially to prevent profuſe Bleedings after Lithotomy, or the Operation for Fiſtulas; *a*, *b*, *c*, *d*, *e*, *f*, *g*, ſhew the principal Turns; but the prick'd Lines ſhew two Directions from *a* to *b*, and from *g* to *i*, which croſſing the *Abdomen*, are reflected under the *Perinæum*, and over the Shoulders, to compreſs the Parts more effectually. This I call'd the knotted Bandage for the *Perinæum*.

Fig. 16. Is the ſimple inguinal Bandage, which begins at *a*, and continues its Courſe by *b* to *c*, from thence by *d e* to *c*, and again to its Beginning *a*.

Fig. 17. Denotes a fractur'd Arm A, ſecur'd with Splints and Compreſſes *a a a*, and tied over the Bandage on the Outſide of the Arm with three Strings *b b b*; *c c c c* is the Sling hung about the Neck, and tied on the ſound Shoulder by the Knot *d*; *e e* is the Caſe for a Fracture of the *Cubitus*; but this is needleſs in a Fracture of the Shoulder or Clavicle.

Fig. 18. Shews the Bandage for a burnt or ſcalded Hand.

Fig. 19. Repreſents the Method of binding the Stump of an amputated Hand; *a a*, the Arm, with Part of the *Cubitus*; *a*, the Stump and Dreſſings; *b b*, the two Ends carried round the Compreſs in the Direction *c*; then one of them croſſes over the Stump *d*, the other continues in Circles: Hence termed *the Bandage with two reflected Heads*.

Fig. 20. Exhibits a Straw-caſe, and the Method of applying to the Leg; *a a*, two cylindric Bundles of Straw, with a Stick

in

in the Middle of each; *b b*, the ſubjacent Pillow; C, the Foot-board; *a*, *b*, *c*, *d*, four Strings, which tie the Whole together on the Outſide; *e f*, the two Strings which faſten the Foot-board to the Straw-caſe; *g*, the uppermoſt String, faſtening the Foot-board a little higher to the outer Cylinder.

Fig. 21. Is a double-headed Roller, whoſe Ends *a a* are ſew'd together, ſo as to leave an Inch in the middle *b*, where the *Calcaneum* in Fractures may be commodiouſly placed.

Fig. 22. Exhibits the Bandage for a tranſverſe Fracture of the *Patella*; *a*, the *Patella*; *b*, the Thigh; *c*, the Leg; *d*, the Circles above the *Patella*; *e*, thoſe below.

Fig. 23. A peculiar Bandage for the ſame Fracture; A, the upper and entire Part; *b b*, the two inferior Heads; *c d*, the Part where the Linen is cut out; C covers the ſuperior Part of the Patella.

Fig. 24. Shews the Deligation for a Fracture, Diſlocation, or Phlebotomy of the Foot; A, the circular Rounds, above the Ancles; B, the ſpiral and circular Turns about the Tarſus and Metatarſus.

Fig. 25. Teaches the Manner of inveſting a compound Fracture of the Tibia with the eighteen-headed Bandage; A, the Thigh; B, the lower Part of the Leg; C C C, D D D, the oblique Poſition of the Leaves acroſs each other, on the Fracture; E F G, the ſix outermoſt Leaves, to be laid over the Compreſſes, obliquely, in that Order.

FASCICULUS. An Handful; or, according to others, as much as can be taken up with two Fingers and the Thumb.

FASDIR. Jupiter; that is, Tin. *Rulandus.*

FASTIDIUM *Ciborum.* An Averſion to, or Nauſeating of, Aliment.

FASTIGIATI *Furni*, in Chymiſtry, are Furnaces furniſhed with ſeveral Aludels. *Caſtellus.*

FATUITAS. The ſame as MOROSIS; which ſee.

FAUCES, φάρυγξ. The Space about the Mouths, or Extremities, of the Gula and the Larynx, or the Gullet and the Wind-pipe; which expoſes itſelf to View when the Mouth is open, and the Tongue depreſs'd.

FAUFEL. The ſame as ARECA; which ſee.

FAVIFORMIS, κηριώδης. Honeycomb-like. An Epithet beſtow'd on ſome putrid Abſceſſes, or Ulcers, which, being preſſed with the Finger, emit a ſanious Mucus through a Multiplicity of Perforations, as Honey comes from the Comb.

FAULEX. Steel. *Rulandus.*

FAUNORUM LUDIBRIA IN QUIETE. An Expreſſion in *Pliny*, *Nat. Hiſt. Lib.* 25. *Cap.* 4. by which he means that nocturnal Diſorder which we call the INCUBUS.

FAVONIUS, ζέφυρος. The Weſt Wind, which is generally cold and humid.

FAUSTINI PASTILLI. Fauſtine Troches, are of ſeveral Sorts: The firſt is for Dyſenteries, and the Cœliac Paſſion, and is thus prepar'd:

Take of burnt Paper, ſeven Drams and an half; Quick-lime, ſix Drams and a Quarter; Arſenic, three Drams; Sandarach, one Dram and an half: Triturate and ferment them with Lentils, and a ſufficient Quantity of a Decoction of Myrtle-berries.

Another Preparation of Fauſtine Troches is as follows:

Take of Quick-lime, two Drams and an half; Sandarach, one Dram and an half; Arſenic, two Drams; burnt Paper, ſeven Drams and an half: Triturate and ferment them in a Decoction of Myrtle-berries; and then make them into Troches, for Uſe.

The way of making the Fauſtine Troches, in *Alexandria*, is thus:

Take of Arſenic, and Sandarach, each two Drams; Quick-lime, ſeven Drams; Acacia, ſix Drams: Triturate and work them in Wine; after which, form them into Troches. *Myrepſus*, *Sect.* 4. *Cap.* 99, 100.

FAVUS. The ſame as CERION; which ſee.

FEBRIFUGA, Febrifuges, are ſuch Medicines as mitigate or remove a Fever; they are otherwiſe call'd ANTIFEBRILIA. *Febrifuga* is alſo a Name for the CENTAURIUM MINUS.

The *Febrifugum Concharum Crollii* is much the ſame as the *Concharum Antifebrile* of *Bates*. See CONCHA.

Under the Article DUODENUM, I have ſpecified one Method of preparing the celebrated Febrifuge of *Riverius*; but our Countryman, *Bates*, gives the Preparation in a ſomewhat different manner, thus:

Take of the Flowers of Antimony, thrice ſublim'd with Sal Ammoniac, and edulcorated, of Glaſs of Antimony, precipitated in four Ounces of Aqua-fortis prepar'd of Nitre and Alum, each half an Ounce; of Mercury, precipitated with Aqua-fortis prepar'd of Nitre, Vitriol, and Alum, ſix Ounces; of Gold, diſſolv'd in Aqua Regia, one Ounce: Mix, and diſtil gradually to Dryneſs, from a Retort, uſing twelve Cohobations. To the Powder, when five times waſh'd, and dried, add two Pints of the Alcohol of Wine; and diſtil from a new Retort, uſing ſix Cohobations. Pour out the Alcohol of Wine, and put the Maſs of the Calx into a cloſe-ſtopt Crucible, which is to be placed in a rotatory Fire, for three Hours; then kindle the above-mention'd diſtil'd Spirit of Wine upon it, according to Art. The Doſe is from ſix Grains to half a Scruple, with an equal Quantity of ſulphurated Scammony.

FEBRIS. A Fever. See the Articles CATHARTICA, DEPURATORIA, MILIARIS, and PYRETOS.

FECULA. The ſame as FÆX; which ſee.

FEDUM. Crocus. *Rulandus. Johnſon.*

FEGOPYRUM. See *Fagopyrum vulgare ſcandens.*

FEGOTRITICUM. A Name for the *Fagopyrum vulgare ſcandens.*

FEL. Gall. See BILIS.

FELILECH, *Faulis.* Iron. *Rulandus.*

FELIS. See CATUS.

FELLA. Sulphureous or ſulphurated Water. *Rulandus.*

FELLETIN. Plates of Iron. *Johnſon.*

FELLIFLUA *Paſſio.* A Name in *Cœlius Aurelianus*, *Acut. Morb. Lib.* 3. *Cap.* 19. for the *Cholera Morbus.*

FEMUR. See CRUS.

FENESTRA. A Name for two Foramina, or Openings, within the Ear; one call'd *Feneſtra Ovalis*, and the other *Feneſtra Rotunda*; for which ſee AURIS.

FERINUS, θηριώδης properly ſavage, brutal; but in a medicinal Senſe, importing noxious, or malignant. Hence it is applied to Diſeaſes remarkable for their Malignity, as proceeding from an extraordinary Depravation of the Humours. *Galen. Com. in 6 Epid.* On this Account we find it given to Worms, a Cough, a raging Delirium, and Ulcers of a bad kind. 1 *Prorrhet.* and *Coac.* Patients, alſo, labouring under ſuch malignant Diſtempers, are called θηριώδεις, *Ferini*, 4 *Epid. Ferinus*, θηριώδης, is, alſo, an Epithet beſtowed by *Hippocrates*, *Lib. de priſca Medicina*, on ſuch Food as was the Suſtenance of Mankind, in the firſt Ages of the World, being chiefly Acorns, and other Fruits and Roots, which they had in common with the wild Beaſts.

FERION. A fictitious ſpagiric Term, occurring in *Theat. Chym. Vol.* 5. *p.* 159. but, what it means, is impoſſible to be learn'd from the Deſcription there given.

FERMENTATIO. Fermentation. See ALCOHOL and ACETUM.

FERMENTUM. Ferment, Leaven, Barm, Yeſt. The Ferment moſt uſed in *England* is the Spume or Froth of Beer, concreted; and we ſeldom uſe any other, where that is to be had: And this Sort of Ferment, *Pliny* tells us, was in Uſe among the Northern Nations, in former Ages: "In *Spain* "and *Gaul*, he ſays, after they have reſolved their Corn into "Drink, the concreted Spume of the Liquor ſerves them for "Ferment; whence their Bread is lighter than that of other "Nations." *Nat. Hiſt. Lib.* 18. *Cap.* 7. This concreted Spume of Beer, then, is, in the Judgment of *Pliny*, a moſt laudable and wholſome Ferment. See ALCOHOL.

FERRAMENTUM. A common Name for all Inſtruments made of Iron or Steel, particularly in Surgery.

FERRATUS. An Epithet for an Inſtrument, arm'd, or fortified, with Iron or Steel. Applied, alſo, to Waters impregnated with Iron; whence *Aquæ ferratæ* are the ſame as ACIDULÆ.

FERRETUM, *Ferreto*, that is black or burnt *Cyprian* Copper; made uſe of in making Glaſs. It is now made in *Spain.*

FERRUGO, ἰὸς σιδήρου, Ruſt of Iron, is a Reſtringent: Applied by way of Peſſary, it repreſſes the Fluor Uterinus; and, drank, it prevents Conception; it cures the Eryſipelas, and exanthematous Eruptions, if it be rubbed on the Parts with Vinegar. It is of good Uſe in a Paronychia, Roughneſs of the Eyelids, and a Condyloma; it alſo ſtrengthens the Gums, relieves under the Gout, being rubbed on the Part affected; and makes the Hair grow after an Alopecia. Wine, or Water, in which red-hot Iron has been quenched, being drank, is good for the Cœliac Paſſion, Dyſentery, Diſorders of the Spleen, Cholera Morbus, and Relaxations of the Stomach. *Dioſcorides*, *Lib.* 5. *Cap.* 98. See MARS.

FERRUM, σίδηρος. Iron. See MARS.

FERRUM EQUINUM.

The Characters are;

It has a flat Pod, diſtinguiſhed by lunated Joints, reſembling an Half-moon, and full of Seeds of the ſame Shape.

Boerhaave

Boerhaave mentions three Species of this Plant; which are,

1. Ferrum equinum ſiliqua ſingulari. *C. B.* 349. *M. H.* 2. 117. HORSESHOE-VETCH WITH A SINGLE POD.

2. Ferrum equinum; ſiliqua multiplici. *C. B. P.* 349. *M. H.* 2. 118. HORSESHOE-VETCH WITH MANY PODS.

3. Ferrum equinum; Germanicum; ſiliquis in ſummitate. *C. B. P.* 349. *Raii Hiſt.* 1. 930. *Synop.* 3. 325. *Ger. Emac.* 1236. *Tourn. Inſt.* 400. *Elem. Bot.* 319. *Boerh. Ind. A.* 2. 52. *Ferrum Equinum.* Offic. *Ferrum equinum ſiliquis in ſummitate.* Merc. Bot. 1. 35. Phyt. Brit. 40. *Ferrum equinum ſiliquis in ſummitate multiplicibus Germanicum.* Buxb. 109. *Ferrum equinum comoſum.* Park. Theat. 1091. Rupp. Flor. Jen. 215. Mer. Pin. 38. Rivin. Irr. Tetr. *Ferrum Equinum capitatum, vel comoſum.* Col. Ecphra. 1. 301. Hiſt. Oxon. 2. 118. *Solea equina & Ornithopodio affinis Herba.* Chab. 155. *Ornithopodio affinis, vel potius Soleæ, aut Ferro Equino Herba.* J. B. 2. 348. TUFTED HORSESHOE-VETCH.

It grows in chalky Grounds in ſeveral Places, and flowers in *June*. The Herb is in Uſe, which is an Aſtringent, and ſtops Bleeding. *Dale.*

FERSÆ. A Name for the MORBILLI, or Meaſles. *Caſtellus.*

FERU. Tin. *Rulandus. Johnſon.*

FERULA, νάρθηξ.

The Characters are;

It has a large, ſucculent, and milky Root; the Stalks are fungous, full of Pitch, and diſpoſed to take Fire. The Seeds are very large, oval, and thin; they throw off their Involucrum, and, for the moſt part, turn black, when ripe.

Boerhaave mentions thirteen Species of this Plant; which are,

1. Ferula; durior; ſeu rigidis & breviſſimis foliis. *Barrel. Ic.* 77. *Obſ.* 61. *Pag. N°.* 638. *Boccon. Muſ.* 2. 84. *Tab.* 76.

2. Ferula; major; ſeu fœmina Plinii. *Boerh. Ind. A.* 64. *Ferula.* Offic. Ger. 898. Emac. 1056. *Ferula tenuiore folio.* Park. Theat. 875. *Ferula major, ſeu fœmina.* Mor. Umb. 35. *Ferula fœmina Plinii.* C. B. Pin. 148. Tourn. Inſt. 321. Elem. Bot. 271. *Ferula tenuiore folio, ſeu fœmina Plinii,* Hiſt. Oxon. 3. 309. *Ferula folio fœniculi, ſemine latiore & rotundiore.* J. B. 3. 43. Chab. 388. Raii Hiſt. 1. 420. FENNEL-GIANT.

It is ſometimes cultivated in the Gardens of Botaniſts, and flowers in *July*. The Parts in Uſe are the medullary Subſtance of the Stalks, the Seed, and the Juice or Gum, which is the Sagapenum of the Shops. *Dale.* See SAGAPENUM.

The Medulla, or Pith, of the green Ferula, being drank, is good for Spitting of Blood, and the Cœliac Paſſion. It is preſcrib'd in Wine, for the Bite of the Viper; and, intruded into the Noſtrils, ſtops Bleeding at the Noſe. The Seed, drank, relieves under the Gripes; and, uſed in Unction with Oil, provokes Sweat. The Stalks, taken as Food, cauſe Headach; they are uſually pickled. The Ferula often produces a Stalk three Cubits long; its Leaves reſemble thoſe of Fennel, but are much larger and thicker. The Sagapenum diſtils from the Stalk, wounded near the Root. *Dioſcoridis, Lib.* 3. *Cap.* 91.

3. Ferula; glauco folio; ſemine lato, oblongo; quibuſdam Thapſia ferulacea. *J. B.* 3. 45. *Chab.* 388. *Raii Hiſt.* 1. 420. *Tourn. Inſt.* 321. *Boerh. Ind. A.* 64. *Libanotis altera,* Offic. *Libanotis fœniculi folio, ſemine foliaceo.* C. B. Pin. 158. *Panax aſclepium anguillariæ & Camerarii.* Park. Theat. 883. CANDY ALL-HEAL.

It grows in the Iſland of *Candy*, and flowers in Summer. The Parts in Uſe are the Root, Herb, and Seed.

The Herb, bruiſ'd and applied, ſtops the Bleeding of the Hæmorrhoids, mitigates Inflammations of the Parts about the Anus, and Condylomas. The Roots, dried, cleanſe Ulcers, and provoke Urine, and the Menſes; the Seed, drank, has the ſame Effects. *Dale* from *Dioſcorides.*

4. Ferula; galbanifera. *J. B.* 3. 52. *Lob. Icon.* 779. *Tourn. Inſt.* 321. *Elem. Bot.* 271. *Boerh. Ind. A.* 64. *Till. Hort. Piſ.* 60. *Chab.* 388. *Ferula latiore folio.* Park. Theat. 875. Hiſt. Oxon. 3. 309. *Ferula altera.* Ger. 899. *Ferulago.* Ger. Emac. 1056. *Ferulago latiore folio.* C. B. Pin. 148. Commel. Plant. uſu. SMALL FENNEL-GIANT.

It grows in the Gardens of Botaniſts. *Lobel* ſays, it was produced from Seed found at *Antwerp*, in the Tears of the Galbanum. *Dale.*

5. Ferula; Africana; galbanifera; folio & facie liguſtici. *Par. Bat.* 163. *Raii Hiſt.* 3. 252. *Boerh. Ind. A.* 65. *Till. Hort. Piſ.* 61. *Galbanifera Planta.* Offic. *Ferula fruticoſa ſempervirens, foliis Aniſi, Galbanifera, ex qua Galbanum Officinarum.* Parad. Bat. Prod. 334. Pluk. Almag. 144. *Aniſum Africanum fruticeſcens, folio & caule vere cæruleo tinctis.* Pluk. Phytog. 12. f. 2. *Aniſum fruticoſum Africanum Galbaniferum.* Hiſt. Oxon. 3. 297. *Oreoſelinum Africanum Galbaniferum fruteſcens Aniſi folio.* Tourn. Inſt. 319. *Oreoſelinum Aniſoides arboreſcens Liguſtici foliis & facie flore luteo Capitis Bonæ Spei.* Breyn. Prod. 2. 79. THE GALBANUM-PLANT.

The Stalks are three or four Cubits high, and an Inch thick; they are not annual, like thoſe of the reſt of the *Ferulæ*, but perennial, ligneous, ſmooth, cover'd with a glaucous Dew, as are the Leaves, geniculated, and divided into Branches, on the Tops of which grow ſmall yellow Flowers like thoſe of the Ferula, and conglobated into the Form of an Umbella; theſe are ſucceeded by oblong, flatiſh, ſtriated Seeds, of a dark-red Colour, and incloſed within a thin membranaceous Involucrum: They reſemble the Seeds of Lovage, in every reſpect; only they are not ſo deeply furrow'd, and are, beſides, furniſh'd with a membranaceous Margin. The Leaves are equal to thoſe of Lovage, but ſtiffer, and of a more lively green, having the Edges of their Lobes cut, or jagged, like thoſe of Aniſe. The Root is thick, ligneous, pale, branched, of an acrid, aromatic Taſte; being wounded, it yields a Milk, but diluted, and little in Quantity, and concreting into a Tear, in all reſpects anſwering to the Galbanum; and this Liquor, ſometimes, diſtils ſpontaneouſly from the Joints of the Stalks, when of three or four Years Growth. It is an Ever-green, and is preſerved with no great Trouble in Stoves, with us, during the Winter. For the Virtues, ſee GALBANUM.

6. Ferula; Tingitana; folio latiſſimo, lucido. *H. Edinb. Broad-leav'd ſhining* FENNEL-GIANT, *from* Tangier.

7. Ferula; Tingitana; lucida; folio anguſto. *H. L. Narrow-leav'd* FENNEL-GIANT, *from* Tangier.

8. Ferula; foliis capillaceis, erectis, cachryos; ſemine glauco.

9. Ferula; Africana; galbanifera fruteſcens, folio Myrrhidis. *C. Comm. Hort. Amſt.* 2. *p.* 115. *Till. Hort. Piſ.* 60. ANOTHER GALBANUM-PLANT. *Dale.*

This laſt, with the fifth Species, as D. *Commeline* writes, being wounded, yields a lacteous Juice, which concretes into a Tear, in all reſpects like GALBANUM, which ſee.

10. Ferula; foliis libanotidis brevioribus; Alpeſtris; umbella ampliſſima.

11. Ferula; Alpeſtris; foliis ſeſelios Maſſilienſis. *Libanotis, Alpeſtris, minor, foliis Seſeli Maſſilienſis.* H. Maur.

12. Ferula; quæ Libanotis; folio fœniculaceo; ſemine folioſo. *C. B. P.* 158.

13. Ferula; minor; ad ſingulos nodos umbellifera. *Tourn. Inſt.* 321. *Boerh. Ind. A.* 65. *Panax Aſclepium.* Offic. Mor. Umb. 33. *Panax Aſclepium Ferulæ facie.* Ger. Emac. 1057. *Libanotis Ferulæ folio & ſemine.* C. B. Pin. 158. *Libanotis quibuſdam, flore luteo, ſemine Ferulæ.* J. B. 3. 41. Chab. 386. Raii Hiſt. 1. 421. *Libanotis Ferulæ folio & ſemine, ſive Panax Aſclepium Ferulæ facie Lobelii.* Park. Theat. 881. *Ferula minor.* Elem. Bot. 271. THE ALL-HEAL OF ESCULAPIUS.

Its Leaf is nearly of the Size of the Leaf of the Ferula, but more finely divided, ſtiffer, and of no unpleaſant Smell. They grow on Pedicles which are ſolid, and not at all fungous. The Stalk is tall, ramous, and ſtriated; the Flowers ſmall, yellow, and diſpoſed in an Umbella; the Seed looſely ſcattered over the Umbella, foliaceous like that of the Ferula, long, double, whitiſh, eſpecially what is foliaceous in it, ſtriated, remarkably bitter, and, as it were, reſinous: The Stalk and Root, in Size and Shape, reſemble thoſe of Dill. *Raii Hiſt. Plant.*

It grows in *Iſtria*, and flowers in Summer; the Flowers and Seed are uſed in Medicine, and, if bruiſed and applied with Honey, are effectual againſt phagedenic and other Ulcers, and Tubercles; being drank in Wine, they are good for the Bites of Serpents. *Dale* from *Dioſcorides.*

FERULANA. *Boerhaave.* A Name for the *Ferula, foliis Libanotidis brevioribus; Alpeſtris; umbella ampliſſima.*

FERULACEA *Raii.* A Name for the *Ferula Galbanifera.*

FESTUCA. See ÆGILOPS.

FIATOLA. A Sea-fiſh, ſo call'd at *Rome*, where it is very common. It is broad, flat, and almoſt round, with Scales of the Colour of Gold and Silver; it has much of the human Shape, and is very good to eat, but not uſed in Medicine. *Lemery des Drogues.*

FIBER. See CASTOR.

FIBRA. A Fibre. *Boerhaave* takes a moſt excellent Method in treating Diſeaſes of the human Body. He begins with thoſe of the moſt ſimple and uncompounded Parts, and thence proceeds to thoſe of the more compounded. The firſt thing he treats of is a ſimple Animal Fibre; and the Diſeaſes it is ſubject to, as ſuch.

Thoſe Parts, which being ſecreted from the Fluids contained in the Veſſels, and, by the vital Powers, together with a highly fine aqueous, or pinguious Glue, mutually applied and united to each other, conſtitute the ſmalleſt Fibre, are themſelves highly minute, ſimple, terreſtrial, and ſcarce capable of undergoing a Change, by the Cauſes which ſubſiſt in an human Body, whilſt alive.

The moſt ſimple Fibre conſiſts of Parts ſtill more minute, longitudinally applied to each other; and theſe conſtituent Parts of a Fibre, which can no longer be divided into Parts ſtill more ſmall and minute, are called the Elements, or firſt Principles, of the Fibres. Now *Galen, de Hippocratis & Platon. Placit. Lib.* 8. *Cap.* 2. informs us, "that the Element of any thing "is the ſmalleſt and moſt minute Part of that thing, whoſe "Element it is." The ſmalleſt Fibre is that which conſiſts of two of theſe Elements, longitudinally applied to each other; ſince one ſuch Element, conſider'd by itſelf, and abſtractedly, does not conſtitute a Solid, but is a Part of the Fluids; ſo that a Combination of theſe Elements, or firſt Principles, conſtitutes what we call a Fibre.

As for the Method in which the Fibres are form'd and produced, it is certain, that an Adult, weighing two hundred Pounds, lay originally conceal'd in the ſeminal Matter of his Father; that, from ſo ſmall a Molecule, he gradually increas'd to ſo large a Weight; and that this Increaſe of the ſolid Parts was produced by the Fluids. This is confirm'd by the Experiments of *Malpighi*, made on an incubated Egg; and which were before tried by *Hippocrates*, as we find in his Book *de Natura Pueri*, where we are told, that, by an Attenuation of the White of an Egg, by means of Incubation, a Chick, with firm Solids, was, in twenty-one Days, produc'd from an inviſible Molecule.

But this White of the Egg muſt have been farther attenuated and elaborated, by means of the Organs of the Chick, before it could have poſſibly paſs'd through thoſe Veſſels, which are ſo ſmall as not to be ſubjected to our Senſes.

The Elements, however, of the ſolid Parts were contain'd in this highly ſubtile Fluid.

Hence we may juſtly conclude, that the Parts, which conſtitute a ſolid Fibre, are, themſelves, extremely ſmall and minute.

Theſe Parts are, alſo, of a highly ſimple and uncompounded Nature; ſince, according to the Definition already given, from *Galen*, they could not be call'd Elements, if any thing of a more ſimple Nature could be conceiv'd.

Theſe Parts are, alſo, of a terreſtrial Quality. It may, perhaps, at firſt appear preſumptuous thus poſitively to determine and aſcertain the particular Nature of thoſe Corpuſcles, which conſtitute a Fibre. But we call that a terreſtrial Subſtance, which can neither be diſſolv'd by Water, nor fus'd by Fire, but remains invariably fix'd. Now the ſolid Parts of Animals, when ſubjected to a chymical Analyſis, yield Remains of this Kind, abſolutely deſtitute of every volatile Principle. This is, alſo, confirm'd by Putrefaction, which ſeparates Earth from all other Principles; for, upon viewing an human Body, which has lay buried in the Earth for ſeveral Years, unleſs it become dry and indurated, which ſometimes happens, all the Parts are found to retain their former Figure, ſo that the Perſon's Face may be known, from the Reſemblance it bears to his Countenance, when alive; but, upon the ſmalleſt Concuſſion, the Parts collapſe, and a ſmall Quantity of ſubtile Earth is found to cover the Bones, which, for the moſt part, are, as yet, ſufficiently firm; theſe very Bones, when, for a conſiderable time, expos'd to the open Air, or calcin'd in an open Fire, are found, after an Expulſion of all other Principles, to conſiſt purely of Earth.

In the laſt Place, theſe Elements, or minute conſtituent Parts of a Fibre are ſcarce capable of undergoing any Change. When Eſſay-maſters, by an highly intenſe Degree of Fire, try their Metals fus'd with Lead, the beſt Copels they can uſe are thoſe which, like a Sieve, ſuffer the Lead to paſs through them, but retain the more precious Metal. Now, it is by no means probable, that, ſince the Parts of theſe Metals remain unchang'd by ſo briſk a Degree of Fire, the Elements, or component Parts, of Fibres ſhould undergo a Change by the Action of Cauſes ſubſiſting in the human Body whilſt alive. Theſe Elements, or component Parts, may cohere, and have that Coheſion again deſtroy'd, but they remain immutable and unchangeable in every other reſpect.

It may, poſſibly, appear ſurpriſing, that an Earth of ſo fix'd and indiſſolvable a Nature ſhould be lodg'd in the moſt fine and ſubtile Fluids: But of the Truth of this we are ſufficiently convinced by Chymiſtry; for the ſaline, alcaline, and highly tranſparent Spirits, obtain'd from animal Subſtances by Fire, contain an Earth. The pureſt Oils, alſo, diſtil'd from the Parts of Animals, contain an Earth, after repeated Diſtillations, till, at laſt, being entirely freed from theEarth they contain, they become volatile, and are evaporated in the Air; for the Earth ſeems to give a fix'd Nature to the other Principles of theſe Oils.

But as the ſolid Fibres of the human Body conſiſt of theſe terreſtrial Elements, 'tis neceſſary they ſhould cohere with each other. This Coheſion is produc'd by the vital Powers applying to the already form'd Fibres, freſh or additional Elements, in order to ſupply the Places of thoſe before loſt; and this is what we call Nutrition. Tho', in conſidering various Phenomena, we are frequently ignorant of the particular Manner in which they are produc'd, 'tis yet probable, that this Coheſion of the Elements of Fibres is owing to the Interpoſition of an aqueous or pinguious Glue; for Water is poſſeſs'd of an incredible Power of uniting and cementing Bodies. The Calx of burnt Alabaſter, which may be ſcatter'd by blowing upon it, by the Addition of Water becomes a ductile Paſte, which, being ſoon concreted into a ſtony Hardneſs, is call'd Plaiſter of *Paris*. Sea-ſhells, burnt to a Calx, afford an highly fine Powder, which, by its light and volatile Nature, often proves hurtful to the Lungs. This Powder, when mix'd with Water, yields a Paſte, which by means of Fire is converted into the hardeſt Stone. Beſides, in the hardeſt Parts of Animals, where no one would ſuſpect there was any Water, a large Quantity of that Fluid is found; for when the drieſt Ivory, or Hartſhorn, which have lain in the Shops for many Years, are diſtil'd from Glaſs Retorts, the greater Part of them becomes volatile, and paſſes into the Receiver: Thus a great Quantity of Water is obtain'd, whilſt what remains in the Retort is friable. Perhaps the judicious *Homer* had this Doctrine in his Eye, whilſt, at the time the *Greeks* ſtood mute, when *Hector* challeng'd their Army to a ſingle Combat, he makes the enrag'd *Menelaus* wiſh their Annihilation in the following Words:

Ἀλλ' ὑμᾶς μὲν πάντες ὕδωρ καὶ γαῖα γένοισθε.

May all of you be transform'd to Earth and Water.

That a pinguious Glue alſo makes earthy Parts cohere, is ſufficiently evident from chymical Experiments; for ſo long as this oleous Matter, which can only be ſeparated by the Force of Fire acting in an open Air, adheres to the Parts of Animals, theſe Parts cohere; but when this pinguious Matter is expel'd, they become Aſhes. Bones calcin'd to the higheſt State of Friability, when immers'd in Oil, become again coherent.

For this Reaſon, in theſe moſt ſimple Elements, conſider'd abſtractedly and in themſelves, there is no Diſeaſe hitherto obſerv'd, or ſaid to be cur'd by Phyſicians.

When the moſt minute Elements, from the Union of which the moſt ſimple Fibre is produc'd, are conſider'd ſeparately and apart, we can affirm nothing poſitive concerning them; and they who, indulging themſelves in ſubtile Speculations, have attempted to inveſtigate their Diſorders, have ſaid nothing of any real Uſe to Mankind and Medicine. 'Tis eaſy to conceive, that they may be tranſpos'd, and have their mutual Coheſion deſtroy'd; but that the Elements, or firſt Principles, of Bodies are abſolutely immutable, is confirm'd by the whole Frame of Nature, for ſix thouſand Years paſt.

For theſe moſt minute Elements of the ſolid Parts are either to be conſider'd, whilſt, being lodg'd in the Fluids, they are carried through the Veſſels; but, in this State, their Diſorders, tho' known, would be only Diſorders of the Fluids: Or they are to be conſider'd as united, and conſtituting a ſolid Part; and, in this Caſe, they are no longer Elements, but a Solid, compounded and made up of theſe.

But in the ſmalleſt Fibre form'd by the Union of theſe Elements, the following highly ſimple Diſeaſes deſerve our careful Attention, ſince they frequently occur; and, tho' overlook'd, or little adverted to, yet lay a Foundation for underſtanding the Nature and Cauſes of others.

The moſt ſimple Diſeaſes are not, therefore, to be ſought for in the Diſorders of the Elements, which perhaps will remain eternally in the Dark, but in the ſmalleſt Fibre, form'd by the Union and Conjunction of theſe; for when only two Elements cohere with each other, their unnatural Coheſion is capable of producing a Diſeaſe; for 'twill be ſufficiently evident from what follows, that either too ſtrong, or too weak, a Coheſion in the ſimple ſolid Fibres, and the Veſſels and Viſcera form'd of them, may give Birth to an infinite Number of Diſorders.

But theſe Diſorders have been almoſt entirely overlook'd and neglected; for the *Methodics*, to whom the Doctrine of Stricture and Relaxation is aſcrib'd, have not treated of theſe moſt ſimple Diſeaſes, ſince, according to *Celſus*, in the Preface to his firſt Book, "They thought it ſufficient to inquire "into the common Nature of Diſeaſes, of which they eſta- "bliſhed three Kinds; one ariſing from Stricture, another "from Relaxation, and a third of a mix'd Nature; ſince the "Excretions of Patients were ſometimes too ſcanty, and at "other times too copious; ſometimes, alſo, too ſmall in one "particular Part, whilſt they were too large in another."

Diſeaſes of a Fibre from Laxity.

The moſt minute and ſimple Fibre is ſaid to be weak, when the Union of its moſt minute Parts, and their Tendency to Coheſion, are ſo ſmall, that they may be ſeparated by that gentle Motion produc'd in a State of Health, or, at leaſt, by a Motion not much greater.

From

From whatever Cauſe the mutual Coheſion of the Elements, which conſtitute a Fibre, proceed, 'tis no hard Taſk to conceive, that the Power or Force, by which they cohere, may be either augmented or diminiſh'd. Our Veſſels, which are compos'd of Fibres, muſt be capable of yielding to the Impulſes of a Fluid, and of being diſtended, but not too much: The Coheſion alſo of theſe Veſſels ought to remain without a Rupture: Hence a fix'd and determin'd Degree of Coheſion is requiſite in our Fibres; and either a Defect or Exceſs in this Coheſion will produce a Diſeaſe.

The Weakneſs of a Fibre can, therefore, only be defin'd in a relative Senſe: For ſome Weeks immediately after Conception, the Rudiments of the Fœtus become liquid when touch'd, and, unleſs they were ſuſtain'd by the equable Preſſure of a circumambient Fluid, would fall into a ſmall mucous Maſs, entirely void of Shape and Form. During this State, ſo ſmall a Coheſion of the Fibres is requiſite, but a far ſtronger Degree of Coheſion is neceſſary in the Fibres of Adults.

Different Degrees of Coheſion are, alſo, requiſite in different Parts of one and the ſame Perſon: Thus the Coheſion of the minuteſt Solids, which conſtitute the ſoft Pulp of the auditory Nerve, ſeem to be far leſs than the Coheſion of thoſe which conſtitute that hard Tendon which receives its Denomination from *Achilles*.

Hence a ſolid Fibre is ſaid to be too weak, when its Coheſion is not ſo ſtrong as to ſuſtain that Motion, which, in a State of Health, is requiſite for the due Performance of the animal Functions.

Nor is this ſufficient; for the Fibres ought always to be capable of ſuſtaining a ſomewhat greater Force; for if the Coheſion of theſe moſt minute ſolid Parts was only able to bear a gentle Motion of the Fluids thro' the Veſſels in a State of Health, and no more, it would be immediately deſtroy'd, when, in conſequence of an increas'd Circulation, the Fluids were carried thro' the Veſſels with a greater Force. Now the Velocity of the Circulation is increas'd by the ſlighteſt Cauſes, and ſuch as can neither be foreſeen, nor prevented, by human Sagacity: Thus, upon the Hearing of a ſudden Noiſe, the Palpitations of the Heart, and the Strokes of the Pulſe, become preternaturally quick: Laughing, Coughing, and Sneezing, alſo, conſiderably accelerate the Circulation of the Blood.

In certain Diſeaſes it ſometimes appears, how miſerable the Condition of the Patient is, whoſe ſolid Fibres are ſo weak, that they are only capable of ſuſtaining an highly mild and gentle Motion.

Thoſe who, having weak Lungs, ſpit Blood in conſequence of the Rupture of an Artery, live pretty comfortably, if they remain in a State of Reſt, if, by Veneſection, the Quantity of the Blood diſtending the Veſſels is leſſen'd, and if they uſe no Aliments of a ſtimulating and irritating Nature: But if they are ſeiz'd with a violent Cough, cry aloud, or are agitated by the Workings of ſome tempeſtuous Paſſion, the tender Veſſels of the Lungs, in conſequence of the Impetus of the Blood carried thro' them, being enlarg'd, are broken, and ſo violent an Effuſion of Blood is often brought on, as ſuddenly to deſtroy the Patient.

This Debility or Weakneſs of the moſt ſimple and minute Fibres is caus'd, firſt, by an obſtructed Aſſimilation of the Aliments to the Nature of the ſound vital Juices, which is owing to an exceſſive Loſs of the laudable Humours, and the Want of a due Action of the Solids upon the Liquids: Or the Aliments themſelves are of too tenacious a Nature to be chang'd by the Powers appointed for that Purpoſe. Secondly, this Weakneſs of the Fibres is caus'd by the too faint and languid Application of one Part to another, which ariſes from a too weak Motion of the Fluids, which again is for the moſt part produc'd by a Defect of muſcular Motion. Thirdly, this Weakneſs of the Fibres may be produc'd by ſuch a preternatural Diſtraction of them, as almoſt amounts to a Rupture.

'Tis moſt certain, that we conſiſt, and are made up, of thoſe Parts, by which we are nouriſhed. But the Matter which nouriſhes is prepar'd, ſo that it may acquire a nutritive Quality in the Body. Hence Aliments alone are not ſufficient for Nutrition; but the Soundneſs and Perfection of the natural Actions are requiſite, to aſſimilate the Aliments to the natural Juices, and reſtore what has been exhauſted, by whatever Cauſe. When Phyſicians preſcribe the beſt and moſt laudable Aliments for highly phthiſical and conſumptive Patients, they are ſurpris'd to find no happy Effects produc'd by them; but, in theſe Perſons, this aſſimilating Power, without which there can be no Nutrition, is wanting. *Galen*, therefore, *de Ratione Victus in Acutis*, juſtly condemns thoſe Phyſicians, who do not advert to this Circumſtance, in the following Words: "Tho' theſe Phyſicians aſſume the Name of Methodics, yet "they are in reality Strangers to all Method [ἀμεθόδως], ſince "they exhibit Wine and Fleſh, pouring, as it were, Nou"riſhment into an unanimated Veſſel [εἰς ἄψυχον ἄγγος]."

This Obſtruction of the Aſſimilation of the Aliments to the Nature of the ſound vital Juices is owing to too great a Loſs of the laudable Humours. If we conſider what happens to the crude Aliments before they are converted into our Humours, we perceive that an incredible Quantity of the human Fluids is mix'd with them: Thus, in Maſtication, the Saliva and Mucus of the Mouth, Tongue, Palate, and Fauces, are mixt with them; in the Stomach, the gaſtric Juice is mixt with them; and, when they paſs from thence, they are mixt with the cyſtic and hepatic Biles, as alſo with a large Quantity of the pancreatic Juice. Beſides, in every Part of the Inteſtines they are mixt with additional Juices, previouſly elaborated by the curious Structure of the Body. The Chyle, when receiv'd into the minute lacteal Veſſels, is diluted by a large Quantity of Lymph. In the thoracic Duct it is mixt with the Lymph, returning almoſt from all the Parts of the Body: At laſt, falling Drop by Drop from the thoracic Duct into the ſubclavian Vein, it is abſorb'd and carry'd off by the common Torrent of the Blood: Hence we may juſtly conclude, that the due Mixture of a ſmall Quantity of crude Aliments, with ſo large a Quantity of concocted Humours, is one of the moſt conſiderable Cauſes of this Aſſimilation, ſo neceſſary to Nutrition.

This is ſufficiently confirm'd by Experience; ſince in the moſt robuſt and hardy Soldiers, who by Wounds have loſt almoſt the Whole of their Blood, the Aliments, tho' devour'd with a keen Appetite, are not digeſted and converted to a laudable Blood; but the Patients become dropſical, and the whole Frame of their Bodies weaken'd. Thus, alſo, an inſupportable Languor remains for a long time with Women, who, in conſequence of Miſcarriages, have loſt large Quantities of Blood: All other Evacuations, whether by Stool, Urine, or Sweat, when exceſſive, produce the ſame Effect.

This Aſſimilation is, alſo, obſtructed by the Want of a due Action of the Solids upon the Fluids. When the Chyle juſt convey'd to the Maſs of Blood, has for ſome little time been acted upon by the pulmonary, and all the other Arteries of the Body, it partakes of the Nature of Milk, and approaches nearer to our Nature than crude Chyle; and, after ſome time, it is converted into Serum, loſing its white Colour, as *Lower* obſerves. But all this while it is ſubjected to the Action of the Veſſels upon the Fluids, which is no more than that Effort by which our Veſſels repreſs the Fluids which diſtend them: The firmer, therefore, theſe Veſſels are, provided they are not too rigid for yielding to the Impulſes of the Fluids, the more powerfully they act, and, conſequently, the Aſſimilation of the Aliments to the ſound and vital Juices is the ſooner and the better carried on.

A weak and languid Girl, labouring under a *Chloroſis*, takes her Aliments, which, however, do not produce a laudable Blood, but only a kind of Milk, as it were. Hence her whole Body becomes pale, and, when a Vein was unſkilfully open'd in a Caſe of this Nature, I myſelf ſaw white Blood diſcharg'd. If in Patients of this Kind the digeſtive Powers are ſomewhat ſtronger, the Aliments are proportionably more chang'd, but not totally perfected. In this Caſe, a yellowiſh or greeniſh Colour is produc'd; for in theſe a due Action of the Solids upon the Fluids is wanting, in conſequence of which, the Patients are render'd tumid, and full of Crudities; but a laudable Nutrition is not, at the ſame time, carried on.

But if, by means of chalybeate Preparations, and due Exerciſe, the Action of ſuch a Patient's Solids upon her Fluids ſhould be increas'd, her tumid Face begins to ſubſide, a roſy grateful Colour adorns her Cheeks and Lips, and a due Vigour is reſtor'd to all the Parts of her Body.

The Aliments themſelves may be of ſo tenacious a Nature, that they cannot be chang'd by the ſeveral Powers appointed for that Purpoſe. The due Mixture of a large Quantity of concocted Humours with a ſmall Quantity of crude Aliments, and the Action of the Solids upon the Fluids, are the two Cauſes concurring to transform and convert the crude Aliments into the Subſtance of the human Body. But tho' theſe Actions are ſo powerful, that, from ſo many and ſo various Aliments, they at laſt produce the human Blood, yet 'tis requiſite the Aliments themſelves ſhould be of ſuch a Nature as to be capable of being chang'd by the Powers appointed for that Purpoſe; for, according to *Galen*, in his Commentaries on the Epidemics of *Hippocrates*, "Concoction is a certain "Conveyance of that which is concocted into the Subſtance "[ἰσία] of the Perſon by whoſe Powers it is concocted: "When, therefore, the Body is in a natural State, and when "the Subſtance to be concocted is ſuited to the Perſon by "whoſe Powers it is to be concocted, the Whole, or, at "leaſt, the greater Part, of the Subſtance to be concocted is "chang'd, ſo that a very ſmall Quantity of it remains half "concocted."

When, in beſieged Towns, a Scarcity of Proviſions forces the Inhabitants to devour every thing which comes in their way, they all become highly weak and languid: And *Dodonæus*, in his *Stirp. hiſtoria*, informs us, "That when the Inhabitants "of *Middelburg* in *Zeland*, for want of other Proviſions, "eat Bread prepared of Lint-ſeed, their Hypochondria were

"ſoon

" soon distended, their Faces and other Parts render'd tumid, " and many of them destroy'd." In this Case, the strong Glue of the Linseed could not be converted into a laudable Nourishment.

When Girls of a deprav'd Appetite eat Sand, Lime, Wool, and several other unaccountable Substances, they become weak and pale. The tenacious Nature, therefore, of the Aliments ought to be duly proportion'd to the assimilating Powers; otherwise the Body is so far from being recruited, that it is rather oppress'd by them. When the common People stuff their Children with Gruels prepar'd of unfermented farinaceous Substances, or with Potatoes, the poor Infants have their Abdomens render'd immensely tumid, whilst the other Parts of their Bodies decrease.

Hippocrates, well appris'd of these things, in the eighth Aphorism of his first Section, orders, that, when a Disease is at its Height, the Patient should use highly light and fine Aliments; since Nature, being at this time oppress'd with the Force of the Disease, is of course unfit for changing strong Aliments: And from this Position he afterwards deduc'd many excellent and salutary Rules with respect to the dietetic Part of Medicine.

In those Diseases in which the Circulation of the Fluids is languid, the Aliments are of no Service. Patients of this Class may be stuff'd till they become tumid, oppress'd, or even almost suffocated, but they can never be duly nourish'd, as we observe in dropsical Persons.

A diminish'd Velocity in the Circulation of the Fluids is the principal Cause why there is not a due Application of the Elements to the Fibre to be nourish'd.

The Source and Spring of the vital Motion seems to be lodg'd in the Heart. By this Motion driving the Blood out of the Ventricles of the Heart, all the Arteries are dilated, and, being afterwards contracted, by that means continue the Motion of the impel'd Blood.

Among the various Causes producing the Motion of the Heart, the principal is, perhaps, the Influx of the venous Blood into its Cavities; for long after Death, when the venous Blood is protruded to its Right Ventricle, the Motion of the Heart returns, as is certain from various Experiments. Now the Muscles becoming turgid when they act, compress the adjacent Veins in such a manner, as to accelerate the Motion of the venous Blood to the Heart; which, being stimulated by this means, is more quickly contracted. Hence the Circulation of the Blood is render'd quicker.

This is sufficiently confirm'd by Experience; since there is a great Difference between the Strength of two Brothers sprung from the same Parents: If one of them leads a studious and sedentary Life, whilst the other accustoms himself to Hunting, Riding, and the more hardy Exercises; the former is weak, like a Girl, and enjoys but a frail State of Health; whilst the latter, by Exercise, acquires an almost *Herculean* Strength.

When an Horse daily accustom'd to Running, is suffer'd to rest in the Stable, he soon becomes fat and plump; but at the same time he is render'd far weaker, and entirely unfit for his usual Labours. *Hippocrates*, in the second Book of his Treatise *de Ratione Victus*, informs us, that Ease moistens the Body, and renders it weaker, whereas Exercise dries and renders it stronger.

Nothing more evinces the Impossibility of explaining the Nature of particular Bodies by mechanical Principles, than Cohesion, that surprising Property of Bodies: The Parts of Iron cohere with each other: This Iron is drawn out into fine Wire for some musical Instruments: Upon twisting about the Key, this Wire is render'd longer, and more slender, whilst fewer of its Particles come into mutual Contact with each other. At last the Wire, when further drawn, breaks; and the Extremities of the Part, where the Rupture happens, tho' mutually apply'd to each other, will yet never again cohere: Hence Cohesion may be gradually so diminish'd, as at last to become none at all; and about the Moment the Rupture happens, the Parts scarce cohere any longer; or, at least if they do, 'tis in such a manner, that the Rupture may be produced by the slightest Accident. This holds equally true in the solid Fibres of our Bodies.

When Criminals are rack'd, in order to extort a Confession, after they are suspended, 'tis customary to fix to their great Toes Weights, which are gradually increas'd; and they who have been rack'd in this manner, can scarce move their Members for some Days, since they are render'd, as it were, paralytic, by no other Cause than the Violence of the Distention. 'Tis perhaps possible, that the Bladder may be so distended by a too long Retention of the Urine, as totally to lose the Power of contracting itself for the future. In pregnant Women the Skin and Membrana Adiposa are so distended, as after Delivery to remain flaccid and corrugated during all their Lives.

This Weakness of the Fibres produces an easy Distention and Rupture of the Vessels compos'd and made up of them, together with their too faint Action upon their contain'd Fluids. Hence arise Tumors from the distending, and Putrefactions from the stagnating or extravasated, Fluids, together with all the Train of Calamities subsequent to these two Misfortunes.

This is sufficiently obvious, if we suppose, that a perfectly sound human Body should suddenly have all its solid Fibres render'd too weak; for all our Vessels consist of Fibres mutually join'd and interwoven with each other: Hence the Strength of all the Vessels depends upon the Strength of the Fibres; but the greater or smaller Capacity of each Vessel is in a *Ratio*, compounded of the direct *Ratio* of the *Impetus* of the impel'd Fluid, and the inverse *Ratio* of the Resistance made by the Sides of the Vessel. Since, therefore, when the Fibres constituting the Sides of the Vessels are weaken'd, the Resistance of these Sides must be impair'd; it follows of course, that the Impetus of the impel'd Fluid remaining the same, the Vessels must necessarily be distended.

When, for Instance, any Part of the Body is long expos'd to the Steam of tepid Water, than which nothing more effectually weakens the Part thus expos'd, it will soon after become tumid, and œdematous.

Whilst the same Cause continues to weaken the Fibres, upon the Application of the smallest Force the Cohesion will be destroy'd, and a Rupture produc'd; of which we find many mournful Instances, since tender Men by coughing, singing, and bawling aloud, have often had an Artery in their Lungs ruptur'd.

The Weakness of the Fibres produces too faint an Action of the Vessels upon their contain'd Fluids. When the Arteries are distended by an impel'd Fluid, they, by the Energy of their constituent Fibres, repress this Fluid. Whilst the Fibres endeavour to lessen the Cavity of the Vessel they compose, they compress and change the contain'd Fluids. Upon these two depend all the Functions of the Body. Thus, when the Strength of the Fibres is impair'd, 'tis sufficiently obvious, that the Vessels compos'd of these must act less powerfully upon their contain'd Fluids.

Tumors from the distending Fluids must consequently be produc'd: This is confirm'd by Experience; for, when a tender Girl begins to be weaken'd by a *Chlorosis*, those loose Parts under the Eyelids, call'd by the antient *Greeks* ὑπώπια and ὑποφθάλμια, begin forthwith to swell; then the whole Face appears somewhat turgid and white; and whilst the Load of Humours to be mov'd daily increases, without a proportionable Increase of the moving Cause, she begins to have almost all the Parts of her Body render'd tumid. Thus, also, in the Beginning of a leucophlegmatic Cacochymia, Men often rejoice, whilst they falsly imagine, that they are in good Health, and becoming fat. When the Atmosphere continues foggy for a considerable Number of Days, our Bodies appear inflated, because their external Parts are plac'd, as it were, in a continual Bath: Hence they are weaken'd by the distending Fluids.

As to Putrefactions from the stagnated or extravasated Fluids; so long as the Humours are by an equable Motion carried thro' the Vessels, no Putrefaction arises in the Body, since every thing which begins to have a Tendency to Putrefaction, is eliminated through the usual Emunctories of the Body: But when the weaken'd Solids cannot sufficiently propel the distending Fluids, a Stagnation ensues: And in the Heat of the common Air, all the Fluids of the human Body, those of a pinguious Nature excepted, if left to themselves, become putrid, except Milk, which is not possess'd of all the Qualities of the Fluids of the human Body. This Accident must much more happen in our Bodies, the Heat of which is far greater than that of the common Air. The same holds true, when the Vessels, in consequence of their exceffive Tenderness, break, and discharge their Humours: Now if these Observations are apply'd to the various Parts of the human Body, it will appear, that from this single Cause an infinite Train of terrible Misfortunes may arise.

When the too tender Lungs are not able to bear the Impetus of the Blood propel'd from the Heart; their Vessels being ruptur'd, an Hæmoptoe is produc'd, and, by its means, an incurable Phthisis is brought on.

When the weaken'd Vessels of the Brain are either too much distended, or, being ruptur'd, discharge their Contents, all the Disorders of the animal Functions, from the slightest Vertigo, to the most fatal Apoplexy, may be produc'd. This Doctrine holds true in all the other Viscera; but let these Observations suffice as proper Instances.

By rightly understanding what has been said, present, future, and past Disorders of the Fibres may be known, their Effects prognosticated, and proper Measures taken for their Cure.

The Physician, who thoroughly understands what has been said concerning the Nature of a too weak simple Fibre, concerning those things which preceded this Weakness, the Phenomena

nomena which diſcover it, and the Effects it produces, may eaſily determine, whether ſuch a Weakneſs of the Fibres is preſent. This, in Medicine, is call'd the diagnoſtic Sign, or evident Knowledge, of a preſent Diſeaſe, diſtinguiſh'd from all others, and denotes the individual and ſpecific Nature of the Diſeaſe. This diagnoſtic Sign is obtain'd, when we know, that ſuch phyſical Cauſes have preceded as have all along before been found to produce ſuch a Diſeaſe. Thus, for Inſtance, when I conſider the Caſe of a Man naturally weak, who has us'd aqueous Baths, drank tepid Liquors of the ſame Nature, and indulg'd himſelf in Eaſe, I know that ſuch Cauſes as render the Fibres weak have preceded: And this is the firſt Foundation of the Diagnoſtic. The other is, a Knowledge of the Diſeaſe in its Nature, and preſent Effects, which, if they are ſubjected to our Senſes, are to be judg'd of by them. But the Nature of a latent Diſeaſe is diſcover'd, when the Effects produc'd by this Diſeaſe, as the Cauſe, are known. Hence the Phyſician, who knows the Effects produc'd by a Weakneſs of the Fibres, may diſcover whether ſuch a Weakneſs is preſent or not.

To make a Prognoſtic, imports no more than to know any thing before it happens: Hence it implies a Knowledge, in the Mind of a Phyſician, of a Diſeaſe which will certainly happen, tho' it does not yet exiſt. A future Diſeaſe is prognoſticated from a Knowledge of ſuch Cauſes, as, tho' they have not yet produc'd the Diſeaſe, will nevertheleſs do ſo, when they are either render'd more powerful in themſelves, or begin to operate in Conjunction with others. Thus, for Inſtance, when a Phyſician knows, that any particular Man is diſpos'd to an *Hemoptyſis*, he will appriſe him, that ſuch a Diſorder is to be dreaded by him, tho' he never before labour'd under it: He will order him carefully to abſtain from Aromatics, and the liberal Uſe of Wine, as alſo from Bawling and Singing; for the Prognoſtic is not founded on a Knowledge of the entire Cauſe of the Patient's Diſorder, ſince in this Caſe the Diſeaſe would be preſent; but on a Knowledge of ſome phyſical Cauſe prediſpoſing, as a Part of a total Cauſe, to the Diſeaſe, and on the Phyſician's foreſeeing that another Cauſe will concur, which will render the former prediſpoſing Cauſe entire. When a Patient is ſeiz'd with a Pleuriſy, and the Phyſician is deſir'd to form a Prognoſtic, if he finds, that the Pleuriſy is not very violent, but is neither reſolv'd by Nature, nor the material Cauſe of the Diſorder remov'd by any critical Evacuation or Tranſlation, and that proper Medicines have not been us'd, then he will prognoſticate, that this Pleuriſy will come to a Suppuration. This Prognoſtic did not depend upon the preſent Pleuriſy, but upon the Pleuriſy conſider'd in Conjunction with ſuch Cauſes as diſpoſe an Inflammation to a Suppuration.

Thus we evidently comprehend what is meant by the Diagnoſtic, and what by the Prognoſtic.

If we have obſerv'd thoſe Changes, which the Diſeaſe, known by its diagnoſtic Sign, has produc'd in a Body before ſound, we may, from theſe Changes ſeen in the Patient, conclude, that the Diſeaſe was preſent; and this is what is call'd *ἀνάμνησις*, or *Recordatio*.

By attentively adverting to what has been ſaid, the moſt proper Methods of Cure may, alſo, be diſcover'd: This is the great and important Intention of Medicine; for to cure is to change the preſent phyſical Condition of the Body whence the Diſeaſe proceeds, that the Soundneſs of the injur'd Functions may be reſtor'd, and Life preſerv'd.

For, after the Diagnoſtic has aſcertain'd the Name of the Diſeaſe, its various Stages, the Part affected, and the peccant Matter in that Part, and after the Prognoſtic has demonſtrated what is to be hop'd or dreaded; from all theſe we are to conclude what Meaſures are to be taken: Theſe are call'd *Indicata*, or things indicated as proper; and the Knowledge thus form'd in the Mind of the Phyſician is call'd *Indication*.

We are always firſt to conſider, whether the Diſeaſe is to be left to Nature, or whether any Aſſiſtance is required from Art. The Patient is as yet alive, and many Effects as yet not exiſting may be produc'd by Life ſtill remaining. If this Change produc'd by remaining Life is ſuch as has been certainly and infallibly obſerv'd capable of ſo changing the Courſe of the Diſeaſe, that Health may return, nothing is to be done by the Phyſician. Thus, for Inſtance, when a pleuritic Patient in the firſt Stage of his Diſorder, in coughing, expectorates a mucous yellow Matter with bloody Strigments, by which all his Symptoms are alleviated, we know from faithful Obſervations made by the Antients, that, if this Expectoration can be continued, the Patient will be cur'd in a few Days. Hence we are neither by Veneſection, nor other Remedies, to diſturb the ſalutary Tendencies of Nature, but only exhibit ſoft Decoctions, in order to continue the Expectoration. But if, on the contrary, in a pleuritic Patient, we obſerve a violent Fever, a burning Heat, a dry Cough, and Dryneſs of the Tongue, without any Signs indicating, that Nature is inclin'd to any ſalutary Tranſlation, we then know, that if the Cauſes acting in this Patient continue to act, either a mortal Gangrene will enſue, or, if the Nature of the Diſeaſe is mild, a Suppuration, which is always good, where the ſuppurated Matter can be evacuated. But in this Caſe there is always great Danger, leſt the Pus form'd ſhould fall into the Cavity of the Thorax, and deſtroy the Patient by a fatal *Empyema*. Hence we in this Caſe conclude, that the Diſorder is not to be left to Nature; but that, by the Aſſiſtance of Art, the Diſeaſe is, if poſſible, to be ſo chang'd, as to prevent a Suppuration, or a Gangrene. Theſe Aſſiſtances, or Means of Relief, are diſcover'd from a Knowledge of the Nature of the Diſeaſe, and the preceding Cauſes.

The Cure of relax'd Fibres is to be obtain'd, firſt, by Aliment which contains Abundance of nutritive Matter, and which is almoſt ſo prepar'd already, as to be nearly in ſuch a State as the nutritive Juices are in a ſound and robuſt Body. Of this Kind, the principal are Milk, Eggs, Fleſh-broths, Decoctions of well-fermented Bread, and auſtere Wines, which are to be taken often, but in ſmall Quantities. Secondly, by increaſing the Motion of the Solids and Fluids by Frictions, Geſtations on Horſeback, in a Chariot, or a Ship, Walking, Running, and other Exerciſes of the Body. Thirdly, by a gentle Compreſſion of the Veſſels, and Repreſſion of the Fluids. Fourthly, by acid and auſtere Medicines, or thoſe of the ſpirituous fermented Kind, prudently and ſparingly us'd. Fifthly, by all thoſe Means which remove a too violent Diſtraction of the Fibres.

Here 'tis ſuppos'd, that there is no Fault in the whole Body, except only a Weakneſs of the Fibres, which is conſider'd abſtractedly as a Diſeaſe, independent of all others. We cannot eaſily cure a preſent weak Fibre, ſo as to reſtore it to ſuch a Degree of Rigidity as is requiſite to Health: But to a Fibre to be afterwards form'd according to the Laws of the animal Oeconomy, we can ſupply ſuch Elements as may, by the Aſſiſtance of the vital Powers, produce a ſufficiently ſtrong Fibre.

The firſt Cauſe of the preternatural Weakneſs of the Fibres mention'd, was an obſtructed Aſſimilation of the crude Aliments to the Nature of that concocted Liquor, which is the moſt ſubtile of all others, and carried through the moſt minute and capillary Veſſels. But, that the Fibres may become ſufficiently ſtrong, there muſt be a proper Matter apply'd and added to them. Now this proper Matter is that, which, having undergone the ſeveral Actions of all the Viſcera and Veſſels, according to the Laws obſerv'd in a ſound Conſtitution, has acquir'd the higheſt Perfection of Elaboration. But ſince the Fibres are ſuppos'd too weak, and ſince the Action of all the Veſſels upon their contain'd Fluids depends upon the due Strength of the Fibres; all the Functions employ'd in changing the crude Aliments into our Nature, will be leſs efficacious. Hence, in ſuch a Body, this Matter ſubſervient to Nutrition can never be prepar'd by its proper Powers. For this Reaſon, Phyſicians are often ſurpris'd to find, that the beſt Fleſhes eaten by ſuch a weak Patient do not nouriſh him; but theſe Fleſhes are only the remote Matter from which the vital Functions prepare the Nouriſhment; and, when theſe Functions are injur'd, the beſt Aliments are in vain exhibited.

Whilſt the tender Embryo is lodg'd in the Uterus of its Mother, the Humours prepar'd by the vital Powers of the latter nouriſh the former, ſince the tender Body of the Fœtus would not be able, from other Subſtances leſs aſſimilated to its Nature, to prepare its Nouriſhment. When 'tis born, the Milk conveys into its Habit the Humours prepar'd in its Mother's Body. Thus Medicine, imitating Nature, conveys, into ſuch weak Bodies, Nouriſhment prepared in the Body of a ſound Animal: Among the moſt conſiderable of which are,

Milk. Every Man is nouriſh'd by his own Milk, and, by the Force of the vital Principle, from it alone prepares all his other Solids and Fluids: For in Men there is always Milk, as well as in Women, tho' they have never born Children, nor been Nurſes. In *Miſcel. curioſ. Dec.* 2. *an.* 5. we are told, that Milk was drawn from a Man of ſixty Years of Age, only by Suction; and in *Miſcel. curioſ. Dec.* 1. *an.* 3. we are inform'd, that Milk was drawn from the Breaſt of a Woman, who was not pregnant: For the Chyle which has undergone the Action of the Heart, Lungs, and Arteries, and is mix'd with all the Humours, is ſeparated from them by the ſurpriſing Structure of the Breaſts.

Now, for theſe Purpoſes, the beſt of all others is human Milk, ſince it is moſt adapted to our Natures; for which Reaſon, 'tis always to be prefer'd to the Milk of other Animals. This Milk ought to be furniſh'd by a ſound Woman, who uſes due Exerciſe, obſerves a laudable Regimen, and is in the Flower of her Age. 'Tis alſo beſt when the Breaſts are drawn four or five Hours after Eating; for then the Chyle is chang'd into concocted Milk, and, having laid aſide the Nature of the Aliments, begins to aſſume that of the human Fluids; for there

is a great Difference in Milk, according to the different Times at which it is drawn after the laſt Meal: That which is collected in the Breaſts, immediately after Eating or Drinking, is crude, and partakes much of the Nature of the Aliments taken: And that which is drawn twelve Hours after a Meal, is thin, yellowiſh, and of a ſomewhat urinous Smell, almoſt like the Serum of Blood: Hence the Milk drawn in the middle Period, between theſe two times, is the beſt.

We muſt here alſo obſerve, that all Animals, which uſe their Mothers Milk, draw it immediately from the Teats, ſo that it is never expos'd to the Air, but is convey'd to the tender Animals, richly impregnated with all its fine and ſubtile Parts; for highly ſubtile Spirits, elaborated by the laſt Concoction in a ſound Body, ſeem to be lodg'd in Milk: This is evinc'd by the large Concurrence of Nerves in thoſe Parts, where the Chyle and Milk are prepar'd, by the ſubtile Steam exhaling from warm Milk, newly drawn from Animals, and by the ſurpriſing Changes produc'd on Infants by Milk: Thus I ſaw an Infant, who by ſucking the Breaſt of a Nurſe who was in a furious Paſſion, immediately became convulſive, tho' before perfectly ſound in every reſpect.

Phyſicians in all Ages have endeavour'd to recruit Bodies ready to fall a Sacrifice to Weakneſs, by having the ſubtile Exhalations ariſing from a ſound young Body, lying in the ſame Bed, convey'd into them. Thus, in the firſt Chapter of the firſt Book of the *Chronicles*, we are inform'd, that the decay'd and ſuperannuated Body of the pious King *David* was cheriſh'd, by laying an healthy young Girl in Bed with him. When, therefore, the Milk is exhibited after it is become quite cold, or again render'd warm by the Fire, it is depriv'd of that highly ſubtile Principle, which was more neceſſary than all the reſt.

Hence *Galen*, in the twelfth Chapter of his fifth Book *de Method. Medend.* uſes theſe Words: "The Antients order'd "a Nurſe to give the Breaſt to thoſe who labour'd under Con- "ſumptions; and I myſelf approve of the Practice: They "alſo order'd, that the Patient ſhould frequently uſe this "Milk, and that in ſuch a manner, as that it might not be "cool'd by the circumambient Air." And, in the ſixth Chapter of his ſeventh Book *de Method. Medend.* after having ſaid ſomething to the ſame Purpoſe, he compares Milk "to "the genital Seed, which cannot long preſerve its Virtues "out of proper Veſſels, but ought either to be retain'd in "the Male, or ſpeedily lodg'd in the Female; and certainly "that Milk is beſt, which is immediately drawn from the "Nipples." And afterwards, when ridiculing the Peeviſhneſs of ſome Perſons, he adds, "As they themſelves will nei- "ther uſe this Milk, nor allow their Children to do ſo, let "them, like Aſſes, uſe Aſſes Milk."

What has been ſaid relative to Milk, is confirm'd by a large Number of Inſtances: Thus *Capivaccius* informs us, that he preſerv'd the only Heir of a noble Family, by ordering him to be laid between two wholſome Nurſes, in the Flower of their Age, and to ſuck their Breaſts. *Foreſtus*, in the fourth Book of his Obſervations, informs us, that at *Bononia* a certain Youth was ſeiz'd with a legitimate *Maraſmus*, but that by ſucking a beautiful young Nurſe, with whom he alſo lay in Bed, his decay'd and exhauſted Body was ſo recruited, that they were afraid, leſt, by an unſeaſonable Venery, he ſhould loſe the Strength he had acquir'd by the Uſe of the Milk.

The Defect of human Milk is beſt ſupplied by that of Aſſes, which is ſucceeded by that of Goats, which may again be ſupplied by that of Cows.

Eggs, which, under a ſlender Shell, contain ſo many Miracles, and which, by the Obſervations of the immortal *Malpighi*, have contributed ſo much to illuſtrate the Generation of Animals, are, alſo, proper for this End.

The White of an Egg, in many reſpects agreeing with the Serum of the human Blood, contains in itſelf a Matter, which, by the Heat of Incubation, being chang'd, within twenty-one Days, makes the latent vital Stamen of the Chick grow to ſuch a Bulk; for the Yolk is not conſum'd, and only the White ſeems ſubſervient to the Nouriſhment of the Chick, whilſt it remains in the Egg.

Hence we may juſtly affirm, that it contains an excellent Nouriſhment. *Hippocrates*, in the ſecond Book *de Ratione Victus*, informs us, "that Eggs contain a Principle of a ſtrong, "nutritive, and inflating Nature: Strong, becauſe it produces "or generates the Animal; nutritive, becauſe it is the Milk "of the Chick; and inflating, becauſe, from a very ſmall "Bulk, the Chick is enlarg'd to a conſiderable Size."

For this Reaſon, the Whites of Eggs are recommended for nouriſhing weak Perſons; but they are to be diluted with Water, in order to deſtroy their tenacious Quality; and moderately ſeaſoned, leſt their Taſte ſhould prove diſagreeable. They muſt be diluted only with tepid Water, or Milk and Water, in equal Proportions; for, when prepar'd with boiling Water, they are coagulated into a ſciſſile Maſs of very difficult Digeſtion.

The Whites of Eggs fall far ſhort of the Uſe of Milk; for, before the White of the Egg can nouriſh the Chick, it muſt undergo the Action of its Veſſels and Viſcera; whereas in Milk there are highly ſubtile Juices, already prepar'd by the animal Fabric.

Though the Yolk of an Egg affords an excellent Nouriſhment, it, nevertheleſs, requires a firm Structure of the Viſcera; for, as *Harvey*, after *Ariſtotle*, has, in his *Exercit. de Generat. Animal.* juſtly obſerv'd, the Chick, ſome Days after its Excluſion, uſes the Yolk, ſhut up in its Abdomen, as Nouriſhment. But the White is conſum'd at the time the Chick is growing from an inviſible Molecule to its due Bulk. For this Reaſon, the White ſeems more eaſily convertible into Nouriſhment than the Yolk.

Galen, therefore, ſeems to have ſpoken of boil'd, and not of raw Eggs, when, for weak Perſons, he principally recommends the Yolks, becauſe the White is with Difficulty concocted [*δύσπεπτον γὰρ λευκὸν*], as is ſufficiently obvious from the tenth Chapter of the firſt Book of his *Method. Medend.* where he ſays the ſame thing of poach'd Eggs.

Fleſh Broths, eſpecially if the Animals, whoſe Fleſh is us'd in preparing the Broth, have faſted for twenty-fours Hours before they were kill'd; for then all the crude Humours are, by the animal Structure ſo chang'd as to aſſume a due Quality. The Fleſhes of kill'd Animals are highly ſucculent, becauſe, principally, the red Part of the Blood is only carried off, whilſt the other Juices remain in them, which, in boiling, being mix'd with Water, afford to weak Bodies a Matter already elaborated, and prepar'd in the Body of a ſound Animal. But, in Boiling, the moſt ſubtile Parts fly off, which might be retain'd, if they were boil'd in *Papin*'s Machine. Decoctions, however, prepar'd in this manner, have a ſaponaceous nauſeous Taſte; ſince the Fat, always adhering to Fleſh, by the violent Action of the Fire and Water, whilſt the Veſſel is cloſe-ſtopt, is ſo attenuated as to be intimately mix'd with the Water. Beſides, Broths prepar'd in this manner are too rich, and require to be diluted. Hence, every thing of a ſoluble Nature ought, as much as poſſible, to be extracted from Fleſh, till only the muſcular Fibres remain, by long boiling, in a long and well-ſtopt common Veſſel. When Broths of this Kind are thoroughly cold, a concreted Fat generally ſwims upon their Surface, which is carefully to be taken off, leſt, as it ſoon becomes rancid, it ſhould prove offenſive to a weak Stomach.

It is an unaccountable Error, to imagine that Broths, deſtin'd for theſe Purpoſes, are the better, the more rich they are; ſince, in conſequence of their inſurmountable Tenacity, they rather too much load a weak Stomach; for which Reaſon a moderate Dilution of them is neceſſary.

But, that, by boiling Fleſhes in common Veſſels, a great deal of their moſt ſubtile Parts are loſt, is ſufficiently obvious, from the grateful and refreſhing Steam ariſing from the Veſſels in which they are boil'd, when not cloſe-cover'd.

It is highly probable, that all thoſe Animals are the fierceſt, which prey upon other live Animals: For of this we are certain, that Dogs which fed upon raw Fleſh are more bold than others.

For Broths prepar'd with this Intention, the Fleſh of Fowls is generally prefer'd, then Veal, then Mutton, and, laſt of all, Beef. If we except the ſubtile Steam which exhales in common Boiling, the other nutritive Parts are lodg'd in the gelatinous Portion which the inſpiſſated Broth affords. Now it is confirm'd by Experience, that Veal has more of this gelatinous Subſtance than Beef; and Mutton ſtill ſomewhat more than Veal; the Fleſh of Chicken yields leſs of this gelatinous Subſtance, but that of old Fowls almoſt double the Quantity yielded by Veal.

The beſt and moſt ſavoury Broths are prepar'd of a due Mixture of Veal, Mutton, Beef, and Fowls, eſpecially if, after they are prepar'd, a little Lemon or Orange-juice is added, in order to remove their Tendency to Putrefaction.

Decoctions of well-fermented Bread. Theſe are of ſingular Service among thoſe People, who, living in hot Countries, have lean and conſtricted Bodies, in which, in acute Diſeaſes, every thing has a Tendency to the higheſt Putrefaction. It is neceſſary, that, by Fermentation, the too glutinous Nature of the Grain ſhould be deſtroy'd, leſt it ſhould prove injurious. In this Caſe, Decoctions prepar'd from it, of the Thickneſs of Whey, are of ſingular Service; but thoſe made ſo rich as to have the Conſiſtence of Cream, are leſs eaſily digeſted. To Decoctions of this Kind, grateful Aromatics, or a little Wine, may be added; by which means they become more reſtorative.

But we muſt obſerve, that theſe Decoctions, prepar'd from Bread, are only advantageous for this Reaſon, that they nearly reſemble the Chyle, in ſo far as it conſiſts of Aliments, but not as it conſiſts of a Mixture of the other Humours of the human Body: Hence theſe Decoctions always partake of a Vegetable Nature. But, in order to

prepare

prepare the Fluids of an human Body from the Chyle, the Action of the Lungs, the other Viſcera and Veſſels, are requir'd: Hence in phthiſical Patients, and all others who have too weak Lungs, the only Hopes of Recovery are placed in the Uſe of Milk: Decoctions of Bread, therefore, contain a Matter far more remote from the higheſt Perfection of Nouriſhment than Milk does.

Auſtere Wines. In all Wines there is a highly ſurpriſing, but, at the ſame time, a grateful Stimulus, by which they rouſe and warm all the Parts of the Body. If a ſmall Quantity of this Liquor is drank by a Perſon not too much accuſtomed to it, all his Senſes become quick, his Members agile, and his Mind chearful. When the Philoſopher, exhauſted by deep Reſearches, or profound Meditations, takes his Glaſs of Wine, he is forthwith refreſh'd, and a new Vigour and Serenity are reſtor'd to his Mind. Grateful ſparkling Wines, ſuch as Champaign, are poſſeſs'd of this Quality, but their Effects do not laſt for any conſiderable time; whereas auſtere Wines apply their more firmly cohering ſpirituous Principle to the Body, by a more durable Action; and, at the ſame time, by their aſtringent Qualities, ſtrengthen the Fibres more; for which Reaſon, they are, in this Caſe, preferable to the others. The beſt way of exhibiting them is to ſoak a Piece of Biſcuit in them, to be eaten every three Hours. By this means, the Virtues of the Wine will not be ſo ſoon loſt, and the flaccid Primæ Viæ will, as it were, be inſpir'd with new Life; for there is an uncommon Energy and Strength in Bread and Wine. Theſe auſtere Wines are, principally, *Florence*, rough *French* Wines, and black *Greek* Wines.

Theſe remote Materials of Nouriſhment ought to be taken in ſmall Quantities. Faults, with reſpect to this, are often committed; ſince, by endeavouring to reſtore theſe weak and and languid Bodies, People frequently load and deſtroy them, by too large a Quantity of Aliments: What Difficulty of Breathing is produced, when phthiſical Patients, by eating but a little more than enough, oppreſs the Lungs too much by a freſh Quantity of Chyle? It is wiſely order'd by Nature, that Infants ſhould take but ſmall Quantities of Milk at a time, though they have frequent recourſe to the Breaſt. Unleſs, therefore, this Rule be obſerv'd, all other Means, though in themſelves the moſt conducive to the End, will never be of any Service.

Among the other Cauſes of too weak Fibres, we reckon'd too faint and languid an Application of the Parts to each other. This Cauſe is remov'd when the Solids act more powerfully upon their contain'd Fluids: For, upon the Action and Reaction of the Solids and Fluids, all the Functions of the Body depend. Now this Action and Re-action are reſtor'd

By Friction, which is, as it were, an alternate Compreſſion and Relaxation of the Parts of the Body. A gentle Friction only compreſſes the Veins; whereas, by a ſtronger Degree, the Arteries are, alſo, compreſſed. By compreſſing the Veins by Friction, the Motion of the viſcous Blood to the Heart is accelerated. Hence the Motion of the Heart is rous'd; by which means, the Blood is, with greater Velocity, propel'd through all the Veſſels. The vital Force may, therefore, be augmented to any Degree, by means of Frictions, without the Exhibition of any Medicine internally; for, by means of Frictions, a burning Fever may be excited in the moſt cold dropſical Patient. In thoſe Bodies where almoſt all the chylopoietic Organs are ſo languid as not duly to perform their reſpective Functions, Frictions with rough woolen Cloths over the whole Abdomen, when the Patient is faſting, have been found to produce ſurpriſingly happy Effects. Hence the Antients had Frictions in ſo great Veneration, not only for the Preſervation of Health, but alſo the Cure of Diſeaſes.

When a Horſe is left in the Stable without being curried, he, in a few Days, becomes good for nothing; whereas, when he is duly comb'd and bruſh'd, he remains agile and hardy for a conſiderable Number of Years: For, as *Columella*, in the thirtieth Chapter of his ſixth Book *de Re Ruſtica*, obſerves, "The Bodies of Cattle, as well as of Men, are to be daily "rub'd; and it is often of more Advantage to curry them "ſufficiently, than to pamper them with Foods."

Among the Antients there were Frictions of various Kinds, and ſubſervient to different Purpoſes. Hence *Hippocrates*, in his Treatiſe *de Med. Offic.* tells us, "that Friction may re"ſolve, contract, incarn, and diminiſh; ſince ſtrong Friction "contracts, gentle Friction reſolves, much Friction diminiſhes, "and moderate Friction condenſes." Any Part is render'd more lax by being rub'd with ſoft oleous Subſtances.

Nothing is more beneficial in curing a Weakneſs of the Fibres, than Frictions with rough warm woolen Cloths, eſpecially if previouſly impregnated with the Smoke of burning Amber, or Maſtich, that at the ſame time this aromatic and corroborating Steam may enter the relax'd Parts. But we are to proceed gradually in this Work, and not uſe too ſtrong Frictions at firſt; leſt either the ſtagnating Fluids in the preternaturally diſtended Veſſels ſhould be too copiouſly convey'd to the Heart, and by that means overwhelm and ſuffocate it; or the tender Veſſels ſhould be broken by imprudently increaſing the Motion of the Blood.

Geſtations on Horſeback, or Riding. The whole Time this Exerciſe is continued, the entire abdominal and thoracic Viſcera, being pendulous, are ſhak'd, and, as it were, gently rub'd upon each other; the pure Air, in the mean time, acts with a greater Impetus on the Lungs; and all theſe Circumſtances concur to produce incredible Changes. But it is to be obſerv'd, that a weak Perſon ought not to ride with a full Stomach, but before Dinner, or after Digeſtion is almoſt over; for, when the Stomach is diſtended, the Concuſſions occaſion'd by Riding are troubleſome to weak Perſons; whereas, when the Primæ Viæ are almoſt unloaded and empty, the remaining Fæces are, by this Concuſſion, excellently eliminated.

Sydenham laid ſo great a Streſs on Riding, that he thought he could not only cure ſlight Conſumptions, but an almoſt deſperate Tabes, accompanied with nocturnal Sweats, and a violent Diarrhœa, by Riding alone; nor did he believe Mercury more effectual in the Cure of the Venereal Diſeaſe, or the Peruvian Bark in intermittent Fevers, than Riding was in a *Phthiſis*.

But he orders the Time and Degrees of Riding to be gradually enlarged, ſo as not ſuddenly, and all at once, to fatigue the Patient by ſtrong Riding; and gives memorable and beautiful Inſtances of Cures produced by that means. Then he ſubjoins, that tho' Riding on Horſeback is principally beneficial to phthiſical Patients, yet Journeys undertaken in Chariots have often produced ſurpriſingly happy Effects.

Hence thoſe who are ſo weak, that they cannot ſit on a Horſe, may uſe a Chariot, till, becoming ſtronger, they are able to bear Riding. Geſtation, and rocking in Cradles, never fail to prove beneficial to Children, the weakeſt of human Creatures.

Sailing in a Ship is alſo beneficial to weak Perſons. Whilſt the Ship is under a calm and gentle Motion, an uncommon Alacrity, an increas'd Perſpiration, a keener Appetite, and a quicker Digeſtion, are excited. But the Toſſings of a rough and ſtormy Sea, ſometimes in the moſt robuſt Men, not accuſtomed to a Sea-faring Life, produce Vertigo's, Vomitings, intolerable Uneaſineſs, and ſometimes Deliquiums: By theſe means inveterate Diſorders have been known to be accidentally cured; but, in weak Conſtitutions, theſe violent Agitations and Commotions would be injurious.

All theſe are principally beneficial to weak Perſons, becauſe, without much Fatigue, they enjoy the Benefit of Motion; but after, by theſe means, their Strength begins to return, the Body is alſo to be ſtrengthened by muſcular Motion; which End is obtain'd by

Walking, Running, and Exerciſe of the Body: For unleſs Patients of this Kind uſe theſe, they gradually relapſe into the ſame Diſorder. Hence it is ſo often to be lamented in Practice, that young Women, cured of a *Chloroſis*, delighting too much in a ſedentary Life, and neglecting to ſtrengthen their Bodies by Exerciſe, a few Weeks after become equally weak and pale, as they were before. They want to be nouriſh'd by Aliments, and abſtain from Labour; but by this means they never generate a laudable Blood, but the languid and vapid Cacochymy returns; for, according to *Hippocrates*, in his Treatiſe *de Ratione Victus*, "Aliments and Labour have oppoſite Intentions, "tho' both concur to the Preſervation of Health: Labour "conſumes what is preſent in the Body; whereas Meat and "Drink reſtore and recover what is evacuated and exhauſted "from it."

How effectually muſcular Motion contributes to corroborate and ſtrengthen a weak Body, we have already obſerved. Weak Perſons are to begin with gentle and moderate Walking, which is to be gradually raiſed and augmented to Running. Thoſe Exerciſes are principally beneficial, which, at the ſame time they employ the Body, amuſe and divert the Mind; ſuch as playing at Ball, Fencing, and others of a like Nature. Hence the ſagacious Antients propoſed Rewards for thoſe, who, in the Gymnaſtic Exerciſes, ſurpaſſed their Neighbours; that, by this means, the Youth might be encouraged to ſtrengthen and prepare their Bodies for all the Toils of War: And *Hieronymus Mercurialis*, in his Treatiſe *de Arte Gymnaſtica*, informs us, that *Cyrus*, who always had the Intereſt of the *Perſians* much at Heart, enacted a Law, injoining, that his Subjects ſhould not ſet down to a Meal, unleſs they had previouſly uſed ſome proper Exerciſe.

By a gentle Compreſſion of the Veſſels, and Repreſſion of the Fluids. This Direction is of the higheſt Importance, ſince Diſeaſes, by all accounted deſperate, have often been cur'd by no other means than a general Compreſſion of the Veſſels, which ought never to be ſo great as entirely to deſtroy the Cavities of the Veſſels; for, in this Caſe, the Principle of Life would be ſuffocated in the Part; but only to render them leſs than they would have been without this Compreſſion; for, by this means, the weak Veſſels are kept from being preternaturally diſtended by their contain'd Fluids; for the Capacity of a Veſſel does not depend ſimply upon the diſtending Fluid, but on its Exceſs above the Reſiſtance of the Veſſel; but the more a Fibre is diſtracted,

diſtracted, the weaker it becomes: For this Reaſon, every thing which prevents the Diſtraction of a Fibre, removes the weakening Cauſe. Now Bandages, or tight wearing Apparel, of any kind, by proving a kind of Prop or Buttreſs to the Veſſels, perform what the weaken'd Solids could not do; that is, hinder the preternatural Dilatation of the Veſſels.

In the Cure of ſome Diſeaſes, more happy Effects are produced by this Method, than by any other whatever. Thus, for Inſtance, when that Species of Dropſy call'd Anaſarca has render'd the Thighs and Legs tumid, and the whole Water is diſcharg'd, whether by Accident or Deſign, the Parts not only remain pendulous and flaccid, but ſoon after become equally tumid, unleſs ſtrengthen'd and ſupported by proper Bandage.

In that Species of Dropſy call'd Aſcites, when the Waters are evacuated by a Perforation of the Abdomen, unleſs the pendulous and flaccid Belly is forthwith duly ſwath'd, a mortal Syncope is either brought on, or the Waters are again collected in the lax and pendulous Parts, and the Dropſy ſoon render'd as formidable as before.

When Fluids become ſtagnant, or, at leaſt, move very ſlowly in the too much dilated Veſſels of the Legs, the Skin is often corroded, and Ulcers of a bad Kind produc'd, eſpecially if there is a ſcorbutic Taint in the Body, which often prove rebellious to the beſt Medicines: But theſe Misfortunes may infallibly be prevented by Bandage or Socks, ſo tight, as to hinder the Fluids from lodging in the dilated Veſſels.

I remember to have perform'd a Cure on a young Girl of Diſtinction, whoſe nervous Syſtem was the moſt ſuſceptible of irregular Motions, of any I had ever ſeen. Upon hearing a ſhrill Noiſe, or having her Eyes expoſed to a ſparkling Light, ſhe forthwith became convulſive, and felt ſurpriſing Commotions, accompanied with a Senſe of Laceration in her Abdomen. Neither the ferulaceous Juices, nor Caſtor, which is generally ſo effectual in Caſes of this Nature, were of any Service to her. But when her Legs, Thighs, and whole Abdomen, as far up as her Breaſts, were duly ſwath'd, her Diſorder immediately remitted, and, by the Exhibition of proper Remedies, ſhe was perfectly recover'd. But, for ſome Months, ſhe patiently and chearfully liv'd ſwath'd up like an *Egyptian* Mummy, becauſe ſhe found ſo uncommon Relief from that Practice.

The Cure of a too weak, ſolid, ſimple Fibre, ſo far as it depends upon the Non-naturals, and the Aſſiſtance of Surgery or Swathing, has been already deſcrib'd. It now remains, that we conſider and enumerate thoſe Remedies, which, being exhibited internally, and committed to the Force of Nature, induce ſuch a Change as is requiſite for the Reſtitution of Health. The Elements of the Fibres, united by too faint a Degree of Coheſion, produce the Diſeaſe; ſuch Remedies are therefore requiſite, as, when apply'd to the Body, render this Coheſion ſtronger. And the Subſtances of this Kind are,

Acido-auſtere Medicines, commonly call'd Aſtringents. All theſe, when apply'd to the Tongue, exert their Virtues in a ſufficiently ſenſible manner; for they dry the whole Mouth, and conſtrict all the Mouths of the exhaling Veſſels. The Tongue, alſo, becomes, as it were, contracted, and ſhorter than before. Hence *Galen*, in the ſecond Chapter of his eighth Book *de Method. Medend.* informs us, "That 'tis the peculiar "Province of the Taſte to diſtinguiſh aſtringent Subſtances;" for all the Medicines of this Claſs have this peculiar to themſelves, that when apply'd to any Part of the Body, they make the conſtituent Elements of the Fibres approach more nearly, and adhere more ſtrongly, to each other; and ſo powerful are they, that they produce the ſame Effect on the Parts of dead Animals; for when, by a long Maceration, Tanners have freed the Skins of Animals from their adhering Fat, they are ſo ſoften'd as almoſt to fall in Pieces, but a due Strength is reſtor'd to them by an Addition of auſtere Subſtances. This *Pliny*, in the 19th Chapter of his 13th Book, calls *Coria perficere*; where, talking of Pomgranates, he tells us, that their Bark is principally uſeful *ad Coria perficienda*, for tanning Leather. Oak Bark, which is much cheaper, is at preſent uſed for this Purpoſe.

The principal Vegetables, poſſeſs'd of this aſtringent Quality, are thus enumerated in *Boerhaave*'s *Materies Medica*. The Fruit, Juice, Flower, and Bark of Acacia; the Doſe of the inſpiſſated Juice is from four Grains to one Dram. The inſpiſſated Juice of Sloes, call'd Acacia Germanica, from ſix Grains to a Dram and an half. The Juice of (*Acetoſa*) Sorrel, (*Anſerina*) Wild Tanſy. The Fruit and Juice of Barberries. Biſtort-root. The Fruit, Bark, and Root, of Capers. The immature Fruit and Leaves of Cornelian Cherries. The Fruit and Leaves of the Cypreſs-tree. The Flowers, Fruit, and Sponge, of the *Cynosbatos*, common Briar. The Fruit and Marmalade of Quinces. The Roots of Fern. Strawberries. The Bark of the Aſh-tree. The Flowers, Fruit, and Bark, of Pomgranates. St. John's-wort, the whole Plant. The inſpiſſated Juice of Hypocyſtis, from one Dram to five Drams. The Leaves, Flowers, Seed, and Root, of the common Dock. The immature Fruit of the Medlar. All the Sorts of Myrobalans, from five Grains to two Drams. Myrtle-leaves. The Leaves and Flowers of the Great Water-lily. Omphacium. Burnet. Purſlain. Sloes. Unripe Pears. Oak Leaves and Acorns. Cinquefoil. Rhubarb, from half a Dram to two Drams. The Leaves and Grains of Sumach. Roſe-flowers. The greater Houſleek. The Fruit of the Service-tree. Tamarinds, from one to two Ounces; the Pulp of them duly preſs'd and cleans'd, from half an Ounce to two Ounces. The Bark of Tamariſk. *Terra Japonica*. Tormentil-root. From all which, Infuſions, Decoctions, Extracts, Pills, medicated Wines, and Remedies of various Forms, may be eaſily prepar'd. Thus, for Inſtance, an Infuſion may be prepar'd in the following Manner:

Take of Wild Tanſey, one Handful; of Burnet, half an Handful; and of Tormentil-root, half an Ounce: When they are cut ſmall, infuſe them for an Hour in a Pint and an half of boiling Water. The Doſe is one Ounce every three Hours throughout the Day.

For a Decoction:

Take of the Flowers of the ſharp-pointed Dock, one Handful; of the Flowers of red Roſes, four Ounces; of Tamariſk-bark, two Ounces; of Sorrel-root, four Ounces; and of the bruiſed Seeds of the common Dock, two Drams: Boil for a Quarter of an Hour in a ſufficient Quantity of Chalybeate-water, for two Pints of the ſtrain'd Liquor. The Doſe is an Ounce, three or four times a Day.

Or,

Take of Sorrel, two Handfuls; of Biſtort-root, half an Ounce; and of Pomgranate-flowers, two Drams: When they are boil'd for a Quarter of an Hour in a ſufficient Quantity of Water for one Pint of the ſtrain'd Liquor, mix with it one Ounce of the Syrup of Myrtles. The Uſe of this Preparation is the ſame with that of the former.

For an Electuary:

Take of the Marmalade of Quinces, one Ounce; of the Conſerve of red Roſes, half an Ounce; of Pomgranate-flowers, one Dram; and of the Syrup of Myrtles, a ſufficient Quantity for making an Electuary: The Doſe of which is one Dram, three or four times a Day.

For an Extract:

Take of Sorrel, eight Handfuls; of the Garden Dock, four Handfuls; and of the Cinquefoil, ſix Handfuls: Make theſe Ingredients ſufficiently clean, cut them ſmall, boil them in a ſufficient Quantity of Water, ſqueeze them ſtrongly by a Preſs into a large Veſſel, and let them evaporate to the Thickneſs of an Extract; for a Doſe of which, from one to two Drams may be exhibited: Or add to the Extract a Quantity of dry'd Biſtort-root, ſufficient for forming it into a Maſs for Pills, the Doſe of which is from four to fifteen Grains.

For a medicated Wine:

Take of the bruiſed Seeds of the greater Sorrel, ſix Drams; of Pomgranate-flowers, five Drams; of the Root of Capers, two Ounces; of the Bark of the Aſh-tree, ten Drams; of the Leaves of Burnet, two Handfuls: When they are cut and bruiſed, infuſe them in three Pints of auſtere *Freuch* Claret: Of which an Ounce is to be taken three or four times a Day.

Or,

Take of the Barks of Caper and Tamariſk-roots, each one Ounce; of the Flowers and Stalk of St. John's-wort, two Ounces: Of theſe prepare a medicated Wine, with three Pints of auſtere Red-wine.

But, among the Aſtringents of the foſſil Kind, the moſt valuable is Iron diſſolv'd in fermented vegetable Acids; by the Uſe of which, theſe tumid, cold, and weak Bodies, are miraculouſly reſtor'd. By means of this Medicine, no Evacuation of the diſtending Fluid is made, but an additional Strength is procur'd to the Veſſels; by which, being more contracted, they promote the Motion of the almoſt ſtagnant Humours; whereas thoſe who attempt the Cure of theſe Diſorders by Evacuation, weaken the Patient ſtill more and more.

They who uſe Medicines of this Kind, perceive a grateful Warmth ariſing over all their Bodies; the Swelling ſubſides, the pale Colour of the Lips and Cheeks is chang'd into a natural and grateful Red; the Torpor, and Difficulty of Breathing,

upon

upon the ſlighteſt Motions, are remov'd; their former Agility returns; all the Functions are invigorated; and a new Life is, as it were, reſtor'd. The ſame Effect is alſo produc'd by Iron diſſolv'd in medicinal mineral Waters.

By ſpirituous fermented Liquors. The Serum of Blood, or the White of an Egg, are immediately coagulated by an Affuſion of pure Alcohol; and the ſolid Parts of Animals become far more hard, and are contracted every Way, by being depoſited in Alcohol. Hence this Fluid is poſſeſſed of a Power of ſhortening the ſolid Parts of Animals; but, at the ſame time, it coagulates the Fluids; for which Reaſon great Caution is requiſite in the Uſe of fermented Spirits; for, when they are imprudently uſed, they may produce a large Train of Misfortunes, by inſpiſſating the Fluids, and contracting the Solids. Thus, in the *Hiſt. de l'Academ. des Sciences, An.* 1706. we are inform'd, that, upon diſſecting the Body of a Woman ſtrongly addicted to Drinking, the Spleen, Pancreas, Liver, and Lungs, were found dry, ſcirrhous, and, in ſome meaſure, petrified. All the Glands, in the mean time, both internal and external, had aſſum'd a Degree of Hardneſs, almoſt equal to that of a Stone. Many other Obſervations of the like kind occur in practical Writers.

But theſe muſt be uſed prudently and ſparingly; for all theſe Medicines, when taken inwardly, act firſt on the Stomach and Inteſtines, and can never enter the Blood with their entire Virtues, otherwiſe they would prove injurious; for this Reaſon they ought to be exhibited in ſmall Quantities, and at different Times, that, by this means, being diluted by our Humours, they may gradually enter the Maſs of Blood. If only a few Grains of the highly aſtringent Juice of the *Egyptian* Thorn are held in the Mouth, they contract every Part of it, and ſo conſtrict all its exhaling and inhaling Veſſels, that the Mouth remains highly dry for half a Quarter of an Hour. If, therefore, this Juice ſhould be apply'd immediately to the delicate Orifices of the lacteal Veſſels, it would, by conſtricting them, prevent its own Acceſs. But as all theſe Medicines act firſt upon the Primæ Viæ. and cannot, till much diluted, enter the Mouths of the Lacteals, and, as it were, by ſtealth, inſinuate themſelves into the Maſs of Blood; hence their Virtues muſt be much diminiſh'd, before they arrive at this laſt-mention'd Fluid. Thus *Galen*, in the fourth Chapter of his ſecond Book *de Method. Medend.* juſtly cautions us, "That for this "Reaſon we ought carefully to conſider not ſo much the preſent and immediate Effect of any Medicine, whether external or internal, as the Effect it will produce when it reaches "the Part affected."

Aſtringents, eſpecially thoſe of the more powerful Kind, imprudently uſed, may, partly by coagulating the Liquids, and partly by bracing up all the tender Veſſels which conſtitute the internal Surface of the Stomach and Inteſtines, produce moſt terrible Diſorders.

Hence Steel, diſſolv'd in the milder Acids, is preferr'd to almoſt all other Aſtringents; becauſe it not only operates by its auſtere and aſtringent Quality, but by the Stimulus of its metallic Sulphur, which is highly friendly to Nature, ſurpriſingly rouſes the vital Principle. See MARS.

By all the Means which remove a too violent Diſtraction. Diſtraction removes the Elements, of which the moſt minute Fibres are compoſed, from a mutual Contact: For this Reaſon it diſpoſes them to a Rupture, which is no more than a Privation of Coheſion. The State, next to a total Rupture, is the weakeſt Coheſion capable of being ſurmounted by the ſmalleſt additional Force. Every thing, therefore, which diſtracts, by leſſening the Coheſion, produces Weakneſs. When the String of any muſical Inſtrument is ſtretch'd by Weight, by increaſing this Weight gradually, the Diſtraction is augmented, till at laſt the String breaks. Immediately before the Rupture it coher'd, but ſo faintly, as to break by a very inconſiderable additional Weight. The Perſon, therefore, who removes the Weights which diſtract the String, increaſes, by that very means, its Strength.

This holds equally true in the Fibres of the human Body; for, when the diſtracting Cauſes are leſſen'd, the Strength of the Fibres, by which they endeavour to ſhorten themſelves, is almoſt continually and proportionably increas'd. This is confirm'd by what happens in ſeveral Diſeaſes. Thus, a certain Perſon, by a ſcirrhous Tumor gradually increaſing, had his Oeſophagus ſo compreſs'd, that, during the laſt Months of his miſerable Life, he could only, with the greateſt Difficulty, ſwallow a few Drops of Milk diluted with Water, or the like Quantity of very thin Broth. Upon laying open his Body, I ſaw, that the Cavity of his Stomach did not exceed that of one of the ſmall Inteſtines; for, during a conſiderable Number of Months, it had not been at all diſtended; for which Reaſon, its Fibres had gradually contracted it into ſo ſmall a Compaſs: for all the ſolid Parts of our Bodies are poſſeſs'd of this ſurpriſing Property, that when they long remain in any determin'd Poſition, they afterwards ſo firmly retain it, that they cannot by Force be removed from it.

If a Man has the Misfortune to break his Leg, and if the Surgeon, in the Courſe of the Cure, neglects now-and-then gently to bend the Joints, they remain ever after immoveable; for the Ligaments, not being diſtended for ſeveral Weeks, for want of Motion in the Joints, become rigid and hard.

The Laxity of a Fibre conſiſts in ſuch a mutual Coheſion of the Parts, as by a ſmall Force may be ſo chang'd, that the Fibre becomes longer than it was before: Hence 'tis obvious, that the Laxity of a Fibre is a Species of Weakneſs, and that the Flexility, as alſo the impair'd Elaſticity, of a Fibre, depend upon it, as is obvious from what has been already ſaid; for Glaſs, the moſt brittle of all Bodies, may, by the Rules of Art, be drawn out into Threads more ſlender and minute than thoſe of a Spider's Web; which yet cohere, and, by the ſmalleſt Force, are capable of being twiſted in every Direction without a Rupture. The Flexility of a Body increaſes in proportion to its Slenderneſs. See *Hiſt. de l'Acad. Royale*, 1713.

As for the Laxity of a Fibre, Fibres are ſaid to be too weak, when, their Coheſion remaining entire, they cannot ſuſtain that Impetus which muſt neceſſarily be made by the animal Functions for the Preſervation of Health; or when, though able to bear the Efforts of the Functions in the moſt perfect State of Health, they yet break, upon the Motion being a little increas'd, which muſt ſometimes unavoidably happen in the animal Oeconomy. But a preternatural Laxity of the Fibres is known to be preſent, when they indeed bear the Impetus of the vital Motion without having their Coheſion deſtroy'd, but, being too much diſtracted by a ſmall Force, become longer than they ought to be.

A ſilken Thread, not able to bear a Weight fix'd to it without breaking, furniſhes us with a pretty adequate Idea of a too weak Fibre; and a Wire, made of the ſofteſt Lead, which, by having a Weight fix'd to it, is drawn out into a conſiderable Length before it breaks, gives us the Idea of a too lax Fibre. Upon a due Degree of Laxity depends

Flexility. That all thoſe things may happen in the Body, which are daily obſerv'd to be perform'd by the various Motions of the Humours, Veſſels and Muſcles, the Elements of the ſolid Parts muſt partly remain in their natural Coheſion, and partly be changed from it; for which Reaſon they muſt neceſſarily be capable of Elongation. Thus, for Inſtance, in order to the bending of the Joints, their retaining Ligaments muſt neceſſarily be capable of Elongation. For this Reaſon, a certain Degree of Laxity in the Fibres is requiſite to Health; but, if this Degree is enlarg'd, a Diſeaſe is produc'd: Which is,

An impair'd Elaſticity of the Fibres. The Elaſticity of Fibres conſiſts in this, that they are capable of being extended, but again return to their former Length, when the extending Force is remov'd.

But the whole Force of Elaſticity is only that Effort by which the minute Parts, which conſtitute the Fibre, mutually attract each other, whilſt, by the Elongation of their Surfaces, they become more diſtant from each other, their Coheſion in the mean time remaining. If, therefore, a Fibre is render'd weak by any Cauſe whatever, that is, if its Parts attract each other with a faint and languid Effort, its Elaſticity muſt of courſe be neceſſarily impair'd.

The large Veſſels of the human Body are compoſed of ſuch as are ſmaller, and theſe of others ſtill ſmaller; ſo that Anatomiſts have as yet come to no End of their Diviſion. The larger Muſcles, in like manner, conſiſt of others which are ſmaller; and what, to the naked Eye, appears a ſingle muſcular Fibre, by the Aſſiſtance of Microſcopes, appears a Congeries of ſmaller Fibres.

The ſame is alſo obſerv'd in the Nerves, and other Parts of the Body. Hence all the Parts of the Body ſeem to conſiſt of an infinite Number of ſmaller ſimilar Parts; and this wonderful Circumſtance was requiſite for the Flexility of the Parts; and, from the Experiment before alleg'd, we may eaſily conceive, how Glaſs, the moſt brittle of all Bodies, may, by a ſimple Diviſion into the moſt ſlender Filaments, be render'd incredibly ductile; which made the ingenious *Reaumur*, in the *Mem. de l'Acad. Royale des Sciences, An.* 1713. affirm, that he did not deſpair of ſeeing Webs woven of it. I myſelf ſaw a falſe Head of Hair made of Glaſs, drawn out into Wire ſo fine, that without breaking, it was capable of being turn'd up into Curls.

From what has been ſaid, we may account for the following Phenomena; why aqueous and pinguious Aliments render the Fibres weak; why the Fibres of ſuch as are of cold Habits, young, addicted to Eaſe, and growing, are weak; why earthy and auſtere Subſtances render the Fibres ſtrong; why the Fibres of ſuch as are of hot Conſtitutions, and ſuch as uſe Exerciſe, are alſo ſtrong; and, laſtly, why Elaſticity is an inſeparable Concomitant of the Strength of the Fibres.

As for aqueous and pinguious Subſtances, we are taught from Experience, that they weaken the Fibres; for the hardeſt Parts of Animals are render'd ſoft, by being expos'd to the Steam of tepid Water: Long-kept Hartſhorn becomes ſciſſile, by being expos'd to the Steam either of tepid, or boiling Water; as we obſerve in the Philoſophical Preparation of Hartſhorn in the Shops. Young Women, alſo, by the daily Uſe of tepid aqueous Liquors, become highly weak and flaccid. In the ſecond Chapter of the Book *de Uſu Fluidorum*, aſcrib'd to *Hippocrates*, the Diſadvantages attending the liberal Uſe of warm Liquors, are ſaid to be, "Weakneſs of the Muſcles, Impotence of the "Nerves, Stupidity of the Mind, Hæmorrhages, and Deli-"quiums."

The Weakneſs of a Fibre conſiſts in the eaſily-ſeparable Coheſion of its Parts. Now the Elements, or conſtituent Parts, of Water cohere very faintly with each other: Hence, if two or more Particles of Water ſhould be interpos'd between the Elements of a Fibre, the Fibre would in all Probability be render'd weaker by that means; but if only ſingle Particles of Water ſhould be lodg'd between the Elements of the Fibres, they will by that means be render'd much more rigid; for the Elements of Water, conſider'd abſtractedly and by themſelves, ſeem to be highly hard and immutable, and may in a ſurpriſing manner be form'd into Concretions with other Bodies, as we have ſhewn in the Beginning of this Article. Hence, perhaps, the Reaſon may be deduced, why the Parts of Animals become ſofter, by being wet with Water; but, when dry'd again, aſſume a far greater Degree of Rigidity than they had before. But that Water is capable of inſinuating itſelf between the Elements of Bodies, and removing them from their mutual Contact, is ſufficiently certain from the Experiments recorded in the *Mem. de l'Acad. des Sciences, An.* 1714. where we are told, that Shreds of Paper wet with Water become longer by a ſixth Part than they were before.

'Tis alſo confirm'd by many Experiments, that for the like Reaſon the ſolid Parts of Animals are ſoften'd by pinguious Subſtances. The moſt rigid Skins of Animals become ſoft, when impregnated with Oil. The Muſcles, in order to make them retain a due Degree of Flexility, are every-where enveloped in oleous Coats; and, leſt the Ligaments ſhould become rigid, an attenuated medullary Oil is pour'd upon them; and they become highly rigid, when, in exceſſive old Age, this Oil begins to be defective. On the contrary, as there is a Redundance of it in too fat Perſons, it renders their weaken'd Bodies highly lax and tumid.

Perſons of cold Conſtitutions have weak Fibres. Cold, indeed, abſolutely conſider'd, ſtrengthens the Fibres, by bringing their Elements into a more immediate Contact with each other; but, in Perſons of cold Conſtitutions, the Circulation is languid, the Blood too little compreſs'd, the crude Aliments not at all chang'd, and the minute Elements of the Fibres apply'd to each other by two ſmall a Force. Hence their Coheſion is proportionably leſs.

Young Perſons have alſo weak Fibres. The human Embryo is originally a Molecule almoſt infinitely ſmall; and when it is gradually increas'd, ſo as to become obſervable by the Senſes, it would diſſolve away into a mucous Subſtance, unleſs it was ſuſtain'd by the equable Preſſure of a circumambient Fluid. A new-born Infant is ſoft, pulpous, and has all its Bones as yet flexible; as it advances in Years, it becomes gradually firmer. Hence, the younger a Perſon is, the ſofter the Parts of his Body are. For this Reaſon his Fibres, tho' ſufficiently firm for his youthful State, may yet be call'd weak, when compar'd with thoſe of Adults. This ſeemingly unfortunate Circumſtance was abſolutely neceſſary, that the human Body which grows from ſo ſmall a Molecule to ſo large a Bulk, might be eaſily extended every Way.

Such as indulge themſelves in Eaſe, have, alſo, weak Fibres. This is obvious from what has been already ſaid; for when Girls are, by means of the ſalutary Uſe of Steel, cur'd of a Chlorоſis, but neglect to uſe proper Exerciſe, they ſoon relapſe into their former Languor. *Hippocrates* order'd languiſhing dropſical Patients to uſe Exerciſe; but, in acute Diſeaſes, he recommended a State of perfect Reſt; becauſe, in theſe, the vital Force, too much augmented by the Fever, conſum'd the Fluids, and of courſe render'd the Solids dry. Hence, almoſt the whole Cure of acute Diſorders conſiſts in bringing on a Diſpoſition to a Dropſy, that is, a greater Weakneſs.

Growing Perſons have alſo weak Fibres. For the Humours which fill the conic Veſſels, being carried from their Baſes to their Apices, always endeavour to lengthen the Sides of their Veſſels, according to the Axes of their reſpective Cones. So long as theſe Canals or Veſſels are capable of Elongation by this Impulſe, the Man grows. Hence a ſmall Degree of Coheſion is neceſſary to render them capable of yielding. Now, the younger Perſons are, the faſter they grow, becauſe, at this time, their Solids make little or no Reſiſtance; for in nine Months time the human Fœtus grows from an inviſible Molecule, to an Infant weighing ſixteen, and, ſometimes, twenty Pounds.

In Youths, alſo, not arriv'd at their full Growth, we obſerve, that a Fever lengthens the Veſſels as yet capable of Elongation, ſo as to produce a ſenſible Increaſe of Stature. Such a faint Coheſion of the Fibres, as renders them capable of yielding, is, therefore, requiſite and neceſſary to what we call Growth. When, therefore, by ſtrong Labour the Bodies of young Perſons are render'd firm and hard, a proportionable Stop is, by that means, put to their Growth before the due Time. For this very Reaſon, thoſe who train up Lap-dogs, whoſe Worth is, by the Ladies, eſtimated according to their Smallneſs, daily give them Brandy to render their Bodies firm and hard.

Earthy and auſtere Subſtances, alſo, ſtrengthen the Fibres. With reſpect to auſtere Subſtances, we have already obſerv'd, that they are experimentally found to be poſſeſs'd of a Power of making the Elements of our Fibres approach more near to each other. And as earthy Subſtances are of an abſorbent Nature, they attract all the Moiſture which approaches them, and are form'd into firm Concretions by it. A new unglaz'd Tobacco-pipe, when apply'd to the Lips, adheres ſo firmly to them, that it can ſcarcely be pulled away without hurting them. Since, therefore, aqueous Subſtances, as has been already ſhewn, weaken the Fibres, thoſe Bodies, which abſorb Water, muſt of courſe be reckon'd among the Subſtances which corroborate them.

Perſons of hot Conſtitutions have ſtrong Fibres. Heat, externally apply'd to the Body, weakens all its Parts, makes the Elements of the Fibres recede from each other, and conſequently renders them proportionably weaker: yet, in Perſons of hot Conſtitutions, whoſe denſe and compact Fluids are briſkly carried thro' the Veſſels, the Force by which the Aliments are aſſimilated to the human Fluids, is always ſtrong, and the Elements of the Fibres efficaciouſly apply'd to each other; and upon theſe two Circumſtances depends the Strength of the Fibres.

There is a great Difference betwixt Heat excited by Fire, and that excited by a briſk Motion of the Body. The Man, who in the Winter-time baniſhes Cold by ſitting near a Fire, is by that means render'd languid and weak; whereas the Perſon, who endeavours to remove Cold by a briſk Motion of the Body, remains lively and agile.

Perſons who uſe ſufficient Exerciſe, have, cæteris paribus, *ſtronger Fibres than others.*

This is ſufficiently evident from what has been ſaid; for the Country-man, who earns his Bread by hard Labour, has all the Parts of his Body firm and robuſt; he deſpiſes the Inclemencies of the Seaſons, and eaſily digeſts the ſtrongeſt Aliments; whereas the Man who indulges himſelf in Eaſe and Luxury, is weak and miſerable, is highly ſenſible of the ſmalleſt Change of Air; and by a thouſand delicate Diſhes, the ſhameful Inventions of Luxury, and not of genuine Hunger, can hardly excite his languid Appetite.

Elaſticity is a neceſſary Concomitant of the Strength of the Fibres; for thoſe Bodies are ſaid to be elaſtic, which, when diſtracted, return into as many Points of Contact as they were in before. Hence, a ſtrong Force is neceſſary to make the Parts mutually attract each other; and in this Force conſiſts the Strength of the Fibres, as will be ſufficiently obvious from the following Example: Two Load-ſtones, when apply'd to each other, cohere; and if they are a little remov'd from each other, but ſo as to remain within the Sphere of each other's Attraction, they are again united. Thus the elaſtic Parts of the Body, when remov'd from each other, again mutually attract each other, and are reſtor'd to their former Coheſion, when the diſtracting Cauſe is removed. When any Part of a weak and leucophlegmatic Girl's Body is preſs'd with the Finger, it yields like a Piece of ſoft Paſte, and riſes ſlowly, and with Difficulty; whereas the Parts of a ſound and vigorous Man are ſo elaſtic, as to reſtore themſelves immediately.

Thus we have deſcrib'd the moſt ſimple Fibre, laid down a Method for diſcovering its Nature, enumerated the Cauſes which concur to produce it, ſpecify'd the ſeveral Accidents to which it is ſubject, directed how to form juſt Prognoſtics with reſpect to its Diſorders; how, from the known Hiſtory of the Diſeaſe, deſcrib'd by its Signs, we may form a proper Indication, which teaches in what manner, and by what Medicines the Phyſician ought to attempt the Cure; and from the Whole deduced ſome general Corollaries.

The Weakneſs, however, of the ſimple ſolid Fibres is rarely unattended with other Misfortunes; but it was neceſſary to conſider them in this abſtracted Light, that their Nature might be the more clearly underſtood; for this Reaſon we have gone upon the Suppoſition of a Man perfectly ſound, who next Moment had his Fibres render'd too weak by any Cauſe whatever.

Too great Rigidity of an animal Fibre.

The too great Rigidity of a Fibre is ſuch an Union of its Elements, or moſt minute Parts, as makes them cohere in ſuch a manner as not to yield to that Action of the Fluids, which, in order to the Preſervation of Health, ought to overcome this Reſiſtance.

Life and Health depend on this, that the Fibres of all the Arteries are ſo flexile, that they may, by the Blood impel'd by the muſcular Force of the Heart, be diſtended to ſuch a degree, as to be capable of receiving this impel'd Blood; for, when the Heart is in its Diaſtole, the Arteries and Veins are full; otherwiſe there would not be a continued Propulſion of the Blood. The Moment after, the Heart in its Syſtole expels the Blood into the Arteries, which are already full, and through them into the Veins, which are alſo full: Hence, if theſe numerous Veſſels ſhould forcibly reſiſt their Dilatation, ſince the Blood is not capable of great Compreſſion, the Heart could not be emptied, and Life would be deſtroy'd: Hence the Fibres conſtituting theſe Veſſels muſt be poſſeſs'd of ſuch a Degree of Laxity as to render them capable of yielding to the diſtending Blood expel'd from the Heart into the Veſſels before full: The more rigid, therefore, theſe Fibres become, the ſtronger Reſiſtance they make.

Hence, as we cannot abſolutely define a too weak Fibre, ſo neither can we poſitively aſcertain when a Fibre is too rigid, but muſt conſider it with relation to various Ages. Thus, that the little Heart of the tender Embryo may be ſufficient for dilating the Veſſels, by propelling the Blood, ſo ſmall a degree of Coheſion is neceſſary, that the ſolid Parts, upon being touch'd, diſſolve into a kind of Mucus.

The Rigidity of the Fibres is produc'd by thoſe Cauſes which the Cure of a weak Fibre requires, if they are intenſe, or continue too long.

We have already given the Hiſtory of too weak a Fibre, becauſe the Cure of that gives us ſome Inſight into the Cauſes of too rigid a Fibre: But, inſtead of repeating all that has been ſaid concerning the Cure of too weak a Fibre, we ſhall only illuſtrate the Matter by one Example: Moderate Labour, then, ſtrengthens the Body; exceſſive Labour dries it, and renders all its Parts rigid. As the Country-people are, from their Infancy, oblig'd to uſe hard Labour, they are ſometimes, about the fortieth Year of their Age, ſo rigid, and their Humours ſo much exhauſted, that their ſtooping Bodies become the true Picture of Death, till at laſt they are cut off by a Maraſmus, like that which is the Effect of Age.

When a Rigidity of the Fibres is produc'd, it renders the Veſſels compos'd of theſe Fibres leſs flexible, more narrow, ſhorter, capable of reſiſting the Motion of the Fluids too ſtrongly; and, alſo, is attended with all the Conſequences ariſing from theſe Circumſtances.

The Veſſels of the human Body always reſiſt their Diſtention: Hence their Capacity depends upon the Exceſs of the diſtending Force above their contractile Power. When, therefore, this contractile Power of the Veſſels is increas'd, the diſtending Force remaining the ſame, the Veſſels muſt of courſe be more contracted, or be render'd more narrow. The higheſt Degree of this Diſorder is, when the Veſſels do not at all yield to the diſtending Fluids: Hence the Circulation of the Blood is forthwith ſtopt, and that calm and gentle Death, which ſometimes happens in exceſſive old Age, is produc'd, when all the Veſſels, becoming rigid, reſiſt the impel'd Fluids. When by any Cauſe the Fluids are diminiſh'd, the natural Strength of the Veſſels ſo contracts them, that they remain full, but at the ſame time leſs diſtended than they were before.

In an acute continual Fever a Man may, in a Fortnight's time, loſe half of his Weight, the Veſſels, in the mean time, being gradually contracted, in proportion as his Fluids are diminiſh'd. This is ſufficiently obvious; for all Animals, in which the Strength of the Fibres is increas'd, have Veſſels more contracted than other Animals, whoſe Fibres are weaker.

An Horſe full-fed, and kept in a State of Reſt in the Stable, becomes fat by this means; but when his Exerciſe is gradually increas'd, till at laſt he is daily accuſtom'd to the hardeſt Fatigue, he perhaps loſes a third Part of his Weight, but at the ſame time is render'd more hardy, and fit for Labour; by which the Fibres of his Veſſels are ſo conſolidated, that he will not afterwards become ſo ſoon fat, when he enjoys Eaſe, and is well-fed.

The Rigidity of the Fibres renders them ſhorter. The Impetus of the Fluids impel'd through the conical Canals, endeavours their Elongation: Hence the Fibres are lengthen'd, ſo long as their Coheſion admits of it. This is ſufficiently evinc'd, by the remarkable Growth of young Perſons after any acute Diſeaſe. When a great Toe was cut off by one Stroke of a Chiſel, I remember to have ſeen two Arteries to ſtart forth from the even Surface of the wounded Part to the Length of a geometrical Line [the twelfth Part of an Inch]; ſo much were theſe Veſſels lengthen'd by the Impetus of the Blood, notwithſtanding their Diſtance from the Heart. When the Fibres become too rigid, they are incapable of Elongation, and are at laſt, in conſequence of their Strength, ſhorten'd; as is obvious in old Perſons, who become actually leſs than they were in their Youth.

The Veſſels, in conſequence of the Rigidity of the Fibres, reſiſt the Motion of the Fluids too ſtrongly: For, when the Heart forces the Blood through the Arteries, a Part of the Impetus communicated by the Heart is ſpent in dilating the Arteries, whilſt the other Part propels the Blood through them; if, therefore, the Arteries ſhould become rigid, or leſs capable of Dilatation, the more of the Impetus communicated by the Heart will be ſpent in dilating the Arteries, and the leſs in propelling the Blood through them. Hence the Reaſon is ſufficiently evident, why too great a Rigidity of the Fibres increaſes the Reſiſtance of the Veſſels to the Fluids, which move through them: And, as all the Functions of the animal Oeconomy depend on a due Circulation of the Humours thro' the Veſſels, hence a Cauſe, apparently ſo ſimple, may produce a numerous Train of Diſorders.

From what has been ſaid, a Rigidity of the Fibres may be known, its future Effects prognoſticated, and a proper Method of Cure diſcovered.

The Diagnoſtic, which informs us whether a Rigidity of the Fibres is preſent, may be eaſily diſcover'd; for, if a Perſon is emaciated, has his Mouth and Jaws dry, his Skin parched, and his Joints leſs flexible than they ought to be, and if theſe Sympeoms remain, notwithſtanding the Uſe of ſuch Things as render the Body moiſt and plump, we conclude that the Solids are too firm, that they prevail over the Liquids, and diſſipate them too ſoon. Perſons in this State are highly emaciated, and voracious, digeſt their Aliments too ſoon, and have their Juices diſſipated.

Now, if we know, that either ſuch Aliments or Medicines as are employ'd for the Cure of too great a Weakneſs of the Fibres, have been too plentifully us'd, we prognoſticate a future Rigidity.

Various and ſurpriſing Diſorders are produc'd, according as this Rigidity is either univerſal, or confin'd to ſome particular Part; for anatomical Obſervations have ſufficiently evinc'd, that all the known Veſſels of the human Body are capable of being render'd rigid, and that often by Cauſes of ſuch a latent Nature as not to be diſcover'd by our moſt diligent Reſearches.

Thus ſometimes a Finger, and ſometimes a whole Arm, gradually decreaſes, and becomes parch'd; for if the Reſiſtance of the Veſſels is, by any Cauſe whatever augmented, their Extenſion will be proportionably diminiſh'd: Hence a ſlow Maraſmus enſues. I myſelf ſaw a Woman under forty Years of Age, who, without any perceptible Fault in her Body, without any Signs of an internal Suppuration, and without the Increaſe of any ſenſible Evacuation, in two Years-time by a ſlow Maraſmus had her Fluids ſo exhauſted, that her ſqualid loathſome Skin only cover'd her Bones. Perhaps Diſorders of this kind are what the Antients call'd ἐκ νόσου γῆρας, old Age brought on by a Diſeaſe.

The accurate *Sartorini*, in the third Chapter of his anatomical Obſervations, informs us, that whilſt he was diſſecting the Body of a Man, whoſe Right Eye had, long before his Death, been afflicted with a legitimate *Amauroſis*, he found the optic Nerve of the ſame Side preternaturally ſmall and dark-colour'd. In this Caſe a too great Rigidity ſeems to have been produc'd in the Right optic Nerve by a latent Cauſe. A great Variety of Diſorders are produced, when a preternatural Rigidity happens in any of the other Organs of Senſe, or the Viſcera.

Hence the Means of removing a too great Rigidity of the Fibres are diſcover'd.

This Diſorder then is remov'd, firſt, by Aliments and Drink of a mild and aqueous Nature, eſpecially Whey, the ſofteſt Pot-herbs, diluted, farinaceous, and unfermented Liquors. Secondly, by Reſt, in a ſomewhat cool and moiſt Air, together with plentiful Sleep. Thirdly, by unſalted aqueous Remedies, exhibited internally, or apply'd externally tepid, uſing, in like manner, ſmooth and mild oleous Subſtances.

By Aliments and Drink of an aqueous Nature. We call aqueous Drink, either Water itſelf, or any other Liquor in which Water predominates. We call aqueous Aliments, ſuch as have Water for their moſt conſiderable Ingredient, ſuch as Gruels, Broths, and others of a like Nature. All theſe apply a large Quantity of Water to the internal Parts of the Body, carry it through all the Veſſels, and ſoften and lubricate all the Parts; for Water, eſpecially when tepid, is poſſeſs'd of a Power of ſoftening the hardeſt Parts of Animals: Thus Horns, Hoofs, and even Bones, may be render'd ſoft by warm Water.

Hence we obſerve, that the Inhabitants of the hotteſt Climates, who have their Bodies highly conſtricted, are principally fond of Water, and aqueous Subſtances. 'Tis not to be wonder'd at, that Whey is here commended, ſince the Uſe of Milk was before order'd for corroborating too weak Fibres: For, in Whey, the ſubtile, ſpirituous, and caſeous Parts are wanting, and the aqueous Part only remains, which is richly impregnated with the diſſolving Quality of the Graſs. For theſe Purpoſes, the beſt is Whey of Butter-milk, ſtript of all its pinguious Principles, and ſomewhat ſour: Hence this Liquor is highly uſeful in all acute Diſeaſes. To this Claſs belong all the Juices of perfectly ripe Summer-fruits.

The ſofteſt Pot-herbs. All theſe are enumerated in the *Materies Medica* of *Boerhaave*; and there is neither any great Taſte nor Smell in any of them; but they yield an aqueous and highly emollient kind of Mucilage. Broths prepar'd from theſe are highly beneficial to Perſons of this atrabiliarious Habit.

The Pot-herbs mention'd by *Boerhaave* are theſe;

Orache, Potatoes, Beets, Borrage, red Cabbage, Earth-nuts, Chervil; all the Kinds of Succory, Artichokes, Cucumbers, Dandelion, Endive; almoſt all Sorts of Lettuces, Parſnip, Purſlain, Turneps; the Roots of Skirrets, the Roots of Vipers-graſs, Spinage, the Roots of Goats-beard, ſmall Valerian.

Boerhaave, in his *Materies Medica*, ſpecifies the ſubſequent ſoft, aqueous Subſtances, which he recommends as proper in the Caſe before us:

Thin Decoctions of Bread, the Juices of ripe Summer-fruits, either crude, or boil'd with a little Water, and ſweeten'd with Sugar; the Juice of Oranges, the Juice of Elder-berries; all the Kinds of ſweet Cherries, ſweet Citrons full-ripe, Garden-cucumbers, Garden-gourds, Figs, Strawberries, ripe Pomegranates, Jujubs, ſweet Lemons, Apricots, Melons, Mulberries, Peaches, Apples poſſeſs'd of a Sweetneſs together with a kind of Acidity, ſweet Plums, red, white, and black Currants, Raſpberries.

From theſe many Sorts of agreeable Aliments may be prepar'd by boiling, roaſting, and other ways of Management.

A Decoction of Oats alone, drank daily in large Quantities, ſo impairs the ſtrongeſt Man, as to render him entirely weak and languid. Country-people, alſo, have a Practice of rendering Swine lax and fat, only by Meal mixt with Water or Whey.

Many of the common People, who lead a ſedentary Life, uſe no violent Exerciſe, and live conſtantly on theſe farinaceous Subſtances, have always highly lax Bodies.

Farinaceous Vegetables are theſe;

Sweet Almonds, Oats, Buck-wheat, Barley, Mays, Millet, Rice, Panic, Piſtachios, Wheat, Rye, Speltwheat.

From all theſe, Decoctions, Cremors, and Panadas, may be made.

Diluted farinaceous Liquors. When Water is drank by Perſons of conſtricted Bodies, in which the Humours are always compact and denſe, it does not remain long in the Body, but is forthwith diſſipated. 'Tis often to be lamented in acute Diſeaſes, that the Water drank by the Patient is forthwith carried off, either by Urine or Sweats. But the farinaceous Subſtances mention'd in *Boerhaave's Materia Medica* as proper for this Purpoſe, when mixt with the Water, render it ſomewhat more viſcid; by which means it is retain'd, and not ſo ſoon expel'd from the Body. This ſeems to be the Reaſon why *Hippocrates*, in his Treatiſe *de Ratione Victus in Acutis*, condemns the drinking of Water in acute Diſorders, whilſt, in the ſame Book, he ſo warmly recommends the Uſe of Ptiſan. All theſe farinaceous Subſtances procure a kind of Viſcidity to the Water, and, by their latent Oil, which is capable of being mixt with Water, and which may be expreſs'd from them, ſoften all the Parts of the Body.

Unfermented Liquors. The ſame is true with reſpect to the Juices of the Summer-fruits; for ſpirituous fermented Liquors were juſtly claſs'd among the Remedies for a Weakneſs of the Fibres; for, by means of Fermentation, from all theſe are produc'd thoſe ſpirituous Liquors, which, when reduc'd to their higheſt Perfection, like a Fire, as it were, parch all the Solids of the Body, and condenſe the Blood into irreſoluble Maſſes.

By Reſt. Muſcular Motion is a principal Remedy in the Cure of too great a Weakneſs of the Fibres, 'tis not, therefore, to be wondered at, if Reſt ſhould produce the contrary Effect. Thoſe who fatten Animals, keep them, as much as poſſible, from Motion, and feed them plentifully. Hence in acute Diſeaſes, where all the Parts are render'd highly dry, the antient Phyſicians order'd as much Reſt as poſſible, eſpecially in a ſomewhat cool and moiſt Air; for a cold and dry Air corroborates the Fibres.

But nothing more relaxes the Body, than the Warmth of the Bed, eſpecially when the Patient indulges himſelf in Sleep; for in this Caſe the Patient is, as it were, in a Bath, conſiſting of the Exhalations ariſing from his own Body: For this Reaſon, all Animals are ſomewhat larger after Sleep, than they were before. Hence *Hippocrates*, in his ſecond Book *de Ratione Victus*, affirms, "that long Sleeps, by the Heat they "produce, colliquate the Fleſh, relax the Body, and render "it weaker."

And, in his Treatiſe *de Affectionibus*, he uſes theſe Words: "In Diſorders where Dryneſs is beneficial, 'tis highly con-"ducive to ſleep as little as poſſible: But in ſuch as require "Humidity, the Patients ought neither to want Aliments, "nor Drink, nor to labour hard, but to ſleep as much as "they have a mind."

As for aqueous internal and external Remedies; the moſt conſiderable of theſe, and that which is the Baſis of all the others, is Water, which, when warm, and riſing in Steams, is capable of ſoftening the hardeſt Parts of Animals to ſuch a Degree as almoſt to diſſolve them. In acute Diſeaſes, where the Skin is often parch'd and dry, in conſequence of a total Conſtriction of the exhaling Veſſels, the Attempts to provoke Sweats by the hotteſt Medicines are fruitleſs and unſucceſsful: Whereas, when the naked Body is expos'd to the Steams of tepid Water, the Mouths of the Veſſels are relax'd, the Skin becomes moiſt, and ſoon after profuſe Sweats appear. And, becauſe in theſe Diſeaſes the internal Parts are as dry as the Skin, Clyſters of a like Nature are to be injected, and aqueous Decoctions prepar'd with farinaceous Subſtances to be exhibited, in order to ſoften the internal Parts. And when, by the long-continued Uſe of theſe aqueous Subſtances, the Body is weakened, the oppoſite Diſorder, that is, a Dropſy, is often induced.

All theſe aqueous Remedies ought to be us'd tepid; becauſe cold Subſtances condenſe and corroborate the Fibres, and too hot Subſtances coagulate the Blood, and burn the Solids to a gangrenous Cruſt.

All the Medicines of this Kind ought to be without Salt; becauſe Salt indurates all the Parts of the Body, as is obvious from ſalted Fleſh. The Medicines of this Kind afford a very ſingular Relief.

As for mild oleous Remedies; it is certain, that the Skins of Animals become flaccid and pliant, when wet with Water, but are more rigid when dry'd, than they were before; but when they are impregnated with Oil, they remain ſoft for a long time, becauſe Oil is of an adheſive Nature, and not ſoon diſſipated. When the Fibres of the Inteſtines are ſo ſpaſmodically conſtricted, as to excite the moſt violent Pains, by drinking a large Quantity of the ſofteſt Oils, and injecting Clyſters of the ſame, the Stricture is remov'd, and the inteſtinal Fibres are relax'd.

In acute Diſeaſes attended with an exceſſive Dryneſs, and when too great a Strength of the Solids is produced by the Diſeaſe; or when the Patient has often been in ſuch a State before; thoſe oleous Subſtances would be highly beneficial, if the increas'd Heat of the Body did not change theſe Oils, which eaſily become rancid, from a mild to a highly acrid Nature. In this Caſe, Decoctions prepar'd from thoſe farinaceous Subſtances, enumerated from *Boerhaave's Materia Medica*, excellently ſupply the Place of Oils; for from all theſe, eſpecially when dried, a pure and copious Oil may be extracted, by means of a Preſs, which is ſo united with the mucilaginous Part of the Decoctions, that it retains the whole emollient Quality of the Oil, without any Danger of becoming rancid.

When an Anchyloſis ariſes from ſuch an Hardneſs of the Ligaments, that they cannot be extended ſo as to allow the Bending of the Joints, the Rigidity is moſt ſucceſsfully remov'd by duly rubbing all the Part affected with a Lixivium of Soap, ſo as to render it clean, and capable of perſpiring freely. Then it is to be frequently, every Day, expos'd to the Steam of tepid Water; after which, the Part, when dried, is to be anointed with the moſt ſoftening Oil, the rigid Ligaments are to be gently drawn, and the Joint bended; for too great a Diſtraction of the Fibres is one of the Cauſes of their Weakneſs: Hence, after theſe Meaſures are taken, it is highly beneficial to extend and lengthen the too rigid Parts.

When the Antients attempted to reduce extenuated Parts to their natural Situation, they ſtimulated and irritated theſe Parts ſo as to produce a gentle Inflammation and Swelling; for, by this means, the Humours, being convey'd with a greater Impetus, and a briſker Motion, to the Parts, diſtended the too rigid Veſſels proportionably the more. By often repeating this Irritation, the too great Strength of the Veſſels was ſo diminiſhed, as to yield to the Humours, which, in order to their good State of Health, muſt neceſſarily flow into them. Thus *Galen*, in the third Chapter of his fifth Book *de Sanitate tuenda*, informs us, "that, by Frictions with pinguious Subſtances, "he, in a few Days, reſtor'd the Fleſh of many, who had "been, for a long time, emaciated."

Hence Frictions with pinguious Subſtances are highly proper in theſe Caſes, but only to ſuch a Degree as to excite a

ſlight and gentle Redneſs of the Part; for when the Friction is violent, that which it attracts to the Part is diſcuſs'd; but, in this Caſe, a large Diſtention of the too ſtrong Veſſels is requir'd. *Galen*, in the ſeventh Chapter of his ſeventh Book, *de Method. Medend.* gives this Caution, in the following Words: "When, ſays he, we intend to produce Fleſh on "any Part, we are by Friction to heat it, ſo as to render it "tumid; but, when we intend to diſcuſs and evacuate, this "Friction and Heat are to be continued, till the tumid Part "ſubſides." And, in the ſixteenth Chapter of his fourteenth Book, *de Method. Medend.* he tells us, "That it was cuſtom-"ary, with ſome, to ſtrike emaciated Parts with ſlender Rods "ſlightly anointed, till the Parts became moderately tumid." He, alſo, informs us, that, by ſuch a Percuſſion repeated daily, or every other Day, together with a moderate Pication, the diminutive and extenuated Buttocks of Children were wonfully enlarg'd.

Hence the Reaſon is obvious, why Friction, ſometimes, produces oppoſite Effects; for a ſtrong Friction with rough dry woolen Cloths, eſpecially when impregnated with the Fumes of kindled Aromatics, cures too weak Fibres; whereas a gentle Friction with pinguious Subſtances, by attracting the Humours, and relaxing the Solids, ſoftens too rigid Fibres.

Boerhaave, in his *Materies Medica*, ſpecifies the ſubſequent aqueous, ſubfarinaceous, ſuboleous, ſoft, and emollient Subſtances, for the Caſe before us:

Water, boil'd with farinaceous or emollient Vegetables; yellow Mallows; the Root, Leaves, Flowers, and Seed, of Vervain Mallows, Ladies Mantle, Chickweed; the Flowers, Leaves, and Root, of Marſhmallows, the Ox-eye Daiſy, Engliſh Mercury, Brank-urſine, Comfrey, Bugle, the common Daiſy, Hounds-tongue; the Leaves of Henbane; the Roots of white Lilies, Toadflax, Flax, Pile Trefoil, and Sweet Trefoil, common Mallows; the Flowers and Leaves of Meliot, French Mercury, Pellitory of the Wall; the Leaves and Buds of the Poplar, Self-heal, Lungwort; the Leaves and Flowers of Elder, Scabious, Solomon's-ſeal, Nightſhade, Orpine, ſtinking Trefoil, Mullein, the Violet, Kidney-vetch, freſh Butter, Cream; the Fat of Birds, as of a Duck, a Gooſe, and a Capon; the Marrow of Beef; ſoftening Oils, prepar'd of mild farinaceous Subſtances, ſuch as the Oils of both bitter and ſweet Almonds, Linſeed-oil, Oleum Mucilaginum deſcrib'd in the *Leyden* Diſpenſatory, Olive-oil, Palm-oil, Oil of white Poppies, Oil of Nightſhade, Oil of white Trefoil, and Oil of Violets; Syrups, ſuch as the Syrup of Marſhmallows of *Fernelius*, Syrup of Borrage, Syrup of Maidenhair, Syrup of Jujubs, Syrup of white and red Poppies, Syrup of Comfrey of *Fernelius*, and the Syrupus violaceus ſimplex, Honey of Mercury; Ointments, ſuch as the compound Ointment of Marſhmallows, the Golden Ointment, Baſilicon, and Ointment of Poplar.

From theſe may be made proper Baths, Fomentations, Vapours, Ointments, Decoctions, Apozems, and Clyſters; but the Hounds-tongue and Henbane are only ſafe for external Uſe.

Hence are underſtood the genuine Nature and moſt proper Cure of too great an Elaſticity of the Fibres, which is generally the Concomitant and Effect of Rigidity.

We have already explain'd Rigidity, which always bears a direct Proportion to Elaſticity; for it is ſcarce poſſible to find a Body ſo perfectly rigid, as to be incapable of being bent by any Force. Hence, as Elaſticity depends on that Force, by which the conſtituent Parts of a Fibre cohere; and as this Force is greater in a rigid than in a lax Fibre; it is ſufficiently obvious, that too great an Elaſticity muſt always accompany too great Rigidity.

Soft Balls of Clay meeting each other in contrary Directions remain in a State of Reſt; but, when bak'd in a Furnace, they become elaſtic, and recoil from each other with a Force which bears a compound Proportion to their Elaſticity, and the impelling Cauſe.

From what has been ſaid, we are, alſo, enabled to comprehend, why Children, Women, and thoſe who are addicted to Eaſe, have lax Fibres; whereas Adults, Men, and ſuch as uſe Exerciſe, have their Fibres, and, conſequently, all their Solids, ſo rigid, that, upon a Solution of Continuity, their Parts are ſtrongly retracted, and drawn from each other.

As for Children; we have already obſerv'd, that in them the Fibres and Veſſels are not become callous; which afterwards happens by the natural Energy of the vital Motions.

As for Women; it is confirm'd, by anatomical Obſervations, that their Bodies are, all other Conditions remaining alike, far ſofter than thoſe of Men. This Circumſtance is the Reſult of our Creator's Pleaſure; who, for wiſe Purpoſes, form'd the Body of Women in this Manner, capable of being diſtended without any conſiderable Inconvenience, that it might be the more capable of lodging and nouriſhing the Fœtus, and have the menſtruous Matter accumulated more commodiouſly. The lax State of Womens Bodies is, alſo, in a great meaſure, owing to their uſing leſs hardy and ſevere Exerciſes than Men.

As for thoſe who indulge themſelves in Eaſe; we have already ſhewn, that their Courſe of Life has a neceſſary Tendency to render their Fibres lax.

As for Adults; the longer a Man lives, the more often and forcibly the conſolidating Force is applied to his Fibres: Hence, the Strength of his Fibres is increas'd, in proportion as he advances in Years. A Boy has all his Members flexible and pliant; whereas, in a decrepit old Man, they are ſtiff and rigid: Nor can any other Reaſon be given why this ſhould happen in Men rather than in Women, all other Conditions being ſuppos'd equal, than that Almighty God, for the Purpoſes already mentioned, and, perhaps, more noble ones as yet unknown to us, intended this ſignal Difference in the original Make of his Creatures.

As for thoſe who uſe Exerciſe; we have already obſerv'd, that Exerciſe contributes greatly to ſtrengthen and corroborate too weak Fibres; for that which we call Tenacity or Coheſion of the ſolid Parts, is the Effect of the Continuation of Life. Now, the leſs of animal Motion a Perſon adds to the vital Motion, the more weak the ſolid Parts of his Body remain: He who does no kind of Work with his Hands, has them ſoft and tender; whereas he who labours ſtrongly with them, has them hard and callous, and, at laſt, rigid and inflexible.

As for a Retraction of the Parts upon a Solution of Continuity; when a Solution of Continuity happens in any ſolid Part of the living Body, the Parts divided are retracted, and recede from each other; becauſe that Force, by which the Elements of the Fibres cohere, neceſſarily retracts the Extremities of the Parts divided: The ſtronger, therefore, this Force is, a proportionably larger Gaping of the divided Parts will neceſſarily be produc'd. Hence Wounds, made in lax Bodies, immediately unite, and are conſolidated; whereas, in rigid Bodies, they gape more, and are conſolidated with greater Difficulty.

Simple Diseases of the large and small Vessels.

As the Diſeaſes of the moſt minute Veſſels proceed from the ſame Cauſes with thoſe of the ſimple Fibres, by an Application, Intexture or Contortion of which, they are form'd, they muſt, of courſe, retain the ſame Nature, produce the ſame Effects, require the ſame Method of Cure, and be, in a great meaſure, underſtood from what has been already ſaid.

Upon conſidering the Diſorders of the Fibres, and, conſequently, of all the ſolid Parts, which are made up of them, it ſufficiently appears, of how ſimple a Nature all the Diſeaſes incident to the Solids are.

As the Elements of the Fibres, mutually apply'd to each other, conſtitute a ſolid Fibre, ſo we may eaſily conceive, how the moſt minute Fibres may have all the Points of their contiguous Sides mutually applied to each other, in ſuch a manner, as only to cohere longitudinally. If two ſuch Fibres are mutually apply'd to each other in a parallel Direction, they conſtitute the ſmalleſt or moſt minute Membrane: If, on the contrary, a thouſand of theſe Fibres are in the ſame manner apply'd to each other, they will form a Membrane, which is broader, but not thicker. Hence the moſt ſimple Membrane is conceiv'd to conſiſt of Fibres longitudinally united to each other.

The Strength of the Fibres depends on the Coheſion of their conſtituent Elements; but all the Elements of a Fibre, which is a conſtituent Part of the moſt ſimple Membrane, cohere with the Elements of the two Fibres, which lie next, on each Side. Hence, the Strength of a Fibre, join'd to other Fibres on each Side, is doubly greater than that of a ſimple Fibre.

Hence the Strength of the Fibres is increas'd by their being join'd and united in the moſt ſimple Membrane; but the Fibres which terminate, or ſet Bounds to, the moſt ſimple Membrane, ſince they have only another contiguous Fibre on one Side, have, therefore, only half a greater Degree of Coheſion in their Elements, than a ſimple Fibre.

Since a Membrane conſiſts of Fibres interwoven and contorted with each other, the greater the Number of Points, in which they touch one another, is, the Strength of the Fibres, which conſtitute ſuch a Membrane, muſt be proportionally the greater.

Hence 'tis obvious, that the Part which conſtitutes the Margin of the moſt ſimple Membrane, is moſt eaſily ſeparated from its Coheſion with the other Parts.

Now, if we conceive ſuch a ſimple Membrane, wrapt up in the Form of a hollow Veſſel, then every Fibre will be plac'd between two other Fibres, and, conſequently, there can be no Margins or Edges; ſo that the Coheſion of all the Fibres, which conſtitute the moſt ſimple Membrane, wrapt up into a hollow Veſſel, is doubly greater than that of a ſimple ſolid Fibre.

The Veſſel, which conſiſts of ſuch a ſimple Membrane, thus wrapt up, is call'd the ſmalleſt, or moſt minute Veſſel.

All the Diſeaſes of ſuch a minute Veſſel depend either on the too great or too ſmall Force, by which the Elements of each Fibre cohere with each other, and with thoſe of the adjacent Fibres. But of theſe Diſeaſes we have already treated.

The larger Veſſels, compos'd of the ſmalleſt, united to each other by Application, Intertexture, or Contortion, are ſubject to Diſorders of two Kinds; the former of which depends on the Diſeaſes of the ſmalleſt Canals, which conſtitute theſe larger Veſſels; ſo that their Origin, Nature, Effects, and Cure, are to be underſtood from what has been already ſaid; but the other kind of Diſorders, to which the larger Veſſels are ſubject, depends, firſt, on the Degree of Force, by which the Fluid, moving through them, preſſes their Sides in extending them; which Sides, ſince they conſiſt of other ſmaller Canals, are by this Preſſure depriv'd of their Fluids, united as to their Sides, and grow together in the Form of a ſolid, but thick and groſs, Fibre. This ſame Misfortune may be convey'd to the adjacent ſmall Veſſels. Secondly, the Diſeaſes of the latter Kind, incident to the larger Veſſels, depend on the Concretion of the Fluid, with its proper containing Veſſel.

As ſimple Fibres, longitudinally united, conſtitute a Membrane, ſo we may eaſily conceive, that the ſmalleſt Veſſels, form'd of the moſt ſimple Membrane, wrapt up, may be mutually apply'd to each other, and form a Membrane, which, being again wrapt up, will form a Veſſel, not of the ſmalleſt Kind, but larger, and not conſiſting of Fibres, but of the ſmalleſt Veſſels in their ſtead.

As the Section of theſe minute Veſſels, in a Direction perpendicular to their reſpective Axes, conſtitutes a Circle, the Circles of the Veſſels adjacent to each other can only touch one another in a Point. Hence the adjacent Veſſels will only touch each other by a Line, that is, by the moſt ſimple Fibre. In thoſe Places of Contact, therefore, the Strength of ſuch a Membrane, compos'd of the ſmalleſt Veſſels inſtead of Fibres, will be alſo increas'd.

The ſmalleſt Veſſel, then, conſiſts of Fibres united into a Membrane. The Veſſel next to this in Bulk is that whoſe Membrane conſiſts of the ſmalleſt Veſſels inſtead of Fibres. The next Veſſel, or the laſt except two, with reſpect to Simplicity, is not, like the laſt but one, made up of the ſmalleſt Veſſels, but of them, and the next in Bulk, and ſo forward, till we arrive at the largeſt Veſſels, which are made up of all the different Series of Veſſels found in the human Body.

The Aorta, which is the largeſt of the Veſſels, is, by Injections, demonſtrated to conſiſt of Membranes compounded of ſmaller Veſſels, which are, nevertheleſs, pretty large. The Membranes of theſe Veſſels, which conſtitute the Membranes of the Aorta, conſiſt ſtill of other, but ſmaller Veſſels, and ſo forwards, till we arrive at the laſt Series of Veſſels. *Ruyſch* has ingeniouſly ſhewn, that thoſe Membranes, which, in former Ages, were look'd upon as abſolutely ſimple and ſolid, conſiſt of an incredible Number of ſmall Veſſels.

Hence, by the Multiplicity of Concretions in the Sides, the Strength of the larger Veſſels is continually augmented; and thus we begin to comprehend, on what Circumſtances the Strength and Firmneſs of the human Body depend.

If we inquire what Diſorders are incident to the larger Veſſels, not with reſpect to the Fluids they contain, but when conſider'd as ſolid Veſſels, 'tis ſufficiently obvious, that they are ſubject to all the Diſeaſes of the ſmalleſt Veſſels, of which they are compos'd. But of theſe we have already treated.

The latter kind of Diſorders, incident to the larger Veſſels, depends, firſt, on the Degree of Force by which the Fluid, moving through them, preſſes their Sides in lengthening them.

When the Aorta is diſtended by the Blood forc'd from the Left Ventricle of the Heart, the Canals, which conſtitute its Membranes, are, by that means, compreſs'd; but, when the Action of the Heart ceaſes, the Aorta, contracting itſelf, frees theſe Canals from their Compreſſion. But ſince, at every Moment, the minute Veſſels, which conſtitute the Membranes of the larger Veſſels, are thus compreſs'd, they begin gradually to be ſo depriv'd of their Fluids, that Time for a farther Influx is ſcarce allow'd; then their Sides grow together, their Cavities are deſtroy'd, and, by that means, a ſtrong and thick Membrane is form'd; for the Coheſion of a Membrane, wrapt up in the Form of a Veſſel, is doubly greater than the Coheſion of a ſimple Fibre; but, when the Sides of the flatten'd Veſſel grow together, the oppoſite Fibres muſt of courſe do the ſame; and the Coheſion of a Membrane, thus form'd by the Concretion of the Sides of a flatten'd Veſſel, will become ſtill greater than it was before.

The greater, therefore, the Force of the Heart is, and the longer this Force has continu'd to act, the fewer the Veſſels muſt be, but the ſtronger the Solids. Hence, in extreme old Age, the Strength of the Solids becomes incredible; and, at laſt, when the too ſtrong Reſiſtance of the Veſſels ſuffers them to be no longer diſtended by the impel'd Fluids, a Ceſſation of all the Functions enſues; and a calm and gentle Death, for this Reaſon, generally happens in extreme old Age. Hence, alſo, Animals, accuſtom'd to too hard Labour, are ſoon loaded with the Grievances of old Age, becauſe all their Veſſels are render'd callous before the due Time.

Thoſe Quacks are, therefore, juſtly to be ridicul'd, who impudently boaſt, that they can prevent Wrinkles, and the other more formidable Diſadvantages attending Old-age, by a few Drops of ſome wonderful Elixir, daily us'd; ſince all the Veſſels becoming callous by the inevitable Effects of good Health, we muſt, of courſe, gradually approach the fatal dreaded Period which puts an End to Life.

Certainly more juſt and rational were the Meaſures of the celebrated *Medea*, who, by Baths, cheriſh'd old and decay'd Bodies; for which Reaſon ſhe is, by the antient Poets, ſaid to have reſtor'd Youth to old Perſons.

Secondly, the latter kind of Diſorders, incident to the larger Veſſels, depends upon the Concretion of the Fluid, with its proper containing Veſſel.

When the contain'd Fluid is depriv'd of its moſt ſubtile and liquid Parts, it at-laſt grows to the Veſſel in which it before mov'd. It has, in all Ages, been obſerv'd, that in thoſe Degrees, in which, to uſe the Language of the Antients, the *Callidum innatum*, or innate Heat, prevail'd over the *Humidum radicale*, or radical Moiſture, or, as the Moderns expreſs themſelves, where the Force of the Veſſels exceeds that of the diſtending Fluids, the Blood aſſumes ſuch a Nature as to form itſelf into a Pellicle, which can ſcarcely be cut by a Razor. Certainly the Fluids of the human Body are poſſeſs'd of a plaſtic Diſpoſition; and it is as certain, that the Aliments we take into the Body are not render'd ſimilar to our Humours, till they have acquir'd ſuch a Nature. *Ruyſch, in Theſaur.* 6. *N.* 7. and *Theſaur.* 7. *No.* 39. informs us, that by only agitating his own Blood with the Twig of an *African* Plant, he reduced it to a thick coherent Membrane.

Hence we may eaſily conceive, that the Blood, already too much inclin'd to Concretion, by its inflammatory State in acute Diſeaſes, may, if its fluid Parts are ſtill farther diſſipated by the Force of the Diſeaſe, grow to its containing Veſſels.

But we have a ſatisfactory Proof, that even the larger Veſſels are capable of growing to the Fluids, which before circulated in them; for the large Canal, which, during the Stay of the Fœtus in the Uterus of the Mother, convey'd the Blood from the Placenta to the Liver, is afterwards concreted, not into a flat Canal, which it muſt have been, if it had been concreted by the collapſing of its Sides only, but into a kind of round and ſolid Chord; which is an irrefragable Argument, that it is concreted with its contain'd Fluid.

The Strength, therefore, of the larger Veſſels is produc'd by three Cauſes; firſt, the Strength of the Fibres; ſecondly, the collapſing of the Veſſels, or their Compreſſion and Concretion into Membranes; and, thirdly, the Concretion of the Veſſels with their contain'd Fluids.

Hence the Weakneſs, Laxity, Strength, Rigidity, and Elaſticity of the Veſſels, concerning which the Ignorant and Unſkilful advance ſo many Abſurdities, may be clearly underſtood.

All theſe Conditions of the Veſſels are already explain'd; and therefore, only here enumerated, in order to exhibit a ſummary View of the important Circumſtances which depend more or leſs upon a due Acquaintance with the Nature and Properties of a ſimple Fibre.

Relaxation of the Viſcera.

The Weakneſs of the Veſſels and Viſcera is ſuch a Coheſion of their conſtituent Parts as may be remov'd by ſo ſlight a Motion, that they are uncapable of duly performing the ſeveral Functions requiſite for the Purpoſes of Life and Motion.

The Viſcera are generally defin'd, Organical Parts of the Body, which ſo change the Humours convey'd thro' them, as to render them conducive to Life and Health. Thus the Lungs form an Organ receiving all the Blood, and inducing ſuch a Change in it, as to render it fit for paſſing through all the Veſſels of the Body. Thus, alſo, the Heart receives all the Blood, changes the Direction of its Motion, and promotes its Mixture,

ture. The ſame holds true with reſpect to all the other Viſcera.

Now 'tis certain from anatomical Injections, that all the Viſcera conſiſt of numberleſs Veſſels, which in different Viſcera are diſpos'd in various Orders, and that upon theſe Veſſels the Action of the Viſcera, by which they change the Humours convey'd to them, depends. If therefore theſe Veſſels are weaker than they ought to be for the Purpoſes of Health, they will act proportionably leſs upon their contain'd Fluids, and conſequently change them leſs than is required. Thus too weak Lungs cannot change the Chyle into good Blood: Thus, alſo, if the Veſſels of the Liver are too much relax'd, the Blood will paſs and repaſs through that Organ, without the Secretion of the Bile, and a Dropſy will conſequently be produc'd. When the Action of the Stomach is too faint and languid, the whole Buſineſs of Chylification is ſurpriſingly diſorder'd.

Theſe Functions of the Viſcera, requiſite for Life and Health, vary according to the Age or Sex of the Individual.

As for the Age; all the Viſcera have their Strength gradually increas'd, in proportion to the Time the vital Powers have acted upon them. Hence all the Parts are originally ſo weak, as to be almoſt diſſolv'd; but they gradually become firmer, till in extreme old Age they are render'd almoſt rigid. Now between this greateſt Weakneſs, and the greateſt Firmneſs of the Parts, there is almoſt an infinite Number of intermediate Degrees in the ſeveral Periods of human Life.

As for the Sex; the Author of Nature has ſubjected Man to a Neceſſity of gaining his Bread by the Sweat of his Brow; whereas he has appointed a different Taſk for Woman, that is, to conceive, bring forth, and nouriſh, her Offspring. This Appointment, alſo, prevails among thoſe Nations, who regulate their Conduct rather by the Suggeſtions of Nature, than the Tenor of poſitive Laws. Hence different Degrees of Strength were requiſite for the diſtinct Purpoſes of the different Sexes.

This Weakneſs ariſes, firſt, from the Weakneſs of the Fibres, and the Cauſes producing it. Secondly, from the Weakneſs of the moſt minute Veſſels, and the Cauſes producing it. Thirdly, from the languid State of the Fluids moving thro' the larger Veſſels, which depends upon a Diminution of their Quantity, an Augmentation of their aqueous Parts, and a languid muſcular Motion. And, fourthly, from the large Number of minute Canals remaining too long in proportion to the Age of the Perſon.

As to the Weakneſs of the Fibres, and that of the moſt minute Canals; theſe have been already explain'd: And,

As for the languid State of the Fluids moving through the larger Veſſels; the whole Action of all the ſeveral Viſcera depends on this, that the Fluids, impel'd by the Force of the Heart, dilate the Arteries, which, reacting by their Strength and Elaſticity, ſhould promote, or carry forward, the diſtending Humours: But all thoſe Bodies, which, under the ſame Bulk, contain a large Quantity of Matter, that is, which are more ſolid, retain the Degree of Motion communicated to them, longer.

In the Fluids, therefore, mov'd by the Force of the Heart, a certain Degree of Solidity was requiſite, that they might not too ſoon loſe the Degree of Motion impreſs'd. Where this due Solidity is wanting, the Humours are ſaid to be languid: But this Solidity is procur'd to the conſtituent Parts by the Efficacy of the Veſſels thro' which they move: Now this Efficacy is no more than that Force by which the diſtended Veſſels re-act upon the diſtending Fluids. Whilſt, therefore, the Quantity of the Fluids being too much diminiſh'd, the Veſſels are not ſufficiently diſtended, their Re-action muſt of courſe be the leſs: Hence all the Veſſels are languid and weak. For this Reaſon, alſo, when by Wounds, or any other Cauſe, a great Quantity of the Fluids is diſcharg'd, a ſolid red Blood is not form'd from the Subſtances us'd as Aliments, but all the Fluids become thin like Water.

As for the Increaſe of the aqueous Parts of the Fluids; ſome Phyſicians were of Opinion, that the Body was in the moſt perfect and advantageous State, when all its Fluids were thinneſt; in conſequence of which, they thought they would paſs the more expeditiouſly thro' all the Veſſels. But the human Body is made and contriv'd according to other Laws. Fluids of a proportional Thickneſs correſpond to the different Series of Veſſels; for, if our Blood was as thin as Water, it would ſlip thro' the open Orifices of the exhaling Veſſels, plac'd both in the internal and external Surface of the Body; or all the Cavities of the Body would be fill'd with Humours too thin, but which would there ſtagnate; for the red and moſt thick Part of the Blood, in a State of Health, always remaining in the largeſt, that is, the red Veins and Arteries, receives the Momentum, or Quantity of Motion, neceſſary to Life and Health, from two moving Cauſes, the Heart and Arteries, and communicates this Momentum to the other Parts of the Blood. From the Attrition of this red Part of the Blood, on the Veſſels which contain it, ariſes the Heat of the human Body; for when this red Part begins to be deficient, all the Parts become cold. Leucophlegmatic Patients, and Girls languiſhing under the Greenſickneſs, are ſufficient Proofs of this.

For this Reaſon, the bountiful and indulgent Author of Nature has plac'd large red Veſſels round the medullary Subſtance of the Brain collected into the Medulla oblongata, that theſe highly minute Veſſels, in which all Attrition is wanting, might be cheriſh'd by a gentle Heat; ſo that, among the Cauſes of the Weakneſs of the Viſcera, we may juſtly reckon the aqueous State of the Humours. The Blood ſpringing from the Veins of a robuſt Man is immediately concreted into a coherent ſciſſile Maſs; whilſt the Blood diſcharg'd from a weak and ſickly Girl is but faintly red, thin, difficultly concreted, and abounding with Water.

As for the Weakneſs of muſcular Motion; this has been already conſider'd, in the Beginning of this Article.

As for the large Number of minute Canals; 'tis certain, that in every Diverſity of Age, there is a certain Calloſity and Abolition of ſome Veſſels requiſite. Anatomiſts obſerve, that Injections are moſt ſucceſsfully made upon young Subjects: Thus we ſee, that, in Proceſs of Time, many Veſſels are aboliſh'd.

The Gland called Thymus, ſo conſpicuous in new-born Infants, ſo decreaſes in Adults, as hardly to leave any Traces of itſelf. A Woman, who abounding with Milk, has ſucceſſively ſuckled a conſiderable Number of Children, when ſhe becomes ſuperannuated and ſtiff, has only flaccid Pellicles, which ſcarcely deſerve the Name of Breaſts. The Glands diſpers'd in the Meſentery are totally aboliſh'd in Perſons advanc'd in Years.

Great Strength is added to the Body, when many minute Veſſels are ſo concreted, as to be form'd into ſtrong Membranes. But this Concretion ariſes from the briſk Motion with which the Fluids are convey'd thro' the larger Veſſels: The briſker, therefore, this Motion is, and the longer it has continued to act, the more the Parts of the Body are conſolidated. Hence, in new-born Infants there is a large Number of Canals, but the Compages of the Body is highly lax; whereas in adult Perſons many of the Veſſels are deſtroy'd, and the Texture of the Body by that means render'd firmer.

From this Weakneſs, produc'd by its peculiar Cauſes, ariſe many Diſorders, falſly aſcrib'd to Temperament, or accounted hereditary. The moſt conſiderable of theſe Diſorders are, firſt, a too eaſy Dilatation and Tumors of the Veſſels, their too eaſy Compreſſion and Inanition, and the Stagnation of the Fluid contain'd in them; an increas'd Reſiſtance made to the Heart, Crudities of the Fluids, ſpontaneous Corruption, an Incapacity for performing the vital, animal, and natural Functions. And all the Conſequences of theſe, which, as they are infinite in Number, ſo they are with Difficulty cur'd, and highly productive of other Diſorders, eſpecially a Cachexia, and a Cacochymia. Secondly, an eaſy Diſſolution of the Veſſels by external or internal Cauſes, ariſing either from Acrimony or Motion; the Effuſion, Stagnation, Corruption, or Evacuation of the Fluids neceſſary to Life and Health; An Interception of the Motion of the Fluids thro' the ruptur'd Veſſels; the Corruption of thoſe Parts which were kept in a ſound State by this Motion; and other Diſorders of various Natures, ſuch as a Phthiſis, an Empyema, a Dropſy, and an Atrophy.

'Tis here ſuppos'd, that a Body, before ſound, has Viſcera and Veſſels too weak; in which Caſe the Injuries of the chang'd Functions appear very conſpicuouſly, eſpecially thoſe enumerated in this Paragraph.

As every Individual has a State of Health peculiar to himſelf, and as different Bodies ſeem to vary from each other, both with reſpect to the Solids and Fluids, though each may, at the ſame time, be in a ſound Condition; this Peculiarity of Conſtitutions, by which they differ from other ſound Bodies, is call'd Idioſyncraſy; and the Diſorders ariſing from this Peculiarity are, ſometimes, accounted incurable, becauſe they are thought to be preſent from the very firſt Formation of the Body. But we cannot always aſcribe thoſe Diſeaſes of weak Veſſels and Viſcera to a known Peculiarity of Conſtitution.

A Girl, ſprung from an illuſtrious Family, delicately brought up, and enur'd to Idleneſs, has her Body rendered tender, languid, and weak; whilſt a Country Girl, ſeemingly of the ſame State of Health in the firſt Months of her Life, gradually acquires a robuſt and ſtrong Conſtitution, by being accuſtomed to Labour from her Infancy.

The Weakneſs of the former, and the Diſeaſes ariſing from it, are therefore faſily accounted hereditary.

When the moſt robuſt and vigorous Man loſes moſt of his Blood by a Wound, he becomes dropſical; and in this Caſe a very great Change is induc'd in what is vulgarly call'd the Temperament.

As for the too eaſy Dilatation and Tumors of the Veſſels; the Manner in which the ſeveral Viſcera prepare their reſpective Humours, has been canvas'd from the very Infancy of Medicine to our own Times; but Authors have advanced nothing ſatisfactory on this Subject, till Mr. *Ruyſch* demonſtrated, that, at the Terminations of the Arteries every-where in the Viſcera, there was a peculiar Conformation in various Parts; and it ſeems, that each Bowel has been form'd with a particular Deſign of preſerving this Conformation of the Arteries. Now, if in any Bowel the Arteries ſhould be too much dilated, as the ſame Force of the impel'd Fluid continues to diſtend the leſs reſiſting Sides of the Veſſels, weak Viſcera will not prepare ſuch Humours as are generated in a State of Health, but ſuch as are of a peccant Quality, and diſturb the whole Body. Thus, when the Structure of the Liver is chang'd, Bile is not prepar'd, but a peccant Liquor of quite different Qualities. Thus alſo, when the Veſſels of the Kidneys are relax'd, they tranſmit Blood inſtead of Urine.

The Veſſels, when too much dilated, produce a Tumor either of the whole Body, or ſome particular Part; for Perſons of weak Veſſels and Viſcera have their Faces inflated, their Cheeks tumid, and their whole Bodies œdematous. Hence, when this Diſorder begins gradually to advance, the deluded Patients often rejoice at the Addition made to their Habit.

As for the eaſy Compreſſion and Inanition of the Veſſels; the Veſſels of a ſound and robuſt Man, left to themſelves, are ſo contracted, as to diminiſh the Diameters of their reſpective Cavities; but they do not become flaccid, and collaps'd, but even ſtrongly reſiſt a preternatural Contraction. Any Impreſſion remains on the Legs of dropſical Patients, but in ſound and robuſt Perſons, the Part preſs'd riſes again.

As for the Stagnation of the Fluids; almoſt the whole Force of the Heart is ſpent in dilating the Arteries. Now, if the weaken'd Arteries, diſtended by the Blood, impel'd by the Force of the Heart, do not contract themſelves ſufficiently, the Blood will remain unmov'd in the dilated Veſſels; for two Cauſes concur to produce the Motion of the Fluids thro' the Veſſels: The Force of the Heart diſtending the Veſſels by the impel'd Blood, and the contractile Force of the Veſſels, which, when the Action of the Heart ceaſes, propels the Blood impel'd from the Heart. When, therefore, this contractile Force is wanting, the Fluids become ſtagnant.

As to the increas'd Reſiſtance made to the Heart; this may perhaps appear ſurpriſing, ſince the weaken'd Veſſels yield more eaſily to the Blood impel'd from the Heart. But, as the weaken'd Arteries are not contracted by a ſufficiently ſtrong ſyſtaltic Motion, they remain diſtended and full. Hence, the Moment after, the Heart cannot ſo eaſily diſcharge its Contents into Veſſels already too full and diſtended. We daily obſerve, that People of pale and tumid Habits of Body are pretty eaſy whilſt in a State of Reſt; but, upon the leaſt Motion, they breathe ſhort, their Hearts palpitate, their jugular Veins become tumid, and they themſelves are almoſt ſuffocated; for, whilſt in a State of Reſt, a ſmall Quantity of venous Blood, ſlowly mov'd, is convey'd to the Heart, and eaſily expreſs'd from it; but the Velocity of the venous Blood being augmented by the Motion of the Body, the Heart is not ſo ſoon able to force the Blood receiv'd thro' the full Veſſels.

As for the Crudity of the Fluids; every thing we take by way of Aliment, is crude, becauſe, not being as yet corrected by the vital Force, it is of a Nature quite different from the human Fluids: But when the Viſcera are weaken'd, their peculiar Powers, by which they contribute to change the Aliments into our Natures, are deſtroy'd; for, in order to a due and laudable Chylification, it is requiſite, that all the chylopoietic Organs ſhould furniſh the other Parts with the Humours prepar'd by them. 'Tis therefore requiſite they ſhould elaborate ſuch Humours: If, therefore, they are weaken'd, they will furniſh peccant Humours degenerating from their native and genuine Qualities. Hence the whole Buſineſs of Chylification will be diſturb'd. Thus the weak Body of a Girl, labouring under a Chloroſis, from the beſt Aliments, does not prepare a laudable Blood, but a kind of pale Humour, reſembling a large Quantity of Milk mix'd with a little Blood. Hence ariſe ſurpriſing Depravations of the Fluids, and various Diſeaſes depending on them. All the Viſcera contribute their particular Share in changing the Aliments to our Natures. If, therefore, one or more of theſe ſhould be weaken'd, this Aſſimilation is defective, and a quite different Fluid produc'd. Hence *Galen*, in the ſixth Chapter of the ſeventh Book of his *Method. Medendi*, juſtly gives us this Caution; that in reſtoring weak Patients, we ought to conſider, "that the Aliments are not, without Aſ-
"ſiſtance, concocted, diſtributed to the various Parts of the
"Body, nor aſſimilated with the Parts of the Perſon to be
"nouriſhed."

As for the ſpontaneous Corruption of the Fluids; the Aliments taken into the human Body are chang'd and aſſimilated to our Natures, by the ſeveral Actions of all the Veſſels and Viſcera; and this Change is call'd πέψις, or Concoction. But if the Aliments are of ſo tenacious a Nature, or the Strength ſo impair'd, that the latter cannot ſubdue the former, then theſe Subſtances are indeed chang'd in the Body, but not aſſimilated to our Natures; but, retaining their own Natures, and being, as it were, digeſted in a hot and moiſt Place, degenerate into an acid, or putrid, and rancid Corruption: And this is call'd ſpontaneous Corruption. This will be render'd more obvious, by an Inſtance: The hard and robuſt Viſcera of labouring Men prepare a laudable Blood from Rye-bread. But this Bread, with the Addition of Water, when digeſted in a chymical Veſſel, with a Heat equal to that of the human Body, is converted into the worſt of Acids. Robuſt Viſcera ſubdue this aceſcent Quality. But, if the ſame Bread is us'd by weak Girls, it retains its Nature, and, by its aceſcent Quality, produces Cardialgias and Gripes. This Degeneracy does not happen in the Body preciſely in the ſame manner as out of it; the Aliments, however, unleſs the aſſimilating Power of the Body is ſufficiently ſtrong, always tend to a ſpontaneous Change.

As for an Incapacity for the vital, animal, and natural Actions; all the Actions of the human Body, in a certain Senſe, depend on muſcular Motion; for the Heart and Arteries, the univerſal moving Cauſes of all the Humours, are muſcular. But theſe Actions can only be perform'd when there are good and laudable Spirits; now the Preparation of the Spirits requires the higheſt and moſt perfect Aſſimilation.

Whilſt, therefore, the too weak Viſcera cannot bring the Aliments to the higheſt Degree of Elaboration, the highly ſubtile Spirits, on which almoſt all the Functions of the Body depend, begin to prove defective. Hence, when a tender Girl begins to languiſh under a Chloroſis, ſhe is gradually ſeiz'd with an unuſual Torpor, a ſurpriſing Laſſitude upon the ſmalleſt Motion, a Vertigo, and a Dulneſs of all the Senſes; all which indicate, that the animal Faculty is injur'd. A Palpitation of the Heart upon the ſlighteſt Motion, a ſoft and weak Pulſe, and a difficult Reſpiration, ſhew that the vital Actions are weak and faint. A languid and ſurpriſingly deprav'd Appetite, an uneaſy Senſation, created by Aliments taken, frequent Coſtiveneſs, together with pale and crude Urine, indicate that the natural Functions are deprav'd.

Hence it is obvious, that from this Source an almoſt infinite Number of Diſorders may ariſe; ſince by this means all the Functions of the Body may be injur'd. Hence, alſo, the Difficulty of Cure, in Caſes of this Nature, is ſufficiently obvious; for the defective Strength of all the Parts muſt be reſtor'd: But this cannot be done, unleſs ſo much of the original Nature of the Body remains, that, being freed from Impediments, and its Defects ſupply'd, it may be able, from the Aliments, to prepare and elaborate a laudable Blood. Hence, when the Lungs or Liver are waſted by a Conſumption, a Cure is in vain either promis'd by the Phyſician, or expected by the Patient. But, from this Incapacity for performing the animal, vital, and natural Actions, ariſes principally a Cachexy, which is a bad Habit of Body, accompanied with ſuch a Weakneſs, that the Nutrition is deprav'd and injur'd thro' the whole Parts of the Body at one and the ſame time. This Diſorder is produc'd when all the Fluids and Solids recede from the Conditions requiſite for a due Aſſimilation of the Aliments to our Natures. Now every Cachexy is neceſſarily attended with a Cacochymy, which is a Receding of all the Humours from the Conditions requiſite to Health. But the Humours of the human Body receive their Qualities from the Force and Action of the Veſſels and Viſcera. If therefore the latter are too weak, the former muſt neceſſarily degenerate, and become deprav'd.

As for the eaſy Diſſolution of the Veſſels; ſuch a Coheſion of the ſolid Parts, which conſtitute the Canals of the human Body, is requiſite, that they may, without ſuffering a Solution of Continuity, ſuſtain the Force of the Fluids impel'd from the Heart. When, therefore, this Coheſion is weaken'd, a Rupture of the Veſſels is to be dreaded from an increas'd Impetus of the impel'd Fluid. Hence it ſo often happens, that tender Men, who have arriv'd at their full Growth, and who, either in conſequence of an original Taint, or their Bodies not being ſufficiently ſtrengthened by muſcular Motion, have too weak Veſſels, have an Artery ruptur'd in their Lungs, by Bawling, Singing, or Running; and thus either die under a Vomiting of Blood, or, afterwards, pine away under a ſlow Phthiſis. Thus, alſo, it frequently happens, that Perſons, the Veſſels of whoſe Kidneys are weak, diſcharge Blood inſtead of Urine, by being drawn over rugged and ſtony Places in Coaches.

Beſides, it has been already obſerv'd, that, when the Viſcera are weak, the Humours degenerate into a ſpontaneous Corruption, and, conſequently, always become more acrid; for,

in a State of Health, the Humours are of ſo mild a Quality, that the Blood, when dropt into the Eye, creates no manner of Pain: When, therefore, acrid Humours flow through the weaken'd Veſſels, the latter are eaſily diſſolv'd by the former. This is ſufficiently obvious from a Scurvy, in which the Laxity of the whole Body frequently concurs with the Acrimony of the Humours. Hence, the Veſſels being ruptur'd, the Blood is diſcharg'd under the Skin, and produces ſcorbutic Spots.

When the Veſſels are thus corroded by an acrid Fluid, or ruptur'd by the too violent Impetus of the moving Fluid, their contain'd Humours are diſcharg'd, and become ſtagnant, becauſe the moving Cauſe ceaſes; and, in conſequence of their Stagnation, they become corrupted, tho' this happens later when the Air has no Acceſs to them. When the ruptur'd Veſſels gape, the Fluids are diſcharg'd from them, and the Circulation of the Humours is diſcontinu'd. Thus all the ſeveral Functions, depending on the Circulation of the Fluids thro' ſound Veſſels, are deſtroy'd. Hence, ſince theſe Accidents may happen in various Parts of the Body, they may give Riſe to an infinite Number of Diſorders, which cannot be eaſily enumerated, but may be reduc'd to certain Claſſes. The Principal of theſe Diſorders are,

Phthiſis; tho' this Diſorder takes its Name from a *Greek* Word importing Corruption, yet Phyſicians do not by it underſtand every Species of Corruption, but a Conſumption of the whole Habit, ariſing from the Prevalence of a purulent Cacochymy, in whatever Part of the Body the Fomes is lodg'd. When the too weak Veſſels are either corroded, or ruptur'd, the diſcharg'd Humours are corrupted, and by their Acrimony inflame all the adjacent Parts. Thus Blood diſcharg'd in the Cavity of the Thorax becomes putrid, and inflames the adjacent Lungs. After this Inflammation, a true Suppuration enſuing deſtroys the Patient by a pulmonary Conſumption. Thus we may underſtand, how from the ſame Cauſe an *Empyema* may ariſe; which tho', in an extenſive Senſe, it denotes every Species of Suppuration, yet, for the moſt part, it only imports a Collection of Pus, in the Cavity of the Thorax.

As for a Dropſy; all Patients, on whom this Diſorder gradually ſteals, labour under Weakneſs of the Veſſels and Viſcera; and almoſt every Dropſy, not ariſing from ſome other violent and previous Diſorder, acknowledges this for its Cauſe, for the exhaling Arteries diſcharge their contain'd Humours into all the large and ſmall Cavities of the Body. But it is to be obſerv'd, that the Force by which the minute Orifices of the Veins imbibe the diſcharg'd Humours from the Cavities of the Body, increaſes and decreaſes in proportion to the Briſkneſs of the Circulation. Hence, in acute Diſorders, where the Circulation is too briſk, all the Parts are render'd dry, whereas, in languid chronical Diſeaſes, the Humours, being gradually accumulated, render all the Parts tumid. Beſides, in Diſorders accompanied with the higheſt Languor, the evacuating Power of the Artery ſeems to continue longer than the abſorbent Force of the Vein. Hence in every Diſpoſition of Body, where the vital Vigour is impair'd, aqueous Parts begin to be accumulated.

As for an Atrophy; tho' at firſt this Diſorder may appear of a Nature quite oppoſite to a Dropſy, yet, when the Abdomen is immenſely turgid in that Species of the Diſeaſe, which is call'd Aſcites, we obſerve that all the ſuperior Parts are extenuated. Nor is this to be wonder'd at, ſince all the Viſcera, being too weak, each of them cannot contribute its proper Share, in bringing about the laſt and higheſt Elaboration of the Aliments, by which they are chang'd into our Natures, and what is loſt, reſtor'd; for Life itſelf will, in the very Nature of the Thing, deſtroy the Body, unleſs it is recruited by the Aliments. Nutrition may, therefore, prove defective from this ſingle Cauſe; and this Defect is called an Atrophy.

The Phyſician who accurately adverts to theſe Circumſtances, will know the Origin, Preſence, and Events, not only of this, but, alſo, of an infinite Number of other dark and obſcure Diſorders; and be capable of diſcovering the moſt ſafe and efficacious Means of Relief.

Whoever attentively conſiders what has been already ſaid, muſt neceſſarily conclude, that all the Functions of the Body may be injur'd by the Weakneſs of the Action of the Veſſels on their contain'd Fluids; becauſe the Soundneſs of all the Functions depends on the due Action of the Solids on the Fluids, and of the Fluids on the Solids; ſo that the want of this Action is the genuine Source, from which an infinite Number of Diſorders ariſes. But when the Effects of Diſeaſes ariſing from Weakneſs are obvious to the Senſes, there is no manner of Difficulty in diſcovering the Cauſe; but frequently the moſt latent and obſcure Diſorders draw their Origin from this Cauſe. When a Patient, in conſequence of a Rupture of the too weak Veſſels of the Lungs, throws up a florid ſcarlet-colour'd Blood, a previous Weakneſs is eaſily diſcover'd to be the Cauſe of the Diſorder. But if the like Arteries, being ruptur'd in the Brain, ſhould, by the Effuſion of the Blood, produce a mortal Apoplexy, the latent Cauſe of ſo terrible a Misfortune is preciſely the ſame with that of the former. When the Veſſels of the Liver are ruptur'd, and diſcharge their Humours, theſe Humours, ſtagnating, become corrupted, inflame all the adjacent Parts, and at laſt deſtroy the Patient, after having conſum'd his whole Liver, and expos'd him to the moſt terrible Calamities. The firſt Spring and Origin of this Diſeaſe is the ſame, as in the former Caſes. This holds equally true in all the other Viſcera.

There is not a more juſt or important Maxim in Medicine, than that, in the Cure of Diſeaſes, a due Regard ought always to be had to the firſt Cauſe, from which all the Symptoms proceed; for, from this Foundation alone, infallible and efficacious Medicines may be diſcover'd. They who by Purgatives attempt to evacuate the Waters of a Dropſy, ariſing from Weakneſs, are, a few Days after, ſurpris'd to find all the Parts as much tumid with Water, as before, ſince all the Fluids are convey'd into the flaccid Veſſels, whilſt ſcarcely any Part of the Liquors drank is carried off either by Sweat, or a Diaphoreſis, and very little by Urine; whilſt the Phyſician who has duly inveſtigated the Cauſe of the Diſorder, goes more prudently to Work, and, after removing the diſtending morbid Fluids, orders the relax'd Body to be ſwath'd with proper Bandage; and by drying Aliments, Corroboratives, and due Exerciſe, deſtroys the firſt Cauſe and Spring, from which all the Symptoms of the Diſorder flow'd.

But, in the Application of theſe Remedies, the preſent Weakneſs of the Patient calls for a ſlow Adminiſtration, ſince a ſudden Change is in no Caſe more dangerous than in this.

The judicious *Hippocrates*, in the fifty-firſt Aphoriſm of his ſecond Section, juſtly obſerves, "That it is moſt ſafe to carry "on an Intention by little and little, eſpecially when a "Change, from one Extreme to another, is to be promoted." This Maxim, is, in a particular manner, to be obſerv'd in the Cure of weak Veſſels and Viſcera; for if in this Caſe the Phyſician ſhould by ſtimulating Medicines, or muſcular Motion, imprudently accelerate the Circulation of the Humour, through the Veſſels, the too weak Veſſels and Viſcera, not being able to ſuſtain the increas'd Force, are often ruptur'd, and the Patient ſhamefully kill'd, inſtead of being judiciouſly cur'd.

The Phyſician, who by violent Exerciſe ſhould attempt the ſpeedy Cure of ſpitting of Blood ariſing from a Weakneſs of the Lungs, would act a moſt abſurd and ridiculous Part; becauſe, by accelerating the Impetus of the Blood, the Wound, as yet not conſolidated, would again be broke open. Hence, in Caſes of this Nature, great Caution, and a prudent Slowneſs of Meaſures, are abſolutely neceſſary.

Theſe Remedies are, therefore, to be ſlowly and cautiouſly exhibited from the firſt to the laſt Stage of the Diſorder; and when, by their means, the Veſſels are corroborated, ſtrong muſcular Motion is to be us'd, till from every Circumſtance it is obvious, that the Veſſels and Viſcera are render'd ſufficiently compact, ſolid, and callous.

Without repeating what has been ſaid concerning the Cure of weak Fibres, we ſhall only obſerve, that it is of the higheſt Importance, that all theſe Meaſures ſhould be gradually increas'd and augmented, till Health is perfectly reſtor'd. If the Intention is to cure Diſorders of this kind by muſcular Motion, the Patient muſt begin with the ſlighteſt and moſt gentle Degree of it, which is to be cautiouſly and gradually increas'd. The Phyſician, in the mean time, muſt carefully advert to the Effects produc'd by this Motion in the Body of the Patient. A Perſon dropſical from the Weakneſs of the Veſſels alone, would be ſuffocated by uſing violent Motion all of a ſudden. But when the diſtending Waters are previouſly remov'd, and the relax'd Parts ſecur'd by Swathing, gently heating Medicines are to be exhibited, and afterwards ſuch as are more powerful. Then gentle Motion is to be preſcrib'd and gradually augmented to ſevere Exerciſe. Thus the relax'd Body is infallibly ſtrengthen'd, and the Force of the Diſeaſe overcome.

But 'tis not ſufficient to have remov'd the Diſeaſe; we muſt, alſo, deſtroy and root out thoſe Cauſes, which we foreſee will neceſſarily occaſion a Relapſe; for, when a Phyſician has evacuated the Waters of a dropſical Patient, he has only render'd the Body ſuch as it was before it ſpontaneouſly became dropſical; ſo that in this Caſe he only performs a Part of his Duty, unleſs after this Evacuation he corroborates the relaxed Parts.

That Viſcera, before too weak, are render'd ſufficiently firm and ſtrong, may be known from the following Signs: If there is an equable Heat, like that in a State of perfect Health, diffus'd over all the Body; for, when the Viſcera are weak, there is a Defect of Heat; if, upon drinking, neither the Whole of the Body, nor any Parts of it, are render'd tumid; but eſpecially if the Colour is lively and red, in thoſe Parts where the Veſſels appear conſpicuous without any Covering of the Skin, ſuch as the

the Lips, the Tongue, the Fauces, the Gums, and the Corners of the Eyes; for from theſe Signs we may ſafely conclude, that all the Viſcera and Veſſels are ſufficiently ſtrong.

When the Cure is brought thus far, no farther Corroboration is requir'd; otherwiſe the oppoſite Fault, that is, too great a Rigidity, would be induced. But the Body is to be kept in the Degree of Strength already acquir'd; and all thoſe Things are to be carefully avoided, which are enumerated as the Cauſes of too great a Weakneſs; for, unleſs theſe Meaſures are taken, the Diſeaſe will ſoon recur. Hence Relapſes ſo frequently happen to Girls cur'd of a Chloroſis, becauſe they will not abſtain from ſupping warm Liquors, and chuſe rather to loſe reſtor'd Health by Idleneſs, than to preſerve it by due Exerciſe. Thus they create a great deal of Uneaſineſs to the Phyſician, and, at laſt, render their Diſeaſes incurable.

Hence it is evident, that the various Doctrines, relating to the Qualities of Aliments, are of a relative Nature, that is, in ſome Caſes true, and in others falſe; that muſcular Motion corroborates the Fibres; that the Exerciſes of Geſtation reſolve the coagulated Fluids, and ſtrengthen the relax'd Solids, without diſſipating the Strength; that, in the moſt robuſt Perſons, the Blood is highly denſe, viſcid, and mild; whereas in tender Habits it is diſſolv'd, light, and acrid; that an infinite Number of Diſeaſes, apparently widely different, often proceed from the ſame Cauſe, and are remov'd when that is taken away.

As for the Qualities of Aliments; Authors who have wrote profeſſedly on this Subject, have never advanc'd any thing which was abſolutely true in all Caſes; becauſe the Qualities of Aliments depend, not on the Aliments alone, but, in a more particular manner, on the Body into which they are taken, as has been already obſerv'd. Thus, whole Nations live, ſound and healthy, on Vegetables and Water alone; others, on Fiſh and Water only; and others, taught by Luxury, on the various Parts of Animals, and a Mixture of all the Subſtances which the Earth produces, whether ſpontaneouſly, or by Culture; and yet all, or, at leaſt, moſt Part, live ſufficiently healthy: Nor does the vaſt Variety of Aliments produce a very conſiderable Difference; for the human Body is poſſeſs'd of ſuch a Faculty, that, by the Concurrence of the Actions of all the Veſſels and Viſcera, human Blood, the ſame, almoſt, with reſpect to all its Qualities, is produced from Aliments of quite different Natures. But, according to the various Degrees of Strength in the Veſſels and Viſcera, Aliments of the ſame Nature may prove either hurtful or beneficial. Fleſhes, ſalted and dried in Smoak, together with coarſe Bread, agree with the robuſt Viſcera of a hardy Labourer, whoſe Strength would fail, if he was fed on Fleſh-broths; theſe, on the contrary, agree beſt with weak and tender Conſtitutions, which would be highly injur'd by Fleſhes and Aliments of ſuch an hard and difficult Digeſtion. Thus *Hippocrates*, in his Treatiſe *de Affect.* adviſes, "That thoſe who are capable of digeſting a large "Quantity of Aliments, are not to be fed with Sorbitions, "becauſe they paſs off the Stomach too ſoon; but thoſe, "on the contrary, who are not capable of digeſting large "Quantities of Aliments, are to be nouriſh'd with Subſtances "of a ſorbile Nature." No Aliment can, therefore, be pronounc'd univerſally and abſolutely ſalubrious: And the Man who aſks, what particular Aliment is univerſally wholſome, acts juſt as ridiculous a Part, as he who ſhould aſk, whether he had a fair Wind, when he did not know the particular Port to which he was to ſteer.

As for muſcular Motion; this Subject has been already conſider'd; only we ſhall obſerve, that, by an Exceſs of muſcular Motion alone, a Rigidity of the Veſſels, which is directly oppoſite to their Weakneſs, may be produc'd. Thus, there is a ſurpriſing Difference between the Fleſh of a Stall-fed Ox, and that of the ſame Animal, which, by dragging the Plow, and hard Labour, has all its Parts dry and juiceleſs.

As for the Exerciſes of Geſtation; muſcular Motion ſtrengthens, but, at the ſame time, fatigues the Body, and diſſipates the Spirits in the ſame Proportion as it recruits them; for this Reaſon, very weak Patients can never be reſtor'd and cur'd by its means. Hence, for weak Patients, Geſtations, eſpecially of the mild and gentle Kind, are to be ſubſtituted in the room of muſcular Motion: Thus, the Patients, ſitting on a Rope, are to be gently mov'd backwards and forwards. See *Hieronymus Mercurialis*, in his Treatiſe *de Arte Gymnaſtica*. This Step is to be ſucceeded by Geſtations in Coaches; which, again, is to be follow'd by gentle Geſtations in Coaches on ſmooth Ground; then they may be driven in Chariots, on ordinary Roads; and, laſtly, let ſuch Patients get on Horſeback, and ſtrengthen their Bodies by gradually increaſing the Pace of the Horſe. Thus the moſt ſtubborn Diſorders are often happily cur'd, and almoſt all the Advantages of muſcular Motion obtain'd, without a Diſſipation of the Strength. All theſe Meaſures are beneficial for three Reaſons: Firſt, becauſe the pendulous Viſcera, agitated by theſe Concuſſions, are ſtrengthen'd, and the Concretions reſolv'd, partly by the Concuſſions, and partly by the increas'd Strength of the Veſſels and Viſcera. Secondly, becauſe, by theſe means, the Fæces remaining after the laſt Digeſtion are eliminated from the Primæ Viæ, in thoſe who want a due Degree of Strength in theſe Viſcera: Hence theſe Exerciſes are moſt beneficial an Hour or two before Meals. And, thirdly, becauſe, by this means, the Force and Efficacy of the Air on the Lungs is increas'd, and the circumambient Atmoſphere, which is ſoon render'd tepid by the Heat of the Body, is continually renew'd; but this Advantage is, in a particular manner, obtain'd by Riding.

As for the Denſity and Viſcidity of the Blood in robuſt Perſons; we call that Blood denſe, which, in any given Quantity, is of the greateſt ſpecific Gravity; but this Circumſtance depends on the Preſſure of the Veſſels. All the Aliments we take, as, alſo, the Chyle and Milk prepar'd from them, are lighter than the Blood. Blood extravaſated, and ſet at Liberty from the Compreſſion of the Veſſels, becomes lighter than it was when contain'd in them: The compact and ſolid State of the Blood is, therefore, the greater, the more ſtrong and conſolidated the Veſſels acting upon it are. Hence, in acute Diſeaſes, in which the Action of the Veſſels on their Contents is too ſtrong, the Blood becomes more heavy and denſe than it was before. Blood iſſuing from a Vein, or a Wound, in ſtrong Men, is thick and black: Thus *Homer*, when, in the ſeventh Book of his *Iliad*, he repreſents *Ajax* as having wounded *Hector*, ſays, μέλαν δ' ἀνεκήκιεν αἷμα, *blackiſh Blood ſprung* from the Wound of *Hector*; and elſewhere, in the ſame Book, he informs us, that the Blood of Heroes is black, τῶν νῦν αἷμα μελαινέν. But, in this Species of Blood, there is always a certain Lentor, in conſequence of which, it is forthwith concreted into a ſolid Maſs. This is always true, with reſpect to the arterial Blood of robuſt Perſons; and, after violent Exerciſe, or in acute inflammatory Diſeaſes, the venous Blood is, forthwith, concreted almoſt in the ſame manner. This Blood is, at the ſame time, of ſuch a Quality, that, if dropt into the Eye, it produces no manner of Pain; ſo mild is ſound Blood, which contains ſomething of a gently ſaltiſh Nature, but ſo highly diluted, that it does not, by its Acrimony, offend the Parts of the moſt acute Senſation; for all thoſe Parts, which would, in time, become acrid in the Body, are eliminated by Stool, Urine, and Sweat.

As for the Diſſolution of the Blood in tender Conſtitutions; the Blood of a ſound Man is not, without the greateſt Difficulty, ſubjected to a ſtatical Examination; becauſe it is forthwith concreted, and is rarefied as ſoon as it is free from the Compreſſion of the Veſſels. That Mr. *Boyle*, however, might have ſome, though, as he himſelf confeſſes, in his Hiſtory of human Blood, not an accurate Knowledge of this Affair, he put a certain Quantity of ſound human Blood in an oblong Phial: When it had ſtood at Reſt till the Bubbles diſappear'd, he mark'd its Height on the Glaſs whith a Diamond: Then, waſhing out the Blood, he fill'd the ſame Phial, to the ſame Height, with Water; then, by weighing, he found that the ſound Blood was about a twenty-fifth Part ſpecifically heavier than the Water. But, from what has been already ſaid, it is obvious, that, by the Force of the Veſſels and Viſcera, a Blood is prepar'd from the Aliments, which is more ſolid, and, conſequently, more heavy, than the Aliments themſelves. Hence, ſince in weak Conſtitutions this Force is languid, the Blood is, of courſe, leſs conſolidated; and, conſequently, being more diſſolv'd, and light, it, at laſt, degenerates to a Thinneſs equal to that of Water. This is ſufficiently confirm'd by the Inſtances of Dropſies ariſing from a weak and infirm State alone.

But, generally, a thin State of the Blood is accompanied with a proportionable Degree of Acrimony. On this Account, Perſons of tender Habits are readily ſubject to Corroſions of the weak Veſſels. Hence ariſe Spitting of Blood, acrid and ſaline Catarrhs, together with the other Diſorders to which ſuch Perſons are ſubject.

As for the infinite Number of apparently different Diſeaſes ariſing from the ſame common Cauſe; ſo long as the human Fluids move through Canals, whoſe Diameters are proportion'd to theſe Fluids, and each Series of decreaſing Fluids is carried through its reſpective Veſſels, all the Functions of the Viſcera and Veſſels remain ſound and entire. But when the weak Veſſels, too much diſtended by the impel'd Fluids, admit foreign and improper Fluids, all the Functions are diſturb'd. Hence an infinite Number of Diſorders may draw their Origin from this ſimple and uniform Cauſe; and all the Diſorders ariſing from this Source may be remov'd, by reſtoring the Strength of the Veſſels. One Inſtance will be ſufficient to illuſtrate this Affair. Naturally the Tunica adnata of the Eye contains no red Blood in its Veſſels; but, when it is relax'd by any Cauſe, the red Blood enters theſe Veſſels, remains there, and produces an Ophthalmia; which, at firſt, is often curable by the Application of cold Water, becauſe the Veſſels, conſtricted by the Cold, repel the red Blood,

which had enter'd; whereas, in ſuch a Caſe, emollient and relaxing Applications often increaſe the Diſorder.

Hence it appears, of how great Importance the due Conſideration of ſuch a ſimple Diſorder is, ſince it opens a Way for the Knowledge and Cure of a great many others, which, though they draw their Origin from the ſame Cauſe, are, yet, highly intricate and perplexing to the Ignorant and Unſkilful.

From the ſame Conſiderations we draw both the Knowledge and the Cure of too great a Laxity of the Veſſels and Viſcera.

Since Laxity is a Species of Weakneſs, what has been advanced on that Head, is applicable to this.

Disorders of the Viscera, arising from too much Stricture, or Rigidity.

The too great Rigidity of the Veſſels and Viſcera is ſuch a Coheſion of their component Parts, as does not yield to that Motion which ought to move and change them, that thoſe Functions, which, in a State of Health and Life, flow'd from this changeable State of the Veſſels and Viſcera, may be duly perform'd.

In every Period of Life, the Veſſels of the human Body undergo a Change, ſince they never remain two Moments of the ſame Bulk, but are ſometimes diſtended by the Force of the Fluid impel'd from the Heart; and, immediately after, have their Diameters diminiſh'd by their natural Force. Such a Coheſion, therefore, of the conſtituent Parts of the Veſſels is requiſite, as that they may be capable of yielding: Ard where this Coheſion is ſo great, as not to yield ſufficiently, the Veſſels and Viſcera are ſaid to be too rigid.

What the Viſcera are, we have already explain'd; and, on the ſame Occaſion, obſerv'd, that all the Viſcera produce their reſpective Effects by the Structure of thoſe Veſſels, of which they conſiſt; but all the Veſſels only act on their contain'd Fluids in ſo far as they are contracted, and endeavour to diminiſh and leſſen their Diameters; and, when they are contracted to their ſmalleſt Diameter, then this Force ceaſes to act till the Veſſels are again diſtended by the impel'd Fluids. Such a Flexibility is, therefore, requir'd in the Veſſels, as they may yield, and be expanded by the impel'd Liquids, and again contract themſelves, when the impelling Force ceaſes to act.

It is, beſides, requiſite, that in all the Viſcera which ſecrete the Liquors, prepar'd in their Structure, through Emunctories, the moſt minute ſecretory Ducts ſhould have a certain determin'd Bulk, leſt they ſhould let thoſe Parts paſs which ought to be retain'd, or retain thoſe which ought to be ſecreted. Upon the juſt Bulk and Proportion, therefore, of theſe ſecretory Ducts, Life and Health entirely depend.

In different Viſcera of the Body various Degrees of Flexibility are requiſite in the Veſſels; for, certainly, a far greater Degree of Flexibility is requiſite in the ſmall Arteries diſpers'd through the cortical Subſtance of the Brain, than in the ſecretory Veſſels of the Kidneys. Hence, in this Caſe, nothing general can be determin'd; but our ſeveral Poſitions muſt be limited by the various Conditions and Purpoſes requiſite to a ſound State of Health.

This Rigidity of the Veſſels and Viſcera ariſes, firſt, from every Cauſe which renders the Fibres too rigid. Secondly, but more eſpecially, from an highly compact State of the Fibres with each other, produced by the ſtrong Force of the propel'd Fluids. Thirdly, from an Union and Conjunction of the minute Canals, depriv'd of their Fluids by ſtrong Preſſure, with which the vital arterial Fluid preſſes the Sides of the larger Canal; and the moſt conſiderable Cauſe, contributing to the Production of this Effect, is ſtrong and violent muſcular Motion. Fourthly, from a Concretion of the Veſſels into one Solid, with its proper contain'd Fluid, becoming ſtagnant, dry, and coagulated.

1. *As for the Cauſes productive of too great a Rigidity of the Fibres*; we have already conſider'd them.

2. *With reſpect to the compact State of the Fibres, mutually and ſtrongly applied to each other, by the Force of the propel'd vital Fluid*; though in the Fluids there are Parts fit for reſtoring the Elements worn away and loſt by the Actions neceſſary for Health, yet, as we before obſerv'd, 'tis requiſite there ſhould, by the Impulſe of the vital Fluid, be a due Application of theſe Parts to proper Places, and, as it were, an Appreſſion of them to other Elements; and the ſtronger this Application or Appreſſion is, the more firm will the Structure of the Fibre, thus produc'd or reſtor'd, be. Now, the ſame Force which mutually unites the Elements of the Fibres, forcibly compreſſes, and produces a ſtrong Coheſion in the Fibres form'd by theſe Elements.

3. *As for the Union and Conjunction of the ſmall Canals*; this may, in ſome meaſure, be underſtood from what has been already ſaid: For the largeſt Canals have their Membranes form'd of the moſt minute Canals, which, by the Force of the Heart, are far leſs diſtended than thoſe which are larger, on which the whole Force and Strength of the Heart act, as it were, with an immediate Impetus. Hence, when the large Canals are diſtended, the minute Veſſels, conſtituting the Membranes of theſe Canals, are render'd flat, and become impervious; in conſequence of which, they grow together, and the Strength is, by that Circumſtance, augmented. Now, ſtrong muſcular Motion, by conveying the venous Blood with greater Velocity to the Heart, increaſes its Action. Hence a greater Impetus, eſpecially on the larger Veſſels, and all the other Circumſtances enumerated, are produc'd.

4. *As for a Concretion of the Veſſels with their contain'd Fluids*; this has been before explain'd.

When there is a Rigidity of the Veſſels; firſt, it produces Effects ſimilar to thoſe ariſing from a Rigidity of the Fibres. Secondly, it produces a ſtrong Effort in the Veſſels, by which the Fibres endeavour to apply themſelves to the Axis of the ſeveral Canals they compoſe; to leſſen their reſpective Cavities; to preſs, compreſs, repel, and expel, their contain'd Fluids; and thus to reſiſt their Motion from the Heart, and, conſequently, the Heart itſelf; to become ſcarcely capable of Dilatation, and thus to interrupt the equable Motion of the Blood, and, conſequently, of all the Secretions; to diminiſh the Quantity of the Blood, which would otherwiſe be expel'd from the Heart, at one Pulſation; to prevent the perfect Evacuation of the Heart, and, by that means, produce polypoſe Concretions of Blood; by compreſſing the Fluids, and diveſting them of their moſt ſubtile Parts, to condenſe them too much, and, by that means, to produce Suffocations and Death. Thirdly, this Rigidity of the Veſſels makes them gape very much when wounded, in conſequence of the great Force with which they are retracted into the Parts which ſuſtain them; and this ſame Rigidity, when the Veſſels are cut entirely through, either leſſens, or entirely ſhuts up, their Extremities.

1. *As to the Effects of too rigid Fibres*; theſe have been already conſider'd.

2. *As to the ſtrong Effort of the Veſſels, by which the Fibres endeavour to apply themſelves to the Axis of their reſpective Canals*; in a conical Canal, a Right Line, drawn from the Apex to the Centre of the Baſe, is call'd its Axis.

When the flexible Canals of the human Body are diſtended by the impel'd Fluids, they are in a State of Violence; and the longitudinal Fibres, diſtended in the Form of an Arch, endeavour to reſtore themſelves to their former Length; whereas the diſtracted orbicular Fibres endeavour to return to ſmaller Diameters. By both theſe Actions, the Sides of the Canal approach more nearly to its Axis; and this Attempt of the diſtended Fibres to reſtore themſelves is the only Action of the Canals of the human Body: The firmer, therefore, the Structure is, and the greater the Elaſticity of theſe Sides, the ſtronger this Effort is, as is ſufficiently obvious.

But, whilſt the Sides of the Canal approach its Axis, its Cavity is neceſſarily diminiſh'd, and, conſequently, the contain'd Fluid preſs'd upon; and ſince this Fluid can neither be ſoon expreſs'd from the converging Extremities of the Arteries, nor forc'd back to the Heart, in conſequence of the Reſiſtance made by the Valves of the Aorta, 'tis, for this Reaſon, compreſs'd, repreſs'd, and condens'd; for every porous and flexible Body is compreſs'd into ſo much the ſmaller Bulk, the ſtronger the compreſſing Force is. This ſeems to be the Reaſon why the Chyle, and Milk, which are always lighter than Blood, being, by the repeated Actions of our Veſſels, compreſs'd, are, at laſt, chang'd to ſolid and compact Blood.

But all the freſh Fluids which enter the human Body, whether by Aliments and Drink, or by the bibulous Veſſels diſpers'd over all the Surface of the Body, always enter by the Veins, which, being eaſily dilated, admit them all. But after theſe Fluids have enter'd the Arteries, if the Strength of theſe latter is increas'd above what is conducive to Health, the former will be forthwith diſſipated from the Body. Hence we underſtand, why lean robuſt Men often eat twice as much as fat and idle Perſons; and yet do not become corpulent, though their Diſcharges by Stool are very ſmall in Quantity: In ſuch Perſons as theſe, the Fluids drank firſt enter the lacteal Veins, then the Vena Cava, and the Right Ventricle of the Heart; but, in the Arteries of the Lungs, and afterwards by means of the whole arterial Syſtem, they are ſo attenuated, that they are capable of being diſſipated, and carry'd off through the ſmall exhaling Veſſels of the Body.

As

As for the Reſiſtance made to the Motion of the Fluids from the Heart, and, conſequently, to the Heart itſelf; 'tis to be obſerv'd, that, though an additional Strength is communicated to the Arteries, a too great Reſiſtance is not, on that account, forthwith made to the Heart, ſince the Force of the Heart is increas'd in proportion to the additional Strength imparted to the Arteries: For the Influx of the venous Blood into the Cavities of the Heart, the Paſſage of the arterial Blood through the Subſtance of the Heart, and the Influx of the Spirits into its muſcular and villous Fibres, are the Cauſes on which its muſcular Motion depends. But when, the Aorta ſtrongly contracts itſelf, it, with a proportionably greater Celerity, forces the Blood through the coronary Arteries into the Subſtance of the Heart, and, at the ſame time, with greater Force, applies the Blood through the carotid and vertebral Arteries to the Brain and Cerebellum. Hence a larger Secretion of Spirits is produc'd. It alſo accelerates the Motion of the Blood from the Arteries to the Veins; and, by thus increaſing the Motion of the venous Blood, irritates and ſtimulates the Heart to a briſker Action. All the Cauſes, therefore, of the muſcular Motion of the Heart are increas'd by an additional Strength of the Arteries.

So long as this Equilibrium remains, the higheſt and moſt ſpeedy Converſion of the Aliments into a State ſuited to our Nature happens, and the Blood is render'd ſolid, in ſuch a Degree only, as not to be detrimental to Health. But when the Strength of the Arteries is ſo increas'd, as to be ſcarcely capable of Dilatation, then all the Misfortunes above-mention'd are produc'd; for, when the Arteries are not dilated, they cannot afterwards be contracted: But the Contraction of the Arteries is the principal Cauſe which produces the Motion of the Blood through the Veins; for the Action of the Heart does little more than dilate the Arteries, and convey to them, when thus dilated, the Blood contain'd in its Cavities. Immediately after, the Arteries, contracting themſelves, propel the Blood convey'd to them. This evidently appears upon wounding a large Artery; on which Occaſion, the Blood is not diſcharg'd with a continu'd and uniform Impetus, but, as it were, by ſtarts, and far more ſlowly, when the Heart, in conſequence of its Contraction, dilates the Arteries, than when the Arteries are contracted, and the Heart is what we call in its Diaſtole.

When, therefore, by whatever Cauſe, the Veſſels are render'd ſo rigid, that they are not capable of being dilated at all, or, at leaſt, not ſufficiently, then the Force of the Heart is not able to expel the Blood contain'd in its Cavities; and, being irritated by an uncommon kind of Teneſmus, endeavours, by various Pulſations, to do that which it could not do by one Contraction. Hence Palpitations of the Heart, and an interrupted Pulſe, are ſo frequently obſerv'd in extreme old Age; for, in long-liv'd Perſons, the larger Veſſels about the Heart have ſometimes been found cartilaginous, or even of a bony Contexture, as we learn from medicinal Obſervations. Now, when the Motion of the Heart is diſturb'd, all the Functions of the Body are proportionably diſorder'd, ſince it is the Source and Spring of all Motion: Hence none of the Excretions and Secretions remain the ſame they were before. But, when the Blood begins to remain in the Cavities, the Sinuſes and the Auricles of the Heart, polypoſe Concretions are form'd. This Species of Diſorder, which takes its Name from a Fiſh, that fixes itſelf by a great Number of Filaments to adjacent Bodies, is no leſs frequent, than it is latent and obſtinate. *Malpighi*, in his Treatiſe *de Polypo Cordis*, was almoſt the firſt who gave us any diſtinct Account of the Origin of polypoſe Concretions of the Heart, and larger Veſſels; for the Blood of a ſound Man, taken from the Vein, immediately becomes viſcid, and begins to form a concreted Maſs, which ſeparates from itſelf the more thin and yellow Part of the Blood. This Maſs is gradually more and more concreted, and floats in the more liquid Part expreſs'd from it. Then the concreted Part, when waſh'd with pure Water, becomes white, appears fibrous, and, when cut, exhibits ſmall Cellulæ, full of reddiſh Ichor.

The Experiment of *Ruyſch*, before-mentioned, ſhews us, how ſuch a Concretion, when beginning to be produc'd, draws Parts ſimilar to its own, from the remaining Maſs of Blood; and, by an Union of theſe, forms a Species of Membrane.

The Blood, therefore, of a ſound Man, as is obvious from theſe Experiments of *Malpighi* and *Ruyſch*, conſiſts of ſuch Parts as repel each other; but the vital Motion keeps them mix'd with each other: Hence, as ſoon as the Blood of the ſoundeſt Perſon remains at Reſt, for ſome time, in the large Veſſels; or, moving too ſlowly, is too copiouſly accumulated in the diſtended Veſſels; it is diſpos'd to a kind of flaky Concretion, and the Flakes thus produc'd are mutually concreted, aſſimilate, and attract to themſelves ſimilar Parts; and thus produce ſmall polypoſe Maſſes, which, by a Continuation of the ſame Cauſes, are often increas'd to an enormous Bulk, and grow to the Veſſels, the Columnæ of the Heart, and its Auricles, as we find from Diſſections.

In Animals whoſe Throats are cut, and almoſt all the Blood diſcharg'd, there only remains about the Right Ventricle of the Heart a ſmall Quantity of Blood, form'd into oblong polypoſe Concretions. Hence the Reaſon appears, why, after great Loſſes of Blood, polypoſe Concretions are often form'd about the larger Veſſels, which, afterwards, induce very terrible Diſorders. Thus *Boerhaave* informs us, that he ſaw a Woman, who in a Miſcarriage loſt ſo large a Quantity of Blood, that ſhe was laid out for dead: She afterwards, however, came to Life, and remain'd pretty eaſy, ſo long as ſhe continued in a State of perfect Reſt; but, upon her uſing the ſlighteſt Motion, ſhe was forthwith ſeiz'd with an intolerable Uneaſineſs, a ſudden Proſtration of Strength, and an inſupportable Difficulty of Breathing, till, at laſt, a more eaſy State was reſtor'd by Reſt; and, in this Condition, ſhe kept her Bed for ten Years. The ſame Circumſtance ſeems to have happen'd to this Woman, which happens to Animals whoſe Throats are cut, that is, polypoſe Concretions ſuffer'd the Blood to paſs when ſlowly mov'd, but ſtopt it when the Motion was too briſk.

This Circumſtance evidently appears in Syncopes; for, when Life returns to thoſe who have been ſeiz'd with this Misfortune, they ſigh, and breathe with Difficulty. The polypoſe Flakes of concreted Blood are ſtopt in the pulmonary Artery, which, from a large Cavity, is diſtributed into various minute Ramifications. By the Contraction of the Heart and pulmonary Artery, the Effort to Reſpiration being in this Caſe always increas'd, theſe Flakes are carried backwards and forwards, and ſometimes diſſolv'd: But they who are frequently ſubject to Syncopes, in conſequence of a Polypus already form'd, are, thro' the whole remaining Courſe of their Lives, ſubject to Palpitations of the Heart.

This Diſorder would be highly familiar to delicate young Women, who upon any violent Commotion of Mind, forthwith fall into a Syncope, unleſs the State of their Blood had a Fault oppoſite to that which produces polypoſe Concretions; for in thoſe whoſe Strength is vigorous, and whoſe Principle of Life briſk and active, the Blood is poſſeſs'd of a ſtronger Tendency to Concretion: Hence it requires an equable and perpetual Motion to prevent this Misfortune.

But, from theſe polypoſe Concretions, whether in the Cavities of the Heart, or in the Veſſels, ariſe ſo anomalous, and, often, ſo terrible Symptoms, that they have unjuſtly been aſcrib'd to Cauſes apparently of more Importance.

In a confirm'd Polypus, ſmall Hopes of a Cure are left. Many Medicines are highly extol'd for this Purpoſe, but ſcarce any of them prove effectual. Our whole Hopes are plac'd in rendering the Blood as thin as poſſible, and, conſequently, as little prone to Concretion; that is, let a Cacochymy, ariſing from a too much diluted Blood, be artificially brought on, that thus the Polypus may not be enlarg'd by the Addition of freſh Matter, but the Blood kept thin and diluted by a continual Attrition of its Parts.

As for the Gaping of wounded Veſſels; if there was no contractile Force in the ſolid Parts of the human Body, the Aperture of an inflicted Wound would be no larger than the Thickneſs of the wounding Inſtrument. But we obſerve, that Wounds inflicted by the ſharpeſt Razors ſoon after gape; for that Force, by which the ſolid Parts mutually cohere, retracts both their Extremities: The ſtronger, therefore, this Force is, the more the divided Parts will recede from each other. When, therefore, the Veſſels are entirely divided, this ſame Force will retract their Extremities, and conceal them under other Parts. Thus, in this Caſe, Hæmorrhages are more eaſily ſtopt in robuſt ſtrong Perſons, than in ſuch as are weak and tender; becauſe the contractile Force of the orbicular Fibres in the Arteries of robuſt Perſons is proportionably ſtronger than in thoſe who are weak and delicate.

From an accurate Conſideration of what has been ſaid, we may clearly know a paſt, a preſent, and a future Rigidity, Elaſticity, and Force of the Veſſels, together with the Effects they do or afterwards will produce; as, alſo, the moſt proper Methods of Cure.

We have already explain'd the Method of inveſtigating the Diagnoſtic of a preſent Diſeaſe; the Anamneſis, or Judgment, on one that is paſt; and the Prognoſtic, with reſpect to one which is future, and the Effects ſubſequent to it; as, alſo, the moſt proper Intentions of Cure.

The Cure in Caſes of this Nature is obtain'd, firſt, by ſuch Remedies as are proper for the Cure of too rigid Fibres. Secondly, but more eſpecially by ſuch as diminiſh the Quantity, the Denſity, and the Compreſſion of the vital Fluids. Thirdly, by ſuch Things as ſuſpend muſcular Motion. And, fourthly, by ſuch Subſtances as are of a moiſtening,

ing, lenitive, emollient, diluting, reſolvent, and abſtergent Nature.

1. *As for the Remedies proper for the Cure of too rigid Fibres*; theſe are already treated of.

2. *As for ſuch Remedies as leſſen the Quantity of the vital Fluids*; in the Cure of a too rigid State of the Fibres, the Solids are only conſider'd; whereas, in curing too great a Rigidity of the Veſſels and Viſcera, a due Regard is to be had at once to the Solids and the Fluids. Among the Cauſes of too rigid Viſcera, we have already ſpecify'd the violent Force of the propel'd vital Fluids, mutually compacting the Fibres to each other: Now the vital Fluid is that which is expel'd from the Heart, and again returns to it. But, during Life, the more of this vital Fluid is taken away, the leſs the Action and Attrition of the ſolid Parts will be upon their contain'd Fluids; that is, the Briſkneſs of the Circulation is diminiſh'd: For, when the Quantity of the vital Fluid is diminiſh'd, the ſame Quantity cannot be return'd to the Heart, which was before convey'd thither. But the Influx of the Blood convey'd thro' the Veins into the Cavities of the Heart is juſtly reckon'd among the Cauſes exciting its Motion, as we have before obſerv'd: The Strength, therefore, and Velocity of the muſcular Motion of the Heart will be, by this means, diminiſh'd. This is ſufficiently obvious from Veneſection, which, in acute Diſeaſes, ſo checks the exorbitant Force of the vital Circulation, that all the Symptoms begin to remit, and become languid: And, in acute continual Fevers, this Evacuation, continued ſo long as to bring on a Deliquium, provided the Patients have a ſufficient Degree of Strength, frequently removes the Diſorder almoſt inſtantaneouſly; ſo that, when *Galen* cur'd a violent Fever in this manner, he was addreſs'd by one of the By-ſtanders, in the following complimental, but, at the ſame time, nervous and pathetic Strain: *O venerable Man, thou haſt murder'd the Fever.*

Among the antient Phyſicians there were various Diſputes with reſpect to the moſt proper Manner of removing the Redundance of the Blood in ſome Diſorders: The moſt ſimple and ſimilar to Nature, who often cures Diſeaſes by Hæmorrhages, ſeem'd to be Veneſection. But the Favourers of *Eraſiſtratus* condemn'd this Method, and maintain'd, that the ſuperfluous Blood might be remov'd by Abſtinence, which they order'd to be protracted for three Days: The celebrated Διαρρεῖν ἀσίτια was diſcarded by *Hippocrates*, in his Treatiſe *de Ratione Victus in Acutis*. And *Galen* wrote a whole Book *de Venæſectione adverſus Eraſiſtratæos*, in order to confute this abſurd Method, which was afterwards unfortunately reviv'd by ſome of the Chymiſts.

For, whilſt by Abſtinence they attempt to diminiſh the Fluids, their moſt ſubtile Parts are diſſipated; the groſs Humours more condens'd in the large Veſſels, and the whole Maſs of Fluids diſpos'd to a putrid Acrimony. But Veneſection takes away the thickeſt Part of the human Fluids, that is, the red Blood, and, by that means, prepares the way for diluting Subſtances.

As for the Denſity of the Fluids; the Denſity of the Blood in a ſound Perſon always ſurpaſſes that of Water; and, when the Blood begins to degenerate into an aqueous Thinneſs, all the Strength is loſt, as we learn from dropſical Patients. When, therefore, the Veſſels and Viſcera are too ſtrong, after a Depletion of the Veins, and an Evacuation of the moſt denſe Part of the Blood by Veneſection, aqueous Liquors are to be exhibited, ſuch as Whey, Barley-water, and other Liquors in which Water predominates; ſo that the Veſſels, being fill'd with theſe, may be weaken'd, and, as it were, a Diſpoſition to a Dropſy brought on. In acute Diſeaſes, *Hippocrates*, in the Regimen of his Patients, preſcrib'd almoſt aqueous Liquors alone.

As for the Compreſſion of the Fluids; all the Aliments, whether of a ſolid or a fluid kind, are lighter than the Blood. The Force, therefore, of the Veſſels, by its continued Action conſolidates and transforms them into laudable Blood. The ſmaller this Force of the Veſſels is, the leſs compact Blood is form'd from the Aliments. This is ſufficiently obvious from weak and tender Girls, who, inſtead of a ſolid Blood, have only a rediſh Ichor circulating in their Veins. Now the fuller the Veſſels are, the greater the Compreſſion of the Fluids contain'd in them is; for the Force of the Heart throwing the Blood into the Arteries, already much diſtended, muſt more forcibly compreſs the Blood already lodg'd in theſe Arteries, that by this means it may convey to them the Blood contain'd in its Cavities. Hence, when the Plenitude of the Veſſels is diminiſh'd, the Cauſe of this Compreſſion is, in a proportionable Degree, remov'd: Now the thicker the Fluids of the human Body are, they act with the greater Force on the Veſſels; and, in a ſound and healthy State, the reciprocal Action and Reaction of the Veſſels and Fluids are exactly equal to each other. Whilſt, therefore, the Denſity of the Fluids is diminiſh'd, their Preſſure upon the Veſſels muſt of courſe be proportionably leſſen'd; now the quicker the Circulation of the Blood thro' the Veſſels is, the oftener in any given Time are the condenſing Cauſes apply'd to the human Fluids: Hence the ſagacious Antients enjoin'd the higheſt State of Reſt in all Diſeaſes where the Circulation was too ſtrong and vigorous. By diminiſhing, therefore, the Quantity, the Denſity, and the Motion of the Fluids, their Preſſure is of courſe diminiſh'd, and, conſequently, a preſent Rigidity of the Veſſels and Viſcera remov'd, and a future one prevented.

3. *As for thoſe Things which ſuſpend muſcular Motion*; theſe have been already conſider'd.

4. *As for Subſtances of a moiſtening Nature*; to moiſten the human Body, is to fill it with a larger Quantity of Fluids, than it before contain'd, and at the ſame time to diſpoſe it for the Retention of this larger Quantity. Theſe two Intentions, jointly carried on, conſtitute what we call Humectation; for, when Water is drank without remaining in the Body, the Body may, by this means, be ſaid to be waſh'd, but not moiſten'd. Tepid Water relaxes all the Veſſels, but is far more emollient and moiſtening, when boil'd with farinaceous Subſtances: Thus it renders the Veſſels leſs capable of reſiſting their Repletion. This holds true, with reſpect to the Solids of the human Body; but there is a kind of Difficulty with reſpect to the Fluids; for the human Blood, by the too ſtrong Action of the Veſſels upon it, begins to aſſume an inflammatory Spiſſitude; and in this Caſe it is not eaſily mixt with Water, which is taken into the Body. Thus 'tis often obſerv'd, that, in highly acute Diſorders, large Quantities of Water drank paſs off by Urine and Sweat; and, a few Hours after, the Urine is as red as before, neither are the Symptoms reliev'd. In this Caſe, the Water ſeems to have flow'd through the Veſſels with the Blood, but not to have been intimately mixt with it, ſince it was forthwith ſeparated from it. In this Caſe, therefore, mild ſaponaceous Subſtances mixt with Water; ſuch as the Juices of Summer Fruits, mild Oils, Honey, Manna, and Sugar, ſo divide the Blood, when prone to a Concretion, that the Water may be more eaſily, and more durably, mixt with it.

Moiſtening Remedies are ſuch as always have Water predominant in them; but ſuch Things muſt be, alſo, added to them, as convey ſomething of a glutinous Viſcidity to the Water, which would otherwiſe paſs too ſoon off, ſuch as all farinaceous Subſtances, and emollient Herbs. Saponaceous Ingredients are alſo to be added, in order to divide the tenacious viſcid Blood. In *Greece*, Decoctions of River-crabs were, from the Days of *Hippocrates*, highly celebrated for dry Conſumptions, which ſo much rag'd in that Country. In *Italy*, Decoctions of Vipers Fleſh are highly eſteem'd for this Purpoſe; and, perhaps, in this Part of the World, Decoctions of Eels may be us'd as a proper Succedaneum to the former; for, in all theſe, there is a ſomewhat viſcid, moiſtening, and mild Juice, which in ſuch dry and parched Bodies, is capable of producing almoſt incredibly happy Effects. If to theſe Decoctions, of themſelves inſipid, we add grateful Pot-herbs, we have, by that means, a moſt excellent and perfect Remedy.

Broth of a moiſtening, lenitive, emollient, and reſolvent Quality, may be prepar'd in the following Manner:

Take of lean Veal, well bruis'd, two Pounds; and of well cleans'd Barley, two Ounces. Boil in eight Pints of Water for three Hours, in a well-ſtopt Veſſel, adding, towards the End, half a Pound of recent Garden Lettuce; of the Lactuca Agnina, four Ounces; and of the Roots of Vipers-graſs, ſix Ounces: Then let them boil again for about a Quarter of an Hour, always adding ſuch a Quantity of Water, that there may be at laſt ſix Pints of the Decoction.

Broth of River-crabs is to be prepar'd in the following Manner:

Take of live River-crabs, three Pounds; boil them for an Hour in twelve Pints of Water; then taking them out, bruiſe them with their Shells, and boil them in the ſame Water for four Hours, always adding ſuch a Quantity of Water, that eight Pints of the Decoction may at laſt remain; then expreſs the Broth ſtrongly; and put into it, of Borage-flowers, half an Ounce; of Bugloſs-flowers, one Ounce; of the Roots of Goats-beard, four Ounces; and of Skirrets, two Ounces; then let them boil together for the ſixteenth Part of an Hour: Of both theſe Preparations, let the Patient take two Ounces and an half, every two Hours.

A moiſtening Decoction may be prepar'd in the following Manner:

Take of white Poppy-ſeeds bruis'd, one Ounce; of entire Oats, four Drams; of red Chiches bruis'd, twelve Drams; of the Flowers of Borage and Marſhmallows, each ſeven Drams; of the Roots of Vipers-graſs, two Ounces; of the Roots of Liquorice, two Drams; of the

Flowers of Mallows, and Pellitory of the Wall, each half an Handful: Boil in two Pints of Water, for a Quarter of an Hour; and then add of the Robs of Currans and Elder, each an Ounce: Of this Preparation, let the Patient take two Ounces every Hour, during the Day-time.

As for Subſtances of a lenitive Quality; Medicines are ſaid to be lenitive, either with reſpect to the Solids, or the Fluids. Thoſe which lenify the Solids, are ſuch as remove their preternatural Rigidity, whereas thoſe which are lenitive, with reſpect to the Fluids, are ſuch as ſheath up every Subſtance of an acrid ſtimulating Nature, of which Kind are the Ingredients already enumerated.

As for emollient Subſtances; lenitive Subſtances, alſo, belong to the Claſs of Emollients, only with this Difference, that Emollients have a Relation to the Solids, whereas Lenitives produce their Effects on the Solids and Fluids, at one and the ſame time.

As for diluting Subſtances; Dilution is a Word only applicable to the Fluids; and when theſe are diluted, the Solids are relax'd. Now, Water is the only proper Diluent, with reſpect to the human Blood; and all other Liquors commonly call'd Diluents only operate in conſequence of the Water they contain. Salts attenuate and reſolve, but at the ſame time do not dilute the Fluids; and all ſpirituous Liquors rather coagulate, than dilute the Juices of the human Body. Intenſely cold Water, as well as that which is boiling, in like manner, coagulates the Blood. Hence tepid Liquors are of all others the moſt proper for diluting. Now tepid Water may be us'd in a great many different Methods, ſuch as Baths, Vapours, Clyſters, and Fomentations. Recent Whey may, alſo, be us'd in the ſame Manner, and for the ſame Purpoſes.

As for Reſolvents; too great a Strength of the Veſſels and Viſcera is ſaid to be induc'd, when a large Number of Veſſels, before pervious, are concreted, and grown together. Hence, in order to anſwer the Intention of Cure, reſolvent Subſtances, with reſpect to the Solids, ought to be poſſeſs'd of a Power of rendering the concreted Veſſels again open and pervious. But this Circumſtance is ſcarcely poſſible, or, at leaſt, not obtain'd without the greateſt Difficulty. Now, reſolvent Subſtances, with reſpect to the Fluids, are all ſuch as again diſengage the fluid Parts now concreted, and reduce them to the Molecules, of which they conſiſted before the Concretion. And theſe Subſtances divide the concreted Parts, either by inſinuating themſelves between them, or by increaſing the Force of the Veſſels, in conſequence of their ſtimulating Quality. Hence a greater Attrition, and frequently the Diviſion of the concreted Parts, are produc'd. Sometimes Reſolvents act in both theſe Manners.

The red Blood, when circulating thro' the whole Body, muſt neceſſarily paſs thro' Veſſels, whoſe Diameters do not exceed the tenth Part of the Thickneſs of a ſingle Hair. But this ſame Blood, when out of the Body, is ſo concreted, that it could not poſſibly move thro' the largeſt Canals. Now, a reſolvent Medicine is, properly, ſuch as is capable of dividing the concreted Blood into Particles ſo ſmall, that it may again paſs through theſe minute Veſſels. Now, as Humours of different Kinds may be concreted, ſo Reſolvents of different Kinds become neceſſary; for aqueous Diluents reſolve mucous, glutinous, gummy, and ſaponaceous Humours. But there are various Humours incapable of being reſolv'd in this Manner; for human Blood is not hinder'd from Concretion by being put in tepid Water, whereas moſt ſaline Reſolvents excellently anſwer this Intention: And inflammatory Concretions are moſt effectually reſolv'd by neutral Salts, eſpecially Nitre, and its Preparations, which are not only lighter than Sea Salt, but, alſo, more grateful to the human Conſtitution, and conſequently of ſingular Service in almoſt all acute Diſorders: Alcaline Salts are, on the contrary, more proper for reſolving glutinous and viſcid Concretions. Saponaceous Subſtances, eſpecially thoſe of the milder Kind, ſuch as Sugar, Honey, and ſome others, reſolve various Concretions, without creating any Trouble, whereas the chymical ſaponaceous Subſtances of a ſtrong and acrid Nature never operate without exciting violent Commotions. The Operation of all theſe Reſolvents is much aſſiſted by Frictions, whilſt, by the alternate Compreſſion and Relaxation of the Veſſels, the Reſolvents are mixt with the Blood, and produce a kind of Attrition with the concreted Fluids; for 'tis certain, that after the Uſe of a Vapour-bath, moderate Friction, and the internal Uſe of Reſolvents, have often diſſipated hard Tumors of the Glands, which in all Appearance ſeem'd impoſſible to be reſolv'd.

Reſolvents are, firſt, Diluents; ſecondly, Preparations of Sea Salt, Sal Gemmæ, Borax, Sal Ammoniac, alcaline Salts, whether of a volatile or fix'd Nature; Acids duly fermented, and Subſtances prepar'd from them; ſuch as Sal Polychreſtus, Tartarus tartariſatus, the purgative Tartar of *Sennertus*, the Panacea Duplicata of the Duke of *Holſtein*, antimoniated Nitre, and the *Sal Viperarum ſaturatus* of *Tachenius*.

Saponaceous Reſolvents are volatile, ſpirituous, aromatic, and oleous Salts. Chymical Soaps, conſiſting of diſtil'd Oils, and fix'd Alcalis; as alſo common Soap, conſiſting of expreſs'd Oils, and a fix'd Alcali. Preparations of Honey, and the ripe Juices of Summer Fruit. All theſe Ingredients may be exhibited in various Forms. Thus a Mixture may be prepar'd in the following Manner:

Take of diſtil'd Water of Rue, twelve Ounces; of Venetian Borax, two Drams; of Sal volatile oleoſum, three Drams; and of the pureſt Honey, three Ounces. Mix all together, and let the Patient take one Ounce every Hour, during the Day-time.

Drops may be prepar'd in the following Manner:

Take of Elixir Proprietatis, prepar'd with Salt of Tartar, of Sal volatile oleoſum, and of the purgative Salt of *Sennertus*, each half an Ounce. Let the Patient take twenty-five Drops in Wine, three or four times a Day.

Pills, for the ſame Intention, may be prepar'd thus:

Take of *Venice* Soap, Borax, and the beſt Aloes, each two Drams; make into a Maſs, and let each Pill contain three Grains; and let the Patient take one four times every Day.

A Decoction may be prepar'd thus:

Take of recent Leaves of Soapwort, three Handfuls; of Brook-lime, two Handfuls; of Fumitory, one Handful; of the recent Roots of Graſs and Succory, each two Ounces. Boil in Water, for a Quarter of an Hour, in a cloſe Veſſel; ſtrain the Liquor thro' a Cloth; and when it it depurated by Standing, with every three Pints of it, mix of the Rob of Elder and Simple Oxymel, each two Ounces. Let the Patient drink two Ounces of this Preparation warm, every Hour.

A Powder for the ſame Intention, may be prepar'd thus:

Take of Sperma Ceti, and Borax, each two Drams; make into a Powder, to be divided into eight Doſes, one of which is to be taken, every two Hours, in a little Wine.

As for Abſtergents; when any thing of a viſcid, glutinous, or tenacious Nature ſo adheres to the Surface of a Veſſel, as to ſtop up the natural Paſſage of the Fluids, when this is remov'd, the Part is ſaid to be deterg'd. Hence Abſtergents, eſpecially all thoſe of the ſaponaceous Kind, are ſuch as reſolve the concreted Fluids. But, in thoſe Veſſels where the Motion of the Fluids is moſt ſwift and rapid, ſuch viſcid Concretions are not generally found, but only in the moſt minute Veſſels, or in thoſe Receptacles where the Humours are collected for certain Purpoſes. But it would be a great Error to believe, that all ſuch viſcid Adheſions are of a morbid Nature, ſince the whole internal Mouth, the Œſophagus, and Stomach, are cover'd with ſuch a Mucus; and, when it is defective, the moſt terrible Diſorders are produc'd. To the Claſs of Abſtergents belong all diluent and reſolvent Subſtances, eſpecially of the ſaponaceous Kind. Theſe contribute to the Cure of too great a Rigidity of the Veſſels and Viſcera, becauſe, by removing the Obſtructions, they procure a free Paſſage of the Humours through the Veſſels. Hence the highly equable Circulation neither preſſes the Solids ſo forcibly againſt each other, nor condenſes the Humours ſo much.

The Subſtances which remove glutinous Fluids, or half-corrupted Solids, from the Parts to which they adhere, are, firſt, Diluents; ſecondly, Reſolvents; and, thirdly, but moſt eſpecially, ſaponaceous, lixivial, and fix'd Salts, together with Preparations of Honey and Vinegar.

From what has been ſaid, all the Diſorders incident to the ſolid Parts may be underſtood and explain'd, ſince they all depend on a faulty Coheſion of the Parts: And from this Doctrine ariſe many Things of the greateſt Uſe in Medicine; ſince, by this means, we are able to anſwer the following Queſtions.

What is the Diverſity of Structure in the ſolid Parts, at different Ages? The younger the human Body is, the more ſimple Veſſels, Fibres, and Membranes, it conſiſts of; the more eaſily the Veſſels yield to the Impulſe of the Fluids, and the greater Proportion there is of the Brain, and of the Nerves diſtributed thence to the other Parts of the Body. If we take an accurate Survey of the Body of a new-born Infant, all the Parts appear pulpous, ſoft, and moiſt; the Palms of the Hands, and Soles of the Feet, are wet with the Moiſture diſcharg'd from the ſmall exhaling Veſſels: Nothing appears dry and callous. But gradually, as the Infant advances in Years, many

many of the minute Veſſels begin to be conſolidated: Thus the Number of the Veſſels is diminiſh'd, and the Strength of the Solids increas'd, till, at laſt, in extreme Old-age, a ſtrong Degree of Calloſity is induced on the dry Body; and many of the minute Veſſels are aboliſh'd. Hence all the Functions, which depend on the Motions of the moſt ſubtile Humours through the ſmalleſt Veſſels, begin to be defective in old Perſons; and the Solids, becoming too rigid, make too ſtrong a Reſiſtance to the impel'd Fluids.

Why does a Man grow? *Hippocrates*, in his firſt Book *de Victus Ratione*, informs us, "That all the Parts of the human "Body exiſt, and are increas'd at the ſame time; and one "Part is not ſo, ſooner or later than another; but the larger "Parts are diſcernible ſooner than thoſe which are leſs, tho' "the former did not exiſt before the latter." For, if we conſider the Nature and Phenomena of Generation, pre-exiſtent Parts only ſeem to be enfolded, and take up a larger Space. The ſame holds in the Propagation of Plants; for the whole Plant, to be afterwards rais'd, lies latent, and, as it were, wrapt up, in the Seed. Since, therefore, in a tender Embryo, a great many Veſſels are, as it were, intorted and folded up; a Reſiſtance to the Fluids to be convey'd through theſe Veſſels is produced. But Fluids, when carried through Canals, when they meet with an Effort againſt, or a Reſiſtance to their Motion, endeavour to diſtend theſe Canals, and lengthen their Sides. Hence an Elongation of all the Parts happens: And this is Growth. But, when all the Veſſels are unfolded, a ſmaller Reſiſtance is made to the propel'd Fluids, the Circulation through all the Canals is free and uninterrupted, and then the Lengthening of the Veſſels ceaſes, becauſe the Motion of the Fluids through them is freely carried on, and the Sides of the Veſſels, conſolidated by the vital Motion, no longer ſuffer themſelves to be diſtracted by the ſame Force; and in this Caſe the Body remains without Augmentation or Diminution.

This happens, becauſe the Quantity and Impetus of the Humours are a Balance to the Force of the reſiſting Solids; for the human Body does not ceaſe to grow, becauſe the Solids can be no longer extended, but becauſe, in conſequence of the Unfolding of the Veſſels, the Circulation is render'd ſo free, that the Humours no longer ſtretch the Veſſels; for, even in an adult Perſon, when an Obſtruction happens in any of the Veſſels, the Velocity and Quantity of the Humours remaining the ſame, we ſee the particular Parts are increas'd. This is ſufficiently prov'd by the Uterus of pregnant Women, which is expanded to ſo large a Bulk. And, perhaps, the ſurpriſing Augmentation of particular Parts is owing to ſome ſuch latent Cauſe.

Way does the Body decreaſe? By the neceſſary Effect of good Health ſuch a Strength is ſoon produced in all the Veſſels, that they gradually begin to make too ſtrong a Reſiſtance to the impel'd Fluids. Hence all the Parts are gradually contracted; the whole Body becomes dry and parch'd; and almoſt the whole Fat, which conſtitutes ſo great a Part of the Bulk of the Body, is conſum'd. Hence, in the Hands of old Perſons, we ſee the Tendons almoſt deſtitute of all Fat. The Ligaments, alſo, between the Bodies of the Vertebræ, are often ſo effectually aboliſh'd, that the Vertebræ touch each other. Hence the Talneſs of the Body is diminiſh'd, the Spina Dorſi is incurvated forwards, and old Perſons become gibbous, and, at laſt, die of a Maraſmus, ariſing from Old-age.

Why do Men grow faſter in the Uterus, than at any other Period of their Lives? That this actually happens, is a Circumſtance, the Truth of which we cannot call in queſtion; for in nine Months time, from an inviſible Molecule, the Infant grows ſo large, that its Weight is often equal to ſixteen Pounds, and ſometimes more. The Reaſon of this Phenomenon ſeems to be this: The Veſſels adjacent to their Heart, which is ſtrongly mov'd, are highly tender; and, as many of them are ſhrivel'd up, they make a more forcible Reſiſtance to the impel'd Fluids: Hence they are more lengthen'd and diſtended. Beſides, the whole Embryo is continually cheriſh'd by the tepid Liquor of the Amnios: Hence all the Parts are preſerv'd highly lax; and the Nouriſhment prepar'd by the Mother's Body, is not only continually convey'd to that of the Fœtus, but, alſo, equally diſtributed.

How does a Man contract a lax Habit of Body? If a Perſon leads an idle unactive Life, indulges himſelf in Sleep, and at the ſame time uſes ſoft Aliments, his Body will become preternaturally large, but his Strength is not augmented in Proportion; and the Veſſels are not ſufficiently conſolidated. Hence they eaſily yield, and are diſtended by the impel'd Fluids.

How does a Man become ſtrong? When the Force of the Fluids is more than a Balance to the Strength of the Veſſels, the Body becomes tumid and lax. But when the Veſſels, ſtrengthen'd by due Exerciſe, ſuſtain the Impetus of the Fluids without too great a Dilatation, and when this Strength of the Veſſels is a preciſe Balance to the Quantity and Motion of the Fluids, the Man is ſaid to be ſtrong; ſince, in ſuch a Perſon, there is a firm Coheſion of the ſolid Parts, and a due Denſity of the Fluids.

How does a Man acquire a rigid Habit of Body? The ſame Cauſes which render the Body ſtrong, continuing to act, will, of courſe, render it rigid. Age gradually ſtrengthens the render Body of a new-born Infant, and Exerciſe imparts Strength to the weakeſt Conſtitutions; a more advanced Age renders all the Parts calous and rigid; and exceſſive Labour brings on all the Symptoms of Old-age, before the due Time.

Why is a Man of a moiſt Conſtitution? The Veins of the human Body, being eaſily dilatable, are, of courſe, fill'd with the freſh Supplies of Fluids taken into the Body; but the firmer Strength of the Arteries again expels theſe Liquors: For, a ſound and vigorous Man may drink an incredible Quantity of Water, which, being receiv'd into the Veins, is convey'd into the Heart; and then, being diſtributed through the Arteries, is expel'd from the Body, and, next Day, the Man recovers his former Weight. When, therefore, there is ſuch a Weakneſs of the Arteries, that they can neither put the Humours, receiv'd into the Veins, in ſufficient Motion, nor expel the ſuperfluous Juices, then the Fluids are accumulated, prevail over the Solids, and produce what we call a moiſt Conſtitution.

Why is a Man of a full Habit? A Man is ſaid to be full of Juices, when his Veſſels are fill'd with a larger Quantity of laudable Humours than is requiſite for the Purpoſes of Health. In ſuch Perſons there is ſuch a Degree of Laxity in the Veſſels, that they may be fill'd ſo far as not to create a Diſeaſe: But if, in this Caſe, the Humours ſhould be increas'd or rarefied by Heat, or any other Cauſe, Health can no longer remain.

Why is a Man of a dry Habit of Body? This State is produced ſimply by the increas'd Strength of the Veſſels. When the Arteries are contracted with a greater Force than is requiſite for perfect Health, the Fluids are expel'd, and the Body becomes dry. Hence Age, and hard Labour, by corroborating the Solids, render the Body dry.

Why does a Man die a natural Death? A natural Death, is that which, undoubtedly, happens in conſequence of the peculiar Frame and Make of the human Body. This happens, becauſe the Elements of the Fibres are mutually apply'd to each other, Fibres to Fibres, Membranes to Membranes, the Sides of the Veſſels to each other, and the flatten'd Veſſels grow to other ſimilar Veſſels. Thus, at laſt, almoſt all the minute Veſſels being concreted, the Circulation of the Humours is only carried on through the larger Veſſels, which, at laſt, becoming dry, callous, and, ſometimes, cartilaginouss or bony, hinder the free Expulſion of the Blood from the Heart: Thus Life terminates in a calm and gentle Death. *Lewis Cornaro*, that celebrated Model of Temperance and Mortification, died in this grateful and deſirable Manner. Hence the Boaſtings of the Chymiſts are falſe and ill-founded, who fooliſhly promis'd Immortality, or, at leaſt, pretended, that they could protract Life at Pleaſure. This Species of gentle Death happens by the Reſt of the Heart, when full, and not capable of evacuating its Contents into the Arteries, which are full, and ſo rigid, that they cannot be diſtended by the Force of the Heart.

What Diſeaſes are moſt incident to different Ages? In the firſt Years of Life Man is moſt ſubject to the Diſorders of the nervous Syſtem; becauſe, as we know from Experience, the Brain, together with its Appendages, the ſpinal Marrow and Nerves, bear a larger Proportion to the other Parts of the Body, the younger the Body is. Beſides, as at this Age the Brain is leſs firm, ſo the Nerves, ariſing from it, are not only ſoft, but cover'd with thin Membranes, and, conſequently, eaſily affected, and render'd ſubject to Convulſions; for an Infant can hardly be ſeiz'd with the ſlighteſt Fever, without being, at the ſame time, thrown into Convulſions. Gripes, ariſing from an Acid, in the Stomach and inteſtinal Tube, an Infection by the ſmall Pox or Meaſles, and every thing which acts forcibly on the Organs of Senſation, ſuch as a violent Noiſe, or a too ſtrong Light, often excite Convulſions. And *Sydenham*, when, after Dentition, he found Children ſeiz'd with Convulſions, prognoſticated the Small-pox, and thoſe of a good Kind. Hence, ſince at this tender Age Convulſions are produced by ſuch ſlight Cauſes, *Hippocrates* was not very dubious about a Cure, before the ſeventh Year of the Child's Age: But he pronounces them dangerous after that Age, becauſe they are produced by more violent Cauſes.

Another Source of Diſorders, which happen in the firſt Years of Life, is, that the Quantity of the Humours is more than a Balance to the Strength of the Solids; for all Infants are turgid and moiſt. Hence happen ſo eaſy and ſo ſurpriſing Changes of the Humours, which are ſo often diſcharg'd thro' the Skin, in a manner not as yet ſufficiently underſtood. This is obvious from Achors, Herpes, Excoriations behind the Ears, and under the Axillæ. By theſe means an incredible Quantity of Fluids is daily diſcharg'd; and an imprudent Stop put to ſuch Evacuations often lays a Foundation for the moſt terrible Diſorders.

Then, about the Time of Puberty, surprising Changes happen to the whole Body in both Sexes; in Men Tumors of the Testicles, and varicose Inflations of the seminal Vessels, which are easily curable by gentle Purgatives, and slight Frictions over the Steam of kindled Amber. And in young Women surprising Disorders often precede, or accompany, the first Eruption of the Menses.

Afterwards when the Parts of the Body begin to make a stronger Resistance, and the Vessels are no longer capable of being so easily distended, an Equilibrium, or just Balance, is produc'd between the Quantity and Impetus of the Fluids, and the Resistance of the Vessels. In the mean time found Viscera continue to generate fresh Humours. Hence a Rupture of the Vessels easily happens, which lays a Foundation for Hæmorrhages of the Nose, and Spittings of Blood.

In adult Persons, the Action of the Vessels on the Fluids is highly strong: Hence their Blood is render'd dense and compact, which lays a Foundation for acute inflammatory Disorders.

At last, when Old-age comes on, the Solids become more compact; the minute Vessels are gradually concreted, and become callous; and all the Functions, which depend on the Circulation of the most subtile Humours thro' the most minute Vessels, are gradually abolish'd: Hence all the Actions of the Brain and Nerves begin to be weaken'd; the Humours degenerate to a cold and phlegmatic State; the Circulation is only perform'd thro' the larger Vessels; and Death, at last, necessarily follows: Thus *Galen*, in the third Chapter of his sixth Book, *de Sanitate tuenda*, informs us, "That we become old, and "subject to Corruption, because we cannot avoid the Work-"ings of Nature, which becomes gradually more dry."

Hippocrates in *Sect.* 3. *Aph.* 24, 25, 26, 27, 28, 29, 30, 31, has carefully remark'd the Diseases incident to different Periods of Life.

What Regimen is best accommodated to the various Periods of Life? So long as the Fœtus remains in the Womb, it receives the Humours prepar'd from its Mother; and, as soon as it is brought into the World, it by a happy kind of Instinct begins to suck its Mother's Breasts. The Milk, therefore, yielded by these, is of all others the most proper Nourishment for Infants: When their *Dentes Incisores* appear, Aliments somewhat more solid, but previously reduc'd to a Pap, are to be exhibited; and, according to *Galen*, in the tenth Chapter of his first Book *de Sanitate tuenda*, they are to be often rub'd, but not with a full Stomach; then well-fermented Bread reduc'd to a soft Pulp by an Affusion of Milk, or Flesh-broth, may be properly us'd; and, when the *Dentes Molares* have appear'd, firmer Aliments may be exhibited. But all hot, vinous and irritating Substances are highly prejudicial to Infants, because their nervous Systems are very delicate and tender.

Children, on account of their voracious Appetite, are to have Aliments often exhibited to them; and *Hippocrates*, in *Aphor.* 13. and 14. of *Sect.* 1. informs us, that Children are, of all others, least capable of bearing Hungar. Those who are in a growing State, have a great Degree of innate Heat, and for that Reason require a large Quantity of Aliments, lest their Bodies should be consum'd and wasted away.

For adult and found Persons, the Rule laid down by *Hippocrates*, in the sixth Book of his Epidemics, is generally sufficient; which is, not *to eat to Satiety; and to use sufficient Exercise.* And since this Age is highly obnoxious to acute Distempers, it is obvious, that heating Substances are carefully to be avoided, and the Aliments ought to be always proportion'd to the Exercise; for a hardy Labourer requires quite different and more copious Aliments, than the Philosopher, who applies diligently to his Studies.

Since, according to the 13th and 14th Aphorisms of the first Section of *Hippocrates*, "old Persons bear Hunger easily, "have but a small Degree of natural Heat, and therefore "require but little Food, since much Nourishment extin-"guishes this Heat," they are, therefore, to have soft Aliments frequently exhibited; and, when they are become toothless, they are to be sustain'd almost by Milk alone, Broths, and Eggs. The moderate Use of Wine is in a particular manner beneficial to them, and is, for this Reason, by some call'd Old Mens Milk; for, in all fermenting Liquors, there is something of a surprisingly spirituous Nature, which in a Moment operates in an efficacious Manner upon the Brain and Nerves; but, when imprudently or too copiously us'd, it may produce sudden Death; or, if it should operate with less Violence, it may produce a Disorder still more terrible than Death itself, which is Madness, or some other Misfortunes sufficient to render Life a Burden. This spirituous Part, in new and fermenting Wines, is a highly efficacious Restorative in Old-age.

Cornaro every Year in the Months of *July* and *August* had an Aversion to all kinds of Wine. In consequence of this Peculiarity in his Constitution, his Appetite gradually languish'd, so that he became quite weak about the middle of *August*. But, upon his drinking the new Wine, for the three or four first Days of *September*, his Strength and Vigour return'd, notwithstanding his great Age.

What Method of Life is most suitable to different Ages? In the first Years of Life, the Body is highly agile, Children can scarcely remain in a State of Rest, and have their Health disorder'd, if they are entirely restrain'd from their Diversions by too strict Parents, or Tutors. But when they are too soon inured to hard Labour, their Bodies are render'd strong, but they die of a callous State of the Vessels, induced before the due Time. Thus we observe, that Countrymen, accustomed from their Infancy to hard Labour, become rigid and callous like old Men, when, they are about forty Years of Age. It is no less a Fault, to accustom Children too soon to severe Studies, since, tho' they may at first give signal Proofs of the Pregnancy of their Genius, yet they either soon after die, or remain stupid, and good for nothing. Instances of this are every-where to be met with.

Adults ought by proper Exercise to sustain and confirm their Strength, lest the Body should become languid, and overburden'd with superfluous Fat. What Advantages accrue to the human Body from Exercise, we have already observ'd. *Galen*, in the third Chapter of his fifth Book *de Sanitate tuenda*, for old Men, recommends Frictions with Oil in the Morning after Sleep, and orders them to use their habitual Labours, tho' without Violence; and, as old Men are sensible of the smallest Errors with respect to Regimen, and young Men are scarcely affected by the greatest, he orders the former to use soft Aliments often repeated.

What Medicines are most proper in the different Periods of Life? Such Medicines seem almost only suited to Children, as, in some measure, diminish the Quantity of their Humours. Hence they easily bear gentle Purgatives, especially of Rhubarb. Those Substances are, also, beneficial to them, which have a Tendency to correct an acid Acrimony, such as the absorbent Powders of Crabs-eyes, and others of a like Nature. Such Medicines are excellently suited to Infants, as check the Irritation of the nervous System, and, at the same time, moderately corroborate the Solids: Hence Rhubarb with Crabs-eyes, and a little Cinnamon, is a Medicine excellently suited to the Condition of Infants. Then, when they advance in Years, such Medicines are never to be exhibited, as by their Stimulus render the Circulation of the Humours too brisk, lest the tender Vessels should, by that means, be ruptur'd. In the Years of Maturity, those Medicines are most proper, which remove that Propensity, which the Humours have, to assume an inflammatory Spissitude. Old-age, on the contrary, which, according to *Galen*, in the ninth Chapter of his fifth Book *de Sanitate tuenda*, "Is nothing, but a dry and cold "Habit of Body, brought on by Age," requires moistening and gently nutritive Medicines, with the Addition of grateful, stimulating, and spirituous Substances, but always mixed with such as are of a moistening Quality.

Of what Certainty and Use is the Doctrine of Stricture and Relaxation in the Solids? After Medicine was divided into two Sects, each of which had its Followers, some, contending that the Art was built upon Experience alone, maintain'd that a Knowledge of evident Causes was necessary; but affirm'd that Disputes about obscure Causes, and natural Actions, were superfluous; and asserted that Medicine was not invented after Reasoning; but that, after Medicine was discover'd, the Reasons of Phenomena were found out. Hence this Sect maintain'd, that Experience, was alone necessary, and its Followers were call'd Empirics. Others, who were call'd Rational, did not deny the Necessity of Experience, but affirm'd that it could not be obtain'd without some previous Reasoning. Besides, they affirm'd that a Knowledge of the remote and latent, as well as evident, Causes of Diseases was necessary, as also a Knowledge of the Natural Actions, and consequently of the internal Parts.

Among the Rational or Dogmatic Sect, *Themison*, one of the Followers of *Asclepiades*, and after him others, reduc'd this difficult Art to a kind of brief System; and asserted that the Knowledge of no Cause contributed to the Cure of Diseases; and that it was sufficient to be acquainted with some Circumstances, which Distempers, had in common; and that these were of three Kinds, that is, Stricture, Flux, or a Mixture of these; because sometimes the Sick discharg'd too little, at other times too much, and at other times too little in one Part, and too much in another.

This was the Origin of the Doctrine of Stricture and Relaxation, concerning which *Prosper Alpinus*, in his *Medicina Methodica*, afterwards treated fully. Many Things, relating to this Doctrine, also occur in *Cœlius Aurelianus*, who was of the Methodic Sect.

But Stricture and Relaxation can only properly happen in the Solids, nor could they easily explain the Diseases of the Humours from these. 'Tis, therefore, of great Importance in Medicine, to consider the Change of Cohesion in the solid Parts; nor yet can all Diseases be deduced from it, as the Methodic Sect maintain'd. See the Articles ACIDA, and ALCALI.

Whence

Whence are we to take our moſt certain Mark of a due Degree of Stricture, or Relaxation? When after copious Eating and Drinking, and the being expos'd to a moiſt Air, the Body either does not become tumid, or does not remain long ſo, we know that the Veſſels and Viſcera have a due Degree of Strength; by which the ſuperfluous Quantity of diſtending Liquors is ſoon expel'd from the Body. When the Body of an adult Perſon does not gradually decreaſe, by the too great Contraction of the Veſſels, and the conſequent Expulſion of the Fluids, we then know, that an Equilibrium between the Solids and Fluids prevails. If, upon a copious Uſe of Aliments, the Body immediately becomes tumid, we know that the Veſſels are too weak, and too eaſily dilated. If all the Parts are lean, dry, and parch'd, we juſtly conclude, that the Veſſels are too ſtrong.

FIBRILLA. A Diminutive of *Fibra*; but commonly us'd in the ſame Senſe.

FIBULA, in Anatomy, is the outer and ſmaller Bone of the Leg. See CRUS. In Surgery it ſignifies a Button. See INFIBULATIO.

FIBULEUS. A Name for the *Muſculus peronæus primus*.

FICARIA. A Name for the SCROPHULARIA, or Fig-wort.

FICATIO, the ſame as FICUS, a Diſeaſe of the Anus, and other Parts. See ANUS and FICUS.

FICATUS, σύκωτος, is an Epithet apply'd to the Viſcera of thoſe Animals which are fatten'd by feeding on dry'd Figs; and alſo to Meats prepar'd of thoſe Viſcera, particularly the Liver. *Galen, Lib.* 3. *de Alim. Fac. & Com.* 3. *in R. V. I. A.*

FICEDULA, Offic. Charlt. Exer. 88. Bellon. des Oyſe. 359. *Ficedula, Atricapilla*, Geſn. de Avibus, 339. *Atricapilla*, Jonſ. de Avib. 90. Schw. A. 227. *Atricapilla, ſeu Ficedula*, Aldrov. Ornith. 2. 757. Raii Ornith. 226. Ejuſdem Synop. A. 79. Will. Ornith. 162. THE BLACK-CAP.

The Bird, uſed as Food, ſharpens the Eyeſight. *Dale.*

FICOIDEA. This Plant is ſo called, from its Reſemblance to the *Ficoides*.

The Characters are;

It has a ſtamineous Flower, whoſe Calyx is divided into five roundiſh Segments: When the Flower is paſt, the Pointal, which is terminated by five Threads, becomes a five-corner'd Fruit; which, when ripe, opens into five Cells, each of which is filled with ſmall Seeds.

The Species are;

1. *Ficoidea procumbens, Portulacæ Folio. Acad. Reg. Scient.* Trailing Ficoidea, with a Purſlain-leaf.

2. *Ficoidea Hiſpanica annua, Folio longiore.* Annual *Spaniſh* Ficoidea, with a longer Leaf. This exotic Plant is cultivated with us in Stoves; but I find no medicinal Virtues aſcribed to it.

FICOIDES.

The Characters are;

The whole Plant is ſucculent, and has the Appearance of Houſleek: The Leaves are conjugated, or grow oppoſite by Pairs: The Calyx ſurrounds the extreme Margin of the Ovary; is of a carnous or fleſhy Subſtance, and pentaphyllous, or pentaphylloidal: The Flower is polypetalous, very minutely divided, and ſpringing from the Top of a Capſule: The Ovary produces five reflected Tubes, and becomes firſt a ſucculent, afterwards a fungous Fruit, divided into five or more Cells, like little Pods, full of numerous minute Seeds.

Boerhaave, in his *Index alter Plantarum, Pars* 1. *p.* 289. enumerates fifty-three Species of this Plant; which, in the *Hiſtoria Plantarum* attributed to him, are ſaid to be of an emollient Quality, and to have the other Virtues of the *Sedum*, or Houſleek. The Fruit is eatable, and a good Part of the Food of the *Hottentots*.

FICUS.

The Characters are;

From the Extremity of the Pedicle ſhoots forth a ſmall triphyllous Calyx; whence ariſes the Pericarpium, incloſed in a ſomewhat ſpinous Membrane, and contracted at the Top of the Fruit, where it forms an Umbilicus, and paſſes into many ſmall ſquamous ſharp-pointed Leaves, ſucceſſively incumbent one upon another, which by their cloſing almoſt cover the Cavity, which there opens itſelf, while the outer Leaves, being ſupported by the thick Pedicle, preſs one another very cloſely, and the inner ones adhere without a Pedicle.

From within the Cavity of the Pericarpium, all around, proceed, long, tubiform, more petalous, Hermaphrodite Flowers, with Ovaries, which are teſtaceous Capſules, growing in pulpous Huſks, placed within others, which are rough.

Boerhaave mentions eight Species of this Plant; which are,

1. Ficus, communis, *C. B. Pin.* 457. *Boerh. Ind. A.* 2. 258. *Ficus*, Offic. Ger. 1327. Emac. 1510. J. B. 1. 128. Chab. 9. Raii Hiſt. 2. 1431. Aldrov. Dendr. 427. *Ficus vulgaris*, Park. Theat. 1494. *Ficus ſativa*, Jonſ. Dendr. 46. THE FIG TREE.

The Fig-tree ſeldom grows to be a Tree of any great Bigneſs in our Parts, being cloath'd with large Leaves, bigger than Vine-leaves, full of high Veins, and divided, for the moſt part, into five blunt-pointed Segments, yielding a thin milky Juice, when broken. It bears no viſible Flowers, and they are therefore ſuppoſed to be hid in the Fruit, which it produces twice a Year, Spring and Autumn, though thoſe only, which come forth in the Spring, arrive to Maturity. When ripe, they are as big as a Pear, being of a browniſh green Colour on the Outſide, and red within, full of ſmall round Seed, and of a ſweetiſh Taſte. The dry Figs come principally from *Spain* and *Portugal*, being firſt cur'd by dipping them in ſcalding hot Lye, made of the Aſhes of the Cuttings of the Tree; and afterwards, carefully drying them in the Sun, they are put into Barrels or Frails; and theſe are what are only uſed in Medicine.

Theſe Figs are cooling and moiſtening, good for Coughs, Shortneſs of Breath, and all Diſeaſes of the Breaſt; as alſo for the Stone and Gravel; and uſeful to drive out the Small-pox, and Meaſles. Outwardly applied, they are diſſolving and ripening, good for Impoſtumations, and Swellings, and peſtilential Buboes.

New Figs, provided they are ripe, are very eaſy and quick of Digeſtion, quicker than any other Summer Fruit: And of this we are certain; becauſe we not only eat of them more freely than of other Fruits, without any Inconvenience; but alſo eat them before Meals, not at all diminiſhing the Quantity of Meat and Drink, we uſually take; and yet are not in the leaſt diſorder'd thereby: *J. B.* In *Italy* it is the Cuſtom to eat plentifully of Figs before Dinner, without any conſequent Inconvenience. *Galen*, in order to preſerve his Health, as he ſays, abſtain'd from all Summer Fruits, except perfectly ripe Figs and Grapes, from his twenty-eighth Year to Old age; and his Friends, whom he adviſ'd, in like manner, to abſtain from theſe ſort of Fruits, maintain'd themſelves in Health, by following his Advice. *J. Bauhine* proves Figs to be of a glutinous and ſalt Quality; becauſe, by their Viſcidneſs, they ſtick to the Hands, and at the ſame time abſterge them after the manner of lixivial Salt, and Nitre: Hence they excite to Stool, but without Gripes, or Perturbations. They increaſe their ſalt Property by an Addition of Salt; and thus are the new Figs, now prepared and eaten in *Italy* and *Provence*. After eating them you are to drink plentifully, that they may not be detained long in the Stomach, but the more eaſily be digeſted, and the more readily deſcend. The Antients, *Dioſcorides*, *Pliny*, and *Galen*, are very prolix in deſcribing the Virtues of this Fruit. Phyſicians agree that the Caricæ, or dry'd Figs, are good for the Aſthma, Cough, and other Diſorders of the Breaſt and Lungs; the Cuſtom is to macerate two or three Figs for a Night in Wine, and exhibit them in the Morning, to be eaten by the aſthmatic Patient; but the moſt effectual Preparation is a Decoction of the ſame with Hyſſop, which is called by *Meſue* a great Abſterſory. Green Figs allay Thirſt and Heat; the dry ones have a contrary Effect, eſpecially in bilious Conſtitutions, affected with febrile Diſorders, incident to ſuch Natures; for they are eaſily converted into Bile, as are Honey, Sugar, and other ſweet Things. *C. Hoffman* adviſes thoſe who are ſubject to a Looſeneſs to avoid eating Figs, which are very ripe, and of the longeſt ſtanding, and eſpecially at Dinner, becauſe if, by their too long Stay in the Stomach, they ſhould happen to putrefy, they generate putrid Fevers. At preſent Figs, according to *C. Hoffman*, are only uſed in two Caſes, which are, in a Decoction for the Small-pox and Meaſles in Children, and for Gargariſms in Inflammations of the Fauces and Tonſils: It is, however, agreed, by the unanimous Conſent of almoſt all Phyſicians, that they are of excellent Service in the Aſthma, Coughs, and other Affections of the Lungs. It is common with our old Women to adviſe eating of roaſted Figs to Women drawing near their Labour, in order to facilitate Delivery; and it is cuſtomary to kindle Spirit of Wine upon Figs, and to drink Decoctions thereof, in order to mitigate a Cough.

Figs outwardly apply'd ripen, mollify, and draw; bruiſed with Ferment, and Salt mixed therewith, they cauſe peſtilential Buboes, and other Abſceſſes, to break in a few Days. *Tragus* is of Opinion, that King *Hezekiah*, 2 *Kings Cap.* 20. was, by the Advice of the Prophet, cured by the ſame Medicine.

That the frequent Uſe of Figs generates Lice, not only *Galen*, but *Oribaſius*, *Paulus Ægineta*, and many of the Moderns, are firmly perſuaded; and the ſame Opinion prevails at preſent among the common People: But whether the ſame can be atteſted by Experience, remains, with me, ſays *Ray*, a Doubt.

The Juice of the Fig-tree, whether extracted from a Wound in the Tree, or expreſſed from the Leaves, is hot and biting, ſo as to be reckon'd among Cauſtics; but, with due Preparation, it is of good Service, externally us'd, as an Abſtergent, in malignant Ulcers, Lichen, Lepra, and other cutaneous Diſeaſes; it alſo extirpates the Warts called *Myrmeciæ*.

The ſame Judgment, ſays *C. Hoffman*, is to be made of the green or unripe Figs, both of the Garden Fig-tree and the *Caprificus*; for theſe, eſpecially thoſe of the latter, have as much of a cauſtic Quality as the Trees themſelves; which appears, becauſe a Solution of them in Vinegar can diſſolve Bulls Blood.

Take of the Shoots, or young Branches, of the Fig-tree, cut ſmall, one Pound: Boil them in a Pint of Wine, and a Pint and half of Water: The Doſe is four Ounces in the Morning for a Dropſy. It is a potent Sudorific.

Letters written on Paper with the Milk, or Juice, of the young Branches, diſappear till held near the Fire, and the Paper is very much heated, when they appear as if they were burnt. The ſame Effect has Vinegar, Juice of Lemons, and other Acids; and hence alſo this Juice, by its acid Quality, will coagulate Milk into Cheeſe, as we are aſſured by *Pliny* and *Dioſcorides*. *Ray Hiſt. Plant.*

2. Ficus; communis; fructu albo. *C. B. P.* 457.

3. Ficus; communis; fructu viridi. *C. B. P.* 457.

4. Ficus; communis; fructu cœruleo. *C. B. P.* 457.

5. Ficus; foliis robuſtioribus, & ramis erectioribus. *H. L.*

6. Ficus; humilis. *C. B. P.* 457. *Chamæficus.* J. B. 1. 120.

7. Ficus; Malabarenſis; folio cuſpidato; fructu rotundo, parvo, gemino. *Pluk.* 178. 2. THE MALABAR FIG, or INDIAN GOD-TREE.

8. Ficus; Bengalenſis; folio ſubrotundo, fructu orbiculato. *H. A* 1. 119. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 258.

Beſides the foregoing Species of FICUS, *Dale* mentions the following:

1. *Ficus ſylveſtris Dioſcoridis.* See CAPRIFICUS.

2. *Ficus Indica*, Offic. J. B. 1. 146. C. Comm. Flor. Mal. 111. Aldrov. Dendr. 434. Jonſ. Dendr. 48. *Ficus Indica Arbor radicum Indiæ*, Chab. 9. *Ficus Indica arcuata*, Park. Theat. 1499. *Ficus Indica foliis Mali Cotonei ſimilibus fructu ficubus ſimili, ex Goa*, C. B. Pin. 457. Tourn. Inſt. 663. *Arbor ex Goa ſive Indica*, Ger. 1331. Emac. 1514. *Katoualou*, Hort. Mal. 3. 73. Tab. 57. Raii Hiſt. 2. 1437. THE INDIAN FIG-TREE.

It grows in many Places in the Country of *Malabar* in the *Eaſt Indies*, and is green, and bears Fruit, throughout the Year, and will live ſome Ages: Its Virtues are much the ſame with thoſe of the common Fig-tree. *Ray. Dale.*

3. *Ficus folio Mori fructum in caudice ferens.* See SYCOMORUS.

4. *Ficus Cypria*, Offic. J. B. 124. *Ficus folio Sycomori, folio non in Caudice gerens*, C. B. Pin. 459. *Ficus ſylveſtris Cretica folio non diviſo, leviter crenato*, Tourn. Coral. 45. *Sycomorus Cypria*, Chab. 8. Jonſ. Dendr. 61. *Sycomorus altera, ſive Ficus Cypria*, Park. Theat. 1492. Raii Hiſt. 2. 1439. THE CYPRIAN SYCOMORE-TREE.

It very much reſembles the *Egyptian* Sycomore (ſee SYCOMORUS) in Trunk, Leaves, and Fruit; only, whereas the latter bears its Fruit moſtly on the larger Branches, and on the Trunk itſelf, this Tree, on the contrary, has its Fruit growing very thick on ſmall ſolitary Shoots, bare of Leaves, and generally about a Span in Length: Theſe kinds of Trees bear Fruit three or four times a Year. The Fruit itſelf is ſmall, inclining to an Aſh-colour, and of a roundiſh oblong Shape, like a Plum; and may be found on the Tree almoſt at any time of the Year. It grows in *Cyprus*, as its Name informs us; and alſo in *Syria*, *Rhodes*, and ſome other Countries.

Its Virtues are the ſame as thoſe of the *Egyptian* Sycomore, or SYCOMORUS, which ſee. *Ray Hiſt. Plant.*

FICUS, alſo, from the Reſemblance, is a Name given to certain Excreſcences, which ſometimes grow about the *Anus*, *Uterus*, and *Pudenda*. See ANUS and VAGINA.

FIDA. Gold or Silver. *Rulandus.*

FIDDA. The Moon. *Rulandus.*

FIDEUM. Saffron. *Johnſon.*

FIDICINALES. The Muſcles call'd LUMBRICALES; which ſee.

FIDO. Quickſilver, ſometimes Gold. *Rulandus.*

FIDUCIA, Confidence, in Medicine, is the firm Truſt or Reliance of the Patient on the Phyſician; which, according to *Hippocrates*, *Prognoſt. in Proœm.* and others ſince him, is of no ſmall Moment towards a Cure.

FIGENTIA are ſuch things as fix Volatiles, and concentrate Acids. *Blancard.*

FIGURA, Figure, the outward Form or Appearance of any thing. *Figurata Medicamenta* are ſolid Medicines reduc'd into particular Forms or Shapes, as Troches, Pills, and the like. *Stercora figurata*, figur'd Stools, are when the Fæces are ſolid enough to aſſume a Figure. *Caſtellus.*

FILACEOUS Roots are ſuch as are furniſh'd with a great Number of Filaments; that is, of ſmall Threads or Strings.

FILAGO.

The Characters are;

The Calyx is ſquamous, and neither ſhining nor ſpecious: The Floſcules are divided or cut in form of a Star: The broken Parts end in ductile Filaments.

Boerhaave mentions ſeven Species of this Plant; which are,

1. Filago; ſeu Impia. *Tourn. Inſt.* 454. *Boerh. Ind. A.* 119. *Gnaphalium*, Offic. *Gnaphalium vulgare majus*, C. B. P. 263. Raii Hiſt. 1. 295. *Gnaphalium Germanicum*, J. B. 3. 158. *Gnaphalium minus ſive Herba Impia*, Park. 686. Raii Synop. 84. *Filago ſive Herba Impia*, Ger. 517. Emac. 642. COMMON CUDWEED. *Dale, p.* 91.

This kind of Cudweed grows to be near a Foot high, uſually with one woolly Stalk, having ſeveral long, narrow, crumpled, ſharp-pointed, whitiſh Leaves, ſet pretty cloſe to the Stalk: On the Top of the Branches grow round Globules or Heads compos'd of a great Number of ſmall naked Flowers ſet together in Cluſters; and, from the Middle of theſe, on both Sides ſpring ſmaller Branches, over-topping them three or four Inches, bearing at their Ends the like, but ſmaller Heads of Flowers, whence 'tis call'd Herb Impious, from the younger Heads over-topping thoſe from whence they had their Original: Theſe Heads paſs away into Down, holding very ſmall Seed: The Root is ſmall, woody, and periſhing yearly: It grows in dry barren Places, and often in fallow Fields.

Cudweed is drying and binding, and accounted good for all ſorts of Hæmorrhages and Fluxes. It is given to Cattle that have loſt the ruminating Faculty, and is therefore called Cudweed. It is rarely uſed. *Miller's Bot. Off.*

Dodonæus mightily commends the diſtilled Water of this Plant for the Cancer in the Breaſts; applying, once a Day, Pledgets and Compreſſes ſoaked in it. *Lobel* ſays, the Infuſion of this Plant in Oil of Olives, makes a very good Balſam for Wounds and Contuſions. *Martyn's Tournefort.*

2. Filago; altera. *Dod. p.* 67.

3. Filago; minor. *Dod. p.* 66.

4. Filago; vulgaris; tenuiſſimo folio; erecta. *T.* 454.

5. Filago; maritima; capite folioſo. *T.* 454.

6. Filago; erecta; latifolia; capitulis tomentoſis.

7. Filago; quod Gnaphalium; longifolium; humile; ramoſum; capitulis nigris. *Raii Synop.* 85. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 119.

This Herb is of an antihyſteric Quality, and highly beneficial in Cancers, and other Diſorders of the Breaſts. Some, alſo, affirm, that it cures the Leproſy; but this they have been induc'd to believe, by the Down with which its Leaves are cover'd; for which Reaſon they have alſo imagin'd, that it removes an Exceſs of unſeemly Down on the Skin. But theſe are groundleſs Conceits. All the Species of this Plant are poſſeſs'd of an incredibly drying Quality, which is ſufficiently conſpicuous upon chewing the Leaves in the Mouth. Hence the ſeveral Species of this Herb are proper for putting a Stop to Fluxes of Humours. *Boerhaave, Hiſt. Plant.*

FILAMENTUM, Filament, in Botany, is a ſmall Thread or Fibre, belonging to the Roots of Plants: It is alſo uſed to ſignify that viſcid concreted Matter, which appears like Hairs or Threads in Urine.

FILELEUM. The Frenum, or Bridle, by which the Prepuce is connected to the Glans of the Penis; it is alſo call'd *Canis*. *Caſtellus.*

FILETUM. The nervous Ligament under the Tongue, which Midwives uſually divide with their Nail, or a Six-pence, immediately after the Birth: Sometimes it is cut by a Barber-ſurgeon, with a Lancet, or a Pair of Sciſſars, to the endangering the Life or Speech of the Child, tho' this Operation is very rarely found to be neceſſary.

FILICULA. See FILIX.

FILIPENDULA.

The Characters are;

The Root is fibrous and perennial, with glandulous Bulbs faſten'd to it: The Leaves are finely jagged, like thoſe of Milleſoil: The Calyx is monophyllous, denticulated, and divided into ſix or ſeven Segments, which are retroflected, or bent backwards: The Flowers are hexapetalous or heptapetalous, looſely diſpos'd in Panicles on long Stalks, which are almoſt naked: The Stamina are numerous, and ſituated on the reflected Margin of the Calyx: The Fruit is generally round, and contains many Seeds compacted together, each of them furniſh'd with its Tube.

Boerhaave mentions two Species of this Plant; which are,

1. Filipendula; vulgaris; an Molon Plinii? *C. B. Pin.* 163. *Tourn. Inſt.* 293. *Elem. Bot.* 243. *Boerh. Ind. A.* 43. *Filipendula*, Offic. J. B. 3. 189. Ger. 906. Emac. 1058. Raii Hiſt. 1. 623. *Synop.* 3. 259. Mer. Pin. 38. *Filipendula vulgaris*, Park. Theat. 434. Hiſt. Oxon. 3. 320. Buxb. 111. *Filipendula Officinarum*, Rupp. Flor. Jen. 129. *Filipendula vulgaris, Oenanthe*, Merc. Bot. 1. 35. Phyt. Brit. 41. *Oenanthe; Filipendula.* Chab. 407. *Saxifraga rubra vulgo.* DROPWORT.

The Roots of Dropwort conſiſt of a great Number of oval Glandules, faſtened together by ſlender Strings, from which ſpring ſeveral long, narrow, and, as it were, pinnated Leaves, whoſe Pinnæ are ſerrated, and not much unlike the ſmaller Burnet Saxifrage-leaves: The Stalks grow to be about a Foot high, having but few Leaves there; but, on their Tops, a pretty many Flowers in form of an Umbel, which are white within, and reddiſh on the Outſide, made of ſix Leaves, with a great Number of yellowiſh Stamina in the Middle, which are ſucceeded by ſeveral flattiſh Seeds growing in a Head together: It grows in chalky Grounds, and flowers in *June* and *July*; the Root being principally uſed.

The *Fipendula* is ſtyptic, ſweet-ſmelling, glutinous, of a Taſte a little ſaltiſh, and gives a pretty deep-red Tincture to blue Paper: The Root gives it a pretty ſtrong one: It is ſtyptic, and a little bitter. This Plant contains a Salt, approaching to that of Alum; but it is mixt with a great deal of Sulphur; for by the chymical Analyſis we obtain from it a great deal of acid Earth and Oil. All Authors agree, that it is very diuretic and aperitive. *Tabernæmontanus*, after *Sylvaticus*, *Simon Januenſis*, *Bayrus*, and *Lobel*, recommend it for the Epilepſy; and *Mercator* and *Prevotius* for the Dyſentery. *Martyn's Tournefort.*

The Root is an Attenuant, and ſomewhat aſtringent; a Decoction thereof provokes Urine, expels the Stone, and helps the Dyſury and Strangury. Some commend the Powder of the Root, and its Juice, againſt the Epilepſy: Others write, that *Filipendula* in Qualities approaches very near to Peony; for which Reaſon, as *Lobel* ſays, the Roots are of Service in the Epilepſy, and Vertigo: Uſed with the Seeds of Fennel, they relieve under Shortneſs of Breath, the Aſthma, and Inflations of the Stomach. *S. Pauli*, from his own Experience, commends the Powder of the Roots as an approved Remedy in the *Fluor albus*, when all other Medicines have failed: It is, alſo, of excellent Uſe in an exceſſive Flux of the Lochia: The Doſe is a Dram, in a Decoction of Daucus. *Corbæus* exhibited every Day a Dram of the green Root of Filipendula in black Wine for the Fluor albus. *Prævotius* tells us, that he often cured the Dyſentery, by exhibiting a Dram of the Powder of the Root in Wine, or the Yolk of an Egg, which *Lud. Mercatus*, before him, had recommended as a Secret. The Plant is certainly of a remarkably aſtringent Quality, and to ſuch a Degree, that, as *Tho. Carthuſius* obſerv'd, Hernias have been cur'd by eating it. *Ray, H. Plant.*

2. Filipendula; omni parte major; folio anguſtiori. *An Filipendula minor?* C. B. P. 163. Prodr. 85. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 43.

FILIUS ANTE PATREM, the Son before the Father. An Expreſſion, which Botaniſts apply to Plants, whoſe Flower comes out before their Leaves.

FILIUS, the Son, in the Spagiric Language, is a Term apply'd to various Works in the Affair of the Philoſophers Stone: Thus, the Redneſs, which emerges after the Whiteneſs, and is call'd *Rex diadematus*, or *coronatus*, is alſo call'd, *Filius nigri & albi*. Again, *Filius unius Oſtum* is Vitriol, or Orpiment; *Filius unius Diei* is an Egg, and the Philoſophers Stone; and *Filius Veneris* is *Aurichalcum*. *Rulandus.*

FILIX.

The Characters are;

The Leaf is compos'd of other Leaves, which adhere to a Rib in ſuch a manner, as to have Lobes on both Sides, cut into the Depth of the main Fibre: The Fruit reſembles that of *Polypody.*

Boerhaave mentions nine Species of this Plant; which are,

1. Filix; non ramoſa; dentata. *C. B. P.* 358. *Hiſt. Oxon.* 3. 578. *Tourn. Inſt.* 536. *Elem. Bot.* 428. *Dill. Cat.* 103. *Boerh. Ind. A.* 26. *Filix mas*, Offic. Ger. 969. *Filix*, Chab. 553. *Filix mas vulgaris*, Park. 1036. Raii Hiſt. 1. 143. Synop. 47. Buxb. 112. *Filix mas non ramoſa, pinnulis latis, denſis, minutim dentatis*, Ger. Emac. 1129. *Filix vulgò mas dicta, ſive non ramoſa*, J. B. 3. 737. COMMON MALE FERN.

The Leaves of this Fern are pretty long and large, not divided into Branches, as the Female Fern is; but having ſeveral long Surculi of pinnated indented Leaves, growing on each Side the Stalk, which are not directly oppoſite on the Rib, but grow alternately, one a little above another: The Seed grows in round duſky Globuli, along the Back of the Leaves: The Root pretty much reſembles that of *Oſmund Royal*, and is, indeed, generally ſold for it by the Herb-women: It grows in Hedges, and ſhady Lanes.

The Root is only uſed; being apply'd to the ſame Purpoſes, and ſuppoſ'd to have the ſame Virtues, with the Roots of *Oſmund Royal*: It is believ'd to be hurtful to the Female Sex, and to cauſe Miſcarriage. See OSMUNDA REGALIS.

It grows on the ſhady Banks of Hedges: The Part uſed in Medicine is the Root, which is thick, blackiſh without, but pale within, fibrous, involv'd and interwoven with Multitudes of Appendages, and of a bitter and ſomewhat aſtringent Taſte.

The Virtues are the ſame as thoſe of the *Female Fern*; but it has a peculiar Efficacy againſt the Rickets, or Reckets: It expels Worms and the Stone; relieves thoſe who labour under an Increaſe of the Spleen. *Dioſcorides* ſays, that the Root drank, or made into an Ointment with Fat, cures Wounds inflicted by Arrows. *Theophraſtus*, *Pliny*, and *Dioſcorides*, agree, that it cauſes Barrenneſs and Abortion. *Tragus* aſſures us, from his own Experience, that when a Horſe falls down, and you are puzzled to find the Nature of his Diſorder, if you put a Rib of the Root of this Plant under his Tongue, he will immediately excrete both Ways, and riſe up. *Dale*, *Ray*. This, however, I will not vouch.

2. Filix; non ramoſa; latifolia; dentata. *T.* 536.

3. Filix; non ramoſa; latifolia; dentata profundius; pinnulis maximis.

4. Filix; non ramoſa; minor; pinnulis in ſummo leviter inciſis. *Flor.* 1. 147.

5. Filicula; fontana; major; ſive Adianthum album, filicis folio. See ADIANTHUM.

6. Filix; baccifera. *Corn.* 5.

7. Filix ſaxatilis Tragi. *J. B.* 3. 755. *Muſcus corniculatus.* Ger. Ic. 1561.

8. Filicula; ſaxatilis; regia; pinnulis ad fumariam accedentibus. *Vaill.*

9. Filicula; ſaxatilis; pinnulis brevioribus acutis. *T.* 542. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 27.

The *Hiſtoria Plantarum*, attributed to *Boerhaave*, informs us, that all theſe Species of Ferns, eſpecially the firſt, ſecond, and third, are excellent in the Rickets, and Diſeaſes proceeding from Laxity; and good in the Scurvy, Pleuriſy, and Dropſy, being a powerful Diuretic.

Botaniſts divide Fern into Male and Female: The Male is that which has no Branches, but only one main Rib: The Female is that which is branch'd.

A great many more Plants, beſides thoſe mention'd under this Article, are call'd by the Name of *Filix*; but theſe are either taken notice of under other Names, agree in Virtues with thoſe here ſpecify'd, or have no Virtues aſcrib'd to them.

Beſides the foregoing Species of FILIX, *Dale* mentions the following:

Filix fœmina, Offic. Ger. 969. Emac. 1128. Raii Hiſt. 1. 149. Synop. 49. Buxb. 113. *Filix femina vulgaris*, Park. 1037. *Filix ramoſa major pinnulis obtuſis, non dentatis*, C. B. 357. Tourn. Inſt. 536. Elem. Bot. 428. *Filix major & prior Tragi, ſeu ramoſa repens*, J. B. 3. 735. *Filix ramoſa repens vulgatiſſima*, Hiſt. Oxon. 3. 583. *Thilypteris*, Dill. Cat. 174. FEMALE FERN, or COMMON BRAKES.

The common Female Fern, or Brakes, has many large Leaves, divided into ſeveral Branches, beſet with long, narrow, ſtiff Pinnulæ, which are moſtly ſmooth about the Edges, though ſometimes they are a little indented: The Back of theſe, about Midſummer, will be cover'd round the Margins with a great Number of duſty-brown Particles, which are the Seed: The Root is long and thick, ſpreading much in the Earth, ſending out Shoots on every Side, which makes it hard to be eradicated: It grows but too frequently upon Commons and Heaths, being uſed in want of Fuel by the Country-people, for heating their Ovens, and other Uſes.

The Roots only are uſed in Medicine, and thoſe but rarely, being commended as very good for Worms, eſpecially the flat Worms: A kind of Pot-aſh is made of the Stalks and Leaves burnt. *Miller's Bot. Off.*

The Powder of the Root, taken to the Weight of half an Ounce (*S. Pauli* ſays, a Dram) in Hydromel, kills the flat Worms, and, alſo, long ones; being, as *S. Pauli* aſſures us, inſtantaneouſly mortal to theſe Vermin, and, for that Reaſon, accounted, by circumforaneous Quacks and Mountebanks, the beſt of all their Secrets againſt the Worms; and a proportionable Price they ſet upon it. A Decoction of the Root in Wine, drank for ſome Days together, relieves under an Increaſe of the Spleen. The Juice of the Root, either green or dry, with a Mixture of Roſe-water, or Cow-dung Water, or Water of Lime-tree-flowers, or, for want of theſe, common Water, is of excellent Service in all Kinds of Ambuſtions, whether by Fire, boiling Water, or Oil; for, as *Tragus* and *S. Pauli* aſſert, it yields a viſcous and mucilaginous Juice, which is effectual in Caſes where other Medicines are of no Service: It is, alſo, a moſt approv'd Remedy againſt Hernias and Ulcers. *Ray*, *Dale.*

FILLETIN. A Plate of Iron. *Rulandus.*

FILM, in Botany, is that woody Skin which ſeparates the Seeds in the Pods of Plants.

FILONES, in *Fallop. de Metall.* are the Fibres of Stones.

FILTRATIO. Filtration. This is the paſſing any Fluid through a Strainer, or Filtre, in order to ſeparate from it any groſs Particles it contains, and render it limpid. In order to

filtrate

filtrate a Fluid, the Apothecaries fold up a Piece of bibulous or filtrating Paper, in the Shape of a Funnel: This they place in a Funnel, with the ſmall End, in the Veſſel they intend for the Reception of the filtrated Liquor; then they pour the Liquor to be filtrated into the Paper, and ſuffer it to drop gradually through it, taking care not to put in too much at once, for fear of burſting the Paper. But Filtration is, alſo, perform'd by a woollen Bag, call'd *Hippocrates*'s Sleeve, or one of Linen. The Choice of theſe muſt be directed by the Liquor to be filtred.

FILTRUM. See FILTRATIO.

Filtrum is alſo a Name given to a rare and very precious exotic *Mexican* Stone, found at the Bottom of the Waters, at the Depth of about a hundred Yards, in ſome Places of the Bay of *Mexico*, where it grows like a Fungus, and petrifies in the open Air. Large Fragments of this Stone, being reduc'd into the Form of a Pot or Mortar, ſo as to contain Water, are highly valued on account of their ſingular Virtue in purifying the Water, ſo as to make it depoſit a certain Quantity of inſenſible Fæces, by which it becomes purer and lighter without Diminution of its Coolneſs. A fuller Account of this Stone, in *French* and *Latin*, is annex'd to a phyſico-medical Diſſertation of *Mich. Bernh. Valentinus*, printed at *Strasburg*, 1702.

FILUM, a Thread, has various Uſes in chirurgical Operations. *Filum Arſenicale*, in the Spagiric Language, is ſublimate Mercury. *Rulandus.*

FIMBRIA, in Surgery, is the ſame as CATABLEMA; which ſee.

FIMBRIATA, fimbriated, of *Fimbria*, a Fringe, is a Term relating to the Leaves of Plants, when they are jagged on the Edges, having, as it were, a Fringe about them.

FIMUS, κόπρος, Dung of Animals

Neats-dung, apply'd freſh, mitigates Inflammations in Wounds; the Way is, to wrap it up in Leaves, and heat it in hot Aſhes, and then apply it: Uſed in the ſame manner, it eaſes the tormenting Pains of the Sciatica. Rub'd on the Parts, with Vinegar, it diſcuſſes Hardneſſes, Strumæ, and Pani. The Dung of a Bull in particular, uſed in Suffumigations, reſtores a prolapſed Uterus; and, burnt, drives away Gnats.

The Dung of Goats, eſpecially thoſe which live on the Mountains, drank in Wine, cures the Jaundice; and, exhibited with Spices, provokes the Menſes, and expels the dead Fœtus. Being dry'd, triturated, and mix'd with Frankincenſe, and apply'd in Wool, as a Peſſary, it repreſſes the menſtrual Flux; and, uſed with Vinegar, reſtrains other Hæmorrhages; burnt, and rub'd on the Parts with Vinegar or Oxymel, it cures an Alopecia; apply'd in a Cataplaſm, with Fat, it eaſes the Gout; boil'd in Wine or Vinegar, it is apply'd to the Bites of Serpents, Herpes, Eryſipelas, and the Parotides. They have a way of burning it, which is of Service in the Sciatica, and is thus perform'd: In the hollow Part, between the Thumb and fore Finger, where the Thumb joins to the Wriſt, they firſt apply Wool, moiſten'd with Oil, and, upon that, burning Clots of Goats-dung, one at a time, they continue ſo to do, till the Senſation proceeds through the Arm down to the Hip, and mitigates the Pain; this they call the *Arabian* Way of Burning.

The Dung of Sheep, apply'd as a Cataplaſm with Vinegar, cures Epinyctides, Corns, Thymi, and Acrochordones; burnt, and ſpread upon Cerate of Roſes, it ſerves for the ſame Purpoſes. See OVIS.

The Dung of Swine, dry'd, and drank in Wine or Water, ſtops Vomiting of Blood, and eaſes inveterate Pains of the Sides; drank in Vinegar, it is effectual in Ruptures and Spaſms; and, apply'd in Cerate of Roſes, it cures Luxations.

The Dung of Aſſes, as well as Horſes, mix'd with Vinegar, repreſſes Hæmorrhages; the Dung of Cattle, which feed on Herbs, dry'd, then infus'd in Wine, and drank, is an excellent Remedy for the Poiſon of the Scorpion.

The Dung of Pigeons, on account of its exceſſively hot and cauſtic Quality, is properly mix'd with the Flour of Barley; uſed with Vinegar, it diſcuſſes ſtrumous Swellings; and, pounded with Honey, Oil, and Linſeed, it breaks Carbuncles, and heals Ambuſtions; the Dung of Hens is effectual to the ſame Purpoſes, but in a weaker Degree; it is particularly ſerviceable to thoſe who have eaten deadly Muſhrooms, or are affected with the Colic.

The Dung of Storks, drank in Water, is ſuppos'd to be good for the Epilepſy; and the Dung of a Vultur, in a Suffumigation, is ſaid to expel the dead Fœtus.

The Dung of Mice, pounded in Vinegar, and rub'd on the Part, cures an Alopecia; and, drank in Mulſum, with Frankincenſe, expels the Stone; uſed in a Suppoſitory for Children, it ſtimulates the Belly to Excretion.

The Dung of Dogs, evacuated in the canicular Seaſon, dry'd, and drank in Wine or Water, ſtops a Looſeneſs.

Human Dung, apply'd freſh, preſerves Wounds from Inflammation, and, at the ſame time, conglutinates them; dry'd, and rub'd on the Parts, with Honey, it is reported to give Relief under the Quinſey.

The Dung of a Land-crocodile ſerves the Women as a Coſmetic to render the Skin of the Face of a lively Colour, and ſhining. The beſt of this Kind is the whiteſt [for λεπτο-ϛάλη here I read with *Pliny*, and moſt Interpreters, λευκόλαλη] and friable, light, like Amylum, ſoon diſſolv'd in a Liquid, which, when triturated, has an acid Taſte, and ſmells of Ferment. Some adulterate it with the Dung of Starlings fed on Rice, which reſembles what is genuine. Others work up Amylum, or Cimolia Terra, and, colouring it with Anchuſa, paſs it through a fine Leaf; and, after it is dry, reduce it to a vermiculated Form, and vend it inſtead of the true Dung of the Crocodile. *Dioſcorides, Lib. 2. Cap. 98.*

FIREX. Oil. *Rulandus, Johnſon.*

FIRFIR. A red Colour. *Ibid.*

FIRMAMENTUM, the Firmament, is either properly ſo call'd, being the whole viſible Extent of the Heavens, and thence ſtyl'd, in the chymical Language, *Macrocoſmicum*; or, by way of Analogy, the *Firmamentum Hominis, ſeu Microcoſmi*, as they expreſs themſelves. Of Man, under this Notion, *Paracelſus* treats in many Places, and eſpecially in his *Paramirum.*

In *Crollius*, *Firmamentum* is the Light of Nature, which inſtructs Man in every thing naturally.

FIRMISIUM *Mineralium* is Antimony. *Paracelſus.*

FISARUM. *Rulandus* explains this, *Confectio Salis Ammoniaci.*

FISSICULATIO. A Word, importing anatomical Diſſection; properly, a Cutting open.

FISSURA. A Fiſſure, or Crack. Theſe are either natural or morbid. Thus, the Mouth, and the Orifice of the Female Pudenda, are frequently call'd natural Fiſſures. Morbid Fiſſures are either thoſe of the *Cranium*, or other Bones, (ſee CAPUT) or Chaps and Cracks of the Skin, which ſometimes happen about the Lips, *Anus*, and other Parts of the Body.

FISTACIA. The ſame as PISTACHIA.

FISTULA.

A Sinus is, by Phyſicians and Surgeons, defin'd, a Cavity in the ſoft Parts of the Body, form'd by Pus collected in an Abſceſs, which removes them from their mutual Contact; and is eliminated by an Aperture, made either ſpontaneouſly, or by the Aſſiſtance of Art. The following Definition is given by *Galen*, in *Comment. 2. in Lib. Hippocrat. de officina Medici.* "So long, ſays he, as the Part affected has no Aperture in its "Surface, the Diſorder is call'd an Abſceſs; but, when in any "Part of it an Aperture is made, ſo as to diſcharge the con-"tain'd Matter, the Diſorder is no longer an Abſceſs, but "forthwith aſſumes the Name of a Sinus." But, from this Definition, it would follow, that a Sinus muſt neceſſarily be produc'd by every Abſceſs; but, according to Cuſtom, a Sinus is only ſaid to be form'd, when the Sides of the Abſceſs, coming into mutual Contact, in conſequence of the mutual Diſcharge of the Pus, cannot, however, be ſoon conſolidated, but remain, for a long time, ſeparate; ſo that freſh Humours, daily collected in this preternatural Cavity, create an uncommon Difficulty of Cure. For this Reaſon, *Galen*, in the fourth Chapter of his Treatiſe *de Tumor. præter Natur.* gives the following Definition of a Sinus: "When, ſays he, the "Pus excoriates the Parts, and ſeparates thoſe which contain it "from ſuch as lie under it, in ſuch a manner, that the Pus "being eliminated by that means, the ſeparated Parts cannot "recover their former State, the Diſorder is call'd a Sinus." He expreſſes himſelf in the like manner in the tenth Chapter of his ſecond Book *de Method. Medend. ad Glaucon.* for, after, in the ninth Chapter of his ſecond Book *de Method. Medend.* he has told us, that in Suppurations the Skin is with Difficulty united to the ſubjacent Parts, when it is ſo decay'd as to reſemble the Fragments of worn Garments, he immediately ſubjoins, in the Beginning of the next Chapter, "When the "Skin is incapable of being united with the ſubjacent Parts, "the Diſorder is call'd a Sinus." *Paulus Ægineta*, in the 48th Chapter of his fourth Book, gives the ſame Definition of a Sinus, almoſt in the very Words of *Galen*.

A Fiſtula is, in ſome reſpects, different from a Sinus, ſince the former is narrower, generally continues longer, and has its internal Surface, and its Orifice, for the moſt part, callous. Hence *Paulus Ægineta*, in the 49th Chapter of his fourth Book, gives the following Definition of a Fiſtula: "A "Fiſtula, ſays he, which derives its Name from its Reſem-"blance to a Reed or Pipe, is a callous Sinus, generally ariſing "from Abſceſſes;" and, in the 77th Chapter of his ſeventh Book, he tells us, that Fiſtulas generally ſucceed ill-cur'd Abſceſſes. The elegant *Celſus*, after having inform'd us, that Fiſtulas ariſe from Abſceſſes and Ulcers of other Kinds, briefly defines them, in the 28th Chapter of his fifth Book, to be deep, narrow, and callous Ulcers.

The Seat of a Fiſtula is always in the *Membrana Adipoſa*; nor have we any well-vouch'd Obſervations of Fiſtulas penetrating

trating into what we properly call the Subſtance of the Muſcles, that I know of. But, if we conſider, that Pus, collected in the *Membrana Celluloſa*, and attenuated by its Continuance, and the Heat of the Body, may be lodg'd upon the Muſcles, 'tis ſufficiently obvious, that this Pus, being preſs'd by the Action of theſe Muſcles, muſt be propel'd through all the adjacent Parts, and produce deep Sinuſes and Fiſtulas of the worſt Kind, eſpecially when it inſinuates itſelf into the Interſtices of the Muſcles. The thicker, therefore, the *Membrana Adipoſa* is, or the more Strata of Muſcles lie above each other in the ſuppurated Part, the more Miſchief the retain'd Pus is capable of doing: For this Reaſon the Sinuſes and Fiſtulas of the Abdomen are found ſo troubleſome on account of the large Quantity of Fat ſituated there, between the Strata of the abdominal Muſcles.

The Preſence of a Sinus, or Fiſtula, may be diſcover'd by the following Means: When there is an external Aperture on the Surface of the Body, then they are eaſily detected by the Eye; for if a large Quantity of Pus is either diſcharg'd from a ſmall Orifice, or may be evacuated by preſſing the adjacent Parts, 'tis ſufficiently obvious, that the Sinus, in which this Pus was contain'd, muſt be proportionably large. But *Celſus*, in the 28th Chapter of his fifth Book, informs us, "That it is, above all Things, highly expedient to "introduce a Probe into the Fiſtula, that we may know "how deep it is, and in what Direction it runs." By this Method, he ſays, we may at the ſame time diſcover, whether the Fiſtula has penetrated to the Bone or not; and whether the Bone is carious or ſound. But, in order to diſcover whether, notwithſtanding one external Orifice, the Fiſtula may not be divided into various Ramifications, he, in the ſame Chapter, gives the following Directions: "The Poſture, "ſays he, of the Body, informs us whether the Fiſtula has "penetrated into more Parts than one, becauſe, upon chang-"ing the Situation of the Body, or any particular Member, "the Pus, which before ſtopt, often begins to be diſcharg'd "afreſh; which teſtifies not only, that there is another Sinus, "from which the Pus is diſcharg'd, but alſo, that it runs in "a Direction contrary to the former." But the beſt Method of diſcovering Sinuſes and Fiſtulas, together with their various Directions, is, by means of a Syringe, gently to inject tepid Water into them, which will eaſily inſinuate itſelf into all their Windings: And, if the Fiſtula runs near the external Parts under the Integuments, the Elevation of the Skin will indicate its Courſe: But if the Sinus, or Fiſtula, ſhould be deeper, the Quantity of the Water injected will, at leaſt, diſcover the Largeneſs of ſuch a preternatural Cavity; nor, in ſuch a Caſe, can much more be diſcover'd by the Uſe of the Probe. Beſides, if the Probe is forcibly introduced into the Orifice of the Fiſtula, it often makes a new Paſſage for itſelf, by lacerating the tender *Membrana adipoſa*; nor, by this means, can the Length of the Fiſtula be diſcover'd, if it runs in a winding Direction.

But when Sinuſes are not yet open'd, they are with greater Difficulty diſcover'd, eſpecially when deep ſeated. All the Light we can receive in this Caſe, muſt be drawn from the Symptoms of the preceding Inflammation, and the Nature of the Suppuration ſubſequent to it. If, after this, a Fluctuation, and a Cavity, ſoft to the Touch, are perceiv'd, we may be certain, that ſuch a Sinus is form'd. Beſides, no conſiderable Suppuration can happen in the Body, without being ſoon after accompanied with a ſlight hectic Fever. But, in Caſes of this Nature, the higheſt Caution is abſolutely neceſſary, leſt a latent Aneuryſm, or a varicoſe Tumor, ſhould be taken for a deep Suppuration. But a ſkilful Surgeon will not readily fall into an Error of this Kind, if he attentively conſiders the Origin and Progreſs of the Diſorder. It muſt, however, be confeſs'd, that ſometimes ſo deep Abſceſſes have occur'd, that the moſt ſkilful Artiſts have blunder'd in diſcovering their genuine Natures.

When Fiſtulas, as yet not become callous, are complicated with Ulcers, and diſcover'd either by the Eye, the Aſſiſtance of the Probe, or any other Means, the moſt expeditious Method of Relief is to make an Inciſion to their very Bottom, if it can be done without Danger; after which they are to be deterg'd and conſolidated. But, becauſe Patients are unwilling to ſubject themſelves to this Operation, 'tis expedient previouſly to cleanſe them by an Injection of ſome proper Liquor, or by means of Lint, cover'd with digeſtive Ointment. But tho' many Surgeons thruſt Tents into Fiſtulas, with a View to convey Medicines to their Bottoms, yet, as their Hardneſs, or, perhaps, their too great Length, may poſſibly induce a Callus, or an Inflammation, or excite too violent a Commotion of the Humours, or at leaſt, protract the Cure longer than it ought; it ſeems more expedient, either to abſtain from them entirely, or, at leaſt, to take good Care, that they be neither too hard, nor too long. *Belloſte*, and *Cæſar Magatus*, both ſkilful Surgeons, on account of this Abuſe of Tents, entirely rejected them, not only as ſuperfluous, but hurtful: And I myſelf am ſo far from condemning, that I rather applaud, and approve of, this Practice of theirs. Neither do I think the Uſe of Tents ſafe, except in Caſes where the Conglutination of the Mouths of narrow Fiſtulas is to be prevented; and even in this Caſe they ought to be very ſhort and ſoft.

Another Step to be taken in the Cure of Fiſtulas is, duly to preſs their Bottoms towards their Orifices or Apertures. For this Purpoſe, a narrow Compreſs, or a Slip of Plaiſter, wrapt up in that Form, is, after the Ulcer is cleans'd, and proper Medicines put into the Fiſtula, to be apply'd to its Bottom, and ſecur'd, as in other Ulcers, with Lint, Plaiſters, and Bandage. As for the Method of applying the Bandage, it is moſt expedient to apply it firſt to the Bottom of the Fiſtula, or, at leaſt, to make it tighteſt there, that, by this means, the peccant Matter may be, as it were, propel'd from the Bottom to the Mouth of the Fiſtula; in conſequence of which, the Bottom will be conglutinated before the reſt of the Fiſtula. This generally happens ſooner in Fiſtulas of the Arms or Legs, than in thoſe of other Parts, eſpecially if their Bottoms lie towards the ſuperior, and their Mouths towards the inferior Parts of the Members.

When Fiſtulas lie too deep for having their moſt remote and latent Cavities commodiouſly cleans'd, detergent Medicines are to be injected, in order to waſh out the Sordes; ſuch as Decoctions of Agrimony or Birthwort, mixt with Honey of Roſes, or Eſſence of Myrrh and Aloes; or, which *Belloſte* greatly commends, a Decoction of the Leaves of the Walnut-tree, with an Admixture of Sugar; to which we may juſtly add the following Preparations:

Take of digeſtive Ointment, prepar'd of Turpentine and the Yolks of Eggs, an Ounce and an half; of common Honey, or that of Roſes or Celandine, one Ounce; and common Spirit of Wine, nine Ounces: Mix all together. Or,

Take of the Decoction of Germander, or Southernwood, or Agrimony, eight Ounces; of common Spirit of Wine, three Ounces; of the Elixir Proprietatis, or of the Eſſence of Myrrh and Aloes, one Ounce; and of the Honey of Roſes, two Ounces. Mix all together.

Some of theſe Preparations are, at every Dreſſing, to be injected warm, and retain'd for a ſhort time, gently compreſſing the Bottom and Mouth of the Fiſtula, that the peccant Matter may be the more effectually waſh'd off; and this Method is to be perſiſted in, till the Bottom of the Ulcer begins to be gradually conglutinated; then we are to dreſs with digeſtive Ointment; or if this ſhould ſeem too weak and ineffectual, we may, in its ſtead, uſe the Liniment of *Arcæus*, Peruvian Balſam, Balſam of Meccha, Balſam of Sulphur, Eſſence of Myrrh, and Aloes, Oil of Myrrh per Deliquium, Oil of Eggs; and other vulnerary Balſamics. The Regimen and Method of Cicatrization are the ſame as in Ulcers. See ULCUS.

But, if the Method of Cure already directed ſhould prove inſufficient, both for cleanſing and conglutinating Fiſtulas, greater Relief is generally obtain'd from manual Operation, than from Medicines, eſpecially when the Fiſtulas are directed downwards, or too crooked and winding; or when their Bottoms cannot be ſufficiently compreſs'd: And, in theſe Caſes, an Inciſion is to be made from their Mouths to their very Bottoms.

Some groov'd Probe is, therefore, to be gently paſs'd into the Cavity of the Fiſtula; and, introducing a Knife into the Groove, as much of the Skin and Fleſh is to be cut, as is thought ſafe or ſufficient to anſwer the End; for when the Bottoms of Fiſtulas are laid open, the corrupted Matter is not only more expeditiouſly diſcharg'd, but Medicines are more commodiouſly apply'd. The Inciſion may alſo be made without a groov'd Probe, by means only of an obtuſe-pointed Knife, like thoſe in *Tab.* XXVI. *Fig.* 4. and 5. Sometimes one Branch of a Pair of Sciſſars, like thoſe repreſented in *Tab.* XXII. D, are paſs'd to the Bottom of the Fiſtula, and the Inciſion is made by their means. But this Method of making the Inciſion, unleſs the Skin and Fleſh are tender, ſeems to be leſs commodious, and more troubleſome to the Patient, than the other.

If upon making an Inciſion into a Fiſtula, a large Quantity of Blood ſhould be diſcharg'd, which frequently happens, the Wound is, in the firſt Dreſſing, to be fill'd with dry Lint, and duly dreſs'd. Then the digeſtive Ointment, in Conjunction with the *Egyptian* Ointment, or red Precipitate, is to be apply'd, till the Ulcer is ſufficiently deterg'd. The other Meaſures to be taken are the ſame, as in recent Ulcers. The fourth Chapter of the ſixth Book of *Celſus* may be conſulted, not only with reſpect to Fiſtulas in general, but alſo with reſpect to thoſe of the Ribs, the Abdomen, and the Anus. The Fiſtulas happening in particular Parts of the Body are conſider'd under their reſpective Articles. *Heiſter. Chirurg.*

See ANUS, and THORAX.

Belloſte abſolutely diſcards all manner of Tents and Injections in the Cure of Fiſtulas.

FISTULA LACHRYMALIS.

A ſpontaneous, or involuntary Efflux of a purulent Fluid, or real Pus, out of the greater Canthus of the Eye, or one ſubſequent to preſſing the lachrymal Sack, is, in general, termed a lachrymal Fiſtula. This Diſorder proceeds from an Ulcer in the lachrymal Paſſages, but principally in the Sack; the more inveterate, therefore, the Ulcer, the more dangerous the Diſeaſe. It is often in the Sack only, and emits the corrupted Matter out of the Puncta lachrymalia; ſometimes it eats into the Skin, which covers it, and the contiguous Bones. If it does not eat into the Skin, it is imperfect; if it does, perfect; and, when it corrodes the Bones too, it is called a compound lachrymal Fiſtula. Here we muſt obſerve, that our modern Writers have been very inaccurate in their Deſcriptions of this Diſtemper, which ſeems to be owing to theſe two Reaſons: 1. The wonderful Variety of Diſorders, to which the greater Angle of the Eye is ſubject, occaſioned a Variety of Names to the ſame Diſorder, and ſometimes the ſame Name to different ones. 2. The Nature of it was unknown to moſt Surgeons. For how few of the Antients have not derived this Fiſtula, either from an Ulcer of the Caruncle itſelf, or one under it, in it, or behind it! When it is plain, to the moſt experienced Moderns, from frequent and accurate Obſervations, that it never flows from the lachrymal Caruncle, or the adjacent Parts, but from the Sack thro' the Puncta lachrymalia. If this Error, therefore, introduced a prepoſterous Practice, Phyſicians have done well in endeavouring to correct it.

But, for our Direction, both with reſpect to Theory and Practice, I think it not amiſs in this Place, briefly to expound their Miſtakes, and lay down Rules for the Amendment of them: 1. Many term'd that a lachrymal Fiſtula, which we denominate an *Epiphora*. 2. Others confounded it with an Anchilops, and an Ægilops. But, before we can reconcile their different Opinions, we muſt diſtinguiſh clearly between theſe two Diſorders. An Anchilops, then, is a Tubercle which riſes between the greater Angle of the Eye and the Noſe, whether it be in or near the lachrymal Sack, and whether it is attended with an Inflammation, or not. Here we may obſerve, that near the Sack, as well as in other Parts, there are, (1.) Encyſted Tumors; (2.) Inflammations and Abſceſſes; and, very often, (3.) a Diſtention and Reſolution of it, which we call a lachrymal Hernia. (See *Tab.* XXXVII. *Fig.* 10. A B, with *Fig.* 16. and 17.) Upon a Preſſure of the Finger, this Tumor ſubſides, ſometimes with Eaſe, ſometimes with Difficulty; and the Matter diſcharges itſelf through the Noſe, or Puncta lachrymalia, or both. The Ægilops is a Tumor nigh the lachrymal Sack, ariſing after an Inflammation or Abſceſs; which, by its ſharp, purulent Matter corrodes the ſuperior Skin, or the lachrymal Ducts, or the Fat near the Sinus of the Eyes, and ſometimes the Oſſa plana; and, laſtly, the Parts and Bones near the Noſe, often producing a deſtructive Caries. Sometimes, both the ſuperior and inferior Ducts are ſo corroded, that Pus flows continually out of the Puncta lachrymalia into the greater Angle (ſee *Fig.* 18. Letters *a* and *b*). And this is properly denominated a lachrymal Fiſtula; for, when the clear lachrymal Fluid diſtils out of the Eye, it is only an Epiphora. What has been ſaid, I think, amounts to ſufficient Directions for the diſtinguiſhing between theſe Diſorders; which, from their Reſemblance to each other, moſt Surgeons and Phyſicians have confounded together.

See ÆGILOPS, ANCHILOPS, and EPIPHORA.

An Anchilops proceeds from various Cauſes; for an encyſted Tumor or Inflammation will produce this, as well as other Diſorders; but it generally ariſes from a Relaxation or Diſtention of the Sack; and a lachrymal Fiſtula is the uſual Concomitant of it, becauſe, as the purulent Matter cannot paſs to the Noſe, it weakens and diſtends the Sacculus. The principal Origin of an Ægilops is a previous Inflammation or Abſceſs; for theſe corrode the Skin, and lachrymal Ducts; whence ſometimes proceeds a Fiſtula: But there are many others; and the principal of theſe is, an Ulcer in the Sack, or adjacent Parts; for, as ſoon as the lachrymal Ducts are corroded, the corrupted Matter diſtils into the Sack (ſee *Fig.* 18.). If the inferior lachrymal Duct (Letters *d d*, *Fig.* 7, 8.) is by any means obſtructed, it often produces a Fiſtula; for it is ſcarce poſſible, but the inherent Pus will inſenſibly contract an Acrimony, which will relax, corrode, or at leaſt, exulcerate the Sack. This Diſorder is frequent in many, either after an Ophthalmy, or Inflammation of the Membrane of the Noſe, or theſe Ducts; or, as I have often ſeen, after the Small-pox. But ſometimes it ariſes ſpontaneouſly, without any ſenſible Cauſe.

There are various Kinds of a lachrymal Fiſtula: For, 1. It is Perfect, or Imperfect. Perfect, when the Skin is corroded, and Pus flows out of the lachrymal Bag, near the greater Angle of the Eye; Imperfect, when, the Skin being entire, it diſcharges itſelf only through the Puncta lachrymalia. The firſt Kind is viſible to the Eye (ſee *Tab.* XXXVII. *Fig.* 19. *a b*). 2. It is Simple or Compound, when attended with a Callus, or Caries. 3. New or Old. 4. Mild or Obſtinate. 5. It is either accompanied with an Obſtruction of the naſal Duct, or not. 6. It is Intermitting and Periodical, or Continual. *Garengeot*, by dividing it into the true and falſe Fiſtula, has made a ſeventh Species. The firſt, according to him, is, when the lachrymal Ducts themſelves are exulcerated; the other, when the Exulceration is in the adjacent Parts; which laſt we term an Ægilops. Some, as *Signorettus*, and *Platnerus*, are of Opinion, that a Callus is requiſite to conſtitute theſe Fiſtulæ, as it is with reſpect to all other Fiſtulas. That this is a Miſtake, not only the received Interpretation of the Word, but the Authority of *Celſus*, *Fallopius*, *Cardan*, and *Wolhouſe*, and Experience itſelf, evince. Beſides what *St. Yves*, a celebrated Oculiſt of *Paris*, aſſerts, that he ſeldom found a Callus. I myſelf have often ſeen inveterate Fiſtulæ without it. Further, ſome think there never was a lachrymal Fiſtula, without an Obſtruction of the naſal Duct, as that appears to them the Origin of this Diſorder. But their Error is manifeſt, not only from the Authors I have already quoted, but from daily Experience; for I have ſeen many Caſes, and know one at preſent, where the Sack, being preſs'd by the Fingers, has daily diſcharg'd Plenty of Pus through the Puncta lachrymalia, when the naſal Duct was entirely open, and it might have been expel'd through that Paſſage. Some ſay, this purulent Matter flows through one Punctum only, but are not agreed which it is; but, in reality, it paſſes through both: In ſome indeed, principally through the ſuperior, in others through the inferior Punctum.

So much for the lachrymal Fiſtula, and Method of diſtinguiſhing it from Diſorders which bear ſome Affinity to it: Let us now conſider the Symptoms. The Patient complains of a frequent dropping of Tears, and a purulent Matter, eſpecially in the Morning, is collected in his Eye, without any Inflammation: And, from a Preſſure of the Finger, the lachrymal Sack emits a Pus thro' the Puncta. And we may conclude there is a Caries, when this Pus is of a bad Smell, or unuſual Colour, as Green or Black; but ſtill more, when the Bone is bare to the Eye, as in open Fiſtulæ, or when it is found ſo by the Introduction of a Probe, for the Colour will deceive you greatly; and I have ſeen many Inſtances, where that has been good, yet, upon Examination with a Probe, I have found the Bone bare: But if the Diſorder is inveterate, and diſcharges daily Plenty of Matter, we may be certain there is a Caries, the Seat of which is different; for ſometimes the lachrymal Bone, ſometimes the Os Plenum, and ſometimes the Bone of the upper Jaw is corroded. We may know the naſal Duct is obſtructed, if none of the Matter, or injected Fluid, paſſes thro' the Noſe, but all flows out of the Puncta lachrymalia. Laſtly, An uncommon Hardneſs of the Parts denotes a Callus; though, as I before obſerv'd, this ſeldom attends a Fiſtula. If there is an encyſted Tumor, the exterior Parts ſwell with an Hardneſs, and will not yield to the Preſſure of the Fingers, but there is no Inflammation; but, if the Tumor yields upon Preſſure, there is a lachrymal Hernia. We know an Ægilops by this, that the Parts contiguous to the greater Angle are exulcerated, and have no Communication with the lachrymal Paſſages.

I met with an extraordinary Inſtance of a lachrymal Fiſtula in a Student, in the Year 1726. Though he had been afflicted with this Diſorder for eight Years, yet no Matter could be expreſſed by the Fingers. A perpetual Flux of Tears dropt down his Cheeks, and, whilſt he ſlept, his Eye was filled with a Pus, which, when any Liquid was injected into either of the Puncta lachrymalia, diſcharg'd itſelf out of the other. There was no Tumor of the lachrymal Sack; yet, upon making an Inciſion into the Skin, I found a Caries in the Os lachrymale.

Theſe Diſorders of the Eyes are generally of very bad Conſequence; for, as they are near the ſoft, ſpongy Bones, they produce violent Diſorders, and often a Caries. An Anchilops, or Ægilops, ſoon degenerate into a Fiſtula, which, from mild, grows obſtinate and dangerous, and even ſometimes cancerous; and, after a Corroſion of the Bones, it is ſeldom or never cured. Their Danger is increas'd by a bad Habit of Body, the Acrimony of the Matter, and an irregular Method of Diet and Living: On the contrary it is leſs, if the Patient is ſound, and the Diſtemper free from bad Accidents, eſpecially a Caries, Callus, and Obſtruction of the naſal Duct; for then it is curable, whatever ſome may ſay to the contrary, within a few Days; particularly, if you follow *Annell*'s Directions. A perfect Fiſtula is often attended with a Caries, and can ſcarcely be remedied, till that is extirpated, either by proper Medicines, Inciſion, or cauterizing the Bone. If a Callus ſupervenes, the Cure cannot be completed, till that is remov'd: Without any of theſe, you may expect a more happy Event. The more inveterate the Fiſtula, the more Difficulties you have to ſtruggle with; for here the Bones are generally corroded with a Caries, and after a Cure, without a thorough Extirpation of that, the Diſorder readily returns: Though, what is ſurpriſing, ſome Surgeons affirm, that Fiſtulæ, with a Caries and Callus, have been cured by Nature alone. Unleſs the obſtructed naſal Duct be open'd, and kept ſo, you cannot hope for a laſting

Cure;

Cure; at leaſt, you muſt expect the Continuance of a weeping Eye, tho' you have judiciouſly cauterized the Caries and Callus. Moreover, the compreſſing Inſtruments of the Antients, tho' they were a long time in Uſe, had no other Effect, than to give unneceſſary Pain to the Patient; and, from a ſlight Diſorder, make one more conſiderable. Thoſe Moderns are not without their Merit, who, by the Inſtruction of *Annell*, ſince the Year 1712, have uſed Methods for the Cure of recent Fiſtulæ, or at leaſt, thoſe free from a Caries or Callus, without the Knife, Terebra, or Cautery; whereas formerly they knew no other Way of proceeding.

If any Tumor, or Anchilops, with an Inflammation, ariſes near the greater Angle, Reſolution muſt be immediately attempted, to prevent an Abſceſs or Fiſtula. Firſt, therefore, anoint the Tubercle with a ſoft Pledget, or your Finger, dipt in Spirit of Vitriol; but be careful not to touch the Eye. It is of great Service, to anoint the Parts with Honey of Roſes mixt with Spirit of Vitriol, to ſome degree of Sharpneſs, and upon this lay a Diachylum-plaiſter; nor is it leſs beneficial to apply often a Compreſs, moiſtened with warm camphorated Spirit of Wine, or a Poultice of roaſted or boiled Apples, mixt with Camphire, till a Reſolution enſues. If the Tumor is encyſted, treatit as an encyſted Tumor (ſee TUMOR): For, in that Manner, I extirpated a Tumor, which lay deep in the Orbit of a Girl, with my Inciſion-knife.

But, if the Inflammation tends rather to a Suppuration than Reſolution, promote that; for, by Delay, it may degenerate into a pernicious Fiſtula. This is done by the Application of a Diachylum-plaiſter with the Gums, or an emollient Cataplaſm. As ſoon as the Matter is come to Maturity, to prevent a Corroſion of the Sack, or adjacent Parts, the inferior Part of the Tubercle muſt be cut with a Lancet, or Inciſion-knife; and, when the *Pus* is expreſs'd, cleanſe the Abſceſs thoroughly with Oil of Bricks, a digeſtive Ointment, or Honey of Roſes, mix'd with Myrrh, and a proper Proportion of *Egyptian* Ointment, or red Precipitate; then heal the Ulcer with ſome proper Balſam, as in other Abſceſſes. But, if the Abſceſs breaks ſpontaneouſly, as I have often ſeen it, and the Aperture is ſo narrow, that it cannot be cleans'd, enlarge it by Inciſion, by introducing a Sponge, or a Piece of Gentian-root; and, after this, cleanſe and heal it, as we directed before. If there is a Caries, apply Lint, moiſten'd with ſome Drops of Spirit of Sulphur, or Vitriol; or, inſtead of this, with Powder or Eſſence of Euphorbium; then lay on Compreſſes, moiſten'd with cooling Liquids, or Lime-water; and, when the Caries is remov'd, the Wound will be fit for healing: Sometimes the Caries may be taken off with a Rugine (ſee *Tab.* XXVIII. *Fig.* 3, 4, 5. or *Tab.* XXXIX. *Fig.* 9.). Some prefer the Uſe of the Cautery, guarded in a proper Canula, as that (*Tab.* XXXVII. *Fig.* 21, 22.), or one of the like Kind; and afterwards they apply balſamic Medicines, to heal the Wound.

The Manner of curing the true Fiſtula lachrymalis (when the Ulcer is in the lachrymal Paſſages) varies according to the Nature, Degrees, and other bad Accidents, of the Diſorder. For, when it is recent, when there is a good Habit of Body, the external Skin not yet corroded, and the naſal Duct ſtill open, laſtly, when the Matter is of a good Colour, and due Conſiſtence, forbear Inciſion, and the Application of the Cautery, as this may be cur'd without any chirurgical Operation, by frequently preſſing the Matter out of the lachrymal Sack, with your Fingers, which will prevent it from contracting any Acrimony, and corroding the adjacent Parts. You muſt, at the ſame time, uſe the reſolvent and cleanſing Medicines preſcrib'd for the weeping Eye, under the Article *Epiphora*; not neglecting, according to the Patient's Habit of Body, Purging, Bleeding, Scarification, Veſicatory, and other Medicines, as the Caſe ſhall require, and a regular Method of living and Diet.

DIONIS, in his Book of Surgery, mentions ſeveral Cures of recent Fiſtulæ lachrymales, particularly in Infants, which he himſelf had perform'd by a proper Compreſſion. His Method was this: 1. He laid a little Plaiſter of burnt Ceruſe upon the Tubercle of the Fiſtula. 2. A ſmall triangular Compreſs, an Inch thick, (or, inſtead of that, ſeveral thin ones) to fill the Angle exactly near the Eye. 3. Another ſuch Compreſs, but ſomething larger; having firſt moiſten'd them with Lime-water, or Spirit of Wine, or ſome other drying Liquor. Laſtly, he faſten'd them on with a circular Bandage, ſo firmly, that he prevented any Collection of the vitiated Humour from being form'd within, and reſtor'd the relax'd Sack to its former Shape and Strength. DIONIS orders this to be continued for many Months, if you would complete the Cure. But, inſtead of his Bandage, others have us'd proper compreſſing Inſtruments; ſome of which are recommended by *Aquapendente*, *Scultetus*, *Palfyn*, and *Heiſter* (ſee *Tab.* XXXVII. *Fig.* 20.) and others by other Surgeons: Though all theſe Ways of Compreſſing are in vain, if the lachrymal Duct is ſtopp'd; for it can never be of any Service, but when the Abſceſs is near the lachrymal Sack, (as in *Tab.* XXXVII. *Fig.* 18.) or, at leaſt, when the lachrymal Duct is yet pervious.

But, ſince this laſt Method will not cure an inveterate Fiſtula in a Patient who has been long afflicted with it, or is of a bad Habit of Body, the Surgeons, before *Annell*, were of Opinion, and ſtill are, that the Tubercle ſhould be open'd, between the greater Canthus and the Noſe, either with ſome corroſive Medicine, or, rather, a Lancet, or Inciſion-knife; in which Operation they adviſe the utmoſt Care, leſt the Ducts proceeding from the Puncta lachrymalia to the Sack, or the Ligaments, reſtraining the Eyelids, ſhould be cut, and the Eye greatly deform'd. Some direct an oblique Inciſion, as *Fig.* 9. *Tab.* XXXVII. from *d* to *e* or *c*, or *Fig.* 10. from B to A, with a ſtraight Inciſion-knife; others, with a crooked one; which, to me, ſeems indifferent, as I have uſed both ſucceſsfully. This Inciſion muſt reach the Cavity of the lachrymal Sack, which muſt be dilated, in the Direction above-mention'd, upwards and downwards, with the Knife, from the Top of the lachrymal Sack to the bony Canals. The Cavity muſt then be fill'd with Lint, laying Compreſſes over it, and faſtening all with a Bandage. Others would have the Inciſion ſemicircular, with the concave Part tending to the Eye, and the convex to the Noſe, beginning at the lower Part of the Apophyſis of the Os Frontis, call'd the naſal Apophyſis, where it touches the maxillary and lachrymal Bone, (a Part well known in the Head of a Skeleton) proceeding in the Form of an Arch, according to the Direction of the naſal Apophyſis of the maxillary Bone to that Part, where it almoſt touches the interior Apophyſis of the Os jugale (ſee *Tab.* XXXVII. *Fig.* 19. the prick'd Line *c b*). When this Inciſion is ſufficiently enlarg'd, they fill it with Lint, and bind it up, leaving it till next Day, that it may be well dilated; then examine, not only whether there is a Caries, but how, and where, they may beſt perforate it. If there is too large an Hæmorrhage, they apply Lint, dipt in ſtrong Spirit of Wine, and then a Compreſs, and faſten them on tight with a Bandage. Then they deterge it with Eſſence of Amber, Oil of Bricks, or other Medicines of the ſame Kind, as directed above, in caſe of an Ægilops. When it is thus cleans'd, they apply vulnerary Balſams, and drying Plaiſters, with thick triangular Compreſſes, and Bandage, as mention'd above, and heal the Wound gradually. Some uſe the compreſſing Inſtruments before-mention'd, with a Plaiſter, and ſmall Compreſs; and then heal the Wound, though very ſeldom with Succeſs, as the naſal Duct is generally obſtructed.

The antient Method of curing a callous Fiſtula was, after having open'd the Ulcer, firſt, to extirpate the Callus, with Trochiſci de Minio, red Precipitate, *Egyptian* Ointment, or the Lapis Infernalis; then to treat it as before directed. If it was carious, they apply'd Powder of Euphorbium, with Lint dipt in Spirit of Sulphur, or of Vitriol. As this was ſeldom effectual, they remov'd the Caries with the Knife, as we obſerv'd above, or with a Cautery, which they repeated, as often as was requiſite. The Shape of the Inſtruments was varied, as the Surgeon pleas'd. Some were without a Tube (as in *Tab.* XXIV. *Fig.* 14. and 16.). Others, to prevent burning the Skin, had a ſmall Tube, which was introduced into the Ulcer as far as the Bone, and then through that they paſs'd the Cautery; ſuch a one I have copied from PLATNERUS (*Tab.* XXXVII. *Fig.* 21. and 22.). Then they reſolv'd the Eſchar, rais'd by the Cautery, by the Application of a digeſtive Ointment; and proceeded to heal the Ulcer by the Application of vulnerary Balſams, in the Method already laid down. It is not only proper in this Operation to bind up the ſound Eye, that the Sight of the Cautery may not terrify the Patient, but likewiſe to cover the affected Eye with an Inſtrument of a ſpiral Form, (ſee *Tab.* XXXVII. *Fig.* 23.) that it may not be touch'd. Obſerve always to dry the injur'd Bone thoroughly with Lint, before you apply the Cautery; otherwiſe it will be extinguiſh'd too ſoon. But none of theſe are effectual, when the naſal Duct is obſtructed; for, unleſs the Bone is perforated accidentally, or deſignedly, to the Noſtrils, and a new Paſſage open'd for the Pus, it is ſo far from dropping into the Noſe, that the Diſorder returns, or, at leaſt, a weeping Eye remains. If this is the Caſe, which the antient Writers do not deny, it is manifeſt, in my Opinion, that the above-mention'd Methods of Cure are principally ſerviceable, when there is only a Suppuration on the Outſide of the Saccus Lachrymalis, or when the naſal Duct is pervious. Diſtinguiſh therefore, carefully, between theſe Fiſtulæ, and thoſe wherein the naſal Duct is obſtructed.

To ſupply this Defect in Surgery, ſome took another Method: They open'd the Saccus lachrymalis, and, next Day, perforated the Os Unguis, with a ſharp Inſtrument, (ſee *Tab.* XXXVII. *Fig.* 24. or *Tab.* XXVIII. *Fig.* 7. A; or *Tab.* XLV. *Fig.* 2. B) obliquely, between the ſuperior and inferior Os Spongioſum, even to the Noſe; then they put a Tent into the Aperture, form'd a new lachrymal Duct by Tents, and a frequent Introduction of Probes into the Noſe. When this was form'd, they heal'd the external Wound. Others forbore the Uſe of Cauteries, but perforated the Bone with the Inſtruments already mention'd, or a ſulcated Probe: Thus they remov'd the Caries, and open'd a new lachrymal Paſſage into

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the Noſe by the ſame Operation. Again, others, having laid a Tube (*Tab.* XXXVII. *Fig.* 22.) on the Os lachrymale, apply the Cautery (*Fig.* 21.) in ſuch a manner, as to perforate the Bone to the Noſe; then proceed as we have already directed. Though all theſe Methods are very troubleſome, and ſubject the Patient to a weeping Eye, yet, for want of better, the moſt experienc'd Moderns have been oblig'd to follow them. *St. Yves* himſelf, the celebrated Oculiſt at *Paris*, as appears from his Treatiſe on the Diſorders of the Eye, as well as ſeveral others, purſu'd this Method.

Since Perſons of Diſtinction are not eaſily induc'd to undergo this Operation, on account of the Pain of Inciſion, Terebration, and Cauterizing; and are likewiſe deter'd by the Danger of an unſeemly Cicatrix, and unſucceſsful Cure, eſpecially under the Hands of an ignorant Surgeon; the moſt ingenious *Annell* thought it worth while to invent a new, ſafer, and more tender Method, for curing the moſt Serene Duke of *Savoy*, in the Year 1712. which he perform'd with ſo much Succeſs, that not only a new, but ſometimes an inveterate Fiſtula lachrymalis, where there was neither Callus nor Caries, has been often cur'd without the Knife, Cautery, or the troubleſome Bandage, before us'd. I ſhall, therefore, now give a very exact Account of his Proceſs.

He made a peculiar thin crooked Probe, of Silver Wire (ſee *Tab.* XXXVII. *Fig.* 11, 12, 13.): Then plac'd the Patient on a Seat oppoſite to the Light, in the moſt commodious manner; and, elevating the upper Eyelid ſufficiently with one Hand, he introduc'd the Probe with the other, in the tendereſt manner, through the upper Punctum lachrymale, (which ought to be well known to a Surgeon) into the Saccus. For the more ready and eaſy Performance of this, the Operator ſhould be well acquainted with the Figure and Situation of the Parts. Then, with the ſame Care, he directs the Probe to the Noſe; after this, he elevates the Handle a little; and, by a gentle Motion, dexterouſly forces the other End, inherent in the Saccus Lachrymalis, down into the Noſe, and opens the naſal Duct. But it is far more eaſily open'd, when it is obſtructed only by Matter, than when it is grown together, as is very common in inveterate Fiſtulæ. For, in the laſt Caſe, the Violence muſt be ſo great, that the Patient feels an acute, though not an intolerable Pain, and the Noſe bleeds. To prevent a ſecond Obſtruction in the lachrymal Duct, he injected a Liquid, with a Syringe, not only Morning and Evening, but more frequently, if Occaſion requir'd; and repeated it, till no more Pus return'd through the Puncta lachrymalia; whence he concluded the Ulcer to be healed, and the naſal Duct reſtor'd to its former Integrity.

Garengeot was unacquainted with the real Uſe of theſe Probes; for he thought they did not open the naſal Duct, but only ſerv'd for ſearching the Saccus lachrymalis.

The Injection ſhould be made with the little Syringe of *Annell*, (ſee *Tab.* XXXVII. *Fig.* 14.) or one like it; for the anterior Part, or ſmall Tube, of it A, about the Thickneſs of an Hog's Briſtle, is paſs'd into the Punctum lachrymale of the lower Eyelid, as leſs moveable; and the contain'd cleanſing and healing Collyrium (ſee EPIPHORA) is to be injected into the Saccus Lacrhymalis. By frequent Repetitions of this, the Pus is diſcharg'd, and the new lachrymal Duct kept open. For the more commodious Performance of this, let the Patient be plac'd in a Seat oppoſite to the Light, with his Head erect, or a little reclin'd; and, if the Right Eye be diſorder'd, let the Surgeon ſtand on the Right Side; and, when he has fill'd his Syringe with a proper Liquor, thoſe, for Example, mention'd under the Article EPIPHORA, lay the Ring-finger of his Left Hand on the inferior Eyelid, immediately under the lower Punctum lachrymale, near the Saccus. By this Method, he brings down the Eyelid; which will not only render the Punctum more conſpicuous, but make the Introduction of the Syringe more convenient. This Finger, likewiſe, will keep his Hand ſteady. After this, he takes the Syringe, at the poſterior Part C, in the middle and fore Finger of his Right Hand; then he puts the inferior Part D between the ſame Fingers of his Left Hand, which are already under the Patient's Eye, *and holds them faſt:* Then the extreme Part A is carefully introduc'd into the inferior Punctum lachrymale, the Head of the Piſtil B being preſs'd by the Right Thumb; and thus the Liquor is forc'd through the Punctum into the Sack, naſal Duct, and Noſe. But it muſt be confeſs'd, all this may be made more intelligible by ſeeing the Operation, than by any Deſcription. We muſt obſerve, that whatever Liquor is injected into the inferior Punctum lachrymale, immediately returns, either by the ſuperior, or flows through the naſal Duct into the Noſe, and the very Fauces. If the Left Eye is to undergo the Operation, let the Surgeon ſtand on the Left Side, and proceed according to the former Directions. I have, ſometimes, by way of Variety, injected into the ſuperior Punctum: In order to this, I plac'd the Ring-finger of my Left Hand above it, and pull'd the ſuperior Eyelid upwards, till I plainly ſaw it; then introduc'd my Syringe, and injected the Liquor with the ſame Facility as the other Way. Here Dexterity, and Quickneſs of Sight, is very requiſite. However, the firſt Method is the moſt convenient.

This muſt be repeated daily, till (1.) The Injection penetrates into the Noſe voluntarily, without the Help of the Probe. (2.) Till no purulent Matter proceeds from the greater Canthus, either voluntarily, or after Compreſſion with the Fingers. Then you may conclude your Operation has been ſucceſsful. And this happens ſoöner in ſome than others; for, ſometimes, the Cure is perfected in four, eight, fourteen, or twenty Days; ſometimes it requires a longer Time; though no Fiſtula is ſo obſtinate, but that this Method will extirpate it, provided there is no Caries or Callus. I have myſelf, indeed, often cur'd theſe Fiſtulæ in three or four Days, by this Proceſs; and, from a ſingular Experiment, found, that a ſlight Caries may be remov'd by it. I remember, in the Year 1727. I freed a Girl of eleven Years old, by continuing this Injection daily about ſix Months, of an inveterate Fiſtula, and ſlight Caries, who is now married, and perfectly well.

I muſt confeſs, that this Method, invented by Mr. *Annell*, as here deſcrib'd by *Heiſter*, appears perfectly rational, and well calculated to anſwer the End propos'd: And *Heiſter*, no inconſiderable Practitioner, affirms, that, with him, it has ſucceeded beyond all others. Mr. *Sharp*, however, a competent Judge of chirurgical Operations, ſeems to diſapprove it, for Reaſons not drawn from his own Experience, as it appears; which renders them the leſs valid. This Author informs us, that, "Some "Years ſince, Monſieur *Annell*, a *French* Surgeon, recom- "mended, in the recent Fiſtula, to paſs a ſmall Probe through "one of the Puncta lachrymalia, into the Saccus and Noſe, in "order to break the Concretions which are ſuppos'd to make "the Obſtruction; and, with the ſmall Pipe and Syringe, to "throw an Injection through the other, in order to waſh them "away. This Method was, at firſt, receiv'd with great Ap- "plauſe; and ſtill continues to be practis'd by ſome very emi- "nent Surgeons: Yet, by what I have been able to learn from "the Experiments of others, and the Reaſon of the Thing, I "am, by no means, inclin'd to think favourably of the In- "vention; for, as the very Characteriſtic of this State of the "Fiſtula is the Reflux of the Tears from the Saccus, the "Chanels leading to it from the Puncta lachrymalia muſt be "ſuppos'd clear; and, as to the Obſtruction in the naſal Duct, "an Injection, thrown with ſo little Force, can hardly be "imagin'd ſufficient to remove it; and ſtill leſs, if it be true, "that the Obſtruction is not owing to any looſe Subſtance "clogging up the Paſſage, but to an Inflammation of the "Membranes.

"If, then the Injection cannot aſſiſt, by the Force of its "Stream, the Advantage muſt ariſe from its balſamic Quali- "ties. But no Surgeon, at this time, dilates an Abſceſs of "any Kind by Injections, when the Pus is good-condition'd, "and he can, by Compreſs, diminiſh the Cavity of it, as "may be done in this very Caſe, and which ſhould be pra- "ctis'd before any other Method is undertaken. Indeed *An-* "*nell*, and his Followers, after the Injection, applied a Com- "preſs and Bandage, to the good Effects of which, rather "than any of the other Proceſſes, I am inclin'd to think their "Succeſs was owing."

After comparing the Reaſons here given, with the Sentiments of *Heiſter*, given above, and what is farther ſaid below, relative to this Method, the Reader will readily diſtinguiſh when it is likely to ſucceed, and when not; and may judge for himſelf, which of the two Authors above-quoted is in the right.

When a Fiſtula lachrymalis is perfect, that is, when the external Skin is corroded, the obſtructed lachrymal Duct may be more eaſily open'd; and, in this Caſe, it is better to paſs the *Annellian* Probe through the external Fiſtula, directed downwards, through the naſal Duct, than through the Punctum lachrymale; and this with the thick End *b* (*Fig.* 12.). Sometimes I have even open'd the naſal Duct effectually with the Probe K (*Tab.* 22.). For cleanſing the Ulcer, proceed according to the former Directions; except, that a Leaden or Wax Tent is more commodious than a Linen one; and the naſal Duct muſt be carefully touch'd every other Day with the Lapis Infernalis, in the Shape of an inverted Cone, till its Sides are ſufficiently harden'd, and render'd fit for healing; but, when the external Aperture of the Ulcer is united, you muſt continue the Injection for keeping the naſal Duct open ſome time. *Garengeot*, in his Book *de Operat. Chirurg.* tells us, that *Petit* us'd a thick wax'd Thread inſtead of a Tent, and that it prov'd effectual. When the Os Unguis, in theſe Caſes, is corrupted, the Aperture of the Ulcer muſt be dilated, the Caries taken off, or the Bone perforated.

In a Fiſtula not attended with an Obſtruction of the naſal Duct, frequent Expurgation of the Matter by a proper Injection is more ſerviceable than the Introduction of the Silver Probe. When, likewiſe, the Saccus lachrymalis is too lax, apply ſtrengthening Medicines, or compreſſing Inſtruments (ſee *Tab.* XXXVII. *Fig.* 20.), or others, delineated by *Fabricius*

ab Aquapendente, *Scultetus*, *Palfyn*, and others, which, by degrees, reſtore it to its former Vigour.

It is a great Miſtake to imagine the *Annellian* Method infallible in every Fiſtula; for when it is accompanied with a very hard Callus, or inveterate and large Caries, all his Injections are of no Service; nor have we yet diſcover'd Medicines that will anſwer this Purpoſe. It, likewiſe, frequently happens, that the naſal Duct can neither be kept open, nor a continued Increaſe of the Pus be prevented, or that the *Annellian* Injection cannot be tranſmitted to the Noſe, though it is pervious to the Probe. I have ſeen ſeveral Inſtances of this, though I could never conceive the true Reaſon. If, therefore, any thing of this Kind happens, and the Patient has, notwithſtanding, an Inclination to be cur'd, our only remaining Hope is in the Uſe of the moſt effectual Methods propos'd above, for making a new Paſſage to the Noſe, and extirpating the Callus and Caries; or in the new one we ſhall preſently deſcribe. Some are of Opinion, that the Caries ſometimes penetrates ſo deep into the Oſſa ſpongioſa of the Noſe, that it can neither be remov'd by Medicine nor Cautery: But this I never found. And, indeed, it may be ſo far mitigated, that, by forming a new naſal Duct, in the manner already mention'd, the Matter may be brought to the Noſe, which before diſcharg'd itſelf at the Eye, with inexpreſſible Agony to the Patient; eſpecially if proper Injections are continued for ſome time after.

The celebrated *Brunner*, Phyſician to the Elector Palatine, aſſur'd me once, by Letter, that he had cur'd a very bad Fiſtula lachrymalis by a Mercurial Injection.

We have already ſaid, that in an imperfect Fiſtula, that is, when it is conceal'd under the Skin, the external Skin ſhould be cut through, before we perforate the Os Unguis. To render this Operation more expeditious, and leſs troubleſome, a Surgeon of *Hamburgh* invented a peculiar Inſtrument, (ſee *Tab.* XXXVII. *Fig.* 24.) which, at the ſame time, would perforate the external Skin, the Saccus, and Os Unguis; after which he took care to form the new naſal Duct by the Introduction of a Tent, as before directed, and heal'd the external Wound. Since that time, as this new Duct has been often found to coaleſce, ſome, after the Method of *Wolhouſe*, inſtead of the Tent, have paſs'd a Leaden, Gold, or Silver Tube (ſee *Tab.* XXXVII. *Fig.* 25.) thoough the Os Unguis, into the Noſe, and, after uniting the external Wound, left it there, to prevent a ſecond Obſtruction: This I have done often, with the deſir'd Succeſs, though I us'd a Tube ſomewhat larger, (*Fig.* 26.) that the Paſſage might be wider, and then heal'd the Ulcer.

The Royal Academy of Sciences at *Paris*, in the Year 1729. publiſh'd another Method. The Inventor *Lamorier*, according to the old Practice, made an Inciſion into the Saccus lachrymalis with a Knife; then introduc'd a peculiar Forceps, with a ſharp crooked Beak (ſee *Tab.* XXXVII. *Fig.* 29. A); and with this perforated the Os lachrymale to the Cavity of the Noſe. Next, that this Paſſage might be large enough, (which is abſolutely neceſſary, to prevent a Coalition) he dilated his Forceps a little (ſee *Fig.* 30.) and with that lacerated the Os lachrymale, and internal Membrane of the Noſe. Having remov'd the Forceps, he dreſſes up the Wound with Lint, and a digeſtive Ointment; on the third or fourth Day, inſtead of the Tent, he introduc'd into this Duct a ſmall crooked wax Candle, of the Thickneſs of a Straw at leaſt, and with a little Head, (ſee *Fig.* 31. A B) which he order'd to be kept there for thirty-five or forty Days, till the Duct is completely form'd; then he extracts it, and heals the Wound.

Jo. Caſp. Schobinger, of *Saintgall* in *Switzerland*, in his Diſſertation *de Fiſtula lachrymali*, *Baſil. An.* 1730. deſcribes *St. Yves*'s Method. It is this: After the Patient is ſeated, the Skin about the greater Angle of the Eye is gently extended, as in opening a Vein; and that, with the Saccus lachrymalis, is cut into obliquely with a Lancet, from the Eyelids towards the Tendon of the orbicular Muſcle *, and, by introducing a Piece of *prepar'd* Sponge, which is to continue all Night, the Wound is dilated; and is then cover'd with a proper Plaiſter. Next Day, upon the Removal of the Dreſſing, the State of the Wound and ſubjacent Os Unguis is examin'd into, by an Injection, or Probe, and an Inquiry made, whether the Bone is carious. After this, the Surgeon ſupports the Patient's Head with one Hand, and with the other carefully and obliquely perforates the Os Unguis, towards the Noſe, with a ſtrong Probe, or Trocar (a Needle, or Spike rather, with a triangular Point). He muſt know exactly the Situation of the Os Unguis, leſt he ſhould perforate the Os Planum inſtead of it, or enter into the naſal Apophyſis of the maxillary Bone, or the Sinus thereof: Further, let him be careful, that his Inſtrument is directed ſo obliquely, that, having perforated the Os Unguis, it may paſs into the Middle of the Noſe, between each Lamina of the Oſſa ſpongioſa. Then he orders the Patient to inſpire (or rather expire) through his Noſtrils, that he may know, from the Breath and Blood coming through the Wound, whether the Perforation has been properly conducted. When he finds his Proceſs ſo far right, he endeavours to keep it thus, and dilates it a little by the Introduction of a ſmall wooden Wedge into the Wound; then lays upon that a Plaiſter; he continues the Dilatation for ſome Days, with Tents of wax'd Linen; theſe he changes every third Day, and, by degrees, applies thicker (though the thickeſt does not exceed the Size of a Quill); then he gradually returns to his originally thin ones. By the Help of theſe, he affirms, that the corrupted Bone, without the Uſe of a Cautery, ſpontaneouſly ſeparates, and a new Paſſage is procur'd from the Saccus lachrymalis to the Noſe. If there appear any Splinters and Aſperities during the Cure, they muſt be taken away. If there is a Sinus, it is to be open'd with the Sciſſars; and Ulcers of the Membrana Schneideriana, and Saccus lachrymalis, are remedied towards the End of the Cure, by a repeated Application of the Lapis Infernalis. At every Dreſſing, whilſt the Noſtrils are ſtopt, let the Patient reſpire thro' this new Paſſage, that he may expel the Pus, which, perhaps, may be collected and ſtagnate there; and the Surgeon is to introduce a freſh Tent, firſt dipt in Oil †, and on that lay a Plaiſter. When the Sides of the Duct are ſufficiently confirm'd and conſolidated, the Tent is omitted, and the Wound heal'd by a Plaiſter only, which, as he ſays, is generally completed within ſix or eight Weeks. "Repeated proper Injections, towards the Concluſion, or after the Cure," (I ſuppoſe he means thro' the Punctum lachrymale) "if they penetrate "the Noſe, will ſhew whether the Operation has had its "deſir'd Effect."

I muſt here obſerve, that *Schobinger* ſays, *Annell*'s Method of curing a Fiſtula by Injections is grown obſolete, and almoſt forgotten, becauſe it requires the utmoſt Induſtry and Dexterity. I agree with him, that it is buried in Oblivion among thoſe, who are incapable of performing it; but, for my own Part, I have often uſed it, and found no Difficulty in the Operation; but, from the Deſcription *Schobinger* gives, it is probable he had ſome Difficulties to ſtruggle with, from his Ignorance of the proper Manner of proceeding.

Garengeot, likewiſe, in his *Operat. Chirurg.* paſſes it by in Silence, as of no Conſequence; and, in his Treatiſe of *Chirurgical Inſtruments*, ſpeaks of it with ſo much Indifference, that it is manifeſt he never try'd it: And the Probe he there repreſents for this Uſe, is made ſo ſlender, weak, and, in conſequence thereof, ſo ill towards the ſuperior Extremity, that it can never perforate the obſtructed naſal Duct; and he has repreſented the Extremity of the Tube of the Syringe ſo ſmall and ſlender, that it would rather prick like a Needle, if applied to the Eyelids. Laſtly, he recommends a *Speculum Oculi*, in uſing theſe Injections, contrary to *Annell*'s and my Deſcription; and has exhibited two for this Purpoſe, which rather impede than aſſiſt the Operator, the Whole being better performed by the ſole Application of the Fingers, as I have already ſaid, than by the *Specula*; and this I am convinced of by numberleſs Experiments. *Garengeot*, alſo, affirms, that the Probe cannot paſs into the naſal Duct, becauſe the Paſſage is too much winding; but it is a ſufficient Anſwer to this, that the Probe has actually, in a great many Inſtances, paſs'd the naſal Duct, and ſtill is found by Experience to do ſo; tho', perhaps, a Perſon not furniſh'd with a ſufficient Degree of Practice, or Knowledge of the Part, or who is unattentive to the true Method of performing this Operation, might meet with ſome Difficulty. As a further Proof, that this Method is not only poſſible, but very eaſy, I have practiſed it upwards of twenty Years with Succeſs, upon many of my Patients, only from having read it, without once ſeeing it put in Execution; and ſeveral Surgeons have come from remote Places, as *Hamburg*, for Example, to me at *Helmſtadt*, to ſee and learn this Operation, which they before, having frequently attempted in vain, thought impoſſible; and then, after I had ſhewn them the Method of performing it often, they could readily imitate it. I once attended a Student of Divinity, who, when I had for ſome time every Day, and oftener, introduced this Probe through the *Punctum lachrymale*, and obſtructed naſal Duct, into his Noſe, with very little Pain, himſelf attempted it before a Looking-glaſs, and ſucceeded; and he ſoon did it, by a dextrous Motion of the Probe, in the Sight of many Students, more readily than I could; ſo that, when you would think the Probe ſcarce touched the *Punctum lachrymale*, it had enter'd the *Saccus*, and naſal Duct; and he would leave it for Hours, without any Inconvenience, in the lachrymal Paſſages and Noſe, to keep it open. I have been the more prolix in this Account,

* Here *Heiſter* remarks, that the Deſcription ſeems obſcure; for, when he ſays, From the Eyelids, we are certainly told in which Eyelid the Inciſion ſhould be begun; but, in my Opinion, he means the inferior.

† All other Surgeons declare againſt the Uſe of Oils in any Diſorder of the Bones, as prejudicial: I am ſurpriſed, therefore, that he ſhould recommend them for an Injury of the ſofteſt; nor does he tell us what Oil we may ſecurely apply. I think it, therefore ſafer to dip the Tent into Spirit of Wine, or rather ſome vulnerary Eſſence.

both to refute the Impoſſibility, and evince, that *Garengeot* was not only unacquainted with this Operation, but an entire Stranger to the true Uſe of this Probe, when he ſays, it is of Service only to diſcover the *Saccus lachrymalis*; whereas the principal Deſign of it was, to open the obſtructed naſal Duct, both in a weeping Eye, and a *Fiſtula lachrymalis*; and, in theſe Diſorders, it ſeldom fails. Laſtly, he makes no mention of the Inventor *Annell*; for what Reaſons, let others determine.

The different Methods us'd by different Surgeons for the Cure of this Diſorder are remarkable; nor do they vary ſo much in their Treatment of any other Caſe whatever.

It now remains, that I ſhould briefly explain my own Method: I begin, then, with the gentle one of *Annell*, eſpecially in recent Fiſtulas; and purſue it for ſeveral Days or Weeks, according to the Nature of the Diſorder, particularly when I find it diminiſh. When this is not effectual, I have recourſe to the Knife, and, carefully covering both Eyes, make an oblique Inciſion thro' the external Skin into the Saccus lachrymalis, in ſuch a manner, that I may next Day, without any Impediment from the Blood, perforate the Os Unguis to the Noſe ſufficiently with the Inſtrument (*Tab.* XXXVII. *Fig.* 24. or *Tab.* XLV. *Fig.* 2.) and this, for Reaſons already aſſigned, with the utmoſt Caution; then, after waſhing the Wound with warm Wine, I inſert firſt a Tent dipt in balſamic Medicines; and, after the ſecond or third Day, a Wax-candle, or leaden Tent ſomewhat larger, to fill up the new Paſſage, about the Thickneſs of the Inſtrument (*Fig.* 21. A. *Tab.* XXXVII.). This I continue, till the Canal is confirm'd; for the more ſpeedy Promotion of which, I touch the Lips every other Day, after extracting the Tent with the Lapis Infernalis: This I do for three Weeks or a Month, and longer, if it is requiſite; then I heal the Wound, if the Duct is large enough, without the Inſertion of a Tube; and, if I do leave one in, it is either of Lead or of Gold, and ſhort, (ſee *Tab.* XXXVII. *Fig.* 25.) ſuch as *Platnerus* has delineated; but, as I have found theſe too ſmall to admit the viſcid Humour, I generally uſe a larger, as in *Fig.* 26. in ſuch a manner, that after applying a balſamic Medicine, and Plaiſter, the Saccus lachrymalis, and external Skin, may be properly healed. That this Cure may ſucceed the better, the Day after the Wound is cloſed, I inject a Decoction of Veronica, with *Annell*'s Syringe, through the Punctum lachrymale; and this I repeat for ſome time every Day, to point out a Paſſage for the Tears through that Tube. Tho' theſe Tubes are generally large enough to admit the Matter into the Noſe, yet it muſt be confeſs'd, that in conſiderable Fiſtulas, eſpecially when they are narrow, they do not fully anſwer the End, but ſometimes leave ſome Inconvenience behind, and, principally, a weeping Eye: However, I never uſed the Cautery to theſe, and think it rarely neceſſary; though it is ſo * often recommended by ſo many Writers: But I prefer the making a new Canal, with the Inſtruments already mentioned, large enough to prevent a ſecond Obſtruction; for this will extirpate a Caries of the Os Unguis, without a Cautery. Hence it is manifeſt, that, when the Tube is too narrow, the Cure can never be complete.

Laſtly, it may not be improper to add here ſome Cautions: And, firſt, in the Beginning, where an Inciſion is neceſſary, I think Purging proper, and Bleeding, if the Patient is too full of Blood; which ſhould be repeated, after the Cure when there is an Inflammation, which, however, ſeldom happens. 2. If there is an ill Habit of Body, I preſcribe purifying Medicines, as a Decoction of the Woods, with a proper Purge. 3. If there is any other Diſtemper, it ſhould be cured by proper Methods. 4. I perform this Operation, whilſt the Patient is ſtanding; *Platnerus* ſitting, as for a Cataract. 5. He orders, that in this Inciſion the Periоſteum be ſeparated from the Bone; and the Saccus lachrymalis, by a tranſverſe Inciſion, from the Os Unguis: But, as I cannot ſee any Reaſon for this, I never did it, and yet have ſucceeded: For what can be done by one Operation, does not require more. 6. For a Hernia of the Saccus lachrymalis, when the naſal Duct is open, *Platnerus* adviſes to make an Inciſion into it with a Knife; and afterwards to heal it with Balſam of Meccha, which will ſtrengthen it by a Cicatrix. I have done the ſame thing in the like Caſe; but, for ſome time after the Inciſion, I touch'd the Lips of the Wound every Day with Lapis Infernalis, and then heal'd it, ſtrengthening the Saccus lachrymalis afterwards by injecting a Decoction of Veronica, with a little Spirit of Wine. 7. When the Os Unguis is carious, I only perforate that with a Cautery, as the Antients directed; *Platnerus* ſays, it ought to be cauterized often to the very Noſe; but, as he gives no Reaſon for this cruel Method, and the Cure may be completed without it, I prefer the milder Way. 8. *Garengeot*, in an Inciſion of theſe Fiſtulas, will have the leſs oblique Muſcle of the Eye cut out, if it appears to be depriv'd of its Fat; but, as he too does not back his Opinion with any Reaſons, I muſt diſſent from him, as it may prove prejudicial to the Eye. 9. *Garengeot* alſo denies, that, by perforating the Bone, you can preſerve a new Paſſage to the Noſe; and, conſequently, that after the Operation, the Tears cannot paſs thither: And, he further aſſerts, that the Puncta lachrymalia become uſeleſs; but this contradicts the Experience of the beſt Surgeons, and is a manifeſt Indication, that he is not converſant in the Diſorders of the Eye. For which Reaſon, he has taken no notice of the Methods propos'd by *St. Ives*, *Wolhouſe*, and *Lamorier*.

FISTULARIS. Fiſtular, in Botany, is an Epithet for Flowers, which are compounded of many long, hollow, ſmall Florets, like Pipes.

FISTULARIA. A Name for the *Pedicularis*; *pratenſis*; *purpurea*.

FIXA. Fix'd Subſtances; that is, ſuch as do not aſcend, and fly off, when expos'd to a conſiderable Heat.

FIXATIO, Fixation, is the rendering any volatile Subſtance fix'd, ſo as not to fly off, upon being expos'd to an intenſe Degree of Heat.

FLABELLUM *Marinum*. A Name for the *Keratophyton*; *maximum*; *cinereum*; *elegantiſſime reticulatum*. It is thus call'd on account of its Reſemblance to a Fan, *Flabellum*.

FLAGELLATIO. Flagellation. For the Effect of this on the muſcular Parts, ſee FIBRA.

FLAMMULA *Jovis*. A Name for the *Clematitis*; *ſive Flammula*; *ſurrecta*; *alba*.

FLAMMULA is, alſo, a Name for ſeveral Species of the RANUNCULUS.

FLATUARII. Chymiſts.

FLATUS. Flatulencies; that is, Air contain'd in any Cavity of the Body, and rarefy'd by the Heat of the Part: Hence Diſtentions, uneaſy Senſations, and, frequently, Pain.

FLAVII *Clementis Medicamentum*. The Name of a Medicine for the Gout, deſcrib'd by *Actuarius*, *Meth. Med. L.* 6. *C.* 8.

FLEMEN. A Tumor about the Ancles. But it ſometimes imports callous Sulci, or Furrows, in the Hands or Feet.

FLERESIN. A Name for the Gout.

FLEXOR. A Name apply'd to many Muſcles, which are ſo call'd from their Office, which is to bend the Part to which they belong.

FLEXOR CAPITIS. See RECTUS INTERNUS MAJOR.

FLEXOR CARPI RADIALIS.

This ariſeth tendinous from the internal Extuberance of the Os Humeri; and, becoming fleſhy, adheres ſtrictly to the *Pronator Radii Teres*; and in half its oblique Progreſs to the Carpus, it becomes a flat Tendon, which paſſes under the annular Ligament, and is inſerted into the upper Part of the *Os Metacarpi*, which ſuſtains the fore Finger.

FLEXOR CARPI ULNARIS.

This ariſeth partly fleſhy, but principally tendinous, from the ſame Tubercle of the Shoulder-bone with the former, as alſo from the ſuperior and external Part of the Ulna, where the *Muſculus Perforans* ariſes; and, continuing fleſhy, according to the Length of the Ulna, is partly inſerted by a ſhort ſtrong Tendon into the fourth Bone of the Carpus, and partly into the Os Metacarpi, which ſuſtains the little Finger.

FLEXORES PRIMI INTERNODII DIGITORUM. See LUMBRICALES MANUS.

FLEXOR POLLICIS LONGUS.

This is an Antagoniſt to the *Extenſor Longus*, ariſing oppoſite to it from the back Part of the Fibula, with a double Order of fleſhy Fibres, running to a middle Tendon, like the *Flexor Tertii Internodii Pollicis Manus*. It ceaſeth to be fleſhy, as it paſſes over the Juncture, and runs through a Chanel on the internal Part of the Os Calcis, under the Tendon of the *Muſculus Flexor Digitorum Longus Perforans*, to which Tendon it ſends off a fleſhy Slip over the following Muſcle, and is inſerted into the upper End of the ſecond Bone of the great Toe.

FLEXOR POLLICIS BREVIS

Is ſhort, thick, and fleſhy, ſeemingly divided into two Muſcles, by the Tendon of the former paſſing over it. It ariſeth from the ſuperior of the *Os Cuneiforme Medium*, and, running over the Termination of the *Muſculus Peronæus Primus*, is implanted into the Oſſa Seſamoidea of the great Toe, which are likewiſe tied to the ſuperior Part of the ſecond Bone of that Toe.

FLEXOR PRIMI INTERNODII DIGITORUM PEDIS. See LUMBRICALES PEDIS.

* *Galen* tells us, *de Comp. Pharmac. ſec. locos, Lib.* 5. *Cap.* 2. that the Antients proceeded ſo cruelly in the Cure of this Fiſtula, that they pour'd melted Lead through a Funnel upon it.

FLEXOR SECUNDI INTERNODII DIGITORUM MANUS. See PERFORATUS MANUS.

FLEXOR PRIMI ET SECUNDI OSSIS POLLICIS.

This is a large, disgregated, fleshy Muscle, arising from the *Ligamentum Transversale Carpi*, the Bones of the Carpus at the Basis of the *Mons Lunæ*, and the *Os Metacarpi* of the middle Finger, whence it passes to its Insertion into the first and second Bones of the Thumb. That Part of this Muscle, which arises from the *Os Metacarpi* of the middle Finger, is divided from its other Part by the Tendon of the *Flexor Pollicis Longus* passing between them. Besides which, there is a second Division of this Muscle in that Part, which arises from the *Os Metacarpi*, insomuch that it has the Appearance of three distinct Muscles, as *Vesalius* observes. In its Tendon, near the Insertion into the first Bone of the Thumb, are plac'd two Sesamoide Bones.

Its Actions are various, according to the Diversity of its Series of Fibres, bending the Thumb, either directly or obliquely, whether towards the Carpus, or the Palm of the Hand, which Motions are frequently made use of by Jugglers.

FLEXOR SECUNDI INTERNODII DIGITORUM PEDIS. See PERFORATUS PEDIS.

FLEXOR TERTII INTERNODII SEU LONGISSIMUS POLLICIS.

This we have frequently observ'd to have a twofold Beginning; the first and superior of which arises tendinous from the internal Extuberance of the *Os Humeri*, between the *Perforatus* and *Perforans*, becoming a fleshy Belly, and then tendinous again, before it joins with the middle Tendon of its other larger Head. The first Head is sometimes wanting, and sometimes it is found springing from the superior and fore Part of the *Ulna*. The second or inferior Origin of this Muscle is that Part of it, which is commonly describ'd, arising with a double Order of fleshy Fibres, for some Space on the *Radius*, from immediately below its superior Part, which unite in a middle Line or Tendon (not unlike the Fibrillæ of a Feather joining to their Stamina); and, passing over the Articulation of the *Carpus*, it becomes entirely tendinous, as it runs over the *Flexor Primi & Secundi Internodii* to its Implantation at the superior Part of the third Bone of the Thumb. For the better Dissection of the rest of the Muscles of the Thumb, raise first the *Abductor Pollicis*. *Cowper*, 84.

FLEXOR TERTII INTERNODII DIGITORUM MANUS. See PERFORANS MANUS.

FLEXOR TERTII INTERNODII DIGITORUM PEDIS. See PERFORANS PEDIS. *Cowper's Myotomia Reformata.*

FLOCCUS. A Flock of Wool, or the Knap of Cloth. The picking of Flocks out of the Bed-clothes is esteem'd a Sign of an approaching Delirium, and is of bad Presage. See DELIRIUM.

FLOS ADONIS. See ADONIS FLOS.

FLOS ÆRIS. See ÆS.

FLOS AFRICANUS. See AFRICANUS FLOS.

FLOS AMBERVALIS. A Name for the *Polygala*; *vulgaris.*

FLOS AMORIS. A Name for the AMARANTHUS.

FLOS ARMERIUS. A Name for several Sorts of CARYOPHYLLUS.

FLOS AURICULÆ. See XOCHINACAZTLIS.

FLOS CARYOPHYLLÆUS. See STATICE.

FLOS CONSTANTINOPOLITANUS. A Name for several Sorts of *Lychnis.*

FLOS CUCULI. See ARMERIA.

FLOS MIRABILIS. A Name for the *Jalapa*; *flore flavo.*

FLOS PASSIONIS. A Name for several Sorts of *Granadilla.*

FLOS REGIUS. A Name for several Sorts of DELPHINIUM.

FLOS SOLIS. See CORONA SOLIS.

FLOS TINCTORIUS. A Name for the *Genista*; *tinctoria*; *Germanica.*

FLOS TRINITATIS. A Name for the *Viola*; *tricolor*; *hortensis*; *repens.*

FLOS TROLLIUS. A Name for the *Helleboro-ranunculus*; *flore luteo globoso.*

FLOS SALIS. The Flower of Salt flows down with the River *Nile*; it is also found on the Surface of some Lakes. Chuse such as is of the Colour of Saffron, has somewhat of a rank Smell like Garum, and sometimes ranker, with a biting Taste, and a fattish Substance. What is colour'd with Minium, or is grumous, is to be rejected. Besides, what is pure and genuine is not to be dissolv'd but in Oil, whereas the adulterated is partly dissoluble in Water.

It is effectual against malignant and phagedenic Ulcers, Nomæ in the Pudenda, and Purulencies in the Ears; it also cures Dimness of Sight, and removes Specks and Albugos from the Eyes. It is mix'd with Plaisters and Ointments, as also with Oil of Roses, for the sake of the Colour it communicates to them. Taken inwardly, in Wine or Water, it provokes Sweat, disturbs the Belly, and incommodes the Stomach. It is, also, an Ingredient in Acopa and Smegmata, for extenuating the Hair: In general, it is of an acrimonious and pyrotic Quality, as are all Salts themselves. *Dioscorides, Lib.* 5. *Cap.* 129.

FLORES. Flowers, in Chymistry, are the most subtile Parts of Bodies, separated from the more gross Parts by Sublimation, in a dry Form. Thus there are Flowers of Antimony, of many Sorts; of Benzoin; of Bismuth; of Tin; of Sal Ammoniac; and of Sulphur; which see under their respective Articles. Mace is, also, sometimes call'd the Flowers of Nutmeg.

FLUCTUATIO. Fluctuation. A Term in Surgery generally us'd with respect to Abscesses, in which Matter is form'd; for then it is perceiv'd by the Fingers to fluctuate in the Tumor, or move in the manner of a Wave.

FLUOR ALBUS. The Fluor Albus is a cachectic Disorder, consisting in an irregular Discharge of an impure, mucid, and generally whitish Humour, from the Female Pudenda, and accompanied with very considerable Inconveniencies, and Diminution of the natural Functions.

Tho' Women, in the Flower of their Age, are, generally, most subject to this Misfortune; yet such as are pretty far advanc'd in Years are not exempted from its Tyranny, as *Hippocrates*, in his second Book *de Morbis Mulierum*, long ago observ'd. There are, also, various Instances of Girls, of six or seven Years of Age, who have labour'd under it, as may be seen in *Fernelius, Lib.* 6. *Pathol. Cap.* 16. in *Rodericus a Castro, Lib.* 1. *Morb. Mulier. Cap.* 14. and in the *Act. Haffnienf. Vol.* 1. *Obf.* 83. This Discharge generally appears in Women of thirteen or fourteen Years of Age, at which time an Eruption of the Menses usually happens. Nor are married Women, whether pregnant or not, at all times free from the Attacks of this Disorder; for I have known pregnant Women afflicted with it during the whole Time of their Gestation. We also find, from Experience, that those Women are more subject to it, than others, whose Nerves and Fibres are highly lax, and less solid than they ought to be, or whose Constitutions abound with Serum.

It is call'd an irregular Discharge, because it is not stated and periodical; for in some it is daily and continually made, whereas in others it appears at certain Intervals; twice, for Instance, or thrice a Month; tho' there are not wanting Instances of its returning periodically, and at stated Times. It sometimes precedes, sometimes accompanies, and sometimes follows, the menstrual Discharge; whilst, on other Occasions, it appears in the intermediate Time between the Discharges of the Menses. Besides, when it is very violent, it appears instead of the Menses, and afflicts Women whose Age has render'd them free from Evacuations of this Kind.

The Matter of this Discharge differs as to Colour and Consistence, as *Platerus, in Prax. Tom.* 3. has judiciously observ'd in the following Words: "In this Disorder, says he, the "Humour is sometimes serous, and generally copious; at other "times limpid, without exciting a pungent Sensation; some"times acrid, or saline; at other times yellowish, greenish, "somewhat blackish, or even sanious; sometimes inodorous, "and at other times fetid. With the Serum is, also, some"times mix'd a pituitous Humour, somewhat glutinous, and "odorous, and cold; sometimes in a smaller, sometimes in an "equal, and sometimes in a larger Quantity than the Serum."

This Disorder, when moderate, is attended with so mild a Train of Symptoms, that Women, both married and unmarried, may, for several Months, and even Years, labour under it, without any signal Inconvenience. But when it becomes immoderate, it is accompanied with a Cachexy, or bad Habit of Body: Hence arises not only a considerable Languor and Weakness of the Functions, but also an Itching, a Heat, and Sense of Pungency, in and about the Pudenda. In some Women this is a great Hindrance to Conception, and in others none at all. And, if the Matter discharg'd is fetid, it is not only troublesome to the Woman, but generally so loathsome to the Husband, that he abhors the Embraces of his Wife.

That this Disorder bears a near Affinity to a Cachexy, is beautifully shewn by *Hippocrates*, in his second Book *de Morb. Mulierum*, in the following Words: "The Matter, says he, "discharg'd, resembles the white Urine of an Ass. White "Swellings appear on the Patient's Face; the Parts below her "Eyes swell, her Eyes are disorder'd, and appear as if she "was dropsical, the Colour of her Skin is whitish, and the "lower Part of her Abdomen tumid; on her Legs appear "Tumors, so soft and lax, as to retain the Impressions of the "Finger; she perceives a biting Pain of the Stomach, and "seems to feel an acid Water lodg'd in it, when she is either "fasting, or happens to vomit; when she goes up a steep "Place, she is seiz'd with a Shortness of Breathing, her Legs are "cold, her Knees feeble, and her Uterus preternaturally open'd, "and

"and fallen down, with a Senſe of Weight, to its Mouth. "But it is difficult to cure thoſe who labour under this Degree "of the Diſorder." Theſe Aſſertions of *Hippocrates* are by no means to be underſtood of a moderate and beginning Fluor Albus, but rather of one of the chronical and obſtinate Kind; whoſe firſt Cauſe and Source is a deprav'd State of the Solids and Fluids, but more eſpecially a preternatural Weakneſs of the Stomach; for, as that chylous, lymphatic, mild, and ſubtile Fluid, which imparts Strength and Tone to the ſolid Parts, is too copiouſly carried off by the Veſſels of the Uterus, it muſt neceſſarily happen, that the elaſtic and ſyſtaltic Force of the Heart and Arteries, together with the periſtaltic Motion of the Stomach and Inteſtines, muſt be impair'd. Hence a Languor and Loſs of Strength enſue; and the Digeſtion of the Stomach being deſtroy'd, crude and viſcid Juices, accumulated and convey'd to the Maſs of Blood, not only ſpoil Nutrition, and deform the Countenance, but alſo impair the Vigour of the Mind, and induce Melancholy and Depreſſion of the Spirits.

As the Seat of this Diſorder is the Uterus, we ſhall take an accurate anatomical View of its Structure, eſpecially that of its Veſſels. No Part of the Body, then, is furniſh'd with ſo large a Number of Veſſels as the Uterus. The moſt conſiderable of theſe are the ſpermatic Arteries and Veins, which reach the Ovaries, and are, by copious Ramifications, convey'd to the Bottom of the Uterus. The Ramifications alſo of the hypogaſtric Vein and Artery are diſtributed, not only to the middle and inferior Parts of the Uterus, but alſo to the Vagina. Theſe Blood-veſſels, copiouſly diſpers'd through the Subſtance of the Uterus, are diſtributed in highly winding and ſerpentine Directions. But the exquiſite Union or Connection of the Veſſels of the Uterus by Anaſtomoſes, has this peculiar to itſelf, that Canals, of different Bulks, terminate in a large Number of ſmall Cells, which communicate with each other, and are of an oval Figure, a Circumſtance which renders the Subſtance of the Uterus fungous and ſpongy. It is, alſo, to be obſerv'd, that the hypogaſtric Veins, which carry back the Blood, are not only as large again as the hypogaſtric Arteries, but, alſo, that the ſpermatic Veins are not ſtraight, but run in a highly winding and crooked Direction, ſo that, if they were to be unravel'd, their Length would amount to ſeveral Ells, and be far greater than that of the ſpermatic Arteries.

From this peculiar Structure of the Veſſels of the Uterus it is ſufficiently obvious, that the Blood muſt circulate ſlowly through theſe Veins, eſpecially ſuch of them as are deſtitute of Valves; and from this anatomical Theory we may commodiouſly account, not only for the Diſcharge of the Menſes, but alſo for all the Misfortunes to which the Uterus is ſubjected. Hence the Reaſon is ſufficiently obvious, why Women, both married and unmarried, are ſometimes afflicted with ſo long and ſo troubleſome a Diſcharge of Serum of different Colours and Conſiſtencies from the Uterus and Vagina; for as the Tone and Motion of the Uterus, which depend on a due Conſtriction and Dilatation of its Fibres, are eaſily injur'd and weaken'd; as the Motion of the Blood and Humours is highly ſlow through the winding and ſerpentine Veſſels of the Uterus; and as the Return of the Blood is very ſlow through the Veins which are deſtitute of Valves, hence not only Infarctions and Stagnations of Blood and Serum are eaſily produc'd in the Uterus, but, alſo, the ſerous and lymphatic Humour, becoming viſcid, by the Slowneſs of its Motion, finds a Paſſage for itſelf, and is diſcharg'd through the ſmall Orifices which every-where occur in the Uterus and Vagina. It is the common Opinion of moſt Authors, that this Humour is ſecreted from the Lacunæ of *De Graaf*, or the ſmall Pits conſpicuous about the Urethra, and the Glands lodg'd in that Part. But in theſe Lacunæ there is ſcarce any Perforation found which admits the Point of a Briſtle; whereas on both Sides of the Orifice, and thro' all the Subſtance of the Vagina, there are a great many Lacunæ, which eaſily admit half a Finger's Breadth of a Briſtle; and, when their Ducts are preſs'd, they diſcharge an Humour not unlike the ſeminal Matter.

But tho' theſe Glands, when relax'd, may diſcharge a large Quantity of Humour, yet they are not the only Seat of the *Fluor albus*, ſince there are a great many more Paſſages from which the Matter of this Diſorder, as alſo the impure ſerous Liquor diſcharg'd both with and after the Lochia, are ſupply'd. And tho' *Ruyſch* denies, that the Glands of the Uterus could be ever ſeen or exhibited to the View; yet 'tis not to be doubted, but in a *Fluor albus* the Serum may be diſcharg'd from the ſmall Orifices, which, in the Menſes, give Vent to the Blood. For *Fantoni*, in his Anatomy, obſerves, that, when one blows into the Veins of the Uterus, the Air is convey'd into its Cavity, and the Vagina; and, *vice verſa*, by blowing into the latter, the Air may be convey'd into the former. Beſides, according to *De Graaf* and *Van Horne*, there are ſmall Perforations obſervable in the Neck of the Uterus. *Verheyen*, alſo, obſerves, that when the Uterus is macerated in Water, and kept in a gentle Heat for ſome time, many globous Corpuſcles are not only obſervable in the internal Surface of the Vagina, ſome in Cluſters, and others diſpers'd up and down; but alſo affirms, that he ſaw the like Corpuſcles, in the inferior Part of the Cavity of the Uterus, and that they are juſtly to be look'd upon as Glands, ſubſervient to the Secretion of a ſerous and pituitous Humour.

'Tis not, therefore, to be doubted, but in a *Fluor albus* the Matter is diſcharg'd from the ſame Veſſels and Ducts with the menſtruous Blood; and the Truth of this Aſſertion is evinc'd by this, that in ſome Women a Suppreſſion of the Menſes brings on a *Fluor albus*. That a white Fluid is diſcharg'd inſtead of the menſtruous Blood, is alſo obvious from an Obſervation of *Severinus Pinæus*, in his Treatiſe *de Notis Virginitat. Lib.* 1. *Prob.* 3. where this Author informs us, that, in diſſecting the Bodies of married and unmarried Women, who, during their Lives, had labour'd under a *Fluor albus*, tho' they were not cut off by that Diſorder, he found in the Uterus a highly limpid Humour, which dropt from its Cavity to the Vagina, where it became white, like a Calx diſſolv'd in Water, perhaps, by means of the cold Air interpoſing itſelf betwixt the ſerous Particles, not to mention a certain Acrimony, perhaps, deriv'd from the Glands of the Uterus.

Since, therefore, the immediate Cauſe of a *Fluor albus* is a Debility of the Fibres and Veſſels of the Uterus, and a retarded Circulation of the Blood thro' its Veſſels, by which means the Serum is ſeparated from the Blood, we muſt next inquire what remote and ſecondary Cauſes concur to produce and conſtitute this direct and immediate Cauſe. Now, nothing has a more immediate Tendency to relax the Tone of the Fibres, than a cold and moiſt Air. Hence the Reaſon is ſufficiently obvious, why in the Autumn, and in Places which are cold and moiſt, marſhy, low, vapid, and ſuch as are not ſufficiently purg'd by briſk and wholſome Winds, this Diſorder is moſt epidemical; and why, according to *Sylvius*, in *Prax. Lib.* 3. *Cap.* 4. the *Fluor albus* is more frequent in *Holland*, than in other Countries, eſpecially if any Error, with reſpect to Regimen, concurs; for all thoſe Aliments which, on account of their too great Viſcidity, cannot be eaſily digeſted, ſuch as leguminous Subſtances, Preparations of Milk, farinaceous Aliments, and ſuch as are too ſweet; as alſo Periwinkles, Oyſters, Fiſh inhabiting Ponds and Lakes, Summer Fruits copiouſly eaten, all Acids and Sallads, which, as they generate a glutinous and crude Chyle, unfit for Aſſimilation and Nutrition, greatly cheriſh and increaſe the *Fluor albus*; and this happens in a ſtill more remarkable Manner, when young Women, or even Infants, have a voracious Appetite. 'Tis alſo confirm'd by daily Experience, that ſuch Women, as are addicted to Eaſe, and a ſedentary Life, or indulge themſelves too much in Sleep, are much more ſubject to this Diſorder, than thoſe, who, by ſufficient Exerciſe and Motion, procure a due Degree of Strength to their Bodies. For this Reaſon, Country Girls are leſs ſubject to this Misfortune, than thoſe who live in Towns and Cities; and the former, by reaſon of their Labour and Exerciſe, enjoy a more conſtant and uninterrupted State of Health, than the latter.

We muſt alſo obſerve, that thoſe Women, who are ſubject to frequent mucous Defluxions from the Noſtrils, are, upon a Suppreſſion of theſe, generally ſeiz'd with the *Fluor albus*, ſince the Humour is tranſlated to the Uterus. But this happens moſt readily, when the menſtrual Diſcharge is not duly and regularly carry'd on: And, as ſoon as this happens, the State of Health begins forthwith to be impair'd, the Veſſels are fill'd with impure Humours, and the Foundations of a Cachexy are laid.

Having already conſider'd thoſe Cauſes which generate a Redundance of thoſe Humours which conſtitute the Matter of the *Fluor albus*, we now come to conſider thoſe Cauſes which diſpoſe the Uterus, the genuine Seat of this Diſorder, to it. The Cauſes, then, which concur to the Production of this Effect, are principally ſuch as, by relaxing the Veſſels and Fibres of the Uterus, deſtroy their due Tone and Strength; by which means the Maſs of Blood and Humours muſt neceſſarily be too ſlowly carry'd through ſo large a Number of winding Veſſels. Hence a Secretion of viſcid Serum will eaſily be made through the Pores of the Uterus. Hence, alſo, we obſerve, that, in marry'd Women, difficult Labours, which weaken the Uterus, frequent Abortions, and imprudent and violent Extractions of the Secundines, often lay a Foundation for this Diſorder. 'Tis, alſo, confirm'd by Experience, that thoſe Women who are ſubject to immoderate Diſcharges of the Menſes, as alſo thoſe who are deliver'd of Moles before the due Time, are generally afflicted with the *Fluor albus*; for all theſe Circumſtances indicate too great a Diſtention and Relaxation of the Veſſels, which muſt ſpeedily be remov'd by proper Corroboratives; otherwiſe, in Proceſs of Time, the Tone of the Veſſels cannot be reſtor'd without great Difficulty.

In order, not only to prognoſticate the Event of a *Fluor albus*, but alſo to take proper Meaſures for its Cure, it is highly neceſſary, accurately to diſtinguiſh it from other Diſcharges from the Uterus, which bear a kind of Reſemblance to it. Firſt, then, it ought not to be confounded with the ill-colour'd Menſes, to which ſome Women, eſpecially thoſe of the younger Kind, are ſubject; for, tho' theſe are peccant, yet they exactly keep their ſtated Period; whereas the Matter of a *Fluor albus*

not only varies in Colour and Conſiſtence, but is promiſcuouſly and irregularly diſcharg'd, either when the Menſes are irregular, or flow too copiouſly. 'Tis, alſo, of great Importance to diſtinguiſh a *Fluor albus* from a virulent Gonorrhœa, contracted by impure Embraces; for the Venereal Taint not only affects the glandulous Proſtatæ with Pain, but alſo the Vagina; which it ſo exulcerates, as to infect the Men who have the Misfortune to enjoy a Woman in ſuch a State. Beſides, the Diſcharge of the Venereal Matter is far leſs than that of the *Fluor albus*; but it is more acrid, creates a Heat, accompany'd with Pain, and continues when the Menſes flow, and when the Urine is diſcharg'd; whereas the *Fluor albus* either precedes, or comes after, the Menſes. Hence the celebrated *Baglivi*, in *Prax. Med. Lib. 2. Cap. 8. Sect. 3.* gives us an infallible Rule for diſtinguiſhing thoſe Diſeaſes from each other, in the following Words: "Aſk, ſays he, of the Patient, whether ſhe diſ-"charges this white Matter during the Time of her Menſes: "If ſhe ſays ſhe does, you may aſſure her, that ſhe labours "under a Gonorrhœa: But, if during the Time of her men-"ſtrual Diſcharge the white Matter diſappears, and again re-"turns when it is over, you may be ſure, that the Woman "only labours under a *Fluor albus*."

Nor is every Diſcharge of ſanious Matter to be accounted a virulent Gonorrhœa; for ſometimes, tho' rarely, Abſceſſes and Ulcers, free from every Degree of a contagious Quality, are form'd in barren Women. With reſpect to this Subject, the Reader may conſult *Claſius, in Obſ. Med. rarioribus, Obſ. 4. & 5. de Ulcere Muſculorum Uteri, Vaginæ, Vicinorum, & Uteri purulento.* Nor is every Eroſion and Exulceration a ſure Sign of a virulent Gonorrhœa; for in a *Fluor albus*, and ſtill more in ſcorbutic Patients, the Serum may acquire ſuch a Degree of Acrimony, as to corrode and exulcerate the adjacent Parts; but this Exulceration is accompanied with an uncommon Itching, and is more ſuperficial, and eaſily cur'd, than that in a Gonorrhœa. But, in order to prevent our forming a wrong Judgment in Caſes of this Nature, I think it expedient to inquire into the Caſe of the Patient, and accurately to examine every Circumſtance.

A *Fluor albus*, when moderate, recent, and produc'd by an external Cauſe, is not a dangerous Diſorder, and may be ſupported without any violent Symptoms for ſeveral Months, either by marry'd or unmarry'd Women. 'Tis, however, highly diſagreeable and troubleſome to the more delicate and cleanly Part of the Sex; becauſe, in Proceſs of Time, it deſtroys the Beauty of their Complexions. But that Species of *Fluor albus* is attended with worſe Conſequences, which, ariſing from a great Weakneſs of the Stomach, and a bad Habit of Body, has arriv'd at a conſiderable Height, or ſucceeds other Diſeaſes; for this Species of the Diſorder, by injuring all the Functions of the Parts, induces a remarkable Change on the whole Body; for frequently great Extenuation, accompanied by a ſlow Fever, is produced by it; and ſometimes it proves the Cauſe of Sterility, as *Hippocrates*, in the 42d *Aph.* of *Sect. 5.* has long ago obſerv'd, in the following Words: "Thoſe Women, who "have their Uterus too moiſt, cannot conceive, becauſe the "ſeminal Matter is extinguiſhed in them." And, in his Book *de Sterilitate*, he tells us, "that a Woman, whoſe Uterus is "ſlippery, cannot conceive; becauſe the Uterus ſuffers the "ſeminal Matter to fall out of it." Beſides, thoſe Women, who have long labour'd under the *Fluor albus*, are frequently and eaſily ſubject to Abortion; becauſe, in conſequence of the relaxed Tone of the Uterus, the Conception is not ſufficiently retain'd, but corrupted by a continual Defluxion of Matter, and, at laſt, expel'd. A Falling down of the Uterus is, alſo, frequently the Effect of this Diſorder.

Since, when this Diſeaſe is obſtinate, and of long ſtanding, it is ſo difficultly cur'd, as to be juſtly claſs'd among the Reproaches of Phyſicians, we ſhall inquire into the Cauſes which concur to render the Cure ſo difficult. The firſt, then, of theſe Cauſes ſeems to be, that Phyſicians place the immediate Cauſe of this Diſorder, only in a Redundance of an impure and contaminated Serum; whereas, they ought rather to direct their Views to the Fault of the Uterus, the Seat of the Diſorder, and the deſtroy'd Tone of its Veſſels; not neglecting, at the ſame time, ſuch Medicines as eliminate and diſcharge the Sordes. But, without doubt, the beſt Corroboratives, and great Pains, are requiſite to reſtore the natural Strength of the Uterus, in conſequence of the large Number of Veſſels interwoven with each other, and the ſlow Circulation of the Blood thro' them, by which the Veſſels and Glands, being too much relax'd, are depriv'd of their due and proper Tone. Another Cauſe why this Diſorder is cur'd with greater Difficulty than it otherwiſe would be, is, that generally Phyſicians either entirely overlook, or do not ſufficiently regard, the firſt Origin of the Diſorder, which is the Weakneſs of the Stomach; for, when the Digeſtion of the Aliments is not duly carry'd on, peccant Juices are convey'd to the Maſs of Blood; and even ſuch Subſtances as are eaſily digeſted, are converted to a bilious or pituitous Sordes, which create in the Stomach a nauſeous Senſe either of a rancid Fat, or of a Sweetneſs reſembling that of Honey, or of ſome ſour or nidorous Subſtance: Unleſs, therefore, the Fault is firſt corrected in the Primæ Viæ, all the Remedies exhibited for purifying the Blood, and eliminating the peccant Humours, will prove ineffectual. Nor is it to be forgot, as a Cauſe why this Diſorder is with Difficulty cur'd, that Women are naturally ſo obſtinate, as generally to neglect the Injunctions of their Phyſicians, ſince they indulge themſelves in all thoſe things, which contribute to induce the *Fluor albus*, ſuch as an idle Life, the Abuſe of ſweet Fruits, Acids, farinaceous Aliments, Tea and Coffee, drinking little, and ſleeping much, refrigerating their Abdomen and lower Parts, admitting the hot Steam of live Coals to their Pudenda, in the Winter-time, and drinking cold Liquors when the Body is over-heated; all which are highly prejudicial to Health, but ſtill more ſo when the Uterus has contracted any Diſorder by difficult Labour, Abortion, or any other Cauſe.

As for the general Intentions of Cure, the Primæ Viæ, and whole Body, are to be empty'd of the Redundance of peccant Serum, by proper Evacuants thro' the Emunctories allotted by Nature for that Purpoſe. Then the due Tone and Strength of the Uterus are to be reſtor'd, by the beſt choſen Remedies, both of the internal and external Kind, that the Circulation of the Blood and Humours may be the more eaſily and expeditiouſly carry'd on; and that, by this means, the Stagnation of the peccant Humours may be prevented, the Relaxation of the Glands remov'd, and the like Misfortunes guarded againſt for the future. After this, the Phyſician is to direct his Views to the State of the Stomach, that good Juices may be convey'd to the Maſs of Blood, in order to correct the peccant Humours, and reſtore the good and laudable ones, which are loſt. If the Diſorder is violent, and the Patient cachectic, the Phyſician is to endeavour to bring the Maſs of Blood and Humours to a better State, to promote the natural Excretions, and to reſtore the former Strength and Functions of the Viſcera.

The firſt Step, therefore, to be taken, is, to eliminate the recrementitious Sordes from the Primæ Viæ; which, however, is not to be done by violent Medicines, and draſtic Purgatives, but rather by thoſe of a mild and gentle Kind, which operate as Alteratives. My Opinion, with reſpect to this, ſays *Hoffman*, is confirm'd by the Authority of the ableſt Practitioners; among whom, I ſhall only mention the learned *Riverius*, who, in the eighty-ſecond Obſervation of his third Century, affirms, that, after he had try'd all other Medicines to no Purpoſe, he found ſingular Relief afforded by a laxative Ptiſan us'd for a Month; by means of which alone, a Woman, who had for a long time labour'd under a *Fluor albus*, was reſtor'd to perfect Health. This ſame Medicine is again highly extol'd in the fourth Chapter of the fifteenth Book of his *Praxis*. But, among the whole Claſs of laxative Medicines, none are more beneficial, in this Diſorder, than Preparations of Rhubarb; becauſe, beſides their laxative, they are alſo poſſeſs'd of a balſamic and bitteriſh Quality, by which they not only correct the peccant Acid, but alſo corroborate the weaken'd Parts: But, for this Intention, the beſt and moſt ſolid Rhubarb ought to be choſen, and not ſuch as is light and rotten. This Medicine may commodiouſly be mixt with others, anſwering the ſame End, and exhibited either in the Form of a Powder, an Infuſion, a Decoction, an Extract, or an Eſſence. The Powder may be thus prepar'd:

Take of the beſt Rhubarb, half a Dram; and of the *Terra foliata Tartari*, (otherwiſe call'd *Tartarus Regeneratus*) twelve Grains: Mix together for a Doſe.

A moſt uſeful Infuſion may be prepar'd in the following Manner:

Take of the beſt Rhubarb, ſix Drams; of the Roots of Zedoary, round Birthwort, and Burnet, and of Orange-peel, each three Drams; of the Seeds of Carrot, and ſtellate Aniſe, and Salt of Tartar, each one Dram and an half: Mix all together, to be put into one Pint of Wine.

The Extract is moſt commodiouſly mixt with Pills of a laxative and corroborative Nature, and may be prepar'd in the following Manner:

Take of the Extract of Rhubarb, of roſated Aloes, of Gum-Galbanum, of the beſt Myrrh, Gum Hedera, Gum Sandarach, Extract of round Birthwort, and Amber, each one Dram: Mix together, and out of each Dram make twenty Pills, with Eſſence of Peruvian Balſam.

When the *Fluor albus* is very violent, the Stomach highly weak, and the Viſcera much relax'd, I have always, ſays *Hoffman*, found the following Medicines of ſingular Efficacy:

Take of the fineſt Crocus Martis, or chalybeated cachectic Antimony, the Fæcula of Arum, the Salt of Wormwood,

and a Solution of Crabs-eyes, each one Dram; of the Bark of Caſcarilla, of Amber, and Cinnabar, each half a Dram; and of the Oil of Saſſafras-wood, ſix Drops: Mix up into a Powder; one Dram of which may be exhibited for a Doſe each Morning in Wine diluted with Water.

But the Operation of this Medicine will be ſtill more effectual and conſpicuous, if an Infuſion prepar'd of the Herbs Baum, Mint, Dead-nettle, Sage, and the Seeds of the Carrot, and ſtellated Aniſe, is drank after it. After this, in order to reſtore the Strength of the Stomach, and reſolve and eliminate the Sordes, the following Medicine is of ſingular Efficacy:

Take of the Eſſence of Amber, of Aloes-wood, of the acrid Tincture of Antimony, of the anodyne mineral Liquor, and of the Spirit of Hartſhorn, each half an Ounce: Of this Mixture fifty Drops, according to the State of the Patient, may be exhibited in ſome proper Infuſion, or Wine diluted.

Tho' the beſt and moſt proper internal Medicines for this Diſorder are already enumerated, yet 'tis ſometimes neceſſary their Virtues ſhould be aſſiſted by external Applications; the moſt celebrated of which are, from long Experience, known to be Baths prepar'd with corroborating nervous Species, and ſuch as are impregnated with a volatile oleous Salt; of which kind are the Herbs Marjoram, Savory, Thyme, Baum, Calamint, Feverfew, Southernwood, Origanum, Roſemary, and Hyſſop, together with the Flowers of *Roman* Chamomile, Bay, and Juniper-berries; all which ought to be included in a Bag, and boil'd gently in the Water for half an Hour. This Bag, whilſt the Patient ſits in the Bath, is to be applied to the Region of the Uterus. 'Tis alſo expedient, when the Patient is out of the Bath, to apply, in the Night-time, ſmaller Bags of the ſame kind gently boil'd in red Wine, to the Region of the Groin. Beſides, Suffumigations prepar'd of Tacamahac, Maſtich, Amber, Benzoin, and Frankincenſe, are of ſingular Service, when admitted into the Uterus.

As for the Regimen, 'tis neceſſary that, during the Cure of this Diſorder, the Diet ſhould be ſpare, ſlender, and of eaſy Digeſtion: The Patient muſt carefully abſtain from all Fleſhes, eſpecially ſuch as are of hard Digeſtion, pinguious, or ſmok'd; as alſo from Sea-fiſh, Preparations of Milk; and ſuch Subſtances as are leguminous, farinaceous, acid, or ſweet; and, if the Patient will eat Fleſh, that which is roaſted is preferable to that which is boil'd. For ordinary Drink we recommend a Decoction of China-root, Saſſafras-wood, red and yellow Sanders, the Wood of the Maſtich-tree, and Cinnamon. Good *Hungarian* Wine moderately drank at Meals, is, alſo, excellent for removing the Weakneſs of Digeſtion.

In a *Fluor albus*, whether of the ſimple or virulent kind, as alſo in Caſes where the Menſes have an unnatural Colour, nothing is more prejudicial than Aſtringents, whether internally exhibited, or externally applied; for, by their means, the ſerous Matter retain'd in the Uterus, and its Veſſels, is often concreted into a highly tenacious Maſs: Hence its Excretion is not only prevented, but alſo a large Tumor, hard to the Touch, is form'd in the Region of the Pubes, which, unleſs ſpeedily cur'd, ſcarce ever fails to bring on a Train of highly formidable Symptoms; for I have ſeen this Misfortune give Riſe to ſlow Fevers, attended with an Atrophy, a Phthiſis, purple Eruptions, ſuch Tumors as happen in a Tympanites, Defluxions which prey upon the Uvula and Tonſils; as, alſo, Scirrhuſes, Apoſtems, and almoſt incurable Exulcerations of the Uterus.

As uterine Peſſaries and Injections were highly eſteem'd, and frequently us'd, by the Antients, and eſpecially by *Hippocrates*, in ſome Diſorders peculiar to the Sex, ſo 'tis ſurpriſing their Uſe ſhould be baniſh'd from the modern Practice, ſince in certain Caſes, eſpecially where the Subſtance of the Uterus is injur'd, we are by Experience convinc'd of their ſingular Efficacy: For I myſelf have ſeen happy Effects produc'd by them in an inveterate *Fluor albus*, which would not yield to other Means, as alſo in Abſceſſes and Exulcerations of the Uterus; for as, in Men, inveterate Gonorrhœas, whether of the benign or malignant Kind, are not to be cur'd without Injections, ſo, alſo, in a *Fluor albus*, 'tis neceſſary that ſome powerful Remedy ſhould be immediately applied to the Part affected. But 'tis to be obſerv'd in general, that ſuch Injections are not to be us'd in large Quantities at one time, but frequently injected in ſmall Quantities, an Ounce or two, for Inſtance, at a time; but, for this Purpoſe, we muſt carefully abſtain from all ſuch Subſtances as are of a ſaline, acrid, too pinguious, or lubricating Nature.

Tho' in cachectic Caſes the *Caroline* Baths are highly efficacious, yet they are cautiouſly to be us'd, both internally and externally, when the Subſtance of the Uterus is injur'd, and too copious a Diſcharge of Serum made; and they muſt be us'd with ſtill greater Caution, when the Diſcharge is of the Venereal kind, the Parts exulcerated, and the Urine diſcharg'd with Pain, and containing a large Quantity of glutinous Matter, which ſubſides; for theſe Waters, by reaſon of the ſubtile calcarious Earth, with which they abound, are of an highly conſtricting Nature, when externally apply'd; and, when us'd internally, they injure the Parts relaxed and corroded by a corrupted Matter.

Chalybeate Waters are far more proper in Caſes of this Nature; ſuch as the Springs of *Laughſtad* and *Freyenwald*, which, when made into Decoctions with nervine Herbs, are highly efficacious in eliminating the ſuperfluous Serum by Perſpiration, and diverting the Courſe of the Humours from the Uterus.

I have often obſerv'd a large Diſcharge of Blood after a Suppreſſion of the Menſes for two or three Months, not by Pregnancy, but ſome other Cauſes, ſucceeded by a Fluor albus. For preventing both theſe Misfortunes, Veneſection, after duly weighing all Circumſtances, is to be adminiſtred; for the Veſſels of the Uterus, diſtended by too large a Quantity of Blood, loſe their Tone and Strength; ſo that Stagnations not eaſily to be remov'd happen in them.

In this Diſorder, Baths, whether of the dry or moiſt kind, are almoſt always rather pernicious than beneficial before the proper Uſe of Correctors, Corroboratives, and Evacuants; for as they put the peccant and impure Humours into too violent a Commotion, they often, not without the greateſt Danger, force them from a leſs to a more noble Part. Dry or *Laconic* Baths are of ſingular Service to phlegmatic Women, if the Body is previouſly freed from the ſuperfluous and recrementitious Humours, ſince, by promoting Sweat by means of the external Warmth, they reſtore the natural Strength to the Parts before too much relax'd, by the Excretion of the redundant Humidity.

If the Stomach is full of Crudities, as in this Diſorder it frequently is, mild Emetics are, with great Succeſs, frequently repeated: Among theſe, the beſt and moſt efficacious is Ipecacuanha, which is generally corroborating, and aſſiſts Perſpiration: The Elixir Viſcerale, mix'd with the Eſſence of *Caſcarilla*, and taken together with the Aliments, alſo produces very happy Effects.

After the Cure of an inveterate *Fluor albus*, if any Matter ſhould ſtill continue to drivel from the Pudenda, beſides the external and internal Medicines already mention'd, Suffumigations of Olibanum, Tacamahac, Maſtich, and Amber, are of ſingular Service, if commodiouſly apply'd to the Vagina; for they, in ſome meaſure, ſtrengthen and corroborate the relax'd Glands.

When ſcorbutic Women, ſuch as are infected with the Venereal Diſeaſe, or thoſe who are frequently ſubject to the purple Fever of the red kind, are ſeiz'd with the *Fluor albus*, they muſt carefully abſtain from hot Purgatives and Baths; and are, at firſt, to be mildly treated with fix'd Diaphoretics, and ſuch Medicines as powerfully reſiſt the Corruption of the Lymph. In a Caſe, therefore, of this kind, I with ſingular Succeſs order'd bezoardic Powders, in Conjunction with a Grain or two of Sulphur of Antimony, preſcribing, at the ſame time, a Decoction generally us'd in the Lues Venerea, and prepar'd of ſuch Roots and Woods as purify the Blood, with an Addition of crude Antimony. If by this means the Body is prepar'd for a Month or more, both internal and external Medicines will prove more effectual in promoting the Cure. *Frederic Hoffman.*

In the preceding Diſſertation there are many excellent Hints relative to the Cure of a *Fluor albus*; and the Caution he gives, eſpecially relative to the Uſe of Aſtringents, are never to be forgot by the prudent Phyſician; for, from the Uſe of theſe, very formidable Diſorders are frequently brought on. I muſt remark, that a Cancer of the Uterus, not unfrequently cauſes a *Fluor albus*, which is generally ſucceeded by Floodings and Death. A ſtrumous Habit of Body, alſo, frequently induces a *Fluor albus*.

FLUTA. The ſame as MURÆNA; which ſee.

FLUVIALIS. An aquatic Plant, of which *Tournefort* reckons three Species:

1. *Fluvialis Piſana Foliis denticulatis.* J. B.

2. *Fluvialis Foliis anguſtis dentatis. Fluvialis Species, anguſto brevique Folio undequaque Spinis infeſta.* Raii H. 3. 132.

The third Species is the *Algoides vulgaris*; for which ſee ALGOIDES.

FLUVIORUM, *vel* FLUVIALIS AQUÆ *Qualitates.* The Qualities of Rivers, or River-water.

The Waters of all Rivers and Pools are bad, except the Water of the River *Nile*, which is endu'd with all good Qualities; for it is pleaſant in drinking, ſtays but a moderate time in the Body, and quenches Thirſt; and, if it be drank cold,

it creates no Moleſtation, but is ſerviceable to Concoction and Digeſtion; whence it renders the Body graceful, robuſt, and florid. But the Waters of other Rivers are hard of Concoction, dry, and create a Thirſt, eſpecially if they paſs through a bad Soil. The beſt of this Sort are Streams which flow from never-failing Springs, and mix with no other River-waters. *Aetius, Tetrab.* 1. *Serm.* 3. *Cap.* 165.

FLUXIO. The ſame as CATARRHUS; which ſee.

FLUXUS, ῥύσις, ῥές, ῥύσις, a Flux, is ſometimes taken for all kinds of Defluxions, and in this Senſe is the ſame as *Catarrhyſis*, or *Catarrhus*; ſometimes it bears a reſtrained Senſe, as *Fluxus Ventris*, a Flux of the Belly, which is a continual Evacuation of humid Fæces, without a Teneſmus or Lientery, as *Galen* defines it, *Com.* 2. *in* 1 *Epid.* Again, there is a *Fluxus hepaticus*, an hepatic Flux, when from an Imbecillity of the Liver proceeding from a cold Diſtemperature of that Part, the Excrements are render'd very like Water in which Fleſh newly killed has been waſhed. *Galen, Lib.* 5. *de Loc. affec. Cap.* 7. *Sylvius Prax. Med.* ſays, he never knew this Affection, but he thinks the Cauſe of it to conſiſt in a Redundance of Serum in the Blood, attended with a Relaxation of the Veſſels. *P. Barbette* ſuppoſes it to be a Species of the *Fluxus Hæmorrhoidalis*. Sometimes *Fluxus*, ῥύσις, is taken in the ſtricteſt Senſe for the *Fluxus muliebris*, as in ſeveral Places of *Hippocrates de Nat. Mulieb.* Of this there are various Kinds with reſpect to the Colour of the Excretions, ſuch as the *Fluor albus*, which ſee before; the *Fluor ruber ſive cruentus*, which is the ſame as the MENSES; or, if the Flux be different from the two preceding, it proceeds from the ſame Cauſe as other Hæmorrhages, that is, a Solution of Continuity of the Veins of the Uterus from a Redundance or Acrimony of the Blood. *Fluxus*, ῥύσις, is alſo ſpoken of a Flux, or Falling off of the Hair, as in *Trallian, Lib.* 1. *Cap.* 2. *Caſtellus.*

FOCALE, a Kerchief, or Muffler, worn by the Antients about the Neck, to guard the Fauces from the Injuries of the Air. It is ſtill much in Uſe among the *Germans.*

FOCHA. It is not certain what it means: *Coſtæus* and *Magius*, the Tranſlators of *Avicenna*, expound it of a ſort of Drink made of Barley, or elſe of Raiſins. *Avicenna*, in one of his Treatiſes, gives the Name *Focha* to an aromatic Drink prepared for exciting Venery. *Caſtellus.*

FOCILE MAJUS ET MINUS, the greater and leſſer Focil, are Names for the two Bones of the fore Arm, the *Ulna* and *Radius*; for which ſee BRACHIUM. The ſame Terms are apply'd to the Bones of the Leg, the *Tibia* and *Fibula.*

FOCKIL. A Species of SOLANUM, which grows in *Java. Bontius.*

FOCOT GUEBIT. A Species of Poplar. *Ray Index.*

FOCUS, ἑστία, in Metallurgy, according to *Rulandus* and *Johnſon*, is a Smelting-houſe for Metals. *Focus Morbi*, the *Focus* of a Diſeaſe, is the Part where it is ſuppoſed to keep its principal Reſidence, and whence it communicates its noxious Influence; for Inſtance, the *Focus* of a Fever, according to *Galen, Lib. de Maraſmo, Cap.* 7. is that Part of the Body which firſt contracts an immoderate Heat in its ſolid Subſtance; or, as he expreſſes himſelf in another Place, *M. M. Lib.* 11. *Cap.* 20. the *Focus* of a Fever is that Part where the Obſtruction, Putrefaction, or Inflammation, lies. Among ſome antient Anatomiſts the firſt Lobe of the Liver was called the *Focus*, from a Perſuaſion that it contributed to Concoction; the ſecond was called *Menſa*, the Table, becauſe the Aliments were imagin'd to be plac'd thereon; the third *Culter*, the Knife; and the fourth *Auriga*, the Carrier, as ſuppos'd to be inſtrumental in the Diſtribution of the Aliment.

FODINA. A Name given by ſome Anatomiſts to that turning and winding Cavity of the Ear called *Labyrinthus*, the Labyrinth.

FŒDULA. A Species of *Fungus. Rulandus.*

FŒNICULUM.

The Characters are;

The Root is fibrous; the Leaves capillaceous; the Petals of the Flowers entire; the Seeds oblong, ſomewhat thick, gibbous, and ſtriated.

Boerhaave mentions eight Species of this Plant; which are,

1. Fœniculum; vulgare; Germanicum. *Boerh. Ind. A.* 48. *Rupp. Flor. Jen.* 224. *Mor. Umb.* 3. *Hiſt. Oxon.* 3. 276. *C. B. Pin.* 147. *Fœniculum*, Offic. *Fœniculum vulgare*, Ger. 877. Emac. 1032. Park. Theat. 884. Raii Hiſt. 1. 457. Synop. 3. 217. *Fœniculum vulgare minus, acriore & nigriore ſemine.* J. B. 3. 2. Tourn. Inſt. 311. Elem. Bot. 260. *Marathrum ſeu Fœniculum.* Chab. 381. FENNEL, or FINCKLE.

Our ordinary Fennel has pretty large, thick, white Roots, which run deep into the Earth, without much dividing, beſet with ſmall Fibres. It has large winged Leaves, branch'd into ſeveral Segments of long, ſlender, very fine, capillaceous Parts, of a dark-green Colour, and ſometimes a little reddiſh; the Stalk grows to be four or five Foot high, much divided, and full of whitiſh Pith: The Flowers grow on the Tops of the Branches, in flat Umbels, of ſmall yellow five-leav'd Flowers, each of which is ſucceeded by a Couple of roundiſh, ſomewhat flat, ſtriated Seed. The whole Plant has a pretty ſtrong, but not unpleaſant Smell. It is generally planted in Gardens to be near at hand, but it grows wild in ſeveral Places toward the Sea-coaſt; and at *Woolwich* and *Graveſend* it is frequently met with: It flowers in *June.* The Leaves, Root, and Seed, are in Uſe; the Root being one of the five opening Roots, and the Seeds one of the great carminative Seeds.

FOENICULUM, μάραθρον, ſeems to be a Diminutive from *Fœnum*, Hay; becauſe, when wither'd and dry'd like Hay, it is in like manner repoſited againſt Winter. *C. B.* Others think it ſo called, becauſe when ſown it returns the Seed *magno cum Fœnore*, with vaſt Intereſt. *Marathron*, μάραθρον, ἀπὸ τῦ μαραίνεσθαι, from withering, becauſe, when dry and wither'd, it is much us'd in ſeaſoning a great Variety of Things.

In putrid Fevers, attended with a Malignity, we ſhall hardly find a Plant more aperitive and diſcuſſive, by means of Sweat, than Fennel; whence nothing can be more proper in the Small-pox and Meaſles, than a Decoction of the Herb, or its Seeds or Roots. *Sim. Pauli.*

The Seeds, taken in Powder every Morning, faſting, with Sugar, wonderfully ſharpen the Sight. The dry'd Seeds, infus'd in Vinegar, with an equal Quantity of Cinnamon, and an Addition of Sugar, is an excellent Preſervative of the Sight, and reſtores it when weak, or decay'd through Age; ſo that Perſons eighty Years old, and quite dim, have, by means hereof, recovered the Uſe of their Eyes, to a Degree almoſt incredible. *Arnaldus de Villa nova.* Inſtead of Sugar, it would perhaps be more convenient to make uſe of Honey. Nothing is more effectual for Dimneſs of Sight than Fennel-ſeed, ſays *Tragus.* Of the ſame Efficacy is the Juice of the Flowers or Root, or the diſtil'd Water, dropped into the Eyes.

Beſides, the Seed corroborates the Stomach, and cures a Nauſea, or Loathing. *C. Hoffman* aſſerts, the Seed or green Herb of other Plants, are ſo far from promoting Concoction, that they rather hinder it. What has been ſaid is ſpoken of the dry Seed, which is alſo a noble Carminative, according to the well-known Verſe,

Semen Fœniculi reſerat Spiracula Culi:

The Seed of Fennel forces Vent for Winds below:

And, mix'd with other Pectorals, gives Relief under an Aſthma, and is alſo an Alexipharmac. The Leaves, boiled in Barley-water, increaſe Milk in Nurſes; and a Decoction of the Leaves or Seed eaſes the Pains of the Kidneys, provokes Urine, and expels the Stone. The Roots provoke the Menſes, and are ſuppos'd to open Obſtructions of the Liver and Spleen, and to cure the Jaundice. The whole Herb, boiled in Broth and Soops, is accounted good to extenuate an exceſſive Fatneſs and Obeſity of Body. The *Italians* and Inhabitants of *Languedoc* and *Provence* make the tender Shoots with a Bit of the upper Part, whence they ſpring, ſeaſon'd with Oil and Pepper, ſerve at a ſecond Courſe at Table, inſtead of ſweet Smallage. It is uſual with us to put the Leaves, cut ſmall, into Vinegar, as Pickle for boil'd Fiſh, as Salmon, Pike, Sturgeon, and others.

For a Quartan and other Fevers, take of the Juice of the Root of Fennel, four Ounces; ſweeten it with Sugar; and let the Patient drink it, for ten Days together, in the Morning, faſting. *Zacutus*, who ſays it mightily provokes Sweat, to thoſe who are well cover'd in Bed, to others, Spitting of viſcous Phlegm, and, to others, fetid Eructations, or Diſcharges of Wind downwards, calls it an eaſy, but uſeful Remedy.

Joannes Crato, Phyſician to the Emperor of *Germany*, ſaw a Monk, who was cur'd by his Tutor, in nine Days, of a Cataract, by only applying the Roots of Fennel, boiled in Wine, with the Decoction, to the Eyes.

A Woman, feeling her Child deſcend to the Pecten before the due Time, with other Signs of Abortion, applied a Cataplaſm prepar'd of toaſted Bread, with Vinegar, and the Powder of Fennel-ſeeds, to the fore Part of the Belly, under the Navel, and behind alſo as far as the *Os ſacrum*; by which means all the Symptoms were immediately remov'd; for Fennel is excellent for preventing Abortions. *Ray, Hiſt. Plant.* 457.

Officinal Preparations are a ſimple Water from the Leaves, and a diſtil'd Oil from the Seeds. *Miller's Bot. Offic.*

The Steam of the Decoction of Fennel excellently cleanſes the Eyes, and ſtrengthens the Sight. 'Tis, alſo, highly beneficial in Diſeaſes, as we are inform'd by *Gabelchoverus Centur.* 1. *Curat.* 60. *in Annotat.* A Decoction of this Plant is alſo ſerviceable, in increaſing the Quantity of Milk in Nurſes, as we are told by the ſame Author, *Centur.* 6. *Curat.* 86.

Hoffman de Præſtantia Remediorum Domeſticorum.

2. Fœni-

2. Fœniculum, vulgare; Italicum; Semine oblongo; guſtu acuto. *C. B. P.* 147. *M. H.* 3. 270.

3. Fœniculum; Foliis atrovirentibus. *H. Edinb.* 122.

4. Fœniculum; dulce. *Offic. Ger.* 877. *Emac.* 1032. *Park. Theat.* 884. *C. B. Pin.* 147. *Boerh. Ind. A.* 48. *Mor. Umb.* 3. *Hiſt. Oxon.* 3. 270. *Raii Hiſt.* 1. 458. *Fœniculum dulce Majori & albo Semine.* J. B. 3. 4. Tourn. Inſt. 311. Elem. Bot. 260. Rupp. Flor. Jen. 224. Chab. 381. SWEET FENNEL.

The ſweet Fennel grows not ſo tall as the common, otherwiſe they are much alike; the main Difference being in the Seed, which is longer and narrower, not ſo flat, but for the moſt part ſomewhat crooked, of a yellower Colour, and of a much ſweeter Taſte. The Seed is brought to us from *Germany*, and is much of the Nature of the common Sort; but is accounted better, and is therefore more us'd in the Shops; though *Parkinſon*, upon his own Experience, prefer'd the Seed of the common Fennel before this. *Millers Bot. Offic.*

It agrees in Virtues with common Fenel.

5. Fœniculum; ſylveſtre. C. B. P. 147.

6. Fœniculum; ſylveſtre; glauco folio. T. 311.

7. Fœniculum; marinum; altiſſimum; anguſtifolium.

8. Fœniculum; tortuoſum. *J. B.* 3. 16. *Raii Hiſt.* 1. 460. *Boerh. Ind. A.* 48. *Tourn. Inſt.* 311. *Elem. Bot.* 260. *Seſeli Maſſilienſe*, Offic. Ger. 834. Emac. 1051. *Seſeli Maſſilienſe Fœniculi folio, quod Dioſcoridis cenſetur*, C. B. Pin. 161. Park. Theat. 903. *Seſeli Maſſilienſe folio Fœniculi craſſiore*, Bot. Monſp. 239. *Seſeli Maſſilioticum Fœniculi folio*, Schrod. 137. *Fœniculum tortuoſum Monſpelienſium, Seſeli Maſſilienſe multis*, Chab. 384. *Saxifraga montana, minor, Fœniculum tortuoſum dicta*, Hiſt. Oxon. 3. 273. FRENCH HARTWORT.

It is cultivated in the Gardens of Botaniſts, and flowers in *Auguſt*. The Part us'd is the Seeds, which are white and ſtriated, of an aromatic Taſte, attended with ſomewhat of Acrimony. They are hot and dry, provoke Urine and the Menſes, and enter the Compoſition of the *Theriaca Andromachi*.

FOENICULUM *Sylveſtre*. A Name for the *Seſeli*; *perenne*; *folio glauco breviori*; and for the *Seſeli*; *perenne*; *folio glauco longiori*.

FOENICULUM *Alpinum*. A Name for the MEUM.

FOENICULUM *Porcinum*. A Name for the *Peucedanum, Germanicum*.

FOENIX *vel* PHÆNIX, the Son of one Day, the Philoſophers Stone. *Rulandus*.

FOENUM BURGUNDIACUM. A Name for the *Medica*; *major*; *erectior*; *floribus purpuraſcentibus*.

FOENUM GRÆCUM.

The Characters are;

It has a flat Pod, ſhap'd like a Horn, and generally full of Rhomboidal or Kidney-ſhap'd Seeds, mark'd with a hollow Line reaching from Corner to Corner.

Boerhaave mentions ſeven Species of this Plant; which are,

1. Fœnum Græcum; ſativum. *C. B. Pin.* 348. *Park. Theat.* 1096. *Hiſt. Oxon.* 2. 166. *Rupp. Flor. Jen.* 213. *Tourn. Inſt.* 409. *Elem. Bot.* 326. *Boerh. Ind. A.* 2. 32. *Fœnum Græcum.* Offic. Ger. 1026. Emac. 1196. Raii Hiſt. 954. Chab. 167. *Fœnugræcum.* J. B. 2. 365. FENUGREEK. *Dale, p.* 227.

Fenugreek is one of the trifoliated leguminous Plants, growing a Foot or two high, having the Stalks ſet alternately with Leaves like Trefoil, round-pointed, and a little indented about the Edges: The Flowers grow ſingly with the Leaves, and are white and papilionaceous, much leſs than the Bloſſom of a Pea; theſe are ſucceeded by very long ſlender Pods, ſomewhat flat and full of yellow hard ſquare Seed, of a very ſtrong unpleaſant Smell. The Root is ſmall, and periſhes every Year; it is ſown in ſeveral Parts beyond Sea, for the ſake of the Seed, which comes from *Germany*, and is the only Part us'd.

It is rarely given inwardly, but is us'd in Fomentations, Baths, Cataplaſms, and emollient Glyſters; being ripening, diſſolving, anodyne, and good for all kind of Tumors and Swellings, to which Purpoſes the Farina, or Powder, in very effectual.

Fenugreek is ſown in many Places, but I know not any where it grows ſpontaneouſly. The farinaceous Subſtance of the Seed, which is the only Part in Uſe, is emollient, digeſtive, maturating and diſcutient, and alſo paregoric; it is of ſo great Service in Medicine, that Surgeons very rarely prepare a Cataplaſm, for any of the aforeſaid Intentions, without a Mixture of Fenugreek, or its Mucilage. It is a common Ingredient in emollient Clyſters; for by its mucilaginous Subſtance it blunts the Acrimony of the Humours, and covers over the Eroſions of the Inteſtines with its ſlimy Parts. Its Mucilage is alſo of Service in diſcuſſing the Marks of Sugillations about the Eyes, being thereto apply'd. The Antients held the Decoction to be effectual in very many Diſorders incident to Women.

For the SCIATICA,

Take of Fenugreek boiled in Hydromel to a Diſſolution, a ſufficient Quantity; bruiſe it, and boil it again with Honey; then ſpread it upon a Cloth, and apply it to the Part: It gives immediate Relief under this Diſtemper as well as the Gout, and all Pains of the Joints, as we are told by *Bayrius*. This Preſcription was communicated to Mr. *Ray* by Dr. *Hulſe*.

Fenugreek, we are well aſſured, is an excellent Ophthalmic; and I have obſerv'd a Sugillation in the Adnata Tunica of the Eye, which a Boy had contracted in a violent Fit of the Epilepſy, quite remov'd, after taking a Purge of Sena-leaves, with a very ſmall Quantity of the Root of Mechoacan, in three Days, by Help of the following Preſcription: Take of the Pulp of ſweet Apples, of the Conſiſtence of a Poultis, boiled in a ſufficient Quantity of Water of Fennel, and Vervain, half a Pound; ſhake it well, in a new Hair-ſieve; then add, of Mucilage of Fenugreek, extracted by Roſewater, one Ounce; Lapis Hæmatites, finely levigated, one Dram; Camphire, and Tutty prepared, one Scruple; Bole Armoniac, a ſmall Quantity, and Roſe-water, as much as is ſufficient: Make them into an Epithem for the Eyes. The Flour of Fenugreek, mixed with the Juice of Apium, is proper to be apply'd to cold Tumors of the Breaſts. *Ray's Hiſt. Plant.*

Fenugreek, and its Flour, are of an emollient and diſcuſſive Quality; triturated, and made into a Cataplaſm with Hydromel boiled, they are effectual againſt internal, as well as external Inflammations. Made into a Cataplaſm, with Nitre and Vinegar, they extenuate the Spleen. The Decoction of Fenugreek, us'd by way of Inſeſſion, is effectual in Female Diſorders proceeding from an Inflammation or Obſtruction of the Uterus. The Cremor of the ſame, boiled in Water, cleanſes the Hair, and abſterges Scurf, and Achors; made into a Peſſary with the Fat of a Gooſe, it mollifies and dilates the Parts about the Region of the Uterus. The green Herb, us'd with Vinegar, is accommodated to ſuch Parts, as are relaxed and exulcerated. The Decoction is good for the Teneſmus, and the Dyſentery accompany'd with fetid Diſcharges; and the Oil of Fenugreek, with Myrrh, cleanſes the Hair, and obliterates the Marks of Cicatrices in the Pudenda. *Dioſcorides, Lib.* 2. *Cap.* 124.

2. Fœnum Græcum; ſylveſtre. *C. B. P.* 348. WILD FENUGREEK.

3. Fœnum Græcum; ſylveſtre alterum; polyceration. *C. B. P.* 348. *Another* WILD FENUGREEK, *with many Pods*.

4. Fœnum Græcum; ſylveſtre; alterum. *Dod. p.* 547.

5. Fœnum Græcum; ſylveſtre; polyceration; majus; Creticum. *Breyn. Cent.* 1. 79. *Ic.* 80.

6. Fœnum Græcum; ſylveſtre; πολυκεράτιον; minus; Monſpelienſe. *Breyn. Cent.* 1. 79. *Ic.* 80.

7. Fœnum Græcum, corniculis reflexis, minus; & repens. See ALCHIMELECH. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 32.

FOETABULUM. A Term coined by *M. Aurelius Severinus, Lib. de Abſceſſ. in Animal.* to ſignify an Abſceſs with a Bag, or Cyſtis: He thought this Word *Fœtabulum* more proper to expreſs the firſt Generation of ſuch Abſceſſes, than *Germen*, becauſe they are produced only in Animals, whereas *Germen* rather belongs to Vegetables. *Caſtellus*.

FOETUS. The Young of all viviparous Animals, whilſt contain'd in the Womb, and of oviparous Animals, before they are hatch'd, are call'd by this Name. The Name has alſo been transfer'd by Botaniſts to the Embryos of Vegetables.

In the *Edinburgh* Medical Eſſays, *Vol.* 2. *p.* 172. there is a Diſſertation on the Nutrition of the Fœtus in the Womb.

FOLIACEUM ORNAMENTUM. A foliaceous or fringed Subſtance at the Extremity of the *Tubæ Fallopianæ*; which receives the Egg as it deſcends from the Ovary, and tranſmits it to the Uterus.

FOLIATA TERRA. Sulphur perfectly prepared by Mundification, Purification, and Dealbation. *Theat. Chym. Vol.* 4. *p.* 720. At preſent the eſſential Salt of Tartar, and the *Arcanum Terræ foliatæ Tartari* of the Chymiſts, paſs under this Name, and are highly extol'd, tho' nothing elſe but Tartar regenerated. See TARTARUS.

FOLIATIO, Foliation, is one of the Parts of the Flower of a Plant, being a Collection of thoſe fine-colour'd Leaves, which conſtitute the Compaſs of the Flower. *Miller*.

FOLIATUM, φωλιάτον, was a precious Ointment for the Stomach and Head, only in Uſe among the Rich at *Rome*: It was alſo called *Spicatum*, σπικάτον. *Galen, de C. M. S. L.* and *de C. M. P. G.*

FOLIUM, φύλλον, a Leaf. See the Article BOTANY.

FOLIUM INDUM. See MALABATHRUM.

In the Spagiric Language *Folia* ſignifies pure, and ſeparated from Droſs: Hence, when a Spagiriſt ſays, *Vertite Aurum in Folia*, "Turn ye Gold into Leaves," he means as much as to ſay, Diſſolve it into Liquor, that the Soul may be ſparingly extracted, which Soul is tingent Sulphur. *Folium* is alſo a Name for the Philoſophers Stone, in *Theat. Chym. Vol. 4. p. 772.* Again, *Folium*, with ſome Anatomiſts, is that triangular membranaceous Sinus, where there is a Concourſe of the ſagittal and coronal Sutures in Infants; and laſtly, *Arnaldus de Villa nova* gives the Name of *Folium* to a relaxed Uvula. *Caſtellus.*

FOLLICULUS, in Botany is the thin Involucrum, or membranaceous Cover incloſing the Grains or Seed of a Plant: *Folliculus*, in Surgery is the Bag, or Cyſtis, reſembling a Membrane, which contains the Matter of anomalous Abſceſſes; ſuch as the *Steatoma*, *Atheroma*, and *Meliceris*, of which in their proper Places.

Folliculus Fellis is the Gall-bladder.

FOLLIS, in Anatomy, means the ſame as the preceding Word.

FOM. Sound, or Voice. *Rulandus.*

FOMENTATIO. The ſame as FOTUS.

FOMENTUM is us'd in the ſame Senſe as FOTUS.

FOMES, ἔναυσμα, ζώπυρον, Fewel, in a medicinal Acceptation, is the internal or antecedent Cauſe, which foments and continues the Diſeaſe. *Galen.*

FONS, πηγή, Fountain, has various Significations in Medicine. *Hippocrates*, *Lib. 4. de Morb.* calls Blood, Bile, Phlegm, and Water, the four Fountains of the Body: So the *Fontes Signorum*, "the Fountains of the Signs," are thoſe Things, or Circumſtances, from which the Signs of Health or Diſeaſes may be collected: The three Heads from whence Remedies may be derived, have alſo the Name of *Fontes*, or Fountains, given them; as *Fons Diæteticus*, *Pharmaceuticus*, & *Chirurgicus*, "the diætetic, pharmaceutic, and "chirurgic Fountains." In Anatomy, that membranous Part which is found in new-born Infants at the coronal and ſagittal Commiſſures, and which, in Length of Time, hardens into a Bone, tho' of a thin Subſtance, is call'd by ſome *Fons pulſans*, or *pulſatilis*, by others *Fontana* and *Fontanella*. Among the Chymiſts Mercury is honour'd with the Title of *Fons Chymiæ*, "the Fountain of Chymiſtry." And the *Balneum Mariis* or *Mariæ*, according to *Rulandus*, is the *Fons Philoſophorum*, "the Philoſophers Fountain."

FONTALE *acetoſum*, in *Paracelſus*, *Lib. de Tartar. Morb. Cap.* 16. means the ſame as ACIDULÆ.

FONTALIS *Raii*. A Name for the *Potamogeiton rotundifolium.*

FONTANELLA. An Iſſue. See CAUSTICA.

Fontanels are thoſe ſmall Ulcers made by Surgeons in various Parts of the Body, either for the Preſervation of preſent, or the Recovery of loſt Health. They are, by ſome, call'd *Cauteries*, though leſs properly, becauſe by that Word we generally underſtand either a red-hot Iron, or a corroding and cauſtic Medicine. Surgeons in this Operation ſeem to imitate Nature, who often ſpontaneouſly excites Ulcers of this kind, by which means the latent Corruption of the Body is eliminated, and Mankind freed from various Diſorders. The Parts of the Body in which Fontanels are moſt commodiouſly and moſt generally made, are, firſt, the ſuperior Part of the Head; ſecondly, the Neck; thirdly, the Arms, in which the Fontanel is to be made near the loweſt or extreme Part of the Deltoide Muſcle, and the Muſculus Biceps; for in theſe Parts Fontanels are at preſent generally made; fourthly, the lower Extremities, eſpecially that Part above the Knee, on the Inſide of the Thigh, where there is a Sinus, which may be perceiv'd by the Fingers; fifthly, and laſtly, the Part below the Knee, on the Inſide of the Leg, where a kind of Sinus is found, is generally a very proper Place for a Fontanel.

Though there are various Methods of making a Fontanel, yet there is generally none more expeditious, than, after the Part is mark'd with Ink, and the Skin rais'd by the Fingers both of the Surgeon and an Aſſiſtant, with a Knife to make an Inciſion capable of commodiouſly admitting a Pea. When the Pea is introduc'd, a Plaiſter is to be apply'd over it, and ſecur'd with a Bandage; and nothing more is requiſite, in order to making the Fontanel, which, when united, and cleans'd every Morning and Evening, is to have a freſh Pea put into it, and the Plaiſter and Bandage is then again applied; by which means it will, in a few Days, become a ſmall Ulcer, from which a purulent Humour is daily diſcharg'd; and this Humour ought to be carefully wip'd away with a clean Linen Cloth at every Dreſſing.

Another Method of making Fontanels is to open the Skin by means of a red-hot Iron. But, leſt this Iron ſhould ſtrike a Terror into Patients, eſpecially Women and Children, it is expedient to conceal it in a Caſe (ſee *Tab.* XXXIII. *Fig.* 8. A). The Caſe B B is ſo to be applied to the Part in which the Fontanel is to be made, that, by depreſſing the Plate C, the red-hot Iron, contain'd in the Caſe, may be forcibly applied to the Body. After this, the cauteriz'd Part is anointed with Baſilicon, or freſh Butter, and cover'd with a Plaiſter, till, after repeating this Dreſſing every Day, the Cruſt falls off; and then the Ulcer left is to have a Pea put into it, and treated in the Manner already directed. Though this antient Method of making Fontanels may ſeem uneaſy and cruel to the Patient, yet it is highly efficacious, ſince the intenſe Pain, created by it, muſt neceſſarily produce a great Revulſion; but delicate Patients will rarely ſubmit to this Method.

The third Method of making Fontanels is by means of corroſive or cauſtic Medicines. In order to this, a Plaiſter, perforated in the Middle, as in *Tab.* XXIII. *Fig.* 11. is ſo laid on the Part intended, which is to be mark'd with Ink, that the Perforation in the Middle, which ought to be as large as a Pea, may correſpond to the Part mark'd. Then the Part of the Skin, appearing through the Perforation, is to be cover'd with ſome proper ſolid Cauſtic, which, leſt it ſhould fall off, is to be cover'd with Lint, or a ſmall Compreſs, over which is to be laid a pretty large Plaiſter; and, above all, a Compreſs and Bandage are to be applied. Then the Patient is order'd to be kept in a State of Reſt, and this Dreſſing is left on for ſix or eight Hours, according as the corroſive Medicine requires more or leſs Time to operate on the Part. Then, removing the Dreſſing, a certain Cruſt is found on the Skin, which is to be treated in the Manner before directed.

But, in whatever Manner the Fontanel is made, the Dreſſing is to be renew'd once a Day, and if, in the Summer-time, much Pus is diſcharg'd, twice; for a freſh Pea, after the former is taken out, ought always to be put in, and a freſh Plaiſter apply'd, almoſt as large as the Palm of one's Hand; or, inſtead of a Plaiſter, a Piece of Paper, or Silk, cover'd with Wax, or a Leaf of Ivy, which muſt be ſecur'd with a Compreſs and Bandage. But Linen Bandages are, for this Purpoſe, far leſs commodious than thoſe made of Leather or Braſs Laminæ, ſo contriv'd with Claſps, or Strings, that the Patient may himſelf apply them, without any Trouble. The beſt Machine for this Purpoſe ſeems to be that delineated in *Tab.* XXXIII. *Fig.* 9. The Letters A A repreſent a Thong of Leather, B a ſmall Hook of Metal, C a Plate made of Braſs or Copper, with various Perforations for receiving the Hook. We muſt alſo obſerve, that ſome, inſtead of Peas, put ſmall Silver or Wooden Balls into their Fontanels; but there ſeems to be little or no Difference betwixt the one and the other. The Fontanel is to be kept open, till the Diſorder, for the Removal of which it was deſtin'd, is cur'd: And, in Patients who have labour'd under any inveterate Diſorders, it is to be kept open till the very Day they die, leſt their former Misfortune ſhould return: Or, if a Diſorder, formerly cur'd, returns, which ſometimes happens, the Fontanel is to be made again.

The principal Uſe of Fontanels ſeems to be either to mitigate, or remove, various Diſorders of the Head, Eyes, Ears, Teeth, Breaſt, and other Members, together with ſciatic Pains. And as theſe Uſes of Fontanels are of the greateſt Importance, ſo various Authors have treated profeſſedly of them: Nor are we to regard the Opinion of *Helmont*, who, with ſome others, affirms, that Fontanels are of no other Uſe but to torment the Patient. I cannot, indeed, deny, that in ſome Men Fontanels are made to no manner of Purpoſe; but, as ſoon as this is perceiv'd, it is expedient to conglutinate the Ulcer. Nor is it to be forgot, that, in violent and obſtinate Diſorders, there ought to be two Fontanels, one in each Leg or Arm; or one in one Arm, and one Leg; or in one Arm or Leg, and in the Neck; that, by this means, the peccant and corrupted Humours may be the more eaſily and expeditiouſly eliminated.

When, by means of Fontanels, the Patient is recover'd, or when other Circumſtances indicate their Conglutination as proper, the Pea, or ſmall Ball, is to be taken out, and the Fontanel will ſoon ſpontaneouſly be heal'd. It ſometimes happens on this Occaſion, that proud and fungous Fleſh ariſes in a Fontanel; but it may be ſoon remov'd by ſprinkling a little of the Powder of burnt Alum, or black Hellebore, upon it. It is, alſo, to be obſerv'd, that, when, in old Perſons, Fontanels ſtop, and the Lips of the Ulcer become dry, livid, or black, it is often a Sign, that ſome violent Diſorder, or, perhaps, Death, is approaching. Hence, proper Remedies are quickly to be exhibited, in order to ward off the impending Misfortune. *Heiſter. Chirurg.*

The METHOD *of making* ISSUES *in the* CORONAL SUTURE.

Fontanels are, ſometimes, cut on the Top of the Head, where the coronal and ſagittal Sutures join. This Operation is not ſo frequently perform'd in *Germany*, as in *Italy* and *Holland*: And, though many Surgeons are of Opinion, it is of no Service, ſince nothing can be extracted from the Inſide of the Head; yet there are ſome, and thoſe Men of Experience and Probity, who eſteem it a noble and efficacious Remedy. And it

it must be confess'd, that it is frequently very beneficial in the Head-ach, Vertigo, Epilepsy, Dimness of Sight, Defect of Memory, and many other Diseases of the Eyes and Head.

For discovering the proper Place for these Fontanels, the Antients shav'd the Head; then laid a double String upon the Middle of it, and extended one from the Nose to the Neck, and the other from the Middle of one Ear to the Middle of the other; for where these two Threads cross in the Vertex, there is the Juncture of the coronal and sagittal Sutures, and the propereſt Place for this Operation. But this Method is so far from being exact, that it sometimes deceives; for the Juncture is different in different Men. Nor is it very material, whether the Issue be cut in or near the Juncture, or in the sagittal Suture; since the Discharge does not proceed so much from the inclos'd Brain, as the Antients surmis'd, as from the external Integuments of the Cranium. They were, likewise, mistaken, in thinking that Part of the Cranium, where the Sutures join'd, thinner and more perspirable; for though there is often an Aperture of that Part in Infants, (call'd *Fontanella*) yet the Bones, gradually concreting, often render it, in Adults, of the same, and, sometimes, a greater Thickness than any other; yet this Opinion, however erroneous, of the Antients, seems to have been the Reason of their making Issues in this Part. The Sutures, and their Junctures, are not easily discover'd without an intimate Acquaintance with the Heads of Skeletons, and an Application of the Fingers to the Patient's Head who is to undergo the Operation; for most Men have a Depression, or a Prominence, in that Part where the Sutures meet; and this is the most commodious Place for your Purpose.

To render this Remedy more effectual, the Issue is generally made with a Cautery. First, the Head is shav'd; and, after having discover'd the Commissure of the Sutures, that Place is cauteriz'd to the very Cranium. The Instrument for this Operation is either simple, as that describ'd by *Meekren* and *Decker* (see *Tab.* XXIV. *Fig.* 9.); or furnish'd with little Tubes, as that represented *Tab.* XXXVI. *Fig.* 1. and 2. from *Aquapendente*. To prevent the Cautery from being extinguish'd; before it has reach'd the Cranium, some make an Incision into the Skin, either rectilinear, as *Celsus* did, or transverse; and, opening the Lips of the Wound, first lay the little Pipe (*Fig.* 2.) upon the Cranium; then through that press the Cautery, till the Bone is sufficiently burn'd. When the Aperture is perfected, they put in a Pea with a digestive Ointment, and upon that a Plaister, square Compress, and the four-headed Bandage; for the rest, proceed as directed above, with respect to Issues in other Parts.

In order to account for the Efficacy of these Fontanels in the Cure of many violent Disorders of the Head, we must observe, that the Burning, though it does not, perhaps, extract the malignant Humours, through the Cranium, out of the Brain, yet the Pain, occasion'd by it, dispels or removes them in an Instant, by causing a strong Revulsion. For further Proof of their Efficacy, see *Marc. Donatus, Lib.* 2. *Hist. Miral. Cap.* 4. *M. A. Severinus Pyrot. chirurg. Lib.* 2. *Pars* 1. *Cap.* 6. *Riverius, Cent.* 11. *Ob.* 93. *Aquapend. Operat. Chirurg. Cap.* 1. *Claudini Respons. de Cauterio in Sutura Coronali.*

See also *Frederic Hoffman*'s *Dissertatio de Vesicantium & Fonticulorum circumspecto in Medicina Usu*, in the sixth Volume of the folio Edition of his Works, *Genev.* 1640. *p.* 67.

FONTANELLA, also, imports the quadrangular Aperture found betwixt the Os Frontis and Ossa Sincipitis in Children just born, which is also call'd *Fons Pulsatilis*.

FONTICULUS, in Surgery, is the same as FONTANELLA.

FONTINALIS. A Species of Moss, describ'd under the Article BOTANY.

FORAMEN. A Perforation, is an open Place, so call'd *a forando*, from boring or piercing, the Way by which it is usually effected. *Foraminulentum Os* is the Os cribriforme, or ethmoides. *Castellus.*

FORBICIN, an Insect, the same as FORFICULA; which see.

FORCEPS. The Name of a well-known chirurgical Instrument, of which there are many Sorts, adapted to various Operations. Their Uses are to lay hold of any thing, and extract it from the Body. In Mechanics they are call'd *Pincers*, or *Tongs*.

FORFEX, in Surgery, is a Pair of Scissars.

FORFICULA, *Auricularia, Mordella, Vellicula*, an Earwig. This Insect insinuates itself into the Ear, and bites or pierces the Place where it fixes, causing much Pain, so that the Brain sometimes is offended thereby; it lodges itself also in other sinuous Parts of the Body, where it acts in the same manner, but with less dangerous Effects than in the Ear. It contains a good Quantity of volatile Salt and Oil.

They make an Infusion of these Insects in Oil, which is afterwards boil'd, in the same manner as when they prepare Oil of Worms. Oil of Earwigs is good to strengthen the Nerves under convulsive Motions, by rubbing it on the Temples, Wrists, and Nostrils. These Insects, being dry'd, pulveriz'd, and mix'd with the Urine of a Hare, are esteem'd to be good for Deafness, being introduc'd into the Ear. *Lemery des Drogues.*

When this Insect gets into the Ears, a ready way to extract it is, to lay the Patient on the opposite Side, and to pour warm Water into the affected Ear; after which, you will soon see the Earwig floating on the Water.

FORMA, the Form, in the Sense of the Chymists, as they would explain themselves, is either the Spirit of the World, by which natural Bodies are produc'd, or the generative Virtue which is in Things, by which they are enabled to produce their Like: Thus the *Form* of Man lies in Man, and no other Being; the *Form* of a Tree in a Tree; the *Form* of Metal in Metal; and so of other Things. The *Forms* of Things, as *Rulandus* says, are the celestial Influences communicated from superior to inferior Things; the occult Power, Force, and Virtue, of every thing. The Term *Forma* is also often us'd by the Chymists instead of *Quinta Essentia*, as well as for the outward Form or Figure of any thing. *Castellus.*

FORMATUS, form'd, is an Epithet apply'd by *Bohnius*, *Circul. Anat. Phys.* to the Muscles properly so call'd, by way of Distinction from the *Nonformati*, or *Informes*: By the first, he means all the carneo-tendinous Parts, which always pass'd among Anatomists under the Name of Muscles; by the latter, we are to understand carneo-fibrous Contextures; for Instance, the Membranes, especially those of the middle Parts of the Body, as of the Stomach, Intestines, and the like. *Castellus.*

FORMICA, Offic. Ind. Mod. 52. Jonst. de Insect. 85. Mer. Pin. 202. Mouff. 238. Aldrov. de Insect. 517. Charlt. Exer. 51. Jonst. de Insect. 85. Raii Insect. 69. *Formica minor*, Schrod. 5. 341. THE ANT.

It is a small, oblong, red, or blackish Insect, arm'd with a Sting, and living in Swarms; the Male is wing'd, the Female destitute of Wings; the Animal, and its Eggs, are in Use.

Ants heat and dry, and incite to Venery; their acid Smell mightily refreshes the vital Spirits. They are said to cure the Psora, Lepra, and Lentigo. The Eggs are effectual against Deafness, and correct the Hairiness of the Cheeks in Children, being rub'd thereon. *Dale* from *Schroder.*

FORMICA MAJOR, Offic. Aldrov. de Insect. 517. *Formica major Herculeana, ἱππομύρμηκες*, Charlt. Exer. 57. *Formica alata, ἱππομύρμηκες, Aristoteli*, Ejusd. *major Aristoteli ἱππομύρμηκες*, Jonst. de Insect. 85. *Hippomyrmaces*, Raii Insect. 70. THE HORSE ANT.

The Insect provokes to Venery, and the Oil thereof, by Infusion, is good for the Gout and Palsy. *Dale.*

In the Philosophical Transactions, I meet with the following Account of Ants:

There are three Sorts of Ants, as the black, dark-brown, and philemort; each Kind inhabit by themselves in their several Banks, two Sorts seldom or never being found together.

Mr. *Ray* says, that Dr. *Hulse*, in *August* 1670. sent him these Observations: "Make bare an Ant-hill with a Stick, and "then cast Succory-flowers upon it, and you shall see the "Ants creep very thick over them; now, as they creep, they "let fall a Drop of Liquor from them; and, where that "chanceth to light, there you shall have, in a Moment, a "large red Stain. Sometimes they will be a pretty while "before they discolour them; and, at other times, they will "do it suddenly. At the first, I guess'd, that, being vex'd "by stirring their Hill, they might thrust their Stings into the "Flowers, and thorough them convey that sharp Liquor; "but, by bruising them, and rubbing the express'd Juice against "the Flowers, I find they will be equally stain'd. 'Tis a "Thing well known, that Ants, if they get into Peoples "Clothes, and so to their Skin, will cause a Smart, or Tin-"gling, as if they were stung with Nettles; which I conceive "is done by letting fall the fore-mention'd corrosive Liquor, "rather than by stinging.

"To what Sort of Liquor to refer this Juice, I know not. "I dropt Spirit of Salt, and Oil of Sulphur, upon the Flowers; "but they did not cause them to change Colour. I also put "Salt of Tartar upon them, and dropt thereon a little Spirit of "Salt; which caused a sufficient Fermentation, but prevailed "not to change the Colour of the Flowers in the least.

"This Observation holds true, not only in Succory-flowers, "but also Larkspur, Borage, and all others of a blue "Colour."

Some Years since, Mr. *Sam. Fisher*, of *Sheffield*, made me acquainted with these Experiments. "If with a Staff, or "other Instrument, you stir an Heap of Ants, (especially "Horse Ants) so as to anger them, they will let fall thereon "a Liquor, which, if you presently smell to, will twinge the "Nose like newly-distil'd Spirit of Vitriol.

"A weak Spirit of Pismires will turn Borage-flowers red in "an Instant; Vinegar, a little heated, will do the like. "Pismires, distil'd by themselves, or with Water, yield a "Spirit,

" Spirit, like Spirit of Vinegar, or rather like the Spirit of " Verdegriſe: Lead, put into this Spirit, or fair Water, with " the Animals themſelves being alive, maketh a good Sugar " of Lead: Iron, put into the Spirit, affords an aſtringent " Tincture; and, by a Repetition, a Crocus Martis. Take " Sugar of Lead thus made, and diſtil it, and it will afford " the ſame acid Spirit again; which the Sugar of Lead, made " with Vinegar, will not do, but returns an inflammable Oil " with Water, and nothing that is acid. Sugar of Lead, made " with Verdegriſe, doth the ſame (in this reſpect) with that " made with Spirit of Piſmires. When you put the Animals " into Water, you muſt ſtir them to make them angry, and " then they will ſpirt out their acid Juice. No Animal that " we ever diſtil'd, (he ſpeaks of his Brother and himſelf) " except this, yields an acid Spirit, but conſtantly an urinous " one; and yet we have diſtil'd many, both Fleſh, Fiſh, and " Inſects."

In Dr. *Hulſe*'s Account, where he ſaith, that Spirit of Salt, and Oil of Sulphur, dropt upon Succory-flowers, did not cauſe them to change Colour, it is to be underſtood of the Flowers, entire and unbruis'd; for any blue Flowers, being a little bruis'd, and then a Drop of Spirit of Salt, or any other acid Spirit, let fall thereon, will turn inſtantly red. The Reaſon is obvious; for that the Leaves of the Flowers (as all the other Parts of the Plant) being inveſted with a Skin or Membrane, the Liquor dropt thereon cannot eaſily penetrate it, and ſo mix itſelf with the interior Juice or Pulp. Hence it is, that if theſe Flowers be put into cold Vinegar, eſpecially if the Weather be cool, they will not change Colour for a conſiderable time; but, if you heat the Vinegar, they will change immediately. *Phil. Tranſ. Abr. Vol.* 2.

FORMICA, alſo, ſignifies a kind of black Wart, with a broad Baſe, and cleft Superficies, call'd likewiſe *Myrmeciæ*. Beſides theſe Significations of *Formica*, certain ſmall varicoſe Tumors on the *Anus*, and *Glans Penis*, and the *Herpes Miliaris*, are call'd by this Name.

FORMICANS, *μυρμηκίζων*, formicating, an Epithet beſtow'd by *Galen* on an unequal Kind of Pulſe, the loweſt and weakeſt of all Pulſes, and reſembling the creeping Motion of Ants, being no other than a lower Degree of the vermiculating Pulſe, and proceeding from an extreme Languiſhment of the vital Flame, and Imbecillity of the Syſtole of the Heart. *Galen, de Pulſ. ad Tyron. Cap.* 8. *& de Diff. Pulſ. Lib.* 1. *Cap.* 26, 27.

FORMICATIO, Formication, is a Senſation in any Part, reſembling the creeping of Ants thereon.

FORMIX. The ſame as *Noli me tagere*, *Herpes Eſthiomenos*, or *Lupus*. See HERPES and ULCUS.

FORMULA. A technical Term, ſpoken of the Conſtitution of Medicines, whether ſimple or compound, both with reſpect to their Conſiſtence and Deſcription. *Paracelſus* calls red and clear Urine *Formula Urinæ*. *Morellus* wrote a Treatiſe expreſly on the Forms, or Formules, of Medicines; and *Gaubius* has lately done the ſame.

FORNACEÆ TESTÆ, *ὀστρακα τὰ ἐξ ἰπνῶν*, Bricks or Tiles us'd in the Structure of Furnaces, Stoves, or Chimnies, being heated to a great Degree are good Eſcharotics, and, rub'd with Vinegar, cure Itchings, and exanthematous Eruptions. They give Relief alſo under the Gout; and, made into a Cerate, diſcuſs ſcrophulous Tumors. *Dioſcorides, Lib.* 5. *Cap.* 178.

FORNACUM *Terra*, *ἐκ τῶν καμίνων γῆ*, the Earth of Stoves, Furnaces, or Chimnies, being heated to a Redneſs, work the ſame Effects as the Bricks or Tiles in thoſe Structures. *Dioſcorides, ib. Cap.* 178.

FORNAX, *κάμινος*, a Furnace, for chymical Purpoſes, is divided by *F. Hoffman*, and others, from *Geber*, into ſeven Kinds; which are, the *calcinatory*, *ſublimatory*, *diſtillatory*, *deſcenſory*, *fuſory*, *ſolutory*, and *fixatory*; according to the ſeveral Operations perform'd in them, of which an Account may be found under their proper Articles.

FORNIX. A Part in the Brain. See CAPUT.

FORPEX, for FORFEX. *Caſtellus.*

FOSSA, in Anatomy, is the interior Cavity and *Rima magna* of the *Pudendum Muliebre*, which appear on a Separation of the Labia; by *Bartholine*, it is call'd *Foſſa navicularis*.

FOSSIO, Digging, is reckon'd by *Galen de San. tuend.* among the more violent Kinds of Gymnaſtics; and is eſteem'd the more wholſome Exerciſe, becauſe the Perſon employ'd therein, at the ſame time, ſucceſſively receives the kindly and beneficial Effluvia of the freſh and newly-open'd Earth.

FOSSULA. The ſame as BOTHRION, which ſee.

FOTUS. A Fomentation. A liquid *Epithem*, if apply'd hot, is the ſame as a Fomentation. It is generally apply'd to the Body by means of Stuphs, or doubled Flannels, wrung out of the Fomentation; but it is a neceſſary Caution, to expreſs out all the Liquor, provided it is extremely hot; otherwiſe it will ſcald the Part, raiſe Bliſters, and may be attended with ill

Conſequences. It is alſo obſervable, that a certain Degree of Heat will diſſolve and diſſipate a Tumor; and a higher Degree of it will harden, and make it ſcirrhous. See EPITHEMA.

FOVEA, in Anatomy, is the Sinus of the Pudendum Muliebre; it is alſo the ſame as BOTHRION. *Fovea*, in *J. C. Claudinus*, *Appendic. de Ingreſſ. ad Infirmos*, is a particular little Vaporary, or Sudatory, for receiving only one, or both Legs, in order to ſweat; on which account it differs from the *Stupha*, which is ſpacious enough to receive one or more entire Bodies. *Caſtellus.*

FRACES are the preſſed Pulp, or the Subſtance, of the Olive.

FRACTURA, *κάταγμα*, a Fracture. See CATAGMA.

The different Species of Fractures, as diſtinguiſh'd by the Antients, are; (1.) The *Catagma raphanedon*, *κάταγμα ῥαφανηδὸν*, (from *ῥάφανος*, a Radiſh) a tranſverſe Fracture of a Bone through its whole Thickneſs, as we break a Radiſh; it is alſo called *Sicyedon*, *σικυηδὸν*, and *Cauledon*, *καυληδὸν*, from *σίκυος*, a Cucumber, and *καυλὸς*, a Stalk, becauſe they are broken in that manner. See CAULEDON. (2.) *Catagma Schedacedon*, *κάταγμα σχεδακηδὸν*, an oblong Fracture of a Bone. (3.) *Catagma ad Onycha*, *τὸ εἰς ὄνυχα*, or *καλαμηδὸν*; for which ſee CALAMEDON. (4.) *Alphitedon*, *ἀλφιτηδὸν*, or *Caryedon*, *καρυηδὸν*. See ALPHITEDON. (5.) *Catagma ſecundum Apothrauſin*, *& Apocopen*, *τὸ κατ' ἀπόθραυσιν*, *ἢ κατ' ἀποκοπὴν*, " when by the " Fracture a Splinter or Fragment of a Bone is ſo broken off, " as to lie looſe on the Surface." See APOTHRAUSIS.

Fractures of the Cranium, obſerv'd by *Hippocrates*, *Lib. de Cap. Vuln.* are, (1.) *Rogme*, *ῥωγμὴ*, the Fiſſure, which, when it appears very ſmall, and like a Hair, is called, by *Paulus*, *Trichiſmus*, *τριχισμὸς*, from *θρὶξ*, a Hair. (2.) *Phlaſis*, *φλάσις*, by *Galen* call'd *Thlaſis*, *θλάσις*, in which, ſays *Hippocrates*, there is a Colliſion or a Contuſion of the Bone, without either a Fiſſure or Depreſſion. (3.) *ἔδρα*, when the Inſtrument leaves a Mark or Impreſſion on the Bone; and this Species, if the Cranium be deeply penetrated, is call'd *διακοπὴ* (ſee DIACOPE); if Part be cut off without a Diviſion, *ἐκκοπὴ* (ſee ECCOPE); if the Wound be inflicted as with an Ax, *ἀποσκεπαρνισμὸς* (ſee *Apoſceparniſmus*). (4.) *Apechema*, *ἀπήχημα*, or *Apochopema*, *ἀποχόπημα*, call'd alſo *Xumphore*, *ξυμφορή*. See APECHEMA and CONTRAFISSURA. (5.) *Eſphlaſis*, *ἔσφλασις*, or *Engiſoma*, *ἐγγίσωμα*, which is divided into *Ecpieſma* and *Camaroſis*. See theſe four laſt Words under their proper Articles.

When a Solution of Continuity happens in a Bone, the Diſorder is by the *Latin* Writers call'd *Fractura*, and by the *Greeks*, as we learn from *Galen*'s *Method. Medend. Lib.* 6. *Cap.* 5. *Κάταγμα*. In Cartilages, however, a Solution of Continuity has obtain'd no peculiar Denomination, but is comprehended under the general Name, Fracture; at leaſt, *Hippocrates*, in his Book, *de Articulis Text.* 48. when treating of a Fracture of the external Ear, which is totally cartilaginous, uſes the general Name Fracture, ſince his Words are, *ἢν ᾖ ὃς κάλεαγῆ*.

It was not, however, cuſtomary among the Antients, to call every Solution of Continuity in a Bone, a Fracture, but only ſuch a Solution as was produc'd by external Violence, as *Paulus Ægineta*, in the 89th Chapter of his ſixth Book, tells us, in the following Words: " A Fracture, in general, is ſuch a Separa- " tion or Rupture of a Bone, as is made by external Force." For, by this Circumſtance, a Fracture is diſtinguiſh'd from a Caries of the Bone. Beſides, a Fracture is only ſaid to happen when the Parts of one Bone have their Coheſion deſtroy'd, in order to diſtinguiſh a Fracture from a Luxation, in which Bones naturally contiguous, are ſeparated. A Fracture is diſtinguiſh'd from a Contuſion, which ſuppoſes an Attrition of the Solids, by this Circumſtance, that the Bones are, in the former, divided into large Portions. Among the Antients, however, the Comminution of the Bones into the ſmalleſt Portions, was refer'd to Fracture, provided it was produc'd by external Force; and this Species of Fracture was call'd *ἀλφιτηδὸν*, as we learn from *Paulus Ægineta*, in the Part above-quoted.

Surgeons generally divide Fractures into three Species, or thoſe of the ſimple, compound, and complicated Kind. A ſimple Fracture is produc'd, when only one Bone is broken in one Part, without any conſiderable Injury done to the ſuperincumbent or adjacent Parts. But when ſuch a Fracture happens in thoſe Parts of the Body where two large Bones are contiguous to each other, in the *Cubit*, for Inſtance, when the *Radius* is broken whilſt the *Ulna* remains entire, this Species of Fracture is, by Surgeons, call'd incomplete, becauſe the Situation of the Parts is not much chang'd, and the Length of the Member remains the ſame. But when the *Ulna* and *Radius*, or the *Tibia* and *Fibula* in the Leg, are both broken, this is call'd a complete or a compound Fracture, tho' we may, alſo, properly enough call it a compound Fracture, where only one Bone is broken in ſeveral Parts. But, where, beſides the Fracture of one or more Bones, there is a Train of Symptoms which requires a particular Method of Cure, ſuch as a Wound or Ulcer; then it is call'd a complicated Fracture, becauſe, in the Cure of ſuch a Diſorder, particular Regard is to be had to

the concomitant Symptoms. But 'tis ſufficiently obvious, that a Fracture cannot properly be ſaid to be complicated, unleſs the above-mention'd Symptoms are preſent in a very conſiderable Degree; for a Fracture cannot be produc'd without ſome Degree of Contuſion, and a ſlight Inflammation is almoſt always ſubſequent to Fractures. Hence a Fracture is only ſaid to be complicated, when the concomitant Symptoms are of ſuch Importance as to require an Apparatus and Method of Cure different from thoſe requiſite in a ſimple or compound Fracture. Thus, for Inſtance, when a conſiderable Wound accompanies a Fracture, ſuch a Dreſſing cannot be us'd as in a ſimple Fracture, where it is often left unchang'd for ſeveral Weeks; but ſuch an Apparatus is requir'd, as may, without endangering the Separation of the fractur'd and reduc'd Bone, be frequently remov'd, in order to dreſs the Wounds.

Fractures are call'd tranſverſe, oblique, or longitudinal, according to their different Directions. They, alſo, receive various Names, and require different Methods of Treatment, according as the Portions of the Bone either reſt on each other, or are mutually apply'd to each other ſideways, or riſe into the Fleſh like Prickles.

Fractures are differently denominated according to their different Directions. A tranſverſe Fracture is produc'd, when a Bone is divided by a Section perpendicular to its Length. An oblique Fracture, on the contrary, is ſaid to be produc'd, when the Diviſion of the Bone is not perpendicular to its Longitude, but declines more or leſs from a perpendicular Direction. Hence the Surface of the Fracture is the greater, and the Retention of the fractur'd Portions, when reduc'd, the more difficult. A longitudinal Fracture is, when the Bone is ſplit in a longitudinal Direction; for which Reaſon, it is rather a Fiſſure than a Fracture, properly ſo call'd, becauſe the Parts of the Bone are not entirely ſeparated, but, as it were, fiſſur'd in a longitudinal Direction; which Species of Fracture was therefore call'd, as we learn from *Galen*, *de Method. Medend. Lib.* 6. *Cap.* 5. κατὰ μῆκος, or a longitudinal Diviſion of the Bone.

As for the different Situation of the fractur'd Portions; the Extremities of the fractur'd Bone may remain in their natural Situation, eſpecially in a tranſverſe Fracture. They may alſo be a little remov'd from each other, but in ſuch a manner, as mutually to reſt on each other, in ſome meaſure. The fractur'd Portions may, alſo, be entirely remov'd from their uſual and natural Contact, and ſlip to the Sides of each other; which almoſt always happens in an oblique, and ſometimes in a tranſverſe Fracture. And, laſtly, if the fractur'd Portions are acute, they may riſe like ſo many Prickles through the Integuments; and this Species of Fracture is certainly the worſt of all others.

Theſe Circumſtances ought to be duly adverted to, not only in order to diſtinguiſh the various Fractures by their reſpective Names, but alſo becauſe, according to the Diverſity of Fractures, different Methods of Cure are requir'd; and becauſe, by adverting to their Differences, we are the more able to prognoſticate their Events.

The Effects of a Fracture are various, according to the different Natures of the Bones fractur'd; the different Directions of the Fracture; the State of the fractur'd Portions with reſpect to Situation, Figure, Number, and Bulk; and according to the Nature of the Place in which, and the Parts near to which, the Fracture is made.

The moſt conſiderable Conſequences of Fractures are, a Deſtruction of the Office of ſupporting the Body; as alſo of ſuſtaining and directing the Muſcles; a Contraction of the Muſcles; a ſhortening of the Member; a Removal of the Muſcles from their natural Situation; an Intorſion and Deformation of the Member; a Laceration, Contuſion, or Corruption of the internal Perioſteum of the medullary Membrane, and of the Marrow itſelf; a Luxuriancy of the Veſſels of the Bone: Whence ariſe an Inequality of the Callus; a Tumor and Deformity of the Member, together with a Diſtraction, Laceration, Irritation, Compreſſion, and Convulſion, of the Membranes, Tendons, and Nerves; a Change, Deſtruction, Obſtruction, and Inflammation of the adjacent Veſſels; together with Pain, Ecchymoſis, Extenuation, Suppuration, Gangrene; the Mortification of a Part, and often of the Whole, of the Member, and almoſt always Contuſion.

As for a Deſtruction of the Power of ſupporting the Body; when we ſtand or walk, the whole Weight of the Body is ſupported by the Bones of the Legs and Thighs. Hence, in rickety Children, theſe Bones, being too pliant and flexible, are bended by the Weight of their Bodies. When, therefore, theſe Bones are fractur'd, the Power of ſupporting the Body is forthwith deſtroy'd, unleſs, in a tranſverſe Fracture, the Extremities of the Bone ſhould correſpond exactly to each other, and not change their Situation. But ſoon after, if the Patient continues to move the fractur'd Part, the Portions of the Bone will quickly be remov'd from each other, and the Power of ſupporting the Body conſequently ceaſe.

As for ſuſtaining and directing the Muſcles; moſt of the Muſcles of the human Body not only riſe from, but are alſo inſerted into Bones: If we except the Sphincter Muſcles, and the muſcular Fibres of the Viſcera and Veſſels, there are ſcarce any Muſcles in the Body which have not one of their Ends fix'd to a Bone: When, therefore, the Bones are fractur'd, the Direction of the muſcular Motion is deſtroy'd, and the Action of the Muſcles affix'd to theſe Bones ſurpriſingly diſorder'd. When the Patella, which adheres to the Tendon, riſing from the crural Muſcles, and raiſes this Tendon, like a Lever moving on its Fulcrum, is broken, the Direction and Action of theſe Muſcles is forthwith diſturb'd. The ſame holds true in the other Bones when fractur'd.

As for the Contraction of the Muſcles, and Shortening of the Member; *Galen*, in the eighth Chapter of his firſt Book *de Motu Muſcul.* obſerves, that the Bellies of the Muſcles have a Power of contracting themſelves ſpontaneouſly: And, that this Effect was not produc'd by the animal Faculty moving the Muſcle, he prov'd by the Retraction of both Parts of a Muſcle, upon dividing it after the Death of any Perſon. *Veſalius*, in the 19th Chapter of his ſeventh Book, beautifully confirms this by Experiments made on live Animals; for, when he cut the Belly of a Muſcle, he perceiv'd one Part of it retracted towards its Origin, and the other towards its Inſertion. When he cut the Tendon of another Muſcle, he obſerv'd the Muſcle retracted to its Origin. When he cut the Head of another Muſcle, it was drawn towards its Inſertion: And, when he cut both the Head and Inſertion of a Muſcle, then both Parts of it were contracted towards its Belly, or moſt fleſhy Part. But the Bones, to which the Muſcles are fix'd, retain them in the Diſtention which produces their Retraction when cut: Hence, when the Bones are fractur'd, the Muſcles, in conſequence of their ſpontaneous Contraction, become ſhorter, and retract the Part of the Bone to which they adhere: Hence the Member becomes ſhorter; and this Shortneſs is the greater, the more and the ſtronger the Muſcles are which are fix'd to the inferior Portion of the fractur'd Bone. Thus, if the *Os Humeri* is fractur'd above that Part to which the Deltoide Muſcle is affix'd, the fractur'd Bone will be ſtrongly drawn upwards, and the Member ſhorten'd; for, as *Celſus* tells us, in the tenth Chapter of his eighth Book, "the Muſcles and "Nerves, which were before tenſe, are now contracted." The ſame alſo holds true in the *Os Femoris*. For this Reaſon, all Surgeons are agreed, that Fractures of the *Os Femoris*, if they happen in the upper Part near the Hip, are rarely cur'd without Lameneſs; but, if this Bone is fractur'd about the Middle, or towards the Knee, the Cure generally ſucceeds more happily. This ſeems, among other Reaſons, to happen principally, becauſe, the higher this Bone is fractur'd, the more Muſcles draw the inferior Portion of the Bone upwards; and, ſince theſe Muſcles are very ſtrong, a violent Extenſion is neceſſary to the Reduction of the Bones, which are, for the ſame Reaſon, with great Difficulty, retain'd in their natural Situation.

As for the Removal of the Muſcles from their natural Situation; moſt of the Muſcles not only draw their Origins from the Bones, but are alſo inſerted into them, and ſome of them even adhere for a conſiderable Length to the Bones. If, therefore, the fractur'd Bones are remov'd from their natural State, the Situation and Direction of the adjacent Muſcles, which either derive their Origins from theſe Bones, or are inſerted into them, are much diſorder'd. Beſides, the Portions of the fractur'd Bone may remove other Muſcles from their natural Situation, tho' they neither derive their Origins from them, nor are inſerted into them, ſince they repel, and take up the Room of, the adjacent Parts.

As for the Intorſion and Deformation of the Member; the external Surface of the human Body has certain Eminences, and, conſequently, ſome Parts which are more depreſs'd. This is principally produc'd by the various Poſitions of the Muſcles, and their various Actions, during which they are ſometimes tumid, and ſometimes ſunk. This is, in a particular manner, obvious in ſuch Men as are brawny and not over-fat, but much leſs in Women, whoſe Bodies always appear more ſmooth and equable. This Circumſtance is highly regarded by Painters and Statuaries, who, in their reſpective Performances, make the Limbs of *Hercules* and *Laomedon* ſtrong and brawny, whereas they make the Body of *Venus* ſoft and ſmooth. When, therefore, the Muſcles, in conſequence of a Fracture of the Bones, are put out of their natural Situation, the Figure of the Parts is chang'd, and the natural Form of the Member is deſtroy'd. Hence ſkilful Surgeons, in order to diſcover whether Bones are well ſet, compare the affected Arm or Leg with that which is ſound, carefully obſerving whether the Eminences

nences and Cavities of both are exactly similar. Thus, for Inſtance, the fractur'd Parts of the Arm may be mutually apply'd to each other, tho' not exactly in their former and natural Situation; but in this Caſe the Deformity of the Member will always diſcover the Error: And this Deformity appears moſt conſpicuous, when the Bones of the Cubit are fractur'd; for then the Muſcles ſubſervient to the Supination and Pronation of the Hands generally induce a ſurpriſing Change on the natural Figure of the Part.

The Misfortunes incident to the Bones themſelves, after Fractures, are theſe following:

The Laceration, Contuſion, or Corruption of the external Perioſteum, of the Veſſels lodg'd in the ſmall Cellulæ of the Bones, of the internal Perioſteum, and of the medullary Membrane.

All the Bones are cover'd with a Membrane, which not only conveys the Veſſels to them, but alſo receives ſuch as are ſent out from them. This Membrane is call'd the Perioſteum, and, for the moſt part, adheres cloſely to the Bones. It covers the external Surface of the Bones in every Part, except where the Ligaments, which ſurround and ſecure the ſeveral Articulations, ariſe from them; for in theſe Parts the Perioſteum is ſeparated from the Bone, and runs upon the Ligament, till it is inſerted into another Bone, and adheres to it. By this means the Perioſteum, without any Interruption of its Continuity, is convey'd from one Bone to another. The whole Surface, therefore, of the Bones is cover'd with the Perioſteum, except that Part of them which is contain'd in the Capſula of the Joints, form'd by the Ligaments ſurrounding the Articulations: But the Part of the Bone which is contain'd in the Capſula, is rarely or never fractur'd. When, therefore, a Bone is fractur'd, the external Perioſteum is almoſt always injur'd: Beſides, the Structure of many Bones is ſurpriſingly cellular; for the ſmaller Bones, which have not a large medullary Cavity, ſuch as the Phalanxes of the Fingers, together with the Bones of the Carpus and Metacarpus, have their whole Subſtance full of ſmall bony Cells: But in the larger Bones, which have a large Cavity in their Middles for containing the Marrow, the Laminæ of the Bone, which in the Middle are cloſely united, recede from each other towards the Extremities of the Bone, and form ſurpriſing Cavities, in which Blood-veſſels and medullary Globules are lodg'd. If, therefore, ſuch Bones are fractur'd towards their Extremities, this cellular Sructure will be deſtroy'd, the Blood-veſſels ruptur'd, and their Contents diſcharg'd; which, by ſtagnating, may produce a large Train of Misfortunes. 'Tis, at the ſame time, equally obvious, that by a Fracture of a Bone the internal Perioſteum, the tender Membrane of the Marrow, and the Marrow itſelf, may be deſtroy'd, ſince the laſt of theſe is ſo tender, that in an old Ox it may, by handling it rudely with the Fingers, be reduc'd to the Conſiſtence of a Pulp. How terrible Symptoms may be produc'd by a Corruption of the medullary Oil, is ſufficiently obvious from daily Experience. But all theſe are infallibly dilacerated, if the Extremities of the fractur'd Bone recede from each other, and are laterally apply'd; for then 'tis certain, that every thing contain'd in the Cavity of the Bone is broken: 'Tis true, that the worſt Misfortunes to be dreaded from this Circumſtance do not always follow ſuch Fractures, but that they may ſometimes happen, is ſufficiently obvious: Hence 'tis expedient to advertiſe the Patient, or his Friends, of theſe poſſible Conſequences, leſt, if they ſhould afterwards happen, they ſhould be aſcrib'd to the Ignorance of the Surgeon.

As to the Luxuriance of the Veſſels of the Bone, from which proceeds an Inequality of the Callus, together with a Tumor and Deformity of the Member; *Hippocrates*, in his *Coacæ Prænotiones*, informs us, "That Bones, or Cartilages, when "broken, do not increaſe;" And in the nineteenth Aphoriſm of his ſixth Section, he tells us, that "they do not coa-"leſce, or grow to each other." *Galen*, alſo, in the ſeventh Chapter of his fifth Book *de Method. Medend.* affirms, that a Bone can never be united to a Bone, nor a Cartilage to a Cartilage, ſince in fractur'd Bones the Union is produc'd by the Interpoſition of a Callus anſwering the End of Glue, but not by a Concretion of the ſeparated Parts. But, in his firſt Commentary on *Hippocrates de Fracturis*, he gives his Sentiments on this Subject more fully, in the following Words: "Since "the Bones cannot, in conſequence of their natural Dryneſs, "grow together like Fleſh, a Callus growing about the Lips "of the Fracture becomes the means of their Union. But "the Origin of the Callus is the ſuperfluous Nouriſhment of "the fractur'd Bone; and when the Patient does not uſe a "proper Regimen, or is plethoric, this ſuperfluous Nouriſh-"ment is too copious, and, diſcharging itſelf, renders all the "Bandages wet, juſt as when the Blood is diſcharg'd." Hence he ſeems to inſinuate, that the Callus is not form'd of what is properly call'd the Subſtance of the Bone, but that it is only a Species of Glue, which, interpoſing itſelf between the Extremities of the fractur'd Bone makes them cohere; for a little after he ſubjoins, "For as Glue is to united Pieces of "Wood, ſuch is a Callus to fractur'd Bones." But ſince it cannot be deny'd, that a Callus at laſt acquires the Hardneſs of the Bone, and, ſince *Galen* did not believe, that the Callus aſſum'd the Nature of the Bone, he us'd a pretty uncommon Way of expreſſing himſelf, when he ſays, "Whatever "is diſcharg'd from the Bone, and is concreted about the "Lips of the Fracture, is ſo chang'd by the contiguous Bone, "as to become highly like it, and is denominated Callus." Hence he is of Opinion, that this Matter diſcharg'd retain'd the Name Callus, after it had acquir'd the Hardneſs of the Bone. After *Galen*, many ſeem to have embrac'd the ſame Opinion: But 'tis ſhewn under the Article VULNUS, that in Wounds the loſt Subſtance is reſtor'd, and the ſeparated Parts united, not by means of a certain Glue, but by a genuine Reſtitution produc'd from a laudable Blood by the Aſſiſtance of Nature, as *Galen* himſelf truly affirm'd in the Paſſage laſt-quoted; and under the Article CAPUT 'tis ſhewn, that a Part of the Cranium remov'd by the Trepan, or any other wounding Inſtrument, grows again. The ſame ſeems to hold true in fractur'd Bones, which are again united, not by the Interpoſition of a certain Glue, but by a true Union of the Subſtance of the Extremities; and, in thoſe Caſes where a Part of the Bone is remov'd, a viſcid Humour, which gradually becomes hard, is not interpos'd between the ſeparated Fragments, but the organical bony Structure is renew'd, and the loſt Part, by that means, reſtor'd. This is ſufficiently confirm'd by practical Obſervations. This wonderful Phenomenon is to be aſcrib'd to that ſurpriſing Property of the human Body, by which it is able, from the Aliments duly chang'd by the Action of the Viſcera and Veſſels, to reſtore what is loſt, and augment in every Dimenſion, what is already form'd. Certainly the vital Rudiment lodg'd in the Colliquamentum of an impregnated Egg, after the Structure of the Chicken's Body is form'd, produces, in twenty-one Days, from the White of the Egg, which is highly ſoft, ſolid Bones, by which the Chicken not only ſtands, but runs nimbly as ſoon as it is excluded from the Shell. The ſame, therefore, ſeems to obtain in Bones, with reſpect to Loſs of Subſtance, and the Union of their divided Parts, which happens in Wounds of the ſoft Parts, that is, a Regeneration, or true Concretion of the organical Subſtance, and not an Agglutination by means of a certain glutinous Matter.

As the growing Veſſels in Wounds of the ſoft Parts are highly tender and pulpous, in conſequence of their not being cover'd with the Skin, they may eaſily be too much diſtended, and degenerate into fungous Fleſh. The ſame holds true in the Callus of the Bones, which may become luxuriant, when the Veſſels, which conſtitute the Subſtance of the growing Bone, are diſtended, either by a Redundance, or too ſtrong an Impetus, of the Fluids. But this Misfortune is moſt to be dreaded in young Patients, in whom the Strength of the ſolid Parts is leſs, the Quantity of Fluids larger, and their Circulation generally briſker, than in Perſons advanc'd in Years. For theſe Reaſons Surgeons ſo often obſerve the Calluſes form'd in young Perſons to be luxuriant, eſpecially if they feed high. Hence there neceſſarily follows an Inequality, and a Change of Figure, in the Part. But a Deformity of the Member happens far more frequently, when, before the Callus has acquir'd a due Firmneſs, the Extremities of the Bone are preſs'd to each other; for in this Caſe the Callus, like flexible Wax, is every-where forc'd out, and forms a prominent kind of Ring in the fractur'd Part. This principally happens, when the Patients, after Fractures of the Thighs or Legs, attempt to walk too ſoon; for, as the whole Weight of the Body is ſupported by theſe Bones, the Callus is by this means ſqueez'd, if it has not acquir'd the Hardneſs of a Bone.

As for the Diſtraction, Laceration, Irritation, Compreſſion, and Convulſion of the Membranes, Tendons, and Nerves; theſe moſt generally happen, when the Fracture is ſuch, that the Fragments lie over each other; but eſpecially if they are ſharp and pointed, which often happens; for in this Caſe all the adjacent Parts are injur'd and lacerated. The Misfortunes to be dreaded from Injuries or Irritations of the Membranes, Tendons, and Nerves, are enumerated under the Article VULNUS. From Accidents of this Kind, Misfortunes of ſo terrible a Nature often ariſe, that *Hippocrates*, in his Treatiſe *de Fracturis*, adviſes Surgeons to avoid ſuch Caſes, if they can with Honour do it, ſince there is little Hope, and a great deal of Danger: "For, ſays he, if the Bones are not reduc'd to their natural "Situation, the Surgeon is thought ignorant; and, if they are, "the Reduction tends more to the Deſtruction than to the "Recovery of the Patient."

As for the Change, Deſtruction, and other Misfortunes, of the adjacent Veſſels; the worſt Misfortunes ſubſequent to Fractures are rarely produc'd by the Injury done to the Bone itſelf, but far more frequently by the Fragments of the Bones compreſſing or wounding the adjacent Parts. Many Veſ-

ſels are either affix'd to the Bones themſelves, or are adjacent to them; and may, therefore, be injur'd or compreſs'd by the Fragments of theſe Bones mov'd from their natural Situation. Hence *Hippocrates*, in the Paſſage laſt quoted, tells us, that it is a Circumſtance of great Moment, whether the Bones of the Humerus and Thigh give way externally or internally, becauſe a great Number of large Veins run along their internal Parts. Now Obſtructions are produc'd by all thoſe things, which, by an external Compreſſion or Diſtraction, render the flexible Veſſels narrower than they were before: It is, therefore, obvious, that Obſtructions muſt be frequently ſubſequent to Fractures of the Bones. And though the Motions of the Humours through the Veſſels, thus render'd narrower, is not totally obſtructed, yet moſt of the Functions of the Body are ſurpriſingly diſorder'd by this means, ſince the Soundneſs of theſe Functions, in a great meaſure, depends on the due Proportion of the Trunks of the Veſſels to their Ramifications, and of the Ramifications to their reſpective Trunks. If, therefore, an Obſtruction of the Veſſels is accompanied with a briſk Circulation of the Humours, by the Fever excited, an Inflammation may be produc'd, together with all its different Terminations, ſuch as a Suppuration, a Gangrene, and a Sphacelus. By a Diſtraction of the Membranes, Tendons, or Nerves, highly intenſe Pains are produc'd in Fractures, not ſo much by the Injury done to the Bone itſelf, as is obvious from the total Ceſſation, or, at leaſt, the conſiderable Diminution, of the Pain, when the Bones are reduc'd to their natural Situation: But when the Veſſels are ruptur'd, or only divided by a ſmall Wound, under the ſound Skin, the Blood is diſcharg'd, collected in the Membrana adipoſa, and forms an Ecchymoſis, as is ſhewn under the Article CONTUSIO. But when an Artery, or a large Trunk of a Nerve, diſtributed to the inferior Parts, are ſo compreſs'd, or deſtroy'd, that they can no longer tranſmit their reſpective Fluids, the Parts below this Compreſſion, or Deſtruction, are totally depriv'd of the vital Influx of the Humours; in which Caſe they are either corrupted by a putrid Gangrene, or dried up by a ſlow Maraſmus.

Death is, ſometimes, ſubſequent to Fractures of the Bones, in conſequence of the acute Pains, which produce acute Fevers, Deliriums, and Convulſions; or, if ſuch a Gangrene ſhould ſeize the Part affected, and, degenerating into a Sphacelus, ſpreads itſelf to the ſuperior Parts, the Patient, after Watchings, Deliriums, Syncopes, and Hiccups, at laſt dies, as it were, in a gentle Slumber.

Fractures are, almoſt always, accompanied with Contuſion: For an external Force cannot deſtroy the Coheſion of the Parts of a Bone, without, at the ſame time, acting on the ſuperincumbent ſoft Parts. Since, therefore, theſe are preſs'd between the wounding Cauſe, and the ſubjacent hard Bone, they muſt neceſſarily be contus'd. Hence, in Fractures, there is always ſome Degree of Contuſion, except in Caſes where, by a Lues Venerea, a Scurvy, or other Diſeaſes of a like Nature, the Bones are become ſo brittle, that they may be broken by the ſmalleſt Force. This Circumſtance is carefully to be adverted to, becauſe, when Bones are happily reduc'd, many Misfortunes often ariſe from the Contuſion of the Parts. Hence *Hippocrates*, towards the End of his Treatiſe *de Fracturis*, in which he recounts the many bad Conſequences of Fractures and Luxations, lays it down as an Axiom, that more is to be dreaded from the Contuſion, than from the Fracture itſelf; for, ſays he, "Thoſe Diſorders are ſlighter in which the Bones are fractur'd, "than thoſe in which they are not fractur'd, if, at the ſame "time, conſiderable Veins and Nerves are contus'd; for theſe "latter Diſorders endanger the Patient's Life more than the "former, if they are accompanied with a continual Fever." Hence thoſe Remedies which are proper for the Cure of Contuſions, are often to be applied to Fractures; for though the Reduction of the fractur'd Bones, and their Retention in their Situation, are Circumſtances, which, to the Generality of Surgeons, ſeem ſufficient to anſwer the general Intention, yet it is ſufficiently obvious, from what has been ſaid, that different Methods of Cure are requiſite, according to the different Symptoms accompanying the Fracture.

The METHOD *of* DISCOVERING FRACTURES, *according to* HEISTER.

Fractures may be examin'd, 1. By the Eye; as when the injur'd Part appears ſhorter than that which is ſound, or the Patient cannot lean upon it. 2. By the Touch, when you perceive any preternatural Inequality or Flexibility of the Bone; where, by the way, I would recommend it to the Surgeon, if poſſible, to lay the Patient in the Bed, where he is to continue, before he either examines or reduces the Fracture. 3. By the Ear; when you hear a Craſhing of the Bones, upon moving or touching the Part. 4. We may, without much Danger, conclude this to be the Conſequence of any extraordinary external Violence: Though, 5. it may not be amiſs to obſerve, that we are more liable to Fractures in the Winter, than at any other time. 6. In Fractures, eſpecially tranſverſe, the Parts are frequently reſtor'd ſpontaneouſly to their proper Place, without any Aſſiſtance, and, conſequently, leave very little or no Grounds to ſuſpect them. In this Caſe, therefore, if the Patient, after any external Violence receiv'd, cannot uſe the Part without great Difficulty, or if it cannot be touch'd or mov'd without great Pain, it is more than probable there is a Fracture. But the propereſt Method of finding the Truth is to put the Part affected into the Hands of an Aſſiſtant, who muſt move it gently, while you are employ'd in examining, whether any Noiſe, Hiatus, or Inequality, can be diſcover'd.

The METHOD *of* DISCOVERING FISSURES.

As for Fiſſures, we cannot ſo eaſily come at the Knowledge of them, as we have no Aſſiſtance from the Sight, Touch, or Hearing; and, therefore, according to *Gouey*, many Surgeons have been deceiv'd. However, if we will give Credit to thoſe who affirm the Exiſtence of them, we ſhall not want Symptoms to diſcover them. They ſay, that, after a Fiſſure, the Place affected can neither bear the Touch, nor ſupport the ſuperior Parts; that it is accompanied with very great Tumors, and, ſometimes, violent Inflammations, Suppurations, and Caries; and that Perſons advanc'd in Years, from the Fragility and Rigidity of the Bones, are more liable to them, than young Perſons. And, indeed, theſe Obſervations ſeem very well grounded; for it is next to impoſſible, that the Blood and Sanies, adhering to the Fiſſures, ſhould not putrefy, and, by corroding the Marrow, the neighbouring Parts, and the Bone itſelf, produce theſe Inconveniences.

Of the PROGNOSTICS.

In prognoſticating the Event of Fractures, a Surgeon ſhould be very circumſpect, and not promiſe too ſpeedy, eaſy, or certain a Cure, leſt he be diſappointed from ſome unforeſeen Accident, and that be imputed to his Ignorance; for Perſons unacquainted with the Profeſſion are ſubject to imagine Fractures the moſt curable Injury attending the human Body; whereas it is often impoſſible to reſtore the Limb to its former Strength and Beauty, even by a ſkilful Hand. Since, then, ſome Fractures are inconſiderable, and others very bad, a prudent Surgeon ſhould not only have regard, in his Prognoſtics, to the Diſpoſition of the fractur'd Part, but alſo the neighbouring Parts, the Place of the Bone, accidental Diſorders, the Conſtitution, Age, and Habit, of the Patient. But, above all things, let him avoid promiſing a ſpeedy Cure; for the Patient's Neglect will be often attributed to his Unſkilfulneſs.

Here I would recommend ſome particular Obſervations; as, 1. Simple and recent Fractures are much more eaſily cur'd, than thoſe accompanied with external Wounds, a Luxation, violent Contuſion, Hæmorrhage, or Caries. 2. Some are cur'd with more Speed and Readineſs, others more ſlowly and difficultly, according to the Difference of the fractur'd Bone; for the ſmall Bones, as the Clavicles and Ribs, will agglutinate within twenty Days; the Radius, within thirty; the Tibia and Humerus require forty or fifty; the Thigh-bone is ſcarce to be cur'd under fifty, or, perhaps, ſeventy Days. Though, 3. We muſt obſerve, that Fractures unite ſooner, and more eaſily, in healthy young Men, than in the old, and thoſe of an ill Habit of Body.

When the fractur'd Bone is remov'd but a little from its proper Place, it is much more eaſily reduc'd, than after a great Separation. Tranſverſe Fractures, likewiſe, are ſooner cur'd, than oblique. And thoſe near the Articulations are more dangerous than thoſe in the Middle; for, in the former, not only the Joints are often affected in ſuch a manner, that they become rigid; but the Ligaments, and Tendons too, are generally bruis'd; which often produces violent Pains, Inflammations, Convulſions, and even Death.

If two Bones are broken in the ſame Limb, the Cure is render'd abundantly more difficult. If, alſo, one is broken into ſeveral Pieces, it is next to impoſſible to prevent a Gangrene and Sphacelus; at leaſt, you muſt expect your Cure to proceed very ſlowly, and the Limb to be unequal: A judicious Surgeon, therefore, would diſcover this to the Patient, or ſome of his Family, in due Time.

When a Fracture is immediately reduced, the Reunion will be more ſpeedy and commodious: When, therefore, you are called in ſome time after the Accident, do not promiſe too ſpeedy a Cure.

When a Fracture happens near the more noble Parts, it is always dangerous, and often fatal; as of the Cranium, from the Vicinity of the Brain; the Vertebræ, from the ſpinal Marrow; the Ribs, Sternum, Os Ileum, and Pubes, from the ſubjacent Viſcera in the Breaſt and Abdomen: Nor is it leſs hazardous, if any of the greater Veins or Arteries are near, more particularly when the Points wound them; for hence, as moſt uſually the Caſe is in the Humerus and Femur, mortal Hæmorrhages are produc'd.

If the Fragments are ſo far ſeparated, that they burſt thro' the Fleſh and Skin, the interjacent Muſcles, Nerves, Veins, and Arteries,

Arteries, will prevent the replacing them; and many unexpected Inconveniences will impede the Cure, and deform or weaken the Member, eſpecially the Humerus, Leg, and Thigh, or, perhaps, corrupt it to ſuch a Degree as to render Amputation neceſſary.

The moſt convenient Seaſon for the Cure of Fractures, as well as other Diſeaſes, is the moſt ſerene and temperate; that is, neither too hot, nor too cold. Your Cure is completed ſooner, too, in young Men than old; but in pregnant Women the Cure generally ſucceeds very ill, till they are deliver'd.

Inflammations, Suppurations, or Fiſtulæ, are generally the Conſequence of a Bone being broken into ſeveral Fragments, which will not admit of a Cure, till the Pieces are extracted: But Fractures proceeding from an internal Cauſe, which are often attended with a Caries, are more dangerous than thoſe from an external, and often incurable, unleſs the Cauſe, whether ſcorbutic, venereal, or hydropic, be firſt removed, and the Patient's Habit of Body entirely mended.

When any large Fragment of the Bone is carry'd away by a large Iron or Leaden Bullet, it is better to cut off the lower Part of the ſhatter'd Limb, as the divided Bones can never unite, than by a tedious and fruitleſs Proceſs to weaken the Patient, and hazard his Life: But if a ſmall Piece only be ſeparated, the Fragments may, indeed, unite, but the Limb will be ſhorter; and, if this happens in the Leg, the Patient muſt be lame.

If any Blood gets from the Fiſſures into the interior Sinus of the Bone, very great Danger of a Caries, or a Spina Ventoſa, incurable Fiſtulæ, Conſumption, and Sphacelus, enſue; ſo that the Limb muſt be amputated, or the Patient die: And, indeed, in all other Fractures, whenever the Blood corrupts the Marrow, the Conſequence is the ſame.

Fractures in the Legs are worſe, and more inconvenient, than in the Arms, as they are leſs capable of being conceal'd, eſpecially in Men; and they are not only accompanied with Lameneſs, but even a Deformity, and therefore require the utmoſt Care in the Management of them.

The Cure of Fractures.

In curing of Fractures, the principal Concern ſhould be the Agglutination of the Bone: Take care, therefore, 1. That it is reduced to its proper Situation; and this is done by Extenſion and Repoſition. 2. After Reduction, apply a proper Bandage, and preſcribe Reſt to your Patient. 3. Prevent, or remedy, the Inconveniences that may enſue; and the Surgeon will be qualify'd for this, if he knows, firſt, how the Bones are ſituated, whether there are one or more in the Limb; whether they are large or ſmall, robuſt or ſpongy, even or uneven; and, whether one, or more, be fractur'd. 2. What Muſcles are near, with their Poſition and Office. 3. Whether any of the larger Nerves, Veins, or Arteries, are near. For a thorough Knowledge of theſe Things conduces very much to a ſucceſsful Cure.

When the fractur'd Bones continue in their natural Poſition, a proper Bandage will promote the Agglutination of the Fragments, without Repoſition or Extenſion; though, as often as they recede from each other, ſome Degree of Extenſion is abſolutely neceſſary, which muſt always be proportion'd to the Diſtortion of the Fragments; for the wider the Separation, and the ſhorter the Limb, from a Contraction of the Muſcles, the greater Extenſion is required. But this Operation muſt be performed tenderly, leſt too great Violence ſhould injure the Patient.

In extending a fractured Limb, care is to be taken, 1. That the Patient is kept ſteady, to prevent his giving Way to the Extenſion. The Poſture muſt be accommodated to the Circumſtances; for ſometimes ſitting in a Chair, or on the Floor, ſometimes lying on a Bed or Table, is more commodious. 2. The broken Limb, both above and below the Fracture, muſt be held by an Aſſiſtant. 3. The Aſſiſtant, who holds the lower Part, muſt extend it with Strength ſufficient to replace the Fragments. But, if the Hands alone are not ſufficient, uſe a Rope or Napkin; and, if one Man is not enough, employ two or three. Obſerve always to proceed with Tenderneſs, that you may not rack the Patient with unneceſſary Tortures.

The Antients, as often as the Hands, Ropes, and Napkins, failed them, which was not very often, invented ſeveral Machines for the Reduction of Fractures; as the Pullies with Ropes, the *Scamnum Hippocratis*, and others repreſented by *Oribaſius*, *Paré*, *Andreas a Cruce*, *Scultetus*, and other Authors. But the Moderns have rejected them, as their Action is unequal, and Application inconvenient; nor can they be always at hand in a Battle, and other proper Places, where wanted. Beſides, it is certain, that the Hands, Ropes, and Napkins, will anſwer every End propoſed.

There remains one very important Obſervation relative to the Extenſion of fractur'd Bones; which is, that if the Surgeon is called in, after Tumors, or violent Inflammations, come on, he ought to defer the Extenſion, till they are remov'd: For, under theſe Circumſtances, the Parts affected cannot be handled, compreſſed, or extended, without moſt acute Pains, Convulſions, and the Danger of a Sphacelus: But if the Tumor or Inflammation are ſlight, we may ſafely proceed to Extenſion directly, in order to prevent their Increaſe.

If the Inflammation is ſo violent, as to render Extenſion impracticable, the firſt Care muſt be to mitigate this Symptom; and the Rules laid down under the Article Contusa will anſwer this End, as Bleeding, Purging, drinking aqueous Fluids, internal Medicines which reſiſt Inflammation, and the frequent Application of warm reſolvent Fomentations: By the Help of theſe, the Inflammation will gradually abate; ſo that in twenty-four Hours the Extenſion of the Limb may be made; though, inſtead of the above-mention'd Fomentations, the following may be us'd with very good Effect:

> Take of the Leaves of Scordium, two or three Handfuls; Water, one Pint; Spirit of Wine, ſix Ounces: Let them boil together for a Quarter of an Hour; and then add, of common Salt, an Ounce; of Nitre, half an Ounce. Let Linen Cloths, impregnated with this Decoction, be bound upon the fractur'd Part, and frequently renew'd.

When the Inflammation is ſo violent, that you cannot the next Day reduce the Bone, continue theſe Medicines, till the Diſorder is entirely remov'd.

Sometimes the Splinters, which irritate the neighbouring Parts, prevent the Repoſition of the Bone: If, therefore, theſe are looſe, they are to be taken out; if they adhere to the Periоſteum, cut them off; for they never will unite, and, conſequently, will prevent the Cure: But if they adhere firmly to the other Parts, and do not obſtruct the Reſtitution, firſt, reduce the Bone; and, after the Application of proper Bandages, leave them, either till they are reſolv'd by Suppuration, and come away without great Pain to the Patient; or, till they unite with the Bone; after which, you muſt never attempt to extract them, but rather reſtore them, as near as poſſible, to their former Poſition, by which means they often agglutinate; but, if this does not happen, they muſt be extracted in the beſt Manner you can.

When the Fragments or Splinters are ſo prominent as to hinder the Repoſition of the Bones, you muſt conſider whether they can be reunited or not: And this will appear to be practicable, if they are not too widely ſeparated from the great Bone, and much Fleſh is not interpos'd between: But, when they can neither be reſtor'd nor agglutinated, they muſt be remov'd by a ſharp ſtrong Forceps (ſee *Tab.* XXIX. *Fig.* 1.); or, when they are firm and thick, by a fine Saw, (ſee *Tab.* XXVIII. *Fig.* 9.) ſo far as is requiſite. When this is done, proceed to the Extenſion and Reſtitution of the Bone; for, till then, the Bones can ſeldom be replac'd or united.

If the Splinters lie concealed under the Skin, ſo that they cannot be reached with the Hands, firſt try to reduce them: If that cannot be done, make an Inciſion in the Skin, and extract them.

The beſt Method of Extenſion has been already ſpecify'd. The Surgeon is to take hold of the Part, which is extended by two Aſſiſtants, and to preſs it ſometimes outwards, ſometimes inwards, ſometimes upwards, ſometimes downwards; and to put it into different Poſitions, according as the Circumſtances of the Caſe require, till every Splinter appears to be reſtored to its natural Poſition.

You may judge whether the Fragments are reduc'd, from an Abſence or Remiſſion of Pain, and from the Limb recovering its former Shape and Length: If theſe Appearances fail, you may ſafely conjecture the Reduction not to be complete; and then you muſt continue the Extenſion, till the Bone is entirely reſtored.

After a Reduction of the Fragments, keeping them in their proper Situation alone will promote the Reunion.

The Methods for procuring a Reunion are principally theſe: 1. To apply a proper Bandage: 2. To place the Limb in a convenient Poſition. To the firſt belong Rollers, Compreſſes, and Splints of Paſteboard or Wood; and, ſometimes, of Copper, Braſs, Tin, Iron, or Lead (ſee *Tab.* XXIX. *Fig.* 7.); but I ſhould recommend principally thoſe of Wood or Paſteboard. The Method of Dreſſing is, firſt, to apply a Bandage round the fractur'd Limb; upon this lay Compreſſes and Splints; then faſten them firmly with Fillets, or by Tying. In ſome Caſes, Boxes of Paſteboard, Wood, or Metal, (ſee *Tab.* XXX. *Fig.* 9.) and other Inſtruments, are requiſite (ſee Art. Fascia.). And ſome of theſe are proper for ſimple Fractures, others for compound; but they all tend to this, that the reduced Bone may be ſecured in its Situation, and unite the better: It, therefore, is no Wonder, that the Want of Reſt, or of a proper Bandage, ſhall render the Cure unſucceſsful.

Some of the Moderns apply a Plaister before the Bandage; but others, with good Reason, reject this Practice, not only as unnecessary, but often hurtful: For, besides that Plaisters are ineffectual without Bandages, and that Bandages will retain the Fracture without them, there is this additional Inconvenience, that they obstruct the Pores of the Skin, and occasion Tumors, Inflammations, and violent Itchings: But, to speak my own Opinion freely, I am convinced from Experience, that most Fractures may be cured without Plaisters: However, if any one will apply them, let them take care, that they be not too long, nor the whole Limb surrounded with them, but a Part about a Finger or Thumb's-breadth left bare, lest, if a Tumor arises, they should prevent the Circulation of the Blood, and produce a Gangrene or Sphacelus.

Since we have already treated of Bandages at large, we shall here only give a brief Explanation of the Apparatus; and, since the principal Hopes of completing a Cure seem to depend on them, we must be very careful, that they be not only of a proper Length and Breadth, but likewise adapted to the Shape of the fractured Limb. In simple Fractures, we apply two single-headed Rollers, in such a manner, that each begins upon the Part affected, the one after two or three Rounds ascending, the other descending in a contrary Direction, and then ascending again.

We must here observe, that Bandages, the more tightly they are bound, retain the Fragments the more firmly; but since, when too straitly obstructing the Circulation of the Blood, they occasion Tumors, Inflammations, and a Gangrene, and, on the contrary, if too lax, they will come off, and quit the disunited Parts, a just Medium is carefully to be observ'd. The State of the Bandage may be thus discover'd: When the Extremity of the Member, some time after the Application of the Bandage, swells a little, it is right; for, if it swells too much, it is plain your Bandage is too tight; if not at all, it is too lax. In one Case, therefore, it must be render'd straiter, in the other it must be relax'd.

The Compresses and Splints ought to be suitable to the Size of the fractured Limb; and if that is unequal, as in the Legs, the Compresses should be folded, (see *Tab.* XXX. *Fig.* 13.) so as to fill up the lesser Part; for then the Splints may be more commodiously and firmly apply'd. The Splints must always be ty'd with three Strings, beginning with that in the Middle.

If the Arm is fractur'd, after a proper Deligation, suspend it in a Sling about the Neck; if the Leg, place it either in a Straw-bed, (*Tab.* XXX. *Fig.* 5.) or a Box, (*Tab.* XXX. *Fig.* 9.) with a Pillow and a smooth Board under it, extending from the Bottom of the Foot to the Thigh, for the more commodious Situation, as appears more plainly from what we have already said under the Article FASCIA. And these Machines must be fasten'd with three or four Strings about the Leg, to keep it fix'd. Some use a Pillow for this Purpose, which they bind firmly under the Limb after the Bandage. Others use wooden Boxes, which *Solingen* and *Scultetus* have both described. But the most judicious of our modern Surgeons, prefer the Straw-bed, as it is not only convenient for retaining the fractur'd Bone, but also more easily made. To this they often add a sort of a Sole made of Wood or Pasteboard, (*Tab.* XXX. *Fig.* 6.) which retains both the Foot and Leg; and, to prevent its being troublesome to the Foot, they cover it well with a soft Compress, (*Fig.* 7.) and fasten it to the Straw-case with the Strings (*a a a*, *Fig.* 6.) Then they sew a Piece of Linen, in the Shape of a Ring, furnish'd with Strings, (*b b*, *Fig.* 8.) to the lower Part of the Compress, to suspend the Heel, lest, by lying on it too long, as it frequently happens, Inflammations, Pains, and, perhaps, more dangerous Symptoms, should be excited. Over the Leg form an Arch, either with a Hoop of a Tub, a Drum, or a Bushel (see *Tab.* XXX. *Fig.* 10.): For this not only prevents the Bed-clothes from being offensive, but makes it more easy to cover the Part with warm Napkins, or any other Linen Cloths.

The Patient should lie on his Back, with his Head and broken Leg somewhat elevated, to prevent sliding down; and a Rope should be fix'd either to the Tester of the Bed, or a Beam, that he may raise himself at Pleasure. If he is of a plethoric Habit of Body, open a Vein, lest ill Consequences should ensue. It is the Duty of a Surgeon, at first, to be frequent in his Visits, and examine the Bandage accurately, whether it be tight, and in its proper Place; for, if it is removed, he must immediately replace it; if too strict, relax it; and, if too loose, straiten it. As for Diet, the Rules laid down, under the Article VULNUS, are applicable to Fractures.

The first Dressings may be taken off either sooner or later, as the Nature of the Case requires; for, without a Necessity, it should not be renewed under five or eight Days: But when Inflammations, Pains, or Itchings, arise, or the Bandage is found too tight, or too loose, as it often happens, it must be immediately renewed: In the second and third Dressing, proceed as you did in the first. Though it may not be amiss, if there is no Tumor, to make the Bandage somewhat more firm at the third Dressing, which will prevent the Growth of a deformed Callus, and promote the Consolidation of the Fracture.

If any of the Symptoms mentioned above denote a Fissure, *Wurtzen* directs the Application of his Plaister, with Compresses proper for Fractures, and keeping the Patient quiet for several Days, by which means the Tumor will abate. When the Swelling is large and soft, he directs Incision; after which the corrupted Fluid must be squeezed out, and a Tent, dipt in his yellow Ointment, put into the Wound, applying afterwards a Bandage proper for Fractures complicated with a Wound. On the contrary, Unguents, Cataplasms, Fomentations and Baths, according to him, are so far from removing this Disorder, that they increase it. For the collected putrid Matter, by gradually corroding the subjected Parts, and principally the Bones, causes a Caries, and other bad Symptoms. And tho' these are generally attributed to the Gout, and Defluxions of Humours, he informs us, that they frequently proceed from such Fissures. *Gouey* is of Opinion, that recent Fissures may be cur'd by Bandages only.

Wurtzen's Plaister is thus prepar'd:

Take of pure white Resin, two Pounds; of common Turpentine, half a Pound: Whilst these are melting over the Fire, throw in four Ounces of the powder'd Root of *Ulmaria* (Meadow-sweet); and stir them together, till all cools. When this is to be spread, upon Linen Cloth, or Leather, it must first be put into hot Water. *Wurtzen* attributes great Virtues to this Plaister.

If a Fracture is complicated with a Wound, after Reduction, it must be treated almost in the same manner as other Wounds. First, cleanse it with warm Wine, Spirit of Wine, or Salt-water; then fill it with dry Lint, to stop the Hæmorrhage: Thirdly, anoint it with some digestive Ointment. And lastly, with a vulnerary Balsam, till it is entirely healed. But since the Bandage must be loosen'd daily for the sake of cleansing the Wound, and the Limb must by no means be moved, it certainly ought to be very short, particularly if the Fracture is in the Thigh or Leg; for as you cannot carry the Roller round the Part affected without lifting up the Leg, it almost necessarily follows, that the Bone, after a Reunion, will be disturbed, and consequently not agglutinate neatly. Therefore the best Surgeons have rejected the longer Bandages, and substituted in their room that of eighteen Heads (see *Tab.* XXX. *Fig.* 4.); as it is sufficient to keep the Limb quiet, and sustain it properly. But when the Wound is healed, and the Fracture not agglutinated, it is convenient to leave off the eighteen-headed Bandage, and apply the narrow, long, simple Roller, till the Cure is completed. But this will appear more plainly by the Article FASCIA.

If an Ulcer accompanies a Fracture, especially in the Leg or Thigh, as this must be opened every Day, like a Wound, after Reduction, apply the eighteen-headed Bandage, till the Ulcer is healed; then, laying that aside, use the narrow, long, simple Roller, till the Bone is consolidated, as we directed for a Fracture with a Wound.

Sometimes a Fracture happens in a Part of the Bone, where there have been an Ulcer and Caries for some time. The Cure then is difficult, if not impossible, and very few Writers have propos'd any proper Method in this Case. *Petit*, indeed, mentions an Instance, where a fractur'd Leg was attended with a Caries; but this, since he speaks of no other, is very far from being a sufficient Guide. However, it may be of some Service, till we can find a better. There was a young Man, says he, about the Age of Twenty, who having been a long time troubled with an Ulcer and Caries about the Tibia, broke the Bone in that very Part, and the Fibula remain'd entire. Here he found Extension unnecessary, but, first removing all the vitiated Flesh near the Fracture, he reduc'd it with his Fingers, and filled the Ulcer with dry Lint, applying Compresses, and the eighteen-headed Bandage, as to a Fracture with a Wound; then placed the Limb in a Straw-case. Some Days after, when the Fever abated, he cauterized the Extremity of the Bone, where the Caries was; and then took off the carious Parts with an exfoliating Trepan: He then apply'd Lint moistened with Tincture of Aloes, to the bare Bone, having first used a digestive Ointment to the Flesh, and afterwards the Unguentum Fuscum, to check the luxuriant Flesh, which is very prejudicial. This he continued for fifty Days, till the corrupted Parts of the Bone exfoliated. Lastly, he produc'd a new Flesh by the vulnerary Balsam; and then agglutinated the Ulcer, and Bone, after the usual Method.

But the Case of a fractur'd Thigh with an Ulcer and Caries, which *Petit* has made no mention of, is much more difficult. I knew a Student, about the Age of Twenty, who, for several Years, had an Ulcer with a Caries, in the middle and internal Part of his Thigh, where the crural Artery descends. The Caries, from the Thickness of the Flesh in this Part, was invisible; neither could the Ulcer be enlarg'd with a Knife,

Knife, or the Bone cauteriz'd, on account of the Vicinity of the great Artery; ſo that all the Medicines, which were applied, prov'd ineffectual. At length, in Walking, without any external Violence, his Thigh was broken in this very Part. Here, again, we could neither enlarge the Wound, nor cauterize the Bone, for the Reaſons above-mention'd. And though the Bone was reduc'd, and a proper Bandage applied, yet it would never heal, and the Patient led a miſerable Life. It is, therefore, the Duty of every one to conſider, how ſuch a Fracture in the Thigh, Arm, and other Parts, where the Bone does not appear, nor can be ſafely laid open, ſhould be treated, which would be ſomewhat difficult to diſcover.

A Surgeon, after having reduc'd the Fracture, and given proper Directions for keeping it at Reſt, has done his Duty; for Nature herſelf, by inducing a Callus, performs the Agglutination. From the little Arteries, and bony Fibres, of the fractur'd Parts there ſweats out a certain Gelly, or liquid viſcous Matter, which adheres to the Chinks like Glue. This, being firſt converted to a Cartilage, then to a harder cartilagineous, and, at laſt, to a bony Subſtance, unites the Fragments ſo firmly, that any other Part may be broken ſooner than this; as is obſervable in Planks join'd with Glue.

But as in Wounds the new Fleſh, ſo in Fractures the Callus, is ſometimes too luxuriant, rendering the Limb uneven and deform'd. When this happens, and cannot be prevented, the Surgeon ſhould acquaint his Patient with it, leſt the Diſproportion be imputed to him. Nor can this Excreſcence of the Callus be always prevented, or, when it is come to a Pitch, be cut off, like luxuriant Fleſh, for many and good Reaſons: It is therefore incurable.

But too great a Luxuriance of the Callus may, in ſome meaſure, be prevented, by binding the Part pretty tight, and bathing it with rectified Spirit of Wine; for this will not only ſuppreſs, but harden, the viſcid Matter. I would recommend this particularly in the Arms of Women, and the Legs of Men, as they are the moſt conſpicuous Parts of the Body. But, if the Callus is already indurated, ſcarce any Remedy can be found, either to remove or ſuppreſs it; though ſome ſay it may be ſucceſsfully check'd by the Application of the *Emplaſtrum de Ranis cum Mercurio*, binding a Leaden Plate over it. This Callus grows ſooner or later, according to the different Size of the fractur'd Bone, the Habit of the Body, Temperament of the Air, and the Age of the Patient. When it is obſerv'd to be too ſlow in its Progreſs, ſome promote it by giving frequently half a Dram of Oſteocolla to the Patient.

The beſt Method to prevent an Itching is the Removal of all fat and oily Applications, and even Plaiſters; for they are of ſuch a Nature as to obſtruct the Pores of the Body entirely. If this does not anſwer the End, it will be proper to bathe the Part with warm Wine, Spirit of Wine, or Oxycrate, and to make the Bandage with clean ſoft Linen. If there are any Bliſters, they may be cut with the Sciſſars.

Inflammations may be treated in the Manner directed under the Articles INFLAMMATIO, CONTUSIO, and VULNUS. But, for Pains and Convulſions, obſerve what is ſaid under the Article VULNUS; but particular Care muſt be taken, that the Fragments be replac'd; and, if any are looſe, let them be extracted, and the Limb put in the moſt commodious Poſture: Though the beſt Method is to open a Vein, and apply reſolvent Cataplaſms, and Fomentations; not neglecting, in the mean time, internal Medicines, and a proper Diet; for, without theſe, violent Inflammations, a Sphacelus, and Death, will often enſue.

But if the Inflammation is ſo violent, that you apprehend a Mortification; firſt, let Blood; then apply an eighteen-headed inſtead of the long ſimple Bandage, with digeſting Fomentations, either of Lime-water with camphorated Spirit of Wine, and Eſſence of Aloes and Myrrh; or of Spirit of Wine camphorated, and Sal Ammoniac; or the Medicines already preſcrib'd above for the Mitigation of Inflammations. But, if the Mortification already appears, you muſt make frequent Scarifications and Inciſions, to let out the ſtagnating Humours, not forgetting the Fomentations juſt recommended; and, when the Gangrene has gain'd ſuch a Head, that Fomentations will avail nothing, and the Sphacelus approaches, the Limb muſt be amputated, to prevent the Corruption from ſpreading.

If an Hæmorrhage attends a Fracture, you muſt ſearch diligently for the ruptur'd Vein or Artery, and check the Profuſion of Blood, either by Preſſure, or a proper Application of Lint, Compreſſes, and Bandages; or by a proper Ligature of the affected Veſſel; or, laſtly, by the Cautery. After this, reduce the Bone, remove all the extraneous Bodies which can readily be come at, and then apply the Bandage.

If a Fracture is accompanied with a Palſy, or Waſting of the Limb, there is but little room for Hope. Though it is proper, in this Caſe, (1.) To rub the Part affected with warm Cloths, often and diligently. (2.) To anoint it with ſtrong Spirits, as the Spirit of Ants, Earth-worms, Hartſhorn, Sal Ammoniac, or the Spiritus Matricalis of the *Leyden* Diſpenſatory, Eſſence of Euphorbium, and Caſtor. (3.) To foment it with warm Fomentations, and Baths made of Wine impregnated with ſtrengthening, aromatic, and nervous Vegetables, or natural warm Baths. (4.) But the moſt proper Method is to put the paralytic, rigid, or tabid Limb into the Bellies of Animals freſh-kill'd, as Oxen, Calves, Swine, or Dogs, as this will promote an Afflux of the Blood and Animal Spirits to the injur'd Part, and recover it; particularly if it is aſſiſted by internal, nervous, and corroborating Medicines.

As often as a Joint grows rigid, and the corrupted Matter therein is ſuppos'd to be harden'd; this the *Greeks* call *Anchyloſis*: If it proceeds from an Infuſion and Concretion of the Juice of the fractur'd Bones into the Joint, the Cure will be difficult; but if it ariſes from too long Reſt, or the Inſpiſſation of the Humour which ſhould lubricate the Joints, it is proper to uſe frequently warm Fomentations, and rub the rigid Parts with Oils, and Fat of Animals, and emollient Unguents; and to move it in different Directions, with the Hands, till the natural Power of moving be reſtor'd.

When a Luxation accompanies a Fracture; firſt, reduce that, then the Fracture; and apply to both a proper Bandage. In ſome Caſes, for Example, where the Fracture is near the Head of the Bone, ſo that the diſlocated Part can neither be taken hold of, nor ſufficiently extended, it is better to reduce the Fragments, bind them up properly, and agglutinate them, before you meddle with the Diſlocation; though you muſt not omit to preſerve the luxated Bone from Tumors, and Inflammation, by applying Spirit of Wine, or Spirit of Wine camphorated, or warm Vinegar. But I cannot forbear confeſſing, that this Method is not always effectual; for, ſometimes, the luxated Parts cannot be reduc'd by any means whatever, afterwards. Mean time, as we have no better Way, this muſt not be rejected, eſpecially ſince there are many Inſtances in Authors, where the Luxation has been reduc'd ſome Months, and even a whole Year after.

If a fractur'd Limb, either through the Negligence of the Surgeon, or the Imprudence or Inquietude of the Patient, after Conſolidation, is deform'd, there is no other Method of reſtoring it to its priſtine Beauty, but employing ſtrong Men to extend, divide, and break it again; though a repeated Cure of ſuch a Fracture requires the utmoſt Circumſpection. When, therefore, the Deformity and Pain are inconſiderable, and the Callus harden'd, or the Patient old and infirm, it is not only troubleſome, but ſometimes dangerous; and, conſequently, ought not to be attempted. On the contrary, when the Callus is tender, and the Patient young and robuſt, you may ſafely uſe theſe means for reſtoring the Member to its former Shape. Mean time it is neceſſary to obſerve, that, before this is undertaken, reſolvent and emollient Baths, Fomentations, Ointments, and Plaiſters, for ſeveral Days, are to be applied to the Callus.

Zwinger affirms, that a Callus may be reſolv'd by the Application of the *Emplaſtrum de Ranis cum Mercurio*, and that in fourteen Days, provided it has not been form'd above ſix Months. But *Heiſter* doubts of this, and leaves it to Experience to be determin'd.

Having treated above of Fractures in general, and of Fractures of the Head in particular, under the Article CAPUT, we now proceed to Fractures of particular Parts, not ſpecified under other Articles.

FRACTURES OF THE NOSE.

Both the Bone and Cartilages of the Noſe are liable to a Fracture, from a Fall or Blow. This happens in the Middle, or on the Side, and is diſcoverable by the Sight or Touch; for, when either of the Bones in the Front are broken, the Noſe will become flat, and the Patient breathes with Difficulty. If a Bone on either Side is fractur'd, the Part is hollow. When this Accident happens to the Cartilage, the Noſe inclines to one Side. This is ſometimes a ſimple Fracture, but more frequently attended with an external Wound; and, when the Injury is very conſiderable, the Cure can never be complete, but there will remain ſome Deformity in the Noſtrils; and, from the Vicinity of the Brain, which is often affected at the ſame time, it is very dangerous: Beſides, Ozæna, Caries, or Polypus, frequently ſucceed, which greatly impede the Smell, Speech, and Reſpiration.

When the Bone of the Noſe is to be reduc'd, place the Patient oppoſite to the Light, either reclining on a Bed, or an Aſſiſtant holding his Head back, whilſt you elevate the depreſs'd Parts with a Probe, Spatula, or Quill; and externally apply the Thumb and fore Finger of the other Hand. If the Fracture is on both Sides, proceed in the ſame Method with the other; and, to prevent their collapſing, fill each Noſtril with a Doſſil of Lint, laying on a Plaiſter, and ſuch Dreſſings as are directed for recent Wounds. The Splinters muſt be forced into their natural Situation by the Fingers; but, if a Splinter is ſo far remov'd from the Bone, that it will not reunite, extract it with the Forceps.

If this Fracture is attended with an external Wound after Reduction, firſt dreſs it with dry Lint, covering it with a vulnerary Plaiſter; afterwards apply balſamic Medicines, as digeſtive Unguents, Eſſence of Aloes, Myrrh, Amber, Maſtich. Fat oily Medicines muſt be avoided in this, and all other Fractures, as very improper; but, if there is no external Wound, the Plaiſter only will be ſufficient to ſecure the Bone; and, unleſs an Abſceſs or Caries follow, the Agglutination is completed in fourteen Days. However, as a ſingle or double Support of ſtrong Paſteboard, cover'd with Splints, and adapted to the Noſe, (ſee *Tab.* XXIX. *Fig.* 8.) ſometimes ſeems neceſſary, it may be applied to the Side, and faſten'd, but not too tightly, with the four-headed Bandage (ſee FASCIA). Before the Application of the Plaiſter or Bandage, ſome introduce a little Silver or Leaden Tube, or a Quill, into the affected Noſtril, in order to preſerve Reſpiration (ſee *Tab.* XXIII. Letters P and Q); and, to ſecure theſe, as well as the Bone, they uſe the four-headed Bandage, or a peculiar String faſten'd to the Bandage: Though many Moderns reject this whole Apparatus, except the Splints, Bandage, and Plaiſter, as unneceſſary, and even prejudicial, rather than ſerviceable, eſpecially ſince the Patient can ſeldom bear theſe Tubes, or even the Tents themſelves, as they irritate the Part, and hinder Reſpiration: Beſides, theſe Bones, once reduc'd, do not eaſily ſeparate again, as is generally imagin'd.

FRACTURES OF THE JAW.

The lower Jaw is leſs ſubject to Fractures than any other Bone; but, when it does happen, either on one or both Sides, the Fragments are not far ſeparated from each other; for the Muſcles are ſo ſituated, that they cannot ſeparate the Bone far: But, however, the more violently it is injur'd by a Blow or Fall, the more are the Fragments bruis'd, and remov'd from their proper Situation.

As for the Diſcovery of a Fracture in the Jaw-bone, it is made by the Sight, but, principally, by the Touch; for the laſt will demonſtrate, evidently, what is divided in the Jaw, and whether the Teeth are remov'd from their natural Poſition. Beſides, the violent Pains and Convulſions are infallible Signs of a fractur'd Jaw; though, if the Pieces are not entirely ſeparated, it is not ſo eaſily diſcover'd.

The Method of reducing the fractur'd Bones of the lower Jaw, is to place the Patient in a convenient Seat oppoſite to the Light, and let his Head be held back firmly by an Aſſiſtant: Then the Surgeon muſt introduce his Finger or Thumb of one Hand into his Mouth, and apply the other Hand on the Outſide; and with theſe bring the Fragments together, till they appear to be properly replac'd, which he may know from the accurate Situation of the Teeth. But, when any of the Teeth are looſen'd, or forc'd out, it will be proper, if the Caſe will permit, to faſten them with Gold or Silver Wire, or Thread, to the next Teeth. If the Jaw is broken on both Sides, you muſt proceed in the ſame manner, with one after the other; and you will be the more ſucceſsful in this, the more you are acquainted with the Anatomy of this Part. When the Fragments are not ſeparated, Repoſition is unneceſſary.

When you have reduc'd the Bone, firſt apply a Plaiſter, then a Compreſs dipt in Spirit of Wine; and, upon that, if only one Part is broken, lay another Compreſs, few'd to a Piece of Paſteboard, in the Form of a half Jaw, provided only one Side is fractur'd (ſee *Tab.* XXIX. *Fig.* 9.). Faſten them both, either with a Bandage of four Heads, perforated in the Middle, to receive the Chin, or with the Habena, deſcrib'd under the Article FASCIA. When the Jaw-bone is fractur'd on both Sides, then apply, in the ſame manner, one Compreſs, moiſten'd with Spirit of Wine; and another with Paſteboard, perforated in the Middle, (*Tab.* XXIX. *Fig.* 10.) and fitted to the Chin, ſo that the Perforation *a* may be applied to the Chin, and the Extremity *b b* to the Ears. Theſe Fractures, however, may be eaſily cur'd without Plaiſters or Compreſſes, by a proper Bandage, as they will not, without Violence, relapſe after Reduction. For your further Direction, in regard to the Bandage, conſult the Article FASCIA.

Laſtly, to promote the Agglutination of a fractur'd Jaw-bone, it is proper to open a Vein, and recommend Reſt to the Patient, and forbid him all manner of Diſcourſe and Manducation, eſpecially at firſt. Preſcribe, therefore, before the Agglutination, Spoon-meats, as Broth, Soop, and Eggs; order him to lie on his Back, and not upon his Face or Cheek; for thus your Cure will be completed in twenty or thirty Days; eſpecially if the internal Part, where the Fracture is, be anointed ſeveral times every Day with Honey of Roſes.

If the Fracture is attended with a Wound, it muſt be open'd every Day, and Care taken of the Wound, till it is heal'd. *Le Dran* gives an Example of a Fracture of each Maxilla, in *Obſ. Chirurg.* 3. *Tom.* 1. and one of the lower Jaw, *Obſ.* 8.

For the Method of treating Fractures of the Clavicle, ſee CLAVICULA.

FRACTURES OF THE SCAPULA.

The Scapula is fractur'd, either near the Acromion, that is, the Part where it is join'd to the Clavicle, or elſewhere. If the Acromion is broken, it may be eaſily reduc'd with the Fingers, either elevating the Arm, to relax the Deltoide Muſcle, or preſſing the Os humeri directly upwards, laying hold of it near the Elbow; but it will ſlip out again from a very ſlight Cauſe, ſo that it does not agglutinate without great Difficulty; and this even by the Weight and Motion of the Arm, and the Contraction of the Deltoide Muſcle: The Conſequence of which is, that few Perſons, who have met with this Accident, can afterwards lift their Arm up freely. After the Reduction, apply a Compreſs moiſten'd in Spirit of Wine, faſten it with the Bandage commonly call'd Spica, put a Ball under the Ala, and ſuſpend the Arm in a Sling about the Neck. But, if the Neck of the Scapula, which is below the Acromion, or the Acetabulum, be broken, which, from its deep Situation, cannot be well diſcover'd, and, indeed, but ſeldom happens, a Stiffneſs of the Joint, or Inability of Motion, an Inflammation, a violent Abſceſs, or ſome other bad Symptoms, and even Death, generally enſue: An Inſtance of which I ſaw in a Profeſſor at *Helmſtadt*; and it cannot be otherwiſe, by reaſon of the neighbouring Joint, the Tendons, Muſcles, Ligaments, Nerves, Veins, and great adjacent Arteries, as ſome of theſe muſt be affected by the Fracture. All other Fractures of the Scapula are leſs hazardous.

In order to reduce the Scapula, an Aſſiſtant ſhould extend the Arm forwards, whilſt the Surgeon, in the beſt manner he can, is employ'd in reſtoring it with his Hands, laying thereon Compreſſes, and Splints of thick Paſteboard, adapted to the Part, and dipt in Spirit of Wine, or Oxycrate, binding it afterwards with the Faſcia Stellata, or Quadriga. See FASCIA.

FRACTURES OF THE STERNUM.

The Breaſt-bone, or Sternum, as well as others, may be depreſs'd, or fractur'd, by external Injuries, as a Fall, or Blow. After this Accident, the Part is not only in Pain, and unequal, but the latent Veins and Arteries are very much injur'd, or entirely broken; from whence proceed Pains of the Breaſt, Difficulty of Breathing, violent Coughs, Spitting of Blood, or Extravaſations of Blood on the Precordia, or within the Mediaſtinum, with many other dangerous Symptoms.

Nor are theſe only, which we have already mention'd, Symptoms of a fractur'd Sternum, but it is plainly indicated, when the Sternum is remarkably or unnaturally diſproportion'd, or when it is moveable by the bare Touch of the Fingers, but particularly if a Noiſe is heard: Though the proper Indication of a depreſs'd Sternum is, that, beſides theſe Symptoms, there is a manifeſt Sinus, or Inequality, in the Part.

The propereſt Method of reducing the Sternum is, to lay the Patient upon his Back, on a Bed or Table, putting under him ſome hard Pillows, a great Loaf, a Drum, ſome cylindrical Body, a Tub, or ſome other large Subſtance, ſo as to depreſs or recline the Shoulders, and elevate or extend the Breaſt-bone. Then the Surgeon muſt preſs, and with ſome Violence ſhake, each Side of the Breaſt; for that both extends the Ribs forwards, and forces the depreſs'd Parts of the Sternum into their natural Situation. But, as this Method may ſometimes fail, it is then proper to make a crucial Inciſion in the Skin, and elevate the depreſs'd Part of the Sternum, with an Elevator (*Terebra*) gently ſcrew'd into the Part; and, though this is the moſt painful Method, yet *Gouey* and *Petit* both recommend it, as the readieſt and beſt. We have already, under the Article FASCIA, explain'd the propereſt way of retaining this Bone. But, if any Blood is collected within the Mediaſtinum, (as it often happens, particularly when violent Pains under the Sternum continue after Reſtitution) and cauſes a Suppuration internally, it will not be amiſs to trepan the inferior Part of the Sternum, as we do the Cranium; and, after purging the Breaſt of the corrupted Matter, to apply a vulnerary Balſam. Laſtly, when any Effuſion of Blood is diſcover'd within the Breaſt, the only remaining Hope is plac'd in a Perforation of the Breaſt, after the manner recommended under the Article EMPYEMA. As for the Dreſſings, you muſt uſe Compreſſes dipt in warm Wine, or Spirit of Wine, with the Napkin and Scapulary.

FRACTURES OF THE RIBS.

Sometimes the Ribs are broken or fiſſured in ſuch a manner, that only the exterior or interior Part is affected, nor do they remove from their proper Place; and then there are very few bad Symptoms, inſomuch that it is often not perceivable, ſo that they reunite ſpontaneouſly: But, when the whole Rib is fractur'd, and the Fragments recede from their natural Situation,

Situation, the Caſe is more dangerous; for theſe ſeparated Fragments fret the Muſcles, and the internal Membrane of the Breaſt, call'd the Pleura: When theſe Bones are fractured, they project either internally or externally, and almoſt in the ſame Manner as a broken Bow: In the latter Caſe the Symptoms are not dangerous; whereas, in the former, eſpecially if the Veins or Arteries are injur'd, they are very hazardous, and generally attended with violent Prickings, an Inflammation, a Difficulty of Reſpiration, Cough, Fever, Spitting of Blood, Suppuration, Hæmorrhage into the Cavity of the Thorax, or cellular Interſtice of the Mediaſtinum, with many other dangerous Symptoms, particularly if the Viſcera, which are near, have received any Injury; and, if theſe are not timely relieved, violent Fevers, Inflammations and Ulcers of the Breaſt and Lungs, Empyemas, incurable Fiſtulas, and Caries of the Bones, and even Death itſelf, will frequently enſue. Sometimes, indeed, it is only a ſimple Fracture; but, for the moſt part, it is accompanied with an external Wound; or ſome acute Fragment irritates the tender Parts, and then there follows a great Profuſion of Blood, which is hardly to be ſtopped; and, if this Blood infuſes itſelf into the Breaſt, it never can be extracted but by an Aperture, or at leaſt a Dilatation of the Wound, if the Injury be in the baſtard Ribs. If the Cartilage is divided from the Bone, we denominate it a Fracture, and treat it as other Fractures.

When the Parts of the fractur'd Rib continue in their proper Situation, or when the Rib is not fractur'd quite through, and the natural Equality of the Part remains unalter'd, or when the Pain is not violent, it is difficult to diſcover ſuch a Fracture; yet a ſlight Touch of the injur'd Part will give Pain; on this Account, however, it agglutinates more eaſily: But, when the fractur'd Parts are ſeparated from each other, you may not only perceive an Inequality by the Touch; but the Noiſe of the Bones, if they are mov'd, will diſcover it to the Ear. When any acute Part touches the Viſcera, or any Fragment points inward, the Symptoms mention'd above will enſue; from the dangerous Appearance of which, we collect the Danger of the Fracture. A windy Tumor (which the *Greeks* term *Emphyſema*) very often proceeds from a Fracture of the Ribs; for the Wind inſinuates itſelf through a ſmall Wound between the Fleſh and Skin into the Subſtance of the cellular or adipoſe Membrane; and firſt inflates the Breaſt, then the Neck, Head, Belly, and other Parts, as Calves or Sheep are blown up by the Butchers. Of this Mr. *Littre* gives a remarkable Inſtance in the *Memoirs of the Academy of Sciences for* 1713. and Mr. *Mery* gives another in the *Memoirs* for the ſame Year. That of Mr. *Mery* is as follows:

A poor Man, about ſixty Years of Age, on *Monday* about Three of the Clock in the Afternoon, had the Misfortune to be thrown down by a Coach, the Wheels of which paſs'd over his Breaſt, and broke the fourth and fifth Ribs of his Left Side in the Middle. His calamitous Situation oblig'd him immediately to apply for Relief to the *Hotel-dieu*, where he was forthwith receiv'd as a Patient.

Upon examining his Body, the Fracture of his Ribs was eaſily and palpably diſcover'd: Soon after there appear'd in the ſame Place a conſiderable Tumor, occaſion'd by a Quantity of Air pent up, and confin'd in the veſicular Texture of the Membrane lying under the Skin. The Surgeon, to whoſe Care this Patient was committed, did not think it adviſeable to apply Medicines to the *Emphyſema*, becauſe externally he could perceive neither Wound nor Contuſion: Nor durſt he venture to apply the Bandage commonly uſ'd for Fractures of the Ribs, for Fear of injuring his Reſpiration, which was already conſiderably diſorder'd. He contented himſelf with only Bleeding the Patient; and the Veneſection, by Order of the Phyſician of the Ward, was repeated on the ſubſequent Days: But, notwithſtanding theſe Meaſures, the Difficulty of Reſpiration, and the Emphyſema, gradually increas'd till the Evening of the *Thurſday*, which was the fourth Day of his Indiſpoſition, and the laſt of his Life.

Next Morning, upon examining his Body, I found that the Emphyſema had diffus'd itſelf thro' all its external Parts, except the Soles of his Feet, and Palms of his Hands, ſo that his Face, his Neck, his Breaſt, his Abdomen, his Arms, and his Legs, were fill'd and diſtended with Air, which yielded under my Fingers, when I but gently preſs'd the Skin, under which it was lodg'd.

Making an Inciſion in the Skin, and other Integuments, which cover'd the Fracture of the Ribs, I obſerv'd a very ſmall, and almoſt imperceptible, Opening in the intercoſtal Muſcles, but without any Ecchymoſis. Then laying open the Breaſt, I perceiv'd a ſmall Portion of the Membrane, which ſurrounds the Lungs, torn, and one Part of it adhering to the Lungs, and another to a Portion of the fractur'd Ribs: Notwithſtanding this, a ſingle Drop of Blood was not diſcharg'd from the Lungs into the Cavity of the Breaſt; a Circumſtance which to me appear'd pretty ſingular and uncommon.

After the Diſcovery of theſe Phenomena, it was no difficult Taſk to find out the particular Road the Air had taken in forming this monſtrous Emphyſema; for 'tis obvious, that a Part of the Air, which enter'd thro' the Arteria Trachea into the Lungs, during the Dilatation of the Breaſt, muſt, during its Contraction, be carried back thro' the ſame Paſſage, whilſt another Part of the Air, making its Eſcape from the Cellulæ of the Lungs, thro' the Opening of their torn Membrane, muſt paſs from the Cavity of the Breaſt, thro' the ſmall Wound of the intercoſtal Muſcles, and inſinuate itſelf into the Texture of the cellular Membrane; becauſe the Reſiſtance made by it was not equal to the Effort of the Air, which penetrated it; for 'tis by no means probable, that the Air ſhould have inſinuated itſelf into this Membrane during the Dilatation of the Breaſt, ſince, in dilating itſelf, it can only convey into the Lungs a Quantity of Air equal to that, whoſe Place it takes up by its Dilatation; for, on this Occaſion, its Cavity within is enlarg'd in a direct Proportion to the Space it takes up externally; for which Reaſon, the Air could not inſinuate itſelf into the cellular Membrane, during the Dilatation of the Breaſt: It muſt, therefore, have penetrated this Membrane, during the Contraction of the Breaſt; and, as the Air enter'd into it without creating any Pain to the Patient, who, alſo, perceiv'd no uneaſy Senſation in any Part of his Body, upon preſſing the Skin under which the Air was pent up, we have juſt Reaſon to conclude, that all the Cellulæ of the cellular Membrane have a mutual Continuation with each other; otherwiſe this poor Patient had been ſubjected to the moſt intenſe and racking Pains, if the Texture of the cellular Membrane had been broken and lacerated by a forcible Inſinuation of the Air.

In reducing the Ribs, you ſhould always obſerve very particularly, whether the Splinters project internally or externally: In the laſt Caſe, the Patient ſhould be placed on a high Chair or Table, and the ſeparated Bones gently reſtored by the Fingers; after which, apply Compreſſes dipt in Spirit of Wine, with a Splint of thick Paſteboard, which you muſt faſten with a circular Bandage, or the Napkin and Scapulary. In the former Caſe, while the Patient draws his Breath, the Surgeon ſhould preſs and move gently with his Hands, both the anterior and poſterior Extremity of the Ribs, till the depreſs'd Part recover its Situation. As to the Bandage, proceed as before, omitting only the Paſteboard, and binding the Napkin ſomewhat looſer; but the Bandage muſt not be unloos'd, unleſs it is too lax, or ſome Symptom makes it requiſite; and, in theſe Caſes, the Patient muſt be in an erect Poſture whilſt it is done: Thus will your Cure be completed within three Weeks or a Month. During the whole Time, according to *Celſus*'s Advice, the Patient muſt avoid Clamour, Talking, Paſſion, any violent Motion of the Body, Smoak, Duſt, and every Provocative to Coughing or Sternutation. If theſe Rules fail, it will not be amiſs to elevate the Ribs by means of a ſticking Plaiſter, as in a Depreſſion of the Cranium. See CAPUT.

If any acute Fragments, breaking through the Pleura, cauſe great Pains, difficult Reſpiration, Coughing, Spitting of Blood, Inflammation, Fever, and other dangerous Symptoms, an Inciſion muſt be immediately made in the Skin, and the Fragments which ſtick in the Fleſh, muſt be extracted with the Fingers, Forceps, Hooks, or ſome other Inſtrument, the Omiſſion of which will endanger the Patient's Life: Open, therefore, a Vein in the Arm, give Glyſters, temperating and anodyne Medicines, and preſcribe a thin Diet. This Inciſion is particularly neceſſary, when neither a Plaiſter, nor the Concuſſion of the Breaſt, before recommended, are ſufficient to reduce the Ribs.

When the Signs, mentioned under the Article THORAX, indicate that the Veins or Arteries under the Ribs are injur'd, and an internal Hæmorrhage excited, you muſt open the Breaſt, about the affected Part, and paſs in your Finger, arm'd with Lint or Linen, impregnated with ſome proper Styptic, till the Bleeding ceaſes. If the Finger will not perform the Office, you muſt ſearch for the broken Veſſel, and cloſe it, either with a Ligature, or by the actual Cautery. But, to omit nothing which may conduce to cleanſing the Wound, the Surgeon ought to keep it open with Lint, if it is in the lower Part of the Breaſt, as long as is neceſſary; if in the upper Part, or at the true Ribs, after Agglutination, a Perforation of the Breaſt, in the inferior Part, will be very proper.

For the Cure of an *Emphyſema*, it is proper to enlarge the external Wound of the Skin, if it is ſmall, by Inciſion, and rub the Tumor gently at every Dreſſing, or preſs it towards the Wound, that the included Air may be gradually expel'd. For the Treatment of Contuſions, if they are accompanied with a violent Cough or Suppuration, Phlebotomy and other Remedies muſt be uſed.

In *Le Dran, Obſervat.* 29. *Vol.* 1. there is an Example of an Emphyſema cur'd by this Method.

FRACTURES

Fractures of the Vertebræ.

When any of the Vertebræ are fractur'd by a Fall, a Blow, or any other external Cauſe, without affecting the ſpinal Marrow, then very ſeldom any thing but the poſterior Apophyſes, or acute Tubercles, are injur'd, which is not at all dangerous. But, when the Body of the Vertebræ, and, conſequently, the ſpinal Marrow, is injur'd by any external Violence, the Parts of the Arms, Legs, or Viſcera, which are below them, become immediately rigid and motionleſs. It is, therefore, no Wonder, that Death enſues ſooner or later, according to the Degree of the Injury. If the tranſverſe Apophyſes, which tend towards the Cavity of the Thorax, are broken, then muſt the Heads of the Ribs, which are inſerted in them, be likewiſe broken, which is a dangerous Caſe.

We diſcover a Fracture of the Vertebræ, not only (1.) from an outward Violence, as a Fall, Blow, or Contuſion; but, principally, (2.) from the Pains of the affected Part; and (3.) the Touch, Sight, or Hearing.

When the Apophyſes are only fractur'd, you may reduce them with your Fingers, applying on each Side of the Spina Dorſi narrow Compreſſes, moiſten'd with Spirit of Wine, and a Splint of thick Paſteboard, with the Napkin and Scapulary. This will eaſily and ſpeedily reunite the Bones of the Vertebræ, as they are ſoft and ſpongy.

If the ſpinal Marrow is wounded, Death follows inevitably; though, as it may ſeem cruel not to attempt the Relief of one under theſe unhappy Circumſtances, the Surgeon ſhould lay the injur'd Part bare by the Knife, and elevate the Fragments, which preſs upon the Medulla, in a proper manner, or, when they are quite looſe, extract them; then let him cleanſe the Wound thoroughly, and apply balſamic Medicines, uſing the Napkin and Scapulary. He muſt continue this, till the Wound heal'd, or the Patient dies.

Fractures of the Os Sacrum.

It ſometimes happens, that the Os Sacrum is fractur'd by a Fall, or ſome violent Blow; and this appears from the Pain the Patient undergoes, but, principally, from the Touch, as in other Fractures.

When this happens, the Fragments ſhould be immediately reduc'd with the Fingers. But, if they are depreſs'd internally, the beſt Method is, after cutting your Nail cloſe, to introduce one Finger, moiſten'd with Oil or Butter, into the Anus, and raiſe the Part depreſs'd into its natural Situation, and, with the other Hand, to reduce it externally. Having done this, apply a Plaiſter ſuitable to the Fracture, and Compreſſes dipt in warm Spirit of Wine, with the T Bandage, or only Compreſſes impregnated with Spirit of Wine, with any Bandage. Laſtly, to promote Conſolidation, let the Patient lie quiet in his Bed, upon either Side, for about a Fortnight; or, if he chuſes ſometimes to ſit, put him in a Chair, without a Bottom, that the Bones may not ſeparate again.

The Os Innominatum is ſeldom fractur'd; but, when it is, the Danger is great; becauſe the adjacent Parts are generally affected, and bad Symptoms enſue, eſpecially if the Patient diſcharges by Vomit a brown or bloody Matter. In reducing it, the Patient muſt lie on the ſound Side; the fractur'd Parts muſt be reſtor'd with the Hands; and Compreſſes, dipt in Spirit of Wine, muſt be apply'd, which are to be faſten'd with the Spica. After this, open a Vein, give temperating and reſolving Medicines, and preſcribe a thin Diet.

Fractures of the Humerus.

The Os Humeri is liable to be fractur'd, either in the Middle, where the Danger is ſmall, or near the ſuperior or interior Head, where the Fracture is worſe, attended with greater Pains, and cur'd with greater Difficulty. It may be eaſily diſcover'd, as it is apparent to the Senſes; but the Bandage, and Method of Cure, is different, according to the Difference of the Parts affected; ſometimes the fractur'd Bones remain in their proper Situation, but much more frequently ſeparate; and one, ſlipping over the other, makes that Limb ſhorter than that on the oppoſite Side; and it ſometimes, though rarely, happens, that the Weight of the Arm cauſes the Fragments to recede from each other. However, in the firſt Caſe, they are reduc'd with great Eaſe; in the latter, more Strength is requiſite to reſtore them, eſpecially if the Patient's Nerves and Muſcles are ſtrong, as they uſually are in robuſt Men.

When the Os Humeri is fractur'd, the following is the propereſt Method of extending it: The Patient is plac'd upon a high Seat; then one Aſſiſtant, the Patient's Elbow being gently bent, takes firm hold of his Arm above the Fracture, and another below it, which laſt extends the Arm in a direct Line, while both pull in oppoſite Directions. The Surgeon himſelf takes the fractur'd Part in his Hands, and, when the Bone is ſufficiently extended, reduces it; then he applies a Bandage, in the manner directed under the Article Fascia. If one Aſſiſtant cannot complete the Extenſion, you muſt employ two; and ſurround the Heads of the Joints with Napkins, or Linen Bandages; and pull different Ways, till the Limb becomes longer then it ought to be naturally; and then the Surgeon, with his Hands, muſt replace the Bones in their proper Situation.

Fractures of the Cubit.

The Cubit has two Bones, the Radius, and the Ulna: In a Fracture, therefore, of the Cubit, either one or both are broken; and that ſometimes in the Middle, ſometimes at the Extremities: If both are broken, each is the more eaſily remov'd out of its proper Situation, but, for that Reaſon, reduc'd and agglutinated with the more Difficulty; if one only, it is not ſo readily remov'd out of its Place; and, therefore, the Reduction and Retention are more eaſy; for one entire Bone is more ſerviceable than any Bandages or Splints whatever. When the Fracture happens near the inferior Head, the broken Bone, by reaſon of the Muſculus Quadratus, and that ſtrong Ligament which lies between the two Bones, is attracted towards the entire Bone, which makes the Reduction difficult; and this ought to be principally conſider'd both in that and the Prognoſtic.

A Fracture in theſe Bones is diſcoverable by the common Indications of Fractures. The Touch, or Sight, by moving the Hand of the affected Cubit inwards and outwards, will certainly indicate whether one or both are broken, and in what Part; though a Fracture of the Ulna, from its Inability to ſupport the Joint, will ſhew itſelf ſooner than that of the Radius: The Ear likewiſe will aſſiſt in this Diſcovery; for, if you take firm hold of the ſuperior Part of the Elbow, and move the Hand inwards and outwards, you will perceive a grating of the Bones.

If the Radius is to be reduc'd, and the Fragments have receded towards the Ulna, an Aſſiſtant ſhould ſtretch the Arm, and the Surgeon preſs down the Patient's Hand towards the Ulna, till the depreſs'd Part is elevated. After this, the Arm muſt be compreſs'd on each Side, with the Palms of both Hands, ſo as to reſtore the compreſs'd Muſcles, between the Ulna and Radius, and Fragments of the Radius, to their natural Poſition; then bind up the Arm, as we have directed under the Article Fascia, placing it in a Caſe of Paſteboard, or thin Wood (ſee *Tab.* XXIX. *Fig.* 14.); and ſuſpend it in a Sling about the Neck.

In reducing, binding up, and ſuſpending the Ulna, follow the Method preſcrib'd for the Radius; only here remember to turn the Hand towards the Radius, or Thumb, till the depreſs'd Part of the Ulna has recover'd its former Poſition.

When both Bones of the Arm are fractur'd, proceed in the ſame manner as you would with either of them ſingly; but here you muſt employ more Strength and Circumſpection, both in reducing and retaining them; nor can you be too careful in the Bandage; but, above all, uſe your utmoſt Endeavours to prevent the Mucilage of the Joints from growing hard, the Ligaments from becoming rigid, and the Arm or Elbow motionleſs, by keeping it quiet too long. It will not, therefore, be amiſs, to turn and extend it cautiouſly, every two or three Days, and foment it ſometimes with Oil, or warm Water, for this will preſerve its natural Mobility.

Fractures of the Carpus.

The Bones of the Carpus, as they are very ſmall, are ſeldom broken; though this ſometimes happens by a violent Blow with a Beam, Stone, or ſome other heavy hard Body; and then there ſcarce remain the leaſt Hopes of a perfect Cure; for theſe minute Bones can never be properly replac'd, much leſs will they conſolidate; and the Ligaments and Tendons are, for the moſt part, very much bruis'd; and, conſequently, the Joint of the Hand becomes rigid and immoveable; and Abſceſſes, Suppurations, Fiſtulas, and a Caries, generally enſue; which, by reaſon of the Tenderneſs of the Bones, and Difficulty of extracting the Pus, is ſeldom reliev'd but by an Amputation of the Hands. Thus *Ruyſch*, and others, ſaw a Fracture of this Kind, which was not cur'd in three Years.

However, as the Surgeon ought to attempt any thing, rather than leave the Patient deſtitute of Hope, let one of his Aſſiſtants lay hold of the Part of the Arm near the Carpus, the other of the Hand itſelf, and pull in oppoſite Directions, as much as is neceſſary; after this, he ſhould reduce the fractur'd Carpus, as well as he can, with his Hands, and bind it up properly.

Fractures of the Metacarpus.

As the Metacarpus is much more frequently broken, ſo is it in general more eaſily reduc'd, becauſe the Bones are large; for the Performance of which Operation, an Aſſiſtant muſt extend the fractur'd Hand upon a ſmooth Table, and the Surgeon reſtore the ſeparated Bones, as exactly as he can, with his Fingers; after which, he muſt apply a proper Bandage.

See an Example of a fractur'd Metacarpus, complicated with a Wound, in *Le Dran, Obſ.* 56. *Tom.* I.

Fractures of the Fingers.

When one or more Fingers are fractur'd, your principal Care ſhould be, accurately to reduce the fractur'd Parts, remov'd out of their Places, to their proper Situation, and then to make a proper Bandage, with a narrow Fillet, faſtening it to the next Finger, as is directed under the Article Fascia; where the Method is alſo laid down of proceeding, when more Fingers than one are injur'd; though, when the Colliſion of the Hand or Fingers appears to be very great, ſo that there are no Hopes of a Reunion, it is better to amputate them, than torment the Patient with tedious Pains, and, perhaps, endanger his Life.

Fractures of the Thigh.

The Thigh-bone, which is the thickeſt of the whole Body, may be fractur'd in the Middle, or near the Joints, but moſt frequently at that Part which Anatomiſts call the Neck of the Femur, near the Juncture with the Os Coxæ: When this happens, it is no ſmall Difficulty to reſtore and retain it in its proper Situation. Sometimes this Bone is fractur'd in two Places, and then the Danger is great; for, if the Patient ſurvives, which is rarely the Caſe, he is generally lame. Sometimes the Fracture is tranſverſe, ſometimes oblique; and one Bone ſlipping over the other, renders the Cure difficult; for the Muſcles, being very ſtrong, and violently contracted, draw the inferior Part upwards, ſo that they are neither extended, nor reduc'd, without very great Force: So likewiſe oblique Fractures of the Femur ſlip out again more eaſily than the tranſverſe, and, for the moſt part, leave the Limb ſhorter than its oppoſite, though the Surgeon has perform'd his Office with the utmoſt Skill. It is, therefore, proper, beſides the Directions we ſhall immediately give, to retain an oblique Fracture of the Thigh by a ſtrict Bandage, leſt the Fragments ſhould ſeparate again.

In reducing the Os Femoris, conſider whether it is fractur'd near the Neck, or in any other Part; for an exact Knowledge of this is neceſſary to a ſucceſsful Reſtitution, and the Application of a proper Bandage; for, as often as it is fractur'd in the Middle, or nigh the inferior Head, it muſt be extended and reduc'd with the Hands, like other Bones; only here a greater Violence, eſpecially in ſtrong Men, is requiſite for the Extenſion; and, therefore, you muſt employ more and robuſter Aſſiſtants, to pull this Bone, in different Directions, with their Hands; and, if their Hands are not ſufficient, with Slings, Napkins, or Linen Bandages, tied round each Head of the Thigh, while you yourſelf reduce the Fragments properly.

When neither the Hands, Slings, nor Bandages, will extend this Bone ſufficiently, which ſeldom happens, you muſt uſe *Hildanus*'s Belt or Girdle (ſee *Tab.* XXIX. *Fig.* 17.). This is to be buckled very tight above the Knee, being firſt paſs'd through the Eyes of the Hooks A A, upon which you faſten a ſmall ſtrong Rope B B, which is to be extended, as far is requiſite, by the Hands applied to C, that the Fragments may be reduc'd to their proper Places. And this is as convenient for the Extenſion of the Cubit and Humerus, as for the Thigh-bone. If the Arm is to be extended, faſten it above the Hand; if the Humerus, above the Elbow.

But, if this Belt fails, it is neceſſary to have recourſe to the Pully, or Polyſpaſtus (ſee *Tab.* XXIX. *Fig.* 15.). One Hook, A, is to be faſten'd on the Cord of the Belt at C (in *Fig.* 17.); the other, B, to be hung on the Ring A, of the Screw (*Fig.* 16.); which is firſt to be ſcrew'd tight into a Beam; then the upper Parts of the Patient are ſecur'd by Slings, Napkins, or ſtrong Linen Bandages, that he may not give way; and the Rope C, (*Fig.* 15.) being put through the Polyſpaſtus, muſt be drawn till the Bone is ſufficiently extended, that is, till it can be conveniently reduc'd by the Surgeon. We muſt here obſerve, that the ſeveral Pullies, E, D, promote the attractive Power ſo far, that, by the Help of this Machine, one Man can do more than ten or twelve without it.

A Fracture of the Neck of the Femur.

When the Neck of the Femur is fractur'd, as it often is, partly by reaſon of its tranſverſe Situation, and partly becauſe of its ſpongy brittle Subſtance, according to *Hildanus* and others, the Reduction is not only difficult, but the Limb generally ſhorter than the other, and the Patient lame. For (1.) the prodigious Thickneſs and Strength of the Muſcles not only occaſion this Difficulty in the Repoſition; but, (2.) after that, though it is perform'd in the beſt manner, the Fragments will be very ſubject to ſeparate again, becauſe the inferior Part of the Femur will be drawn upwards by the Muſcles; which (3.) is the more eaſily accompliſh'd, becauſe the Neck of the Thigh is not join'd to the Head tranſverſely, or directly, but obliquely, and ſideways, as appears very manifeſtly in a Skeleton. It is, therefore, no Wonder, if bad Accidents, or even Lameneſs, attend theſe Fractures.

To theſe we may add, (4.) that a Fracture of the Neck of the Femur is difficult to be diſcover'd, and is generally miſtaken for a Luxation, by the Head of the Femur ſlipping out of the Acetabulum; though *Paré*, and after him *Schenkius* and *Ruyſch*, and then many famous Surgeons and Phyſicians, demonſtrated, that it is much more eaſy for the Head of the Thigh to be fractur'd, than for the Joint, guarded by ſtrong Ligaments, to be puſh'd out of the Acetabulum, by any outward Violence; but the Antients, as well as thoſe of the laſt Age, were ſo ignorant of this Obſervation, that, when it happen'd, they thought of nothing leſs than a Fracture, and us'd Machines proper for the reducing a Diſlocation, which put the Patient to inexpreſſible Torment. However, ſince this Extention of the Thigh is eſteem'd not only uſeleſs, but very cruel, it will not be amiſs to recommend a ſafer Method of treating this Fracture; that is, a Method not ſo liable to be attended with violent Pains, Inflammations, and other Diſorders.

When, therefore, after any conſiderable external Violence done to the Thigh, the Patient cannot ſtand on the affected Leg; when he feels acute Pains about the Joint; when that Leg is ſhorter than the other, looſe, as it were, at the upper Part; and when the Foot may, by a very ſmall Force, be turn'd either inwards or outwards; and during this Contorſion you hear a Craſhing, as of a broken Bone; you may ſafely conclude the Neck of the Thigh to be fractur'd. When theſe Symptoms appear, we muſt not extend the Leg violently, as the Practice was in Luxations, with Inſtruments invented for that Purpoſe, by *Scultetus*, and others; but rather, after having ſecur'd the Patient by a Napkin, or other proper Sling, between his Legs, extend the affected Limb by the Hands of robuſt Men, or a Napkin, or the Belt above-mention'd, till it becomes equal to the other, and the Neck is, if not perfectly, at leaſt as well as it can be, rejoin'd with the Head inherent in the Acetabulum. Tho' it is almoſt impoſſible to prevent a Shortneſs of the Limb, and Lameneſs, yet ſome are cur'd; and I have found it very ſerviceable to apply ſtrong Bandages, that the Neck may adhere to the Head, and, if poſſible, conſolidate. For which End, the *Spica Inguinalis* is to be us'd; then put a long and large Piece of Linen Cloth, or a Napkin, between the Thighs, to keep the Body from ſubſiding, and, upon the Ancles and Knee, ſuch Ligatures as faſten the Foot to the lower Part of the Bed, that it may not be drawn upwards: To this I add a Straw-caſe (ſee Fascia). When you have done this, and put the Patient in a proper Poſture, examine carefully, whether the Leg affected is equal to the ſound Leg, or not; for, if it appears ſhorter, there is room to conjecture, that the Neck is again ſlipped out; and you muſt extend it again, after unbinding it, till it becomes proportionable. On the contrary, if no Diſproportion appears, you may expect a complete Cure, provided the Patient keeps himſelf ſtill, and obſerves a regular Diet. For the reſt we muſt truſt to Nature.

It would be worth while to invent a Machine for preſerving the fractur'd Thigh in a due Extenſion, ſo that the injured Limb might be kept of an equal Length with the other for fourteen Days, or more, or indeed during the whole Time of the Cure; for then you might reaſonably expect a more certain and ſucceſsful Agglutination: And tho' *Hildanus*, as already quoted, has deſcribed an Inſtrument proper for the Extenſion of oblique Fractures; yet it is to be feared, this is ſomething imperfect. In the mean time, ſince we are without a better, and the Method of Bandage, above directed, is not thought ſufficient, it will not be amiſs to apply that Machine of *Hildanus*; or, if this ſhould not be in Readineſs, beſides the Straw-caſe, and the reſt of the Apparatus thereto belonging, the large four-headed Bandage, deſcribed, alſo, by *Hildanus*, may be us'd; or two long Napkins between the Legs, near the Inguen, and faſten'd either to the Side or Teſter of the Bed, with Nails or Rings, will keep the Body ſo firm, that it cannot deſcend; and, to prevent its aſcending, put upon the Knee and Ancles a Ligature or Bandage, which muſt be faſten'd to the lower Part of the Bed, in order to keep the Leg in a proper Poſition, till the fractur'd Bone is reunited: And this Method is not only commodious, but extremely neceſſary in all Fractures of the Thigh, but more particularly in oblique ones. Leſt, however, the Groin ſhould be preſs'd too hard, and gall'd by the Strictneſs of theſe Bandages or Napkins, you may put under them ſome Compreſſes of fine Linen, or ſometimes change them. For more particular Directions on this Head, ſee the Article Fascia.

When a Fracture of the Thigh is complicated with a Wound, it is dangerous, and generally incurable; and, if it happens near the Joints, Death, for the moſt part, enſues; eſpecially, when the large Blood-veſſels are affected, which appears from a violent Hæmorrhage. Nor is the Danger leſs, if the Wound be in the poſterior Part of the Thigh, becauſe it cannot be cleanſed and fomented without great Difficulty.

In treating theſe Fractures, apply the eighteen-headed Bandage, (*Tab.* XXX. *Fig.* 4.) which we have deſcrib'd under the Article Fascia. But, if the Part affected be violently contuſed, and Blood lies under the Skin, and in the In-

terfices of the Parts, you muſt, with Caution, make frequent and deep Inciſions, to open a Paſſage for this extravaſated Blood, which would ſoon putrefy. Afterwards waſh the Part affected with Lime-water, mixt with a fourth Part of Spirit of Wine camphorated, or ſome other reſolvent Liquor, till the Contuſion is digeſted.

When an Hæmorrhage attends this ſort of Fracture, and that not violent, nor near the Bone, you muſt fill the Wound with dry Lint well twiſted, as in other Hæmorrhages, and lay ſeveral thick Compreſſes on it, applying proper Bandage: If the Hæmorrhage is ſomething more violent, uſe aſtringent Liquors, eſpecially rectify'd Spirit of Wine, which I have found very ſerviceable; if it is very violent, ſearch diligently for the Artery, firſt applying the Tourniquet; and when you have found it, tie it up with a Thread. When this Fracture is cauſed by a Bullet, and attended with a copious Hæmorrhage, and great Comminution of the Bone, which is an Indication, that the crural Artery is lacerated, if the Surgeon has any Regard for the Patient's Life, he will amputate the Limb, and tie up the Artery, as the moſt probable Method of ſaving him; for the crural Artery will very rarely reunite; and, conſequently, the Hæmorrhage cannot be ſtopt without Amputation: Beſides, in this Caſe, a Gangrene is much to be apprehended. But when you have ſtopt the Bleeding, and cleanſed the Wound, reduce the fractur'd Bones, lay on Compreſſes and Splints, then bind them tight with the eighteen-headed Bandage, and put the Limb into a Straw-caſe. Afterwards the Wound muſt be unbound every Day, and dreſs'd with digeſtive Ointment, Balſam, or vulnerary Eſſence, till it is healed.

Fractures of the Patella.

That we may the more eaſily diſcover and cure a Fracture of the Patella, it is neceſſary firſt to learn, in what Manner it adheres to the Thigh and Leg, by the Aſſiſtance of the Muſcles and Tendons, and likewiſe how it aſcends, together with the Muſcles in an Extenſion of the Leg, and deſcends in an Inflexion; and, in violent Motions of the Body, ſuſtains a great Force. Whenever the Patella, therefore, is fractur'd by a Fall, a Blow, or any external Violence, it is either longitudinally, tranſverſely, or in ſeveral Directions; but the tranſverſe Fracture is the moſt frequent. And as the longitudinal is moſt uncommon, ſo is it the moſt eaſily cured; for the Fragments generally remain in their proper Situation. On the contrary, the tranſverſe Fracture, and that in many Directions, are very dangerous; for tho' the inferior Part, as having no Muſcles, preſerves its Situation, the ſuperior, by reaſon of the ſtrong Muſcles annexed to it, is attracted upwards, and, of conſequence, difficult to be reſtored.

It is very eaſy to diſcover a Fracture of the Patella; for the Fingers will ſhew, whether it is broken or not; and, if it is, whether longitudinally, tranſverſely, or in ſeveral Directions; and whether the Fragments are divided, or ſtill cohere. In this Search, be cautious of bending the Knee, becauſe ſuch Flexure is uſeleſs, painful, and very dangerous, as it ſeparates the Fragments wider: But when a ſmall Fragment of the Patella is attracted upwards, if the Patient is fat, the Diſcovery is not quite ſo eaſy. In general, this ſort of Fracture of the Patella is not ſo dangerous as ſome others, becauſe the Juice of the Bone, which produces the Callus, cannot ſo eaſily penetrate into the Joint, and make it rigid, as is common in other Fractures of this Bone, where the Knee is often render'd ſtiff and motionleſs.

A complete Cure of this Fracture, if we may believe experienced Surgeons, is ſcarce to be expected; for the Knee will generally become rigid, at leaſt, the Motion of this Joint will be impair'd. Beſides, the Juice of the Bone deſtin'd for the Formation of the Callus inſinuates itſelf into the latent Sinus of the Joint; and the very Liquor, which, at other times, lubricates it, unites with the Joint, and grows ſo hard, that the Bones of the Leg and Thigh, like Boards glued together, are rigid, and, uniting with each other, become one Bone. Moreover, as in this kind of Fracture, eſpecially the tranſverſe, the Patient muſt continue a long while at Reſt, even till the Bone is agglutinated, this conduces very much to the Inſpiſſation of the Liquor deſigned for Lubrication: And it often happens, that the Tendon, which ſupports the Patella, and principally directs the Motion of the Joint, is affected by the ſame Violence, and, conſequently, the Mobility of the Knee greatly impeded, if not entirely deſtroyed. Upon theſe Conſiderations, it is no Wonder, that thoſe, who have once fractur'd the Patella, ſhould be liable to frequent Falls, and new Fractures, as I have often ſeen; principally, becauſe an incurable Debility, for the moſt part, follows a Contuſion of that Tendon. I have, however, known Inſtances of tranſverſe Fractures of the Patella ſo perfectly completed, that the Patients have never after found the leaſt Inconvenience from them.

The Method of Cure is this: When the Fracture is direct, having laid the Patient on his Back, and extended the Leg, reduce the Fragments on each Side with your Hands; then apply the uniting Bandage, in the ſame manner, as directed under the Article Fascia, for Wounds of the Belly or Forehead: When it is tranſverſe, or into ſeveral Pieces, or Directions, lay him in the ſame Poſture; and after Extenſion depreſs the Fragments, which are attracted upwards, with your Hand, Thumb, or Fingers; and, having reduced them properly, ſtrengthen them with a Plaiſter in the Form of a Half-moon, (ſee *Tab.* XXX. *Fig.* 2.) or perforated (*Fig.* 3.); then let the injured Limb be ſo placed and fixed, that it can neither be inflected nor diſturbed. But this will appear more plainly by the Directions given under the Article Fascia. Tho' ſome Surgeons have invented Machines for retaining theſe Fractures, one of which *Selingen* has recommended, and *Garengeot* has deſcribed another; yet, to confeſs the Truth, they are ſo contriv'd, that they do not anſwer the End propoſed. But leſt the Patella, which is too often the Caſe, ſhould be fractur'd again, you muſt forbid the Patient to walk, or ſet his Foot to the Ground, in leſs than nine or ten Weeks; for it ſeldom agglutinates before that time; and whoever does not keep himſelf quiet, is generally lame ever after. See *Purmannus*'s *Obſ.* on theſe Fractures.

Fractures of the Bones of the Leg.

As for Fractures of the Leg, and its two Bones, the Tibia and Fibula, no farther Directions are neceſſary, than thoſe already given relative to Fractures of Bones in general; which are, that they be extended by the Hands or Slings, and accurately reduced, then bound up, and placed in a proper Poſition. I will only obſerve, that ſometimes both Bones, ſometimes one only is fractur'd; if this Accident happens to both, it ſeldom is in the ſame Place, but one a little above the other. If the Tibia only is fractur'd, it is eaſily diſcover'd, becauſe it lies immediately under the Skin; but, if the Fibula only is fractur'd, the Diſcovery is more difficult, as it is concealed in the Fleſh or Muſcles. Beſides, this gives very little Pain, and ſcarcely diſqualifies the Patient for Walking. However, it may be known, by taking hold of the Leg under the Sura with one Hand, and with the other moving the Foot; for, by this Motion, the Hand, that comprehends the Leg, will diſtinguiſh, whether it is fractur'd or not, and in what Part. But if a Fracture of the Tibia, which often happens, is attended with an external Wound, the Cure muſt be perform'd in the following Manner: In the firſt Place, the Wounds and fractur'd Bones ſhould be cleans'd from the Sordes, looſe Fragments, and all foreign Matter; then, after Extenſion, be reduc'd; afterwards the Hæmorrhage, if there is any, muſt be ſtopt; and then all muſt be bound firmly with the eighteen-headed Bandage, (ſee *Tab.* XXX. *Fig.* 4.) which has been fully explain'd under the Article Fascia. If any prominent Fragments hinder the Reduction, they muſt be remov'd with a ſharp Forceps, or fine Saw; and afterwards the Fracture muſt be reduc'd, and bound up: Next, place the Limb in a Straw-caſe, or Braſs-caſe, ſuited to contain the broken Tibia (ſee *Tab.* XXX. *Fig.* 9.). Renew this Bandage every Day, till the Wound is heal'd. Sometimes little Pieces of the Bone, being looſe, will come away by Suppuration; theſe muſt be extracted, and then proceed as before.

Petit's famous Machine for Fractures of the Leg is repreſented in *Tab.* XXX. *Fig.* 11. and 12. and deſcrib'd under the Explication of that Table.

Fractures of the Bones of the Foot.

The Bones of the Foot, that is, the Tarſus, Metatarſus, and Toes, are as ſubject to Fractures as thoſe of the Hands; but from the violent Contuſion of the Nerves, Tendons, Ligaments, and Membranes, theſe Fractures are generally accompanied with Wounds, and very dangerous Symptoms; they are to be cur'd almoſt in the ſame manner, only there is a Difference in the Bandage, which ſee under the Article Fascia. But here we may obſerve, that Fractures of the Foot, as well as of the Hand, and Leg near the Ancle, eſpecially when the Malleolus recedes from the principal Bone, ſeldom admit of ſo complete a Cure, as to leave the Limb free from Stiffneſs, an Ulcer, Caries, or incurable Fiſtula. Theſe laſt Diſorders are ſeldom remedied without Amputation; nor does that always preſerve the Patient's Life. In theſe Fractures, therefore, it is adviſeable to give timely Notice of the Danger to the Patient, or his Friends, leſt his unhappy Condition ſhould be unjuſtly attributed to the Surgeon, which is often done. But, for a more exact Acquaintance with Fractures of the Bones, I would recommend *Petit*'s Treatiſe on the Diſeaſes of the Bones. *Monro*, alſo, and *Boerhaave*, have wrote excellently on the Bones.

Of Bones broken by acute Inſtruments, which may be called Wounds of the Bones.

Thus far have we been treating of Fractures of the Bones, proceeding from blunt Inſtruments; it now remains, that we treat of ſuch as are caus'd by ſharp ones, as Darts and Swords, which may be properly term'd Wounds of the Bones; and of theſe few Authors have treated ſeparately. Not only the ſoft Parts, but, alſo, the hard Bones are divided by theſe Weapons; ſometimes ſlightly, ſometimes conſiderably, and ſometimes the Solution is equal to a Fracture. Theſe Wounds muſt neceſ-

farily be attended with Variety of bad Symptoms, according to the Size and Depth of the Wound, and the Force it was inflicted with; and as the Patient receives it, either in the Head, Noſe, Jaw, Fingers, Hand, Arm, Shoulder, Leg, or Thigh. Theſe are eaſily diſcover'd; but, as they require a different Method of Cure from other Fractures, I thought it not improper here to give ſome Directions with regard to the Manner of treating them.

Before we proceed, it muſt be obſerv'd, that ſlight Wounds, which do not penetrate deep into the Bone, are ſeldom dangerous, eſpecially if we treat them regularly, that is, if we cover the affected Bone, as much as poſſible, with its Integuments, to keep out the Air, and avoid oily fat Medicines as very noxious. When they penetrate deep, or entirely divide the Bone, and affect its neighbouring Parts, eſpecially thoſe which are immediately neceſſary to Life, as in the Head, Neck, Spina Dorſi, and Breaſt, or when they wound or ſeparate the larger Veins, Arteries, Nerves, and Tendons, of the Arms or Legs, the Danger is much greater, the Cure more difficult, and Death frequently enſues.

In the Cure of Fractures by acute Weapons, *Petit*, otherwiſe a very good Surgeon, in his Book on Diſeaſes of the Bones, inadvertently recommends joining the Lips of the Wound, and the uniting Bandage, for longitudinal Fractures of this Kind; for very oblique, or wholly tranſverſe ones, Suture, and the eighteen-headed Bandage. But, as this Method often fails, and may miſguide young Beginners, I will endeavour to ſet it in a clearer Light. In the firſt Kind, I am almoſt of his Opinion, particularly when the Wounds are inconſiderable, as when the Head is not entirely nor deeply penetrated, nor contus'd, nor the Brain affected. But, when the contrary happens, we muſt proceed with more Caution; for the Wound muſt be kept open with Lint, and cleans'd; and, after cleanſing, be heal'd with Balſams; for dangerous Symptoms, and often Death, are the Conſequence of too ſpeedy a Cloſure. I do not entirely agree with him in the Management of ſlight oblique or tranſverſe Wounds; for I am ſo far from thinking, that Suture, and the Bandage of eighteen Heads, are of general Uſe, that they appear to me to be ſeldom neceſſary; for I have myſelf cur'd, and ſeen others cure, many of theſe Wounds without them. For Example, ſlight oblique Wounds of the Head, Forehead, or Cranium, may be united by a Plaiſter and Bandage, without the Suture with Needle and Thread, which *Petit* recommends. But they may be generally cur'd by agglutinative Powders, Balſams, and Plaiſters, whether they happen in the Head, Jaw, Clavicle, Scapula, Shoulder, Arm, Hand, Thigh, Leg, or Foot. But when Pieces hang down in ſuch a manner, that they cannot be united without, the Suture is abſolutely neceſſary.

Wounds of the Finger-bones.

When the Finger-bones have been wounded and ſeparated by a Sword, ſo as to hang only by the Skin and Fleſh, I have cur'd them in the following Manner, without the Suture, and eighteen-headed Bandage: I join'd the ſeparated Portions accurately, and roll'd a Slip of Plaiſter round, to keep the Bones in that Situation; then applied a Compreſs dipt in Spirit of Wine, over which I laid ſome ſmall Splints of Paſteboard, to ſecure them in their proper Poſition; then I bound up the Whole firmly, with a long narrow Roller, and ſuſpended the Hand in a Sling about the Neck. I left it thus for ſeveral Days, and only preſcrib'd Reſt, and a proper Diet, to the Patient. At length, I looſ'd the Bandage carefully, and gently remov'd the Compreſs, but not the Plaiſter; and, after cleanſing the Wound as well as I could, dropt in ſome vulnerary Eſſence; and, applying a freſh Compreſs dipt in Spirit of Wine, bound it up again, as before: Then I left it for ſeveral Days more. Afterwards I dreſs'd it in the ſame manner, about every third Day, till, in about a Month, it was perfectly cur'd.

Wounds of the Arm and Leg-bones.

If either of the Bones of the Cubit is divided, which is uſually the Ulna, becauſe that is moſt expos'd in fighting, the Suture, and eighteen-headed Bandage, are ſuperfluous. In this Caſe, I firſt cleanſe the Wound, then put in ſome vulnerary Eſſence or Balſam, and Lint dipt in the ſame; after this, I apply a Plaiſter, Compreſs, and Paſteboard-ſplint, moiſten'd with Spirit of Wine; theſe I apply round a great Part of the Cubit, near the Wound, that, when they are dry, they may ſuit themſelves the better to the Shape of the Part; after this, I apply a long Roller, and ſuſpend the Arm in a Sling about the Neck. In this manner I dreſs the Wound every other Day, or, if the Diſcharge requires it, every Day. Theſe Fractures conſolidate without any Suture, which I rather look upon as prejudicial. When either of the Bones of the Leg are cut, I make uſe of the eighteen-headed Bandage, as in other Fractures of the Leg or Thigh, but ſcarce ever the Suture, becauſe it is very ſeldom neceſſary in theſe Wounds of the Tibia only, as that is cover'd with ſcarce any thing but Skin; nor is it requiſite for the Fibula, unleſs ſome of the great Muſcles are divided. Sutures muſt be avoided as much as poſſible; for they are generally attended with Inflammations, Pains, Convulſions, and other hazardous Symptoms; and I always declare againſt them, unleſs a Wound cannot poſſibly be heal'd without them.

Wounds in the Arm and Thigh-bone.

If the Thigh-bone is cut with a Sword, for the better conjoining and ſecuring theſe ſtrong Muſcles, a Suture, as in other Wounds, may be ſerviceable. The Wound muſt be manag'd in the Manner directed under the Article Vulnus, applying the eighteen-headed Bandage, and the Straw-caſe. So, if the Bones of the Humerus, or Arm, be divided with a Sword, the Suture may be proper, for the above-mention'd Reaſons, and not the eighteen-headed Bandage, but a narrow long one, as in other Fractures of the Arm. Suſpend the Arm in a Sling about the Neck; for this will unite the Muſcles better, and complete the Cure ſooner and more eaſily.

If both the Bones of the Cubit, or Leg, are divided in ſuch a manner, that the Limb hangs only by Skin, Fleſh, and Blood-veſſels, (which is common without an entire Amputation of it) the Suture, and eighteen-headed Bandage, are convenient. But the Suture cannot be of the leaſt Service, when the Part hangs by the Skin alone, its Nerves and Blood-veſſels being wholly ſeparated, particularly if it be a large Limb, as the Leg or Arm, that is injur'd. In this Caſe, therefore, I would adviſe cutting off the Limb, ſtopping the Hæmorrhage, as in other Amputations, and dreſſing it in the ſame manner.

If the lower Jaw is ſo cut with a Sword, that the Pieces recede much from each other, and cannot be retain'd without the Suture, you may uſe it, adding a Balſam, Plaiſter, Compreſs, and proper Bandage. If the Clavicle, or Acromium Scapulæ, meet with the ſame Accident, you muſt proceed in almoſt the ſame Manner as we directed for a Fracture of theſe Bones, gently unbinding the Bandage, and dreſſing the Wound every Day, or every other Day, till the Cure is completed. The Hæmorrhage, which, in theſe Wounds, is commonly very profuſe, muſt be ſtopt by Compreſſes, Aſtringents, or a Ligature of the Arteries, as the Caſe ſhall require.

FRÆNATOR is a Name for ſome Muſcles, which ſerve the Head in different Motions upon the firſt and ſecond Vertebræ of the Neck. They were diſcover'd by Mr. *Dupré*, a Surgeon of *Paris*, in the *Hotel-dieu*; in *French* they are call'd *Rengorgeurs*.

FRÆNULUM, FRÆNUM. See Frenum.

FRAGA. Strawberries. See Fragaria.

FRAGARIA.

The Characters are;

The Root is fibrous and perennial; the Leaves ſtand three on a Foot-ſtalk, and are vein'd, and radiated; the Stalks trail on the Ground. The Calyx is monophyllous, and expanded, like a Star, into ten equal Segments. The Flower is roſaceous, pentapetalous, furniſh'd with many Stamina, ſtanding on the Margin of the Baſe of the Ovary. The Fruit is hemiſpherical, pulpous, and containing a Multitude of ſmall external Seeds, which are furniſh'd with an erect Tube.

Boerhaave mentions ſix Species of this Plant; which are,

1. Fragaria; vulgaris. *C. P. Pin.* 326. *Tournefort. Inſt.* 295. *Elem. Bot.* 245. *Boerh. Ind. A.* 41. *Hiſt. Oxon.* 2. 186. *Phyt. Brit.* 42. *Dill. Cat. Giſſ.* 50. *Rupp. Flor. Jen.* 86. *Buxb.* 116. *Park. Theat.* 758. *Fragaria.* Offic. Ger. 844. Emac. 997. Raii Hiſt. 1. 609. Synop. 3. 254. *Fragaria vulgaris, ſive Trifolium frugiferum.* Merc. Bot. 1. 36. *Fragaria ferens Fraga alba & rubra.* J. B. 2. 395. STRAWBERRY.

Strawberries have ſmall rediſh Roots, full of Fibres, from which ſpring many creeping ſlender Threads, which take Root, and propagate. The Leaves grow three together, upon one Foot-ſtalk, folded together at their firſt ſpringing up, and are full of Veins, of an oval Figure, deeply ſerrated about the Edges. The Flowers ſpring from the Root, on long Foot-ſtalks, four or five together, each of five ſmall, round, white Leaves, with ſeveral yellow Stamina in the Middle; and are follow'd by ſmall Fruit, of a round conical Shape, of a rediſh Colour, of a pleaſant, tart, grateful Taſte, and an agreeable Smell, having the Outſide beſet with a great many very ſmall green Seeds. They grow in the Woods, flowering in *May*, and the Fruit is ripe in *June*. The Leaves and Fruit are uſed.

Strawberries refrigerate and moiſten, reſiſt Poiſon, agree with bilious and thirſty Perſons; but, eaten plentifully, affect the Head, and inebriate, if we may believe *Cæſalpinus*; but we, ſays *Ray*, who have ſeveral times eaten large Quantities of Strawberries, never found any ſuch Effects from them: They have, indeed, a vinous Taſte, without an Affuſion of Wine, but a faint one: But the Reaſon why we ſhould abſtain from too freely eating them is, becauſe they are ſubject to putrefy in the Stomach: Therefore they ſhould not be eaten alone, but with Wine and Sugar, as is common with us, to correct their

Coldneſs

Coldneſs and Humidity. In ſome Parts of *France*, as we are told by *Brayer*, they eat them with Cream [as they do everywhere in *England*]; which, he ſays, has the ſame Effect upon them as Wine; but, ſays *Ray*, I am of another Opinion. The diſtil'd Water of Strawberries is ſaid to comfort the Heart, to amend the Diſorders of the Thorax, to purge the Blood, and, being us'd in Gargariſms, to heal the Ulcers of the Mouth, and the Quinſey, to break the Stone, with other good Effects, if we may believe *Tragus*.

They who, from a hot Diſtemperature, are affected with Puſtules in the Face, or a dry and pruriginous Scabies in all or ſome Part of their Body, are adviſ'd to take every Day about an Ounce of the Water, and the ſame would be proper for thoſe who are moleſted with the Stone; for it refrigerates the Kidneys, and cleanſes them of Gravel. For the Stone: Take ripe Strawberries, and put them into a Phial full of the pureſt boiling-hot Water; after about forty Hours ſtrain it, and put freſh Berries into the ſame Water boiling-hot, and ſo leave it very well cover'd and ſecur'd, that nothing may evaporate; ſqueeze the firſt Strawberries which remain after the Straining, thro' a Linen Cloth, and keep the expreſs'd Liquor by itſelf. When you have a mind to uſe it, take a Spoonful in a Morning, three or four times in a Month, mix'd with Powder of Sugar-candy: This is a grateful, approv'd, and moſt efficacious Remedy, and was recommended to *Geſner* by thoſe who were afflicted with the Stone for upwards of twenty Years, after innumerable Medicines which had been preſcrib'd for them by different Phyſicians. *J. B.*

The Herb is a Refrigerant, and moderately drying: It has a bitter Taſte, as well as its Root, with a manifeſt Aſtringency: It is alſo diuretic, and of frequent Uſe in the Jaundice, as alſo in Gargariſms, Baths, Cataplaſms, and other Ways, for Hæmorrhages and the Dyſentery, for cleanſing foul Ulcers, and for repreſſing Catarrhs and Diſtillations.

The *Decoctum cum toto*, as Phyſicians love to expreſs themſelves, that is, the Decoction of the entire Plant, with its Leaves, Roots, and Stalks, is adminiſter'd with very good Succeſs in the Jaundice, either ſeparately, or mix'd with other Things appropriated to that Diſtemper. *Rulandus* us'd to preſcribe it in the following Form, after purging with Extract of *Eſula*: Take of the Herb *Fragaria*, three Handfuls; of Raiſins ſton'd, three Drams: Boil them together in a ſufficient Quantity of Spring-water, and let the Patient drink it. I have ſeen, ſays *C. Hoffman*, after plentiful eating of Strawberries, many of their Particles in an Urinal, ſo as to cauſe a Suſpicion of a Colliquation of the Kidneys. This, ſays *Ray*, is ſomething rare and incredible. The ſame Author, *Hoffman*, aſſures us, that *Fragaria* is of excellent Service in colliquative Fevers, for deriving the Water infus'd into the Abdomen, and there giving an Appearance of a Dropſy, from thence to the Kidneys.

I am aſſur'd by an unknown Author, ſays *Sim. Pauli*, that *Fragaria*, boiled in red Wine, and apply'd as a Cataplaſm to the Pubes and Pecten, puts a Stop to the *Fluor albus*; and I have found the ſame myſelf, he ſays, to be very effectual in nocturnal Pollutions, and a Gonorrhœa not attended with Virulence.

Hildanus, *Cent.* 5. *Obſ.* 38. tells us of a Woman, who, after eating Strawberries, faſting, was immediately ſeiz'd with terrible Symptoms, as a Fainting, Vertigo, Tumefaction of the Hypochondria, and a Pain in the Stomach: But we muſt here obſerve, that this Woman eat the Strawberries crude, and unwaſhed, and without Wine or Sugar. I am really of Opinion, that this Fruit was poiſon'd by the Urine, Saliva, or Breath, of ſome Serpents or Toads, which are extremely delighted with Strawberries; or, perhaps, as Dr. *Robinſon* conjectures, ſome Inſect had infected the ſame with a noxious and venomous Juice.

Some have fallen into a fainting Fit from the Smell alone of Strawberries, as did the Preſident of the Hoſpital at *Eſlingen*. A Maid of *Auſtria* became epileptic, on eating of Strawberries; and, from that time, was every Year ſubject to a Paroxyſm at the Seaſon of their Flowering. *Ray*, *Hiſt. Plant.*

Fragaria has the ſame Virtues as Cinquefoil: The Decoction of the Herb, and the immature Fruit, are ſtrengthening and aſtringent: The Fruit is emollient, nutritive, relaxing, cooling, diuretic, aperitive, and corrects Acrimony; hence it becomes proper in the higheſt burning Fevers, and under the greateſt Degree of an Inflammation, when the Thirſt is extremely urgent. The Fruit eaten cures a Gonorrhœa. A very good Drink in Fevers is thus prepar'd: Take of the Juices of Strawberries and Lemons, and of Spring-water, an equal Quantity; of Sugar, enough to render it grateful: Mix them together. The Pulp, apply'd in a Cataplaſm, is good for all external Inflammations; and I have frequently experienc'd its Virtue in a Relaxation of the Veſſels of the Uterus. In tertian and quartan Fevers, it does the Service of the *Peruvian* Bark: It is, alſo, a Lithontriptic. Take the ripe Berries, and put them in Water; then ſhake the Veſſel, and the Seeds will fall to the Bottom: Theſe dry'd, and taken to the Weight of one or two Drams in White-wine, in the Morning, faſting, are an excellent and uſual Remedy with Lithotomiſts, to prevent the Regeneration of the Stone in thoſe who have been cut for the ſame.

The Berries gather'd in watry and marſhy Places, though larger, are of leſs Virtue than the Mountain Strawberries, as *Geſner* obſerves. This uſeful Plant has one Inconvenience, in that it has always Toads conceal'd under it; which, as we are aſſur'd by Authors, have render'd it mortal to many who have eaten of the Fruit; for which Reaſon, ſome will never eat Strawberries before they are waſh'd. In *Italy* they bruiſe the Pulp in Roſe-water, and make it into a Conſerve with Juice of Citrons, for the Purpoſes before-mention'd. *Hiſt. Plant.* aſcrib'd to *Boerhaave*.

2. Fragaria; fructu albo. *C. B. P.* COMMON STRAWBERRY *with white Fruit.*

3. Fragaria; fructu parvi pruni magnitudine. *C. B. P.* 325. *M. H.* 2. 186. THE HAUTBOY STRAWBERRY.

4. Fragaria; fructu rotundo, ſuaviſſimo; flore duplici. *H. R. Par.* 72.

5. Fragaria; Virginiana; fructu coccineo. *M. H.* 2. 186. VIRGINIAN STRAWBERRY, *with ſcarlet Fruit.*

6. Fragaria; craſſis, rigoſis, foliis, flore & ſemine carens. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 236. FRAGARIA STERILIS.

The Characters are;

It has the Appearance of the *Fragaria*: The Stalks are without Tendrils: The Calyx, Flower, and Fruit, are thoſe of Cinquefoil. *Boerh. Ind. alt. Part* 1. *p.* 42.

Boerhaave mentions eight Species of this Plant; which are,

1. Fragaria; ſterilis; Alpina; coaleſcens. *H. R. Par. Pentaphylloides*, *Fragariæ folio*. Bott. Monſp. App. 309.

2. Fragaria; ſterilis. *C. B. Pin.* 327. *Raii Hiſt.* 1. 611. *Synop.* 3. 254. *Tourn. Inſt.* 296. *Elem. Bot.* 246. *Boerh. Ind. A.* 42. *Dillen. Cat. Giſſ.* 60. *Buxb.* 116. *Fragarioides*, Offic. *Fragaria minime veſca*, Parkinſon Theat. 758. *Fragaria minime veſca, ſive ſterilis.* Merc. Bot. 1. 36. Phyt. Brit. 43. Mer. Pin. 39. Ger. Emac. 998. *Fragaria, non frugifera, vel non veſca*, J. B. 2. 395. Chab. 165. *Comaroides.* Pent. Anth. 290. *Pentaphylloides foliis ternis Quinquefolii albi effigie.* Herm. Flor. 2. 7. BARREN STRAWBERRY. *Dale, p.* 160.

The Virtues are ſuppoſ'd to be much the ſame as thoſe of Cinquefoil.

FRAGAROIDES. See FRAGARIA STERILIS.

FRAGMEN, FRAGMENTUM, ſignifies either the ſame as *Fractura*, or elſe means ſome Particles ſeparated from the main Subſtance of a Body: Thus, the Fragments of the Stone are Sand and Gravel. *Caſtellus.*

FRAMBŒSIA. The Raſpberry. See RUBUS IDÆUS.

FRANGULA. See ALNUS.

FRAXINELLA.

The Characters are;

The Root is perennial: The Leaves are pennated, like thoſe of the Aſh: The Calyx is monophyllous, and divided into five long, ſlender Segments: The Flower is pentapetalous and anomalous, four of the Petals turning upwards, and one downwards, ſo as to make it appear bilabiated: It is furniſhed with eight, nine, or ten crooked Stamina: The Fruit conſiſts of many little Pods, incurvated like a Ram's Horn, which burſt in two Places, and diſcharge great black Seeds. *Boerh. Ind. alt. Part.* 1. *p.* 299.

Boerhaave mentions three Species of this Plant; which are,

1. Fraxinella. *Ger.* 1056. *Emac.* 1245. *Tourn. Inſt.* 430. *Elem. Bot.* 341. *Boerh. Ind. A.* 299. *Hiſt. Oxon.* 3. 456. *Dictamnus albus*, *Fraxinella.* Offic. *Dictamnus albus vulgo, ſive Fraxinella*, C. B. Pin. 222. *Fraxinella vulgaris.* Park. Theat. 417. *Fraxinella flore purpureo & albo*, Park. Theat. 333. *Fraxinella Officinis Dictamnus*, J. B. 3. 494. Buxb. 217. Raii Hiſt. 1. 698. *Fraxinella*, *Dictamnus albus.* Chab. *Fraxinella & Dictamnus albus Officinarum.* Rupp. Flor. Jen. 235. BASTARD DITTANY. *Dale, p.* 177.

The Roots of this Dittany are pretty large, white, and ſpreading, ſending forth long pinnated Leaves, pretty much reſembling the Leaves of the Aſh-tree; whence it takes the Name *Fraxinella*: The Stalks ariſe to be about two Foot high, having ſmaller Leaves growing alternately on them: The Flowers grow at the Top of the Stalks, in Spikes, of an irregular Shape, conſiſting of five pretty long and narrow Leaves, ſet on like the Flowers of Violets; in ſome Plants of a pale-red Colour, and, in others, of a white, with darker Veins or Stripes, and ſeveral crooked Stamina coming out of the Middle, and turning upward: The Seed is black, roundiſh, and ſhining, growing in long horned Seed-veſſels. The whole Plant has a ſtrong ſomewhat reſinous Scent. It grows wild in ſeveral Places of *Germany* and *France*; but is only planted with us in Gardens, and flowers in *June* and *July*.

The Root is eſteem'd a Cardiac and Alexipharmic, and ſerviceable againſt peſtilential Contagions, if it be taken any way. *Matthiolus* affirms it to be good againſt Poiſons, and the Bites

of venomous Animals. Drank to the Weight of a Dram, it kills Worms in the Inteſtines. It is preſcrib'd in cold Diſeaſes of the Uterus; for it provokes Urine and the Menſes, promotes Delivery, and brings away the Secundines, and the dead Child, if it be uſed either in a Peſſary, or in a Suffumigation with Peny-royal, or taken to the Quantity of two Drams in pure Wine; it is, alſo, good for the Gripes of the Belly, and to cleanſe the Kidneys of Gravel, and is a uſeful Ingredient in Potions for internal Wounds. The Women in *Rome* uſe the diſtil'd Water as a Coſmetic, and for Inflammations of the Eyes; which is a plain Argument, ſays *C. Hoffman*, that it cannot be uſed as a Succedaneum to the true Dittany; but, ſince it is bitter and acrimonious, ſays *Ray*, I ſee no Reaſon why it ſhould not be effectual for the ſame Purpoſes as this Plant. The Pods and Flowers excite an Itching by their Contact, and in hot Countries exulcerate the Skin: The Plant varies with reſpect to its Flower, which is ſometimes white. *Raii Hiſt. Plant.*

The whole Plant has a moſt fragrant Smell, abounding with Oil: The Flowers and Stalks are aromatic, balſamic, and ſweet; whence it is reckon'd among balſamic and vulnerary Herbs. This Species may be had in all the Shops: It has a balſamic Smell, and is very ſweet and fragrant in all its Parts: The Bark is much commended for facilitating Delivery, and purging the Lochia; and, on account of its intenſe Bitterneſs, is preſcrib'd againſt Worms: The Seeds, Leaves, and Roots, are uſed in the Shops; and the Plant, for want of the true Dittany, ſupplies its Place in the *Theriaca Andromachi*: The Conſerve of the Flowers, by its aſtringent Virtue, corroborates the Stomach and Inteſtines. *Hiſt. Plant.* aſcrib'd to *Boerhaave*.

2. Fraxinella; niveo flore. *Cluſ. H.* 100.

3. Fraxinella; purpurea; major; multiflora. *H. R. Par.* GREAT PURPLE FRAXINELLA, WITH MANY FLOWERS. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 229.

FRAXINUS.

The Characters are;

The Leaves are pennated, and grow to a common Rib, whoſe Top ends in an odd Leaf: The Flower is Male, apetalous, and conſiſts of Stamina, which are adorn'd with a double Apex: The Ovary is oblong, oval, flattiſh, furniſh'd with a bifid Tube; and ripens into a flat membranaceous Fruit, reſembling a Tongue, and containing a Seed of the ſame Figure.

Boerhaave mentions ſix Species of this Plant; which are,

1. Fraxinus; excelſior; flore petaloide; mas. *C. B. P.* 416. *Tourn. Inſt.* 577. *Elem. Bot.* 448. *Boerh. Ind. A.* 2. 171. *Dill. Cat. Giſſ.* 59. *Rup. Flor. Jen.* 269. *Buxb.* 117. *Jonſ. Dendr.* 290. *Fraxinus.* Offic. Ger. 1289. Emac. 1472. Raii Synop. 3. 469. Mer. Pin. 39. Chab. 62. *Fraxinus Ornus.* Mont. Ind. 43. *Fraxinus vulgaris*, Park. Theat. 1419. Merc. Bot. 1. 36. Phyt. Brit. 43. *Fraxinus vulgatior.* J. B. 2. 173. Raii Hiſt. 2. 1702. COMMON ASH-TREE. *Dale, p.* 332.

The Aſh-tree grows to a great Height and Bigneſs, with a ſtrait Body, cover'd with a whitiſh or aſh-colour'd Bark, which gives it its Name, as a Tree, whoſe Body is of the Colour of Aſhes. It grows with its Branches pretty upright and ſmooth. The Leaves are of a dark-green Colour, pinnated, the Pinnæ growing oppoſite; and are oval and ſharp-pointed, with an odd one at the End. The Flowers grow in ſmall ſtamineous Bunches, coming out early in the Spring, before the Leaves. The Seed is ſmall, long, flat, and narrow, growing in thin membranaceous Huſks, ſeveral growing together in Bunches. The Aſh-tree grows frequently in Woods and Hedges, and the Seed is ripe in *September* and *October*. The Bark, Leaves, and Seed, are uſed.

The Leaves of this Tree, by the chymical Analyſis, yield a great many acid Liquors, a little urinous Spirit, no concreted volatile Salt, a great deal of Oil and Earth, and a moderate Quantity of fixed Salt; by which the natural Salt of this Plant ſeems to reſemble that call'd by *Angelus Sala*, *Oxyſal diaphoreticum*; but in the Aſh it is join'd with a great deal of Sulphur and Earth: Thus it is no Wonder, if it ſhould be aperitive, diuretic, and ſudorific. *Tragus* ſays, its diſtil'd Water cures the Jaundice and Stone; and the Decoction of its Leaves in Wine removes Obſtructions of the Liver and Spleen. *Simon Paulli* commends the Uſe of the Salt of the Aſh, taken in *Cardaus Benedictus* Water, mixt with a little Syrup of Pomegranates or Raſpberries, in the Small-pox and Meaſles. *Cæſalpinus* relates, that, in his Time, they uſed the Wood of the Aſh in Decoctions, after the Manner of that of Guaiacum: *Lobel* ſays, alſo, that it is alſo good for the Venereal Diſeaſe. The Aſhes of its Bark make a good Cauſtic. The Aſhes of the Bark of the Root, ſays *Lobel*, ty'd in a Knot, and moiſten'd, and then apply'd, ſupply the Place of a potential Cautery; and the Aperture thus made is kept open by introducing an Ivy-leaf.

He ſays, that the Perfume of its Leaves, Bark, or Seed, cures Deafneſs: It is certainly reſolving; and the very Water which drops out of a freſh Branch, that has the other End of it ſet on Fire, has the ſame Virtue: Syringe it into the Ear, and afterwards ſtop it with ſome Cotton dipt in the ſame Water: The Bark of the Root is preſcrib'd for the Dropſy, Rheumatiſm, Sciatica, and thoſe Diſeaſes which require to have the ſuperfluous Seroſities voided: This Bark is an Ingredient in the Potions, Broths, and Apozems preſcrib'd for the Green Sickneſs: They add to theſe Remedies the Tincture of Steel, or chalybeated ſoluble Tartar. *Martyn's Tournefort.*

The Seeds of the Fraxinus, bruiſed, and drank in Wine, provoke Urine, ſays *Hippocrates*. Feed a Pig, ſays *Galen*, with the Bark of Aſh, boiled in Wine for three Days, and kill it on the fourth, and you ſhall find it without a Spleen. The Bark and Wood are drying, attenuating, and are thought to have a ſpecific Virtue againſt Hardneſs of the Spleen; whence it is ſaid, that continual drinking out of a Cup made of its Wood extenuates that Part; for which Purpoſe ſome give the Decoction of the Bark, and others uſe the ſame, inſtead of Guiacum, with good Succeſs. Dr. *Tancr. Robinſon* obſerved the middle Bark or Rind of the Aſh frequently preſcribed in foreign Countries for intermittent Fevers; and ſays, that he has heard the ſame has been ſucceſsfully practiſed in *England*. The Juice of the Leaves, and of the tender Buds, drank in a ſmall Quantity every Morning, are ſaid to be effectual in the Dropſy. The Salt of the Aſh-tree, mix'd with Diuretics, provokes Sweat, as does alſo the Decoction of the Bark. The Seed called *Lingua Avis*, Bird's Tongue, potently heats and dries, and is good for hepatic Diſorders, Pleuriſies, and the Stone. The modern Chymiſts, and eſpecially *Glauber*, mightily extol the ſame for breaking the Stone in the Kidneys and Bladder. Eaten with Piſtachios, Pine-nuts, and Sugar, it imparts Venereal Abilities. The Powder of the Seed dry'd, after perfect Maturity, is an excellent Remedy, not only againſt the Stone, but the Jaundice and Dropſy, as we are aſſur'd by a famous Phyſician, Dr. *Bowles*. A Dram of the Seeds, taken in Wine, as *Pliny* ſays, cures the Dropſy, and extenuates thoſe who are exceſſively fat and corpulent: The *Arabians*, alſo, mightily commend it. In *England*, the green Seeds, or rather Fruit of the Aſh-tree, gather'd before Maturity, are pickled with Salt and Vinegar, and ſerve for Sawce. *Raii Hiſt. Plant.*

2. Fraxinus; excelſior; frugifera; fœmina.

3. Fraxinus; humilior; ſive altera Theophraſti; minore & tenuiore, folio. *C. B. P.* 416.

4. Fraxinus; folio rotundiore. *C. B. P.* 416. *J. B.* 2. 174. *Chab.* 62. *Raii Hiſt.* 2. 1703. *Jonſ. Dendr.* 291. *Boerh. Ind. A.* 2. 172. *Mannifera Arbor.* Offic. *Fraxinus*, Tourn. Inſt. 577. Elem. Bot. 448. *Alepenſis*, Herm. Cat. Hort. Lugd. Bat. 261. THE ROUND-LEAV'D ASH. *Dale, p.* 332.

The Leaves reſemble thoſe of the Piſtachio, are roundiſh, leſs than thoſe of the common Aſh-tree, ſerrated at the Edges, and often have the interior Half, towards the Bottom of the Rib, ſhorter than the exterior; which may be alſo, ſometimes, obſerv'd in the Piſtachio and Turpentine-tree.

For the medicinal Virtues of this Tree, ſee MANNA.

5. Fraxinus; Virginiana; caudice penitus nodoſo.

6. Fraxinus; major; foliis rotundioribus; ſplendentibus; undulatis. An Fraxinus, Alepenſis. H. L.? *Boerh. Ind. A. Plant. Vol.* 2. *p.* 171.

FRENA. A Name for the Sockets of the Teeth. *Caſtellus.*

FRENANS *Medicamentum*, a bridling Medicine, is one which moderates and reſtrains the Rage of the redundant and diſturb'd Humours. *Caſtellus.*

FRESUM. An Adjective frequently apply'd to Pulſe, importing, being hull'd, ſkin'd, or peel'd.

FRICIUM, *vel Fricatorium Medicamentum*, is a Medicine appointed for the Friction or Rubbing of the ſoft external Superficies of the Body.

This Medicine, with reſpect to its Conſiſtence, is of three Kinds, *dry*, *ſoft*, *liquid*: The firſt is adminiſter'd in dry Friction, in form of Fumes, or by way of Suffumigation: The two laſt ſerve for humid Friction.

Their Uſefulneſs, ſo highly celebrated by the Antients, and ſtill much regarded in the preſent Times, cannot eſcape the Obſervation of every one, who knows how greatly Friction contributes not only to the Conveyance of Remedies within the Superficies, but to their Action and Efficacy after Introduction. *Gaubius de Methodo concinnandi Formulas.*

FRICTIO, Friction, or Rubbing. A Species of Gymnaſtics; for which ſee the Article FIBRA.

FRIGIDARIUM. A Veſſel in the Baths of the Antients, appointed for holding cold Water, the *Caldarium* and *Tepidarium*, the other two Veſſels containing hot and tepid Water. *Caſtellus.*

FRINGILLA, the Chaffinch; a ſmall Bird well known: *Lemery* ſays, it contains much volatile Salt and Oil, and is thought to be good for the Epilepſy.

FRITTA. A technical Word belonging to the Art of Glaſs-making, and ſignifying the Maſs of Salt and Aſhes concreted

erected in the Sand by Cold. By the Antients it was called *Hammonitrum*, or, perhaps more properly, *Ammonitrum*. *Plin. Lib.* 36. *Cap.* 26.

FRITILLARIA, the Fritillary, or chequer'd Tulip.

The Characters are;

The Flower is like a Lily, Bell-shap'd, hexapetalous, pendulous, naked, and generally chequer'd, furnish'd with six Stamina, and containing the Ovary: The Ovary is furnish'd with a trifid Tube, or Pointal, the triple Cavity extending to the Cavity of the Ovary: This Pointal becomes an oblong Fruit, full of flat Seeds, dispos'd in a double Row: The Root consists of two carnous Knobs, from the Middle of which arises the Stalk. *Boerhaave, Index alter, Pars* 2. *p.* 139.

The Flower of the Fritillaria, as *Paul. Renealmus* says, is not only good in burning Fevers, but to allay Thirst: Its Juice is made an excellent Ointment for carcinomatous Ulcers. There is, also, a considerable Virtue in the Flower for strengthening the Heart and Brain, and correcting the Malignity of the Meconium. The Water, rightly distil'd, helps Inflammations of the Eyes. *Raii Hist. Plant.*

Boerhaave enumerates twenty-eight Species of this Plant.

FRIXUS, *frictus*, φρυκτὸς, φρυγόμενος, τηγόμενος, τεθηγανισμένος, τηγανιστὸς, fried, is apply'd to things dress'd or prepar'd in a Frying-pan; hence *Panis teganites* (τηγανίτης) is Bread bak'd in a Frying-pan. *Galen, de Al. Fac.* tells us, that all fry'd Meats afford a dry Aliment, and void of Flatulences. *Frictæ vel frixæ Resinæ*, call'd by the *Greeks*, simply, φρυκτὴ, (*Phryctè*) signifies *Colophony*, or black Rosin; and distinguishes it from liquid or humid Rosin, which they call ὑγρὰ (*Hygra*). It takes the Name *Phryctè*, from its being fry'd or burnt in the Manner describ'd by *Dioscorides*, *Lib.* 1. *Cap.* 93.

FRONDIPORA. A Name for the *Eschara marina*.

FRONDOSITAS, Frondosity; signifies Leafiness, Fulness of Leaves, or Aptness to bear Leaves.

FRONDOSUS, frondous; is full of, or apt to bear Leaves. *Idem*.

FRONS, μέτωπον, the Forehead, is the fore Part of the Head, situate above the Eyes, bare, or destitute of Hair, and reaching to the Temples. *Castellus*. See CAPUT.

FRONTALE, μετωπιδιον, is a Name for any external Medicine or Topic apply'd to the Forehead: In particular it means a refrigerating and hypnotic Remedy, prepar'd of cold Cephalics bruis'd and ty'd up in a Linen Bag, four or five Fingers in Breadth: It is, also, put for ANACOLLEMA, which see.

FRONTALIS. The Name of a Muscle belonging to the Forehead. See CAPUT.

FRONTATUS, frontated, is a Term us'd by Botanists, relating to the Leaf of a Flower, which grows broader and broader, till, perhaps, terminated in a right Line; and is spoken in Opposition to *cuspidated*; that is, when the Leaves of a Flower end in a Point. *Miller's Dict. Vol.* 1.

FRONTO, from *Frons*, is one who has a large and ample Forehead. *Castellus*.

FRUCTUS, καρπὸς, Fruit, is the Production of a Tree or Plant for the Propagation or Multiplication of its Kind; in which Sense, Fruit includes all kinds of Seeds, with their Furniture. Botanists use it to signify, properly, that Part of a Plant wherein the Seed is contain'd. The Word *Fruit* is, also, used to signify an Assemblage of Seeds in a Plant, as in a *Pea*, *Bean*, *Ranunculus*, and the like; and, in its general Signification, for all kinds of Grain, whether naked, or inclos'd in Cover, Capsule, or Pod, whether bony, fleshy, skinny, membranous, or the like. *Fruit* is also describ'd to be the Product or Result of the Flower, or that for whose Production, Nutrition, and Perfection, the Flower is intended. *Miller's Dict.*

In the Language of the Chymists, Metals are call'd Fruits of the Earth, as proceeding, say they, from their own Mother the Water, and entering into another Mother the Earth; in which the Operation of their Trees is perfected, the Roots being fix'd in the Water. *Castellus*.

FRUMENTACEUS, frumentaceous, is a Term apply'd by Botanists to all such Plants as have a Conformity with Wheat, *Frumentum*, with respect either to their Fruits, Leaves, Ears, or the like. *Miller's Dict.*

FRUMENTUM INDICUM. A Name for the *Mays*; *granis aureis*.

FRUMENTUM SARRACENICUM. A Name for the *Fagopyrum*; *vulgare*; *erectum*; and the *Fagopyrum*; *vulgare*; *scandens*.

FRUMENTUM TURCICUM. A Name for the *Mays*; *granis aureis*.

FRUTEX. See the Explanation of Botanical Terms, under the Article BOTANY.

FRUTEX ÆTHIOPICUS. A Name for the CLUTIA; and also for the *Conocarpodendron*; *foliis argenteis, sericeis, latissimis*.

FRUTEX, AFRICANUS, CONIFER. A Name given to several Species of the CONOCARPODENDRON and LEPIDOCARPODENDRON.

FRUTEX AFRICANUS AMBARUM SPIRANS. A Name for the *Camæ aureæ similis Frutex*; *ambarum spirans*.

FRUTEX CORONARIUS. A Name for the *Syringa*; *alba*; *sive Philadelphus Athenæi*.

FRUTEX, PAVONINUS. A Name for the *Poinciana*; *flore pulcherrimo*.

FRUTICOSUS, fruticose, are those Plants which are of an hard woody Substance.

FUCA is a Sea-fish, which resembles our Perch: There are several Species of them, of different Colours. They are found upon the Shore amongst the Alga. They afford good Aliment, and are of easy Digestion; they purify the Blood, and provoke Urine. *Lemery des Drogues*.

FUCATUS, (from *Fucus*, Paint, or Varnish) colour'd, varnish'd: In a metaphorical Sense it means the same as *Palliativus*, palliative; and is spoken of an imperfect Cure, where the Subject is incapable of a perfect Restoration. *Castellus*.

FUCHSIA. This Plant was so nam'd by Father *Plumier*, who discover'd it in *America*, in Honour to the Memory of *Leonard Fuchsius*, a learned Botanist.

The Characters are;

It hath a Funnel-shap'd Flower, consisting of one Leaf, and divided into several Parts at the Brim; whose Cup afterward becomes a roundish, soft, fleshy Fruit, which is divided into four Cells, that are full of roundish Seeds.

We have but one Sort of this Plant; which is,

Fuchsia triphylla, flore coccineo. *Plum. Nov. Gen.* THREE-LEAV'D FUCHSIA, WITH A SCARLET FLOWER. *Mil. Dict. Vol.* 2.

There are no medicinal Virtues attributed to this Plant, that I know of.

FUCUS.

The Characters are;

It is a slimy, coriaceous, herbaceous Substance, and has a sort of foliaceous Appearance in every Part. The Seeds are often contain'd in Follicles. For a fuller Account of the *Fucus*, see the Explication of *Tenus*, under the Article BOTANY.

Botanists mention a great many Species of the Fucus; none of which have any medicinal Virtues attributed to them, except the two following; which are,

1. Fucus; maritimus; vel Quercus; maritima; vesiculas habens, *C. B. P.* 365. *Tourn. Inst.* 566. *Boerh. Ind. A.* 9. *Quercus marina*, Offic. Ger. 1378. Emac. 1567. Park. Theat. 1294. Aldrov. Dendr. 160. *Fucus sive Alga marina latifolia vulgatissima*, Raii Hist. 1. 70. Synop. 3. 40. *Fucus marinus vulgatissimus latifolius, foliis Quercinis vesiculis donatis*, Hist. Oxon. 3. 647. COMMON SEA-WRACK.

The Herb is us'd, which agrees in Virtues with the ALGA. *Dale*.

2. Fucus; Lactucæ folio, *El. Bot.* 443. *Tourn. Inst.* 168. *Lichen marinus*, Offic. Ger. 1377. Emac. 1566. Raii Hist. 1. 77. Synop. 10. *Marinus Platyphyllos*, Pluk. Almag. 216. *Fucus marinus*; *Lactuca marina dictus*, Park. 1293. *Fucus primus*, Dioscor. *Fucus marinus Lactucæ folio*, Hist. Oxon. 3. 645. *Muscus marinus Lactucæ folio*, C. B. 364. *Lactuca marina*; *Bryon Theophrasti, Dioscoridis, & Plinii*, Chab. 572. *Bryon marinum Lactucæ foliis*, Calc. Mus. 19. *Lactuca Marina sive Intybacea*, J. B. 3. 801. OYSTER-GREEN. See BRYON. *Dale*.

Fucus, Offic. *Tertius*, Dioscor. *Fucus Marinus*, *Rocella tinctorum dictus Alga Tinctoria*, J. B. 3. 797. Raii Hist. 1. 74. Tourn. Inst. 566. *Fucus marinus*, *Rocella Tinctorum*, C. B. 365. *Alga Cornu Cervi divisura*, Ejusd. 364. *Alga Tinctoria* Hist. Oxon. 3. 646. *An Fucus, sive Alga membranacea purpurea parva*, Raii Synop. 3? PURPLE SEA-WRACK. *Dale*.

It is found in the *Mediterranean* Sea. See its Virtues under ALGA, where it passes under the Denomination of the red *Alga*.

Vitis marina, & *Lenticula marina*, Offic. *Lenticula marina*, Calc. Mus. 19. *Lenticula marina serratis foliis*, Ger. Emac. 1615. Park. Theat. 1281. *Fucus folliculaceus serrato folio*, C. B. Pin. 365. Tourn. Inst. 568. Raii Hist. 1. 72. Hist. Oxon. 3. 647. *Fucus folliculaceus, serratus, Sargazo*, Mont. Exot. 7. *Sargasso*, Pis. SEA-LENTILS.

It is found upon Rocks by the Sea-side. The Herb is us'd by the *Portuguese* and *Dutch* for a Dysury. *Dale*.

FUGAX. An Epithet sometimes apply'd to Fruits, importing the same as *Horæus*, perishable.

FUGILE imports the Excrement of the Ears, or Ear-wax; and, in *Paracelsus*, an Appearance in the Urine resembling Ear-wax. According to *Rulandus*, it signifies those Apostemations near the Ears call'd *Parotides*. *Forestus* makes it the same as *Bubo*. *Castellus*.

FUGITIVUS SERVUS. Mercury.

FULICA, Offic. Aldrov. Ornith. 3. 91. Will. Ornith. 239. Raii

Raii Ornith. 319. Ejusd. Synop. A. 116. Gesn. de Avib. 344. Jonst. de Avib. 98. Mer. Pin. 174. *Cotta major sive Calva*, Charlt. Exer. 107. *An Cotta, sive Cutta Anglorum*, Aldrov. Ornith. 3. 981. *Cotta Anglorum*, Jonst. de Avib. 99. *Poule d'eau*, Bellon. des Oyse. 181. THE COOT, or BALD-COOT.

The Heart is recommended against Epilepsies; and the Flesh is said to be good for the Poison of Serpents.

FULIGO. Soot.

Analysis of Soot.

Take of the blackest and driest Soot, gather'd in the Chimney of an Oven, where nothing but Bread is bak'd, and nothing burnt but Vegetables, and gather'd on a very dry Day; with this fill a large glass Retort almost to the Neck; apply a large glass Receiver, after the Neck of the Retort has been thoroughly clean's'd, on the Inside; and lute the Juncture with the common Linseed-paste; raise a Fire of an hundred and fifty Degrees, and keep it up equably: A large Quantity of transparent Water will thus come over, with considerable Violence; so that if the Fire was immediately made strong at first, the Receiver would easily crack. Continue in this manner, so long as any clear Water comes over, which it will long do, although the Soot was dry. Then taking away this first Water, and pouring it into a Glass, apply the Receiver again, and raise the Fire a little above two hundred Degrees; a white, milky, fat Water, will now come over in Quantity, and with considerable Violence; proceed with a slowly-increas'd Fire, so long as this continues; keep it apart; apply the Receiver again, and raise the Fire briskly; a yellow, volatile, copious Salt, will come over, and stick all round the Sides of the Receiver; continue the Fire thus brisk, so long as any Salt rises; then, with the strongest Heat, that Sand will give, and, with a Heat of Suppression, there arises a thick black Oil. Let all cool, and there will be found, in the Neck of the Retort, a Salt which could rise no higher, even by so violent a Fire; but, in the Bottom of the Retort, there remains a black feculent Matter; the upper Surface whereof is cover'd with a very thick, whitish, saline Crust, which, both in Colour, Figure, Concretion, and Striæ, resembles the common Sal Ammoniac. If the milky Water be rectify'd, it affords a very penetrating volatile Spirit, and some sharp volatile Salt.

REMARKS.

Here we are taught what the Agitation of an open Fire can move, change, expel, and drive through the Air by burning; first, in the Form of Smoke; then, of Flame; lastly, of Exhalation; and how high it may carry them. For a Chimney is a kind of Still-head, converging in an open Top; and sometimes rises to the Height of above thirty Feet, and carries Soot up to the Top; and, after this, discharges a black Smoke, at its upper Orifice, and disperses it through the Air, where it seems gradually to vanish. It may deserve to be consider'd, what an immense Quantity of such Matter is, by the Force of Fire, thrown up from the Surface of the whole habitable Globe, in the Places where Fire is constantly us'd: Whence we may learn, that combustible Vegetables, their Smoke, Flame, and Soot, and the black Clouds dispers'd in the Air, consist of one and the same Matter agitated by Fire. This Matter consists of several Parts; as (1.) a fetid, oily, bitter, unpleasant, nauseous Spirit, residing in the Water, that first comes over, and is afterwards constantly dispers'd through all the other Parts: This Spirit seems to be the oily and more subtile Part of the Vegetable, acted on by the Force of Fire. (2.) Water, which is here contain'd in great Plenty, residing in this Spirit, in the first limpid, and in the second milky Liquor, as also in the saline Spirit, the volatile Salt, and, in some measure, in the Oil itself. This Water can scarce be render'd pure by any Art; being always foul'd with the unalterable Bitterness, and the inseparably disagreeable Odour, of the Spirit. (3.) A sharp, volatile, alcaline, oily Salt, which first comes over, rises into the Receiver, and sticks to the Sides thereof; for this Salt is truly alcaline, as appears by its Taste, Smell, fiery Virtue, the violent Effervescence it makes with Acids, and, by concreting therewith into a compound Salt; and hence a volatile Alcali continally impregnates the Atmosphere, in great Plenty, by Conflagrations. (4.) A sharp, alcaline, fat Spirit, consisting of the Salt just now mention'd, dissolv'd in Water, and so resembling Spirit in Fluidity, Pungency, Subtilty, and Volatility. (5.) A fetid, black, bitter, nauseous, inflammable, thick, and almost caustic Oil, mix'd with an oily Salt. (6.) A true Sal Ammoniac, sticking in the lower Part of the Neck of the Retort, and rais'd to the Surface of the black Earth below. For, if this Salt be carefully collected and separated from the alcaline Kind, that first comes over, it proves a genuine Sal Ammoniac. It is of a whitish Colour somewhat transparent, makes no Effervescence with Acids, and, if mix'd with fix'd Alkalies, presently affords a true volatile alcaline Salt, as Sal Ammoniac does; whence the true Origin of this Salt is deriv'd from Soot. (7.) A black fix'd Earth, which, being afterwards calcin'd in an open Fire, and burnt from its Oil, which tenaciously adheres thereto, leaves a white earthy Calx behind.

This is the Analysis of Soot; by considering of which, we may learn what Parts of Vegetables are volatile, and fly off by an open Fire, and what are fix'd and remain behind, and what Fire throws off from Vegetables into the Air. Hence we see, that even Earth, which appears so fix'd in the most violent Fire, after being separated from the other Principles, yet, when mix'd with the rest, is, either by the Force of Flame, or Fire, thrown to the Distance of forty Feet through the Air, in the Form of a thin Cloud; but, there would be no End, if we should minutely pursue the physical Uses of this Process. Pills compos'd of dry Soot, and gilded, are recommended for the Cure of cold Distempers, and this often with Success. The volatile Salt of Soot is us'd with the same Success as that of Animals. *Hartman* recommends the Salt which rises last, for giving Relief in Cancers; and, certainly, Sal Ammoniac, prudently employ'd, is of Service against the Putrefaction of running Cancers. But the Soot produc'd by Oak-wood alone, the common *Dutch* Tufts, or Pit-coal, appears different upon chymical Analysis; and that again would be very different, which should be collected from the Chimney of a public Kitchen, which is continually fill'd with the Fumes, not only of the Fuel, but likewise of all kinds of boil'd, roasted, and fry'd Meats. And this much may help us to form a Judgment of Soot. *Boerhaave's Chymistry.*

Spirit, and Salt of Soot, are rectify'd in the same manner as Spirit of Hartshorn.

FULIGO *Metallorum* is Arsenic, and sometimes Mercury.

FULMINATIO, Fulmination, in Chymistry, has two Significations: First, it imports an Explosion, and is the same as Detonation. Secondly, Fulmination, in the Depuration of the more perfect Metals, is, when, upon infusing them with Lead, a bright Colour succeeds a kind of sulphureous Cloud before appearing in the Metals, during the Fusion.

FUMANS NIX is Quick-lime.

FUMARIA.

The Characters are;

The Leaves are divided as in umbelliferous Plants; the Calyx is small, and bifoliated, in some lying under the Spur of the Flower, and in others wanting. The Flower, if curiously examin'd, in many Plants, appears tetrapetalous, the lower Petal running out in the Shape of a Keel from the End of the Pedicle: The upper, being bent in the Figure of a Spur, rises upwards, in the Form of an erect Galea; to this latter Petal grow the Calyx and Pedicle: The third and fourth Petals are lateral, and, by their Apposition, form the Representation of a very sharp-pointed Vagina, conceal'd between the two former Petals.

The Ovary, at the Extremity of the Pedicle, is short and contracted, and furnish'd with a long Tube, with a globous or discous Head: The whole Length of it seems carefully cover'd up, and conceal'd within the Vagina before describ'd. To the Tube, for its whole Length, grow two Stamina, so closely, that, in Conjunction with it, they are included in one very small, thin, pellucid Vagina, in such a manner, that nothing appears outwardly but the Apex of the Tube of the Ovary, and the two Testes. The Ovary, when ripe, becomes an unicapsular Pod, full of round Seed.

If the ripe Flower be cautiously open'd, as soon as the two interior Petals are disclos'd, the Testes discharge the Seed by a sudden Explosion.

Boerhaave mentions eleven Species of this Plant; which are,

1. Fumaria; viticulis & capreolis plantis vicinis adhærens; Neapolitana; flosculis subflavis in summitate nigricantibus. *C. B. P.* 143. *Var.*

2. Fumaria; Officinarum & Dioscoridis; flore purpureo. *C. B. P.* 143. *Tourn. Inst.* 422. *Boerh. Ind. A.* 308. *Fumaria.* Offic. Chab. 377. *Fumaria purpurea.* Ger. 927. Emac. 1088. *Fumaria vulgaris.* Park. 287. J. B. 3. 201. Raii Hist. 405. Synop. 3. 204. *Fumaria vulgaris latifolia, siliquis curtis, non bivalvibus.* Hist. Oxon. 2. 261. *Herba Melancholifuga.* Cat. Altd. FUMITORY. *Dale.*

This is a tender succulent Plant, hardly able to sustain itself, having many winged finely divided Leaves, of a whitish-green Colour. The Stalks are hollow, and corner'd, much branch'd, and seldom rising very high, having, on their Tops, long Spikes of Flowers, purple above, and whitish underneath, somewhat resembling the papilionaceous Kind, having a Heel or Spur in the

the hinder Part, the Foot-ſtalk being inſerted in the Middle of the Flower: They are ſucceeded by ſingle round Seed. The whole Plant has a bitter Taſte; whence it is call'd *Fel Terræ*. It grows every-where in Fields and till'd Grounds, and flowers in *May*. The whole Plant is us'd.

This Plant gives the blue Paper much ſuch a red Colour as Aloes; ſo that, probably, it contains very near the ſame Principles, ſuch as a Salt like that which is natural in the Earth, but in which the Sal Ammoniac predominates over the Nitre and marine Salt: Beſides, the Salt of the Fumitory is join'd with a great deal of Sulphur and Earth, and diſſolv'd in a conſiderable Quantity of Phlegm.

By the chymical Analyſis, Fumitory yields a great deal of concreted, volatile, fix'd, lixivial Salt, and very thick Oil.

All theſe Principles render this Plant laxative, diuretic, good to cleanſe the Blood, and remove Obſtructions of the Parts. It paſſes for a Specific in all Diſeaſes of the Skin, in hypochondriac Melancholy, in a Cachexy, and Dropſy: They give the Juice of Fumitory from two Ounces to ſix; the Infuſion in Whey, from ſix Ounces to ten, or twelve; the ſimple Syrup, to two or three Ounces, in Ptiſans; the compound Syrup, to one or two Ounces, if you would have the Patient purg'd. The Water, alſo, of Fumitory is deterſive, and good to dry up Ulcers of the Mouth. An Ointment is made of the Juice of this Plant, mix'd with equal Quantities of the Juice of Elecampane, thicken'd over the Fire with ſome Hog's Lard. Fumitory is us'd in the Electuary *de Pſyllio*, in that which they call *Sennatum*, in the Confection *Hamech*, and in the compound Syrup of Succory. *Martyn's Tournefort.*

Fumitory purges Bile, and aduſt Humours; but then it requires to be taken in a large Doſe. I am of Opinion, ſays *C. Hoffman*, with thoſe who believe, that *Meſue* and *Avicenna* intended, that the Juice ſhould be given from five to eleven Ounces; the Decoction, to the Quantity of fifteen Ounces; and the Powder, from four to five Ounces; by which means it clarifies and purifies the Blood. In *England*, we boil the Herb in Whey, in the Spring-time, and drink the Decoction for purifying the Blood. Hence it is admirably beneficial in all Diſeaſes proceeding from bilious and ſerous Humours, ſuch as the Leproſy, Scab, Itch, Impetigo, Herpes, and ſuch other cutaneous Diſorders, and, it is ſaid, in the Lues Venerea itſelf. It is diuretic, as well as ſudorific; for which Reaſon the Water is preſcrib'd in the Lues Venerea; and, mix'd with Theriaca Andromachi, in the Peſtilence. It opens Obſtructions of the Liver, and purges the Jaundice by Urine. I very much eſteem the Conſerve, ſays *C. Hoffman*, for opening Obſtructions of the Viſcera after univerſal Purgation.

The Juice, or diſtil'd Water, dropt into the Eyes, are believ'd to cure their Dimneſs: Hence the Plant takes its Name, *Fumaria*, becauſe it provokes Tears, and clears the Sight, after the Manner of *Fumus*, or Smoke. *Pliny.*

The Eſſence of Fumitory, or its Juice, may be taken in Whey, for ſome Days together, in atrabilious Diſorders. The Herb will not bear much Boiling, on account of its volatile Salts. *Raii Hiſt. Plant.*

Fumitory is juſtly accounted one of the moſt wholſome, as well as uſeful Herbs; for it abounds not only with a bitteriſh Juice, but with a copious, tartareous, and nitrous Salt. Boil'd in Beer or Whey, or taken in form of Pills, it is an admirable Remedy in all chronical Diſeaſes, and particularly thoſe which proceed from corrupted Lymph and Serum; as the Leproſy, Itch, Scurvy, the Lues Venerea, and many other cutaneous Diſeaſes; for, by promoting the Circulation of the Blood, it removes ſuch things as clog the Viſcera, opens Obſtructions, excites and facilitates Excretions by Stool and Urine, and cauſes a free Perſpiration; by which means it works a moſt effectual Depuration of the Lymph and Blood. And, indeed, in our Opinion, there can hardly be found a Simple of ſuch extraordinary Virtue, for depurating and cleanſing the Maſs of Blood and Humours, and corroborating the Tone of the Viſcera, as Fumitory. *Hoffman. de Præſtant. Remed. domeſt.*

3. Fumaria; Officinarum; foliis cæſiis; flore dilutè rubello.

4. Fumaria; minor tenuifolia. *C. B. P.* 143. *M. H.* 2. 261. LESSER NARROW-LEAV'D FUMITORY.

5. Fumaria; ſempervirens & florens, flore albo. *Flor.* 1. 91. EVERGREEN FUMITORY, *with a white Flower.*

6. Fumaria; lutea. *C. B. P.* 143. *Fumaria, lutea, montanâ.* M. H. 2. 260. *Fumaria, quæ Split dicitur.* J. B. 3. 26. 203. YELLOW FUMITORY.

It grows on the cultivated Hills, and in the Fields of *Apulia* and *Calabria*, and in other Parts of *Italy* and *Sclavonia*.

Achilles Gaſſerus, in his Obſervations, publiſh'd by *Velſchius*, *Obſ.* 99. makes the following Remarks on this Herb: When I travel'd in *Italy*, he ſays, for the ſake of Improvement, there was an Herb much in Requeſt, which, in *Sclavonia*, they call *Split*, but, at *Venice*, the *Sclavonian Herb*; it is of a bitter Taſte, and its Leaves much reſemble thoſe of Rue; whence by ſome it is reputed a Species of Rue, or the *Harmel* of the *Arabians*. It grows plentifully on the Borders of *Boſnia*, about the Caſtle of *Boſmaprina* and is much celebrated for its Efficacy in many Diſorders, as the Gout, Sciatica, Affections of the Nerves, Convulſions, Palſy, Epilepſy, Apoplexy, and the like. Of this I ſent an Account to a celebrated Phyſician my Friend, *G. Laubius*, and receiv'd for Anſwer as follows: The herb Split, as I am aſſur'd by *Vinceſ. Levinus*, a *Moravian*, and a Man of Learning, is a Species of *Fumaria*, or *Corydalis*. It is gather'd on the Mountain of *Boſnia*, in a ſtony Soil; in Leaves, Flower, and Taſte, it reſembles *Fumaria*, but bears its Seed in Pods; it is an Evergreen, and has ſeveral Roots complicated one with another, and may be call'd *Fumaria Alpina*. It is of Service in all cold Affections of the Nerves, comforts the Brain, gently purges, provokes Urine, and opens Obſtructions of the Meſentery and Liver; the Root is bitter and acrimonious. The Form of Preparation is in the following manner:

Take of the Roots of Split, one Ounce; bruiſe them ſmall, and put them in a Pint of White-wine, in a glaz'd Pot of ſufficient Capacity; and cover it with a Cruſt of Bread, well paſted round about at the Edges; and let it boil over a gentle Fire, for an Hour. Exhibit an Ounce of this Decoction warm, for five Days together, to the Patient, faſting.

At the firſt time of taking, it inebriates, but afterwards it moderately exhilarates, and, with the Help of a proper Diet, ſoon removes the Diſeaſe. It ſtrengthens the Brain; and a certain Phyſician is perſuaded, that it is good for melancholy and maniac Patients. *Greg. a Klo*, a *Bavarian* Phyſician, aſſures me of the Truth of all this, and further ſays, that he perfectly cur'd himſelf, with this Herb, of a great Weakneſs of the Joints, ſo that he could hardly walk; and dreaded, beſides, the Approach of an Epilepſy. The Doſe he preſcribes is two Ounces. *Raii Hiſt. Plant.*

7. Fumaria; claviculis donata. *C. B. P.* 143. *M. H.* 2. 260.

8. Fumaria; bulboſa; radice cava; major. *C. B. P.* See ARISTOLOCHIA ADULTERINA.

9. Fumaria; bulboſa; radice cava; major; flore albo. *C. B. P.* 143. *Var. J. B.* 3. 204. GREAT BULBOUS ROOTED FUMITORY, *with a white Flower.*

10. Fumaria; bulboſa; radice non cava major. *C. B. P.* 144. GREAT BULBOUS ROOTED FUMITORY, *with a Root not hollow.*

11. Fumaria; bulboſa; radice non cava; major; flore albo. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 308.

FUMARIA, *Africana.* A Name for the *Cyſticapnos*; *Africana*; *ſcandens.*

FUMIGATIO, Fumigation, implies the Application of Fumes to particularly Parts, as thoſe of factitious Cinnabar to Venereal Ulcers; or a kind of chymical Calcination, when Metals, or other hard Bodies, are corroded, or ſoftened, by receiving certain Fumes.

FUMUS *Albus.* Mercury.

FUMUS *Citrinus.* Sulphur.

FUMUS *Rubeus.* Orpiment.

FUMUS *Duplex*, in the Proceſs for the Philoſophers Stone, is Sulphur and Mercury.

FUNCTIO, Function, is the ſame as Action. See ACTIO.

FUNDA. The Sling. A ſort of Bandage. See FASCIA.

FUNDALIA. The ſame as FÆCULA; which ſee.

FUNDULUS. The Name of a Freſh-water Fiſh, call'd alſo *Gobites*, Gudgeon. See GOBIUS. The *Gobio Capitatus*, Bull-head, is alſo call'd *Fundulus.*

FUNDUS, in Anatomy, is the Bottom of any of the Viſcera. Thus the *Fundus Ventriculi* is the Bottom of the Stomach; and the *Fundus Uteri* is the Bottom of the Womb.

FUNGOIDES. See the Explication of Botanic Terms, and the Diviſions of *Fungi*, according to Mr. *Ray's* Syſtem, under the Article BOTANY.

FUNGUS. See the Articles AMANITA and BOLETUS.

The *Fungi* conſtitute the firſt Genus of Plants in Mr. *Ray's* Syſtem of Botany: For the Diviſions and Subdiviſions, ſee the Article BOTANY.

A prodigious Number of *Funguſes* are mention'd by Botanic Authors, of which thoſe that grow in *England*, are ſpecify'd in the laſt Edition of *Ray's Synopſis Stirpium Britannicarum*, *Londini* 1724, to which I muſt refer the curious Reader; none having any Medicinal Virtues, except the following: As,

1. *Fungus typhoides coccineus*, Offic. *Fungus typhoides coccineus Melitenſis*, Bocc. Plant. rar. 80. Raii Hiſt. 2. 1851. *Fungus Melitenſis*, Ejuſd. Muſ. di Fiſica 56. Tab. 4. *Fungus typhoides coccineus tuberoſus Melitenſis*, Ejuſd. 69. *Fungus typhoides Lubernenſis*, Filli Hort. Piſan. 64. *Cynomorion purpureum Officinarum*, Mich. Nov. Gen. 17. Tab. 12. SCARLET MUSHROOM.

It is found on a Rock near the Iſland of *Malta*; and is eſteem'd a very great Aſtringent: It is, therefore, given in the Quantity

Quantity of a Scruple, or more, in Wine or Broth, in order to ſtop Hæmorrhages. *Dale.*

2. FUNGUS ESCULENTUS. See AMANITA.
3. FUNGUS ROTUNDUS ORBICULARIS. See LYCOPERDON.
4. FUNGUS MAXIMUS ROTUNDUS. See LYCOPERDON.
5. FUNGUS SAMBUCINUS. See AURICULA JUDÆ.
6. FUNGUS LARICIS. See AGARICUS.
7. FUNGUS PHALLOIDES. See PHALLOIDES.

FUNGUS, in Surgery, is a ſpongy Excreſcence, which ariſes in Wounds and Ulcers.

Mr. *Sharp* ſays, that in Wounds made by a ſharp Inſtrument, where there is no Indiſpoſition of Body, the Cure is generally perform'd without any Interruption, but from the Fungus; ſo that the Buſineſs of Surgery will conſiſt principally in a proper Regard to that Point, and in Applications that will the leaſt interfere with the ordinary Courſe of Nature, which in theſe Caſes will be ſuch as act the leaſt upon the Surface of the Wound; and, agreeable to this, we find, that dry Lint only is generally the beſt Remedy through the whole Courſe of Dreſſing; at firſt it ſtops the Blood with leſs Injury than any ſtyptic Powders or Waters; and afterwards by abſorbing the Matter, which, in the Beginning of Suppuration, is thin and acrimonious; it becomes, in Effect, a Digeſtive: During Incarnation, it is the ſofteſt Medium that can be apply'd between the Roller and tender Granulations, and at the ſame time is an eaſy Compreſs upon the ſprouting Fungus.

If Ulcers ſhould be of ſuch a Nature as to produce a ſpongy lax Fleſh, ſprouting very high above the Surface, it will be neceſſary to deſtroy it by ſome of the Eſcharotics, or the Knife: This Fungus differs very much from that belonging to healing Wounds, being more eminent and lax, and generally in one Maſs; whereas the other is in little diſtinct Protuberances. It approaches often towards a cancerous Complexion; and, when it riſes upon ſome Glands, actually degenerates, ſometimes, into a Cancer, as has happen'd in Buboes of the Groin. When theſe Excreſcences have aroſe in Venereal Ulcers, I have par'd them with a Knife; but the Flux of Blood is ordinarily ſo great, that I do not recommend the Method, and rather prefer Eſcharotics. Thoſe in Uſe are the Vitriol, the Lunar Cauſtic, the Lapis Infernalis, and more generally the red Precipitate Powder; but even in this Caſe I do not think the Powder the beſt Remedy; for tho' I have ſaid it is always an Eſcharotic, yet, as the *Pulvis Angelicus*, which is a Compoſition of the Precipitate Powder and burnt Alum, eats deeper, I think it preferable to the Precipitate alone.

It is but ſeldom that theſe inveterate Fungi appear on an Ulcer; but it is very uſual for thoſe of a milder kind to riſe, which may often be made to ſubſide by Preſſure, and the Uſe of mild Eſcharotics: However, if the Aſpect of the Sore be white and ſmooth, as happens in Ulcers with a Dropſy, and often in young Women with Obſtructions, it will anſwer no Purpoſe to waſte the Excreſcences, till the Conſtitution is repair'd, when moſt probably they will ſink without any Aſſiſtance. In Ulcers, alſo, where the ſubjacent Bone is carious, great Quantities of looſe flabby Fleſh will grow up above the Level of the Skin; but, as the Caries is the Cauſe of the Diſorder, 'twill be in vain to expect a Cure of the Excreſcence, till the rotten Part of the Bone is remov'd; and every Attempt with Eſcharotics will be only a Repetition of Pain to the Patient, without any Advantage. In ſcrophulous Ulcers of the Glands, and indeed of almoſt every Part, this Diſorder is very common; but, before Trial of the ſevere Eſcharotics, I would recommend the Uſe of the ſtrong Precipitate Medicine, with Compreſs as tight as can be born without Pain, which I think generally keeps it under.

When the Excreſcence is cancerous, and does not riſe from a large Cancer, but only from the Skin itſelf, it has been uſual to recommend the actual Cautery; tho' I have found it more ſecure, to cut away quite underneath, and dreſs afterwards with eaſy Applications; but the Caſes, where either of theſe Methods are practicable, occur very rarely. See CANCER.

Fungous Excreſcences, alſo, frequently ariſe after Wounds of the Head which penetrate the Scull, and after the Operation for the Trepan; for an Account of which ſee CAPUT.

Certain Tumors of the Joints, generally call'd White Swellings, are alſo call'd *Fungi*, by ſome Authors, particularly *Heiſter*, who gives the following Directions relative to them.

Excreſcences of the Joints very nearly reſemble œdematous Tumors, are attended with Danger, and therefore require a peculiar Examination; nothing but an Ignorance of the Nature, and Origin of them, that is, whether they proceed from the Blood or Serum, from a corrupted Matter, Flatus, or any other Cauſe, could have tempted ſo many Authors to paſs them over in Silence, or treat of them ſo ſuperficially. A Fungus in the Joints is a Tumor in the Articulations of the Limbs, without Heat or Pain, ſo ſoft, that it eaſily yields to the Preſſure of the Fingers; but, upon the Removal thereof, expands itſelf immediately, like a Muſhroom, without retaining any Marks. Tho' no Joints either of the Arms or Legs are exempt from this Diſorder, the Knees, from the Quantity of Glands and latent Fat between the Ligaments and Tendons, are moſt ſubject to it. There are ſeveral Kinds of theſe Fungi; ſome are ſmall, others large; ſome ſoft, others hard; according as the Humours producing it by their Stagnation and Inſpiſſation, are either thin or glutinous. In ſome the noxious Fluids are without-ſide the Articulation; theſe are properly termed Fungi: In others they ſtagnate within the very Joint, as the Serum in the Scrotum, when there an Hydrocele, which I have both ſeen and cur'd: This laſt may juſtly be call'd, A Dropſy of the Joint; and, by its Diſtention of the entire Joint, may be diſtinguiſh'd from the Fungus, as that occupies rather one Side. Theſe two Diſeaſes, then, may be eaſily diſtinguiſh'd from what has been ſaid.

A Fungus undoubtedly ariſes from an Inſpiſſation of the viſcid, glutinous Serum about the Ligaments of the Joints, which, being collected after a Fall, or violent Blow, immediately raiſes a Tumor externally, or in the very Joint, and, by debilitating the Ligaments, deſtroys the natural Mobility of the Part. When the Nerves, Arteries, or Veins, are affected by theſe Swellings, the uſual Conſequence is, that the ſubjected Parts are deprived of their Nutriment, and the Joint, being preternaturally inlarged, is by degrees inſenſibly conſumed.

We have already obſerved, that, in Excreſcences of the Joints, the Ligaments are too much extended and relaxed, and, conſequently, the natural Strength of the affected Limb is more or leſs weakened; in proportion to the Violence of the Injury received: Now, ſince it is very difficult to remedy this Diſorder, and theſe Tumors cannot eaſily be reſolved or ſuppurated, every one muſt acknowledge, that the Surgeon lies under great Difficulties, who attempts their Cure; for, beſides the Difficulty of bringing them to ſuppurate, there is Danger in the Suppuration, as it is often attended with a Caries, or incurable Fiſtula, which induce a Neceſſity of Amputation. Recent, ſmall, and ſoft Fungi are often remedied by reſolvent and corroborating Medicines, tho' they are generally irritated by Emollients; whereas great and inveterate ones reſiſt all the Power of Medicine, and depend entirely on the Knife for Relief, and this does not always prove ſucceſsful; for tho', by Inciſion, you may extract the noxious Humours, the Swelling often returns, after the Wound is healed.

But the propereſt Method for the Cure ſeems to be this: Rub the Part affected ſeveral times in a Day with warm Cloths; then foment it with the beſt tartariſed Spirit of Wine, or Linen dipt in the ſame; continue this, till the natural Form and Vigour of the Limb is reſtored. *Purmannus*'s Fomentation is likewiſe a very noble Remedy: Take of the Pickle of Herrings, two Pints; of the ſtrongeſt Vinegar, one Pint; Leaves of Sage, two Handfuls; Roman Vitriol, an Ounce and an half; crude Alum, ſix Ounces: Boil theſe together for half an Hour; then apply them. When the Tumors begin to be diſperſed, and the former Vigour of the Limb a little recover'd, the Reſolution is greatly promoted by fomenting with tartariſed Spirit of Wine, or fetid Oil of Tartar, ſeveral times in a Day; then, to keep out the Cold, which is very injurious, bind it up firmly with Compreſſes and Bandages. Laſtly, I cannot but recommend one Fomentation above all others; which I have uſed myſelf, with great Succeſs: Take of Litharge, half a Pound; Armenian Bole, an Ounce; Maſtich, Myrrh, each half an Ounce; Wine-vinegar, a Pint: Boil theſe together for a Quarter of an Hour. You muſt uſe this Decoction warm, and every Morning and Evening dip Compreſſes, or thick Linen Cloths, into it, and foment the Part; obſerving to order, internally, proper purging, attenuating, and ſudorific Medicines.

If none of the Medicines recommended anſwer the Purpoſe, *Wurtzen* and *Purman* place their ſole Confidence in an Inciſion into the tumefy'd Joint, towards the lower and moſt commodious Part, but with the utmoſt Circumſpection, leſt any of the Ligaments or Tendons ſhould be injured; for, by the Help of this, if the ſtagnating Serum is collected in one Cavity only, it will immediately diſcharge itſelf; if it is diſperſed into ſeveral, it will gradually flow out in a few Days. This may be promoted, by applying Tents dipt in ſome Digeſtive, and ſprinkled with Alum. But before the Inciſion, you ſhould preſs the Tumor hard with your Fingers, and retain it with a Bandage plac'd above it, to prevent its giving way; for this will not only expoſe the Part more commodiouſly to your Sight, but, after Inciſion, promote the Efflux of the Serum, and make it burſt out, as the Blood does after Veneſection, or the Water after an Inciſion of the Hydrocele. When you have done this, if any Swelling ſtill remains, lay on a Diachylum or Oxycroceum-plaiſter, or *Wurtzen*'s red one, which, in this Caſe, he ſtrongly recommends Lime-water, or Spirit of Wine: This will reſolve the Remainder. Thus, when the Member is reſtored to its priſtine Form, the Wound is healed by vulnerary Balſams; carefully avoiding the Uſe of fat oily Medicines, as very prejudicial to the Ligaments and Tendons. But if the Serum be found too tenacious and glutinous to diſcharge itſelf voluntarily, apply ſome attenuating Injections at every Dreſſing. A Decoction of Agrimony, Alchimilla, and Birth-

wort, mixt with Honey of Roſes, or of Celandine, is the beſt. Theſe Injections will generally reſolve the Tumors ſurprisingly.

Though Incision is the more ready way of Cure, ſome prefer Cauſtics; and, when the Eſchar is ſeparated, they turn out the collected Humours; proceeding afterwards as directed above. During this Proceſs, I would adviſe anointing the affected Joints with a nervous Unguent, or ſome aromatic Spirit, till it has recover'd its natural Strength.

As it is very common for the inſpiſſated Serum, after the Formation of the Cicatrix, to collect again; in order to prevent this, you muſt obſerve, not only to preſcribe internal reſolvent, purging, and ſudorific Medicines, but likewiſe to keep the Wound open with Tents for ſome time, and cleanſe it daily with a vulnerary Injection of a Decoction of Birthwort, Agrimony, Alchimilla, or the like, mixt with Honey of Roſes, or of Celandine; for in *Purman*'s Opinion this Method is the moſt expeditious, inſomuch that the Sinus of the Wound is not only cleanſed, but filled up alſo with new Fleſh, ſometimes in ſix Days. It will, however, not be improper to inject ſome Lime-water into the Wound, and to apply the ſame, or a digeſtive Plaiſter, externally, always binding up the Knee carefully, to prevent a Collection of the Serum. This will prevent a Return of the Fungi, as *Wurtzen*, who had been very converſant in theſe Cures, teſtifies.

Every Excreſcence of the Joints is not form'd, ſo as to admit of an Inciſion ſafely; for, when it is inveterate, hard, or very large, or the Patient is weak, you muſt forbear it, as rather more prejudicial than ſerviceable, becauſe it is frequently attended with new Diſorders, as a Caries, Fiſtula, and Gangrene, by which the Man is deſtroy'd, who might otherwiſe have arrived at a good old Age.

FUNICULUS UMBILICALIS, the umbilical Chord, or Navel-ſtring. See PLACENTA.

It is the conſtant Practice to make an exact Ligature upon the Navel-ſtring of a new-born Infant, leſt it ſhould bleed to Death thro' the umbilical Veſſels. As ſoon as the Infant and Secundines are deliver'd, a ſtrong Thread, of about an Ell long, folded together four times, and ty'd in Knots at each End, is carried twice round the umbilical Chord, about two or three Fingers-breadth from the Navel, and faſten'd with a double Knot; then, for the better Security againſt too copious an Hæmorrhage, a ſecond String, at about a Finger's-breadth Diſtance from the former, towards the After-birth, is paſs'd in the ſame Manner. After this, the umbilical Cord and Placenta muſt be cut off with Sciſſars, below the ſecond Ligature; then the wounded Part muſt be wrapt up in a Linen Rag, on which a Compreſs is to be laid, and the Whole ſecur'd with a proper Bandage. For the reſt, it may be left to the Nurſe, till it becomes dry, and falls off ſpontaneouſly.

Some Moderns look upon this Ligature as ſuperfluous, becauſe they have ſeen it omitted without any ſubſequent Danger. This, I muſt own, may ſometimes happen. But we have numberleſs Inſtances to the contrary, and therefore thoſe Women are deſervedly ſtigmatiz'd with the Character of Murderers, who, being deliver'd privately, and alone, deſignedly neglect this Operation, and, by that means, induce Convulſions, with other bad Symptoms, which are too generally follow'd by Death itſelf.

FUNIS, χοῖνιξ, χοινίκιον, a Rope, a Cord: It is reckon'd among the Inſtruments neceſſary to a Surgeon, as appears from *Hippocrates*, *Lib. de Artic.* The *Arabians* call the *Vena mediana*, *Funis Brachii*, the Cord of the Arm. *Caſtellus.*

FURCALA. The ſame as CLAVICULA.

FURFUR, πίτυρον, Bran, is properly the Pellicle or Cortex which comes off from Wheat in grinding; in which Senſe it occurs in ſeveral Places in *Hippocrates*, and alſo in *Galen*; where he recommends Bran for its deterſive Faculty, in a Gargariſm. For the ſame Reaſon the *French* frequently uſe it in Clyſters, as we learn from *Phil. Guibert's Medecin charitable.* From a Mixture of Bran, or πίτυρον, Bread is call'd πίτυρίας, furfuraceous. See ARTOS. *Galen* aſſerts every thing furfuraceous, πιτυρώδες, to have a deterſive Virtue. From a Similitude to Bran, alſo, thoſe excrementitious Particles which are evacuated with the Urine are call'd πίτυρα, *Furfures*, *Hippoc. de Nat. hum.* And hence we read πιτυρώδης ὑπόστασις, "a "furfuraceous (or branny) Hypoſtaſis;" and πιτυρώδες οὖρον, "furfuraceous Urine." *Coac. & Progn. Furfuroſi* are Patients afflicted with a ſort of Scabies or Scurf in the Head, which, upon Combing or Scratching, diſcharges a ſcaly Subſtance like Bran, whence the Affection is call'd πίτυρα, *Furfures*; or πιτυρίασις, *Furfuratio. Galen, de C. M. S. L. Lib.* 1. *Cap.* 6. by *Serenus Samonicus*, *Porrigo*, and *Farrea Nubes.* See FARINA.

FURFURACEUS, furfuraceous, branny. See the preceding Article.

FURFURATIO, πίτυρίασις. See FURFUR.

FURNUS. The ſame as FORNAX, which ſee.

FURO. The ſame as VIVERRA, which ſee.

FUROGI. A Cock. *Rulandus.*

FUROR, μανία. A Species of violent Delirium without a Fever. See MANIA, and UTERINUS FUROR.

FURUNCULUS, a Boyl.

Furunculus, among the *Latin* Writers, imports what we commonly call a Boyl, which is a ſmall hard Tubercle riſing in the Fat under the Skin, and accompanied with Inflammation, Redneſs, and Pain. As no Part of the Body is exempted from this Species of Tubercle, ſo the whole Body is ſometimes ſo over-run with them, that the Patient does not know on which Side to lie, how to turn himſelf, or in what Poſture to keep his Body. Not only Adults, but alſo young Perſons, and even Infants newly born, are ſubject to theſe Tubercles, which produce violent Cries, Watchings, and Loſs of Strength.

Though theſe Tubercles are not dangerous when they afflict Adults, yet it ſometimes happens, that, when a large Number of Boyls appear on tender Infants, they produce a moſt intenſe Pain, accompanied with Crying, Watching, Weakneſs, Convulſions, Epilepſies, and, at laſt, Death. And as in all other Inflammations, ſo the principal Cauſe producing the Symptoms which accompany Boyls ſeems to be a too glutinous and inſpiſſated Blood. The greater, therefore, this Inſpiſſation is, the more virulent and numerous the Boyls produc'd generally are.

For this Reaſon, the principal Intention of Cure in Boyls is, by proper Remedies to reſtore the inſpiſſated and ſtagnant Blood to its natural Motion and Circulation, with all poſſible Expedition. When a Patient is afflicted with few Boyls, internal Medicines are rarely exhibited, ſince they are generally cur'd by external Applications. But, when a large Number of Boyls appear, or return frequently, there is a Neceſſity for uſing Purgatives, and ſuch Medicines as attenuate and purify the Blood. For which Purpoſe, in Adults, 'tis expedient to take away a proper Quantity of Blood, either by Veneſection or Cupping with Scarification: At the ſame time Decoctions of the Woods, and ſuch other Subſtances as attenuate the Blood, are often to be exhibited, and a proper Regimen obſerv'd. Perſons afflicted with Boyls ought carefully to abſtain from generous Liquors, eſpecially Wine and Brandy, as alſo from the Uſe of Tobacco.

Recent Boyls are generally capable of being cur'd by external Remedies. This Intention is excellently anſwer'd by mixing Spirit of Vitriol with Honey, till it is highly acid, and anointing the Boyl with it. It is alſo of great Service to touch the Boyl frequently with pure Spirit of Vitriol, or of Sulphur: Digeſting Plaiſters, ſuch as ſimple Diachylum, Melilot-plaiſter, the Emplaſtrum de Spermate Ceti, or the Emplaſtrum Diaſaponis, are alſo found highly efficacious in the Cure of Boyls.

But if, in conſequence of a Delay in attempting the Cure, or any other Cauſe, the already enumerated Medicines ſhould not be ſufficient for reſolving the Boyl, it muſt neceſſarily be brought to a Suppuration: And in ſome Caſes the Maturation of an highly peccant and coagulated Matter is found ſo difficult, that the Boyl remains hard for ſome Weeks. Sometimes this ſtagnant Matter, in conſequence of its long-continued Inſpiſſation, becomes ſo acrid, that the Inflammation degenerates into malignant Ulcers, which ſpread gradually; or into Fiſtulas, which cannot be cur'd without the greateſt Difficulty. The Suppuration, however, is, for the moſt part, remarkably accelerated by a Plaiſter prepar'd of Honey and Meal, or by the Diachylum-plaiſter with the Gums. When theſe are not ſufficient for anſwering the End, maturating Cataplaſms are to be us'd; tho' 'tis to be obſerv'd, that for Children Plaiſters ſeem to be far more proper than Cataplaſms. When the Boyl is ſufficiently maturated, which may be known from its Softneſs, and the yellow Colour of its ſuperior Part, we are forthwith to have recourſe to the Knife, and opening the Abſceſs, to ſqueeze out the corrupted Matter lodg'd in it: After this, a Diachylum-plaiſter is to be apply'd, and the Ulcer daily cleans'd from Pus, till the Whole is eliminated, and the Wound conglutinated.

When ſucking Children are afflicted with Boyls, 'tis moſt expedient to exhibit Purgatives to the Mother or Nurſe, who are to be enjoin'd an exact and proper Regimen; but, to the Infants themſelves, gentle Laxatives muſt be frequently exhibited, and Preparations of Crabs-eyes, Shells, Mother of Pearl, Powder of Aniſe and Antimony, which are highly efficacious in correcting the Acrimony of the Blood. We muſt, alſo, obſerve, that as *Vari*, which are ſmall Puſtules or Pimples of the Face, are only diminutive and minute Boyls, they may be cur'd in the ſame Manner. The Uſe of Whey and mineral Waters is, alſo, highly beneficial to Perſons afflicted with Pimples. *Heiſt. Chirurg.*

FUSANEUS, κυτὸς, φυάς. An Epithet of ſuch kinds of Fiſh as ſwim in Shoals, and are caught by Multitudes in Nets.

When

When apply'd to Diſeaſes, it imports the ſame as SPORADICUS; which ſee.

FUSANUS. The ſame as EUONYMUS; which ſee.

FUSIO, χύσις, from χύω, to fuſe, Fuſion, in general, is any kind of Reſolution or Liquefaction by Fire, whence *Fuſion*, and *Solutio per Ignem*, mean the ſame thing; but, in the common Way of Speaking, by *Fuſion* we underſtand a Solution or Liquation of Metals and Minerals; and, by *Liquefaction*, a Solution of pinguious and concreted Subſtances.

FUSTERNA, from *Fuſtis*, a Club, or Cudgel. The upper Part of a Fir-tree; ſo call'd, becauſe full of Knobs and Joints, and ſo adapted for the making of Staves and Cudgels; as the lower Part, on the contrary, is call'd, by *Vitruvius*, *Sapinea*. *Blancard.*

FYADA. Mercury. *Rulandus. Johnſon.*

G.

G, γ. The *Greek* Letter Γ, among the *Greek* Phyſicians, is a Mark for an Ounce. *Rhodius ad Scribonium Largum, N.* 71. *Galen. de Compoſ. Med. & de Pond. & Menſ.*

For the Signification of G in the Chymical Alphabet, ſee ALPHABETUM CHYMICUM.

GABAL. See CABALES.

GABIREA, γαβιρέα. A very pinguious Species of Myrrh. *Dioſcorides, Lib.* 1. *Cap.* 77.

GABRICU. A Spagiric Term, ſignifying the *philoſophic Husband*, that is, the *Sulphur of Philoſophers*, whoſe Wife is call'd BRYA, that is, *Mercurial Water*. *Theat. Chym. Vol.* 3. *p.* 667. and *Vol.* 4. *p.* 736.

GADOS, γάδος. The ſame as GALEUS, which ſee.

GÆODES, γαιώδης. A Stone, which is a Species of Ætites; though *Dioſcorides* treats of them ſeparately. It contains in its Subſtance Earth, which is generally white, but ſometimes pale, and ſometimes yellow, and differs only in Figure from the Belemnites; for this latter is oblong, like an Arrow; but the Gæodes is round: The Maſs which adheres to it ſmells like Violets. This Stone, as *Dioſcorides* ſays, is aſtringent, drying, deterges ſuch things as darken the Sight, and, rub'd on the Parts with Water, cures Inflammations of the Breaſts and Teſtes. *Dioſcorides, Lib.* 5. *Cap.* 169.

GAGATES, *& ſuccinum nigrum.* Offic. *Gagates.* Mer. Pin. 217. Boet. 335. Worm. 31. Aldrov. Muſ. Metal. 418. Gæbal. 29. *Lapis Gagates.* Charlt. Foſ. 14. Calceol. Muſ. 355. JET.

It is a kind of black, ſtony, cruſty Earth, ſo full of Bitumen, that it ſmells ſtrongly of it, and, being kindled, flames almoſt like Pitch, and emits a very black Smoke. It differs from the *Terra Ampelitis*, in that this latter ſends forth no Flame, unleſs excited by Bellows, and has no bituminous Smell; whereas the Gagates, held to the Fire, catches Flame, and emits a Smell like Bitumen.

It is mollifying and diſcutient, and is ſuppos'd to cure the Colic, and other Diſtempers. *Schroder.* It is of great Efficacy in Hyſterics, and the Epilepſy; and is, alſo, a Diuretic. The Oil thereof is good for the Palſy: *Tournefort* commends it in hyſteric, epileptic, hypochondriac, and paralytic Diſorders; the Doſe is from ſix Drops to twelve. *Wormius* makes the Gagates only a harder Species of Ampelitis, and ſays, that, when it is poliſh'd, it is call'd, by *Pliny*, the *Gemma Samothracica*; by *Nicander*, *Lapis Thracius*; and, by ſome, *Lapis Obſidianus*. Though *Agricola*, ſays *Aldrovandus*, ſuppoſes the *Lapis Obſidianus* to be a Species of Gagates, and *Lapis Thracius*, I believe it to be a Subſtance very different from them both.

Dioſcorides ſays, that, us'd in Suffumigation, it cures the Fit of an Epilepſy, and revives the Patient under hyſteric Diſorders; and that the Fume thereof drives away Serpents: It is an Ingredient in antiarthritic Medicines, and in Acopa. It is produced, he ſays, at the Mouth of a River in *Cilicia*, near a City call'd *Plagiopolis*; and the Place, or River, where it is found, is call'd *Gagas*. *Dioſcorides, Lib.* 5. *Cap.* 146.

GAGEL. The ſame as GALE, which ſee.

GAIDEROTHYMUM. A Name, in *Raii Hiſt. Plant.* for the *Stachys, ſpinoſa, Cretica.*

GALA, γάλα. Milk. See FIBRA.

GALACORTA. A Species of SCORZONERA; which ſee.

GALACTINA, γαλάκτινα, from γάλα, Milk. Milk-meats. See LACTICINIA.

GALACTITES *Lapis*, γαλακτίτης λίθος, from γάλα, Milk. The Galactites-ſtone. It grows out of a Lime-ſtone, as does, alſo, the MELITITES, (ſee that Word) which it very much reſembles too in other reſpects. It is of an Aſh-colour, and, being rub'd on a Whetſtone, yields a milky and ſweet Juice; whence it takes its Name. It increaſes almoſt every Year, ſo as at laſt to be as big as a Child's Head. It is ſomewhat heating and abſterſive; whence it is proper to anoint the Eyes with it in Defluxions and Ulcers. After bruiſing it in Water, it ought to be repoſited in a Leaden Box, becauſe of the glutinous Quality which it retains. Triturated, and drank in Water, or ſweet Wine, after Bathing, it generates Plenty of Milk in the Breaſts of Women. *Dioſcorides.*

GALACTODES, γαλακτώδης, from γάλα, Milk, ſignifies either tepid, or milk-warm, like Milk juſt drawn from the Cow, or a milky Colour, in which Senſe it is applied to Excrements and Urine. The Word has both theſe Significations in ſeveral Places of *Hippocrates* and *Galen.*

GALACTOPHOROS, γαλακτοφόρος, from γάλα, Milk, and φέρω, to carry. Lactiferous. An Epithet applied to Canals, or Veſſels, ſuppos'd to convey Milk to the Breaſts, or rather to thoſe Ducts, or little Tubes, which, proceeding from the glandulous Subſtance of the Breaſts, are concentred at the Nipples.

Galactophora Medicamenta are Medicines which generate Plenty of Milk, and determine its Influx to the Breaſts. *Blancard.*

GALACTOPOETICA, γαλακτοποιητικὴ, from γάλα, Milk, and ποιέω, to make, Milk-making, is an Epithet applied to that Faculty, which is ſuppos'd to be in the Breaſts, of generating Milk. *Caſtellus.*

GALACTOPOSIA, γαλακτοπόσια, from γάλα, Milk, and πόσις, of πίνω, to drink, is a Method of curing Diſeaſes, for Inſtance, the Gout and Phthiſis, by drinking of Milk.

GALANGA.

Galanga major. *Offic. Ger. Emac.* 33. *C. B. P.* 35. *Chab.* 245. *J. B.* 2. 734. *Park. Theat.* 1585. *Raii Hiſt.* 2. 1338. *J. Comm. Hort. Amſtel.* 136. *C. Com. Plant. Uſu.* 91. *An Wanhom*, Kemph. Amœn. Exot. 901? *Acorus.* Pharm. GREAT GALANGAL.

This is a tough woody Root, of about an Inch, or an Inch and an half, thick, of a brown Colour on the Outſide, and whitiſh within, having a very thin Bark, which is beſet, at about a Quarter of an Inch diſtant, with Rings, or Circles; it is of a bitteriſh Taſte, ſomewhat aromatic, but not near ſo much as the ſmaller Galangal. This is ſold by the Druggiſts under the Name of *Radix Acori*, or *Acorus-root*; and is ſaid to grow in *Java* and *Malabar.*

It is hot and dry, cephalic and carminative, and good for Flatulences, and cold Diſeaſes of the Stomach. It is an Ingredient in the *Pulvis Ari compoſitus*, or elſe it is not much us'd. *Miller's Bot. Off.*

It is planted like Ginger, by ſetting the Root in the Earth.

The Root of the great Galangal is uſeful for all the ſame Purpoſes as Ginger, and is preſerv'd after the ſame manner. It is preſcrib'd to excite an Appetite, as Capers and Olives are amongſt *Europeans*: For which Purpoſe, the freſh Roots of both Sorts of Galangal are cut into thin Slices, and boil'd with Fiſh or Fleſh. They are, alſo, eaten raw, being ſprinkled with Vinegar, Oil, and Salt, with fried or roaſted Fleſh or Fiſh, in order to promote Concoction. The Inhabitants of *Malabar* and *Java* make uſe of it againſt cold Diſeaſes, not only in Men, but Cattle. They commonly make Puddings, or Loaves, of the Flour of the Root, which, being prepar'd with the Juice of the Cocoa-nut, they exhibit againſt Diſorders of the Uterus and Bladder. It is of great Uſe in cold Diſeaſes, ſtrengthens the Stomach, and promotes Concoction. Eaten, it cures acid Eructations, diſcuſſes Flatulences, and mends the Breath; it helps the Colic, heats the Reins, and excites to Venery. Preſerv'd with Sugar, it is effectual in cold Diſeaſes

of the Brain and Nerves, the Cephalæa, and Pains of the Joints. Mix'd with the Juice of Plantain, it cures the Palpitation of the Heart. And, taken in generous Wine, Baum-water, or the Juice of Borrage, it is effectual in fainting Fits, if occasion'd by Cold; for which Reason the *Germans* exhibit it to be chew'd in the Mouth, during Venesection.

Raii Hist. Plant.

Galanga minor. Offic. Ger. Emac. 33. Raii Hist. 2. 1338. Park. Theat. 1585. J. B. 2. 735. Chab. 245. C. B. Pin. 35. COMMON GALANGAL.

This is a much less Plant than the former, coming over cut in short Pieces, scarce an Inch long, and not half so thick, of a reddish-brown Colour, having several circular Rings on the Outside, of an hot aromatic Taste and Smell. This is said to grow in *China*; but it is not known what Plant either this or the former are the Roots of; though, by the best Judges, they are supposed to be Species of the Iris.

This is much more in Use than the former, being more stomachic, and of greater Virtue against Diseases of the Head and Bowels, expelling Wind, provoking Urine and the Menses, and helping Digestion.

The Galangas have exactly the same Fructification with the *Bengela* of the *Indians*, the greater and lesser Cardamoms, Zedoary, the Zerumbeth of *Garcias*, and Ginger; for which Reason it would be proper to reduce them all under one Genus. They abound with a volatile oleous Salt immers'd in mild viscid Parts. *Dale.*

GALARIAS. A Fish, the same as CALLARIAS; which see.

GALARICIDES, GALARACTIS. A Stone, the same as GALACTITES; which see. *Castellus.*

GALATURÆ. Mucilages of the Seeds of Quinces, or Fleawort, made in Waters, for Instance, of Crabs, or Frog-spawn, and useful in Affections of the Eyes. *Castellus.*

GALAX. The same as GLAUX, or NOCTUA; which see. It is a Species of Owl.

GALAXA, GALACIA. Terms coin'd by *Paracelsus*, by which he means what he calls *Spina Ignis*, *Lib. de Gallic. Pust. Cap.* 5. The Word *Galaxa* usually means the white Circle in the Heavens, call'd the *Via lactea*, or Galaxy, whose Principle the same profound Philosopher asserts to be a very subtile Sulphur, which is, also, the Cause of Winter, and produces Mists. He has, also, discover'd a sort of Galaxy, by Analogy, in Man, and has bestow'd that Name on the Porosities in the Cranium, *Lib. de Podagricis.* The Name *Galaxia* has also been us'd to signify the Ways of Distribution of the Chyle. *Castellus.*

GALAXIAS, γαλαξίας. The Name of a Stone, which *Galen*, *Lib.* 9. *de S. F.* confounds with the Galactites. But they are distinguish'd from each other by *Dioscorides*, *Lib.* 5. *Cap.* 150. 152. who makes the Galaxias a Name for the MOROCHTHOS; which see.

GALBANETUM *Paracelsi.* See the Prescription for this, under the Article ARTHRITIS, in the Part which treats of the *Arthritic Colic.*

GALBANUM, γάλβανον, χαλβάνη. Galbanum. The Juice, or Gum, of a ferulaceous Plant; whose Description see under the Article FERULA.

Galbanum is the Juice of a ferulaceous Plant growing in *Syria*, call'd by some *Metopium.* The best is what resembles Frankincense, is grumous, pure, pinguious, free from Chips, retaining some of the Seed, and of the Plant, of a strong Smell, not very humid, nor yet quite dry. It is adulterated with Rosin, blanch'd Beans, and Ammoniacum.

Galbanum heats, burns, draws, and discusses; us'd in a Pessary, or a Suffumigation, it provokes the Menses, and brings away the Child; rub'd on the Parts with Vinegar and Nitre, it removes Freckles in the Skin. Taken inwardly, it is good for an inveterate Cough, Difficulty of Breathing, Asthma, Ecchymoses, and Spasms. Drank in Wine [for ὄξει I read ὄινῳ, on *Pliny*'s and other Authorities] with Myrrh, it resists Poison; and, taken after the same manner, expels the dead Child. It is apply'd in Pains of the Side, and to a Boyl. The Smell of it raises those who labour under an Epilepsy, Hysterics, or Scotomia; being burnt, the Fume thereof drives away venomous Animals; being rub'd on the Body, it preserves it from the Bites of Serpents; and, us'd with Sphondylium and Oil, kills those noxious Creatures by its Application to them. Apply'd as a Litus to the Gums, or put into the Cavity of a putrid Tooth, it eases the Tooth-ach. It is dissolv'd, in order for a Potion, with bitter Almonds and Water, or Rue, or Hydromel, or hot Bread; or, for other Purposes, with Meconium, burnt Copper, or liquid Gall.

If you have a mind to cleanse your *Galbanum*, put it into boiling-hot Water; and, when it is melted, the Sordes will swim on the Top, and be easily separated; or put it into a thin clean Linen Cloth, and, tying it up, hang it in a Copper Pot, or Earthen Vessel, so as that neither the Cloth, nor the String, may touch the Bottom of the Vessel; then, covering the Vessel, immerge it in boiling-hot Water; by which means the pure *Galbanum* will melt, and run through the Cloth, but the ligneous Parts will stay therein. *Dioscorides*, *Lib.* 3. *Cap.* 97.

It is a very good antihysteric, emmenagogue, and forcing Medicine; and, even when apply'd in a Plaister to the Navel, will cure hysterical Convulsions. It is likewise sudorific; when taken inwardly; and, when outwardly apply'd, it softens and digests Tumors, and brings them to Suppuration. For inward Use it ought to be strain'd, but not for outward. It is the Basis of the *Ceratum de Galbano*, and is an Ingredient in the *Emplastrum Matricale.*

Galbanum is a pinguious Juice, soluble, not in Oil, but in Water, being of a kind of middle Nature between a Gum and a Rosin; for it kindles at the Fire like a Rosin, and is soluble in an aqueous Liquor like a Gum. It is of a yellowish or reddish Colour, of a soft Substance, and ductile like Wax, of a bitterish and acrimonious Taste, and of a strong and somewhat rank Smell. He who anoints his Hands with a Solution of *Galbanum*, may handle Serpents, and receive no Injury from them, if the Antients are to be credited. *Raii Hist.*

GALBEUM, *plural* GALBEI, or CALBEI, a sort of Bracelets worn among the *Romans*, as well for the sake of Health as Ornament, as appears from *Suetonius*, *Vit. Galbæ*, *C.* 3. *Castellus.*

GALBULA, Offic. *Galbula sive Picus nidum suspendens*; Aldrov. Ornith. 1. 854. Will. Ornith. 147. Raii Ornith. 198. Ejusd. Synop. A. 68. *Picus nidum suspendens*, Jonst. de Avib. 80. *Oriolus, seu Picus nidum suspendens*, Gesn. de Avib. 645. THE WITWALL, by *Salmon* absurdly call'd THE YELLOW HAMMER, which is the *Emberica lutea.*

Pliny commends this Bird for the Jaundice. *Dale.*

We read also *Galbula* in the plural Number for Cypress-nuts. *Castellus.*

GALBULUS. The same with the preceding.

GALE.

The Characters are,

The Leaves are alternate; the Male Flowers are produc'd on Pedicles from the *Alæ* of the Leaves, and dispos'd on a Stalk, in the Form of a long Spike; these Flowers are naked, and adorn'd with six Stamina, which appear like Branches from them. The Ovary is seated in another Place of the same Plant, on a much shorter Pedicle, being lodg'd within a tetraphyllous caducous Calyx, and surrounded with other Male Flowers; it is of a globous Figure, here-and-there irregular, and containing one Seed.

Boerhaave mentions three Species of this Plant; which are,

1. Gale; quæ Myrto Brabanticæ similis; Carolinensis; baccifera; fructu racemoso, sessile, monopyreno. *Plukn.* 48. 9. See AMBULON.

2. Gale; frutex odoratus; Septemtrionalium, *Boerh. Ind. A.* 2. 261. *Elæagnus*, Offic. *Gale frutex odoratus Septentrionalium*, *Elæagnus Cordo*, Raii Synop. 3. 443. *Gale frutex odoratus Septentrionalium*, *Elæagnus Cordo*; *Chamælæagnus Dodonæo*, J. B. 1. 224. Chab. 66. *Myrtus Brabantica sive Elæagnus Cordi*, Ger. 1228. Emac. 1414. Mer. Pin. 82. *Rhus Myrtifolia Belgica*, C. B. Pin. 414. Raii Hist. 2. 1707. Jonst. Dend. 293. *Rhus sylvestris, sive Myrtus Brabantica, vel Anglica*, Park. Theat. 1451. DUTCH MYRTLE, or GAULE. *Dale.*

It delights in Heaths, and uncultivated Soils, as well as in watery and marshy Places; and is found in great Plenty in the Isle of *Ely*, among the Marshes, in a boggy Soil, and in many such Places in the North of *England*, and near the Town of *Wareham*, in *Dorsetshire.* The Flowers appear in *May* and *June*, and the Seed is ripe in *July* and *August.*

Its extraordinary Bitterness demonstrates it to be of a drying and discussive Quality; but we are told, that it is principally serviceable in killing and expelling Worms, whether it be taken inwardly, or outwardly apply'd. The Leaves and Branches are us'd in Summer to adorn the Windows and Chimneys of Chambers and Parlours, for the sake of the extraordinary sweet Smell diffus'd by the Flowers and Buds; the same, laid in Chests among Clothes, not only render them sweet-scented, but keep away Moths. *Simon Paulli* tells us, that the *Polanders* use to destroy the Lice in their Swine by this Plant; which being strew'd in the Hogsties, all the Lice die in the Space of a few Hours, and the Knits never come to be animated. And Serpents are never known to settle, or have their Nests, in those Marshes where *Gale* grows, or ever to approach, much less to creep over them. Some boil the Flowers, instead of Hops, in their Beer; which, for that Reason, affects the Head, and soon induces Ebriety. In *Bergen*, and other Places of *Norway*, they commonly prepare an Ointment of *Gale* pulveriz'd, and *May* Butter, which is found to be very efficacious in the most stubborn Itch. *Raii Hist. Plant.*

3. Rhus Myrtifolia; Monspeliaca, *C. B. P.* 414. *Boerh. Ind. alt. Plant. Vol.* 2.

It grows plentifully about *Montpelier*; it is much us'd by the Tanners to ſtrengthen their Leather; and, by the Dyers, to give a black Colour: But I find no medicinal Virtues aſcrib'd to it. *Ray, Hiſt. Plant.*

Boerhaave doubts, whether this laſt be a Species of *Gale*, or whether it ought to conſtitute a new *Genus*.

GALEA, κράνος, γαλέα, in Anatomy, is a Name apply'd to the *Amnios*; it ſignifies alſo a ſort of Bandage made on the Head. *Galen, de Faſciis. Galea*, and *Galeus*, are Names for the Fiſh call'd *Aſellus*; *Galea* is alſo a Term for a ſort of *Cephalalgia*, which encompaſſes the Head like a Helmet. In *Botany*, the upper Lip of a labiated Flower is call'd the *Galea*, or Creſt.

GALEANTHROPIA, γαλεανθρωπία, from γαλῆ, or γαλέη, a Cat, and ἄνθρωπος, a Man, is a Species of Madneſs, in which the Patient imagines himſelf a Cat, and imitates its Manners. *Caſtellus.*

GALEATA *& verticillata Perſicæ Folio*, in *Ray*, is a Species of *Sideritis*, ſo call'd from its galeated Flowers. *Ray, Hiſt. Plant.*

GALEGA.

The Characters are;

The Root is perennial, the Pod round, cylindrical, and full of oblong Kidney-ſhap'd Seeds. The Leaves grow by Pairs to a Rib terminating in an odd Leaf.

Boerhaave mentions four Species of this Plant; which are,

1. Galega vulgaris; floribus cœruleis, *Tourn. Inſt.* 398. *Elem. Bot.* 317. *Boerh. Ind. A.* 2. 45. *Rupp. Flor. Jen.* 214. *Galega, Ruta capraria*, Offic. Chab. 154. *Galega*, Ger. 1068. Emac. 1253. Raii Hiſt. 1. 911. Hiſt. Oxon. 2. 91. J. B. 2. 342. *Galega vulgaris*, C. B. Pin. 352. Park. Theat. 417. GOATS-RUE. *Dale.*

Goats-rue has many tall, hollow, ſtriated Branches, a Yard or more in Height, with long pinnated Leaves growing alternately on the Joints, conſiſting of ſix or eight Pair of long oval Pinnæ, ſmooth, and not indented about the Edges, which are ſubject to be folded together. The Flowers grow in long Spikes, hanging downwards in the Shape of Peaſe-bloſſoms, but leſs, of a pale, whitiſh, blue Colour: The Seed grows in long erect Pods: The Root is thick, ſpreading on the Earth, and abiding long. It grows in ſeveral Parts of *Italy* by Riverſides; but, with us, only in Gardens; and flowers in *June* and *July*.

Goats-rue is accounted cordial, ſudorific, and alexipharmic, and good againſt peſtilential Diſtempers, expelling the Venom through the Pores of the Skin; and is of Uſe in all Kinds of Fevers, the Small-pox and Meaſles; it likewiſe kills Worms, and cures the Bites of all Kinds of venomous Creatures. *Miller's Bot. Off.*

2. Galega; vulgaris; floribus penitus candicantibus, *C. B. P.* 352. COMMON GOATS-RUE, WITH WHITE FLOWERS.

3. Galega; Africana; floribus majoribus; & ſiliquis craſſioribus, *T.* 399. AFRICAN GOATS-RUE, WITH LARGE FLOWERS, AND THICK PODS.

4. Galega; facie Barbæ Jovis; ſericea; repens; flore pallidè luteo denſè ſpicato. *Boerh. Ind. alt. Plant. Vol.* 2.

GALENA, γαλήνη, is the ſame as *Molybdæna*, or *Plumbago*; it was alſo the antient or firſt Name for the *Theriaca*, which was ſo call'd by *Andromachus*, and others before him, when it had as yet no Addition of Vipers Fleſh. The Reaſon of the Name was, as *Galen* tells us, becauſe it induces a kind of Calm, γαλήνη, over the Blood and Spirits, when diſturb'd and agitated, as it were, under a Storm and Tempeſt, by Diſeaſes. *Caſtellus.*

GALENICA *Medicina*. Medicine founded upon the Principles of *Galen*; for which ſee the *Preface.*

GALENION, γαλήνιον. The Name of an anodyne *Malagma* deſcrib'd by *P. Ægineta, Lib.* 7. *Cap.* 18.

GALENUS.

Claudius Galenus was a Native of *Pergamus*, a City of *Aſia Minor*. The Time of his Birth may be eſtimated by a Circumſtance mention'd by himſelf, which is, that when he was thirty-eight Years of Age, he was call'd by *Marcus Aurelius* and *Lucius Verus*, then at *Aquileia*; and particularly by what he ſubjoins, which is, that he no ſooner arriv'd there, than he ſet out for *Rome* with theſe two Emperors, the latter of whom died on the Road a few Days after. If, therefore, we reckon thirty-eight Years backwards from the Death of *Lucius Verus*, which happen'd in the Year of *Chriſt* one hundred and ſixty-nine, we find that *Galen* muſt have been born in the Year one hundred and thirty-one, about the fifteenth Year of the Reign of *Adrian*. Beſides, it appears from his Writings, that he liv'd under the Emperors *Antoninus, Marcus Aurelius, Lucius Verus, Commodus*, and *Severus*.

Galen, in his younger Years, had the Advantage to be under the Inſpection of *Nicon* his Father, who was no Stranger to Philoſophy, Aſtronomy, Geometry, and Architecture. When he was ſomewhat farther advanced in Years, he ſtudied both the *Belles Lettres* and Philoſophy under the beſt Maſters. He was firſt initiated in the School of the *Stoics*: Thence he paſs'd into that of the *Academics*, and afterwards took his Turn in thoſe of the *Peripatetics* and *Epicureans*. The three firſt of theſe Sects he reliſh'd pretty much, and took from each of them what he thought beſt; but the *Epicurean* Notions were entirely rejected by him.

After having laid ſuch Foundations of Learning, influenc'd by a Dream of his Father's, he choſe Medicine as a Profeſſion when he was only ſeventeen Years of Age: Two Years after, he became Auditor to a Diſciple of *Athenæus*, at whom he was ſoon diſguſted; becauſe he was ſo far from reckoning Logic neceſſary to a Phyſician, that he accounted it a Glory to be ignorant of it. After this he had ſeveral Maſters, *Ælianus Meccius, Numeſianus, Pelops, Stratonicus, Satyrus, Pheſianus, Heraclianus*, and *Æſchiron*; ſome of whom were the Diſciples of one *Quintus*, the moſt celebrated Phyſician of his Time.

Galen, in his Youth, travel'd a great deal, both with a Deſign to improve from the Converſation and Precepts of the moſt learned Phyſicians, and to inform himſelf with reſpect to many Peculiarities relating to the Drugs of different Countries: He reſided for ſome Years at *Alexandria*, the Capital of *Egypt*, where all the Sciences then flouriſh'd: He travel'd into *Cilicia, Paleſtine, Crete*, and *Cyprus*. Among his other Voyages, he made two to the Iſle of *Lemnos*, in order to diſcover what the *Lemnian* Earth was: He alſo went to *Cœloſyria*, with a View to examine the Opobalſamum. When he was twenty-eight Years of Age, he return'd from *Alexandria* to *Pergamus*; and was ſo much a Maſter of his Art, that he had acquir'd a perfect Knowledge of the Wounds of the Nerves, and found out a ſucceſsful Method of treating them, before unknown. He try'd his Skill in this reſpect upon the Gladiators entruſted to his Care by the Pontiff of *Pergamus*; theſe he treated with ſuch Succeſs, that never any of them died of a Wound of the Nerves; a Circumſtance which proves, that *Galen* underſtood Surgery as well as Phyſic.

Four Years after his Return to *Pergamus*, he left it on account of a Sedition, and ſet out for *Rome*: Being now thirty-two Years of Age, he was inclin'd to fix in this great City; but, like moſt other great Geniuſes, became the common Butt of the Malice and Envy of his cotemporary Dunces. The Phyſicians of *Rome* hated him; and this Circumſtance oblig'd him to quit their City, a few Years after he had ſettled in it. Notwithſtanding his ſhort Stay among the *Romans*, his Merit had procur'd him not only the Acquaintance, but alſo the Veneration and Eſteem, of ſome of the moſt conſiderable of them; for he was intimate with *Eudemus*, a *Peripatetic* Philoſopher of great Reputation, whom he cur'd of a Fever contracted by the prepoſterous Uſe of the Theriaca, by means of that very Medicine; and, which is ſurpriſing, predicted the Symptom which would be firſt remov'd, and the preciſe Time in which *Eudemus* would be perfectly recover'd: He was alſo highly eſteem'd by *Sergius Paulus*, the Prætor, by *Barbarus*, Uncle to the Emperor *Lucius*; by *Severus*, then Conſul, and afterwards Emperor; and, by *Boethus*, a Man of conſular Dignity; before all of whom he had Occaſion to make Diſſections, and exhibit the Organs ſubſervient to Reſpiration, and the Modulation of the Voice. Happy was it for *Galen*, that he had *Romans* who were not blind to Merit for his Patrons; for he might have liv'd at a time when a little low Cunning, and diſhoneſt Artifice, would have been a more effectual Recommendation, than all the Knowledge in the World.

Galen's Penetration, his Skill in Medicine, and his Acceſs to the Great, were the Circumſtances which render'd him ſo odious to the *Roman* Phyſicians, that he was forc'd to quit *Rome*, after a four or five Years Stay in it, and to return to his native Country, being now thirty-ſeven Years of Age, ſo that he muſt not have been long at *Pergamus*, till he was call'd to *Aquileia* by *Marcus Aurelius* and *Lucius Verus*, with the former of whom he went to *Rome*; and the Emperor deſiring him to accompany him into *Germany*, he excus'd himſelf, by pretending that *Eſculapius*, for whom he had a great Veneration, becauſe he had cur'd him of an otherwiſe mortal Apoſtem, had warn'd him in a Dream not to depart from *Rome*. Here, then, he ſtay'd during the Abſence of the Emperor, and wrote ſeveral Books, among which was that excellent Performance *de Uſu Partium*. But, as the Hearts of Phyſicians, as well as of Courtiers, are full of Diffidence and Jealouſy, the wary *Galen* liv'd, for the moſt part, at a Country-ſeat, to which *Commodus* the Emperor's Son had retir'd, under the Inſpection of *Pitholaus*, who had Orders from the Emperor to conſult *Galen*, if the young Prince ſhould fall ill: Accordingly, *Galen* had an Opportunity of raiſing his Reputation, by curing him of a violent Fever. He, alſo, cur'd *Sextus*, another Son of the Emperor, and prognoſticated the Termination of his Diſeaſe in a Manner directly contrary to the Judgments of all the other Phyſicians conſulted.

'Tis not absolutely certain how long *Galen* staid at *Rome* this second time, nor, perhaps, whether he staid all his Life there, or return'd into *Asia*. This Point is involv'd in so many Difficulties and Intricacies, that the Truth is hard to be discern'd; since some Authors, who have wrote the Life of *Galen*, affirm, that he return'd from *Rome* to *Pergamus*, when he was thirty-seven, or, at most, forty Years of Age, and that he never after quitted his native Country; whilst others maintain, that he did not return home till extremely old. The Opinion of the former is inconsistent with the Facts already mention'd, and that of the latter seems more consonant to Truth, tho' its Favourers advance no Proofs for its Support, any more than they who assert, that he dy'd in *Palestine*.

Suidas informs us, that *Galen* liv'd seventy Years. If it is true, that this Physician was born about the fifteenth Year of the Reign of *Adrian*, as we have suppos'd, he must have died, according to *Suidas*, in the ninth Year of the Reign of *Severus*, which was the first of the third Century, after the Birth of *Christ*. He must have liv'd longer, if his Life was protracted to the Reign of *Caracalla*, as *Tzetzes* would have it; but not so long as those pretend, from whom *Cælius Rhodiginus* has borrow'd his Assertion, that *Galen* liv'd an hundred and forty Years. This is palpably an Exaggeration, as well as the immediately subsequent Assertion, "That *Galen* arriv'd "at this advanc'd Age without ever having suffer'd the "Shock of a Distemper. The Reason assign'd for it is, that "this Physician had observ'd so strict a Regimen, that he "had never eat or drank too much, or tasted any crude "Aliments; which not only procur'd him an uninterrupted "Series of Health; but, also, render'd his Breath so sweet, "that he seem'd to breathe nothing but Balm and Aromatics." *Galen*, 'tis true, informs us, that by living on Aliments which are easily and equally concocted, and using proper Exercise, he had found the happy means of preserving an uninterrupted State of Health for many Years: Besides, he tells us, that after he arriv'd at the twenty-eighth Year of his Age, as he was then Master of the Art of preserving Health, and follow'd the strictest Rules of that Art, he had been exempted from all Diseases, except an Ephemera, or Fever of one Day's Continuance, produc'd by too much Study or Fatigue: But he confesses, that he had before labour'd under several Disorders, such as the Apostem, of which *Æsculapius* cur'd him, by warning him in a Dream to open the Artery between the Thumb and fore Finger of the Right Hand; a Colic, of which he was cur'd by a Clyster consisting of Oil, and a Decoction of Rue. He also informs us, that, before he was twenty-eight Years of Age, he was almost every Year afflicted with some Disorder or other; but that afterwards, by abstaining from Summer-fruits, and not eating Fruits promiscuously, but only Figs and Raisins, he was exempted from them.

Galen was highly and justly esteem'd, not only by the Antients, but also by the Moderns. *Athenæus* his Contemporary not only testifies his Regard for him, by introducing him in his Feast of Philosophers, as one of the Guests invited; but also mentions with Honour the great Number of his Works, and extols him for Eloquence and Perspicuity. *Eusebius*, who liv'd about an hundred Years after him, in the last Chapter of the fifth Book of his Ecclesiastical History, informs us, that the Veneration paid him amounted almost to religious Worship. *Trallian* calls him the divine *Galen*. *Oribasius*, who was himself a Physician, testifies the Regard he bore him at once by the Extracts he has made from his Works, and the Encomiums he bestows on him. *Aetius* and *Paulus Ægineta* were so fully convinc'd of his Merit as an Author, that they faithfully copied him in most things they wrote. Whatever is valuable in the Writings of *Avicenna*, *Averroes*, and the other *Arabian* Physicians, is borrow'd from the immortal *Galen*, on whom these Authors bestow the highest Encomiums. It would be an endless Task to recount the Praises bestow'd on *Galen* by the Moderns, that is, by those who have wrote for a Century or two past: The incredible Number of Commentators on his Works, during this Time, is a Circumstance sufficiently expressive of the general Sense of the Moderns with respect to the incomparable *Galen*. But, as the most perfect Characters are neither free from Faults in themselves, nor Proof against the Caprice of others, so *Galen* not only had powerful Opposers in his own Time, but has, also, ever since, had a Croud of formidable Adversaries. The Doctrines of *Hippocrates*, which he endeavour'd to re-establish, did not in all Probability triumph over the Methodic and other Sects, as soon as *Galen* declar'd himself against them. The Methodic Sect, in particular, subsisted for some Centuries after him; and was in so great Reputation as to furnish Physicians for the Emperors.

That *Galen* had his Faults, is certain; for an intolerable Fund of Vanity, and, which is still worse, an unaccountable Dash of Superstition and Bigotry, are to be discover'd in numberless Passages of his Works; but, as it is inconsistent with Humanity and Good-nature, maliciously to dwell upon the Imperfections of a Character, especially when a thousand Beauties may be laid in the Balance against one Blemish, we shall finish this Life of *Galen*, by giving some Account of his Works.

The great Number, then, of his Works still extant, besides those which are lost, convince us, that it was an easy thing for him to write. *Suidas* informs us, that he wrote not only on Medicine and Philosophy, but also on Geometry and Grammar. He is said to have wrote above five hundred Books on Medicine alone; and about half as many on other Sciences. He has compos'd two Books, with no other View but to enumerate such as he had wrote, to specify the Time and Place in which some of them were compos'd, the Motive which induc'd him to write them, and the Order to be observ'd in reading them. We are inform'd by himself, that a Part of his Works was lost during his own Life, by a Fire which happen'd in the Temple of *Peace* at *Rome*. But, without enumerating all the particular Treatises wrote by *Galen*, whether lost, or still extant, it is sufficient for all the Purposes of the Reader to enumerate the several Editions made of his Works in a Body.

There are, then, two *Greek* Editions of *Galen*; one at *Venice* by *Aldus* and *Andreas Asulanus*, publish'd in the Year 1525, in five Folio Volumes; another, and more correct Edition, tho' not without numberless Faults, was publish'd at *Basil*, by *Andreas Cratandrus*, *Johannes Hervagius*, and *Johannes Bebelius*, in the Year 1538, in five Folio Volumes.

There are various *Latin* Editions, translated by different Hands; one, for Instance, at *Lyons*, by *Simon Colinæus*, in the Year 1536, in Folio; and the same was publish'd, much enlarg'd, and far more correct, by *Joh. Frellonius*, in the Year 1554, Folio. Another Edition is publish'd at *Basil*, in 1541, by *Joh. Frobenius*, and, in 1549, by the same *Frobenius*, in four Volumes; and in the Year 1562, with a Preface of *Conradus Gesnerus*, in which he writes with a great deal of Judgment concerning *Galen*, his Writings, and the several Translators of them. There is another publish'd at *Venice*, by the *Juntæ*, who have given ten Editions of *Galen*, the first in Octavo, in the Year 1541; and all the others in Folio, in some subsequent Years: The best and fullest of all these are the ninth and tenth, which are exactly the same.

We know of no *Greek* and *Latin* Edition of *Galen*, hitherto publish'd, but one at *Paris*, in the Year 1639, under the Inspection of *Renatus Charterius*, in thirteen Volumes, Folio: Which elegant Work comprehends not only the Works of *Galen*, but also all those of *Hippocrates*, and some other Physicians, together with a correct Translation, by comparing the Text with other Editions and Manuscripts.

GALEOBDULON. A Name in *Oribasius* and *Dioscorides*, for the GALEOPSIS.

GALEONYMUS. A Fish, the same as the GALEUS; which see.

GALEOPSIS.

The Characters are;

The Calyx is quinquefid, and Funnel-shaped; the upper Lip, or Galea, is entirely hollow; the lower Lip, or Beard, trifid; the middle Segment being the greatest.

Boerhaave mentions fourteen Species of this Plant, none of which have any medicinal Virtues particularly attributed to them, except the four following.

1. Galeopsis; procerior; fœtida; spicata, *Tourn. Inst.* 185. *Elem. Bot.* 154. *Boerh. Ind. A.* 162. *Rupp. Flor. Jen.* 182. *Dill. Cat. Giss.* 97. *Galeopsis*, Offic. *Galeopsis vera*, Ger. Emac. 704. Mer. Pin. 44. *Galeopsis legitima Dioscoridis*, Park. Theat. 908. Raii Hist. 1. 548. Synop. 3. 237. *Galeopsis Dioscoridis*, Merc. Bot. 1. 37. Phyt. Brit. 45. *Galeopsis sive Urtica iners magna fœtidissima*, J. B. 3. 853. *Lamium maximum sylvaticum fœtidum*, C. B. Pin. 134. *Stachys sylvatica*, Rivin. Irr. Buxb. 312. *Stachys fœtida sepium flagellis reptatricibus*, Hist. Oxon. 3. 382. HEDGE-NETTLE.

The *Galeopsis* smells of Bitumen, or fetid Oil: It has an herby Taste, a little saltish, astringent, and does not stain the blue Paper; which makes us conjecture, that its Salt participates very much of the natural Salt of the Earth, which in this Plant is involved in a great deal of Sulphur, and terrestrial Parts.

It is vulnerary, and very sweetening: An Oil made of it by Infusion is excellent for Burns, and for Wounds of the tendinous Parts. In the Country, they use successfully the Infusion of its Leaves and Flowers for a nephritic Colic, scrophulous Tumors, and the Pleurisy. An Extract may be prepared of it to serve during the Winter. *Martyn's Tournefort.*

It has the Reputation of discussing hard Tumors, Cancers, Pani, and Parotides; and is recommended against Putrefactions, Gangrenes, and spreading Ulcers. *Boerhaave* esteems it excellent in hysteric Fits.

2. Galeopsis; palustris; folio Betonicæ; flore variegato, *Tourn. Inst.* 185. *Dill. Cat. Giss.* 109. *Boerh. Ind. A.* 162. *Rupp. Flor. Jen.* 183. *Panax Coloni*, Offic. Ger. 858. Emac. 1005. *Marrubium aquaticum acutum*, Ger. 565. *Galeopsis angustifolia fœtida*, J. B. 3. 804. *Stachys palustris fœtida*, C. B. Pin. 216. Hist. Oxon. 3. 383. *Stachys palustris*, Rivin. Irr. Mon. Buxb. 312. *Sideritis Anglica, strumosa radice*, Park.

Theat.

Theat. 587. Raii Hift. 1. 563. Synop. 3. 242. Mer. Pin. 113. *Sideritis 1. gravis odoris*, Merc. Bot. 1. 68. Phyt. Brit. 113. CLOWNS ALL-HEAL. *Dale*, *p.* 150.

The Roots of this Plant creep and ſpread much in the Earth, having tuberous Knots growing here-and-there upon them. The Stalks ariſe to be two or three Feet high, ſquare and rough, almoſt to Pricklineſs, and are but little branched. The Leaves grow upon the Joints, which are at ſome Diſtance, on ſhort Foot-ſtalks; they are long, narrow, hairy, and ſharp-pointed, indented about the Edges, of a pretty ſtrong Smell. The Flowers grow whorl-faſhion towards the Top of the Stalks, and are pretty large, of a deep-red Colour, with a hollow Galea, and the Labella ſpotted with White, each ſet in a rough Calyx, ending in five Points, and containing four black Seeds. It grows in Ditches and watery Places, and flowers in *June* and *July*. The Leaves are uſed.

This has been cry'd up for a mighty Wound-herb, ever ſince *Gerard* gave ſuch Commendations of it in his Herbal, being accounted good to cure all green Wounds, beaten into a Cataplaſm with Hogs Lard, and apply'd to the wounded Part. It likewiſe ſtops all kinds of Hæmorrhages.

Cæſalpinus, who calls it *Tertiola*, ſays, it cures a Tertian Ague. This Plant contains ſome Sal Ammoniac, joined with a great deal of fetid Oil; its Leaves are bitter, ſtinking, and give hardly any Tincture of red to blue Paper. The whole Plant is vulnerary and ſweetening.

3. Galeopſis; ſive Urtica iners; flore luteo, *J. B.* 3. 323. *Rupp. Flor. Jen.* 183. *Tourn. Inſt.* 181. *Elem. Bot.* 154. *Boerh. Ind. A.* 162. *Leucas montana*, Offic. *Lamium luteum*, Ger. 567. Emac. 702. Park. Theat. 606. Raii Hiſt. 1. 560. Synop. 3. 240. Mer. Pin. 69. *Lamium folio oblongo luteum*, C. B. Pin. 231. Hiſt. Oxon. 3. 385. *Lamium flore luteo*, Merc. Bot. 1. 46. Phyt. Brit. 65. Rivin. Irr. Mon. *Lamium ſpurium flore luteo*, Volck. Flor. Nor. 239. *Galeopſis*, Chab. 435. *Galeobdulon*, Dill. Cat. Giſſ. 49. YELLOW ARCHANGEL.

It grows in Woods and Thickets, and flowers in *May*; and is ſaid to reſiſt the Poiſon of venomous Animals, particularly thoſe of the Sea-kind. *Dale* from *Dioſcorides*.

4. Galeopſis; lutea; amplioribus foliis; maculatis. *Tourn. Inſt.* 186. *Elem. Bot.* 154. *Boerh. Ind. A.* 162. *Milzadella*, *Lamium maculatum*, *Urtica lactea*, Offic. Mont. Ind. 48. *Lamium luteum foliis maculatis*, Sath. Hort. Ed. *Lamium maculatum*, C. B. Pin. 231. Raii Hiſt. 1. 560. Hiſt. Oxon. 3. 385. SPOTTED ARCHANGEL.

It grows in Gardens, and flowers in *June*; the Herb is in Uſe, and its Virtues are the ſame with thoſe of the *Lamium*; *album*; *non fœtens*; *folio oblongo*, or white Archangel; which ſee.

Galeopſis ſive Urtica iners, floribus albis. A Name for the *Lamium*; *non fœtens*; *folio oblongo.*

Galeopſis ſive Urtica iners, folio & flore minore. A Name for the *Lamium*; *purpureum*; *fœtidum*; *folio ſubrotundo*; *ſive Galeopſis Dioſcoridis.*

GALERITA. The Lark. The ſame as ALAUDA; which ſee.

GALEUS. A Sea-Fiſh; call'd alſo, *Muſtelus Spinax*, Offic. Bellon. de Aquat. 136. *Galeus acanthias*, Rondel. de Piſc. 1. 373. Geſn. de Aquat. 607. Jonſ. de Piſc. 16. *Galeus acanthias ſive Spinax*, Aldrov. de Piſc. 399. Raii Icht. 56. Ejuſd. Synop. Piſc. 21. *Galeus acanthias*, *Muſtelus Spinax*, Charlt. Piſc. 8. *Canis marinus aut Galeus*, Schonef. Icht. 29. THE HOUND-FISH, FALSLY CALL'D SEAL.

It is an Inhabitant of the cavernous Places of the Sea; and its rough Skin is of Uſe to Artificers in poliſhing Alabaſter, Marble, and other Things; but I find no Part of the Fiſh uſed in Medicine. *Dale.*

GALEXIAS, γαλεξίας, a Species of *Muſtelus*, or *Galeus*, but more delicate, and of a ſofter Fleſh; and for that Reaſon highly valued by the *Romans*. *Gal. de al. Fac.*

GALGALUS, *Galgula*, *Galgulus*. The ſame as GALBULAS, or GALBULA; which ſee.

GALIA. In the *Antidotarium* there is a Deſcription of two Sorts of *Galia*, the Pure, and the Aromatic; the Pure or Simple is compoſed of Galls, unripe Dates, and emblic Myrobalans; the Aromatic has a Mixture of ſome Perfumes, as Muſk. *Salmaſ. Plin. Exercit.*

GALIA MOSCHATA, *vel* MUSCATA. In *Conſtantine's Viaticum*, there is frequent Mention of the *Galia muſcata*, which is nothing but the ſweet-ſcented or aromatic *Galia*; in many other Places he mentions *Galia*, without the Addition of *Muſcata*. And in the Antidote of *Myrepſus*, call'd *Dialacca*, *Galia moſchata* is one of the Ingredients; and, Antidote 424. is call'd γαλιάτ[ο]ν μοσχ[ά]τον σύνθεσις, "the Preparation, or Compoſition of a *Galiatum Moſchatum*;" or, as *Fuchſius* renders it, *compoſitio moſchata*; it conſiſts of many Ingredients, and among others the *Nux moſchata*, or Nutmeg, and Cinamon, but has nothing of the *Galia Zibettina*, or *Galia* of the Civet-cat, which is an extraordinary Perfume, and call'd *Galia*, from γαλῆ, a Weaſel; for the Civet-cat is of the Weaſel-kind. The *Galia muſcata* or *aromatica* of *Avicena*, therefore, or that compoſed of emblic Myrobalans, Galls, unripe Dates, and other Simples, tho' quite another Thing, yet took its Name from the *Galia Zibettica*; becauſe it had a ſweet Scent, as from a Mixture of that Dung. *Salmaſ.* The ſame Author obſerves, that it ſhould, perhaps, more properly be call'd *Gallia moſchata*, becauſe Galls are an Ingredient in it.

GALIANCONES. See ANCI.

GALIAS. The Name of a Fiſh, ſmaller than the *Galeus*; it is called alſo *Aſellus* and *Catellus*. *Caſtellus.*

GALIOPSIS, in *Ray* and *Dioſcorides*, is the ſame as GALEOPSIS, before deſcribed.

GALLA, a Gall. See QUERCUS.

GALLATURA. That Part of the Albumen of an Egg, which is of a ſomewhat more denſe and cloſe Subſtance than the reſt, and is ſuppos'd to be a Sign of Fecundity in the Egg, towards the Generation of a Chick. *Caſtellus.*

GALLERIDAS. A Fiſh. The ſame as ASELLUS. *Caſtellus.*

GALLIA MOSCHATA. A Compoſition of cordial and ſtrengthening Troches, in which the Ingredients are only Muſk, Amber, and Wood of Aloes. The Doſe is from eight Grains to a Scruple. The Preſcription is *Meſue's*. *Lemery*, *Pharmacop. univ. p.* 25.

The Troches are thus prepar'd:

Take of Wood of Aloes, five Drams; Ambergriſe, three Drams; Muſk, one Dram; with Mucilage of Tragacanth extracted with Roſe-water: Make it into Troches.

GALLICUS *Morbus*. See LUES VENEREA.

GALLINA AQUATICA, Offic. *Gallinula Chloropus major*, Aldrov. Ornith. 3. 450. Will. Ornith. 232. Raii Ornith. 312. Ejuſd. Synop. A. 113. Jonſ. de Avib. 111. *Gallina Chloropus*, Charlt. Exer. 112. *Gallus paluſtris*, Mer. Pin. 174. *Poullette d'eau*, Bellon. des Oyſe. 211. THE COMMON WATER-HEN, or MOOR-HEN.

It is commonly found in Fiſh-ponds, near great Mens Houſes: The Parts us'd in Medicine are, the Craw, the Feathers, and their Aſhes.

The Craw is recommended in the Aſthma; the Smoke of the Feathers is ſuppos'd to be good for hyſteric Fits, and their Aſhes dry up old Ulcers and Fiſtulas. *Dale.*

GALLINA DOMESTICA.

Gallus & Gallina, Offic. Schrod. 5. 317. THE COCK AND HEN.

The Parts in Uſe are, the whole Bird, the Brain, the Coats of the Ventricle or Craw, the Teſticles, the Gall, the Fat, the Throat, the Dung, and the Eggs.

An Hen ſlit, and apply'd to the Head while the Blood is hot, is of good Effect in the Phrenſy, Cephalalgia, and other Diſorders of that Part: It is alſo ſaid to cure the Bites of venomous Animals, being us'd in the ſame Manner. Laid on a Carbuncle, it draws out the Poiſon; and, what deſerves Obſervation, ſtops an Hæmorrhage in recent Wounds, being apply'd thereto: The living Hen, ſtript of its Feathers about the Anus, and apply'd, extracts the Poiſon of Buboes. The Brain is of an incraſſating Quality, and ſtops Fluxes. The inner Coat of the Ventricle, extracted, dry'd, and pulveriz'd, has a Virtue of binding and ſtrengthening the Stomach, and, by that means, of reſtraining Vomiting and Fluxes of the Belly; and is, alſo, a Lithontriptic. The Teſticles of the Cock are ſaid to have a wonderful Effect in reſtoring loſt Strength in Diſeaſes, in ſupplying prolific Semen, and Venereal Vigour. The Gall deterges Spots in the Skin, being rub'd thereon, and is good for the Eyes. The Fat of Hens and Capons heats, moiſtens, mollifies, and is lenitive, and of a middle Nature between the Fats of a Swine and a Gooſe, correcting their Acrimony: It is of Uſe in Fiſſures of the Lips, Pains of the Ears, and Puſtules of the Eyes. The Throat of a Cock burnt, and not conſum'd, but ſcorch'd and dry'd, and given at Night before Supper, cures involuntary nocturnal Diſcharges of Urine, by a ſpecific Property. *Solenand. S.* 4. *Conſ.* 11. The Dung is ſaid to perform all the ſame Effects as Pigeons Dung, tho' in an inferior Degree; but it is particularly uſeful in Pains of the Colon and Uterus; it is, alſo, efficacious in the Jaundice, Stone, and Suppreſſion of Urine; the white Part of the Dung is obſerv'd to be beſt. The Aſhes dry up Achors of the Head, and other running Sores, being ſprinkled thereon: The yellow Part of the Dung conſolidates an Exulceration of the Bladder. The Eggs afford, for medicinal Uſes, the Shells, Membranes, Albumen, and Yolk: The Shells are lithontriptic, and are endu'd with the Virtue of inciding a tartareous Mucilage: The Membranes have a diuretic Quality, us'd either inwardly or outwardly, and are apply'd to the Prepuce of Infants: The Albumen is refrigerating, aſtringent, and agglutinant, and is of frequent Uſe in Redneſs of the Eyes, in Conglutination of Wounds (with the common Bole). In Fractures, and the like Caſes, it is, alſo, of Service for *Anacollemas*. *Hippocrates* exhibited three or four Whites of Eggs to Perſons in a Fever, as a Refrigerant and Expellent:

Expellent: The Yolk of an Egg has an anodyne, maturating, digesting, and relaxing Virtue; for which Reasons, it is a very frequent Ingredient in Clysters, and, mixt with a little Salt, is usually apply'd, in the Shell of a Walnut, to the Navel of Infants, to provoke Excretion of the Fæces. *Schrod. Dale.*

See ALIMENTA, CAPO, ALBUMEN, and FIBRA.

GALLINAGINIS CAPUT. A Caruncle or Eminence in the Urethra, near which the Semen is excreted from the seminal Vesicles into the Urethra. Its Use is to prevent the Semen bursting out at one Side, from dashing against the Orifice of the other Side. It is, also, call'd, GALLI GALLINACEI CAPUT, the Names being taken from the Similitude.

GALLINAGO, Offic. *Scolopax*, Charlt. Exer. 112. Raii Ornith. 281. *Scolopax, Gallinago maxima.* Ejusd. Synop. A. 104. Will. Ornith. 213. *Becassine*, Bellon. des Oyse 116. *Scolopax sive Perdix rustica*, Aldrov. Ornith. 3. 471. Jonst. de Avib. 110. *Rusticula, vel Perdix Rustica major*, Gesn. de Avib. 444. *Rusticola major, Scolopax, Gallinago*, Mer. Pin. 173. THE WOODCOCK.

The Ashes of a Woodcock, burnt, are said to be lithontriptic. The Woodcock, consider'd as Food, is said to be nourishing, strengthening, and restorative, but not quite so easy of Digestion, as some other Birds, whose Flesh is white. The Salts of this Bird are highly exalted by their habitual Exercise, which renders it a very proper Aliment, where there is a Redundance of Acid.

The GALLINAGO MINOR is the Snipe or Snite, which agrees with the Woodcock in Virtues, except that it is more easily digested, and esteem'd more delicate to the Taste.

GALLIVASSA, in the *Indian* Language *Tropillo*, is a kind of *Mexican* Crow, almost as large as an Eagle. It contains much volatile Salt and Oil; and its Flesh eaten is thought to be good for the Small-pox. *Lemery des Drogues.*

GALLINULA. See GALLINA AQUATICA.

GALLITRICHO AFFINIS. A Name for the *Lamium*; *maximum*; *fœtens*; *purpureum*; *galea hormini.*

GALLITRICHUM. A Name given to several Species of SCLAREA; which see.

GALLITRICHUM, FOLIO ROTUNDIORE. A Name for the *Melissa*; *peregrina*; *caule brevi*; *plantaginis folio.*

GALLIUM.

The Characters are;

It resembles the *Mollugo* in every thing; only its Leaves are even softer than those of that Herb.

Boerhaave mentions five Species of this Plant; which are,

1. Gallium; luteum, *Ger.* 967. *Emac.* 1126. *Park. Theat.* 564. *C. B. Pin.* 335. *Raii Hist.* 1. 442. *Synop.* 3. 224. *Dill. Cat. Giss.* 82. *Hist. Oxon.* 3. 327. *Tourn. Inst.* 115. *Elem. Bot.* 94. *Boerh. Ind. A.* 148. *Rupp. Flor. Jen.* 2. *Mer. Pin.* 44. *Merc. Bot.* 1. 37. *Phyt. Brit.* 45. *Buxb. Gallium*, Offic. Chab. 548. *Gallion verum*, J. B. 3. 70. CHEESE-RENING. *Dale.*

This Plant, from a long slender spreading Root, sends forth many square weak Stalks, a Foot or two high, beset at the Joints with slender narrow Leaves, about an Inch long, set in a Circle; the Stalks of a dark-green Colour. On the Tops of the Stalks, as well as on the smaller Branches, which come out of the Sides, grow thick Spikes of small, yellow, monopetalous Flowers, divided into four Segments, of a pleasant Smell; each of which is succeeded by two small globular black Seeds: It grows on Banks, and dry barren Places, flowering in *June* and *July*. The whole Herb is us'd.

This Plant is drying and incrassating, good in stopping all kinds of Fluxes and Hæmorrhages, and for the Cure of Wounds: Some commend a Decoction of it for the Gout; and a Bath made of it is refreshing to wash the Feet of Persons tir'd with over-walking. In the Northern Countries they use this Herb for the making their Cheeses, instead of Rennet, whence it is call'd Cheese-rennet; the Flowers containing an Acidity, which may be got by Distillation. This is a Plant but seldom us'd in the Shops.

This Plant is vulnerary and detersive; it is us'd in *Catalonia* for the Epilepsy: The Syrup made with the Juice of its Flowers is very aperitive and emmenagogic. *Tabernæmontanus* says, that the Decoction of it is excellent for the dry Scab of young Children, provided you bathe them often with it. *Martyn's Tournefort.*

An Infusion by way of Tea is recommended for the Gout and Epilepsy.

2. Gallium; saxatile; glauco folio. *Bocc. Mus. Part.* 2. *Tab.* 116. *F.* 115. LADIES-BED-STRAW *of the Rocks, with a glaucous Leaf.*

3. Gallium; rubrum. *C. B. P.* 325. RED LADIES-BED-STRAW.

4. Gallium; nigropurpureum; montanum; tenuifolium. *Col.* 1. 298.

5. Gallium; album; linifolium. *Barr. Obs.* 99.

Boerh. Ind. alt. Plant. Vol. 1. *p.* 149.

GALLOPAVO, the Peacock. See PAVO.

GALLOS, γάλλος, an Eunuch; also the Name of a Dropax in *P. Ægineta, Lib.* 7. *Cap.* 19.

GALLUS. See GALLINA.

GALREDA. A kind of Jelly made of the cartilaginous Parts of Animals boil'd. In *Paracelsus, Lib.* 2. *de Morb. Metallifossor.* it signifies an excrementitious Mouldiness. *Castellus.*

GALTIHENUM, GALITHENUM. A Term us'd by *Paracelsus*, obscure enough: He would seem, however, to have us understand by it the occult Virtue, in the Cure of the Epilepsy, which ought to be induc'd in the Essence of the MUMIA. See MUMIA.

GAMAHEU, *Gamahæi, Gamathæi*, are Stones on which celestial Virtues, and superior Constellations, are impress'd in wonderful Characters, Images, and Figures, as we sometimes observe, wrought by the Hand of Nature, in those which are digged out of Mountains, or found by the Banks of Waters. *Rulandus. Johnson. Gamaheu* has an astral Force in moving the Spirits, and the Principles of the Microcosm. *Paracelsus* ascribes very much to those *Gamahæan* Images and Characterisms, as being effected by the Influence of Heaven, as appears every-where in his Works; whence he calls a fourth Species of the Magic Art *Gamaheos*, which is otherwise nam'd *Talismanica. Gamaheum Conjugium* was an Expression us'd by the *Magi* to signify the Conjunction of the celestial Virtues and Properties with the Elementary. *Castellus.*

GAMANDRA. A Name for the GUTTA GAMBA.

GAMATHA. See GAMAHEU.

GAMBOGIUM. See GUTTA GAMBA.

GAMBOIDEA, (*Gutta*). The same as GUTTA GAMBA.

GAMMAROS. See CANCER.

GAMMATA (*Ferramenta*). Chirurgical Instruments for cauterizing in an *Hernia aquosa*, mention'd by *P. Ægineta, Lib.* 6. *Cap.* 62. and so call'd because they were made after the Figure of the *Greek* Letter Gamma (γ).

GAMMAUT. So the *Italians* call a sort of crooked Knife, for opening Abscesses, blunt on the gibbous or back Part, and sharp in the hollow. *Scultet. Armament.*

GAMPHELE. The same as *Gena*, or *Maxilla*, the Cheek; for which see the Article CAPUT.

GAMPSONYX, γαμψώνυξ, from γαμψὸς, crooked, or bent, and ὄνυξ, a Claw, or Talon, having crooked Claws. An Epithet of Beasts of Prey, who are observ'd to be provided with such Claws.

GANGAMON. A Name for the *Omentum*, given it on account of the various Contexture of Veins and Arteries with which it is interspers'd, and made, as it is fancy'd, to resemble a Fishing-net, which the *Greeks* call γάγγαμον, *Gangamon.* Some call, by this Name, that kind of *Plexus Nervorum*, or Contexture of Nerves, which is observ'd about the Navel. *Gorræus.*

GANGILA. A Name in *Ray* for the *Sesamum Africanum.* See SESAMUM.

GANGITIS. The same as GAGATES. *Gorræus.*

GANGLION, γάγγλιον, is a nodous and renitent Induration of a Nerve, of a natural Colour, void of Pain, proceeding from a Concretion of the nervous Juice, thro' some Disturbance of the Order of the Fibres from an external Cause, as a Stroke, or too great a Compression of the Nerves. *Galen, in Def. Med. & Com.* 1. *de Artic.* Or it is describ'd to be a preternatural Tumor, not deeply seated, but just under the Skin, unequal, and, on Compression, receding sideways. It affects many Parts of the Body. There often happens such a Concretion in the Hands and Feet, as *Actuarius* says: And *Paulus* tells us, that a *Ganglion* may arise on the Ancle-bone, the Carpus, and the Joints. *Celsus* says, that *Ganglia* may affect the Head, and calls them *Tubercula*, "Tubercles." And *Galen, Com.* 2. *Lib. de Artic.* writes, that they are Concretions about the Cartilages and Nerves, form'd of their nutritious Juices; and that they arise from a glutinous and mucous Humour. *Hippocrates, Lib. de Artic.* says, it is customary to open τὰ γαγγλιώδεα, "those ganglious Tubercles," which contain a loose and mucous Flesh, expecting to find an Humour in them, but are deceiv'd, tho' without any bad Consequence to the Patient.

The Moderns, by this Word, generally mean no more than any hard, and, for the most part, moveable Tumor, form'd both on the internal and external Surface of the Carpus, most frequently near the Tendons or Ligaments of the Muscles, but without any considerable Pain or Uneasiness to the Patient. The *Germans* call this Disorder *Oberbein*, which corresponds to the Word *Hyperostosis*; either because this Species of Tumor generally arises upon the Bones, or because it sometimes assumes, in a great measure, the Hardness of a Bone. But though a Ganglion bears so near a Resemblance to encysted Tumors, that *Celsus* did not hesitate to refer the former to the latter; yet they differ in this, that, what we at present call a Ganglion, scarcely appears any-where but on the Wrists, or Hands; whereas

whereas encyſted Tumors are form'd in any Parts of the Body whatever. Some of the Moderns, however, continue to give the Name of *Ganglion* to hard and moveable Tumors on the Bones of the Head in general, but more eſpecially of the Forehead. See a Diſſertation *de Ganglio*, publiſh'd at *Alterf*, in the Year 1717.

As for the Cauſe of a Ganglion, this Species of Tumor ſeems generally to ariſe, as *Sennertus* ſays, in the fifth Book of his *Praxis Medica*, from thick and inſpiſſated Humours, which, in conſequence of a Blow, a Fall, a Contuſion, a Diſtortion, a Luxation, or any other external Violence done to the Tendons or Ligaments of the Hands, are collected between the Fibres and the Coats, and gradually ſo increas'd as to form a Tumor as large as a Filbert, a Nutmeg, or Walnut, and ſometimes a Pigeon's Egg. *Blancard*, in his *Collect. Med. Phyſ.* informs us, that the celebrated *Ruyſch* once found in a Carcaſe a Ganglion, which was pellucid like the cryſtalline Humour of the Eye. One of the ſame Kind, as large as a Nutmeg, and form'd upon the external Part of the Carpus, in a young Woman, I ſaw extirpated by my own Son, at *Helmſtadt*, in the Year 1736. *Cyprianus*, in his Treatiſe *de Fœtu Tuba Fallopiana extracto*, informs us, that Ganglions are form'd by a certain Lymph, not unlike the Whites of Eggs, ſecreted within the Vaginæ of the Tendons, but never coming to a Suppuration. Inſtances of this I myſelf have ſeen.

As Ganglions differ very conſiderably with reſpect to Bulk; ſo they generally vary no leſs manifeſtly with reſpect to their Number. For the moſt part, one Ganglion is only form'd; but ſometimes a great many appear, and that in both Hands: Of this we have a memorable Inſtance in the *Miſcellanea Acad. Nat. Curioſ. Decur.* 1. *An.* 3. *Obſ.* 326. As for the Figure of Ganglions, ſome of them are globular, while others reſemble an Acorn, or a ſmall Egg. Some, again, are ſmooth and plain, whilſt others have rough and unequal Surfaces; ſome are greatly, and others little, or not at all, prominent; ſome, eſpecially when recent, are eaſily reſolv'd, whereas others, eſpecially of the inveterate Kind, are not to be cur'd without the utmoſt Difficulty.

In recent Ganglions, the inſpiſſated Matter is generally ſucceſsfully digeſted by careful Frictions of the prominent Part, rubbing it ſufficiently every Morning with *faſting Spittle*, and applying over it a Plate of Lead, to be wore for ſome Weeks ſucceſſively, and ſecur'd by proper Bandages. Some think the Lead poſſeſs'd of a ſtill more diſcutient Quality, if it is previouſly rub'd with Mercury. Others, more ſuperſtitious than wiſe, attribute a peculiar, but unaccountable Virtue to thoſe Balls with which wild Beaſts, eſpecially Deer, have been kill'd: Others, with *Foreſtus*, in his *Obſ. Chirurg. Lib.* 3. *Cap.* 9. order the Ganglion to be cover'd with the *Emplaſtrum de Ammoniaco*; and others, with the *Emplaſtrum de Ranis cum Mercurio*; whilſt others, as the moſt effectual means of Relief, order the Part affected to be carefully and frequently rub'd with the Oleum Petræ, the Oleum Philoſophorum, or the Oil of Soap. Sometimes Ganglions, eſpecially when recent, or treated for ſome time with the above-mention'd Digeſtives, ſuddenly diſappear, upon the Surgeon's preſſing them with all his Strength with his Thumb: See *Aetius*, *Tetrabibl.* 4. *Serm.* 3. *Cap.* 9. and *Add. Muyſius*, in his *Prax. Chirurg. Dec.* 2. *Obſ.* 8. *Meekren*, in his *Obſervat. Chirurg. Cap.* 44. informs us, that a Ganglion may be equally happily and expeditiouſly cur'd by laying the Patient's Hand on a Table, and ſtrongly ſtriking the Tumor ſeveral times with the Fiſt, as in *Tab.* LVII. *Fig.* 1. This ſeems to be the Reaſon why *Muyſius*, in the Book laſt quoted, orders inveterate Ganglions, which can neither be digeſted, nor diſcuſs'd by Preſſure, to be diſpers'd by ſtriking them with a Club or Mallet of Wood, arm'd with Lead; afterwards applying the *Emplaſtrum de Ranis cum Mercurio* to the Part affected, in order to prevent the Return of the Diſorder. *Helvetius* is, alſo, ſaid to have us'd a kind of wooden Mallet for this Purpoſe. The Reaſon why a Cure is brought about in this Manner, ſeems principally to be this, that the Membrane or Bag of the Tubercle being ruptur'd by the Strokes, the Matter, collected and inſpiſſated within it, is, by the Blows, expel'd, and afterwards gradually diſſipated by Frictions, and digeſtive Medicines. But in ſtriking the Ganglion, we ought to be highly careful not to wound other Parts of the Hand, or ſhatter the Bones; by which means the Patient might be expos'd to other terrible Misfortunes. When theſe Meaſures prove ineffectual, or when, by reaſon of the dubious Event, we do not care to uſe this Method, the Ganglion is, like an encyſted Tumor, to be cut out by the Knife, or extirpated by proper Corroſives. That, in this Caſe, the Knife was ſucceſsfully us'd by *Solingen*, is ſufficiently obvious from the fourteenth Chapter of the fouth Book of his *Chirurgia:* And I myſelf have frequently extirpated Ganglions in this Manner. But, in performing the Operation, we ought to be highly careful not to injure the adjacent Tendons, or Ligaments. As for applying to the Part affected the Hand of a dead Man, or that of a Seventh-ſon, muttering ſome particular Words, in the Night-time, when the Moon is in her Decreaſe, it is a Practice which beſpeaks ſo much Superſtition, and Want of Reaſon, though recommended not only by old Women, but alſo by ſome Phyſicians, that every Perſon, in his Senſes, muſt neceſſarily deſpiſe it: The Reader may, however, for the ſake of Curioſity, conſult *Clacius*, in his *Obſervationes*, where Methods of this Nature are recommended for the Cure of a Ganglion. *Heiſter Chir.*

Beſides the above-explain'd Significations of *Ganglion*, it imports a Knot, frequently found in the Courſe of the Nerves, which is not morbid. For, where-ever any Nerve ſends out a Branch, or receives one from another, or where two Nerves join together, there is generally a *Ganglion* or *Plexus*, either leſs or more, as may be ſeen at the Beginning of all the Nerves of the Medulla Spinalis, and in many other Places of the Body.

GANGRÆNA. A Gangrene. See INFLAMMATIO.

A Gangrene is a Diſorder of any ſoft Part of the Body, tending to a Mortification, in conſequence of the Influx of the vital Humours into the Arteries, and their Return through the Veins being prevented; whereas a Sphacelus deſtroys all the vital Action of the Part affected, whilſt Life remains in the other Parts.

Galen, in the eleventh Chapter of his ſecond Book *de Method. Medend. ad Glaucum*, gives a very accurate Definition of a Gangrene, in the following Words: "A Gangrene, ſays he, is a Mortification not already form'd, but "which, in conſequence of the Degree of Inflammation, will "afterwards be form'd." This Paſſage he elſewhere paraphraſes, in the following Words: "A Gangrene is ſaid to be "induc'd, when any Part of the Body, not yet mortified, is "nevertheleſs ſo inflam'd, that it muſt neceſſarily become ſo." *Paulus Ægineta*, in the nineteenth Chapter of his fourth Book, in his uſual Manner, gives the ſame Definition from *Galen*; but premiſes, that an Inflammation, neither reſolv'd [διαφορηθεν] nor converted into Pus, for the moſt part degenerates either into a Gangrene, or a Sphacelus. A Gangrene, therefore, imports a beginning Mortification of any Part. A legitimate Gangrene is eaſily diſtinguiſh'd from an Inflammation, by the Signs hereafter enumerated. But when a violent Inflammation will be chang'd into a Gangrene, or when a Gangrene begins to be form'd by an Inflammation, is a Point not eaſily determin'd by this Definition; for, at the very Inſtant, that a violent Inflammation of a ſoft Part tends to a Mortification, the entire Life of the Part is not utterly deſtroy'd by a Gangrene. *Galen*, in *Commen.* 4. *in Hippocrat. de Artic.* has taken notice of this Circumſtance; for, after he has obſerv'd, that a Gangrene is a Diſorder of a middle Nature betwixt a Sphacelus and a violent Inflammation; and that it is much more violent than an Inflammation, as it is more mild than a Sphacelus, he adds the following Words: "We ſometimes ſo confound and abuſe the Names of Diſeaſes "which have a Dependence on each other, as to apply the "Name of one to another, though it does not totally come up "to its genuine Nature: Thus we ſometimes call a violent "Inflammation, when it no longer retains its Colour and Pain, "a Gangrene, though it is not really ſuch, but will, if neg-"lected, ſoon become ſuch."

Celſus ſeems to have us'd the Words *Cancer* and *Gangrene* promiſcuouſly; for, in the twenty-ſixth Chapter of his fifth Book, he uſes the following Words: "Sometimes a "Cancer is form'd either by a violent Inflammation, im-"moderate Heat, exceſſive Cold, too tight Bandage of a "Wound, Old-age, or a bad Habit of Body." Then he gives ſuch a Deſcription of a Cancer as perfectly agrees with a Gangrene and Sphacelus; for *Celſus* made a Diſtinction between a Cancer and a Carcinoma; and, at laſt, ſubjoins the following Words: "Sometimes, what the *Greeks* call γαγγραινη, is "form'd; the former, that is, a Cancer, happens in any Part "of the Body, whereas the latter, that is, a Gangrene, happens "in the prominent Parts of the Body, as betwixt the Nails and "the Arm-pits, or betwixt the Toes and the Groin; and gene-"rally in old Perſons, or thoſe of a bad Habit of Body." Then he goes on to deſcribe all the Signs of a Gangrene, which ſpreads, and, at laſt, terminates in a Sphacelus. Hence we have juſt Reaſon to conclude, that what, in the Extremities of the Body, *Celſus* call'd a Gangrene, he, in other Parts, call'd a Cancer. However, in the twenty-ſixth Chapter of his fifth Book, when deſcribing the Meaſures to be taken for the Cure of a Gangrene, he gives the following Cautions: "Sometimes all the "Means of Relief prove ineffectual, and the Cancer ſpreads, "notwithſtanding their Uſe. In this Caſe the deplorable, "though only remaining, Method of Relief, is to amputate "the Member, which gradually becomes mortified, that, "by this Means, the reſt of the Body may be ſav'd." But it is ſufficiently obvious, that *Celſus*, in this Paſſage, means the Amputation of the Extremities, when corrupted by a *Sphacelus*, which he calls a *Cancer*.

A Gangrene is ſubſequent to an Inflammation, when the Obſtruction is ſo great, that it cannot, by any means, be reſolv'd; and ſo diffuſive, as to poſſeſs all the Veſſels of the affected Part; or when, though, at the Beginning of the Diſorder, ſome Veſſels were free from the Obſtruction, they are, nevertheleſs, ſo compreſs'd by the adjacent, obſtructed, and tumid Veſſels, as to ſtop all Circulation of the Humours through the Arteries, and, conſequently, prevent their Return through the Veins, which are only Continuations of them. The ſame Misfortune will happen, if, by the Impetus and Velocity of the Circulation, or by the Acrimony of the circulating Humours, or a Concurrence of both theſe Cauſes, the Veſſels ſhould be ſuddenly ruptur'd in the inflam'd Part, and the diſcharg'd Humours become putrefy'd. In both Caſes, the Influx of the arterial Fluids into the Part is prevented, and their Return through the Veins conſequently cut off; for which Reaſon, the whole Part ſo affected has no longer any vital Communication with the reſt of the Body, and will, therefore, by a ſpontaneous Principle of Change, common to all the Parts of Animals, tend to Putrefaction. In this Caſe, therefore, a quite different Method of Cure is requir'd from that proper in a Suppuration, in which there is only a gentle Separation of the Ends of the obſtructed Veſſels, together with an Immeability of the obſtructing Matter, and ſome Degree of Depravation in the Fluids, but ſuch as may be overcome by Nature; whereas Putrefaction ſhews, that Nature is baffled in her Efforts, as *Galen* juſtly obſerves: For, ſays he, if the natural Heat recedes much from its due Temperature, then the Blood becomes putrid, as in a Carcaſe; but, when this Heat retains ſome Degree of Force, a kind of mix'd Change is produc'd, partly by a preternatural, and partly by a natural, Cauſe. The preternatural Cauſe produces Putrefaction; and the natural Cauſe, Concoction. In Suppuration, therefore, there is a Concoction, ſince the Principles of Life remain in the Part; and this is a natural Cauſe: Whereas, in a Gangrene, Putrefaction alone, which is a preternatural Cauſe, operates. So long as the ſoft Parts alone are thus mortify'd, the Diſorder is call'd a Gangrene, and is principally ſeated in the Membrana Adipoſa, as will afterwards appear; but, when the Muſcles, Tendons, Ligaments, Perioſteum, and Bones, are thoroughly mortify'd, the Diſorder is call'd a *Sphacelus*. But, becauſe, in a Carcaſe, every Degree of vital Action is deſtroy'd, as well in the Whole, as in every particular Part, 'tis therefore mention'd in the Definition, that a Sphacelus ſuppoſes a perfect Mortification in the Part affected, whilſt a Principle of Life remains in the reſt of the Body. But ſince, in a Gangrene, there is generally a remaining Heat, ſupply'd by the neighbouring and ſubjacent Parts, as yet alive; ſince a Gangrene generally ſucceeds a violent Inflammation, which burns, as it were, the Parts affected; and ſince, as we obſerv'd before, a violent Inflammation is ſometimes call'd a Gangrene, when it is juſt about to degenerate into it; Surgeons, for theſe Reaſons, generally call a Gangrene *Ignis Calidus*, or a hot Fire; and a Sphacelus, in which all the vital Action ceaſes, *Ignis Frigidus*, or a cold Fire; becauſe the Part thus affected ſoon becomes as cold as the ſurrounding Air; for the Cauſe exciting Heat, which is the Motion of the Humours through the Veſſels, is entirely wanting in a ſphacelated Part.

But the Word *Sphacelus* does not, among the antient Phyſicians, ſeem to have denoted a perfect Mortification of the Part affected. Thus *Hippocrates*, in the ſeventh Chapter of his firſt Book *de Morbis*, deſcribes a Sphacelus of the Brain, but does not pronounce it abſolutely mortal; and only adds, that few eſcape from it: And ſo far was he from thinking it irretrievably fatal, that, in the very next Chapter, he lays down the Meaſures to be taken for its Cure. But 'tis ſufficiently obvious, that, in this Part, a Sphacelus, properly ſo call'd, muſt neceſſarily prove ſpeedily mortal, if, by the Word *Sphacelus*, an abſolute Mortification of ſo noble an Organ as the Brain is meant. *Galen*, in the eighth Chapter of his ſecond Book *de Locis affectis*, when conſidering a Paſſage of *Archigenes*, an antient Phyſician, in which the Word σφακελῶδες occurs, obſerves, that the Meaning of this Word is highly ambiguous; ſince ſome meant no more by it than a violent Pain; others, ſuch an exceſſive Inflammation as endanger'd the Corruption of the Part affected; and others, the actual Corruption of it. There are ſeveral other Paſſages of *Hippocrates* and *Galen*, which ſhew, that various Ideas are affix'd to this Word enumerated by *Gorræus* and *Foeſius*; but thoſe already mention'd are ſufficient for our Purpoſe.

A Gangrene, therefore, generally affects only the Membrana Adipoſa; whereas a Sphacelus affects all the Parts, as far as the Bone. A Gangrene is previous to a Sphacelus, which generally ſucceeds it, unleſs it derives its Origin from the Corruption of the Bone, the Marrow, or the Perioſteum. But a ſingular kind of Gangrene, which is without Fever, Inflammation, or Loſs of the natural Colour, may be produc'd in the Parts, inferior to the ſpinal Marrow, by a Contuſion of that Part.

'Tis ſhewn, under the Article INFLAMMATIO, that an Inflammation happens no-where more frequently than in the Membrana Adipoſa: But, ſince a Gangrene almoſt always follows a violent Inflammation, 'tis ſufficiently obvious, that the former muſt have the ſame Seat with the latter. This is carefully to be adverted to; becauſe Surgeons ſometimes think a Sphacelus preſent, where there is only a Gangrene; when, for Inſtance, a Phlegmon ariſes on the Back of the Hand, where there is ſcarcely any Fat, the Membrana Celluloſa often becomes incredibly tumid; and, when ſuch a Phlegmon is ſucceeded by a Gangrene, and the Part found mortify'd conſiderably deep, they think all the Parts corrupted by a Sphacelus; whilſt, at the ſame time, under the tumid Membrana Celluloſa, the Tendons and Muſcles are entire, as afterwards appears upon a Separation of the corrupted Parts. If, therefore, in ſo lean a Part, ſo large a Tumor may be produc'd by Inflammation, ſtill larger Tumors muſt be produc'd, by the ſame means, in the Buttocks, Thighs, Legs, and Arms, where there is naturally ſo large a Quantity of Fat laid over the greater Muſcles, in order to facilitate their Motions, by a pinguious and lubricating Oil.

Though frequently the Parts are for a conſiderable Depth corrupted by a Gangrene, yet numberleſs Caſes in Surgery convince us, that the Whole of the Tumor is only lodg'd in the Membrana Adipoſa, which, after its Separation from the ſubjacent live Parts, may be extracted in large Pieces. Thus Members of the Body are ſometimes preſerv'd, when their Extirpation ſeem'd to be the only remaining Means of Relief. But a Sphacelus mortifies not only the Membrana Adipoſa, but alſo the Muſcles, Tendons, Ligaments, Perioſteum, and Bones.

If we conſider, that the highly tumid Membrana Adipoſa, pent up and confin'd by the Skin, compreſſes all the ſubjacent Parts, it is ſufficiently obvious, that, by this Cauſe alone, the vital Influx and Efflux of the Humours in the ſubjacent Parts may be totally deſtroy'd. Beſides, a Putrefaction, ſucceeding a Gangrene, may convey its Taint to all the adjacent Parts; for which Reaſon, a Gangrene is generally previous to a Sphacelus. There are, however, ſome Caſes, in which a Sphacelus is form'd without any preceding Gangrene; when, for Inſtance, by a violent Contuſion in any Part of the Body, all the Parts are at once deſtroy'd, as far as the Bone; or when, by any Cauſe whatever, the Bones, the Marrow contain'd in them, or the Perioſteum, which conveys Veſſels to the Bones, and receives thoſe ſent out from them, are ſo affected, that the vital Motion of the Humours through the Arteries and Veins in theſe Parts is totally deſtroy'd. The Lues Venerea, and Spina Ventoſa, have been often obſerv'd to corrupt the Bones in this manner, even whilſt the external Parts have as yet remain'd ſound; in which Caſe, the Diſorder diffuſes itſelf from the ſubjacent Parts, and ſpreads, till it has corrupted all around them; whereas, in a Gangrene, the external Parts are firſt affected, and then the ſubjacent Parts are, as it were, gradually ſuffocated.

Why a Gangrene ſhould enſue, when, by a violent Contuſion, Wound, or any other Cauſe, the ſpinal Marrow is ſo diſorder'd, that the Influx of the nervous Fluid into the Parts below the Wound is entirely prevented, is ſhewn under the Articles CONTUSA and VULNUS; where 'tis alſo obſerv'd, that the Deſtruction of the larger Nerves produces the like Misfortunes; whereas other Gangrenes generally ſucceed violent Fevers, or Inflammations; or, in extreme old Age, ariſe purely from the Defect of natural Heat. This laſt Species, ariſing without the previous Signs before-mention'd, preys on all the Parts in a ſlow, but irreſiſtible Manner.

A Gangrene, therefore, and a Sphacelus, have one common Cauſe; but theſe Diſorders differ with reſpect to Violence, Duration, and the Parts they affect.

When the Arteries of the human Body are ſo chang'd, that they cannot tranſmit the Blood, and other Humours, which, in a State of Health, move through them, duly carry on the Secretions, and then convey the Fluids to the Veins, Death enſues. When this happens only in the Membrana Adipoſa, and Skin, the Diſorder is call'd a Gangrene; but, when the vital Action, in any Part of the Body, is totally deſtroy'd, then a Sphacelus is form'd. The Cauſe, therefore, of a Gangrene and Sphacelus is the ſame; that is, every thing which deſtroys the Influx and Efflux, the Secretion and Excretion, of the Humours, in any Part of the Body.

But the Force of the Cauſe which produces a Sphacelus, muſt be greater than that of the ſame Cauſe when producing a Gangrene; becauſe, by the former, far more ſolid Parts are corrupted, ſuch as the Muſcles, Tendons, and Bones; whereas the latter generally only induces a total Mortification on the tender Membrana Adipoſa, and Skin.

The ſame Cauſe which produces a Gangrene, continuing to act, may alſo produce a Sphacelus. Thus, for Inſtance, if, by an external Compreſſion, the vital Influx and Efflux of the

Humours in the Skin, and Membrana Adipoſa, are entirely deſtroy'd, 'tis ſufficiently obvious, that, unleſs the compreſſing Cauſe can be remov'd, all the ſubjacent Parts, as far as the Bone, muſt be, as it were, ſuffocated; and, conſequently, that a Sphacelus ariſes from the ſame Cauſe with a Gangrene; only it muſt operate longer to produce the former, than the latter.

The Place or Seat of a Gangrene is the Membrana Adipoſa; whereas a Sphacelus affects all the Parts: Another Circumſtance which ſerves to diſtinguiſh between a Gangrene and a Sphacelus.

A Gangrene and Sphacelus may, therefore, be form'd by all thoſe Cauſes which produce an Inflammation, eſpecially if the Fluids become ſtagnant, and if the Action of the circulating Blood upon them is ſtrong. Among the Cauſes of this Kind are, a Ligature of the Veins; their Compreſſion by any Cauſe, a Tumor for Inſtance; intenſe Cold; an obſtructed Perſpiration in a Phlegmon by Aſtringents, emplaſtic Medicines, cold Subſtances, Repellents, or ſtupefying Remedies, eſpecially if acrid Subſtances are either exhibited internally, or mix'd with external Applications; internal or external Inflammations, Wounds, Contuſions, Luxations, and Fractures, eſpecially when the Bandage is apply'd too tight; oleous Subſtances of an acrid Nature apply'd to ſound Parts, long lying in Bed, and Hernias of the confin'd or incarcerated Kind.

In this, and ſome ſubſequent Paragraphs, we ſhall treat of the Cauſes capable of producing a Gangrene and Sphacelus. Firſt, then, we have here enumerated all the Cauſes capable of producing an Inflammation; for every Inflammation preſuppoſes an Obſtruction of the ſmall arterial Ducts, by which the free Circulation of the Fluids is prevented; ſo that, if this Misfortune was to happen to all the Veſſels of any Part of the Body, a Sphacelus would be form'd; ſince all vital Motion of the Humours is deſtroy'd in the Part ſo affected. Now, if we conſider, that, according to the Definition of an Inflammation, there is, in this Diſorder, not only a Stagnation and Immeability of the Fluids, but, alſo, that the Impetus of the ſucceeding Blood acts powerfully on the obſtructed Parts, 'tis obvious, that the ſmall Veſſels may frequently be ſuddenly ruptur'd, the Fluids diſcharg'd, and become putrefy'd, and, conſequently, a Gangrene form'd, as is ſhewn under the Article INFLAMMATIO. But as the Arteries ought to convey the Fluids to the Veins, which carry them back to the Heart, from which they ought to be again forc'd through the Arteries, in order to maintain the due Circulation of the Blood through the whole Body, and all its Parts, all thoſe Cauſes, therefore, which hinder the Arteries from evacuating their Contents freely into the Veins, are capable of ſuffocating and preventing the vital Motion in the Part, and, conſequently, of producing a Gangrene and Sphacelus. Now, an Obſtruction of the Veins can never happen, except by ſome external Compreſſion. Of this Kind, therefore, are

Ligatures of the Veins. *Boerhaave*, in explaining this Paſſage, us'd to give his Auditors the following Caſe: A young Gentleman of Diſtinction, returning drunk from an Entertainment, with a View to enjoy the Benefit of the Air, laid his Elbows on the inferior Part of an open Window, where he continu'd all the Night, drown'd in Wine, and overpower'd by Sleep. But, waking next Morning, and attempting to move his Body, he dropt down, as if he had loſt his Legs; for, unfortunately, his Garters, being too tight, had ſo compreſs'd the Veins, that the Blood could not return through them, whilſt, at the ſame time, the Blood was forc'd through the Arteries by an increas'd Impetus, in conſequence of the Intoxication: Hence aroſe a Tumor of the Parts, which render'd the Garters ſtill tighter. As, by this Means, the vital Motion of the Humours was entirely deſtroy'd, a Gangrene was form'd in each Leg; which, ſoon aſcending to his Thighs, prov'd fatal to him.

Compreſſion of the Veins by any Cauſe: As Ligatures, ſo other Cauſes compreſſing the Veins, may, for the ſame Reaſon, produce a Gangrene. Medicinal and chirurgical Obſervations convince us, that incurable Gangrenes and Sphaceluſes have drawn their Origins from latent Tumors, which could neither be remov'd, nor eaſily known: Thus *Hildanus*, in *Cap. 4. de Gangræna & Sphacelo*, tells us, that he ſaw a memorable Inſtance of this Kind. A certain Man, in the Flower of his Age, and of an excellent Conſtitution, began to perceive an unuſual Coldneſs, Heavineſs, and Stupor, in both his Legs, without any known previous Cauſe. Theſe Symptoms increaſing gradually, a Gangrene enſued, which was ſucceeded by a Sphacelus, which aſcended to his Knees, and prov'd mortal. Upon diſſecting the Body, there was found a ſcirrhous Tumor, compreſſing that Part of the *Vena Cava deſcendens*, where it is divided into the two Iliacs. The Author adds, that, for the ſake of Brevity, he omitted more Inſtances of the ſame Kind. I myſelf, ſays *Van Swieten*, ſaw a memorable Inſtance of this Kind, in a Man, whoſe Left Leg, two Weeks before his Death, began to be painful, tumid, and, at laſt, all over œdematous, the Tumor aſcending above the Knee. As his Foot began to grow cold, and the Points of his Toes livid, I ſuſpected that a Gangrene would ſoon enſue: I therefore order'd the whole Part to be perpetually wrapt up in antiſeptic Fomentations. A ſkilful Surgeon, who attended this Patient, believ'd, as well as I, that a latent Collection of Pus compreſs'd the Iliac or Crural Vein; and therefore thought the Diſorder incurable, unleſs the compreſſing Cauſe could be remov'd. We could not, however, by the ſtricteſt Examination, diſcover where the Cauſe of the Diſorder was lodg'd; for which Reaſon, we concluded that the Uſe of Antiſeptics alone was to be perſiſted in. Next Day we were ſurpris'd to find the Leg warmer, and the Swelling much abated. The Patient, however, and thoſe who attended him, told us, that he had diſcharg'd by the Anus ſeveral large Quantities of Wind, with great Violence and Noiſe. The Swelling of the affected Leg was hourly diminiſh'd, and, in the Space of two Days, by gentle Frictions, was totally remov'd: The Patient, however, died. Upon opening his Body, I found no Pus in the larger Cavities of his Body: But, in the Abdomen, I found the Inteſtinum Colon not lying under the Stomach, as it uſually does, but preſſing upon it, and diſtended with Wind; but that Part of it which deſcends from the Spleen, behind the ſmall Inteſtines in the Left Side, was ſo contracted, that it was ſcarce ſo large as one's Thumb; but, as ſoon as it emerg'd again below the ſmall Inteſtines, it appear'd inflated. Hence, 'tis highly probable, that the Colon, highly diſtended with Wind, and touching the Iliac Vein, had compreſs'd it in that Part. Hence aroſe the Tumor of the Leg on the ſame Side, which again diſappear'd upon the Exploſion of the Wind. Unleſs I myſelf had ſeen theſe Phenomena in the Carcaſe, I could have ſcarcely thought, that ſo large a Vein could have been ſo compreſs'd by Flatulences, as to endanger a Gangrene.

Intenſe Cold: The Molecules of the Blood are, by Cold, ſo compacted, as to become incapable of circulating thro' the Veſſels, and, conſequently, to form Obſtructions. Now, if an intenſe Cold acts ſo powerfully on any Part of the Body, as to congeal the Fluids which ought to move in them, 'tis ſufficiently obvious, that the vital Influx and Efflux of the Humours muſt, in ſuch a Part, be totally deſtroy'd, and, conſequently, a legitimate Gangrene form'd, or even a Sphacelus, if the Force of the Cold has penetrated as far as the Bones. 'Tis true, the Blood, and its Serum, require a greater Degree of Cold to coagulate them, than Water; and the native Heat of a ſound human Body reſiſts a very intenſe Cold; eſpecially if a briſk Motion is us'd. There are, however, daily and melancholy Examples, in the Northern Climates, of the Extremity of the Body being ſo diſorder'd by an intenſe Cold, as ſuddenly to fall off, corrupted by a true and legitimate Sphacelus. Hence the Effects of intenſe Cold are, in a great meaſure, the ſame with thoſe produc'd by the Action of live Fire on the Parts of the human Body; that is, they are ſuddenly deſtroy'd, both by the one, and the other. For this Reaſon, perhaps, *Hippocrates*, in his Treatiſe *de Aere, Locis, & Aquis*, ſpeaking of the Complexion of the *Scythians*, ſays, they are *burnt* by the Cold. And *Virgil*, ſpeaking of burning the Stubble on the Ground, uſes this Expreſſion;

Ne tenues pluviæ, rapidive potentia ſolis
Acrior, aut Boreæ penetrabile frigus adurat.

A Gangrene and Sphacelus, however, produc'd by intenſe Cold, have certain peculiar Signs, by which they may be diſtinguiſh'd from other Gangrenes, as will afterwards be ſhewn. They, alſo, require a different Method of Cure, as will afterwards appear. But, among all other Cauſes, none produces a Gangrene ſo ſuddenly, as a Cold ſucceeding an intenſe Heat. Thus *De la Motte*, in the third Volume of his *Traité Complet de Chirurg.* informs us, that, in the Month of *July*, whilſt a Servant was cleanſing a deep Well, he perceiv'd an intenſe Cold, and a violent Pain, in the great Toe of his Left Foot, which ſoon after aſcended to the Ancle. All this Part was corrupted by a Sphacelus; and, about an Hour after, the Diſorder reach'd the Middle of his Leg, and would ſoon have put an End to his Life, unleſs the Member had been ſeaſonably amputated.

An obſtructed Perſpiration: That an obſtructed Perſpiration is highly prejudicial to Inflammations, and that Inflammations of the worſt Kind ſometimes ariſe from the external Application of pinguious Subſtances, eſpecially when mix'd with thoſe of an acrid Nature, is ſhewn under the Article INFLAMMATIO. 'Tis alſo ſhewn, under the ſame Article, that Aſtringents, cold Subſtances, and emplaſtic Medicines, ſoon change an Inflammation into a Gangrene; for a Phlegmon, properly ſo call'd, is only lodg'd in the narrow Parts of the larger Veſſels, which are either naturally, or by their Dilatation, capable of receiving the red Blood. Hence, tho' the Circulation of the Humours through the larger Veſſels ſhould be obſtructed, it may ſtill be carried freely on through the

the ſmaller Veſſels. But a Gangrene is only form'd, when the vital Efflux and Influx of the Humours, in all the Series of Veſſels, in any Part of the Body, is deſtroy'd. For this Reaſon, all thoſe Things which obſtruct Perſpiration in the inflam'd Part, produce a Gangrene; becauſe they deſtroy the Motion of the Fluids through the ſmalleſt Veſſels, whilſt the larger Veſſels are already become impervious by the Inflammation. Practical Obſervations ſufficiently convince us, that Subſtances of this Kind are productive of highly unluckly Effects, when apply'd to Parts affected with a Phlegmon, as may be ſeen in *Hildanus*, and the *Miſcellanea Curioſa*.

But no Cauſe more frequently produces a Gangrene, than the Application to an inflam'd Part of ſuch Subſtances, as by their acrid Stimulus augment the Motion in it; as alſo the accelerating of the circulatory Motion by the internal Exhibition of the like Medicines: For 'tis ſhewn under the Article INFLAMMATIO, that the Acrimony, and violent Motion, of the Humours, change an Inflammation into a Gangrene. Hence, ſo fatal Effects have often been produc'd, whilſt in inflammatory Diſeaſes the Chymiſts have boldly exhibited their volatile oleous Salts, and other highly acrid Subſtances, as the moſt powerful Reſolvents, or whilſt the Surgeons have apply'd Spirit of Sal Ammoniac, or Alcohol, to inflam'd Parts.

Internal or external Inflammations: 'Tis ſhewn under the Article INFLAMMATIO, how a Phlegmon degenerates into a Gangrene. But there, ſuch a Diſorder is only treated of, as affects the external Parts, and by the various ſenſible Changes of Symptoms, manifeſts the Tranſition of an Inflammation into a Gangrene. 'Tis, however, certain, that a legitimate Phlegmon, together with all its Terminations, whether in a Suppuration, Gangrene, or Scirrhus, may alſo be found in the internal Parts of the Body, as is ſhewn under the Article INFLAMMATIO.

Wounds, Contuſions, Luxations, and Fractures: With reſpect to theſe, ſee their reſpective Articles. But how frequently a Gangrene is produc'd by the too tight Application of Bandages, is ſufficiently obvious from daily Experience, and a Reflection on the Compreſſion of the Blood-veſſels thereby occaſion'd.

As for Subſtances of an oleous and acrid Nature; the Reader, with reſpect to theſe, may conſult the Article INFLAMMATIO: For, as Subſtances of this Kind are often of an highly acrid Nature, and ſtrongly adhere to the Part to which they are apply'd, they may produce a Gangrene, where there was no previous Inflammation; but much ſooner, where there is one. Thus *Boerhaave* gave his Pupils an Account of a Lady afflicted with a Palſy of her Right Leg and Thigh; and, when a Liniment of the *Galbanetum Paracelſi*, Oil of Hartſhorn, and other ſtimulating acrid Subſtances, was order'd to be gently rub'd on the Parts affected, the Patient, fond of a ſpeedy Cure, apply'd a large Quantity of the Liniment, and cover'd all the Part with a Cerate, in order to retain the Virtues of the Medicine the longer. Next Day, however, her whole Thigh and Leg were found affected with a Gangrene. Hence it appears, how dangerous the Uſe of oleous and acrid Subſtances, in Conjunction, often is, if they are unſkilfully apply'd.

As for long lying in Bed; this is a very frequent Cauſe of a Gangrene; for whilſt we lie in Bed, the whole Weight of the Body is ſupported by a few Parts. Hence, in conſequence of the Compreſſion of the Veſſels, a gentle Inflammation, and Pain, are produc'd; which, however, are immediately remov'd, on changing the Poſture of the Body. Hence the ſoundeſt and moſt healthy Perſons, now-and-then, change the Poſture of their Bodies in Sleep; by which this Misfortune is eaſily prevented. But, when in intenſely painful Diſorders, ſuch as the Gout and arthritic Pains, the Patients are forc'd to lie without changing their Poſture, ſince the Pain is greatly augmented by Motion, the Arteries and Veins are compreſs'd in the Parts which ſuſtain the Weight of the Body; and by this means the vital Motion of the Humours is prevented, and a Gangrene form'd. But a Gangrene is never more frequently or ſuddenly excited by lying in Bed, than in acute Diſeaſes, in which there is ſuch an Inſenſibility produc'd, as renders the Patient incapable of perceiving the Pain and Uneaſineſs excited by the Compreſſion of the Parts; in which Caſe his Strength being impair'd, he generally lies on his Back. Now, when a Perſon lies thus horizontally, his Bed is always ſunk in the Middle, and elevated both at the Head and Foot. Hence, the whole Weight of the Body is almoſt ſupported by the *Os Sacrum*, and *Os Coccygis*, which are only cover'd with the Integuments, and a ſmall Quantity of Fat. The ſoft Parts, therefore, which cover theſe Bones, are by the ſtrong Compreſſion totally depriv'd of the Influx and Efflux of the vital Humours, and, conſequently, ſoon become mortify'd. And even theſe Bones themſelves are ſometimes corrupted. Hence, if the Patients ſhould eſcape the Fury of theſe dangerous Diſeaſes, they are afterwards ſubjected to the Diſadvantages of a tedious and long-protracted Cure. In order to prevent all theſe Misfortunes, the Change of Poſture alone is ſufficient; for, if the Body is only turn'd ſix times, for Inſtance, in twenty-four Hours the Parts will be freed from the Preſſure of the incumbent Body, the Veſſels will be dilated by the impel'd Humours, and the Life of the Part will return. Care is, alſo, to be taken, that the Patient be laid immediately, and without the Interpoſition of a Shirt, on the ſofteſt Sheeps-ſkins to be had, than which nothing is more beneficial in this Caſe. When there is a Separation of the Epidermis, and a gentle Excoriation produc'd, the Part is to be cover'd with the *Emplaſtrum Diapompholygos*, or ſome other of a like Nature, ſprinkled with the fine Powder of Ceruſs, or Lapis Calaminaris. If, on account of the great Weakneſs of the Patient, or any other Cauſe, it ſhould be impoſſible to change the Situation of his Body ſo often, his Body is to be ſupported by Girths; or a Ring form'd of Straw, and cover'd with ſoft Sheeps-ſkins, is to be laid under his Body in ſuch a manner, as to free the Parts in Danger from all Compreſſion. It cannot, therefore, be too carefully inculcated to Phyſicians, always to ſuſpect a Gangrene in acute Diſeaſes, when they find their Patients lying long in one Poſture, dull, and, as it were, half aſleep; for frequently, in a few Hours, all the Parts about the Os Coccygis become corrupted. By lying long in one Poſture, a Gangrene may not only be form'd about this Part, but alſo about the Scapulæ, the Tubercles of the Os Iſchium, the large Trochanters of the Os Femoris, and about the Spines of the Vertebræ, in highly emaciated Patients. Terrible Effects are often produc'd, whilſt, in the Cure of Fractures, Surgeons often deſpiſe the Complaints of the Patient, and neglect to change the Poſture of the Part. *Hippocrates*, in his Treatiſe *de Fracturis*, when treating of the Cure of Fractures of the worſt Kind, gives the following Caution: "We muſt remember, ſays he, that when fractur'd "Parts lie long in the ſame Poſture, Excoriations, not to be "cur'd without great Difficulty, are produc'd." In this Paſſage he uſes the Word ἐκτρίμματα, which ſignifies Excoriations, Corroſions, or Gallings; for, when any Part of the Body begins to be diſorder'd by long lying, a red Spot appears; ſoon after the Epidermis is, as it were, worn away, and at laſt ſeparated: But, the Unſkilful thinking the Diſorder ſlight, a few Hours after, a black Spot appearing indicates a Mortification of the worſt Kind.

Hernias of the confin'd and incarcerated Kind: Tho' the Name Hernia is given to widely different Diſeaſes, whilſt that, for Inſtance, in which the Coats ſurrounding the Teſtes, or the Scrotum itſelf, are fill'd with extravaſated Lymph, is call'd *Hernia aquoſa*; that in which the ſpermatic Veins are become varicoſe and tumid, *Hernia varicoſa*; and that in which the Teſtes are become ſcirrhous, or, as it ſometimes happens, ſurpriſingly concreted into a fungous Maſs, *Hernia carnoſa*; yet, in this Place, ſuch Hernias are only underſtood, as are form'd by the Parts contain'd in the Abdomen deſcending in conſequence of a preternatural Dilatation, or a Rupture of the Peritonæum. Hernias may happen in all the Parts of the Abdomen, and other Parts beſides the Inteſtines and Omentum may, ſometimes, ſlip out of the Cavity of the Abdomen; but the Hernias which happen moſt frequently, are thoſe form'd by the Deſcent of theſe thro' the dilated Peritonæum at the Navel, or thro' the Rings of the abdominal Muſcles in the Groin, in which Caſes they are call'd umbilical and inguinal Hernias; and, when theſe laſt fall down into the Scrotum, they are diſtinguiſh'd by the Epithet Scrotal; but if they fall towards the Thighs, which frequently happens in Women, they are call'd Herniæ Femorales. Now, if the dilated Peritonæum, together with a Part of the Inteſtine, ſhould ſlip through the Rings of the abdominal Muſcles, 'tis ſufficiently obvious, that the doubled Inteſtine is lodg'd in theſe Rings, except in rare Caſes, where the Part of the Inteſtine, oppoſite to the Meſentery, being gradually dilated, paſſes thro' theſe Rings, and becomes an Appendix or Sack, which is gradually render'd longer. By the periſtaltic Motion, therefore, the Chyle, and other things contain'd in the Cavity of the Inteſtine, muſt be forc'd into this Appendix, and frequently cannot return from it, whilſt the Inteſtine is compreſs'd by the Rings of the abdominal Muſcles. The ſame Effect may be produc'd by Flatulences diſtending the prolaps'd Inteſtine. Such a Hernia is call'd a confin'd or incarcerated Hernia, becauſe neither the prolaps'd Inteſtine, nor the Subſtances contain'd in its Cavity, can return into the Abdomen. In this Caſe, violent Pains are excited, the periſtaltic Motion is diſturb'd, Vomitings and Hiccup happen, and, frequently, in a few Hours, the ſtrangulated Inteſtine becomes gangrenous; and, which is ſtill more ſurpriſing, the ſoundeſt and moſt robuſt Men are often ſuddenly cut off by this means; for, after the moſt racking Torments, all Pain ſuddenly ceaſes, and the Patient, when he thinks himſelf paſt Danger, dies unexpectedly. But theſe fallacious Periods of Reſpite will not eaſily impoſe on a ſkilful Phyſician or Surgeon, ſince the Coldneſs of the Extremities, the cadaverous Appearance of the Countenance, the cold Sweats, and frequently the livid Colour of the Inteſtine ſhining thro' the Skin, are ſufficient Proofs, that Death is not far off. From the Knowledge we have hitherto acquir'd of the Structure of the human Body, I think we cannot aſſign ſatisfactory Reaſons, why an incarcerated Hernia ſhould be ſo ſuddenly and frequently ſucceeded by Death;

Death; tho' we know, from medicinal and chirurgical Obſervations, that the abdominal Nerves have a ſurpriſing Influence over the vital Functions. Thus *Ruyſch* gives us an Account of a Caſe, in which a Wound of the Abdomen, after violent Pains, prov'd mortal in a few Days; though, upon opening the Body, there was no conſiderable Injury obſerv'd to be done to any other Part than the Meſentery. 'Tis, however, certain from the Hiſtories of Wounds of the Abdomen given us by the beſt Authors, that large Portions of the Inteſtines may be either cut off, or ſpontaneouſly ſeparated, without deſtroying the Life of the Patient. 'Tis, alſo, certain, that the lacerated Inteſtines may be ſew'd together; and that the Meſentery may, by paſſing a Thread thro' it, be brought to the Aperture of the abdominal Wound, that the two Extremities of the Inteſtine may be brought into Contact, and grow together. In ſuch a Caſe, when a Gangrene is dreaded from an incarcerated Hernia, the Patient is to be ſo weaken'd by liberal Veneſection, that the Inflammation may be depriv'd of too ſtrong a vital Motion: Then let Narcotics be exhibited in ſmall Doſes at a time, but let them be repeated every eight Hours, till the Patient is reliev'd, and a Reſpite procur'd: Let the Hernia, in the mean time, be fomented with the moſt emollient Fomentations. Let Clyſters prepar'd of the like Materials be injected each Hour, and let the Reduction be attempted; but, if it cannot be reduc'd by theſe means, the only remaining Step to be taken is, to make an Inciſion thro' all the abdominal Integuments and Peritonæum, in order to ſet the ſtrangulated Inteſtine at Liberty, and return it into the Cavity of the Abdomen. But, when a Gangrene has already ſeiz'd an incarcerated Hernia, Death generally ſoon enſues; or, if the Patient ſhould eſcape, the corrupted Part of the Inteſtine being ſeparated, the Extremity of the remaining ſound Part is to be faſten'd to the Aperture, leſt the Fæces ſhould fall down into the Cavity of the Abdomen; and in this Caſe there remains an artificial Anus in this Place, during the Remainder of the Patient's Life, unleſs, which rarely happens, the Extremities of the Inteſtines ſhould again ſo unite, as to make the inteſtinal Tube one continued Paſſage from the Stomach to the Anus.

Secondly, Such Things as render the Fluids ſo acrid, as to corrode and deſtroy the Veſſels, may cauſe a Gangrene; ſuch as the long Stagnation of a pent-up and warm Humour, whence ariſe Acrimony and Corroſion: Hence Blood in an Aneuriſm, Pus in an Abſceſs, Water in the Cranium, the Thorax, the Abdomen, or the Scrotum; Contuſions, the Fluids diſcharg'd in wounded Parts; bad, morbid, acrid, and totally peccant Humours perpetually brought to the Parts, ſuch as Lymph long flowing about tendinous Parts, the Ichor of a Cancer, the Matter of a Dyſentery, or Dropſy; the Afflux of a febrile peſtilential, variolous, or ſcorbutic Matter to any fleſhy Part, eſpecially to the Gums.

The human Blood, and all the Humours ſecreted from it, except the Bile and Urine, in which, by Stagnation, Acrimony is either produc'd, or, at leaſt, much augmented, are in a State of Health of ſo mild a Nature, as to produce no Pain when dropt into the Eye, or a recent Wound. This Condition of the Humours was requiſite, that they might paſs with a ſufficiently rapid Motion thro' the tender Veſſels. If, therefore, by whatever Cauſe, the Fluids ſhould become acrimonious, the Veſſels will be deſtroy'd, the vital Influx and Efflux of the Humours prevented, and, conſequently, a Gangrene form'd. Hence, under the Article INFLAMMATIO, the Acrimony of the Humours is juſtly claſs'd among the Cauſes which make an Inflammation tend to a Gangrene. The principal Cauſes of ſuch an Acrimony in the human Fluids are theſe:

Stagnation: The human Fluids, by means of Reſt and Heat alone, ſpontaneouſly tend to Putrefaction in the ſoundeſt Bodies; the Aliments, alſo, tho' they have naturally no Tendency to any Degree of Putrefaction, become putrid in twenty-four Hours. A ſound Man, when drown'd, becomes totally putrify'd in a few Days, only by the Stagnation of the Juices, and the Heat of the Atmoſphere. This Tendency to Putrefaction in our Humours is increas'd in proportion to the Degree of Heat, provided the Heat is not ſo intenſe as to diſſipate the Fluids, and render all the Parts dry: Thus, in an highly hot and dry Air, the Fleſhes of Animals do not ſoon become putrid, but are ſometimes ſo dry'd, as to be preſerv'd entirely from every Degree of Putrefaction; whereas in a hot and moiſt Air they become putrid very ſoon. Beſides, 'tis obſervable, that the ſtagnant Humours of the Body may be preſerv'd a long time without Putrefaction, if no Air is admitted to them: For this Reaſon, the Stagnation of the pent-up and warm Humour muſt be long continued, before it can produce its Effect.

Blood in an Aneuriſm: 'Tis certain from undeniable and well-vouch'd Obſervations, that Blood, becoming ſtagnant in the Sack form'd by the Dilatation of an Artery, has acquir'd ſuch a Degree of Acrimony, as not only to corrupt the ſoft Parts, but, alſo, totally to deſtroy the moſt ſolid Bones.

Pus in an Abſceſs: As to the Effects of Pus in an Abſceſs, ſee ABSCESSUS.

Water in the Cranium, Thorax, Abdomen, or Scrotum: 'Tis certain from daily Experience, that Water may be collected in the large and ſmall Cavities of the Body; whether this happens by a Rupture of the lymphatic Veſſels diſcharging their Contents, or in conſequence of the bibulous Veins not abſorbing the Matter exhal'd from the adjacent Parts into the Cavities: Such a Water may remain for a long time without Corruption, ſo long as no Air has Acceſs to it; but at laſt it begins to grow putrify'd, and corrode the Parts it touches. 'Tis certain from Obſervation, as will afterwards appear, that the Omentum, Liver, and Spleen, have been ſo long macerated in ſuch a Water, as to be quite decay'd and waſted; and, upon opening the Bodies of thoſe who have dy'd of that Species of Dropſy call'd *Aſcites*, an inſupportable Stench has been ſometimes perceiv'd by all who were preſent. But in no Caſe is a Gangrene more frequently produc'd by this Cauſe, than when that Species of Dropſy call'd *Anaſarca* ſeizes the Thighs and Legs; for as dropſical Patients are always cold, and frequently ſit much over the Fire, or keep their Feet warm by means of Stoves, the Epidermis is rais'd in Bliſters; and when theſe break, a large Quantity of Water is diſcharg'd, and the Patient is greatly reliev'd; but it frequently happens, that a Gangrene is form'd about thoſe Apertures by the Serum, which is now render'd more acrid by an Acceſs of the Air; the Membrana adipoſa, which was before highly diſtended, collapſes, becomes flaccid, and is partly corrupted by the Acrimony of the Serum, and partly mortify'd, in conſequence of the Weakneſs of the vital Influx.

As for Contuſions, and the Fluids diſcharg'd in Wounds; ſee the Article CONTUSIO.

As for an acrid, morbid, and totally peccant Humour acting upon the Parts; that ſound and mild Humours may become acrid by Stagnation, is obvious from what has been already ſaid; but it ſometimes happens, that the Blood, and Fluids ſecreted from it, become acrimonious, tho' they circulate in a natural and legitimate Manner. 'Tis true, there is rarely or never a great Degree of Acrimony in the Blood itſelf, otherwiſe the tender Veſſels would ſoon be deſtroy'd. Sometimes, however, there is a certain Degree of Acrimony in it, which does not produce any ſenſible Effects ſo long as it is mix'd with the whole Maſs of Blood; but, when it is ſecreted from it, and collected in particular Parts of the Body, it often produces the moſt terrible Effects: Thus, for Inſtance, ſo long as the Taint of a Venereal Lues remains mix'd with the circulating Humours, it ſcarcely gives any Proofs of its Exiſtence in the Body; but, when this latent Poiſon is depoſited on ſome Parts, it corrodes them ſo violently, that the hardeſt Bones are not Proof againſt its virulent Quality. If, therefore, any Matter of an acrid and morbid Quality lodg'd in the Blood is depoſited in particular Parts of the Body; or, if the Humours ſecreted from the Blood being more acrid than uſual, act for a conſiderable time upon any Part, 'tis obvious that the Veſſels may be corroded and deſtroy'd by theſe Means; and, conſequently, the vital Influx and Efflux of the Humours will be obſtructed; that is, a Gangrene will be form'd.

As for Lymph acting for a long time upon tendinous Parts; 'tis ſhewn under the Article VULNUS, that in Caſes where the tenſe or tendinous Nerves are only partially cut, there often enſues a large Evacuation of a thin and acrid Serum; 'tis, alſo, there obſerv'd, that in ſuch Caſes a benign Suppuration never happens, but that ſinuous Collections of ſuch an ichorous Matter ſo corrupt the Fat lying between the Muſcles, that, becoming gangrenous, it often comes away in large Portions; and that the pinguedinous *Vaginæ* of the Tendons are deſtroy'd by this Means: Hence a future Immobility of the Muſcles is produc'd, and the Uſe of the Member frequently deſtroy'd. *Celſus*, in the twenty-ſixth Chapter of his fifth Book, calls this Matter an Ichor; for, ſays he, "A thin whitiſh Ichor is "diſcharg'd from malignant Ulcers, eſpecially when an Injury "done to a Nerve is ſucceeded by an Inflammation; whereas "the *Melicera* is thicker, more glutinous, whitiſh, and reſem-"bling white Honey. This Species of Matter is, alſo, diſ-"charg'd from malignant Ulcers, when the Nerves about the "Articulations are injur'd; and this happens in no Part ſo "frequently as in the Knees." But becauſe Wounds about the Joints are accompany'd with a Diſcharge of ſuch an Ichor, and which is often ſucceeded by an incurable Immobility of the Joint, *Hildanus*, in the third Chapter of his Treatiſe *de Ichore & Melicera*, has given this Diſorder the Name of *Hydrarthron:* And as in this Diſorder, the Patients perceive a burning Pain, they generally aſcribe this Symptom to the Acrimony of the diſcharg'd Lymph; tho', perhaps, this intenſe Pain ariſes from the ſlow Dilaceration of the nervous or tendinous Fibres. 'Tis, however, certain from many well-vouch'd Obſervations, that after a long-continued Diſcharge of ſuch

ſuch a Lymph about tendinous Parts, a Gangrene almoſt always enſues; whether this happens on account of the Acrimony of the Lymph; or whether, becauſe the Blood, when depriv'd of this diluting Vehicle, produces obſtinate Inflammations.

As for the Ichor of a Cancer; in this terrible Diſorder the Humours diſcharg'd are often ſo highly acrimonious, that, like Aqua-fortis, they not only burn the Linen Cloths apply'd, but alſo deeply corrode the adjacent Skin over which they run: But theſe acrimonious Humours have not only been found in the external, but alſo the internal Parts of Cancers; whence 'tis ſufficiently obvious, what terrible Evils muſt be produc'd, when ſuch virulent Humours prey upon the internal Parts of the Body.

As for the Matter of a Dyſentery; if the virulent Matter, for Inſtance, of a cancerous Liver, or Pancreas, falling into the Inteſtines, excites a continual Teneſmus, accompanied with violent Gripes, it is ſufficiently obvious, that, the Inteſtines being, by this means, corroded, a Gangrene may be produc'd. When the black Bile becomes turgid by the Heat of the Atmoſphere, the Motion of the Body, or any other Cauſe, atrabilarious Dyſenteries, accompanied with intolerable Pain, are produc'd, and, ſoon after, ſucceeded by a Gangrene of the Inteſtines, and at laſt a gentle Death, without any Pain.

As for the Water of a Dropſy; we have already obſerv'd, that the Serum of dropſical Patients is ſometimes totally evacuated by the Apertures caſually or artificially made in their Legs; but, that, during this Diſcharge, the Parts adjacent to the Apertures are often corrupted. Now it is certain, from medicinal Obſervations, that the ſame Serum is abſorb'd by the Veins, mix'd with the circulating Humours, and diſcharg'd by Stool and Urine. Thus *Hippocrates*, in his *Coac. Prænot.* informs us, "that dropſical Patients are reliev'd by a Diſcharge "of the Water from the Veins, by Stool and Urine." Now if, by a long Confinement and Stagnation, theſe Waters begin to become putrid, before they are abſorb'd into the Veins, the Putrefaction will be augmented, whilſt they are carried along with the Maſs of Blood through the Veſſels; and if they ſhould be diſcharg'd through the meſenteric Veſſels into the Cavity of the Inteſtines, the villous Coat of the Inteſtines will be macerated and waſted, whilſt this putrid Water continually acts upon it. Hence Putrefaction, Gangrene, and often Death, enſue. Hence the general Senſe of the above-quoted Paſſage of the *Coac. Prænot.* is limited by *Hippocrates*, in another Place: "For, ſays he, when a beginning Dropſy is ſucceeded by a "watery Flux without Crudities, the Diſeaſe is determin'd;" for, in this Caſe, a Putrefaction is not to be dreaded.

As for a febrile Matter; a Fever often ſo changes and alters the material Cauſe from which it draws its Origin, or by which it is ſupported, that the Integrity of all the Functions is reſtor'd without any ſenſible Evacuations: Sometimes, alſo, the peccant Matter, conceal'd in the Body, is ſo chang'd as to be render'd moveable: But, as this Matter would continue to diſturb the Functions, if it was retain'd, it is either eliminated from the Body, or depoſited, by way of Abſceſs, in ſome particular Parts of it. It is a matter of no Moment, whether what is thus depoſited by way of Abſceſs, exiſted before the Fever, or whether it was only form'd in the Body during the Time of the Fever; for in both Caſes it is call'd febrile Matter. When, therefore, this febrile Matter is depoſited, by way of Abſceſs, in particular Parts of the Body, it not only produces Eryſipelas, Phlegmons, and Suppurations, but, ſometimes, ſuffocates, and deſtroys the Life of a Part: Hence a Gangrene and Sphacelus quickly enſue.

As for a peſtilential Matter; all the Authors who have wrote of this terrible Diſorder, affirm, that if the virulent Matter was depoſited, by way of Abſceſs, in any Part of the Body, that Part would ſuddenly be deſtroy'd; ſo that, becoming mortified, and adhering to the live Parts, it muſt be afterwards ſeparated, by a Suppuration happening in the Circumference, or the Parts in which the mortified and ſound Fleſh are join'd to each other. Peſtilential Carbuncles are ſuch Marks on the Surface of the Body, that they appear as if made by Fire. But far more terrible were the Diſorders ſubſequent to that Plague among the *Athenians*, ſo beautifully deſcrib'd by *Thucydides*, in his ſecond Book of the *Peloponneſian* War, and with which he himſelf was afflicted; for, all on a ſudden, the ſoundeſt Perſons were ſeiz'd with this horrid Lues, accompanied with a Pain of the Head, together with a Redneſs and Inflammation of the Eyes. Soon after, their Tongue and Fauces became bloody, and their Breath nauſeous and fetid. Theſe Symptoms were ſucceeded by a Sneezing, and intolerable Hoarſeneſs; ſoon after, the Diſeaſe affected their Breaſt, and was attended with a violent Cough. Then ſucceeded a Vomiting of Bile, an uneaſy Hiccup, and an intolerable internal Heat; externally the Body did not appear very hot, but was rediſh, or livid, and full of minute Puſtules and Ulcers. Thus the Diſeaſe ſeem'd gradually to deſcend through all the Parts; and thoſe who ſurviv'd the ſeventh or ninth Day, the Diſeaſe deſcending to the Abdomen, died after being weaken'd by a violent Exulceration, and a copious Flux. But if the Fury of the Diſeaſe attack'd the Extremities of the Body, in this Caſe the Patients, indeed, eſcap'd the greateſt Dangers, and preſerv'd their Lives; but as they loſt their Hands, their Feet, their Eyes, and ſometimes their Pudenda, their Lives were more calamitous than Death would have been. *Galen*, alſo, in the fifth Chapter of his third Book *de Uſu Partium*, makes mention of a Plague which ſeiz'd the Feet.

As for variolous Matter; in the worſt Sort of the confluent Kind of the Small-pox, the whole Face is elevated in a gangrenous Bliſter; and, when the Pellicle is broken, a thin, and, often, an highly fetid Ichor is diſcharg'd, and the ſubjacent Skin and Membrana Adipoſa are miſerably prey'd upon by this gangrenous Matter. And *Van Sweiten* informs us, that he has frequently ſeen, what *Sydenham* before obſerv'd, that is, Bliſters rais'd on the Thighs of ſuch Patients, as large as an Hen's Egg, which, when broken, diſcharg'd a thin Ichor, or a bloody Sanies, and the ſubjacent Fleſh appeared highly black.

As for an Afflux of ſcorbutic Humours to any muſcular Part, eſpecially the Gums; in a Scurvy, it is pretty ſurpriſing, that the Coheſion of the Veſſels ſhould be ſo diminiſh'd, that they may be broken by the ſlighteſt Force. Thus, in Patients labouring under this Diſorder, rude Squeezing is always ſucceeded by an Ecchymoſis; ſince, in conſequence of a Rupture of the Veſſels, the Blood is diſcharg'd under the ſound Skin. And, even without any external Force, the Veſſels being ſpontaneouſly ruptur'd by the Motion of the adjacent Muſcles, or corroded by the acrid Blood, theſe ſcorbutic Spots appear blue, and ſometimes black; for, in this Diſeaſe, the diminiſh'd Coheſion of the Veſſels is always accompanied by an acrid State of the Blood. It is not, therefore, to be wonder'd at, if, in conſequence of a Deſtruction of the Veſſels, an Afflux of ſcorbutic Matter to any muſcular Part, eſpecially to the Gums, ſhould produce a Gangrene. In ſcorbutic Patients, malignant Ulcers of the Legs are frequently found to become gangrenous, and incurable by the beſt choſen Remedies. But in no Part are the Signs of a preſent Scurvy ſooner diſcover'd, no-where does this Diſorder more quickly corrupt the Parts, than about the Gums, which, when ſeiz'd with this Diſorder, become hot, painful, or itch, and, upon the ſlighteſt Touch, diſcharge Blood. Then here-and-there appear white Spots, red and inflam'd at the Circumference, which, if neglected, eſpecially in young Perſons, often ſpread, and prey upon all the adjacent Parts, and are accompanied with an intolerable Stench, and a copious Diſcharge of thin and fetid Saliva from the Mouth. In *Holland* this Diſeaſe is call'd the Water-cancer, becauſe, like a Cancer, it corrodes all around it, and is accompanied with a continual Diſcharge of Saliva. Unleſs this Diſorder is check'd in due time, which is moſt efficaciouſly done by Spirit of Sea-ſalt diluted in Water, as alſo with other foſſil Acids, or with the Brine of Sea-ſalt, it not only affects the Gums, but alſo the Cheeks, the Lips, and the Tongue. It alſo corrupts the Teeth and Jaw-bone, and makes them fall out. The free Acceſs of the Air, the Heat and Moiſture of the Place, together with the highly acrid, and often putrid, Lymph acting on the Parts in a malignant Scurvy, greatly augment the Corruption already begun.

Thirdly, Thoſe things which produce a Mortification of the Extremities, ſuch as the languid State of Old-age, great Weakneſs, violent Contuſions of large Nerves, of the Spina Dorſi, of the ſpinal Marrow, and large nervous Ganglions, will cauſe a Gangrene.

As a Gangrene is ſuch a Condition of the ſoft Parts of the Body, as, by a Deſtruction of the Influx of the vital Humour into the Arteries, and their Efflux by the Veins, tends to a Mortification, it is ſufficiently obvious, that this Diſorder muſt be produc'd, when the Cauſes which move the Humours through the Veſſels, become ſo weak, that they cannot continue this Motion to the Extremities of the Body. But the Force of the Heart filling and dilating the Arteries, together with the Energy of the Arteries, by which they contract themſelves, and propel the Blood through their narroweſt Parts into the Veins, are the Cauſes which carry on and finiſh the Motion of the Blood through the Veſſels. But the Return of the venous Blood to the Heart is promoted by the Action of the Muſcles adjacent to the Veins: When, therefore, in Old-age, or great Weakneſs, produc'd by any Cauſe, the Force of the Heart is ſo impair'd, that it cannot, by the impel'd Blood, dilate the Arteries to the very Extremities of the Body, this languid State of Old-age begins, and hence a Gangrene of the Extremities ariſes. Beſides, ſuch a Flexibility is requiſite in the Arteries, that they may yield, and be dilated by the Blood impel'd from the Heart; and, at the ſame time, ſuch a Strength, that, when the Action of the Heart ceaſes, they may, by their Elaſticity, and the Action of the muſcular Fibres, propel the Blood contain'd in their Cavities. Hence it is evident, that the ſame Effect may

be

be produc'd by the oppoſite Faults of the ſolid Fibres, and of the Veſſels compos'd of them; that is, an Impediment to the equable Motion of the Blood, and Stagnation.

It is ſhewn, under the Article FIBRA, that the Motion of the Humours through the Veſſels is hinder'd by too great a Weakneſs and Laxity of the Fibres; as alſo, that the ſame Misfortune may be produc'd by their too great Rigidity.

But, in decrepit Old-age, when many Canals, which, in Youth, were pervious, are concreted, the Veſſels become too ſtrong and callous, by which means they reſiſt Dilatation. Hence, at laſt, the Heart is no longer able to evacuate the Blood contain'd in its Cavities; and is, therefore, oppreſs'd, and its Motion ſtopt.

Another Cauſe of an incurable Gangrene is, when the Arteries, though the Force of the Heart remains entire, become ſo rigid, and ſometimes bony, that they can neither yield to the Blood impel'd from the Heart, nor contract themſelves.

Why Gangrenes ſhould be produc'd by violent Contuſions, or other Wounds of large Nerves, nervous Ganglions, the Spina Dorſi, or the ſpinal Marrow, is ſhewn under the Article VULNUS.

Fourthly, Poiſons of a particular and ſurpriſing Quality, may produce Gangrenes.

Beſides the Cauſes of a Gangrene already enumerated, there are ſtill others, which could not be reduc'd to the former Claſſes; for there are in Nature ſuch Subſtances, as, being applied to the human Body, infallibly and ſpeedily produce not only the Mortification of the particular Part, but alſo of the whole Body; though we are ignorant of the real Manner in which they produce their Effects.

We obſerve, that, in particular Diſeaſes, a Matter of ſo hoſtile a Quality to the human Conſtitution is ſometimes form'd, that it forthwith produces a Mortification in the Part where it is depoſited. Thus, the Small-pox is ſometimes capable of converting the whole Body into a gangrenous Corruption, even in the ſoundeſt Habits. Beſides, medicinal Obſervations convince us, that the ſlighteſt Bites of venomous Animals are capable of producing a Gangrene, and Sphacelus.

The Signs of a future Gangrene are its preceding Cauſes, already enumerated.

Theſe have been already conſider'd, ſo that we now come to treat of thoſe Signs by which a preſent Gangrene is known, and diſtinguiſh'd from an Inflammation, which frequently precedes it, as well as from a Sphacelus, which is ſometimes ſubſequent to it.

The Signs of a preſent Gangrene are, firſt, A Removal of the Symptoms of Inflammation, without any Correction of the Cauſe. Secondly, A faint Senſation of the Part. Thirdly, A pale, cineritious, dark, livid, or black Colour. Fourthly, Such a ſoft and flaccid State of the Part, that it does not riſe when compreſs'd by the Fingers. Fifthly, Puſtules, full of a lymphatic, yellowiſh, or rediſh Ichor, in the inflam'd Part. Sixthly, When a Gangrene is produc'd by Cold, an Itching, and violent Senſe of Puncture, together with an intenſe Redneſs, which is ſoon ſucceeded by a Blackneſs, which indicates Mortification.

If thoſe things which have been ſaid concerning the preceding Cauſes, the Nature, and Seat of a Gangrene, are well underſtood, it will be no difficult Taſk to diſcover, whether a Gangrene is preſent, or not, by the following Signs.

Firſt, *The Symptoms of the Inflammation* ariſe from the Principle of Life forcing the Blood into the obſtructed Veſſels with great Celerity, as is ſhewn under the Article INFLAMMATIO, where theſe Symptoms are enumerated. If, therefore, theſe Symptoms increaſe every Moment, and, at laſt, ceaſe all of a ſudden, we know that they have not ceas'd in conſequence of a Correction of the Cauſe; that is, a Reſolution of the inflammatory Concretion; becauſe this never happens, except when all the Symptoms of the Inflammation are highly gentle. Nor in this Caſe can there be a Suppuration; becauſe by it the Symptoms of an Inflammation are not deſtroy'd, but gradually, and not ſuddenly, chang'd and alleviated. Much leſs could a Scirrhus be expected in this Caſe; ſince in it all the Symptoms are much more ſlowly chang'd. It, therefore, only remains, that the Inflammation muſt terminate in a Tendency to a Gangrene, that is, the Death of the Part. But, why, in this State, the Symptoms accompanying an Inflammation ſhould ceaſe, is ſhewn under the Article INFLAMMATIO. When an Inflammation ſeizes the external Part of the Body, the Change of Colour, and the other Signs of a Gangrene, produc'd by the Inflammation, may be perceiv'd by our Senſes. But, when this Diſorder ſeizes the internal Parts, the State of it is to be judg'd of by the Heat, the Pain, the Fever, and the ſudden Removal of the Symptoms.

Secondly, *As to the languid Senſation of the Part*; the inflam'd Part was highly painful, in conſequence of the Diſtraction of the nervous Fibres diſtributed through the Coats of the diſtended Veſſels. When, therefore, the diſtending Cauſe, that is, the vital Influx of the Humours into the Veſſels, ceaſes, the Pain will be remov'd, or, at leaſt, conſiderably diminiſh'd; for it ſometimes happens, that, when the Membrana Adipoſa is corrupted by a Gangrene, the Skin is not as yet mortify'd. Hence ſome Senſation will remain in it, as well as in the ſubjacent Parts, which, by the Interpoſition of this mortify'd and inſenſible Subſtance, but faintly perceive the Action of external Bodies.

Thirdly, *As to the Paleneſs, or other Variations of the Colour*; 'tis ſhewn under the Article INFLAMMATIO, that the inflam'd Part is red, and the Skin ſhining, in conſequence of its Tenſion. But, as ſoon as the Motion of the Humours thro' the inflam'd Parts is deſtroy'd, the florid red Colour begins to be loſt, a Paleneſs enſues, which is ſucceeded by a cineritious, a dark, or a black Colour; ſo that, according to the various Colours of the Part affected, there is a different Degree of Corruption, which is always worſe, in proportion as it recedes from Paleneſs, and tends to that Blackneſs which indicates a Mortification.

Fourthly, *As to the Softneſs and flaccid State of the Part*; ſo long as the Inflammation laſts, there is in the Part a hard and reſiſting Tumor, which, when preſs'd, forthwith reſtores itſelf; becauſe the Blood, acting on the obſtructed Veſſels, diſtends all around them: When, therefore, this Force is remov'd, the Part, being now mortify'd, becomes flaccid; and the Membrana Adipoſa, before highly diſtended, appears ſoft, and retains the Impreſſion of the Fingers: If, in this State, the Part is touch'd, a viſcid Matter ſeems to fluctuate under the Skin, or, at leaſt, a manifeſt Vacillation of the Parts under the Skin is perceiv'd, which is only owing to the Corruption of the Membrana Adipoſa, of which large Portions come away, when, by a benign Suppuration, the mortify'd Parts are ſeparated from ſuch as are ſound.

Fifthly, *As for Puſtules on the inflam'd Part*; this is generally accounted the pathognomic Sign by which a preſent Gangrene, in the external Surface of the Body, may be known; for, as is ſhewn under the Article INFLAMMATIO, whilſt the Inflammation degenerates into a Gangrene, the Veſſels are ſuddenly ruptur'd, and the Humours diſcharg'd will be ſoon corrupted; the Connection between the tender Epidermis, and ſubjacent Skin, is deſtroy'd; and the former, by the diſcharg'd Humours, is rais'd in Puſtules, which are turgid with a yellowiſh, or, ſometimes, a rediſh Ichor, like the Waſhings of Fleſh. But, in the worſt Kinds of Gangrenes, which ſoon tend to a Sphacelus, theſe Bliſters are full of a black Ichor.

Sixthly, *As for Gangrenes produc'd by Cold*; this peculiar Species of Gangrene is known by diſtinct Signs in the Northern Climates: When the Winters are ſevere, miſerable Inſtances of it frequently occur; for the Extremities of the Body, ſuch as the Toes, the Fingers, the Tip of the Noſe, and the Lobes of the Ears, are, by the intenſe Cold, ſo corrupted with a Gangrene, as to fall off. This Diſorder proceeds in the following manner: By the Cold, is firſt produc'd a Paleneſs, which is ſucceeded by a Redneſs, accompanied with a troubleſome pungent Pain, or an uneaſy Itching. Then the Redneſs is increas'd almoſt to a purple Colour. Then the Part affected becomes black, and, being corrupted with a true Sphacelus, as far as the Bone, at laſt falls off. But, becauſe a Gangrene, ariſing from this Cauſe, ſoon mortifies the Parts, and requires a widely different Method of Cure from other Gangrenes, we are, therefore, to be highly careful, that no Error be committed with reſpect to the Diagnoſtic of this Diſorder.

A future Sphacelus is known by the continual Augmentation of the Signs of a preſent Gangrene.

We have already obſerv'd, that a Gangrene is generally previous to a Sphacelus, which ſucceeds it: If, therefore, all the Signs of a preſent Gangrene, already enumerated, are increas'd, we know that a Sphacelus is to be dreaded; for the gangrenous Parts may, by compreſſing the ſubjacent live Parts, ſuffocate them, or corrupt them by their ſpreading Putrefaction.

The Signs of a preſent Sphacelus are, firſt, A violent previous Gangrene. Secondly, A Ceſſation of Senſation and Motion; ſo that the Part, when cut, prick'd, or burnt to the Bone, feels nothing, but remains inſenſible. Thirdly, A livid, dark, or black Colour. Fourthly, Softneſs, Flaccidity, Coldneſs, a Separability of the Skin; at laſt, Dryneſs and Hardneſs. Fifthly, A cadaverous Stench. Sixthly, A mortify'd deep-ſeated Corruption, preying on all the adjacent Parts, as far as the Bone.

As for a previous Gangrene; this Sign ought only to awaken the Attention of the Phyſician or Surgeon; for a violent Gangrene is not always ſucceeded by a Sphacelus, which, however, is juſtly to be dreaded.

As to the Ceſſation of the Senſation in the Part; it is frequently no eaſy Taſk to determine, whether a Sphacelus is preſent or not; for ſometimes the Membrana Adipoſa, ſeiz'd with a violent Phlegmon, is diſtended to an incredible Thickneſs, even in thoſe Parts where there is no great Quantity of Fat, ſuch as the Back of the Hand, the Fingers, and the upper Part of the Foot. If a Gangrene ſeizes theſe Parts, a Knife may be thruſt very deep into them without exciting any Senſe of Pain. The diſtended Membrana Adipoſa, pent up by the ſound Skin, may alſo ſo compreſs the ſubjacent Parts, as to render their Senſation faint, or ſcarce any at all, though they are not as yet entirely mortify'd; and may again revive, when freed from this Compreſſion. Hence we cannot conclude, that a Sphacelus is preſent, unleſs we are ſure, from the deepeſt Scarifications and Punctures, that no Degree of Pain is excited; for, if there are any live Parts under the Membrana Adipoſa corrupted by the Gangrene, a Separation of the corrupted Parts may ſtill be expected. Beſides, 'tis to be obſerv'd, that a Power of Motion frequently remains in a Part, though 'tis entirely corrupted by a Sphacelus.

As to the livid, dark, or black Colours; theſe are already conſider'd.

As to the Softneſs, Flaccidity, and other Conditions of the Parts; why any Part of the Body, affected with a Gangrene and Sphacelus, ſhould become ſoft and flaccid, is alſo already explain'd. But, ſince Heat is produc'd by the Motion of the Fluids through the Veſſels, when this Motion is deſtroy'd, the Part thus affected muſt neceſſarily be reduc'd to the ſame common Temperature with the circumambient Air; but then it is ſaid to be cold, becauſe the Heat of a ſound Body always exceeds that of the Atmoſphere. But, ſo long as only a Gangrene is preſent, the ſubjacent Parts, as yet alive, may, by their Heat, convey a gentle Warmth to the Part affected; but, when, as deep as the Bone, the vital Influx totally ceaſes, 'tis obvious, that a Coldneſs of the Part muſt be produc'd.

In this Caſe, the Epidermis is always ſeparated, which is highly tough, and not eaſily corrupted by Putrefaction. Thus, alſo, upon Burns, or the Application of Cantharides, the Epidermis remains entire; but as ſoon as its Connection with the Skin is deſtroy'd, it is rais'd in Bliſters by the diſcharg'd Humours: And, even, when any Part of the human Body is macerated in Water, till it becomes putrid, the Epidermis is not corrupted, but ſeparates from the ſubjacent Parts reſolv'd into a putrid Matter.

But though, in a beginning Sphacelus, the Part affected ſhould appear ſoft and flaccid, yet afterwards, when the moſt fluid Parts are diſſipated, all the reſt are ſo dry'd and contracted, as to appear very hard; for the ſame happens to Parts corrupted by a Sphacelus, which happens to the Fleſh of kill'd Animals long ſuſpended in the Air, and which is obſerv'd by thoſe, who, in order to train up a Breed of fierce Dogs, feed them with the Fleſh of Horſes; for, firſt, this Fleſh is reduc'd to a putrid Matter, which afterwards becomes incredibly hard: And, in parch'd and dry old Bodies, a ſphacelated Part may, for a great while, be preſerv'd without Putrefaction; but it will be dry.

As for a cadaverous Stench; this muſt neceſſarily happen; becauſe the ſphacelated Part is as much acted upon by the Heat of the common Air, as a Carcaſe: Hence the like fetid Smell, and Corruption, will be produc'd in both.

As for a mortifying and deep-ſeated Corruption; as, in a Carcaſe, by a ſpontaneous Principle of Corruption, all the Parts are deſtroy'd, except the Bones, which have been found to remain for Ages; ſo, in a Sphacelus, all the ſoft Parts, unleſs dry'd, are converted into a putrid Matter, and ſeparated from the Bone. 'Tis alſo obſervable, that, in a Sphacelus, unleſs a kind of Limit is plac'd, either by Nature or Art, between the mortify'd and live Parts, and unleſs the ſoft Parts, by a Chaſm form'd at this Boundary, recede from each other, the mortifying Corruption proceeds to prey upon all the adjacent Parts, and that ſo much the ſooner, the more briſk the Principle of Life is. Hence it is, that, in young Bodies, eſpecially when a ſtrong Fever is preſent, a Sphacelus ſpreads ſo ſoon; but, in decrepit Old-age, the Diſorder is often ſupported for a long time, provided the Part is preſerv'd from Corruption by Antiſeptic Medicines; for the Fluids, propel'd through the Veſſels to the Sphacelus, are ſtopt, and the corrupted Miaſmata are abſorb'd by the Veins. Hence the live Part, contiguous to that which is mortify'd, is farther affected. *Celſus*, in the twenty-ſixth Chapter of his fifth Book, beautifully deſcribes the Progreſs of a Gangrene and Sphacelus in the following Words: "In "this Species of Ulcer the Fleſh is black, or livid, but dry "and parch'd, and the external Skin is generally full of "blackiſh Puſtules; then that which is next to it, is pale, or "livid, and almoſt æruginous, and without Senſation. 'Tis "ſtill worſe in an Inflammation, ſince all the Symptoms "ſpread at once; the Ulcer into the puſtulous Place; the "Puſtules into that which is pale or livid; the pale or livid "Part into that which is inflam'd; and that which is inflam'd, "into that which is ſound."

The imminent and ſpeedy Danger of this Diſorder requires juſt Prognoſtics.

As ſoon as the Signs of a preſent Sphacelus appear, after duly weighing all Circumſtances, we ought, without Delay, to reſolve upon the Meaſures to be taken in order to preſerve the Life of the Patient. If nothing remains but the Extirpation of the mortified Part, that is to be ſet about with all poſſible Expedition; ſince, in the Space of an Hour or two, the Diſorder may ſpread ſo far as to admit of no Cure: Frequent Inſtances of this occur in the Writings of practical Authors.

Theſe juſt Prognoſtics are to be taken, firſt, From a due Conſideration of the Age, Temperament, Diſorder, and Strength of the Patient. Secondly, From the quick-ſpreading Nature of the Diſeaſe. Thirdly, From a Knowledge of the internal or external Cauſe. Fourthly, From the Seaſon of the Year. Fifthly, From the Part affected, according as it is more or leſs neceſſary to Life; or according as it is moiſt, ſinuous, or dry.

In order to form a due Prognoſtic of what is to be either fear'd or expected, the following Circumſtances are to be attended to:

The Age of the Patient: As in young Perſons the Fluids predominate over the Solids, almoſt all the Parts are capable of being diſſolv'd. Hence it is, that in them the Progreſs of a Putrefaction, once begun, is often ſo quick. This is highly obvious in that Gangrene of the Gums by ſome call'd the *Water-cancer*, which, in this Age, ſoon preys upon all the adjacent Parts. In middle-aged Perſons a Gangrene, and Sphacelus, only ſucceed violent Inflammations, or are ſometimes obſerv'd to happen in acute Fevers. But in Old-age theſe Misfortunes happen from an Exceſs of Reſt, and a Defect of ſufficiently ſubtile Fluids; in which Caſe they are rarely or never cur'd, becauſe the Cauſe producing them cannot be corrected.

As for the Temperament of the Patient. This is either ſound or morbid. Thus, in Perſons of a fat Temperament, if a Sphacelus is produc'd, unleſs, either by Nature or Art, a Stop is put to the ſpreading Evil, it will ſoon prey upon all the adjacent Parts. But in Perſons of cold Habits, all other Conditions being alike, the Progreſs of a Gangrene and Sphacelus is obſerv'd to be ſlower. But if a morbid Temperament, tending to Putrefaction, predominates, as in a putrid Scurvy ariſing from a Species of black Bile, the worſt Conſequences are to be dreaded.

As for the particular Circumſtances of the Diſorder; the Prognoſtics are alſo to be drawn from them. Thus, for Inſtance, after a long-continued Dropſy, a Gangrene of the Feet is rarely cur'd. But when, in an acute Diſeaſe, the febrile Matter ſeizes the Extremities, and renders them totally mortified, there is great Hope, that, if the other Signs are ſalutary, the Patient may eſcape, though depriv'd of that Member.

As for the Strength of the Patient; it is carefully to be obſerv'd, that, after the quickeſt Motion of the Humours in a burning Fever, and after their Stagnation and Reſt, in decrepit Old-age, a Gangrene and Sphacelus ariſe. In the former Caſe, the ſtronger the vital Powers are, the Diſorder will ſpread the ſooner; but, in the latter, the weaker the vital Principle is, the leſs Hopes remain. But it is ſufficiently obvious, that great Weakneſs is more to be dreaded, than too quick a Motion of the vital Humours through the Veſſels; ſince the latter may be diminiſh'd by proper Remedies. But, to rouſe the languid and drooping Strength, eſpecially in decrepit Old-age, is not only a Taſk far more difficult, but often abſolutely impoſſible.

As for the quick-ſpreading Nature of the Diſorder; the Progreſs of an Inflammation, which may be cur'd by a benign Reſolution, is never quick, but all the Symptoms are ſlowly, or ſcarce at all, augmented. When it tends to a Suppuration, the Heat, the Pain, and Redneſs, are more quickly increas'd; but moſt quickly of all, when it is about to degenerate in a Gangrene; and, in a Gangrene, the Danger is greater, the more quickly it ſpreads; the ſame, alſo, holds true in a Sphacelus. Skilful Surgeons, therefore, juſtly dread this Diſorder, when it ſpreads quickly, eſpecially when the Gangrene ariſes from internal Cauſes.

As for a Knowledge of the internal or external Cauſe; this is neceſſary, becauſe it enables us to know, whether ſuch a Cauſe is capable of being remov'd, or not. Thus, for Inſtance, if we know, that a ſcirrhous Tumor ſo compreſſes the *Vena cava deſcendens*, that a Gangrene, in the inferior Extremities, muſt be produc'd by it, 'tis ſufficiently obvious, that the Diſorder is incurable. But if, by lying long in Bed, the Weight of the Body has ſo compreſs'd the Os Sacrum, and the Os Coccygis,

as to produce a Gangrene, the Progreſs of the Diſorder may be ſtopt by changing the Situation of the Body; and, by proper Remedies, the corrupted Part may be ſeparated from thoſe which are ſound.

As for the Seaſon of the Year; 'tis certain, that a Gangrene may be produc'd by intenſe Cold, as well as by exceſſive Heat, whether excited by the Application of Fire, or by a violent Inflammation. The beſt Seaſons, therefore, are thoſe in which there is neither a pinching Cold, nor a ſcorching Heat; that is, the Spring, or Autumn. But the Winter-ſeaſon is highly prejudicial to thoſe Gangrenes produc'd by the Languor of old Age. Whereas the Summer is, in a peculiar manner, hurtful to thoſe Gangrenes which are ſubſequent to violent Inflammations, or putrid Corruptions of the Humours; and eſpecially, if an intenſe Heat is accompanied with a moiſt State of the Atmoſphere.

As for the Part affected; unleſs a beginning Gangrene is ſuddenly check'd, the Solids are deſtroy'd, the Fluids extravaſated, and corrupted; by which means the Part is ſo putrefy'd, that its Soundneſs cannot poſſibly be reſtor'd. In this Caſe, the only remaining Step to be taken is, with all Expedition, to ſeparate the mortify'd from the adjacent live Parts. If the Part affected is of ſuch a Nature, that its Soundneſs is abſolutely requiſite to Life, 'tis ſufficiently obvious, that no Hopes of Recovery are left: When, for Inſtance, the *Cerebellum*, the *Medulla oblongata*, or the *Medulla Spinalis*, are corrupted by a Gangrene. Beſides, the Cure will be more difficult, when a Gangrene is produc'd in moiſt Parts of the Body; for the Putrefaction produc'd, will be much increas'd by the continual Afflux of the Humours. Hence it is, that Gangrenes, in the internal Parts of the Mouth, are with ſo much Difficulty cur'd, ſpread ſo ſoon, and are accompanied with ſo intolerable a Stench. But, when the Part affected is ſinuous, ſuch as the Genitals in both Sexes, or the *Inteſtinum Rectum*, 'tis always to be dreaded, leſt the mortify'd Part ſhould, with Difficulty, be ſeparated from that which is alive: And tho' this Separation ſhould happen, yet 'tis ſtill to be dreaded, leſt the Diſorder ſhould degenerate into a fiſtulous Ulcer. But when the dry and tendinous Extremities of the Body are corrupted by a Gangrene or Sphacelus, in old Perſons, or others of a naturally dry Conſtitution, the like Misfortunes happen; the Diſorder, however, ſpreads more ſlowly, nor will ſo great a Putrefaction enſue. But the Separation of the corrupted Parts from thoſe which are ſound and alive, will be more difficult, becauſe this muſt be carry'd on by the ſound Fluids convey'd in a due Quantity, and with a ſufficient Impetus, to the Limits of the Gangrene.

From what has been ſaid, ſome Axioms, which in theſe Diſorders conſtitute the juſt Prognoſtic, may be deduc'd; and are as follows:

From a Gangrene ariſes a Sphacelus.
From a Sphacelus, the Mortification of the Part, and the ſudden Infection of the adjacent Parts.
A Gangrene is to be reliev'd with all Expedition.
A Sphacelus is to be extirpated with all Expedition.

A Sphacelus ariſes from a Gangrene. As a Gangrene generally poſſeſſes only the *Membrana Adipoſa*, it is generally previous to a Sphacelus; for frequently under the *Membrana Adipoſa*, already highly tumid, and corrupted by a Gangrene, the Muſcles remain alive, and the Perioſteum and Bone ſound. But 'tis ſufficiently obvious, that a Gangrene may, by its Bulk, ſo compreſs the adjacent live Parts, or ſo affect them by the Propagation of the Diſorder, as to render them mortify'd, in which Caſe a Sphacelus ariſes from a Gangrene.

From a Sphacelus the Mortification of the Part, and the ſudden Infection of the adjacent Parts. So long as there is any Circulation of the Humours thro' the Parts of the affected Member, a Sphacelus is not preſent, and there ſtill remain ſome Hopes, that the corrupted Parts may be ſeparated from thoſe which are ſound: But, when the Influx and Efflux of the vital Humours is totally deſtroy'd, the Mortification of the Part is produc'd. But this mortify'd Part adheres to thoſe which are ſound; and frequently the ſame Cauſes which produc'd the Sphacelus, continue to deſtroy the adjacent Parts: And, tho' theſe Cauſes ſhould ceaſe, the adjacent Parts will nevertheleſs be ſoon infected; for the Fluids, by reaſon of the Continuity of the Veſſels, will be convey'd to the corrupted Part. Hence they will act on this Putrefaction every Moment, and become ſtagnant, becauſe, in conſequence of the Mortification of the Part, they cannot paſs thro' its Veſſels. But, by reaſon of the Continuity of Subſtance, the Diſorder will ſpread in the ſolid Parts.

A Gangrene is, with all Expedition, to be reliev'd: For, as *Galen* obſerves, a Gangrene is in an intermediate State between a violent Inflammation, and a Sphacelus. Since, therefore, a Gangrene tends to a Mortification of the Part, that is, a Sphacelus; 'tis for this Reaſon to be remov'd as ſoon as is poſſible.

A Sphacelus is to be extirpated with all Expedition: For, by the ſpreading of the Diſorder, the ſound and live Parts will be ſoon affected. Hence, the longer the Extirpation is delay'd, the more of the Body muſt of courſe be loſt. It cannot, however, be deny'd, that there are medicinal and chirurgical Obſervations, which ſhew us, that Nature has, in ſuch Caſes, perfected a Cure, where Extirpation ſeem'd abſolutely neceſſary. Many Inſtances occur, which inform us, that ſphacelated Parts have been ſpontaneouſly ſeparated from the Sound. But it more frequently happens, that the Sphacelus ſpreads, and ſoon proves mortal, unleſs extirpated in due Time. Since, therefore, a ſphacelated Part muſt be always remov'd, whether by ſpontaneous Separation, or Extirpation; and ſince the Event is highly dubious, when committed to Nature, it appears that this Axoim is true, that a Sphacelus is forthwith to be extirpated. Theſe Caſes, however, inform us, that we are not abſolutely to deſpair, even in Inſtances where the Extirpation cannot be made, either on account of extreme Weakneſs, or any other Cauſe. In Caſes of this kind, the Strength is to be ſupported by good Aliments, and Cardiacs. The Part affected is, in the mean time, to be dreſs'd with ſuch Things as prevent and correct all Putrefaction.

A Gangrene of the Brain, Viſcera, and Bladder, is mortal, and, in acute Diſeaſes, proves the Cauſe of a ſudden Death, whilſt the larger Parts ſcarcely appear to be injur'd.

As for a Gangrene of the Brain; if we conſider how ſoft and tender the Subſtance of the Brain is, it will appear ſufficiently obvious, that a Gangrene produc'd in it muſt ſoon reduce it to a putrid Maſs. Nor in this Caſe is a Depuration poſſible, tho' the mortify'd Parts were ſeparated from the ſound, ſince the hard Cranium muſt on all Sides prevent the Diſcharge. Under the Article CAPUT, it is ſhewn, that a great Part of the Brain, eſpecially of its cortical Subſtance, has ſometimes been deſtroy'd by Wounds, fungous Excreſcences, or Suppuration; Life, in the mean time, being preſerv'd, and no Diſorder of the Functions of the Brain remaining. 'Tis alſo ſhewn, that, by an Evacuation from the Ears or Noſe, all thoſe Symptoms have been reliev'd which generally ariſe from a Diſcharge of Humours compreſſing the Brain under the Cranium. But in order to preſerve a Man, whoſe Brain is affected with a Gangrene, a great Number of lucky Circumſtances muſt concur, which rarely happen ſingly and apart; for the Gangrene muſt be ſtopt, and the corrupted Parts ſeparated from thoſe which are as yet ſound. Then the ſeparated Part muſt no longer continue to infect the tender Pulp of the Brain, which is contiguous to it: So that it muſt be evacuated by ways, which the Induſtry of Anatomiſts has not as yet diſcover'd, tho' ſome Obſervations ſeem to evince, that there are ſuch ways, tho' not naturally, yet in certain Diſeaſes. It would be, alſo, neceſſary, that the Portion of the Brain, deſtroy'd by the Gangrene, ſhould be reſtor'd. If all theſe Circumſtances are duly conſider'd, it will ſufficiently appear, that no Hope remains, when the Brain, and much more the Cerebellum, or Medulla oblongata, are ſeiz'd with a Gangrene.

As for a Gangrene of the Viſcera; ſince a Gangrene deſtroys thoſe Parts of the Body on which it ſeizes, and often ſpreads itſelf very quickly, unleſs ſeaſonably check'd, it is ſufficiently obvious, that ſcarcely any Hopes of a Recovery are left, when this Diſorder ſeizes the Viſcera, eſpecially thoſe whoſe Subſtance is ſoft; ſuch as the Liver and Spleen, which, in a ſhort time, will be reduc'd to a putrid Maſs. But if the vital Viſcera, lodg'd in the Cavity of the Thorax, are, after violent Inflammations, ſeiz'd with a Gangrene, Death ſeems unavoidably to follow, becauſe Life is, as it were, check'd in its firſt Spring and Source. Thus, *Hildanus*, in the fourth Chapter of his Treatiſe *de Gangræna & Sphacelo*, informs us, that, in his own Son, who dy'd of a Retention of Urine, he found the Kidneys, and adjacent Parts, affected with a Gangrene. 'Tis, however, certain from Experience and Obſervation, that every Gangrene of the Viſcera does not prove mortal; for, if the Viſcera affected are of a firm and membraneous Subſtance, ſuch as the Inteſtines, for Inſtance, and if the Separation of the corrupted gangrenous Part from the live Parts is not only poſſible, but alſo its Elimination from the Body, the Patients are often preſerv'd. In thoſe Viſcera, therefore, whoſe firm Subſtance is not eaſily reſolv'd into a putrid Maſs, and in which the Elimination of the gangren'd Part may be expected, a Gangrene is highly dangerous, but not always productive of certain and infallible Death.

As for a Gangrene of the Bladder; violent Inflammations, or other Injuries, of the Bladder, produc'd by Wounds, or Lacerations in rude Extractions of the Stone, are ſucceeded by Gangrenes, which generally terminate in an unlucky manner; partly becauſe the acrid Urine, always acting on the Bladder thus affected, augments the Putrefaction already form'd; and partly becauſe the Bladder, being furniſh'd with an incredible Number of Nerves, ſurpriſingly affects the Brain, and all the nervous Syſtem.

Now, if, in acute Diſeaſes, the Humours render'd immoveable by an inflammatory Denſity, or by an *Error Loci* lodging in Veſſels they ought not to be in, ſhould ſo obſtruct the tender Veſſels of the Brain, on which Life and the animal Functions depend,

depend, as totally to deſtroy the Influx and Efflux of the vital Humours, ſudden Death will enſue, nor can any ſenſible Injury be diſcover'd, becauſe theſe minute Parts eſcape the Cognizance of our Senſes. It is a matter of no Moment, whether the Diſorder immediately ſeizes theſe Parts, or whether the Inflammation has been tranſlated from other Parts of the Body to the Brain.

This is the Reaſon why *Hippocrates* ſo carefully collected all the Signs, by which a future Delirium might be prognoſticated, in order to prevent a Misfortune; which, when it happens, generally produces certain Death. Thus, in a continued Fever, *Van Sweiten* informs us, that he knew a Pain ariſe in one of the Patient's Legs, which ſuddenly diſappear'd; but, immediately after, a Phrenitis ſeiz'd the Patient, and carried him off on the third Day. In the Writings of *Hippocrates* there are ſeveral Caſes, which confirm this. Thus, in the third Book of his *Epidemics*, *Ægrot.* 5. he gives us the Caſe of *Phalacrus* of *Lariſa* [the bald Man] in the following Words: "He was ſuddenly ſeized with a Pain in his Right Thigh, which yielded "to no Remedies; the firſt Day an acute burning Fever came "on by ſlow Degrees, by which the Pains were alleviated; the "ſecond Day the Pains of his Thigh were ſtill more mitigated; "but his Fever increas'd, and he became reſtleſs, and could "not ſleep. His extreme Parts were cold, and he diſcharg'd "a large Quantity of Urine, but not of a laudable Kind. The "third Day the Pains of his Thigh entirely ceas'd, but he be"came delirious with much Reſtleſneſs, and Jactation of the "Body; and on the fourth Day, about Noon, he died ſud"denly." We have already obſerv'd, that the febrile Matter is ſometimes depoſited on the Extremities of the Body, where it quickly corrupts, not only the ſoft Parts, but alſo the Bones. The ſame is alſo obſerv'd in the Plague, as we have already ſhewn. If, therefore, ſuch a corrupted Matter was depoſited about the Heart, the Brain, the Lungs, or the Viſcera, 'tis ſufficiently obvious, that the Death of the Patient muſt enſue.

A Gangrene of the internal Part of the Mouth, Lips, Noſtrils, and Genitals, is not to be cur'd without great Difficulty.

'Tis certain, from anatomical Obſervations, that the Skin ceaſes to cover the Parts about the Lips, and that the Epidermis alone covers the Lips, the internal Surface of the Cheeks, and the other Parts of the Mouth and Fauces. If in theſe Parts an Inflammation incapable of Reſolution ſhould ariſe, a benign Suppuration rarely follows, but almoſt always a gangrenous Putrefaction, which preys upon all the adjacent Parts; for the Parts, being expos'd to the Air, and continually moiſten'd with a Saliva, which is frequently pretty acrid, are reduced to a highly fetid Subſtance; and, as in this Caſe there is generally a great Diſcharge of the Saliva, and as this Diſorder, when form'd, corrodes all the adjacent Parts, unleſs ſpeedily cur'd, it is for this Reaſon, by ſome, call'd the Water-cancer: There ariſes, firſt, in the internal Parts of the Mouth, the Lips, the Gums, the Tongue, or the Tonſils, a gentle Redneſs, accompanied with no great Degree of Pain, but a conſiderable Heat. Soon after, on the Middle of this Part, appears a white Speck, which often deceives Surgeons into an Opinion, that a Suppuration is about to follow: Then the Pain is increas'd, eſpecially in that Part where the white Speck appears, as alſo in its Margins, which now appear highly red. Beſides, this Part is corroded deep; and the whole white Portion, which is only a gangrenous Eſchar, falls off, if the Diſorder is ſlight, and the Patient an Adult: But if the Malignity is great, eſpecially in young Patients, where all the Parts are ſoft, the Diſorder ſpreads, and the white Spot is diffus'd around on all Sides. The Breath, in the mean time, is highly putrid, and a fetid Saliva continually drivels from the Mouth. In this Caſe, unleſs efficacious Medicines are ſoon apply'd, the Diſorder quickly corrodes all round it. As this Diſtemper frequently ariſes from a Scurvy, 'tis therefore cuſtomary to waſh the Mouth with Spirit of Scurvy-graſs and *Spiritus Theriacalis*; but theſe almoſt always do more Harm than Good. If the Diſorder is ſlight, and only beginning, which may be known, if the Redneſs, Heat, and Pain, are preſent, without the fetid Smell, *Sal Ammoniac*, or Nitre, diluted in a large Quantity of Water, with the Addition of a little Vinegar, or Citron-juice, will be of ſingular Service to waſh the Mouth; or Linen Cloths, impregnated in this Preparation, may be gently applied to the Parts affected: But Surgeons have an unaccountable Cuſtom of rubbing the Parts, ſtrongly, with Bruſhes dipt in theſe Liquors; but this Practice is always pernicious, ſince it augments the Pain, and deſtroys the tender Veſſels. But if the Diſorder begins to ſpread, and is accompanied with a fetid Stench, the above-mentioned Remedies will not prove ſufficient; for, in this Caſe, the Putrefaction muſt be ſubdued by Spirit of Sea-ſalt: Let twenty Drops of this Spirit be mix'd with half an Ounce of the Honey of Roſes, and let the Part affected be frequently every Day anointed with a Pledget dipt in this Preparation. The Quantity of the Spirit of Sea-ſalt may be increas'd, if the Putrefaction is very great; and, in deſperate Caſes, *Van Sweiten* informs us, that he has applied this Spirit alone, with excellent Succeſs; for, ſays he, the Progreſs of the Gangrene was immediately ſtopt by it; and, ſoon after, the gangrenous Eſchar was ſeparated from the live Parts. He alſo ſays, That Medicine never fruſtrated his Hopes, unleſs when, the Gums being entirely corrupted, the Jaw-bone happens to be affected; for then, he ſays, it was not in his Power to prevent its becoming carious; but it infallibly eradicates a Gangrene of the ſoft Parts of the internal Mouth.

When this Diſorder ariſes in the Lips, there is ſtill an additional Danger; for when the Epidermis, which covers the ſoft Subſtance of the Lips, is corroded, the nervous Papillæ are diſtended to an immenſe Bulk, and degenerate into a malignant Cancer; but, if the Membrane ſurrounding the internal Noſtrils is corrupted, the Bones become bare, in which, as they are highly tender, no Exfoliation can be expected; but they always become carious, and fall away: 'Tis therefore obvious, that the Cure of a Gangrene in theſe Parts muſt be highly difficult.

As for Gangrenes of the Genitals; theſe Parts are of a ſurpriſingly cellular Structure, and even in ſound Bodies afford a Smell ſomewhat putrid, becauſe they are adjacent to the Bladder and Anus, by which Nature eliminates the corrupted Matter lodg'd in the Habit. Hence a Gangrene, in theſe Parts, muſt not only ſpread quickly, but alſo be cur'd with Difficulty. By means of difficult Births the Pudenda of Women are ſometimes ſo contus'd and lacerated, as to produce a Gangrene, which is not without the greateſt Difficulty to be cur'd; but this Caſe, however deplorable, is not altogether deſperate.

A Sphacelus of the extreme and tendinous Parts is mortal in Old-age.

Theſe Gangrenes, incident to old Age, generally ariſe from ſuch Cauſes as admit of no Cure; for they generally draw their Origins from an exceſſive Rigidity of the Veſſels, or from an impair'd and diminiſh'd Strength of the Heart. In this Caſe, therefore, no Separation of the corrupted Part is to be expected, ſince it depends on the briſk Motion of the ſound Humours through Veſſels poſſeſs'd of a due Degree of Flexility: Nor will the Extirpation of the Part affected be of any Service; for the Diſorder will return upon the mutilated Part. The only Method to be taken is, to dreſs the Part affected with ſuch Subſtances as are uſed in embalming, for preſerving the Bodies of the Dead from Putrefaction. By this means mortified Parts, in old Perſons, may be kept from conveying the Contagion to thoſe which are ſound, for ſeveral Months. A purple or livid Spot generally appears on the Toes firſt; and, unleſs this is dreſs'd in the manner now mention'd, it ſoon ſpreads, and produces a mortal Sphacelus. *Van Sweiten* tells us, that he knows no Inſtances of the Cure of Gangrenes ariſing ſpontaneouſly in the Toes of extremely old Perſons; but gives us an Inſtance of a Man of Seventy, but of a robuſt Conſtitution, who was cur'd of a Gangrene ſpontaneouſly ariſing about the internal Malleolus of the Right Foot, by Infuſions of Wine, Salt, and recent Rue, by continually fomenting the Part with which, a Separation of the gangrenous and corrupted Part was made, and the Cure ſucceeded.

In dropſical, phthiſical, and ſcorbutic Patients, a Gangrene is ſo highly virulent as to produce the Death of the Patient.

Gangrenes ariſe in dropſical Patients, either becauſe the collected Waters, by their Preſſure, ſuffocate the Parts; or becauſe, being render'd putrid and acrid, they corrode the contiguous Parts. But in either of theſe Caſes there remain no Hopes of the Patient's Recovery; for, if the Water remain, the Diſorder will be increaſed, ſince the ſame Cauſes, which produced it, continue to act. If, on the contrary, the Waters ſhould be evacuated, the flaccid and almoſt waſted Parts, being no longer ſuſtained by the equable Preſſure of the Fluids, will be diſſolved, the Veſſels ruptured, the Mortification of the Part, and the Death of the Patient, produced.

But in phthiſical Patients, who already labour under an Atrophy, ariſing from a purulent Cacochymy of the Blood, and who at laſt generally die of a highly putrid Diarrhœa, 'tis ſufficiently obvious, that no Hopes of Recovery are left when a Gangrene ſeizes any Part of the Body; for the natural Strength is daily impair'd, and the State of all the Humours becomes more and more acrid. Hence neither the Separation of the corrupted Part, nor conſequently the Regeneration of what is loſt, can be obtain'd.

As for ſcorbutic Patients, we have already obſerv'd, that in them the Cohеſion of the Veſſels was ſo diminiſh'd, that they were capable of being ruptur'd by the ſmalleſt Force; and that the Fluids were of too acrimonious a Nature; and in a violent Scurvy all the Parts become putrid. Since, therefore, the Acrimony of the Humours, the Rupture of the Veſſels, and the Putrefaction of the diſcharg'd Humours, may produce a Gangrene, this Misfortune muſt be with the greateſt Difficulty cur'd,

if the Blood is infected with a ſcorbutic Cacochymy. Hence, in Ulcers of the Legs, ſo common in the Scurvy, gangrenous Cruſts are almoſt always found, which immediately grow afreſh when taken away by the Application of Detergents; and, for this Reaſon, a good Cicatrix can hardly ever be form'd on Ulcers of this kind.

A Sphacelus aſcending to the ſuperior Parts, or producing Watchings, Deliriums, Syncopes, Eructations, Hiccups, Spaſms, Pains, cold Sweats, and Drowſineſs, preſages the Death of the Patient.

Here all theſe Symptoms are enumerated, which generally accompany a mortal Sphacelus, and that in the ſame Order in which they uſually happen; for, if the Sphacelus is ſtopt, either by the ſpontaneous Workings of Nature, or by the Aſſiſtance of Art, a Separation happens between the live and mortified Parts; neither does the Diſorder ſpread any farther. But, when the Diſorder proceeds, it is ſaid to aſcend to the ſuperior Parts; becauſe, beginning in the laſt Articulation of the Toe, it gradually aſcends through the Foot, the Leg, and at laſt the Thigh. But, if it begins in the Fingers, it generally aſcends through the whole Arm, before it proves mortal. But the Functions of the Brain are always obſerv'd to be diſturb'd when the Sphacelus is about to prove mortal; then the vital Functions begin, alſo, to be affected, and at laſt the Patient dies, as it were, in a gentle Sleep. 'Tis, therefore, a bad Sign, if in a Gangrene, or Sphacelus, of the Extremities, the Symptoms of a diſturb'd Brain appear. Hence *Hippocrates*, in the ſeventh Book of his *Epidemics*, tells us, "That a violent Sphacelus is "dangerous; but, if it is attended with bilious Vomitings, An- "xiety, a Stupor of the Eyes, a Privation of Voice, little "ſpeaking, or any Degree of a Delirium, theſe are Signs, that "the Patient is convulſive, and will die." But Watchings are generally the firſt Sign, which warn the Phyſician to uſe all his Endeavours to divert the Force of the Diſeaſe from the Head. Theſe Watchings are followed by a Delirium; then the Cerebellum being affected, a Syncope enſues: After this, by the inordinate Motion of the animal Spirits through the abdominal Viſcera, Eructations and Hiccups happen, and laſt of all Spaſms and Pains. Then appears that viſcid cold Sweat, which ſtands in Drops on the Skin, and is an infallible Preſage of preſent Death: Of which Sweat *Helmont* ſaid, "That it was not a recrementitious Fluid, but the alimentary "Dew reſolv'd and ſubdued by Death." In this Caſe the Patient, at laſt, dies, as it were, in a gentle Sleep. According to the various Cauſes from which a Sphacelus may proceed, ſo it ſpreads with a proportionably greater or leſs Celerity; for, if this Diſorder ariſes purely from the languid State of Old-age, it ſpreads ſlowly, and may be ſometimes born for ſeveral Months before it proves mortal; provided the Part be dreſſed with ſuch Subſtances as prevent Putrefaction. But if in a young and robuſt Conſtitution, after a violent Inflammation, a Gangrene ſhould be form'd, and if a Sphacelus ſhould ſucceed this Gangrene, it quickly aſcends to the ſuperior Parts, and in a few Hours becomes incurable. Moſt of the Symptoms accompanying a mortal Sphacelus are by *Celſus*, in the twenty-ſixth Chapter of his fifth Book, beautifully enumerated; for, after having deſcrib'd the Method in which a Gangrene ſpreads, he adds, "In the "mean time an acute Fever, accompanied with an intenſe "Thirſt, ariſes; in ſome Patients a Delirium alſo happens. "Others, though they retain the full Uſe of their Reaſon, can "yet hardly expreſs their Sentiments, by reaſon of a Stammer- "ing in their Speech. Then the Stomach begins to be affected, "and the Breath becomes fetid. This Diſorder, when begin- "ning, admits of a Cure; but, when it is inveterate, it is in- "curable; and thoſe who labour under it, are ſeiz'd with a "cold Sweat at the time of their Death."

A livid or black Colour, or Dryneſs, about Ulcers, preſage a Gangrene, a Sphacelus, and the Death of the Patient.

Hippocrates, in his Prognoſtics, where he recounts the moſt material Circumſtances, to which a Phyſician ought to advert, in order to enable him to prognoſticate the Events of Diſeaſes, gives us the following Caution: "We muſt, ſays he, conſider "whether the Patient has had an Ulcer before the Diſorder "commenc'd, or whether the Ulcer was form'd during the "Diſeaſe; for 'tis a Sign, that the Patient will die, when the "Ulcer appears livid and dry, or pale and dry." 'Tis certain, that a laudable Pus is produc'd by the Principle of Life remaining in the Part, and by the Humours convey'd to the Wound, or Ulcer, provided Fluids of a good Quality are in a ſufficient Quantity, and with a due Impetus, conveyed to it; but if otherwiſe, another Fluid is obſerv'd in the Wound, which degenerates from the Condition of laudable Pus. Hence it is, that, in cacochymic Habits, the Formation of a laudable Pus, and the Conſolidation of Ulcers and Wounds, are ſo highly difficult. But when by a Fault of the Veſſels, or Humours, or of both, nothing is conveyed to the Wound, its Surface will be render'd dry, by the Air, and the Heat of the adjacent Parts; and, before a Cure can be produc'd, the Whole of this dried Part muſt be ſeparated. The Dryneſs, therefore, of an Ulcer denotes, that the vital Influx and Efflux of the Humours in the Part are ſtopt: But the livid or black Colour denote a legitimate Mortification, and are, therefore, juſtly accounted among the worſt Signs.

The Intentions of Cure in a Gangrene are, firſt, To confirm the Strength. Secondly, To prevent the Ingreſs of the putrid Matter into the Veins. And, thirdly, To check and remove the Putrefaction form'd.

Having conſider'd the Diagnoſtics and Prognoſtics of a Gangrene, we now proceed to conſider the Intentions of Cure, and the Medicines proper for removing the Diſorder: But, leſt a Confuſion ſhould ariſe in this reſpect, we are to remember, that it is hard to judge of the preciſe Period of Time which diſtinguiſhes a beginning Gangrene, from the Phlegmon which produces it. Since, therefore, a beginning Gangrene approaches very near to a Phlegmon, but differs very much from it, when it is about to degenerate into a Sphacelus, 'tis obvious, that in this intermediate Time there are various Degrees of Malignity in a Gangrene; and that different Methods of Cure are requir'd, according to the different Symptoms; for a beginning Gangrene may ſometimes be happily remov'd, by correcting the Juices; but, when the Diſorder is confirm'd, the corrupted Part cannot be render'd ſound, but muſt be ſeparated from the live Parts, to which it adheres: The general Intentions of Cure are, therefore, enumerated in this Paragraph.

As for confirming the Strength; ſo long as laudable Humours move with a due Impetus and Velocity through the Veſſels, Health and Strength remain entire; but, when this equable Motion is interrupted, either totally, or in part, the Strength is impair'd either in the whole Body, or, at leaſt, in the Part affected. Hence *Hippocrates*, in the fifth Aphoriſm of his ſecond Section, affirms, that ſpontaneous Laſſitude, in conſequence of which Perſons cannot, without Uneaſineſs, bear their accuſtom'd Labours, preſages Diſeaſes, though the Perſon ſeemingly appears to be, as yet, in a pretty good State of Health; for theſe Laſſitudes are frequently obſerv'd, when the Blood, being render'd leſs fluid, by an inflammatory Spiſſitude, cannot, without Difficulty, paſs through the narrow Extremities of the Veſſels: The Strength will, therefore, be confirm'd by all thoſe things which promote the free Circulation of the Humours through the Veſſels, and remove thoſe Impediments which are capable of obſtructing it. According to the Diverſity of Cauſes, various Remedies contribute to confirm the Strength.

As for the Ingreſs of the putrid Matter into the Veins; the Urine naturally waſhes out of the Body thoſe things, which, approaching to Putrefaction, would prove hurtful, if they were any longer to be carried through the Veſſels, with the other Fluids: But, when a perfect Iſchury prevents the Secretion and Excretion of the Urine, the retain'd Fluids, becoming acrid and putrid, ſeem, in a particular manner, to injure the tender Veſſels of the Brain; and the Patients labouring under this Diſorder, after having ſuffer'd almoſt the ſame Misfortunes with thoſe who die of a Sphacelus, are in like manner cut off in a profound Sleep. 'Tis, therefore, juſtly to be dreaded, leſt a putrefied Matter, ſucceeding a Gangrene, and being abſorb'd by the contiguous Veins, ſhould prove injurious in the like manner: We are, therefore, to uſe all our Endeavours to prevent this Accident.

As for removing and correcting the Putrefaction form'd; every Part of the human Body, that is depriv'd of the vital Influx and Efflux of the Humours which it before enjoy'd, by a ſpontaneous Principle of Change, tends to Putrefaction. 'Tis, therefore, requiſite, that a future Putrefaction ſhould be prevented, and a preſent one ſo corrected, as that it may not infect the adjacent ſound Parts. When the Hands have Acceſs to the Part affected, ſuch Medicines are to be apply'd, as are thought moſt proper for producing this Effect: But, if the Diſorder is lodg'd deep, 'tis ſufficiently obvious, that the Cure muſt be difficult.

The Strength is confirm'd, firſt, By ſuch things as contribute to deſtroy the internal Cauſe producing the Gangrene, rouſe the Spirits, and preſerve the Circulation of the Fluids, at the ſame time having due Regard not only to the Age, the Sex, and the Temperament of the Patient; but alſo to the State of the Weather: Theſe are, therefore, to be either of the refrigerating, or heating Kind, according as the particular Circumſtances of the Patient ſhall require. Secondly, By Aliments, and Drink of an analeptic Nature. Thirdly, By Epithems, as toaſted Bread, impregnated with Medicines which reſiſt the internal Cauſe, excite the Spirits, and preſerve the Circulation of the Fluids, applied to the Veins, or about the Noſtrils.

As for thoſe Medicines which deſtroy the internal Cauſe; in order to anſwer this Intention, we muſt neceſſarily pay a due Regard to the Nature of the Cauſe which produc'd the Gangrene;

grene. But all these Causes are already enumerated, and reduc'd to their respective Classes: Thus, for Instance, if a putrid Scurvy affects the Blood with a violent Cacochymy, those Things which resist such a Putrefaction will be of Service to confirm the Strength, such as *Rhenish* Wine, and the Juices of Citrons and Oranges; and the poorer Class of People may use Butter-milk, or its Serum, boil'd with a little Mace, or Nutmeg. As all Gangrenes, though arising from different Causes, always produce a Putrefaction, it is obvious, that the Use of these Acids contributes very much to the Cure of such Disorders.

Boerhaave, in his *Materia Medica*, recommends the following exciting Spirit to be us'd in a Gangrene proceeding from a hot Cause, or an alcaline Temperament:

Take of the express'd Juice of Citrons, two Ounces; of the Juice of Oranges, one Ounce; of the recent Syrup of Mulberries, two Ounces; of Water distil'd from the whole Citron, four Ounces; of Baum-water, two Ounces; of Cinnamon-water, one Ounce; and of *Rhenish* Wine, six Ounces; adding Sugar, if there is Necessity for it: Mix these together, and let the Patient drink an Ounce of the Spirit every Hour, or Half-hour.

Or;

Take of the Robs of Currants, and Barberries, each two Ounces; of the Spirit of Salt, half a Dram; of distil'd Baum-water, six Ounces; and of *Rhenish* Wine, ten Ounces: Mix these together, and let the Patient drink an Ounce of the Mixture every Hour.

If the Patient labours under a Gangrene proceeding from a cold Cause, or is of a phlegmatic or acid Temperament, the following Preparation is to be us'd:

Take of the Sal volatile oleosum, three Drams; of the Elixir Proprietatis, prepar'd with Salt of Tartar, two Drams; of distil'd Aqua Vitæ of *Matthiolus* [in the *Leyden* Dispensatory], three Ounces; of the distil'd Water of Citron-peel, six Ounces; of the Syrup of the Five aperient Roots, and of *Fernelius*'s Syrup of Mugwort, each one Ounce; and of the Confectio Alkermes, two Drams: Mix, and use like the preceding.

As for those Medicines which rouse the Spirits; it is certain, from Experience, that there are in Nature such Substances as, entering into the most subtile Fluids of the human Body, commonly call'd the Spirits, are of singular Efficacy, and capable of disturbing the whole Body in a surprising Manner. This Efficacy, in the mean time, often depends upon Corpuscles, or Effluvia, so subtile and minute, that they not only escape the Notice of our Senses, but even exceed our Imaginations. Thus, Asa-fœtida, by its Exhalations alone, often checks the inordinate Motions of the Spirits in hysteric Women; and yet, after, during several Months, it has fill'd a pretty large Room with its Effluvia, scarce any sensible Diminution of it Weight appears. On the contrary, the Fragrance of Musk frequently so disorders the whole nervous System of delicate Women, as sometimes to throw them into violent Convulsions; and yet Musk does not sensibly lose its Weight, though it be kept for several Years, and imparts an almost incredible Smell to all the adjacent Bodies. There are, in the *Materia Medica*, such Medicines as, only by their Exhalations, rouse the languid Spirits, and, as it were, inspire new Life into the weakest Patients. If an highly fragrant Citron is applied to the Nostrils of a Woman about to fall into a Deliquium, she immediately revives: The same Effect is produc'd by the Fragrance of Vinegar, and of almost all the grateful Aromatics. But those Things, which rouse the languid Spirits, are, in a particular manner, beneficial in a Gangrene and Sphacelus, because nothing more quickly destroys the Strength, even of sound Constitutions, than putrid Effluvia. If, in the Summer-time, the soundest Man happens to be near the Body of a large drown'd Animal, when it is tumid and breaks, he is immediately so affected with the noxious Exhalations, as to fall into a Deliquium; and will, all the remaining Part of the Day, languish under a terrible Nausea. When, in any Disease, the corrupted Bile is lodg'd about the Præcordia, the Patient is observ'd to be highly weak; and, when these Sordes are remov'd, his Strength returns. When, therefore, in a Gangrene, a Putrefaction is either present, or its Formation dreaded, it is obvious, that these fragrant Aromatics, especially when mix'd with Acids, are of singular Service. *Hildanus*, in his Treatise *de Gangræna & Sphacelo*, *C.* 12. together with other Authors, recommend the bezoardic Powders, prepar'd Pearls, the Bone of a Stag's Heart, and other Medicines of a like Nature. But *Rhenish* Wine, with the Peel and Juice of Citrons, Cinnamon, and Nutmeg, are far more efficacious. And if a violent Fever, or an intense Heat, contraindicate the Use of hot Medicines, Elder-rob, and Rose-leaves, with Vinegar, will excite the Spirits, and produce a grateful Coolness.

As for those Medicines which preserve the Circulation of the Fluids; as a Gangrene is such a Disposition of the soft Parts, as, after the Abolition of the Influx and Efflux of the vital Humours, tends to produce Death, the Circulation of the Blood thro' the Vessels is, with the utmost Care, to be maintain'd, in order to prevent this. Now the Circulation of the Humours is stopt, either through a Fault of the Fluids to be transmitted, or of the Vessels transmitting, or a Defect of the Causes producing Motion. All those Substances, then, which dilute and attenuate the Fluids, open the Vessels, and, by their gentle Stimulus, excite the moving Cause, are highly proper in Cases of this Nature. Hence Decoctions of the Roots of Grass, Burdock, and Scorzonera, as also of the aperient Roots, together with Infusions of Sanders and Sassafras, are of singular Service in these Disorders; because, by their diluting, resolvent, aromatic, and stimulating Quality, they answer all these Intentions.

As for the Age of the Patient; quite different Measures are requir'd in decrepit Old-age, where every thing is languid, and the State of the Blood cold and mucous, from those to be taken in a robust young Man. The Bodies of Women are, if all other Circumstances are alike, more lax than those of Men, and easily chang'd by the slightest Causes; and yet they more easily bear the greatest and most sudden Changes: This is sufficiently obvious from the menstrual Discharge, Gestation, the Birth of the Fœtus, the Lochia, and excessive uterine Hæmorrhages. Hence the Female Sex require a different Treatment from Men. A Difference, also, arises from the various Seasons of the Year; for, in the Summer-heats, especially if the Constitution of the Air is moist, all the Parts tend to Putrefaction; whereas in the Winter they may be kept uncorrupted.

As for Substances of the refrigerating Kind; we are first to examine, whether the Patient's Strength is defective, or not. If the Pulse is strong, large, and hard; if there is still a sufficient Degree of Heat in the Extremities of the Body; and if the Urine is red, and of an high Colour; we know that the Tone of the Circulation is sufficiently great, and, therefore, not to be increas'd. But if the Pulse is weak, and a Series of Symptoms, opposite to those already enumerated, present, we may conclude, that the Circulation of the Humours is to be accelerated. We must, also, examine, whether the Fluids tend to a putrid alcaline State; or whether a cold mucous Cacochymy predominates in the Habit. In the former Case, grateful stimulating Acids are to be exhibited; and, in the latter, volatile oleous Salts, Elixir Proprietatis, and other Medicines of a like Nature. But the Medicines proper in both these Intentions are specified under the Articles ACIDA and ALCALI.

Those who, after the Shocks of violent Disorders, begin to acquire fresh Degrees of Strength, are said to recover: But though, after the Force of the Disease is subdued, Health returns; yet it is necessary, that, by laudable Aliments, those Parts should be restor'd, which were destroy'd by the Shock of the preceding Disease. Now the Weakness of such Patients renders it necessary, that such Aliments and Liquors should be exhibited as contain a sufficient Quantity of Matter for affording a fresh Supply of Chyle and Blood; but, at the same time, these Substances must be of such a Nature, as to require little or no Action at all of the Vessels and Viscera, in order to transform them to the State and Condition of sound and laudable Juices. The Aliments and Liquors possess'd of these Qualities are distinguish'd by the Epithet *analeptic*: With respect to these, see the Article FIBRA. But in the Choice of these a due Regard must be had to the Age, the Sex, and the usual Method of Living, of the Patient. And as in a Gangrene a Putrefaction is, for the most part, to be dreaded, the Analeptics for this Purpose are generally prepar'd from acescent Substances, such as milky Decoctions of Bread, Barley, and Oats; or of Veal-broth, with Citron-juice. See the Article FIBRA.

As for Epithems of toasted Bread; 'tis certain from physiological Observations, that, in the whole external Surface of the human Body, the Mouths of the bibulous Veins are open, and may, consequently, absorb the contiguous Fluids, and mix them with the Blood: Hence 'tis obvious, that, in order to confirm the Strength, such Medicines as are apply'd to the Skin may be of singular Service. If, therefore, those Substances recommended in the Beginning of this Paragraph are apply'd by way of Epithem, they insinuate their most subtile and fragrant Parts into the bibulous Veins, which convey them forthwith along with the venous Blood to the Heart, from which they are, by means of the Arteries, distributed thro' all the Body: Hence a sudden Restoration of Health ensues; since, by the grateful stimulating Particles of these Bodies, which remain unchang'd by the Action of the Viscera, the Spirits are excited, and the Force of the Heart augmented. These Preparations are principally to be apply'd to those Places adjacent to the larger Veins, such as under the Arm-pits, the Hams, and to the Neck, that the Effluvia absorb'd by the bibulous Veins may be soon

ſoon convey'd to the larger Veins. Theſe Epithems appear beneficial not only in this reſpect, but alſo when apply'd as nearly as poſſible to ſome of thoſe Nerves which we know from Experience to have the greateſt Influence over the vital Functions of the Body. Of this Kind are the Nerves diſpers'd thro' the internal Surface of the Noſtrils: Thus a Perſon ſo fatigu'd, as to be ready to fall into a Syncope, is forthwith recover'd by the fragrant Smell of Bread, immediately taken from the Oven. The ſame holds true of almoſt all Aromatics, whoſe Fragrance, perceiv'd by the Organs of Smell alone, immediately reſtores the Strength. Hence ſimilar Preparations are, with great Succeſs, apply'd to the Region of the Stomach, near the large cardiac Nerves. Theſe are alſo of ſingular Service, when apply'd to the Navel. Medicinal Obſervations ſufficiently prove, that Remedies, apply'd externally to theſe Parts, are ſometimes incredibly efficacious. But, in order to confirm the Strength, ſuch an Application of theſe Epithems is requiſite, as that the Heat of the Body may not diſſipate their ſubtile Fragrance externally. For this Reaſon Bread, ſo toaſted as to become highly bibulous, is to be immers'd with ſuch an Epithem, and apply'd to the naked Skin; then it is to be cover'd with a Sheep's or Swine's Bladder, as ſoft as can poſſibly be found, previouſly anointed with Oil, and ſecur'd by proper Bandage. Thus, in order to confirm the Strength, in Caſes where the Diſorder proceeds from an alcaleſcent hot Cauſe,

Take of *Rheniſh* Wine, one Pint; of Cinnamon, Cloves, Leaves of the Macer, and Nutmeg, each two Drams. Boil in a tall glaſs Phial, plac'd in a Sand-heat; and, with the Decoction, impregnate the toaſted Bread.

In Caſes proceeding from an acid cold Cauſe,

Take of Sal volatile oleoſum, half an Ounce; of the Spirit of Citron-peel, two Ounces; of the Spirits of Lavender, and Mint, each one Ounce; and of the Spiritus Theriacalis, two Ounces: Mix all together, and immerſe the toaſted Bread in the Mixture.

The Ingreſs of the putrid Matter into the Veins is prevented, firſt, By confirming the Strength, and, conſequently, increaſing the Motion of the peccant Matter to the exterior Parts. Secondly, By procuring its free Diſcharge externally: And this Intention is anſwer'd by Fomentations and Cataplaſms, prepar'd of diaphoretic, emollient, and laxative Subſtances; as alſo by Scarifications, Cuppings, Leeches, and external Warmth.

The ſecond Intention of Cure, in a Gangrene, is to hinder the Ingreſs of the putrid Matter into the Veins; for the gangrenous Part either every-where adheres to the ſound Veſſels, or, at leaſt, is contiguous to them, and is generally diſſolv'd gradually into a putrid Gore. Hence the putrid Matter will be eaſily abſorb'd by the Veins, from which terrible Diſorders may ariſe; ſuch as putrid Fevers, Deliriums, and ſudden Loſs of Strength. But the Abſorption of this Matter may be prevented,

Firſt, *By confirming the Strength:* Thoſe Things which render the Circulation of the Humours through the Veſſels free and eaſy, confirm the Strength, as has been already obſerv'd; and, conſequently, the Medicines enumerated above will ſo augment the vital Force, if languid, as all over the Surface of the Body to diſcharge, through the exhaling Arteries the recrementitious Matter, which ought naturally to be eliminated through theſe Emunctories. So long as there is no Obſtruction in theſe minute exhaling Ducts, we obſerve, that, according as the Impetus and Velocity of the Blood are increas'd, a proportionably larger Quantity of Fluids is diſcharg'd from them, either by inſenſible Perſpiration, or Sweat. The Reaſon of this is, becauſe, within the ſame time, a greater Quantity of Fluids is apply'd to the ſecretory and excretory Veſſels. But whilſt theſe minute exhaling Arteries are, by a greater Momentum of the impel'd Fluids, diſtended and dilated, the ſmall abſorbent Veins, contiguous to theſe, muſt of courſe be render'd narrower, and, conſequently, the Ingreſs of the Fluid to be abſorb'd into them, render'd proportionably more difficult. Beſides, the Heat, accompanying an increas'd Motion of the Fluids through the Veſſels, diſſipates the Matter which would have been otherwiſe abſorb'd. In all Diſeaſes, therefore, in which the Circulation of the Humours is increas'd, a Dryneſs is produc'd, in conſequence of the Diſſipation of the moſt ſubtile Parts; whereas, in languid Diſorders, where the Circulation is too ſlow and weak, the Body becomes turgid by an Accumulation of the Humours. But how much the bibulous Veins, in the Surface of the Body, are capable of abſorbing, ſo long as the vital Force remains weak, is ſufficiently obvious from medicinal Obſervations; for 'tis certain, that the Bodies of dropſical Patients, after all the Waters have been eliminated, again become tumid in a ſhort time, though they carefully abſtain from drinking, and uſe only the moſt dry Aliments. Hence Patients of this Kind ſeem to imbibe the Water, contain'd in the Air, through the bibulous and abſorbent Veins. It will, therefore, be of great Uſe, to render the Circulation ſomewhat briſker, in order to prevent the Ingreſs of the putrid gangrenous Matter into the Veins. And if, unfortunately, any of it ſhould enter, it is to be carried off by Urine, or through the Emunctories of the Skin, till the Strength being confirm'd, the Motion of the Humours to the exterior Parts is increas'd.

As for procuring a free Diſcharge of this Matter externally; in the Cure of Abſceſſes, 'tis abſolutely neceſſary, that, after the inflammatory crude Matter is maturated, it ſhould be convey'd to the exterior Parts of the Body, leſt, being abſorb'd, it ſhould infect the Blood with a purulent Cacochymy, and give Riſe to a great Number of very terrible Diſorders. But, in the Cure of a Gangrene, the Conveyance of the Matter to the exterior Parts is ſtill more carefully to be procur'd; becauſe a gangrenous Matter is far more virulent than Pus. But nothing more effectually prevents this Conveyance to the external Parts, and, at the ſame time, ſuffocates thoſe which are ſubjacent, than when the Skin is indurated, and becomes gangrenous, and parch'd like Leather; for if, in this Caſe, a ſufficiently briſk Motion of the Humours remains in the live Parts, every thing will be corrupted under this Skin, which reſembles a Cruſt. It will, therefore, be highly expedient, by Fomentations and Cataplaſms, continually to keep the gangrenous Part moiſt, and ſo to open all the Pores, that all the live Veſſels may perſpire freely. Water, and all Remedies, in which that Fluid predominates, excellently anſwer this Intention: Emollient and laxative Subſtances are to be added at the ſame time. But ſince, in a gangrenous Part, the Circulation of the Humours is defective, and, conſequently, the Heat which depends on this Circumſtance, external Heat is neceſſary, leſt the Fomentations and Cataplaſms apply'd ſhould become cold. This is obtain'd by the Application of Bricks warm'd; which are alſo of ſingular Service in alleviating Colic Pains. 'Tis true, by the Heat and Moiſture, the Putrefaction is augmented in the Parts already mortify'd; but, at the ſame time, their Separation from ſuch as are alive, is facilitated. Hence theſe Remedies are never us'd, except when there are ſome Hopes of obtaining ſuch a Separation. *Celſus*, in the 26th Chapter of his fifth Book, when treating of the Cure of a Gangrene, gives us the ſame Caution in the following Words: "So long "as the Diſorder ſpreads, no Medicines, which promote the "Formation of Pus, are to be us'd; and, therefore, warm "Water is to be rejected;" for, ſo long as the Diſorder ſpreads, the Putrefaction would be augmented by theſe, and the adjacent Parts more quickly infected. But Fomentations and Cataplaſms, intended againſt Gangrenes, are generally mix'd with ſuch Subſtances as effectually reſiſt Putrefaction, and, at the ſame time, by their penetrating aromatic Quality, put the ſtagnant Fluids into Motion. But, ſince all theſe are eaſily reſolv'd in Water, and, at the ſame time, have ſo ſubtile a Fragrance, by which they open all the Veſſels, without too great an Increaſe of the Motion, and as they alſo generally increaſe the Evacuation by the cutaneous Pores, they are therefore call'd Diaphoretics. Thus a Fomentation againſt a Gangrene may be prepar'd in the following manner:

Take of recent Rue, four Handfuls; of Mallows, two Handfuls; of *Alliaria* [Jack by the Hedge], one Handful; and of the Meal of Linſeed, one Ounce. When theſe are boil'd in a cloſe Veſſel, with a ſufficient Quantity of Water, to four Pints of the Decoction, add two Drams of Venice Soap for a Fomentation, to be apply'd with woolen Cloths.

Or,

Take of the Vinegar of Elder, two Ounces; of Elder-flower-water, ten Ounces; of Sal Ammoniac, two Drams; and of white *French* Wine, ſix Ounces: Mix for a Fomentation.

A Cataplaſm againſt a Gangrene may be prepar'd in the following manner:

Take of the Flowers of Elder, Melilot, Marſhmallows, Chamomile, and Marigolds, each three Ounces. When theſe are boil'd in Water to a Cataplaſm, towards the End, add of the Meal of Linſeed, one Ounce; and of the Oil of Linſeed, an Ounce and an half.

As for Scarifications; theſe are of ſingular Uſe, if the Membrana Adipoſa, diſtended to a great Thickneſs with an inflammatory Matter, becomes gangrenous; for, in this Caſe, the whole Bulk of the corrupted and mortify'd Portion ſo lies upon the ſubjacent live Parts, as, by its Compreſſion, to ſuffocate them; whilſt, at the ſame time, the Fomentations or

Cataplasms apply'd cannot penetrate so far as to prevent the Entrance of the putrid Matter into the Veins. Hence, by means of Scarifications, Emunctories are, as it were, made in the gangrenous Part, through which, in consequence of an increas'd Motion, the corrupted Matter may be expel'd, and those things admitted, which not only correct a present, but also prevent a future, Putrefaction. But these Scarifications ought only to be made in the mortify'd Part, but to penetrate, however, as near as possible, to the live Parts, without hurting them. Thus they may be made without any Pain, and as, by this means, a crude Wound is not made in the live Parts, the Ingress of the putrid Matter into the Veins will not so easily happen, as it would have otherwise done; for we are taught, by the Bites of venomous Animals, how easily the Poison is receiv'd into the Veins in a crude Wound.

As for Cuppings; when the Pressure of the Atmosphere is remov'd from the Part to which the Cupping-glass is applied, the Impetus of the Blood as yet moving through the live Parts, it will distend the Vessels, raise the mortified Portion lying over them, and repel the putrid Matter. Besides, since the adjacent Vessels, being compress'd by the mortified Part, could not be distended by the impel'd Humours, most Part of this Pressure being taken off by the Cupping-glass, the Passage will again become free to the Fluids which ought to move through these Vessels. Thus Life will be restor'd to those Parts, which, in consequence of a destroy'd Influx and Efflux of the Humours, tended to a Mortification. The Efficacy of Cuppings, in order to restore defective Life and Nutrition, is sufficiently obvious from medicinal Observations. Cuppings are also of singular Service, when applied to the live Parts adjacent to a Gangrene, in order to increase, at once, the Impetus and Quantity of the vital Humours convey'd thither; for by this means, as we shall afterwards shew, the Fibres uniting the Gangrene to the Parts will be divided, and a Separation obtain'd.

As for Leeches; these Animals wound the Part of the Body, to which they are applied, with their Mouths, suck out the Blood, and often keep themselves so obstinately fix'd as not to quit their Hold, till, being full of Blood, they can retain it no longer; or till, being sprinkled with Nitre, Salt, or some other such Substance, they drop from the Part to which they adher'd. And, after these Animals are remov'd, the Blood often continues to be discharg'd, especially when they have been applied to the hæmorrhoidal Veins; and that so copiously, that Authors, who have wrote concerning the Use of Leeches, have specified Medicines, by which this excessive Discharge may be stopt. The whole Action of Leeches, therefore, is to wound the Vessels, and, by Sucking, extract the Blood; so that, by diminishing the Resistance, the Blood is convey'd to the Parts in a larger Quantity, and with a greater Impetus. Leeches, therefore, produce the same Effect with Cupping; especially if the Part to which the Glasses are applied, is previously scarified. They are, therefore, principally us'd in Cases where the Patients are afraid of Scarification; or when the Situation of the Part is such, that Cupping-glasses cannot be applied. These Animals will not, however, readily fix on a mortified Portion of the Body, but may be applied hard by the gangrenous Part.

From what has been said, it is obvious, that, in these Cases, such a Method is recommended as the Antients us'd against the Bites of venomous Animals. *Celsus*, in the 27th Chap. of his 5th Book, in Bites of this Kind, recommends Cupping, and an Incision made with a Knife, about the Edges of the Wound, that more of the corrupted and contaminated Blood may be extracted. If Cupping-glasses cannot be had, he advises a Man to suck the Wound; which, he says, may be safely done, provided he has no Ulcer in his Mouth. Then he order'd the bit Patient to be lodg'd in a warm Place, the Wound to be fomented with live Animals, ript up, and applied warm, and then proper Antidotes to be exhibited. And, if these last could not be had, he orders unmix'd Wine, with a little Pepper, to be exhibited, or any other Thing capable of exciting Heat.

A beginning Putrefaction is corrected, first, by removing its sensible Causes.

In this Case nothing general can be determin'd; but it is requisite we should previously investigate the Causes before enumerated, from which the Gangrene, and the subsequent Putrefaction have drawn their Origins. For those Measures, which, in one Case, are highly beneficial, are, in another, highly injurious and destructive. Thus, for Instance, in that Species of Gangrene which is subsequent to great Weakness, or the languid State of Old-age, hot Cardiacs, of a stimulating and rousing Nature, are of the greatest Service: But these very Medicines would be highly prejudicial in Gangrenes arising in hot young Constitutions, after violent Inflammations.

Secondly, By correcting its proximate Cause, which consists in the Stagnation and Heat; first, By guarding the stagnating Fluids against Putrefaction. Secondly, By fortifying the Solids against the same Misfortune. And, thirdly, By procuring a due Degree of Motion to the corrected stagnant Liquors, through the Vessels thus fortified and secur'd against Putrefaction.

How much Stagnation and Heat contribute to Putrefaction, is sufficiently obvious from Experience. A sound Man may live for eighty Years, without having any Putrefaction form'd in his Body; but the whole Carcase of the most wholsome Youth will become putrid in two Days time, especially if the Atmosphere is intensely hot. Stagnation alone does not produce Putrefaction, or, at least, very slowly, as we observe in the Flesh of kill'd Animals, which, in the Winter-time, may be kept uncorrupted for several Weeks. Nor does Heat alone easily produce Corruption, unless Stagnation concur. Rivers, whose Waters flow continually, are pure and limpid; under the most scorching Heat; whereas the Waters of Ponds and Lakes diffuse a disagreeable Stench, during all the Summer. Hence *Galen*, in *Comment. 3. in Lib. 3. Epidem.* justly took notice of this Circumstance, in the following Words: "All "Putrefaction seems to be produc'd from a moist and humid "Matter, and to have, for its efficient, external, and preter-"natural Cause, Heat, which operates more powerfully, and "augments the Putrefaction, when Immobility or Stagna-"tion concurs with it." That the Putrefaction may, therefore, be check'd and remov'd, it is requisite, the intense Heat should be mitigated, and the stagnant Fluids put in Motion.

As for guarding the stagnant Fluids against a Putrefaction; since, in order to the Cure of a Gangrene, 'tis necessary the stagnant Fluids should be put in Motion, and again circulate through the Vessels, with the other Humours, 'tis sufficiently obvious, that the Physician ought carefully to guard against their Putrefaction; for, if they should be put in Motion, after they are become putrid, they would destroy the tender Vessels, and corrupt the laudable Humours, with which they should be mix'd. 'Tis certain, that the Blood is dissolv'd, and the minute Vessels destroy'd, by putrid Substances; and consequently, that all the Actions of the Solids and Fluids are, by this means, deprav'd; from which numberless Disorders may arise. In case of putrid Scurvies, and where there is a Redundance of black Bile, the corrupted and stagnant Humours cannot, without the greatest Danger, be put in Motion, as we learn from daily Experience.

As for fortifying the Solids against Putrefaction; not only the Humours alone are chang'd and corrupted by Putrefaction, but the solid Parts also lose their Cohesion, so that the Flesh of Animals, in an hot and moist Air, are dissolv'd into an highly fetid Gore. But, according to the various Degrees of Putrefaction, the Cohesion of the solid Parts is more or less chang'd, as is daily observ'd in preparing Aliments; for newly-kill'd Flesh is generally tough, if us'd in this Condition; but, when kept for some Days, loses much of its Toughness. But, when it remains in the open Air, till it acquires the slightest Degree of Putrefaction, it becomes so highly tender as to dissolve almost in the Mouth, whilst it is eaten. Hence *Pliny*, in the fifth Chapter of his twenty-fifth Book, informs us, "that the *Gauls*, when they went a "hunting, ting'd their Arrows with Hellebore, and affirm'd, "that, by this means, and making an Incision round the "Wound, the Flesh of the Animal kill'd was render'd "more tender;" because the poisonous Quality of the Hellebore brought on a beginning Putrefaction in the Flesh.

As for procuring the Motion of the corrected stagnant Fluids thro' the Vessels fortified against Putrefaction; after the two before-mention'd Ends are obtain'd, then the Motion of the Humours may safely be excited; for, if the putrefied stagnant Humours have acquir'd a considerable Acrimony, or if the Cohesion of the Vessels is much weaken'd by the Putrefaction, or if both these Misfortunes should concur, by exciting this Motion the Vessels will be ruptur'd, the Humours discharg'd, the Putrefaction augmented, and, consequently, the Gangrene so far from being cur'd, that it will rather increase, as is obvious from what is said under the Article INFLAMMATIO.

The Fluids are preserv'd from Putrefaction by Applications of Salt, Vinegar, Wine, Spirits of Wine, and Aromatics.

In the *Materia Medica* there are Substances capable of preserving the Parts of Animals from every Degree of Putrefaction; but since, besides this Circumstance, it is necessary the stagnant Fluids, corrected and preserv'd by these Medicines, should afterwards be mov'd through the Vessels duly fortified, it is sufficiently obvious, that these Antiseptics ought to be of such a Nature as neither to destroy those Qualities of the Vessels, nor of the Fluids, which are requisite to this Motion. Hence the Parts ought to be preserv'd, like a Carcase embalm'd; but the Life of the Part must be kept up; and restor'd, if defective. These Intentions are principally obtain'd by the Application of the following Substances.

As for Salt; the Fleſh of Animals, which in a few Days becomes putrid, may be kept long uncorrupted, if ſprinkled with Sea-ſalt, or immers'd in its Brine: But 'tis obſervable, that, by theſe means, the Fleſh is render'd harder. Sea-ſalt, Sal Gemmæ, Sal Ammoniac, and Nitre, are, for theſe Purpoſes, to be diſſolv'd in Fomentations, and apply'd to the gangrenous Parts.

As for Vinegar; this Fluid is an excellent Antidote againſt all Putrefaction; for which Reaſon it was ſo much us'd by the antient Phyſicians in all putrid Diſorders: Even the very Smell of it refreſhes Patients labouring under Diſeaſes of this kind. Beſides, 'tis certain, from daily Experience, that the Fleſh of Animals is as well preſerv'd from Putrefaction by Vinegar, as by Salt. Vinegar, alſo, is attended with this additional Advantage, that it neither greatly indurates the Solids, nor coagulates the Fluids, but rather reſolves and attenuates the Blood. The other more draſtic Acids, obtain'd by the Force of Fire from foſſile Subſtances, ſuch as the Spirits of Nitre, of Sea-ſalt, of Sulphur, and of Vitriol, prevent Putrefaction, but at the ſame time coagulate the Fluids, and contract and indurate the Solids, which they even deſtroy, if they are intenſely ſtrong. Hence 'tis obvious, that Vinegar, an Acid prepar'd by a gentle Fermentation, muſt be far preferable to them.

As for Wine, and the Spirits of Wine; 'tis ſufficiently known, that in *Germany* the Fleſh of Boars, immers'd in Wine, is not only preſerv'd from Putrefaction, but alſo remains tender. Hence 'tis obvious, that there is in Wine an antiſeptic Virtue, which excellently anſwers this Intention. The Spirit of Wine alſo, and Alcohol prepar'd from it, are efficacious Remedies againſt all Putrefaction, but, at the ſame time, they coagulate the Blood and its Serum, corrugate and contract the Veſſels, for which Reaſon they may preſerve the mortify'd Part, and keep the Putrefaction from ſpreading: But Life can never return to thoſe Parts which have been long preſerv'd with Alcohol of Wine. Spirit of Wine, therefore, diluted with Water, will be more proper, ſince, though 'tis weaker, it is yet capable of preſerving the Parts from Corruption, and will neither contract the Solids, nor coagulate the Fluids.

As for Aromatics; in *Boerhaave*'s *Materia Medica* there are a great many Aromatics enumerated, which are of ſuch a Quality, that, when ſprinkled upon Carcaſes, they not only preſerve them long from Putrefaction, but alſo prove refreſhing by their grateful Odour. Among theſe, the moſt extol'd are, Scordium, *Alliaria* [Jack-by-the-Hedge], Rue, Sage, Horehound, Wormwood, and Tanſey. *Galen*, in the twelfth Capter of his firſt Book *de Antidotis*, tells us, that Authors of unqueſtionable Veracity have affirm'd, that after Battles, when the Bodies of the Slain have been for many Days unbury'd, thoſe who fell on Scordium, caſually growing on the Field, were much leſs corrupted than others; and that thoſe Parts of their Bodies, which immediately touch'd this Herb, were abſolutely free from Corruption. *Hildanus*, in his *Obſervat. Chirurg. Cent.* 2. *Obſervat.* 94. beſtows the like Virtues on Alliaria; and, tho' he prefers Scordium to it, yet he depended ſo much on its Efficacy in the Cure of a Gangrene and Sphacelus, as alſo of putrid and ſordid Ulcers, that he expreſs'd its Juice in the Spring, and preſerv'd it in glaſs Phials, by pouring Oil on its Surface, that he might not be deſtitute of ſo ſalutary a Remedy in the Winter-time. In all theſe Plants there is a ſubtile Fragrance, on which their medicinal Virtues depend; but by long boiling, eſpecially in open Veſſels, this Fragrance is diſſipated in the Air, and the remaining Decoction is poſſeſs'd of ſcarcely any Virtues at all. 'Tis, therefore, moſt expedient to infuſe theſe Herbs in cloſe Veſſels, with Water almoſt boiling; and then, expreſſing the Liquor, to add Wine-vinegar, or Salt. The recent Herbs, alſo, triturated to a Poultice, with an Addition of Salt and Vinegar, may be apply'd to the gangrenous Parts, by way of Cataplaſm. How beneficial theſe, and other Subſtances of a like Nature, are, in Diſorders of this kind, is obvious from the Article CONTUSA. The Salts, the Vinegars, and the Aromatics, proper for theſe Intentions, are, according to *Boerhaave*, theſe following:

Sal Ammoniac, Borax, Sal Gemmæ, Nitre, Sea-ſalt, Regenerated Salt remaining after the Diſtillation of Spirit of Sal Ammoniac, Vinegar, Vinegar of Marigolds, diſtil'd Vinegar, Vinegar of Garden Tarragon, Vinegar of Lavender, Vinegar of Roſes, Vinegar of Rue, Elder-vinegar, Vinegar of Squills, and the Acetum Theriacale; Spirit of Nitre, of Salt, of Sulphur by the Bell, and of Vitriol, either ſimple, or with three times the Quantity of Alcohol; *Rheniſh* Wines are, in a particular manner, proper for this Purpoſe.

The Aromatics anſwering this Intention are the following: Southernwood, Wormwood, Alliaria, Angelica, Balſamita, *Carduus Benedictus*, Leſſer Centaury, Germander, *Cretan* Dittany, Herb Robert, Lavender, Marjoram, white Horehound, Myrtle, Origanum, Polium, Penyroyal, Roſemary, Rue, Savine, Sage, Water Germander, Tanſey, Thuya. Thus:

Take of the Leaves of Rue, Water Germander, and Wormwood, each four Ounces; and, of Mint, one Ounce: Boil in a cloſe Veſſel, with a ſufficient Quantity of Water and Vinegar; and, to every four Pints of the Decoction, add, of Sal Gemmæ, four Drams; and, of the Spiritus Vini Theriacalis, two Ounces, for a Fomentation. Or, for a Cataplaſm,

Take the ſame Ingredients, boil up to the Conſiſtence of a Cataplaſm; adding towards the End, of Sal Ammoniac, four Drams; of the Meal of Linſeed two Ounces, and of the Oil of Rue, by Infuſion, an Ounce and an half; make into a Cataplaſm, at the time of Uſe, to be ſprinkled with a little of the Spiritus Vini Theriacalis, or camphorated Spirit of Wine.

By the ſame Medicines the Solids are preſerv'd untouch'd, and free from Putrefaction.

This is ſufficiently obvious; for the Solids are not naturally very ſubject to Corruption, but only become ſo, becauſe they are acted upon by the Fluids they contain in their Cavities. Hence, when the Fluids are diſſipated by drying, the Parts of Animals are capable of being long preſerv'd without Putrefaction.

The ſtagnant Fluids are put in Motion by diluting them with aqueous Liquors copiouſly drank, and apply'd; by ſtimulating the Arteries by ſuch Medicines as are oppoſite to the Diſorder; by putting the Fluids in Motion, by means of Heat, Friction, and cardiac Medicines; and, laſtly, by removing the Redundance of the Blood, which diſtends the Veſſels too much, by Veneſection.

From the Definition of a Gangrene, 'tis obvious, that the Fluids ſtagnate in their Veſſels in a Part affected with a Gangrene, ſince the vital Influx of the Humours thro' the Arteries, and their Efflux thro' the Veins, ceaſe. Now, by Stagnation and Reſt, 'tis certain, that the Molecules of our Fluids are mutually united to each other, ſo that, in order to put the ſtagnant Fluids in Motion, 'tis neceſſary theſe concreted Molecules ſhould be ſo divided, as to be capable of paſſing thro' the narrow Extremities of the Veſſels. Beſides, when the Molecules are divided, 'tis requiſite a certain Motion ſhould be procur'd to them, which they wanted whilſt they were in a State of Stagnation; and, if the Cavities of the tranſmitting Veſſels ſhould happen to be diminiſh'd by any Cauſe, this Cauſe is to be remov'd. All theſe Ends are obtain'd by the following Means.

As for diluting the Fluids with aqueous Liquors; almoſt the whole Surface of the Skin is furniſh'd with the Mouths of the minute abſorbent Veins. Hence, diluting Medicines, apply'd externally to the Part affected, may inſinuate themſelves into theſe Mouths, and conſequently be mixt with the Blood, and by the common Laws of the animal Œconomy diſtributed thro' all the Parts of the Body. Now, 'tis certain, not only, that diluting Medicines are of ſingular Efficacy in reſolving the Concretions of the ſtagnating Blood, but alſo that diluent Fomentations, apply'd to the Part affected, are not only beneficial, in ſo far as they inſinuate their diluting aqueous Parts into the abſorbent Veins, but alſo, becauſe, by relaxing all the Veſſels, they increaſe the Quantity and Impetus of the vital Fluid in the Part, and conſequently the diluting Liquid mixt with the whole Maſs of Blood will be more deriv'd to theſe Parts. 'Tis alſo certain, that Diluents, when externally apply'd, may alſo enter the Extremities of the exhaling Arteries, if the greater Ramifications, from which theſe minute Arteries are diſtributed, ſhould be obſtructed; for then their laſt Terminations, being empty, will abſorb the contiguous Liquids, juſt as all ſmall Tubes imbibe Fluids. If, whilſt Subſtances of this kind are apply'd externally, a large Quantity of theſe Fluids is drank, the Reſolution of the concreted Humours will be obtain'd, ſo far as that End can be anſwer'd merely by diluting Liquors.

As for ſtimulating the Arteries by Medicines oppoſite to the Nature of the Diſorder; ſince, with reſpect to our Fluids, Water is almoſt the only diluting Liquor; and ſince it is of itſelf languid and inactive, the Motion of the Heart and Arteries is requiſite, in order to render it active, and capable of producing the deſign'd Effect. In the gangrenous Part the Fluids are ſtagnant. Hence, tho' Diluents ſhould be us'd both internally and externally, yet no good Effect can be produc'd, unleſs this Motion is excited. Hence, on this Occaſion, a pretty briſk Motion in the whole Body, that is, a gentle Fever, is always beneficial. Hence, in Conjunction with Diluents, ſuch Medicines, as by their gentle Stimulus ſomewhat increaſe the Motion, are to be exhibited; ſuch as Infuſions of Saſſafras-wood, the three Sanders, Rue, and Alliaria. And, as the ſpontaneous Corruption of our Humours, whilſt they ſtagnate, always tends to Putrefaction, to theſe Infuſions are to be added the moſt grateful Acids, and eſpecially the expreſs'd Juices of Vegetables, ſuch as thoſe of Lemons, Oranges, and Currants; or fermented Acids, ſuch as Wine and Vinegar; all which are ſo far from coagulating, that they rather attenuate and dilute the Blood.

Blood. According, therefore, as the Danger of a Putrefaction is greater or leſs, Acids are proportionably more or leſs to be exhibited, both among Aliments, and by way of Medicine. But when a Gangrene ariſes from the faint and languid State of Old-age, and when there are as yet no Signs of Putrefaction, volatile oleous Salts, aromatic Elixirs and Tinctures, may be of Service.

As for putting the Humours in Motion by Heat; an equable Heat, diffus'd over all the Parts of the Body, to the very Extremities, always attends a State of Health. As the Powers of Life are either increas'd or diminiſh'd, the Heat is in like manner proportionably augmented or impair'd. At laſt, when, in a Carcaſe, all Principle of Life ceaſes, Cold is produc'd, and all the Parts are in a State of Reſt. But Heat is not only the Sign and Concomitant of Life, but alſo the latent and languid Principle of Life is, by its means, rous'd, and render'd more active and vigorous. Frogs are not only render'd torpid by the Winter Cold, but often retain'd immoveable by being buried in the Middle of the Ice; however, when they are put into a Stove, their Agility returns. The vital Stamen of a Chick, contain'd in the Colliquamentum, remains there inactive, and without Growth, till, by a due Degree of Heat, the latent Principle of Life is rous'd; and, from the Obſervations of the accurate *Reaumur*, it is ſufficiently obvious, that the Life of Inſects may be rous'd, depreſs'd, prolong'd, or ſhorten'd, at Pleaſure, according to the greater or ſmaller Heat they happen to be expos'd to. Much, therefore, is to be expected from external Heat, in order to put the ſtagnant Fluids in Motion; provided, at the ſame time, ſuch Medicines are us'd, as are capable of preventing the Putrefaction, which is otherwiſe to be dreaded.

As for Frictions; their various Uſes, and the Methods in which they excite greater Heat, either in the whole Body, or in any particular Part of it, are ſpecify'd under the Article FIBRA. For our preſent Purpoſe, 'tis ſufficient to obſerve, that the alternate Compreſſion and Relaxation of the Parts, which happens in all Friction, ſupplies the natural Action of the Fluids they contain; and, therefore, the ſtagnant Fluids may be put in Motion by Friction, which, in this Caſe, is ſo highly neceſſary. Frictions will, therefore, be of the greateſt Service, when Gangrenes of the Extremities, ariſing from the weak and languid State of Old-age, are either preſent or dreaded. But, when Gangrenes are apprehended after violent Inflammations, the ſofteſt and moſt gentle Frictions are only beneficial, ſince, by rude handling, the Veſſels diſtended by the ſtagnating Fluids might be ruptur'd.

As for cardiac Medicines; ſince the Heart is the principal Cauſe of all thoſe Motions on which the vital Force depends, all Remedies, therefore, which increaſe theſe Motions, are call'd Cardiacs, though they do not always act immediately on the Heart itſelf. Theſe Cardiacs are principally of two Kinds; that is, ſuch as reſtore a ſufficient Quantity of ſound Juices, and ſuch as increaſe their Motion through the Veſſels; but 'tis of this latter we here principally ſpeak, ſince the Intention of Cure is to put the ſtagnating Fluids in Motion. Wine, the Juices of Oranges and Lemons, and other grateful Acids of a like Nature, are of ſingular Service in Caſes of this Kind, becauſe they prevent the Putrefaction to be dreaded.

As for Veneſection; as we have now obſerv'd, that, in the Cure of a Gangrene, the vital Strength is to be excited, in order to put the ſtagnating Fluids in Motion, it may poſſibly ſeem ſtrange, that we ſhould recommend Veneſection on this Occaſion, ſince, by it, the Quantity of the Humours is leſſen'd, and the Strength impair'd. But this Evacuation will be beneficial, either when the whole Body is plethoric, or when the Veſſels of the affected Part, being fill'd with a ſtagnant Fluid, are, by the Force and Impetus of the ſucceeding Blood, too much diſtended; for a Stoppage of the Circulation, a Rupture of the Veſſels, and a Gangrene, are to be dreaded from too great Repletion. The ſame Misfortunes are alſo to be dreaded from too violent a Motion of the Blood through the Veſſels. Beſides, by Veneſection, the diſtending Liquid is diminiſh'd, and the Elaſticity of the Veſſels reſtor'd, which is abſolutely neceſſary to the Motion of the ſtagnating Fluids.

It may, perhaps, be thought by ſome, that, by Veneſection, the Ingreſs of the putrid Matter into the emptied Veins is render'd more eaſy. But this ought not to be adminiſter'd, unleſs when there is a pretty violent Fever, by which the Motion to the exterior Parts is render'd briſker, and the Ingreſs of the putrid Matter into the Veins hinder'd. Beſides, there cannot be a great Putrefaction, ſo long as there are any Hopes, that the ſtagnant Fluids may again move through the Veſſels as yet entire and ſound. Hence, though ſomething of this beginning Putrefaction ſhould enter the Veins, it would eaſily be waſh'd out of the Maſs of Blood by diluting Liquors liberally drank, and be eliminated from the Body either by Urine or Sweat.

By theſe Medicines, ſoon apply'd, and frequently repeated, a beginning Gangrene is often happily corrected, and ſucceſsfully remov'd, by a Diaphoreſis.

Though a Gangrene ſeems to be preſent, yet we ought not to deſpair, ſo long as it is not accompanied with thoſe Signs which indicate the Rupture of the Veſſels, and the Effuſion of the putrefy'd Humours; for, if all the Medicines before enumerated are ſoon apply'd, and their Uſe carefully perſiſted in, Life often returns into the Part which was thought mortify'd. Nor will it do any Harm, to make a proper Trial of their Efficacy, provided there are but the faineſt Hopes left; becauſe theſe Remedies will often prove effectual in Caſes where nothing could be expected but the Separation of the mortify'd from the ſound Parts, as we ſhall afterwards obſerve. Though, therefore, the Signs of a violent Inflammation are ſuddenly remov'd, without a Correction of the Cauſe; though the Colour of the Part, before highly red, begins to be chang'd; and even though ſome ſmall Puſtules, full of a lymphatic Ichor, appear on the Skin, which only indicate, that the tender Veſſels, connecting the Skin and Epidermis, are ruptur'd; this Method may, nevertheleſs, be tried; for we have already obſerv'd, that it is not always eaſy to diſtinguiſh a violent Inflammation, from the firſt Beginning of a Gangrene ariſing from it; becauſe a violent Inflammation tends to a Mortification, and the beginning Gangrene has not as yet deſtroy'd all Life in the Part. When, therefore, the Diſorder conſiſts, as it were, in this Boundary between a Gangrene and an Inflammation, the moſt efficacious Remedies are to be applied; for, if the ſame Cauſes continue to act, the Veſſels will ſoon be deſtroy'd, and the diſcharg'd Humours will ſtagnate, and become putrid: But, when the Veſſels are deſtroy'd, there remain no more Hopes, that the ſtagnant Humours can again be put in Motion. Under the Article CONTUSA, there are ſome memorable Caſes related, which teach us, what unexpected Succeſs has ſometimes attended this Method, even in the moſt deſperate Caſes.

But, if the Fluids are already putrefy'd, their moſt moveable Parts exhal'd, and the Veſſels deſtroy'd, the Diſorder will not yield to theſe Remedies, nor will Soundneſs be reſtor'd to the corrupted Part; but the adjacent Veſſels will be much deſtroy'd by the mov'd Humours, whilſt, at the ſame time, the live Parts are not capable of exhaling.

Whilſt the Phyſician or Surgeon tries all the Remedies recommended in the two preceding Paragraphs, he ought, every fourth Hour, to inſpect the Part affected, if it is ſubjected to his Senſes, in order to diſcover, whether the Signs of an increas'd or returning Life appear, or whether every Circumſtance becomes worſe, and the Colour is chang'd into a pale, dark, livid, or black Colour; for then he knows infallibly, that the Part is mortify'd, and the Veſſels ſo deſtroy'd, that there remains no Hope of reſtoring a vital Motion in the Part. The ſtagnant Liquors will, therefore, by a ſpontaneous Tendency of their Nature, become putrid, the Veſſels will be deſtroy'd, and, as the Air acts on the extravaſated Fluids, they will be ſo much the ſooner corrupted. 'Tis ſhewn, under the Article ALCALI, that, by Putrefaction, our Humours are ſo chang'd, that their aqueous Parts are exhal'd, the native, mild, ſaponaceous, and ſufficiently fix'd Salts become acrid, alcaline, and volatile; and the Oils are ſo attenuated, as to become fetid and volatile, whilſt the remaining Part of the Oil, diveſted of its moſt moveable Particles, and united with the more terreſtrial and fix'd Portion of the Humours, conſtitutes a tenacious and viſcid Sordes. All theſe Things happen in a confirm'd Gangrene; and the mortify'd Parts becoming dry, by the Exhalation of the moſt moveable Portion of the Fluids, form a hard, and, frequently, a coriaceous Covering, which is call'd a gangrenous Cruſt. Under this Cruſt, or Eſchar, the live Parts remain, as it were, buried. If, in this Caſe, therefore, by ſtimulating the Arteries, either by cardiac Medicines, Frictions, or external Heat, the Motion of the Fluids through the live Veſſels ſhould be much increas'd, theſe will be preſs'd againſt this hard and impervious Cruſt, and, by the Attrition, a new Inflammation will be produc'd in them, which ſoon tends to a Gangrene; ſo that the Diſorder will ſoon be increas'd to a Sphacelus, whilſt all the Parts, as far as the Bone, are perfectly mortify'd; or the putrid Matter, being put in Motion in the Membrana Adipoſa, will be propagated to the adjacent Parts; and thus the Gangrene will ſpread.

In this Caſe, therefore, the whole Intention is, to ſeparate the mortify'd from the live Parts.

For, as the Circulation of the Humours no longer remains in the Part thus affected, ſo neither can it be reſtor'd, as is obvious from what has been ſaid. The only thing remaining is, therefore, to remove the mortify'd Part, leſt, by its Preſſure, it ſhould injure the ſubjacent live Parts, or, by its Contagion, infect thoſe which are adjacent.

This Separation is always produc'd by the Force of the vital Fluid flowing to the Boundaries of the gangrenous Eſchar,

Eſchar, ſuffocated there, and forc'd into a Suppuration; by which means the Fibres connecting the Gangrene to the ſound Parts will be divided.

The Manner in which this Separation of the mortified and gangrenous from the live Parts is brought about, is not eaſy to account for; ſince the vital Motion of the Humours thro' the Veſſel, cannot act upon the mortified Part, becauſe it is abſolutely wanting in it; and ſince, by a ſpontaneous Principle of Change, the Separation of this mortified Part cannot be obtain'd, becauſe it is never obſerv'd in a Carcaſe. It, therefore, only remains, that the live Part, contiguous to the gangrenous Eſchar, ſhould ſeparate from it: But, ſo long as the vital Functions continue briſk and ſtrong, a Redneſs and Inflammation are always obſerv'd in that Part where the gangrenous Eſchar touches the live Parts; becauſe, in the Boundary between the mortified and live Parts, the Humours convey'd through the live Veſſels are ſtopt, becauſe they cannot paſs through the gangrenous Eſchar: But an Inflammation ariſing, in this Caſe, cannot be cur'd by Reſolution; becauſe the Terminations of the obſtructed Veſſels cannot be open'd. Hence it will tend either to a Gangrene, or a Suppuration; for, in this Caſe, a Scirrhus is not to be dreaded. The Surgeon is, therefore, to uſe all his Endeavours to bring about a Suppuration, which will be obtain'd, if the Conditions requiſite for a Suppuration, enumerated under the Article INFLAMMATIO, are either ſpontaneouſly preſent, or brought about by the Aſſiſtance of Art. The vital Motion is, therefore, to be ſo regulated, as that it may be greater than in a State of Health, and yet not too great; a mild Quality is to be procur'd to the Humours, and Putrefaction is to be carefully prevented; for, in this Caſe, by the continual Action of the vital Humours, propel'd as far as the gangrenous Part, through the live and pervious Veſſels, the Sides of the Veſſels will be gradually relax'd, and the Coheſion between the live and mortify'd Parts deſtroy'd. From the Extremities of the live Veſſels the Humours will be diſcharg'd, and converted into Pus, as is ſhewn under the Article INFLAMMATIO. And as the gangrenous mortified Part, when no longer moiſten'd with the vital Fluids, and when the moſt moveable Parts are diſſipated, muſt neceſſarily be dried by the Heat of the circumambient Air, and that of the adjacent Parts, it will, of courſe, be contracted in all its Dimenſions; ſo that it will be the more effectually ſeparated from the live Parts, as ſoon as the Extremities of the live Veſſels begin to be, as it were, diſſolv'd, by a Suppuration. In this Caſe, a Gap is form'd, which moſt perfectly ſeparates the gangrenous and mortified from the live Parts; and then there is no longer any Fear, leſt the Gangrene ſhould ſpread; for the gangrenous Eſchar remains, as it were, like an Iſland ſurrounded by the live Parts. But the inferior Part of this gangrenous Eſchar generally remains longer fix'd to the live Parts, though in its Circumference it is perfectly free; till at laſt, the ſame Cauſes continuing to act, it is daily more and more contracted, till it falls totally off, and leaves a ſimple Ulcer. But that a Suppuration is the only Method by which the Parts, ſo corrupted, that they can no longer obey the Laws of the animal Œconomy, can be ſeparated from thoſe which are ſound and alive, is ſhewn under the Article VULNUS. They who have imagin'd, that by cutting, burning, and corroding, they could more ſpeedily procure this Separation of the mortified from the live Parts, have certainly err'd, ſince by all theſe Methods either ſome of the mortified Part is left, or, together with it, the live adjacent Parts are deſtroy'd; for, by touching that Part of the gangrenous Portion, which is next to the live Parts, with Butter of Antimony, or with a cauſtic Liquor, prepar'd of Quick-ſilver diſſolv'd in Aqua-fortis, and ſo much extol'd by *Belloſte*, we may ſometimes hinder the Putrefaction from ſpreading, and affecting the adjacent Parts; but we can never, by this means, obtain the Separation of the mortified from the ſound Part; for, when live Parts are touch'd with theſe acrid Corroſives, they are forthwith render'd mortified, and muſt afterwards be ſeparated from the live Parts by a Suppuration. All, therefore, which can be obtain'd by theſe means is, to place Boundaries, within which the mortified Parts remain; but theſe Parts are, at the ſame time, ſo impregnated with theſe highly concentrated acid Spirits, as totally to hinder the Progreſs of the Putrefaction. Thus there is a kind of Boundary made, which cuts off all the Commerce and Communication between the live and the putrid gangrenous Parts. But this Boundary is itſelf mortified, and muſt be ſeparated from the live Parts, to which it adheres; and this Separation is only accompliſh'd by a Suppuration brought about by Nature, as we have already obſerv'd.

'Tis certain, from chirurgical Obſervations, that the Scarification of gangrenous Parts is often of ſingular Service, ſince, by this means, the Force of antiſeptic Medicines penetrates more deeply, and Putrefaction is the more effectually prevented. 'Tis, at the ſame time, equally certain, from Experience, that the cutting the gangrenous from the ſound Parts, by a Knife, is always an unſafe and dangerous Method: But where gentle Scarifications are us'd, Putrefaction prevented, by proper Fomentations, and the Buſineſs of Separation left to Nature, after the Force of the Diſeaſe is ſubdued, and the Strength reſtor'd, the Cure almoſt always proves ſucceſsful, even in pretty deep Gangrenes. *La Motte* informs us, that he had frequently ſeen gangrenous Cruſts, form'd about the Os Coccygis, and the adjacent Parts, by long lying in Bed, ſpontaneouſly ſeparated, in poor Perſons, who had no Care taken of them. *Van Sweiten* informs us, that he has often ſeen Inſtances of the ſame Kind, though no Scarifications were uſed, but the Parts only fomented with Wine, Vinegar, and Salt, in order to prevent Putrefaction.

'Tis, therefore, obvious, that the Art of treating a Gangrene muſt conſiſt, firſt, In taking the Meaſures already directed. Secondly, In haſtening the Suppuration. And, thirdly, In ſoftening the Eſchar.

Since, from what has been ſaid, 'tis obvious, that, by a Suppuration alone, a perfect Separation of the mortified from the live Parts can be produc'd, this Suppuration is carefully to be promoted and accelerated. And, whilſt it is expected, and forming, we are to take care, leſt too great a Putrefaction ſhould be produc'd, which may either infect the adjacent Parts, or, being abſorb'd into the Veins, diſorder the whole Body. But of this we have already treated: And as a gangrenous Eſchar, after the moſt fluid Parts are diſſipated, ſometimes acquires the Rigidity of dry'd Leather, it is obvious, that it muſt be more eaſily ſeparated, after 'tis previouſly ſoften'd, and render'd moiſt.

In order to accelerate a Suppuration, a Scarification of the putrified Part, to the very Beginnings of the live Parts, is conducive; for, by this means, the too great Suffocation being diminiſhed, an Abſceſs is form'd, inſtead of a ſpreading Gangrene, by which the Skin, and gangrenous Fat, are, for the moſt part, ſeparated from the ſubjacent live Parts.

In ſome Parts of the Body the Membrana Adipoſa, the principal Seat of a Phlegmon and Gangrene, is conſiderably thick; and, even when it is thin, it is ſometimes diſtended to an incredible Bulk, by ſtagnating Blood. Now, if a Gangrene ſeize the Whole of this Maſs, the live Muſcles and Tendons will remain buried under this mortified Part, which they are not capable of removing. Hence a Suffocation is to be dreaded, and there is great Danger, leſt all the Parts ſhould be corrupted, as far as the Bone, and the Gangrene degenerate into a Sphacelus. In order to prevent this, Surgeons generally make Inciſions in the gangrenous Part, parallel to each other, and differing in Number and Length, according to the Bulk of the Part affected: Sometimes to theſe longitudinal Inciſions they add tranſverſe ones, which decuſſate them. The Depth of theſe Inciſions ought to be ſuch, as not to injure the ſubjacent live Parts, but, at the ſame time, to divide the mortified, as near as may be, to the ſound; for it would be cruel, and often dangerous, to divide the live Parts with the Knife; and the Ingreſs of the gangrenous and putrid Matter into the Veins would become more eaſy, by its touching upon ſuch a crude Wound, which, however, is carefully to be guarded againſt. Hence the Antients order'd Inciſions to be made in gangrenous Parts, as far as the live ſubjacent Parts. Thus *Celſus*, in the 26th Chapter of his fifth Book, when treating of the Cure of a Gangrene, uſes the following Words: "Whatever Part is dry, and, in any "meaſure, prejudicial to the adjacent Part, is to have an In-"ciſion made in it, as far as the ſound Parts." By this means, Vents are, as it were, made, through which the ſubjacent Veſſels may riſe, and not only remove the mortified incumbent Parts, but alſo ſupply what was corrupted by the Gangrene. The ſame happens in this Caſe, which happens in Wounds of the Head, when the Cranium is perforated with ſmall Holes, to different Depths, according to the different Degrees of Corruption; for the ſubjacent Veſſels riſe through theſe Punctures, the Parts of the corrupted Bone are ſeparated, and what was loſt is reſtor'd. Beſides, when gangrenous Parts are thus divided, an eaſier Ingreſs is procur'd to antiſeptic Fomentations, the mortify'd Parts are impregnated with theſe, and effectually defended from all Degrees of Putrefaction: The Softneſs of the Eſchar may alſo be more eaſily obtain'd, whilſt Emollients apply'd may inſinuate themſelves into theſe Apertures. After theſe Meaſures are taken, if the vital Force is ſtrong about all the Circumference of the gangrenous Portion, the live Parts will be inflam'd, and a Suppuration will happen; by means of which the whole mortify'd Part, ſoften'd and divided by Scarifications, will be gradually ſeparated; and then the Gangrene becomes an Ulcer, but of the ſordid Kind, which, however, is daily more and more cleans'd, whilſt the Skin and Membrana Adipoſa, which are, for the moſt part, only affected with a Gangrene, wither away, as it were, and are ſeparated from the ſubjacent live Parts. But, when a Gangrene ſeizes ſuch Parts as are only cover'd with little Fat, the gangrenous Cruſt is not ſo thick as to require theſe Scarifications, which could not be commodiouſly made, without

without injuring the ſubjacent live Parts. Thus, when, lying in Bed, Gangrenes ariſe about the Os Coccygis, and the Os Sacrum, ſuch a gangrenous Cruſt is rarely found, becauſe theſe Bones lie almoſt immediately under the Skin, without the Interpoſition of any Fat.

But, that the more Blood may be convey'd into theſe Boundaries, Leeches, Cupping-glaſſes, and other Remedies of an attracting Nature, often applied, are of Service.

Concerning theſe we have already ſpoke; but we muſt here obſerve, that they are to be us'd when the Force of the vital Humours is languid; for where there is a violent Fever, it is often more expedient to diminiſh the Force of the Circulation. Beſides, attracting Remedies, applied to theſe Parts, may be beneficial in ſo far as they derive the Efficacy of antiſeptic and diluting Remedies taken inwardly to theſe Parts. Mr. *Ruſhworth*, a celebrated Surgeon of *Northampton*, ſome Years ago, wrote a Letter to the Company of Surgeons in *London*, concerning the Uſe of the *Peruvian* Bark, in putting a Stop to a Gangrene and Sphacelus. And, next Year, Mr. *Amyand* inform'd Mr. *Ruſhworth*, in a Letter, that he had made ſeven Trials of his Medicine in a Sphacelus, and found it accompanied with Succeſs. Afterwards, other celebrated Surgeons confirm'd the Opinion of Mr. *Ruſhworth*, and the Value of the Bark, by their Teſtimonies. In the *Philoſophical Tranſactions*, *N.* 426. *p.* 429. 434. there are various Inſtances, by which it is ſhewn, that, by the Uſe of *Peruvian* Bark, Gangrenes and Sphaceluſes have been ſtopt, and hinder'd from ſpreading to the adjacent Parts, and the mortified Parts have happily ſeparated from the ſound, though there were no Symptoms of an intermittent Fever through the whole Courſe of the Diſorder. There are, alſo, Inſtances, in which every thing ſucceeded well, ſo long as this Medicine was us'd; and the Symptoms increas'd upon giving it over, whilſt, upon reſuming the Uſe of it, the Events have been obſerv'd to be ſucceſsful and happy. There are, alſo, various Operations in the third Volume of the *Medical Eſſays*, publiſh'd at *Edinburgh*, which prove the Efficacy of the *Peruvian* Bark, in curing Gangrenes and Sphaceluſes. There are, alſo, ſome Inſtances of its having fail'd of Succeſs.

The Part in which the Inciſions are made is to be fomented with warm Liquors, proper for reſiſting Putrefaction; and the Eſchar is to be diminiſh'd by Emollients.

In order to produce a Separation of the mortified gangrenous Parts from thoſe which are alive and ſound, it is expedient ſo to ſoften and moiſten the gangrenous Cruſt, that it may almoſt diſſolve. But, whilſt this Intention is carrying on, a Putrefaction is almoſt always to be dreaded. Emollients are, therefore, to be applied; but they are to be previouſly mix'd with Antiſeptics. Whilſt, therefore, a gangrenous Part is fomented with Alcohol of Wine, or other Liquors of a like Nature, Putrefaction is prevented; but, at the ſame time, all the Parts are indurated. And when, after pretty deep Inciſions are made, theſe are capable of penetrating to the ſubjacent live Parts, they mortify them, and thus produce new mortified Cruſts. But, when theſe Parts are fomented with Emollients, the ſmall mortified Portion, which covers the ſcarified live Parts, is ſo relax'd, as to be almoſt diſſolv'd, ſo that it ſcarce any longer adheres to the live Veſſels. Hence it will eaſily be ſeparated by the Force of the vital Humours, carried to the Part through the live ſubjacent Veſſels. In *Boerhaave*'s *Materia Medica*, there is a Liquor recommended, which powerfully reſiſts Putrefaction; as alſo a Cataplaſm proper for ſoftening gangrenous Eſchars, which conſiſts partly of highly emollient, and partly of aromatic antiſeptic Herbs. Before the Application of ſuch Cataplaſms, Surgeons generally ſprinkle them with antiſeptic Liquors. Thus the Effects of theſe two Remedies are happily join'd. Both theſe Intentions are excellently anſwer'd by a ſimple Cataplaſm of the Meals of Oats or Rye, which ſoon become aceſcent, boil'd in Butter-milk, adding, towards the End, recent Rue triturated, a ſmall Quantity of Sal Ammoniac, and ſome of the Oil of Linſeed, or any other proper Oil, leſt the Cataplaſm ſhould become dry too ſoon.

The Liquor above-mention'd, proper for reſiſting Putrefaction in a Gangrene, is thus prepar'd:

Take of the Vinegar of Taragon, ſix Ounces; of the Vinegar of Roſes, two Ounces; of the Spiritus Vini Theriacalis, four Ounces; of Sea ſalt, one Ounce; and of a Decoction of Scordium, prepar'd with Water, twelve Ounces: Mix all together.

The Cataplaſm for ſoftening gangrenous Parts is thus prepar'd:

Take of the Leaves of Scordium, two Handfuls; of Mallow-leaves, one Handful; of the Flowers of Lavender, and Marſhmallows, each one Ounce: Boil theſe to a Cataplaſm, with Vinegar; and then add, of the Meal of Linſeed, three Ounces; of the Oil of Lindſeed, one Ounce; and of Sal Ammoniac, one Dram.

The *Unguentum Aureum*, and *Baſilicon*, are, in this Caſe, alſo, recommended.

The pendulous, mortified, diſengag'd, and ſoften'd Parts of a gangrenous Eſchar, are to be remov'd by the Forceps or Sciſſars.

In the Courſe of this Diſorder, the gangrenous Cruſts, eſpecially when divided into various Parts by Scarification, begin to be diſengag'd and ſeparated, not only from each other, but alſo from the live Parts; and then, cohering only in a few Points, they hang down. In this State of things, Surgeons, too fond of cleanſing the gangrenous Part, pull away theſe gangrenous Shreds with the Forceps, by which means they not only often create unneceſſary Pain, but alſo excite a Convulſion and Tetanus about the tendinous Parts, whilſt they irritate and draw the Tendons, which, in this Caſe, are often uncover'd, and depriv'd of their mucous Vaginæ, as may be ſeen in the Article VULNUS. How cruel and hurtful it is to cut off the mortified Parts, as yet not ſoften'd, but adhering to thoſe which are ſound, we have already ſhewn. Nature, who, in the Cure of Diſeaſes, is ſo often ſufficient for bringing about her own Meaſures, will accompliſh that Separation of the mortified from the ſound Parts, which ſhe has already begun. All that Art can do, is, by a laudable Regimen, and proper Remedies, to convey a ſufficient Quantity of good Humours, with a due Force, to the Part, which, by their continual Impulſe, may throw off theſe gangrenous Cruſts, previouſly relax'd by emollient Fomentations and Cataplaſms. The Putrefaction, in the mean time to be dreaded, is to be prevented by antiſeptic Medicines. But whatever is totally diſengag'd from its Coheſion with the ſound Parts, is to be remov'd, leſt, being left, it ſhould become putrid, and injure the ſubjacent tender Veſſels. If pendulous gangrenous Shreds, in ſome meaſure, ſtill adhere to the live Parts, all that Part, which is diſengag'd, is to be cut off with a Pair of Sciſſars; but that which ſtill adheres, is to be left, ſince, by pulling it away, a crude Wound is form'd, which diſcharges Blood, and may be unhappily affected by the gangrenous Matter; for the gangrenous Putrefaction may be eaſily abſorb'd by ſuch a crude Wound. It is, therefore, a general Rule, to be obſerv'd in this Caſe, that nothing is to be taken away, in conſequence of which, either Pain is produc'd, or Blood diſcharg'd.

Warm Cataplaſms, which act by a continual and uninterrupted Heat, and which conſiſt of emollient, diaphoretic, and anodyne Subſtances, are to be kept continually applied to the whole Part affected.

Since, in a gangrenous Part, there is no Motion of the vital Humours through the Veſſels; the Heat depending on this Circumſtance muſt, of courſe, be wanting. This Defect is, therefore, to be ſupplied by external Heat. But it is obvious, that this is only neceſſary when the gangrenous Cruſts are thick; for, when they are thin, the Heat of the ſubjacent Parts is ſufficient. For this Purpoſe, therefore, Cataplaſms are preferable to Fomentations, becauſe they retain the Heat longer, do not become dry ſo ſoon, and, conſequently, need not be renew'd ſo often. By means of the heated Bricks before-mention'd, the Heat of theſe Cataplaſms may be preſerv'd. But, in theſe Cataplaſms, as we have already obſerv'd, an emollient Quality is not only requir'd, but they muſt alſo contain Ingredients capable of preventing Putrefaction, and gently ſtimulating the live Veſſels by their grateful aromatic Particles. Theſe Applications, therefore, muſt be various, according to the different Conditions of the Part affected; for, if it is exceſſively dry, emollient and moiſtening Subſtances are moſt proper; but, if the Signs of a violent Putrefaction are preſent, a large Proportion of antiſeptic Ingredients is neceſſary. If Paleneſs, Cold, and Liſtleſſneſs, are obſerv'd, either in the whole Body, or in the Part affected, a large Quantity of ſtimulating Aromatics is proper. On the contrary, if there is a violent Inflammation about the Boundaries of the Gangrene, Elder-flowers, Houſleek, and other refrigerating Subſtances, are moſt beneficial. To theſe Cataplaſms are generally added ſome anodyne Ingredients, which obtund and alleviate the Pain, whilſt the gangrenous Eſchar is ſeparating from the live Parts; for this Species of Eſchar, by numberleſs Connections, adheres to the live and ſenſitive Parts: Whilſt, therefore, this Eſchar gradually contracts itſelf, and is leſſen'd in all its Dimenſions, the ſenſible nervous Fibres in the live Parts, ſurrounding the gangrenous Eſchar, are diſtracted by a kind of ſlow Dilaceration. Hence the Pain, uſual on thoſe Occaſions, ariſes. It is, therefore, obvious, that emollient and laxative Subſtances muſt be of ſingular Service in Caſes of this Nature; ſince, by their means, the gangrenous Eſchar is not only ſooner diſengag'd, but alſo the Pain, ariſing from the Diſtraction of the nervous Fibres, mitigated. To theſe Cataplaſms ſuch Subſtances may be added as alleviate the Pain, though its Cauſe ſtill continues, ſuch as

Henbane, the Solanum of the Shops, and others of a like Nature. A Cataplaſm for theſe Intentions may be prepar'd in the following Manner:

Take of the recent Leaves of Male Southernwood, of *Pontic* Wormwood, of Garden Rue, Scordium, *Alliaria* [Jack-by-the-Hedge], Hemp-agrimony, white Horehound, and Tobacco, each half an Handful; of Henbane, one Handful; of the Flowers of Marigold, the leſſer Centaury, Melilot, Feverfew, and Tanſey, each two Ounces; of the Flowers of Marſhmallows, and wild Poppy, each one Ounce. When theſe are boil'd with Water, in a cloſe Veſſel, for a quarter of an Hour, mix with them, of the Meal of Linſeed, four Ounces; of the Oil of Rue by Infuſion, two Ounces; of the Acetum Theriacale, and the Spiritus Vini Theriacalis, each one Ounce; and of Sal Ammoniac, one Dram.

The Cure is alſo much promoted by a leſs frequent Inſpection of the Part than is uſually practis'd.

How quickly a Gangrene and Sphacelus frequently ſpread, we have already obſerv'd: For this Reaſon, Surgeons, always dreading the worſt, frequently inſpect gangrenous Parts; and this Practice is juſt, and well founded, ſo long as we are not certain, that the Gangrene is ſtopt. But, after the Appearance of this Diviſion, all around the Gangrene, a Stop is put to the ſpreading Diſorder; becauſe the Continuity is deſtroy'd, by means of which the mortify'd Parts adher'd to thoſe that were ſound. There is, therefore, no Danger in ſuffering the Cataplaſms to remain for a conſiderable time, without being renew'd; for they conſiſt of ſuch Ingredients as prevent the Putrefaction to be dreaded. Thus, by ſuch a continual Maceration, the gangrenous Cruſts will decay, and the Suppuration, ſo neceſſary in this Caſe, will be promoted. But, when the Apparatus is often renew'd, the free Acceſs of the Air to the live Parts, now diveſted of the gangrenous Cruſt, will prove injurious, as is ſhewn under the Article VULNUS; eſpecially if Surgeons ſpend a conſiderable Time in examining and cleanſing the gangrenous Part with their Inſtruments, as they ſometimes do. 'Tis ſufficient, if the Surgeon, three or four times a Day, ſmells whether he perceives any Degree of a putrid Smell; and, if he perceives no ſuch thing, the whole Apparatus may remain unchang'd for twenty-four Hours.

When, after theſe Meaſures are taken, the Eſchar begins to be contracted, the ſcarify'd Parts to become moiſt, the ſound Margins to grow tumid, red, and to ſuppurate, and the mortify'd Part to move up and down, 'tis a Sign, that the Separation is carrying on, that the ſpreading Diſorder is ſtopt, and that the Part will ſoon become pure and free from the gangrenous Taint.

When, by the Force of the vital Fluid carried to the Boundaries of the gangrenous Eſchar, the Fibres joining the Gangrene to the ſound Parts are divided, the Extremities of the live Veſſels will be retracted. The gangrenous Eſchar, in the mean time, which receives no more Supply from the Veſſels, will, by the Heat of the adjacent Parts, loſe its moſt fluid and moveable Parts; in conſequence of which, it will become dry, and have its Bulk every way diminiſh'd: Hence it will be contracted in its Circumference, and recede from the live Margins to which it before adher'd. Theſe two Circumſtances, concurring, produce that Chink or Gap which fixes the Bounds between the mortify'd and live Parts, and puts a certain Stop to the ſpreading Diſorder. But, in this Place, the live Veſſels, now diveſted of their mortify'd Covering, begin to perſpire, and diſcharge a Fluid from their open Orifices: Hence a certain Moiſture appears in this Aperture, which is an excellent Sign of returning Life in the Part. If the gangrenous Part has been divided by Scarifications, the Bottoms of theſe Diviſions, which at firſt were very dry, will afterwards begin to become moiſt: But this Moiſture will eaſily be diſtinguiſh'd from that which is produc'd by Fomentations and Cataplaſms; for, if, theſe being remov'd, the Part is duly cleans'd and inſpected, it appears perfectly dry, ſo long as the Separation of the mortify'd Part, from that which is ſound, is not begun; whereas, if the ſubjacent live Veſſels have already, in ſome meaſure, remov'd the mortify'd ſuperincumbent Portion, a manifeſt Moiſture will appear in the Bottoms of the Diviſions, which, though wip'd away, will forthwith appear afreſh. Soon after, a Suppuration will begin; and, when this happens in the Aperture dividing the gangrenous and mortify'd Part from the live Margins, there appears a Pus, which is not laudable, but ſeems to partake of a middle Nature between a gangrenous Matter, and a good Pus; for that Fluid which is convey'd through the live Veſſels, now free and unobſtructed, would, in conſequence of its Continuance, Heat, and the Diſſipation or Abſorption of its moſt liquid Part, be converted into Pus; but the mortify'd gangrenous Part, being diſſolv'd into a kind of thin Ichor, will mix itſelf with it; for, in the Beginning of the Separation, a thickiſh and ſomewhat unctuous Ichor is diſcharg'd; but, on the ſubſequent Days, it gradually approaches, more and more, to the Conditions of laudable Pus, till at laſt it acquires all its Qualities. In this Caſe, the live Margin, every-where diſengag'd from the mortify'd gangrenous Portion, to which it adher'd, is exactly in the ſame State with the Lips of a Wound: Hence it will begin to grow tumid, and become red, painful, and hot, for the Reaſons aſſign'd under the Article VULNUS. The ſame will happen to the live Parts lying under the gangrenous Eſchar; for they will, alſo, be gradually ſeparated from the mortify'd Part. Hence the Cruſt, which before adher'd pretty ſtrongly, will become moveable, and begin to yield, when touch'd with the Fingers; and, by a gentle Preſſure, the Liquor, collected under it, is diſcharg'd all around it. Thus, when all the Fibres, joining the mortify'd to the live Parts, are gradually divided, the former falls off, and leaves a ſimple Wound, with Loſs of Subſtance, which is to be incarn'd and conſolidated in the uſual manner.

Then lenitive, anodyne, balſamic, and digeſtive Subſtances, are to be apply'd; the Ulcer is to be dreſs'd. All Medicines, which render the Fibres rigid, are to be avoided. The Part is to be kept in a State of Reſt; and the Diſorder, in other reſpects, is to be treated like an Ulcer.

After the ſpreading Diſorder is ſtopt, and the gangrenous Cruſt, ſeparated from the live Margins, remains like an Iſland in the Middle of them, we are to conſider it as a ſordid Ulcer, which firſt demands Depuration, then the Regeneration of the loſt Subſtance, and, laſtly, Conſolidation. Hence *Celſus*, in the 26th Chapter of his 5th Book, when treating of the Cure of a Gangrene, juſtly adviſes, "that, when the Diſorder "is ſtopt, we ſhould apply thoſe Medicines which are proper "in a putrid Ulcer." But the Cleanſing of this Ulcer conſiſts in taking ſuch Meaſures as may, as ſoon as poſſible, make the gangrenous Cruſts fall off, after they are ſeparated from the live Parts to which they adher'd, by the Impetus of the vital Humours convey'd through the Veſſels. This Intention will be beſt anſwer'd by ſuch Medicines as relax and mollify theſe gangrenous Cruſts. Hence the Unguentum Aureum, Baſilicon, and freſh Butter, are of ſingular Uſe for this Purpoſe. Nor is it to be apprehended, that the Veſſels, being too much relax'd by theſe emollient Applications, ſhould degenerate into fungous and luxuriant Fleſh; for this will be prevented by the ſuperincumbent gangrenous Cruſt; and, when this is remov'd, and, by that means, the Place freed from a gangrenous Taint, ſuch Medicines are to be apply'd, as gently corroborate and check the exceſſive Dilatation of the Veſſels. Theſe Emollients are of an anodyne Nature, for the Reaſons before-mention'd. But if, after theſe gangrenous Cruſts are, in ſome meaſure, ſeparated, the bare live Veſſels ſhould begin to riſe too much, this Symptom may be remov'd by ſprinkling Powder of Maſtich upon them; and the Emollients are, in the mean time, to be apply'd to the other Parts of the Wound. Dreſſing the Part affected very ſeldom, is a Circumſtance of ſingular Service, as we have already obſerv'd. But all ſpirituous Subſtances, ſuch as Alcohol of Wine, camphorated Spirit of Wine, and the Spiritus Vini Theriacalis, prevent Putrefaction, but retard the Cure; becauſe they coagulate the Fluids, and render the ſolid Fibres highly rigid; in conſequence of which, the Separation of the mortify'd from the live Parts will be more difficult; ſince, by this means, the Coheſion of the ſolid Parts is augmented. The ſame Misfortune will happen, if the Part is continually fomented with acrid Lixiviums of Sea-ſalt, or Sal Ammoniac; for 'tis certain, from daily Experience, that the Fleſh of Animals become hard by being immers'd in Brine or Pickle. The Part affected ought to be kept in a State of Reſt; that the Dreſſings may the better remain in their Situation, and that the pulpous and ſoft Veſſels may not be deſtroy'd by their Attrition on the gangrenous Eſchars. The other Meaſures, requiſite for the perfect Cure of a Gangrene, are the ſame with thoſe to be taken in the Cure of an open Ulcer. See the Article ULCUS.

When a Gangrene ariſes from an intenſe Cold, the Part affected is to be cover'd, either with Snow, or with Linen Cloths ſoak'd in cold Water, till, the Spicula of the Cold being abſorb'd by the Snow, or the cold Water, the Part begins to be thaw'd, and its Life to return.

If the Cure of this Species of Gangrene was attempted by the Meaſures already directed, the Part affected would ſoon be ſphacelated to the very Bone; a Caſe which frequently happens in the northern Climates. This Species of Gangrene is, therefore, to be carefully diſtinguiſh'd from others, which may be eaſily done by attending to the preceding Cauſe, and the Signs of this Gangrene, when preſent.

The Heat of the human Body, when in a ſound and healthy State, ſurpaſſes the Heat of the circumambient Air, even in the hotteſt Summer Months. Hence 'tis obvious, that an intenſe Degree of Cold is requiſite to render the Parts of the Body rigid. But, ſince, all other Circumſtances being alike, the Heat is leſs in the Extremities, becauſe the Velocity of the Blood is diminiſh'd in proportion to the Diſtance from the Heart; the Effects of the cold Air are, for this Reaſon, principally obſervable on the Toes and Fingers, the Point of the Noſe, and the Ears. But, ſince Cold converts Water, which was before fluid, into rigid Spicula, it follows, of courſe, that it muſt produce a ſimilar Effect on the Fluids of the human Body, which contain a large Quantity of Water. The Influx and Efflux of the Humours will, therefore, be totally deſtroy'd, when the congeal'd Humours loſe the Nature of a Fluid. In this Caſe, therefore, a Gangrene will be form'd, as is obvious from the Definition already given. Since theſe congeal'd Spicula are lodg'd in the tender Veſſels, 'tis ſufficiently obvious, that all the Parts muſt be deſtroy'd, if theſe are put in Motion, either by Heat or Frictions; for, if we ſhould ſuppoſe, that, theſe Spicula being partly reſolv'd, the Circulation of the Blood ſhould, in ſome meaſure, return, thoſe Parts, which are not as yet render'd fluid, muſt neceſſarily ſtick in the narroweſt Parts of the Veſſels; and, ſince the Force of the ſucceeding vital Fluid acts upon theſe Obſtacles, the Coheſion of the Veſſels muſt neceſſarily be ſoon deſtroy'd by theſe ſharp and rigid Molecules; in conſequence of which, the Diſorder will ſoon become incurable, and the only Means of Safety will conſiſt in a Separation of the corrupted and mortify'd Parts from thoſe which are ſound and alive. Perhaps theſe Diſorders are increas'd, becauſe the ſaline Molecules of the human Fluids are ſeparated, and form'd into larger Maſſes; and, when theſe Maſſes are put in Motion, before they are again render'd fluid, they may prove prejudicial, both by their Figure and Rigidity. At leaſt we learn from Experience, that Water, richly impregnated with Salt, cannot be congeal'd without an intenſe Degree of Cold; and that, before it is congeal'd, the Salt is ſeparated from it, and collected in the Bottom of the Veſſel.

Experience has taught us, that, in cold Countries, theſe Diſorders are happily cur'd by the Application of Water ſo cold, that it is very near to a State of Congelation; for this Water, acting as a phyſical Cauſe, extracts the Particles which had congeal'd the Fluids; and that Part of the Water, which is next to the Part affected, is, by their means, congeal'd. By this means the Humours are reſtor'd to their natural Fluidity; and then a due Motion may be procur'd to them, by ſtimulating Cardiacs and Frictions. Thus *Hildanus*, in the thirteenth Chapter of his Treatiſe *De Gangræna & Sphacelo*, informs us, that before the Inhabitants of the Northern Climates approach the Fire, or enter into Stoves, they rub their Hands, Noſes, and Ears, with Snow. The ſame Author tells us, that he was inform'd by a Perſon of unqueſtion'd Veracity, that when a Traveller was brought to an Inn, rigid with Cold, and as it were dead, the Landlord immers'd him in cold Water; after which the Spicula of Cold, were ſo copiouſly diſcharg'd, that his whole Body ſeem'd to be cover'd with a Cruſt of Ice: Then, by exhibiting a large Quantity of Hydromel, together with the Powder of Cinnamon, Mace, and Cloves, a Sweat was excited in a warm Bed, and the Patient recover'd, without any farther Loſs than that of the laſt Articulations of his Fingers and Toes.

In Caſes of this Nature, the Part becomes putrid by the Application of Heat; becauſe the Spicula of Cold are put in Motion, without being reduc'd to a due Degree of Fluidity.

Whilſt, the phyſical Cauſe, producing the Congelation, not being extracted, Motion is procur'd to the Spicula of Cold by external Heat, the tender Stamina of the Veſſels muſt neceſſarily be deſtroy'd. This plainly appears in what we call froſted Apples; for, if theſe are laid before the Fire, in order to be thaw'd, they loſe all Taſte, are ſoon corrupted, and transform'd into a ſoft Pulp: But, if they are immers'd in cold Water, near to a State of Congelation, a Cruſt of Ice begins, every-where, to cover them: And, after this Cruſt is fallen off, they are again to be immers'd in cold Water, and this Method is to be repeated, till no more Ice is diſcharg'd from them. After this they have their uſual Taſte, and, when dry'd, may be preſerv'd for a conſiderable time. The ſame happens in the Parts of the human Body, when conſtricted with Cold, if they are imprudently expos'd to Heat, before the Spicula of Ice are extracted by the Application of Snow, or cold Water; for ſuch Parts, becoming corrupted by a legitimate Sphacelus, fall off. *Hippocrates* ſeems to have given a Caution, with reſpect to this, when, in the firſt Chapter of his Treatiſe *De Liquidorum Uſu*, he tells us, "That Feet benumb'd with Cold fall off by an "Affuſion of any warm Liquor."

After theſe Meaſures are taken, the Patient is to have his Strength recruited by cardiac Medicines, of a hot Quality; and a Heat, ſo intenſe as to produce a Sweat, is to be excited.

After the Spicula of Cold are extracted, there is no Fear of deſtroying the Parts by exciting the Motion of the Fluids; and ſuch Medicines may be ſafely exhibited, as excite a pretty briſk Motion, and conſequently diffuſe an equable Heat, either thro' the whole Body, or the Part affected; for, by this means, the Circulation of the Humours will, moſt quickly, be reſtor'd through theſe Parts, in which, a little before, they were ſtagnant, and at Reſt. Hence, *Hildanus*, in the thirteenth Chapter of his Treatiſe *De Gangræna & Sphacelo*, recommends gentle Frictions, and afterwards Fomentations of ſweet Milk, boil'd with Leaves of Bays, Roſemary, Sage, and Lavender; and, after this, he orders Sudorifics to be exhibited to the Patient, in a warm Bed: Theſe Fomentations are, in the mean time, to be continually applied, that the Motion, created by the internal Remedies, may be principally determin'd to the Part affected. *Van Sweiten* informs us, that he has ſeen ſingular Service done, only by an Infuſion of Saſſafras, in poor Perſons, who have been ſeized with Gangrenes during intenſely cold Winters.

A Sudorific, proper in a Gangrene, may be thus prepar'd:

Take of diſtil'd Treacle-water, one Ounce; of the prophylactic Water of *Sylvius*, ſix Drams; of the Aquavitæ of *Matthiolus*, one Ounce; of Rue-water, nine Ounces; of *Fernelius*'s Syrup of Mugwort, and of the Syrup of the Five aperient Roots, each an Ounce and an Half; and of Elixir Proprietatis, prepar'd with Salt of Tartar, two Drams: Mix all together. Let the Patient take a Spoonful, every Half-quarter of an Hour, drinking after, an Ounce or two of the following Mixture:

Take of Barley-water, two Pints; of French-wine, one Pint; of powder'd Ginger, two Drams; and of the Syrup of Jeruſalem-oak, three Ounces: Mix all together.

Of a Sphacelus.

If a Gangrene degenerates into a Sphacelus, the Part infected muſt be remov'd; but the Method of doing this is to be varied, according as the Part is totally, or only partially affected, and according to the Situation of the Part, which ſometimes does not admit of Amputation, as the Buttocks, Os Sacrum, Os Coccygis, the prominent Spines of the Vertebræ, and Eminences of the Scapulæ.

If, therefore, the Part is not corrupted to the very Bottom, or cannot be extirpated, our Endeavours muſt tend, firſt, To ſtop the Progreſs of the Sphacelus; and, ſecondly, To remove the ſphacelated Portion.

The Progreſs is ſtopt by intercepting the Communication betwixt the live and ſphacelated Part.

In the Part, thus mortified, all the Humours remain at Reſt, in the Veſſels; or, the Veſſels being ruptur'd, the Humours are diſcharg'd, and become ſtagnant: But, ſo long as the Coheſion between the mortified and live Parts remain, the Fluids, convey'd through thoſe Veſſels, which are as yet alive, will ſtop in the Part where the Sphacelus begins; and, conſequently, the Motion will be ſuffocated in the live Parts contiguous to that which is mortified; and thus the Diſorder will be propagated. Nor can this Misfortune be prevented, unleſs the Coheſion between the live and mortified Parts is previouſly deſtroy'd: As ſoon as this happens, whether by the ſpontaneous Workings of Nature, or the Aſſiſtance of Art, the Humours will be diſcharg'd from the ruptur'd Veſſels, the Extremities of the divided Veſſels will be retracted, and an Aperture, dividing the live from the mortified Parts, will be form'd; nor will the Sphacelus, in this Caſe, ſpread any farther, tho' ſeveral Cauſes, favouring its Propagation, ſhould concur.

A Stop is put to the Propagation of this Diſorder, by placing a pretty deep Boundary between the ſound and diſorder'd Part, either by Inciſion, the actual Cautery, or Corroſion.

Art, attempting to imitate Nature, may place a Boundary of this kind, to prevent the Propagation of the Diſorder, and cut off the Communication between the mortify'd and live Parts. But this is never ſo accurately done by Art, as by Nature; which produces a perfect Separation of the mortify'd from the live and ſound Parts, at the ſame time preſerving the latter entire and undeſtroy'd; for, when this Effect is produc'd by the Knife, the actual Cautery, or Corroſives, a Part of the mortify'd Portion is either left, or the live Parts are deſtroy'd together with thoſe which are mortify'd. We have already ſhewn, that the Coheſion between the mortify'd and live Parts, is deſtroy'd only by the Efficacy of the vital Fluid, convey'd to the Circumference of the corrupted Part; which, afterwards, by a gentle Suppuration is every-where ſeparated, and falls off. 'Tis expedient to make this Boundary or Diviſion, whether by the actual Cautery, or the Knife, in the mortify'd Parts, but;

at the ſame time, as near to thoſe which are alive as poſſible; for ſince, in this Caſe, all the Parts are not ſuppos'd corrupted to the Bottom, or when the Condition of the Part affected is ſuch, that it cannot be entirely remov'd, it would be cruel to deſtroy the live Parts; for hence would be produc'd violent Pains and Inflammations, eſpecially, becauſe the Knife and Cautery muſt penetrate pretty deep in a Sphacelus. 'Tis true, that by this Method a Part of the mortify'd Portion is left adhering to the live Parts; but yet this mortify'd Portion, left without the Diviſion or Boundary, will no longer injure the ſound Parts by its putrid Contagion, and may by antiſeptic Medicines be ſo preſerv'd, as to prevent any Degree of Putrefaction. Whilſt, in the whole Surface of the ſphacelated Part, ſuch a Boundary is artificially made, and the remaining Surface divided by deep Scarifications, the Medicines apply'd will penetrate much deeper, ſo that there will be no Danger of a Putrefaction; and we may ſafely expect the perfect Separation of the mortify'd from the ſound Parts, which Effect is produc'd by Nature alone. Now, ſuch a Boundary, or Diviſion, may be made either by the Knife, the actual Cautery, or thoſe corroſive Liquors, which, in a Moment, deſtroy the Parts they touch. For this Purpoſe, *Belloſte* recommends a rich Solution of Quick-ſilver in Aqua-fortis. But others give the Preference to Butter of Antimony, eſpecially, when, by due Rectification, it is render'd fine and limpid, like Water; for then, by means of this highly acrid Liquor, and the Aſſiſtance of a Pledget, ſuch a Boundary may be made at Pleaſure all round the Circumference of the Sphacelus. This Medicine is highly efficacious in Diſorders of this Nature, becauſe it conſiſts of a moſt concentrated Spirit of Sea-ſalt, united with the reguline Part of Antimony. Now, Spirit of Sea-ſalt is an incomparable Remedy for checking and correcting Putrefaction; for which Reaſon it is of ſo ſingular Service in curing Gangrenes of the Gums, as we have already obſerv'd. But by theſe means a Separation of the mortify'd from the live Parts will not be produc'd, but a Boundary is only plac'd between the ſound Parts and the Sphacelus, which Boundary is itſelf mortify'd, and muſt afterwards be ſeparated; the Communication, however, between the ſound and mortify'd Parts is by this means deſtroy'd. *Celſus*, in the twenty-eighth Chapter of his fifth Book, when treating of the Cure of a Carbuncle, beautifully deſcribes the Force of corroding Medicines in the following Words: "A Cruſt is pro-"duc'd by corroſive Medicines, which being ſeparated every-"where from the live Fleſh, carries along with it whatever "was corrupted." This Author juſtly obſerves, that ſuch a Cruſt is produc'd by Corroſives, but that it is afterwards ſeparated from the live Parts. This Separation does not, therefore, depend on the Force of the Corroſives, which was ſpent before the Separation happens.

The infected Part is ſeparated, if, after the Progreſs of the Diſorder is ſtopt, or whilſt it is a ſtopping, the whole Part is cauterized or cut to the ſound ſubjacent Parts, and then corroded by the Application of a warm acrid Lixivium, till it is conſum'd to the live Parts, till Eſchars are form'd, which are carefully to be ſoften'd and remov'd: But the live Parts muſt, at the ſame time, be avoided with the greateſt Caution.

Since a Sphacelus is ſaid to be preſent, when all the Parts are mortify'd as far as the Bone, all theſe corrupted Parts muſt be remov'd as ſoon as poſſible, leſt they ſuffocate and render putrid the Parts of the Bone, or Perioſteum, which are ſtill alive. But the Parts affected with a Sphacelus are mortify'd, and can be no more influenc'd by Medicines, than a Carcaſe. Hence, they muſt be remov'd, either by Inciſion, the actual Cautery, or ſuch Corroſives, as by their external Heat are capable of acting upon dead Bodies. Mr. *Petit*, in the *Memoires de l'Academie des Sciences*, for the Year 1732. informs us, that the potential Cautery, commonly us'd by Surgeons, apply'd to the Skin of an human Carcaſe for fifteen Hours, and diſſolv'd, as it generally is, by the Air, ſcarcely produc'd any Effect: But when, by the Application of warm Linen Cloths, he carefully fomented the Part of the Carcaſe, to which the Cauſtic was apply'd, he, after fifteen Hours, found that the Skin was render'd ſoft like Pulp; and that the Efficacy of the Medicine had penetrated to the Fat. For removing mortify'd Parts, therefore, we may, with great Succeſs, apply that common potential Cautery of the Surgeons, which is prepar'd of the inſpiſſated Lixivium of Quick-lime, and Pot-aſh, or this Lixivium itſelf may be us'd for the ſame Purpoſe: And if the Heat of the adjacent live Parts is not ſufficient, external Heat may be apply'd. By this means the mortify'd Parts will ſoon be converted into Eſchars, which, being ſoften'd by the Application of ſome emollient Ointment, or of Butter, may be commodiouſly remov'd. Then the ſame Medicine is to be apply'd in the ſame manner, till all the mortify'd Portion is conſum'd as far as the live Parts. But becauſe, in every Sphacelus, there is always a Danger of Putrefaction, we might poſſibly be induc'd to think, that acid Corroſives would be more proper, than a Lixivium prepar'd of Quick-lime and alcaline Salt, which quickly renders the Salts of the human Fluids volatile, alcaline, and putrid. But if we conſider, that a Sphacelus penetrates as far as the Bone; and that Acids, eſpecially of a highly acrid kind, are greatly injurious to the Bones; the Reaſon will be obvious, why in thoſe Caſes we ought to abſtain from the Uſe of Acids. Thus Quacks have a Practice of rendering Teeth white in a Moment, by touching them with Spirit of Vitriol; but a few Weeks after they begin to grow yellow, then black, and at laſt fall off in ſmall Pieces, becauſe their vital Structure is deſtroy'd by the Acid of the Vitriol. Hence, in order to fix the Boundary between the mortify'd and live Parts, we juſtly prefer that highly concentrated Acid of Sea-ſalt, which is found in Butter of Antimony. But, for ſpeedily converting the mortify'd Part into Eſchars, and by that means gradually procuring its Separation, a highly acrid alcaline Lixivium is far more proper and effectual. If, after the ſoft Parts are thus conſum'd, any Fault ſhould appear in the Bone, which may be diſcover'd by the Change of its Colour, then thoſe Medicines are to be apply'd, which are proper, when in Wounds of the Head, the Cranium is affected. See CAPUT.

But ſince all theſe Remedies are highly acrid, and almoſt inſtantaneouſly deſtroy the Parts to which they are apply'd; 'tis obvious, that great Caution is requiſite, leſt the ſound ſhould be deſtroy'd with the mortify'd Parts. And, becauſe, in a legitimate Sphacelus, all the Parts are often mortify'd, except the Bones, and the Perioſteum, which covers them, theſe may be greatly injur'd by an imprudent Application of ſuch Medicines. Hence, the Cure would be render'd highly difficult and tedious, ſince the Separation of the corrupted Parts of the Bone often requires a long time. Beſides, as theſe Medicines penetrate very deep, the adjacent, and, as yet, live Tendons, Nerves, and tendinous Membranes, may be conſiderably injured and irritated by them: A Circumſtance, which may give Birth to a Series of other Misfortunes.

'Tis alſo to be obſerv'd, that the Uſe of theſe Corroſives is by no means requiſite, unleſs when the mortify'd Parts are very thick; for, if they are otherwiſe, the Cure may be ſafely accompliſh'd without them. Thus, when, by long lying in Bed, a Sphacelus is form'd about the Os Coccygis, or the Os Sacrum, the mortify'd Parts generally become black, and parch'd like a Piece of dry Leather. And as, in theſe Parts, the Membrana Adipoſa is very thin, theſe Medicines can hardly be apply'd without Danger of injuring the ſubjacent Bone. When, in Caſes of this Nature, the Parts are frequently fomented with Wine, Vinegar, and Salt, then cover'd with the Emplaſtrum Simplex Plumbatum, and when, the Force of the Diſeaſe being ſubdued, the Patients frequently change their Poſture, and retain their Fæces and Urine, in which theſe Parts were before drench'd, all the mortify'd Parts will be ſpontaneouſly ſeparated, and the Cure happily accompliſh'd. *Van Sweiten* informs us, that he has ſeen ſeveral Inſtances of this kind.

The corroſive Lixivium, recommended by *Boerhaave*, for procuring the Separation of a Sphacelus, is prepar'd thus:

Take of Quick-lime, made of calcin'd Stones, one Part: Cover it carefully up with three Parts of Pot-aſh; and when they are diſſolv'd in a ſubterraneous Place, filtrate and keep the Preparation for Uſe. Quick-lime itſelf, reduc'd to a fine Powder, may alſo be ſprinkled on the Part.

But Separations are moſt advantageouſly made, if the mortify'd Eſchars, ſoften'd by the Application of a putrefying Remedy, ſo as to be diſſolv'd into a ſoft Maſs, recede from the ſound Part, whilſt the live Parts are, in the mean time, cheriſh'd with enlivening Fomentations. See above.

When the Signs of Soundneſs and Life return, the Diſorder is to be treated like an Ulcer, or a Wound.

When the Influx of the vital Humours into the Arteries, and their Efflux thro' the Veins, are deſtroy'd, the Part is then ſaid to be mortify'd. The Signs, therefore, of returning Life, are ſuch Circumſtances as inform us, that the Humours flow into the Arteries, and are return'd by the Veins; that is, that the Circulation is reſtor'd, or at leaſt beginning to be ſo. But this can never happen in Parts corrupted by a legitimate Sphacelus, but only in thoſe which are ſubjacent or contiguous.

If, therefore, either by Scarification or Corroſion, a Part of the mortified and corrupted Portion is remov'd, or divided, as far as the Confines of the live Parts, as ſoon as the Life of theſe begins to prevail, theſe Fiſſures, which before were dry, become moiſt, and the mortified Portion will, in all its Circumference, be ſeparated from the live Parts, as we have before obſerv'd. In this Situation of things, there is no longer any Danger, leſt the Sphacelus ſhould ſpread; but it may be conſider'd as a ſordid Ulcer, which, after cleanſing the corrupted Parts, may, by a benign Suppuration, be brought to the State of a ſimple Wound, and conſequently requires a ſimilar Treatment. But we muſt obſerve, that, after ſuch Parts are ſuffi-

ciently cleans'd, the ſofteſt Balſams are principally beneficial, in order to regenerate and reſtore the loſt Subſtance.

When the Meaſures above-recommended will not produce the deſir'd Effect, we muſt proceed to Amputation. See AMPUTATIO.

The following Medicines are, by *Heiſter*, recommended for the ſeveral Intentions of Cure in a Gangrene.

A FOMENTATION *which digeſts, ſtimulates, and reſiſts Putrefaction.*

Take of Quick-lime Water, one Pint; of camphorated Spirit of Wine, three Ounces; and of the Spirit of Sal Ammoniac, half an Ounce: Mix all together.

Let this Preparation be frequently apply'd warm with proper Compreſſes: The ſame Intention is alſo excellently anſwer'd by a Pint of Quick-lime-water, mix'd with an Ounce of Mercurius Dulcis. *Heiſter* tells us, that, in the Hoſpital of *Amſterdam*, the Surgeons, with great Succeſs, uſe the following Fomentation againſt a Gangrene.

Take of the Spirit of Wine, three Ounces; of the Powders of Aloes, and Myrrh, each half an Ounce; and of *Egyptian* Ointment, three Ounces: Mix all together.

Or,

Spirit of Wine, gently boil'd with Aloes, Myrrh, and Saffron; or camphorated Spirit of Wine mix'd with Venice Treacle; or the Spiritus Theriacalis, or the Spiritus Matricalis, mix'd with about a ſixth Part of Elixir Proprietatis; or, what *Garengeot* ſo much extols, warm Wine, mix'd with ſimple or camphorated Spirit of Wine; or camphorated Spirit of Wine, either by itſelf, or quicken'd with Sal Ammoniac; which he recommends as a highly efficacious Medicine for reviving the gangrenous Parts.

Or,

Take of the Leaves of Scordium, Southernwood, and recent Rue, each two Handfuls; of Chamomile-flowers, one Handful: Boil in a ſufficient Quantity of common Water: Strain off the Liquor, and, to every two Pints of it, add, of the Spiritus Vini Theriacalis, four Ounces; of Venice Soap, two Ounces; and of Sal Gemmæ, half an Ounce.

Theſe Fomentations are to be apply'd frequently every Day, with Linen or Woolen Cloths; applying over them, in order to preſerve the Heat, folded Cloths, and heated Bricks.

A penetrating, reſolvent, and digeſtive Cataplaſm, for reſtoring the Circulation of the Blood in the affected Part, may be prepar'd in the following Manner:

Take of the Herbs Scordium, Mallows, Wormwood, and Feverfew, each two Handfuls; of Mint, and Southernwood, each one Handful.

Boil theſe in a ſufficient Quantity of Oxycrate, in a cloſe Veſſel, to the Conſiſtence of a Cataplaſm; to which add, of Sal Ammoniac, half an Ounce; of the Meal of Linſeed, two Ounces; of the Oil of Rue, or Chamomile, by Infuſion, an Ounce and an half: And, before the Cataplaſm is apply'd, let it always be ſprinkled with camphorated Spirit of Wine, or the Spiritus Vini Theriacalis, in order to render it more efficacious: Or, inſtead of this, the following Cataplaſm, recommended by *Koenerdingius*, may be uſed.

Take of the Crums of Wheaten Bread, one Pound; of the Powders of Wormwood, Scordium, and Rue, each one Handful; of Wine, a Quantity ſufficient to reduce them to the Conſiſtence of a Cataplaſm: After gentle Boiling, add four Ounces of the Spirit of Wine; and apply warm.

A Fomentation for ſtopping the ſpreading of a Gangrene may be prepar'd in the following Manner:

Take of the Decoction of Barley, or Scordium, one Pint; of the Vinegar of Rue, ſix Ounces; of the Spiritus Vini Theriacalis, four Ounces; of Sea-ſalt, one or two Ounces: To be apply'd warm with Compreſſes.

A Cataplaſm for ſoftening the gangrenous Cruſt, and promoting its Separation, may be prepar'd in the following Manner:

Take of the Flowers of Scordium, two Handfuls; and of the Leaves of Mallows, Henbane, and Marſhmallows, each one Handful; and of the Flowers of Lavender, half an Handful: Boil in Vinegar, or Oxycrate, to the Conſiſtence of a Cataplaſm: To which add, of the Meal of Linſeed, three Ounces; of the Oil of Linſeed, one Ounce; and of Sal Ammoniac, two Ounces.

If, in any Stage of the Diſorder, the Uſe of Corroſives ſhould be indicated, the celebrated *Belloſte* orders the following Preparation, as the moſt efficacious of all others.

Take of the Spirit of Nitre, or of Aqua-fortis, two Parts; and of Quick-ſilver, one Part: Mix over a gentle Heat, till the Mercury is diſſolv'd.

With this corroſive Liquor, the mortify'd Part is to be anointed, or a little Lint, or a Linen Cloth ſoak'd in it, is to be apply'd to the corrupted Part; for, by this means, the mortify'd Parts will ſoon be divided from ſuch as ſound and alive. *Heiſter. Chirurg.*

GANGRINOS *(Sal)*, γάγγραινον ἅλας, in *Myrepſus*, *Antidot.* 418. is render'd by *Fuchſius*, *Sal foſſilis*, foſſile Salt; for other *Greek* Authors, he ſays, call the ſame Salt ὀρυκτὸν, *foſſile*; and the *Barbarians*, *Sal Gemmæ*.

GANIMEDES (more properly GANYMEDES), in the myſterious Language of the Chymiſts, is *white Sulphur*; becauſe it is elevated, ſublim'd, and, as is feign'd of *Ganymede*, by the Poets, rapt up into Heaven. *Johnſon.*

GANNANAPERIDE. A Name, in *Ray*, for the QUINQUINA.

GARAB, ALGARAB, are Names, in *Avicenna*, for the *Ægilops*. *Sennert. Vol.* 2. *p.* 569.

GARAGAY. A Bird of Prey in *America*, of the Bigneſs of a Kite. It ſearches the Banks of Rivers for the Eggs of Crocodiles and Tortoiſes, which it carries away, and eats. It lives ſolitary, and is of no Uſe in Medicine. *Lemery des Drogues.*

GARB. A Name given by the *Moors* to an *Arabian* Species of SALIX, or *Willow*. *Ray.*

GARGALE, *Gargalos*, *Gargaliſmos*, γαργάλη, γάργαλος, γαργαλισμός. Irritation, Stimulation, Titillation. *Erotian. in Hippoc.*

GARGAREON, γαργαρέων. The Uvula. See UVULA.

GARGARISMA, GARGARISMUS, γαργάρισμα, γαργαρισμὸς, is ſometimes taken, in a large Senſe, for every Collution of the Mouth; and ſo is the ſame with DIACLYSMA, of which before; but, more ſtrictly and properly, it ſignifies a liquid Medicine, appropriated to Affections of the Mouth, Gums, Fauces, Larynx, and ſometimes of the Head, receiv'd into the Mouth, and there us'd by way of Collution, without Deglutition. *Caſtellus.*

Gargarizations, as *Celſus* ſays, are made for the ſake of Alleviation, Repreſſion, or Evacuation: The firſt Intention is anſwer'd by Milk, and Cremor of Ptiſan, or of Bran; Repriments are Water, boil'd with Lentils, Roſes, Bramble, Quinces, or Dates; Evacuants are Muſtard and Pepper. *Celſus, L.* 5. *Cap.* 22.

GARGATHUM. A Bed, to which Lunatics and Demoniacs were confin'd. *Caſtellus.*

GARIDELLA. This Plant was ſo nam'd by Dr. *Tournefort*, in Honour of Dr. *Garidel*, who was Profeſſor of Phyſic at *Aix* in *Provence*.

The Characters are;

The Root is annual, the Leaves capillaceous, the Calyx polyphyllous, the Flower roſaceous, with formicated, or arch'd, bifid Petals, diſpos'd in a Circle. The Head conſiſts of many oblong bivalve Capſules, full of Seeds, which are, for the moſt part, round.

Boerhaave mentions but one Species of this Plant; which is,

Garidella; foliis tenuiſſime diviſis. *T. App.* 655. *Nigella, Cretica, folio Fœniculi.* C. B. Pin. 146. GARIDELLA, *with very narrow-divided Leaves. Boerh. Ind. alt. Plant. Vol.* 1. *p.* 283.

At preſent there are no medicinal Virtues attributed to this Plant, that I can find.

GARIP. A Term in *Lagneus*'s *Harmonia Chemica*, quoted from *Haly*, and explain'd by *aliquid aliud*, "ſome other "thing." *Theat. Chym. Vol.* 4. *p.* 730.

GARON, GARUM, γάρον, γάρος. A kind of Pickle, prepar'd of Fiſh, ſeaſon'd or macerated with Salt. The Fiſh moſt in Uſe, for this Purpoſe, was the Scombrus, or Mackrel, as appears from *Martial*, and *Horace*, *Serm. Lib.* 2. *Sat.* 8. *Garo de ſuccis piſcis Iberi*; "Garum of Juices of the *Iberian* [*Spaniſh*] "Fiſh." There were ſeveral Sorts of Garum. *Archigenes, in Galen. de C. M. S. L.* commends γάρον Σπανίου, "*Spaniſh* Garum." And *Aſclepiades*, in the ſame Book, mentions black Garum, in auricular Compoſitions. This black Garum ſeems to be the ſame with what *Martial* calls *Fæcoſum*, as if made of the Fæces of Fiſh, and with the αἱματίου, "ſanguineous," ſo call'd becauſe the Blood of the Fiſhes was an Ingredient in its Compoſition. One way of preparing it is deſcrib'd by *Conſtant. Cæſar, Lib.* 20. *de Agricultura. Paulus, Lib.* 3. *Cap.* 51. calls it γάρον πρῶτον, "the primary (or choiceſt) "Garum. And it is the ſame as what *Pliny* and *Martial* call *Hiſpanienſe*, *Carthaginienſe*, and *Sociorum. Auſonius*, *Epiſt.* 7. ſays, that Garum was call'd, in *Latin*, *Liquor ſociorum*. When we read in *Galen*, that black Garum was call'd, by the *Romans*, *Oxyporum*, it means no more than that this Sort of Garum was us'd in Medicines and Pickles call'd *Oxypora* (ſee OXYPORON); or ſerv'd to dilute them,

and

and thence took the Appellation of *Oxyporon*. We are inform'd by *Pliny*, *Lib.* 31. *Cap.* 7. that this exquiſite Kind of Liquor, call'd *Garon*, is made of the Inteſtines, and other Offals, of Fiſh, macerated in Salt, ſo as to be the Sanies produc'd from their Putrefaction. It was formerly made of the Fiſh, which the *Greeks* call *Garos*, as he relates. But (as he goes on, in the next Chapter) the moſt eſteem'd, at preſent, is made of the Scombrus: Nor is there hardly any other Liquid, beſides Ointments, that bears a greater Price. He proceeds to inform us of ſeveral other Species of Fiſh, of which it is prepar'd; and ſays, there are infinite Sorts of it among them, one conſecrated by the Religious among the *Jews* to the Service and Promotion of a ſuperſtitious Chaſtity, becauſe it was prepar'd from Fiſhes void of Scales. He ſays further, that theſe Preparations of Garum are not only ſerviceable to the Neceſſities of Life, but have their Uſe in Medicine; for they cure the Scab, or Mange, in Cattle, being infus'd into an Inciſion made in the Skin: And, being ſpread on Linen, and applied, are effectual againſt the Bite of a Dog, and the Draco marinus, and, eſpecially, the Crocodile. It cures alſo, he ſays, recent Ambuſtions, and ſpreading or ſordid Ulcers; and is of extraordinary Efficacy in Pains and Ulcers of the Mouth and Ears.

All Kinds of Garum, which are the Colliquament or Sanies of Fiſh and Fleſh, macerated in Salt, are uſeful, in Clyſters, for the Dyſentery and Sciatica; in the firſt Caſe, for repreſſing and reſtraining Exulcerations of the Inteſtines; and, in the latter, for inciting and ſtimulating the Inteſtines, though free from Exulceration, to diſcharge the peccant Humours which affect the Hip. *Dioſcorides*, *Lib.* 2. *Cap.* 34.

Aetius, *Tetr.* 4. *Serm.* 4. *Cap.* 121. gives the following Deſcription of a Garum, for the Uſe of thoſe who are bound to Abſtinence: Take of Water, thirty-one Sectaries, or Pints; Salt, two Pints; Caricæ, or dry Figs, to the Number of fifty: Prepare, ſtrain, and repoſit them for Uſe. The true way of preparing the Garum, ſo much in Requeſt among the Antients, is unknown to the Moderns.

Garum, as well as Muria, is eſteem'd, by *Oribaſius*, a vehement Drier; and *Aetius*, *Tetr.* 1. *Serm.* 2. *Cap.* 150. tells us, that Garum is of a very hot and dry Quality, and, for that Reaſon, was us'd, by ſome Phyſicians, for putrid Ulcers, and, in Clyſters, for a Dyſentery, and the Sciatica. *Galen*, *de Al. Fac. Lib.* 2. *Cap.* 22. aſcribes to Garum a laxative Quality, if taken before Food.

Garum, among the Moderns, ſignifies the Liquor, or Pickle, in which Fiſh is preſerv'd, more eſpecially the Herring and Anchovy; the medicinal Uſes of which may be found under the Articles HALEC, and APUA.

GARRULUS. A Species of Pye, call'd alſo *Pica marina*, frequent about *Strasburg*. *Garrulus Bohemicus* is the ſame Bird as the AMPELIS; which ſee. *Caſtellus*.

GARYOPHYLLATA. See CARYOPHYLLATA.

GARYOPHYLLI. See CARYOPHYLLI.

GAS is a Term coin'd by *Helmont*, and ſignifies, in general, a Spirit incapable of Coagulation; ſuch as proceeds from fermented Wine. In particular, it has various Significations; thus *Gas vitale* is the Spirit of our Life, the Light and the Balſam which preſerves from Corruption, *Complex. & Miſt. N.* 42. The *Gas pingue Sulphureum* is what is ſuddenly mortal, being lethiferous Exhalations, ariſing principally in Caves and Mines. *Gas Sulphuris*, the Gas or Spirit of Sulphur, is made by burning Sulphur under a glaſs Bell, ſet over a Veſſel of Water, till the Water is ſufficiently impregnated with the Sulphur. The *Gas Sylveſtre* is that inviſible and incoercible Spirit, which ariſes from vegetable Juices under Fermentation. See ALCOHOL, and BUFO. *Helmont* makes ſeveral other Diſtinctions of Gas; as the *Gas Ventoſum*, which is mere Air; the *Gas ſiccum*, which is Sublimate, *de Flatibus*, *N.* 4. the *Gas Salium*, and the *Gas Fructuum*, which are mere elementary Water, *Complex. & Miſt. N.* 37, 38.

GASSELA, *ſeu* GAZELLA, is the *African* wild Goat. See BEZOAR.

GASTER, γαστὴρ, in *Hippocrates*, often ſignifies the whole Abdomen, comprehending the lower Belly and Epigaſtrium, or all that Region of the Body which is circumſcrib'd by the Diaphragm, Hypochondria, and Pubes; it is, alſo, taken for the Ventricle, or Stomach, the Receptacle of Meat and Drink; ſo it ſignifies in 6 *Epid. Sect.* 4. *Aph.* 6. *Hippocrates*, alſo, frequently means by it the Uterus.

GASTERANAX. See BITHNIMALCA.

GASTRICUS SUCCUS, from *Gaſter*, the Stomach, is a thin, pellucid, ſpumous, and ſaltiſh Juice, which continually diſtils from the glandulous Kernels of the Stomach, for the Diſſolution, Mixture, and Dilution of the Food.

GASTRINUM. Pot-aſh. *Rulandus*. *Johnſon*.

GASTROCNEMII. The Name of two Muſcles of the Leg; from γαστὴρ, a Belly, and κνήμη, the Leg.

Theſe are two thick, pretty broad, and oblong Muſcles, ſituated laterally with reſpect to each other, in the ſame Plane, under the Hams, and forming a great Part of what is call'd the Calf of the Leg. That which lies next the Tibia is call'd *Internus*; and that next the Fibula, *Externus*; and becauſe they form, as it were, the Belly of the Leg, they have been term'd, in *Greek*, *Gaſtrocnemii*.

Each Muſcle is fix'd above, by a flat Tendon, to the poſterior Part of the lower Extremity of the Os Femoris, behind the lateral Tuberoſity of each Condyle, adhering cloſely to the poſterior Ligaments of the Joint of the Knee.

From thence they run down, each forming a large and pretty broad fleſhy Body, irregularly oval. The *Externus* covers the *Popliteus*, being larger and broader, ſpreading more laterally, and running lower down than the *Internus*, the fleſhy Body of which begins higher up than the other.

About the Middle of the Leg they end in a ſtrong, broad, common Tendon, which contracts a little in Breadth, as it deſcends, and is inſerted in the poſterior Extremity of the Os Calcis, together with the Tendon of the *Soleus*.

The ſuperior Tendons of theſe Muſcles become gradually cartilaginous in aged Perſons, and, at laſt, oſſify near the Condyles; the bony Portions looking like Seſamoide Bones. It is ſometimes very late before they are harden'd in this manner; and ſometimes one grows hard before the other. *Winſlow*.

GASTROEPIPLOICA, γαστροεπιπλοϊκὰ, from γαστὴρ, the Stomach, and ἐπίπλοον, the Omentum or Caul. An Epithet for the Veins and Arteries which go to the Stomach and Omentum. *Blancard*.

GASTRORAPHIA, γαστορραφία, from γαστὴρ, the Belly, or Abdomen, and ῥαφὴ, a Suture. Gaſtroraphe, or the Operation of performing a Suture of the Abdomen. See ABDOMEN and SUTURA.

GASTROTOMIA, γαστροτομία, from γαστὴρ, the Belly, and τέμνω, to cut, is a Cutting of the Abdomen and Uterus, as in the Cæſarean Section. *Blancard*.

GATRINUM. Pot-aſh. *Johnſon*.

GATTARIA. The ſame as CATTARIA, that is, Catmint. *Blancard*.

GAUSOS, γαῦσος, γαυσὸς. Gibbous, bent, incurvated, as *Galen* explains the Word, commenting on that Paſſage of *Hippocrates*, *Lib. de Fract.* προσξυπίσθαι δὲ χρὴ, &c. "Now "we ought to know, that the Thigh is γαυσὸς" [that is, ſays *Galen*, κυφὸς, gibbous, bent] "more towards the exterior, than the interior Parts."

GAZAR. The Bay-tree. *Johnſon*.

GAZELLA. See BEZOAR.

GE, γῆ. Earth. See TERRA.

GEBRAIL AL CAHHAL, a Phyſician, who, though a Chriſtian, was much in Favour with the Caliph *Al Mamoun*; which he loſt entirely, by ſaying, one Day, to ſome of the Lords of his Court, that he was aſleep.

GECHARSUN. A Frog. *Rulandus*.

GECHYTON, γήχυτον, in *Galen's Exegeſis*, is expounded, the external Part of the Earth, which is ſoft, and not at all ſtony.

GEISON, γεῖσον, γείσου, γείσωμα, properly the Eaves of an Houſe, is put, by Metaphor, for the prominent Part of the Eyebrows. *Gorræus*.

GELASINOS, γελασινὸς, from γέλως, Laughter, is an Epithet of the four middle fore Teeth; ſo call'd becauſe they are ſhewn in Laughing. *Gelaſinus* ſeems alſo to ſignify the Hollow of the Cheek, which appears from that Verſe of *Martial*;

Nec grata eſt Facies, cui Gelaſinus *abeſt*.

"Nor does that Face pleaſe, which wants a *Gelaſinus*;" though ſome underſtand it of the fore Teeth.

GELATINA. A Jelly. Theſe are made of the Juice of ripe Fruit, boil'd with Sugar to a proper Conſiſtence; or of ſtrong Decoctions of Horns, ſoft Bones, or the Extremities of Animals. Jellies of Fruits are cooling, ſaponaceous, and aceſcent; and, therefore, proper in an alcaleſcent State of the Primæ Viæ, and Juices, eſpecially when diſſolv'd in a proper Liquor. On the contrary, Jellies of animal Subſtances are alcaleſcent, and good when an Acidity prevails; but are leſs alcaleſcent when Lemon-juice and Sugar are added to them. Sometimes Jellies have medicinal Drugs added to them, in various Forms, as Powders and Extracts; and this with various Intentions, and then they are call'd Compound Jellies.

Jelly of Bread is made by boiling well-fermented Bread, or Biſcuit, in Water, till it will aſſume the Form of a Jelly, when cold.

The celebrated *Gelatina Avenæ*, Jelly of Oatmeal, is thus prepar'd:

Take of excorticated Oats, a Pound and an half; of Currants, and Shavings of Hartſhorn, each two Ounces; a Leg of Veal, cut, and bruis'd together with the Bones: Let them boil in a cloſe Veſſel, with a gentle Heat, a ſufficient time; then let the Broth be ſtrain'd, which ſoon becomes a thick Jelly, a few Spoonfuls of which ſhould be taken every Morning for a conſiderable time, diſſolv'd in a proper Vehicle.

Boecler recommends this, as admirable in hectic Diſorders, if taken with the Broth of Snails, or Craw-fiſh.

GELATI. Properly Freezing; but ſometimes us'd to expreſs that Rigidity of the Body, which happens in a Catoche or a Catalepſis.

GELBUM, GELFUM. The Name of a Marchaſite, or rather a Pyrites, found in *Hungary*, and often pregnant with Silver. *Gelbum*, or *Geldum*, is alſo a Name for the Philoſophers Stone, in *Theat. Chym. Vol. 4. p. 727.*

GELION. A Leaf. *Rulandus.*

GELOS, γέλως, Laughter, is defin'd a Motion, by the Contraction of the Lips, and a ſonorous and broken Expiration, expreſſive of Mirth. In a preternatural State, Laughter is a Species of Convulſion, or convulſive Spaſm, like that proceeding from the Uſe of the poiſonous Sort of Apium, call'd *Sardon*, growing in *Sardinia* (ſee SARDONIUS), an Abuſe of Saffron, or an Inflammation of the Diaphragm. Laughter is alſo a frequent Symptom in Hyſterics.

GELSEMINUM. A Name in *Ray*, for ſeveral Species of Jaſminum.

GELUTA. The Carline Thiſtle.

GEMELLI.

There are two ſmall flat narrow Muſcles, ſituated almoſt tranſverſly one above the other, between the Tuberoſity of the Iſchium and the great Trochanter, immediately below the Pyriformis, and parted by the Tendon of the Obturator Internus.

The ſuperior and ſmalleſt Gemellus is fix'd to the lower Part of the Spine of the Iſchium, to the ſuperior Part of the ſmall iſchiatic Notch, and to a rough Line which runs croſs the Outſide of the Iſchium, beginning from the Spine, and continued under the Acetabulum, where it is bent downward.

The inferior and largeſt Gemellus is fix'd to the ſuperior and back Part of the Tuberoſity of the Iſchium, and to a rough Impreſſion, which runs croſs the Outſide of the Iſchium, from the lower Extremity of the iſchiatic Notch, and is bent upward toward the other Line, together with which it forms a ſort of irregular Semicircle.

Both theſe Muſcles have likewiſe a ſmall Inſertion in the Inſide of the Iſchium, where, being united together by a particular Membrane, one of them joins the upper Side, and the other the lower Side of the Obturator Internus, a little after it is paſs'd over the Notch: They incloſe it as in a Bag, and continue to be fix'd to it by fleſhy Fibres all the Way to its Extremity.

The ſuperior Muſcle terminates wholly with the Tendon of the Obturator Internus; but the Inferior, being broader, is inſerted likewiſe, by fleſhy Fibres, in the orbicular Ligament, and under the Tendon of the ſame Obturator. *Winſlow.*

GEMONIS, γεμωνὶς, from γέμω, to be full or pregnant. A Stone, the ſame as the Ætites.

GEMURSA. The Name of a Diſeaſe known to the Antients, as *Pliny* ſays, *Lib.* 36. *Cap.* 1. but extinct in his Time; it was an Excreſcence between the Toes.

GENA, γένυς. That Part of the Face between the Noſe and Ears. See CAPUT.

GENEIAS, γενειὰς. The downy Hairs which firſt cover the Cheek; alſo the Name of a Bandage, which comes under the Chin. *Gal. de Faſciis.*

GENEION, γένειον. The ſame as ANTHEREON; which ſee.

GENER. A Name for the Philoſophers Stone. *Theat. Chym. Vol. 4. p. 727.*

GENERATIO, Generation.

The Parts of Generation proper to Men may be fitly divided into thoſe which prepare and ſeparate the Seed from the Blood, and thoſe which convey it into the Womb. The firſt is done by three ſorts of Glands, which are the Teſtes, the Veſiculæ Seminales, and the Proſtatæ. The ſecond is the Office of the Penis.

The Teſtes, which prepare the principal Part of the Seed, receive their Blood from two long and ſlender Arteries, ſee *Tab.* XVI. *Fig.* 1. FF, which, at their Riſe from the Sides of the Aorta, a little below the Emulgents, are extremely ſmall, but immediately become larger. As theſe Arteries run between the Duplicature of the Peritonæum, to which they give ſome ſmall Twigs, they paſs out of the Abdomen, at the Holes in the tranſverſe and oblique Muſcles, and march over the Os Pubis, within the Productions of the Peritonæum, to the Teſticles; but, before they arrive, they divide each into two Branches, the largeſt of which are ſpent upon the Teſticles themſelves, and the two ſmall ones upon the Epididymides. When the Blood has diſcharged itſelf of the Seed into the Teſticles, it returns by the Veins, which, riſing in ſeveral Branches from the Teſtes, tend towards the Abdomen, in the Productions of the Peritonæum, the ſame Way the Arteries come down. In their Progreſs, their Branches frequently inoſculate, and divide again, till they come near the Abdomen, when they all unite into one Trunk; and therefore, becauſe of their Shape, they are call'd Corpora Pyramidalia: In the Abdomen they receive ſome ſmall Twigs from the Peritonæum. The Right ſpermatic Vein opens into the Vena Cava, a little below the Emulgent: But the Left is always inſerted into the Emulgent of the ſame Side, that it may not be obliged to croſs the Aorta, whoſe Pulſe would be ſubject to ſtop the Blood which returns from the Teſticles very ſlowly, by reaſon of the narrow Orifices of the ſpermatic Arteries, and the Largeneſs of the Veins. Theſe Blood-veſſels have been call'd the Vaſa Præparantia.

Having deſcrib'd the Blood-veſſels of the Teſticles, I come now to their Integuments, which are three; one common, and two proper: The common is the Scrotum, which, beſides the Skin, (which is very thin, and full of Blood-veſſels) Scarf-ſkin, and Membrana Adipoſa, in this Place likewiſe very thin, its Veſicles being empty of Fat, is compos'd likewiſe of many fleſhy or muſcular Fibres, by means of which the Scrotum is contracted, which is reckon'd a Sign of Health. This muſcular Lining of the Scrotum is by the *Greeks* call'd DARTOS, which ſee. The Scrotum is divided in the Middle by a thin Membrane, which ſeparates the two Teſticles.

The firſt of the proper Integuments is call'd Tunica Vaginalis, or ἐλυθροειδὴς, being form'd by the Dilatation of the Productions of the external Membrane of the Peritonæum; its internal Superficies is ſmooth, its external rough: It contains the Vaſa Præparantia and Deferentia; it embraces looſely the whole Body of the Teſticle, adhering to one End of the *Epididymis.* Upon the Outſide of this Tunicle runs a Muſcle called Cremaſter, from its Office; it ariſes from the Os Pubis, and, ſpreading its Fibres upon the Elythroides, it ſuſpends the Teſticles, and draws them up in the Act of Generation. See CREMASTER.

The ſecond is that which covers immediately the Teſticles: It is call'd Albuginea, becauſe of its white Colour. It is ſtrong and thick, very ſmooth and equal. The Branches of the Vaſa Præparantia are finely wav'd upon it.

The Subſtance of the Teſticles, (ſee *Tab.* XVI. *Fig.* 1. II; and *Fig.* 3. 4. and 5.) which formerly was thought to be a ſort of Marrow, is nothing but the Folding of ſeveral ſmall and ſoft Tubes, diſpoſed in ſuch a manner, that if they could be ſeparated from one another, without breaking them, they might be drawn out to a great Length. They run in ſhort Waves from the Tunica Albuginea to the Axis of the Teſticles, being divided from one another by thin membranous Productions from the inner Side of the Albuginea. Theſe Productions unite at the Axis of the Teſticle, and form a Cover to ſome ſmall Tubes, which at one End of the Teſticle pierce the Tunica Albuginea, and unite into one Canal, which, by ſeveral Turnings and Windings upon the upper Part of the Teſticles, forms that Body which we call Epididymis, cover'd with a thin Production of the Albuginea. The ſame Canal continuing, and aſcending from the Extremities of the Epididymides, forms the Vaſa Deferentia, one from each Epididymis, (*Fig.* 3. H) about the Bigneſs of a Gooſe-quill: As they aſcend within the Tunica Vaginalis, they make ſeveral ſhort Turnings and Windings; then they enter by the Holes of the tranſverſe and oblique Muſcles into the Abdomen, and, marching over the Ureters, between the back Side of the Bladder and the Rectum, they grow larger as they approach the Veſiculæ Seminales, (with which they communicate) where they come cloſe to one another; and, growing again ſmaller and ſmaller, they paſs through the Proſtatæ, and open into the Urethra, a little below the Neck of the Bladder, (ſee *Tab.* XVI. *Fig.* 2. 3. 3.) where each Orifice has a ſpongious Border, called Caput Gallinaginis, which hinders the involuntary Running of the Seed; ſee DEFERENTIA VASA. The Teſticles have many Lympheducts, which diſcharge themſelves into the inguinal Glands. Their Nerves come from the Intercoſtal, and twenty-firſt of the Spine.

The ſpermatic Arteries convey the Blood from the Aorta to the Teſticles, which ſeparate that Part of it which is fit for Seed. The Veins carry back to the Cava what Blood remains, after the Secretion of the Seed. The Seed is farther purify'd in the Epididymides, and in Coition is carried by the Vaſa Deferentia into the Urethra. As the narrow Orifices, and great Length, of the Spermatic Arteries, (which give time to the ſlow moving Particles of the viſcous Seed to combine and unite) the Particles which compoſe the Seed, being groſs, all the ſmaller Particles of the Blood muſt enter the Tubes with them; and therefore, that none but the Particles of the Seed might arrive at the *Vas Deferens*, it was neceſſary, that the Tube of the Gland ſhould be long, having many ſmaller Branches, to convey off all the leſſer Particles, which were not to enter into the Compoſition of the Seed. Many of theſe Particles muſt be lymphatic, becauſe of the great Proportion they bear in the Blood; and therefore we find, that the Teſticles, as well as the Liver, have a Multitude of the lymphatic Veſſels. The Reaſon of the Length of the *Vaſa Deferentia* is, that the Impetus of the Seed at the *Caput Gallinaginis* might not be ſufficient to dilate the Orifices of the *Vaſa Deferentia*, but when aſſiſted with the Compreſſion of the ſurrounding Parts in Copulation.

The *Veſiculæ Seminales* (*Tab.* XVI. *Fig.* 2. 4. 4. and *Fig.* 6. F F) are two in Number, one on each Side, ſituated betwixt the Bladder, and the ſtrait Gut, tied to the one and the other by a Membrane of fleſhy Fibres, which in time of Coition, contracts and preſſes the Veſiculæ: They are cover'd with a pretty thin Membrane, upon which creep many Branches of Veins, Arteries, Nerves, and Lymphatics. Their external Surface reſembles rather that of the Brains, than that of the Guts of a little Bird: They are about two Fingers-breadth long, their broadeſt Part is not an Inch, from which they grow narrower, by little and little, to their End, which is next the Proſtatæ. They have two conſiderable Cavities divided into membranous Cells, which open diſtinctly by two Orifices, which are in their ſmall Extremities, into the two *Vaſa Deferentia*, from which they receive the Seed, which is ſeparated in the Teſticles, to be kept till Coition.

The *Proſtatæ*, or *Corpus Glanduloſum*, (*Fig.* 6. G G) is a conglomerate Gland, ſituated at the Neck of the Bladder, covered with a Membrane made of muſcular Fibres, as that of the Veſiculæ, and for the ſame Uſe: It is about the Bigneſs of a Walnut. The Vaſa Deferentia paſs through its Subſtance, which is veſicular and glandulous. The Glands (which like little Grains lie upon the Sides of the Veſicles) ſeparate a clear and mucilaginous Humour, which lies in the Veſicles till Coition, when it is carried into the Beginning of the Urethra, by eleven or twelve excretory Ducts, which open about the Orifices of the Vaſa Deferentia; the Border of their Mouth is all ſpongious, to prevent a continual Running of this Humour, which happens in a Gonorrhœa, when their Orifices are corroded by the morbific Matter.

The other principal Member of the Parts of Generation is the Penis, whoſe Shape and Dimenſions are pretty well known. Its Skin, (*Fig.* 6. M M) which is thin, and without Fat, has a Reduplication (NN), which makes a Hood to the Glans, or End of the Penis, call'd Præputium, or the Foreſkin. The ſmall Ligament, by which it is tied to the under Side of the Glans, is call'd *Frænum*. The Uſe of the Præputium is to keep the Glans ſoft and moiſt, that it may have an exquiſite Senſe.

The Subſtance of the Penis is compos'd of two ſpongious Bodies, call'd *Corpora Cavernoſa*; they ariſe diſtinctly from the lower Part of the Os Pubis. A little from their Root they come cloſe together, being only divided by a Membrane, which at its Beginning is pretty thick, but, as it approaches the End of the Penis, it grows thinner and thinner, where the Corpora Cavernoſa terminate in the Middle of the Glans.

The external Subſtance of theſe ſpongy Bodies is hard, thick, and white. The internal is compos'd of ſmall Fibres and Membranes, which form a ſort of looſe Net-work, upon which the Branches of the Blood-veſſels are curiouſly ſpread. When the Blood is ſtopt in the great Veins of the Penis, it runs through ſeveral ſmall Holes in the Sides of their capillary Branches into the Cavities of the Net-work, by which means the Corpora Cavernoſa become diſtended, or the Penis erected.

Along the under Side of the Corpora Cavernoſa, there runs a Canal, called the Urethra, (*Fig.* 6. I I H) which is about twelve or thirteen Inches long, beginning at the Neck of the Bladder (from which it receives the Urine); it bends to the lower Part of the Os Pubis, and, turning up to the Roots of the Corpora Cavernoſa, is continued to the End of the Penis. The Sides of this Canal are compos'd of two Membranes, and a middle ſpongy Subſtance, like that of the Corpora Cavernoſa, except at the End, which joins the Neck of the Bladder, where the Diſtance between the Membranes is ſmall, and fill'd up with a thin and red glandulous Subſtance, whoſe excretory Ducts, piercing the inner Membrane, pour into the Canal a mucilaginous Liquor. The external Membrane is hard, cloſe, and white; the internal, which lines the Cavity of the Urethra, is thin, ſoft, and of an exquiſite Senſe. The ſpongious Subſtance, which lies between the two Membranes, is about half a Line thick next to the Corpora Cavernoſa, one half Line round the reſt of the Canal. The Extremities of this ſpongy Subſtance are much thicker than in the Middle: That End next the Proſtatæ, becauſe of its Bigneſs, is call'd the Bulb of the Urethra (H), being about half an Inch thick, and divided in the Middle by a thin Partition, as the Corpora Cavernoſa are. The other End forms the Glans or Balanus upon the Extremities of the Corpora Cavernoſa. The Veins in the Urethra have Holes in their Sides, through which the Blood paſſes into the Cavities of its Net-work, in an Erection, as in the Corpora Cavernoſa.

On each Side of the Bulb of the Urethra, there lies a ſmall Gland, whoſe excretory Duct, ſloping forwards, pours into the Urethra a viſcous and tranſparent Liquor, which defends it againſt the Acrimony of the Salts of the Urine: And, on the oppoſite Side of the Urethra, upon its internal Membrane, a little nearer the Glans, there is another ſmall Gland, which has the ſame Office. Theſe Glands were firſt obſerv'd by that diligent Anatomiſt, Mr. *Cowper*. At the other End of the Urethra, round the Crown of the Glans, where it joins the Præputium, is a Row of ſmall Glands, like thoſe of the Cilia, called, by that accurate Anatomiſt, Dr. *Tyſon*, *Glandulæ Odoriferæ*: They ſeparate a Liquor, which lubricates the Glans, that the Præputium may ſlip eaſily upon it.

The Penis has a ſmall Ligament, which ariſes from its Back, a little Diſtance from its Root, which ties it to the upper Part of the Os Pubis, that it may not hang too low: It receives two Branches of Veins and Arteries from the hypogaſtric Veſſels, beſides others from the Pudenda. The two Veins unite near its Roots, and form one Trunk, that runs along the upper Side of the Penis. It has two Nerves from the Os Sacrum, and ſeveral Lymphatics, which empty themſelves into the inguinal Glans.

The Penis has three Pair of Muſcles: The firſt is the *Erectores*, (*Tab.* XVI. Fig. 1. M M) by ſome called *Directores*, and by *Spigelius*, *Collaterales Penis*. They ariſe fleſhy from the external Knob of the *Os Iſchium*, below the Beginnings of the cavernous Bodies of the Penis, in whoſe thick Membrane they are inſerted. When theſe Muſcles act, they pull the Penis towards the *Oſſa Pubis*, whereby its great Vein is compreſt, and the refluent Blood denied its Paſſage under thoſe Bones, by which means the Penis is erected. The ſecond are the ACCELERATORES, which ſee. The third Pair are the *Tranſverſales*; they ariſe from the Iſchium, juſt by the Erectores, and run, obliquely, to the upper Part of the Bulb of the Urethra.

The external Parts of Generation in Women are the *Vulva*, or great Chink, ſituated below the *Os Pubis*, and cover'd with Hair; above this there is a little Swelling, made by ſome Fat, under the Skin, which is call'd *Mons Veneris*. The *Labra*, or Lips, of the great Chink, (*Tab.* XVI. Fig. 7. *i i*) are only the Skin, ſwell'd by ſome Fat underneath: Theſe being a little ſeparated, there appear the Nymphæ, (*f f*) one on each Side of the Chink; they are two ſmall Pieces of Fleſh, reſembling the Membranes that hang under the Throats of Pullets. Their internal Subſtance is ſpongious, and full of Blood-veſſels; therefore they ſwell in the Act of Generation; they receive Veſſels and Nerves as the Clitoris; their Uſe is, to defend the internal Parts from external Injuries; to increaſe Pleaſure; to direct the Courſe of the Urine: They are bigger in married Women than in Maids. In the Angle of the great Chink next the Os Pubis, is the Extremity of the *Clitoris* (*e*), cover'd with a little Hood of the Skin call'd Præputium (*d*); ſee CLITORIS. A little deeper, in the ſame Side of the Vulva, there is a little Hole, which is the Orifice of the Neck of the Bladder (*g*). On the oppoſite Side, next the *Anus*, are the Glandulæ Myrtiformes, ſituated in the Foſſa Magna, or Navicularis; and, in this Angle of the Chink, there is a Ligament, call'd the Fork, which is torn in the firſt Birth.

The Hymen is a circular Folding of the inner Membrane of the Vagina, which being broke in the firſt Embraces, its Fibres contract in three or four Places, and form what they call Glandulæ Myrtiformes.

A little beyond the Clitoris, in the fore Part of the Vulva, above the Neck of the Womb, there is a little Hole, which is the Orifice of the Urethra (*Fig.* 7. *g*). It is naturally ſo large as to receive a Probe as big as a Gooſe-quill. The Length of the Neck of the Bladder is near about two Fingers-breadth: It has a little Muſcle, call'd its Sphincter, which embraces the Urethra, to hinder the involuntary running of the Urine; it joins the fleſhy Fibres, which are at the Orifice of the Vagina.

Between this Muſcle, and the inner Membrane of the Vagina, there are ſeveral little Glands, whoſe excretory Ducts are call'd Lacunæ: They pour a viſcous Liquor into the lower Part of the *Vulva*. Theſe Glands are the Seat of Gonorrhœas in Women, as the Proſtatæ are in Men (according to *Keil*); and have the ſame Uſe that they have. They have been found all ulcerated in Women who have had a Gonorrhœa.

The Vagina, (*Tab.* XVII. *Fig.* 3. *Numb.* 7.) or Neck of the Womb, is a long and round Canal, which reaches from the Pudendum, to the internal Mouth of the Womb. In Maids, 'tis about five Fingers-breadth long, and one and an half wide; but, in Women who have born Children, its Length and Bigneſs cannot be determin'd; becauſe it lengthens in the time a Woman is with Child, and it dilates in the time of Birth. It lies betwixt the Bladder and the Rectum; with which laſt it is wrapt up in the ſame common Membrane from the Peritonæum; for this Reaſon, the Excrements come out ſometimes by the Vulva, when this Inteſtine is wounded.

The Subſtance of the Vagina is compos'd of two Membranes, of which the inner, which lines its Cavity, is nervous, and full of Wrinkles and Sulci, eſpecially in its fore Part. It has three or four ſmall Glands on that Side next the Rectum, which pour into it a viſcous Humour in the Time of Enjoyment.

The Wrinkles of this Membrane are for the Friction of the *Balanus*, to increaſe venereal Pleaſure; to detain the Seed,

Seed, that it run not out again; and that it may extend in the Time of Geſtation.

The external Membrane of the Vagina is made of muſcular Fibres, which (as Occaſion requires) dilate and contract, become long and ſhort, for adjuſting its Cavity to the Length and Bigneſs of the Penis. At its lower Part, there is a Muſcle of circular Fibres, like a Sphincter, and under it, on each Side of the Vagina, a Net-like Plexus of Blood-veſſels, which, with the Muſcle, helps to ſtraiten the Mouth of the Vagina, that it may graſp the Penis cloſely.

The Neck of the Womb receives Veins and Arteries from the hypogaſtric and hæmorrhoidal Veſſels. Thoſe from the hypogaſtric are diſpers'd in its upper Part, and thoſe from the hæmorrhoidal in its lower Part. Theſe Veſſels communicate with one another. It has Nerves from the Os Sacrum. Among other Uſes, the Neck of the Matrix ſerves for a Conduit to the Menſtrua, and for a Paſſage to the Fœtus.

The Matrix or Womb (*Tab.* XVII. *Fig.* 3. *Numb.* 1.) is ſituated in the lower Part of the Hypogaſtrium, betwixt the Bladder and the ſtrait Gut; the Os Pubis is a Fence to it before, the Sacrum behind, and the Ilium on each Side; theſe form, as it were, a Baſon for it; but, becauſe it muſt ſwell whilſt Women are with Child, therefore they leave a greater Space in them than Men; it is, for this Reaſon, that Women are bigger in the Haunches than Men.

The Figure of the Womb is like a Pear, from its internal Orifice to its Bottom; 'tis three Fingers long, two broad, and almoſt as much thick. In Maids, its Cavity will contain a large Almond. It changes both Figure and Dimenſions in Women that are with Child; it preſſes the Bowels, and reaches to the Navel, towards their Delivery; whilſt, at other times, it does not paſs the Os Sacrum.

The Womb is cover'd with the Peritonæum. Its Subſtance is compos'd of fleſhy Fibres, which are woven together like a Net, and they draw together, and make ſeveral Bundles, which have ſeveral Directions, for the better contracting the Womb in the Expulſion of the Fœtus. The Spaces between theſe Fibres are fill'd up with thin and ſoft Membranes, which form an infinite Number of Cells, upon which the Blood-veſſels run, turning and winding frequently. Upon theſe Membranes, eſpecially towards the Cavity of the Womb, there are ſeveral Glands, which ſeparate an Humour to lubricate the Cavity of the Womb.

The Bottom of the Womb grows thick, as it dilates, ſo that in the laſt Months of Geſtation, 'tis at leaſt an Inch thick, where the Placenta adheres; becauſe its Roots run into the Subſtance of the Womb.

The Entry into the Cavity, or the Mouth of the Womb, joins the upper End of the Vagina, and makes a little Protuberance, in the Form of Lips, and reſembles the Muzzle of a little Dog; by ſome it is call'd Os Tincæ (*Tab.* XVII. *Fig.* 3. *Numb.* 5.). The Cavity of the Womb, next its internal Orifice, being more contracted than it is near its Bottom, is call'd *Collum minus Uteri.* Its Surface is unequal, and among the Rugæ open ſeveral ſmall Ducts, which diſcharge a glutinous Liquor, to ſeal up the Mouth of the Womb in Geſtation. Theſe Ducts are affected in a *Fluor albus.*

The Veins and Arteries of the Womb are Branches of the hypogaſtric and ſpermatic Veſſels, whoſe larger Ramifications inoſculate with one another; the ſpermatic Artery, with the hypogaſtric, and the Vein with the Vein, as alſo the Branches of one Side of the Womb with thoſe of the other. When the Term of Accretion draws to a Period, and the Blood, which us'd to be ſpent in the Increaſe of the Body, being accumulated, diſtends the Veſſels, it breaks forth once a Month, at thoſe of the Womb; becauſe, of all the Veins of the Body, which ſtand perpendicular to the Horizon, theſe only are without Valves. This Evacuation is call'd the *Menſtrua*, to which Men, for the ſame Reaſon, are ſubject; but in them the redundant Humour paſſes off by Urine, as *Sanctorius* obſerves, and rarely by the hæmorrhoidal Veins.

Its Nerves come from the Intercoſtals, and from thoſe which come from the Os Sacrum. There are, alſo, ſeveral Lymphatics upon its Outſide, which unite, by little and little, into greater Branches, and diſcharge themſelves into the Reſervatory of the Chyle. All the Veſſels of the Womb creep upon it by many Turnings and Windings, that they may not break when it is diſtended.

The Womb is tied by two Sorts of Ligaments; by two broad, call'd *Ligamenta Lata* (*Tab.* XVII. *Fig.* D D); and by two round, call'd *Ligamenta Rotunda* (*Tab.* XVII. *Fig.* 3. *Numb.* 66.). The two broad Ligaments are only a Production or Continuation of the Peritonæum from the Sides of the Womb. For their Largeneſs and Figure, they are commonly compar'd to the Wings of a Bat. The Ovaria are faſten'd to one End of them, and the Tubæ Fallopianæ run along the other.

The two round Ligaments riſe from the fore and lateral Part of the Bottom of the Womb, and paſs, in the Productions of the Peritonæum, through the Rings of the oblique and tranſverſe Muſcles of the Abdomen to the Os Pubis, where they expand like a Gooſe-foot, and are partly inſerted in the Os Pubis, and partly continu'd or join'd to the Muſculus Membranoſus, or Faſcia Lata, on the upper Part of the Inſide of the Thigh; from thence comes the Pain that Women, big with Child, feel in this Place. The Subſtance of theſe Ligaments is hard, but cover'd with a great Number of Blood-veſſels; they are pretty big at the Bottom of the Womb, but they grow ſmaller and flatter as they approach the Os Pubis.

The ſpermatic Veſſels, in Women, are four, as in Men: they differ only in this, that they are ſhorter, and the Artery makes ſeveral Turnings and Windings, as it goes down; that it divides into two Branches, of which the ſmalleſt goes to the Ovarium; the biggeſt divides into three more, of which one is beſtowed upon the Womb, another upon the Vagina, and the third upon the Ligaments of the Womb, and Tubæ Fallopianæ: 'Tis the ſame as to the Vein.

The Ovaria are tied, about two Fingers Diſtance from the Bottom of the Womb, by the Ligamenta Lata. They are fix'd to the Peritonæum at the Ilia, by the ſpermatic Veſſels. They are of an oval Figure, a little flat upon their upper Part, where the ſpermatic Veſſels enter.

The Ovaria, or Teſticles, (*Tab.* XVII. *Fig.* 3. *Num.* 4. 4.) are near half as big as Mens are; their Surface is unequal and wrinkled, in old Women, but ſmooth and equal in Maids; they are cover'd with a proper Membrane, which ſticks cloſe to their Subſtance, and with another common from the Peritonæum, which covers all the ſpermatic Veſſels. Their Subſtance is compos'd of Fibres and Membranes, which have little Spaces, in which there are ſeveral ſmall Veſicles, round, and full of Water, which, being boil'd, hardens like the White of an Egg; they have each of them two proper Membranes, upon which there are ſeveral ſmall Twigs of Veins, Arteries, and Nerves. Theſe Veſicles are called Eggs, and they are of a different Size and Number, in Women of different Ages. We obſerve, in Cows, that ſuch of them as are impregnated, after Copulation, are contain'd in, or cover'd all over with, a yellow Subſtance, which has a ſmall Hole in its Side, through which they are thruſt, when they fall into the Tubæ Fallopianæ: Beſides the ſpermatic Veſſels, the Ovaria have Nerves, from the Intercoſtals and Lymphatics, which diſcharge themſelves into the common Receptacles.

The *Tubæ Fallopianæ* (*Tab.* XVI. *Fig.* 7. E G; *Tab.* XVII. *Fig.* 1. E E; *Fig.* 2. G G; and *Fig.* 3. *Num.* 2, 2.) are ſituated on the Right and Left Side of the Womb; they riſe from its Bottom by a narrow Beginning, and they dilate in form of a Trumpet, to their Extremities, where they are contracted again into a ſmall Orifice, from whoſe Circumference they dilate into a pretty broad Membrane, which looks as if it were torn at its Edges, therefore call'd *Morſus Diaboli* (*Tab.* XVII. *Fig.* 1. F F; and *Fig.* 3. *Num.* 3. 3.). Their Cavity, where they open into the Womb, will ſcarcely admit of a Hog's-briſtle; but, at its wideſt Part, it will take in the End of one's little Finger. Their Subſtance is compos'd of two Membranes, which come from the external and internal Membranes of the Womb. The Tubes are about four or five Fingers-breadth long; they have the ſame Veins, Arteries, Nerves, and Lymphatics, as the Ovaria. Theſe are all the Parts of Generation in Women. See the Explications of *Plate* XVI. and XVII.

So great is the Pleaſure in the Act of Generation, that it alters the Courſe of the Blood, and animal Spirits, which then move all the above-deſcribed Parts, which before lie quiet, and at Reſt. The *Clitoris* is erected, which, by its exquiſite Senſe, affords a great deal of Delight; the Glands about the Neck of the Womb, being preſſed by the Swelling of the neighbouring Parts, pour forth a Liquor to facilitate the Paſſage of the *Penis*, and to increaſe the Pleaſure. The Neck of the Womb contracts, and embraces cloſely, the Penis; the Fibres of the Womb contract, and open its Mouth (which, at other times, is extremely cloſe) for the Reception of the ſpirituous Part of the Seed; and the Branches of the ſpermatic Artery, which run upon the *Ligamenta Lata*, between the *Ovaria* and the *Tubæ Fallopianæ*, being diſtended with Blood, contract and pull the Extremities of the Tubes to the Ovaria, for conveying the Seed to them. The Seed impregnates the Egg, which, from being tranſparent, becomes opake; ſome time after, 'tis cover'd with a thick and yellow Subſtance, which preſſes it on all Sides, and thruſts it out through a little Hole in its Middle; ſo it falls into the Orifice of the Tubes, which dilate ſufficiently for its Paſſage into the Womb.

Some, partly conſidering the Cloſeneſs of the Mouth of the Womb, and partly the Thickneſs of the Membranes of the Ovaria and Ova, judge it impoſſible for the Seed to paſs this Way; therefore they think, that it is taken up by the Veins, which open in the Cavity of the Vagina and Matrix, where, circulating, it ferments with the Maſs of Blood; from thence come all thoſe Symptoms, which appear upon Conception: It enters and impregnates the Egg, by the ſmall Twigs of Arteries which are upon its Membranes. This Fermentation ſwells the Membranes of the Tubæ, opens the Cavity of the Womb,

Womb, and makes every thing ready for the Reception of the Egg.

The great and many Difficulties which attend the moſt plauſible Account of the firſt Formation of the Parts of an Animal, and Beginning of Motion in its Fluids; and the nice and curious Obſervations of *Redi*, and *Leeuwenhoeck*, and others, have been ſufficient Motives to moſt of the Moderns, to throw off the Notion of equivocal Generation. But though both Reaſon and Experiments convince us, that all the Parts of an Animal did exiſt, and its Fluids were in Motion, before Generation; yet whether the Animalcule was lodg'd in the Seed of the Male or Female Ova, is matter of Controverſy. The Arguments, ſtrongly alleg'd on both Sides, perſuade me of the Truth of what Dr. *Garden* ſays, that the Female Ovum is a proper Nidus for the *Animalcula in ſemine*. It is amazing to ſee the prodigious Number of little Creatures, like ſo many Tadpoles, ſwimming, every Way, in the Male Sperm of all Animals: Nor is it leſs curious to obſerve their languid Motion, in ſuch as are pox'd, and how they recover their former Briſkneſs, as the Diſtemper abates. *Leeuwenhoeck* tells us of one whoſe Wife, for ſome Years, did not conceive, becauſe there were no Animalcula to be found in his Seed, there being no other ſenſible Hindrance on either Side. Theſe Animals are ſo ſmall that 3000000000 of them are not equal to a Grain of Sand, whoſe Diameter is but the hundredth Part of an Inch. Whilſt the Seed thus abounds with Animalcula, there are not the leaſt Rudiments of an Animal to be ſeen in any Part of the Ovaria: Yet theſe, likewiſe, have a principal Part in Generation; for without them there is no Conception; and even Bitches, which have been ſpay'd, forget their uſual Appetites, as if they were the only Spurs to Venery. The yellow Subſtance, which grows in the Ovaria of Cows, upon Conception, is very remarkable; it has a ſmall Dint, and a Cicatrix, in its Middle, as if the Ovum had dropt out there (as *Malpighi* thinks). When the Fœtus is very ſmall, I have obſerv'd it very large; but, as the Fœtus grows bigger and bigger, this dries; and, I think, at laſt, even vaniſhes: Nor is it to be ſeen before Conception, and in one Teſticle only, when there is but one Calf. If all the Animalcula, or a great many of them, did faſten and grow to the Womb, till ſuch time as by their Bigneſs, or want of Nouriſhment, they made one another drop off, (as *Leeuwenhoeck* thinks) Women could not but be ſenſible of their Evacuation; for they muſt be falling off, through the whole Time of their being with Child: But when the Animalcula gets into an Ovum fit to receive it, and this falls through one of the *Tubæ Fallopianæ*, into the Womb, the Humours which diſtil thro' the Veſſels of the Womb, penetrating the Coats of the Egg, ſwell and dilate it, as the Sap of Earth does Seed, thrown into the Ground: Or elſe the Branches of the Veins and Arteries, whereby the Egg was tied in the Ovarium, (which, probably, make the umbilical Veſſels) being broken, faſten with the Veſſels of the Womb; then the Placenta begins to appear like a little Cloud, upon one Side of the external Coat of the Egg; and, at the ſame time, the Spine of the Embryo is grown ſo big, as to be viſible; and, a little after, the Cerebrum and Cerebellum appear like two Bladders; and the Eyes, next, ſtand goggling out of the Head; then the Beating of the Heart, or *Punctum Saliens*, is plainly to be ſeen; and the Extremities diſcover themſelves laſt of all.

Now the Membranes, which involve the Fœtus, are the ſame with the Coats of the Egg: The external is called *Chorion*; it is pretty thick, and a little rough on its Outſide, to which the Placenta adheres: It embraces the *Amnios*, or internal Membrane, which is a fine and delicate Bag, full of a clear Liquor, in the Middle of which the Fœtus ſwims. The Liquor is ſeparated, for the Nouriſhment of the Fœtus, by the Glands of the *Amnion*, from its Blood-veſſels, which are fine Branches of the umbilical Veins and Arteries.

The Arteries riſe from the Extremity of the Aorta, or the Beginning of the Iliacs of the Fœtus; and, paſſing by the Sides of the Bladder to the Navel, through which they paſs, they give ſome Branches to the *Amnion* and *Chorion*, and are afterwards divided into an infinite Number of Branches in the Placenta. The Vein riſes by ſeveral Roots or Branches, which are ſpread through all the Subſtance of the Placenta; it enters the *Chorion* and *Amnion*, to which it gives ſeveral Twigs; and, paſſing in at the Navel, it joins the *Vena Portæ*, in the Subſtance of the Liver.

The umbilical Veſſels, between the Navel and the Placenta, are wrapt up in Productions of the *Chorion* and *Amnion*, which is generally about a Foot and an half long, that the Motion of the Fœtus might not pull the *Placenta* from the Womb. The Uſe of this Navel-ſtring is, to carry the material Blood, by the Veins, to the Fœtus, for its Nouriſhment: That which is unfit for this Uſe, is carried back, by the Arteries, to the *Placenta*, whilſt the Fœtus is ſtill ſupplied with more, by the Vein; ſo that there is a continual Circulation betwixt the Mother and the Fœtus.

Now, the *Placenta* is a thick Cake, which grows upon the Outſide of the *Chorion*, in proportion as the Fœtus grows; it is of a circular Figure; at its biggeſt, it is about two Fingers-breadth thick, and ſix or ſeven in Diameter. The Branches of the umbilical Veſſels are ſpread through all its Subſtance; and, indeed, it ſeems to be nothing elſe but a Texture of the Vein and Arteries, by whoſe Extremities, opening into the Sides of the hypogaſtric Veſſels, the Circulation is perform'd between the Mother and the Fœtus; for that Side of the Placenta, which adheres to the Womb, appears to be nothing but the Extremities of an infinite Number of ſmall Threads, which, in Labour, dropping out of the Pores in the Sides of the hypogaſtric Blood-veſſels, into which they had inſinuated themſelves, is the Occaſion of the Flowing of the Lochia, till the Uterus collapſes, or the Pores, by the natural Elaſticity of the Veſſels, contract by degrees. Sometimes Twins have only one common Placenta, and ſometimes they have each a diſtinct one.

Beſides theſe Membranes which involve the Fœtus, there is another, which lies between the Chorion and the Amnion, on the oppoſite Side to the Placenta, in the Form of a Bag, call'd the ALLANTOIS; which ſee.

The Fœtus is almoſt of an oval Figure, whilſt it lies in the Womb; for its Head hangs down with its Chin upon its Breaſt; its Back is round; with its Arms it embraces its Knees, which are drawn up to its Belly; and its Heels are cloſe to its Buttocks, its Head upwards, and its Face is towards its Mother's Belly. But, about the ninth Month, its Head, which was always ſpecifically lighter than any other Part, becomes ſpecifically heavier, its Bulk bearing a much ſmaller Proportion to its Subſtance, than it did; and, conſequently, it muſt tumble in the Liquor which contains it; ſo its Head falls down, its Feet get up, and its Face turns towards its Mother's Back: But becauſe then it is an irkſome, though favourable Poſture for its Exit, the Motion it makes for its Relief, gives frequent Pains to its Mother, which cauſes a Contraction of the Womb, for the Expulſion of the Fœtus.

I have above given the prevailing Opinion, with reſpect to Generation, as collected by Dr. *James Keil*; but I muſt confeſs, that neither this, nor any Syſtem I have yet met with, gives me the leaſt Satisfaction; but, on the contrary, all of them appear full of Abſurdities, and the Whole of Generation to be involv'd in Difficulties, at preſent in no Degree clear'd up, notwithſtanding all the Pains that have been taken about it. *Leeuwenhoeck*, as obſerv'd above, by the Help of his Glaſſes, diſcover'd Animalcula in the Seed of all Male Animals; whence he, and his Followers, deduc'd a new Syſtem of Generation, as it ſhould ſeem, utterly romantic, and inconſiſtent with the Conduct of Providence, obſervable in all natural Productions. Thus, for Example, if 3000000000 Animalcules ſhould be included in a Quantity of Male Sperm ſufficient for the Production of one Animal only, provided the Animal is produc'd by one of theſe Animalcules, all the reſt are ſuperfluous, and created for no End, but to be immediately deſtroy'd: Beſides, we muſt ſuppoſe, that Providence aims very ill, if oblig'd to load her Engine ſo enormouſly, in order to be able to hit the Mark propos'd. But in all other Inſtances we find, that the Author of Nature perpetually adapts much leſs compounded Means, in order to arrive at the deſtin'd Ends. We have, therefore, great Reaſon to believe, that the Generation of Animals is not the only thing neglected, and accompliſh'd in a Manner extremely unartificial.

With reſpect to theſe Animalcula, I muſt obſerve, that they really exiſt, and are eaſily viſible by the Help of Glaſſes; but never, ſo far as I have been able to obſerve, whilſt the Sperm is freſh, and uncorrupted. But, in a very ſhort time, the Sperm of Animals corrupts, and then the Animalcules appear, and, I believe, not before.

Something analogous to this happens to the Seed of Vegetables. Wheat, for Example, ground down into Meal, whilſt freſh, exhibits no Animalcules; but, when mixt with Water into a Paſte, and corrupted, great Numbers of Animalcules are diſcoverable in it by Glaſſes. Now it ſeems to be equally probable, that the Animalcules obſervable in Wheat, the Seed of a Vegetable, ſhould be the Rudiments of the future Blade of Corn, as that the Animalcule in the corrupted Sperm of an Animal ſhould be neceſſary to the Production of an Animal ſimilar to its Parent.

GENEROSUS. An Epithet in Medicine, ſignifying the ſame as vehement, potent, efficacious. *Caſtellus.*

GENESIS, γένεσις. The ſame as GENERATIO.

GENETHLIACUS, γενεθλιακὸς, was formerly a kind of Prophet, as appears from *Galen*, *Com.* 1. *in Lib. de R. V. I. A.* but is now appropriated to modern Aſtrologers, who pretend to caſt Nativities. *Caſtellus.*

GENETTA, call'd alſo the *Spaniſh Cat*, is a Beaſt of a leſs Size than a Fox, and much valued for its Skin. It lives in marſhy and watery Places in *Spain*, and its Fat, which is us'd in Medicine, is a Diſſolvent, and friendly to the Nerves. *Lemery des Drogues.*

GENICULATUS, geniculated, from *Geniculum*, a Joint, or Knot, is ſpoken of ſuch Plants, or their Parts, which are divided by Joints.

GENICULUM, GENICULUS. See the preceding Word.

GENIOGLOSSI *Muſculi.*

This, with its Partner, lies immediately under the Genio-Hyoidæus. They ariſe fleſhy from the fore Part of the lower Jaw internally; and, enlarging themſelves, are inſerted in the Root of the Tongue.

When theſe act, they pull the Tongue forwards, and thruſt it out of the Mouth.

GENIO-HYOIDÆUS.

This, with its Partner, are ſhort, thick, and fleſhy Muſcles, ariſing from the internal Parts of the lower Jaw-bone, call'd the Chin; and, dilating themſelves, are ſoon leſſen'd again, and inſerted into the ſuperior Part of the fore Bone of the Os Hyoides.

Theſe, acting, pull the Os Hyoides both upwards and forwards, and aſſiſt the Geniogloſſi in thruſting the Tongue out of the Mouth.

GENIPAT. An *Indian* Tree, the ſame with the JANIPABA, which ſee.

GENISTA. See the common *Geniſta* or Broom, under the Article CYTISO-GENISTA; but there are ſeveral other Sorts of Plants which go by the Name of *Geniſta*; as the

Geniſta; juncea, *Boerh. Ind. A.* 2. 23. *Tourn. Inſt.* 643. *Geniſta Hiſpanica*, Offic. Ger. 1131. Emac. 1313. Raii Hiſt. 2. 1726. *Spartium arboreſcens ſeminibus Lenti ſimilibus*, C. B. Pin. 396. *Spartium Hiſpanicum frutex vulgare*, Park. Theat. 231. SPANISH BROOM.

It is common in Gardens, and flowers in *June* and *July*; the Parts in Uſe are the Branches, Flowers, and Seeds; and it agrees in Virtues with the common *Geniſta*, only is more efficacious. *Dale.* It is a potent Expeller of pituitous and ſerous Humours, both upwards and downwards; for which Reaſon it is effectual in Dropſies, the Sciatica, and Arthritis; provokes Urine, and breaks the Stone in the Kidneys. The Oil of the Flowers diſcuſſes Tumors of the Spleen, the Part being anointed with it. The Flowers, alſo, us'd with Honey of Roſes, or an Egg, diſſolve ſtrumous Swellings. *Raii Hiſt. Plant.*

The Flowers and Seeds, drank to the Weight of 50 Grains in Hydromel, work violently by Vomit, after the manner of Hellebore, but with Safety; the Seeds alſo purge downwards. The Juice of the Branches, firſt macerated in Water, and then bruis'd, is given with Effect in the Sciatica and Quinſey; the Doſe is a Cyathus, faſting. Some macerate the Branches in Brine, or Sea-water, and adminiſter the ſame in Clyſters for the Sciatica; it extracts bloody and ſtrigmentitious Abraſions. *Dioſcorides, Lib.* 4. *Cap.* 158.

Geniſta; hortenſis; major Luſitanica. *Vir. Luſit.*

Geniſta; radiata; ſive ſtellaris. *J. B.* 399.

Geniſta; ramoſa; foliis hyperici. *C. B. P.* 395.

Geniſta; tinctoria; Germanica. *C. B. Pin.* 395. *Tourn. Inſt.* 643. *Boerh. Ind. A.* 2. 25. *Geniſtella, Geniſta tinctoria.* Offic. *Geniſtella tinctoria.* Ger. 1136. Emac. 1136. Raii Hiſt. 2. 1725. Synop. 3. 474. *Geniſta tinctoria vulgaris.* Park. Theat. 228. *Tinctorius flos.* J. B. 1. 391. GREEN WEED, DYERS WEED.

It is too frequent in Paſture-grounds, and flowers in *June* and *July*. The Herb is in Uſe, and has an aſtringent Virtue aſcrib'd to it by *Monti. Dale.* As it agrees in Temperament, and outward Appearance, with the common Geniſta, it may very well be ſuppos'd to have the ſame Virtues. *Raii Hiſt. Plant.*

Geniſta; tinctoria; Germanica; foliis anguſtioribus. *C. B. P.* 395.

Geniſta-ſpartium; majus; brevioribus aculeis, *Tourn. Inſt.* 445. *Boerh. Ind. A.* 2. 24. *Nepa*, Offic. *Geniſta aculeata minor ſive Nepa Theophraſti*, Ger. 1140. Emac. 1321. *Geniſta ſpinoſa minor*, Park. Theat. 1003. Raii Synop. 3. 479. *Geniſta ſpinoſa major brevibus aculeis*, C. B. Pin. 394. Raii Hiſt. 2. 1719. THE LESSER FURZ.

It flowers in Autumn, and the whole Plant is us'd, which agrees in Virtues with the common Broom. *Dale.*

Geniſta-ſpartium; majus; longioribus aculeis, *Tourn. Inſt.* 645. *Boerh. Ind. A.* 2. 24. *Scorpius*, Offic. *Geniſta ſpinoſa major*, Ger. 1138. (*quoad deſcript.*) *Geniſta ſpinoſa vulgaris*, Ger. Emac. 1319. Raii Hiſt. 2. 1729. Synop. 3. 475. *Geniſta ſpinoſa major longioribus aculeis*, C. B. Pin. 394. *Geniſta ſpinoſa major vulgaris ſeu Scorpius Theophraſti, quam Gaza Nepam tranſtulit*, Park. Theat. 1003. *Geniſtellæ ſpinoſæ affinis, Nepa quibuſdam*, J. B. 1. 400. FURZ, or GORS.

This Plant flowers in the Spring, and is every Part of it us'd in Medicine, for the ſame Purpoſes as the common Broom. *Dale.*

3. Geniſta-ſpartium; Africanum; folio baccis breviore; flore luteolo.

4. Geniſta-ſpartium; minus Anglicum. *T.* 645.

5. Geniſta-ſpartium; ſpinoſum; majus; tertium hirſutum. *C. B. P.* 394.

6. Geniſta-ſpartium; montis ventoſi. *T.* 645.

GENISTELLA.

The Characters are,

The Parts of the Leaves grow one within another by Articulation.

Boerhaave mentions but one Species of this Plant; which ſi, Geniſtella; herbacea; ſive Chamæſpartium. *J. B.* 1. 393.

There are no medicinal Virtues attributed to this Plant, that I know of.

GENITURA, γονὴ, γόνος, Semen, or Seed. Some, from *Ariſtotle, de Gen. Animal. Lib.* 1. *Cap.* 18. diſtinguiſh between γονὴ (*Gone*), and σπέρμα (*Sperma*), making the firſt the Principle and Cauſe of Generation in perfect Animals; the other to ſerve the ſame Purpoſe in imperfect Animals and Plants. There are ſome other Diſtinctions made between them; but, however, it is certain, that they are us'd promiſcuouſly, and in particular by *Hippocrates, Lib. de Genitura*, as well as *Galen, de Sem.* Γόνος, in *Hippocrates de Humid. Uſu*, ſignifies the *Pudendum virile.*

GENIUS, δαίμων, a Genius. *Galen*, in his Book *de Hippocr. & Plat. Decret.* aſſerts, that God has given to every Perſon a Genius, which reſides in the uppermoſt Part of the Body, and exalts us from Earth to the Knowledge of celeſtial things.

GENOS, GENUS, γένος. To omit other Senſes of the Word, as not ſo pertinent to our Purpoſe, in Botany, is a Claſs or Order of Plants, agreeing in ſome common Character, or Structure of Part, diſtinguiſhing them from all others. *Triſmegiſtus* makes three *Genera generaliſſima*, or higheſt and moſt univerſal Orders of Subſtances, which are Minerals, Vegetables, and Animals. *Theat. Chym. Vol.* 1.

GENSING. See GINGSZENG.

GENTIANA.

The Characters are;

The Leaves are conjugated, or grow in Pairs: The Calyx is monophyllous, membranaceous, and form'd like a Sheath: The Flower is ſhap'd like a Cup, and is divided into four, five, or, perhaps, ſeven or eight Segments. The Fruit is unicapſular, oval, acuminated, bivalve, and running out into two Parts like Horns: The Seeds are flat, orbicular, and border'd with a Rim.

Boerhaave mentions ſeven Species of this Plant; which are,

1. Gentiana; major; lutea, *C. B. Pin.* 187. *Tourn. Inſt.* 80. *Boerh. Ind. A.* 204. *Park. Parad.* 350. *Gentiana*, Offic. *Gentiana major*, Ger. 351. Emac. 432. Raii Hiſt. 1. 716. *Gentiana vulgaris major Ellebori albi folio*, J. B. 3. 520. GENTIAN.

The Root of the great Gentian is large, thick, and woody, pretty much divided, of a yellow-brown Colour, and a very bitter Taſte; no Part of the Plant beſides is us'd in Medicine, and the Root, *Schroder* tells us, ſhould be taken up in *Auguſt* and *September.* It is extremely bitter, but leaves rather an agreeable than nauſeous Guſt behind. It deſervedly ſtands at the Head of the Stomachic Claſs, as it wonderfully warms the Stomach, and excites the Appetite; and alſo, as it enables it the better to digeſt what it receives. The Subtilty of its Parts makes it alſo paſs for a Diſcutient and Aperient, in many Compoſitions of thoſe Intentions; and likewiſe for an Alexipharmic, and a great Antidote againſt many kinds of Poiſons, as it wonderfully promotes ſenſible and inſenſible Perſpiration. For killing and expelling Worms, it is the beſt in Eſteem: And in Surgery, it not only goes for a Diſcutient, in their Fomentations, but is alſo us'd, in fine Powder, to Iſſues, to promote their running; and as a Tent, both to enlarge and cleanſe ſome fiſtulous Apertures. Some Authors extol this beyond all Credibility, for its alexipharmic Qualities, and rank it almoſt with the *Peruvian* Bark, in Intermittents. And for this Reaſon undoubtedly we meet with it in the *Theriaca Andromachi*, and in ſome other Shop Compoſitions of the ſame Intention, although it now ceaſes to be preſcrib'd for ſuch Purpoſes in extemporaneous Practice. That it very much aſſiſts in ſome Compoſitions for removing Agues, and ſome Kinds of Intermittents, I have found by Experience, in many Inſtances; but it is not to be depended upon alone; and, by its great Subtilty and Heat, if Caution be not us'd, it will inflame in many Caſes, rather than abate the Symptoms. With this only, and the outer Rind of Orange-peels, may be made a very good Bitter, in any proper Menſtruum.

Officinal Preparations are, a compound Water, ſee AQUA; and an Extract, made according to the Rules laid down under the Article EXTRACTUM.

The medicinal Virtue of Gentian was ſaid to be firſt taken notice of by *Gentius* a King of the *Illyrians. Pliny, Lib.* 25. *Cap.* 7.

The *Decoctum amarum ſimplex*, in which Gentian is the principal Ingredient, is thus prepar'd:

Take of the Roots of Gentian and Galangal, each one Dram; of the Tops of *Roman* Wormwood, two Drams; of

of the yellow kind of dry'd *Seville* Oranges, and of the leſſer Cardamom-ſeeds, each one Dram: Infuſe all in a Pint of boiling Water, and, when the Liquor is cold, ſtrain it off.

The *Decoctum amarum ſolutivum* is prepar'd in the following Manner:

Take of the Tops of the leſſer Centaury, and of Chamomile-flowers, each one Pugil; of Gentian-root, half a Scruple; of Rhubarb, one Dram; of Sena-leaves, ſufficiently cleans'd, and of the Seeds of Carduus Benedictus, each one Dram; of the leſſer Cardamoms, half a Dram: Infuſe in five Ounces of boiling Water, and ſtrain off the Liquor. *Pharmacop. Londin.*

2. Gentiana; Aſclepiadis folio, *C. B. P.* 187. *J. B.* 3. 723. *Raii Hiſt.* 1. 717. GENTIAN WITH SWALLOW-WORT-LEAVES.

It grows plentifully in *Stiria*, *Hungary*, and *Lower Auſtria*, at the Foot of Mountains, and on ſhady Hills, but never on the open Tops.

The Peaſants of *Sclavonia* ſay, they drink the Decoction of the Root, with good Succeſs, for the Stone: And *Aretius* and *J. Simlerus* inform us, that the Farmers make uſe of it to cure the Udders of their Cows, when bit by the Shrew-mouſe, or other poiſonous Animals, *Raii H. P.*

3. Gentiana; cruciata, *Offic. C. B. P.* 188. *Raii Hiſt.* 1. 717. *Tourn. Inſt.* 81. *Boerh. Ind. A.* 205. *Gentiana minor cruciata*, Park. Parad. 350. Ger. 351. Emac. 433. *Gentiana minor ſeu vulgi cruciati*, J. B. 3. 522. CROSSWORT GENTIAN.

It grows in all Parts of *Hungary*, both on the open and graſſy Hills and Mountains, and in the dry and green Meadows.

The Roots of this Species are extol'd by the Moderns againſt the Peſtilence, and the Bites of venomous Creatures. *Matthiolus* affirms, that the Root bruiſed, and apply'd to the Belly by way of Cataplaſm, is an experienced Remedy againſt the Worms of the Inteſtines; and that the Plant newly digged up, and bruis'd in the ſame manner, or dry'd and pulveriz'd, is effectual in curing ſtrumous Ulcers. *Raii H. P.*

4. Gentiana; Alpina; flore magno, *J. B.* 3. 523. *Tourn. Inſt.* 80. *Boerh. Ind. A.* 205. *Gentianella verna*, Offic. *Gentianella verna major*, Ger. Emac. 436. Raii Hiſt. 1. 718. *Gentianella major*, Park. Theat. 403. *Gentianella Alpina latifolia, magno flore*, C. B. P. 187. GENTIANEL.

The whole Plant, ſays *J. Bauhine*, is of a very bitter Taſte, and therefore is good for hyſteric Diſorders, the Jaundice, and Obſtructions. *Raii Hiſt. Plant.*

5. Gentiana; Alpina; pumila; verna; major, *T.* 80.

6. Gentiana; anguſtifolia; autumnalis, major. *Tourn. Inſt.* 81. *Boerh. Ind. A.* 205. *Pneumonanthe*, Offic. Ger. 355. Emac. 438. *Gentianella autumnalis Pneumonanthe dicta*, Park. Parad. 352. *Gentiana paluſtris anguſtifolia*, C. B. P. 188. Raii Hiſt. 1. 719. *Gentianæ Species, Calathiana quibuſdam radice perpetua, ſive paluſtris*, J. B. 3. 524. MARSH GENTIAN.

It is found on boggy Heaths, and flowers in Autumn. The Herb is accounted, by the Moderns, of great Virtue againſt the Peſtilence, and the Poiſon of venomous Animals; and ſome no leſs commend it in hepatic and pulmonic Affections: In ſhort, it agrees in Virtues with the common Gentian, only is much weaker. *Dale.*

7. Gentiana; paluſtris; latifolia; flore punctato, *C. B. P.* 188. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 204.

Beſides the foregoing Species of *Gentiana*, *Dale* mentions the following:

Gentianella autumnalis, Offic. *Gentianella fugax minor*, Ger. Emac. 437. *Gentianella autumnalis Centaureæ minoris foliis.* Park. Theat. 406. *Gentiana pratenſis, flore lanuginoſo*, C. B. Pin. 188. Raii Synop. 3. 275. Tourn. Inſt. 81. *Gentianæ Species quibuſdam, an Cordo Pneumonanthe, aut Gentiana fugax altera Cluſii?* J. B. 3. 526. BASTARD GENTIAN.

It grows on chalky Hills, and in dry Paſtures, and flowers in *September*. It is ſuppoſed to have the ſame Virtues with the greater Gentian.

This Gentian is a moſt excellent Stomachic, and one of the moſt grateful of bitter Herbs, far ſurpaſſing, in that reſpect, the leſſer Centaury, inſtead of which it begins to be frequently us'd by the Phyſicians and Apothecaries of *London*. *Dale.*

GENTIANELLA. See the preceding Word.

GENTIAPOLIS, ζεντιάπολις, a Term in *Myrepſus*, *Antid.* 447. follow'd by an ἄλογ, "that is," and a void Space left for a Word to explain it, which none as yet, ſays *Fuchſius*, has been able to ſupply.

GENTILITIUS. An Epithet of Diſeaſes propagated from Parents to their Children, meaning the ſame as *Hæreditarius*, hereditary.

GENU, γόνυ, the Knee. See CRUS.

GENUGRA. A barbarous Term in *Paracelſus*, for *Gonagra*, the Gout in the Knee. *Caſtellus.*

GENYS, γένυς. See GENA.

GEODES *Lapis*, λίθος γεώδης, a Stone ſo call'd from γῆ, "the Earth," which it contains. It is of an aſtringent and drying Quality, deterges ſuch Things as darken the Sight, and mitigates Inflammations of the Breaſt and Teſtes, being rub'd on the affected Parts with Water. *Dioſcorides*, *Lib.* 5. *Cap.* 169.

GEOPILYSIA, γεοπιλυσία, according to *Rulandus*, is the Name which the Antients very properly gave to a Separation by Dilution; but it will be very hard to find a ſufficient Authority for his Aſſertion. *Caſtellus.*

GERÆTEROS, γεραίτερος; in *Hippocrates*, ſignifies Middle-aged, or one between thirty Years and Old-age. *Galen's Comment.*

GERANDRYON, γερανδρεῶν. A Name for any old Tree; for the *Greeks* uſe the Word δρῦς, to ſignify all Kinds of Wood. *Gorræus.*

GERANIS, γηρανὶς, the Name of a Bandage for a Diſlocation of the Shoulder, or a Fracture of the Clavicle, or Collar-bone, invented by *Hippocrates*; or, as others ſay, by *Perigenes*. *Galen, Lib. de Faſc. Æginet. Lib.* 6. *Cap.* 99.

GERANIUM, γήρανον.

The Characters are;

The Leaves are, for the moſt part, conjugated, the Calyx pentaphylloidal, and expanded in form of a Star. The Flower here, in *Europe*, is pentapetalous, and roſaceous; but in *Africa* ſometimes tetrapetalous, and in a manner galeated and labiated, and furniſh'd with ten Stamina, which cloſely ſurround the Baſe of the Ovary. The Fruit is pentangious, or quinquevaſcular, beaked, containing, at the Baſe, five Capſules, including each a tailed Seed, and producing a long ſlender Tube; which five Tubes, uniting in cloſe Coalition, repreſent, with the Ovary, the Head of a Stork, or Crane.

Boerhaave mentions ſixty-eight Species of this Plant; none of which have any Medicinal Virtues attributed to them, except the following: The firſt of *Boerhaave's* is, the

Geranium; Africanum; arboreſcens; ibiſci folio rotundo; Carlinæ odore, *H. L.* 274.

This Plant has an emollient Virtue like the *Acetoſa*: As it is eſculent, its tuberous Roots are eaten in *Africa*, as we eat Turneps. An Infuſion, or Decoction, of the Herb, or its Juice, are effectual in reſolving the coagulated Blood in Wounds; it has ſomething of Aſtringency, and is recommended by the Antients for the Cure of foul Ulcers; they uſed it alſo in Ulcers of the Pudenda. A Bath prepared of the Decoction of this Herb has a good Effect in Fevers; and a Decoction of the Seeds is in Uſe for the healing of Wounds, and as a Demulcent of Aſperities in the Body; it is highly comforting and refreſhing to the Breaſts labouring under a Cancer, being reckon'd among thoſe Plants which preſerve from Corruption: The Leaves, boiled in Wine, diſcuſs an Inflammation, and are commended for an Eryſipelas. The Juice of the Root cures Diſeaſes in the Ears, and is good in a Fomentation for Pains of the Joints; for which Purpoſe it is uſed by ſome Surgeons, as alſo for Fiſſures in the Breaſts, and Diſcuſſion of the Milk.

Boerhaave mentions ſeveral other Species of the *African Geranium*; all which, he ſays, are poſſeſs'd of an emollient Quality.

The twenty-ſeventh of *Boerhaave's* is, the

Geranium; Batrachioides; Gratia Dei Germanorum, *C. B. Pin.* 318. *Tourn. Inſt.* 266. *Boerh. Ind. A.* 264. *Geranium Batrachioides*, Offic. Ger. 797. Emac. 942. Raii Hiſt. 2. 1061. Synop. 3. 360. J. B. 3. 475. *Geranium Batrachioides flore cæruleo*, Park. Parad. 228. CROWFOOT CRANE'S-BILL.

It grows in low Meadows and Paſtures, and flowers in *June* and *July*. The Powder of the Herb, ſprinkled on a Wound, dries it, and not only puts an immediate Stop to the Hæmorrhage, but cures it in a ſpeedy and ſurpriſing manner. *Dale.*

All the Species which go by the Name of *Batrachioides*, and eſpecially this twenty-ſeventh, have a very aromatic Smell, whence they are excellent Aperitives. This Species, in particular, is very ſucceſsfully uſed by Surgeons in the Cure of a Scirrhus, Abſceſſes, and Cancers. It is alſo commended for its Efficacy againſt the Stone, and as a Lenitive; and is highly extol'd by the antient Surgeons againſt cancerous Tumors.

The other Species of *Batrachioides* are, the 28th, 29th, 30th, and 31ſt of *Boerhaave*.

28. Geranium; batrachioides; Gratia Dei Germanorum, flore albo.

29. Geranium; batrachioides; Gratia Dei Germanorum, flore variegato, C. B. P. 318.

30. Geranium; batrachioides; odoratum, C. B. P. 318.

31. Geranium; batrachioides; folio Aconiti, C. B. P. 317.

The thirty-ſecond of *Boerhaave's* is, the

Geranium; ſanguineum; maximo flore, *C. B. Pin.* 318. *Tourn. Inſt.* 267. *Boerh. Ind. A.* 264. *Geranium ſanguinarium*, Offic. Ger. 799. Emac. 945. *Geranium ſanguineum ſive Hæmatodes, craſſa radice*, J. B. 3. 478. *Geranium Hæmatodes*, Park. Parad. 229. Raii Hiſt. 2. 1061. Synop. 3. 360. BLOODY CRANE'S-BILL.

The Leaves of this Plant are ſtyptic, and taſte a little ſaltiſh; they give as deep a Tincture of red to the blue Paper, as Alum: Thus it is probable they are vulnerary no otherwiſe than by their aluminous Salt, which is united with a great deal of Sulphur and Earth: That does not hinder this Plant from having ſomething urinous in it; for, by the chymical Analyſis, is obtain'd from it, beſides ſeveral acid and oily Liquors, a little concreted volatile Salt.

The Roots and Leaves of this Species of Geranium are us'd in Ptiſans and Broths, which are vulnerary, and good to ſtop either external or internal Defluxions. *Martyn's Tournefort.*

It grows on Heaths, and among Buſhes, eſpecially in hilly Places, and flowers in *July*. It ſtops an Hæmorrhage in a ſurpriſing manner, in any Part of the Body, what Way ſoever almoſt it be us'd. *Dale.*

The thirty-ninth Species, in *Boerhaave*, of this Plant, is the Geranium; tuberoſum; majus. *C. B. P.* 318. *Boerh. Ind. A.* 265. *Tourn. Inſt.* 267. *Geranium tuberoſum.* Offic. Ger. 795. Emac. 940. Raii Hiſt. 2. 1060. J. B. 3. 474. *Geranium tuberoſum, vel bulboſum.* Park. Parad. 228. KNOTTED ROOTED CRANE'S-BILL.

It is cultivated in the Gardens of the Curious, and flowers in *June* and *July*. *Dioſcorides* tells us, that the Root, drank in Wine, diſcuſſes Inflammations of the Uterus. *Dale.*

The forty-firſt of *Boerhaave* is the Geranium; folio Malvæ rotundo; majus. *Boerh. Ind. A.* 265. *Geranium Columbinum, Pes Columbinus.* Offic. *Geranium Columbinum.* Ger. 793. Emac. 938. Raii Hiſt. 2. 1059. Synop. 3. 359. *Geranium Columbinum vulgare.* Park. Theat. 706. *Geranium folio Malvæ rotundo.* C. B. P. 318. Tourn. Inſt. 268. *Geranium folio rotundo, multum ſerrato, ſive Columbinum.* J. B. 3. 473. DOVE'S-FOOT.

The Root of this Species of Geranium is ſmall and rediſh, growing deep in the Earth, but not much branch'd. The Leaves generally lie ſpread on the Ground in a round Form, growing on long, rediſh, hairy Foot-ſtalks; they are ſmall and round, cut into about ſeven ſoft and hairy Segments. The Stalks are ſlender and jointed; hairy likewiſe, and beſet with ſmaller and more divided Leaves; they are about a Span high, having on them ſeveral ſmall, purple, five-leav'd Flowers, growing together, each of which is follow'd by a long Head, which reſembles the Head and Bill of a Crane, or Stork; when ripe, ſplitting into five Seeds. It grows every-where on Banks and Hedge-ſides, and flowers great Part of the Summer. The Leaves are us'd.

Dove's-foot is reckon'd among the Number of vulnerary Plants, being uſeful in inward Wounds, Bruiſes, and Hæmorrhages, and all Fluxes in general. It is mightily commended for the Cure of Ruptures in Children, given in Powder. It likewiſe helps the Stone, and provokes Urine. *Miller's Bot. Off.*

This Plant has an herby, ſaltiſh, glutinous, ſtyptic Taſte. It gives ſuch a red Colour to the blue Paper as the *Geranium ſanguineum; maximo flore*, or *Bloody Crane's-bill*, in all Appearance, by an aluminous Salt, which is diſſolv'd in a more glutinous Phlegm.

The Juice of this Species, boil'd with Sugar, is good for the Dyſentery; its Extract has the ſame Virtue; and its Leaves are us'd in Potions, Decoctions, Plaiſters, Oils, and Ointments for Wounds and Contuſions.

The fifty-eighth Species of this Plant, in *Boerhaave*, is the Geranium; Cicutæ folio; Moſchatum. *C. B. P.* 319. *Tourn. Inſt.* 268. *Boerh. Ind. A.* 266. *Geranium Moſchatum.* Offic. Ger. 796. Emac. 941. Park. Theat. 709. Raii Hiſt. 2. 1057. Synop. 358. *Geranium Moſchatum folio ad Myrrhidem accedente majus.* J. B. 3. 479. MUSKED CRANE'S-BILL. *Dale.*

This Species of Geranium has its Leaves ſpread on the Ground in a round Compaſs, like the preceding; but they are much longer and larger, being pinnated with long roundiſh Pinnæ deeply ſerrated about the Edges, and pretty hairy, having a ſweet Scent ſomewhat reſembling Muſk, whence it has its Name. The Stalks grow taller than the preceding, beſet with the like, but ſmaller Leaves. The Flowers are ſmall and purple, growing on longer Foot-ſtalks, many together, in a kind of Umbel; after which come beak'd Heads of Seed like the former, but much longer, parting aſunder at the End, into five Seeds, each curling itſelf in a ſpiral Manner. It is found wild in divers Places of *England*, and is alſo frequently planted in Gardens, flowering great Part of the Summer.

This is alſo accounted a vulnerary Plant, as well as the former; and is ſometimes, though not ſo often, us'd in Wound-drinks. *Miller's Bot. Off.*

The ſixtieth Species of Geranium, in *Boerhaave*, is the Geranium; Robertianum, *Ger.* 794. *Emac.* 939. *Raii Hiſt.* 2. 1058. *Synop.* 3. 358. *C. B. P.* 312. *Tourn. Inſt.* 268. *Boerh. Ind. A.* 366. *Geranium Robertianum, Gratia Dei*, Offic. *Geranium Robertianum vulgare*, Park. Theat. 710. *Geranium Robertianum murale*, J. B. 3. 480. HERB ROBERT.

This Species of Crane's-bill grows taller than either of the former, with ſeveral hairy rediſh Stalks, full of Joints, having at each two Leaves ſet oppoſite, which are much cut in and divided, reſembling Chervil-leaves, and are beſet with ſmall ſhort Hairs. The Flowers come forth at the Joints, two together upon one long Foot-ſtalk, which are larger than the Flower of either of the two former, conſiſting of five Leaves, and are ſucceeded by Heads, reſembling the Head and Beak of a Crane, as in the two preceding. The Root is of a rediſh-yellow Colour, ſlender, and creeping in the Earth. It grows in Hedges, and ſhady Banks, flowering in the Summer Months. The whole Plant has a ſtrong unſavoury Smell.

This is much of the Nature of Dove's-foot, being drying and binding, and uſeful in Wounds and Bruiſes, as well as in Fluxes; and is more particularly commended for the King's-evil, and all ſcrophulous Swellings; and has done great Service in nephritic Caſes. *Miller's Bot. Off.*

It is ſtyptic, ſaltiſh, and a little ſouriſh; and ſmells of Bitumen, and gives a pretty deep Tincture of red to the blue Paper. In all Appearance it contains a Salt reſembling Alum, mix'd with a little fetid Oil, and a very ſmall Quantity of Sal Ammoniac; for by the chymical Analyſis it yields a great deal of Acid, a little Salt, no volatile concrete Salt, but a little urinous Spirit. This Geranium is very aſtringent, and vulnerary. An Infuſion of its Leaves, in Wine, ſtops all Sorts of Hæmorrhages. *Martyn's Tournefort.*

It is of extraordinary Efficacy in cancerous Breaſts; and an old and ſkilful Surgeon aſſur'd me, that he never found more Succeſs, in theſe Caſes, from any Herb than from Geranium and Phellandrium. The Leaves, boil'd in Water, and made into a Cataplaſm, and ſome Vinegar added thereto, have an anodyne Virtue. *Boerhaave.*

GERARAT. A Name in *Avicenna* for ſome poiſonous Animalcula, ſuch as Scorpions, with gibbous Bodies, and ſharp Tails. *Caſtellus.*

GERARDI HERBA. See ANGELICA.

GERAS, γῆρας, in *Hippocrates*, means extreme Old-age, in which State Perſons are call'd by the *Greeks*, *Gerontes*, γέροντες, according to *Galen*, *Com. in Aph.* 31. *Lib.* 3. and by *Hippocrates*, *Presbytæ*, πρεσβύται, in the ſame Aphoriſm; γῆρας ἐκ νόσου, "Old-age from a Diſeaſe," is a ſort of Conſumption, or maraſmodic Fever. *Galen de Præſag. ex Pulſ.*

GERMEN. The ſame as BLASTEMA; which ſee.

GERMINATIO, Germination, Budding, in the Senſe of the Spagiriſts, is a kind of particular Tranſmutation of Metals, eſpecially Silver, when, by the Mediation of Aqua-fortis, Mercury, and a ſmall Quantity of Silver, ſet over a moderate Fire of Charcoal, you ſee an Appearance of Silver Ramifications, or Branches, germinating or ſprouting forth in the Glaſs. *Caſtellus.*

GEROCOMIA, γεροκομία, from γέρων, an aged Perſon, and κομέω, to be concern'd about, is that Part of Medicine which preſcribes a Regimen to Old-age. *Blancard.*

GEROCOMICE, γεροκομικὴ, is the ſame with GEROCOMIA.

GERONTOPOGON. A Name, in *Boerhaave*, for the *Tragopogon purpureo-cæruleum Porri folio, quod Artifi. vulgo.*

GERSA. Ceruſs. *Rulandus.*

GERULA, in *Paracelſus, de Puſtul. Gallic.* is a monſtrous Plant, or a Degeneration of a tranſplanted Parſnip. *Caſtellus.*

GERYON. A Name attributed to Mercury, or Quick-ſilver, by *Libavius*, *Ars Chym.*

GESNERA. An *American* Plant, ſo named by Father *Plumier*, in Honour of *Conrad Geſner*, a very learned Botaniſt, and Natural Hiſtorian.

It has an anomalous perſonated Flower, conſiſting of one Leaf, from whoſe Cup ariſes the Pointal, fix'd like a Nail in the hinder Part of the Flower, which afterwards becomes a membranaceous Fruit, divided into two Cells, which are fill'd with ſmall Seeds. *Miller* deſcribes three Species of this Plant.

GESOR. Galbanum. *Rulandus.*

GESTATIO, Geſtation, a Species of Gymnaſtics; for which ſee ÆORA. *Geſtatio* is alſo us'd to expreſs the Pregnancy of a Woman, or the Time ſhe carries a Child in her Womb, till the Birth. *Caſtellus.*

GESTICULATIO, Geſticulation, is a Species of Gymnaſtics, conſiſting in a ſpontaneous Agitation of the Parts, and throwing the Body into different Poſtures, much like Actors on the Stage. Geſticulation, ſays *Oribaſius*, is a middle kind of Exerciſe, between Dancing and Mock-fighting, but more like the latter, and is uſeful for the ſame Intentions [ſee UMBRATILIS PUGNA]; but it is more adapted to Children, Women, and aged Perſons, and thoſe of weak and thin Bodies. *Oribaſ. Med. Col. Lib.* 6. *Cap.* 30.

GEUM. See SAXIFRAGA.

GEUMA, γεῦμα, from γεύω, to taſte, in *Hippocrates*, ſignifies all kinds of Food.

GHAHALA. A Name for the *Colocaſia*; *quod Arum Zeylanicum*; *minus*; *Colocaſiæ foliis*; *pediculis punicantibus.*

GHAN-

GHANDIROBA, *vel* NHANDIROBA *Braſilienſibus*, Marcgr.

An hederaceous ſcandent Plant, growing in *Braſil*; it bears a Fruit of the Size of a large Apple, which contains, under ſeveral Shells and Membranes, an oily yellowiſh Kernel, of which the Inhabitants prepare an Oil, which is us'd in their Lamps, and burns very clear, and is very laſting. It cannot be eaten with Food, becauſe it is bitter, as is the whole Fruit. *Raii Hiſt. Plant.*

GHITTA *Jemou*. A Name for the GUTTA GAMBA. *Caſtellus.*

GIALAPPA, GIALAPIUM, JALAPPA. Names for the JALAPIUM; which ſee.

GIBAR. Metallic Medicines. *Rulandus. Johnſon.*

GIBBEROSITAS, GIBBOSITAS. The ſame as CYPHOSIS; which ſee.

GIBUM. Cheeſe. *Rulandus. Johnſon.*

GIFFÆ. Tumors behind the Ears. *Caſtellus.*

GIGARTON. The Stone, or Kernel, of a Grape. Grape-ſtones, *Ægineta* ſays, are drying and refrigerating. The Stones of Raiſins afford an acid Spirit, an empyreumatic Oil, and, as ſome pretend, a volatile Salt. *Caſtellus.*

GIGARUS. A Name for the *Dracontium*, in *Marcellus Empiricus*, *C.* 10.

GIGERIÆ. The Entrails, Viſcera, and Extremities of Poultry. *Heſychius.*

GILARUM. A Name for the *Serpyllum*, in *Marcellus Empiricus*, *C.* 11.

GILLA *Vitrioli*. See VITRIOLUM.

GINGIBER. The ſame as ZINZIBER, which ſee.

GINGIBRACHIUM, and GINGIPEDIUM. Names for the Scurvy, ſo call'd; becauſe the Gums, Arms, and Legs, are affected by this Diſtemper.

GINGIDIUM *alterum*. A Name for the *Viſnaga*.

Gingidium Dioſcoridis. A Name for the *Caucalis*; *arvenſis*; *echinata*; *magno flore*.

Gingidium folio Chærophylli. A Name for the *Daucus*; *maritimus*; *lucidus*.

Gingidium folio Fœniculi. A Name for the *Thapſia*; *Orientalis*; *Anethi folio*; *ſemine eleganter crenato*.

Gingidium primum. A Name for the *Tordylium*; *minus*; *limbo granulato*; *Syriacum*.

GINGIVÆ. The Gums. See DENS, EPULIS, and PERULIS.

When Infants, whoſe Teeth are juſt about to break out, are afflicted with intenſe Heat, Crying, and Watching, or with Convulſions and Epilepſies, we muſt forthwith examine, whether there is not, on the Gum, a Tumor, which indicates a riſing Tooth: If there ſhould, the means of Relief are, firſt, to be ſought from proper Remedies; and, if theſe ſhould prove ineffectual, manual Operation muſt be us'd; for a tranſverſe Inciſion is cautiouſly to be made, with a Knife, in the tumid Gum, as far as the riſing Tooth. By this means the violent Diſtention of the Gums being remov'd, the above-mention'd Symptoms, for the moſt part, immediately diſappear; eſpecially if the wounded Gum is diligently anointed with Syrup of Violets, or Honey of Roſes. *Sydenham*, a juſtly celebrated Practitioner, affirms, that difficult Dentition, which is always accompanied with Inflammation, cannot be more expeditiouſly cur'd than by Veneſection. *Veſalius*, in the eleventh Chapter of his firſt Book *de human. Corp. Fabric.* informs us, that in Adults, whoſe *Dentes Sapientiæ* generally appear after the twentieth Year of their Age, with intenſe Pain, this Pain may be ſucceſsfully remov'd by frequent Scarification of the tumid Gum, or by making an Inciſion into it. The Authority of *Veſalius*, in this Caſe, is ſo much the better, becauſe, when he was twenty-ſix Years of Age, he us'd this Method himſelf. And *Paré*, in the ſixty-ſeventh Chapter of his twenty-third Book, obſerves, that through a Neglect of theſe Precautions the Duke of *Nevers*'s Son died, when eight Months old. *Heiſt. Chirurg.*

GINGIPEDIUM. See GINGIBRACHIUM.

GINGLYMUS, γίγλυμος, ſignifies a Hinge; and hence, in Anatomy, a Species of Articulation reſembling a Hinge. See ARTICULATIO.

GINSZENG, & NINZIN, Offic. *Ninzin*, *Ginſen*, Mont. Exot. 7. *Ninzin ſeu Zingin & Ginſeng Radix genuina Indiæ Orientalis*, Pluk. Phytog. Tab. 101. Num. 7. *Ginſeng & Genſing quibuſdam*, Raii Hiſt. 2. p. 1338. *Radix Ninzin*, Piſ. Mant. Arom. 194. *Ginſeng vel Ninzen, Niſi, Rad. Chinenſis*, Cod. Med. 55. *Radix Ginſeng Chinenſibus, Niſi Japonenſibus*, Ogilb. Chin. 1. 212. *Radix Ginſeng*, Ejuſd. 2. 679. *Siſarum montanum Coræenſe, radice non tuberoſa*, Kemph. Amœn. Exot. 818. *Aureliana Canadenſis Iroquæis Garentogon, Sinenſibus Ginſeng*, R. P. Lafiteau.

Father *Jartoux*, a Jeſuit Miſſionary, in *China*, gives the following Deſcription of Gingſeng.

The Ginſeng has a white Root, ſomewhat knotty, about thrice the Thickneſs of the Stem, and which goes tapering to the End: At a few Inches from the Head, it frequently parts into two Branches, which gives it ſome Reſemblance of a Man, whoſe Thighs the Branches repreſent; and it is hence it takes the Denomination *Ginſeng*.

From the Root riſes a perfectly ſmooth, and tolerably round Stem; its Colour is a pretty deep Red, except towards the Foot, where, by the Neighbourhood of the Earth, it is turned ſomewhat whiter: At the Top of the Stem is a ſort of Joint, or Knot, formed by the ſhooting out of four Branches, which ſpread as from a Centre: The under Side of each Branch is green, mix'd with white; and the upper Part, much like the Stalk, of a deep Red: The two Colours gradually decreaſe, and at length unite on the Sides.

Each Branch has five Leaves, equally divided from each other, both with reſpect to themſelves, and to the Horizon; and with the Leaves make a circular Figure, nearly parallel to the Surface of the Ground.

The Fibres of the Leaves are very diſtinguiſhable, and on the upper Side are beſet with ſmall whitiſh Hairs: The Membrane, or Pellicle, between the Fibres, riſes a little in the Middle, above the Level of the Fibres.

The Colour of the Leaf is a dark Green, above; and a ſhineing, whitiſh Green, underneath; and all the Leaves are finely jagged, or indented.

On the Edges, from the Centre of the Branches, ariſes a ſecond Stalk, very ſtrait, ſmooth, and whitiſh, from Bottom to Top, bearing a Bunch of round Fruit, of a beautiful red Colour. This Bunch, in the Plant viewed by our Miſſionary, was compoſed of twenty-four Berries.

The red Skin, which covers the Berry, is very thin and ſmooth, and contains within it a white Pulp: As theſe Berries were double, (for they are ſometimes ſingle) each had two rough Stones, of the Size and Figure of our Lentils. The Pedicles, whereon the Berries were ſupported, all aroſe from the ſame Centre; and, ſpreading exactly like the Radii of a Sphere, made the Bunch of Berries of a circular Form. The Fruit is not good to eat, and the Stone includes a Kernel: It has alſo a ſmall Beard at the Top, diametrically oppoſite to the Pedicle.

The Plant dies away every Year, the Number of its Years may be known by the Number of Stalks it has ſhot forth, of which there always remain ſome Marks.

As to the Flower, *F. Jartoux* owns he had never ſeen it; and therefore could not deſcribe it: Some have aſſured him, that it is white, and very ſmall; others, that there is no Flower at all, and that nobody had ever ſeen it. He rather inclines to think it ſo ſmall as to have eſcaped Notice; and what confirms him in the Opinion, is, that thoſe who ſeek the Ginſeng, having nothing in View but its Root, overlook and deſpiſe the reſt as uſeleſs.

As they have ſowed the Seed in vain, without any Plant ever ariſing therefrom, it is probable that might give occaſion to the Fable, which is current among the *Tartars*: They ſay, that a Bird eats it, as ſoon as in the Earth; and, not being able to digeſt it, it putrefies in its Stomach, and afterwards ſprings up in the Place where it was caſt, by the Bird, with its Dung. The Miſſionary rather believes, that the Stone remains a long time in the Ground, before it takes Root; which appears the more probable, as there are ſome Roots no longer or bigger than one's little Finger, which yet have ſhot forth, at leaſt, ten Stalks.

The moſt eminent Phyſicians in *China* have wrote whole Volumes upon the Virtues and Qualities of this Plant; and make it an Ingredient in almoſt all Remedies, which they give to their chief Nobility; for it is of too high a Price for the common People. They affirm, that it is a ſovereign Remedy for all Weakneſſes, occaſion'd by exceſſive Fatigues, either of Mind or Body; that it diſſolves pituitous Humours; that it cures Weakneſs of the Lungs, and the Pleuriſy; that it ſtops Vomitings; that it ſtrengthens the Stomach, and helps the Appetite; that it diſperſes Fumes, or Vapours; that it fortifies the Breaſt, and is a Remedy for ſhort and weak Breathing; that it ſtrengthens the vital Spirits, and increaſes Lymph in the Blood; in ſhort, that it is good againſt Dizzineſs of the Head, and Dimneſs of Sight; and that it prolongs Life, in Old-age. Nobody can imagine, that the *Chineſe* and *Tartars* would ſet ſo high a Value upon this Root, if it did not conſtantly produce a good Effect. Thoſe who are in Health often make uſe of it, to render themſelves more vigorous and ſtrong; and I am perſuaded, that it would prove an excellent Medicine in the Hands of any *European*, who underſtands Pharmacy, if he had but a ſufficient Quantity of it, to make ſuch Trials as are neceſſary, to examine the Nature of it chymically, and to apply it in a proper Quantity, according to the Nature of the Diſeaſe, for which it may be beneficial.

It is certain, that it ſubtilizes, increaſes the Motion of, and warms the Blood; that it helps Digeſtion, and invigorates in a very ſenſible manner. After I had deſigned the Root, I obſerv'd the State of my Pulſe, and then took half of the Root, raw as it was, and unprepar'd: In an Hour after, I found my Pulſe much fuller and quicker; I had an Appetite, and found myſelf much more vigorous, and could bear Labour much better and eaſier than before: Four days after, finding myſelf ſo

fatigued and weary, that I could ſcarce ſit on Horſeback, a Mandarin, who was in Company with us, perceiving it, gave me one of theſe Roots: I took half of it immediately, and an Hour afterwards I was not the leaſt ſenſible of any Wearineſs. I have often made uſe of it ſince, and always with the ſame Succeſs. I have alſo obſerv'd, that the green Leaves, and eſpecially the fibrous Part of them, chew'd, would produce nearly the ſame Effect. The *Tartars* often bring us the Leaves of Ginſeng inſtead of Tea; and I always find myſelf ſo well afterwards, that I ſhall readily prefer them before the beſt Tea. Their Decoction is of a grateful Colour; and, when one has taken it twice or thrice, its Taſte and Smell become very pleaſant.

As for the Root of this Plant, it is neceſſary to boil it a little more than Tea, to allow time for extracting its Virtue; as is practiſed by the *Chineſe*, when they give it to ſick Perſons, on which occaſion they ſeldom uſe more than the fifth Part of an Ounce of the dry'd Root. But, as for thoſe who are in Health, and take it only for Prevention, or ſome ſlight Indiſpoſition, I would adviſe them not to make leſs than ten Doſes of an Ounce, and not to take of it every Day. It is prepar'd in this manner: The Root is to be cut into thin Slices, and put into an earthen Pot, well glaz'd, and fill'd with about a quarter of a Pint of Water, *Paris* Meaſure: The Pot muſt be well cover'd, and ſet to boil over a gentle Fire; and, when the Water is conſum'd to the Quantity of a Cup-full, a little Sugar is to be mix'd with it, and it is to be drank immediately. After this, as much more Water is to be put into the Pot, upon the Remainder, and to be boil'd as before, to extract all the Juice, and what remains of the ſpirituous Part of the Root. Theſe two Doſes are to be taken, one in the Morning, and the other at Night.

As to the Places where this Root grows, it is between the thirty-ninth and forty-ſeventh Degree of Northern Latitude, and between the tenth and twentieth Degree of Eaſtern Longitude, reckoning from the Meridian of *Peking*. There is there a long Tract of Mountains, which the thick Foreſts, that cover and encompaſs them, render almoſt unpaſſable. It is upon the Declivities of theſe Mountains, and in theſe thick Foreſts, upon the Banks of Torrents, or about the Roots of Trees, and amidſt a thouſand other different Sorts of Plants, that the *Ginſeng* is to be found. It is not to be met with in Plains, Valleys, Marſhes, the Bottoms of Rivulets, or in Places too much expos'd and open. If the Foreſt takes Fire, and be conſum'd, this Plant does not appear till two or three Years after. It, alſo, lies hid from the Sun, as much as poſſible; which ſhews that Heat is an Enemy to it: All which makes me believe, that, if it is to be found in any other Country in the World, it may be particularly in *Canada*, where the Foreſts and Mountains, according to the Relation of thoſe that have lived there, very much reſemble theſe here.

Father *Laſitau*, a Miſſionary Jeſuit, and a Lover of Botany, was moved at the Reading of a Letter, wrote by Father *Jartoux*, from *China*, concerning the *Ginſeng*, to ſearch for that Plant in the Foreſts of *Canada*; and, after much Pains, believ'd he had found it, becauſe it was exactly like what Father *Jartoux* had deſcrib'd. The *Iroqueſe*, in that Country, who are very curious in Plants without being Botaniſts, and know very well how to uſe them without regular Preſcriptions, call this Plant *Garent-oguan*, which nearly ſignifies, *Two things ſeparated like two Thighs*.

The Academy being appriſed of this Diſcovery of Father *Laſitau*, ſome Botaniſts ſtill wanted clearer Information, to ſatisfy themſelves, that this Plant of *Canada*, was the ſame as what grew in *Tartary*; and they even doubted, whether that of Father *Jartoux* was the true *Ginſeng*, becauſe *M. Kæmpfer*, in a Book printed 1712, had given a Cut of the *Ginſeng*, very different from that of Father *Jartoux*. Father *Laſitau* happening to return to *Paris*, publiſh'd a ſmall Treatiſe on the Subject, which was diſtributed to the Academy, and ſeems entirely to diſſipate all Doubts. It contains a Deſcription of the *Ginſeng* of *Canada*, or the *Garent-oguen*, more circumſtantial than that of Father *Jartoux*. Its Virtues, as far as they could be try'd by Father *Jartoux*, for the preſent, are the ſame as M. *Bourdelin*, and common Opinion, aſcribe to the *Ginſeng*. M. *Vaillant* has reduc'd that Plant under a new Genus, which he calls *Araliaſtrum*. Before it was known to be the *Ginſeng*, or any thing heard of its Virtues, M. *Sarraſin*, a Phyſician, and very good Botaniſt, at his firſt Arrival in *Canada*, had obſerv'd this, among other Plants, peculiar to that Country, and gave it the Name of *Aralia humilis Fructu majore*. The *Engliſh* alſo obſerv'd it in their Colony of *Maryland*, and it is from their Accounts, that M. *Ray*, in his *General Hiſtory of Plants*, has given it us under the Name of *Plantula Marilandica Foliis in ſummo Cauliculo ternis, quorum unumquodque bifariam dividitur, circa Margines ſerratis*, "The *Maryland* "Plant, with three quinquefid ſerrated Leaves, at the Top of "the Stalk." A Deſcription which, however ſhort, is ſufficient to make us know it.

We are here then, you ſee, enrich'd with the Diſcovery of a very valuable Plant, for which, as well as for that of the *Quinquina*, we are oblig'd to the Miſſionary Fathers, the Jeſuits. The Misfortune is, that this Plant, though growing in the Foreſts of *Canada*, where you need only take the Pains to gather it, will, in all Probability, be always ſcarce and dear. It has a perennial Root, and an annual Stalk; the Root produces, yearly, but a ſingle Stalk, which periſhes every Year; and by certain Nodes, form'd every Year in the Root, every one of which is the Mark of a Stalk, which has proceeded from it, Father *Laſitau* judges, that the Plant, or, more properly, its Root, may live a hundred Years. The Plant grows only in Foreſts, and not ſuch neither as are over-run with Briars, or Copſes, but only in the Shade of tall Trees; ſo that when theſe Places are clear'd, it appears no more there; and, in ſhort, it ſows itſelf with Difficulty; for, in the moſt advantageous Situations, we diſcover no more than ſeven or eight Stalks, one after another. M. *de Juſſieu* ſow'd ſome freſh and likely Seeds, which he had receiv'd from Father *Laſitau*, in the Royal Garden, but they did not ſucceed.

We have, however, ſome Reaſon to comfort ourſelves for the Scarceneſs of the *Ginſeng*, if, as M. *Reneaume* aſſures us, the *Hepatica nobilis Tragi*, a common Plant in Medicine, but leſs eſteem'd than it deſerves, be endu'd with its principal Virtues. *Hiſtoire de l'Acad. Royale*, 1718.

Whatever Virtues the *Ginſeng* may poſſeſs, when recent, I am afraid it loſes ſo much before it comes to us, that we cannot be proper Judges of its Efficacy. It is certain, that it is ſoon eaten by Worms, and becomes carious; an Inſtance of which I have ſeen, in a large Parcel, that was purchas'd by one concern'd in Medicine: When he perceiv'd the Worm began to ſeize it, he prudently made a Tincture of all he had left; and he aſſures me, from his own Experience, that he has great Reaſon to believe, that the Virtues attributed to the *Ginſeng*, by the *Chineſe* and *Tartars*, are not without Foundation.

GISCARA. A Name for the *Palma, Coccifera, minor Braſilienſis.*

GIR. Quick-lime. *Rulandus.*

GIRGIES. White Stones, found in Rivers. *Rulandus.*

GIRMER. Tartar. *Rulandus.*

GISISIM. Gum. *Rulandus.*

GIT, or GITH. A Name for the *Nigella*; *Flore minore, candido.* Fennel-flower. See NIGELLA.

GITHAGO. A Name for the *Lychnis*; *Segetum*; *major.*

GIUHNAXOCHITL. A Name for the *Tagetes*; *maximus*; *rectus*; *flore maximo, multiplicato.*

GLABELLA. The *Latin* Name for the Space between the Eye-brows, ſo called from its Smoothneſs, as being void of Hair. The *Greek* Term for it, in *Ruffus Epheſius*, is μεσόφρυον, or *Meſophryon.*

GLACIES MARIÆ. The ſame as the SPECULARIS LAPIS; which ſee.

GLADIOLUS.

The Characters are;

The Root is carious, tuberous, and double, one Part reſting on another; the Leaves are like thoſe of the Iris. The Calyx conſiſts of two vaginal or ſheath-like Leaves ſupporting the Ovary, and the Tube of the Flower ſeated thereon. The Flower is monopetalous, and, like a Lily, Funnel-ſhap'd below, but expanded above, and divided into ſix large Segments, of which the three uppermoſt are larger, wider, and more erect; the three lowermoſt longer, narrower, and in a manner pendulous, ſo as to make the Flower appear almoſt bilabiated. The Flower is ſeated on the Apex of the Ovary, and is furniſh'd with three Stamina, which ariſe from the Inſide of its Tube. The Ovary becomes an oblong, tricapſular Fruit, which is full of roundiſh Seeds, involv'd in a Calyptra, or Cover; and has a Tube, which ariſes from the Centre of its Apex; and is furniſh'd with three hollow *Cymbi*, or little Cups, for its Apiculæ. *Boerhaave, Index alter, Part 2. p.* 126.

Boerhaave mentions ſix Species of this Plant; which are,

1. Gladiolus; utrimque floridus, *C. B. P.* 41.

2. Gladiolus; carnei coloris, *Swert.* 42.

3. Gladiolus; maximus, Indicus, *C. B. P.* 41.

4. Gladiolus; floribus uno verſu diſpoſitis; major, floris colore purpureo-rubente, *C. B. P.* 41. *Tourn. Inſt.* 365. *Boerh. Ind. A.* 2. 127. *Gladiolus*, Offic. *Gladiolus Narbonenſis*, Park. Parad. 189. *Gladiolus Italicus*, Ger. 95. Emac. 104. *Gladiolus ſive Xiphion*, J. B. 2. 701. Raii Hiſt. 2. 1168. *Victorialis rotunda*, Offic. CORN-FLAG.

It is cultivated in our Gardens, and flowers in *June*. The Root, which is the Part in Uſe, is of a drawing, diſcuſſing, and drying Quality; it is commended as an Alexipharmac, and againſt the Peſtilence; and is accounted, by the Ignorant and ſuperſtitious Vulgar, a Charm againſt Witchcraft, and a Spell to render the Body invulnerable. *Dale.*

5. Gladiolus; Africanus; folio gramineo; floribus carneis maculam rhomboïdeam purpuream inſcriptis, uno verſu poſitis.

6. Gladiolus; utrinque floridus, floribus albis. H. R. Monſp.

Gladiolus luteus. See ACORUS ADULTERINUS.

GLADIUS. The Sword-fiſh. *Pliny.*

GLAMA, GLAME, γλάμα, γλάμη. The Sordes of the Eye in a Lippitude; γλαμυροὶ ὀφθαλμοὶ, in *Hippocrates, Lib. 2. de Morb. Mul.* are ſordid and humid Eyes. *Caſtellus.*

GLANDES TERRÆ. See LATHYRUS; arvenſis; repens; tuberoſus.

GLANDIUM. The ſame as THYMUS; which ſee. *Caſtellus.*

GLANDOSUM *Corpus.* So *Veſalius* calls the PROSTATÆ.

GLANDULA. A Gland. See CONGLOBATA, and CONGLOMERATA.

The Antients thought, that the Glands were Ciſterns, which contained certain Liquors, by which the Blood being fermented, throws off the Humours we find in the excretory Ducts. But as theſe Ferments muſt mix with the Blood, ſo they muſt be exhauſted and carry'd of by the Blood into the Veins. And becauſe all the Liquors in the Body are ſeparated from the Blood, there muſt, therefore, be another Ferment to ſeparate more: But this ſecond Ferment is liable to the ſame Fate as the firſt; and, therefore, there muſt be an infinite Series of Ferments in the Body, which is abſurd. If it ſhould be ſaid, that the Ferments are not carry'd off with the Blood, they muſt be ſtopt by the Structure of the Glands: But then we have a Secretion without a Ferment; which is the Opinion of moſt of the Moderns: Some of which think, that the Glands are Tubes, whoſe Orifices, differing in Figure, admit only Bodies of ſimilar Figures to paſs through them. But this Opinion is demonſtrably falſe; for, beſide that Liquors are ſuſceptible of all Figures, and that Bodies of any Figure, and a leſſer Diameter than that of the Gland, will paſs through; and that even a Body of a ſimilar Figure, and equal Diameter with that of the Orifice of the Gland, may be preſented innumerable ways, and not be able to paſs through, whilſt there is only one way it can paſs; I ſay, beſides all theſe, it is eaſy to demonſtrate, that all the Veſſels in the Body are either conical or cylindrical, and conſequently there is no Difference in the Figure of their Orifices: For the Preſſure of a Fluid being always perpendicular upon the Sides of the Veſſel that contains it, and equal at equal Heights of the Fluid, if the Sides are ſoft and yielding, they muſt be equally diſtended; that is to ſay, a Section perpendicular to the Axis of the Veſſel muſt be a Circle, and, conſequently, the Veſſel be either cylindrical, or conical. This is agreeable to the Obſervations and Speculations of the niceſt Anatomiſts, who tell us, that a Gland is nothing but a Convolution of ſmall Arteries, whoſe laſt Branches are cylindrical, or, which is the ſame thing, part of an infinitely long Cone. A Gland, therefore, being nothing elſe but a Branch of an Artery, whoſe fartheſt Extremity becomes the excretory Duct of the Gland, let us conſider how ſuch a Structure can ſeparate from the Blood only ſome Parts of it, and how different Glands may ſeparate different Parts of the Blood. Firſt, then, if ſuch a Fluid is to be drawn off, as conſiſts of the ſmalleſt Particles of the Blood, let that Orifice of the Gland, which is inſerted into the Artery, of which it is a Branch, be ſo ſmall as to admit only the ſmalleſt Particles of the Blood; then theſe, and theſe only, will enter this Gland; and the Fluid which paſſes out at the other Extremity of the Tube, or the excretory Duct, muſt be ſuch as is required. If the Particles of the Blood, which are of the next Size or Magnitude, are required to be ſeparated, let the Orifice of the Gland be ſo big as to receive theſe ſecond Particles, but ſmall enough to exclude all bigger Particles, then theſe ſecond Particles, together with the firſt, or ſmalleſt, will enter the Gland; but becauſe the Liquor to be ſecerned is to conſiſt only of the ſecond Sort of Particles, that is, the ſecond Sort of Particles only are to flow out at the Extremity of the Tube, which is the excretory Duct, therefore we are to ſuppoſe, that this Gland (which is only a Branch of the Artery, and differs in nothing from a common Artery, but in the Narrowneſs of its Chanel) has Branches which are big enough to receive the ſmalleſt Particles only, and carry them off into the Veins: So that, as both Sorts of Particles move together along the Gland, the ſmalleſt Particles will paſs off through its Branches, and a Fluid, conſiſting principally of the ſecond Sort of Particles, will arrive at the excretory Duct. Thus the Number of Branches may be ſo great as to draw off moſt of the ſmalleſt Particles, before the ſecond Sort of Particles arrive at the excretory Duct; ſo the Liquor to be ſecerned may conſiſt of both theſe Sorts of Particles, mixt together, in any Proportion, according to the Number of Branches. If a Fluid, conſiſting of a third Sort of Particles, larger than either of the former, is to be ſecerned, the Orifice of the Gland muſt be juſt big enough to admit of ſuch Particles, and none bigger; and the Branches of the Gland muſt be ſmall enough to exclude the biggeſt Particles, and big enough to receive the leſſer; and, according as the Number of Branches is either greater or ſmaller, the Fluid, which runs out at the excretory Duct, will conſiſt either of the largeſt Particles, or of all together mixt in any Proportion. Thus we ſee, how a Liquor, thicker than the Blood, may be ſtrained off from the Blood, if the Orifice of the Gland be ſo big as to admit Particles of all Sizes, and the Branches ſo numerous as to draw off the thinner Part, before the thicker arrives at the excretory Duct.

After this manner, the ſeveral Humours of the Body may be ſeparated by the Glands from the Blood, which muſt either be compoſed of ſo many Humours as are ſeparated from it, or elſe it muſt contain a few Principles, which, mixt all together, form the Blood, and, which variouſly combined, form the different Humours which are drained from it, as a few Rays of Light of different Refrangibilities, mixt all together, produce a white Colour; but, variouſly combined, exhibit all imaginable Variety of Colours.

It is not at all probable, that the Blood, in which we diſcern but two diſtinct Parts, ſhould be compoſed of near thirty ſimple Humours; for ſo many do the Glands ſecern from it. Nor is it agreeable to that Simplicity which Nature conſtantly affects in all her Operations. The Principles of all natural Bodies are ſaid, by Philoſophers, not to exceed the Number Five; and how prodigious is the Variety that reſults from their different Mixtures, and Modifications! If we ſuppoſe, alſo, but five Principles, or different Particles, in the Blood, their Combinations alone, without different Modifications and Proportions, will yield near as many different Humours as are ſeparated by the Blood. Nor is this purely a Suppoſition, but it is matter of Fact, that Urine, Sweat, Tears, Spittle, and Milk, are compound Liquors, and that in each of them there are Parts common to all of them. And if the Compoſition of ſome of the other Humours of the Body is not ſo apparent, it does no more follow from thence, that they are not compounded, than it does, that the Blood is not, becauſe we do not perceive in it the ſeveral Humours, which by the Glands are ſeparated from it. Being, therefore, the ſeveral Humours are formed by the various Combinations of a few Particles which compoſe the Blood, and that each Humour is ſecern'd by Glands, plac'd in ſome one Part of the Body, as the Gall, which is ſeparated no-where but in the Liver, and the Urine in the Kidneys, the Particles of the Blood muſt fall into ſuch Combinations as are fit to form Gall at the Liver, Urine at the Kidneys, and ſo of the others; otherwiſe the Glands could never ſeparate from the Blood ſuch Humours. And being all the Humours are compos'd of a few different Particles, the greater will be the Number of Particles combined to form Bile; and the greater Quantities of Bile will be ſecerned, the fewer there are of all other Combinations at the Liver. Such Combinations, therefore, as are fit to form the Humours proper to paſs thro' the Glands, where theſe Combinations are form'd, being there only requiſite, will be there moſt numerous; and all others, being leſs requiſite, or uſeleſs, will be there leſs numerous: And, therefore, where-ever the Particles of the Blood are moſt diſſolved, there will be plac'd ſuch Glands as ſeparate Humours which conſiſt of the moſt ſimple Combinations, or of Particles which the moſt eaſily combine; and, at the greateſt Diſtance from theſe, will be ſituated the Glands which ſecern Humours conſiſting of the moſt compound Combinations, or of Particles which do the moſt ſlowly unite; and between theſe will be all other Glands, nearer to either Extreme, as they ſeparate Humours more or leſs combined, or compounded of Particles, which more quickly, or ſlowly, combine together. By the Thinneſs of the Liquor in the Pericardium, and of the Urine which paſſes thro' the Kidneys, the Particles of the Blood ſeem to be moſt diſſolved at and about the Heart. Here we not only find the Effects of this Diſſolution in the Secretions, but likewiſe the Cauſe of it, the Force of the Air in Reſpiration breaking the Globules of the Blood, which Force is demonſtrable to exceed the Preſſure of an hundred Pounds Weight, upon the Surface of the Lungs. Nor is it evident only from the Cauſe and Effects, that the Blood is here moſt diſſolved, but alſo from the Methods which Nature takes to prevent the Effects of this Diſſolution, in ſome particular Places, at a little Diſtance from the Heart: For the Bile and Seed being thick Humours, compos'd of Particles which combine but ſlowly together, and it being requiſite, that they ſhould be ſecern'd where the Liver and Teſticles are plac'd, Nature has made uſe of particular Contrivances, to give the Particles, which were to form theſe Humours, more time to combine, than they could have had otherwiſe, being ſo near to the Heart. For the Formation of Bile, ſhe has contriv'd the Vena Portæ, and the Spleen: Through the firſt, the Blood moves near two hundred times ſlower, and through the laſt altogether as much, than otherwiſe it had done. And, that the Particles which form the Seed, might have time to combine, the Orifices of the ſpermatic Arteries are contracted; and they likewiſe ariſe from the *Aorta Deſcendens*, a little below the Emulgents, at a great Diſtance from the Teſticles, contrary to the common Courſe of Nature; by which means the Blood is 150 times longer in going to the Teſticles, than otherwiſe it had been. At the greateſt Diſtances from the Heart, the viſcous Liquor of the Joints is ſecerned; and ſome Liquors, whoſe Parts require no Combination, as the Lympha, may be ſecerned any-where. All theſe different Combinations, which form ſo many diſtinct Fluids,

Fluids, arise from an attractive Power in the Parts of Matter; which, tho' it be equally diffus'd thro' the whole Mass, yet, according to the different Densities of Particles, and the Figure of their Parts, some Sorts of Particles will be soon united, whilst others require a longer time to be join'd together; some Particles will cohere more firmly than others, and Particles of one kind will have a greater Tendency to unite with those of another Sort, in a certain Portion of their Surface, than in any other. This attractive Force is different from that by which Sir *Isaac Newton* explains the Motions of the heavenly Bodies; for the Force of Attraction, by which the Planets observe their Motions, decreases only in a reciprocal duplicate Proportion of their Distances; whereas this other seems to decrease in a reciprocal Triplicate, or in a greater Portion of the Distances of the Parts of Matter from each other. *Keill's Anatomy.*

In giving an Account of the Nature, Properties, and various Uses of the Glands, we shall take notice of the useful Discoveries of *Sylvius*, *Steno*, *Wharton*, *De Graaf*, *Malpighi*, *Bellini*, *Borelli*, *Peyer*, *Ruysch*, and *Nuck*, who have been both diligent and accurate in their Researches with respect to the Glands.

Glands, then, are either simple or compound; the latter consist of the former, and are both contain'd in one common Membrane. Those of the simple kind convey their proper Humour thro' their own lymphatic Ducts either to the Chyle, or to the venous Blood; or else they discharge their Contents, either on the external Parts of the Skin, or the Surfaces of the loose Membranes, which are every-where found in the Body: But the compound Glands, by means of a proper Canal, discharge their Humours form'd in every Part, into a larger Canal, and at last, by means of this common Emissary, into the large Cavities, especially those of the Mouth and Intestines, or quite out of the Body, for particular Purposes. The simple Glands are also call'd conglobate, and the compound conglomerate Glands.

The simple Glands are form'd of a certain exterior and slender Membrane, together with a subjacent one, to which the other closely adheres: The former, compos'd of circular and elastic Fibres, every-where comprehends, braces up, compresses and expresses the contained Liquor, and consists principally of a Contexture of the small Vessels, which enter it, and are sent out from it. The latter, which is thicker and more dense, consists of Fibres running almost in all Directions, and of an intricate and perplex'd Contexture of the small Vessels: It is subservient almost to the same Purposes with the former. These Membranes receive the Arteries, support their Ramifications in a due and unalterable Order, and accurately convey and distribute these Ramifications to every the most minute Part of the Gland; so that an Injection of Wax or Quick-silver, by increasing the Bulk of the small Arteries, and compressing the other Vessels, would almost make us think, that the whole Fabric of the Gland was arterial. These Membranes have, also, Veins dispos'd in the same Direction with the smaller Arteries, and more and larger Nerves than any Part of the Body of an equal Bulk; and these Nerves are also so distributed thro' the small Body of the Gland, that they seem almost to make up the Whole of it. These Membranes, of which the Glands consist, have also lymphatic Vessels, which arrive at, and are sent out from them.

Their Arteries are conical, inflected, ramous, elastic, and gyrated Canals, whose Extremities are cylindrical, and no longer ramous, but chang'd into Veins: But, before these small Arteries are thus chang'd, they communicate with each other by an infinite Number of Anastomoses, and various Positions at an infinite Number of different Angles; so that their Extremities vary very greatly in different Glands.

The arterial Blood, therefore, convey'd to the Glands, is mov'd very briskly; for there is a great Resistance, a Compression, a mutual Pressure of the Parts upon each other, an oblique Pressure, a continual Permutation of Contacts; everywhere a multifarious Application to all the most minute Points of the Canals, a various Rotation at every Moment, and an opposite Pressure, in every Particle, a Distribution of the Humours into the Ramifications, and a Return thereof to the Ramifications, an Attenuation, an Attrition, a Preservation of Fluidity, Solidity, Secretion, and a due Mixture.

In the mean time the Ramifications arising from the Trunk of the Artery are generally narrower than the Trunk at that particular Part whence they arise: This happens even in the most minute Ramifications, so that the ultimate Ramifications are smaller than the smallest Part of the common Trunk. The ultimate Trunks transmit the red and thickest Part of the Blood, and convey it to the Beginnings of the small Veins. The smaller Ramifications receive finer, more fluid, and pellucid Parts, smaller than the Diameters of their respective Cavities, press'd thro' them by an oblique, opposite, and strong Force.

But this subtile Fluid, destitute of the thicker Parts, is no longer Blood, but some other Liquor of various Kinds, such as Sweat, perspirable Matter, or that discharg'd by the cutaneous Pores, Tears, pinguious Wax, the Wax of the Ears, Mucus, Saliva, Spit, Mucilage, Lymph, Serum, Bile, Seed, Oil, Milk, and Fat. Hence, the ultimate Ramifications, losing their former Name of Artery, are denominated from the Nature of the Fluid they contain; and, as they often assume all the Properties of an Artery, they will also have their smaller Ramifications and Veins. Hence there are both Arteries and Veins destin'd for the Serum, the Lymph, the aqueous Parts, and the Spirits, as well as for the Blood. Nor is it known where this Progression terminates; but by this means we come to know the Origin, the Progress, the End, and the Office, of the lymphatic Vessels. See ERROR LOCI.

The Ramifications, however, of any such Artery, when no longer ramous, but direct, and collected in the finest Membrane of the most minute glandular Follicle, opening the Mouths of their Extremities, discharge their contain'd Fluids into a common Cavity, form'd by that fine Membrane, where being collected, it in some measure remains, and is the glandular Lymph there prepar'd and accumulated.

'Tis probable that the Nerves of the Glands, by a similar Apparatus, discharge their Spirits into this common Cavity, where they are mixt with the Lymph, and furnish it with the Qualities it naturally ought to have.

In the mean time the lymphatic Arteries often convey the Lymph receiv'd into their small Veins furnish'd with Valves, by us call'd vascular Lymph, to these Glands; and by a different Apparatus convey it into the same Follicle, where 'tis mix'd with the glandular Lymph and Spirits, in order to supply a most subtile Part, in the room of that which is lost.

Then this compound Humour is by the contractile Force of the fibrous Membrane, the Motion of the Artery, and the Pressure of the Muscles, carried thro' the egredient lymphatic Veins into other Glands, where 'tis again to undergo the same Action, and thence into the Receptacle of the Chyle, the thoracic Duct, or the Blood-vessels: And such seem to be conglobate Glands in all the Parts of the Body.

But in other Glands the Case is quite different; since this Follicle immediately expels thro' its proper Emissary the Liquor it receives, into some common Cavity: Thus the secreted Mucus is deposited, collected, and chang'd in the frontal Sinuses, the Sinuses of the superior Jaw, the *Cellulæ* of the *Os Sphenoides* under the *Sella Turcica*, the Excavations of the spongious Bones of the Nostrils, the Cavities of the Nostrils, and the *Lacunæ* of the Tonsils. Of this Kind seem to be the mucilaginous Glands of the Mouth, of the back Part of the Tongue, of the exterior and interior Part of the Epiglottis, of the internal Part of the Nostrils, of the *Meatus auditorius*, of the *Larynx*, of the *Aspera Arteria*, of the *Bronchia*, of the *Oesophagus*, of the Stomach, and of the Intestines, which Species of Glands may be call'd simple excretory Glands.

Again, other Glands, with a similar Apparatus, discharge their prepar'd Liquors thro' proper Emissaries, arising from the common Cavity, without the Skin, as the Glands in the external auditory Passage, in the *Pinnæ Nasi*, in the exterior Part of the Nose, in the Beginning of the internal Part of the Nostrils, in the Face, in the Neck, in the *Axillæ*, in the *Scapulæ*, in the *Areolæ* of the Nipples and Navel, in the Hips, in the Areola of the *Anus*, in the *Perinæum*, in the *Pubes*, in the *Mons Veneris* in both Sexes, in the *Scrotum*, in the Integuments of the Penis, in the Lips of the Female Pudenda, and in the Knees. The Glands of this kind are now call'd sebaceous Glands.

Hence the Distance of an Artery from the Heart, its Situation with respect to the Heart, and the Trunk whence it arises, its various Complication, the different Velocity of the Blood moving thro' it, the Proportion of each Ramification to its common Trunk, the different external and internal expressing Force, the Continuance of the Fluid in the common Cavity, its Distribution thence into Places which again change the Humours by their Structure; and the Exhalation or Separation of the most liquid Part of the secreted Fluids, are all Circumstances which concur to make various Liquors secreted from the same Blood in various Parts, and, when secreted, surprisingly chang'd.

In the Structure of the human Body, as discover'd by the Evidence of Sense, these Causes are found to be various in various Parts of the Body, or they are capable of being deduced from this Structure of the Body, with the greatest Evidence, by means of infallible mechanical Laws, and by a Knowledge of the Nature of the Humours, which may be easily and speedily acquir'd. The innumerable Species, therefore, of Secretions and secreted Fluids may be hence understood.

Hence 'tis by no means necessary to suppose, that, in order to glandular Secretion, Pores of a determin'd, various, and immutable Size are absolutely requisite; especially since 'tis repugnant to the Laws of Nature, that there should be such, or that they could act in such a manner, though they really existed.

Much leſs is it conſiſtent with the Principles of Phyſic, to account for glandular Secretion by any Ferments, whether they are ſuppos'd thick or fluid, or whether we conceive them to act by Fermentation, Precipitation, Coagulation, Solution, Change, or Aſſimilation; for to theſe neither Cauſe, Origin, Matter, Place, Admixture, Efficacy, Proportion, Duration, Effect, or Termination, can be aſſign'd.

But of theſe ſimple Glands already deſcrib'd, or of others highly ſimilar to them, united by common Veſſels, and wrapt up in a common Membrane, are form'd the compound or conglomerate Glands. Theſe are generally furniſh'd with a common Emiſſary, which receives the Humours from all the Emiſſaries of the other Parts, collects them, and diſcharges them again into ſome other larger Cavity. Of this Kind are, the Glands of the Eye, the Parotids, the Pancreas, and ſome others.

This common Cavity or Receptacle, ending in an Emiſſary frequently, is either firſt chang'd, as it were, into an arterial inflected Veſſel, which induces ſome Change in the Humours they convey, and by an Apparatus like an Artery diſcharges them into an open and patent Receptacle; as in the Teſtes, the *Ductus Highmorianus*, the *Epididymis*, the *Vas Deferens*, and the *Veſiculæ Seminales*; or, ſecondly, it is immediately convey'd into a common Emunctory.

Hence 'tis certain, that, by means of the Glands, there are ſeparated from the arterial Blood Water, Lymph, a fine Serum, and alſo the Salts, Spirits, and highly ſubtile Parts of the Oils, mix'd with theſe; that all theſe, either becoming ſtagnant, are collected, chang'd, and accumulated in certain Places; or forc'd through the ſmall Veſſels into the moſt minute Parts of the Body, for the Purpoſes of Motion and Nutrition, and thence return to the Heart by their proper Veins, or are exhal'd; and that the Part of the Blood, after this, remaining in the Arteries, enters the Veins, which become gradually wider, is mix'd with ſimilar Blood, diluted with Lymph, and returns to the Heart.

For this Reaſon the arterial Blood is, about the Heart, highly diluted, but gradually becomes thicker, and is thickeſt of all, moſt viſcid, and eaſily concreted, in the End of the Artery, that is, the Beginning of the Vein; for which Reaſon it requires a Veſſel incapable of Obſtruction, and an Admixture of ſome diluting Liquor, that is, of Lymph, which has aſſum'd its due Quality by having perform'd its ſeveral Offices, and is returning to the Heart. It, alſo, requires an Admixture of Spirits. But theſe Circumſtances muſt happen to it, before it can be again convey'd into the pulmonary Arteries; otherwiſe the Blood would only be fit for performing one Courſe of Circulation.

Hence we know the particular Parts, the Diſorders of which moſt eminently endanger Health, and the Continuation of Life. Hence, alſo, we know, how much the large Veſſels, the thick Humours, the ſmall Veſſels, and the ſubtile Humours, contribute to the Strength, Stability, and Flexibility of the Body. Hence, farther, we underſtand, why the Veins becoming gradually larger, lax, fit for the Concourſe and Dilution of the Humours, ſhould perform their reſpective Offices, before a freſh Return of the Blood to the Heart can be produced.

But ſome Glands ſeem to be of another Structure; ſince, in them, the Artery, conveying the Humours, diſcharges the thicker Blood into its correſponding Vein, by means of Anaſtomoſes running between the Artery and the Vein; but, after this, the Artery going on ſingle, and being contorted, diſcharges from its Extremity, into the common Receptacle, its proper Liquor, prepar'd in it, but different from the Blood, tho' ſecreted from it. *Boerhaave's Inſtit.*

GLANDULOSOCARNEUS, glanduloſo-carneous, an Epithet, given by M. *Ruyſch*, to ſome Excreſcences, which he obſerv'd in the Bladder. *Caſtellus.*

GLANDULOSUM *Corpus*. The *Proſtatæ*, ſo called.

GLANIS. The Name of a Fiſh, which lives both in freſh and ſalt Waters. It is ſuppos'd to be like the *Silurus*, or Shore-fiſh. *Caſtellus.*

GLANS, βάλανος. See BALANOS. *Glans unguentaria.* See BALANUS MYREPSICA.

Glans is alſo taken for ſtrumous or ſcrophulous Tumors. *Caſtellus. Glandes Quercinæ.* See QUERCUS.

Glans is, in Anatomy, the Nut of the *Penis*. See GENERATIO.

Glans, alſo, ſignifies a Suppoſitory, or Peſſary.

GLASSA. A ſort of dry Verniſh. *Rulandus. Johnſon.*

GLASTAVIDA *Cretenſium*. A Species of BLATTARIA; which ſee.

GLASTEA *Bilis*. A ſort of Bile, the ſame as the ἰσχάδωδες, which ſee under BILIS.

GLASTUM. A Name for the *Iſatis*; *ſativa*; *ſive latifolia.*

GLAUCEDO. The ſame as GLAUCOMA. See CATARACTA.

GLAUCIUM.

The Characters are;

The End of the Pedicle is expanded into an orbicular Placentula, terminated by a hollow ſpherical Subſtance, to which it grows. The Calyx conſiſts of two Leaves, and is caducous: The Flower is tetrapetalous; expanding in form of a Roſe, or Poppy; and furniſh'd with very numerous Stamina, which, for the moſt part, fall off, after the Opening of the Flower. The Ovary ariſes from the Bottom of the Placentula, with a hairy bifid Apex; and ripens into a long, ſmooth, bivalve Pod, the Valves adhering to the intermediate Partition; in ſuch a manner as to leave the whole Capacity unicapſular, and full of roundiſh Seeds.

Boerhaave mentions four Species of this Plant; which are,

1. Glaucium; flore luteo. *Tourn. Inſt.* 254. *Boerh. Ind. A.* 305. *Papaver Corniculatum.* Offic. *Papaver corniculatum luteum.* J. B. 3. 398. Park. Theat. 261. Raii Hiſt. 1. 857. Synop. 3. 309. *Papaver corniculatum luteum, κεράτιτης Dioſcoridi, & Theophraſti, ſylveſtre, Ceratitis, Plinio.* C. B. P. 171. YELLOW-HORNED POPPY.

Dioſcorides ſays, this Plant is diuretic; and *Galen* looks upon it to be vulnerary and deterſive; but he conſiders not, that it muſt be uſed only to eat away the proud Fleſh of Ulcers. Nevertheleſs, in *Portugal*, they give the Infuſion of half a Handful of it, in White-wine, to thoſe who are ſubject to the Stone. In *Provence* they uſe the ſame Leaves, bruiſed, for Ulcers, and, above all, for the Wounds of Horſes. *Martyn's Tournefort.*

2. Glaucium; hirſutum; flore phœniceo. *T.* 254.

3. Glaucium; glabrum; flore phœniceo. *T.* 254.

4. Glaucium; flore violaceo. *T.* 254. *Boerh. Ind. alt. Plant. vol.* 1. *p.* 305.

The *Argemone Mexicana*; of *Boerhaave*, is the *Glaucium.* Offic. *Papaver Spinoſum.* C. B. P. 171. J. B. 3. 397. Ger. Emac. 401. Raii Hiſt. 1. 856. *Papaver ſpinoſum Americanum.* Park. Theat. 366. PURGING THISTLE.

It is cultivated in the Gardens of the Botaniſts, and flowers in *July* and *Auguſt*. The Juice, which bears the Name of *Glaucium*, is the Part uſed; and, being, as *Dioſcorides* ſays, of a refrigerating Quality, is effectual in recent ophthalmic Diſorders.

From what Plant this Juice, or *Glaucium*, of *Dioſcorides*, is expreſs'd, remains a Controverſy among Botaniſts. I, ſays *Dale*, with *C. Bauhine*, have ſuppos'd it to be produc'd from the Plant before-mention'd, being induced thereto by the Deſcription; which Deſcription he gives of it as follows: "*Glaucium* is the Juice of an Herb, which grows near *Hierapolis*, "a City of *Syria*; its Leaves nearly reſemble thoſe of the "horned Poppy, only fatter, and ſpreading upon the Ground, "of a ſtrong Smell, and a bitter Taſte; the whole Plant is "full of a Saffron-colour'd Juice. The Natives of the Country "put the Leaves into an earthen Pot, which they place in their "Ovens, when half cold, and keep it there till the Leaves "become flaccid; then take it out, and, bruiſing the Leaves, "expreſs the Juice."

GLAUCOMA, or GLAUCOSIS. A Diſorder of the Eye. See CATARACTA.

GLAUCOS, γλαυκός. A Colour compos'd of a White and Green. Sky-colour'd.

GLAURA, in *Paracelſus*, is immature Amber, call'd alſo, *Nympha.*

GLAUX. Offic. *Glaux Dioſcoridis.* Ger. 1061. Emac. 1242. *Glaux Hiſpanica.* J. B. 2. 341. *Glaux Hiſpanica Cluſii.* Park. Theat. 1095. Raii Hiſt. 1. 940. *Ciceri ſylveſtri minori affinis, ſi non idem.* C. B. P. 347. THE MILKWORT OF DIOSCORIDES.

It grows in hilly and chalky Fields, and the Herb is in Uſe, which, boil'd in Barley-water, is effectual, as *Dioſcorides* ſays, for renewing Milk in Womens Breaſts, where it is loſt.

There is a Diſpute, among the Botaniſts, about the *Glaux* of *Dioſcorides*. *Anguillarus*, *Parkinſon*, and *Alpinus*, will have it to be the *Lotus*; *Geſner*, the *Onobrychis*; *Turner*, the *Glaux vulgaris* (Liquorice-vetch); *Dodonæus*, *Cordus*, and *C. Bauhine*, a Species of a certain ſmall marine Plant; *Lobel*, *Gerard*, and *Cluſius*, the Plant here exhibited, and deſcrib'd by *Dioſcorides*, as follows: "The *Glaux* has Leaves like thoſe of the "*Cytiſus*, or Lentil, green on the upper Side, and whitiſh "underneath. The Root ſends forth five or ſix ſlender Stalks, "a Span high; the Flowers are of a purple Colour, and reſemble thoſe of the *Leucoium*, (Stock-gilliflower) only "ſmaller." *Dale.*

The *Aſtragalus* γλυκύφυλλος of *Boerhaave* is the *Glaux vulgaris.* Offic. *Glaux vulgaris leguminoſa ſeu Glycyrrhiza ſylveſtris.* Park. Theat. 1098. Raii Hiſt. 1. 935. *Glycyrrhiza ſylveſtris floribus luteo-palleſcentibus.* C. B. P. 352. *Aſtragalus luteus perennis procumbens vulgaris ſeu ſylveſtris.* Raii Synop. 3. 326. Tourn. Inſt. 416. *Fœnum Græcum ſylveſtre, ſeu Glycyrrhiza ſylveſtris quibuſdam.* J. B. 2. 330. *Hedyſarum Glycyrrhizatum.* Ger. 1056. *Quoad deſcript.* Emac. 1233. LIQUORICE-VETCH.

It grows in Buſhes and Thickets, and on the Borders of Fields, and flowers in *July*: The Herb and Seed are in Uſe, which

which agree in Virtues with the Milkwort of *Dioſcorides*. The Herb, as *Buxbaumus* writes, is deceitfully ſold, in the Shops, for *Galega*. *Dale*.

Under the Article ASTRAGALUS I have, by Miſtake, applyʼd the Account which *Tournefort* gives of this Plant to the *Aſtragalus*, Offic. Which is, that the Root is ſweetiſh, aſtringent, and gives a deep Tincture of Red to the blue Paper; the Leaves give it hardly any; they are bitter, and ſmell like Elder; which ſhews, that the fetid Oil is found in greater Quantity in the Leaves, and that it involves the acrid Salt and Earth: This Plant is not in Uſe; nevertheleſs, a Night's Infuſion of it, in Wine, is given, with Succeſs, for the Retention of Urine, and for the Gravel, by ſome Herbariſts, at *Paris*. *Martyn's Tournefort*.

GLAUX. The Owl. See NOCTUA.

GLECHON. γλήχων, or γλῆχος. Peny-royal. See PULEGIUM. HIPPOCRATES.

GLECHONITES, γληχωνίτης. An Epithet for Wine, impregnated with Peny-royal. *Dioſcorides*, *L.* 6. *C.* 5. *C.* 67.

GLENE. Γλήνη. This properly ſignifies the Cavity of the Eye, and the Pupil: But it is uſed to expreſs any ſlight Depreſſure, or Cavity of a Bone, which receives another Bone, in Articulation. *Cotyle* is, alſo, ſuch a Cavity, or Depreſſure, but much more deep.

GLENOIDES. An Epithet for two Cavities, or ſmall Depreſſures, in the inferior Part of the firſt Vertebra of the Neck.

GLEUCINUM (*Oleum*), γλεύκινον (ἔλαιον), or Gleucine-oil. Simple Gleucinum is prepar'd of Oleum Omphacinum, Juncus, Calamus, *Celtic* Nard, Spatha, Aſpalathus, Melilot, Coſtus, and Muſt, put together into a Veſſel, which is to be ſurrounded with the Huſks of Grapes, after preſſing out the Wine. This Mixture is to be ſtir'd twice a Day, for thirty Days; then the Oil is to be preſs'd out, and reſerv'd for Uſe.

It is warming, emollient, and relaxing; and, therefore, good in Rigidities, and Diſorders of the nervous Parts, and Affections of the Uterus. *Dioſcorides* prefers this before all ſorts of Acopa, *Lib.* 1. *Cap.* 67.

Aetius, *Tetrab.* 3. *Serm.* 4. *Cap.* 44. gives the Deſcription of a much more compounded Gleucinum.

GLEUCOS, γλεῦκος, Muſt. The unfermented Juice of the Grape. *Vander Linden* ſays, it ſometimes imports ſweet, generous, and ſtrong Wine.

GLEUXIS, γλεῦξις. Wine which has a large Quantity of Sapa, or Defrutum, mix'd with it.

GLIS. Offic. Geſn. de Quad. Digit. 550. Aldrov. de Quad. Digit. 409. *Glis Geſneri & aliorum*. Raii Synop. A. 229. THE REL, or RELL-MOUSE.

The Fleſh, if eaten, is ſaid to cure the Bulimia; if the Soles of the Feet are anointed with the Fat, it is ſaid to procure Sleep; the Excrements, drank in any convenient Vehicle, have the Reputation of diſſolving the Stone; and, mix'd with Vinegar and May-dew, to cure an *Alopecia*, the Part affected being anointed therewith; the Aſhes clear the Sight. *Dale*.

GLISCHROCHOLOS, γλισχρόχολος. An Epithet for Excrements which are viſcid, and, at the ſame time, bilious.

GLISCHROS, γλισχρός. Viſcid, or glutinous; in *Latin lentus*. In the ſeventh Book of *Hippocrates*'s *Epidemics*, πυρετοὶ γλίσχροι, are ſlow Fevers, the ſame as *lentæ Febres*.

GLISOMARGO. White Chalk. *Rulandus*.

GLOBULARIA.

The Characters are;

The Floſcules are unilabiated, multifid, connected each to its proper Calyculus, and collected very many together into one globous flowery Head, ſurrounded with one common Calyx. The Calyculus, or little Flower-cup, of the Floſcule becomes a Capſule, which contains the Seed, and is affix'd to the common Placenta.

Boerhaave mentions but one Species of this Plant; which is,

Globularia; vulgaris. *Tourn. Inſt.* 467. *Boerh. Ind. A.* 131. *Globularia*. Offic. *Globularia Monſpelienſium Bellis cærulea*. Park. Theat. 529. *Bellis cærulea Monſpeliaca*. Ger. 512. Emac. 637. Raii Hiſt. 1. 381. *Bellis cærulea caule folioſo*. C. B. P. 262. *Aphyllanthes Anguillara, ſive Globularia Bellidi ſimilis*. J. B. 3. 13. FRENCH DAISY.

It is to be found in the Gardens of the Curious, and flowers in Summer. The Plant is a Vulnerary. *Dale*.

GLOEOS, γλοιός. The ſtrigmentitious Serges ſcrap'd from the Skin, after Exerciſe, or in the Baths. See STRIGMENTA. Hence γλοιώδης, ſtrigmentitious.

GLOSSA, or GLOTTA, γλῶσσα, or γλῶττα. The Tongue. See LINGUA.

GLOSSOCATOCOS, γλωσσοκάτοκος. A chirurgical Inſtrument, for depreſſing the Tongue. *Paulus Ægineta*, *L.* 6. *Cap.* 30.

GLOSSOCOMON, γλωσσόκομον, or GLOSSOCOMION, γλωσσοκόμιον, in Surgery, is the Name of an Inſtrument, or Sort of Caſe, contriv'd for containing a fractur'd Leg, or Femur. It is not at preſent in Uſe. *Gorræus* gives a Figure of it, from *Oribaſius*, *de Machinamentis*, *Cap.* 7.

GLOSTOPETRÆ. The petrified Teeth of the Serpent, or of the Canis Carcharias, white Shark. See CANIS CARCHARIAS.

GLOTTA. See GLOSSA.

GLOTTIS, γλωττίς. The Chink in the Larynx, through which the Air paſſes into the Aſpera Arteria.

GLUMA. The Huſk or Chaff of Corn.

GLUTÆUS. The Name of three Muſcles, which form the Buttocks, call'd *Glutæus maximus*, *Glutæus medius*, and *Glutæus minimus*.

GLUTÆUS MAXIMUS,

So call'd from its being the largeſt Muſcle of thoſe which compoſe the Buttocks. It has a large ſemicircular Beginning; forwards, merely tendinous, from near two thirds of the external Part of the Spine of the Os Ilium; backwards its Origination is thick and fleſhy, from the poſterior Part of its Spine, and hindermoſt Part of the Os Sacrum, laterally, and whole Os Coccygis, as alſo from a broad Ligament that is extended between the two laſt-nam'd Bones, and Tubercle of the Os Iſchium; its fleſhy Fibres deſcending diſgregately, in an almoſt ſemicircular manner, become tendinous as they approach the great Trochanter, where it is united with its firſt deſcrib'd tendinous Beginning, deſcending over the external Part of the great Trochanter, after being join'd with the Tendon of the Membranoſus, proceeds to cover and ſtrictly embrace all the external Muſcles of the Tibia, like the external Tendon of the Biceps thoſe of the Cubit. But the other Part of it, proceeding from the fleſhy Body of this Muſcle, is largely inſerted into the Linea Aſpera, on the back Part of the Os Femoris, near four Fingers-breadth below the great Trochanter.

The firſt-deſcrib'd tendinous Beginning of this Muſcle doth not only ſerve to ſupport its fleſhy Body, but its Fibres, interſecting thoſe of the Membranoſus, as they cover all the Muſcles of the Tibia, do more adequately include them, whereby they are corroborated in their Action. When this Muſcle acts, it pulls the Thigh directly upwards.

GLUTÆUS MEDIUS.

This lies principally under the tendinous Beginning of the former Muſcle; and, ariſing fleſhy from almoſt the whole external Part of the Spine of the Os Ilium, in its Deſcent becomes thicker and fleſhy, and is inſerted, by a ſhort ſtrong Tendon, to the ſuperior and external Part of the great Trochanter, in a ſemicircular manner.

If the differing Series of Fibres in this Muſcle are rightly conſider'd, their Poſition will manifeſt they are not ſo uſeful in extending the Thigh, as Authors would perſuade us, but rather employ'd in turning it inwards. This will plainly appear, if, in the time of Diſſection, you give the Thigh that Motion; you then may obſerve the fore Part of this Muſcle notably relax'd. And in living Perſons, when the Thigh is turn'd inwards, you may ſee it tumefied; or if, in performing that Action with your own Thigh, you lay your Thumb on this Muſcle, you may feel it contract or move under the Skin. Beſides its being partly uſeful in extending the Thigh, with the former Muſcle, it is alſo employ'd in divaricating the Legs, it co-operating with the Muſculus Membranoſus in that Action.

GLUTÆUS MINIMUS

Lies totally under the former Muſcle, it being ſo much leſs than the former, as the former is the precedent; it ariſeth ſemicircular, broad, and fleſhy, from the Dorſum Ilii; from hence its fleſhy Fibres deſcend to their partly tendinous and partly fleſhy Inſertion, like the former, at the ſuperior Part of the Root of the great Trochanter.

The Fibres of this, running parallel with thoſe of the former, aſſiſt it in all its Actions. They alſo aſſiſt in rendering the Articulation of the Thigh-bone, with the Coxa, more ſtable in ſtanding erect. *Cooper's Myotomia Reformata*.

GLUTEN. Glue. *Dioſcorides*, *Lib.* 3. *Cap.* 101. gives the following Account of Glue, and its Virtues.

Glue, which ſome call *Xylocolla*, or *Taurocolla*, is beſt made at *Rhodes*, of Bulls Hides, and is white and pellucid; the black Sort is not ſo good.

Diſſolv'd in Vinegar, it cleanſes the Skin from the Lichen and Lepra; infus'd in warm Water, and the Parts anointed therewith, it prevents Ambuſtions from riſing into Veſicles; and, diluted with Honey and Vinegar, it proves a good Vulnerary.

GLUTIA. The Nates; two ſmall Protuberances of the Brain. See CAPUT.

GLUTINATIO. The ſame as AGGLUTINATIO.

GLUTOS, γλουτός. A Buttock.

GLUTTUPATENS. An Epithet for the Stomach, in *Q. Serenus Samonicus.*

GLYCYRRHIZA.

The Characters are;

The Pod is ſhort, unicapſular, and full of kidney-ſhap'd Seeds; the Leaves grow by Pairs to a Rib, which ends in an odd Leaf.

Boerhaave mentions three Species of this Plant; which are,

1. Glycyrrhiza; filiquoſa; vel Germanica. *C. B. P.* 352. *Tourn. Inſt.* 389. *Boerh. Ind. A.* 2. 47. *Glycyrrhiza, Liquiritia.* Offic. *Glycyrrhiza vulgaris.* Ger. Emac. 1302. Raii Hiſt. 1. 910. Synop. 3. 324. *Glycyrrhiza radice repente, vulgaris Germanica.* J. B. 2. 328. *Glycyrrhiza ſiliquoſa vulgaris.* Park. Theat. 1098. LIQUORICE.

Liquorice has very long Roots, of a brown Colour without, and of a greeniſh-yellow within, tough and pliable, and with few Knots or Joints. They are full of a very ſweet Juice. In the Spring it ſends forth long ſtriated Stalks, three or four Foot high, beſet alternately with pretty large wing'd Leaves, made of eight or ten double Pinnæ, with an odd one at the End; they are of an oval Form, and feel clammy to the Touch. From the Boſom of the Leaves, towards the Tops of the Branches, after the Root has been ſome time in the Ground, ſpring long ſlender Spikes of ſmall, blue, papilionaceous Flowers, and after them ſmall erect Pods, holding the Seed. It is frequently planted in Gardens and Fields, and flowers in *Auguſt.*

The Roots of Liquorice, which are the only Part us'd, are a good Pectoral, and of great Uſe in Diſtempers of the Lungs, as Coughs, Shortneſs of Breathing, mitigating the acrimonious Particles which cauſe Soreneſs of the Aſpera Arteria, and Hoarſeneſs, as well as the Heart-burn. They are likewiſe good in nephritic Affections, as Stone, Gravel, Stoppage and Heat of Urine, and Ulcers in the Kidneys.

There are two kinds of the inſpiſſated Juice ſold in Shops; one made in *England*, and prepar'd of the Decoction of the Roots mix'd with the Pulp of Prunes, and made up into Balls; the other is imported from *Spain*, being made near *Tortoſa* in *Catalonia*, and brought to us in beautiful ſhining brittle Lumps, wrapt in Bay-leaves. The Way of preparing it is as follows:

The Liquorice is firſt dry'd, and cut in ſmall Pieces, then boil'd in Water. This Decoction, being firſt filtred, is evaporated to the Conſiſtence of an Extract, which is what we call an inſpiſſated Juice.

It is a good Emollient and Healer, proper for Coughs, and for promoting Expectoration, becauſe the viſcid Parts, which it contains, ſheath and blunt the acrid Salts. It ought to be given in ſmall Quantities, and often repeated, being otherwiſe diſagreeable to the Taſte. *Dale. Geoffroy.*

Liquorice, with us, is principally cultivated at *Pomfret*, in *Yorkſhire*; and *Worksop*, in *Nottinghamſhire*: The *Engliſh* Liquorice is prefer'd to what is imported. The Leaves and Stalk periſh every Winter, and are renew'd in the Spring. *Tragus* prefers the Root, and its Juice, before Sugar itſelf: Every one, ſays he, knows, that bitter Things and Sugar excite Thirſt, which this ſweet Root and its Juice extinguiſh. The Bark, ſays *Dodonæus*, has ſomething of Bitterneſs, and is of an hotter Quality than the other Parts, and, therefore, ought to be ſcrap'd off. But *C. Hoffman* ſays, we are not to regard this; for the Bitterneſs is ſomething more internal, being increas'd by long Boiling, as it is in other ſweet things, and gives it an abſterſive Quality. Liquorice, boil'd in Water with a little Cinnamon, ſerves ſome for their ordinary Drink; and, after Fermentation, inebriates no leſs than Beer. *Raii Hiſt. Plant.*

2. Glycyrrhiza; capite echinato. *C. B. P.* 352. *Tourn. Inſt.* 389. *Boerh. Ind. A.* 2. 47. *Radix dulcis.* Offic. *Glycyrrhiza echinata.* Park. Theat. 1099. Raii Hiſt. 1. 914. *Glycyrrhiza echinata Dioſcoridis.* Ger. 1119. Emac. 1302. *Glycyrrhiza echinata Dioſcoridis non repens.* J. B. 3. 327. ROUGH-HEADED LIQUORICE.

It is planted in Gardens; the Root is us'd, and agrees in Virtue with the common Liquorice. The Powder of the Root, as we are told by *Dioſcorides*, is very proper to be ſprinkled on a Pterygium. *Dale.*

3. Glycyrrhiza; Orientalis; filiquis hirſutiſſimis. *T. C.* 26. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 47.

GLYCYS, γλυκύς. When us'd relative to Taſtes, it ſignifies *ſweet*; when apply'd to the Humours, it imports *mild.*

GLYCYSIDE, γλυκυσίδη. Peony. A Plant much recommended by *Hippocrates* and *Dioſcorides*, in the Diſorders peculiar to Women. See PÆONIA.

GLYXIS. See GLEUXIS.

GNAPHALIUM.

The Characters are;

It has downy Leaves, and the Appearance of the Filago; the Calyx is hemiſpherical and ſquamous; the Floſcules are tubulous, quinquefid, and interſpers'd with ſmall Leaves; the Seeds are ſecur'd within a ſolid Calyptra, or Covering.

Boerhaave mentions but one Species of this Plant; which is the

Gnaphalium; maritimum. *C. B. P.* 263. *Raii Hiſt.* 1. 294. *Synop.* 3. 18. *Tourn. Inſt.* 461. *Boerh. Ind. A.* 119. *Gnaphalium maritimum multis.* J. B. 3. 157. *Gnaphalium marinum.* Ger. 516. Emac. 640. *Gnaphalium marinum, ſeu Cotonaria.* Park. Theat. 687. *Polium Gnaphalodes.* Alp. Exot. 146. Tourn. Voy. 1. 21. SEA CUDWEED, or COTTON-WEED.

Lemery ſays, that this Plant is deterſive, deſiccative, and very reſtringent.

GNAPHALIUM is alſo a Name for the FILAGO; which ſee. As alſo for ſeveral Species of *Helichryſum.* And a Name alſo for the GNAPHALODES; which ſee.

GNAPHALODES.

The Flowers conſiſt of Florets; in ſome Plants they are apetalous, Male, and repreſenting a Diſcus. The Ovary is conſtituted of Embryos growing in a Circle, ſupported by the Florets, and ripening into a creſted Fruit, full of oblong Seed.

Boerhaave mentions but one Species of this Plant, which is the

Gnaphaloides; Luſitanica. *T.* 439.

There are no medicinal Virtues attributed to this Plant, that I know of.

GNATHOS, γνάθος. Sometimes it ſignifies the entire Cheek; ſometimes only the lower Part, betwixt the Angles of the Mouth and Ear, which the *Latins* call *Bucca*; but it is alſo us'd to expreſs the Jaws, or Jaw-bones.

GNESIUS, γνήσιος. Legitimate, or genuine. It is frequently an Epithet, in *Hippocrates*, for Diſtempers; and is alſo applied to Sweats.

GNIDIA GRANA. See CNIDIA.

GOACONEZ. The Name of a very large Tree in *America*, which affords a ſort of Balſam. It is call'd *Balſamum purius*, Monard. *Balſamum album*, Park. *Americanum*, C. B. *Raii Hiſt. Plant.*

GOAN. The Name of a Tree which grows in *Perſia*, near *Ormuz*, of the Aſhes whereof they make a ſort of Tutty, or rather Antiſpodon. See ANTISPODA.

GOBIUS. The Gudgeon.

There are two ſorts of Gudgeons, as the Sea and Freſh-water Gudgeon. The firſt is ſubdivided into two other, of which the one is white, and the other black; they have both of them a good Taſte, though the white has the Preference. Both the Sea and River-gudgeon ought to be well fed; and thoſe that have been bred in clear and running Water are the beſt.

The Gudgeon yields pretty good Nouriſhment, produces good Juice, is eaſy of Digeſtion, and provokes Urine. Several Authors affirm, that People recovering from Sickneſs may eat it.

It produces no ill Effects, unleſs us'd immoderately.

It contains much Oil, and volatile Salt.

It agrees, at all times, with any Age and Conſtitution.

A Gudgeon is ſoft, and not compact in its Parts, and hath but few viſcous and groſs Humours; and, therefore, is eaſily digeſted, and of a pleaſant Taſte. *Lemery on Foods.*

The Sea-gudgeon is thus diſtinguiſh'd;

Gobius niger. Offic. Rondel. de Piſc. 1. 200. Jonſ. de Piſc. 35. Geſn. de Aquat. 395. Aldrov. de Piſc. 97. *Gobius niger Rondeletii.* Raii Ichth. 106. Ejuſd. Synop. Piſc. 76. *Gobius marinus.* Charlt. de Piſc. 15. *Gobius marinus niger.* Bellon. de Aquat. 233. *Gobius, vel Gobius niger.* Sconef. Ichth. THE SEA-GUDGEON, or ROCK-FISH.

It is taken among the Rocks by the Sea-ſhore. Broil'd, and eaten without Salt, it cures the Dyſentery, Lientery, and Teneſmus. *Sim. Sethi.*

A freſh Gudgeon, put into an Hog's Ventricle, or Maw, and the Aperture ſew'd up; if the ſame be afterwards boil'd, in twelve Pints of Water, till they are reduced to two, and the Liquor ſtrain'd off, and ſuffer'd to cool in the open Air, when drank, it purges by Stool, without Perturbation. The Fiſh, applied in a Cataplaſm, is good againſt the Bites of Dogs and Serpents. *Dioſcorides, Lib.* 2. *Cap.* 32.

GOMPHIASIS, γομφίασις. A Word us'd by *Dioſcorides*, *Lib.* 2. *Cap.* 63. which his Interpreters explain, Pains of the interior Teeth. *Caſtellus* thinks it means, Vacillation of the Teeth.

GOMPHIOI, γόμφιοι. The Dentes Molares.

GOMPHOSIS, γόμφωσις, or Gomphoma, from γόμφος, a Nail. A Species of Articulation peculiar to the Teeth. See ARTICULATIO.

GONAGRA, from γόνυ, the Knee, and ἄγρα, a Prey. The Gout in the Knee.

GONANDINA *Braſilienſibus*, Marcgr. The Name of a tall Tree, which grows in *Braſil. Raii Hiſt. Plant.*

GONE, γονή. The Seed; but it alſo ſignifies, in *Hippocrates*, the genital Organs, particularly of Women; or the Uterus.

GONGRONA, γογγρώνη, from γόγγρος, a round Tubercle in the Trunk of a Tree. Any round and hard Tumor of the nervous Parts; but, particularly, a BRONCHOCELE; which ſee.

GONGYLIS. The Root of a Turnep.

GONGYLION. A Pill.

GONIMOS, γόνιμος. An Epithet for Days, frequently us'd by *Hippocrates*, importing their being odd, or uneven, and critical. It alſo imports prolific, vital, and genuine.

GONIOSIS, γωνίωσις, from γωνία, an Angle, is a Species of Pulſe, not improperly, as *Galen* ſays, ſo called by *Archigenes*, which ſtrikes not with the whole Circle of the Artery, but only with an Angle of it, or when the elevated Artery is not felt like the curve Line of a Circle, but like the Vertex of a Triangle. The Cauſe hereof is to be aſcribed to the Imbecillity of the Faculty, which renders it incapable of duly elevating the Artery.

GONOIDES, γονοειδὴς, from γονὴ, Seed, and εἶδος, Form; reſembling Seed. *Hippocrates*, in many Places, uſes this as an Epithet for the Excrements of the Belly, and for the Contents of the Urine, when there is ſomething in them which reſembles the ſeminal Matter.

GONORRHŒA, from γόνος, Seed, and ῥέω, to flow; an involuntary Efflux of the ſeminal Juice. Authors take notice of three Species of Gonorrhœas. The firſt is a ſimple Gonorrhœa, or perpetual Efflux of the ſeminal Juices, without any Virulence. The ſecond is a virulent, or Venereal Gonorrhœa, ſo call'd, tho' improperly, from its Similitude to the preceding. The third is an involuntary Efflux of a viſcid, white, or whitiſh Fluid, from the Urethra, in conſequence of a Venereal Gonorrhœa ill cur'd, or too frequently repeated.

The firſt Species, or a ſimple Gonorrhœa, is thus deſcrib'd by *Aretæus*:

The Gonorrhœa is not a deadly Diſtemper, but noiſome, and even indecent to be mention'd; for if the Diſtemperature and Relaxation affect the Humours, and the Parts of Generation, there is a perpetual Efflux of the ſeminal Juice through the refrigerated Places, which is not to be reſtrained even in Sleep; but, whether the Patient be ſleeping or waking, the Flux is continual, and at the ſame time inſenſible. Women, alſo, labour under the ſame Diſorder, but with ſome Senſe of Pleaſure, whereas Men have none at all. The Matter of the Flux is an humid, thin, cold, colourleſs Subſtance, which is void of Fecundity; for how is it poſſible, that Nature thus refrigerated ſhould emit a prolific Juice? Young Men affected with this Diſorder muſt of neceſſity become old in Habit of Body, ſlow, languid, ſpiritleſs, dull, ſilent, feeble, wrinkled, unactive, pale, white, effeminate, of a weak Appetite, cold, with a Heavineſs of the Limbs, and a Numbneſs of the Legs, weak, lazy, and indiſpos'd for all manner of Action. In many Subjects this Diſorder is the Forerunner of the Palſy; for how is it poſſible for the Nerves not to ſuffer under a Decay of their Forces, when Nature, as the generating Principle of Life, is infrigidated? ſince it is the vital Seed which makes us Men, hot, robuſt, hairy, of a ſtrong and deep Voice, bold, and courageous, and fit to contrive or execute any Enterprize. Men are a Proof of this; whereas they who are deſtitute of vital Seed are wrinkled, weak, of a ſhrill Voice, without Hairs, beardleſs, and effeminate; ſuch are Eunuchs. But the Man who is retentive of the ſeminal Juices becomes bold, hardy, and ſtrong, like the Beaſts of the Foreſt; witneſs the *Athletæ*, who lead a chaſte Life. And they who by Nature were ſtronger than others, have, by Intemperance render'd themſelves much weaker than thoſe who were naturally weak; and thoſe who were much weaker by Nature, have by their Temperance become ſuperior in Strength to thoſe who were ſtronger; for nothing renders an Animal robuſt, but the ſeminal Juice, which is therefore of great Efficacy and Importance towards Health, Strength, and Magnanimity, as well as Procreation. A *Satyriaſis* uſually degenerates into a *Gonorrhœa*. *Aretæus de Cauſ. & Sign. Chron. Morb. Lib. 2. Cap. 5.*

A Gonorrhœa would furniſh Materials for an entire Volume; but, that I may be as ſhort, and, at the ſame time, as inſtructive as poſſible, I ſhall give the Sentiments of ſome of the moſt celebrated Authors among the Moderns upon this Subject.

Among the Diſorders ariſing from a Want of a due Tone in the ſolid Parts, we may juſtly reckon a Gonorrhœa, which is an involuntary Diſcharge of the Seed, and of a Matter reſembling it, from the Genitals, produc'd by a preternatural Relaxation of the Veſſels containing the Seed, and of the Parts adjacent to them.

A Gonorrhœa is different from a Venereal Pollution, in which latter, ſometimes at ſhorter, and ſometimes at longer Intervals, a conſiderable Quantity, one or two Drams for Inſtance, either of pure ſeminal Juice, or of this together with a chylous Serum, are diſcharg'd in the Night-time, in conſequence of Venereal Dreams, with a Senſation of Enjoyment. In the Day-time the ſame Accident happens upon viewing beautiful Women, or after Riding, in conſequence of a Relaxation; and at the ſame time a gentle Irritation of the *Veſiculæ Seminales*, or *Proſtatæ*.

A Gonorrhœa is either of a mild and benign, or of a malignant kind. The latter conſiſts in a Diſcharge of Matter of various Colours, accompanied with Heat and Exulceration; and, in ſcorbutic or cacochymic Patients, as alſo thoſe afflicted with the Stone, this Diſorder is generally attended with a Pain in diſcharging the Urine, which in ſuch Patients is of an acrimonious Quality. But, in a Gonorrhœa of a mild or benign kind, a whitiſh Liquor, all of one Colour, is diſcharg'd without Pain, Heat, or Exulceration; and this Species bears a near Reſemblance to the *Fluor albus* in Women, which is a Diſcharge of a chylous Matter, ſeparated by means of the glandular Subſtance of the Uterus. *Maſſarias*, in his fourth Book, beautifully delivers his Sentiments on this Subject in the following Words: "Thoſe Phyſicians, in my Opinion, err "egregiouſly, who think that their Patients labour under an "Effuſion of Seed, ſince they are rather afflicted with an "Evacuation of ſome other recrementitious Matter; for we "obſerve, that this Diſcharge has with ſome Patients laſted for "ſeveral Years, ſo that if the Matter evacuated was Seed, "theſe Patients muſt neceſſarily be extenuated, and thrown "into a Conſumption, like thoſe who uſe immoderate Ve-"nery; which, in the mean time, we find does not happen."

This Species of Gonorrhœa mention'd by *Maſſarias* is not only protracted for a long time, but there are alſo ſignal Inſtances both of benign and malignant Gonorrhœas continuing for ſeveral Years. Thus *Bartholine*, in *Hiſt.* 36. *Cent.* 2. and in *Anat. Lib.* 1. *Cap.* 23. makes mention of two Men, one of whom had a malignant Gonorrhœa, protracted for ten Years; and the other labour'd under the ſame Diſorder for thirty Years; but it was uncertain whether it was of the benign or malignant kind. The former of theſe Patients was extremely emaciated; but in every other reſpect both of them had all the Symptoms of good Health.

There is alſo a virulent Gonorrhœa, which ariſes from a Venereal Contagion, and affects thoſe who imprudently purſue illicit Venereal Enjoyments. This Species of the Diſorder diſcovers itſelf not only by the Diſcharge of a Matter of different Colours and Conſiſtences, but alſo by an uncommon Loſs of Strength. Unleſs ſpeedy Meaſures of Relief are taken, this Diſorder is attended with large Tumors of the Teſticles and inguinal Glands, as, alſo, with inflammatory Ulcers of the Glans and Prepuce, and a painful Incurvation of the Penis: Urine, alſo, full of Filaments reſembling ſmall Worms, is ſometimes diſcharg'd. When the Diſorder becomes virulent, is of long ſtanding, or has been prepoſterouſly or unſkilfully treated, the Taint is convey'd thro' the lymphatic Veſſels, and affects the fineſt and moſt fluid Part of the Blood. Upon this the Symptoms of a Pox diſcover themſelves, ſuch as lancinating Pains of the Head and Joints, which are moſt intolerable in the Night-time, Ulcers of the Fauces, a Conſumption of the Bones of the Noſe, Puſtules in the Glands reſembling the Nature of a Cancer; Leanneſs of the whole Body, accompanied with Paleneſs of the Countenance, hollow Eyes, and tophaceous Indurations.

Theſe are the general Symptoms which either accompany or ſucceed this Diſorder; but we ſhall proceed to a more accurate Hiſtory of it. Soon after unlucky Embraces, a gentle Diſcharge begins, and becomes worſe on the third, fourth, and ſubſequent Days. The Glans begins to be wet with a kind of thin Seed, is afterwards cover'd with a whitiſh kind of Colluvies, and Stains are found on the Patients Linen. In the Beginning the Matter diſcharg'd is whitiſh; but, if the Evacuation is continued for a conſiderable time, it becomes yelloviſh, and, at laſt, greeniſh. When the Urine is diſcharg'd, a burning and almoſt intolerable Pain is perceiv'd, firſt in the Glans, then about the Root of the Urethra, and, at laſt, thro' the whole Tract thereof; ſometimes a continual Deſire of diſcharging the Urine afflicts the Patient; and ſometimes the Diſcharge of the Urine is much hinder'd, and almoſt ſuppreſs'd, on account of the uneaſy Tenſion of the Penis, which in the Night-time is ſo great as to produce Pain, Hardneſs, and an Incurvation of the Penis; beſides, there is ſo ſtrong a Stimulus to Venery, that the Patient cannot, without the greateſt Difficulty, abſtain from it; and ſordid Ulcers frequently appear on the Glans and Prepuce.

De Graaf, in his Treatiſe *de Virorum Organis Generationi dicatis*, thinks that the Seat of this Diſorder is in the Proſtatæ: And *Veſalius*, in the twenty-firſt Chapter of his fifth Book, informs us, that upon diſſecting a Man who was executed, and before his Death had labour'd under an involuntary Diſcharge of Seed, he found all the Veſſels, and eſpecially thoſe which reach from the Teſticles to the Revolutions of the *Vaſa deferentia*, highly lax and open; and therefore places the Seat of the Diſorder there: But, for Reaſons of ſufficient Importance, I aſſert, that the true Seat of this Diſorder is in the Coat of the Urethra, which, according to the Diſcoveries of *Cowper* and *Littre*, is furniſh'd with a large Number of Glands: It is not, at the ſame time, to be denied, that ſometimes, in virulent Gonorrhœas, the Diſorder ſpreads ſo far as to infect the *Proſtatæ* and *Veſiculæ Seminales*. This is ſufficiently certain from the Diſſections of thoſe, who during their Lives, had for a long time continued under this Diſorder; for in theſe

the *Proſtatæ* have been found callous, ſcirrhous, and ſometimes exulcerated.

In Women affected with this Diſorder, ſmall Ulcers appear in the *Corpus glanduloſum*, or in the Part where the Lacunæ are ſituated, about and at the Termination of the urinary Paſſage. Thus *De Graaff*, in his Treatiſe *de Mulierum Organis Generationi dicatis*, informs us, that, upon diſſecting the Body of a Woman who had labour'd under this Diſorder, he found the *Corpus glanduloſum* or *Proſtatæ* lying about the Urethra affected, whilſt, in the mean time, the Uterus and its Vagina were ſound and unaffected: Hence the Reaſon is obvious, why the Children of Women affected with this Diſorder may be ſecure from it. *Palmarius*, however, is of a different Opinion; and, in the ninth Chapter of his Treatiſe *de Lue Venerea*, ſays, that the Neck of the Bladder is the Seat of this Diſorder, becauſe he met with an Ulcer there, remaining after the Cure of a Gonorrhœa, which, during the Remainder of the Patient's Life, diſcharg'd a purulent Matter, not unlike that which in a long-continued Gonorrhœa is generally diſcharg'd thro' the Urethra from the *Proſtatæ*. 'Tis, beſides, obſervable, that this Diſorder does not rage with ſuch Violence in Women as in Men, ſince the former may live a long time under it, whereas it much ſooner proves fatal to the latter, if not remov'd.

The Cauſe of a virulent Gonorrhœa is a Taint, by impure Coition, convey'd from a Woman infected with a malignant Gonorrhœa, or a Lues Venerea, firſt, to the Genitals of a Man, and afterwards through the Pores, to the Lymph, or ſeminal Liquor, the due Craſis and natural Mixture of which it entirely deſtroys, by inducing partly a cauſtic and corroding, and partly a putrid State thereof. Hence ariſe the Pains, the Heats, the Tumors, the Inflammations, and the Exulcerations of the Genitals; for, at firſt, the Glans is only affected, whilſt, in Coition, the Poiſon inſinuates itſelf into the open Pores. Then, unleſs Meaſures of Relief are taken, it ſoon proceeds to the Glands of the Urethra, then to the Proſtatæ, which are porous; and, after that, to the Veſiculæ Seminales. If the infected Lymph is convey'd to the inguinal Glands through theſe lymphatic Veſſels, which *Cowper* diſcover'd to run from the Prepuce to the Groin; then a Venereal Bubo is form'd, which is a kind of hard Tumor, without Pain. But, if the Seat of the Gonorrhœa is deeper, and an Inflammation ariſes about the Beginning of the Urethra, where the Veſiculæ Seminales generally diſcharge the ſeminal Fluid; then theſe Veſſels are ſo compreſs'd by the Tumor, that this Fluid cannot be convey'd to them; and hence ariſe Tumors of the Teſticles.

In accounting for a benign Gonorrhœa, we are to have a due Regard to the ſeminal Juice itſelf, and the Tone of the ſeminal Veſſels, which is generally weak and languid. 'Tis ſufficiently certain, from Experience, that the Redundance of the ſeminal Fluid, ariſing from high Living in an unmarried State, or its Acrimony in cacochymic, ſcorbutic, or arthritic Patients, frequently produce a Gonorrhœa. That a Weakneſs of Tone in the ſeminal Organs may, alſo, produce this Diſorder, is moſt certain; for all the Cauſes which are capable of weakening theſe Veſſels, the moſt conſiderable of which are too great a Profuſion of the ſeminal Fluid, whether by too frequent Embraces, nocturnal Pollution, or the prepoſterous Way of Venery by Manuſtupration, and a preceding virulent Gonorrhœa, diſpoſe to a benign Gonorrhœa, eſpecially in Perſons who are naturally weak, or of a phlegmatic Conſtitution.

Both a virulent and benign Gonorrhœa are more eaſily remov'd, when recent, if treated with proper Remedies; on the contrary, if they have made ſome conſiderable Progreſs, and are attended with violent Symptoms, they are not to be cur'd without Difficulty; and may not only render Men incapable of propagating their Species, but, in Proceſs of Time, bring on a Cachexy, and hectic Conſumptions. With reſpect to the virulent Kind, we are, in a particular manner, to obſerve, that the greater the Infection is, the more violent and obſtinate the Diſorder will prove; though it rarely brings on a Pox, unleſs the Diſcharge is imprudently ſtopt by the prepoſterous Uſe of Sudorifics, and Aſtringents, either internally or externally apply'd; for, immediately upon the imprudent Suppreſſion of the Diſcharge, Buboes, Tumors of the Scrotum and Teſticles, Caruncles of the Urethra, and other terrible Symptoms, appear, together with a confirm'd Pox. The more regularly the Diſcharge is made, the more mild all the Symptoms are. But, it is a bad Sign, when it diſtils in too ſmall a Quantity, and when the Urine diſcharg'd is highly fetid, and the Matter yellow or green. It is a certain Sign, that the Diſorder is mitigated, when the painful Conſtriction of the Penis in Erection, and the Heat of Urine, are remov'd; when the impair'd Strength begins to return, and the Countenance, before pale, aſſumes a more natural and florid Colour: It is a Sign, that the Gonorrhœa is cur'd, if, upon compreſſing the Penis, a Drop or two of a limpid thin Liquor, reſembling the White of an Egg, are diſcharg'd. As a benign Gonorrhœa is generally long protracted, and creates a deal of Trouble to the Phyſician, ſo 'tis ſtill more obſtinate, when it ſucceeds a virulent Gonorrhœa, which it frequently does. But this Diſorder differs according to the various Conſtitutions of Patients: Thus it remains for a longer time with thoſe who are of phlegmatic Conſtitutions; or who, during their Youth, have been ſubject to catarrhal Defluxions, or Fluxes; for, as the Fibres of ſuch Perſons are naturally lax, we may juſtly conclude, that, as the Parts are depriv'd of their due Tone, this Diſorder muſt be far more violent in them, than in others, whoſe Fibres are ſtronger.

As the Cauſes of a benign and virulent Gonorrhœa differ very widely from each other, ſo the Diſorders themſelves call for different Methods of Cure; and are, for that Reaſon, to be conſider'd ſeparately. The Cure, then, of a benign Gonorrhœa is highly difficult, as we have already obſerv'd; nor can we aſſign any other Reaſon for this, than that, in this Diſorder, there is a preternatural Afflux of impure Humours from all the Parts of the Body, to thoſe infected, which are already too much weaken'd, and have their Tone deſtroy'd. Beſides, the Parts ſubſervient to Generation, which are, in this Diſorder, affected, conſiſt almoſt entirely of Nerves, and nervous Coats; and it is not without the greateſt Difficulty, as we learn from Experience, that the Energy of Medicines penetrates to them.

In the Cure of this obſtinate Diſorder, the following Intentions are to be purſued: Firſt, The Redundance of impure Serum, if there is any ſuch in the Body, is, by means of proper Laxatives, to be evacuated, and deriv'd from the Part affected. Then the too much relax'd and flaccid Parts are to be ſtrengthen'd by proper corroborating Medicines, both of the external and internal Kind.

The former of theſe Intentions is anſwer'd by ſuch Laxatives as operate in a double manner, ſuch as the *Pilulæ Balſamicæ*, of *Becher*, and thoſe directed by *Stahl*, which are not only purgative, but alſo highly corroborating. Beſides, I have often found happy Effects produc'd by a laxative Infuſion, prepar'd in the following manner:

Take of *Alexandrian* Rhubarb, one Ounce; of the Roots of Swallow-wort, of Burnet, and the Shavings of Saſſafras, each half an Ounce; of Sena-leaves, of Agaric, reduc'd to Troches, and of the fibrous Part of black Hellebore, each three Drams; of Cardamoms and Cinnamon, each two Drams; of Currants, three Ounces: Mix all together, and infuſe in two Pints of *Rheniſh* Wine, the fourth Part of which is to be taken for a Doſe.

After the Uſe of this Infuſion, for eight Days, every Morning, in order to anſwer the other Intention, we are to uſe the following Powder:

Take of Cuttle-bone, one Ounce; of red Coral, Amber, the Species de Hyacintho, and the Bark of Caſcarilla, each two Drams: Make into a Powder, one Dram of which is to be taken every Morning and Evening, in a Decoction of Barley, prepar'd with ſome Almonds. At the ſame time, I would have the following Epithem externally applied to the Region of the *Pubes* and *Perinæum*, eſpecially during the Night-time.

Take of the Herbs Baum, Mint, and Baſil, of the Leaves of red Roſes, and Balauſtins, each one Handful; of Pomgranate-bark, Cloves, Nutmeg, Cardamoms, and Maſtich, each half an Ounce: Mix together, and put into a ſmall Bag, to be boil'd in red *French* Wine.

Theſe Meaſures are to be ſeconded by an accurate Regimen: The Patient muſt, therefore, carefully abſtain from Aliments prepar'd with Pepper, from Aromatics, ſaline Subſtances, leguminous and inflating Foods; as, alſo, from the immoderate Uſe of Wine and Beer: He ought, farther, to abſtain from frequent Converſation with Women, from Venereal Encounters, and from violent Motion, eſpecially that by riding in a Coach, or on Horſeback. On the contrary, the Aliments moſt proper are Broths prepar'd of Oats, and reduc'd to an Emulſion, with the Yolks of Eggs, Sweet-almonds, and Piſtaches; which are of ſingular Efficacy, in correcting the Acrimony of the ſaline Lymph. 'Tis, alſo, proper to uſe, for common Drink, either ſweet Whey, or a Decoction prepar'd with the Roots of Vipersgraſs, China-root, red Sanders, Shavings of Saſſafras, Liquorice, and Raiſins.

If theſe ſhould prove ineffectual, I, in order to remove inveterate Diſorders of this Kind, generally recommend Baths, compos'd of the nervous Species and Corroboratives; ſuch as Southernwood, Marjoram, Mint, Hyſſop, Origanum, Mother of Thyme, Roſemary, and others of a like Nature. After bathing, let the Patient go to Bed, and promote a gentle Sweat. I have, with good Succeſs, frequently recommended the Springs of *Lauchſtad*, to be us'd for ſome Weeks, by way of Bath, ſince theſe Waters, in conſequence of the highly ſubtile Crocus of *Mars* they contain, are of ſingular Efficacy in corroborating the relax'd Parts.

This Method of Cure is highly effectual in putting a Stop to violent and weakening Pollutions; only the Purgatives muſt be leſs frequently exhibited; for, if there is a Neceſſity for rendering the Body ſoluble, that Intention may be anſwer'd by Preparations of Rhubarb and Raiſins alone. In Caſes of this Nature, beſides the Medicines already mention'd, I would adviſe the following Plaiſter to be applied to the Region of the Loins, or to the *Spina Dorſi*, near that Part.

Take of the *Emplaſtrum de Spermate Ranarum*, (ſee RANA) two Ounces; of the Sugar of Lead, and burnt Alum, each two Drams; of Camphire, and the Oil of Roſewood, each half a Dram: Mix all together, and apply in the uſual manner.

In this obſtinate Diſorder I have, alſo, obſerv'd very happy Effects produc'd by a proper Uſe of cold Baths, provided the Body is prepar'd for them, and if there is neither a Plethora, a Cacochymy, nor a Loſs of Strength, to contraindicate their Uſe: Twice a Day, in the Morning, and at four in the Afternoon, the Patient may ſit, for half an Hour, in pure River-water; or, which is far better, that of *Lauchſtad* Springs: After which he is to go to Bed for a little time, and drink a few Cups of ſome warm Infuſion. The whole Body is not only ſurpriſingly corroborated by this means, but Perſpiration being ſo far promoted, as to riſe to a Sweat, an excellent Derivation of the Humours is made from the Part affected.

The Cure of a virulent Gonorrhœa, if duly ſet about in the Beginning, is not very difficult; but if the Diſorder, after having been prepoſterouſly treated by Aſtringents, a Practice common among Empirics, is committed to the Management of a Phyſician, the Cure is ſo difficult, that he often finds it more difficult to remove ſuch a Gonorrhœa, than an univerſal Lues. But, in my Opinion, the moſt rational Method of curing this Diſorder conſiſts, firſt, in expelling from the Body, as ſoon as poſſible, the Venereal Poiſon receiv'd into the Genitals, and which is partly of an acrid, cauſtic, and partly of a putredinous Nature. Then, when the Parts deſtin'd to the Conſervation and Excretion of the ſeminal Fluid are relax'd, corroded, or exulcerated, by the virulent Matter, they are to be cleans'd, conſolidated, and ſtrengthen'd, that, by this means, too copious an Afflux of Humours to them, for the future, may be prevented.

Since, therefore, the firſt Step to be taken, by the Phyſician, is, with all Expedition, to expel the Venereal Poiſon, in order to prevent its pernicious Effects; I think it highly proper to exhibit Alexipharmics, and uſe a ſudorific Regimen, immediately after ſuſpected or impure Embraces. For this Purpoſe we recommend an Eſſence, prepar'd of equal Portions of the Spirit of Hartſhorn, Spirit of Amber, and the *Eſſentia Bezoardica*; ſixty Drops of this Eſſence may be taken every Morning, in an Infuſion of Scordium, Scabious, and Goats-rue; and the Patient muſt keep his Bed for an Hour after, in order to ſweat. Nor does the following diaphoretic Powder promiſe leſs Succeſs.

Take of bezoardic Powder, two Drams; of bezoardic Mineral, and medicinal Regulus of Antimony, each half a Dram; of Nitre, fifteen Grains; and, of Camphire, four Grains: Make into a Powder, to be divided into four Doſes; one of which is to be taken at Bed-time, for three or four Nights.

Externally, in order to diſcuſs the Poiſon convey'd to the Genitals, I generally adviſe the Uſe of the *Aqua Sclopetaria*, (See AQUA) render'd ſtronger with Eſſence of Amber, and camphorated Spirit of Wine. A Cloth, wet in this Preparation, may be apply'd to the Penis, the Region of the Pubes, and the Peronæum, even during the Diaphoreſis.

But if the Poiſon has penetrated farther, and, by intimately inſinuating itſelf into the Parts, has produc'd a virulent Diſcharge, accompanied with Heat, Pain, and Exulceration; the principal Buſineſs of the Phyſician is, by Remedies calculated both to correct and eliminate the peccant Matter, to free the Body from the impure Sordes. To the Medicines anſwering this Intention, belong Purgatives, the moſt important Ingredient in which is *Mercurius Dulcis*, which is poſſeſs'd of a peculiar and ſpecific Virtue in correcting an ulcerous and cauſtic Acrimony; as alſo in evacuating and reſolving Viſcidities. It is moſt commodiouſly mix'd with an equal Quantity of the Extract of Rhubarb; or, for the Uſe of ſerous Patients, with an equal Quantity of the *Extractum Panchymagogum Crollii*; and reduc'd to the Form of Pills, with Balſam of Capivi, or Peruvian Balſam. Of theſe Pills, let a Scruple, or half a Dram be taken every other Day, till the Heat of Urine is remov'd, and the yelloviſh or greeniſh Matter diſcharg'd aſſumes a better Colour. The ſame Intention is, alſo, excellently anſwer'd by the following Pills:

Take of the pureſt Gum Ammoniac, Sagapenum, Extract of black Hellebore, of the Trochiſci Alhandal, of Mercurius Dulcis, of the Roſin of Guaiacum, and of Balſam of Capivi, each one Dram: Make all into a Maſs, from each Scruple of which make Pills, which may be taken three Days ſucceſſively, either in the Morning, or towards Evening.

Then, for two Days, the Alexipharmics above-mention'd muſt be exhibited, eſpecially in phlegmatic Patients, in the Method already ſpecified. After this, the Pills are to be exhibited, and then Sweat excited for three Days more, and it is expedient to repeat this three times.

After a ſufficient Evacuation of the impure Humours, ſuch Remedies are to be us'd, as by their mild balſamic Virtues dry, conſolidate, and ſtrengthen the too much relax'd ſeminal Veſſels; and by that means check the Diſcharge. Among theſe we may juſtly reckon boil'd Turpentines, Maſtich, Amber, Myrrh, Opobalſamum, Rhubarb, Armenian Bole, Diaphoretic Antimony, Japan Earth, Blood-ſtone, and the *Antimonium Martiale Cachecticum*, which may be reduc'd to Pills, in the moſt commodious manner. But I, with great Succeſs, have preſcrib'd theſe prepar'd in the following manner:

Take of Venice Turpentine, of Amber, Maſtich, Extract of Rhubarb, and Caſcarilla, each two Drams; of Balſam of Capivi, and Reſin of Guaiacum, each one Dram: Mix all together, and, from each half Dram of the Maſs, form Pills, to be taken during ten or more Days ſucceſſively, towards Night, in a temperating Emulſion; drinking, next Morning, an Infuſion of *Paul*'s Betony, Mint, Baum, Yarrow, and Saracens Conſound; or a Decoction of the Roots of China, Sarſaparilla, Liquorice, Succory, and crude Antimony tied up in a Bag.

For checking the ſeminal Diſcharge, the following Mixture is, alſo, of ſingular Service.

Take of the acrid Tincture of Antimony, of the Eſſence of Guaiacum, of Amber and Aloes-wood, each an Ounce; of the Tincture of Blood-ſtone, or of the chalybeate Liquor, prepar'd from the *Caput Mortuum* of chalybeated Flowers of Sal Ammoniac, one Dram: Mix together, into an Eſſence, which is of a blackiſh Colour, and of which, after ſufficient purging, forty Drops may be taken, twice a Day.

But, unleſs internal Medicines be ſeconded by external Applications, we labour in vain; but theſe vary according to the Nature of the Symptoms: Thus, in order to lay the Pain and Heat of the Genitals, as, alſo, to bring Buboes to Suppuration, the beſt Applications are Cataplaſms, prepar'd of demulcent and emollient Ingredients, ſuch as Roots of white Lily and Marſhmallows; Flowers of Chamomile, Elder, and Mullein; the Seeds of Fenugreek, Cumin, Dill, and Henbane, made into a Cataplaſm, with a Decoction of Oats, or with Milk, and frequently applied warm. In order to cleanſe exulcerated Parts of the Urethra, and corroborate ſuch as are relax'd, nothing is of more Service than Injections, prepar'd of two Drams of Mercurius Dulcis, boil'd for a Quarter of an Hour in half a Pint of a ſtrong Infuſion of ſome vulnerary Plant, made by way of Tea. But if the Corroſion is very violent, Milk, and deſpumated Honey, together with a Decoction of Myrrh, prepar'd with Water, is to be injected, by means of a Syringe.

It is of the higheſt Importance, that the Phyſician ſhould preſcribe a proper and ſtrict Regimen: Above all things, he ought to order his Patients to abſtain from Aliments prepar'd with Aromatics; from ſuch as are of hard Digeſtion, or too nutritive a Quality; from Wine and Ale; from violent Exerciſe; from the Sallies of Paſſion; and from Converſation with Women; otherwiſe this Diſorder will not only be cur'd with Difficulty, but will readily recur. Let the Patient, for Aliments, uſe weak Broth, prepar'd with Endive, Sorrel, Lettuce, and Succory; and, for common Drink, let him uſe a Decoction of Liquorice, with Barley or Whey. Excellent Effects are, alſo, produc'd by Emulſions of ſweet Almonds, the Four greater cold Seeds, and white Poppies, together with a thin Decoction of Hartſhorn, us'd for common Drink; to which may be commodiouſly added, purified Nitre, as, alſo, gently diaphoretic Powders, prepar'd of calcin'd Hartſhorn, diaphoretic Antimony, or Ceruſs of Antimony; for, by theſe means, the Acrimony of the Humours is corrected, and the Heat and Pain of the Genitals effectually allay'd.

In a benign Gonorrhœa, draſtic Purgatives, and Preparations of Mercury, are to be cautiouſly us'd, as well as the ſtrong and diuretic Balſamics; for theſe, by putting the Humours into a violent Commotion, and forcing them to the weaken'd Genitals, increaſe the Diſcharge of the Matter. Theſe are ſtill more to be abſtain'd from by Perſons of ſanguine and choleric Habits, to whom they are, in a particular manner, prejudicial. The ſame is to be affirm'd of Aſtringents, which ought never to be us'd without a previous Correction

rection of the Humours, unleſs we intend to bring on a Gonorrhœa of a bad Kind, eſpecially in thoſe whoſe Juices are highly impure.

Veneſection, Abſtinence, weak and drying Aliments, and Drink, are of ſingular Service in the Beginning of this Diſorder, in phlethoric, fat, and ſpongy Habits, for ſuch as live high; whereas, if, by the Continuation of the Diſorder, the Body is much weaken'd, theſe Meaſures are not at all to be taken; ſince, by exhauſting the Strength ſtill more, they often induce a Cachexy, a Tabes Dorſalis, a hectic Fever, or an ignominious Impotence.

In the Cure of a malignant Gonorrhœa, the Phyſician ought to have a particular Regard to the Conſtitution of the Patient; for it is of the higheſt Importance, whether he is of a choleric, ſanguine, or a phlegmatic Habit; as alſo, whether he is robuſt, or tender: Nor ought he to be leſs cautious in inquiring into the State of his Humours; for, according as the Condition of theſe varies, ſo the Diſorder is attended with different Symptoms. Thus, if the Body is cacochymic, or, in conſequence of a bad Regimen, affected with the Itch, a ſcorbutic purple Fever, or the hypochondriac Diſorder, then the Symptoms are more terrible, and not to be cured without great Difficulty.

When Men of a hot and delicate Conſtitution are ſeiz'd with this Diſorder, they ought, eſpecially in the Beginning of the Diſtemper, to abſtain from hot Subſtances, Purgatives, Sudorifics, Diuretics, Decoctions of the Woods, ſuch as that of Guaiacum, acrid Subſtances, as, alſo, the Eſſences of *Peruvian* Balſam, and Opobalſam; for, by the prepoſterous Uſe of theſe, without a due Preparation of the Body, the peccant Humour is often retain'd, the Diſcharge ſuppreſs'd, and not only Buboes form'd about the Genitals, but alſo ulcerous Puſtules, of a bad Kind, produc'd on the Face.

I remember to have ſeen a recent Gonorrhœa perfectly cur'd, and the Poiſon expel'd, from Patients of a languid Habit, after ſufficient Purging, by Corroboratives, and gently ſpirituous Subſtances. With this Intention, the following Preparation may be frequently exhibited:

Take of Mint, three Handfuls; of *Venice* Turpentine, one Ounce; of *Peruvian* Balſam, half an Ounce: Diſtil with three Pints of *Rheniſh* Wine. The Doſe is from one to two Ounces.

For this the following Formula may very properly be us'd as a Succedaneum.

Take of Roſe-water, and rectify'd Spirit of Wine, each half a Pint; of Roſe-water, two Ounces; and of the Balſam of Life, fifty Drops: Mix all together.

So long as the Matter diſcharg'd is fetid and greeniſh, Aſtringents are never to be us'd; for when, by their means, the Diſcharge is too ſoon ſtopt, or when too ſtrong Decoctions of the Woods, together with a ſudorific Regimen, are us'd, the Poiſon paſſes into the ſeminal Fluids and Lymph, and produces the Symptoms peculiar to a confirm'd Pox. But by no Aſtringent are worſe Effects produc'd, than by Sugar of Lead unſeaſonably exhibited internally, as is the Cuſtom with Quacks; for, by means of this Medicine, I ſaw a convulſive Colic, a Loſs of Appetite, and an obſtinate Coſtiveneſs, brought on. Aſtringent Injections ought, in like manner, never to be us'd, till the Impurity of the Matter is corrected.

Among diuretic Medicines, Cantharides, and the Eſſence of them, are, in my Opinion, to be highly condemn'd; ſince they are prejudicial to the urinary Paſſages, and excite violent Inflammations of the Kidneys and Bladder, together with a Diſcharge of bloody Urine, unleſs their Effects are prevented by the Uſe of proper Medicines.

In the Cure of a virulent Gonorrhœa, Veneſection is rarely neceſſary; and, in delicate Conſtitutions, eaſily ſubject to a Suppreſſion of the Diſcharge, it is more prejudicial than beneficial: But, if the Body is full and young, Veneſection may be beneficial, in order to mitigate the Symptoms.

It ſometimes happens, from various Cauſes, that, when the Matter is diſcharg'd in too ſmall a Quantity, Puſtules break out here and there on the Body. In this Caſe, it is highly expedient to moiſten and relax the Parts affected, and, by Purgatives, to derive the Humours downwards. This Intention is alſo promoted by Injections of ſweet Milk, and a Decoction of Oats, mix'd with Oil of ſweet Almonds; by which I have often known the Diſcharge brought on again.

'Tis ſurpriſing, that a Gonorrhœa cannot be remov'd by Salivation; for we know, from Experience, that the worſt Venereal Ulcers have been cur'd by this means, whilſt, at the ſame time, the Gonorrhœa has remain'd; and this terrible Diſcharge, when ill treated, and become inveterate, frequently continues all the Patient's Life; for ſometimes ſcirrhous and fiſtulous Ulcers, not to be remov'd without the greateſt Difficulty, are lodg'd both in the large and ſmall Glands. In Caſes of this Nature, I have found the moſt happy Effects produc'd by the internal Uſe of the *Caroline* Baths, which, though cautiouſly to be us'd in a recent Gonorrhœa, becauſe they relax the weaken'd Parts ſtill more, are yet highly beneficial when the Diſorder is inveterate; ſince they remove the Obſtructions of the Veſſels, and reſolve latent, incarcerated, and hard Tumors. But I would have them exhibited in ſmall Quantities, uſing, at the ſame time, both during and after the Cure, internal Medicines, and Injections of a corroborating and balſamic Nature.

When the Urethra, whoſe middle Coat is highly glandular, is not only exulcerated, but too much relax'd, and, ſomething adheres to the fungous Subſtance of the Penis, from which troubleſome Caruncles afterwards ariſe, I have often, with good Succeſs, order'd Eſſence of Opobalſam, extracted with Spirit of Wine, as alſo the Balſam of Life, diluted with three Parts of the *Aqua Sclopetaria*, to be injected frequently every Day. By ſuch an Injection, a violent Heat is indeed excited, but it ſoon remits. As for Caruncles, which are a Species of Warts, I think they ought to be remov'd by corroſive Powder, or the actual Cautery; the Application of which calls for a ſkilful Hand, leſt the adjacent Parts ſhould be injur'd.

For cleanſing Ulcers of the Glans and Penis, the following Epithem is of ſingular Service:

Take of Quick-lime-water, mix'd with Roſe-water, two Ounces; of the *Aqua Solopetaria*, one Ounce; of the Sugar of Lead, ten Grains; and of white Precipitate of Mercury, eight Grains: Mix all together.

And, when the Intention is to conſolidate, the beſt Medicine is the antimoniated Balſam of Sulphur, or that prepar'd with Oil of Turpentine, and mix'd with a digeſtive Ointment.

Buboes are to be maturated by the emollient Plaiſter of *Agricola* malaxated with Oil of Henbane and Soap. This Intention is, alſo, excellently anſwer'd by *Barbett*'s Plaiſter, prepar'd with Soap, and a ſmall Quantity of the Oil of Henbane.

Tumors of the Scrotum and Teſticles are to be remov'd by warm Fomentations, or the Steams ariſing from Decoctions of emollient Herbs and Flowers, prepar'd with Milk. By this Method, ſeaſonably us'd, the Tumor is ſo ſoften'd, that emollient Plaiſters may be afterwards applied with more Advantage. *Frederic Hoffman.*

Boerhaave thus delivers his Opinion of a virulent *Gonorrhœa*:

A *Gonorrhœa* proceeds from the infecting Matter imbib'd by the dilated Pores of the Glans, in that Inſtant of Time when this Part firſt begins to ſubſide from its turgid State in the Venereal Paroxyſm. In this Caſe, the contagious Poiſon takes its Place in the Cells of the *Corpus Spongioſum* of the Glans; which is wrapt up in its two Membranes, and continu'd all the Way to the Neck of the Bladder. From this Continuation of its Structure it is that the ſlighteſt Contagion is eaſily propagated through all this Tract; and when once the Poiſon has made its Way into the *Membrana Celluloſa*, which is here extremely tender, it immediately produces a ſmall Ulcer, attended with a whitiſh yelloviſh Diſcharge, of the Conſiſtence of new Cream, like it, almoſt void of Tenacity or Ropineſs to the Fingers, and which, when it dries upon the ſtiffen'd Linen, appears of a Colour between green and yellow. This filthy Pus, feeding upon the fine fattiſh Texture of the Part, digs out, by degrees, an ample Cavern, in which it is prepar'd, accumulated, retain'd, and from which it makes a ſlow, drilling, ſpontaneous Exit, or is preſs'd out in conſiderable Quantities. If this Cavity is confin'd within the fungous Texture of the Glans, and, through its Surface, has form'd to itſelf Outlets, a very filthy Pus ouſes out, by which both the Glans and Prepuce are corrupted, and ſometimes conſum'd and mortify'd. This, according to *Boerhaave*, is the firſt Species of a virulent *Gonorrhœa*. It is known by a ſordid Moiſture, of a leſs thick Conſiſtence than what is produc'd in the other Kinds of this Diſeaſe, continually prepar'd within the Structure of the Glans and Prepuce, and, when the Glans is ſqueez'd, ſweating out upon its Surface. After the Contagion is remov'd, this Kind of *Gonorrhœa* is eaſily cur'd. And, in order to the Cure, theſe Parts muſt be bathed often in a Day with a Fomentation, compounded of Honey, Salt, Wine, and Water; or with a Solution of Myrrh in Wine, made by Digeſtion in a proper Heat; or with Vinegar, and a ſmall Quantity of Aloes, much diluted with Water. Above all things, any the leaſt Moiſture, which may lie conceal'd among the Rugæ of the Prepuce, muſt be very carefully wip'd off. After the Part has by theſe means been very accurately depurated, let the naked Glans, with the Prepuce drawn back, be involv'd in an emollient, relaxing, attracting, anodyne, and ſomewhat antiſeptic Cataplaſm. One who is ſkill'd in the *Materia Medica*, can never be at a Loſs for proper Materials. For Inſtance:

Take of the Powder of Marſhmallow-root, and the Meal of Linſeed, each an Ounce; Flowers of Marſhmallows, and Elder, each half an Ounce; Leaves of white Horehound, and Scordium, each a Quarter of an Handful; Sal Ammoniac, a Scruple. Make, according to Art, a ſoft Cataplaſm, adding at laſt a little Linſeed-oil.

This Cataplaſm ſpread upon a Cloth, and applied to the Part, is ſufficient for all the aforeſaid Intentions: For, by means of ſuch Applications, the Pores are dilated, whilſt the morbid Matter is puſh'd out and ſeparated by the Force of the vital Power, and its Retreat inwards is prevented. In the mean time, all poſſible Care muſt be taken, that no Cold ever reaches the Part, and that it never becomes dry, leſt the Pores contracting ſhould repel the Flux of Matter. Another very prudent Caution here is, that during the whole Time of the Cure, the Patient ſtrictly abſtains from all Food which partakes of the leaſt oily Quality: He muſt, alſo, avoid every thing, which, by an acrimonious Activity, ſtimulates to Venery; ſuch as Spices, bulbous Roots, Fleſh, Eggs, Fiſh, and fermented Liquors; for there is nothing that more retards the Cure of a *Gonorrhœa*, than the Inflation of the Penis. For ſince during that State its Cells are expanded by the warm Blood flowing in from the Arteries, till they are almoſt in danger of burſting, their Breaches will now be made wider, the contagious Particles will be rouſed, exaſperated, put into Motion, and mix'd with the Maſs of Blood accumulated in the Cells; and, when the Penis collapſes, theſe poiſonous Corpuſcles will be taken into the Circulation along with the returning Blood. Hence I have often, in this Diſeaſe, ſeen the moſt approved Methods of Cure fruſtrated by this Condition of the Penis, which here has too many Cauſes to produce it: And even from one Venereal Paroxyſm, I have often known this Diſeaſe, after it has been already ſubdued, make a freſh Attack, and require a new Application of all the former Efforts againſt it. Whatever, therefore, the Cook, the Vintner, or the Apothecary, ſupply to the Irritation of Venery; whatever has a Tendency to tickle the prurient Fancy, whether the Company of Women, or lewd Pictures, or wanton Converſation, or laſcivious Reading; all ſuch Provocatives and Allurements muſt here be avoided as certain Death. Water and Whey I would recommend as very proper for Drink; and, for Food, Seeds and Summer-fruits.

If ever hydragogue Purges are of excellent Uſe, it is here. Jalap, Hermodactyls, Scammony, and Senna, are ſingularly good in this Caſe: Theſe, when frequently repeated, melt down the red Blood into Serum, determine the reſolved Fluids downwards, and diſcharge them by the Inteſtines; while, at the ſame time, they act powerfully upon the urinary Paſſages, the Bladder, and Urethra. Hence it is, that theſe Purges are ſo much in Vogue in thoſe Countries of which this Diſeaſe is a Native, as *Africa* and *America*; nor are they held in leſs Eſteem among the greateſt Maſters of the medicinal Art among us.

And now, after all, I cannot eaſily believe, that any other Practice, that has yet been purſued, is at all ſuperior to this here laid down; for there are not many other Methods but what I know, and have try'd, and yet this does not in the leaſt ſuffer by the Compariſon. This Method is not, indeed, quite ſo happily calculated for the Convenience of thoſe who live in Courts, who ſtudy Pomp and Magnificence, or are hurried in publick Buſineſs: But the ſafeſt Courſes are often difficult, and attended with Trouble. I know how ſanguine the Mountebanks are in their Promiſes. They pretend to remove this Diſeaſe, tho' the Patient all the time indulges in regal Luxury, tho' he is every Day on Horſeback, or abandons himſelf to all manner of Senſuality. For my Part, I have attempted the ſame, but have never had the good Fortune to ſucceed under theſe Circumſtances; and it has many a time moved my Pity, to ſee ſeveral Patients of Diſtinction, who had been manag'd in that manner, liable for ſome Years to the Remains of the long-contracted Diſeaſe.

In the mean time, if the Patient cannot be prevail'd upon to ſubmit to the Trouble of Cataplaſms, Fomentations may be us'd in their ſtead; and, when his Situation is ſuch, that neither of theſe can be conveniently apply'd, emollient Plaiſters, as the *Emplaſtrum de Mucilaginibus*, or *de Meliloto*, may be ſubſtituted in their Place. But the Preference here always belongs to Cataplaſms and Fomentations.

It makes another kind of *Gonorrhœa*, when the Venereal Poiſon, after having inſinuated itſelf thro' the Pores of the Glans, has penetrated into that cellular Subſtance, which is apply'd round the upper Part of the Urethra, ſo as to form a ſmall Ulcer there; which, thro' Paſſages that it has eat into the Cavity of the Urethra, pours its Pus into that Canal, out of whoſe Canal it is perpetually trickling, but in greateſt Plenty when the Penis is preſs'd at this Part, and the Preſſure continued forward from its Root. What is here moſt remarkable is, that if, after the Patient awakes in a Morning, and before he has emptied his Bladder, a Preſſure begun an Inch behind the Apex of the Penis be continu'd forwards, a conſiderable Quantity of Pus may be diſcharg'd; which Method of Compreſſion, and Manner of Diſcharge, conſider'd, it appears that this Pus did not come immediately from the Canal of the Urethra, but that it had been firſt ſqueez'd out of its fungous Subſtance into its Cavity: And in this Species of *Gonorrhœa*, if you begin from the Neck of the Bladder, and preſs all the Way to the Glans, you will not be able to ſqueeze out the leaſt Drop of that kind of Matter from beyond this Part. This, therefore, is the only affected Part, and hither muſt all your Efforts be directed. This is the Shape in which the *Gonorrhœa* moſt commonly appears at firſt; and this Species of Diſeaſe occurs every Day. For the moſt part it produces a vaſt Quantity of Venereal Pus, continues a long time in People of lax Habits; and yet, if the purulent Matter has a free Exit, it ſeldom occaſions a Pox; ſo far from that, it rather prevents it: But it is principally attended with this Misfortune, that when it has continued a long time in the ſinuous Meanders of the cellular Membrane, it is ſubject to produce tedious Gleets, which all the Art in the World cannot, without extreme Difficulty, dry up.

The Cure of this *Gonorrhœa* is the ſame with that of the firſt kind; only I would adviſe beſides, that the Penis and Scrotum be, three or four times a Day, for half an Hour together, bathed in the ſame Liquors that I have already recommended for Fomentations. In the mean time, as the affected Cells can ſcarcely be reach'd by Injections, theſe are of little Service here, except at the firſt Appearance of the Diſeaſe, or when the internal fungous Subſtance has ſcarcely ſuffered any Injury.

I reckon it the third kind of *Gonorrhœa*, when the contagious Particles have enter'd and taken Poſſeſſion of the *Glandulæ Cowperianæ Urethræ*, ſo that the Pus diſcharges itſelf by their excretory Ducts into the Urinary Duct. Here the Diſeaſe works out vaſt, hollow, fiſtulous Sinuſes, which flow with large Quantities of Matter, and are very difficult to deterge, and conſequently to heal. If the Diſcharge of this Ichor ſo produc'd is by any means obſtructed, it ſometimes forms very malignant Ulcers about the Sides of the Urethra, where theſe Glands, according to the Deſcription of their noble Diſcoverer, are ſituated. Hence proceed very obſtinate Ulcers, which give a great deal of Trouble to both the Phyſician and Patient, and frequently continue for ſome Years. What renders the Cure ſo inſuperably difficult in this Caſe is, that when once the contagious Matter has made its Way into the Folliculi of thoſe Glands, it can ſcarce be expel'd, but there it lies in ſpite of all that can be done to diſcharge it: By Stagnation it becomes every Day more and more virulent, and ſpreads the Infection thro' the neighbouring Parts; inſomuch that ſometimes the ſubcutaneous pinguedinous Cells towards the Root of the Penis are affected by it; and what miſerable Effects this may, and in fact ſometimes does produce, any knowing Practitioner can tell. This *Gonorrhœa* requires the very ſame Treatment with the two former: But here the leaſt Time muſt not be loſt. The affected Parts muſt be kept in a conſtant State of Laxity by the moſt emollient Applications, and the contagious Matter muſt, with all poſſible Expedition, be drawn out; for the Succeſs of your Practice here entirely depends upon the total Diſcharge of the infectious Matter, together with the Pus which it has introduc'd; and, if this Taſk is not perform'd, a *Pox* is greatly to be apprehended. Wherefore, if this Diſeaſe continues but for a little time, we muſt have recourſe to all the Severities of a Salivation: For, tho' Salivating does not at all cure either of the two former kinds of *Gonorrhœa*, this Species of the Diſeaſe, as it has its Seat in a more ſolid glandulous Part, in which the Action of the Heart and Arteries is briſker, is much more ſuſceptible of the Power of Mercury,

Beſides theſe, there is a fourth *Gonorrhœa*, which differs from the reſt: For, after the virulent Matter has, by the Paſſages already deſcrib'd, reach'd the Proſtatæ, it waſtes their Subſtance, and melts it down into a very plentiful Maſs of virulent Pus. This Diſeaſe ſometimes takes its Riſe from other Gonorrhœas long-continued, but principally from often repeated ones. It diſcovers itſelf by Tumors upon the Perinæum; ſometimes too the Parts all around the Region of the Proſtatæ are moſt miſerably ulcerated, by which means the neighbouring Parts are deſtroy'd, and become a very ſhocking Spectacle.

But one of the moſt common Symptoms of this Diſeaſe is, that frequently thoſe miſerable Patients, all at once, and without any manifeſt Cauſe, are ſeiz'd with a Suppreſſion of Urine; whence they are tortur'd with a great many painful and fruitleſs Attempts to make Water; while, at the ſame time there is no Admiſſion of the Catheter to relieve them that Way: At laſt, after a long Torment, ſome Quantity of Pus on a ſudden makes its Way out of the Orifice of the Urethra, a little after which the Urine is diſcharg'd without Difficulty, till the ſame Miſchief returns again. I have ſometimes ſeen

this Diſeaſe, and you cannot but be ſenſible what a hard Matter it is to accompliſh a Cure. Here Salivation takes place, and here all the Remedies recommended againſt the aforenamed kinds of Gonorrhœa, muſt be very diligently apply'd.

The laſt and moſt abominable Species of this Diſeaſe happens, when, from the already-mention'd Affection of the Proſtatæ, the Emiſſaries of the Veſiculæ Seminales, deſcrib'd by the famous *Morgagni*, gaping with open Mouths among the Ducts of the Proſtatæ, are eroded. Whence the Venereal Poiſon, admitted by theſe Emiſſaries into the ſeminal Reſervoirs, corrupts their Veſſels, and contain'd Liquids, with its Virulence, occaſions a very copious Diſcharge of moſt filthy Matter, and ulcerates thoſe ſinuous Parts intorted into a great many winding Labyrinths. Hence what enormous Miſchiefs enſue! I have ſeen that whole cellular Apparatus, which inveſts, and ſeparates from one another the Veſiculæ Seminales, the Bladder of Urine, the Rectum, and Perinæum, ulcerated, putrefy'd, and corroded into fiſtulous Caverns, reaching as far as the Scrotum, the Anus, and Perinæum; ſo that theſe Parts were entirely deſtroy'd by the mining Corruption, whilſt, in the mean time, there was no Benefit receiv'd from the Uſe of Baths, Fomentations, or Injections; nor from the Application of Plaiſters, Ointments, or Cataplaſms; nor from making Inciſions into the Sinuſes, or dilating their Orifices. In ſpite of all theſe Means, I have known the Diſeaſe proceed till the very Urine was diſcharg'd by thoſe Ulcers. And if theſe topical Remedies did no Service, the moſt abſtemious Life, the Uſe of Decoctions of the Woods, the Sweating-box, and the beſt-managed Salivations, did as little.

Aſtruc adapts the Cure of a Gonorrhœa, to the different Stages of the Diſeaſe.

Thus, in a Beginning of a Gonorrhœa he adviſes Bleeding to be repeated more or leſs, according to the Violence of the inflammatory Symptoms; and, where theſe are very ſevere, he thinks Bleeding is to be as plentifully uſed as in a Peripneumony, or Dyſentery.

He preſcribes for the Patient's ordinary Drink, Ptiſan made of emollient and refrigerating Herbs, together with Cryſtal Mineral, or Sal Prunellæ; and, if the Belly is not open enough, he adviſes a Glyſter of the ſame Ptiſan to be adminiſtered every Day, either alone, or with a little Vinegar, Sal Prunellæ, or Pulp of Caſſia.

Where the Inflammation is not mitigated by the Uſe of the Ptiſan, he adviſes the Patient, Morning and Evening, to take a large Draught of Emulſion of the Seeds of Melon, Agnus Caſtus, Hemp, white Poppy, or Linſeed, prepared with the Decoction of the Flowers of Water-lily, adding to it, after ſtraining, a ſufficient Quantity of the Syrup of Water-lily.

Where the Symptoms are very violent, he recommends an Opiate, diſſolv'd in both Doſes of the Emulſion, but eſpecially that taken in the Evening.

Where the Dyſury and inflammatory Symptoms are very ſevere, he recommends Fomentations of Milk for the genital Parts, emollient Cataplaſms to be apply'd to the Perinæum, and emollient, cooling, and ſaturnine Injections.

He recommends the Uſe of Camphire, and Sugar of Lead, internally, as prodigious Anodynes and Coolers; each to be given from the Quantity of ſix Grains, to half a Scruple; but he gives a juſt Caution to uſe them ſparingly, eſpecially the Sugar of Lead. This, however, in my Opinion, ought never to be us'd at all internally.

In the mean time, he adviſes a thin moiſtening Diet of young animal Food; Abſtinence from ſpirituous Liquors, from all Sauces with Salt and Spices, from Venery, and violent Exerciſe.

In the ſecond Period, when the Inflammation and painful Symptoms begin to remit, and the Matter flows more freely, he lays down the following Intentions. (1.) To diſcharge as much of the contagious Particles, by the purulent Running, as poſſible. (2.) To drive out the reſt by Purging. And, (3.) If any Remains of them are left, to diſcharge and correct them by means of Mercury.

In the firſt Place, therefore, he gives a gentle lenitive Purge of Caſſia, or the like, leſt a ſtrong one ſhould excite the Inflammation afreſh. But afterwards, if there be Occaſion, he allows a briſker one of Diagrydium, or Mercurius Dulcis.

He diſapproves of the common Method of Purging, and giving Preparations of Mercury alternately. For, he ſays, theſe ſharp Preparations not only injure the Stomach, and weaken the Patient; but, by increaſing the Acrimony of the Blood, render the Ulcers more malignant and obſtinate: And he tells us, that he has frequently ſeen a remitting Dyſury, and yielding Gonorrhœa, return upon their Uſe, and a yellow or green Diſcharge reappear.

Inſtead of theſe, he adviſes rubbing the Perinæum, Genitals, Hips, and Groins in Men, the Perinæum, Hips, Groins, and Labia Pudendorum in Women, once in three or four Days, with a ſmall Quantity of mercurial Ointment, not above one or two Drams at a time, leſt a Salivation ſhould be brought on. And, if any Symptoms preſage that, it muſt be prevented by gentle Purges.

By theſe means, he ſays, the Particles of Mercury, without any Injury to the Stomach, being apply'd immediately to the affected Parts, eaſily penetrate into them, reach the Particles of the Venereal Poiſon, and deſtroy them.

Theſe Ointments are to be thus uſed, till the Diſcharge is deſtroy'd, and the Cure of the Gonorrhœa completed.

In the mean time, proper Remedies, for reſolving the Remains of the Inflammation, deterging the Ulcers, and correcting the Acrimony of the Blood, muſt not be omitted.

But if the Inflammation returns, or the virulent Diſcharge is ſuppreſſed, which frequently happens from Irregularities in the Non-naturals; ſuch as Intemperance in Eating and Drinking, Venery, or too much Exerciſe; this Method, he ſays, muſt be laid aſide, as not only uſeleſs, but noxious, and the Method of Cure, laid down for the firſt Stage, muſt be called in.

In the third Period, when the Inflammation and painful Symptoms are gone, and the Diſcharge is abated, and become thicker, milder, and whiter, his Intentions are to deterge and conſolidate the internal Ulcers, and to temperate and correct the Acrimony, which the Blood, and ſeminal Fluid, have contracted from the Venereal Taint, by the means of ſweetening and diluting Medicines.

For theſe Intentions, he recommends Balſams, Milk, the acidulous, vitriolic, mineral Waters; and, if the Gonorrhœa does not yield to theſe, the internal Uſe of Aſtringents. And after the Heat is gone, and the Diſcharge is become thin, whitiſh, ropy, and inconſiderable as to Quantity, he ſays, you may ſafely have recourſe to Injections of the detergent Vulneraries, as Decoctions of Bugle, Sanicle, Horehound, Guaiacum, Lady's-mantle, and the like, with Honey of Roſes; or of hot ſulphureous Waters, diluted with a Decoction of Barley. As for aſtringent Injections, he ſays, they are never ſafe.

He cautions againſt ſome common Faults in the Method of managing this Diſeaſe: As, 1. Againſt the exhibiting ſtrong Cathartics. 2. Adminiſtring Decoctions of Guaiacum, without Diſtinction, to all Patients; though, at the ſame time, he allows, that theſe Decoctions are ſucceſsful enough in drying up Ulcers in corpulent pituitous Habits. 3. The immoderate Uſe of internal Mercurials, eſpecially where the Blood is affected with an acrid Dyſcraſy. 4. The prepoſterous Uſe of ſtyptic Injections, which frequently occaſions a genuine Lues, or a morbid Conſtriction of the Urethra; and hence a violent Strangury.

He enumerates the different empirical Methods, as he calls them, of curing this Diſeaſe, and condemns every one of them. Among the reſt, he takes notice of the internal Uſe of the Sugar of Lead, which, he ſays, may be given with Succeſs in the Gleet, which ſometimes remains after the Cure of a virulent Gonorrhœa. But, at the ſame time, he gives a Caution, never to adminiſter it in a larger Doſe than four or ſix Grains; and if it occaſions any Heart-burnings, Pain at the upper Orifice of the Stomach, or Nauſea, to lay it aſide immediately. It is, however, more ſafe not to give it at all.

He alſo examines the different boaſted Methods of preventing Infection; but juſtly concludes, that there is not one of them to be depended upon, not even the faſhionable, modern Practice, which he charges upon the *Engliſh*, tho' the *French* are in the Mode too.

He treats of two other Kinds of Gonorrhœa, which, he ſays, leſs frequently occur; and firſt, of the virulent dry Gonorrhœa, or, more properly, the dry Venereal Dyſury, by which he means a Dyſury with a Senſe of a burning Acrimony, without any Diſcharge from the Urethra, or, at leaſt, with very little.

This Dyſury, he ſays, is ſometimes attended with a Strangury, Heat, Redneſs, and Swelling of the Perinæum, and often of the whole Penis; ſometimes with a ſlight Strangury, without any ſenſible Swelling, or Redneſs in the Perinæum, or Penis.

Hence, ſays he, this Gonorrhœa ought to be diſtinguiſhed into two Kinds; in one of which the Proſtatæ, or Veſiculæ Seminales, are inflamed; and this either precedes a ſevere virulent Gonorrhœa, or follows a ſuppreſs'd one. The other is produc'd by an eryſipelatous Inflammation of the Urethra, which may be a Prelude to a virulent Gonorrhœa, but, for the moſt part, is neither the Forerunner nor Attendant of any other Diſeaſe.

As to the Prognoſtics, he ſays, 1. That a dry Gonorrhœa is always worſe than a running one, both becauſe the Poiſon is retain'd, and becauſe it erodes and injures the affected Parts more.

2. The firſt of theſe two Kinds of Gonorrhœa, if the Inflammation is not ſpeedily reſolved, is very ſubject to degenerate into an Abſceſs of the Perinæum.

3. The ſecond Species, if it is not ſoon reſolved, ends in a Sphacelus of the Part.

For the Cure, he adviſes the antiphlogiſtic Method, and recommends

commends Bleeding once every fourth Hour at firſt, emollient Fomentations, Injections, and the Uſe of emollient Diuretics: By which Method, duly obſerved, he ſays, within three, four, or, at moſt, ſix Days, you will be able to procure a virulent Flux, or the Inflammation will be gradually reſolved without any. Above all, he adviſes, in theſe two kinds of Gonorrhœa, that, as ſoon as the Remiſſion of the Symptoms makes it ſafe, Mercurial Ointments be cautiouſly apply'd for a long time to the Perinæum; becauſe, as the Poiſon, in theſe Caſes, is not diſcharg'd by any Running, there is the greater need of Specifics to correct it.

Women, he ſays, are alſo ſubject to the virulent dry Gonorrhœa; and the Parts affected in them are the Proſtatæ, and *Cowper*'s Glands, or the Vagina. The Cure is eaſily deduc'd from the Method of curing the ſame Symptom in the other Sex.

What he calls the ſpurious Gonorrhœa, is a Diſcharge of lymphatic, ſubviſcid, purulent Matter, from the Crown of the Glans, which, at the ſame time, is affected with a Pain and Inflammation, together with a ſlight Eroſion. This Species, he ſays, is frequent in Men; and he is of Opinion, that Women are not exempted. In Men, he ſays, its Seat is the ſebaceous Glands, upon the Corona; in Women, thoſe upon the entire external Surface of the Pudenda.

The prediſpoſing Cauſes, as he alleges, of this Symptom, are, the Laxity of theſe Glands, and the too great Length of the Prepuce.

In his Prognoſtics, he ſays, this Species of Gonorrhœa is, for the moſt part, without Danger, provided proper Remedies be us'd; but, if it is neglected, theſe ſuperficial Eroſions of the ſebaceous Glands are very ſubject to degenerate into cancerous Ulcers, and theſe, where they become callous, to occaſion a Phymoſis, Paraphymoſis, and Cryſtallines.

The Cure, he ſays, is perform'd by Bleeding, the Uſe of detergent and emollient Applications; and, after the Inflammation is abated, by the Antivenereals, propos'd in the Cure of a common Running; and, at laſt, where the Diſcharge is mild, and yet does not ſtop, he adviſes to foment with the Decoction of Guaiacum, red Wine, in which Iron has been quench'd, or a weak Solution of Sugar of Lead in Plantain-water.

He gives the Hiſtory of the Caſe of a young Man, who contracted a violent Ophthalmia, with a lachrymal Flux, by waſhing his Eyes, every Morning, with his own Urine, while he labour'd under a virulent Gonorrhœa: Both which Diſeaſes yielded to the ſame Method of Cure with the Gonorrhœa.

With reſpect to thoſe Diſeaſes which ſucceed a Gonorrhœa, the firſt he treats of, is the Swelling of the Teſtes; with which Symptom a Gonorrhœa is frequently complicated.

It proceeds, he ſays, from two Cauſes: 1. A ſuppreſs'd Gonorrhœa. 2. From the Venereal Poiſon in the Blood, by which the Seed is inſpiſſated and accumulated in the Meanders of the Teſtes.

From the firſt Cauſe it is more inflammatory, and, conſequently, more capable of being reſolv'd, eſpecially if the Gonorrhœa can again be ſet a flowing; though it frequently ſuppurates, and degenerates into a fiſtulous Ulcer.

What remains unreſolv'd of the ſecond kind, he ſays, is ſubject to harden into a Scirrhus, which frequently produces an Hydrocele, Pneumatocele, or Sarcocele; and often degenerates into a Cancer.

In the Cure, he recommends frequent Bleeding, and the antiphlogiſtic Regimen. All internal ſtrong and purging Remedies as well as external Aſtringents and Repellents, are to be avoided; and Anodynes only are to be us'd, under the Form of Lotions, Fomentations, and Cataplaſms. Conducive to this Purpoſe are a Decoction of the Root of Althea, and Lindſeed; or Milk, ſomewhat warm, with which the Scrotum may now-and-then be fomented; or an anodyne Cataplaſm of the Roots of Lilies, with Leaves of Henbane, Mallow, and Branc-urſine, boil'd to a Mucilage, and mix'd with the Flower of Lindſeed, and Oil of Earth-worms, or of Lilies. After the Inflammation and Fever are abated, he adviſes a gentle Purge, after that, the Application of mild Reſolvents, and the internal Uſe of antivenereal Remedies.

The Hardneſs which frequently remains, eſpecially in the Angles of the Epididymides, muſt be diſcus'd by the Application of the ſuccinated Balſam of Sulphur, Oil of Rue, Mercurial Plaiſters, or Ointments. He ſays, that ſuch Applications as merely relax, the Mucilage-plaiſter, and the Plaiſter of Sperma Ceti, for Example, often do Wonders here.

While theſe Medicines are applied, he recommends a ſuſpenſory Bandage.

Where the Inflammation proceeds to a Suppuration, he ſays, as ſoon as it appears that there is Pus form'd, it muſt be diſcharg'd with a Lancet, leſt it ſhould deſtroy the ſoft Texture of the Teſticle.

In caſe of a fiſtulous Ulcer remaining from the Suppuration, or a Scirrhus, he adviſes the Uſe of Mercurial Ointments. See HERNIA.

2. The next Symptom is a Venereal Abſceſs of the Perinæum.

This proceeds, he ſays, from a Suppuration of the Veſiculæ ſeminales, Proſtatæ, but moſt frequently of *Cowper*'s Glands. It is owing to Neglect, or bad Management, both in the Method of Cure, and the Regimen; eſpecially in ſuch Patients whoſe Blood is of an acrid Diſpoſition, or where theſe Parts have been tainted with repeated Gonorrhœas.

As for the Prognoſtic, theſe Abſceſſes are always dangerous, more or leſs; but moſt ſo, where they have dug out Sinuſes into the Urethra and Anus; in which Caſe, for the moſt part, nothing but a palliative Cure ought to be attempted, becauſe of the Danger and Inconveniencies which attend the Uſe of the Knife here.

The Indications of Cure are the common ones in caſe of Abſceſſes.

3. He farther conſiders mild continual Gleets, and involuntary Emiſſions of the ſeminal Fluid.

He tells us, they are of two kinds, either a perpetual, but ſlow, Running, from the too great Wideneſs of the Emiſſaries; or a more plentiful Diſcharge, which only happens when the Imagination is affected with lewd Ideas, or the Patient juſt upon the Point of Venereal Enjoyment: This kind, he ſays, is owing to the Laxity of theſe Emiſſaries; and that, of theſe two, the laſt it moſt eaſily cur'd.

As the perpetual Gleet is, in his Opinion, ſometimes encourag'd by a ſlight Inflammation of the Proſtatæ and Veſiculæ ſeminales, whence their Nerves become more ſenſible, he recommends Bleeding once or twice at firſt; by which means, he ſays, he has more than once ſeen a recent Gleet cur'd.

In like manner, as this Symptom is, for the moſt part, increas'd by the Acrimony of the ſeminal Juices, contracted from the Venereal Poiſon, or the Uſe of acrid Medicines, he adviſes Sweeteners, and a Milk-diet.

The Cure is to be carried on by Vulneraries, Balſamics, and Styptics, externally and internally.

In the mean time, he recommends a thin, moiſtening, and refrigerating Diet; forbids the Uſe of Wine, Venery, violent Exerciſes, and particularly Riding; at leaſt, he would have the Patient to be very moderate in theſe Articles. He adviſes him not to retain his Water long; and, if his Belly is not ſufficiently open, he recommends frequent Clyſters.

Women, he tells us, are ſubject to the ſame Diſeaſe, and to be cur'd the ſame way.

4. The next Symptom, which ſucceeds a Gonorrhœa, is an obſtinate Strangury.

This Symptom, he ſays, by Drinking, Venery, Exerciſe, Riding, Walking, an acrimonious Diet, or violent Paſſions, is ſometimes aggravated into an Iſchury.

The Cauſes of this Strangury are, 1. Callous Ulcers of the Urethra. 2. Hard Cicatrices there. 3. Caruncles. 4. The Caput Gallinaginis becomes ſcirrhous or verrucoſe. 5. The Proſtatæ, or Veſiculæ ſeminales, become hard, callous, or ſcirrhous. 6. Or ſpungy and fungous. From all which Cauſes the Cavity of the Urethra, he ſays, is leſſen'd; and a Strangury, of courſe, produced, from the violent Impulſe of the Urine upon the Obſtructions in the Urethra; and the more ſo, if theſe Obſtacles are any way inflam'd or ulcerated.

This Symptom, for obvious Reaſons, is, he ſays, rarely met with in Women; though, he tells us, he has ſometimes ſeen a Strangury in that Sex, from a Compreſſion of the Urethra, by means of a Calloſity and Tumor of the ſurrounding Glands; and once from a Diſcharge of acrid Pus from the ſuppurated Glands into the Urethra.

The different Cauſes of this Symptom are to be diſtinguiſh'd, but, he owns, with no great Certainty, by the Matter which is diſcharg'd after the Urine, as whether it be Pus or Mucus; and by the Catheter, by which, from the Quality of the Matter that appears upon it, one may judge of the State of the Parts, but eſpecially of the Number and Size of the Obſtacles.

As for the Prognoſtic, our Author ſays, this Symptom is always difficult of Cure, becauſe of the Nature of the Obſtacles, and always preſages Danger from an Iſchury.

He begins with the Cure of the Iſchury, which is to be attempted by bleeding once every four Hours, and the antiphlogiſtic Regimen, and the Application of Emollients to the Perinæum; and, where the Caſe is very urgent, by the cautious Introduction of the Catheter, which muſt remain in the Paſſage, till the Inflammation of the Urethra is either reſolv'd or ſuppurated.

Where the Catheter cannot be introduced, and a Gangrene is threaten'd, he adviſes cutting upon the Extremity of the Catheter, after it is thruſt in, as far as it will go, introducing, by the Wound, a ſtraight Catheter into the Bladder.

But, if neither of theſe Methods ſucceed, he adviſes to thruſt the Trocar, by a Wound of the Perinæum, into the Bladder; according to the Direction of the Urethra.

In the Cure of the Strangury, he, for very good Reaſons, rejects the now obſolete Uſe of Catheretics; as alſo the Practice

ctice of laying open the Urethra, for the ſake of deſtroying the Obſtacles by proper Applications.

In the next Place, he takes notice of the Method, by introducing Tents into the Urethra, which he approves much of, and, to the Honour of this Method, ſays, that it effectually mitigates, by a ſafe and eaſy, though ſlow Way, the moſt obſtinate Stranguries; but he finds Fault with it upon account of the troubleſome Apparatus; and, for this Reaſon, beſides, that as theſe Tents only fill and dilate one Part of the Urethra, the other Parts muſt ſuffer a greater Coarctation.

For theſe Reaſons, he prefers to this Method the Introduction of leaden Rods, anointed with Oil of ſweet Almonds, or freſh Butter, every Day, through the Urethra, into the Bladder, to remain in the Paſſage for three or four Hours every time, beginning with a very ſmall one; and, as ſoon as that can be introduc'd and taken out again without Pain, changing it for one of a Size larger; proceeding thus till the Obſtructions are all depreſs'd, and the Strangury remov'd.

But, as theſe Obſtacles are very ſubject to ariſe again, he ſays, this Operation ought to be perform'd after the Symptom diſappears, two or three times a Week, and afterwards three or four times a Month. But, after all, he ſays, this Symptom is rather to be palliated, than perfectly cur'd.

In the mean time, that this Method may be us'd with the greater Safety and Succeſs, he gives the following Cautions:

That the Venereal Poiſon be ſubdu'd by antivenereal Specifics, before this Method be attempted; that you chuſe, if poſſible, the Spring or Autumn for it, becauſe the Parts are then the moſt yielding; that you firſt correct the Acrimony of the Juices by bleeding, purging, and refrigerating Decoctions, and the Uſe of Whey; that the Patient, all the time of the Cure, abſtain from Wine, Venery, and Exerciſe, and uſe a refrigerating low Diet, and apply emollient Fomentations to the Perinæum; that the leaden Rods be choſen, ſuch as have not the leaſt Crack upon them, leſt, breaking, they ſhould occaſion a Neceſſity of laying open the Urethra; that they be introduc'd very cautiouſly and deliberately, becauſe, ſays he, it is found by Experience, that if they ſtrike rudely upon the Obſtacles, the Patient is preſently ſeiz'd with a ſudden Horripilation, and a violent ephemerous Fever; if this happens, that a Vein be immediately open'd; that, if there is a violent Dyſury, or ſharp Pain, that Symptom be reliev'd by anodyne, or even narcotic, Injections; that, if there are any Ulcers, they be deterg'd and heal'd by proper Injections; and, in the laſt Place, that the Remains of the Diſeaſe be carried off by the Uſe of Aſſes or Cows Milk, or the mineral Waters; and, where there is any Diſcharge of Mucus or Sanies, that it be dry'd up by proper Injections. *Aſtruc de Morbis Venereis.*

With reſpect to Caruncles, which are exceſſively troubleſome, and difficult of Cure, *Heiſter* aſſigns the following Cauſes, and propoſes the ſubſequent Methods of Treatment.

Men who have been affected with a Gonorrhœa, or an Ulceration of the Urethra, ſometimes find an uncommon Difficulty in making Water, ſo that they cannot void it without Straining, and violent Pains, and then only in a Stream no larger than a Thread; and, ſometimes, the Paſſage is even totally obſtructed. This was attributed to a Caruncle in the Urethra, till, very lately, *Brunner*, Phyſician to the Elector *Palatine*, and *Dionis*, in his Surgery, rejecting this Opinion, aſcrib'd it rather to a Cicatrix remaining after the Cure of an Ulcer, which proceeded from a Gonorrhœa; and this is confirm'd by many Inſtances of dead Bodies which have been opened. But *Arnaud* and *Petit* impute it to a Tumor form'd in the ſpongy or cavernous Body of the Urethra itſelf, (as happens to the Membranes of the Noſe in a Coryza) which ſtops that Paſſage. However, ſome oppoſe the Experience of one Party to that of the other, and contend for the former Opinion. Laſtly, *Benevoli*, a Surgeon of *Florence*, diſſents from both: He declares, in a Treatiſe on that Subject, that he always found the Part of the Urethra or Proſtatæ, which Anatomiſts call *Caput Gallinaginis*, tumefied and ulcerated, but could never yet find the Urine obſtructed by a Caruncle in the Cavity of the Urethra, and that the Obſtruction was always proportionable to the Quantity of Pus lodg'd in the Caput Gallinaginis. This Diſorder, he ſays, generally ariſes from a virulent Gonorrhœa; and that in the Beginning, as well as at the latter End, there is a conſtant Diſcharge of purulent Matter and Fibres with the Urine. For my own Part, I muſt acknowledge, there may be Truth in each of theſe Opinions, as the ſame Diſorder may ſpring from different Cauſes. But the true Cauſe is immaterial, ſince the Method of Cure is the ſame. The Surgeon may ſoon determine, whether it ariſes from a Caruncle, by the Patient's own Account. For, in that Caſe, the Obſtruction is not ſo ſudden, but the Paſſage decreaſes gradually, till it is totally cloſed up, and there is a continual Endeavour to diſcharge the Urine from the perpetual Irritation of the foreign Body in the Urethra; the Urine, alſo, carries off with it purulent Matter, or Fibres, and Membranes. Sometimes it is attended with a ſlight Fever. The Seat of this Diſorder may be diſcover'd by paſſing a Catheter, leaden Probe, or Wax-candle, into the Urethra; for wherever the Inſtrument meets with any extraordinary Reſiſtance, there we ſuppoſe it lies. Laſtly, as this Diſeaſe is very painful, and ſometimes mortal, it will be proper to direct Methods for the Cure of it.

If the Caruncle is recent, without any great Stricture in the Urethra, the following Method will perfect a Cure. The Patient ſhould be ſeated on a Couch or Bed, and, while the Surgeon holds the Penis in his Left Hand, he muſt, with his Right, introduce a leaden Probe, or Wax-candle, about a Foot long, and the Thickneſs of a large Catheter, dipt in Oil, into the Urethra, as far as, or, indeed, ſomewhat beyond, the Obſtacle: This muſt be ſecur'd with a proper Bandage, and left there for ſome Days, till the Urethra appears to be pervious, or the Progreſs of the Diſorder check'd. When the Patient would make Water, the Probe or Candle muſt be extracted, and then inſerted again, till the Cure is completed. But if it is ſo inveterate as not to yield to the preceding Method, it will be proper to dreſs the End of the Probe or Candle with white Vitriol, burnt Alum, red Precipitate, Unguentum Fuſcum, or Ægyptiacum, or any other gently corroding Medicine. This ſhould be repeated once or twice, till there is a free Paſſage open'd for the Urine: We have many Inſtances of Cures perform'd in this manner. But *Brunner* and *Benevoli*, who deny that this Diſeaſe proceeds from a Caruncle, condemn this Practice, becauſe by it the Urethra is corroded and ulcerated; and I join with them, where there is no Caruncle, and prefer a Continuation of the former gentle Method. The Patient ſhould always diſcharge his Urine, before the Inſertion of the leaden Probe, or Wax-candle, that it may remain the longer without Extraction, and more effectually compreſs or dilate the Parts. This is to be continued till the Paſſage is entirely open'd; and, when the Diſeaſe has been of long ſtanding, even after an abſolute Cure, it may be neceſſary to keep a Tent conſtantly, for a few Weeks, in the Urethra, or, at leaſt, to introduce one at Intervals, that the Parts may continue pervious. *Benevoli* adviſes to involve the End of the Probe in the Emplaſtrum Diapalmæ, that the Part affected may be more ſecurely heal'd. Mean time Injections of Lime, or Plantain-water, with a little Sugar of Lead, or the *Lapis Medicamentoſus* of *Crollius*, are to be thrown up the Urethra.

When the Paſſage of the Urethra is entirely obſtructed without an Inflammation, the Catheter will give Relief. If this Inſtrument cannot be paſſed gently, it muſt be ſtrongly, but cautiouſly, preſs'd and twiſted, to break the Caruncle or Cicatrix, and dilate the Parts. After the Urine is diſcharg'd, a leaden Probe, or Wax-candle, dipt in Oil of Eggs, or of ſweet Almonds, may be paſſed into the Urethra, to keep it open. But if, on account of an Inflammation, the Catheter cannot be introduc'd, and the Patient's Life is in Danger, recourſe muſt be had to the following Remedy: The Bladder is to be open'd by the Trocar, either in the Perinæum, or above the Os Pubis, which we ſhall explain at large under the Article ISCHURIA. When the Bladder is thus open'd, and the Urine diſcharg'd through the Pipe left in it, the Surgeon proceeds to the Cure, by Methods already propoſed. When the natural Paſſage is free, the Tube may be extracted, and the Wound heal'd.

If there is a violent Inflammation of the Urethra, neither the Catheter, Probe, nor Wax-candle, ſhould be introduc'd, as they would increaſe it; but the Patient ſhould be bled plentifully, and order'd diſcutient Medicines internally and externally; and, in particular, the Parts affected ſhould be treated externally with diſcutient Fomentations and Cataplaſms; and, when the Inflammation abates, the Surgeon may dilate the Paſſage, by introducing the Catheter, Probe, or Candle, and retaining them in the Paſſage for ſeveral Days. When the Inflammation is ſlight, the Urine may be drawn off by the Catheter.

Great Care muſt be taken not to thruſt the Wax-candle into the Bladder; for a broken Piece, remaining there, may lay a Foundation for a future Stone. When the Difficulty of diſcharging the Urine proceeds from a Diſorder in the Bladder itſelf, as an Excreſcence, Abſceſs, or Ulcer, or an Induration of its Neck, or the Proſtatæ, it is very ſeldom curable: For the Probe, Candle, and all corroſive Medicines, are not only uſeleſs, but pernicious. On the contrary, when the Urine is obſtructed by a Tumor, Ulcer, or Cicatrix, in the Urethra, the Probe or Candle, dipt in Oil, is the propereſt Remedy: The Cicatrix, indeed, is the moſt difficult to remove; though *Benevoli* aſſures us, from his own Experience, that it is to be done by this Method; and, as we are at preſent unacquainted with a better, we muſt purſue it. *Heiſter Chirurg.*

Thus have I given an Account of the Methods propos'd by the moſt rational and celebrated Authors for the Cure of a Gonorrhœa. But, with reſpect to a benign Gonorrhœa, I muſt remark, that the moſt formidable and frequent Species of this is, when the retaining Veſſels of the Organs of Gene-

ration are so extremely relax'd, as to permit the seminal Juices to pass off, upon the slightest Stimulus, as a lascious Idea, or Conversation with a Woman; though this is frequently attended with a continual Weeping or Gleet. When this is the Case, an ignominious Impotence, as to Venereal Enjoyments, is induc'd, which scarcely ever admits of a perfect Cure.

There is, perhaps, no Sin, productive of so many hideous Consequences, as that which is the general Cause of the Imbecillity here mention'd. Providence has implanted in human Nature, what is by some call'd the Passion of Love; and, by others, the Appetite of Lust, for very wise Purposes; but has given us Reason to restrain this necessary Inclination, and keep it within due Limits. Every Day, however, furnishes us with Cases, which evince, that Reason is not always a Balance against the Appetites; for Boys, regardless, or, perhaps, ignorant of the Consequences, too frequently indulge themselves in a prepostrous Method of Venery; and it is to be suspected, that many more advanc'd in Age, who are long immur'd in Colleges and Cloisters, and at last elope from their Cells, utterly destitute of Science, and equally unacquainted with the World and Books, are not less guilty of this enormous Vice. These, by a most detestable kind of Magic, conjure up, at Pleasure, an ideal *Venus*, and thus never want an Opportunity of enjoying an imaginary Mistress. The frequent Repetition of these execrable Pleasures weakens the Tone of the retaining seminal Organs, and induces the worst Species of a Gonorrhœa, attended with an utter Impotence, as to real Enjoyments. If such are, afterwards, so wicked as to marry, for so I must call it, the Consequences of their preceding illicit Practices, are extended to Families, and the Public, for Reasons too obvious to require farther Explanation.

Cold Embrocations of the genital Parts, and those adjacent, with old Verjuice diluted with Water, have been much recommended; and wrapping up the Parts perpetually in Cloths impregnated with the same, are said to do great Service, and may possibly have good Effects; but I have known more Relief from a long-continued Use of the cold chalybeate Waters drank at the Fountain-head, together with a due Course of strengthening and astringent Remedies, both externally and internally apply'd, than from any other Method.

GONOS, γόνος. The same as Gone; which see.

GONYALGIA, γονυαλγία, from γόνυ, the Knee, and ἄλγος, Pain; is the same as Gonagra.

GOR, according to *Scaliger Exercit.* is a Tree growing by the River *Niger*, and bearing a Fruit like the Chestnut, but bitter. *Jo. Leo* tells us, that these Trees are of an extraordinary Tallness, and grow at a great Distance from the Sea, on the Continent. *Ray H. P.*

GORAS. The Name of the Person, who, as we are inform'd by *Oribasius*, *Med. Col. Lib.* 1. *Cap.* 40. introduc'd a Flesh-diet among the Athletæ, who before dieted themselves on *Caricæ*.

GORGONEI FONTES. Fountains of a petrefying Quality. *Libavius*, *Art. Chym.*

GORGONIAS. A Name given to Coral; because on its Change of Place from Water to Air it immediately hardens into a stony Substance. The Reason of the two last Names is taken from the well-known Story of the *Gorgon*.

GOSSAMPINUS, *Plin. Arbor lanigera G. Pison.* A Tree in the *East Indies*, producing a sort of Wool or Cotton, which is too short to be spun or carded, but only serves to stuff Beds, for which Use it is very proper, being very fine, soft, and light. In medicinal Use it is good to recal Heat and Spirits into the Parts to which it is apply'd, and is proper for the Palsy, and to heat the Stomach, being apply'd thereto. The Tree takes its Name from *Gossipium*, Cotton, and *Pinus*, a Pine-tree, because it has some Resemblance of a Pine, and bears a sort of Cotton.

GOSSIPIUM, Cotton. See Xylon.

GOSSUM. The same as Botium, or Bronchocele.

GOTNEMSEGIAR. A Name for the Xylon arboreum. *Boerhaave*, *Ind. alt. Plant.*

GOTTE. The same as Gutta Gamba.

GOUDBOOM. A Name for the *Conocarpodendron*; *folio crasso, nervoso, lanuginoso, supra crenato, ibique limbo rubro*; *flore aureo*; *Cono facile deciduo*.

GRACILIS. The Name of a Muscle of the Leg, which, *Douglas* says, arises by a thin and broad Tendon from the Os Pubis, near its Commissure: It soon grows fleshy, and, descending by the Inside of the Thigh, is inserted tendinous into the Inside of the Tibia near the Sartorius. Its Use is to bend the Thigh and Leg inwards.

But *Winslow* describes two Muscles under this Name; the one is the *Gracilis anterior*, otherwise called *Rectus anterior*; and the other is the *Gracilis internus*, otherwise call'd *Rectus internus*.

Gracilis anterior, sive Rectus anterior.

This Muscle is as long as the Os Femoris, and lies directly along the fore Side of the Thigh, from whence it has the Name of Rectus anterior. The greatest Part of it is fleshy, and the Middle is broader than the two Extremities. It is called *Gracilis*, from its Thinness or Flatness.

It terminates above, by a pretty strong Tendon, which is divided into two Branches; one short and strait, the other long and bent. The short Branch, running up in a strait Line, is inserted in the anterior inferior Spine of the Os Ilium. The long Branch is inflected backward over the Supercilium of the Acetabulum, and runs in the Direction thereof from the Spine toward the great ischiatic Sinus. It is strong and flat, adhering very closely to the Bone, and cover'd by the orbicular Ligament and the Glutæus Minimus; and therefore they who follow the common Method in Dissecting, often cut it off, and observe only the small Branch of the Tendon.

From thence the Muscle runs down wholly fleshy, and partly penniform, some of its Fibres meeting above, and separating below. It is narrow at the upper Extremity, and grows gradually broader toward the Middle. Afterwards it contracts again in the same manner, and at the lower Extremity of the Os Femoris ends in a flat broad Tendon.

Through its whole Course it lies between the two Vasti, and covers the Cruræus; and its inferior Tendon is inserted in the upper Edge of the Patella, from whence it sends down a small Plane of tendinous Fibres, which adhere very closely to the convex Side of that Bone, and, having reached the great Ligament, seem to be lost therein.

This Muscle, by its Insertion in the Patella, is a Congener to the *Vastus Internus*, *Externus*, and *Cruræus*; and serves to extend the Leg. By its Insertion in the Os Ilium, it bends the Thigh, and assists the Psoas, Iliacus, and Pectineus, whether the Leg be extended or bent. It likewise moves the Pelvis forward on the Os Femoris, and hinders it from falling back when we sit.

Being partly penniform, and partly simple, it is capable of sustaining great Efforts, and of producing large Motions; and its Line of Direction, which is raised to a considerable Distance from the Centre of Motion of the Hip and Knee, increases these Advantages. The particular Disposition and Largeness of its second superior Tendon answer principally to all the Degrees of Flexion.

The other Tendon, commonly describ'd, would not alone have been sufficient for that Purpose; but its Obliquity is convenient for the Extension of the Leg, when the Thigh is extended, or but little bent: But, when the Thigh is very much bent, this Obliquity would remove the small Tendon to too great a Distance from the Bone, and thereby expose it to be torn off, in the same manner as we tear off the Branch of a Tree, by separating it from the Trunk. The Obliquity here mention'd is with respect to the Os Femoris, this superior Tendon lying out of the Direction of that Bone.

Gracilis Interior, sive Rectus Interior.

This is a long thin Muscle, lying in a strait Line on the Inside of the Thigh, between the Os Pubis and the Knee; and from this Situation and Structure its Names are taken.

It is fixed in the Edge of the inferior Branch of the Os Pubis near the Symphysis, by a broad and very short Tendon, on one Side of the Insertion of the Triceps secundus, but a little lower down.

From thence the fleshy Fibres, contracting a little in Breadth, run down to the internal Condyle of the Os Femoris, where they terminate in a thin Tendon, which afterwards degenerates into a kind of Aponeurosis, and is inserted in the fore Part of the Inside of the Head of the Tibia.

This Tendon is inserted immediately below the Sartorius, by which it is partly covered, and above the Semi-tendinosus, which it partly covers, mixing some Fibres with it. Before it ends, it makes the same oblique Turn, and is braced down in the same manner as the Tendon of the Sartorius, and it sends the same kind of Aponeurosis obliquely downward, on the Inside of the Tibia.

This Muscle bends the Leg much in the same manner with the Sartorius, which it assists in this Function, but not in that of turning the Leg; and it is more proper to continue the Flexion, than to begin it, it being principally when the Thigh is turned by the Sartorius, that the Gracilis contributes to this Action.

It may likewise assist the Triceps in the Adduction of the Thigh, which it performs with much more Facility than it begins the Flexion of the Leg without the Rotation of the Thigh. This Facility in all Situations of the Thigh is procured by the Distance of the superior Insertion of this Muscle from the Joint of the Hip; but it cannot with the same Ease bend the Leg, when the Thigh is not turned; for this Reason: While the Thigh is only extended, the Line of Direction of this whole Muscle is nearly in the same Plane with the Axis of Motion of the Knee, and therefore the Distance of its superior Insertion gives it no Advantage. But, when the Thigh is turned round by the Sartorius, the Plane of its Direction changes and crosses the Axis of the Ginglymus of the Knee, and

and then the lateral Diſtance of its ſuperior Inſertion facilitates its Action on the Leg. *Winſlow's Anatomy.*

GRACULUS. Offic. Bellon. des Oyſe, 283. Charlt. Exer. 75. *Coracias.* Mer. Pin. 172. *Coracias, ſeu Pyrrhocorax.* Will. Ornith. 86. Raii Ornith. 126. Ejuſd. Synop. A. 40. Geſn. de Avib. 473. Aldrov. Ornith. 1. 769. Jonſ. de Avib. 26. THE CORNISH CHOUGH.

This Bird is found in *Cornwall*, and many other Places. Apply'd externally, it is ſaid to reſolve Tumors, and to be good againſt ſcrophulous Swellings. *Dale.*

GRÆA, γρᾶια. In *Moſchion*, either imports an old Woman; or the wrinkled Pellicle which concretes upon Milk, and ſome other Liquors, as they cool after boiling; or the wrinkled Skin about the Navel, which is a Sign of old Age.

GRAMEN, Graſs. Botaniſts mention a great many Species of Graſs. *Tournefort* takes notice of eighty-ſix, and other Authors of a great many more; for which the Curious may conſult *Sceuchzer's Agroſtographia, Tiguri*, 1719. 4*to.*

I ſhall only ſpecify in this Place thoſe Species of Graſſes, which are principally us'd in Medicine.

GRAMEN ARUNDINACEUM. Offic. *Gramen dumetorum panicula acetoſa, ſemine pappoſo.* Raii Hiſt. 2. 1287. *Gramen arundinaceum panicula ſpadicea molli majus.* C. B. P. 7. Theat. 95. Raii Synop. 3. 401. *Gramen paniculatum arundinaceum panicula denſa ſpadicea.* Tourn. Inſt. 523. *Gramen tomentoſum arundinaceum.* Ger. Emac. 9. *Gramen ſpica candida & Serici modo lucens.* J. B. 2. 476. *Calamagroſtis ſive Gramen tomentoſum.* Park. Theat. 1182. REED GRASS.

It grows in moiſt woody Places; the Root is uſed; it agrees in Virtues with the common Reed. *Dale.*

GRAMEN CANINUM. See AGROSTIS.

GRAMEN DACTYLON, Offic. *Dactylon folio arundinaceo majus.* C. B. P. 7. Theat. 112. *Dactylon radice repente ſive Officinarum.* Tourn. Inſt. 510. *Gramen Dactyloides radice repente.* Ger. Emac. 28. *Gramen repens cum paniculis graminis Mannæ.* J. B. 3. 459. Raii Hiſt. 2. 1271. Synop. 3. 399. *Gramen Canarium Iſchæmi paniculis.* Park. Theat. 1178. *Gramen legitimum Cluſii.* Tourn. Mat. Med. 101. COCK-FOOT GRASS.

It grows in Fields, Vineyards, and in ſandy Places. The Root is uſed, and its Virtues are the ſame with thoſe of the AGROSTIS. *Dale.*

GRAMEN LEUCANTHEMUM. See ALSINE.

GRAMEN MANNÆ. Offic. *Gramen mannæ eſculentum*, Ger. 25. Emac. 27. *Gramen dactylon eſculentum.* C. B. P. 8. Theat. 118. *Iſchæmon ſativum, ſive Gramen Mannæ eſculentum.* Park. Theat. 1178. *Gramen Genus Dens Caninus tertius, ſive Gramen primum, vel Galli Crus.* J. B. 2. 444. MANNA-GRASS, RUSSIA-SEED.

It grows in *Germany* and *Poland.* The only Parts in Uſe are its Seeds, which are ſmall, oblong, pellucid, white, of a faint Taſte; and, when decorticated, not unlike Rice. Theſe Seeds are poſſeſs'd of the ſame Qualities with Rice, are moderately aſtringent, reſolve hard Tumors of the Breaſts, and, when uſed as Aliments, are moderately nutritive. *Matthiolus.* They are, alſo, ſaid to be highly efficacious in the Cure of the Rickets in Children.

But of what Plant theſe are the Seeds, is a Point not agreed upon by the Literati of the preſent Age, ſome imagining, that theſe Seeds are the granulated Pitch of a certain Palm, which is pretty much of the ſame Nature with Sago; whilſt others maintain, that they are the Seeds of the Manna-graſs, with whom I agree, and have therefore call'd them ſo: In this Opinion I was lately very much confirm'd by that ingenious Botaniſt *Johannes Philippus Breynius*, when in *England*. *Dale's Pharmacologia.*

GRAMEN PARNASSI. See PARNASSIA PALUSTRIS ET VULGARIS.

GRAMIA. The Sordes of the Eyes.

GRAMINULÆ are young Frogs, not yet furniſh'd with Feet; Tadpoles.

GRAMMA, γράμμα. A Scruple, with reſpect to Weights, thus called, becauſe it is the twenty-fourth Part of an Ounce, as a Letter bears the ſame Proportion to the Alphabet.

GRAMME, γραμμή. The *Iris* of the Eye.

GRANA. The ſame as MIGRANA.

GRANA *Cnidia.* See CNIDIA.

GRANA *Paradiſi.* See CARDAMOMUM MAXIMUM.

GRANA *Tiglia.* See LIGNUM MOLUCCENSE.

GRANA *Tinctorum.* See CHERMES.

GRANADILLA. The *Paſſion Flower.*

The Characters are;

The Calyx is, firſt, triphyllous; from whence proceeds a ſhort Pedicle, and from that a quinquefoliated Calyx, which cloſely embraces the Flower; and afterwards expands in form of a Star. The Flower is roſaceous, pentapetalous, and expanded like a Star; within the Petals are many party-colour'd Filaments, diſpos'd in a Circle, and after them minute Leaves, in an erect Poſition. Within theſe ariſes the Axis, or Pointal, ſurrounded, at firſt, by five expanded Stamina, which grow to it, are diſpoſed circularly, and furniſh'd with appendent, verſatile Teſticuli; next to theſe is ſeated the Ovary, of an oval Form; on whoſe Apex grow three Tubes, with ſcabrous obtuſe Apices, and inclining towards the ſubjacent Teſticuli. The Fruit is oval, or globous, carnous, unicapſular, and full of Seeds, which are affix'd to Ribs, as to Placentæ, and involv'd in a Calyptra.

Boerhaave mentions ten Species of this Plant, which are,

1. Granadilla; pentaphyllos; flore cœruleo, magno.
2. Granadilla; pentaphyllos; latioribus foliis; flore cœruleo, magno.
3. Granadilla Hiſpanis; Flos Paſſionis Italis.
4. Granadilla; folio tricuſpide; flore parvo, flaveſcente. *T.* 240.
5. Granadilla; flore albo; fructu reticulato.
6. Granadilla; folio tricuſpide; flore magno, flaveſcente. *T.* 240.
7. Granadilla; pentaphyllos; anguſtifolia; flore albo. *Prægn.*
8. Granadilla; triphyllos; flore roſeo. *Prægn.*
9. Granadilla; folio tricuſpidi, obtuſo, & oculato. *Feuillier. Tom.* 2. 718.
10. Granadilla; quæ Clematitis; Indica, latifolia; flore clavato; fructu maliformi. *T.* 82. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 81.

The firſt and ſecond Species are of a very ſweet and vinous Flavour; and all the Species are refrigerating.

The *Hiſtoria Plantarum*, attributed to *Boerhaave*, informs us, that all theſe Plants are refrigerating.

Miller takes notice of ſeventeen Species.

GRANAGRANUM. An obſcure Term in *Paracelſus*'s Treatiſe *de Caduco Matricis*, the Meaning of which is not underſtood.

GRANAL. *Lemery* informs us, that this is a ſort of evergreen Plant, which grows in *America*, from the Cielings of Rooms, ſometimes not far from the Fire. The Juice is eſteem'd poiſonous; and the Plant is of no Uſe in Medicine.

GRANATRISTUM, in *Paracelſus*, is a Carbuncle.

GRANATUM. The Pomegranate. See PUNICA.

GRANATUS. Offic. Worm. 104. Schw. 380. Charlt. Foſſ. 37. Boet. 152. Schrod. 328. De Laet. 17. Mont. Exot. 14. THE GRANATE.

This is a pellucid Gem, of a yellowiſh red Colour, almoſt like that of native Cinnabar. It is ſaid, if prepar'd and taken internally, to be drying and ſtrengthening; to cure Palpitations of the Heart; and to reſiſt Melancholy and Poiſon; and to ſtop Hæmorrhages. It is, alſo, believ'd, by ſome, to have the ſame Effects, if ſuſpended about the Neck. *Schroder. Dale.*

GRANDA. A Name for the Philoſophers Stone.

GRANDEBALÆ. The Hairs which grow under the Arm-pits.

GRANDINOSUM OS. A Name for the *Os Cuboides.*

GRANDO. See CHALAZA.

GRANULATIO. A Granulation, that is, a Reduction of Metals into ſmall Grains.

GRANUM. A Grain. With reſpect to Weight, it is the twentieth Part of a Scruple.

GRAPHIOIDES. γραφιοειδής. A Name for the Styliform Proceſs. See CAPUT.

GRAPHISCUS. γραφίσκος. The Name of an Inſtrument, invented by the celebrated *Diocles*, for extracting Darts. It is deſcrib'd by *Celſus*, *L.* 7. *C.* 1.

GRASSA. Borax.

GRATIA DEI. A Name for the *Geranium*; *Batrachioides.*

GRATIOLA. A Name for the *Digitalis*; *minima*; *Gratiola dicta.*

GRAVATIVUS. An Epithet for a ſort of Pain attended with a Senſation of Weight. See DOLOR.

GRAVEDO imports a Pain in the Head, with a Senſation of Heavineſs; and is, alſo, the ſame as CATARRHUS, or CORYZA.

GRAUS, γραῦς. The ſame as GRÆA; which ſee.

GRAVUS. A Marble, or Porphyry, us'd in Pharmaceutical Operations.

GRESSURA. The Part interpos'd betwixt the *Pudenda* and *Anus.*

GRIGALLUS. The Buſtard. *Lemery* ſays there are two Species, one call'd the *Grigallus major*, which is very large; the other the *Grigallus minor*, which is ſomething larger than a Partridge. Theſe Birds are eſteem'd aperient, and good for the Nephritic Colic. The Brain is eſteem'd good to increaſe the ſeminal Juices.

As the Buſtard lives entirely on Vegetables and Water, and its habitual Exerciſe is not very great, the Salts ſhould not ſeem to be very highly exalted.

GRIPHOMENOS, γριφόμενος, from γρίφος, or γρίπος, a Net. Implicated. In the firſt Book of the Prorrhetics of *Hippocrates*, Text 100. γριφόμενα, is an Epithet for ἀλγήματα, Pains; where it ſeems to import no more than Pains removing from the Loins, and ſeizing upon, or being fix'd on, the *Hypochondria.*

GROSSULARIA. The Gooſeberry Buſh. This is a Plant too well known to want a Deſcription. *Boerhaave* enumerates ſeven Species, and *Miller* nine.

Groſſularia; ſpinoſa ſativa. *C. B. P.* 455. *Tourn. Inſt.* 639. *Boerh. Ind. A.* 2. 153. *Groſſularia, Uva criſpa*, Offic. Raii Hiſt. 2. 1484. *Groſſularia.* Park. Theat. 1560. *Uva criſpa.* Ger. 1143. Emac. 1324. *Uva criſpa, ſive Groſſularia.* J. B. 1. 47. Parkinſ. Parad. 560. THE GOOSEBERRY BUSH.

This Buſh is cultivated in Gardens, flowers in *April*, and yields ripe Fruit in *July*. No Parts of it are in Uſe, except the Fruit, which, when unripe, as alſo that of the *Egyptian* Thorn, is ſaid to be effectual againſt the prepoſterous Appetite of pregnant Women, to excite the Appetite, and to ſtop Fluxes. Theſe Berries, when boil'd in Liquors, are advantageouſly exhibited in feveriſh Indiſpoſitions: And, when ripe, they are innocent and friendly to the Stomach. *Dale's Pharmacologia.*

They are not good for melancholy Perſons; they ſometimes incommode the Stomach, prick and contract it a little too much, eſpecially when they are green.

They have a great deal of Oil, eſſential Salt, and Phlegm, in them; they are very good in hot Weather for young bilious and ſanguine Perſons.

Gooſeberries, in the Beginning, are green, and of an acid Taſte, becauſe the acid Salt, contain'd therein in a large Proportion, is not yet encumbred with Sulphurs, and thus it can operate upon the Nerves of the Tongue very powerfully; inſomuch that this Salt, being at that time united with nothing elſe but ſome Proportion of Earth, excites an aſtringent and ſtyptic Senſation; whereas afterwards the little Oil contain'd in the Gooſeberries, which before was kept back by paſſive Principles, gets looſe, riſes, and, by the Help of Fermentation, unites itſelf with the Salts, and diveſts them partly of their Strength; then it is that Gooſeberries are ripe, when they have a ſweet Smell, and yelloviſh Colour: From whence we may conclude, that the riper Gooſeberries are, they are ſo much the leſs aſtringent; and ſo, when you have a mind to have Gooſeberries preſerved, the green are to be prefer'd before thoſe that are ripe.

The ſaid eſſential Salt, wherewith Gooſeberries abound, is the Cauſe of the principal Effects wrought by them. In ſhort, they would not create an Appetite, were it not that this Salt lightly pricks the little Fibres of the Stomach; they would not cool, and be good for People ſick of Fevers, and be endu'd with the little Virtues, but becauſe this Salt, by imparting a little more Conſiſtence to the Humours, ſtops their violent and impetuous Motion. *Lemery on Foods.*

GROSSUS. An unripe Fig.

GRUMA. The Tartar of Wine. *Rulandus.*

GRUMUS. A Grume, or concreted Clot of Blood, Milk, or any other Subſtance.

GRUS. Offic. Schrod. 5. 319. Will. Ornith. 199. Raii Ornith. 274. Ejuſd. Synop. Avium 95. Geſn. de Avib. 494. Aldrov. Ornith. 3. 324. Jonſ. de Avib. 114. Charlt. Exer. 114. Mer. Pin. 185. Bellon. des Oyſe 188. THE CRANE.

The Whole of this Bird, its Fat, its Gall, its Head, its Eyes, its Stomach, and the Marrow of its Legs, are us'd. The Bird itſelf, becauſe nervous, is ſaid to be highly beneficial to the nervous and membranous Parts; hence the Uſe of it is recommended in Colic Pains. Its Fat, if dropt into the Ears, leſſens Deafneſs, ſoftens Hardneſs, and obſtinate Tumors of the Spleen; it quickly relieves a Stiffneſs of the Neck, and is ſaid to be of the ſame Nature with the Fat of a Gooſe. The Gall is beneficial to the Eyes. The Head, Eyes, and Stomach, when reduc'd to a Powder, are ſprinkled upon Fiſtulas, Cancers, and varicoſe Ulcers. An ophthalmic Ointment is prepar'd of the Marrow of the Legs. *Schrod.*

GRUTUM. A ſort of groſs Oatmeal. *Lemery des Drogues.*

GRYALI *Collyrium.* An exterſory *Collyrium*, deſcrib'd by *Aetius, Tetrabib.* 2. *Serm.* 1. *C.* 110.

GRYGALLUS. See GRIGALLUS.

GRYLLUS. Offic. Mer. Pin. 200. *Gryllus domeſticus*, Schrod. 5. 342. Raii Inſect. 63. Aldrov. de Inſect. 442. Charlt. Exer. 44. Jonſ. Inſect. 65. THE CRICKET.

This is an Inſect with Wings, of a ruſty Colour, an Inhabitant of the Fire, and highly officious with its ſqueaking Notes. The Aſhes of it exhibited, are ſaid to be diuretic; the expreſs'd Juice, dropt into the Eyes, is a Remedy for Weakneſs of the Sight, and alleviates Diſorders of the Tonſils, if rub'd on them. *Schrod. Dale.*

GRYPA. The Name of an Ointment, deſcrib'd by *Nicolaus Myrepſus, Sect.* 3. *Cap.* 43.

GRYPALOPEX, γρυπαλώπηξ. This Word occurs in *Hippocrates Epidem. L.* 6. *Sect.* 8. *Aphoriſm*, 52. and ſeems to be the additional Name of a Man.

GRYPHIUS PES. The Name of an Inſtrument mention'd by *Paré*, in his Surgery, *Lib.* 24. *Cap.* 35. for extracting a Mole out of the Uterus.

GRYPHUS. A Name for the Philoſophers Stone.

GRYPOSIS, γρύωσις. An Incurvation of the Nails. *Cœlius Aurelianus.*

GUABAM. The Name of a ſweet and cooling Fruit, which grows in the *Weſt Indies*. It is about two Palms long, has a cineritious Rind, and a white Pulp, intermix'd with ſome hard Nuclei. *Raii Hiſt. Plant.*

GUACATANA, *Scrophularia Indica.* Park. *Folio affinis Guacatane.* C. B. The Name of a Plant, which grows in *New Spain.*

It is effectual in the Hæmorrhoids. The Method of uſing it is, firſt, to boil the Plant in Wine, or, if the Diſorder be attended with Heat, in Water, and waſh the Parts therewith; then gently to dry them, and afterwards to ſprinkle them with the Powder of the ſame Plant. It alſo mitigates Pains proceeding from Cold, and Flatulences, in any Part of the Body, the Place affected being firſt anointed with Roſin; then ſprinkled with a very fine Powder of this Plant, and a Linen Cloth applied upon the ſame. *Raii Hiſt. Plant.*

GUAJABO. See GUAJAVA.

GUAIABARA. The Name of a Tree that grows in *Hiſpaniola*, which the *Spaniards* call *Ubero.* The Leaves are very large, and are us'd, by the Inhabitants, inſtead of Paper.

GUAJACANA.

The Characters are;

The Leaves grow alternately, and are caducous; the Calyx is quadrifid, the Flowers monopetalous, Bell-ſhap'd, tubulous in the lower Part, with the upper generally expanded into five Lobes or Segments. The Ovary is ſeated in the Centre of the Calyx, and becomes a flat, ſoft, roundiſh, multicapſular Fruit, ſupported by an expanded tetaphyllous Calyx, and containing ſeveral hard Seeds, diſpoſed in a circular Order.

Boerhaave mentions three Species of this Plant; which are,

1. Guajacana. *J. B.* 1. 238. *H. Eyſt. Vern. o. Arb. & Fruct. F.* 13. *Fig.* 1. *Lotus Africana, latifolia.* C. B. P. 447. *Dioſpyros, ſive Faba Græca latifolia Pſeudolotus Matthioli.* Lugd. 349. *Guajacum Patavinum.* Park. Theat. 1522.

2. Guajacana; anguſtiore folio. *T.* 600. *Lotus, Africana, anguſtifolia, ſeu Fœmina.* C. B. P. 447. *Dioſpyros, ſive Faba Græca, anguſtifolia, ſeu Lotus Africana.* Lugd. 349. *Guajacum Patavinum, anguſtioribus foliis.* Park. Th. 1523.

3. Guajacana? Piſhamin Virginianum. *Park. Th.* 1523.

The Leaves and Fruit are aſtringent, and therefore good in Hæmorrhages and Diarrhœas. *Hiſt. Plant. aſcript. Boerh. p.* 657.

GUAIACUM. Offic. Ger. Emac. 1611. Raii Hiſt. 2. 1685. *Guajacum, ſive Lignum ſanctum*, Park. Theat. 1586. *Guaiacum magna matrice.* C. B. Pin. 448. *Fructus Guaiaci putatus & folia.* J. B. 1. 499. GUAIACUM, or POCK-WOOD.

This is a large Tree, having a hard, brittle, browniſh Bark, not very thick, covering over a firm, ſolid, ponderous Wood, appearing very reſinous, of a blackiſh yellow Colour in the Middle, of a hot and ſomewhat aromatic Taſte; the ſmaller Branches have their Bark of a whitiſh Aſh-colour, full of ſhort pinnated Leaves, each conſiſting uſually of four oval ſhining firm Pinnæ, having never an odd one at the End. The Flowers grow ſeveral together in ſmall Umbels, each of ſix little yellow Leaves full of Stamina, having the Embryo of the Fruit in the Middle, which, when ſmall, is in Shape like the Seed-veſſel of Shepherd's-purſe, or an Heart with a ſharp Point at the End. This Tree grows in *Jamaica*, and other Parts of the *Weſt Indies. Miller's Bot. Off.*

Ulric Hutten, who, in the Year 1519. wrote a Treatiſe of the Method of curing the Lues Venerea, by the Uſe of Guaiacum, tells us, that the Remedy was known in *Europe* two Years before; but, if we may believe *Braſſavolus*, it was not brought into theſe Parts before the Year 1525: And the Occaſion of its Introduction, as he informs us, was as follows: "There was, he ſays, one *Gonſalvo*, a *Spaniard*, who was "terribly afflicted with the Venereal Diſeaſe; and, having "tried all manner of Remedies, to no Purpoſe, being mov'd "with the Fame of this celebrated Medicine, took a Voyage, "in Company with others, to the newly diſcover'd Countries, "and was there perfectly cur'd; after which he return'd to "*Portugal*, profeſs'd Medicine, and cur'd all thoſe who were "infected with the before-mention'd Diſtemper, by the Uſe "of the ſame Remedy with which he was cur'd by an *Indian* "Phyſician." But *Hutten*, in the before-mention'd Treatiſe, ſays, "That a certain *Spaniſh* Nobleman, who was Receiver-"general of *Hiſpaniola*, and miſerably afflicted with this "Lues, being ſhew'd this Remedy by the Natives, firſt brought "it in Uſe in *Spain*, tho' very dubious whether it would have "the ſame Effects in a foreign Country as in its native Soil." But, by whom, or by what means ſoever Guaiacum came firſt to be known, it is unanimouſly agreed, by all the Authors of that Age, that we are obliged for this Remedy to the *Weſt Indies*, where the Diſtemper was firſt contracted.

There are two Species of Indian Wood adapted to the Cure of the Lues Venerea; one of them ſolid, denſe, reſinous, blackiſh,

blackiſh, conſiſting of variouſly complicated Fibres, of an acrimonious, bitteriſh, and aromatic Taſte, and of a fragrant Smell; this the *Americans* call *Hiacan*, or *Huiacan*; whence comes the *European* Name *Guaiacum*: The other, in Denſeneſs, Complication of Fibres, Taſte, and Smell, is very much like the other, but of a more whitiſh, or rather a more yelowiſh Colour; this the Natives call *Hoaxecan*, and the *Europeans Lignum Sanctum*, for its extraordinary Virtue. The Bark of both of them is ligneous, thin, hard, conſiſting of a Multitude of parallel and cloſely compacted Laminæ; on the Outſide, of an Aſh-colour, inclining to red, of an acrimonious and bitteriſh Taſte, and almoſt void of Smell.

The Trees, producing theſe Woods, differ not only in Age, as was the Opinion formerly, and many ſtill imagine, but alſo in Kind or Species, as has been demonſtrated particularly by *Plukenet* in his *Phytographia*. Both Sorts are now common in the *Leeward* Iſlands, and all that Part of *America* which lies under the Torrid Zone.

The antient Way of making a Decoction of *Guaiacum* moſt in Uſe was, to take a Pound, or twelve Ounces, of the thin Chips or Raſpings of the Wood, and infuſe it in eight, ten, or twelve Pints of Water, for the Space of four-and-twenty Hours, in a new earthen Pot. Then the Veſſel being well ſtopt, they boil'd it *in Diplomate*, (that is, by ſetting the Pot in a Furnace full of Water) to the Conſumption of a fourth or third Part, or even of half, as they would have the Decoction of more or leſs Strength, or as they thought moſt agreeable to the Strength and Temperament of the Patient, or the Violence of the Diſeaſe; this done, they ſtrain'd the Decoction, and, letting it cool, bottled it up for Uſe. To the Wood left in the Pot, they pour'd the ſame Number of Pints of Water as before; and then boil'd it over a gentle Fire, to the Conſumption of a fourth Part; then ſtrain'd it, and ſet aſide this ſecondary Decoction, or *Bochetum*, in Glaſs Bottles, as they did the firſt: This latter ſerv'd for ordinary Drink, as the firſt did for Medicine.

Whether the Wood of Guaiacum without the Bark, or the Bark without the Wood, or both together; or whether Guaiacum alone, or in Conjunction with other Woods, Roots, or Plants, of the ſame Nature, are to be uſed; or whether the Decoction is to be made in Wine or Water, or in a Decoction or diſtil'd Waters of ſome Plants of much the ſame Kind, has been matter of Diſpute among the Phyſicians in former Times, and manag'd with much Heat; but it is impoſſible to fix any certain Rules for ſo doubtful and precarious a Subject, where there is ſuch a Variety in the Temperament, Age and Condition of the Patient, as well as in the Nature, Degree, and Complication of the Diſeaſe; for which Reaſon, the whole Affair is to be entruſted to the Management and Skill of the Phyſician, who is the beſt Judge of what is moſt ſuitable to the Exigences of every particular Caſe, and on emergent Occaſions.

The Decoctions being got ready, the Patient, being firſt prepar'd by ſome gentle Cathartic, and a ſparing Diet of ſome Days, was cloſely confin'd to his Chamber, which had a good Degree of Warmth, either by Art or Nature, and was well fenc'd and ſecur'd againſt the Air and Cold. The Patient, being confin'd to his Bed, took every Morning, very early, a Glaſs, which held eight or ten Ounces of the firſt Decoction warm; then, well covering himſelf up with the Bed-clothes, he compos'd himſelf to ſweat for two or three Hours. After this, the Sweat being abſterg'd, and the Body dry'd, four Hours at leaſt after the Decoction, the Patient had two or three Ounces of Biſcuit, with a few Raiſins, Almonds, or Piſtachios, offer'd him to eat, and he was to drink plentifully of the ſecondary Decoction. Four Hours afterwards he took another Glaſs of eight or ten Ounces more of the primary or firſt Decoction; then ſweated three Hours, as before; and, after wiping his Body, was allow'd to eat two or three Ounces of Biſcuit, with ſome Raiſins, Almonds, or Piſtachios, and to take off ſome Cupfuls of the ſecondary Decoction, as before. But, if the Patient was thin, attenuated, or of a tender and weakly Conſtitution, and unlikely to ſupport ſo ſevere an Abſtinence, a ſomewhat larger Quantity of Biſcuit and Raiſins, or a Marchpane, or even ſome Chicken-broth, was indulg'd him; and, after ſome Days, perhaps, he had a Quarter, or Half, of a ſmall Chicken, roaſted, or boil'd in pure Water, without Salt, allow'd him. In this Method did they perſiſt for fifteen Days; in which Space of Time, if the Belly was coſtive, an emollient Clyſter was adminiſter'd every ſecond or third Day: After the firſt fifteen Days, the Patient was purg'd with ſome gentle Cathartic, as the Pulp of Caſſia, Manna, Tamarinds, or the like; and, on ſuch Occaſions, he drank nothing but the ſecondary Decoctions for that Day. When this was over, he enter'd upon the ſame Courſe of Medicine as before, till the thirtieth or fortieth Day, but had a little larger Quantity of Food, by degrees, allow'd him; and, after the five-and-twentieth or thirtieth Day, if his Strength were ſufficient, was permitted, now-and-then, to riſe out of his Bed, and, being well clothed, to take a Turn or two about the Chamber, provided he was free from the leaſt Sweating. Towards the End of the Cure he was again purg'd; and, after that, he had the Liberty of walking out of his Chamber, not, indeed, into the open Air, but into another Room, till he was able to bear the Air. And they were very cautious of making ſudden Innovations, but took a Month longer to bring the Patient, by degrees, to his uſual Way of living; during which, he obſerv'd a Regimen of Diet, abſtain'd from Wine, and us'd the ſecondary Decoction for his ordinary Drink.

By this Method, the ſtrong Decoction of Guaiacum, which is of an acrimonious and aromatic Nature, ſuffering little or no Alteration from the very ſmall Quantity of Food in the Stomach, flow'd in great Abundance into the lacteal Veſſels, exhauſted by Abſtinence, and, pervading all Parts of the Body with a very free Current, diſſolv'd, attenuated, and fuſed, the Globules of Blood and Lymph, which were harden'd and inſpiſſated by the Virulence of the Contagion; and either alter'd and corrected the obvious contaminated Fluids, or expel'd and eliminated them by Urine or Diaphoreſis: The Viſcera alſo, in all their Parts, and the Veſſels, being macerated in that acrimonious Lixivium for forty Days together, had all their Obſtructions by degrees remov'd, and all Infarctions from adhering Humours inſenſibly deterged; ſo that the Virulence of the Venereal Contagion being ſubdu'd and eliminated, the Patients were reſtor'd to their former Health.

This Method had certainly a good Effect in many Inſtances in *Hiſpaniola* and *Spain*; and we are aſſur'd, by *N. Poll*, Phyſician to the Emperor *Charles* the Fifth, in a ſmall Treatiſe of his of the Cure of the *Lues Venerea* by *Guaiacum*, "that "the Uſe of this Decoction, near about one and the "ſame time, cured three thouſand Perſons, whoſe Caſes "were look'd upon as deſperate, and who were ſo perfectly "reſtor'd, that they ſeem'd to themſelves to have receiv'd a "new Birth." And I am perſuaded, that the Fame of this Medicine was not a little promoted by the above-quoted *Hutten*, who confeſſes himſelf to have been miſerably affected with this Diſeaſe for nine Years together, attended with moſt ſevere Pains, with a Multitude of Exoſtoſes, an ulcerous Caries of the Bones, an extreme Emaciation, and a dangerous Maraſmus: He had eleven times, he ſays, undergone a Mercurial Courſe to no Purpoſe; but that after a Multiplicity of tormenting Pains, Anxieties, and Dangers, ſcarce poſſible to be conceiv'd, he was at laſt, by the ſole Uſe of the Decoction of Guaiacum, for thirty Days together, reſtor'd to ſound and perfect Health.

But in nothing is the World more commonly miſtaken, than in paſſing a Judgment on Novelties. Thus, at firſt, the Decoction of *Guaiacum* was believ'd to be a ſure, ſafe, and harmleſs Medicine for the *Lues Venerea*, which might be us'd promiſcuouſly without Danger, and therefore it was try'd upon all indiſcriminately. But, in a ſhort time, it was found, by ſad Experience, that Multitudes, who were of an infirm Conſtitution, or of an acrimonious, bilious, and hot Temperament, or were naturally lean and dry, or were before affected with a preternatural Heat, or other Diſorders of the Lungs, Liver, Kidneys, or, laſtly, ſuch as were any way inclin'd to a Conſumption, often had the Misfortune, under ſuch a Courſe as before deſcrib'd, through too much Abſtinence, the exceſſive Acrimony of the Decoction, and the immoderate Sweats, to be exhauſted and extenuated to ſuch a Degree, as to fall into an incurable Phthiſis. "I have obſerv'd," ſays *Pet. And. Matthiolus*, in a Treatiſe of his *de Morbo Gallico*, printed in the Year 1533. "that Perſons of a dry Habit, labouring "under the *Lues Venerea*, have, by drinking this Wood, "fallen into an hectic Fever, and thence into a Con-"ſumption."

In order to prevent ſuch Miſtakes, and for avoiding all Dangers, it was thought adviſeable to mitigate the Severity of this Method. The Patient was therefore allow'd a fuller Diet, the Decoction was made weaker, and the Time for Sweating was ſhorten'd. But what were the Conſequences of this Alteration? To avoid one Error, the Practice ran into the other Extreme; by which means the Virtue of the Remedy was ſo weaken'd and depreſs'd, that it was no more found to be effectual for the Cure of the Diſeaſe; ſo that the ſame *Matthiolus*, in the foremention'd Treatiſe, complains, "that this "Wood had not the ſame ſalutary Effects as heretofore, and "that moſt of thoſe who uſed the Decoction miſs'd of their "Cure, by the Fault of thoſe who adminiſter'd the ſame," who imprudently freed their Patients from the ſevere Reſtraint of a ſtrict Diet. And thus *Guaiacum*, which was at firſt received with ſo much Applauſe, had now begun, in the Time of *Matthiolus*, to loſe its Reputation.

Boerhaave has endeavour'd to revive the Uſe of *Guaiacum* in the Cure of Venereal Diſorders, in his Preface to the Collection of Authors on the Lues Venerea; where he gives it this great Encomium, That it will perform a Cure, where a Salivation has fail'd; whereas, if Guaiacum fails, it is in vain to try a Salivation.

Beſides the Uſes of *Guaiacum* in Venereal Caſes, it is ſaid, in general, to be hot and drying, and, therefore, a great Promoter of inſenſible Perſpiration, rather than Sweat. Upon this account it is reckon'd a wonderful Sweetener and Cleanſer of the Blood, and therefore much preſcribed in cutaneous Foulneſſes of all Kinds. By the ſame hot, penetrating Quality, it alſo is eſteem'd good in the Gout, by diſſipating, and inſenſibly waſting, the Humours thrown upon the Joints; as alſo in Dropſies and Catarrhs, by drying up and waſting the ſuperfluous Humidities. Continual Experience, beyond Contradiction, demonſtrates its Uſefulneſs, in all Depravations of the Conſtitution, which ariſe from too much Humidity.

Analysis of Guaiacum.

Fill a clean glaſs Retort, almoſt up to its Neck, with the ſmall Raſpings of the beſt, green, cloſe, ponderous, and freſh Guaiacum, with Care to prevent any of it from falling thro' the Neck into the Receiver. Set the Retort in a Sand-furnace; apply a very large Receiver, and lute the Juncture cloſe, with a Luting of Linſeed-meal. Diſtil, firſt, with a Degree of Heat not exceeding that of boiling Water; and continue this carefully, ſo long as any Moiſture will be thereby driven from the Wood. A liquid, tart, and ſharply odorous Water will thus come over, which is to be poured out, and kept apart. The Receiver being now, again, luted on, increaſe the Fire, by ſlow Degrees; and, again, a conſiderably limpid, but ſomewhat more acid, unctuous, and rediſh Liquor will come over, which muſt carefully be urged with the ſame Degree of Heat, ſo long as it riſes. This, alſo, may be kept ſeparate, as being conſiderably ſtrong, odorous, and ſmelling almoſt perfectly like red Herrings. The Fire, being now raiſed and kept up, drives over a red, unctuous, and highly acid Liquor, together with a red Oil floating in a conſiderable Quantity therein: At length increaſe the Fire to the utmoſt, that the Bottom of the Iron Pot may begin to be red-hot; there will now aſcend a Smoke, and a thick, black, viſcid Oil, which ſinks to the Bottom of the former Liquor. And if this Fire be continued as ſtrong as the Glaſs will endure, without melting, the ſame Fume will conſtantly continue to riſe, how long ſoever the Fire be kept up. In the laſt Place, apply live Coals upon the Sand, all round and above the Retort, which is called a Fire of Suppreſſion; and keep this up, alſo, for ſome time, till no more Oil comes over. Now ſuffer all to cool ſpontaneouſly, and, by this laſt Extremity of the Fire, a little very thick, black, and ponderous Oil, like Pitch, will be driven over.

Make a little Filtre of Cap-paper, put it into a glaſs Funnel, and pour therein the Water which firſt came over, without any Oil, that the Strainer, being thus well moiſten'd, may tranſmit this pure Water of the Guaiacum, which is to be kept ſeparate. This Water will be tartiſh, limpid, and penetrating, but have little of the Smell or Taſte of the Guaiacum; but a ſomewhat burnt Odour, a little reſembling that of ſmok'd Herrings. Then put the ſecond Water into the ſame Filtre, and this will come through a little rediſh, tranſparent, but more acid, and ſmelling ſtronger of ſmok'd Herrings; ſo as to prove ſomewhat empyreumatic, and much ſharper than the former. And, if any Oil was lodg'd in this ſecond Water, it will remain in the Filtre; which, having been moiſten'd by the preceding Liquor, will not permit the Oil to paſs. Into the ſame Filtre pour, likewiſe, the Vinegar, and third Spirit, together with its light Oil; the Vinegar will immediately paſs through red, pellucid, ſharp, acid, and empyreumatical, but leave its Oil behind, floating upon the Liquor, in the Filtre: For which Purpoſe the Filtre muſt always be kept filling up with more of the oily Liquor, to prevent the Oil from ever touching the lower Part of the Paper; for thus nothing of the Oil will come through with the acid Liquor. When, now, nearly all the Liquor is come through, immediately remove the Funnel, with the Filtre, to another Glaſs, before the Oil begins to ſink through the Paper; which would happen when the Paper begins to grow dry. At this time, therefore, the light and thin Oil may be poured out of the Filtre, into a Veſſel apart.

Pour the Oil, which came over laſt, along with its highly acid, fetid, and unctuous Liquor, into the ſame Filtre, whilſt it remains ſtill wet with the former Liquor, there will now come through a red, acid, tranſparent Fluid; and a groſs, black, pitchy, ponderous Oil remains in the Paper: This, alſo, is to be poured out, and kept ſeparate.

If theſe acid Liquors be preſerved in clean Glaſſes, they depoſit, at the Sides and Bottom thereof, a ſmall oily Cruſt, which gradually increaſes, whereby the Liquor gradually becomes leſs unctuous; whence it appears, that this diſtilled Vinegar is a Compound of Water, Acid, and Oil, and may, therefore, properly be called a volatile, acid, oily, ſaponaceous Salt. If this acid Liquor, when become perfectly limpid, and affording no more viſible Oil, be poured upon clean Chalk, it effervesces therewith, depoſits its Acid in the Chalk, and becomes a Water, which immediately throws the Oil, before latent in it, to the Surface, in a viſible Form: Or, if the ſame Liquor be again diſtil'd with a gentle Fire in a clean Veſſel, it alſo preſently manifeſts its latent Oil, and ſeparates it from itſelf; and thus becomes a pure and clear acid Liquor.

If the Oils be requir'd in greater Perfection, let a Quantity of them be collected, and diſtil'd by boiling Water; whereby the purer Part will be raiſed, and the groſſer left behind; and, by often repeating this Operation, theſe Oils gradually come nearer to the Perfection of the eſſential Kind, and by loſing their more unactive and terreſtrial Part, become liquid, bright, beautifully red, penetrating, pure, thin, and not fetid. When thus all that is volatile has been drawn over from the Subject, by the violent and long-continued Action of the Fire, extremely black, light, inſipid, and almoſt inodorous, and very brittle Shavings remain in the Retort, being the Coal mention'd by *Helmont*, which can never, by the moſt continued Force of Fire, be calcin'd into white Aſhes, whilſt the Veſſel remains cloſe, but always continues black, and therefore inflammable; becauſe this Blackneſs is the fix'd Oil, tenaciouſly adhering to the Earth, and ſubtly extended upon its Surface; whence the Coal becomes ſubject to take Fire, and burn ſo long as this Oil remains unconſumed: For, if theſe black Raſpings be now put into a large open Pan, and a ſmall live Coal be thrown into the Middle of them, they will immediately burn and flame all over, till the whole Blackneſs be ignited, after which the Subject preſently falls into white Aſhes; ſo that, in a ſhort time, the whole Body of the Shavings may, by means of the ſmalleſt Spark, be perfectly converted into Aſhes: Nor could the Wood itſelf be ſo eaſily, and ſo readily, fired with a ſmall Spark, unleſs, by a like Preparation, it were firſt brought to a Coal, and then broke to Powder. The white Aſhes, thus obtained from *Guaiacum*, are inſipid, inodorous, and almoſt without any Salt; though, if the Wood were recent, they prove conſiderably rich in alcaline Salt.

In making Decoctions of Guaiacum, for medicinal Uſes, it is to be remark'd, that the Raſpings of the freſh and green Wood are much preferable to thoſe of that which is old and dry; and that, the longer it is boil'd, the better.

Tincture of Guaiacum.

Take the Raſpings of freſh, green, and ponderous Guaiacum-wood, or the Bark thereof, in Powder, and put it into a tall chymical Glaſs; pour thereon rectified Spirit of Wine, ſo as to float four Inches above it, without any other Addition: Boil them together, in the manner above-mentioned, for four Hours, often ſhaking the Glaſs; the Liquor will thus become red, which is to be ſtrained, after it is clarified by Reſt, through a linen Strainer, to ſeparate it from any Impurities; then, pouring freſh Spirit upon the Remains, boil them again, and preſerve the ſeveral Tinctures pure. The Liquor, thus obtain'd, will be of a pungent, aromatic, acrid, hot Taſte, and Odour; but if the Alcohol, employ'd, was perfect, the Tincture will always be the better.

If this Tincture, prepar'd with pure Alcohol, be diſtilled in a tall Body, with a gentle Fire, till only one fourth Part be left behind, this will be a very rich Tincture, fully impregnated with the Virtue of the Guaiacum. But if the Spirit employ'd contain'd any Water, the Roſin would begin to fall, if the Tincture was inſpiſſated ſo high: But when pure Alcohol is uſed, the Tincture will eaſily bear to be thickened, and thus increaſe in Virtue, without growing turbid.

This Tincture of Guaiacum being externally applied, is a wonderful Remedy in malignant Venereal Ulcers; whether in the Skin, or Fat, Mouth, Jaws, or Throat.

When this Tincture of Guaiacum, prepar'd with pure Alcohol, and inſpiſſated to an half, is mix'd with four times its Quantity of the Syrup of the Five opening Roots, and taken upon an empty Stomach, in the Morning, lying in Bed, it preſently diſtributes itſelf over the whole Body, which it thus warms, and promotes a copious Sweat; and hence it is commended in the Venereal Diſeaſe, when it has ſeiz'd upon the ſubcutaneous Parts. *Boerhaave's Chymiſtry.*

From the Tincture of *Guaiacum*, its Reſin is prepar'd, by the Proceſs directed under the Article Resina.

Beſides the common Reſin of Guaiacum, extracted by Spirit of Wine, another reſinous Subſtance, conſiderably different from the former, both with reſpect to Taſte and Virtues, may be obtain'd from this Wood, though not by a Maceration with ſpirituous Menſtruums, but by long boiling with common Water; for, when a Decoction of Guaiacum is inſpiſſated over a gentle Fire, there remains, at the Bottom, a kind of reſinous thick Subſtance, which is of a balſamic, grateful Smell, of a ſomewhat acrid Taſte, and which, when reduc'd to a fine Powder, and receiv'd into the Noſtrils, by ſtimulating the glandulous Coats, which cover the Bones of the Noſtrils, ſo powerfully colliquates and evacuates the Phlegm lodg'd there, that, from long Experience, it appears to me preferable to all the other Errhines I know; for, beſides its ſtimulating Quality as an Errhine, it is alſo poſſeſt of a corroborating Virtue, which is highly friendly to the nervous Parts of the Head. *Hoffman. Obſervat. Phyſ. Chym.*

The other Species of *Guaiacum* is the

Lignum Sanctum. Offic. *Guaiacum propemedum ſine matrice.* C. B. P. 448. Raii Hiſt. 2. 1686. *Guaiaci altera Species Monardi*, Ger. Emac. 1611. *Palum Sanctum Indiæ Occiduæ.* Park. Theat. 1587. HOLY WOOD.

This is a ſolid compact Wood, nearly of the ſame Smell and Taſte as the other, but ſomewhat more white; and its medicinal Virtues are the ſame.

Gum Guaiacum.

This Gum, or rather Reſin, is much of the ſame Virtue as the Wood whence it is drawn, but more efficacious. It is reckoned much to promote inſenſible Perſpiration, and upon that Account is good in ſuch cutaneous Caſes as proceed from Obſtructions of perſpirable Matter in the miliary Glands. It is very warm and deterſive, and therefore good in all Ulcerations and Gleets, both internal and external. In Gonorrhœas it is by ſome almoſt deem'd a Specific. In the Gout, likewiſe, it does frequently good Service, not only by deterging and cleanſing the Joints and mucilaginous Glands from tartarous Matter, but by warming and ſtrengthening the Fibres, enables them to move with that Vigour, as ſhakes off and prevents the Lodgment of ſuch Particles upon them.

The Doſe, according to *Lemery*, is from eight Grains to two Scruples.

GUAJANA-TIMBO. The Name of an *Indian* ſiliquoſe Plant, mention'd by *Piſo*. If impetiginous Eruptions are rub'd with the Juice of the immature Seeds of the Fruit, or Beans, of this Plant, and this is often repeated, it is ſaid to cure ſuch Diſorders.

GUAJAVA. The Guava.

The Characters are;

The Extremity of the Pedicle paſſes into an Ovary, of an oval Figure, crowned, quinquefid, and like a Calyx. The Flower is roſaceous, pentapetalous, growing on the Ovary within the Crown, and furniſhed with numerous Stamina. The Ovary is furniſhed with a long Tube, and becomes a fleſhy Fruit, full of very numerous ſmall Seeds.

Boerhaave mentions three Species of this Plant; which are,

1. Guajava. *Cluſ. Hiſt. App.* 1. *Guajabo Pomifera, Indica.* C. B. P. 437. *Xalxochitl, ſeu Pomum arenoſum.* Hern. 84. *Pela.* H. Mal. 3. 31.

2. Guajava; rubra; acida; fructu rotundiori. *H. L.* 305. *Malakka Pela.* H. Mal. 3. 33.

3. Guajava; ſylveſtris. *Pelou H. Mal.* 3. 35. *Boerh. Ind. alt. Plant.*

The Tree grows to the Height of twenty Feet, or more in the *Weſt Indies*, and has a Trunk as big as a Man's Thigh: In *England* it is preſerv'd in Stoves, and is rarely ſeen above ſix or ſeven Feet high. *Miller's Dict.*

The Fruit reſembles our Pears, with an Umbilicus full of Chaps, and cover'd with a thin whitiſh green Rind. The Pulp is of a pale bloody Colour, in ſome whitiſh, and, when ripe, of a ſweet and grateful Taſte, and a pleaſant Smell. The Fruit has three different Sorts of Taſte, according to its Seaſon. In the time of its Ripening, before it is ſoft and yellow, it is auſtere and aſtringent, and is then good, when boil'd, for the Stomach; when it becomes a little riper, it is of a middle Nature, and in its beſt State; but it is more adviſable for Health to eat it either boil'd or preſerv'd in Sugar, than raw; beſides, it is of a more grateful Taſte and Smell, when thus prepar'd. When it is come to perfect Maturity, and is entirely ſoft and yellow, it has the Taſte and Smell of Raſpberries, looſens the Belly, and is not ſo wholſome to be freely eaten, becauſe it is eaſily corrupted, and breeds Worms. The Root with its aſtringent Bark, boiled in Water, and drank, is an excellent Remedy for the Dyſentery, where Aſtriction and Strengthening are indicated. The Leaves are acid and aſtringent, and proper to be us'd in Bathing. *Fr. Hernandez* adds, that the Leaves us'd in Lotions cure the Itch, and that a Decoction of the Bark is good for ſwell'd Legs, that it cures fiſtulous Ulcers, helps Deafneſs, and removes Pains in the Belly: A Syrup, alſo, made of the Leaves, is very effectual againſt a Flux of the Belly. *Raii Hiſt. Plant.*

The Fruit is refrigerating, and ſomewhat aſtringent: The Roots are aſtringent, and therefore good for the Dyſentery, and to comfort the Stomach: The Leaves are vulnerary, reſolvent, and uſed in Bathing. *Hiſt. Plant. aſcript. Boerh.*

GUAIBI-POCACA-BIBA *Braſilienſis* Piſonis & Marcgrav. *Arbor ſiliqua tortuoſa putreſcente, Fraxinellæ foliis.* It is the Name of an *Indian* Tree, whoſe Root is furniſh'd with a yellowiſh-white Pith, to which ſome medicinal Virtues are attributed. Thus they peel off the external thin Skin, cut the Pith into Slices, and infuſe them in Spring-water, for one Night, in the open Air. This Water, when drank, is ſaid to provoke Urine, to be beneficial in Obſtructions of the Kidneys and Bladder, and to cure a Gonorrhœa without any other Medicine. The freſh Juice of the Bark, dropt into the Eyes, cures the Inflammations thereof.

GUAIUMBI. The Name of a ſmall *Indian* Bird, call'd by the *Portugueſe*, *Pegafrol.* It is ſaid, that this Bird powder'd, and taken in Wine, relieves the *Sciatica.*

GUANABANUS *Oviedi.* A Species of *Indian Anona*, to which no Virtues are attributed, except that the Fruit is ſaid to be cooling.

GUAO. The Name of a *Weſt Indian* Tree, call'd alſo *Thetlatian.* The Juices of this Tree are extremely acrid, inſomuch that it is not ſafe to ſleep under it. The Wood is firm and hard, but ſo poiſonous, that thoſe who work it, contract a Swelling of the Hands and Face, which laſts for ſome Days. *Lemery des Drogues.*

GUAPARAIBA. Piſon. *Mangle Pyri foliis, cum ſiliquis longis, Ficui Indicæ affinis.* J. B. *Paretuvier* Rochefort. THE MANGROVE-TREE.

This is very common in the *Weſt Indies.* The Root, which is ſoft and moiſt, if ſlit and toaſted, and apply'd to the Punctures made by the poiſonous Fiſh, call'd *Niqui*, eaſes the Pain caus'd thereby, and preſerves the Limb affected. This Remedy was diſcover'd by the Fiſhermen. *Raii Hiſt. Plant.*

GUAPEREIBA *Braſilienſibus.* Marcgrav. The Name of a Tree which grows in *Braſil.*

GUARIQUIMYMIA. The Name of a Shrub, which grows in *Braſil*, like Myrtle. The Seed is ſaid to be good againſt Worms in the Inteſtines. *Lemery des Drogues.*

GUARERVA. A ſort of Cucumber, which grows wild in *Braſil. Raii Hiſt Plant.*

GUASSEM. Certain black, and, as it ſhould ſeem, ſcorbutical Spots, mention'd by *Avicenna.*

GUAVIL. A Species of Sea Lizard.

GUAYAVA. See Guajava.

GUAZUMA, *Baſtard Cedar-tree.* *Miller* mentions three Species of this Tree, to which I find no medicinal Virtues attributed.

GUIDONIA. The Name of an exotic Plant.

Boerhaave mentions but one Species of this Plant, which is,

Guidonia; Ulmi foliis; flore roſeo. *Plum. N. G. A.* 4. *Arbuſcula, facie Ulmi, Æthiopica, ramulis alatis, floribus purpuraſcentibus. H. A.* 1. 165. *Boerh. Ind. alt. Plant. Vol.* 2.

There are no medicinal Virtues attributed to this Plant, that I know off, at preſent.

Miller takes notice of five Species.

GUIRAPARIBA *vel Uruparіba Braſilienſibus.* Marcgrav. *Arbor Braſilienſis Folio ramoſo, floribus magnis, pentapetalis flavis.* A Name for two Trees, which grow in *Braſil*; one of which is a ſort of Ebony. *Raii Hiſt. Plant.*

GUITY-IBA, Piſon. & Marcgrav. *Arbor pomifera Braſilienſis, fructu maximo, oſſiculo ligneo.*

The Name of a Tree, which grows in *Braſil*, the Fruit of which is call'd *Guity Coroga*, and contains a Stone as large as a Gooſe's Egg, incloſing a Kernel, which, grated, and given in the Quantity of a Dram, is ſaid to be good in a Dyſentery. And an Infuſion of a double Quantity of this Kernel is reported to be excellent in ſtopping all ſorts of Hæmorrhages. There are two other Trees call'd by this Name. One is the *Guity Toroba*; the other is the *Guity-iba*, the Kernels of which have the ſame Virtues attributed to them.

GULA. The Gullet; or *Oeſophagus.*

GUMA, in Chymiſtry, is Mercury.

GUMMA. A ſort of Venereal Excreſcence on the Periofteum, of the Conſiſtence of Gum. See Nodus.

GUMMI. Gum. A concreted vegetable Juice, which tranſudes through the Bark of certain Trees, and hardens upon the Surface. The Chymiſts only allow thoſe to be properly Gums, which are diſſolvable in Water; thoſe which are only diſſolvable in Spirit they call Reſins; and thoſe of a middle Nature, Gum-reſins. *Geoffroy* ſays, that Gums are ſomething between Acid and Oil; being an acid Salt ſo fix'd in Earth, as that the greateſt Part of it is changed to an Alcali, the other into Oil; ſo that the Mixture ariſing from thence is an oily Salt, reſembling the ſaponaceous Concretes of the Chymiſts, made of Oil of Olives, and a Lixivium of Tartar, or he mucilaginous Bodies form'd of Spirit of Wine, and the volatile Spirit of Urine. And thus we ſee, that all Seeds which are oily when ripe, are in the Beginning only a Mucilage, or imperfect Oil. *Geoffroy.*

In the antient Writers (κόμμι) *Gummi*, put abſolutely, imports Gum Arabic.

Gummi Ammoniacum	See	Ammoniacum.
Gummi Anime		Anime.
Gummi Arabicum		Acacia.
Gummi Caranna		Caranna.
Gummi Cerasorum		Cerasus rubra.
Gummi Copal		Copal.
Gummi Elemi		Elemi.
Gummi Guaiaci		Guaiacum.
Gummi Hederæ		Hedera arborea.
Gummi Juniperi		Juniperus vulgaris fruticosa.
Gummi Lacca		Jujuba Indica.
Gummi Senegalense		Acacia.
Gummi Tacamahaca		Tacamahaca.
Gummi Tragacantha		Tragacantha.

GUNDELIA. The Name of a Plant, ſo call'd from Dr. *Gundelſcheimer*, who found it, in his Travels with the celebrated *Tournefort*.

GURGEATIO. A Name for the SUDOR ANGLICUS.

GURGULIO. The UVULA. It is, alſo, the Name of an Inſect, call'd a Weavil.

GUSTUS. The Taſte of ſapid Subſtances; or the Organ of Taſte. Upon the Tongue, eſpecially towards the Apex and Sides, under the Skin, are obtuſe Papillæ of various Figures. Theſe Papillæ are prominent in the Tongue of a live and faſting Perſon when put out, and applied to any Body to be taſted. In dead Perſons they abſolutely diſappear; but are, in a particular manner, prominent in hungry Perſons. They ariſe from the nervous Body covering the muſcular Fleſh of the Tongue. Whence they paſs through Perforations of the Corpus reticulare, in the ſame manner as in the Skin, and are cover'd with ſmall Vaginæ, form'd by the exterior Membrane of the Tongue. By means of theſe ſmall Vaginæ, they are defended againſt the Roughneſs, the Acrimony, and the Heat of the Aliments. Theſe Vaginæ are, alſo, porous, and prominent, that the Meat and Drink may, by Preſſure, have the greater Influence upon them.

It is obvious, that ſuch a Number of Papillæ may ariſe from the ninth Pair of Nerves, convey'd to the Tongue alone, and diſtributed through it; and that a Ramification of the fifth Pair is ſubſervient to its muſcular Motions, which Office it performs in ſome other Parts of the Body.

Laurentius Bellini has ſhewn, by ingenious and accurate Experiments, that theſe Papillæ form the Organ, to which when ſapid Objects are applied, they excite the Ideas of Taſte; and that the other Parts of the Mouth, Tongue, and Palate, contribute nothing to the Production of this Effect, except, perhaps, thoſe Parts of the internal Cheeks, which lie near the Meeting of the Dentes Molares in both Jaws.

That Subſtance, in Vegetables and Animals, from which a Salt, and an Oil, may be extracted by Art, whether by itſelf, or mix'd with any other Subſtance, is the true Object of Taſte; ſo that Salt, Soap, Oil, and Spirit, muſt, of courſe, be ſo too. The ſame holds true in foſſile Subſtances alſo.

The Ideas of Taſte are, therefore, excited, if the Matter to be taſted, being attenuated, for the moſt part diſſolv'd in the Saliva, warm'd in the Mouth, applied to the Tongue by the Motion of the Mouth, inſinuating itſelf into the Pores of the membranaceous Vaginæ, and penetrating to the Surface of the Papillæ lodg'd there, ſo affects and moves them as to convey this Motion to the common Senſory, and excite in the Mind the different Ideas of ſaline, acid, alcaline, ſweet, vinous, ſpirituous, bitter, aromatic, hot, acrid, auſtere, or any Compoſition and Mixture of theſe.

Hence the Reaſon is ſufficiently obvious, why ſo different Taſtes are excited by one and the ſame Object, according to the Diverſities of Age, Temperament, Diſeaſes, Sex, Cuſtom, and other Subſtances previouſly apply'd to the Organs of Taſte; as alſo why highly ſapid Subſtances are nearly allied to thoſe of the dolorific kind, ſuch as ſaline, aromatic, and ſpirituous Subſtances, when applied to bare Nerves, or an excoriated Tongue; why ſapid Subſtances are ſpeedy Reſtoratives, and why Water, mild Oils, and Earth without any Salt, are inſipid, and without Taſte.

GUTTA. A Drop. But an Apoplexy is ſometimes call'd *Gutta*, from a whimſical Suppoſition, that it was by a Drop of Blood falling from the Brain upon the Heart.

GUTTA GAMBA. See CAMBOGIUM, CARCAPULA, and ESULA INDICA BONTII.

This Gum hath been longer known in Painting than in Medicine, for its yellow Colour. The Violence of its Operation, both by Vomit and Stool, has occaſion'd abundance of Search for ſome proper Corrector; but none has yet been found better than the lixivious Salts, and particularly Salt of Tartar. Monſieur *Boulduc*, who has been induſtrious this way, and communicated his Experiments to the *Academy of Sciences*, upon many of the moſt efficacious medicinal Simples, in the *Memoirs* for 1701. has a Diſſertation upon Gamboge. He ſays, that it ought to be reckon'd amongſt the reſinous Juices, ſince it is inflammable, and will flow in the Fire, and be almoſt entirely diſſolv'd in Spirit of Wine; but, on the contrary, in aqueous Menſtruums, ſpreads itſelf into a milky Subſtance like Scammony, and afterwards precipitates: It ſeems, at firſt, to be inſipid upon the Tongue, but ſoon after becomes ſenſible in the Throat by its Acrimony, and an inſupportable Drought. It is a powerful Hydragogue and Emetic, but ought to be us'd with Caution, and not until it has been corrected. Monſieur *Boulduc* ſays, he endeavour'd to get Flowers from this reſinous Juice, like thoſe from Benjamin, but without Succeſs. He made Trial on it with Spirit of Wine, a Lye of alcaline Salts, and Water: The Spirit of Wine diſſolv'd all, except about a ſixth Part; the Remainder, which the Spirit would not touch, was eaſily diſſolv'd by a Solution of Salt of Tartar. This, ſays he, may be eſteem'd the ſaline Part of Gamboge; and, tho' it had no purgative Virtue, was very diuretic. The Reſin, which was made by the Spirit of Wine, purg'd more violently, and with greater Irritation, than the Gamboge itſelf.

This Gum was entirely diſſolv'd by an equal Quantity of Salt of Tartar, and a ſufficient one of boiling Water, excepting ſome few terreſtrial Parts. The Liquor filtrated, and evaporated by a gentle Fire, gave a ſort of grey Salt, which eaſily flow'd in the Air, if not kept cloſe ſtopt in a Phial. This ſaline Extract purg'd with leſs Irritation, and in a ſmaller Doſe, than the Gum; but caus'd a great Acrimony and Heat in the Throat, inſomuch that it was intolerable, and ought, therefore, to be inveloped in ſome other convenient Subſtance when it is given.

This Gentleman obſerv'd before, that Water would not diſſolve it, but only made it flow into a milky Subſtance of a yellow Colour, which ſoon precipitated, and left the Water clear above it. This Reſidue, dry'd, differ'd in nothing from the Gum, only was more pure. By caſting diſtil'd Vinegar on this milky Subſtance, it became clear; Oil of Vitriol, on the contrary, made it again turbid; and Spirit of Wine gave it a golden Colour. There are many Ways, this Author obſerves, of correcting it, but he thinks that by alcaline Salts the beſt. However, he gives one of his own, which, as it is different from any other hitherto us'd, he alſo continually practis'd it with Succeſs. The Manner is, by tying the Gum in a Rag, and putting it into a hot Loaf, as it comes out of the Oven, where it muſt remain for twenty-four Hours; afterwards it is to be powder'd, and this muſt be repeated four or five times: By this Management, he ſays, he always found it freed from its great Violence, as well purgative as emetic. He farther obſerv'd the Crum of Loaves thus us'd to have both a purgative and emetic Quality.

From this Account, it is not difficult to determine the Qualities of this Drug, wherein its Efficacy conſiſts, and the moſt advantageous Means of managing it in Preſcription; tho' it does not clearly appear what way of Reaſoning directed the Author to the Loaf of Bread, becauſe it has no relation to the Means made uſe of in other Trials; nor is it eaſily to be accounted for, how ſuch a Method made it of a milder Operation. It is a powerful Hydragogue, and therefore good in Dropſies, and all watery Corpulency tending thereunto. But its Roughneſs requires the utmoſt Caution and Skill in its Exhibition. It is a fit Purge only for grown Perſons, and thoſe of a ſtrong Conſtitution. With all the Care poſſible, it will frequently vomit, before it paſſes downward. The moſt convenient Form to give it in, is a Bole, or Pills; for no Menſtruum will equally draw out all its Qualities by Diſſolution. It will not well powder without ſome Portion of a lixivious Salt, or fine Sugar; and ſuch are its beſt Correctors, by dividing its reſinous Parts, and preventing their Adheſion to the Membranes in too forcible a manner. In ſeveral Intentions, which are moſt conveniently anſwer'd by the urinary Diſcharges, that particular Management of Monſieur *Boulduc*'s, which diveſted it of its purgative Parts, and left only the ſaline, which were very diuretic, may be worth putting in Practice.

It purges very well in the Quantity of four Grains; but from ſix to eight Grains, it purges and vomits violently. It is reckon'd particularly ſerviceable in Dropſies, by evacuating the watery Parts of the Fluids; and, as it has no Taſte, a very ſmall Doſe of it, ſuch as a Grain or two, diſſolved and mixed with Sugar, is very fit for Children. It is worthy Obſervation, that tho' this Gum is ſo very purgative, yet the Fruit of the Tree, to which it belongs, is perfectly harmleſs, and is eaten in the Country like Oranges.

Lemery ſays, the Doſe is to twelve Grains; and *Quincy* informs us, that a Scruple is the extreme Doſe, in the moſt robuſt Conſtitutions.

There are many Opinions concerning the Generation of this Gum: Some will have it to be natural, others factitious; ſome refer it to the *Eſula*; *Bontius*, to an *Indian* Plant, near akin to to the *Eſula*; others, to the Flowers of the *Indian Ricinus*, and its Colour to the CURCUMA; and ſome again endeavour to derive it from the *Tithymalus* and *Scammony*.

We take it to be the concreted Juice of the Trees abovemention'd. But, as *De Syen, in Annot. ad Hort. Malab. Tom.* 1. obſerves, this Gum *Gutta* here deſcrib'd, muſt not be confounded with the common Gum, which *Bontius, in Hiſt. Nat. & Med. Ind. Orient.* affirms to be collected from the Plant akin to the *Indian Eſula*, and call'd, by the *Indians*, *Lenan Cambodia*, becauſe it is plentifully produc'd in *Cambodia*, a Country bordering upon *Indoſtan*. *Dale*.

GUTTA ROSACEA. A red or pimpled Face.

I am inclin'd to believe, that thoſe who have attributed this Diſorder to ſome Intemperature of the Liver, are not much miſtaken, becauſe we frequently obſerve in Practice, that the Diſappearance of fiery Pimples in the Face is ſucceeded by Indurations of the Liver, and from thence Dropſies; and, on the contrary, that Diſorders of the Liver are reliev'd by co-

pious

pious Eruptions of these fiery Pustules of the Face. And this should caution Practitioners against applying Topics, without the utmost Care, to these Eruptions.

It is called *Gutta Rosea*, or *Rosacea*, from the little red Drops, as it were, or fiery Tubercles, dispersed up and down the Face and Nose: By some *Rubedo Maculosa*, or rather, *Ruber cum Maculis*; by which the Parts of the Face are sometimes so overgrown, as to render the whole Countenance horribly frightful.

Nicolaus Florentinus constitutes three Degrees hereof; such as, 1. *Rubedo simplex, seu Facies rubra*; 2. *Rubedo pustulosa*; and, 3. *Ulcerosa*; and deduceth the Cause from a hot, but viscous and thick Blood, generated by some Intemperies or Vice of the Liver, which, being brought by the Capillary Arteries to the Surface of the Skin of the Face, is there diffus'd, as happens in Blushing; but, by reason of its Lentor, or Clamminess, not being return'd, as it ought, presently by the Veins, stops therein, and causes Redness, which neither yet being capable of being discuss'd, by reason of the Density of the Cuticle, raises the same up into Pustules, and at length ulcerates, having vitiated the Frame of the cutaneous Glandules by its long Stagnation.

The diagnostic Signs are evident to the Eye, better than by Description.

The prognostic doubtful as to Cure, tho' not as to Danger otherwise.

If the Disease be recent, mild, and in a good Habit of Body, the Cure is hopeful: If of long standing, inveterate, or malignant, scarce attainable, or at best, palliative.

It is certain, be the Case as it will, it does not always owe its Original to hard Drinking; since it is sometimes observ'd to attend the most Temperate and Abstemious. However, for the most part, the constant Tipplers of strong Beers, Wines, and Waters, but especially the two first, are usually the most obnoxious to this Malady. For the Removal whereof, the Intemperature of the Liver, and other Viscera, is to be corrected, and all other Obstructions remov'd, whilst, at the same time, the Humours are diverted from the Parts affected, by Bleeding, Blistering, Cupping, Issues, with lenient Purgatives frequently repeated. The Diet must be moistening and cooling, taken from Foods easily digested, avoiding Wine, unless well diluted, and strong Drinks, all Things spiced, potted, powder'd, season'd, or salted: The Drink may be an Emulsion of the cold Seeds, Milk and Water, clarify'd Whey. Lettuce, Purslane, Sorrel, and Spinage, are here frequently directed with their Meats; and, indeed, the whole Physical Regimen strikes in with that for the Erysipelas, Itch, and Scurvy.

In the Use, however, of this cooling and contemperating Method, great Prudence is requir'd: For if you take a Person off at once from his strong Liquors, and allow him nothing but Whey, or Milk and Water, you may likely remove his red Face, and Life soon after, by hastening a sudden Decay of Heat, palling his Appetite, and bringing on a Leucophlegmatia, or Dropsy. *Mayern* allows Wine diluted, and even Wine by itself, if moderately taken, on account of its Heat and Tenuity being better fitted to digest and and attenuate the gross and viscid Humours, and promote the Perspiration of the same through the Skin, than Water, which is often found injurious and pernicious to such Patients, by its Coldness fixing the already impacted Humour upon the Part.

As for what concerns Topics, much Caution, likewise, is to be used: For, according to *Sennertus*, if there be only Redness without Pustules, and the Disease recent, Refrigerants and Repellents take place: But, if Pustules attend, Discutients must be mix'd; and if those Pustules seem hard, and the Disease of long Standing, there may be Reason for Emollients to ripen and digest the tough and viscid Matter, and after, to let the same out upon Occasion, before we use desiccative, or drying and repelling Medicines; which, if at this time apply'd, would only increase the Induration of the Tubercles, fix the Humours more deeply in the Skin, and render the Disease still farther obstinate.

If the Disease be stubborn, and the Tubercles grown hard, we are to begin with Emollients, both Fotus and Ointment; such are the Decoction of Mallows, Vervain, Solomon's Seal, and Linseed: Also, a Cerate of Sperma Ceti, or *Bates*'s white Cerate.

Those which suppurate, and rise with Heads, must be empty'd of their Matter, and the Remains of the Humour disposed for Breathing out with the same Medicines mix'd with Discutients, as the Flowers of Elder, Rosemary, and Broom: In the Use of these latter, however, let the Artist have his Eye to the Part, and see, that by their warmer or more tenuious Particles, the Fluxion be not increased.

Sir *Theodore Mayern*, in his Regimen for my Lord *Maxwell*, subject to these exanthematous Pustules, attended with a red Nose, after taking notice, that it was hereditary to the Family, the Brothers and Sisters being subject thereto, lays the Fault principally on the Liver, which, he says, was very hot, his Blood vaporose, impure, abounding with adust earthy Fæces, attended with a bilious Temperament.

In order, therefore, to the Removal of the Disease, he says, the over-hot Blood must be attemper'd, and the Intemperature of the Bowels, especially, corrected, that a more laudable Blood may be generated; for which Purpose, and to alter, as it were, the whole Substance of that Bowel tainted, as well as to preserve the native Salt and Balsam pure and uncorrupted, he lays a mighty Stress upon Antimony, and its Preparations, as the Spirit, Salt, fix'd Substance, as the diaphoretic or the fix'd Flowers of Antimony, (of which Mind was *Sylvius*, and several others, who direct the diaphoretic Antimony, not only inwardly, but use the same in Ointments, and account it one of the best Cosmetics in the Case before us) which have the first Place in depurating the Blood, and correcting its Dyscrasies. Next to this he subjoins Mercurials to purge with, which are proper to convey away the salt and tartarous Humours out of the same, separating also the viscous, impure, and feculent, and carrying them off by Stool; although they do not (continues he) so powerfully operate by the Emunctories of the Skin.

The Simples he lays down to alter and edulcorate are these, Dodder, Fumitory, Adders-tongue, Hops, the cordial and refrigerating Flowers, and Veronica rubra.

Also the Tincture of Tartar, Oil of Sulphur and Vitriol, Broths of the hepatic Plants with Cream of Tartar, and Sal Prunellæ, than which nothing is more powerful to refrigerate, and hinder the Afflux of Humours, and take off their Heat and Ebullition; and these are to be continued for a Week or ten Days.

For the same Purpose he directs, also, an hepatic and splenetic Apozem for three Doses, being render'd purgative with Sena, Cassia, Manna, Rhubarb, solutive Syrup of Roses, and Fumitory, betwixt whiles; purging, moreover, with a Scruple of Calomel, made up with some purging Electuary.

Every Spring he orders a Vein to be open'd in the Right Arm; in Autumn, in the Left.

For twenty Days together he gives Whey, clarified with Fumitory, Succory, and the Juice of Apples; also Tinctures and Julaps of the like Nature, edulcorated with Syrups made from the Juices of the said Plants; and, sometimes, a small Ale, with the more temperate Antiscorbutics infus'd; and, through the whole Course, a most exact Regimen of the Non-naturals.

When the Body is costive, a Clyster must be injected, which if frequently repeated, an exellent Revulsion is thereby made of the Humours to the lower Parts.

As to the Surgery, he prescribes Cupping-glasses, set frequently to the Nape of the Neck, between the Shoulders, with Scarifications; Leeches, behind the Ears, and on the Inside of the Nostrils; also the Veins under the Tongue to be open'd.

Hence we may see what Care or Caution is necessary to be us'd, to provide against the Disease, whilst forming, by rectifying and altering the whole Temperament, and striking at the Source, or Root, before we take notice of that already form'd, or which is already thrown out by Translation to the Surface.

For whoever goes about, by cooling, or repelling, or, indeed, any other local Applications only, to cure this Infirmity, is in great Likelihood, by striking in, or otherwise retarding, those impure Feculences, which are here thrown forth as by some proper Emunctory, to kindle in the Blood some dangerous feverish Ebullition; or, by the same Humours now detain'd, or pent in, to suffocate the vital Flame at the Focus, or Fountain-head, whilst we are endeavouring to put out that in the Face.

The Topics order'd for this Nobleman, were, first, a Sweat for the Parts affected, holding his Head, cover'd about, and receiving the warm Steam of a Decoction of Bran, Soapwort, Melilot, Nettles, Chamomile, Ground-ivy, and the greater Celandine, in Milk and Water, to be us'd for an Hour in the Evening, taking none, or a very little light Supper before upon those Nights, and to avoid the cold Air above all things, at such times.

This was repeated once a Week; whilst, in the mean time, the Pustules were dress'd with an Ointment of Cerus, and white Diachylon, adding a little white Precipitate, or Calomel, for the more stubborn and obstinate, whilst the lesser and milder are touch'd with a Nodulus, wherein were inclos'd Salt of Lead, Camphire, burnt Alum, Borax, and Sal Prunellæ, made wet in Water of Frog-spawn, and Water-lily. Or,

With Water of Frog-spawn, and Phlegm of Alum, let a Mucilage be extracted from the Seeds of Flea-bane, and Quinces; and, by an Addition of the preceding Spices, form a Liniment, to be applied to the Pustules.

Or,

With strong Vinegar extract the Mucilage, and, adding Flowers of Sulphur, form a small Poultice, to be applied all

all Night; and in the Morning let the Face be wash'd with Myrrh-water. When the Disorder is highly obstinate, says the Author, Mercurials are beneficial; but they are cautiously and rarely to be used, lest they should injure the Teeth, or procure a fetid Breath. *Noduli*, also, consisting of *Mercurius Dulcis*, and Lead, are to be express'd upon the Pustules.

But I have frequently done good Service with some of the less pompous, and more easily prepar'd Remedies; as the Salt of Tartar, Salt-petre, and Salt of Lead, mix'd up with some Pomatum, or dissolv'd in a suitable Menstruum, adding sometimes a little White-wine, and Juice of Lemons; the White of an Egg, shak'd up with a little Powder of Alum, or beat up well with a few Grains of Sublimate and Camphire; also, Oil of Myrrh per Deliquium, prepar'd by boiling an Egg hard, taking out the Yolk, and filling up its Place with Myrrh; then binding the divided Sides together, and setting it in a moist Cellar, that the Liquor may drop forth, which is an excellent Cosmetic: For this Purpose, also, is the *Unguentum Faciale* of *Bate. Turner de Morbis Cutaneis.*

Many other Topics might be here specify'd, but I look upon them all to be more or less dangerous; and that, for this Reason, it is better to abstain from them. The Cure is more safely perform'd by a proper Course of Mercurial Deobstruents, which must be succeeded by a due Use of alterative Mineral Waters; such as those of *Scarborough*, *Holt*, or *Rhode*. Or, perhaps, a long-continued and copious internal Use of the saponaceous and resolvent Juices of Summer Fruits, perfectly ripe, will be more effectual than either.

GUTTA SERENA. See AMAUROSIS.

GUTTALIS. The same as ARYTÆNOIDES.

GUTTETA. *Castellus* informs us, that *Goutte*, in *French*, among other Significations, imports Convulsions. Hence a particular Powder, calculated against Convulsions, and nervous Disorders, is call'd *Pulvis ad Guttetam.* It is thus prepar'd:

Take of white Dittany, Misleto of the Oak, Contrayerva, Virginian Snake-root, and Male Peony-root, of the Male Peony-seeds, of burnt Hartshorn, and Elks-hoof, each two Drams; of wild Valerian-root, one Ounce; of red Coral, and human Scull, of each three Drams; of Iacynth-stone, one Dram; of Occidental Bezoar, one Dram and an half; of the Oriental, one Scruple: Mix them into a Powder; to which may be added, at Pleasure, of Musk, five Grains; and, of the Leaves of beaten Gold, N° 30.

This was first prescribed by *Riverius*. It is given to both Children, and grown Persons, from ten Grains to half a Dram for Children, and to one Dram to grown Persons.

GUTTUR. The LARYNX, or ASPERA ARTERIA.

GUTTURIFORMIS *Cartilago.* The Arytænoide Cartilage.

GUTTUS. A barbarous Name for a Vessel contriv'd to hold Oil in such a manner, as to let it drop upon a Person. It was used for this Purpose after Bathing.

GUVAVIRAP *Brasilienstum.* De Laet. The Name of a very tall and large Tree, which bears a Fruit like Gooseberries. *Raii Hist. Plant.*

GUYTIS. See GUTTY.

GYION, γύϊον. It imports the whole Body; and, in the plural Number, the larger Limbs.

GYMNASION, γυμνάσιον, from γυμνὸς, naked. Exercise; or the Place where Exercises were perform'd.

GYMNASTICA. Gymnastics. That Part of Medicine which teaches the Method of preserving and restoring Health by Exercises. See FIBRA. The different Species of Exercises are specify'd under the Articles of their Names.

GYMNOCRITHON. A Name for the *Triticum*, *Spica Hordei*, *Londinensibus.*

GYMNOSPERMOS. See ANGIOSPERMOS.

GYNÆCIA, γυναικεία, from γυνὴ, a Woman. It signifies the *Menstrua*, and sometimes the *Lochia.*

GYNÆCIUM, γυναικεῖον, from γυνὴ, a Woman. An Apartment for Women, now usually call'd a Seraglio. But *Gynæceum*, also, signifies Antimony, probably from the Use Women made of it, in tinging the Cilia; a Custom which prevails much in the East at this Day.

GYNÆCOMASTON, γυναικομαστὸν. An enormous Increase of the Breasts in Women. *Galen.*

GYNÆCOMASTOS, γυναικόμαστος. A Man whose Breasts are large and turgid, like those of Women, is thus called. There are some few Instances where the Breasts of Men grow to an enormous Bulk, and even afford a Fluid not unlike Milk; and Persons thus affected are said to be utterly impotent.

Paulus Ægineta, L. 6. C. 46. says, that the Breasts of Men, as well as those of Women, swell at the time of Puberty, but generally subside again. Sometimes, however, after they have begun to swell, they increase in Bulk, being more and more elevated, and Fat growing underneath. Since a Man, therefore, in such a Case, incurs the Scandal of Effeminacy, it is natural to require the Help of the Surgeon.

In the Operation, he says, we first make an Incision, in the Fashion of a Crescent, in the lower Part of the Breast; then separating the Skin, we take away the Fat, and unite the Lips of the Wound with a Suture. If the Breast, by reason of its Bulk, hangs downwards, as in Women, it will be proper to make two such Incisions, meeting one another at the Extremities, so as that the less may be comprehended within the greater; after which we separate the intermediate Skin, and, taking away the Fat, secure the Wound with a Suture, as before. If the Operation happens to be imperfect, and, by Mistake, we cut away less than is requir'd, we renew the same, and take away what remains redundant; then sew up the Place, and apply such Medicines as are appropriated to Wounds. Thus *Ægineta.*

GYNÆCOMYSTAX, γυναικομύστακ, from γυνὴ, a Woman, and μύστακ, a Beard. The Hairs on the Female Pudenda.

GYNANTHROPOS. A Species of *Hermaphrodite*, which partakes more of the Female than Male; whereas that Sort which partakes most of the Male is call'd *Androgynus.*

GYPS, γὺψ, in Zoology, is the Vultur.

GYPSUM. See ALABASTRUM.

GYRIS, γύεις, fine Meal. It agrees with *Amylum* in Virtues, but is somewhat hotter. *Paulus Ægineta*, L. 7. C. 3.

GYROFALCO, in Zoology, is the Girfalcon.

H.

H, In the Chymical Alphabet, ſignifies the pure Sun, or Gold.

HABASCUM. The Name of a Root, which grows in *Virginia*, and ſerves the Inhabitants for Food. It is of the Figure and Size of a Parſnip, and is eſteem'd aperitive. *Lemery des Drogues.*

HABENA. The Name of a Bandage, contriv'd to keep the Lips of Wounds together, and ſupply the Place of a Suture.

HABITUDO. Habitude. The ſame as CATASTASIS.

HABITUS. Habit. It imports the ſettled and permanent Conſtitution or Habitude of the Body, or of any thing elſe; or the Structure or Compoſition of a Body, or the Parts thereof: Thus a Body is ſaid to be of a denſe, thin, ſolid, compact, or lax Habit. It, alſo, imports a fix'd and ſettled Cuſtom or Habitude of doing any thing. See HEXIS.

HACUB, *ſive ſilybum quibuſdam.* J. B. An exotic kind of *Carduus*, much reſembling the Carline Thiſtle, only larger. The *Indians*, as *Lemery* informs us, eat the young Shoots, or *Aſparagi*. An Infuſion of the Root provokes Vomiting, and produces a Nauſea, and Inappetency.

HADID. Iron. *Rulandus.*

HÆCCEITAS. A Name for the *Quinta Eſſentia*, of the Chymiſts.

HÆMA, αἷμα. Blood. See SANGUIS.

HÆMAGOGOS, from αἷμα, Blood, and ἄγω, to bring away. The Name of an Antidote in *Nicolaus Myrepſus*, *Sect.* 1. *Cap.* 26. It is principally intended for provoking the menſtrual and hæmorrhoidal Fluxes, and conſiſts of aromatic and fetid Simples, with black Hellebore, ſome other Simples, and Honey.

HÆMALOPS, αἱμάλωψ, from αἷμα, Blood, and ὤψ, the Countenance, properly ſignifies the livid Marks of Sugillations in the Face and Eyes; but thus *Hippocrates* calls the black, thick, and feculent Blood, which overſpreads the Chorion in the Formation of the Fœtus, and is rejected by the Fœtus, as of no Uſe, and diſcharged into the Space between the Uterus and Chorion, the thinner and purer Part of it only being attracted for Aliment. *Galen*, *Lib. adverſus Lycum*, explaining the following Paſſage of *Hippocrates*, (περὶ φυσ. παιδίν.) ᾗ δ' ἀμφὶ τὸν ὑμένα ἔξωθεν αἱμάλωπες, "round the Outſide of the Membrane were grumous Collections of Blood," ſays that ſome ſoft and unſhaped Fleſh, reſembling a Clot of Blood, receives the firſt Form of a Fœtus, which has on it ſomething like *Hæmalopes*, (as *Hippocrates* call'd it) which it received from the Subſtances of the Seed, being white in itſelf. *Hæmalops*, αἱμάλωψ, in *Erotian*, is expounded a bloody kind of Circle or Suffuſion of Blood, proceeding generally from a Blow, round the Cornea Tunica. *Hæmalops* is alſo a Species of Sugillation, and ſignifies a Suffuſion of a bloody Aſpect from Blows, not only in the Eyes, but in any Part of the Body. Αἱμάλωπος πτύσις ἐ θρυγώδης, *in Coac*, is "A Spitting of concreted, but not feculent Blood."

HÆMANTHUS, from αἷμα, Blood; and ἄνθος, a Flower. The Blood-flower, or *African* Tulip.

Boerhaave mentions three Species of this Plant; which are,

1. Hæmanthus; Africanus. *H. L. H. A.* 2. 127.

2. Hæmanthus; Africanus; bulbo alio, ſquamoſo.

3. *An* Hæmanthus; bulbo oblongo, ſquamoſo, ex binis, ſemper complicatis, quaſi foliis conſtans? *Ind. alt. Plant. Vol.* 2. *p.* 149.

No medicinal Virtues are attributed to any of theſe.

HÆMATIA, or HÆMATION, αἱματιὰ, or αἱμάτιον. An Epithet of a ſort of *Garum*, made of the Inteſtines of Fiſh, macerated in Salt.

HÆMATITES. Offic. Calc. Muſ. 269. Worm. 64. Dougl. Ind. 42. Aldrov. Muſ. Metall. 646. Boet. 386. De Laet. 122. Charl. Foſſ. 27. *Hæmatites verus*, Schw. 30. *Lapis Hæmatites.* Math. 1381. BLOOD-STONE.

Lapis Hæmatites, λίθος αἱματίτης, of the *Greeks*, *Sedenegi* and *Sadanegi* of the *Arabians*, is a ferrugineous, hard, glebous, ponderous, metallic Subſtance; of a dark-red or yelloviſh Colour, and ſometimes blackiſh, or of the Colour of Iron; and of an earthy aſtringent Taſte. Being broken, it ſhews fine, long, ſharp Fibres, like thoſe of Wood. It was called *Hæmatites*, in *Greek*, from its Colour; or, becauſe it is endued with the Virtue of ſtopping Blood.

Pliny diſtinguiſhes five Kinds of Blood-ſtone, according to the Countries where they are found, and their differing Colour and Hardneſs. Others divide them according to their different outward Appearance. Some Stones have an uneven and angular Surface, as thoſe that come from *Spain*; ſome are cluſtered on the Surface, like Bunches of Grapes, from whence they are termed *Hæmatites Botryodes*, as we ſee in thoſe brought from the *Hercynian* Foreſt in *Germany*. Others are formed in various Convolutions, like Inteſtines, or the outer Surface of the Brain; and theſe Surfaces are very well delineated by *Aldrovandus* and *Imperati*.

In Iron Mines, the Blood-ſtone is often found, in a diſtinct Ore; but where-ever it is found, or where-ever it grows, there are always red Stones, and red Earth, near it. It is likewiſe found ſometimes in the ſame Places with the Loadſtone, and indeed there is a great Affinity between theſe two, as being both reckoned Iron Ores. The Blood-ſtone is dug up in many Places of *Germany*, in *Italy*, and *Spain*, and this laſt is reckoned the beſt. That Blood-ſtone is to be made Choice of, which is hardeſt and ſmootheſt, without any Mixture of Filth or Veins; and this Stone is carefully to be diſtinguiſhed from another, ſomething like it in Colour, but ſofter, which Painters and Joiners make uſe of, called by Miſtake in ſome Books *Hæmatites*, but its true Name is *Ruorica Fabrilis*, or Ruddle.

Blood-ſtone is a kind of Iron Ore, from which Iron may be extracted; and, in the Valley of *Joachim* in *Bohemia*, the Mines of theſe Stones are ſo rich, that it is thought worth while to extract the Iron from them, which is alſo excellent in its Kind, as *Agricola* relates. This Stone is diſſolved by Acids, in the ſame manner as Iron, and, with the Vitriolic Acid, is turned into green Vitriol.

Both *Dioſcorides* and *Galen* uſed Blood-ſtone in Roughneſſes or Cicatrices of the Eye-lids; and for this Purpoſe they firſt rubbed it upon a Whetſtone, with Water, a Decoction of Fenugreek-ſeeds, or the White of an Egg; and they commend it, when diluted in Milk, in Suffuſions of the Eyes. In all Ages it has been uſed in a fine Powder, from one to four Scruples, in any proper Vehicle, for all kinds of Hæmorrhages, in ſpitting Blood, and in Ulcers of the Lungs, which it dries and heals. In the Fluor Albus, Cachexia, and Suppreſſion of the Menſes, it is found to be as effectual as the *Crocus Martis aperiens*.

The Chymical Preparations of the Blood-ſtone are not altogether to be deſpiſed; ſuch as its ammoniacal Flowers, urinous Spirit, aperient Tincture, ſtyptic Liquor, acid Spirit, and Crocus; all which are thus prepared.

Take of the fineſt Powder of Blood-ſtone, two Pounds; powdered Sal Ammoniac, a Pound: Mix them well, and put them in an Earthen Cucurbit, with a Glaſs Alembic, and proper Receiver fitted to it. Then ſublime them in an open Fire, gradually increaſed. The firſt Subſtance that riſes is an Ammoniacal Spirit, tinctured with ſomething of a yelloviſh Caſt; afterwards come citrine Flowers, and then Flowers of a ſaffron Colour. The Maſs which remains in the Cucurbit, being put into a Retort, and diſtil'd with a great Degree of Fire, will yield an acid Spirit, not unlike that of Sea-ſalt. If the Reſiduum be expoſed to the open Fire, it will diſſolve into a Gold-colour'd ſtyptic Liquor, of great Uſe. But, if the Reſiduum be calcin'd in a ſtrong reverberatory Heat, it will turn to a Crocus, of the ſame Virtues with *Crocus Martis aſtringens*.

From the above-mention'd Saffron-colour'd Flowers, a Tincture may be extracted with Spirit of Wine, which ſome Chymical Phyſicians prefer to the Tincture of Gold, and therefore term it the Elixir of the Tree of Life. The Ammoniacal volatile Spirit has the ſame Virtues with the volatile Spirit of Sal Ammoniac, and is even more proper to reſolve Obſtructions, becauſe of the martial Parts contain'd in it. Both the Flowers contain the volatile fine martial Parts of the Blood-ſtone, raiſed by the Sal Ammoniac; and, as the Saffron-colour'd Flowers contain more ſuch Parts than the Citrine, they are moſt eſteem'd: They ſmell ſomething like Saffron, and are therefore, by *Paracelſus*, termed *Aroph*, which is the ſame with *Aroma Philoſophorum*. They open Obſtructions, attenuate groſs viſcid Humours, and very often carry them off by Stool or Urine. The Doſe is from three Grains to a Scruple; which if it exceeds, they ſometimes cauſe Vomiting. They are order'd with very great Succeſs in a Suppreſſion of the Menſes, Cachexia, Obſtructions in the Viſcera, ſtubborn Fevers, and Quartan Agues. They are by ſome preferred to the *Flores Martiales*, becauſe in this Ore the metallic Parts are of a more rare Texture, and the ſeveral Principles cohere leſs than in Iron itſelf; and, conſequently, they are more eaſily diſſolved by the Sal Ammoniac. Theſe may be order'd in this manner.

Take of the Flowers of the Blood-ſtone, twelve Grains; Saffron and Myrrh, of each five Grains; Extract of Wormwood, a ſufficient Quantity for a Bolus; to be taken in a Suppreſſion of the Menſes.

Take Arum-root, and white Agaric, of each an Ounce; Gum Ammoniac, half an Ounce; Flowers of Blood-ſtone, a Dram; Extract of Aloes, of Cinnamon, and of Saffron, of each two Drams; Syrup of Fumitory, a ſufficient Quantity to make an Opiate, of which any Quantity between a Scruple and a Dram is to be taken in Obſtructions of the Viſcera, Jaundice, Scirrhus, Dropſy, and cachectic Affections.

Take Peruvian Bark, an Ounce; Flowers of Blood-ſtone, a Dram; Syrup of Wormwood, a ſufficient Quantity to make a ſoft Opiate; two Drams of which are to be taken every four Hours, in Quartan Agues, and in all ſtubborn intermitting Fevers.

Inſtead of the Flowers, the Tincture may be uſed, which has the ſame Virtues, and may likewiſe be uſed with more Safety in Hæmorrhages, from ten to thirty Drops, in any proper Vehicle. The ſtyptic Liquor obtain'd by diſſolving the Caput Mortuum, or Reſiduum, after Diſtillation in the Air, is of very great Efficacy in ſtopping all kinds of Hæmorrhages, either externally applied, or taken inwardly, in the Quantity of between five, and twenty Drops. It alſo cures the Fluor Albus, Gleets, and Looſeneſſes, whether with or without bloody Stools, where the Patient's Body has been duly prepar'd. Laſtly, whatever Efficacy is in the *Crocus Martis aſtringens*, may be found in the Caput Mortuum of the Blood-ſtone.

The Blood-ſtone is an Ingredient in the dyſenteric Powder of *Charas*, in the Powder againſt Hæmorrhages and Hernias, and in the ſtyptic Plaiſter of that Author.

HÆMATITINOS, αἱματίτινος. An Epithet of a *Collyrium*, in *Galen*, prepar'd of the *Lapis Hæmatites*. *Paracelſus* calls a ſort of Tartar, which is eaſily reſolved, *Tartarus Hæmatitinos*.

HÆMATOCELE, αἱματοκήλη. A Species of Hernia, cauſed by extravaſated Blood. *Ingraſſias Comment. in Avicenna. de Tumor.*

HÆMATOCHYSIS, from αἷμα, Blood, and χέω, to pour out. A Term uſed by *Willis*, importing an Hæmorrhage.

HÆMATOPHLOEBOESTASIS, αἱματοφλοιβόιστασις, from αἷμα, Blood, φλὲψ, a Vein, and στάσις, a Station, is a Suppreſſion of the impetuous Current and Intumeſcence of the Blood in the Veins: But ſome, as *Galen* ſays in his *Exegeſis*, underſtand by the Word, the Veins full and tumeſcent with Blood.

HÆMATOSIS, αἱμάτωσις. Sanguification.

HÆMOCERCHNUS, αἱμόκερχνος. Blood brought up from the Fauces, with a Noiſe or Rattling, or bloody Excretions diſcharged in a dry Form; for κέρχνος either imports a *ſhrill Noiſe*, or Rattling; or, as among the *Athenians*, it ſignified, *dry*.

HÆMODENUM. A Name for the *Geniſta Tinctoria Germanica*.

HÆMODIA, αἱμωδία. A Stupor of the Teeth, cauſed by acid and auſtere Subſtances touching them.

HÆMOPHOBOS, αἱμοφόβος, from αἷμα, Blood, and φόβος, Fear. A Perſon who is afraid of Bleeding is thus call'd; but ſometimes it is applied to a Phyſician, who is too timorous of directing Phlebotomy.

HÆMOPTYICUS, αἱμοπτυϊκός. A Perſon who diſcharges Blood from the Mouth is thus call'd.

HÆMOPTYSIS, αἱμόπτυσις, from αἷμα, Blood, and πτύω, to ſpit. A Spitting of Blood. See PHTHISIS, and SPUTUM.

HÆMORRHAGIA. An Hæmorrhage, or Eruption of Blood; from αἷμα, Blood, and ῥήσσυμι, or ῥήγνυμι, to break forth.

The ſpontaneous Evacuations of Blood, produced by Nature, are generally made from thoſe Places which are of a lax and tender Texture, have highly minute and ſlender Veſſels everywhere diſperſed thro' them, and are not every-where braced up by firm Membranes. Of this Kind the moſt conſiderable are the interior Part of the Noſtrils, the Bronchia of the Lungs, the Fleſh of the Gums, the Stomach, the Inteſtinum Ileum, the Extremity of the Inteſtinum Rectum, and the Uterus and Vagina, from the too much diſtended Arteries of which Parts the Blood is frequently diſcharg'd with an uncommon Impetus. But there are ſome extraordinary Caſes, in which the Blood diſcharges itſelf from unuſual Parts, in which the Veſſels lie ſomewhat more deep. Thus *Salmuthus*, in *Cent.* 3. *Obſ.* 36. and *Henricus ab Heer*, in *Obſ.* 36. inform us, that they ſaw Blood ſpontaneouſly diſcharged from a Patient's little Finger. *Bartholine in Obſervat. Anatom. Cent.* 1. *Hiſt.* 3. tells us, that he ſaw the menſtruous Blood diſcharged from the Hand and the Knee. *Panarolus* alſo, in *Pentec.* 4. *Obſ.* 15. and *Amatus Luſitanus*, *in Cent.* 2. *Obſerv.* 24. and *Cent.* 7. *Curat.* 48. inform us, that they knew the menſtruous Blood violently diſcharged from the Breaſts. *Stalpart. Vander Wiel*, in *Cent.* 1. *Obſ.* 80. furniſhes us with various Inſtances of a menſtrual Diſcharge from the Penis, in Men.

Such Eruptions of Blood are moſt familiar to thoſe, whoſe Bodies are of a ſoft and ſpongious Make, of a delicate Texture; and whoſe Veſſels, being turgid with Blood and Serum, render them, what the Antients called, Perſons of a ſanguineous Conſtitution; for theſe are generally ſubject to Hæmorrhages, almoſt thro' the whole Courſe of their Lives: Whereas thoſe who are of a choleric Temperament, have large Veſſels, a firm Habit of Body, and thro' whoſe Veſſels the Blood circulates briskly, are in their Youth principally obnoxious to an *Hæmoptyſis*, or Spitting of Blood. Perſons, on the contrary, of ſanguineo-melancholic Habits, are generally moſt ſubject to the Hæmorrhoids; whereas Women of a ſanguineo-phlegmatic Temperament are moſt commonly affected with bloody Vomitings.

It is alſo to be obſerv'd, that different Species of Hæmorrhages happen at different Periods of Life, as *Hippocrates* long ago juſtly obſerv'd, in the 27th, 29th, and 30th Aphoriſms, of his 3d Section. Thus Children, and young Perſons, are moſt ſubject to Hæmorrhages of the Noſe. In Perſons ſomewhat farther advanced, the Blood attempts its Diſcharge, thro' the Veſſels of the Lungs: Hence an Hæmoptyſis, and a Phthiſis ariſing from it, are moſt familiar to Perſons of this Age. But in Adults, and ſuch as have arrived to the Years of Maturity, the Blood generally diſcharges itſelf from the hæmorrhoidal Veins; whereas, in decrepit Old-age, it is generally evacuated by the urinary Paſſages.

'Tis alſo obſervable, that in the Spring and Autumn, eſpecially about the Æquinoxes, the redundant Blood is more copiouſly diſcharged than at other Seaſons, eſpecially from the Noſtrils; and in Men, otherwiſe ſubject to the Hæmorrhoids, from the Veins of the Anus. Sanguineous Apoplexies, which ariſe from Eruptions of Blood in the medullary Subſtance of the Brain, are, alſo, more frequent at theſe Seaſons than at others, eſpecially in the Spring: Whereas it is obſervable, that bloody Vomitings, and Diſcharges of bloody Urine, rage more univerſally in the Autumn than in the Spring. Beſides, about theſe Seaſons, the ſpontaneous Evacuations of Blood generally appear, and return periodically.

We, alſo, obſerve, that almoſt all thoſe, who, in their tender Years, are ſubject to copious and frequent Hæmorrhages from the Noſe, are naturally of weak Conſtitutions, have delicate and eaſily ruffled Minds, are, thro' almoſt the whole Courſe of their Lives, ſubject to various Diſorders, Spaſms, and Pains, and rarely live to a great Age; for in their Youth they are inclin'd to a Phthiſis. When they are arriv'd at the Years of Maturity, they eaſily fall into flatulent, ſpaſmodic, and hypochondriac Diſorders: And, when they have the good Fortune to be ſtill farther advanc'd in Years, they are highly ſubject to nephritic and arthritic Complaints.

The Diſpoſition to Hæmorrhages is for the moſt part hereditary, and convey'd from Parents to their Children; but it is moſt ſpeedily put in Action, and exerts itſelf, by means of ſuch external Cauſes, as render the Circulation of the Blood too briſk, or increaſe the inteſtine Commotion of its Parts. The moſt conſiderable of theſe Cauſes are, all Exerciſes of the Body and Mind more intenſe than uſual: Aliments, or Medicines, taken internally, which are either too hot, acrid, or ſpirituous; as alſo the prepoſterous and unſeaſonable Uſe of Baths, Sudorifics, and Purgatives.

As Eruptions of Blood, when ariſing from a Repletion of the Veſſels, and a Redundance of Blood, are highly ſalutary and beneficial to the Conſtitution, ſo they are full of Danger, when excited by a malignant acrid Matter; as in malignant and exanthematous Fevers. And when they ariſe from an Obſtruction, Induration, or Corruption of the Viſcera, eſpecially of the Liver, Spleen, or Lungs, they generally prove mortal, becauſe they readily terminate in a Cachexy, a Dropſy, the Morbus Niger of *Hippocrates*, or an Hectic, which proves fatal.

Thoſe ſeem to be in a great Miſtake, who think that a Redundance of a laudable, fibrous, and purple-colour'd Blood, of a due Conſiſtence, is the principal, immediate, and material Cauſe of Hæmorrhages; for thoſe who abound in a thick and denſe Blood, ſuch as Perſons of brawny and robuſt Bodies, who uſe ſevere Exerciſe, and coarſe Aliments, are rarely ſubject to Hæmorrhages. But Perſons who have too great a Quantity of Serum contain'd in their Veſſels, ſuch as thoſe of ſerous Conſtitutions, thoſe who are of a ſoft Texture of Body, and addicted to Idleneſs, who uſe Veneſection too copiouſly, who have an obſtructed Perſpiration, or who eat more than they can digeſt and diſcharge, are moſt ſubject to Hæmorrhages, and the Diſorders ariſing from them. That the exceſſive, and almoſt incredible, Quantity of Blood, ſometimes diſcharged from the Noſe and the Uterus, is rather the Effect of a ſerous than of a ſanguineous Plethora, is ſufficiently obvious from this, that the red Portion is very ſmall, in Compariſon of the ſerous; as is obvious from opening a Vein in violent Hæmorrhages, and collecting the Blood diſcharged from it.

It is obſervable, that ſome particular Phenomena previouſly appear in the Part where the Blood has a more than uſual Tendency to make an Eruption. Thus an unuſual Redneſs and Heat of the Face, a Swelling, Diſtention, and ſtrong Pulſation of the Arteries, prognoſticate an Hæmorrhage from the Noſe; whereas a Laſſitude of the whole Body, a Pain of the Back and Loins, a Tenſion about the Hypochondria, a Paleneſs of the Face, a Horripilation of the Skin, and a Conſtriction of the Pores, happen before

before Hæmorrhages from the Uterus. In an *Hæmoptysis*, or Spitting of Blood, an Anxiety of the Præcordia, a Difficulty of Breathing, an oppreſſive undulatory Pain about the Diaphragm, Flatulences in the Abdomen, and a Refrigeration of the Extremities, are perceived before the Eruption. A Vomiting of Blood is generally preceded by a tenſive and oppreſſive Pain in the Left Hypochondrium. The Eruption of the Hæmorrhoids is, alſo, for the moſt part, preceded by ſome ſpaſmodic Strictures, Flatulences in the Abdomen, a tenſive and oppreſſive Pain in the Os Sacrum, a Languor of the Body, and a Refrigeration of the Extremities.

If the Circumſtances already advanced are conſider'd, and duly compar'd with each other, I think it will be ſufficiently obvious, that Hæmorrhages do not proceed immediately and directly, either from a Redundance of Blood, its turgid Quality, by which it attempts a Diſcharge thro' the Veſſels, the Acrimony of the Serum and Blood producing a Diæreſis, or Rupture, or from its too great Fineneſs, in conſequence of which it ſweats thro' the Veſſels, as the Antients imagin'd; but rather from a certain irregular and unequal Circulation of the Blood, which happens, when the Extremities, and ſuch Parts as are remote from the Heart, are, by an intenſe Stricture and Contraction of the Fibres, ſo braced up, that the Blood cannot return thro' the Veins, but, in conſequence of their increaſed ſyſtaltic Motion, is in larger Quantities transferr'd to other improper Places. Hence thoſe ſmall Arteries, which generally do not admit Blood, ſtrictly ſo call'd, are preternaturally diſtended, and at laſt neceſſarily ruptured.

But the Cauſes of thoſe Hæmorrhages, eſpecially of the violent and ſymptomatic Kind, which either precede or follow other Diſeaſes, eſpecially of the chronical Kind, are to be ſought for in Infarctions, Obſtructions, and Indurations of the Veſſels and Viſcera, which put a Stop to the free Circulation of the Fluids. Thus, in hydraulic Machines, we obſerve, that, when ſome of the Pipes are obſtructed, the Water burſts from the other open ones with greater Celerity, and a more violent Force. The ſame happens in the human Body; for when the Blood cannot paſs ſufficiently freely to the Heart, thro' the obſtructed or ſpaſmodically conſtricted Veins of any Part, the Force impelling it is increaſed, both in the large and ſmall Ramifications of the Arteries, which, being full and turgid with Blood, have their Extremities open'd. This is ſufficiently obvious from the Diſſections of dead Bodies. Thus *Willis* informs us, that, upon the diſſecting the Body of a Perſon who died of an Hæmoptyſis, he ſaw a Tumor on the Left Side of the Lungs: Thus alſo in the *M. N. C. Decad.* 8. *an. b. Obſ.* 217. we are told, that in diſſecting the Body of a Patient, who died of the ſame Diſorder, the Lungs were found totally cover'd with a large Quantity of Clay-like Matter, and the Auricle of the Right Ventricle of the Heart preternaturally large. *Blancard, Anatom. Pract. Obſ.* 46. in a Perſon who died of the ſame Diſorder, found the Spleen tumid, and the Veſſels of the Meſentery and Omentum ſtuffed with Blood. The ſame Author, in *Obſ.* 23. and 32. tells us, that, in a Perſon who died of a Vomiting of Blood, the Liver was found hard and ſcirrhous, and the Spleen tumid, and full of Blood. Hence *Fernelius*, in his *Method. Medendi*, juſtly obſerves, "That Perſons whoſe Viſcera and Liver "are weak and ſcirrhous, are ſubject to frequent Hæmorrhages "of the Noſe, as well as dropſical Patients." *Heurnius*, in his Commentary on the Aphoriſms of *Hippocrates*, confirms this Doctrine, in the following Words: "Thoſe whoſe Face is of a "greeniſh Colour, labour under ſome Diſorder of the Liver; "and, in them, frequent Hæmorrhages from the Noſe are a Sign "of an approaching Dropſy."

Since preternatural Eruptions of Blood generally draw their Origins from ſpaſmodic Conſtrictions of the Parts, and Contractions of the Veins, we hence plainly underſtand, why hypochondriac Patients, in whom the Stomach, and whole nervous Canal of the Inteſtines, are continually afflicted with flatulent Diſtentions, and ſpaſmodic Strictures, by reaſon of the Irregularity of the periſtaltic Motion, are ſo highly ſubject to the Hæmorrhoids; and why, if the Blood is not diſcharged in that manner, their Symptoms are greatly exaſperated.

With reſpect to the Cure of Hæmorrhages in general, I would have it obſerv'd, that their Practice is highly prepoſterous, who, maintaining that a Redundance of red Blood, ſo called by way of Eminence, is univerſally the material, as well as accidental, Cauſe of theſe Diſorders, uſe frequent Veneſections for their Cure, tho' at the ſame time, in the Beginning of the Diſorder, for the ſake of Prevention, eſpecially in ſanguineous Habits, ſeaſonable Veneſection is highly ſalutary and beneficial. But the juſteſt and moſt rational Intentions of Cure conſiſt in deriving the Impetus of the Blood from the Part affected, by proper Remedies; ſuch as Bathing the Feet, Clyſters, Frictions, and Ligatures of the external Parts, warm Coverings, Fomentations, and Baths. Then the ſpaſmodic Strictures of the nervous Parts are to be relaxed. And laſtly, by gentle Laxatives, moderate Diaphoretics, and Abſtinence from high Feeding, which generates Blood, the Redundance of the ſerous Colluvies is to be remov'd, and its Accumulation for the future prevented. *Frederic Hoffman.*

As Hæmorrhages are of various Kinds, it is convenient to treat of them under different Articles. Thus, under the Article ABORTUS, the Reader will find an Account of the Methods to be purſu'd, in caſe of an Hæmorrhage from a Miſcarriage: And will ſee more upon this Subject, under the Article UTERUS. But I muſt remark, that, under the Article ABORTUS, I have made a Reference to HÆMORRHAGIA, which ſhould have been to UTERUS. For an Hæmorrhage of the Brain, ſee APOPLEXIA. For an Hæmorrhage of the Noſe, ſee NARES. For Hæmorrhages of the *Uterus*, ſee UTERUS. For Hæmorrhages from the Urinary Paſſages, ſee URINA. And for Hæmorrhages, conſider'd as Symptoms of Wounds, ſee VULNUS.

PROGNOSTICS FROM HÆMORRHAGES.

As it was often obſerved, that, in acute and violent Diſtempers, a ſudden and copious Hæmorrhage, either from the Noſe, the Hæmorrhoids, the Anus, or, in Women, the Uterus, was the Means of reſtoring the Patient to Health, ſo Phyſicians, in this reſpect, began to imitate Nature, by taking away large Quantities of Blood in Diſeaſes. So well was *Hippocrates* perſuaded of the Reaſonableneſs of this Practice, that in all acute and violent, or great Diſeaſes, ſuch as Fevers, and Inflammations of the Viſcera, he chiefly recommends Phlebotomy. "In acute "Diſeaſes, he ſays, *Lib. de R. V. I. A.* bleed, if the Diſeaſe "be violent, and the Patient ſtrong, and in the Flower of his "Age." And this Kind of Remedy have Phyſicians been taught to practiſe, not only in Imitation of Nature, but by the Example of ſome Animals, particularly the *Hippopotamus*, or Riverhorſe, which, as *Pliny* tells us, being grown to an exceſſive Degree of Obeſity, thro' its Gluttony, thruſts its Leg againſt the ſharp Stump of a Reed, and thus, wounding a certain Vein, procures a plentiful Diſcharge of Blood, which effectually removes the Plethora, with which it was before oppreſſed. With much the ſame Intention, Phyſicians attempt to evacuate the Humours, either by Cathartics, Emetics, Sudorifics, or Diuretics.

Since Nature, therefore, often procures a Solution of many Diſeaſes, by copious Diſcharges of Blood, it ſhall be our Buſineſs to treat of thoſe ſpontaneous Evacuations, or Excretions, becauſe they are not all good or ſalutary, but are ſometimes very far from relieving the Patient; as are alſo all other Excretions, whether by Vomit, Stool, Sweat, or Urine; nor do all Abſceſſes free from Diſeaſes, but only ſuch as are properly qualified. We ſhall go on, then, firſt, to ſpeak of ſuch Excretions of Blood as are good, and always portend Recovery to the Patient.

Among ſpontaneous Excretions of Blood, thoſe ſeem to afford the beſt Grounds for Prediction, which in continual, acute, and violent Fevers, are diſcharged from the Noſe, and are called peculiarly by the *Greeks*, αἱμορῤῥαγίαι, *Hæmorrhagiæ*. *Galen. in Prorrhet.* ſays, that Deliria and Hæmorrhages are excited by the Recurrence of hot and thin Humours to the Head; and, in his Comment on the Firſt of the *Epidemics*, he ſays, that the Blood, excited by Heat, takes its Courſe upwards, and is carried into the Head; whence neceſſarily follows an Inflation, Anaſtomoſis, and even a Rupture of the Veins, from the Redundance of Spirits: And in the ſame Book he writes, that Eruptions of Blood from the Noſtrils, in burning Fevers, proceed from a Predominance of yellow Bile, which, mixing with the Blood, after rendering it aduſt, ſends up with it an Exceſs of Heat to the Head, which produces a Rupture of the Veins, and an Effuſion of Blood from the Noſtrils.

Hence it appears, that ſuch Hæmorrhages always proceed from Blood heated to an Exceſs, or Bile mix'd with it; and never happen but in Bodies of a hot Temperament, and in hot and acute Diſtempers, ſuch as a *Synochus*, and continual burning Fevers: And this is confirm'd by *Galen*, in the before-quoted Comment, where he ſays, that Eruptions of Blood, in burning Fevers, are cauſed by an Exceſs of Heat, by which the Humours are exalted, and carried to the Head. To the ſame Purpoſe, we are told by *Hippocrates*, 6 *Epid. Sect.* 3. that "Hæmorrhages from "the Noſe happen to thoſe who are of a paliſh black, or of a "yellowiſh red, or of a paliſh yellow Complexion;" becauſe ſuch Perſons are obnoxious to theſe Eruptions from the immoderate Heat of their Humours; for which Reaſon alſo *Hippocrates, ibid.* ſays, that thoſe who begin to uſe "Venery, or "feel Inclinations that way, are ſubject to Hæmorrhages;" he means Boys grown up, and paſſing from a State of Puberty to Manhood, who are ſubject to ſuch Profuſions, both on account of the Redundance and Heat of their Blood.

From ſuch Cauſes, then, are Patients ſubject to Hæmorrhages, which, as was obſerv'd, principally affect thoſe who are of a hot Temperament, and abound with hot Blood; and, beſides, labour under Diſorders proceeding from Humours of the ſame Quality; of which Nature, according to *Galen*, are all continual Fevers, and, among Intermittents, Tertians, and ſometimes Quartans. To theſe we may add, all internal Inflammations of the Part about the Region of the Præcordia, particularly the Liver, Spleen, Diaphragm, and Stomach, and ſometimes Pleuriſies and Phrenſies, but very ſeldom, or never, Lethargies or Peripneumonies. In Diſeaſes of this Nature, therefore, are Hæ-

morrhages, or Eruptions of Blood, to be expected. We are now to regard what may be prognosticated from them.

Hæmorrhages from the Noſtrils, and all the Excretions of Blood, from what Part ſoever, whether by the Uterus in Women, the hæmorrhoidal Veſſels in Men, or ſometimes by the Stomach, (which laſt are ſeldom good, *Hippocrates*, 7 *Aph.* 37. pronouncing "Vomitings of Blood, without a Fever, ſalutary, "but the contrary, if attending a Fever," tho' Vomitings of Blood have been critical in many Diſeaſes) are diſtinguiſh'd into *good*, or what we call *critical*, or *judicial*; ſubdivided into *perfect* and *imperfect*; ſo called, becauſe they perfectly or imperfectly determine the Event of the Diſtemper; and into *bad*, called alſo *ſymptomatical*; but theſe are contain'd under the *imperfect critical*.

Critical Hæmorrhages are always ſalutary, and Prognoſtics of a Recovery, the perfect critical of a ſudden Recovery, the imperfect critical of a Recovery for ſome time delay'd. Critical Hæmorrhages, of the beſt Kind, which prognoſticate certain Recovery to the Patient, are known by the following Signs: Firſt, A critical Hæmorrhage never appears in a crude State of the Diſtemper, but always attended with Signs of Concoction; for which Reaſon a perfect critical Diſcharge happens in the Height of the Diſeaſe, an imperfect one in its Increaſe, where there are ſome, but not all the Signs of Concoction. It is neceſſary, therefore, in order to a ſalutary Hæmorrhage from the Noſe, or any other good Excretion of Blood, that there ſhould be ſome Signs of a Concoction, with which if the Hæmorrhage be attended, it will be of Service to the Patient, as we are aſſured by *Galen*, *Lib.* 3. *de Criſibus*, *Cap.* 7. and *Hippocrates*, *de R. V. I. A.* where he ſays, "that, "if there be a Flux of Blood from the Noſe, there is a Solu- "tion of the Diſeaſe; and the ſame Event attends a critical or- "derly Sweat, or an Evacuation of white thick Urine, with a "light Hypoſtaſis." Some perhaps will object the Caſe of *Meton*, *Epidem. Lib.* 1. *Ægr.* 7. and of him who lay ſick in the Garden of *Dealces*, *Epidem. L.* 3. *Ægr.* 3. and others, to whom there happen'd a truly critical Hæmorrhage, attended with a Crudity of the Excrements. In *Meton*'s Caſe, the Urine was black, and had a black Sediment; in the other Patient, thin Urine, with a pretty thick Sediment, ſhew'd the Diſeaſe not only to be in a very crude State, but attended, alſo, with a conſiderable Malignity. For Anſwer to this, it may be ſaid, that ſo great is the Efficacy of a copious Hæmorrhage, towards determining a Diſeaſe, as often to relieve and free the Patient, even in the Beginning of the Diſorder, and before any Signs of Concoction appear. This is the Opinion of *Galen*, concerning the Caſe of *Meton*, when he ſays, "His Criſis and Recovery really "ſeem to be owing ſolely to the Hæmorrhage, tho' the Signs "were not at all ſalutary." An Excretion of Blood, then, tho' very good, and a moſt certain Prognoſtic of Health, when it happens in the Height and Concoction of the Diſtemper, is not to be deſpiſed, tho' happening in the Beginning of the Diſorder, and attended with Signs of Crudity. To this Purpoſe it may be obſerv'd of the moroſe Woman, *Epidem. L.* 3. *Ægr.* 11. that ſhe recover'd after a Flux of the Menſes, when under the Symptom of black Urine; tho' to this Inſtance *Galen* ſays, that the black Colour of the Urine had nothing of Danger in it, becauſe it receiv'd that Colour from the Menſes, which were retained, and of a melancholy Conſiſtence: And *Meton* recover'd, who had a critical Hæmorrhage, under the ſame Symptom of black Urine. Agreeable alſo with this is the Obſervation of *Hippocrates*, 1 *Epid. Stat.* 3. that thoſe under the Fever, on whom the Jaundice appeared on the ſixth Day, were relieved by an Hæmorrhage; and yet, 4 *Aph.* 62. he condemns a Jaundice in Fevers, appearing before the ſeventh Day, as it happen'd to *Hermocrates*, 3 *Epid. Sect.* 1. *Ægr.* 2. And, 1 *Epid. Stat.* 3. he informs us, that *Antiphon*, the Son of *Critobulus*, labouring under a Fever, with thin Urine, had an Eruption of Blood, and afterwards recover'd. From the Premiſes we may infer, that Excretions of Blood have this Prerogative, if I may ſo ſay, above other Evacuations, that they frequently prognoſticate a Recovery, in a crude State of the Diſeaſe, when other Excretions, whether by Stool, Vomiting, or Sweat, which appear at that time, are ſymptomatical. The Reaſon of this I take to be, that the Blood may at any time be commodiouſly evacuated thro' the open Veins, and wants no Preparation for its Diſcharge, as do the other Humours; whether they require to be excreted by Stool, Vomit, or Sweat, on account of their Thickneſs, Viſcidity, or the Straitneſs and Obſtruction of the Veſſels; which is the Reaſon why Phyſicians ought not to uſe purging Medicines in the Beginning of ſuch Diſorders; according to that Direction, 1 *Aph.* 22. "Concocted, not crude, Matters are to "be purged, or ſtirred, nor are they to be meddled with in the "Beginning of Diſorders, unleſs there be an Orgaſmus, and a "Tendency to Excretion." But, in Evacuations by the open Mouths of the Veins, we juſtly wait for no Concoction; and for the ſame Reaſon we bleed in the Beginning of acute Diſtempers; and hence ſpontaneous Hæmorrhages are good and ſalutary. We may add, what is worthy of Obſervation, that copious Eruptions of Blood are of Service, not ſo much on account of evacuating the bad Blood with the reſt, as by an univerſal Refrigeration of the Body, and cauſing a free Perſpiration of the hot Vapours, and a Ventilation of the Humours. We conclude, therefore, that Excretions of Blood are moſt beneficial in the Height of the Diſeaſe, and with manifeſt Signs of Concoction; but that, however, they are not on all Accounts to be dreaded, tho' attended with Signs of Crudity.

The ſecond Condition, or Qualification, of the moſt laudable Hæmorrhage is, That it be free and copious. Of ſuch Diſcharges *Hippocrates* ſpeaks, 2 *Epid. Sect.* 1. where he ſays, "that plen- "tiful Hæmorrhages from the Noſe generally relieved the Pa- "tients." *Galen*'s Judgment of the ſame, in the Caſe of *Meton*, you have before. Again, *Hippocrates*, 1 *Epid. Stat.* 3. tells us, "that, in the Caſe of burning Fevers, thoſe who had a good "and plentiful Diſcharge of Blood by the Noſe, generally reco- "ver'd by that means; nor do I know any, he ſays, who, in "this epidemical Conſtitution, died after a juſt Hæmorrhage. "But *Philiſcus*, *Epaminon*, and *Silenus*, from whoſe Noſes fell "a ſmall Quantity of Blood, by Drops, on the fourth and fifth "Day, all died." And afterwards he ſays, "Some there were, "on whom the Jaundice appear'd on the ſixth Day; but they "were relieved by ſome Evacuation, either by Urine, Stool, "or a copious Hæmorrhage from the Noſe. Thus it happen'd "to *Heraclides*, who lay ſick in the Houſe of *Ariſtocydes*, and "had a plentiful Effuſion of Blood from the Noſtrils, and Eva- "cuations by Stool and Urine." Again, a little afterwards, "Multitudes were affected with an Hæmorrhage, eſpecially "young Perſons, and thoſe in the Flower of their Age; but "moſt of thoſe, who had no Hæmorrhage died." In the ſame Book, a little farther, ſpeaking of Women who had a critical Evacuation of Blood, he ſays, "Very many had a Flux of the "Menſes in their Fever, ſome an Hæmorrhage from the Noſe, "eſpecially Virgins, who were never before thus affected. Some "had an Hæmorrhage from the Noſe, with the firſt Eruption "of the Menſes, as it happen'd to a Virgin, the Daughter of "*Dætharſes*, who had the menſtrual Flux for the firſt time, "attended with a copious Profuſion of Blood from the Noſ- "trils." From the Premiſes it is ſufficiently demonſtrated, that copious Hæmorrhages are very ſalutary and critical; which is the Concluſion of *Hippocrates*, 2 *Epid. Sect.* 1. "Copious Hæmor- "rhages from the Noſe, he ſays, procure a Solution in many "Diſorders, as it happen'd in the Caſe of *Heragoras*." And of the Woman he ſpeaks of, 4 *Epid. T.* 27. who on the fifth and ſixth Days had a Flux of Blood from the Noſtrils, and on the ſeventh Day underwent a Criſis.

Tho' it abundantly appears, that one of the principal Characters of a ſalutary Excretion of Blood is, that it be in a large Quantity; yet we are to be careful, that we do not deceive ourſelves with the Copiouſneſs of the Evacuation, and miſtake thoſe for very ſalutary and critical Excretions, which are to be eſteemed otherwiſe, ſince many have died under a large Eruption of Blood. For, under violent Diſtempers, immoderate Evacuations are frequent, while the Diſeaſe is yet in a crude State, as *Galen* obſerves, *Lib. de Præſag. ad Poſthumum*; for which Reaſon the Phyſician is often obliged to ſtop the Eruption, as *Galen* did for a young Man of *Rome*, who had an Effuſion of Blood from the Noſtrils, to the Quantity of four Pounds and an half. It will be neceſſary, therefore, to regard the Signs by which good and bad copious Excretions of Blood are diſtinguiſh'd. Large Evacuations are judged to be good and ſalutary, to omit other Signs, which are common to all good Excretions, when the Patient ſupports them with Eaſe, or finds himſelf the ſtronger and lighter for them; if he be no longer thirſty, whereas he was much afflicted with Thirſt before; if the Fever leaves him, and the Symptoms are remov'd, or diminiſh'd, and his Pulſe beats more equally, ſtrongly, and orderly. "Myſelf, ſays *Proſper Alpinus*, "but laſt Year, underwent a critical Solution of a Quartan, from "a copious Excretion of Blood, to the Quantity at leaſt of ſix "Pounds. Among other Signs conſequent upon ſo large an Eva- "cuation, which was by almoſt all eſteemed immoderate, I found "my Thirſt, which before was continual and violent, quite ex- "tinguiſh'd: And I felt myſelf not at all the weaker, but rather "ſtronger and lighter, which flatter'd me with ſome Hopes of a "Recovery, tho' contrary to the Judgment of all the Phyſicians; "and I perſuaded myſelf, that this Evacuation was critical, and "upon no Account to be dreaded, tho' the Profuſion of Blood "was, for the greateſt Part of it, attended with a Cough, which "aroſe on a ſudden." Such then are the Marks by which we diſtinguiſh a good and critical copious Evacuation, from a bad and ſymptomatic one.

A third Condition, or Character, of a critical and ſalutary Hæmorrhage, is, that it happens on a critical Day: For at ſuch a Seaſon the Appearance of Excretions, whether good or bad, are of greateſt Moment towards predicting the Death or Recovery of the Patient: Hence the Author of the *Coac. Præſag.* juſtly obſerves, *T.* 150. that "acute Diſeaſes are determin'd on a critical Day, "by an Hæmorrhage from the Noſe, and a copious Sweat." And *Text.* 152. he ſays, that "Fevers generally have their Solu- "tion on the ſeventh, ninth, and fourteenth Day, by an Hæmor- "rhage from the Noſe."

A fourth Requiſite in laudable Hæmorrhages is, That it be prejudicated on ſome indicatory Day. For Nature uſes on one of the *Dies indices*, or indicatory Days, to excrete a moderate Quantity of Blood, as an Indication of a future and more ample Profuſion on a critical Day. Thus, in the Caſe of *Meton*, 1 *Epid. Sect.* 3. *Ægr.* 7. on the fourth Day of the Fever he was twice affected with a gentle Bleeding at the Right Noſtril, and the next Day with a copious Effuſion of Blood from the Left Noſtril, which gave a Solution to the Diſeaſe.

We may add, as a fifth Requiſite of the beſt Sort of Hæmorrhage, That it ought to be agreeable to the Nature and Quality of the Diſeaſe, as well as of the Patient, and his preceding Way of Living, with the Conſtitution of the Air and Seaſons. We have already obſerv'd, that Excretions of Blood are very proper in all acute Diſorders, as well in Fevers, and among them the Synochus, and burning Fevers, as in Inflammations of the Liver, Spleen, Diaphragm, and frequently in Pleuriſies and Phrenſies. In ſuch Caſes, therefore, it will be very proper and uſeful to regard and conſider theſe Excretions, which in other Diſeaſes are of leſs Importance. For the ſame Reaſon ſuch Evacuations are beneficial in all Bodies which abound with immoderately hot Blood; and therefore, if the Patient's habitual Way of Living has contributed to the Increaſe of Bile, if it be Summer, or an hot and dry Seaſon, or there be any other Circumſtance which may promote the Generation of bilious Blood, nothing can be of more Service to the Sick, under the before-mention'd Diſorders, than an Hæmorrhage: It is even no ſmall Misfortune to the Patient to have none; as we learn from the Obſervation of *Hippocrates*, before quoted, 1 *Epid. Stat.* 3. where we are told, that the greateſt Part of thoſe young Perſons, who were not favour'd with an Hæmorrhage, died.

In the ſixth Place, The moſt laudable Hæmorrhage muſt be congruous or ſuitable to the Places affected, ſo as either to lie in a direct Line with them, and by that means to divert, and plentifully to evacuate, from the afflicted Part; or oppoſite thereto, in order to make a Revulſion from the ſame. To this Purpoſe we read, 6 *Aph.* 21. that "mad Perſons, at the Appearance "of the Varices, or Hæmorrhoids, are freed from their Mad-"neſs;" and, 4 *Aph.* 25. that "an Excretion of Blood down-"wards by Stool is good, or ſalutary." Here *Galen*, in his Comment, ſays, "The Truth is, there is no better Remedy for "a confirm'd Melancholy, than a Flux of Blood from the Veins, "called the Hæmorrhoids." And, 5 *Aph.* 32. we are told, that Women are cured of a Vomiting of Blood by an Eruption of their Menſes. For this Reaſon it is cuſtomary in the Cure of Madneſs, to apply Leeches to the Hæmorrhoidal Veins, which is practiſed with very good Succeſs, upon thoſe in whom thoſe Veins are full and large, and eſpecially if there has been a Diſcharge this Way before; provided ſtill, that Care be taken to make the Evacuation ſufficiently copious, and not to be contented with drawing off a ſmall Quantity of Blood, as is too generally the Cuſtom, which, for that Reaſon, ſeldom anſwers the Intention.

To divert the Humours from the Part affected, and at the ſame time to evacuate them, the beſt Excretion, whether natural or artificial, is in a direct, or on the ſame Side with the Part affected; which Sort of Evacuation *Galen, de Curat. per Sang. Miſſ.* highly commends, and calls it κατ' ἴξιν, "direct," as, when the Liver is affected, to have an Evacuation of Blood on the Right Side; when the Spleen is diſorder'd, on the Left. With this View, we are told by *Hippocrates*, 2 *Epid. Sect.* 3. that "a painful Tenſion of the Sides, and Tenſions of the Hypo-"chondria, with Tumors of the Spleen, and Hæmorrhages "from the Noſtrils, ought to regard one another κατ' ἴξιν, in a "direct Order."

A ſeventh Requiſite of the moſt laudable Hæmorrhage is, That it wholly remove, or, at leaſt, diminiſh the Diſeaſe; and that the Patient be relieved, and the Symptoms quite removed, or greatly mitigated. Of this Nature was the Hæmorrhage obſerv'd by *Hippocrates* in *Heropythus*, and the Virgin of *Lariſſa*. Of *Heropythus*, 3 *Epid. Sect.* 3. *Ægr.* 9. he ſays, "that on the fortieth "Day much Blood came from his Noſtrils, and he recover'd "in ſome meaſure the Uſe of his Reaſon; his Deafneſs was "abated, and his Fever remitted." And of the Virgin of *Lariſſa*, *ibid. Ægr.* 12. he tells us, "that on the ſixth Day ſhe had a "copious Hæmorrhage from the Noſe, was ſeized with a ſhiver-"ing Fit, and, immediately afterwards, with a copious hot "Sweat, over every Part, procuring a Criſis, upon which the "Fever left her." The beſt Hæmorrhage is either what gives an entire Solution to the Diſeaſe, and its Symptoms, or, at leaſt, diminiſhes them all. *Galen, de Mot. Muſc. L.* 2. *C.* 6. writes, that he ſaw a Man, who had been thirteen Days delirious in a Fever, immediately reſtored to Health, upon a very plentiful Evacuation of Blood from his Noſtrils, and recover the Uſe of his Reaſon on a ſudden. *Hippocrates*, 4 *Aph.* 60. pronounces an Hæmorrhage from the Noſtrils to be good, when it removes a Deafneſs; and the Author of the *Prorrhetica*, *Lib.* 1. *T.* 152. ſays, "They who are affected with Pains of the Head and Neck, "together with a Weakneſs and Trembling of the whole Body, "are relieved by an Hæmorrhage." To this I may add, what is a ſingular Benefit from a critical Excretion of Blood, that the Patients are thereby relieved from a Thirſt, by which they were before extremely afflicted; for in many Caſes the beſt of Blood, when not critically diſcharged, uſually excites a Thirſt by drying; whereas a critical Eruption thereof, by means of refrigerating and moderating the febrile Heat, and ventilating the Body, allays the Thirſt; and perhaps, alſo, the Viſcera are moiſten'd, on account of the Suppreſſion of the Heat, by which their Moiſture was exhauſted; agreeably to which Sentiment, *Hippocrates*, 4 *Aph.* 27. tells us, "that they who, labouring un-"der Fevers, are affected with Hæmorrhages from any Part, if "they feel themſelves thereby refreſh'd, have their Bellies moiſt-"en'd, and excited to Excretion." In ſhort, as we ſaid before, the beſt Hæmorrhages are thoſe, after which the Patients find themſelves ſtronger, and better able to raiſe themſelves, and the Pulſe becomes more regular.

Of bad and deſtructive Hæmorrhages.

Excretions of Blood, which are of a bad Kind, and Prognoſtics of the worſt Event, are known by Signs directly contrary to the foregoing; as,

Firſt, When Hæmorrhages, or other ſanguineous Excretions, are attended with no Signs of Concoction. For, tho' we have ſhewn, that large Hæmorrhages are beſt, and even ſometimes good in a crude State of the Diſorder, yet it is difficult to form a Judgment of them, unleſs they are attended with good Signs; but, when they are attended or ſucceeded by bad Signs, they portend nothing but Deſtruction. If, therefore, an Eruption of Blood be preceded by pernicious Signs in the Excrements, as a Blackneſs of Urine, with a black Sediment, turbid Urine, like that of Horſes, not clear, or thin and aqueous; or fetid, virulent, party-colour'd, and black Vomitings; or black and colliquative Stools; or other pernicious Symptoms; it portends no Good: Or, if any bad Signs appear together with the Eruption, or ſucceed it, nothing but Deſtruction is to be expected. Of ſuch Signs we read, 1 *Prorrhet.* 126. where it is ſaid, "If there be an Erup-"tion of Blood from the Noſe, attended with ſmall Sweats, and "a Refrigeration of all the Parts, it ſhews a Maligniry, and "threatens a bad Event." For, ſince there is a Refrigeration of the Extremities, and alſo of the whole Body, the latter is by far the more dangerous. Again, *ibid.* 127. "An Hæmorrhage ſuc-"ceeded by black Stools is bad: Very red Stools are alſo bad in "ſuch a Caſe, and eſpecially if the Hæmorrhage happens on the "fourth Day." *Galen*, commenting on *Text.* 128. ſays, "that "all Eruptions of Blood, attended with Sweating, are malignant." Again, *ibid.* 129. "A moderate Hæmorrhage with black Stools, "in acute Diſorders, ſucceeded by Deafneſs, is bad: In theſe "Caſes, Blood voided downwards is bad; however, it removes "the Deafneſs." We have obſerv'd, however, ſays *Proſper Alpinus*, in a very robuſt Man of *Bologna*, who laboured under an acute malignant Fever, a continual Hæmorrhage from the Noſe, which held him from the firſt Day to the fourteenth, on which he recover'd; during which he loſt every Day at leaſt a Pound of Blood. When this Hæmorrhage had continued to the ſeventh Day, being under ſome Concern for the Event, we uſed ſome Medicines to ſtop the Blood; after which it flowed no longer from the Noſtrils, but paſſed off in the ſame manner by Stool, accompanied with a copious and bilious Diarrhœa, which continued alſo to a violent Degree, from the firſt Day of the Illneſs to the fourteenth, when both Excretions terminated in a perfect Criſis: Thus did this Man eſcape, merely by his extraordinary Strength of Nature. To this Purpoſe alſo, the Author of the *Prorrhetica* ſays, that "under a Conſtipation of the Belly, where "nothing is excreted but ſmall black Fæces, reſembling the "Dung of Goats, and that by Compulſion, an Hæmorrhage by "the Noſe is a bad Prognoſtic." *Galen*, in his Comment on this Place, ſays, that thoſe who are thus dried and exhauſted by the febrile Heat, are unable to bear Evacuations. Thus, *Coac.* 40. 342. "An Hæmorrhage from the Noſtrils, attended with "cold Sweats, and a general Refrigeration, is bad." And, *ibid.* "Extraordinary Refrigerations, ſucceeding an Hæmorrhage, on "critical Days, are very pernicious." Hence it appears, that Eruptions of Blood, attended with bad Signs, are of dangerous and pernicious Conſequence. Of ſuch Hæmorrhages *Hippocrates* ſpeaks, 3 *Epid. Sect.* 3. "Nor had thoſe who were thus affected, "he ſays, any other Sign of a Criſis; there was no juſt Hæmor-"rhage, nor critical Abſceſs form'd as uſual."

As Eruptions of Blood with bad Signs are pernicious, ſo alſo, in the ſecond Place, are thoſe which neither anſwer the Eſſence of the Diſeaſe, the Nature of the Patient, the Conſtitution of the Air, the Seaſon of the Year, or the Age, preceding Way of Living, and Temperament, of the Sick. Thus, for Inſtance, in cold and pituitous Diſeaſes, an Eruption of Blood can never be otherwiſe than bad.

Thirdly, Hæmorrhages which are not congruous, or rightly ſituated, with reſpect to the Places affected, are pronounced bad. To this Purpoſe, we are told by the Author of the *Prorrhetica*, 125. "That Eruptions of Blood, on the contrary Side, are bad; "as if, for Example, under a Tumor of the Spleen, there "ſhould happen an Hæmorrhage from the Right Noſtril; and "the

the Case is the same, with respect to the Hypochondria." For the same Reason, an Excretion of Blood by Vomiting, in Fevers, is condemn'd by *Hippocrates*, in his *Aphorisms*; and more especially if the Blood be black, and most of all in extenuated Bodies; concerning which latter, 4 *Aph.* 23. he says, "In Persons much extenuated by acute or chronical Diseases, or by "Wounds, an Excretion of black Bile, or a Substance like black "Blood, indicates Death on the next Day."

Fourthly. An Excretion of Blood, from which the Patient finds no Relief or Alteration, is to be condemn'd, and most of all when the Case is alter'd for the worse, because such an Excretion is to be reckon'd among those undetermining Excretions, which are of a fatal Kind. For, as *Galen* says, *Com. in* 1 *Prorrhet.* of critical undetermining Symptoms, some are fatal, and others indicate a difficult Crisis; but such as make an Alteration for the worse are to be reckon'd among the former. We may add, that the Pulse, by its Weakness, Inequality, and remarkable Variation for the worse, is a sufficient Demonstration of the Malignity of such Excretions. We may also judge of their Malignity from the Quantity of Blood, as when it flows immoderately, or in too little a Quantity, or not all at once, but by Intervals, as it happens in imperfect Crises. An immoderate Effusion is never good, often bad, because it greatly diminishes the natural Heat, by which means Nature easily sinks under the Disease. To this Purpose, we are told by the Author of the 1 *Prorrhet.* 133. "That the Belly suffers by long Hæmorrhages," because the Part is too much refrigerated; and, *T.* 134. "That "violent Hæmorrhages, in general and critical Refrigerations, "are most pernicious;" because, by greatly refrigerating the Body, they add Cold to Cold. Hence a general Refrigeration after a Rigor, when not succeeded by a Revocation of the Heat, is condemn'd, *ibid.* 6. And, when the Body is exhausted by an immoderate Effusion of Blood, sometimes the Patient falls into a mortal Delirium, sometimes into frightful Convulsions, as we may learn from 7 *Aph.* 9. It sometimes happens in Diseases, not of a violent Kind, that the Patients are refrigerated to such a Degree, as to fall into a Dropsy; for many have been observ'd to be hydropical upon that Account. *Galen* expresses himself to this Purpose, *Com. in* 2 *Aph.* 72. where he tells us, "That "an immoderate Efflux of Blood, either from the Uterus, or "the Veins called the Hæmorrhoids, or from an Ulcer, injures "the Patient in all or most of the natural Functions; and some "are by this means affected to such a Degree as to fall into a "Dropsy."

Of Prognostics, in acute Distempers, from small and suddenly ceasing Excretions of Blood, and Drops of Blood distilling from the Nose.

Blood effused from the Nostrils, or any other Part, in a small Quantity, is sometimes good, where it shews the Beginning of a Crisis in some indicatory Day, as it proved in *Meton*, 1 *Epid. Sect.* 3. *Ægr.* 7. who had a moderate Hæmorrhage from the Nose on the fourth Day, and on the next had a copious Effusion of Blood from the same Part, attending a Crisis. But the Case is not the same, when the Disease is in a perfectly crude State; much less, when the Excretion is attended with some pernicious Sign; for in such Circumstances a small Effusion of Blood discharged at once, or at Intervals, is always a bad Sign, and a very sure Prognostic of Destruction, where the Disease appears not in the least concocted by it, nor the Patient at all reliev'd. However, on some Occasions it may be a very good Excretion, as when the Disease is not perfectly crude, and the other Signs are salutary, and if it be renew'd in a very copious measure on the next critical Day. But if it should either not happen on an indicatory Day, or not be succeeded by a plentiful Eruption, on a judicatory or critical Day, it will be only symptomatic, and, if other bad Signs appear, and the Disease changes afterwards for the worse, a mortal Prognostic. It very rarely happens indeed, as far as we have been able to observe, that a small Excretion of Blood is salutary, but, on the contrary, is generally very pernicious, as always foreshewing the Length of the Disease, and often the Death of the Patient, especially when the Evacuation is not made by a convenient Passage, nor the Sick at all relieved by it; as, for Example, if the Liver be inflamed, and the Excretion be made by the Left Nostril; or the Spleen inflamed, and the Blood comes from the Right Nostril; or if the Uterus be affected, and the Discharge made, not by the Uterus, but by the Nose, or by Vomiting: And the same Judgment is to be formed, when neither the Fever, nor its Symptoms, are at all mitigated by such an Evacuation. Such then are the Indications of a small Excretion of Blood, from which nothing certain can be prognosticated, without considering the other Signs; and, if these are bad, the Excretion, you may be sure, is also bad; if the Signs are not bad, the Excretion shews a difficult or doubtful Crisis; and with good Signs it portends the long Continuance of the Disease. We may conclude, therefore, that a small Excretion of Blood, not succeeded by one more copious, or an Excretion which stops on a sudden as soon as begun, are pernicious to the highest Degree, as indicating an extreme Decay of Strength, according to *Galen. Com. in* 1 *Prorrhet.*

We come now to consider what may be infer'd, or presag'd, from Excretions of Blood by Drops, since such Discharges very frequently happen in acute Fevers, especially in those of the inflammatory or burning Kind: Such Excretions, when they stop as soon as begun, in the Opinion of *Galen*, are worse then if they had never appear'd. It is to be observ'd, that, according to the various Quantities of the flowing Blood, the Eruption thereof is to be estimated. One Quantity of Blood is copious, continual, and discharges itself in a full Stream, and this appears in a perfect Crisis; another Quantity is discrete, or consists of distinct Portions, which, when continu'd to be evacuated at Intervals, sometimes foreshews a future Crisis; and there is a third Quantity, which discharges only a few Drops by the Nose, which Accident is sometimes occasion'd by an external Cause, as by exposing the Head to the Rays of the Sun, drinking too freely of pure Wine, and the like. But, when such an Eruption is owing to the Violence of the Fever, it indicates a vain Effort of Nature towards a Crisis, and the Disappointment to arise either from the Malignity of the Disease, the corrupt State of the Blood, or the Weakness of the Brain. This Excretion by Drops, in milder Disorders, where the other Signs are salutary, foreshews the long Continuance of the Disease, but in acute Distempers are most certain Prognostics of Death; for it shews, as *Galen* says, *Com. in Lib. de R. V. I. A.* that Nature made an Attempt to discharge the superfluous, or, as he expresses it, *Com.* 1. *in Prorrhet.* redundant, Matters, collected in the Brain, but was unable to effect it, either thro' its own Weakness, or the Thickness of the Blood, or the Denseness of the Parts, or thro' a Concurrence of some or all of these Causes. Hence it appears, that all Distillations, or Droppings, of Blood in acute Diseases are very pernicious, and, a Sign of Fevers of a bad and malignant Quality, as *Galen* observes, *Com. in* 3 *Epid.* It was also an Observation of *Hippocrates*, 3 *Epid. Sect.* 3. on the epidemic burning Fevers of the pestilent Constitution, that one of their concomitant Symptoms was, a small Excretion of Blood, which fell by Drops from the Nose; and that it was a pernicious Sign: And this is confirm'd by the same Author, 1 *Epid. Stat.* 3. where he informs us, "That when burning Fevers began to "be epidemic, they gave manifest Indications to what Subjects they would prove mortal." Then, after enumerating many pernicious Signs, which he had observed in the Beginning of those burning Fevers, he adds, "Nor had any of those who "were affected with these Symptoms, an Hæmorrhage from the "Nose, but only an Excretion of a small Quantity of Blood, "which fell by Drops from that Part." All Distillations or Droppings of Blood, therefore, in acute Diseases, are justly esteem'd pernicious Signs; in Confirmation of which, we are told by *Hippocrates*, in the same Book, "That *Philiscus*, *Epami*-"*non*, and *Silenus*, who had a small Distillation from the Nose "on the fourth and fifth Day, died." Excretions of Blood by Drops, then, in acute Diseases, are most certain Prognostics of Death; and most of all, when the Blood is thick and black, according to the Author of the *Prorrhetica*, "Excretions of Blood "by Drops from the Nose, he says, are bad; and, if the Blood "be black and sooty, mortal." And *Galen*, in his Comment, says, "That a Distillation of black and pure Blood indicates, "not only that the Humours are agitated and carried towards "the Head, but that the Blood is extremely parched by a vio-"lent Heat, which has consumed all its Humidity, and wasted "its Ichor." And he had said a little before, "That as all "Distillations from the Nose are of a dubious Event, so, when "they appear black and thick, they prove extremely pernicious." But, if such Excretions happen on one of the critical Days, they are most absolutely fatal, because on such Days all Signs, whether good or bad, are of greatest Moment towards a Prognostication. Agreeably to this, we are told, 1 *Prorrhet.* 1. "That "Distillations from the Nose are fatal, (in the Case before de-"scribed) as at other Times, so especially on the fourth Day." And *Galen*, on the Place quoted, says, "A Distillation from "the Nostrils is always a bad Sign; but, when it happens on "the fourth Day, it indicates the extreme Malignity of the "Distemper." For it seems as if Nature attempted to expel the redundant Matter collected in the Brain, but was too weak to effect what was intended. These Distillations, or Excretions of Blood by Drops, are no less fatal and destructive, when attended with other bad Signs. Thus, 1 *Prorrhet.* 141. we read that "A "small Distillation from the Nose, attended with a Deafness "and Listlessness, is of dubious, dangerous Consequence." Where *Galen*, on the Place, reprehends the Author for saying, that such Distillations were of a dubious or difficult Nature, since they are all of them, as he says, mortal. Again, *ibid.* 126. "If there be a Distillation of Blood from the Nose, accom-"panied with a cold Sweat, and a Refrigeration of the Extre-"mities, it is a fatal Sign." We conclude then, that such Distillations are always pernicious in the highest Degree, when attended with Deafness, Listlessness, Coma, Watchings, Deliriums, and the like; but especially in Phrenses: And this is confirm'd in the *Epidemics*, by the Examples of *Philiscus*, *Silenus*, the Wife of

of *Dromeades*, and the *Parian*, to all whom this Symptom was fatal. *Prosper Alpinus de Præsag. Vit. & Mort.*

Consumptions from Hæmorrhages.

Conſumptions are frequently cauſed by Hæmorrhages, whether it be at the Noſe, or from the Lungs by Coughing, from the Throat by Hawking, from the Stomach by Vomiting, from the Kidneys by the Paſſages of Urine, from the Hæmorrhoids, or Veſſels of the Womb, in the ordinary monthly Purgations, or difficult Labour, or laſtly, from Wounds, where there happens a plentiful and long Flux of Blood, from the Opening of the large Blood-veſſels. For altho' frequent and moderate Bleeding (as every ignorant Fellow and Barber knows) will make one grow fat; foraſmuch as the emptying the Veſſels with a moderate Hand, makes room for a greater Quantity of new Chyle, whereupon the Maſs of Blood growing richer, is render'd more fit for Nouriſhment, and conſequently the Appetite is excited; yet every immoderate and long Bleeding impoveriſhes the Blood, and creates an hectical Heat in the Spirits and ſolid Parts, thereupon deſtroying the Appetite, and bringing the whole Body into a Conſumption and Leanneſs.

In this Caſe the Bleeding muſt be ſtopt as ſoon as may be, and the Return of it is to be prevented, by incraſſating, opiate, and glutinous Medicines. As, for Example: Let ſtrong Ligatures be made upon the Arms and Thighs; if it be neceſſary, and the Strength of the Patient will bear it, let a Vein be open'd with a Lancet, and Blood taken away frequently, but in a ſmall Quantity, to divert the preſent Flux of Blood, and to prevent the Return of it. If the Part where the Blood breaks out will admit of it, let *Galen's* ſtyptic Plaiſter, the Royal Stryptic, cold Oxycrate, Ink, the Aſhes of human Hair, lightly burnt in a Retort, and made into the Form of a Poultice with Vinegar, true Bole, Dragon's Blood, and other Things of that Nature, be in a convenient Manner preſently applied, and often renew'd.

Inwardly let the Patient take, three or four times, twenty or thirty Drops, or more, of the Royal Stryptic, in a Draught of Milk-water; alſo five or ſix Spoonfuls of the clarified Juices of Plantain and Nettles: Or let him frequently take the following Linctus out of a Spoon.

Take of the Syrup of Purſlain, three Ounces; true Bole, Dragons Blood, Troches of burnt Ivory, Sealed Earth, of each two Scruples; Japan Earth, a Dram; of Gum Tragacanth, diſſolved in Plantain-water, a ſufficient Quantity: Mix them up into a Linctus.

Or let him take the Quantity of a Nutmeg of the following Electuary.

Take of the Conſerve of red Roſes, an Ounce; Troches of Amber, three Drams; true Bole, Dragon's Blood, of each half a Dram; Syrup of Myrtles, a ſufficient Quantity; mix them up into an Electuary.

Let him alſo take every Night, five or ſix Spoonfuls of the following Julap, ſhaking the Bottle.

Take of Plantain-water, ſix Ounces; ſmall Cinnamon-water, three Ounces; diſtilled Vinegar, half an Ounce; true Bole, Dragon's Blood, of each half a Dram; *London* Laudanum, three Grains; Syrup of Myrtle, an Ounce and an half: Mingle them, and make a Julap.

The Flux of Blood being thus ſufficiently ſtopt, and cured, we are to uſe our moſt diligent Endeavours, that the Blood may be quicken'd, repleniſh'd with ſuch new Chyle as abounds with ſweet and nutritious Juice, and that the feveriſh Heat (if there be any) may be extinguiſh'd, to prevent a Conſumption. And therefore the Patient is to be nouriſh'd with the frequent taking of Jelly-broths, poached Eggs, and Variety of Food that affords good Juices, and is both eaſy to be digeſted, and moſt grateful to the Stomach. Nevertheleſs he is to abſtain from Wine, and from Things that are ſalt, or have Spice in them, leſt they increaſe the Heat of the Blood, which was before too hot, from the Defect of its nutritious Juice. And becauſe this Sort of Patients, as all that are upon the Confines of a Conſumption, are ſubject to Anger, to Sadneſs, hypochondriacal Oppreſſions, hyſteric Fits, and to a Want of Appetite, whereupon they can neither take nor digeſt much Food, and, conſequently, are incapable of making up the Loſs of that Blood which has been ſpent; therefore the ſick Perſon ought to be diverted and humour'd by his Friends, and to be ſent, as ſoon as may be, into a free and wholſome Air, which I have, being taught from a great deal of Experience, obſerved to conduce more, than any Thing of Medicines, to the comforting and fortifying of the Nerves and Spirits, to the Recovery of an Appetite, and a chearful Mind, and, conſequently, to the preventing of an approaching Conſumption.

But if the Patient ſeems, either thro' his own Neglect, or the ſudden Advances of the Diſtemper, to be affected with a hectical Heat, and ſome Degree of a Conſumption from his Bleeding; then let the Phyſician make it his whole Buſineſs, perfectly to put out this Flame, as ſoon as ever he can, with the Help of the *Peruvian* Bark, given in a large Quantity, the Efficacy of which I have often found to be wonderful in this Caſe: Afterwards, if it be neceſſary, let the Patient be put into a Milk-diet, or upon the Uſe of the chalybeate Waters: But he muſt forbear the Uſe of all purging Medicines. And ſome Benefit may be reaſonably expected from the giving of Crabs-eyes, Coral, Pearl, and other ſuch kind of altering and ſweetening Medicines. *Morton's Phthiſiologia.*

HÆMORRHOIDALE, or HÆMORRHOIDALIS HERBA. A Name by which the *Chelidonium minus* is ſometimes called.

HÆMORRHOIDES, from αἷμα, Blood, and ῥέω, to flow. The Piles; that is, a Diſcharge of Blood from the Hæmorrhoidal Veins about the Anus, and *Inteſtinum Rectum*. See Hæmorrhagia.

Every liberal Diſcharge of Blood from the Veins of the Anus is not to be accounted exceſſive and preternatural; but, in order to form an Eſtimate of this Circumſtance, we are carefully to conſider the Veſſels, the Habit of Body, the Strength, the Age, and the Conſtitution, of the Patient; for it frequently happens, that the Diſcharge of a certain Quantity of Blood proves ſalutary and beneficial to ſome; whereas the Evacuation of an equal Quantity, proves hurtful and injurious to others: Nor is every hæmorrhoidal Diſcharge, tho' larger than uſual, and excited by the increaſed Quantity and Commotion of the Blood, to be eſteem'd a Diſeaſe; but only ſuch a Diſcharge as continues long, impairs the Strength, deſtroys the Appetite, the due Digeſtion of the Aliments, Nutrition, and the other Functions of the Body, and, conſequently, lays a Foundation for violent chronical Diſorders.

Exceſſive hæmorrhoidal Diſcharges are generally preceded, and accompanied, with a heavy and oppreſſive Pain of the Back and Loins; ſometimes a Stupor of the Legs; a Conſtriction of the external Parts, with a ſlight Horripilation, and a Subſiding of the Veſſels; a hard and contracted Pulſe; a Dryneſs of the Mouth and Fauces; a ſmall Diſcharge of Urine, which is frequently pale; a Senſe of Weight in the Anus, extending itſelf to the Perinæum, a Weakneſs of the Stomach, Flatulences in the lower Part of the Abdomen, a frequent Stimulus to diſcharge the Urine, and go to Stool, on which Occaſion, a white and bilious Mucus is ſometimes diſcharg'd. Beſides, Perſons pretty far advanc'd in Years, and ſuch as are weak, are afflicted with a Procidentia Ani.

In the Beginning of theſe exceſſive Diſcharges, the Blood evacuated is generally black, and pretty grumous, and ſometimes eliminated from the varicoſe Veins, in Pieces as large as the Palm of the Hand. After this, a red Blood is diſcharg'd; then a Blood highly ſerous, and ſometimes pituitous, or a Mucus, reſembling the White of an Egg. The Quantity of the Blood diſcharged is ſometimes ſurpriſingly large: Thus *Montanus* knew an Inſtance, in which two Pints were evacuated every Day: And *Panarollus* ſaw an Inſtance, in which one Pint was daily diſcharged. This Evacuation often continues for a conſiderable time, twenty Days, for Inſtance, a Month, and forty-five Days, as is certain from the Obſervations of Authors of undoubted Veracity.

Every Evacuation of Blood from the *Inteſtinum Rectum* is ſupply'd from the hæmorrhoidal Veſſels; but the external hæmorrhoidal Veſſels rarely flow profuſely, but readily degenerate into painful Varices, which, when open'd, diſcharge Blood, though ſeldom in large Quantities. But the internal hæmorrhoidal Veſſels, which are Ramifications of the ſplenic Branch, and are diſtributed to the interior Subſtance of the *Inteſtinum Rectum*, and the *Sphincter Ani*, together with the ſmall Arteries ariſing from the inferior meſeraic Veſſels, not only diſcharge a larger Quantity, but, when ſuppreſs'd, generate thoſe Diſeaſes which ariſe from Diſorders of the Liver, Spleen, Pancreas, Meſentery, and Inteſtines.

This Diſcharge is immediately and directly made from the Ramifications of the Arteries, diſtended by too large a Quantity of Blood, and at laſt ruptur'd. Nor is it to be abſolutely denied, that often a large Quantity of Blood, which is frequently peccant, is diſcharg'd from the hæmorrhoidal Vein; for Valves preventing the Egreſs of the Blood are there wanting; and tho' there were ſuch Valves, yet the varicoſe State of the Veins muſt neceſſarily induce a great Change with reſpect to their Situation.

'Tis univerſally agreed, that this ſalutary Evacuation from the Veins of the Anus is owing to a difficult Circulation of the Blood through the hæmorrhoidal Veins, in conſequence of their perpendicular Situation, and its difficult Return to the *Vena Portæ*, and the Liver; and that the Diſcharge actually happens, when the Extremities of the Veſſels, in the *Inteſtinum Rectum*, are ſo diſtended by the Blood accumulated in them, as at laſt to be ruptur'd. Hence the Phyſician is in no Error, who de-

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duces the Cauſe of an exceſſive and prejudicial hæmorrhoidal Diſcharge from an obſtructed Circulation of the Blood through the hæmorrhoidal and meſeraic Veins, as alſo through the Liver itſelf. This is ſufficiently obvious from anatomical Obſervations, by which we are certain, that the Ramification of the hæmorrhoidal Vein, which runs along the Colon to the Anus, has been found thrice as large as in the natural State, in thoſe who have died of exceſſive hæmorrhoidal Diſcharges; for the greater the Afflux of Blood is through the Arteries, and the ſlower its Reflux through the Veins, the more the Fibres are relax'd by the Blood and Serum collected in the Veſſels; which, being diſtended, and their Tone gradually more and more impair'd, lay a Foundation not only for a long Continuance of the Diſorder, but alſo for its returning more readily than it would otherwiſe have done.

Whatever things, therefore, generate a Redundance of Blood, and ſtop its Paſſage through the Ramifications of the *Vena Portæ*, or invite it in too large Quantities to the hæmorrhoidal Veins, diſpoſe to the hæmorrhoidal Diſcharge; which is either moderate or immoderate, according to the Strength or Energy of the Cauſes. Hence it is, that thoſe who are of a lax, ſpongious, and pinguious Habit of Body, furniſhed with a large Number of Veſſels turgid with Blood, who live delicately, and lead a ſedentary Life, without Exerciſe, or who have ſprung from Parents affected with this Diſeaſe, are moſt ſubject to exceſſive hæmorrhoidal Diſcharges. For the ſame Reaſon it happens, that acrid Purgatives, Preparations of Aloes, frequently uſed; the too liberal Uſe of hot and aromatic Aliments, as alſo of ſweet and ſtrong Wines; a Neglect of habitual Veneſection; the Paſſions of the Mind, eſpecially Anger, and long-continued Grief; violent Commotions of the Body, eſpecially by riding, and other things of a like Nature, contribute very much to the Production of this preternatural Diſcharge of Blood from the Veins of the Anus.

Beſides, this Diſorder, when exceſſive, is not free from Danger, ſince by its means the Strength is impair'd, the Body waſted, the Thighs oppreſſed, the Sleep render'd unſound, the Præcordia rack'd with a Senſation of Weight, the Abdomen render'd tumid with Flatulences, and the Pulſe weak and trembling. But when the Diſorder is long continued, the Ancles become tumid, as alſo the Eyes and Face; the Colour of which is livid, or of a leaden Colour: Reſpiration becomes difficult, and at laſt the Diſorder degenerates into a Cachexy, a Dropſy, or a ſlow hectic Fever; ſo that it is obvious, that very violent Diſorders may ariſe from a Defect of Blood; and that the very Treaſure of Life conſiſts in a Stock of Blood, which is neither peccant in Quantity nor Quality.

Exceſſive hæmorrhoidal Diſcharges are more likely to prove fatal, when brought on by a Tumor of the Liver or Spleen, an Inflation of the Hypochondria, accompanied with a coſtive State of the Belly, or a beginning Cachexy and Dropſy; for, in theſe Caſes, the Obſtructions are increas'd and confirm'd, and the peccant Quality of the Blood and Juices augmented: Hence the Diſcharge proves chronical, and, at laſt, terminates in an Atrophy, or a ſlow hectic Fever, accompanied with extreme Loſs of Strength.

'Tis frequently obſerv'd, that exceſſive hæmorrhoidal Diſcharges, alſo, terminate in Dropſies; eſpecially in phlegmatic Patients, and ſuch as are of a lax Habit of Body; but, if this Diſorder ſucceeds a Dropſy ariſing from an Induration of the Liver, 'tis an infallible Sign, that Death will ſoon enſue.

The Cure.

As this Diſorder may proceed from various Cauſes, ſo there muſt be various Intentions of Cure purſued, and different Remedies made Choice of.

It frequently happens, that when, in plethoric Bodies, the hæmorrhoidal Diſcharge, uſual at other times, is, for ſome time, ſtopt, it not only appears again ſuddenly, upon any violent Commotion either of Body or Mind, the liberal Uſe of ſpirituous Liquors, too hot Baths, or upon taking Medicines increaſing the inteſtine Motion of the Blood, but continues long, and is attended with a large and ſtrong Pulſe. When this is the Caſe, the firſt Step to be taken is, to divert the Impetus of the Blood: For this Purpoſe Veneſection in the Arm, or an Immerſion of the Arms in a tepid Mixture of Water and Wine, are of ſingular Service. Then we are to uſe ſuch things as check the exceſſive inteſtine Motion of the ſulphureous Parts of the Blood, eſpecially things of a diluting and refrigerating Nature, ſuch as the drinking cold Water, eſpecially of the chalybeate or temperate mineral Kind; Whey, made with Citron, or Lemon-juice, the Waters of Plantain, Strawberries, Sorrel, and Wood-ſorrel; a Decoction of Hartſhorn mix'd with Citron-juice, Tincture of Roſes prepar'd with Spirit of Vitriol, and Julaps prepar'd of theſe, with Syrup of Roſes. The ſame Intention is, alſo, excellently anſwer'd by Preparations of Nitre, either ſimply purified, or artificially prepar'd of Spirit of Nitre and Salt of Tartar, exhibited in Powder, with abſorbent and corroborative Subſtances, or in common Drink. Thoſe anodyne Subſtances are, alſo, of ſingular Service, which moderate the impetuous Motion of the Solids and Fluids, and, at the ſame time, alleviate Pains and Spaſms. The moſt conſiderable of this Kind are the anodyne mineral Liquor; the *Spiritus Nitri dulcis*, duly prepar'd; the Waters of common Chamomile-flowers, and of the Tops of Yarrow; the Seeds of white Poppies, the Syrups of both Poppies, the Waters and Extracts of Poppies; and, if ſtrong Anodynes are to be uſed, Seeds of white Henbane will anſwer the Intention.

When, together with a Loſs of Strength, and an injur'd State of the nobler Functions, a large hæmorrhoidal Diſcharge continues for a long time, and the Viſcera begin to be tainted, whilſt, at the ſame time, the Blood is rather aqueous and ſerous, than fibrous, and of a due Conſiſtence; thoſe Medicines are highly beneficial, which gradually and mildly carry off, by Stool, the peccant bilious Juices; and, at the ſame time, invite the Humours from the *Inteſtinum Rectum*, to the Coats and Glands of the other Inteſtines. The moſt efficacious of theſe are Preparations of Rhubarb, with Currans and Tamarinds; or, if the Body is bilious, with Cream of Tartar, exhibited in a Potion render'd agreeable by an Eleoſaccharum, prepar'd with the Oil of Citron. Mild Diaphoretics are, alſo, of ſingular Service, by correcting and expelling the acrid Humours, eſpecially when any thing of a ſcorbutic, or purple, or exanthematous Taint is deeply rooted in the Blood and Serum. Among the Medicines of this Kind are calcin'd Hartſhorn, the foſſile Unicorn, diaphoretic Antimony, Wine-vinegar mix'd with Crabs-eyes, the Waters of Goat's-rue, Elder-flowers, and Carduus Benedictus, Treacle-water, the Mixtura Simplex, and the Diaſcordium of *Fracaſtorius*, which may be reduc'd to the Form of a Potion. My anodyne mineral Liquor, ſays *Hoffman*, mix'd with a fourth Part of the *Liquor Bezoardicus Buſſii*, is of ſingular Service; as alſo an Infuſion of Yarrow, Paul's Betony, Mouſe-ear, and others, drank either in Bed, or a warm Room, with an Intention to ſweat. We muſt not, for this Intention, forget to recommend a ſmall Doſe, half a Grain, for Example, of Camphire, eſpecially when mix'd with nitrous and bezoardic Powders; for by theſe means the acrid and cauſtic Matter, which is frequently the Cauſe of thoſe Spaſms, which render the Circulation of the Blood unequal, and induce large Hæmorrhages, is obtunded and eliminated, whilſt, at the ſame time, the Virtues of the Aſtringents and Anodynes are ſomewhat corrected, leſt they ſhould prove injurious. It was, therefore, no bad Practice of former Phyſicians to mix Camphire with their principal Preparations, for ſtopping Hæmorrhages, though in a very ſmall Doſe, as in the *Species de Hyacintho*, the *Diatrion Santal.* the *Diatrion Abbatis*, the *Trochiſci de Carobe*, the *Sperniola Crolii*, and the celebrated Powder of *Heurnius* for ſtopping Hæmorrhages.

In that more obſtinate and difficultly cur'd Species of the Diſorder, which ariſes from an Obſtruction, an Infarction, or increas'd Bulk, of any of the Viſcera; ſuch as the Liver, Spleen, and, in Women, the Uterus; if there is ſtill any Place for the Means of Relief, ſuch Medicines are to be choſen as reſolve the Obſtructions, without throwing the Humours into too violent a Commotion: Among theſe, the *Pilulæ de Bdellio* of *Meſue* were long ago extol'd, for their Efficacy and Safety, by *Foreſtus*, *Solenander*, and *Riverius*. Excellent Effects are alſo produced by the Pills prepar'd, according to *Beecher*'s Directions, of bitter Extracts, and temperate Gums; only the Extract of Rhubarb is in a pretty large Quantity to be ſubſtituted inſtead of that of the Aloes; and nitrous Powders are to be interpos'd, according as the Condition of the Patient requires them. But nothing is more efficacious in removing Obſtructions, than aqueous and diluting Subſtances. Hence, in Caſes of this Nature, we properly recommend temperate and ſubtile mineral Waters; the beſt of which are thoſe at *Utrecht*, *Wildungen*, and the *Selteran* Springs, drank either with or without Milk. And, certainly, a prudent and moderate Uſe of theſe Waters for ſome Months, in Conjunction with a proper Regimen, and the alternate Uſe of the above-mention'd Pills, as alſo of a Draught prepar'd of the balſamic Elixir, render'd more efficacious by ſome temperate chalybeate Medicine, is, of all others, the moſt effectual Means of Relief. *Montanus* orders Broth, prepar'd of Fowls, to be copiouſly drank three Hours before Dinner; and affirms, that, by this means, he had cur'd many of this Diſorder. But ſuch Broths will be ſtill more efficacious, if they are prepar'd with the Roots of Sorrel, Succory, or Vipers-graſs; or let ſome temperate chalybeate Medicine, ſuch as the *Tinctura Martis*, prepar'd with Juice of Apples, be exhibited with an Extract of Caſcarilla, made with Water, every Morning, drinking copiouſly of the above-mention'd Broth.

Among the principal Cauſes of a too copious hæmorrhoidal Diſcharge, we may juſtly reckon a Want of a due Tone in the *Inteſtinum Rectum*, together with its component Membranes and Veſſels: For this Reaſon ſuch Medicines are, alſo, to be uſed as reſtore the Strength of Parts too much weaken'd and relax'd. For this Purpoſe we may ſafely uſe the *Species de Hyacintho*, and the *Trochiſci de Carabe* of *Meſue*: And, of chalybeate Subſtances, the Blood-ſtone, reduced to a fine Powder, the *Tinctura Martis* of *Zwelfer*, highly ſubtile antimonial Crocus of

Mars,

Mars, exhibited with old Conſerve of Roſes, as alſo the Tincture of chalybeated Flowers of Sal Ammoniac, prepar'd with highly rectify'd Spirit of Wine, and mix'd with an equal Quantity of a bitter Elixir. Among reſinous and balſamic Medicines, the moſt efficacious are, Amber prepar'd or alcaliſated, and the Extracts of Caſcarilla, and red Sanders. If the Diſorder admits of a Cure, theſe Medicines, exhibited prudently, in proper Doſes, and in a due Order, afford great Relief.

In order to obtain the deſign'd Effect, external Applications of an aſtringent Nature are alſo to be uſed. If, therefore, the varicoſe Veins of the Anus, without any Evacuation of the Excrements, diſcharge large Quantities of Blood, attended with Syncopes, and a Danger of Death, we may ſafely apply Colcothar of Vitriol, or the *Crepitus Lupi*, eſpecially if milder Applications have been previouſly uſed without Succeſs; ſuch as Decoctions of Balauſtine-flowers, red Roſes, Myrrh, Plantain, Pomgranate-rinds, and Peruvian Bark, prepar'd with Red-wine, and, after the Excrements are diſcharg'd, applied to the Inteſtinum Rectum by means of a Sponge. When the Force of the effluent Blood is check'd, to the Os Sacrum, Perinæum, and Pubes, we muſt frequently apply Epithems prepar'd of Mint, Sumach, the Flowers of red Roſes, and St. John's-wort, the Shavings of red Sanders, Maſtich, Cardamoms, and Peruvian Bark, boil'd in Red-wine. This ſame Decoction, injected into the Anus by means of a Syringe, is of ſingular Service in reſtoring the Tone of the *Inteſtinum Rectum*.

In the Cure of violent hæmorrhoidal Diſcharges, Veneſection is to be premiſed, and the Primæ Viæ cleanſed, either with recent Caſſia, or the beſt Rhubarb, exhibited in a Decoction: Then both internal and external Medicines, of a corroborative and gently aſtringent Nature, may be ſafely uſed; for, in conſequence of the violent Effuſion of Blood, ſo great a Weakneſs is produced, that 'tis rarely ſafe to uſe draſtic Medicines; for, 'tis a general Rule in Medicine, that the weaker Nature is, the more mild and approaching to a dietetic Nature the Medicines ought to be.

Nitrous, acidulated, and refrigerating Medicines, as they may be eaſily born, when there is a violent Heat and Commotion of the Blood, ſo the Uſe of them is leſs ſafe, when the Blood is already much exhauſted, the Strength impair'd, and the Stomach weaken'd, eſpecially in ſymptomatic hæmorrhoidal Diſcharges ariſing from Obſtructions of the Viſcera.

Veneſection is not to be preſcrib'd at random, and without knowing the particular State of the Patient; becauſe the juſt Quantity of the Blood taken away is a Circumſtance of the higheſt Importance; for, in the Beginning of the Diſorder, if the Body is plethoric, and full of Blood, a large Quantity may be taken from a Vein in the Arm, in order to make a Derivation. But when a large Quantity of Blood is ſpontaneouſly diſcharg'd before, the Quantity taken muſt be ſmall, and the Operation repeated prudently, and at proper Intervals.

Hippocrates prudently adviſed, that, in caſe of violent hæmorrhoidal Diſcharges, one Vein ſhould be kept open, if the others were cloſed, for fear of a Dropſy, or a Conſumption, if the Blood ſhould recur to the Lungs or Liver. Though this Maxim is moſt immediately to be underſtood of the external Veins cloſed, either by the actual Cautery, or by the Application of Styptics, yet it may be juſtly applied to the internal Veins, which frequently diſcharge a large Quantity of Blood; and this is ſo much the more neceſſary, becauſe theſe Veins cannot be cloſed, that is, the Hæmorrhage cannot ſo eaſily and ſpeedily be ſtopt, without the Uſe of efficacious internal Medicines, which ought to be cautiouſly and judiciouſly attempted; otherwiſe the Patient will neceſſarily be injur'd, according to the Remark of *Hippocrates*.

From a due Conſideration of theſe Circumſtances, 'tis ſufficiently obvious, that Aſtringents ought not to be uſed without the higheſt Caution: Nor are they beneficial in the Beginning of the Diſorder, much leſs when the Blood and Strength are exhauſted; ſince, in weak and delicate Habits, they rather excite ſpaſmodic Diſorders, Convulſions, Deliquiums, violent Uneaſineſs of the Præcordia, accompanied with Tremors and Palpitations of the Heart. But if ſuch Subſtances, as check the Violence of the Diſorder, are abſolutely neceſſary, 'tis expedient not to obtain this End by large Doſes, leſt they ſhould produce unlucky Effects. Diluting, correcting, and gently laxative Medicines are, alſo, to be uſed; the moſt efficacious of which are Aſſes Milk, and ſweet Whey; but theſe Diluents are moſt effectual, when taken together with Chalybeates in a liquid Form.

When a ſudden Stoppage of the hæmorrhoidal Diſcharge is ſucceeded by an Uneaſineſs of the Præcordia, Inflations, Reſtleſneſs, and Difficulty of Breathing, it is to be recal'd by mild Laxatives, and emollient Clyſters, and Suppoſitories.

Hypnotics, Opiates, and Narcotics, are alſo to be uſed cautiouſly, ſince, when unſeaſonably adminiſter'd, they have a Tendency to induce Madneſs. But if the Uſe of Medicines of this Kind is indicated, the moſt proper are the *Pilulæ Wildegantii*, which may alſo be exhibited with Succeſs, when an intenſe Pain and Spaſms about the firſt Vertebra of the Loins excite a violent Effuſion of Blood, which is, therefore, to be check'd.

In no Diſeaſe is an accurate and cautious Regimen more neceſſary than in this, ſince, in conſequence of a Neglect in this Particular, the moſt efficacious Remedies will not produce the deſir'd Effect. For this Reaſon the Patient is carefully to abſtain from Summer Fruits, Pulſes, Sallads, Preparations of Milk, Fleſhes which are old, ſalted and indurated in Smoak, Aromatics, Garlick, Onions, ſtrong Wines, and all ſpirituous Liquors. He muſt, alſo, abſtain from Hunting, and all violent Commotions of Body, whether by Riding or Geſtation, eſpecially in rough and uneven Places; and a gentle Exerciſe, rather affecting the ſuperior than the inferior Parts of the Body, is to be uſed, in a pure and ſerene Air. But nothing is more prejudicial to Perſons labouring under this Diſorder than violent Commotions of Mind, eſpecially Anger and Dread; for which Reaſon all Incentives to theſe Paſſions ought to be carefully and induſtriouſly avoided. 'Tis alſo of great Importance, that the Patient ſhould uſe proper Liquors for Drink. I myſelf, ſays *Hoffman*, both with a preſervative and curative Intention, generally preſcribe Water, or Whey, Decoctions of red Sanders, with Maſtich and Cinnamon; as alſo Julaps prepar'd of a Decoction of Hartſhorn, Syrup of Citron-juice, with the Addition of a few Drops of the Oil of Cedar, or a few Ounces of Citron-flower-water.

When the Diſorder is once remov'd, due Pains are to be taken, in order to prevent its Return. This Intention is moſt commodiouſly and effectually anſwer'd by the Regimen already preſcribed; by Veneſection three or four times inſtituted every Year; by cleanſing the Primæ Viæ once a Month; and by the prudent Uſe of Mineral Waters, or only of chalybeated Milk. And, laſtly, all ſuch Aliments and Laxatives, as excite Pain, are carefully to be abſtain'd from, becauſe they excite an Inclination to Stool. *Frederic Hoffman.* See EMMENAGOGA.

CHIRURGICAL TREATMENT OF THE HÆMORRHOIDS.

Though ſome are deſirous of having this Flux moderated or ſtopt, a skilful Surgeon will be ſo far from complying, that he will lay before them the many Inconveniences which muſt attend ſuch a Practice. If, however, they perſiſt, or the Flux is exceſſive, then he may, at the ſame time applying other proper Remedies, ſtop up ſome of the Mouths, leaving one or two open, according to the Direction of *Hippocrates*, *Aphor.* 12. *Sect.* 6. He muſt proceed in the following Manner; firſt, bleed plentifully, then give gentle cooling Purges, and, laſtly, a Clyſter, five or ſix Hours before the Operation.

The Patient muſt be laid on his Belly, either upon a Bed, or Table, ſo that his Feet may touch the Ground; or, according to ſome, on the Side of a Bed, as for a Clyſter; then his Legs and Nates muſt be ſo diſtended, by two Aſſiſtants, that the Surgeon may have free Acceſs to, and Inſpection of, the Parts. Next, if there are no Tubercles, he is to tie up the bleeding Veins with a crooked Needle and Thread; if there are, he is to take hold of the Parts preternaturally tumefied with his Forceps, and cut them off, tying them up likewiſe; but he muſt be ſure to leave one Vein, and that the ſmalleſt, ſtill open. Laſtly, if the Profuſion does not ſtop ſpontaneouſly, in a ſhort time, he may apply Styptics, ſcrap'd Lint, and Compreſſes, with the T Bandage. In the ſubſequent Dreſſings he may uſe cicatrizing Medicines; and, if any thing foreign ſtill remains, he muſt remove it by the Sciſſars, or a Cauſtic. When theſe bleeding Tubercles were ſeated very high in the Rectum, the Antients recommended an actual Cautery; but this was ſevere and dangerous: I, therefore, prefer the Speculum Ani, (*Tab.* LV. *Fig.* 15.) which dilates the Parts, in ſuch a manner, that the Tubercles may be tied, or the open Veins ſtopt by Lint, impregnated with Aſtringents: This, with the Application of proper internal Medicines, will reſtrain a profuſe Hæmorrhage in theſe Parts; though it is ſeldom neceſſary to come to the laſt Operation.

Sometimes the Veins, diſpers'd about the Rectum and Anus, are ſo much dilated with Blood, as to be very painful, and raiſe Tubercles as large as Peas, Grapes, or Eggs; ſometimes, too, they extend to a Finger's-length. Theſe we call the Blind Piles, and diſtinguiſh them from other Tubercles of the Anus by their Colour, and Reſiſtance to the Touch; for they appear livid, or black, from the Stagnation of a thick Blood; and, when preſs'd by the Fingers, feel like a Bladder fill'd with Liquor, which Circumſtances are not obſerv'd in the others. See ANUS. Theſe diſtended Veſſels vary; for ſome are ſoft, giving little or no Pain; others hard, very painful, and inflam'd, rendering the Patient unable to ſit, ſtand, or walk, and ſometimes even bring on fainting Fits.

The blind Piles generally occur in Men of a coſtive, plethoric Habit, and ſuch whoſe Conſtitutions incline them to the bleeding Piles; and Women are moſt ſubject to them from a difficult Labour, a Suppreſſion of the Menſes, Geſtation, or a ſanguine Habit. In all theſe, the Veins ſometimes become ſo turgid as to diſcharge their Blood, and from blind become bleeding Piles, with ſo profuſe an Hæmorrhage as to endanger the Patient's Health. The blind Hæmorrhoids are ſometimes attended

tended with ſuch intenſe Pains as to cauſe a Spaſm of the Anus, and a Difficulty of Sitting, even to that Degree as not to admit of the Adminiſtration of a Clyſter. Sometimes they produce troubleſome itching Ulcers, eſpecially if they do not burſt within three or four Days; and very often give Birth to an Abſceſs, or ſtubborn Fiſtula.

When the blind Piles are neither large, nor troubleſome, they may be left to Nature; but when they encompaſs the Anus like a Bunch of Grapes, ſo that the Patient can neither ſit, ride, nor go to Stool without Difficulty; if they do not ſubmit to Spirit of Wine, the moſt ſpeedy Remedy is gradually to remove thoſe which are very full and large, by a Ligature; but, if there is a violent Inflammation, it is proper, firſt, to bleed, and give, internally, temperating and laxative Medicines, preſcribing a regular Diet, while diſcutient and emollient Fomentations are externally applied. The ſame End is anſwer'd by the *Unguentum Nutritum*, *Unguentum Linariæ*, freſh Butter, Oil of ſweet Almonds and the like, applied to the Parts.

But Linen, dipt in warm Spirits of Wine, and emollient Clyſters, are frequently of infinite Service; and, when they are not effectual, Leeches may be applied, to exhauſt the Blood; if they are not at hand, or the Parts inflam'd, the Lancet muſt be us'd; and, after bleeding in proportion to the Patient's Strength, the Dreſſings muſt be made of Lint, with Compreſſes and the T Bandage: Theſe are to be renew'd, till the Diſorder is completely cur'd. Sometimes the Piles are ſo high in the Rectum as to render the Uſe of the Speculum Ani neceſſary (ſee *Tab.* LV. *Fig.* 15.) When the Anus is properly dilated by this Inſtrument, they muſt be ſcarified with a Lancet, or divided with Sciſſars; for thus the inſpiſſated noxious Blood will be diſcharg'd, and the Pains reliev'd. Sometimes theſe Wounds are ſo far from healing, that of blind they become bleeding Piles, and the Patients, eſpecially if they are cauſtic, always, or very often at leaſt, diſcharge Blood with their Excrements, which Flux, though not entirely free from Trouble, ſhould not be ſuppreſs'd, while it is moderate, as it leſſens the Pains, conduces to the Patient's Health, and prevents or removes many Diſtempers, as the hypochondriac Melancholy, Diſorders of the Kidneys and Bladder, Gout, and iſchiadic Pains. For this Reaſon, many Moderns recommend, and excite, this Evacuation. But as this often induces many Inconveniences, and Diſeaſes, I prefer other Methods of Cure.

The beſt Method of preventing theſe Piles, is a regular, temperate Diet, with bleeding twice or thrice in a Year, and oftener, if requir'd; for theſe Evacuations will leſſen the Quantity of Blood, and, conſequently, remove the Cauſe. Internally may be taken ſome temperating Powder, or a Decoction, of Yarrow, drank like Tea; carefully avoiding all heating and aſtringent Medicines, ſuch as Aloes, Myrrh, and Saffron, and all Aliments of the like Quality, Wine, overloading the Stomach, Anger, violent Exerciſe, profuſe Venery, and Riding. If, notwithſtanding this Regimen, the hæmorrhoidal Veins ſhould begin to ſwell, reſolvent and temperating Medicines ſhould be given internally, while, externally, Fomentations and Cataplaſms may be applied; if the Pains are acute, then Recourſe muſt be had to Leeches, or the Lancet, as before directed. *Heiſter. Inſtitut. Chirurg.*

Sulphur, and its Preparations, are much recommended, taken internally, for the Piles; and it is certain, that the Flowers, or Milk of Sulphur, or crude Sulphur powder'd, are very effectual in removing an habitual Coſtiveneſs, which is a frequent Cauſe of hæmorrhoidal Diſcharges; not to mention its alterative Quality.

It has been obſerved by Practitioners, that a Diſcharge of a few Ounces of Blood from the hæmorrhoidal Veſſels affords greater Relief in many Diſorders, both acute and chronical, than any equal, or even a much larger Quantity, taken artificially from any other Part. That the Reaſon of this may be evident, it is neceſſary to remark, in this Place, that all the Veins which convey the Blood from *all the Contents* of the Abdomen, unite near the Liver, and form the Vena Portæ, which is very different from any other Vein; for it performs the Office of an Artery, conveying Blood to the Liver, for the Secretion of the Bile, in the Manner deſcrib'd under the Article HEPAR. The hæmorrhoidal Vein immediately empties itſelf frequently into the Splenic Branch, and ſometimes into the Meſenteric Branch, From this Structure it is obvious, that when any of the Viſcera of the Abdomen labour under a Plethora, or Fullneſs of Blood, or are obſtructed in ſuch a manner as not to be capable of containing the due Proportion of Blood, without Oppreſſion, a Diſcharge of a Portion of Blood from the hæmorrhoidal Veſſels affords immediate Relief to the labouring and oppreſs'd Viſcera, which could be brought about by no other means. Nor is this all the Advantage of ſuch a Flux; for it neither requires a Demonſtration to prove, nor great Abilities to conceive, that when the Viſcera of the Abdomen, on any Account whatever, are render'd incapable of receiving a due Proportion of Blood propel'd from the Heart, through the Arteries, the deſcending Trunk of the great Artery, which conveys Blood to the abdominal Viſcera, muſt neceſſarily receive leſs Blood than in an healthy State; and, in conſequence of this, the aſcending Trunk, which carries Blood to the Head and Brain, muſt receive more; and hence, all thoſe Actions which depend upon an entire State of the Brain, muſt be proportionably diſturb'd. A Diſcharge, therefore, from the hæmorrhoidal Veſſels makes a true Revulſion from the Head. Hence the Reaſons are evident, why an hæmorrhoidal Diſcharge frequently relieves hypochondriac Diſorders, Melancholy, Madneſs, Gout, Aſthma, Diſeaſes of the Kidneys and Bladder, and iſchiadic Pains.

It muſt, however, be remark'd, that Diſcharges of Blood from the hæmorrhoidal Veſſels are not always ſalutary, but ſometimes ſymptomatic, and of very bad Preſage. This happens when very conſiderable Obſtructions are found in the Liver, Spleen, Pancreas, Meſentery, or any Part contain'd in the Abdomen; for on theſe Occaſions the obſtructed Bowel is incapable of receiving the due Proportion of Blood, which, therefore, burſts out from the hæmorrhoidal Veſſels, and prognoſticates the Deſtruction of the Part.

It were to be wiſh'd, that we could, in Practice, regulate the hæmorrhoidal Flux; that is, procure it when we are certain it would be ſalutary; and check it when redundant, or ſymptomatical, without running the Hazard of doing an Injury to the Patient; for then we ſhould be able to afford ſudden Relief, in Caſes where we now find it attended with much Difficulty. Thus in atrabilarious Conſtitutions, in all Diſeaſes attended with a Depravation of the Imagination and Reaſon, in acute Diſorders, verging towards a Delirium, if we could, at pleaſure, excite the hæmorrhoidal Flux, it would contribute greatly to a Cure. It would farther be of Uſe, if we could reſtore this Diſcharge, when a Suppreſſion thereof is attended with bad Conſequences, or when an Eruption of Blood from ſome leſs convenient Part enſues.

The Medicines contributing to excite the hæmorrhoidal Flux are ſpecify'd under the Article EMMENAGOGA. But the principal Methods of procuring this Diſcharge are to apply warm relaxing Topics to the hæmorrhoidal Veſſels, of Water, Oil, Honey, and emollient Ingredients, either by way of Clyſter, Vapour, or Fomentation; and to rub the Parts, after theſe Applications, with rough Cloths, or Fig-leaves.

HÆMORRHOSCOPIA, *αἱμορροσκοπία*, from *αἷμα*, Blood, *ῥέω*, to flow, and *σκέπτομαι*, to contemplate. An Inſpection and Contemplation of the Blood let out of the Veſſels, in order to form a Judgment from thence, of the State of the Body.

HÆMORRHOUS, *αἱμόῤῥοος*. The Name of a poiſonous Serpent.

Paulus Ægineta, *L.* 5. *C.* 15. informs us, that the Bite of this Serpent is attended with exceſſive Pains, and Hæmorrhages; if there happens to be a Cicatrix in any Part of the Body, it breaks, and Blood flows from it; concreted Blood is mix'd with the Stools; Blood is cough'd up from the Lungs, and the Patient expires, vomiting of Blood.

As to the Cure, this Author ſays, that moſt of the Antients eſteem'd it irremediable; but if, ſays he, we are deſtitute of any ſpecific Remedy, we may, at leaſt, try common Methods. Thus we may ſcarify, burn, or even cut off the Part which receives the Wound, provided it be one of the Extremities: After theſe, apply acrid Cataplaſms to the Part. All acrid Subſtances are good, taken internally, eſpecially ſalted Aliments; unmix'd Wine, alſo, and Baths, are proper. But all theſe things muſt be immediately call'd in to our Aſſiſtance, and perpetually perſiſted in; for, if the Diſeaſe once appears, all Remedies are in vain. Vine-leaves boil'd, and made into a Cataplaſm with Honey, are, alſo, to be apply'd to the Part; and the Head of the Serpent burnt is to be taken internally; or Garlick, with *Oleum Irinum*; or let the Patient eat Raiſins.

Hippocrates calls thoſe large Veins, which, when open'd, diſcharge Blood copiouſly, *Hæmorrhous*, *αἱμόῤῥους φλέβας*.

HÆMOSTASIA. An univerſal Stagnation of Blood from a *Plethora*.

HÆMOSTATICA, from *αἷμα*, Blood, and *ἵστημι*, to ſtop. Medicines which ſtop Hæmorrhages.

HÆRMIA. A ſort of *Indian* Fruit like Pepper. It is eſteem'd good for diſpelling Flatulences, to fortify the Stomach, and is ſometimes apply'd to the Uvula, when relax'd. *Lemery des Drogues.*

HAGAR, or HAGIAR. The *Arabic* Name for the *Armenian* Stone.

HAGIOSPERMON; that is, the Holy Seed. A Name for the *Semina Santonici*, Worm-ſeed.

HAGIOXYLON; that is, the Holy Wood, *Guaiacum.*

HAL. Salt. *Rulandus.*

HALATION, *ἁλάτιον*. The Name of a Medicine, conſiſting principally of Salts, mention'd by *Trallian*, *L.* 3. *C.* 6. and of another, deſcrib'd by the ſame Author, *L.* 12. *C.* 7. which is cathartic.

HALCHEMIA. The Art of fuſing Salts. *Libavii Alchym. Pharm.*

HALCYON. See ALCEDO.

HALCYONIUM, *Spuma Maris*, Offic. FROTH or FOAM OF THE SEA. This is an oleous or bituminous Subſtance found floating on the Sea. It is much controverted, whether this

this is the Excrement, Sperm, or Milk, of ſome Sea Animal; or a kind of Zoophyte; or a Juice of ſome Sea Plant; or ſomething of a bituminous Mineral Exſudation from the Bottom of the Sea, converted into Foam by the Agitation of the Waves.

HALEC, Offic. Schrod. 5. 329. Charlt. de Piſc. 4. *Harengus*, Rondel. de Piſc. 1. 222. Schonef. Ichth. 36. Geſn. de Aquat. 402. Jonſ. de Piſc. 2. Raii Ichth. 219. Ejuſd. Synop. Piſc. 103. Mer. Pin. 185. *Harengus Flandricus*, Aldrov. de Piſc. 294. *Harengus Chalcidis Species*, Bellon. de Aquat. 271. THE HERRING.

The Parts of the Herring, uſed in Medicine, are, the Veſicles call'd *Animæ*, and the entire Fiſh. The *Animæ* are ſaid to excite Urine, taken internally. Salted Herrings are ſometimes apply'd to the Soles of the Feet in Fevers, with an Intent to derive the Humours from the Head, and mitigate the febrile Heat.

The Pickle of Herrings is uſed in Clyſters, for Pains in the Hips, and a Dropſy; externally apply'd, it mundifies fetid Ulcers, ſtops the Progreſs of a Gangrene, and diſſipates ſtrumous Swellings. It is, alſo, of Service in a Quinſy, if the Parts affected are anointed with this, and Honey mix'd together.

Freſh Herrings, conſider'd as a Food, are ſaid to be very good Aliment, if uſed moderately; but, taken in Quantities diſproportion'd to the Powers of Digeſtion, they produce a Putrefaction in the Stomach, of the alcaline Kind, and are attended with all the bad Conſequences, mention'd in the Article ALCALI, of highly alcaleſcent Aliment. But pickled Herrings are very bad Aliment, the Fleſh being render'd hard, and ſcarcely digeſtible by the vital Powers. Theſe, however, are leſs injurious, than thoſe which are ſalted and dry'd; theſe laſt being more harden'd, and, conſequently, leſs eaſily digeſted.

HALELÆUM, ἁλέλαιον. A Mixture of Oil and Salt, recommended by *Galen* for lax Tumors of the Joints. *Olaus Borrichius* has given this Name to a certain inflammable, ſaline, and ſulphureous Liquid, diſtil'd from Snow, or Rain-water.

HALIEÆTOS, HALIEÆTUS, Offic. Aldrov. Ornith. 1. 187. Jonſ. de Avib. 3. Caii de Animal. 85. Bellon. des Oyſe. 96. *Halieætus ſive Aquila marina*, Will. Ornith. 29. Raii Ornith. 59. Charlt. Exer. 70. Geſn. de Avib. 177. *Halieætus, ſeu Oſſifraga*. Raii Synop. A. 6. *Halieætus, ſeu Oſprey*, Mer. Pin. 170. *Niſus Veterum*. THE OSPREY.

The Marrow of the Bones is thought to be of Uſe in Fiſhing, in order to allure the Fiſh to any Place. This popular Error proceeds from a fabulous Story, that the Oſprey, as it flies over the Water, lets fall a Drop of Oil, that allures the Fiſh to the Surface, which it then ſeizes. This Marrow of the Oſprey is what is meant by *Oil of Aſpre*. It is of no Uſe in Medicine.

HALICA. See ALICA.

HALICACABUM. See ALKEKENGI.

HALICACABUM PEREGRINUM. A Name for the *Corindum; folio ampliore; Fructu majore.*

HALICES. Pandiculations after Sleep, or upon awaking.

HALIEUTICON. The Name of two Plaiſters mention'd by *Aetius*.

HALIMAR. Copper. *Rulandus*.

HALIMUS, Offic. *Halimus Cluſii*, J. B. 1. 227. *Halimus latifolius*, Ger. Emac. 523. *Halimus latifolius ſive fruticoſus*, C. B. 120. *Halimus latifolius, ſive Portulaca marina incana major*, Park. 724. *Atriplex Halimus dicta latifolia*, Raii Hiſt. 1. 194. *Atriplex latifolia, ſeu Halimus fruticoſus latifolius*, Tourn. Inſt. 505. Boerh. Ind. A. 2. 89. TREE-SEA-PURSLANE.

Dioſcorides ſays, that the Leaves boil'd are uſed as Food. *Aetius* ſays, the Buds are uſed as Pickles. The Root, taken in the Quantity of a Dram, in *Hydromel*, mitigates ſpaſmodic Pains, thoſe attending Ruptures of the capillary Veſſels in the Muſcles, and the Gripes. *Dioſcorides*, L. 1. C. 120.

HALINITRON, ἁλίνιτρον. Nitre.

HALME, ἅλμη. Brine, or Salt-water, made for preſerving Vegetable or Animal Subſtances from Putrefaction.

HALMYRAX. A ſort of Nitre produc'd in the Valleys of *Media*, in very dry Weather, taken notice of by *Pliny*, L. 31. C. 10.

HALMYRIS, ἁλμυρίς. The Name of a Species of a Sea Cabbage.

HALMYRODES, ἁλμυρώδης. Salt, or ſalſuginous. *Hippocrates* uſes this Word as an Epithet for particular Sorts of Fevers, in which, as *Galen* explains it, the external Parts, when touch'd, communicate ſuch an itching Senſation, as is perceiv'd from handling ſalt Subſtances. When apply'd to the Skin, it imports much the ſame; or, perhaps, a certain Roughneſs, as if it was ſalted. It is, alſo, us'd as an Epithet to many Excretions, when ſalt, and acrimonious. *Halmodes*, ἁλμώδης, implies the ſame.

HALO, in Anatomy, is the red Circle, or Areola, round the Nipples, from its Similitude to the Circles form'd round the Sun, or Moon, call'd *Halo*.

HALOSACHNE, ἁλοσάχνη. The Foam of the Sea.

HALS, ἅλς. Salt. See SAL.

HALTERES. Heavy Maſſes of Stones, Lead, or Metal, us'd by the Antients in their Exerciſes. They ſeem to have been of two Sorts: One, which was held in the Hands, and us'd in Leaping, in order to bring the Body forwards, the Hands being projected at the Inſtant the Leap was taken. Others were thrown ſomewhat like the *Diſcus*. Or, as *Galen* ſays, the *Halteres* were laid on the Ground about an Ell diſtant from each other; then the Perſon to be exercis'd plac'd himſelf in the Middle betwixt them, and, ſtooping, took up that on the Right-hand, with his his Left; and that on the Left-hand, with his Right; laying them in their Places again, and repeating this ſeveral times, without moving the Feet. This Exerciſe is recommended for ſeveral Medicinal Purpoſes. But, as it is not at preſent in Uſe, I ſhall refer the Reader to *Hieronymus Mercurialis*'s Treatiſe *de Arte Gymnaſtica*.

HALYPHÆUS. A Name for the *Quercus*; *Calyce echinato*; *Glande majore*, C. B. P. See ÆGILOPS.

HAMALGAMA. The ſame as AMALGAMA; which ſee.

HAMIA. The Name of a Fiſh. See AMIA.

HAMMA, ἅμμα. A Knot made for faſtening Bandages.

HAMMONITRUM. The ſame as AMMONITRUM; which ſee.

HAMULUS. A Hook in Surgery, of which there are many Sorts, contriv'd for various Purpoſes.

HANDAL. See ALHANDAL.

HAPHE, ἁφή. See HAPSIS.

HAPLOTOMIA, in Surgery, is a ſimple Section.

HAPSIS, ἅψις. The Senſe of Feeling. But it ſignifies, alſo, Connection with reſpect to Bandages. And ἅψις φρενῶν, in *Hippocrates*, imports Madneſs, a Delirium, or Loſs of Reaſon.

HAPSUS. A round Wad of Tow, Lint, or Wool.

HARDESIA. See ARDESIA.

HARENCHUS, HARENGUS, or HERENGA. The Herring. See HALEC.

HARMA, or HARMATION, ἅρμα, or ἁρμάτιον. The Name of a *Collyrium*, deſcrib'd by *Paulus Ægineta*, L. 7. C. 16. and by *Scribonius Largus*, N° 18.

HARMALA.

The Characters are;

The Leaves are alternate, the Flowers roſaceous, and pentapetalous: The Ovary in the Bottom of the Calyx becomes a roundiſh, tricapſular Fruit.

Boerhaave mentions but one Species of this Plant; which is,

Harmala, *Ger.* 1073. *Emac.* 1255. *Tourn. Inſt.* 257. *Boerh. Ind. A.* 261. *Ruta ſylveſtris, Harmel*, Offic. *Ruta ſylveſtris flore magno, albo*, C. B. P. 336. Raii Hiſt. 1. 878. *Ruta ſylveſtris Syriaca, ſive Harmala*, Park. Theat. 133. *Ruta, quæ dici ſolet Harmala.* J. B. 3. 200. WILD RUE.

This Rue grows a Foot and an half, or two Feet high, having ſmooth Stalks, beſet with longer and narrower Leaves than thoſe of Rue, of but little Scent: The Flowers conſiſt of five white Leaves, larger than thoſe of Rue, whole and flat, with ſeveral yellow Stamina. The Seed-veſſels are longer than thoſe of common Rue, containing ſmall brown Seed; the Root is ſomewhat hard and woody, of a yellow Colour. It grows wild in the Eaſtern Countries, as well as in *Spain*, and flowers in *July* and *Auguſt*. The Herb and Seed are us'd, tho' but rarely.

It is ſaid to partake much of the Nature of Garden-rue, and to be particularly good for Diſeaſes ariſing from Melancholy, and to provoke Urine.

The *Arabian* Writers ſay, that the Seeds are intoxicating, narcotic, and good in Melancholy. *Dale*.

HARMEL. The ſame as HARMELA.

HARMONIA, in Anatomy, is a Species of Articulation. See ARTICULATIO.

HARMOS, ἁρμός. The Fleſh which grows betwixt the Teeth.

HARPAX. A Name for Amber. See AMBRA. It, alſo, ſignifies, a Mixture of Quick-lime and live Sulphur. *Holler, Inſt. Chirurg.*

HARUNDO. See ARUNDO.

HASACIUM. Sal Ammoniacum. *Rulandus*.

HASTA REGIA. A Name for the *Aſphodelus*; *verus*; *luteus*.

HASTELLÆ. Splints us'd in Fractures.

HAUSTUS. A Draught. In Pharmacy it is a liquid Form of a Medicine, containing as much as is to be drank at once.

HAYRI. The *Ebenus Æthiopica*. See EBENUS.

HEBE, ἥβη. The Hairs which grow upon the Pubes; the Part on which they grow; or the Age of Puberty when they appear in either Sex.

HEBENUM. The ſame as EBENUS; which ſee.

HEBISCOS. The ſame as *Ibiſcus*. See ALTHÆA.

HECATOMBE, ἑκατόμβη. The Name of a *Collyrium* in *Paulus Ægineta*, L. 7. C. 16.

HECATONDRACHMA, ἑκατόνδραχμα. The Name of a Plaiſter in *Galen, de Comp. Medic. per Gen.* L. 2. C. 2.

HECTEUS, ἕκτεύς. An Attic Meaſure, equal to one ſixth Part of a *Medimnus*, which contain'd ſeventy-two Sextaries, or Pints. *Foeſius*.

HECTICA, ἑκτική, from ἕξις, Habit. An Epithet for a Species of Fever.

Hectic Fevers are not ſo much as mention'd by the antient *Greek* and *Latin* Phyſicians, as *Hippocrates*, *Aretæus*, and *Cornelius Celſus*: Nor was a ſlow Fever deſcrib'd in any of the Writings of the Antients, till at laſt *Celſus* directed the Cure of it. What were afterwards call'd ſlow or hectic Fevers, were among the firſt Phyſicians ſtyl'd tabid or long-continu'd Fevers,

or Marasmi. Thus *Hippocrates*, in the sixty-fourth Aphorism of his fifth Section, calls slow Fevers by the Epithet of long-continued; and observes, that those affected with them are not violently feverish; whilst he every-where describes an Hectic under the Name of *Phthisis*. At present, by slow and hectic Fevers are meant, those which are chronical, and continually by a preternatural, tho' mild and remitting Heat, consume the Juices, induce a Consumption, and impair the Strength.

These Fevers are various, according to the Violence of the Symptoms, and the Prospect of the Danger; for, strictly speaking, slow Fevers are such as are accompanied with mild Symptoms, a gentle Heat, profuse Sweats during Sleep, a natural Pulse after Sleep, and in the Forenoon, without any considerable Loss of Strength and Appetite, Dryness of the Body, livid Colour of the Urine, or great Danger: Whereas, in an hectic Fever, the Heat is continual, and the Pulse always hard, weak, and quick; tho' after Eating, and towards Evening, the Quickness and Hardness of the Pulse are increas'd, the Skin and Tongue are render'd dry, hard, and parch'd, the Cheeks become red, the whole Body is weak and flaccid, the Sleep is not refreshing, the Urine is red, has a Sediment at the Bottom, and on its Surface a pinguious Pellicle of a brownish Colour, and the whole Body is emaciated to such a degree, that the Bones protuberate thro' the Skin: Besides, slow and hectic Fevers differ with respect to their Cause, since in the former the Fault is rather in the Fluids, and the beginning bad Disposition of the Solids; whereas, in the latter, the Solids are rather in the Fault, and the Viscera already corrupted. Hence slow Fevers may be carry'd off, and their Causes remov'd, by proper Medicines; but Hectics are either with the greatest Difficulty, or not at all, to be cur'd; for hectic Fevers are rather of the symptomatic kind, and succeed violent Exulcerations, Vomicas, Abscesses, and Corruptions of the Viscera: Hence all those who labour under a Phthisis, an Abscess, a Vomica, or an Exulceration of the Lungs, Mesentery, Kidneys, or Uterus; those who have violent Suppurations in the internal Parts, or in the Muscles of the Abdomen; those who have a Cancer in their Genitals, Breasts, or Uterus; as, also, those who labour under a Cachexy or Dropsy arising from an Induration, Scirrhus, Corruption, or Putrefaction of the Liver, Spleen, Omentum, Pancreas, and Glands of the Mesentery, die of hectic Fevers.

The Cause of the continual Heat in this Fever is a certain putrid and corrupt Humour, which is utterly prejudicial to the due and natural Mixture of the Blood and Humours, which it disturbs, changes, and dissolves, by a preternatural and intestine Motion. This putrid Humour is offensive to the nervous Fluid, and the nervous Parts; and forces these sensible and moving Parts into a violent Contraction, in which the very Essence of the Fever consists. The greater Quantity, therefore, there is of these putrid and corrupted Humours, arising from an incurable Disorder of the Viscera, and the longer they continue in the Body, the Fever, and all its Symptoms, will be so much the more terrible.

Slow or long-continued Fevers, of a mild and gentle Kind, are highly frequent and incident to Persons at every Period of Life, of every Sex, Temperament, and Country. But the Origins and Causes of these Disorders are various: They, however, commonly arise from some preceding Disease, which too much weakens the Body, and impairs the Strength; for it is certain, from Experience, that those who by obstinate intermittent Fevers, or those of the continual Kind, as also by the Small-pox or Measles; large Discharges of Blood from the Uterus, Anus, or Nose; long-continued Fluxes, whether of the simple or dysenteric Kind; as also, too liberal Salivations, a long-continued Gonorrhœa, or Fluor Albus, Grief, Cares, Watchfulness, continual Application to Studies of any kind, Hunger, hard Labour, or an immoderate Use of Venery, have impair'd their Strength, readily fall into those slow and long-continued Fevers. The Reason of this is sufficiently obvious. Bodies of this kind are deprived of a due Quantity of laudable Blood and Juices, as, also, of a due Quantity of the nervous Fluid: For after such Diseases, the Appetite becomes keener; but the spirituous, salival, and bilious Juices, subservient to the Dissolution of the Aliments, recede from their genuine Nature, and are not so efficacious as they ought to be. The peristaltic Motion, also, of the Stomach and Intestines is highly languid. Hence the Solution, Concoction, and Digestion of Aliments, liberally taken, are not perfectly carried on, but the Chyle, as yet thick, crude, and not duly elaborated, is convey'd to the Mass of Blood, and, by its heterogeneous Nature, destroys the due Crasis of the Fluids, and disturbs the equable and natural Motion of the Solids.

Besides, it is found, from Experience, that these consumptive Fevers are particularly subsequent to a Defect, or a preposterous Suppression, of usual and critical Evacuations; for nothing is more frequent than for those, in whom the Evacuations, which terminate acute Diseases and Fevers, especially Sweats, and a free Perspiration, are obstructed, or not duly carried on; those in whom their usual Night-sweats are dried up; who have Fontanels, or old Ulcers, consolidated; who have Catarrhs, and other acrid Defluxions from the Uterus, or other Organs, or Diarrhœas unseasonably stopt, to be afterwards seiz'd with slow Fevers; for thus the vitious, impure, and superfluous Humours, which ought to be discharg'd, remain in the Body, and so corrupt the laudable and nutritious Juices, that the whole Mass is render'd intemperate, and all the Motions and Functions of the Body vitiated.

That the Seat of slow and hectic Fevers is most generally in the Mesentery, is certain, both from Reason and Experience; for *Fernelius*, and, after him, *Sennertus*, long ago observ'd, that the Mesentery was, more frequently than any other Part of the Body, the Seat of a great Number of latent Disorders, slow and erratic Fevers, Diarrhœas, Choleras, Scurvies, melancholic Disorders, Cachexies, Dropsies, and intermittent Fevers of an obstinate and rebellious Kind. The Reason why the Mesentery has this strong Tendency to generate Diseases, is, that the slow and languid Motion of the Fluids through this Part easily lays a Foundation for Stagnations; for the Vena Portæ, destitute of a Pulsation, receives the Blood returning from the Mesentery, discharges the Office of an Artery, and carries it to the Liver: But, as this is slowly done, an Obstruction happens in the meseraic Vessels, in consequence of which Stagnations, Infarctions, and sometimes Extravasations, are produc'd. Then the hæmorrhoidal Vein, by reason of its perpendicular Direction, and its Distance from the Heart, conveys the Blood very slowly back to the Venæ Portæ, and occasions very frequent Stagnations, and painful Distentions of the Vessels in the Mesocolon, and large Intestines, especially in the Intestinum Rectum. In the Mesentery itself, in consequence of a Defect of nervous and muscular Coats, the Progress of the Blood is not at all assisted, but the Vessels, cover'd with Fat, and running through the Membrana cellulosa, rather have their Tone destroy'd, are continually relax'd, and easily yield to the Blood accumulated in them. Whilst, also, the chylous Lymph is slowly carried through the innumerable lacteal Ducts, divided into minute and capillary Vessels about the Glands, and receiv'd by the minute Vessels of these Glands, it easily remains in their Cavities; nor, for this Reason, is it to be wonder'd at, if the Glands of the Mesentery are often obstructed, render'd tumid, and degenerate into a scirrhous State.

But though the slow Circulation of the Humours through the Mesentery is of some Use, as it contributes to the Excretion both of the redundant and peccant Juices; of the Blood, for Instance, through the internal hæmorrhoidal Veins, and of the serous, mucid, and fermentable Sordes through the numberless Glands of the Intestines; yet it happens, for this very Reason, that almost all the Faults of the Humours, whether arising from Quantity, Quality, or Motion, have an unlucky Influence on the Mesentery. A Plethora, in particular, is prejudicial to no Part more than to the Mesentery; since, by a preternatural Distention and weakening the Tone and Elasticity of the Vessels, the Humours are too much accumulated; for the greater the Stagnation of the Blood in the Mesentery is, the more its Impurity is increas'd; and the greater the Impurity of the Blood and Lymph is, the more the Functions of the Body are weaken'd, and the Nutrition is diminish'd, the Strength impair'd, the intestine Motion of the Fluids increas'd, the Heart and Arteries stimulated to a brisker Motion; and the Fever, by this means, increas'd.

Hence the Reason is obvious, why, according to *Hippocrates*, in *Lib.* 2. *Prædict. Sect.* 13. a Defect or Suppression of the Menses are succeeded by dangerous and consumptive, that is, hectic Fevers, known by the Names of Chlorosis and Greensickness; as, also, why in Men, according to the same Author, *Aph.* 12. *Sect.* 6. an Obstruction, or preposterous Stoppage, of the hæmorrhoidal Discharge, generates Consumptions, or hectic Fevers; and, farther, why, by stopping salutary Diarrhœas, which frequently prevent or terminate acute Diseases, and appear at certain stated Times of the Year, consumptive and dangerous Fevers are brought on. Nor is the Reason less obvious, why nothing is more dangerous, or subject to produce chronical, slow, and hectic Fevers, than when, in Persons especially of plethoric, cacochymic, or hypochondriac Habits, where the Circulation of the Blood through the Mesentery and adjacent Viscera is already too slow, have an unseasonable Stop put to Fevers by Astringents, or even the celebrated Peruvian Bark; which Fevers, in these Disorders, are capable of consuming the superfluous Juices, removing Obstructions of the Viscera, and promoting a free Circulation of the Blood, by an Oppression of which, the Infarctions of the mesenteric Vessels, the Obstructions, the Stagnations and Impurity of the Humours, are increased, and, consequently, a future Foundation laid for chronical Fevers, and other Disorders.

Nor is the Mesentery only thus disposed to Stagnations and Obstructions, but also to Suppurations and Abscesses, which are generally accompanied with a febrile Intemperature. Many are of Opinion, that Inflammations, without which there can be neither Suppurations nor Abscesses, cannot happen in the Mesentery, because in it neither an acute Pain nor Heat, the perpetual Concomitants of an Inflammation, are observ'd. But the Essence of an Inflammation does not consist in Heat and Pain, but in a certain Stagnation of Blood in improper Vessels; and

and the Heat and Pain are rather the Product of this Stagnation, if it happens in a nervous Part of exquisite Sensation. Stagnations and Extravasations of the Humours, together with the Suppurations arising from them, may very readily happen in the Mesentery, in consequence of the large Afflux of Humours thereto; since the Blood is either sometimes impetuously forc'd through the minute Ramifications of the Arteries into the lateral Tubes, (among which are the adipose Vessels) or those lateral Vessels are ruptur'd by the Force of the Humours, and discharge their Contents. Besides, Pus is no-where more readily form'd than in Parts every-where cover'd with Fat; because the Fat itself is, by the intestine and putrid Motion of the extravasated Humours, easily converted to a sanious colliquated Matter.

Abscesses, therefore, in the Mesentery, happen more frequently than is commonly believed, and may be known from a continual hectic Fever, an oppressive and fix'd Pain of the Abdomen, and a Discharge of a sanious Matter by Stool, together with a Pain and Heat of the Intestines. I have remark'd many Causes concurring to a Production of Abscesses in the Mesentery. I have frequently observ'd, that in plethoric, plethorico-cacochymic, and hypochondriac Patients, from violent Anger immediately before or after Meals, especially if Refrigeration concurs, the Body has been affected with an universal Languor, which has been succeeded by fatal hectic Fevers: I have seen the same happen in those who attempt to procure Abortion, by drastic forcing Medicines: When Physicians have treated a Suppression of the Menses with hot and strong Emmenagogues or Purgatives, as also when they have endeavoured, in Opposition to Nature, to promote the hæmorrhoidal Discharge in Men by Preparations of Aloes. I have farther known such Fevers produc'd by Abscesses, in Patients full of Blood and Juices, after violent and unusual Exercise of the Body, and exposing the Whole of it to the Cold, but especially the Feet, which have a considerable Sympathy with the Abdomen.

For by such a violent Motion, whether produced by Passions, Medicines, or Exercise, the Blood is forcibly propel'd into the minute Vessels of the Mesentery, stagnates there, and passes into small Tubes it ought not to enter, where it remains, and is corrupted. Hence arises the Suppuration, which, in consequence of the intestine Motion, spreads farther, corrodes and consumes the adjacent Parts, so that of a small Abscess a large one is form'd, and the Cavities of Apostems enlarg'd. Besides, the sanious and corrupted Matter, being absorb'd by the Veins, and mix'd with the Blood, is often convey'd to other Emunctories, such as the Glands of the *Trachea*, and the Kidneys. Hence large Apostems of the Mesentery are often accompanied with Discharges of purulent Urine, or a Spitting of purulent Matter, whilst, at the same time, both the Lungs and Kidneys are sound. Sometimes, also, the Pus, in consequence of its Weight, descends through the Pores of the Mesentery, enters the Cavities of the contiguous Viscera, and is discharg'd by Stool. Sometimes, also, a large Abscess arises, and after a preceding Horror, or even a Rigor, with a succeeding Heat, breaking its Covering, discharges its Contents. If this happens in a Place less fit for Excretion, violent Gripes, resembling a Colic, are produc'd; but if it happens in the Cavity of the Abdomen, the Matter discharg'd corrodes, and induces a Gangrene on the internal Parts it touches; but, if this should happen in the Cavity of the Intestines, a large Quantity of Pus is discharg'd by Stool. Instances of this Discharge of Pus are given by *Horstius*, *Lib.* 14. *Obs.* 25. & 26. *Bartholine. Cent.* 2. *Epist.* 23. *Cent.* 6. *Epist. Cent.* 4. *Hist.* as also by *Tulpius*, *Lib.* 2. *Obs.* 36.

But the Fevers, which either accompany or succeed large Abscesses of the Mesentery, as well as of the other Viscera, such as the Liver, Pancreas, Kidneys, Bladder, and Uterus, are not mild and gentle, but of the hectic Kind, violent, and, consuming the Strength and Juices of the Body, prove fatal. The Beginnings, different Stages, and Symptoms of these Fevers are justly and accurately describ'd by *Hippocrates*, in his Treatise *de internis affectionibus*, in the following Words: "A gentle "Rigor begins to seize the Patient; the whole Breast is pain'd "as far as the Back; sometimes, also, the Patient is afflicted "with an acute Cough, and a Discharge of a large Quantity of "a thin and saline Saliva. These Symptoms happen in the Be"ginning of the Disease; but, in the Progress of the Disorder, "the whole Body, except the Legs, is extenuated; for these, "and the Feet, become tumid, the Nails are incurvated, but the "Arms become weak and slender. The Fauces are cover'd with "a kind of Down, the Patient breathes as if he whistled through "a Reed, and is through the Whole of the Disease afflicted with "a violent Thirst, and great Weakness. When the Patient comes "to be in this Condition, he generally dies in a Year's time: "All possible Care and Pains are, however, to be taken, in order "to restore and recover him."

There is another slow and latent Species of Fever highly familiar to Children. It is accompanied with a remarkable Swelling of the Abdomen, an Extenuation of the superior Parts, a dry Cough, Loss of Strength, Want of Appetite, and a wandering Heat, which is increas'd after eating, and towards the Evening; the Patient is sometimes costive, and sometimes preternaturally loose, discharging a large Quantity of white mucous Matter by Stool. This Species of Fever, sometimes, arises from a viscid and tenacious Chyle obstructing the villous Coat of the Intestines, and the minute Mouths of the Lacteals, by which an Inflation of the Intestines, and a chylous Diarrhœa, are brought on. These Fevers, also, sometimes draw their Origins from a too tough and viscid Lymph, which, obstructing the Glands of the Mesentery, is there accumulated, and surprisingly distends them. The principal Occasions of these Fevers are the Voracity of Children; Aliments which inspissate the Chyle; Want of thin Liquors for drinking; and exposing their Bodies to Cold. These Fevers, when they happen, continue for a long time, and are, like other Fevers, arising from Obstructions of the Glands, and an excessive Expansion of their nervous Substance, attended with much Danger, and prove fatal, unless remov'd by proper Medicines, and a due Regimen. And after the Death of Children, who have been cut off by this Species of Disorder, the Glands of their Mesentery are generally found preternaturally large, their Intestines tumid and inflated, and their Lungs corrupted.

That Species of hectic Fever, which is common and fatal to old Persons, was, by the *Greeks*, called *Marasmus*. In it the Body is slowly wasted, the Appetite is lost, the Strength gradually consum'd, the Bones deprived of their Flesh to such a Degree, that they seem only to form a Skeleton, cover'd with a Skin; the Mouth is dry, the Saliva glutinous, the Skin cold, stiff, and dry; the internal Parts are hot, the Pulse hard and frequent, the Sleep short and unrefreshing, Respiration difficult, the Voice hoarse, the Tongue dry, and sometimes cover'd with tough and saline Phlegm. All these Symptoms gradually increase, till at last, in about half a Year's time, they put an End to the Patients Lives. This Species of Hectic seems to be produc'd in the following manner: Old Persons, in consequence of their leading a Life free from Exercise, having all their Excretions, especially that from the subcutaneous Emunctories, languid, their Bellies costive, and through Fear, or for some other Reasons, frequently neglecting their usual Evacuations of Blood, by these means acquire a large Quantity of Blood, and impure Humours: Hence the Circulation of the Juices through the Mesentery, the Omentum, the Liver, Spleen, and Intestines, is slowly carried on, a Circumstance succeeded by Indurations and Corruptions, which lay a Foundation for chronical Fevers of the worst Kind.

There is still another Species of slow Fever, little adverted to by Authors, and which I call the Stomachic, or Intestinal Fever. This Disorder arises from an Erosion of the Coats of the Stomach and Intestines; induced either by an acrid, bilious, and pungent Humour, generated in the Body itself, or by taking acrid Substances, possess'd of a corrosive Quality; for 'tis certain, from Experience, that a Cholera, violent Anger, and Dysenteries, have been succeeded by chronical and fatal Fevers. Every one knows, that Poison, taken internally, corrodes the Stomach and Intestines. *Bartholine*, in *Cent.* 6. *Hist.* 21. gives us a Case where the Stomach was exulcerated, and a violent Pain produced after eating, by means of a strong Purgative. The same Effect is produced by Emetics, imprudently exhibited; as also by the purging bitter Salts, either when exhibited alone, in large Doses, to Persons of delicate Sensation, or, as some rashly advise, mix'd with mineral Waters. Not only the Cause and Seat of these Fevers are, with Difficulty, discover'd, but, also, the Cure is hard to be obtain'd; for, as the Coats of the Intestines are, in some measure, injur'd and corroded, every thing taken, especially if in too large a Quantity, or possess'd of a saline or acrid Quality, produces Spasms, Eructations, and Gripes. The Patient is sometimes preternaturally costive, at other times his Body is too soluble. His Body is consum'd in the mean time: Sometimes a Horror and Rigor, sometimes a violent Heat, sometimes a cold, and sometimes a warm Sweat, attended with a quick Pulse, seize the Patient; and these Symptoms return periodically, and are increas'd at stated Hours. If these Fevers are not seasonably remov'd by proper Remedies, they prove chronical and mortal.

These slow and consumptive Fevers are among the Number of chronical Diseases, and terminate sooner or later, according to the Constitution of the Patient. A slow Fever admits of a Cure, if taken in time; but an Hectic is rarely cur'd, and, when of the confirm'd Kind, never. The Signs of Death in an Hectic are, a quick and weak Pulse, a great Loss both of the Appetite and Strength; so that the Patient can neither move his Body, nor remain in an erect Posture, an Hippocratic Countenance, a small Discharge of Urine, which is red, or oleaginous, and made without a hissing Noise, a Falling off of the Hair, a Flux, profuse Sweats, and Swellings of the Feet; for these are Proofs partly of the Consumption, and partly of the colliquative Dissolution of the Juices. When Persons who have died of this Species of Fever, are dissected, an insuperable Defect is found in their Viscera; for sometimes there are Abscesses, with large Cavities, found in the Bowels, the Lungs, the Mesentery, the Liver, or Pancreas. Sometimes, also, Abscesses, or large scirrhous Tumors, or those of the steatomatous Kind, are found in the Uterus, the Stomach, the Kidneys, and Membranes of

the Peritonæum; ſometimes Tumors are found in the Glands of the Meſentery, or Tubercles and Impoſtumations in the Lungs, Scirrhous Tumors of the Liver, Spleen, or Pancreas, a Sphacelus of the Omentum and Inteſtines, and Extravaſations of putrid Humours in the internal Parts.

The Cure.

Since the Seats and Cauſes of conſumptive Fevers are very various, theſe are firſt to be inveſtigated, and the Methods of Cure adapted to them: When, therefore, in conſequence of a bad Digeſtion, and the crude and viſcid Juices of the *primæ Viæ* form'd by that means, ſuch a Fever ariſes after ſome other Diſeaſe, and diſcovers itſelf by the Languor of the Patient, his internal Heat, and his continual Propenſity to ſweat, eſpecially in the Palms of the Hands, and Soles of the Feet; then the principal Intention of Cure is, to free the *primæ Viæ* from theſe Sordes which excite the Fever: This End, according to the Circumſtances of the Patient, may be obtain'd by a gentle Emetic; ſuch as the Root of Ipacacuanha, exhibited either in Powder, or by way of Infuſion: And *Lindanus* informs us, that, in four Days, he cured an Hectic by one Vomit, and the ſubſequent Uſe of *Elixir Proprietatis:* But, if it ſhould be thought more expedient to eliminate the peccant Matter by Stool, and, at the ſame time, to ſtrengthen the Digeſtion; theſe Intentions will be beſt anſwer'd by the neutral or digeſtive Salts, ſuch as the *Terra foliata Tartari*, antimoniated Nitre, *Sal Polychreſtum*, vitriolated Tartar, a Solution of Crabs-eyes, *Sedlitz* Salt, either alone, or mix'd with half the Quantity of Powder of the beſt Rhubarb, exhibited in ſmall Doſes, but frequently, and with a proper Vehicle. The *Pilulæ balſamicæ* of *Becher* are poſſeſſed of the ſame gentle laxative Quality, and may, therefore, be frequently exhibited in ſmall Doſes. When, by this means, the alimentary Duct is cleanſed, Analeptics and Stomachics are to be uſed; as the beſt and moſt efficacious of which, we recommend the Eſſences of Caſcarilla and red Gentian, as, alſo, the ſtomachic Elixir, with Spirit of Salt, or the Spiritus Nitri dulcis, to be taken every Day before Eating; not neglecting, at the ſame time, due Exerciſe, and the Uſe of wholſome Liquors, which are of great Importance in the Cure of Fevers of this kind.

This ſame Method of Cure is highly proper, in the Beginning of thoſe Fevers which ſucceed unſeaſonably ſtopt Intermittents, or Relapſes into them prepoſterouſly check'd: If theſe are ſucceeded by a ſlow Fever, it is moſt expedient to excite the former Fever, eſpecially, if there is a Suſpicion of Infarctions of the Viſcera and Meſentery, as in cachectic and hypochondriac Patients. This was the Method uſed by *Celſus*, who, in the ninth Chapter of his third Book, delivers his Sentiments, in the following Words: "In this Caſe, the principal Care of the Phyſi-"cian ought to be, to change the Diſeaſe; ſince, in all Proba-"bility, this Expedient will contribute to render the Cure more "eaſy. The Patient's Body is, therefore, to be frequently im-"merſed in cold Water, to which a due Quantity of Oil has "been added, ſince, by this means, a Horror is ſometimes ex-"cited, and the Beginning of a new Motion produced: But, "if the Patient has continued long in a cold, torpid, and reſt-"leſs State, it is expedient, even during the Fever, to exhibit "three or four Cyathi of Muſſum, or diluted Wine, with the "Aliments; for, by this means, the Fever is often heighten'd, "and a greater Heat produced; by which the former Symp-"toms are removed, the Hopes of Safety obtain'd, and the "Cure promoted. But it is the Duty of every cautious and "skilful Phyſician, ſometimes to renew and increaſe the Diſ-"eaſe, becauſe, by that means, tho' the preſent Diſeaſe is not "cured, yet a future, and a more formidable one may be pre-"vented:" For, as, in intermittent Fevers, a brisk Circulation of Blood is often the beſt means of removing the Cauſe of the Diſorder, ſo it, alſo, removes the Cauſe of a ſlow Fever, which is moſt frequently deeply ſeated in the Interſtices of the ſolid Parts, and, eſpecially, in the meſeraic Glands and Veſſels: Hence, if intermittent Fevers, eſpecially of the quotidian Kind, are ſucceeded by ſlow Fevers, the Intermittent being recalled, which frequently happens, by the free Admiſſion of a cold Northerly Wind, the returning Fever renders the Heat more intenſe, and, by the Aſſiſtance of this, exhibiting, at the ſame time, proper inciding and correcting Remedies, the ſlow Fever is ſucceſsfully removed in due time.

When, in plethorico-cacochymic, cachectic, and ſcorbutic Patients, theſe ſlow Fevers ariſe from an Obſtruction of the menſtrual or hæmorrhoidal Diſcharge; from too great Voracity, a bad Diet, the Abuſe of ſpirituous Liquors, or expoſing the Body to Cold; another Method of Cure is to be taken, and ſuch Medicines are to be uſed, as remove the Obſtructions of the ſanguineous Viſcera, the Liver, Spleen, and Meſentery, the Veſſels, and Glands, and procure a free Circulation of the Blood and Humours thro' the Veſſels of the Abdomen, and, eſpecially, of the Meſentery. For this Purpoſe, nothing is more effectual, than the Uſe of mineral Waters, both of the cold and hot Kind. I have found, from long Experience, that nothing is more efficacious, in the Cure of theſe ſlow Diſorders, than medicinal Springs; and *Thouvenus*, in his Obſervations, confirms this Doctrine, by the Succeſs they had on himſelf: Of the hot Kind, the moſt ſalutary are, thoſe of *Embſen* and *Wisbaden*; and, of the cold Kind, the *Selteran*, and thoſe of *Schwalbach*. But theſe muſt be uſed in their proper Orders, at ſeaſonable Times, and in due Quantities, exhibiting, at the ſame time, proper Medicines, to aſſiſt Digeſtion, reſtore a mild and balſamic Quality to the peccant Juices, and promote the Evacuation of the Sordes from the Body. But, where theſe Waters cannot be had, other Medicines are to be uſed, as Succedaneums to them. In their ſtead, I have often uſed, with Succeſs, a Decoction of thin Veal-broth, with the Roots of Succory, Fennel, Aſparagus, Graſs, Dandelion, and Vipers-graſs: Of this, I order the Patient to drink a Pint every Day, for ſome Weeks; taking before it ſome chalybeated Medicine, ſuch as the *Tinctura Martialis*, with the Juice of Apples, Quinces, or Oranges; as, alſo, the *Tinctura Martis* of *Zwelfer*, extracted, with Spirit of Wine, from Vitriol of *Mars*, and the Terra foliata Tartari: The Tincture, alſo, of chalybeated Flowers of Sal Ammoniac, prepared with Bloodſtone, and extracted with pure Spirit of Nitre, which is ſtill better, if impregnated with Orange-peel, is, alſo, of ſingular Efficacy, in Caſes of this Nature: But a proper Regimen, a wholſome Diet, and due Exerciſe, are neceſſary, both during the Uſe of theſe Preparations, and the mineral Waters.

In thoſe ſlow conſumptive Fevers ariſing from a Corroſion of the Stomach and Inteſtines, all acrid, ſaline, acid and ſtimulating Subſtances are as bad as Poiſons. *Rhenish* Wine, alſo, in conſequence of its Tartneſs, ſweet and fermentable Subſtances, and all Aliments of hard Digeſtion, increaſe them. The Cure of this Species of Fever is highly difficult; nor does it call for any other Medicines, but thoſe of the demulcent and corroborating Kind. I have frequently known good Effects produc'd by a Decoction of Milk, with Saſſafras and Peruvian Bark, or with Chamomile-flowers, and the Tops of Yarrow. A Pint of this Decoction may be exhibited daily. The Roots of Marſhmallows, Broth prepar'd with Milk and Rice, as alſo Gum Tragacanth diſſolv'd in Mint-water, are highly beneficial. Good Effects are, alſo, produc'd by Clyſters of Milk prepar'd with the Yolk of an Egg, and Honey; or other Emollients, with *Fernelius's* Syrup of Marſhmallows. When the Spaſms of the Abdomen are very violent, they are excellently mitigated, ſays *Hoffman*, by my antiſpaſmodic Pills, prepar'd of the Extracts of Chamomile, Yarrow, Saffron, and Caſtor, together with the Oil of Nutmegs.

In the ſlow and conſumptive Fever, which ariſes in thoſe who have loſt their Strength, and moſt laudable Juices, by long-continued Paſſions, Grief, Care, hard Labour, Watching, Hunger, frequent and unſeaſonable Venery, exceſſive Salivation, the Fluor Albus, a long-continued Gonorrhœa, violent Fluxes, giving too much Suck, or Ulcers which diſcharge a large Quantity of purulent Matter, all Subſtances which throw the Blood into too great Commotions, Purgatives, violent Exerciſe, and too heavy or nutritive Aliments, are highly improper, ſince they rather require Reſt of Body and Mind, and ſuch Medicines and Aliments as are temperate, correct Acrimony, allay Heat, nouriſh gently, and reſtore the impair'd Strength. Among the Medicines of this kind, are Emulſions of ſweet Almonds, Pine-nuts, and the Four greater cold Seeds, prepar'd with a Decoction of Hartſhorn, or Roſe and Cinnamon-water, impregnated with Quinces. Aſſes Milk, or that of Women, or Goats Milk, or Cows Milk boil'd, together with the Juice of River-crabs, the Broth of a young Fowl mixt with Ptiſan, Ptiſan boil'd with River-crabs, or Wood-tortoiſes bruis'd, according to *Amatus Luſitanus*, *in Cent. 2. Curat.* 53. who cur'd an hectic Patient by the Uſe of Aſſes Milk, and young Fowls fatten'd with Wood-tortoiſes. Some recommend Oyſters, if the Stomach can bear them: And *Lindanus* confirms this, by an Inſtance of a Girl of twenty Years of Age, who, from a Fault of her Lungs, becoming hectic, by a continual and long-continued Uſe of Oyſters was ſo perfectly recover'd, that ſhe liv'd long, and bore eight Children. A ſmall Quantity of Wine ought only to be drank, and that of the Neckarine, or Moſelle kind, mixt with Water. Moderate Exerciſe, alſo, by Geſtation, or ſlow Walking, is only to be us'd.

When Fevers of this kind ariſe from an Abuſe of intoxicating Liquors, ſuch as Wine, Brandy, Aqua-vitæ, burnt Wine, and ſtrong Ales, together with a decaying State of Body, then all heating, ſpirituous, and analeptic Subſtances are to be abſtain'd from, as alſo, Stomachics, ſuch Things as reſolve Phlegm, and the drinking of Malt Liquors; but let the Patient uſe, for Drink, a Decoction of Oats, prepar'd, in *Lower's* manner, of Oats, Succory-root, the Flowers of wild Poppey, and a little antimoniated Nitre. See Cura Avenacea. Whey, with a little Nitre and Butter-milk, are of ſingular Service, and have much aſcrib'd to them by *Pieus, de Febr.* Part 2. and *Barbatus, de Sanguine & Sero.* Patients, of this kind, alſo, receive conſiderable Advantage from Ptiſans, prepar'd with Barley and Succory. And *Borelli*, in *Cent. 4. Obſervat.* 89. affirms, that many hectic Patients have been reſtor'd by the Uſe of Preparations of Barley alone. Thinner Emulſions may alſo be of conſiderable Service, as alſo gelatinous Subſtances, with an Addition of Citron-juice.

If, as it frequently happens, these Fevers arise in Women from a sudden Suppression of the Menses, by drinking cold Liquors, Refrigeration, or Frights, a Vein in the Ancles is to be quickly open'd; some resolvent Decoction, of Succory-root, the Herb Sow-thistle, the Flowers of the lesser Daisy, and Elder, is to be exhibited; and the Use of the more drastic Emmenagogues is to be abstain'd from. But if a slow or hectic Fever, arising from this Cause, should have already afflicted the Body for a long time, with a Consumption and Heat, Venesection is so far from being adviseable, that it is justly to be condemn'd, because it impairs the Strength too much. When, after Child-birth, the Menses are totally suppress'd, and a genuine Hectic form'd, together with an Atrophy, Cough, Diarrhœa, Pain of the Breast, universal Languor, and a slow consuming Heat, we are not to use such Medicines as promote the Menses, since the Symptoms indicate the Use of such as are directly the contrary. The same holds true, with respect to that consumptive Fever arising from a Retention, or Obstruction, of the hæmorrhoidal Discharge; for, in this Case, if the Strength and Juices are consum'd, it is absolutely imprudent to attempt to recall the Discharge by Evacuants, forcing Preparations of Aloes, or Venesection in the Foot; for by these means I have observ'd that the Discharge of a sufficiently fluid and red Blood has been procur'd; but, soon after the Fever was increas'd, the Strength more impair'd, the Sleep disturb'd, and the Disorder made to terminate sooner in Death, than it would otherwise have done.

That Species of Hectic, which is incident to old Persons, and known by the Name of *Marasmus*, is more easily prevented, than cured. But since it is obvious, from accurate Observation, that the consumptive Fevers of old Persons may arise from two Causes; that is, from a Plethora, or rather a large Quantity of thick Blood stuffing and obstructing the abdominal Viscera and Mesentery; or from a Cacochymy, when there is a Redundance of impure and saline Serum, in consequence of its too languid Secretion, especially thro' the Skin; these two Causes must have preservative Measures adapted to their respective Natures. Thus, if an old Person, addicted to a sedentary and unactive Life, who still enjoys a good Appetite, should, by omitting his usual Evacuations of Blood, or by the Stoppage of spontaneous Excretions, incur the Hazard of falling into a slow continual consumptive Fever; the Physician's first Business is, to diminish the Quantity of the Blood, by seasonable Venesection, then to order the Patient to drink large Quantities of diluting wholsome Liquors, to abstain from all too nutritive Aliments, and to use proper Exercise. But if the Juices of old Persons abound with impure Particles, and such as are opposite to their mild and natural Qualities, nothing else is to be done, than by the mildest Laxatives, such as Preparations of Rhubarb, Manna, and Raisins, to evacuate the Sordes which foment the Peccancy of the Humours, and again to generate temperate and laudable Juices, by means of Jellies, and Preparations of Milk; and especially by Asses-milk, which is highly salutary to old Persons, on account of its demulcent, aperient, and gently evacuating Quality.

That slow Fever, which is incident and fatal to Infants and Children, is principally subsequent to the Small-pox and Measles. In this Species of Fever the Abdomen becomes tumid, and the superior Parts are wasted. Upon dissecting those who have dy'd of it, the Mesentery is generally full of hard, scirrhous, and steatomatous Tumors, especially about the Veins which run to the Vena Portæ. The Lungs, are, also, found full of Tubercles and Impostumations. In this Disorder, Prevention, if possible, is more eligible than any Attempts for a Cure, which are generally unsuccessful, and in vain. But that Consumption which arises in Children from too great Voracity, and exposing their Bodies to Cold, admits of a Cure. And, in this Case, I know of no more effectual Means of Relief, than the external Use of temperate Baths of sweet Water, continued for some time. And, internally, in order to remove the Obstructions of the Glands, the meseraic and lacteal Veins, we recommend small, but frequent Doses of the saline, aperitive Liquor prepar'd of Salt of Tartar, Nitre, and the *Arcanum Duplicatum*, mix'd in equal Quantities, adding half the Quantity of Sal Ammoniac to be drank, dissolv'd in a due Quantity of Ale.

But, in every Hectic, the principal Intention of Cure is, to restore that laudable Moisture which the continual Heat carries off not only from the Blood, but also from the solid Tubes, and, together with it, at last, the Fat and Flesh. This End is most effectually answer'd by Aliments of a medicinal Quality, the most efficacious of which is Milk: For, according to *Hippocrates*, in the sixty-fourth Aphorism of his fifth Section, "Milk is highly pro-"per for consumptive Persons, when not very feverish: It is "also good for Persons labouring under long and lingering "Agues; as also for those who are much wasted, without any "apparent Reason." But the Milk which most speedily restores the consum'd Moisture, and extinguishes the Heat, is Womens Milk suck'd immediately from the Breast, and not vitiated by the Air; by which *Forestus*, in the tenth Observation of his fifth Book, informs us, he knew a Hectic perfectly cur'd. Asses-milk is less nourishing, but it is more cooling, allays Heat, abstergeS, and is aperient. *Ballonius*, in *Lib.* 1. in his Advice to an illustrious Prince, who was much dispos'd to a Consumption, highly extols the Virtues of this Milk. *Cardan* tells us, "That it is not to "be doubted, but the Safety of consumptive Persons depends "on the Use of Asses-milk." And *Aretæus*, in his second Book *de Cur. Acut.* directs the Cure of a Consumption, in the following Words: "When any one falls into a Consumption, it is not "expedient to trifle away Time, in recommending Rest, and a "slender Diet; but the Patient must use Exercise, Frictions, "Gestations, and Baths, in order to preserve his Life, and re-"store his Vigour. Milk, especially that of a Woman lately "deliver'd, is also to be used; for such Patients require Aliments "of a like Nature with new-born Children: If a sufficient Quan-"tity of Womens Milk cannot be had, that of a new-milch'd "Ass, which is thin and fluid, is to be substituted." The Milk of Goats or Cows is more nutritive, but is heavier, and contains more of a cheesy Substance; for which Reason it is to be corrected, lest it should prove injurious to the Stomach.

I cannot forbear approving, as the best of all others, that Method of using Milk, recommended by *Hippocrates*, in his Treatise *de internis Affectionibus*, in the following Words: "Asses-milk "boil'd, in order to purify it, is to be exhibited; the Patient, is, "also, to drink unboil'd Cows-milk, mixed with a third Part of "Hydromel, and a due Quantity of Origanum, for forty-five "Days." This sagacious Author every-where judiciously recommends boiled Asses-milk, as a gentle Purgative; because it contains a sweet kind of Salt, resembling Sugar, which is gently abstergent and laxative, and, which is more concentrated by the Dissipation of the Moisture by Boiling. *Hippocrates*, no doubt, recommended the Addition of the Origanum, with a View to strengthen the Stomach, and corroborate the weaken'd nervous System. If Asses-milk cannot be had, I generally order, for two or three Mornings, a Pint of Milk from Cows fed with proper Herbs; with an Ounce of Manna, or Sugar of Roses, or Conserve of Roses, dissolved in it. After this, I order a Pint of the Milk to be drank every Morning, only with the Addition of an Ounce of Sugar, and half a Dram of Nitre, according to the Circumstances of the Patient; especially, when there is a Suspicion of some Fault in the Mesentery, or of an internal Exulceration of the Viscera, I order, to mix with the Milk, an half, or a third Part, either of pure Water, or, which is better, of *Selteran* mineral Water: When the *Selteran* Water cannot be had, I order an Infusion to be prepar'd of common Water, with Paul's-betony, Sow-thistle, Lungwort, Liverwort, Tree Lungwort, Colts-foot, Ground-ivy, Spleenwort, Maidenhair, Flowers of St. John's-wort, and Roses: This Infusion is to be drank warm, with an equal Quantity of Goats or Cows-milk, with an Addition of Sugar; and, in order to render it more abstergent, of a few Drops of Oil of Tartar per Deliquium. This Method is to be persisted in for six Weeks at least, abstaining, in the mean time, from every thing which may either coagulate the Milk, or overload and weaken the Stomach. Wine is, also, to be carefully abstain'd from; only, in order to cherish the Stomach, a small Quantity of *Hungarian* Wine, or of Hydromel made of *Prussian* Honey, may be allow'd.

But, before we prescribe the Use of Milk, we are to examine, whether the Stomach is capable of bearing it, because it will not agree with some Persons: I have also observ'd, that those who are accustom'd to Wine, or drink large Quantities of Ale, cannot commodiously bear Milk; nor is it proper for hypochondriacal Patients, and such as labour under a violent Fever, accompanied with a Head-ach. If the Stomach is languid, and the meseraic Vessels obstructed, Milk soon corrupts, becomes vapid, and produces terrible Disorders. We are, therefore, to take care, that it may not remain in the Stomach; to prevent which, *Galen*, in his tenth Book, *De Medicam. Simpl.* orders it to be boil'd, and ignited Steel, or red-hot Flints, to be immersed in it. The safest is Asses-milk, abounding with Serum, and containing little of a cheesy Substance: This *Galen* prefers to all other kinds of Milk, in a Hectic. And *Hoffman* has wrote a Dissertation, *De Mirabili Lactis Asinini Usu in Medendo.* If a sufficient Quantity of Asses-milk cannot be had, sweet Whey, properly prepar'd, may be used in its stead. Some distil Whey *in Balneo Mariæ*, and highly recommend the Water drawn off, both for Drinking, and, as an excellent Vehicle for other Medicines.

Besides, in this Species of Fevers, we are to take all possible Care, both to keep the Crasis and Mixture of the Blood free from the intimate Dissolution and Colliquation of its Elements, threaten'd by the continual Heat, and to preserve a due Equilibrium, or Balance, between the Heat and the Moisture. This Intention is most effectually answer'd by the Use of the gentle Astringents and Corroboratives every-where recommended by Physicians; such as the Tinctures, or, rather, the Solutions, of Corals, or Mother of Pearl, with some subtile Acid, of a Quality friendly to Nature; such as the Juices of Citrons, Barberies, *Seville* or *China* Oranges; the Tincture of Roses, prepar'd with Rose-water; and the Phlegm of Vitriol is, also, highly beneficial: The *Species de Hyacintho*, with a few Grains of Coral and Nitre, are gently astringent, corroborative, and effectual, for checking colliquative Sweats. A temperate balsamic Elixir, pre-

par'd from temperate reſinous Gums and Extracts, without Spirits of Wine, is, alſo, of ſingular Efficacy: Nor are we to omit the Bark of Caſcarilla, and the *Peruvian* Bark, made into the Form of an Electuary, with the Syrup of Citron-juice, or that of the *Indian* Nut, and the Addition of a due Quantity of Nitre; Red Oker, made up with Conſerve or Julap of Roſes, is, alſo, of ſingular Service. All theſe Medicines, provided the Impurities of the Fluids, and Faults of the Veſſels, are previouſly remov'd, are of ſingular Efficacy, and their Uſe highly to be approv'd of.

But the Preparations of Lead, recommended by the Chymiſts, for allaying hectic Heats, and checking Sweats, by no means deſerve the Encomiums beſtow'd on them; ſince, in conſequence of their aſtringent metalline Quality, they prove unfriendly to the Nerves, deſtroy the Tone of the Stomach and Inteſtines, and, by theſe means, do more Injury than Good. Hence we are, in theſe Caſes, to reject the Sugar of Lead, and the celebrated Preparation of it, commonly called the *Tinctura Antiphthiſica Germanorum*. But the *Antihecticum Poterii*, if prepar'd of pure Tin, Nitre, and Antimony, and exhibited with Emulſions, is ſo far from being ſo prejudicial as ſome think it, that it proves highly beneficial, in conſequence of its mild, corroborating, and diaphoretic Quality. Nor is Tin offenſive to the Nerves, by reaſon of the mild Sulphur it contains; nor aſtringent, which Lead is. The judicious *Muraltus*, in *M. N. C. Dec.* 2. *An.* 1. *Obſ.* 109. gives us his Opinion of this Medicine, in the following Words: "The *Diaphoreticum Joviale*, or the "*Antihecticum Poterii*, is of ſingular Service in correcting the "Acrimony of the Humours, which irritates the Nerves: This "Medicine, alſo, corroborates the Uterus, and often renders "thoſe who are emaciated and weak, robuſt, and full of Fleſh."

In ſlow and hectic Fevers, Baths are frequently recommended, eſpecially by the Antients. *Sennertus*, from *Galen*, deſcribes the Method of uſing them, at large: But, omitting all other Authorities, we ſhall only quote a Paſſage of *Proſper Alpinus*, from his ſixth Book, *De Med. Method.* relating to the various Uſes of Baths, and which runs thus: "Among external Remedies, "Baths, either of ſweet Water, or impregnated with Marſh-"mallows, Mallows, Violets, or other Subſtances of a like "Nature, are highly proper. In *Egypt* they prepare tepid Baths "for the Grandees, of the Milk of Aſſes, Camels, or Mares. "Epithems and Unctions are, alſo, recommended. Among "Baths, both thoſe of the tepid and cold Kind are beneficial; "the former moiſten the ſolid Parts, digeſt peccant and recrementitious Humours, promote a due Perſpiration, and even, "by their gentle Warmth, allay the Heat of the Body; whereas "the latter, that is, cold Baths, refrigerate, condenſe the Skin, "and, by augmenting the Heat, increaſe the Strength. But it is "not ſafe for highly extenuated and languid Patients to uſe very cold "Baths, ſince, inſtead of augmenting the Heat, they will extinguiſh "it; becauſe it is already too weak and languid: But, they are highly beneficial to robuſt Patients, who may uſe them twice a Day, "in the Morning and Evening before Meals: Weak Perſons ought "only to uſe them once a Day. Some are of Opinion, that moderately cold Baths are both more ſafe and uſeful, than ſuch "as are exceſſively ſo: For this Reaſon, they firſt put the Patient "into a moderately warm Bath, and afterwards into one moderately cold, ſo that it only appears to be rather tepid. The "*Egyptians* and *Arabians* uſe Baths, of the Water of the *Nile*, "and of the Milk of Camels, Aſſes, or Goats; they, alſo, "apply to the Thorax, Liver, Stomach, and Kidneys, Epithems "prepar'd of Milk, warm Oil of Roſes or Violets, the Juices of "the Ruſh, Lettuce, Endive, Purſlain, Polygonum, Water-lentil, white Water-lily, and other Subſtances of a like Nature, "adding a little Milk and Saffron, to render them of a more "penetrating Quality." But, with reſpect to Baths in general, it is to be obſerv'd, that they are advantageouſly uſed in the Beginning of the Diſeaſe, and when it ariſes from a Loſs of Strength, as, alſo, in the ſlow Fevers of Infants, becauſe they are of an emollient and demulcent Nature, and, at once, relax and moiſten the rigid Fibres: But in the Progreſs of the Diſeaſe, and when internal Abſceſſes and Exulcerations are already form'd, they are of no Service.

One of the moſt conſiderable and efficacious Means of removing theſe chronical and troubleſome Fevers is Exerciſe. Among the Antients, *Hippocrates* and *Aretæus*, for the Cure of a Conſumption, highly extol'd various Kinds of Exerciſe, ſuch as Walking, Riding, Geſtation, Travelling, and Sailing. *Hippocrates*, in the thirty-fourth Book of his Treatiſe *de internis Affectionibus*, orders, that "If the Patient is ſtrong, he ſhould "for thirty Days be employ'd in cutting Wood, uſe ſufficient "Exerciſe, or walk by Day, ſetting apart the Night for Repoſe "and Reſt." But the moſt ſalutary and commodious Species of Exerciſe is Riding on Horſeback, or in a Chariot; during which, the Circulation and Progreſs of the Blood thro' the Meſentery is excellently aſſiſted by the continual Succuſſions of the Body. *Sydenham* and *Morton* are very diffuſe in their Praiſes of Riding, and its Advantages; and the former of theſe Authors does not heſitate to affirm, that, in hectic Diſorders, Riding is a kind of Specific, as infallible as Mercury in the *Lues Venerea*, or the *Peruvian* Bark in intermittent Fevers: And *Morton*, in his *Exercitat. de Phthiſ.* uſes the following Words: "There is no "more efficacious Remedy than daily Riding, protracted to "moderate Sweating, in ſlow and hectic Fevers, eſpecially "when ariſing from any Fault of the Stomach, or, perhaps, "from the prepoſterous Treatment of intermittent Fevers; the "exceſſive or unſeaſonable Uſe of fixing, aſtringent, and precipitating Subſtances; or from Drinking cold Liquors, when the "Body is over-heated, the preternatural Heat excited by which "preys upon the laudable Juices of the Body; or from the "acid, tough, and viſcid Saburra of the Stomach and Inteſtines, "preternaturally obſtructing the Paſſages; for, by the equable "Succuſſion of Riding, the viſcid Lentor, or vapid and lifeleſs "Chyle, with which the Body is ſtuffed, is reſolved and elimi-"nated from the Body, that the Appetite may be reſtored, and "a new and more laudable Chyle elaborated. But it is proper to "obſerve, that brisk and frequent Riding is highly beneficial in "ſlow Fevers; whereas moderate Riding is beſt ſuited to thoſe "of the hectic Kind, properly ſo called."

In theſe ſlow and conſumptive Fevers, the Meaſures of Relief are to be taken with all Expedition; for, when the Opportunity is neglected, when either Phyſician or Patient commits an Error, or when the Diſorder is long protracted, the Cure is in vain attempted, and the Diſtemper generally degenerates into a fatal Hectic. Thoſe who already labour under Fevers of this kind, find themſelves always worſt in the Autumn; becauſe, at this Seaſon, Nature is moſt faint and languid in performing the Offices of Secretion and Excretion. Beſides, ſince there are generally, about the Equinoxes, ſudden and unſalutary Changes of the Weather and Atmoſphere, Patients of this kind are not only for the moſt part worſt; but, alſo, die of incurable Hectics. It is, therefore, neceſſary, that about theſe Seaſons, they obſerve a ſtrict and proper Regimen, preſerve an eaſy State of Mind, and apply to ſome judicious Phyſician for Advice. *Frederic Hoffman.*

HEDERA.

The Characters are;

The paraſitic Tendril ſends forth Fibres, or Roots, into any thing they come near, capable of ſuſtaining them: The Leaves are angular; the Flower roſaceous, and, generally, hexapetalous; the Ovary, at the Bottom of the Flower, becomes a round Berry, pregnant with Seeds, which are gibbous on one Side, and flat on the other.

Boerhaave mentions four Species of this Plant; which are,

1. Hedera; arborea. *Offic. C. B. P.* 305. *Tourn. Inſt.* 613. *Boerh. Ind. A.* 2. 231. *Hedera corymboſa.* Ger. 708. Emac. 858. *Hedera Arborea ſive ſcandens & corymboſa nigra.* Park. Theat. 678. *Hedera communis major.* I. B. 2. 111. Raii Hiſt. 2. 1505. Synop. 3. 459. IVY.

The Leaves of Ivy, while they run upon the Ground, are more angular and corner'd; but, when the Stalks riſe up, and are faſten'd to a Wall or Tree, they become rounder, ending in one Point: Whence moſt of the old Botanic Writers have made two Species; that with the corner'd Leaves, becauſe it bore no Fruit while it lay on the Ground, they called *Helix*, or barren Ivy; and the other *Corymboſa*: The Leaves of both are of a firm Texture, and a dark-green Colour; thoſe of the firſt frequently full of ſmall white Veins: The Branches inſinuate themſelves, by ſhort Cirrhi, into a Wall, or the Body of a Tree, that it climbs on: The Flowers grow in Corymbi or Umbels, conſiſting of ſmall ſix-leaved yellowiſh Flowers, follow'd by round umbilicated Berries, black, when ripe; including ſeveral angular Seeds. Ivy grows every-where in Hedges, and flowers late in the Year; the Berries being not ripe till *January*, or later.

The Leaves are ſeldom or never uſed inwardly; but, outwardly, they are applied to Iſſues, to keep them cool, and free from Inflammations; as, alſo, to Scabs, and Sores, and ſcald Heads. Mr. *Boyle*, in his Uſefulneſs of experimental Philoſophy, commends a large Doſe of the full-ripe Berries, as a Remedy againſt the Plague; tho' *Schroder* ſays, they purge upwards and downwards. The Gum of Ivy is ſomewhat cauſtic, and commended to take away Spots and Freckles out of the Face. *Miller's Bot. Off.*

The Gum is a reſinous, dry, hard, and compact Subſtance; of a bay Colour, inclining to that of Gold, ſhining like Glaſs, but not pellucid; of a ſubacrid and ſubaſtringent Taſte, and fragrant Smell.

Geoffroy ſays, it is neither cauſtic nor depilatory, as the Antients imagin'd; but a powerful Reſolvent and Diſcutient, in which Intentions it is an Ingredient in ſeveral Plaiſters.

Dale ſays, that the Leaves are heating, drying, and ſubaſtringent.

2. Hedera; major; ſterilis. *C. B. P.* 305.

3. Hedera; communis; minor; foliis ex albo & viridi variis. *Hedera, Arborea. C. B. P.*

4. Hedera; monophyllos; Convolvuli foliis; Virginiana. *Pluk. Phyt.* 36. 2. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 231.

HEDERA TERRESTRIS. See CHAMÆCLEMA.

HEDERA TRIFOLIA. See TOXICODENDRON.

HEDERACEUS, or HEDERARIUS. An Epithet for the *Vasa Præparantia*, or *Plexus Pampiniformis*; consisting of the spermatic Vein and Artery, in their Progress to the Testicles.

HEDERULA. A Name for the *Lenticula*; *Aquatica*; *trifulca*.

HEDRA, ἕδρα. The *Anus*, or, sometimes, the Excrement thence excreted. It, also, signifies the Basis or Stool of an Abscess, that is, the Part subjected to that which is converted into Matter. It imports, further, in *Hippocrates*, a Species of Fracture. See FRACTURA.

HEDRICOS, ἑδρικὸς. An Epithet for Remedies appropriated to the *Anus*. *Paulus Ægineta*, *L.* 3. *C.* 59.

HEDYCHROI, ἡδύχροι. A Name for certain Pastils or Troches, invented, as is said, by *Andromachus*; and describ'd by *Galen. de Antid*, *L.* 1. *C.* 10. and *de Theriaca ad Pison. C.* 13. *Paulus Ægineta*, also, describes them. *L.* 7. *C.* 11. They are only used for the *Theriaca Andromachi*. According to the *London* Dispensatory they are thus prepar'd.

Take of yellow Sanders, of the Leaves of Marjoram and Marum, and of Asarum-roots, of each two Drams; of Valerian, Costus, Calamus Aromaticus, Aloes-wood, Cinnamon, Schœnanth, and Opobalsam, or Oil of Nutmegs by Expression, of each three Drams; of Cassia-wood, Indian Leaf, or in its Defect Mace, *Indian* Spikenard, Myrrh, and Saffron, of each six Drams; of Amomum, or the lesser Cardamoms, one Ounce and an half; of Mastich, one Dram; of Canary, a sufficient Quantity: Let the Myrrh be dissolved in Wine, and then the Saffron and Mastich be well stirred in with it; afterwards put in the Opobalsam, and mix the other Ingredients, reduced to a fine Powder, with the Whole; and pour upon them Wine enough to make them into thick Troches, which are leisurely to be dried.

HEDYOSMOS. A Name for Mint, on account of its sweet Smell.

HEDYPNOIS.

The Characters are;

The Calyx of the Flower is like a fluted Pillar, or Melon: The little Leaves of the Flower-cup, when the Flower is fallen off, embrace, each of them, one single umbilicated Seed; but in the Middle of the little Head are other naked Seeds, which form an Head.

Boerhaave mentions four Species of this Plant; which are,

1. Hedypnois annua. *T.* 478.

Lemery, in his *Traité Universel des Drogues*, says, this Species of *Hedypnois* is accounted aperitive, detersive and vulnerary.

2. Hedypnois minor; Cretica; annua. *T. Cor.* 36.

3. Hedypnois; annua; capite maximo.

4. Hedypnois; quod Cichorium; semine adunco; flore triplo majore; capitulis minoribus. *Ind.* 27. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 92.

In the *Historia Plantarum*, attributed to *Boerhaave*, it is said, that they agree in Virtues with the Succory.

Hedypnois is also a Name given to the *Dens Leonis*; *latiore folio*.

HEDYSARUM.

The Characters are;

The Flower is collected into a Head, or Spike; the Pod is articulated, and undulated, and each Articulation contains a Seed.

Boerhaave mentions eight Species of this Plant, none of which have any medicinal Virtues attributed to them, except the third, which is the Hedysarum; Clypeatum; flore suaviter rubente. *Tourn. Inst.* 401. *Boerh. Ind. A.* 2. 51. *Hedysarum Clypeatum*. Ger. Emac. 1235. Raii Hist. 1. 929. Park. Parad. 339. *Onobrychis semine Clypeato, aspero major*. C. B. P. 350. *Astragalus Romanus sive Hedysarum Clypeatum siliqua aspera*. J. B. 3. 315.

FRENCH HONEYSUCKLE.

This is cultivated in Gardens; flowers in *July*; and is esteem'd deobstruent and vulnerary.

Hedysarum minimum Dalechampii. A Name for the *Fœnum Græcum*; *sylvestre*; πολυκεφάλιον; *minus*; *Monspeliense*.

HEDYSMA, ἥδυσμα. Whatever is mix'd with Aliments, or Medicines, whether liquid or solid, whether destin'd to external or internal Use, in order to communicate to them an agreeable Smell, or Taste.

HEL. The same as Mel. *Rulandus*.

HELCOMA, or HELCOSIS, ἕλκωμα, or ἕλκωσις. An Exulceration.

HELCOS, ἕλκος. An Ulcer.

HELCOSIS. See HELCOMA.

HELCYDRION, ἑλκύδριον. A small Ulcer, or ulcerose Pustule.

HELCYSMA, ἕλκυσμα. The Scoriæ of Silver, called also *Encauma*. *Dioscorides*, *L.* 5. *C.* 101. says, that it is possess'd of the same Virtues as the *Molybdæna*, and that it is used in cicatrizing Plaister, being styptic, and epispastic.

HELCYSTER, ἑλκυστὴρ, from ἕλκω, to draw. A Hook for extracting the Fœtus.

HELEAGNUS. A Name for the *Gale*; *Frutex Odoratus Septemtrionalium*. See GALE.

HELENIASTRUM. Bastard Elecampane. *Miller* takes notice of two Sorts, both Natives of *America*. I know no medicinal Virtues attributed to either.

HELENIUM. *Boerhaave* makes this a Species of the *Aster*: But, according to *Miller*, the Characters are;

It hath a radiated Flower, whose Florets are Hermaphrodite, but the Semiflorets are Female; both these are yellow; the Ovaries, which rest on a naked Placenta, are crowned with a Down: All these Parts are included in a scaly Cup. To these Notes may be added, the Leaves growing alternately on the Stalks, and the Flowers grow on the Top of the Branches.

Enula campana, *Helenium*. Offic. *Helenium*. Ger. 649. Emac. 793. Raii Hist. 1. 273. Synop. 81. *Helenium vulgare*. C. B. 276. *Helenium sive Enula campana*. J. B. 3. 108. Park. 654. *Aster omnium maximus*, *Helenium dictus*. Tourn. Inst. 483. Boerh. Ind. A. 94. ELECAMPANE.

This is a very large Plant, having great thick Roots, divided into several Branches, brown without, and white within, of a very strong Scent. The lower Leaves are very long and large, soft and hairy underneath, and green above; broadest in the Middle, and sharp-pointed at the End: It has sometimes one, sometimes more Stalks, which are divided, toward the Top, into several Branches, and grow to be four or five Feet high, having the Leaves set on without Foot-stalks, short and broad at the Bottom, and ending sharp-pointed. The Flowers grow on the Tops of the Stalks; they are larger than any Marigold, and near as big as a Sun-flower, consisting of a great Number of long and very narrow Petala, set about large brown fistular Thrums, which pass away into Down, containing slender longish Seed.

It grows in moist Fields and Meadows, in several Parts of *England*; and is pretty much planted in Gardens, for the sake of the Roots, which are only used.

The Roots of Elecampane are pneumonic, carminative, sudorific, and alexipharmic; of great Service in Shortness of Breath, Coughs, Stuffing of the Lungs, and in infectious and contagious Distempers: They are good for the Stone, and Stoppage of Urine; and promote the menstrual Flux, and to that End are mix'd with Chalybeats; they are, also, good for the Gout and Sciatica; outwardly they are used for the Itch, either the Juice or Powder mix'd with a proper Ointment.

Its Root is acrid, bitter, a little glutinous, aromatic, gives a faint Red to blue Paper, and smells like dry'd Orrice.

By the chymical Analysis, beside several acid Liquors, it yields a great deal of Oil, a little of an urinous Spirit, no concreted volatile Salt, the Leaves a good deal; so that this Plant seems to act by an oily volatile Salt, the Sal Ammoniac of which is not entirely disengaged, and is greatly loaded with Sulphur.

The Root is stomachic, pectoral, diuretic, and provokes the Menses: It is used in Ptisans, Decoctions, and Apozems, for the Asthma, inveterate Coughs, Dropsy, and Cachexy. There is a Confection made of these Roots, and they are boiled in Must, or Wort. Elecampane-wine strengthens the Stomach, cures the Jaundice, provokes Urine, and protects one from the Injuries of a bad Air. The Extract has the same Virtues. Externally applied, they are resolvent, and good for Diseases of the Skin; they give Name to the *Unguentum Enulatum*, in which Mercury is sometimes used. They are used in Ointments for the Itch. *Martyn's Tournefort.*

Miller enumerates thirty Species of this Plant.

UNGUENTUM ENULATUM. *Ointment of Elecampane.*

Take of Elecampane-root, boiled in Vinegar, beat and pulped through a Sieve, one Pound; of Turpentine washed in the same Decoction, two Ounces; of yellow Wax, one Ounce; of old Hog's Lard salted, and of old Oil, of each four Ounces; of common Salt, half an Ounce: Let the Lard, Wax, and Oil, melt together; and afterwards add the Turpentine, the Pulp of Elecampane, and Salt, finely powder'd, so as to make all together into an Ointment, S. A.

UNGUENTUM ENULATUM CUM MERCURIO.

Ointment of Elecampane, with Mercury.

This is made of the foregoing Ointment, with the Addition of two Ounces of Quick-silver, first very well kill'd, or incorporated with a sufficient Quantity of Turpentine.

HELIOSELINUM. See APIUM.

HELIACUM, ἡλιακὸν. An Epithet for the κῦφι μέγα, the large *Cyphi*, described in *Paulus Ægineta*, *L.* 7. *C.* 22.

HELIANTHEMOIDES. The Name of an *American* Plant, which grows near *Surinam*, mention'd by *Boerhaave*. But I know no medicinal Virtues it is possess'd of.

HELIANTHEMUM.

The Characters are;

The Leaves are generally conjugated; the Flower-cup consists of three Leaves; the Flower is pentapetalous, rosaceous, less

leſs than that of the Ciſtus, but in other Reſpects the ſame: The Fruit is almoſt globous, tricapſular, and divides into three Parts, as into ſo many rigid carinated Leaves; the Seeds are roundiſh, and fix'd to ſmall Capillaments.

Boerhaave mentions fifteen Species of this Plant; which are,

1. Helianthemum; vulgare; flore luteo. *J. B.* 2. 15. *Tourn. Inſt.* 248. *Boerh. Ind. A.* 276. *Panax Chironium, Helianthemum.* Offic. *Chamæciſtus vulgaris flore luteo.* C. B. P. 465. Raii Hiſt. 2. 1013. *Helianthemum vulgare.* Park. Theat. 656. Raii Synop. 3. 341. *Helianthemum Anglicum luteum.* Ger. 1100. Emac. 1282. DWARF SUN-FLOWER.

All Authors look upon this Species of *Helianthemum* to be vulnerary. *Tabernæmontanus* made an excellent Gargariſm of of it for the Diſeaſes of the Throat; he ordered this Plant to be boiled in Wine, and added to it a little Roch-alum. *Martyn's Tournefort.*

It grows in mountainous Places, and flowers in *June* and *July*.

The Root, taken internally, is good againſt the Bites of Serpents; and the Tops are effectual for the ſame Purpoſe. The Plant is aſtringent, and a good Demulcent, in the Form of a Decoction, particularly in Diarrhœas, Hæmorrhages, and Diſeaſes of the Fauces. *J. Bauhine* ſays, it is good in all Diſorders attended with a Flux of any Kind whatever.

2. Helianthemum; Ledi folio. *T.* 249.

3. Helianthemum; foliis majoribus; flore albo. *J. B.* 2. 16. *Chamæciſtus, vulgaris, flore albo majore.* C. B. P. 466.

4. Helianthemum; Lavendulæ folio. *T.* 249.

5. Helianthemum; flore albo; folio anguſto, hirſuto. *J. B.* 2. 17. *Chamæciſtus, folio Thymi incanis.* C. B. P. 466. *Chamæciſtus,* IV. Cluſ. H. 74.

6. Helianthemum; foliis Roſmarini, ſplendentibus, ſubtus incanis. *T.* 250.

7. Helianthemum; annuum; anguſtifolium; florum pedunculis cornucopioidibus. *H. Cath.*

8. Helianthemum; Salicis folio. *T.* 249.

9. Helianthemum; folio Pervincæ, ſubtus argenteo, pubeſcentibus fimbriis; flore luteo.

10. Helianthemum; Orientale fruteſcens; folio Oleæ, flore luteo. *Sher.*

11. Helianthemum; folio Roſmarini latiore, ſplendente, utrinque viridi; flore pallido.

12. Helianthemum; folio Roſmarini, viridi; floſculo parvo luteo; fructu in Calyce veſicario recondito.

13. Helianthemum; folio Roſmarini; luteum; incanum.

14. Helianthemum; folio Thymi incano. *J. B.* 2. 19. *Chamæciſtus, tenuifolius, Narbonenſis.* H. R. Park.

15. Helianthemum; album; Germanicum. *Tab. Ic.* 1062. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 276.

Miller enumerates fifty-three Species of this Plant.

HELICE. A Species of Willow.

HELICHRYSUM, from ἥλιος, the Sun, and χρυσὸς, Gold.

The Characters are;

The Flower-cup is ſquamoſe, ſplendid, and beautiful, on account of its fine Colour, which is like that of Gold, Silver, or ſome other agreeable Colour. In other reſpects it reſembles the *Filago.*

Boerhaave mentions nineteen Species of this Plant; which are,

1. Helichryſum; ſylveſtre; latifolium; flore parvo ſingulari. *T.* 452.

2. Helichryſum; Orientale. *C. B. P.* 264. *Park.* 69. *Tourn. Inſt.* 453. *Boerh. Ind. A.* 120. *Chryſocome.* Offic. *Heliochryſon, ſive Amaranthus luteus.* Park. Parad. 374. *Stœchas citrina floris magnitudine & colore ſpecioſa.* J. B. 3. 154. ORIENTAL GOLDY-LOCKS.

This grows in *Crete*, and flowers in *July*. The Root is us'd in Medicine, which is eſteem'd drying and aſtringent. It is ſaid to be good in Inflammations of the Lungs and Liver. It is, alſo, according to the Hiſtory of Plants attributed to *Boerhaave*, diuretic, ſudorific, attenuating, aperient, and vulnerary. It excites the Menſes, kills Worms, and diſſolves extravaſated and coagulated Blood.

3. Helichryſum; flore ſuaverubente. *H. C.*

4. Helichryſum; ſeu Stœchas citrina; anguſtifolia. *C. B. P.* 264. *Tourn. Inſt.* 425. *Boerh. Ind. A.* 120. *Stœchas citrina.* Offic. Ger. 520. *Stœchas citrina, ſive Amarantus luteus.* Ger. Emac. 646. *Stœchas citrina tenuifolia Narbonenſis.* J. B. 2. 154. Raii Hiſt. 1. 281. *Chryſocome ſive Coma aurea & Stœchas citrina vulgaris.* Park. 69. GOLDY-LOCKS.

This is a ſhrubby Plant, holding its Leaves all Winter. It has a hard woody Root, which ſhoots forth a great many ſlender Stalks; thoſe which bear Flowers, grow to be a Foot high, the others are not above half ſo long; they are thick-ſet with long, very narrow, ſharp-pointed Leaves, white and hoary, eſpecially underneath. The Flowers grow on the Tops, being Cluſters of ſmall, round, dry, ſcaly Heads, of a beautiful, ſhining, yellow Colour, which they retain a long while, if preſerved with any Care. The Leaves and Flowers have a pleaſant Scent, if rub'd between the Fingers. It grows in ſome Parts of *France* and *Italy*, and is frequently planted in Gardens, flowering in *July* and *Auguſt*. *Dale* ſays, it flowers in *May*; *Ray* ſays, in *April* and *May*.

It is accounted good for Obſtructions of the Liver and Spleen, diſſolves congeal'd Blood, and provokes Urine. *Matthiolus* gives it great Commendation; but it is ſeldom or never us'd in the Shops.

Dale ſays, it is good in Obſtructions of the Menſes, that it dries up Catarrhs, and kills Worms.

5. Helichryſum; Americanum; latifolium. *T.* 453.

6. Helichryſum; montanum; flore rotundiori, candido. *T.* 453. *Boerh. Ind. A.* 120. *Pes Cati.* Offic. *Gnaphalium montanum, ſive Pes Cati.* Park. 690. *Gnaphalium montanum.* Parad. 375. *Gnaphalium montanum album.* Ger. 516. Emac. 640. Raii Hiſt. 1. 283. Synop. 83. *Piloſella minor quibuſdam aliis Gnaphalii genus.* J. B. 3. 162. CAT'S-FOOT.

This Plant is vulnerary and aſtringent. *Du Remou* ſays, that they us'd to ſend from *Paris* to *Angiers* and *Tours* for this Plant, to make the Syrup of it, till one Mr. *Gouet*, an Apothecary of *Paris*, diſcover'd a good deal of it about that City. This Syrup is good for Defluxions of the Breaſt, eſpecially when the Patients complain of Seroſities, tickling down the Throat and Bronchia. The ſimple Syrup is made of the Cat's-foot alone; it is called *Syrupus de Hiſpidula, ſeu Aeluropo, vulgo de Pede Cati.* The compound Syrup is made of Barley-water, Jujubes, Raiſins, and Liquorice. *Schroder* adds Sebeſtens, Dates, Figs, Colts-foot, Sage of *Jeruſalem*, and Spleenwort.

Dale ſays, that it is drying and aſtringent; and that the Syrup is in Eſteem for Exulcerations of the Lungs, Spitting of Blood, and, particularly, for the Chin-cough.

7. Helichryſum; montanum; flore rotundiori, variegato. *T.* 453.

8. Helichryſum; Africanum; fœtidiſſimum; ampliſſimo folio. *T.* 454.

9. Helichryſum; Africanum; fœtidiſſimum; ampliſſimo folio. *T.* 454.

10. Helichryſum; ſylveſtre; latifolium; capitulis conglobatis. *C. B. P.* 264.

11. Helichryſum; arboreum; Africanum; Salviæ folio odorato.

12. Helichryſum; Africanum; folio oblongo, ſubtus cano; ſupra viridi; flore luteo. *Ind.* 42.

13. Helichryſum; Africanum; folio oblongo, anguſto; flore rubello, poſtea aureo. *Ind.* 42.

14. Helichryſum; Africanum; folio oblongo, tomentoſo, caulem amplectente; flore luteo. *Ind.* 43.

15. Helichryſum; Africanum; argenteum; repens; flore pulchro, magno, albo, diſco aureo. *H. R. D.*

16. Helichryſum; Africanum; arboreſcens: foliis incanis, latioribus. *H. R. D.*

17. Helichryſum; Africanum; fruteſcens; foliis Crithmi marini. *H. A.* 2. 113.

18. Helichryſum; Africanum; fruteſcens; foliis Stœchados citrinæ; flore aureo. *H. R. D.*

19. Helichryſum; anguſtiſſimo folio. *T.* 452. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 120.

The eighth and ninth Species ſmell like Caſtor, or Aſa-fœtida, and are us'd by the *Hottentots* as Antihyſterics; they are balſamic, and good againſt Palpitations of the Heart.

HELIOCAES, ἡλιοκαὲς. The Name of a compound eſcharotic Powder, deſcrib'd by *Paulus Ægineta, Lib.* 7. *Cap.* 13.

HELIOCHRYSUM. See HELICHRYSUM.

HELIOSCOPIOS. An Epithet for the *Tithymalus; ſubrotundus; foliis majoribus, crenatis.*

HELIOSIS, ἡλίωσις. Inſolation, that is, Sitting in the Sun.

HELIOTROPIUM.

The Characters are;

The Flower conſiſts of one Leaf, and is ſhap'd like a Funnel, having its Centre wrinkled and folded, and its Brim cut into ten Segments, alternately unequal: Theſe Flowers are collected into a long reflex'd Spike, reſembling a Scorpion's Tail: Each Flower is ſucceeded by four naked gibboſe Seeds.

Boerhaave mentions ten Species of this Plant; which are,

1. Heliotropium; majus; Dioſcoridis. *C. B. P.* 253. *Tourn. Inſt.* 139. *Boerh. Ind. A.* 190. *Heliotropium; majus.* Offic. Ger. 264. Emac. 334. Park. Theat. 438. Raii Hiſt. 1. 502. *Heliotropium majus, flore albo.* J. B. 3. 604. TURNSOLE. *Dale.*

The Leaves of this Plant are very bitter, and give a very deep-red Colour to blue Paper; which ſhews that their Salt is no otherwiſe different from that of the Earth, but in the Sal Ammoniac's being diſengag'd a little more than the other Principles, and mix'd with a great deal of fetid Oil, and Earth: The Juice of this Plant makes Warts fall off, and takes away the Ringworm. It is reſolvent, and proper to ſtop ſpreading Ulcers. *Martyn's Tournefort.*

It is cultivated in Gardens, and flowers in the Summer. A Decoction of the Herb purges off pituitous Humours; and is good againſt the Bites of Scorpions. The Seeds repreſs fleſhy Excreſcences,

Excreſcences, make penſile Warts fall off, provoke the Menſes, and haſten Delivery.

2. Heliotropium; Canarienſe; arboreſcens; folio Scorodoniæ. *H. A.* 129.

3. Heliotropium; arboreſcens; folio Teucrii; flore albo in Capitula denſa congeſto.

4. Heliotropium; Americanum; cœruleum; foliis hormini. *M. H.* 3. 451.

5. Heliotropium; Americanum; cœruleum; foliis hormini anguſtioribus. *M. H.* 3. 452.

6. Heliotropium; Americanum; procumbens; glaucophyllum. *Flor.* 2. 61.

7. Heliotropium; minus; anguſtifolium; arvenſe; ſeu hirſutum. *Flor.* 2. 61.

8. Heliotropium; minus; anguſtifolium; paluſtre; ſeu glabrum. *Flor.* 2. 61.

9. Heliotropium; minus; ſupinum. *Tourn. Inſt.* 139. *Boerh. Ind. A.* 119. *C. B. P.* 253. *Heliotropium minus.* Offic. Ger. 264. Emac. 334. Raii Hiſt. 1. 501. Park. Theat. 438. *Heliotropium minus quorundam.* J. B. 3. 605. *Heliotropium humi fuſum, flore minimo, ſemine magno.* Tourn. Corol. 7. SMALL TURNSOLE. It is cultivated in Gardens; the Herb is us'd, and agrees in Virtues with the *Heliotropium; majus*; *Dioſcoridis.*

10. Heliotropium; Mexicanum; mali Limonii foliis; Tlachichinoa patlahoac; ſeu Herba uſta; latifolia. *Rech. Hern.* 292. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 190.

Beſides the before-mention'd, *Dale* mentions another Heliotropium; which is the

Heliotropium tricoccum. *Offic. C. B.* 253. *Raii Hiſt.* 1. 165. *J. B.* 3. 606. Ger. 265. Emac. 335. *Park.* 439. *Ricinoides ex qua paratur Tournſol Gallorum.* Tourn. Inſt. 655. TURNSOLE.

This Turnſole is a Plant which grows in various Parts of *Languedoc*, and is the *Heliotropium*, or *Ricinoides*, of Botaniſts. Its Root, which is white, round, and generally pretty ſtrait, ſends out a round Foot-ſtalk, which is at laſt divided into various Ramifications. Its Leaves are of a pale-green, or, as it were, a cineritious Colour. Its Flowers, which are of a yellow Colour, are ſhut up in ſmall Buds, which form a kind of Cluſter: They are of two Sorts, ſince ſome of them are barren, and become dry, in proportion as the Cluſter increaſes; whilſt others of them produce Fruit.

The Juice of the Berry of this Plant being expreſs'd, Linen Rags are impregnated with it, and then expos'd to the Vapour of Urine, which gives them a red Colour. Theſe Rags are exported to *Holland*, where they extract the Lumps from them by a Method, which is, hitherto, a Secret: It is probable, however, that they are a kind of Fæcula. The Tincture of Heliotropium, or Turnſole, ſerves, in Chymiſtry, to try Acids and Alcalis; but is not us'd in Phyſic. There is a third Sort of Turnſole, brought from *Portugal*, which is us'd by the Scarlet-dyers. *Geoffroy.*

Alcaline Salts induce no Change on the Turnſole; Acids, according to their Strength, redden it by degrees, from a very faint Red to a very lively one: It is a Colour extremely ſuſceptible of Alteration; for the weakeſt Acid will change it. *Martyn's Tournefort.*

Dale ſays, it is us'd in Medicine againſt Cancers, gangrenous Ulcers, and ſtrumous Swellings.

HELIOTROPIUM. Offic. *Heliotropius.* Worm. 94. Aldrov. Muſ. Metall. 895. Boet. 257. De Laet. 80. Charl. Foſſ. 33. Calc. Muſ. 219. *Lapis Porraceus guttatim, punctulatim, vel fibratim ſanguineus, Heliotropium dictus.* Cup. Hort. Cath. Supp. 2. 50. THE HELIOTROPE, or COMMON BLOODSTONE.

This is an opake Gem, of a green Colour, mark'd with bloody Spots, or Veins. It is ſaid to reſiſt Poiſon, and to ſtop Hæmorrhages.

HELITIS, ἡλίτις. A Name for the *Squama Æris.* See Æs.

HELIX. The external Circle, or Border, of the Ear.

HELLEBORASTER. A Name for the *Helleborus; niger; flore viridi.*

HELLEBORASTER MAXIMUS. A Name for the *Helleborus; niger; fœtidus.*

HELLEBORASTRUM. See HELLEBORUS.

HELLEBORINE.

The Characters are;

The Root is fibrous, the Leaves nervous, and ſomewhat like thoſe of white Hellebore; the Extremity of the Pedicle, or Foot-ſtalk, bears a Flower conſiſting of ſix diſſimilar Petals, five of which are expanded, and have ſome Reſemblance; the ſixth ſeems interpos'd like one of another kind; the Flowers are diſpos'd in the Form of a Spike; the Ovary is like that of the Orchis.

Boerhaave mentions four Species of this Plant; which are,

1. Helleborine; latifolia; montana. *C. B. P.* 186. *Raii Hiſt.* 11. 1230. *Synop.* 3. 383. *Boerh. Ind. A.* 2. 153. *Tourn. Inſt.* 436. *Helleborine.* Offic. Ger. 358. Emac. 442. *Elleborine flore viridante.* Park. Theat. 218. *Elleborine Dodonæi.* J. B. 3. 516. BASTARD HELLEBORE.

It grows in Copſes, and ſhady Groves; and flowers in *May.*

The Herb is us'd, which is ſuppos'd, by ſome, to agree in Virtues with white Hellebore; but it is ſeldom or never found in our Shops. *Dale.*

2. Helleborine; flore carneo. *C. B. P.* 187. *M. H.* 3. 487. *J. B.* 3. 518.

3. Helleborine; anguſtifolia; paluſtris; ſive pratenſis. *C. B. P.* 187.

4. Helleborine; montana; anguſtifolia; purpuraſcens. *C. B. P.* 187.

HELLEBOROIDES.

The Characters are;

The Leaves are like thoſe of the Aconitum; the Extremity of the Pedicle runs into a ſmall Leaf, which is divided into nine Rays, expanded like a Star, and repreſenting a Calyx. The Calyx is floſcular, conſiſting of ſix floſcular kind of Leaves. The Flower is produc'd in the Centre of a Leaf, conſiſts of ſix ſmall bifid Petals, and is furniſh'd with a Multitude of Stamina; in other reſpects it agrees with the Hellebore.

Boerhaave mentions but one Species of this Plant; which is the

Helleboroides; hyemalis. *Helleborus, ranunculoides, hyemalis, radice tuberoſa, flore in medio folii.* H. L. 309. *Helleborus, niger, tuberoſus, ranunculi folio, flore luteo.* T. 272. *Helleborus ranunculoides, præcox, tuberoſus flore luteo.* M. H. 3. 359. *Aconitum unifolium, luteum, bulboſum.* C. B. P. 183. *Ranunculus, cum flore in medio folio, radice tuberoſa.* J. B. 3. 414. *Aconitum; luteum, minus.* Dod. p. 440. *Aconitum, hyemale.* H. Eyſt. *Hyem.* o. 1. *F.* 5. *Fig.* 2.

The *Hiſtoria Plantarum*, attributed to *Boerhaave*, ſays it agrees in Virtues with the black Hellebore.

HELLEBORO-RANUNCULUS.

The Characters are;

The Leaves are ſingle, and roundly turn'd like thoſe of the Ranunculus. The Calyx is pentaphyllous, the Leaves being of the ſame Colour with the Flower. The Flower is pentapetalous, roſaceous, and furniſh'd with numerous Stamina. The Fruit conſiſts of a Multitude of Vaginulæ, or ſmall Sheaths, each furniſh'd with its Tube, and collected into an Head, like the Ranunculus.

Helleboro-ranunculus; flore luteo globoſo. *Helleborus, ranunculoides, flore globoſo.* H. L. 309. *Helleborus, niger, ranunculi folio, flore globoſo, majore.* T. 272. *Pſeudo-helleborus, ranunculoides, luteus, flore globoſo.* M. H. 3. 461. *Ranunculus, aconiti folio, flore globoſo.* C. B. P. 182. *Ranunculus, flore globoſo, quibuſdam flos Trollius.* J. B. 3. 419. *Ranunculus, flore globoſo.* Dod. p. 430. H. Eyſt. Vern. o. 1. *F.* 12. *Fig.* 2.

The *Hiſtoria Plantarum*, attributed to *Boerhaave*, ſays that this Plant is cauſtic, like the Ranunculus.

HELLEBORUS NIGER. Black Hellebore.

The Characters are;

The Leaves are digitated, the Calyx pentaphyllous, or polyphyllous, and floſcular. The Flower is roſaceous, and conſiſts of five, ten, or fifteen ſmall fiſtulous Petals, like Tubes, in ſuch a manner as to reſemble a Multitude of hollow tubulated Horns; it is alſo furniſh'd with very numerous Stamina. In the Centre of the Flower grows the Ovary on the Apex of the Pedicle, and conſiſts of two, three, four, or more erect Pods, furniſh'd with a long Tube, and becoming a Fruit, conſiſting of membranaceous Vaginæ, or Sheaths, which open lengthwiſe, and are full of roundiſh or oval Seeds.

Boerhaave mentions five Species of black Hellebore; which are,

1. Helleborus niger fœtidus. *C. B. P.* 185. *Tourn. Inſt.* 272. *Elem. Bot.* 235. *Boerh. Ind. A.* 296. *Merc. Bot.* ii. 24. *Phyt. Brit.* 57. *Helleboraſtrum.* Offic. Cod. Med. lviii. Pharm. Bat. 57. Mer. Pin. 61. *Helleboraſter.* Rupp. Flor. Jen. 131. *Helleboraſter maximus.* Ger. 826. Emac. 976. Raii Hiſt. 1. 698. Synop. iii. 271. *Helleboraſter maximus, ſive Conſiligo.* Park. Theat. 212. *Helleboraſter niger ramoſus anguſtifolius ſemper virens elatior.* Hiſt. Oxon. 3. 359. *Helleborus niger ſylveſtris, adulterinus etiam Hyeme virens.* J. B. 880. *Helleborus ſylveſtris adulterinus, etiam Hyeme viveus.* Chab. 528. SETTERWORT.

The Country-people frequently give the Powder of this Herb to their Children, for the Worms: But how dangerous a Medicine it is, may be underſtood by the following Accident: Some Years ago, when the Ground was cover'd with a very deep Snow, a Flock of Sheep, in *Ox-mead*, near *Fulborn* in *Cambridgeſhire*, finding nothing but this Herb above the Snow, eat plentifully of it. They ſoon appear'd terribly out of Order, and moſt of them died, a few being ſav'd, by timely giving them ſome Oil, which made them caſt up this Herb. Some of thoſe which died, being open'd, were found to have their Stomachs greatly inflam'd. This Account I had from the Man who attended them: He went with me to the very Spot, and, as he pointed out the Herb which poiſoned them, I found it to be this Species of Hellebore. *Martyn's Tournefort.*

It grows in woody Places, though but rarely, and flowers in *February* and *March.* The Leaves are uſed, which, being dried and pulveriz'd, are exhibited in ſmall Quantities to Children affected with Worms; and are eſteem'd, by the common ſort of People,

a moſt potent and certain Remedy: But *Tragus* very well obſerves, that it is not to be uſed internally, but avoided as a moſt pernicious Herb. *Dale.*

2. Helleborus; niger; hortenſis; flore viridi. *C. B. P.* 185. *Merc. Bot.* 2. 23. *Phyt. Brit.* 57. *Raii Hiſt.* 1. 697. *Synop.* 3. 271. *Boerh. Ind. A.* 296. *Tourn. Inſt.* 272. *Elem. Bot.* 235. *Rupp. Flor. Jen.* 131. *Helleboraſter.* Offic. *Helleboraſter minor flore viridante.* Park. Theat. 212. *Helleboraſter minor.* Park. Parad. 344. *Helleboraſtrum.* Ger. 824. Emac. 976. Mer. Pin. 61. *Helleborus niger ſylveſtris, ramoſus, latiore folio deciduo.* Hiſt. Oxon. 3. 359. *Helleborus niger vulgaris flore viridi vel herbaceo, radice diuturna.* J. B. 3. 636. Chab. 527. BEAR'S-FOOT. *Dale.*

The Leaves, infus'd, for three or four Hours, in Ale, and drank three Mornings, faſting, are accounted an excellent Preſervative againſt the Small-pox, and orher contagious Diſeaſes. *Raii Hiſt. Plant.*

It grows in mountainous Places, and flowers in *March* and *April.* The Parts us'd in Medicine are the Root and Leaves. The Leaves are recommended by Dr. *Johnſon*, againſt contagious Diſeaſes. The Root has the ſame Virtues with that of the black Hellebore, and may be taken inſtead of it; it purges the lower Belly, evacuating Phlegm, and yellow Bile. Farriers and Graſiers put a great deal of Confidence in this Herb, againſt the Murrain among their Horſes and Cattle. Their Method is to thruſt a Bodkin through the Dewlaps of their black Cattle, through the Skin under the Neck of their Horſes, and through the Ears of their Sheep, and then put a Fibre of the Root into the Wound; whence it is called a *Peg-Root. Dale.* The ſame Operation is deſcrib'd by *Columella*, one of the *Rei Ruſticæ Scriptores*, who wrote under the Emperor *Claudius.*

3. Helleborus; niger, flore roſeo. *C. B. P.* 186. *Boerh. Ind. A.* 297. *Hiſt. Oxon.* 3. 359. *Helleborus niger.* Offic. *Helleborus ſive Elleborus.* Cod. Med. 58. *Helleborus niger verus.* Ger. 825. Emac. 976. Park. Theat. 211. Parad. 344. Raii Hiſt. 1. 697. *Helleborus niger flore albo.* J. B. 3. 634. Chab. 527. *Helleborus niger anguſtioribus foliis.* Elem. Bot. 235. Tourn. Inſt. 272. Rupp. Flor. Jen. 130. *Melampodium.* Pharm. Bat. p. 71. BLACK HELLEBORE.

This Plant has blackiſh Roots, ſomewhat thick at the Head, and full of long and pretty large Fibres of the ſame Colour. The Leaves ſeldom grow above a Span high, on pretty thick round Stalks, being digitated, or divided into ſix or ſeven Parts, which are narrow next the Stalk, and broadeſt toward the End, where only they are indented about the Edges. What are uſually called the Flowers, grow ſingle on the like thick Foot-ſtalks, conſiſting of five greeniſh, white, pretty large, round Leaves, having a Bluſh of Purple on them, which fall not off till the Seed is ripe, and therefore are accounted, by Mr. *Ray*, to be only the Calyces, making the Flowers to be the fiſtular Petala, which encompaſs the Chives in the middle. It flowers ſometimes at the latter End of *September*, whence it is called *Chriſtmas* Flower.

Black Hellebore purges downwards, and expels Flegm and Bile, given either alone, or with Scammony and Salts; the Doſe is half a Dram, or a Dram; it is boiled alſo with Lentils, and in purging Broths. It is effectual in the Epilepſy, Melancholy, Mania, Gout, and Palſies. Uſed in Peſſaries, it provokes the Menſes, and kills the Fœtus: Put into Fiſtulas, and ſuffer'd to remain there for three Days, it cleanſes them. In like manner, in the Caſe of Deafneſs, it is introduced into the Ear, and left to remain there for two or three Days. It cures the Pſora, being anointed on the Parts with Frankincenſe, or Wax, or Pitch, and Oil of Cedar. Made into a Cataplaſm by itſelf, with Vinegar, it cures the Alphi, Lichen, and Lepra. Boil'd in Vinegar, and the Mouth waſhed therewith, it eaſes the Tooth-ach; it is alſo an Ingredient in ſeptic Medicines. Mixed with Barley-flour and Wine, it makes an effectual Cataplaſm in hydropical Caſes. Planted near the Root of Vines, it communicates a cathartic Quality to the Wine made of them. It is uſual, alſo, to ſprinkle the Houſes with it, from a Perſuaſion, that it cleanſes and purifies them: Out of the ſame religious Apprehenſion, alſo, when they dig it up, they ſtand, and make their Prayers to *Apollo* and *Æſculapius*, and watch againſt the Flight of an Eagle; for that Bird, they ſay, brings Danger with it, and even Death, to him whom it ſhall find digging up the Hellebore. They muſt, alſo, be very quick in taking it up, becauſe it emits ſuch Exhalations as oppreſs the Head; for which Reaſon they take Garlick beforehand, and now-and-then a Sup of Wine, by way of Precaution. *Dioſcorides, Lib.* 4. *Cap.* 151.

Galen de atra Bile, *Pliny*, and *Dioſcorides*, mention a famous Cure which *Melampus* perform'd upon the Daughters of *Prætus.* This Shepherd, obſerving his Goats always purg'd after feeding on Hellebore, gave the Milk of theſe Goats to the Daughters of *Prætus*, who were ſo very mad as to fanſy themſelves Cows, ſoon after the Goats had eaten Hellebore. The Experiment ſucceeded. See the PREFACE.

Dr. *Freind* tells us, that Hellebore was, amongſt the Antients, reckoned a rough Medicine, as well as dangerous. This Opinion, he ſeems to think, might take its Riſe from the Manner they uſed to give it in: For the Doſe, as we learn from *Aretæus*, was often to the Quantity of two Drams. *Actuarius* is one of the firſt who thought it could be taken very ſafely, without creating any great Diſorder; and commends it highly as an admirable Remedy, for ſeveral Intentions. But then the Doſe he orders, ſeldom exceeds a Dram.

The Experience of the Moderns has confirm'd the Juſtneſs of his Obſervation: From ſuch different Accounts of its Operation, among other Reaſons, ſome would infer, that the black Hellebore of the Antients is loſt, and that what we uſe now is another Plant.

What we now uſe is that above-deſcrib'd: It is a very innocent and efficacious Medicine; and when given in a moderate Doſe, is ſo far from being a violent Purger, that very often it does not purge at all; and though it ſometimes occations Vomiting, yet frequently it does not ſo much as offend the Stomach. *Avicenna* ſays, it provokes Urine, and the Menſes; which latter Quality is ſufficiently known. In Dropſies more wonderful Effects have been produced from it than any other Diuretic. However 'tis a Remedy which will not always equally work Wonders.

Avenzoar gives an Account, that his Father found out a particular Virtue in the Flowers of *Nenufar*, or *Nymphæa*, in correcting black Hellebore.

It potently purges melancholy Humours, and conſequently is a uſeful Medicine in all Affections proceeding from them, as the Mania, Madneſs, the hypochondriac Paſſion, Elephantiaſis, Herpes, Cancer, Quartan, Vertigo, Epilepſy, Apoplexy, and Itch; but it ought to be adminiſter'd with Caution, and to none but robuſt Perſons, becauſe of the violent Manner in which it is ſubject to work; but there is leſs Danger in the Decoction. It is corrected with Maſtich, Cinnamon, Aniſe, Fennel, and the like. Some write that black Hellebore, rightly prepar'd, is a harmleſs Medicine, and may ſafely be given to Children, Women with Child, and infirm Perſons. The Doſe in Subſtance is from fifteen Grains to half a Dram, or two Scruples; they who are very robuſt may take a Dram of the Infuſion, or from one Dram to two of the Decoction.

It is exhibited either in Subſtance, Infuſion, or Decoction; in Subſtance, firſt, in Powder, as in the following Preſcription:

> Take of Powder of black Hellebore, two Scruples; of Ginger, Maſtich, red Roſes, Cinnamon, Aniſe, each four Grains: Mix them in Broth; for Children let the Quantity of Hellebore be only one Scruple. Secondly, it is taken in Pills, made of the Powder aforeſaid, and a proper Syrup.

All the Virtue of this Root lies in its Bark, and ſmall Fibres; for the Pith, or medullary Subſtance, is to be thrown away: It is beſt corrected with Cloves, according to the Advice of M. *Herman*, Head Botaniſt of the Phyſic-garden at *Leyden.* M. *Hartman*, for an immoderate Flux of the Menſes, order'd a Girdle compos'd of the freſh Leaves of black Hellebore, ſew'd together, to be ty'd about the Waiſt. *Raii Hiſt. Plant.*

Though this has been in the greateſt Eſteem among the Antients, yet it now grows neglected, either through our Unacquaintance with its Virtues, or the Sort which comes to us not having the Efficacy of that which they made uſe of. The latter may be our Unhappineſs; for Botanic and Diſpenſatory Writers differ much in determining which is the true officinal Hellebore. *Matthiolus* tells us, that is the right which flowers like a Roſe; others, that it has a Sky-colour'd Flower; and *Bauhine* takes it to be *Elleborus niger, tenui folio, Buphthalmi flore.* And by the Strength and Manner of the Operation of that they ſpeak of, ours ſeems to be of the ſame Species, but much weaker in Efficacy. What comes to us now, will not operate much by Stool; but is a powerful Alterative, and wonderfully affects the Juices in the moſt remote Receſſes. For this Reaſon it greatly promotes all the thinner Secretions, and particularly that by Sweat, eſpecially if join'd with any convenient Volatiles. This Root is infallible in Obſtructions of the Menſes, and where Steel is not only ineffectual, but improper; as in plethoric Habits; for in ſuch Steel will ſometimes raiſe hyſteric Commotions, Convulſions, and a ſort of Euror Uterinus; whereas this ſo thins the Blood, as to diſpoſe it to that Diſcharge without making it more impetuous. So that tho' Steel and Hellebore both promote the Menſes, yet they do it different Ways, one by increaſing the Blood's Velocity, and giving it a greater Momentum in the Arteries of the Uterus, and the other by dividing it, and rendering it more fluid. In all nervous Caſes the moſt antient Practice confirms its Efficacy, but eſpecially in a Mania or Diſtraction. In this laſt Intention it has been ſo famous as to make it even proverbial, *To ſend ſuch a one to Anticyra*, whom they would inſinuate to be mad, becauſe that Country produced the greateſt Quantities of this Drug. *Paracelſus* commends it as inſtrumental in procuring long Life; to which Purpoſe one *Tachius* made Trial of it upon himſelf.

M. *Boulduc* gives ſome Experiments, which he made upon this Root, in the *Memoirs of the Academy of Sciences*, for the Year 1701. We ſhall not take notice of thoſe made by Diſtillation, becauſe

because he himself believed them to be of no Consequence. The Extract which he procured with Spirit of Wine was very little in Quantity, because this Root contains few resinous Parts: And I am, says he, the more confirmed in this, since from what remained I was able to get a great Quantity of an Extract with Water.

He also made an Extract of the Root with Water, wherewith was drawn all that could be extracted; for from the Residue there was nothing to be got by means of Spirit of Wine. Whence it seems reasonable to conclude, that the saline Parts are able so to dissolve its few resinous ones, that both may be drawn off by Water, without the Aid of Spirit of Wine. He further remark'd, that the first Extract, which was purely resinous, and made with Spirit of Wine, purged little, and with Irritation; that the Extract made of its Remainder with Water purged not at all, but was very diuretic; and that, on the other hand, the Extract made first with Water, and without Spirit of Wine, purged very gently. And this, he says, he has observed of most Purgatives: Whence he thinks, that the Extract, made by Spirit of Wine alone, ought to be suspected; since, being deprived of its proper Salts, which, when joined to the Ferment of the Stomach, open, divide, and attenuate the Resin, it happens that its thick and sulphureous Parts adhere to the Fibres of the Stomach, and cause Gripings, and, by remaining undissolved some time, excite a Tenesmus. And this is confirm'd by Experience; for the most able practical Physicians correct the Resin with Salt of Tartar. He confesses that to be a good Method in these Cases; but supposes one may do without it, by leaving to those resinous Extracts the proper Salts which Nature has endued them with. Whence he affirms, that the way of making the Extract with Water is preferable to the common way of doing it by a sulphureous Menstruum; since thereby the Substance is freed from its terrestrial Parts, without depriving it of any of its natural Principles. He takes notice, that the Hellebore, which is brought from *Switzerland*, is preferable to that which comes by the Way of *England*. This latter, whether it is spoiled by keeping, or losing its Virtue in Transportation, he found to have little or no Effect.

So that, by this Person's Account, as well as the Reasons above given, there is Ground to suspect very much, that our Hellebore falls greatly short of the Goodness of that used by the Antients; since we find there is so great a Difference between it, and what so near Neighbours as the *French* have in Use among them at this Time. Of ours, fifteen or twenty Grains, in Powder, are frequently given as an Alterative and a Sudorific; and in Tincture, where the Root has been one Part, and the Menstruum three, it may be given to sixty, or one hundred Drops to a Dose. Its Virtues are best drawn, by rubbing a little Salt of Tartar with it in a gross Powder, and letting it lie till the Air makes it run; for that so penetrates into the very Substance of the Root, that its Parts immediately join with the Menstruum, as soon almost as put into it. Small Wine is the best, as most likely to take up all the Parts of any medicinal Efficacy.

The only Preparation of black Hellebore, in the College Dispensatory, is the *Tinctura Hellebori nigri*, which is thus prepar'd:

Take of black Hellebore-root, two Ounces; of Salt of Tartar, one Dram; of Cochineal, one Scruple; of *French* Brandy, one Pint: Draw out the Tincture by a warm Heat.

This is an admirable Medicine for many Purposes, but particularly it excels in opening uterine Obstructions; and in sanguine Constitutions, where Steel is hurtful, this never fails of forcing the menstrual Discharges. In short, it is a very convenient Form to give it, in all Cases where the Roots do Service. Its Dose is from twenty to one hundred Drops, in any suitable Vehicle. Some make it with a more spirituous Menstruum; but this seems most likely to draw out both the resinous and gummy, or saline Parts of the Simple.

Tinctura Melampodii.

Take Roots of black Hellebore, one Dram and an half; Calamus Aromaticus, two Ounces; Galangal, half an Ounce; Saffron, one Dram and an half; the lesser Cardamoms, three Drams; Canary, three Quarts: Digest in a close Vessel twenty Hours in a Sand-heat, and then press it out, and filtre it for Use.

This is given from two to three Spoonfuls, in a Dose over Night, or in the Morning: Its Operation is by Stool; and it is prescribed for maniacal, hypochondriacal, and dropsical Persons: In which obstinate Cases, it is accounted a very good Medicine.

4. Helleborus; niger; flore roseo; minor; Belgicus.

5. Helleborus; niger; trifoliatus. *Ald. Hort. Farnes.* 92. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 246.

HELLESPONTIA, ἑλλησποντία. The Name of two Plaisters described by *Galen*, *de Comp. M. per G. L.* 6. *C.* 10, 11.

HELMINTHES, ἕλμινθες. Worms.

HELMINTHAGOGA. Medicines which expel Worms.

HELMINTHICA. The same as Helminthagoga.

HELNESED. Coral. *Rulandus.*

HELODES, ἑλώδης, from ἕλος. A Fen, or marshy Place: An Epithet given to certain Fevers attended in the Beginning with profuse Sweats, which afford no Relief. Mean time the Tongue is dry and rough, and the Skin hard, and, as it were, parched.

HELOSIS, ἕλωσις. A Disorder of the Eye, consisting in an Eversion, or turning up, of the Eye-lids. *Gorræus.*

HELOTIS. A Name for the Distemper call'd *Plica Polonica.*

HELXINE. A Name for the *Parietaria*; *Officinarum & Dioscoridis.* It is, also, a Name for the *Convolvulus*; *minor*; *arvensis*; *flore Roseo.*

HEMERALOPS, ἡμεραλωψ, from ἡμέρα, a Day, and ὤψ, the Eye. A Defect in the Sight, which consists in being able to see in the Day-time only, and not in the Evening. It is the Reverse of the *Nyctalops.*

HEMERIS. A Name for the *Quercus*; *cum longo Pediculo.*

HEMEROCALLIS. A Name for a sort of Lily, call'd *Lilium*; *Hemerocallis*; *Chalcedonica*; *Polyanthos. Boerh. Index alt. Plant.*

HEMEROCOETOS, ἡμερόκοιτος. A Name for the Fish otherwise call'd Callionymus.

HEMICERAUNIOS, ἡμικεραύνιος. The Name of a Bandage, in *Galen*, for the Back and Breast.

HEMICRANIA, ἡμικρανία. A Species of Head-ach, affecting only one Side of the Head.

HEMIECTON, or HEMIECTEON, ἡμίεκτον, or ἡμέκτεον. Half of an Hecteus. But, in *Hippocrates*, *Libro de his quæ Uterum non gerunt*, it seems to signify a Pot capable of containing this Measure, into which Ingredients were to be put for a Suffitus, or Fumigation, in case of uterine Disorders there mentioned. Upon this the Woman was directed to sit, with her Legs wide asunder, in order to receive the Vapour into the Vagina and Uterus.

HEMIMOERION, ἡμιμόριον. Half a Dram. *Erotian.* Or, in general, the Half of any thing.

HEMINA, ἡμίνα, κοτύλη, an antient *Greek* Measure, the same with the Cotyle; which see.

HEMIOBOLION, HEMIOBOLON, ἡμιοβόλιον, ἡμιωβόλιον, ἡμιόβολον, from ἥμισυ, half, and ὄβολος, an Obolus, a Weight, the half of an Obolus, or the twelfth Part of a Drachma, or Dram, that is, five Grains.

HEMIOLION, ἡμιόλιον, from ἥμισυ, half, and ὅλος, the Whole, signifies in general, the Whole of any thing, and half as much more, or the same as *Sesquialtera*; but in *Galen*, *de C. M. S. L.* it is used particularly for the Weight of an Ounce and an half.

HEMIONIS, ἡμιονὶς, from ἡμίονος, a Mule, in *Hippocrates de Natura muliebri*, is Mule's Dung, which he there prescribes to be burnt, triturated, and macerated in Urine, and so administered in the *Fluor Albus.*

HEMIONITIS, ἡμιονῖτις, from ἡμίονος, a Mule. *Mules-fern.*

It resembles the *Lingua Cervina*, or Hart's-tongue, only the Leaves are more simple, and hollow'd into a Sinus at the Base, with two Lobes like Ears, or jagged at the same Part. *Boerh. Index alter*, *Pars* 1. *p.* 24.

Boerhaave mentions but one Species of this Plant; which is,

Hemionitis; vulgaris. *C. B.* 353. *Raii Hist.* 1. 135. *Tourn. Inst.* 546. *Boerh. Ind. A.* 24. *Hemionitis.* Offic. J. B. 3. 758. Ger. 977. *Hemionitis major.* Ger. Emac. 1138. Park. 1047. MULES-FERN.

It is said to be produc'd in *Italy*. The whole Herb is us'd; and, according to *Dioscorides*, consumes the Spleen, if drank in Vinegar. According to *Bobart*, it is good against Disorders of the Spleen, and possess'd of the same Virtues with the Hart's-tongue. According to *Boerhaave*, it is astringent, vulnerary, pectoral, and good against Disorders of the Spleen, and Spittings of Blood. *Dale.*

HEMIONIUM, ἡμιόνιον, a Name, in *Dioscorides*, for the Asplenon, or Asplenium.

HEMIOPON, ἡμίοπον, in *Galen*'s Exegesis, is expounded by ἥμισυ, half. *Foesius.*

HEMIPAGIA, the same as Hemicrania. *Blancard.*

HEMIPLEGIA, HEMIPLEXIA, ἡμιπληγία, ἡ ἡμιπληξία, from ἥμισυ, half, and πλήσσω, to strike. An Hemiplegy, or Hemiplexy, is when only half of the Head, and of the rest of the Body, is affected after the manner of an Apoplexy. See Apoplexia, Caput, Paralysis.

HEMIRHOMBION, ἡμιρόμβιον, the same as Hemitomon.

HEMITOMON, ἡμίτομον, from ἥμισυ, half, and τέμνω, to cut, signifying cut thro' the Middle; a sort of Bandage, mention'd by *Hippocrates*, κατ' ἰητρ. call'd also *Semirhombus*, or half a *Rhombus*, from its Figure.

HEMITRITÆUS, ἡμιτριταῖος, from ἥμισυ half, and τριταῖος, third, or tertian, an Epithet of a Fever, is a *Greek* Word, signifying the same as Semitertiana; which see.

HEMITYBION, ἡμίτυβιον, according to *Hesychius*, is a Linen Piece of Apparel fringed on both Sides; according to the Scholiast on *Aristophanes's Plutus*, it is a Handkerchief, or soft Piece of Linen, to wipe off Sweat. But *Galen*, in his Exegesis, makes

makes it a Piece of thick Linen Cloth, with an Eye to a Place in *Hippocrates, Lib. 2. de Morbis*, where the Word ſeems to be us'd in that Senſe, and agreeably enough with the ſame Meaning in *Lib. de Artic.*

HEMIXESTON, ἡμίξεστον. A Meaſure half a *Xeſtes*; that is, a *Cotyle*; for a *Xeſtes* contains two *Cotyles*.

HENRICUS RUBENS. Vitriol calcin'd to Redneſs.

HEPAR, ἧπαρ. The Liver.

A critical Knowledge of the Structure of this Bowel is of very great Importance both in Phyſic and Surgery; for, without this, it is not poſſible to judge accurately, with reſpect to many, and thoſe very terrible, Affections of this Organ.

The Liver is a large and pretty ſolid Maſs, of a dark-red Colour, a little inclined to yellow, ſituated immediately under the Arch of the Diaphragm, partly in the Right Hypochondrium, which it fills almoſt entirely, and partly in the Epigaſtrium, between the Appendix Enſiformis and Spina Dorſi, and terminating commonly in the Left Hypochondrium, into which it ſometimes runs a conſiderable Way. The Figure of the Liver is irregular, it being arched or convex on the upper Part, unequally concave on the lower, and very thick on the Right and back Sides. Towards the Left and anterior Sides, its Thickneſs decreaſes very much, and terminates there by a kind of Edge; and its Breadth is more extended from Right to Left, than from before backwards. The Liver may be divided into two Extremities, one great, the other ſmall; two Edges, one anterior, the other poſterior; two Sides, one ſuperior and convex, which is ſmooth and poliſhed, and proportioned to the Arch of the Diaphragm, and one inferior, concave and uneven, with ſeveral Eminences and Depreſſions. It may likewiſe be divided into two lateral Parts called Lobes; one of which is termed the Great or Right Lobe, the other, the Small, or Left Lobe. Theſe two Lobes are diſtinguiſhed above by a membranous Ligament; and below, very plainly, by a conſiderable Sciſſure lying in the ſame Direction with the ſuperior Ligament. The Eminences on the concave Side of the Liver belong to the great Lobe. The principal Eminence is a ſort of triangular or pyramidal Apophyſis ſituated backward, near the great Sciſſure, which diſtinguiſhes the two Lobes. This triangular Eminence is termed *Lobulus Spigelii*, or, ſimply, the ſmall Lobe of the Liver. One of its Angles advances a conſiderable Way toward the Middle of the lower Side of the great Lobe, and is loſt there. This Angle I call the Root of the *Lobulus*. Toward the fore Side, there is another Eminence leſs prominent, but broader; and to this Eminence, and the former, the Antients gave the Name of *Portæ*. The Depreſſions on the concave or lower Side of the Liver, which deſerve our Attention, are four in Number. The firſt is the Sciſſure which ſeparates the two Lobes, which run acroſs the concave Side, from the Eminences already mentioned to the anterior Edge, where it terminates by a Notch of different Depths, in different Subjects. This is termed the great Sciſſure of the Liver; and, in ſome Subjects, Part of it is an entire Tube. The ſecond Depreſſion is ſituated tranſverſely between the two Eminences of the great Lobe, and filled by the Sinus of the *Vena Portæ*, ſo called by the Antients, becauſe it lies between the Eminences of the ſame Name. The third Depreſſion is backward, between the great Lobe, and Lobulus Spigelii; and the Vena cava paſſes through it. The fourth is a kind of Sulcus, between the Lobulus, and ſmall Lobe of the Liver; which, in the Fœtus, ſerv'd to receive a venous Canal loſt in Adults, in whom it appears only as a kind of Ligament. This Sulcus is, in ſome meaſure, a Continuation of the great Sciſſure, and joins the Vena Cava, by an acute Angle. Beſides theſe four Depreſſions, there is one on the fore Part of the great Lobe, in which the Gall-bladder is lodged; and it ſometimes runs as far as the Edge, where it forms a ſmall Notch. We may likewiſe reckon, among theſe Depreſſions, a ſmall Cavity in the poſterior and lateral Part of the lower Side of the great Lobe, by which it reſts on the Right Kidney; and likewiſe a ſuperficial Cavity in the Left Lobe, where it runs over the Stomach. Laſtly, on the poſterior Edge of the Liver, there is a great Sinus common to both Lobes, which gives Paſſage to the Spina Dorſi, and Oeſophagus, near the Place where the Vena Cava deſcends; and we ſometimes meet with Sciſſures on both Sides of the Liver, which are not ordinary.

The convex Side of the Liver is commonly connected to the Diaphragm by three Ligaments, which are only Continuations of the membranous Lamina of the Peritonæum. One lies near the Edge of the Extremity of each Lobe, and one in the Middle; and they are accordingly termed Right, Middle, and Left Ligaments. There is a cellular Subſtance in the Duplicature of each, in which the Blood-veſſels and Lymphatics run, and which ſends off a kind of Lamina into the Subſtance of the Liver. The Right Ligament ſometimes connects the great Lobe to the Cartilages of the falſe Ribs; and the Left Ligament, or that of the ſmall Lobe, is often double, and advances toward the middle Ligament. This middle Ligament begins below, in the great Sciſſure of the Liver, near the Eminences called Portæ; and from thence paſſes through the anterior Notch, and over the convex Side of the Liver, at the Union of the two Lobes, and is fixed obliquely in the Diaphragm. It is likewiſe fixed along the upper and inner Part of the Vagina of the Right *Muſculus Rectus* of the Abdomen, in ſuch an oblique Manner, as to be nearer the Linea alba below than above. Beſides theſe Ligaments, the great Lobe of the Liver is likewiſe connected to the Right Ala of the tendinous Portion of the Diaphragm, not by a Ligament, but by a broad and immediate Adheſion, without the Intervention of the Membrane of the Peritonæum, which is only folded quite round this Adheſion, to form the external Membrane of all the reſt of the Body of the Liver. This broad Adheſion is commonly, though improperly, called *Ligamentum Coronarium*; but, in the firſt Place, it is not a Ligament, as has been already obſerved; and ſecondly, it is not circular, but oval, and very oblong: It is not on the upper Part of the convex Side of the Liver, but along the poſterior Part of the great Lobe; the broad Extremity of the Adheſion lying near the Notch, and the pointed Extremity towards the Right Hypochondrium. The middle Ligament, called improperly *Ligamentum Hepatis Suſpenſorium*, contains in its Duplicature a thick white Rope, like a round Ligament, which was the Umbilical Vein in the Fœtus. Thus the lower Part repreſents a *Falx*, the convex Edge of which is ſharp, and the other rounded: All theſe Ligaments ſerve to keep the Liver in its proper Situation, and to hinder it from inclining too much towards either Side: But we muſt not imagine, that any of them ſerve to ſuſpend it, becauſe it is ſufficiently ſupported by the Stomach and Inteſtines, eſpecially when they are filled. When the Stomach is empty, or when we faſt longer than ordinary, it is a common Expreſſion to ſay, The Stomach pinches us. As the Liver is not then ſuſtained by the Stomach and Inteſtines, it deſcends by its own Weight, and, principally by means of the middle Ligament, pulls the Diaphragm along with it. It is in that Place, therefore, that we have this uneaſy Senſation, and not at the ſuperior Orifice of the Stomach, as is commonly believed. The Right or great Lobe of the Liver, which lies in the Right Hypochondrium, reſts on the Right Kidney, by a ſmall ſuperficial Depreſſion above-mentioned; and it likewiſe covers a Portion of the Colon, and the Pylorus. About two Thirds of the ſmall or Left Lobe lie in the middle of the Epigaſtrium, and the remaining third Part advances over the Stomach, towards the Left Hypochondrium: This ſmall Lobe is ſituated almoſt horizontally; the great Lobe is very much inclined, and its thick Extremity runs down almoſt in a perpendicular Direction to the Right Kidney, on which it lies in the manner already ſaid. This Obſervation is of Uſe to diſtinguiſh the different Parts of the Liver, in Wounds, and Chirugical Operations. It may likewiſe ſerve to direct us in examining a Liver taken out of the Body; the Situation of which may be otherwiſe very eaſily miſtaken, eſpecially that of the Parts of the concave Side. The Paſſage of the Vena Cava, between the Body of the great Lobe, and the *Lobulus Spigelii*, may likewiſe ſerve for a Rule, in placing a detach'd Liver in its true Situation.

The Liver is compoſed of ſeveral kinds of Veſſels, the Ramifications of which are multiplied in an aſtoniſhing manner, and form, by the Intertexture of their capillary Extremities, an innumerable Collection of ſmall, pulpy, friable Corpuſcles, which are looked upon to be ſo many Organs deſigned to ſeparate from the Maſs of Blood a particular Fluid termed the Bile. The greateſt Part of theſe Veſſels, from one End to the other, is included in a membranous Vagina called *Capſula Venæ Portæ*, or *Capſula Gliſſoni*, from an *Engliſh* Author who firſt deſcribed it particularly. The Veſſel which carries the Blood to the Liver, is called the *Vena Portæ*, for the Reaſon already given. In the Deſcription of the Veins it is obſerved, that the Vena Portæ might be conſidered as two large Veins, the Trunks of which are joined endwiſe, and ſend out Branches and Ramifications in oppoſite Directions to each other; that one of theſe Veins is ramified in the Liver, the other lying without the Liver, and ſending its Branches and Ramifications to the Viſcera of the Abdomen; and laſtly, that the firſt of theſe large Veins may be termed *Vena Portæ Hepatica*, the other *Vena Portæ Ventralis*.

The particular Trunk of the Vena Portæ Hepatica is ſituated tranſverſely between the broad anterior Eminence of the great Lobe of the Liver, and the Root of the Lobulus, in a particular Sciſſure, and forms what is called the Sinus of the Vena Portæ. From this Sinus five principal Branches go out, which are afterwards divided into Millions of Ramifications, through the whole Subſtance of the Liver. At this Place the Vena Portæ lays down the common Office of a Vein, and becomes a kind of Artery, as it enters, and is again ramified in the Liver. The Extremities of all theſe Ramifications of the Trunk of the Vena Portæ Hepatica end in the pulpy, friable Corpuſcles, which ſeem to be thick, villous Folliculi, when examined through a Microſcope in clear Water.

It is in theſe Folliculi that the Bile is ſecreted, and it is immediately collected in the ſame Number of Extremities of another kind of Veſſels, which unite by numerous Ramifications into one common Trunk. Theſe Ramifications are termed *Pori Bilarii*, and the Trunk, *Ductus Hepaticus*; and the Ramifications

mifications of theſe two Kinds of Veſſels are inveſted together, by the Capſula of the Vena Portæ.

The Blood, depriv'd of this bilious Fluid, is reconvey'd to the Heart, by a great Number of venous Ramifications, which afterwards unite into three principal Branches, beſides others which are leſs conſiderable, that terminate in the Vena Cava, and are called by the Name of Venæ Hepaticæ: The capillary Extremities of the Ramifications of the Vena Cava join thoſe of the Vena Portæ, and accompany them thro' the Liver; and, yet, the great Branches of both Veins interſect each other in ſeveral Places. When we cut the Liver in Slices, it is eaſy to diſtinguiſh, in each Slice, the Ramifications of the Vena Cava from thoſe of the Vena Portæ; the firſt being thinneſt and largeſt, and adhering cloſeſt to the Subſtance of the Liver; whereas thoſe of the Vena Portæ, which are inveſted by the cellular Capſula, appear to be a little rumpled, when empty, becauſe the cellular Capſula ſubſides, when it is cut; but the other Veins remain uniformly open, their Sides adhering to the Subſtance of the Liver.

The Liver receives from the cœliac Artery a particular Branch, term'd *Arteria Hepatica*, which, being very ſmall, when compared with the Bulk of that Bowel, ſeems deſign'd only for the Nouriſhment thereof, and not for the Secretion of the Bile. The *Plexus Hepaticus*, form'd by the *Nervi Sympathetici maximi & medii*, furniſhes a great Number of Nerves to the Subſtance of the Liver. The Ramifications of the Artery, and Nervous Plexus, are included in the cellular Capſula, together with thoſe of the *Vena Portæ*, and *Pori Bilarii*: The Pulſation of this Artery has been, by ſome Anatomiſts, taken for that of the Capſula; and, by this, they have endeavour'd to explain the arterial Function of the Vena Portæ: But they have not conſider'd, that the Blood in this Vein does not require to be pumped forward; becauſe ſo ſwift a Motion would have been prejudicial to the Secretion of the fine Oil of the Bile; for which a ſlow and almoſt inſenſible Motion is neceſſary. The Liver is cover'd exteriorly by a particular Membrane or Coat, which is a Continuation of the Peritonæum: There is likewiſe a membranous or filamentary Subſtance, which runs thro' this whole Bowel, and connects the Ramifications and Extremities of all its Veſſels to each other: This Subſtance ſeems to be a complicated Production of the Capſula of the Vena Portæ, and of the external Membrane of the Liver. The outer Surface of this Coat is very ſmooth, but its inner Surface is uneven, being made up of a great Number of thin membranous Lamiñæ, between which we obſerve, very diſtinctly, numerous lymphatic Veſſels on both the convex and concave Sides of the Liver; but it is more difficult to trace thoſe which accompany the filamentary Subſtance thro' that Bowel. I have already obſerv'd, that the Subſtance of the Liver is principally made up of pulpy friable Corpuſcles, each of which is bounded, and, in a manner, ſurrounded, by a particular Expanſion of the *Capſula Gliſſoni*; and all theſe Expanſions are connected by common Septa, in ſome meaſure reſembling a Honey-comb: Theſe Corpuſcles have ſeveral Angles, eſpecially in the inner Surface of the Liver; but, near the Surface, they are raiſed in the Form of ſmall Tubercles: Their pulpy Texture appears like radiated Tufts, a ſmall void Space being left in the middle of each. If we blow thro' a Pipe into the Vena Portæ, Vena Cava, Arteria Hepatica, or Trunk of the Pori Bilarii, but eſpecially through the two Veins, we obſerve the Liver to ſwell, and the Corpuſcles, near the Surface, are raiſed, and become more ſenſible: If we blow with much Force, we burſt theſe Corpuſcles; and the Air, getting between them and the external Membrane, raiſes it from the Subſtance of the Liver, in Bliſters.

The *Ductus Hepaticus*, or Trunk of the *Pori Bilarii*, having run a little Way, joins another Canal, called *Ductus Cyſticus* or *Veſicularis*, becauſe it comes from the Veſicula Fellis: Theſe two united Ducts form a common Trunk, nam'd *Ductus communis Cholidochus*, becauſe it conveys the Bile: This Duct, having reached the Incurvation of the Duodenum, inſinuates itſelf through the Coats of that Inteſtine, and opens into the Cavity thereof, not by a round Papilla, but by an oblong Orifice, rounded at the upper Part, and contracted at the lower, like the Spout of an Ewer, or like a common Tooth-picker: The Edges of this Orifice are raiſed, broad, and plaited; as we may ſee, by making this Portion of the Duodenum ſwim in clear Water: At the Entry of this Orifice, we ſee another ſmaller Opening, diſtinct from it, which is the Orifice of the *Ductus Pancreaticus*.

The Gall-bladder is a kind of ſmall Bag, ſhaped like a Pear, that is, narrow at one End, and wide at the other. The wide Extremity is termed the Fundus, or Bottom; the narrow Extremity, the Neck; and the middle Portion, the Body. About One-third of the Body of the Gall-bladder lies in a Depreſſion on the concave Side of the Liver, from the Trunk or Sinus of the Vena Portæ, where the Neck is ſituated to the anterior Edge of the great Lobe, a little towards the Right Side, where the Bottom is placed; and, in ſome Subjects, it advances beyond the Edge. When, therefore, we ſtand, the Gall-bladder lies in a Plane, inclined a little from behind, forward: When we lie upon the Back, it is almoſt inverted: When we lie on the Right Side, the Bottom is turned downward; and it is turned upward when we lie on the Left Side; and theſe Situations vary, according to the different Degrees of each Poſture. The Gall-bladder is compoſed of ſeveral Coats; the outermoſt of which is a Continuation of that which inveſts the Liver, and, conſequently, of the Peritonæum: The ſecond Coat is fleſhy, and made up of two Strata, one longitudinal, and the other tranſverſe; the Fibres of which have nearly the ſame irregular Direction with thoſe of the Stomach; and this Diſpoſition of the Fibres of theſe Viſcera is owing to the Inequality of their Diameters in the ſeveral Parts of them, and to their Incurvation: Theſe two Coats are, connected by a cellular Subſtance, continued, between the Body of the Gall-bladder and the Liver, all the Way to a whitiſh Stratum, which is look'd upon as the third Coat to the Gall-bladder, anſwering to the *Tunica Nervoſa* of the Inteſtines: The innermoſt or fourth Coat has, on the Inſide, a great Number of reticular Folds, filled with ſmall Lacunæ, like perforated Papillæ, eſpecially near the Neck of the Gall-bladder, where the Folds are longitudinal, and afterwards form a kind of ſmall rough Pylorus: Theſe Lacunæ are looked upon to be Glands. That Side of the Body of the Gall-bladder, which lies next the Liver, is connected to that Bowel by a vaſt Number of Filaments, which run a great Way into the Subſtance of the Liver; and, among theſe Filaments, there are ſome Ducts which form a Communication between the *Pori Bilarii* and Gall-bladder: Theſe Ducts were obſerved in Brutes long ago, and they have been very lately diſcover'd in Men likewiſe: They are moſt numerous near the Neck of the Bladder, and they are call'd *Ductus Cyſt-hepatici*, or *Hepatico-cyſtici*. The Neck of the Gall-bladder is form'd by the Contraction of the ſmall Extremity; and this Neck, bending afterwards in a particular manner, produces a narrow Canal, named *Ductus Cyſticus*: This Incurvation repreſents, in ſome meaſure, the Head of a Bird, of which the Cyſtic Duct, by the gradual Diminution of its Diameter, expreſſes the Beak: This cannot be ſeen when the Liver is out of its proper Situation; and even *in Situ* it is but imperfectly ſeen, when, in order to view the concave Side, the Liver is raiſed, and thruſt too much againſt the Diaphragm; for, by thus inverting the Liver, the Curvature is diſorder'd, and we ſee two in the Place of one. To ſee this Curvature in its true natural Situation, the Liver is to be raiſed but very little, and the Duodenum left untouched; then we muſt ſtoop, and look under the Liver, without diſordering any thing. This Incurvation may be of Uſe to hinder too precipitate a Diſcharge of the Bile contain'd in the Bladder, which ſome Situations of the Body might occaſion. The Neck of the Veſicula is, nearly, of the ſame Structure with the other Parts; it has, on the Inſide, ſeveral reticular Wrinkles, and ſome Folds, which appear like Fragments of a ſort of Valvulæ conniventes, ſituated very near each other, from the Neck to the Contraction of the Cyſtic Duct: The firſt of theſe Folds is pretty broad and large, and almoſt circular; the next is more oblique, and ſmaller in Size; and the reſt diminiſh in the ſame manner: Taken all together, they form a kind of ſpiral Aſcent, which may be ſeen thro' the Neck, on the Outſide, where it ſometimes appears like a Screw, eſpecially when the Neck is filled with any Fluid. This Obſervation is owing to *Heiſter*. By ſlitting the Neck and Duct, we ſee all theſe Folds very diſtinctly, eſpecially when we examine them in clear Water. When they are view'd in any other Manner, they eaſily deceive us, being miſtaken for true Valves, becauſe of their tranſverſe Situation: They may, however, in ſome meaſure, ſupply the Place of Valves, by hindering the Bile from running too faſt into the Duodenum; and the Contents of the Duodenum from entering this Duct. The internal Surface of all theſe biliary Ducts, that is, of the *Ductus Hepaticus*, *Cyſticus*, and *Cholidochus*, being examin'd thro' a Microſcope, in clear Water, appears to be, nearly, of the ſame Structure, thro' their whole Extent. The Cyſtic and Hepatic Ducts do not, in their ordinary and natural Situation, repreſent the Capital T of the *Greeks*, where they form the *Ductus Cholidochus*: After the Incurvation of the Neck of the Bladder, theſe two Ducts run very near each other, and they appear to be ſeparated, only when the Liver is raiſed up, in order to view them. The ſame Confuſion of theſe Parts happens, alſo, in an inverted Liver, when taken out of the Body; for then the Body of the Liver ſubſides, and is flatten'd, and thereby ſeparates the Ducts; whereas, in its true Situation, it is very much incurvated, and the Ducts are very near each other. The *Ductus Cholidochus* appears rather to be a Continuation of the *Ductus Cyſticus*, than the common Trunk of that and the *Ductus Hepaticus*; for I have obſerv'd, that this laſt Duct runs for ſome Space within the Sides of the former, before it opens into the Cavity, much in the ſame manner as the Ductus Cholidochus paſſes into the Duodenum. I have likewiſe obſerv'd, at the Opening of the Hepatic into the Cyſtic Duct, a ſmall looſe valvular Membrane, which may hinder the Bile from returning out of the *Ductus Cholidochus* into the *Hepaticus*. The Bile, which paſſes thro' the *Ductus Hepaticus* into the *Cholidochus*, may be called Hepatic; and that which is collected in the Gall-bladder, may be term'd Cyſtic: The Hepatic Bile flows continually

thro' the *Ductus Cholidochus* into the *Duodenum*; whereas the Cyſtic Bile flows only by reaſon of Plenitude, or Compreſſion.

The Trunk of the *Vena Portæ Ventralis* terminates between the Lobulus and the oppoſite Part of the great Lobe; and there joins the Trunk of the *Vena Portæ Hepatica*, in the tranſverſe Sinus of the Liver, between the Right Extremity and the Middle of that Sinus. The Umbilical Ligament, and, conſequently, the Umbilical Vein in the Fœtus, joins the Trunk of the *Vena Portæ Hepatica*, toward the Left Extremity of the tranſverſe Sinus of the Liver. The *Canalis Venoſus* in Man is not exactly oppoſite to the Umbilical Vein, but a little to the Right-hand; and, therefore, theſe three Veſſels lie in ſuch a Direction as to form two oppoſite Angles, reſembling thoſe of the Handle of a Wheel, or of a Spit. In the Fœtus, therefore, the Blood which comes from the Umbilical Vein, does not run directly thro' that contained in the Vena Portæ Hepatica in the Sinus, and, from thence, to the Canalis Venoſus; but is obliged to turn from Left to Right, and ſo to mix with the Blood in the Vena Portæ, before it enters that Canal, which opens into the Trunk of one of the great Hepatic Veins of the Vena Cava, near the Diaphragm. The Hepatic Vena Portæ gives off, commonly, five large Branches into the Liver; three from its Right Extremity into the great Lobe; and two from its Left Extremity into the ſmall Lobe; and, from the Interſtice between theſe, a ſmall Branch goes directly to the Middle of the convex Side of the Liver. The Hepatic Veins are commonly three large Branches of the Trunk of the Vena Cava inferior, which go out from it by one common Opening, eſpecially two of them; and, then ſeparating, they enter the Subſtance of the Liver, interſecting the Branches of the Hepatic Vena Portæ; and are ramified, in all Directions, in the manner already explain'd. The inferior Portion of the Opening of theſe Veins into the Vena Cava forms a kind of ſemilunar Valve: Below theſe Hepatic Veins, the Vena Cava inferior ſends off, in its Paſſage by the Liver, ſeveral other ſmall Hepatic Veins immediately from the Trunk, which ſeem to have the ſame relation to the Hepatic Artery, as the great Veins to the Vena Portæ. The Paſſage of the Vena Cava is thro' the Right Portion of the poſterior Sinus of the Liver, and, conſequently, on the Side of the great Lobe, which is hollow'd, at this Place, ſufficiently to give Paſſage to the Vein, of which it ſurrounds about Three-fourths, ſometimes more, and ſometimes the Whole: This Paſſage anſwers to the Interſtice between the Lobulus and the reſt of the great Lobe; and its Direction is, in the natural State, from above, downward, and a little from Right to Left; but when the Liver is view'd out of the Body, and inverted, it appears very oblique.

The Trunk of the great Vena Portæ, the Hepatic Arteries, the *Ductus Hepaticus*, or Trunk of the *Pori Bilarii*, and Nerves of the *Plexus Hepaticus*, form, all together, a large Bundle, before they enter the Liver; the Trunk of the Hepatic Vena Portæ is in the Middle of this Bundle; the Hepatic Arteries lie on the Right and Left Side of this Trunk; the Nerves ſurround it on all Sides, and they communicate with the *Plexus Meſentericus ſuperior*: Afterwards the firſt Branches of the Arteries, Nerves, and Pori Bilarii, leave the Trunk of the great Vein, and join, in the ſame manner, the Trunk of the ſmall or Hepatic Vena Portæ, and its Ramifications in the *Capſulæ Gliſſoni*, explain'd above. All theſe Branches of the Vena Portæ, and of the Arteries, Nerves, and Pori Bilarii, accompany each other, by Ramifications thro' the whole Subſtance of the Liver, forming every-where ſmall Faſciculi, in the ſame manner as the large Bundle is form'd by their Trunks. Each Branch of the Vena Portæ, Artery, Nerve, and Porus Bilarius, has a proper Vagina; and all the four have a common Vagina, diſtinguiſh'd from the former by cellular Septa, which are only Continuations of the Vaginæ of both Kinds. The convex Side of the common cellular Vagina is connected quite round to the Subſtance of the Liver, by numerous Filaments, which ariſe from it, and which form the cellular Subſtance found between the glandular Corpuſcles: The concave Side produces the cellular Septa above-mention'd. In this common Vagina the Veſſels, Ducts, and Nerves, are diſpoſed in ſuch a manner, as that the Branches of the Vena Portæ principally fill the Cavity of it, and it is in a lateral Situation; the arterial Branch and Porus Bilarius lie together, on the Side of the Vein, and the Nerve is divided into ſeveral Filaments, which run in between the Veſſels and Ducts, and chiefly accompany the Artery and Porus Bilarius; the Vena Portæ having by much the feweſt.

The Liver is the principal Organ for the Secretion of the Bile. The Villi of that immenſe Number of glandular Cells, of which it is compoſed, filtrate continually from the Blood of the Vena Portæ ſmall Drops of Bile, which, afterwards, inſinuate themſelves into the Pori Bilarii, and are, in part, lodged in the Gall-bladder, and, in part, run directly into the *Duodenum*, in the Manner already explain'd, in deſcribing the Biliary Ducts.

The Spleen, Omentum, Appendices Epiploicæ, Adipoſe Strata of the Meſentery, and thoſe of the great Inteſtines, and even the Pancreas, with the whole Series of Glands in the inteſtinal Canal, ſeem to contribute to the Formation of the Bile, as ſo many auxiliary, or, rather, preparatory Organs; but each of them in a different Way. It appears, (1.) That the venous Blood, which returns from all the inteſtinal Glands, and from the Pancreas, has left a great Portion of its Serum. (2.) That the Blood, which returns from the Spleen, has undergone a certain Change, by its Courſe being mechanically retarded; and, likewiſe, that its Texture is alter'd, by the Action of the numerous Nerves ſent thither by the Plexus Splenicus. (3.) That the Blood which returns from the Omenta, Appendices Epiploicæ, and from the Strata, and other Collections of Fat, is loaded with Oil. Theſe three Kinds of venous Blood meet in the Trunk of the *Vena Portæ Ventralis*, where they are mixed together; and from thence they enter the tranſverſe Sinus, or Trunk of the *Vena Portæ Hepatica*: In this Sinus they are ſtill more intimately mixed, as in a kind of Lake, and become one uniform Maſs of Blood, which being forced into the Branches of the *Vena Portæ Hepatica*, only by the ſupervening Blood from the other *Vena Portæ*, and by the lateral Pulſations of the Ramifications of the Hepatic Artery, its Courſe muſt be very ſlow: The Secretion of the Bile depends partly on this ſlow Motion, and partly on theſe external Impulſes.

The veſicular Bile appears to be more exalted than that in the Hepatic Duct; and, by meeting in the Ductus Cholidochus, they ſeem to compoſe a third Kind of Bile, which, without the Cyſtic or Veſicular Bile, would, perhaps, be too mild; and too acrid, without the Hepatic: This Bile mixes, in the Duodenum, with the pancreatic Juice, and with that of the inteſtinal Glands; and from this Mixture a Fluid reſults, which is proper to ſeparate the chylous Matter from the groſs and uſeleſs Part of the alimentary Pulp, as it comes from the Stomach.

See BILIS.

See, alſo, *Tab.* XIII. *Tab.* XIV. *Fig.* 1. and 3. and *Tab.* XV. and the Explication of all theſe Figures.

From this Structure of the Liver, duly conſider'd, it will be eaſy to underſtand the Diſtempers to which this Organ is ſubjected in a particular Manner: The firſt, and moſt acute, of theſe is an Inflammation, called *Hepatitis*; which, perhaps, occurs more frequently than is generally apprehended; but, however, not ſo often as one would be ſubject to imagine, from the Conformation of the Part, unleſs it were conſider'd, that the Hepatic Artery is not very large, and, therefore, cannot convey to the Liver a great Quantity of Blood; and that the Force of the Blood circulating thro' the Ramifications of the *Vena Portæ*, is not ſo conſiderable as to ſubject this Organ very much to Inflammations.

An Inflammation of the Liver is ſeated in the Extremities of the Ramifications of the *Vena Portæ*, or Hepatic Artery; and it is evident, from the Diſpoſition of theſe Veſſels, that an Inflammation in either of them muſt ſoon be ſucceeded by one in the other.

The antecedent Cauſes of both theſe Species of Inflammation are the ſame as the general Cauſes of Inflammations, (ſee INFLAMMATIO) determined to this Organ. But there are other Cauſes, which are local, and relate more immediately to the particular Part: Thus an extraordinary Degree of Fatneſs, in the Omentum, may raiſe an Inflammation in the Liver, not only by compreſſing it, but this Fat may alſo diſſolve by Exerciſe, Motion, and Heat, and, being abſorb'd by the Veſſels, and convey'd to the Liver in too large Quantities, may there cauſe an Inflammation.

This Effect may, alſo, be produc'd by an atrabilarious Temperament of the Blood, or Bile; for when ſuch a Temperament is induced by an intimate Union of the Earth and Oil, and a Diſſipation of the ſpirituous and aqueous Particles of the Blood, or Bile, either of theſe Humours become ſubject to form Concretions and Stagnations, in the minute Extremities of the Branches of the Hepatic Artery, or Vena Portæ.

The Liver, alſo, ſuffers from Diſorders in remote Parts of the Body; for if acrimonious *Pus*, *Ichor*, or a ſcorbutic Sanies, is depoſited in any other Organ or Member, theſe, upon the Acceſſion of Heat, a Fever, violent Motion, an improper Diet, ill-applied Medicines, or Poiſons, are colliquated, moved, return'd into the Circulation, and, by this means, convey'd to, and depoſited in, the Liver.

Beſides theſe Cauſes, the Bile, when pinguious, acrimonious, and exalted, or what the Antients called *aduſt*, if put in Motion by adequate Cauſes; a Stone, chalky Concretions, a Scirrhus, Callus, Steatoma, Abſceſs, or Worms, occupying any Part of the Liver, Gall-bladder, or Biliary Ducts, upon the Acceſſion of any Cauſe ſufficient to put them in Motion, by compreſſing the ſmall Ramifications of the Hepatic Artery, and Vena Portæ, excite therein an Inflammation.

Cold, alſo, applied to the Liver when, by any means, overheated, contracts the Veſſels, inſpiſſates the Fluids, and thus produces an immediate Inflammation; and this Cold has much the ſame Effect, whether it is apply'd by means of the Air, Liquors drank, or Bathing.

An Abſtinence from diluting Liquors, during exceſſive Motion, great Heat, and profuſe Sweating, will, alſo, cauſe an Inflammation of the Liver; for, when the Blood is depriv'd of its aqueous Parts, without a freſh Supply, it becomes thick, and, conſequently, inclined to ſtagnate in the capillary Veſſels. Abſtinence, likewiſe, eſpecially from Drink, in burning Fevers, will,

for the ſame Reaſon, produce a like Effect: And the ſame Diſorder may be brought on by violent Paſſions and Perturbations of the Mind, which induce ſpaſmodic Strictures in the Veſſels of the Liver, and an irregular Circulation; as it frequently happens, in ſome Degree, during Hyſteric Diſorders, as *Sydenham* remarks.

Among the Cauſes of an Inflammation in this Organ, exceſſive Motion, excited by Emetics, muſt, farther, be reckon'd as one; for, by theſe, ſome Veſſels in the Liver may be ruptur'd; or the Blood, contain'd in all the abdominal Viſcera, may be impel'd with Violence into the *Vena Portæ*, and thence being convey'd, in too large Quantities, into the Liver, or too forcibly, or both, in either Caſe excite an Inflammation.

Laſtly, inveterate hypochondriac Diſorders will produce Inflammations of the Liver, for Reaſons given under the Article MELANCHOLIA.

The Effects of Inflammations of the Liver, ariſing from any of theſe Cauſes above ſpecify'd, are various, and determin'd by the various preceding Diſpoſitions of the Liver, the Variety of the Matter which is mov'd and fix'd upon the Liver, the material Cauſe of the Inflammation, and the different Cauſes which excite this Matter to Action, and impel it upon the Liver.

When the Caſe is only a ſimple Inflammation, the ſmall Veſſels are obſtructed; and, in conſequence of this, the Fluids, which ought to circulate through them, are ſtopt in the Part: Hence a Tumor ariſes, which compreſſes the adjacent Parts, and, by that means, propagates the Tumor to them; thus it proceeds, till almoſt the whole Organ is affected, which then compreſſes the Stomach, and is again compreſs'd by the Stomach when full; which Compreſſion is attended with Pain in the inflam'd Liver. It alſo affects the Diaphragm, and ſometimes excites Pain and Inflammation in that Part by compreſſing it, or account of its near Situation. Beſides, all the Blood receiv'd by the cœliac Artery, and the two meſenteric Arteries, is intercepted and ſtopt at the Liver; and, in conſequence of this, the Circulation of all the venous, arterial, and lymphatic Fluids, in the principal Viſcera of the Abdomen, is utterly obſtructed; and the Generation, Secretion, Excretion, and Circulation of the Bile, is entirely hinder'd. Hence a Jaundice is produc'd, with all its Conſequences; Putrefactions of the abdominal Viſcera, together with their contain'd Fluids; and a great Number of ill Conſequences, which are obvious from the Uſes of the Bile, (ſee BILIS) and the Functions of the Parts thus deſtroy'd.

Such an Inflammation of the Liver terminates in Health, ſome other Diſeaſe, or Death.

It terminates in Health, either ſpontaneouſly, by the Force of Nature, or by the Aſſiſtance of Art.

Nature performs the Cure, either by a ſalutary Reſolution, or by a due Concoction and Excretion of the morbific Matter.

Reſolution is brought about, if the Diſeaſe is recent, the Matter which forms it mild, and the Caſe, attended with the other Circumſtances mention'd under the Article INFLAMMATIO, as requiſite to a benign Reſolution. In this Caſe, it will be of great Importance towards the Cure, to promote the Work begun by Nature, by diluting, reſolving, and gently moving the obſtructing Matter by Epithems, Drinks, and Clyſters, which are moiſtening, lenient, emollient, diluting, reſolvent, abſtergent, gently ſtimulating, and ſaponaceous; proper Materials and Forms for which are abundantly ſpecify'd under the Articles FIBRA, LENTOR, ALCALI, and OBSTRUCTIO.

A Cure is brought about by a Concoction, and ſubſequent Excretion, of the morbific Matter; firſt, if, during the Diſeaſe, evident from the Signs above-mention'd, a bilious Diarrhœa, mix'd with a ſmall Quantity of Blood, comes on before the fourth Day, which carries off the obſtructing Matter, before concocted, and render'd moveable. But great Care muſt be taken in Practice, not to miſtake this ſalutary Diarrhœa for a morbid Dyſentery.

Secondly, If a large Quantity of acrid, thick, red Urine, with a whitiſh Sediment, is diſcharg'd before the fourth Day, and continues for a long time.

Thirdly, If, before any Signs of Suppuration appear, a ſlight Pain is perceiv'd in the Spleen.

Fourthly, If a copious Hæmorrhage happens from the Right Noſtril.

Fifthly, If a plentiful, univerſal, yelloviſh, and ſomewhat viſcid Sweat, breaks out before the fourth Day, continues long, and is attended with a Mitigation of the Symptoms.

A Phyſician ſhould always watch the ſpontaneous Motions of Nature, and, according to theſe, regulate his Conduct towards the Patient. Thus, in the firſt Caſe, that of a bilious Diarrhœa, all thoſe Things ſhould be adminiſter'd, which are capable of diluting, reſolving, moving, abſterging, gently expelling, and particularly ſuch as reſiſt a bilious Putrefaction; and theſe muſt be exhibited in Epithems, Clyſters, Fomentations, Drinks, Diet, and Medicines. Proper Materials and Forms for theſe are ſpecify'd under the Articles FIBRA and ALCALI. By theſe the ſalutary Operations of Nature are promoted.

In the ſecond Caſe, that is, a critical Diſcharge by Urine, ſoft, relaxing, and aperient Fomentations, are to be apply'd to the Region of the Kidneys, the Perinæum, and Hypogaſtrium: Mean time mild aperient Diuretics are to be exhibited; the Air of the Room is to be kept ſomewhat cool; Sweats, and all other Evacuations, are to be avoided; and mild diuretic Clyſters are to be adminiſter'd, in order to promote the critical Excretion begun by Nature.

In the third Caſe, that of a Pain in the Spleen, the ſame Methods are to be purſued as in the firſt and ſecond; but the Fomentations muſt be apply'd directly to the Region of the Spleen, and all the Tract betwixt that and the Liver.

In the fourth Caſe, that of an Hæmorrhage from the Noſe, the Noſtrils muſt be fomented, both internally and externally, with warm emollient Decoctions, in order to promote the Bleeding till the Symptoms are alleviated. But if the Hæmorrhage ſhould be too profuſe, it muſt be gently reſtrain'd by the Application of Styptics, and a ſubaſtringent Diet; but this muſt not be attempted too ſoon.

A mild Styptic uſeful on ſuch Occaſions:

Take of Roch-alum, one Dram; and of diſtil'd Plantain-water, one Ounce: Diſſolve together, and apply on Tents to the Noſtrils.

A ſtronger Styptic for the ſame Purpoſe may be prepar'd thus:

Take of the Sugar of Lead, one Dram; and of diſtil'd Roſe-water, one Ounce: Mix together, and uſe in the ſame Manner with the former.

Another ſtill ſtronger than the former two may be prepar'd thus:

Take of common Vitriol, one Dram; and of diſtil'd Roſe-water, ſix Drams: Mix together for the like Purpoſes.

In the fifth Caſe, that is, a critical Evacuation by Sweat, a copious Uſe of diluting and abſtergent Decoctions is requir'd; the Materials and Forms of which are ſpecify'd under that Part of the Article FIBRA, where we have treated of Diſeaſes proceeding from too great a Rigidity of the Fibres.

In all theſe Caſes, particular Care muſt be taken to free the Liver entirely from all the morbific Matter ſtagnating therein; otherwiſe its Removal will afterwards be difficult, and it may produce Indurations of this Organ, and all its Conſequences. And thus is the firſt and moſt mild Species of Jaundice to be treated.

If the Inflammation is recent, extremely violent, and without any Signs or Hopes of Reſolution, Concoction, and Excretions, the Caſe muſt be treated with the ſame Cautions and Remedies, and the ſame Method of Cure muſt be purſued, as is directed for a *Pleuriſy*, and *Paraphrenitis*, (which ſee), and other ſimilar inflammatory Diſorders; except that, in the Caſe before us, all antiphlogiſtic Fluids, which promote the Excretions by Stools, when either drank, or injected by way of Clyſter, are particularly ſerviceable. The Materials proper in Caſes of this Nature, are Garden-ſorrel, Meadow-ſorrel, and *French* Sorrel, Wood-ſorrel, Wild Orache, *Engliſh* Mercury, Gum Succory, Garden and Wild Succory, Dandelion, Endive, Fumitory, Hawk-weed, Lettuce, ſharp-pointed Dock, Purſlain, Syrup of Borrage, in a Doſe of two Ounces; Syrup of Succory, with Rhubarb, three Ounces; Syrup of Fumitory, two Ounces; and Syrup of the Five aperient Roots, two Ounces.

Take of Tamarinds, one Ounce; of ſweet Plums, three Ounces; of ſton'd Raiſins, and Currants, each two Ounces; of the Flowers of Dandelion, and Wild Succory, each one Ounce; of the Root of Viper's-graſs, four Ounces. Boil in two Pints of Water, for a Quarter of an Hour; and mix with the Liquor, of *Sal Polychreſtus*, one Dram; of Syrup of Succory, with Rhubarb, an Ounce and an half. Let the Patient drink an Ounce of this every Half-hour, uſing, at the ſame time, a proper Regimen, till his Body is render'd ſoluble.

Or,

Take of the Syrup of Succory, with Rhubarb, an Ounce and an half; of Sal Prunellæ, one Dram; of the diſtil'd Waters of Succory, and Fumitory, each two Ounces: Mix all together, and exhibit a Spoonful every Half-hour.

When the yellow icteritious Colour of the Eyes, Face, Urine, and Excrements, together with all the Symptoms taken notice of above as Diagnoſtics of this Diſtemper, entirely diſappear, we know that the Cure is compleated.

Hence

Hence the Origin, Nature, Effects, and Cure of the ſecond and more ſevere Species of Jaundice may be underſtood.

But if, in an Inflammation of the Liver, the above-mention'd Remedies ſhould not be uſed, ſhould be apply'd too late, or without Effect, or if the Cauſe of the Inflammation be very conſiderable, a Suppuration of the Liver will enſue, as it happens in Inflammations of other Parts; but, with this Difference, that in the Liver, on account of the large Quantity of Blood and bilious Fluids ſtagnating therein, good Pus is very ſeldom form'd, unleſs in very ſmall Abſceſſes, and thoſe in the external Parts of this Organ; but, inſtead of this, a fatal Putrefaction is generally induced.

This Suppuration is prognoſticated, firſt, By the preceding Signs of an Inflammation in this Organ, as an inflammatory Pain, a yellow Colour in the Eyes, Skin, Urine, and Excrements, and an acute Fever.

Secondly, When there is no Reſolution nor Excretion of the concocted morbific Matter, and the Methods of Cure above-mention'd have not been put in Practice, there is Reaſon to believe, that a Suppuration will enſue.

Thirdly, A Change of the Symptoms, that is, a Remiſſion of the Pain, with ſubſequent Pulſation and Shiverings, whilſt the icterical Colour remains, are certain Preſages of a Suppuration.

Fourthly, Another ſuſpicious Sign of Suppuration is, the Duration of an Inflammation not of the moſt violent Kind, for more than three Days.

We are certain, that a Suppuration in this Organ has actually happen'd, firſt, If the four Circumſtances juſt above-mention'd have preceded.

Secondly, If a Tumor is perceiv'd in the Region of the Liver.

Thirdly, If the Symptoms are ſo alter'd, that, inſtead of a Pain, a Senſation of Weight is perceiv'd in the ſame Place, the icteritious Colour ſtill remaining.

Fourthly, If the Patient is affected with great Weakneſs, a hectic Fever, and exceſſive Thirſt.

The Conſequence of ſuch an Apoſtemation is,

Firſt, That the Liver is entirely corroded and conſum'd: Or,

Secondly, That the Abſceſs breaks, and diſcharges into the Cavity of the Abdomen a ſanious Sort of Pus: Or,

Thirdly, That the ſame Sort of Pus paſſes through the biliary Ducts into the Inteſtines: Or,

Fourthly, That it paſſes through the Ramifications of the *Vena Cava* into the Blood.

Fifthly, The Tumor may adhere to the *Peritonæum*, and form an external Abſceſs of the Liver, evident to the Sight and Touch.

In the firſt Caſe, that is, when the Liver is conſum'd, the Patient dies, after ſtruggling, for a long time, with a ſlow icterical Conſumption, a perpetual ſlow Fever, an intolerable Thirſt, exceſſive Weakneſs, inexpreſſible Anxiety, a Diſcharge of black Urine, a *Tympanitis*, and a ſanious and extremely fetid Diarrhœa. This is another Species of Jaundice, which admits of no Cure, and can even ſcarcely be palliated.

In the ſecond Caſe, that is, when the Abſceſs breaks, and diſcharges its Contents into the Cavity of the Abdomen, the Collection of Matter in this Cavity is perpetually increaſed by a freſh Supply from the Liver; and all the Fluids of the Body, together with the Aliment taken in, is continually converted into freſh Pus, and all the abdominal Viſcera contract Putrefaction. Hence an *Aſcites* reſembling a *Tympanitis*, and Death, preceded by a ſlow terrible Conſumption, and all its troubleſome Symptoms. This Species of Jaundice reſembles the preceding, and cannot be cur'd by any Art whatever.

In the third Caſe, that is, when the ſuppurated Matter and Ichor corrode the Extremities of the biliary Ducts, and paſs through their larger Ramifications into the Inteſtines, as they happen to paſs upwards or downwards, they either excite Diſcharges by Vomit, which are fetid, putrid, purulent, and ichorous, of a white, cineritious, brown, yellow, or dark Colour; or elſe Excretions by Stool, of the ſame Nature, attended with exceſſive Weakneſs: Theſe are called Colliquative Fluxes, and are ſoon mortal. This is another Termination of a Jaundice, which is much to be dreaded.

In the Caſes immediately above-mention'd, the only Hopes, even of a palliative Relief, ſeem to be placed in acid or aceſcent Subſtances, exhibited by way of Medicine or Aliment, as theſe powerfully reſiſt Putrefaction.

In the fourth Caſe, that is, if the Pus and Ichor corrode the Extremities of the *Vena Cava*, and paſs through its larger Ramifications into the Maſs of Blood, and are mix'd therewith, the moſt formidable Symptoms are excited, which ſoon terminate in Death; as enormous and frequent Faintings; exceſſive Weakneſs; a Pulſe in every reſpect bad; a general Perturbation of all the Functions.

In this Caſe there is no Method of Cure which can be relied on: Some Relief, however, may be expected from ſuch Remedies as maintain the Strength, reſiſt Putrefaction, and increaſe Humidity. Such are the following.

In the Summer-time:

Take of ripe Mulberries, Currans, Elder-berries, Cherries, and Barberries, each four Ounces: Bruiſe them, expreſs the Juice, and boil it; then, with every Ounce of it, mix one Yolk of an Egg; of Citron-juice, one Dram; of *Rheniſh* Wine, one Ounce; of toaſted Bread, grated down, a ſufficient Quantity; and of Sugar, a ſufficient Quantity: Mix up for a Draught.

In the Winter-time:

Take of the Rob of the above-mentioned Berries, one Ounce; of an Elæoſaccharum of Oil of Nutmeg, five Grains; of diſtil'd Citron-water, two Ounces; of *Rheniſh* Wine, one Ounce; one Yolk of an Egg; and of Sugar, a ſufficient Quantity: Expreſs for Uſe, adding a little toaſted Bread.

The ſame Intention is alſo anſwer'd by the following Preparation:

Take of the beſt and recent Leaves and Stalks of Lettuce, Endive, Dandelion, and Purſlain, each ſix Ounces; of Sorrel, three Ounces: Theſe are to be well cleans'd and waſh'd; then, boiling them gently, in a cloſe Veſſel, with Fleſh-broth, the Patient is to eat them with a little Butter, Salt, and Pepper.

In the laſt Caſe, that of an external Abſceſs, the Tumor muſt be open'd either by burning crude Flax upon it, by the actual or potential Cautery, or by Inciſion; and the Wound muſt be treated with corroſive and ſuppurative Applications, till it is open'd as far as the Abſceſs. If, then, the Pus diſcharg'd from this Abſceſs is white, of an equable and even Conſiſtence, and communicates no Colour to the Probe it touches, there are Hopes of a Cure, by the Treatment due to other Abſceſſes when open'd.

But if a yellow, brown, livid, or black, fetid Ichor is diſcharg'd, which tinges the Probe, apply'd to it, of various Colours, and reſembles the Dregs of Oil, the Patient will be deſtroy'd by a gradual Corroſion and Conſumption of the Liver, after being long afflicted with many of the Symptoms mention'd above. In this Caſe antiſeptic Medicines, which powerfully reſiſt Putrefaction, may ſomewhat palliate, but cannot cure.

But if an Inflammation of the Liver is attended with the Circumſtances mention'd under the Article INFLAMMATIO, as requiſite to produce a *Scirrhus*, the Inflammation will terminate in a *Scirrhus*; which, in time, growing hard, and increaſing in Bulk, injures the Place where it is ſituated, and the adjacent Parts; and hence produces a Jaundice, but of a more chronical Kind, accompanied with many of the Symptoms above-mention'd; and attended with the ſame Effects. Such a *Scirrhus* will not yield to Emollients, and by acrid Medicines is converted into a moſt dreadful *Cancer*, the terrible Effects of which are evident, from reflecting on what has been ſaid of a CANCER, compar'd with its Situation in this Organ. The Effect of ſuch a *Scirrhus* muſt be a perpetual Jaundice; which muſt be treated with extremely mild Remedies, and even with theſe can ſcarcely ever be cur'd.

If there is an Inflammation of the Liver, which neither reſolves, ſuppurates, nor turns to a Gangrene, and a Tumor and Hardneſs remain; if after this the Patient begins to feel Pain in the Part, a Cancer is certainly form'd.

It is remark'd, that Cows, in the Winter, have often ſcirrhous Livers, and that, upon being turned out to Graſs, in the Spring, they are cur'd by means of a profuſe Diarrhœa: Hence 'tis probable a Man may be cur'd of a Scirrhus of the Liver, by means of a continued Diet of emollient Vegetables, as Graſs, Succory, Endive, and the like; and Fruits, as Cherries, Currans, and Cucumbers; and Whey; avoiding Fleſh, and Fiſh of all ſorts, and Spices.

If a ſlight Inflammation happens in a ſmall Portion of the Liver only, it may lay a Foundation for a ſmall Stone, Scirrhus, Puſtule, or Abſceſs, which of themſelves can do no great Injury; but, upon the Acceſs of a Fever, may be inſtrumental in exciting another and more dangerous Inflammation, with all its Conſequences mention'd above.

Laſtly, An Inflammation of the Liver ſometimes terminates ſuddenly in Death, provided the Cauſes are ſo violent as to permit nothing to circulate through any Part of this Organ, and it is attended with a ſevere Fever. For then the Veſſels of the Liver are contracted at their Extremities, and their larger Ramifications diſtended, inſomuch that the Functions of this Organ are utterly interrupted; an exceſſive and ſudden Jaundice comes on; the Veſſels are ruptur'd; the Blood and Bile are extravaſated; and the Patient inſtantly expires.

This is prognoſticated,

Firſt, From the Violence of the Inflammation.

Secondly, From a ſudden and exceſſive Loſs of Strength.

We know that it has actually happen'd, when Blood, Bile, Excrements reſembling the Lees of Oil, green or black, fetid, and cadaverous, are diſcharg'd by Vomit, or Stool; when violent,

leſſe, and perpetual Hiccups torment the Patient; when the Fever is extremely intenſe, and the Thirſt unextinguiſhable; and when an exceſſive Paleneſs ſuddenly comes on.

From all that has been ſaid above, many Symptoms which occur in acute Diſtempers, frequently attributed erroneouſly to Malignity, may be clearly underſtood. For the State of all the abdominal Viſcera, and their reſpective Actions, as Digeſtion, Aſſimilation, Nutrition, Recruiting the Blood with freſh Supplies, and the Expulſion of the Excrements, depend upon the Liver. In this Organ there are three ſorts of Humours, which readily putrefy by Heat; that is, a thin Blood in large Quantities; the Cyſtic, and Hepatic Bile. It is, farther, to be remark'd, that the Situation of the Liver is ſuch, as renders it very ſubject to affect the Diaphragm and Heart; and that when the Extremities of the biliary Ducts are obſtructed, the bilious Fluid convey'd by the *Vena Portæ*, has an eaſy Acceſs to the *Vena Cava*.

Hence the Nature of the black Vomit, alſo, a Diſeaſe very frequent in the *Weſt-Indies*, may be underſtood.

By conſidering all the Circumſtances above explain'd, we may arrive at an accurate Knowledge of various Species of Jaundices; and underſtand the Reaſons why this Diſtemper is ſometimes eaſily cur'd, and under what Circumſtances; why it is ſometimes extremely obſtinate; why it ſometimes proves fatal very ſuddenly; and why, at other times, it continues long before it deſtroys the Patient; why it ſometimes comes on, remains, diſappears, and returns, at Intervals; why the Appearance, Ceſſation, and Return of a Jaundice, are ſo frequently preceded by great Anxieties, enormous Vomitings, Pain, and Convulſions; and what it then imports, that is, that the Bile is prevented in the large Ducts, from flowing into the Duodenum; why a Jaundice, appearing in an acute Fever, before the ſeventh Day, is a Circumſtance of very bad Preſage; and why, after the ſeventh Day, it ſcarcely admits of a Cure; why a copious Dyſentery, of no long Continuance, effectually cures a Jaundice; why Bleeding is of ſo little Relief in Inflammations of the Liver; that is, becauſe the biliary Organs have not ſo immediate a Communication with the other Parts of the vaſcular Syſtem, but form, as it were, a conſiderable ſeparate Machine; why it is of ſo much Importance in acute Diſeaſes, to regard the Pains, Tumors, and Elevations of the Hypochondria; why the Colour of the Eyes and Urine ſo ſuddenly ſhew the Preſence and Termination of a Jaundice; why inflammatory, purulent, gangrenous, and ſcirrhous Diſorders of the Spleen, Stomach, Omentum, Meſentery, and Inteſtines, always affect the Liver in ſo violent a Manner; and why, on the other hand, inflammatory and ſcirrhous Diſorders of the Liver affect theſe Viſcera; why the Liver is ſometimes tumefied and augmented to ſo prodigious a Bulk; and why it is dry'd, and render'd friable, when the Fluids can no longer circulate through it; why a Dropſy ariſes from Diſorders of the Liver, and, ſometimes, a Tympanitis, of worſe Conſequence; for, when the bilious Particles are not ſecreted from the Blood by the Liver, theſe Particles attenuate the Blood, and render it extremely thin, ſo as to tranſude eaſily through the Veſſels, and be accumulated in the Cavities of the Body; ſee TYMPANITIS, and HYDROPS; why in a Dropſy the Liver is extenuated and dry, and the Spleen tumid: And, laſtly, hence we underſtand the Nature of an Hepatic Dyſentery, and an infinite Number of Circumſtances relative to Diſorders of this Kind.

I cannot forbear remarking, on this Occaſion, a very extraordinary Circumſtance, which happens upon the Bite of a Viper: It is, that the Perſon affected ſoon after vomits, and has his whole Skin, in a very ſhort time, ting'd with a yellow Colour, as in a Jaundice. If we reflect, that the Poiſon, receiv'd by the Bite of a Viper, diſpoſes the Blood to immediate Coagulations, and that the Bile effectually attenuates the Blood, and preſerves it from Coagulation, we may, perhaps, have Reaſon to believe, that by ſome Mechaniſm, at preſent unknown to us, the common biliary Duct, which tranſmits the Bile to the Duodenum, is ſpaſmodically conſtricted, in ſuch a manner as to prevent a Diſcharge of the Bile into the Inteſtine; and that the Vomiting is at the ſame time excited, in order to preſs the Liver and Gall-bladder, and force the Bile back into the Blood, that the approaching Coagulation may be prevented: For we find, that on other Occaſions, when the large biliary Duct, near the Duodenum, is obſtructed, Vomiting induces a Yellowneſs, by forcing the Bile into the Blood.

HEPATARIUS. The ſame as HEPATICUS, Hepatic.

HEPATEROS, ἡπατερὸς, from ἧπαρ, the Liver, is an Epithet of a Sort of Dyſentery, in which an aqueous Blood is excreted, like Water in which new-kill'd Fleſh has been waſh'd. *Gorræus.*

HEPATICA TRIFOLIA.

The Characters are;

The Root is fibrous and perrennial; the Pedicles of the Leaves ariſe from the Root; the Leaves conſiſt of three Lobes, the Stalks are naked, florigerous, or flower-bearing, ſimple, and ſpring from the Root. The Perianthium, or Calyx, is monophyllous, deeply cut, commonly into three, rarely into four Lobes, and permanent. The Flower is roſaceous, polypetalous, naturally pentapetalous, and furniſh'd with numerous Stamina. The Fruit is globular, and has every one of its Cells furniſh'd with a crooked Tube: In other reſpects it reſembles the leſſer Celandine.

Boerhaave mentions ſeven Species of this Plant; which are,

1. Hepatica; trifolia; cœruleo flore. *Boerh. Ind. A.* 30. *Trifolium aureum, Hepatica nobilis.* Offic. *Trifolium Hepaticum flore ſimplici.* C. B. Pin. 330. Raii Hiſt. 1. 580. *Trifolium Hepaticum, ſive Trinitatis Herba flore cæruleo.* J. B. 2. 389. *Hepatica nobilis, ſive trifolia.* Park. Theat. 1368. *Hepaticum trifolium.* Ger. 1032. Emac. 1203. *Ranunculus tridentatus vernus flore ſimplici cæruleo.* Tourn. Inſt. 286. NOBLE LIVERWORT.

The Flowers of this Liverwort ariſe out of the Ground early in the Spring, before the Leaves; they grow on long, ſlender, and ſomewhat hairy Foot-ſtalks, four or five Inches long, incloſ'd in a three-leav'd green Calyx: They are made up of ſix blue roundiſh-pointed Leaves, ſet about a ſmall green Head, with ſeveral whitiſh-blue Chives in the Middle; the green Head afterwards is inlarg'd into ſeveral ſmall naked Seeds. The Leaves come up when the Flowers are paſt, conſiſting each of a Leaf of three equal Lobes, round, and ſomewhat pointed at the End, of a dull-green Colour, growing on long Foot-ſtalks. The Root is ſmall and ſtringy. It is uſually planted in Gardens, and flowers in *March*.

The Leaves are us'd, though but very rarely, here in *England*; but they are commended by ſome foreign Authors, as a very good Vulnerary, and uſeful in Diſtempers of the Liver.

It is cultivated in Gardens, and flowers in the Spring. As to its Virtues, it corroborates the Stomach by its aſtringent Quality, and is, therefore, proper in all Diſorders proceeding from Relaxation, and where Aſtriction is requir'd: Hence it is of Service in vulnerary Drinks, in the Diabetes, Spitting of Blood, or making of bloody Urine. It is much commended in an Hernia; and the Leaves pulveriz'd are excellent in the Dyſentery. A Decoction of the Leaves is effectual againſt the Jaundice, Itch, fetid Ulcers, and the Quinſey. The whole Plant is of Service in Obſtructions of the Kidneys, Bladder, and Liver. *Boerh.* The *Dutch* make it an Ingredient in their compound Syrup of Succory. *Dale.*

2. Hepatica; trifolia; flore cœruleo; pleno. *Cluſ. H.* 248.
3. Hepatica; trifolia; rubro flore. *Cluſ. H.* 248.
4. Hepatica; trifolia; flore rubro; pleno.
5. Hepatica; trifolia; flore albo ſimplici.
6. Hepatica; trifolia; flore carneo, ſimplici.
7. Hepatica; trifolia; flore cinereo, ſimplici. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 30.

HEPATICA *fontana.* A Name for the *Lichen*; *primus.*

HEPATICA *minor ſtellaris.* A Name for the *Lichen*; *ſecundus.*

HEPATICA *minor umbellata.* A Name for the *Lichen*; *tertius.*

HEPATICA *vulgaris.* A Name for the *Lichen*; *maritimus.*

HEPATICUS FLOS. A Name for the *Parnaſſia*; *paluſtris & vulgaris.*

HEPATICUS, ἡπατικὸς, from ἧπαρ, the Liver, Hepatic, is an Epithet for any thing belonging to the Liver. They who labour under any Diſorder of the Liver are alſo call'd ἡπατικοὶ, *Hepatics*; though the Antients confin'd that Appellation to thoſe who were affected with an Inflammation of that Part, in the ſame manner as they gave the Names of *Pleuritics*, and *Peripneumonics*, to thoſe who were affected with Inflammations of the Pleura, or Lungs; and thus are we to underſtand the Word in the *Coac. Prænot.* But, in later Ages, ἡπατικοὶ, Hepatics, came to ſignify thoſe, who, without any manifeſt Diſorder of the Liver, ſuffer only by an Imbecillity of that Part, which diſables it from performing its Functions. This appears from *Galen, de C. M. S. L. Lib.* 8. *Cap.* 6. where he ſays, "that an hepatic, "as well as a cœliac and ſtomachic Affection is an Indiſpoſi- "tion of the Parts, without a Tumor. Phyſicians ſay, the Liver "is affected with an Inflammation, an Abſceſs, or a Scirrhus, "or ſome other Diſorder, without calling the Patient an He- "patic: But when there is no manifeſt Affection of that Part, "but merely an Inability, through Weakneſs, to diſcharge its "proper Functions, ſuch a Perſon has the Name of an Hepa- "tic given him." The Author of the *Definitiones Medicæ* ſays, "that Perſons long affected with a Pain of the Liver, attended "with a Tumor, and Hardneſs, and Loſs of Colour, are call'd "Hepatics."

HEPATITES, ἡπατίτης. See HEPAR.

HEPATORIUM. The ſame as EUPATORIUM.

HEPATUS. The Name of a Fiſh mention'd by *Aldrovandus de Piſcibus, Lib.* 1. *Cap.* 12.

HEPHÆSTIAS. The Name of a Plaiſter, very good to induce a Cicatrix; it was prepar'd of Tiles, eſpecially ſuch as had been burnt in Kilns, becauſe they have more of a drying and abſterſive Quality. *Caſtellus.*

HEPHTHOTES, ἑφθότης, is, properly, a Concoction, or Colliquation, produc'd by Elixation, or Boiling. *Hippocrates, Lib. de Rat. Vict. in Morb. acut.* tells us, that too much Sleep diſſolves the Body, and induces ἑφθότητα; which *Galen*, on the Place, explains by ναθρότης, "a Liſtleſſneſs." So, *Lib.* 4. *Epid.* they, who, under a Fever, have their Bodies, through a Redun-

dance of Humidities, diſſolv'd, as it were, into a State of Elixation, by the humid Heat, are call'd ἑφθαί, Hephthi.

HEPIALA. The ſame as EPIALA.

HEPSANA, ἕψανα, in *Hippocrates*, *Lib. 2. de Morb. Mul.* are boil'd Aliments with the Broth.

HEPSEMA, ἕψημα. The ſame as DEFRUTUM. See DECOCTIO.

HEPTAPHARMACUM, ἑπταφάρμακον, from ἑπτὰ, ſeven, and φάρμακον, a Medicine, or Remedy. A relaxing, ſuppurating and incarning Medicine, ſo called from the Number of its Ingredients; which are Ceruſs, Litharge, Wax, Pitch, Colophony, Bull's Fat, and Frankincenſe, as it is deſcrib'd by *Aetius*, *Tetrab. 4. Serm. 3. Cap. 27.*

HEPTAPHYLLUM, ἑπτάφυλλον, from ἑπτὰ, ſeven, and φύλλον, a Leaf, is Tormentil; ſo call'd from the Number of its Leaves, which are commonly ſeven, ſurrounding the Stalk. *Blancard.*

HEPTAPLEUROS, ἑπτάπλευρος, from ἑπτὰ, ſeven, and πλευρὰ, a Rib. Having ſeven Ribs; an Epithet beſtow'd on the Nation of the *Ligurians*, according to *Pollux*. *Caſtellus*. Heptapleuron is, alſo, the *Plantago major*, or greater Plantain; a Name given it, becauſe it is furniſh'd with ſeven Ribs. *Blancard.*

HERACLEIUS, ἡρακλεῖος, from Ἡρακλῆς, *Hercules*, Herculean, is an Epithet of the Epilepſy, *Hippocr. Lib. de Morb. Mul.* ſo call'd either becauſe *Hercules* was the firſt of the Heroes who labour'd under it; or becauſe it is a great and violent Diſorder, and difficult to be ſubdued, as is the Opinion of *Galen*, *Com. in 6 Epid.* with whom agrees *Ariſtotle*, in *Erotian*, who adds, that the Mania was antiently ſo call'd, becauſe Heroes, as *Hercules*, were only ſubject to that Diſorder. *Herculeus Lapis* is the Magnes, or Loadſtone. *Galen de Uſu Partium*, *Lib. 6. & de Locis Affect. Lib. 6. Caſtellus.*

HERACLEOTICUM. A Name for the *Origanum*; ſo call'd from *Heraclea*, a City of *Pontus*, where it was produc'd in greateſt Plenty, or beſt in its Kind. *Blancard.*

HERALEA, according to *Blancard*, is a Name for ſeveral Herbs, taken from *Hercules*; but, on what account, he profeſſes himſelf ignorant.

HERBA. See the Explications of Terms under the Article BOTANY.

HERBA BENEDICTA	See	CARYOPHYLLATA.
HERBA DORIA		DORIA; *Narbonenſium.*
HERBA FELIS		CATARIA; *major*; *vulgaris.*
HERBA GERARDI		ANGELICA.
HERBA HÆMORRHOIDUM		CHELIDONIUM; *minus.*
HERBA JUDAICA		SIDERITIS; *hirſuta*; *procumbens.*
HERBA MAXIMA		CORONA SOLIS.
HERBA PARALYSIS		PRIMULA VERIS.

HERBA PARIS.

The Characters are;

The Calyx conſiſts of four Leaves, which expand in Rays. The Flower is tetrapetalous; the Petals diſpos'd in the Form of a Croſs, and furniſh'd with four Stamina. The Fruit is ſoft, globular, furniſh'd with four Tubes, divided into four Cells, and full of oblong Seeds.

Boerhaave mentions but one Species of this Plant; which is,

Herba Paris. *Offic. Ger.* 318. *Emac.* 61. *Raii Hiſt.* 1. 670. *Synop.* 3. 264. *Park. Theat.* 390. *J. B.* 3. 613. *Tourn. Inſt.* 233. *Boerh. Ind. A.* 2. 72. *Solanum quadrifolium bacciferum.* C. B. Pin. 167.

HERB PARIS.

The Roots of this Herb run creeping along on the Surface of the Earth, being ſlender, and of a brown Colour, ſhooting up here-and-there, being long round Stalks half a Foot high; having uſually four, tho' ſometimes five or ſix Leaves, which are pretty broad and roundiſh, narroweſt next the Stalk, and ending in a ſharp Point. From among theſe ariſes a ſlender Stalk, two or three Inches high, bearing one ſingle Flower, compoſed of four long green Leaves, with as many very narrow ones under them, of the ſame Colour, having ſeveral Stamina among them; in the Middle of theſe grows a roundiſh Black-berry, about as big as a Grape, of an inſipid Taſte. It is found in moiſt ſhady Woods, which have a good Soil; the neareſt Place to *London*, that I know of, where it grows, is *Chiſelhurſt* in *Kent*, in a Wood by the Bog, at the Entrance of it next the Town. It flowers in *April* and *May*, and the Berry is ripe in *July*.

Though this Plant was formerly accounted of a poiſonous Nature, being reckon'd among the Aconites, *Fuchſius* calling it *Aconitum Pardalianches*; yet Authors, who have wrote ſince, attribute to it quite contrary Effects, eſteeming it to be a Counterpoiſon, and an Alexipharmic, and good in malignant and peſtilential Fevers.

Parkinſon ſays, the Roots, boiled in Wine, help the Colic; and the Leaves, apply'd outwardly, repreſs Tumors and Inflammations, eſpecially in the Scrotum and Teſticles, and ripen peſtilential Tumors.

Baptiſta Sardus, and *Cæſalpinus*, have affirmed, that the *Herba Paris* is good for Madneſs. The firſt of theſe preſcribed half a Spoonful of the Powder, taken faſting for twenty Days. *Camerarius* ſays, the Powder of its Roots eaſes the Colic. *Pena* and *Lobel* relate, that the following Antidote cured ſome Dogs, which had been made to take Arſenic and corroſive Sublimate; and others, which had eaten Arſenic mix'd with the *Nux Vomica*.

Take of the Root of Bohemian Angelica and wild Angelica, of *Vincetoxicum*, great Valerian, Polypody, Marſhmallows, and Nettles, of each four Drams; two Drams of the Bark of *Mezereon Germanorum*, thirty-ſix Plants of *Herba Paris*, twenty-four Fruits of the ſame Plant: Macerate the Roots in Vinegar; dry them, and powder them with the reſt. The Doſe is two Drams in Red-wine.

Tragus ſays, the *Herba Paris*, bruiſed and apply'd as a Cataplaſm, aſſwages the Inflammation, and diſſolves the Swelling of the Teſticles; it is a ſovereign Remedy for Whitlows: The diſtil'd Water of it cures Inflammations of the Eyes. *Martyn's Tournefort.*

The Berries are eſteem'd Alexipharmic, and good againſt peſtilential Diſeaſes, and Poiſons. The Leaves contus'd, and made into the Form of a Cataplaſm, are good for peſtilential Buboes, and hot Tumors. The Plant, apply'd as a Topic, eaſes Iſchiadic Pains, is good in Contuſions, and is eſteem'd an Antihyſteric.

HERBA PETRI	See	PRIMULA VERIS.
HERBA SACRA		VERBENA.
HERBA SARDAO		RANUNCULUS; PALUSTRIS; APII FOLIO; LÆVIS
HERBA S. JOHANNIS		ARTEMISIA.
HERBA S. LAURENTII		BUGULA.
HERBA S. PETRI		CRITHMUM.
HERBA SCORBUTI		COCHLEARIA.
HERBA STELLÆ		CORONOPUS HORTENSIS.
HERBA STUDIOSORUM		CHENOPODIUM; LINI FOLIO VILLOSO.
HERBA TERRIBILIS		ALYPUM.
HERBA TRINITATIS		HEPATICA; TRIFOLIA; COERULEO FLORE.
HERBA TURCA		HERNIARIA.
HERBA VENENOSA		SIUM; ERUCÆ FOLIO.
HERBA VENTI		PHLOMIS; NARBONENSIS; FOLIO HORMINI; FLORE PURPURASCENTE.
HERBA VIVA		POLYPODIUM SENSIBILE; AUT POLYPODIUM VIRGINIANUM.

Herba vulneraria ſeu Virga aurea vulgo Germanica. Offic. *Conyzæ affinis Germanica.* C. B. 266. *Conyzis affinis Herba vulneraria ſive Solidago Saracenica III. Tragi hirſuta.* J. B. 2. 1051.

GERMAN GOLDEN-ROD.

It grows in mountainous Places, and flowers in *July*. The Herb is uſed, and is poſſeſs'd of the ſame Virtues with the *Virga aurea*; for which it is ſold in the Shops of *Germany*, as *Buxbaums* affirms.

HERBARIUS, βοτανικὸς, an Herbaliſt, Herboriſt, or Botaniſt.

HERBATUM *Canadenſium*, ſeu *Panaces Moſchatum*, Cornut. *Panaces Moſchatum Americanum*, ſweet-ſcented All-heal of *America*. Park. A Plant growing in *Canada* in *America*, two Cubits in Height, with Leaves a Foot long, reſembling thoſe of the Garden Coſtus, or Dittander. The Flowers are white, like thoſe of the Garden Panax, and diffuſe their Fragrancy to a good Diſtance, having a more grateful Smell than Muſk; the Leaves have an acrid and aromatic Taſte, with ſomewhat of a bitteriſh Reliſh at laſt, but the Root has not the ſame Bitterneſs. It flowers in *September* and *October*.

The Operations of this and the other *Panax racemoſa Americana* are found to be more alimental than medicinal, being familiarly eaten by the Natives, and *French*. *Parkinſon*.

HERBIVORUS, πωφάγος, herbivorous. An Epithet of Animals which live on Graſs and Herbs, thus diſtinguiſhing them from carnivorous or Fleſh-eating Animals.

HERCULES, Ἡρακλῆς, beſides the noted Hero of that Name, is a Term for ſeveral Medicines of draſtic and potent Qualities, particularly of a Collyrium, effectual for curing the Ægilops, in *Aetius*, *Tetrab.* 3. *Serm.* 4. *Cap.* 55. And another Medicine appropriated for drying and conſuming Excreſcences, and conſiſting of equal Parts of Squama Æris, Miſy, burnt Chalcitis, Atramentum Sutorium, and burnt Alum, is called by the ſame Author ἡρακλῆς ξηρὸς, "dry (or drying) *Hercules*." Among chymical Preparations, *Hercules Bovii* is a celebrated Cathartic and Emetic. *Caſtellus*. See MERCURIUS.

HERCULIS CLAVA. *Arbor ſpinoſa Virginiana*, *Caudice & Ramis Lanigeræ ſpinoſæ Malabaricæ ſimilis.* "*Hercules's* Club, "or the thorny *Virginian* Tree, in its Trunk and Branches reſembling the thorny lanigerous or Wool-bearing Tree of *Malabar*;" from which it differs in the acrimonious and hot Taſte of its Bark. *Raii H. P. p.* 1806. I find no Account of its medicinal Virtues.

HEREOS, in *Paracelſus*, *Lib.* 3. *de Orig. Morb. inviſibil.* is a ſort of imaginary Love, in nocturnal Pollutions. *Caſtellus.*

HERINACEUS, call'd alſo *Erinaceus*. Offic. Schrod. 5. 286. Charlt. Exerc. 19. *Herinaceus*. Schw. Quad. 96. *Herinacus & Erinaceus*, Mer. Pin. 167. *Echinus terreſtris*. Jonſ. de Quad. 119. Aldrov. de Quad. Digit. 268. *Echinus ſive Erinaceus terreſtris*. Raii Synop. A. 231. THE HEDGHOG, or URCHIN.

It is found in Thickets and Hedges. What is uſeful in Medicine, are the whole Animal, the Liver, the Feet, and the Ventricle. The Hedghog boiled, or burnt to Aſhes, helps an involuntary Diſcharge of Urine, is grateful to the Stomach, and excites Excretions by Urine and Stool; externally it cures the *Alopecia*, being rubbed on the Part. The Liver, or the Body dry'd, and taken in Oxymel, is effectual in nephritic Diſorders, and cures a Cachexy, Dropſy, Convulſions, and Elephantiaſis, and dries up Rheums in the Viſcera. *Dioſ.* The Fat is moſt ſucceſsfully uſed in a Hernia. *Hart.* The Membrane, or Coat, of the Ventricle, is recommended for the Colic. *Schrod.* The Decoction, or Broth, of the Fleſh, is very ſerviceable in the Dropſy, by provoking Urine. *Dale.*

HERMANNIA.

The Characters are;

The Calyx is monophyllous, reſembling a Bladder, quinquefid, and deeply jagged. The Flower is pentapetalous, the lower Petals narrow, the upper ones broad, and in a manner convolved on one Side, ſurrounding the Bottom of the Ovary; whence, alſo, proceed five Stamina. The Ovary is ſeated in the Bottom of the Calyx, and is pentagonal, pentangious, that is, conſiſting of five Veſſels, and furniſhed with a long Tube.

Boerhaave mentions ſeven Species of this Plant; which are,

1. Hermannia; fruteſcens; folio oblongo, ſerrato. *T.* 656.
2. Hermannia; fruteſcens; folio oblongo, ſerrato latiori. *Ind.* 115.
3. Hermannia; fruteſcens; folio groſſulariæ parvo, hirſuto. *Ind.* 115.
4. Hermannia; fruteſcens; folio Ibiſci hirſuto, molli; caule piloſo. *Ind.* 115.
5. Hermannia; fruteſcens; folio multifido, tenui; caule rubro. *Ind.* 116.
6. Hermannia; fruteſcens; folio oblongo, molli, cordato, hirſuto. *Ind.* 116.
7. Hermannia; fruteſcens; folio Lavendulæ latiori & obtuſo; flore parvo, aureo. *H. R. D. Boerh. Ind. alt. Plant. Vol.* 1. *p.* 273.

In the *Hiſtoria Plantarum*, aſcrib'd to *Boerhaave*, this Plant is ſaid to be us'd in *Africa*, for the ſame Purpoſes as Mallows; and the Nature of the former ſeems to approach very near to that of the latter, ſince their Taſte and Smell are the ſame.

HERMAPHRODITUS, ἑρμαφρόδιτος, from Ἑρμῆς, Mercury, and Ἀφροδίτη, Venus. An Hermaphrodite; that is, one who partakes of both Sexes.

As I look upon all the Hiſtories related of Hermaphrodites to be merely imaginary, I ſhall only obſerve, that of many I have ſeen who have been reported to be ſo, I have met with none who were any more than mere Women, whoſe *Clitoris* was grown to an exorbitant Size, and whoſe *Labia Pudendorum* were preternaturally tumid.

HERMES, Ἑρμῆς, is the *Greek* Name for *Thoth*, or *Thouth*, the ſame Perſon whom the *Latins* call *Mercurius*, Mercury, and whom ſome learned Men conjecture to be the ſame with *Chanaan*, the Son of *Cham*; but, tho' theſe two might be different Perſons, they might at leaſt have lived at one time, and *Hermes* be the older; for *Bochart*, in his *Phaleg*, has proved that *Chronos*, or *Saturn*, was the ſame Perſon as *Noah*. Now we learn from *Sanchoniathon*, that *Hermes*, or *Thoth*, or *Tacuitus*, (as he was called by the *Egyptians* and *Phenicians*) was one of *Saturn*'s Counſellors; and *Diodorus Siculus* ſays, that *Hermes* was Secretary to *Oſiris* and *Iſis*, the moſt antient King and Queen of *Egypt*, who were both ſaid to be the Children, or Grand-children, of *Chronos*. *Sanchoniathon* makes *Hermes* a *Phœnician*, and the Son of *Miſor*, who lived about the Time before-mention'd; and *Clemens Alexandrinus* makes him a Native of *Thebes* in *Egypt*; and others ſay, that he was the Son of *Philon* by his Daughter *Proſerpina*. Whoever he was, it is certain, that the *Egyptians*, and after them all other Nations, have aſcribed to him the Invention of all Arts and Sciences, and of Medicine in particular; for which Reaſon the Antients, doubtleſs, often repreſented their *Mercury* accompany'd with the Goddeſs *Hygieia*, or *Health*, which he was ſuppoſed to have brought to Mortals with his Medicines. *Joſephus* tells us, that the Sons of *Seth* built Columns, on which they engraved what they knew of Aſtronomy: *Mercury* took the ſame Meaſures in leaving to Poſterity the Monuments of his Knowledge, as we are inform'd by *Euſebius*, from *Manetho*, an *Egyptian* Prieſt, who ſays that *Thoyt*, or the firſt *Mercury*, had writ many Things in ſacred Language and Characters, and that *Agathodæmon*, or the ſecond *Mercury*, the Father of *Thoth*, tranſlated theſe Writings into *Greek*, after the Deluge, and compoſed Books of them in ſacred Letters, which were preſerv'd in the moſt ſecret Place of the *Egyptian* Temples. *Iamblichus*, alſo, ſays there were Columns in *Egypt* quite cover'd with Writings, containing the Doctrine of *Mercury*; and ſays farther, that *Pythagoras* and *Plato* received great Improvements from what they had read in the Writings of *Mercury*. *Plato* himſelf, in more than one Place, ſpeaks of the Columns on which the *Egyptians*, and other antient People, wrote their Laws, and the Hiſtory of their Times, with the moſt conſiderable of their Inventions.

Whether all that is related of theſe Columns, and the Extracts which the *Egyptian* Prieſts pretended they made from them, be true or not, what was publiſh'd of them gave occaſion to a Multitude of Writings, or Books, which paſſed for Copies of theſe Extracts, and were pretended to be the genuine Works of *Mercury*. *Iamblichus* reckons thirty-ſix thouſand, five hundred twenty-five of thoſe Books; but though the Books of the Antients were commonly very ſhort, there appears an Exaggeration, and ſome learned Men have had Reaſon to reduce thoſe Books to ſo many Verſes. Of all thoſe pretended Books of *Mercury*, there are not many whoſe Titles are preſerved, and fewer which have deſcended entire to us. Some of them are printed, and others are kept in Libraries, as in that of *Vienna*, of which you may find an Account in *Lambecius*, *Morhofius*, and other Authors. There are ſeveral things concerning Chymiſtry, and the famous *Emerald-table* of *Hermes*. But, if *Hermes* was the Inventor of Chymiſtry, it was not of medicinal, but metallic Chymiſtry. Of the Books of *Mercury*, mention'd by the Antients, and which concern'd Medicine, there were ſeveral much ſuſpected in *Galen*'s time; particularly one, of which that Author ſpeaks, and ſays, it was one of thoſe which was aſcribed to the *Egyptian Mercury*.

We have mention'd the *Sacred Books* of *Mercury*, which were very carefully preſerved in the *Egyptian* Temples; it was, doubtleſs, one of thoſe Books, called by *Diodorus*, ſimply, *The ſacred Book*, which regulated the Practice of Medicine in *Egypt*, ſo far as that they who followed its Precepts were exempt from Blame, though the Patient died under their Hands; but if they deviated from them in any manner whatſoever, and the Patient happen'd to die, they were condemn'd as Murderers. *Clemens Alexandrinus* is more full to the Purpoſe, and ſays, "There were "two-and-forty Books of *Hermes*, which were moſt conſider- "able; thirty-ſix of them contain the whole *Egyptian* Philo- "ſophy, and were read to the Sacrificers and the Prophets; the "other ſix, which related to Medicine, were learn'd by the "*Paſtophori* *. The firſt of theſe treats of the Conſtruction of "the Body; the ſecond, of Diſeaſes; the third, of neceſſary "Inſtructions; the fourth, of Medicines; the fifth, of Diſeaſes "of the Eyes; and the laſt, of Diſeaſes incident to Women."

There can be nothing more exact than this Method; but theſe Books, very probably, were compos'd ſome Ages after *Hermes*, at a time when Medicine was much improved; and it is not to be doubted but the *Egyptian* Prieſts paſſed their own Works under the Name of their *Hermes*, or ſome celebrated Phyſician; and, if the thing were not in a manner ſelf-evident, we might infer as much from *Iamblichus*, who aſſures us, that "the *Egyp-* "*tian* Prieſts, out of a Perſuaſion, that *Mercury* was the Inventor "of every thing, generally attributed to him their own Inven- "tions," or did Honour to themſelves, "in putting his Name "to their own Works."

At preſent we have not the leaſt Remains of theſe Books, and therefore know no more of this Medicine of *Hermes* than the general Heads of what it treated: If there are any other Books, which were aſcribed to him, and are preſerved down to our Times, and are really genuine, we may plainly infer from their Contents, that a great Part of the *Hermetic* Medicine was founded upon Magic and Aſtrology. This is confirm'd by a Paſſage in the Book intituled *Aſclepius*, which was look'd upon, in antient Times, to be a Work of *Hermes*; and the *Latin* Verſion which we have of it is aſcribed to *Apuleius*. This Paſſage mentions certain Statues, which inflicted Diſeaſes, and alſo cured them, predicted Futurities, and did other prodigious things: *Hermes*, in the ſame Place, is called *Triſmegiſtus*, that is, *thrice greateſt*, which was the Surname given him by Antiquity.

The Book of the *thirty-ſix ſacred Herbs of the Horoſcope*, quoted by *Galen*, though granted to be ſpurious, is at leaſt a Proof, that *Mercury* was generally believed not to confine himſelf to the ordinary Methods of Medicine; for otherwiſe they would not have aſcribed to him a Treatiſe of that Kind. The Title of this Book has a near Relation to what *Origen* writes, "That the *Egyptians* ſaid, there were thirty-ſix Demons, or "thirty-ſix Gods of the Air, who were Sharers in the Body of "Man, which was alſo divided into as many Parts." He adds, "That the *Egyptians* knew the Names of theſe Demons in "the Language of the Country, and believed, that by invoking "each of them, according to the Part which was diſeaſed, they "were cured."

It is probable, however, that *Mercury* made uſe, alſo, of ſome

* The *Paſtophori* were an Order of Prieſts, ſo called, becauſe they wore long Cloaks, or were appointed to carry the Bed of *Venus*, on certain ceremonious Occaſions: They were the principal Perſons who practiſed Medicine in *Egypt*.

ordinary

ordinary or natural Remedies; but we have but little left on Record of that Nature. The Herb called *Moly*, which *Mercury* presented to *Ulysses*, as a Preservative against the Charms of *Circe*, is still reckon'd among superstitious Remedies. But that which bears the Name of *Mercury*, (*Mercurialis*) was probably used originally for the same Purposes as we employ it for at present. To *Mercurialis* we may add *Coral*, which, being pulverized, and infused in pure Wine, *Mercury* said, was good against the Poison of Serpents. The Author of the Hymn to *Mercury*, which is ascrib'd to *Orpheus*, and where we find what has been said of *Coral*, speaks also of a Grotto of *Mercury*, in which were kept "all manner of good things," and where "Diseases had no "Power;" and that there were Remedies in particular "against "the Bites of Serpents, for Lunatics, and for Lepers." But *Orpheus* does not inform us, what Means *Mercury* made use of to work these Effects.

I find no more Particulars of the Medicine of *Hermes*, unless we have a mind to make him pass for the Author of all the antient medicinal Practice in *Egypt*. *Aristotle* speaks of an antient Law of the *Egyptians*, by which "Physicians were prohibited "to move the Humours (that is, to purge, as appears from "the Practice of *Hippocrates*) before the fourth Day of the "Distemper, as they would answer it at their own Peril." This seems to have relation to what has been said, that the Physicians of that Country were obliged to regulate their Practice by what they called the *Sacred Book*; and perhaps this Law was contain'd in the Book which was ascribed to *Mercury*. *Diodorus*, also, observes, that the *Egyptian* Medicine consisted wholly in *Abstinence*, *Clysters*, and *Emetics*; but there are no Proofs, that *Hermes* establish'd this Method in particular.

Anubis, or *Hermanubis*, was the same as *Hermes*, or *Mercury*; the *Caduceus*, born by the former in some Medals, is a Proof of it; and *Diodorus Siculus* assures us of it. He is represented with the Head of a Dog, because that Animal is an Emblem of Sagacity; he is join'd in some Medals to *Isis*, because he was her Preceptor, or Counsellor.

HERMESIA. A Name in *Libavius de Igne Natur.* for *Chymia Hermetica*, or the Hermetic Chymistry. *Castellus.*

HERMETICA MEDICINA, Hermetic Medicine, or Chymical Medicine. See HERMES.

HERMODACTYLUS. See BEHEN, and COLCHICUM.

The Characters are;

It has all the Appearance of the *Iris*; the Leaves are narrow, and triangular, or quadrangular; the Root is tuberous, being composed of a Collection of Tubercles.

Boerhaave mentions but one Species of this Plant; which is,

Hermodactylus; folio quadrangulo. *T. C.* 50. *Hermodactylus verus.* Matth. 778. *Iris tuberosa.* H. Eyst. Vern. o. 5. F. 4. Fig. 2. Dod. p. 248, 249. *Iris tuberosa, folio anguloso.* C. B. P. 40. *Iris tuberosa, Belgarum, & secundum Aldrovandum Lonchitis prima Dioscoridis.* Lob. Obs. 51. Adverss. 363. Ic. 98. *Iris bulbosa, præcox.* Clus. SNAKES-HEAD IRIS.

The Root of this Plant has a Tubercle, which purges very powerfully both upwards and downwards, for which Reason it is commended in the Gout, as a powerful Cathartic. This Root, when old, often loses all its purgative Virtue: It is commended as a Specific in the *Gutta Serena*: They mix it with Ginger, on account of its Viscosity, which is subject to excite Gripes. *Hist. Plant. ascript. Boerhaav.*

This Plant has, by some Botanic Writers, been supposed the true Hermodactyl; but what has been long used in *Europe* for that, is a true *Colchicum.*

HERMOLAOS. The Name of a *Collyrium Staticum*, that is, a Collyrium which represses and stops Defluxions: There are two of them so called, the greater and the less, both which are described by *Aetius*, *Tetrab.* 2. *Serm.* 3. *Cap.* 102.

HERNANDIA, *Jack in a Box*, is a Plant very common in *Jamaica*, *Barbadoes*, *St. Christophers*, and many other Places in the *West Indies*; where it is known by the Name of *Jack in a Box. Miller's Dictionary*, *Vol.* 2.

HERNIA. A Rupture.

RUPTURES *in general.*

Most preternatural Tumors about the lower Part of the Abdomen, the Navel, Groin, and Scrotum, caused by a Descent of the Intestines or Omentum, are in general termed Ruptures. These differ (1.) as to their Situations: Thus those formed at the Navel are called Umbilical Ruptures, or *Omphalocele* and *Exomphalos*; those in the Inguen, inguinal Ruptures, or *Bubonocele*; those of the Scrotum, *Oscheocele*; in other Parts of the Belly, they are distinguished by the Name of Ventral. (2.) They differ in the Contents, and from thence too receive different Appellations. A Tumor, proceeding from a Falling out of the Intestines, is termed an *Enterocele*; from the Omentum, an *Epiplocele*; from Wind, a *Pneumatocele*; from Water, an *Hydrocele*. (3.) They differ as to their Size, some being small, others larger, and others of an enormous Bulk; some soft, others hard; some fixed, some moveable, and easily returned into the Abdomen; others not without great Difficulty, or not at all; the last are called adhesive Ruptures. Sometimes the Parts prolapsed are so confined by Stricture and Inflammation, that the Wind and Fæces can by no means be transmitted; these we denominate incarcerated Ruptures; some are free from Pain; others very painful, and attended with Sickness, Vomiting, and many bad Symptoms.

The OMPHALOCELE.

An *Omphalocele*, *Exomphalos*, or umbilical Rupture, is a preternatural Prominence of the Abdomen at the Navel. These differ in Size and Figure. Some of them, especially at the Beginning, are small, others large, and others of a prodigious Magnitude; some round, others pointed, and others cylindrical; which last I met with in a pregnant Woman, whose Navel was often distended to the Size and Shape of the Penis, extremely painful, and containing only Wind. These also differ as to their Contents; for some contain the Intestines; others the Omentum; others Air or Water; further, they are soft or hard, returnable or not, painful or incarcerated. *Scultetus, in Armament. Chirurg. Tab.* XXX. furnishes us with Representations of these Ruptures.

The Causes are various, though the immediate Cause is always some Violence offered to the Abdomen, and principally the Navel: For the common Origin is either a violent sudden Motion, Fall, Leap, Blow, or Strain, in lifting great Weights, Coughing, Sneezing, and difficult Labours in Women: For any one of these Accidents will forcibly dilate the Peritonæum, as *Dionis* affirms, or sometimes break it, especially if it is weak; and, when it is thus dilated, the Intestines and Omentum, or the Omentum only, or Wind, is forc'd through the Navel. Sometimes a Laxity and Weakness of the Peritonæum, near the Navel, causes this Disorder, especially when it arises from some preceding Violence, or vehement Crying, in Infants; for I have often seen them labour under this Disorder soon after the Birth, especially when the Navel, after the Navel-string falls off, is not secured for some time by a proper Bandage.

We know an Omphalocele by the Sight and Touch, assisted by the Ear; for the Navel is preternaturally prominent: The Tumor, upon the Pressure of the Fingers, (unless the prolapsed Parts adhere externally) returns into the Belly, and, at its Return, makes some Noise, especially if the Patient lies on his Back. This is a certain Indication, that it proceeds from a Descent of the Intestines. Sometimes the Tumor is remarkably soft, and then we may reasonably conclude, that Wind, or the Omentum only, has forc'd a Passage; though, as this covers the Intestines, it seldom descends without being accompanied with them. The Descent of the Omentum alone is term'd a Rupture of the Omentum; that of the Intestines alone, an umbilical Rupture of the Intestines; if the Swelling continues, after the Intestines are return'd into the Abdomen, it indicates a Descent, both of the Intestines and Omentum, though, frequently, both the Omentum and Intestines are return'd together. In dropsical Persons, the Navel is often distended by Water, as appears from *Scultetus*'s Figure, and a remarkable Instance in *Purmannus's Chirurg. Curiosi.* But the Habit of Body shews, that this proceeds from Water, and may be called an aqueous umbilical Rupture, as that which contains Wind, is termed *flatulent.*

An Omphalocele in Children is not very dangerous, and, for the most part, easily cur'd. In Adults, likewise, there is no great Danger, while the Parts are capable of being return'd. But, as, in the last, they are never entirely free from Danger; if the Descent, or rather Protrusion of the Intestines through a narrow Foramen of the Navel, arises from a sudden Fall, and cannot be returned into the Belly, it is a troublesome, very hazardous Case; for, it is almost impossible, but that, from the Stricture of the Passage, the Blood must be prevented from returning out of the protruded Intestines; and the stagnating Fluids in the Vessels occasion Inflammation, excessive Pain and Anguish, with Vomiting; and, indeed, the worst Kind of it, a Vomiting of the Feces (the Vulgar call this *Miserere*, Physicians the *Iliac Passion*); and, likewise, a Mortification of the Intestines, followed by a painful Death. But, when this Disorder has increas'd gradually, and the Aperture of the Perinæum is large enough to transmit the Intestines, the Hazard is not so great, particularly in Children, and young Men. Though, unless they apply a Bandage to repress the Intestines and Omentum, and abstain from Cold, violent Motion, too plentiful Feeding, especially on hard, thick, and flatulent Meats, it is very probable they will descend, the Place of the Descent be straiten'd, the Intestines confin'd, and so firmly inclos'd in the external Tumor, with extreme Pains, that they can never be return'd, but bring on the above-mention'd Symptoms, and Death itself. Experience convinces us, that no chirurgical Operation will have any Effect upon this Disorder, but that it is rather hurtful, when the Hernia is considerable; for most Patients die under it, or very soon after. But, if the Intestines can be return'd, an Omphalocele, as well as any other Rupture, is sooner cured in Children than in Adults, by the Use of a proper Bandage, and the Observation of a regular Diet and Exercise. The Neglect of these is often followed by a Relapse. If this Tumor contains Wind only, the Disease is inconsiderable; if Water, it threatens a Dropsy.

There

There are two Methods of Cure, one adapted to the Caſe when the Inteſtines can, the other when they cannot, be return'd. In the firſt Caſe, the prominent Navel, with the prolapſed Inteſtines and Omentum, muſt be returned, and bound up tightly, to prevent a Relapſe. Therefore, when the Aperture is large enough, after laying the Patient on his Back, you muſt depreſs and force them tenderly with your Hand, till they return; then proceed according to the Age: For, in tender Infants, I have often known an Hernia cured, after Repreſſion and Repoſition, by applying a ſmall, round, proper Plaiſter, to the Navel, laying over that another, covered with Linen or Leather, to ſecure it; over this I put next a ſimple thick Compreſs, in a recent, and ſlight Diſorder; then faſten the Whole with a ſimple Roller, three Fingers broad, and carried ſeveral Times, in circular Directions, round the Body; and am very careful, that, whenever this is open'd, it is immediately bound up again. Thus, in a few Weeks, have I ſometimes completed my Cure. But, when the Diſorder is inveterate, I uſe a double Compreſs of a leſs Size, and upon that, as more conducive to the Repreſſion, I lay a leaden Plate, then a larger Compreſs, and proceed as before. But, in young Men, Adults, and old Men, to prevent a Relapſe of the Omentum or Inteſtines, you muſt apply a Truſs ſuitable to the Purpoſe, furniſhed with a peculiar Plate, and faſten'd round the Belly. The beſt are theſe repreſented *Tab.* XLV. *Fig.* 6. made of Leather, and, *Fig.* 7. of Wire, though there are others not deſpicable. But before you uſe this Bandage, you ſhould lay on the Navel a ſound ſtrengthening Plaiſter, upon that, a ſticking Plaiſter with a Compreſs. I am convinced from long Experience, that this Method, diligently purſued for ſome Months, will complete the Cure; and eſpecially if the Patient is young, or the Diſorder recent: More adult and aged Perſons are ſeldom reſtored to perfect Health; but if they would prevent a Return of this Rupture, from whatever Origin it ſprings, they muſt wear theſe Truſſes during their whole Lives; for by the Diſuſe of them, with an irregular Diet, and too violent Exerciſe, they will be expoſed to imminent Danger of their former Diſorder, the Iliac Paſſion, and Death itſelf, if it is a Deſcent of the Inteſtines, or *Omentum*.

This Cure then is only partial in Adults; and, among the Moderns, except *Saviard*, no one mentions a perfect or radical Cure. But the Antients, as appears from the moſt excellent *Celſus*, were ſollicitous about this Affair; and he has directed various Methods, the principal of which it cannot be amiſs here to recite. "The Patient ought to lie on his Back, (ſays he) that the In- "teſtines or Cawl may be returned into the Belly; and a Needle "with a double Thread, muſt be paſs'd thro' the inferior Part "of the Navel, being then empty; and with theſe Threads, "the different Sides of the Navel muſt be tied very tight; "(as in a Straphyloma): Thus, what is above the Knot, dies; "the Navel ſubſides, and is cloſed with a firm Cicatrix." Some before the Ligature, cut the Top in a rectilinear Direction, that by introducing a Finger, they may repel the Rupture; and perhaps foranother Reaſon, leſt they ſhould paſs the Needle thro' the Inteſtines or Omentum at the ſame time. Some (without doubt, to procure a ſtronger *Cicatrix*) cauterized the deligated Part with Cauſtics, or the Cautery; and then healed the Ulcer, as in other Burns. And he aſſerts this to be the propereſt Method, not only in a Deſcent of the Inteſtines or *Omentum*, or both, but alſo where Water deſcends. It requires a good Habit of Body, and that the Patient be neither an Infant, nor old. Further, he ſays, it is ſerviceable in ſlight Tumors, but dangerous in conſiderable ones. Theſe Obſervations partly agree with thoſe of the Moderns, and partly incite us to the Study of more perfect Remedies.

Saviard, a Surgeon at *Paris*, attended a Girl about fourteen Months old, who laboured under this Malady. He laid her on her Back, and, having repreſſed the Inteſtines, elevated, as much as he could, the umbilical Tumor, which was as big as a Gooſe's Egg, and gave it to an Aſſiſtant to hold. Afterwards, he tied the Skin at the Bottom with a quadruple waxed Thread; in two Days he put on another Ligature, when the Swelling began to putrefy, and three Days after he added a third, always making the former Ligatures tighter, ſo that the Tumor at laſt was ſeparated, and the Girl perfectly cured. He affirms, that he met with the ſame Succeſs a ſecond time, in another Girl, *Obſ. Chirurg.* and it is ſurpriſing, that *Garengeot* has made no mention of this; and, as *Saviard* himſelf does not inform us, whether theſe Cures might not have been performed by the Bandage deſcribed above, without flying to that cruel Method, there are ſufficient Grounds for us to think they might.

But if the Aperture is ſo narrow, that the Inteſtines cannot be repelled, and the Patient is troubled with a Vomiting, and acute Pains, as well in the Tumor, as the Belly; then the Application of a Bandage in this, and other real *Herniæ*, is uſeleſs and improper, becauſe it would preſs the Parts too much; in this Caſe, therefore, rather apply proper Clyſters, and emollient Cataplaſms, as a Decoction of white Bread and Milk, with Butter and Saffron, and the like: With theſe foment and mollify the Inteſtines, till they can be conveniently return'd into the Belly. Then the Patient ought to lie on his Back, with his Head low, and, having removed the Cataplaſms, you may try with your Hand tenderly, whether they are fit to be repelled: After you have done this, and continued it for ſome time, ſtill finding the Inteſtines unfit for Repoſition, inject the Smoak of Tobacco, through proper Tubes (delineated *Tab.* LV. *Fig.* 13.) into the *Anus*, till it gives a Stool, and they are relaxed. Long Experience convinces me of the wonderful Efficacy of this Remedy, which is uſually ſtyled a *Tobacco-clyſter*. If there is a large Quantity of Blood, or an Inflammation in the Inteſtines, which is very common, then you muſt immediately open a Vein, and bleed plentifully, as in other Inflammations; for, by this, the Veins and Inteſtines ſubſide, the bad Symptoms decreaſe, and by a gentle Preſſure of the Hand, the prolaps'd Parts return into the *Abdomen*. After this Reſtitution, however it is compaſſed, you muſt preſs the Orifice at the Navel with your Fingers, and a Compreſs; and then compreſs it with a Truſs, or rather a proper Linen Bandage, as before ordered.

But if theſe Medicines, with the bleeding, have no Effect in twenty or four-and-twenty Hours, and every thing rather ſeems worſe, have immediate recourſe to the Chirurgical Operation, as the only remaining Hope; for, as this Operation, ſeaſonably performed, will be very inſtrumental to the Recovery, of the Patient ſo the Procraſtination of it will render it entirely vain and uſeleſs. For within twenty-four Hours, eſpecially in young and vigorous Men, a Gangrene or *Sphacelus* comes on and deſtroys the inflamed Inteſtines: In old Men indeed they come on ſlower. The Sphacelus is followed by a Vomiting, and increaſing Weakneſs, Coldneſs in the Extremities, and cold Sweats, and very ſoon by certain Death. As for the Operation, let the Aperture of the *Abdomen* be enlarged ſufficiently to reſtore the compreſſed, incarcerated Inteſtines. This, therefore, is the Method: The Patient is laid on a Bed, or on a Table, with his Head ſomewhat low, but his Belly and Buttocks elevated; and is either faſtned down with Cords, or ſecured by ſtrong Men, to prevent his moving; then the Skin, over the prominent Navel, is held tranſverſely by the Surgeon, or his Aſſiſtant, and, being drawn tight, if the Tumor is inconſiderable, an Inciſion is made with a Knife, but this with the utmoſt Caution, leſt you wound the Inteſtines at the ſame time. Therefore the ſafeſt Way is, after making a ſmall Puncture, to introduce immediately the Director (*Tab.* XXII. M, and N) under the Skin, and, by moving the Knife carefully, enlarge the Wound longitudinally; and when this will not ſuffice in a large Tumor, make a tranſverſe Inciſion, and divide the four Angles cautiouſly. In the next Place, divide the Fat, and Membranes with your Fingers, a Pair of Sciſſars, or the Knife; and, that you may not injure the Membrane, which immediately inveſts the Inteſtine, elevate that, and make a ſmall Inciſion, as before directed, with reſpect to the Skin. Thus, having uncover'd the Inteſtines, inſert the Director under the Membrane, dilate the Wound with a proper Inſtrument, and, when every thing is open to your View, preſs the Inteſtines gently with your Fingers into the Abdomen. But when the Foramen of the Navel is too ſmall to admit a Return, having inſerted the Director, or ſecured the Inteſtines with your Finger, you may enlarge it upwards, and towards the Left Side of the Belly, with an obtuſe Pair of Sciſſars, or a Knife that has a Button on its Point, (See *Tab.* XXVI. *Fig.* 3, 4, or 5) till it will anſwer your Purpoſe. In Inciſions of the Navel, made otherwiſe, the umbilical Vein and Artery may be injured, which is dangerous.

To avoid the Danger of the preceding Inſtruments, the Moderns have invented others; and, firſt, a Director (*Tab.* XLV. *Fig.* 8.) with Wings [A A] to preſs down the Inteſtines, and prevent any Injury from the Knife, which is in its Groove, during the Enlargement of the Foramen. Further, *Morand*, a celebrated Surgeon at *Paris*, has contriv'd another for this Uſe, which the *French* term *Biſtouri gaſtroraphique* (See *Tab.* XLV. *Fig.* 9.) This I forgot to mention, when I treated of Wounds of the *Abdomen*, which, in my Opinion, is as ſerviceable in dilating the Aperture of incarcerated Ruptures, as in theſe: The End is introduced into the *Abdomen*, as far as [B]; then taking hold of the Handles [C C], as a Pair of Sciſſars, and elevating the moveable Arm [D], which is ſharp like a Knife, in the ſuperior Part E E, the narrow Aperture is enlarged, ſo that the Inteſtines can be reſtor'd. Beſides, *Le Dran*, another famous Surgeon of *Paris*, has lately invented and contriv'd a kind of latent Inciſion-knife, which I have exhibited *Tab.* XLV. *Fig.* 10. 11. In *Fig.* 10. you have it incloſ'd, and conceal'd; in 11. open, and divided into its component Parts. The Part A A, *Fig.* 10. is paſs'd into the Aperture, which is to be dilated; then the Handle K is taken into the Right-hand, and the Plate F properly depreſs'd with the Thumb: Thus the Knife, hitherto conceal'd in the Groove A A, is elevated (ſee *Fig.* 11. C D); ſo that the Top D remains conceal'd in the Cavity, that it may not hurt or prick the Inteſtines; and the Part C enlarges the narrow Paſſage, through which the Inteſtines may be reſtor'd. You will find a farther Explanation of this Inſtrument (which the *French* call *Biſtouri Herniaire de Mr. Le Dran.*) in the Explication of *Table* XLV.

When the Inteſtines are thus replac'd, the Wound, being held, and preſs'd by an Aſſiſtant, ſhould be join'd by the knotted

Suture, (though the Moderns, as *Garengeot* assures us, reject this Suture; and I think, it may be safely omitted, particularly in small Incisions) and bound up, till it is heal'd, in the manner directed in a Gastrorraphy. After the first Dressing, the Patient must keep himself quiet, and the Bandage must remain for three or four Days, unless any extraordinary Symptoms require the contrary, for this will promote the Agglutination; and, after the first Opening, it may be dressed every Day, as in other Wounds of the Belly: And, when the Wound is perfectly healed, a proper Bandage is still necessary, to form a strong *Cicatrix*, and prevent a Relapse. But more adult and old Men, unless they wear a Truss all their Lives, are never secure; while Infants, Boys, and young Men, are, for the most part, completely cured.

That you may not be ignorant how far our Method of Cure agrees with *Petit*'s, I will give you a short Account of it, out of *Garengeot's Operat. Chirurg.* The Integuments of the Tumor, together with the Fat, are held up, partly by the Surgeon, and partly by his Assistant; and first a rectilinear, then a transverse Incision is made with a Knife; then the Wound, after dividing the four Angles, is enlarg'd by the Director and Knife, or the Introduction of the Fingers; after this, a *Raiseau*, somewhat resembling an Intestine, appears, which must be cautiously removed by a crooked Knife. Next the Membrane, which is the Sacculus, after an Incision of the emergent **Raiseau*, which contains the fallen Intestines, is elevated, and a small Incision made; the Efflux of the Lymph will demonstrate, that the Operation is rightly performed. Afterwards, the middle or fore Finger is passed into the Wound, in such a manner, that, by the Direction of it, the Sacculus may be cut cross-ways with a crooked, blunt Pair of Scissars, (See *Tab.* XXII. *Fig.* D). When there appears any preternatural Excrescence, (which is frequent in the Cawl) united to the external Parts, whether it consists of Flesh or Fat, it must be taken off; if then the *Omentum* is not fallen beyond the Lips of the umbilical *Annulus*, there is room for Hope; but if it is, and appears very large, the Disorder seems desperate, whether it be replaced, or removed, so that, though the Intestines are restored, Death ensues. However, they ought to be returned, if the Aperture is large enough; and, if not, you may introduce a Knife, with a Button, somewhat sharp, (see *Tab.* V. *Fig.* 3, 4, 5.) and carry it upwards in an oblique Direction, towards the Left Side of the Belly, till you have dilated it sufficiently. When the *Hernia* is not large, *Petit* takes another Method; he, in some measure, enlarges the Aperture of the Belly, and restores the Intestines with the Sacculus entire. But he does not sufficiently explain to us his Manner of doing it without Incision.

Having done this, *Petit* proceeds to the Bandage, and Agglutination of the Wound; which I will describe to you in the exactest manner: He orders, without any Suture, a large Linen Pellet (Gal. *Pelote*) dipt in the White of an Egg, and tied with a Thread, to be laid on the Aperture, thro' which the Intestines were fallen, then he fills the rest of the Wound with small twisted Linen Cloths, and Rolls of Lints (Gall. *Bourdonnets*); and, having anointed the adjacent Parts with Oil of Roses, he covers it carefully with two or three Compresses, each larger than the inferior, and applies the Napkin and Scapulary: Next Day, he removes the Pellet, tho' it adheres firmly to the *Foramen*, and Lips of the Wound; and asserts, that scarce any Traces of either are left: Afterwards he fills the Wound again with Cloth and Lint; but leaves us in the Dark, as to the manner of Healing: Nor are we better acquainted with *Garengeot*'s Reasons for preferring a double and transverse Incision to the common Practice of a single and rectilinear one, when that will suffice: He likewise gives us *Le Dran*'s Observation, where, in a Rupture of this kind, the Sacculus being open, a Cell of the Colon only was incarcerated, which occasion'd a Vomiting. But, during the Process, especially at first, Bleeding, Purging, or Clysters, and a regular Diet, is absolutely necessary.

Dionis, in his Book of Surgery, says, *That an unsightly Prominence of the Navel never proceeds from too great an Expansion of the Peritonæum*; but, always, rather *from a Rupture of it*; and, therefore, the Intestines are to be found immediately under the Skin, and not contain'd in any Sacculus. But this Error may be confuted, from my Annotations on that learned Author, and the following Observation: I saw, when I was Professor of Physic and Surgery at *Altorf*, with *Carolus de Colonia*, a Surgeon of *Norimberg*, a tall fat Gentleman, whose Navel was very prominent (see *Tab.* XLV. *Fig.* 12.); A A A A denote the Extremity of the external Skin in the Navel, like a large Annulus: In this a thin pellucid Membrane, or, more probably, the *Peritonæum*, was comprised, thro' which the Intestines B B B manifestly appear'd, in the living Subject. As long as he wore the Truss, with a large hard Pillow, (see *Fig.* 6.) they remain'd in their natural Position; but, upon the Removal of that, they, with the thin Membrane, contain'd in a sort of Bag, descended, and formed a Tumor beyond the Navel. I do not know, this has occurred to any one else in Practice; tho' it is beyond all doubt, that *Palfyn* and *Garengeot* differ, in their Sentiments, from *Dionis*, and agree with me, that there is always a Bag, or a preternatural Distension of the *Peritonæum*, in these Ruptures, which contain the Intestines. In the Interim, we should not condemn *Dionis*'s Opinion, as absolutely false, since he declares, it is founded on Observations made both on dead and living Subjects; but, rather, think such Cases may have been; for it is certainly best to be circumspect in the Cure of an Umbilical Rupture, and not rashly cut the Intestines instead of the Bag, or, as *Garengeot* terms it, the *Raiseau*: And, indeed, I am convinced, from Experience, that *Dionis* had some Foundation for his Opinion; and *Garengeot* himself, *pag.* 313. 367. *Tom.* I. *Chirurg. Edit.* II. shews, that a Rupture of the *Peritonæum* sometimes attends these *Herniæ*.

Explication of Tab. XLV.

Fig. 1. Exhibits a triangular-pointed Steel Needle, inserted in a Tube; it is called a *Trocar*, destined for perforating the Belly of a dropsical Person, and, chiefly, extracting the Water out of that and the *Scrotum*. A is the Handle, B the triangular Point, C the Tube into which it is inserted.

Fig. 2. Represents it alone, without the Tube, made of Iron or Steel. A C is in the Handle, B C the polished Needle, B the triangular Point.

Fig. 3. Shews the polished Tube by itself, generally made of Silver, thro' which, after extracting the Needle, the preternatural Humours flow: A A is the Part remaining in the Belly, where the Needle is taken out, B B the Plate, and especially the concave Part of it, with two Apertures, into which you may transmit a Thread, and, if Occasion requires, tie the Tube, to prevent its slipping into the Belly: C shews a kind of elliptical *Foramen*, on each Side, that the Liquor may enter, not only into the extreme Aperture, but, likewise, into these lateral ones: D is the Aperture, in the middle of the Tube, into which the Needle is introduced; and, when the Belly is perforated, upon the Extraction of that, the Water is discharged through it.

Fig. 4. Is *Petit*'s Tube, for the same Use: A A the cylindrical Part, with a Slit almost the whole Length, into which, he thinks, the Water insinuates itself easier than into the other. B the Plate, with an Aperture, into which the Steel Needle is introduced, and through which the Liquor is emitted: C C another Plate, hollowed like a Pipe, through which the Water commodiously flows into the Vessel under it.

Fig. 5. A A A A exhibits an Instrument, resembling a Cross, for repressing a Gibbosity in Children, which is applied to the Back; so that the longer Part lies on the *Spina Dorsi*, the shorter on the *Scapulæ*: B B is an Iron Ring, which, being cover'd with Leather or Silk, is put round the Neck, and, by a proper Loop, put thro' the Apertures *a a*, may be made more lax or tight, as Necessity requires. C C two Leather Strings: The Left hangs down, that you may see the Holes at the Bottom, thro' which the Strings are passed: D D are the Strings; that on the Left untied; the other represents the Manner of tying it about the Shoulder: E E the Bandage passed thro' the Apertures F, which fastens the lower Extremity round the Belly.

Fig. 6. Represents the Bandage for Umbilical Ruptures: A is the Steel Truss, cover'd with Leather or Fustian, with some Cotton, or boiled Hair, under it: This is put upon the Navel, having first laid on a Plaister and Compress: It may have a Button in the Middle. B B B the Belt to encompass the Waist, made of Leather or Fustian: C the Buckle, which fastens the Belt: D the Truss, with the Button in the Middle.

Fig. 7. Another Kind of Instrument, for the same Use, made of Steel or Brass Wire, and bent in a peculiar manner. A the Part laid on the Navel; B B B that which surrounds the Abdomen; C C that which is fitted to the Inguen; this compresses the Belly and Navel by its own Elasticity: It should be cover'd with Leather or Cotton, and the Part stuffed with boil'd Horse-hair, or some other proper Material, and the Whole suited to the Size of the Patient.

Fig. 8. Is the Director, for a proper Dilatation and Incision of an incarcerated Rupture. A A the Plate, resembling an Heart, to keep the Knife from wounding the Intestines.

Fig. 9. *Morand*'s gastroraphic Incision-knife, for the same Use. A shews the obtuse Part, which is introduced into the Abdomen, thro' the Aperture: B the Hinge, which joins the two Parts of the Instrument: C C the Handle, for the Fingers: D the inferior Part of the moveable Arm, somewhat round or obtuse: E E the superior or acute Part, by the Elevation of which, the narrow Aperture is enlarged.

Fig. 10. and 11. Represent *Le Dran*'s Incision-knife for Ruptures. The first shews it joined together, the other separate,

* Neither I, says *Heister*, nor any one I have conversed with, understand this Word *Raiseau*; nor is it in any *French* Dictionary: For tho' *Rainseau* signifies a Ramulus, yet, after the most diligent Search, I could never discover, in any umbilical Rupture, any *Ramulus*, resembling an Intestine; and, therefore, wish *Garengeot* had been more explicit. But if, for *Rainseau*, we read *Reseau* or *Reseul*, which Words are in the Dictionaries, and signify a Net, or little Net, it is still as unintelligible to me, how an Intestine can appear like a Net; since there is the widest Difference between them.

that the internal Structure may be better conceiv'd: A A the excavated Director, in which the ſmall Knife is concealed: B the longitudinal Half of this Knife: D the End, which the Author calls a Swallow's Tail; this is moved in the Groove, to prevent the Extremity from ſlipping out: E E the Lever, which elevates the Knife: F the Handle of the Lever, which, by a Preſſure of the Thumb, elevates the inferior Part of the Lever. G an elaſtic Plate, by which the ſmall Knife, after the Operation, is return'd into the Groove, and concealed. H H the two lateral Wings, which cover and defend the Inteſtine: I I two erect Wings, which include the Lever: K the Handle of the whole Inſtrument: L the Screw upon which the Lever turns.

Fig. 12. Is an Umbilical Rupture, remarkably large: A A A A ſhew the Skin of the Navel, very much diſtended, in the Shape of a Ring, above two Inches Diameter, and connected with a thin Membrane, undoubtedly the Peritonæum, through which the Inteſtines B B B might be ſeen.

Of other Herniæ, *particularly the Ventral.*

We have already ſaid, that a Deſcent of the Inteſtines and Omentum, or either of them, occaſioning an unſightly Prominence of the Navel, is termed an *Omphalocele*, or Umbilical Rupture; and this Name is diverſified, according to the Part affected. So, for Inſtance, when the Inteſtines or Omentum deſcend into the *Scrotum*, it is called *Scrotal*; when into the Groin, *Inguinal*; if they fall into the external Part of the Thigh, *Femoral*; if this Accident happens in any other Part of the Belly, we denominate it *Ventral*; which is obſerv'd to be ſometimes in the *Linea Alba*, as well above as below the Navel. Ruptures are alſo divided into true and ſpurious: True, when the Inteſtines or Omentum deſcend; ſpurious, when neither of them does, but the Tumor ariſes from ſome other Cauſe, as an *Hydrocele*, *Sarcocele*, and *Variocele*. As for what belongs to the ventral *Hernia*, moſt Authors, of the laſt Age, have entirely omitted it, or ſpoken very ſlightly of it, tho' it was known to, and deſcribed by the Antients, and I have ſeen ſeveral Inſtances of it: I ſhall, therefore, be very particular in my Explication of this Diſorder. They differ greatly, for ſome are ſmall, ſome large; ſome on the Right Side, ſome on the Left, and others in the Middle; ſome eaſy, others difficult, to be return'd, and, as we ſaid of the *Omphalocele*, attended with exceſſive Pain; theſe we call incarcerated.

As for the Cauſes of theſe Diſorders, there are two Opinions; *Dionis* thinks, a ventral Rupture does not ariſe ſo much from a Diſtention, as from a Burſting, of the interior Membrane of the *Abdomen*, and is, therefore, occaſion'd only on a ſudden, and by a very great Violence. On the other hand, *Garengeot*, with good Reaſon, attributes it, not only to a Burſting of the *Peritonæum*, and a Laceration of it, by any violent Hurt of the Belly, but, much oftener, to a Separation of it, by any Cauſe, to ſuch a Degree, that it never grows together again: So that the Muſcles, and, principally, the tranſverſe Muſcle of the *Abdomen* is entirely, partly, or, in ſome of its Fibres, relaxed, burſt, or, by ſome other means, ſo far injur'd, that, upon any violent Motion or Force, the Inteſtines protrude and ſeparate the *Peritonæum*.

A ventral Rupture, particularly that which may be eaſily return'd, is known, generally, by theſe Symptoms: The Skin, in ſome Part of the Belly, is indecently puffed up, like a Tumor: This yields to the Preſſure of the Hand, and retreats into the *Abdomen*, but, upon the Removal of the Hand, appears again, with ſome Noiſe. Upon Coughing, Holding the Breath, or Straining, as is common at Stool, the Tumor grows ſurpriſingly hard, and has the Appearance of diſtended or inflated Inteſtines, tho' they ſeldom come out but one after another, which cauſes an inſenſible Increaſe of the Tumor, tho' it was ſmall at the Beginning. When this Rupture is incarcerated, it has all the Symptoms of an *Hernia Umbilicalis*; and every Age is ſubject to it, Adults, as well as Infants and young Men.

It requires a particular Care, to diſtinguiſh this from an Abſceſs, leſt you ſhould inconſiderately treat it in an improper manner, and Experience ſhews us, that many have been deceived: I myſelf knew a Surgeon, who would have made an Inciſion into a Rupture, had not I diſſuaded him from it, as if it had been an Abſceſs. In Adults, and Men far advanced in Years, it is very difficult to cure, and ſo troubleſome, that they are almoſt incapable of any Buſineſs; and even tho' you ſhould cut it, you can ſcarce ſucceed, as the Peritonæum is quite defective. Moreover, when the Aperture, through which the Inteſtines are fallen, is too narrow, ſo that they are greatly compreſſed by it, there is imminent Danger, as in an umbilical, inguinal, or ſcrotal Rupture, of intenſe Pains, an Inflammation, Vomiting, even of the Fæces, and Death, from this violent Conſtriction. A Rupture in the *Linea alba*, either above, or chiefly below the Navel, according to moſt Writers, is uſually incurable; though, ſince the Place of the Deſcent is commonly larger than in other *Herniæ*, it is often leſs dangerous.

Though this Diſorder is very troubleſome, it may be cured, if taken in time; or, at leaſt, mitigated, eſpecially in Infants and young Men; for it is inexpreſſible what Advantage accrues from the Uſe of the Truſs (*Tab.* XLV. *Fig.* 6); particularly if the Iron Plate A be of a due Size; and kept conſtantly round the Belly, with a Plaiſter under it. And even, if the Patients are old, and the Diſorder of long Continuance, it will prevent worſe Conſequences. *Celſus* ſays, when the Antients attempted a complete Cure, they proceeded thus: "Paſſing a Needle with "two Threads through the Baſis, they tied the diſtended "Skin on each Side, as in the Navel, or Uvula; ſo that what "was above the Thread died away." Some cut the middle of the Tumor, in the Form of a Myrtle-leaf, and then join'd the Lips by Suture. But, to confeſs the Truth, both theſe Methods ſeem to me more dangerous than the Truſs; for the Operator will ſcarce be able to refrain from hurting the Inteſtines, or tying them up with the Skin; and there may be a better way diſcover'd, or, at leaſt, the old one improv'd upon. When the Inteſtines, in this Rupture, cannot be replac'd, follow the Rules laid down for an Omphalocele. *Garengeot* aſſures us, that *Petit* did this with Succeſs; for he reſtor'd a Taylor, in about five Days, to his former Health, without any Aperture of the Bag made by the prolaps'd Peritonæum, but only laying it bare, and enlarging the Foramen with a Knife. But if this Misfortune ariſes from the Peritonæum, from an old Wound, by Laceration or Inciſion, as that never concretes, they are not contain'd in the Bag, but rather are contiguous to the Integuments; therefore this Operation requires the utmoſt Skill, leſt, while we inveſtigate the Bag, we ſhould touch or injure the Inteſtines with the Knife. Laſtly, this Admonition cannot be too often repeated, that Adults, though they are freed from this Diſorder, ſhould never leave off the Truſs, for fear of a Relapſe. *Saviard, Obſ. Chir.* 59. gives an Inſtance of a new Species of Hernia ventralis, after the *Cæſarean* Section. See Bubonocele.

Of the Deſcent of the Inteſtines into the Scrotum, or Scrotal Rupture.

We come now to Tumors in the Scrotum, which proceed from almoſt the ſame Cauſe with the others. In treating of theſe, we ſhall ſhew, in general, what the Diſorder is, and the different Species of it; then explain each particularly. We call every preternatural Tumor of the *Scrotum*, a *ſcrotal Hernia*, and it is either *true*, or *ſpurious*: True when it is occaſioned by a Deſcent of the Inteſtines or *Omentum*; falſe, when the Teſticles, or ſpermatic Veſſels are tumified by ſome Humour contain'd therein, or when any noxious *Humor*, or *Flatus*, or ſome ſuch Matter, diſtends the Part unnaturally. Under theſe *Genera* are ſeveral *Species* contained, and the Name and Method of Cure is diverſified according to the Variety of the peccant Matter, which occaſions the Diſtention; for, when the Inteſtine deſcends through the *Proceſſus Peritonæi*, we term it an *Enterocele*; when the *Omentum* falls, an *Epiplocele*. When the *Scrotum* is diſtended by foreign Humours, as the *Serum*, or Water, we call it an *Hydrocele*; when by Blood, an *Hæmatocele*; if it happens from Wind, *Pneumatocele*. Farther, if either Teſticle is preternaturally increaſed and hardened, it is denominated a *Sarcocele*. A Tumor of the ſpermatic Veins is an *Hernia Varicoſa*, *Varicoſele*, or *Circoſele*; and an Abſceſs in the *Scrotum* is termed an *Hernia humoralis*. Sometimes two of theſe happen together, and then they are diſtinguiſhed by a proper Connexion of their Names, as *Entero-epiplocele*, *Hydro-enterocele*. Sometimes there is a *Hydrocele* in one Side of the *Scrotum*, and an *Enterocele* in the other; an Inſtance of which I lately ſaw; and ſo it is with the reſt. Now we will enter upon an accurate Examination of the Nature and Diſpoſition of each.

Of the Enterocele.

An *Enterocele* is a Tumor ariſing from a Deſcent of the Inteſtines through the Ring of the Muſcles of the *Abdomen*, and Proceſs of the Peritonæum, into the *Scrotum* (See *Tab.* XLVI. *Fig.* 3. A B). Some term this an *Oſcheocele*, and perfect Rupture, in Contradiſtinction to the *Bubonocele*, a kind of imperfect Rupture, which does not extend to the *Scrotum*. It is manifeſt this Diſorder ariſes from a vehement Protruſion by the Inteſtines, and an Expanſion of the *Peritonæum*, with the Ring of the Muſcles, ſo that it hangs down in the *Scrotum*. (ſee *Tab.* XLVI. *Fig.* 4. D); or from a Burſting of the *Peritonæum*, which naturally ſtops the Perforation at the Rings, by ſome uncommon external Violence, ſo that the Inteſtines are forced through that, and the *Proceſſus Peritonæi* into the *Scrotum*. Experience teaches, that the latter Accident does not happen ſo frequently as the former. *Ægineta* ſays, the *Peritonæum* may be broken by outward Force, ſuddenly and with great Pain; this is confirmed by others, mentioned under the Article Bubonocele, who have ſeen it. If a Rupture is cauſed by too great a Diſtention of the *Peritonæum*, it increaſes gradually, and with extreme Pain; in general theſe *Herniæ* infeſt but one Side, though ſometimes they reach both, and for the moſt part the Inteſtines deſcend alone, though they may be accompanied by the Omentum.

As for the Cauſes of an *Enterocele*, they are very much the ſame with thoſe of a *Bubonocele*, or *Omphalocele*, that is, a violent Fall, Leap, or Blow; a vehement Strain in moving or lifting Bodies;

Bodies; or, laſtly, Vomiting or Coughing; and, according to the Diverſity of the Cauſe, the Diſorder is formed inſtantly, or imperceptibly. It appears to the Touch like a Bladder or Inteſtine diſtended with Air. At firſt the Tumor ſhews itſelf ſmall, about the upper Part of the *Pudenda*, which, unleſs prevented at the Beginning, by degrees deſcends more and more, in ſuch a manner, however, that the Teſticle of the affected Side, near the Tumor, may be felt by the Fingers, though ſometimes the gradual Increaſe is ſo great, that the *Scrotum* hangs down to the Middle of the Thigh, or even the Knees. The other Symptoms of an *Enterocele* are almoſt the ſame with thoſe of a *Bubonocele*, *viz.* a preternatural Tumor about the private Parts, particularly in the *Scrotum*, like an inflated Bladder to the Touch, and extending itſelf from the Ring of the abdominal Muſcle to the *Scrotum*, near which the Teſticle may be perceived by the Fingers (*a*): This, when the Diſorder is not very great, nor the Part inflamed, ſometimes leſſens, and ſometimes increaſes; particularly, when the Patient lies on his Back, it ſpontaneouſly retreats from the *Scrotum* into the *Abdomen*, or at leaſt decreaſes, and is then generally without Pain; or it may be repreſſed by the Hands towards the *Inguen*, or into the Belly, and then it makes ſome Noiſe; but upon removing the Hand, or the Patient riſing, it returns again with the ſame Noiſe. It is increaſed by crying, Satiety, or carrying a great Weight; but contracted by Cold, and is dilated by Heat. Sometimes the deſcended Inteſtines are inflamed or ſwelled vaſtly with the Fæces, or adhere to the neighbouring Parts; then they cannot be repelled by the Hands. Upon preſſing this Tumor we plainly perceive an inflated Inteſtine, and a Swelling of the Rings of the abdominal Muſcles, and that ſometimes increaſing, ſometimes decreaſing, ſometimes with a Noiſe. Whenever, therefore, we find a Tumor can be forced into the Belly, we conclude it is an *Enterocele*. Men labouring under this Diſeaſe ſometimes, for the Reaſons already given, feel Pains not unlike the Colic, either more or leſs violent, in the *Scrotum*, *Inguen*, and *Abdomen*. Some are troubled with a *Nauſea* and Vomiting. When it is occaſioned ſuddenly, and by any violent Force, the Annulus of the abdominal Muſcles is often ſo narrow, that the Inteſtines cannot be repelled. Conſequently there is Danger of a worſe, that is, an incarcerated Rupture.

Though we have obſerved, that an *Enterocele*, in ſome Men, and ſometimes in pregnant Women, may be ſupported without any extraordinary Pain; yet that generally increaſes with the Tumor, ſo far as to render robuſt Men unfit for Labour; and, unleſs they are ſecured by a proper Truſs, there is great Danger, either from Cold, Leaping, Straining, Coughing, flatulent Food, Vomitings, Falling, Paſſion, and other ſuch or ſlighter Cauſes, that more of the Inteſtines will deſcend, and bring on an incarcerated Rupture, with other Diſorders mention'd under BUBONOCELE, that is, acute Pains, Vomiting, the Iliac Paſſion, and Hazard of Death itſelf. On the contrary, if they defend themſelves with a proper Truſs, and refrain from violent Motion, young Men may be perfectly reſtored, and Adults and old Men, as Experience proves, live as long, and, if they are otherwiſe in a good State of Body, as healthful a Life as others. We muſt obſerve, that a Deſcent of the Inteſtines with the Omentum, is leſs dangerous than that of the former only.

If this Hernia is not yet incarcerated, nor the Inteſtines intercepted, nor united with the external Parts, your principal Care muſt be both to reſtore them to their native Situation, and ſecure them there; and, further, to reunite the diſtended Annulus of the Abdomen; or rather contract it, ſo that they may not fall out again. After replacing the Inteſtines, there are two Methods of uniting *, or rather contracting, the Aperture of the Abdomen, as we have ſaid in a Bubonocele; *viz.* by binding it with a proper Bandage, or by Section, commonly call'd κήλοτομία, or Caſtration, becauſe a Teſticle is generally cut out. An Attempt to cure it by Ointments, Plaiſters, or any other Medicines, without binding, or by Tranſplantation, or Sympathy, is vain, at leaſt uncertain, and often ſuperſtitious. The beſt Remedy, therefore, for Ruptures which are recent, inconſiderable, and not incarcerated, is a proper Bandage, as we have deſcrib'd under the Article BUBONOCELE; for by this, as I have often experienced, not only Infants, and young Men, but Adults, when the Diſorder has been of little Continuance, and ſlight, have been abſolutely freed from it, eſpecially if proper internal and external corroborating Medicines, with a ſuitable Manner of living, have been added †; and if the Patient is old, or the Diſeaſe inveterate, theſe will alleviate it; for by a proper Application of them, the Inteſtines and Omentum may be contain'd in the Abdomen, worſe Symptoms prevented, and the Patient execute any Work, wherein very great Strength is not requiſite.

Of the CELOTOMIA, *or Caſtration.*

I cannot but join with thoſe who condemn the Method of Cure by Caſtration, which is perform'd, by, firſt, tying up the Proceſſus Peritonæi, and ſpermatic Veſſels, ſince it deprives the Patient of a Part ſo neceſſary to Generation, and he may be treated in a much ſafer and gentler Method; for Inciſion is very far from being effectual in theſe Caſes, and, at the ſame time, throws him into cruel Agonies, and an imminent Danger of his Life. And the Patient, or his Relations, ſhould avoid ſuch a Surgeon more than a Plague, ſince they muſt neceſſarily know, that the whole Art of a Quack conſiſts in getting Money, that it is void of Experience and Judgment, and conſequently made up of mere Fraud. It is, for this Reaſon, incumbent on all Magiſtrates and Governors, as the Cuſtom of ſome Countries is, to prohibit all itinerant Empirics the undertaking this pernicious and dangerous Method of Cure, without the Advice and Conſent of able Phyſicians. And, in my Opinion, the Temerity and Cruelty is very extraordinary, which attempts a Remedy accompanied with the moſt intenſe Agonies, the Loſs of a Teſticle, the Danger of Death, and a perpetual Apprehenſion of a Relapſe; for after this Operation, the Inteſtine and Peritonæum have often fallen down, and the Hernia return'd, as *Celſus*, *Cyprianus*, an eminent *Dutch* Surgeon, and my own Experience, thoroughly convince me. Let us, therefore, ſtick to the old Way of Bandage. See my Diſſertation on removing the Abuſe of Celotomy, publiſh'd at *Helmſtadt*, in the Year 1728‖.

As we think Bandage very ſerviceable in the Cure of an Enterocele, or Epiplocele, we ſhall explain how they are to be form'd, and applied. That is beſt which compreſſes the Part of the Belly where the Inteſtine falls down, ſo that neither the Inteſtine nor Caul can deſcend from thence; which is done by fitting it carefully to the Patient's Body. The Induſtry of the Moderns is very commendable, which has invented and deſcrib'd various convenient and proper Bandages for the Cure of this Rupture, either in one or both Sides. Thoſe which I think moſt ſuitable, are repreſented *Tab.* XLVI. *Fig.* 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15. and they are made of different Materials; thoſe for Infants and Youths, of thick Linen, or Fuſtian, ſtuffed with Cotton, or of ſoft Leather; thoſe for ſtronger Men, of ſtrong Leather, or Steel. Theſe Bandages, over a ſticking Plaiſter, being tied round the Body, not only repreſs the Inteſtines, and compreſs the Proceſſus Peritonæi, but ſometimes unite, or, at leaſt, contract the Coats ſo, that the Inteſtines can not fall down again. They ſhould be kept on for ſix Months at leaſt, and a thin Diet ſhould be obſerv'd, with Abſtinence from Leaping, Riding, and all violent Exerciſes, taking, at the ſame time, gentle Purges, and ſtrengthening Medicines, leſt the Inteſtines, being too much inflated, ſhould deſcend again through the Muſcles of the Abdomen. This Method ſeldom fails of curing a Patient under twenty Years old; nor ought we to deſpair, if he is thirty or forty, when the Diſorder is recent, and the Surgeon brings immediate Aſſiſtance. If he is older, we can never expect a perfect Recovery, and both the Patient and Surgeon ſhould content themſelves with the Relief that comes from a proper Bandage, and the Security of preventing a ſecond Deſcent of the Inteſtine and Omentum: For, I think, after what has been ſaid, nobody will have recourſe to the Inciſion-knife.

Celotomy, that is, Caſtration, is another Method us'd by Quacks, and abhorr'd by all regular Surgeons, 1. From the acute Pain attending it. 2. From the Danger of Life. 3. From the irreparable Loſs of a Teſticle. 4. From the continual Apprehenſions of a Relapſe. And theſe Reaſons are more prevailing, if the Patient is young. However, ſome Sections of an Hernia may, and ought to be undertaken, when the Inteſtines cannot be repel'd, and a Bandage, or other Remedies, are ineffectual; as when the fallen Inteſtines are united, either with the Scrotum, or the Proceſſus Peritonæi, in ſuch a manner, that they can by no means be forced into the Belly, but impede the Patient from doing his Buſineſs, and threaten him with the Calamity of an incarcerated Rupture. But Mountebanks, without this Adheſion of the Inteſtines to the neighbouring Parts, and when they may be repel'd, have frequently perform'd this Operation, both on Infants and old Men.

(*a*) It ſeldom happens, as GARENGEOT writes, that the Teſticle is ſo far immerſed in the Inteſtines, that it cannot be felt, becauſe it is contained in a peculiar Cover.

* Some aſſert this Aperture is never reunited, only contracted, the Truth of this can be learnt only from Experience.

† About the End of the laſt Century, a *Frenchman (Prieur de Cabrier)* boaſted, that he had found an Arcanum, which would cure any Rupture, without Bandage or Section. *Lewis* XIV. oblig'd him to diſcover it, for a Sum of Money; and then made it public for the Good of Mankind. It conſiſted of Spirit of Salt, with a certain Quantity of red Wine to be taken often every Day. See *Verduc, Lib. de Faſciis, p.* 24. *Valentini Polychreſt. Exot. p.* 89. *Dionis, Chir. Cap. de Herniis:* However, this did not prove effectual, without any Bandage.

‖ Some think the Loſs of a Teſticle entirely diſqualifies a Man for Generation; but I know this to be an Error, from many Inſtances; however, without doubt, a Man with two will ſucceed better, as we ſee better with two Eyes than one.

The Patient is laid on his Back upon a Table, with his Head reclining, and his Hips elevated, and either bound faſt down with Cords, or his Head, Hands, and Feet, held by ſtrong Men ſo faſt, that he can neither turn, nor move himſelf. Then the Operator protrudes the Inteſtines into the Belly, and then orders his Aſſiſtant to compreſs the Aperture of the Abdomen firmly with his Hand; then he makes an Inciſion, about three or four Fingers-breadth long, according to the different Size of the Body, through the ſuperior and lateral Part of the Scrotum, with the ſubjacent Fat, drawn upwards in the manner directed for the Cure of a Bubonocele, and for cutting Fontanels and Setons; he then ſeparates the Proceſs of the Peritonæum, now bare, and the Teſticle, from the neighbouring Parts, with his Fingers, and tears it out of the Scrotum with inexpreſſible Torment to the Patient; then he draws out the Proceſs, as far as he judges proper, and binds it round the upper Part with a Silk or Linen Ligature as in the Extirpation of Tubercles, tying up at the ſame time the ſeminal Veins and Arteries, to prevent an Hæmorrhage upon the Application of the Knife: Others ſeparate the Proceſs of the Peritonæum from the neighbouring Parts with their Fingers, and tie it with a String, before they extract the Teſticle; and to keep the Teſticle from the Sight of the Spectators and Relations, conceal it in one Hand; and afterwards, with all the Dexterity they are Maſters of, cut off whatever is ty'd, and the Teſticle, leaving a Finger's-breadth below the Bandage; then ſteal away the Teſticle, and fill the Wound with Lint, and, laying a Plaiſter and Compreſs over it, bind it up. When the whole Operation is performed, they put the Patient into Bed, as if he was ſtill poſſeſſed of his Teſticle. The Dreſſing is renewed for ſeveral Days, with Oil of Eggs, of St. John's-wort, or ſome other vulnerary Oil, till the Ligature of the Proceſs of the Peritonæum, and ſpermatic Veſſels, looſens and falls off ſpontaneouſly, which happens generally on the fifth, ſixth, or ſeventh Day. When the Ligature is fallen off, they heal the Wound with balſamic Medicines, and then they have perfected their Cure. In the mean time, if they are not Blockheads, they preſcribe Reſt for twelve or fourteen Days, and the Diet uſual after great Wounds, or chirurgical Operations; and they ought to continue this, till the Patient dies, or recovers. But every one, of the leaſt Experience, knows, that moſt Men, after the Operation, are ſeized with a Fever, Spaſms, and Convulſions, eſpecially if the Operator is not very dexterous, or the Diet neglected: Beſides, thoſe, who are thus cured, frequently relapſe into their old Diſorder. Some Surgeons, particularly the *Italians*, as appears from the Writings of *Fabricius ab Aquapendente*, and *Scultetus*, attempt a Remedy ſtill more inhuman; for, before they tie up the Proceſs of the Peritonæum, they paſs a large Needle through it with coarſe waxed Thread, and, after cutting off the Teſticle, cauterize the Wound of the ſpermatic Veſſels with a hot Iron.

The third and leſs cruel Method is termed the *Sectio*, or *Punctura Aurea*, exactly deſcribed by *Paré* and *Geiger*, contrived to prevent the Loſs of a Teſticle, and other ill Conſequences. It is thus: The Patient is laid on his Back, the Inteſtines are return'd, as we have already ſhewn, and, by an Inciſion, the Proceſs of the Peritonæum is laid bare, and the upper Part of it, near the Annulus of the Muſcles, ty'd with a fine Gold Wire, the Teſticle ſtill continuing in its proper Situation. This Thread is wound gently round the Proceſs of the Peritonæum, with a Forceps, in ſuch a manner, that the ſeminal Veſſels are inſenſible of any Compreſſion, and yet the Proceſs ſo ſtraitened, that the Inteſtines cannot deſcend into the Scrotum. But this is diſapprov'd of by myſelf, as well as others; for when the Bandage is lax, the Inteſtines eaſily depreſs it by their own Weight; and, when it is tight, the ſpermatic Veſſels likewiſe are compreſs'd, and the Teſticle is neceſſarily corrupted, not to mention the Difficulty of curing the Wound made in the Inguen, and the Fiſtula, a uſual Attendant upon this Operation, which muſt proceed from the continual Irritation of the Parts, by the Gold Thread. Hence I conclude, that ſkilful Surgeons will always depend upon the Bandage for a Cure of this Rupture, as long as the Inteſtines can be return'd.

Mr. *Jo. Douglas*, a celebrated Surgeon, at *London*, communicated to me the Method of one *Littlejohn*, without Inciſion. Firſt he returned the Inteſtines into the Belly, then applied a corroſive Medicine above the Os Pubis, to the Place where the Inteſtines deſcended (and he recommends Oil of Vitriol) in ſuch Plenty, that it might ſoon penetrate the Skin; for the deeper the Eſchar, the more effectual the Remedy: Therefore he orders it to be repeated for three or four Days, that the Skin may be the more corroded; and, upon every freſh Application of the Oil of Vitriol, he removed the old Eſchar, that it might penetrate the better; then he dreſſed the Wound with a Plaiſter of Paracelſus and Oxycroceum mix'd in equal Parts, and ſpread upon Leather, and ſecured it with Compreſſes and Bandage. This Plaiſter alone, he affirms, is ſufficient to ſeparate the Eſchar, and cure the Ulcer. If there was any Excreſcence of ſpongy Fleſh, he ordered it to be eaten off with the Lapis Infernalis. The Patient muſt obſerve a ſpare Diet, and refrain from Exerciſe, till the Wound is cured. After which, he lays the Rupture-plaiſter on the Cicatrix, and applies a proper Bandage. This Bandage muſt be worn, till the Cicatrix is ſtrong enough to prevent a Relapſe. King *George* I. out of his Princely Liberality, gave Five thouſand Pounds for this Arcanum, which was ſoon after deſpiſed by the *Engliſh*. See *Heuſton*'s Hiſtory of Ruptures, and *Douglas*'s Syllabus of Chirurgical Operations.

Sermes, a Surgeon of *Amſterdam*, and an old Acquaintance of mine, in his Treatiſe of *Lithotomy*, written in *Dutch*, *Anno* 1726. gives another Method of curing theſe Ruptures, without the Loſs of a Teſticle; which he confeſſes not to be his own Invention, but what he learnt from ſome, who were Eye-witneſſes of it in *Ruſſia*. A *Ruſſian* Surgeon laid ſuch Patients on a Bench upon their Backs, and ſecured them by the Aſſiſtance of ſtrong Men; then he made a rectilinear Inciſion, ſomewhat long, into the Groin, as is uſual in Celotomy, and ſearched for the Proceſs of the Peritonæum, opened it with a Knife, and there inveſtigated the Sack of the Rupture, which contained the Inteſtines (ſee *Tab.* XLVI. *Fig.* 4.). When he had found it, he extracted it out of the Wound with ſome Violence (*undoubtedly, after looſening it from the Parts, to which it is connected*); and ty'd it with a ſtrong Thread, as near as he could, to the abdominal Muſcles, (ſee *Fig.* IV. B B) and left the Thread hanging out of the Wound; he then dreſſed the Wound, as uſual, till the Thread fell off ſpontaneouſly. Thus he cured many, without any Injury to the Teſticle, or ſpermatic Veſſels; and not one, as they ſolemnly affirm, died. *Sermes* approves of this Method in Adults, when the Inteſtines cannot be contained in the Belly by Bandages, and the Patients undergo great Pain and Uneaſineſs. But the Certainty of this can only be confirmed by Experience. However, this is ſure, that, if it ſucceeds, it is preferable to the common Way, becauſe the Teſticle, and other Parts, are kept entire by it. And we muſt further learn from Experience, whether Ruptures, thus cured, do not return as eaſily, as thoſe cured by the vulgar Method, when the Sack and ſpermatic Veſſels are ty'd together; for I ſee no Reaſon, which can hinder it more in one than the other. And this is the more to be dreaded, when the Ruptures are large and inveterate; and, conſequently, the Place of the Deſcent greatly expanded and debilitated. Laſtly, we muſt obſerve, that a certain *Swiſs*, one *Freitage*, in the Year 1721. deſcribed this Method, as well known to his Father, a Surgeon at *Strasburgh*; and the Son, in his Diſſertation, ſays, it was practiſed by his Father ſucceſsfully, with this Difference, that he perforated the Saccus with a Needle and Thread, before he made the Ligature. Thus, alſo, in the Year 1730. a Diſſertation appeared at *Keil* in *Holſtein*, wherein the Author *Jor. Henr. Schuckman* affirms, that he had practis'd this Method with good Succeſs, and commends it greatly.

Some, for the Preſervation of the Teſticle, do not tie up the Proceſs, and ſpermatic Veſſels, but, repreſſing the Inteſtines and Omentum, ſcarify the Annulus and Skin, then bind it up properly, for the Promotion of a firm Cicatrix; and thus they declare they have cured many; particularly if they wore the Bandage long enough afterwards. But my Opinion is, that this Method is more effectual in Infants and Boys, than Men advanced in Years.

If an Enterocele is ſo large, that the Inteſtines cannot be return'd, principally if it happens from their Adheſion to the Proceſs of the Peritonæum, Annulus, Scrotum, or laſtly to the Teſticle, and expoſes the Patient to the Danger of the Iliac Paſſion, then all Bandages are abſolutely ineffectual, and rather excite or increaſe the Pain, Inflammation, and other dangerous Symptoms; nor are Medicines of any Service; but our ſole Hope of averting the Danger of an untimely Death, and the Iliac Paſſion, and reſtoring the Patient to his former Vigour, is in the Knife; for I know of no one yet, who has contrived a better and milder Method. When, therefore, this Operation muſt be performed, place the Patient, as before directed: You muſt firſt divide the Integuments, for Reaſons already given, till the Proceſs of the Peritonæum, and ſeparated Cover of the Inteſtines, appear to your View. Having done this, ſeparate the Inteſtines from the adherent Parts, with the utmoſt Caution, either with a ſmall Knife, your Finger, a Pen, or ſome ſuch Inſtrument, always conducting your Knife, in ſuch a manner, as, if Cutting is unavoidable, you may cut any thing rather than the Inteſtines; and, when they are ſeparated from the adhering Parts, force them into the Belly. This muſt be done too, if you unexpectedly meet with an incarcerated Rupture, adhering to the external Parts. Laſtly, having reſtored the Inteſtines, you muſt not only heal the Wound, but apply the Bandage, called *Spica*, to prevent a Relapſe.

Of incarcerated ENTEROCELE.

If the Stricture of the Inteſtine is ſo great in an Enterocele, that it cannot be returned, and conſequently becomes an incarcerated Rupture, and Cataplaſms, Bleeding, Clyſters, eſpecially one of the Smoke of Tobacco, are ineffectual, you muſt apply the Knife, to preſerve the Patient, as we directed in the incarcerated Bubonocele. And, for the better Illuſtration of this intricate Diſeaſe and Operation, you have *Mauchart*'s Figures, in *Tab.* XLVII. *Fig.* 1, 2, and 3. taken from his Diſſertation on incarcerated Ruptures of the Scrotum; and there you will find them

them explained. In the mean time, I beg leave to add the following Obſervations to what has been already ſaid.

When the Rupture is ſlight, and the Inteſtine reducible without dividing the Coat of the Saccus, then the ſuperior Parts of the Whole ſhould be expoſed to View by Inciſion; for by this means the Inteſtines may be ſafely returned; then proceed as in a Bubonocele. But, (2.) when the Diſorder is of a worſe kind, or the Inteſtine and Omentum adhere to the neighbouring Parts, or a large Quantity of Humour is contained in the Saccus, the preceding Method is not effectual, but you muſt divide the Saccus, and return the Inteſtines; but, if this is impracticable from a Stricture at the Ring, dilate that by Inciſion, and, having freed the Inteſtines and Omentum from their Adheſion, reſtore them to their proper Situations, as before directed. But the Inteſtines muſt be treated with ſo much Tenderneſs, as rather to divide the Part, to which it adheres *, even if it be the Teſticle itſelf, than injure its own Coats †. In the next Place, the Sacculus is to be freed from its Adheſion, and ty'd with a waxed Thread three or four times doubled about the ſuperior Part, near the Ring, the Part of the Sacculus below the Ligature is to be extirpated, and the Wound dreſſed, as in other ſuch Caſes. After the Thread is fallen off, there is a ſort of Tubercle, or firm Cicatrix, formed, which, being agglutinated to the ſcarified Wound of the Abdomen, retains the Inteſtines ſecurely, and prevents a Relapſe. But be very cautious of binding the ſpermatic Veins and Arteries. (3.) If the epigaſtric Artery is divided in this Operation, leſt a Profuſion of Blood ſhould be an Impediment to you, let an Aſſiſtant preſs and keep it cloſe to the Inguen, with a Roll of Lint, either dry, or dipt in ſome Aſtringent; or tie it up with a Needle and Thread. (4.) When the prolaps'd Inteſtine is ſo diſtended either by Flatulences or Fæces, that it cannot be commodiouſly reduced, nothing, to many Surgeons, appears more ſalutary and conducive to the Reduction of the Inteſtine, than gradually drawing out of the Abdomen the Parts moſt adjacent to it, and to preſs into theſe the Flatulences and Fæces contain'd in the Part before prolaps'd; and thus gently to return the gradually-leſſen'd Ducts of the Inteſtine. But leſt this difficult Extraction and Depreſſion of the Inteſtine ſhould weaken, or entirely rupture its Parts, which are already too much debilitated, I think it more expedient by an Inciſion, to be made in the manner above-deſcrib'd, to enlarge the Perforation of the Abdomen, as much as ſhall ſeem neceſſary; and then to replace the prolaps'd Inteſtines. As for the Meaſures to be afterwards taken, they are the ſame with thoſe uſed in an INCARCERATED BUBONOCELE; which ſee. (5.) When the Meſentery is found prolaps'd along with the Inteſtines, then, according to the Obſervation of Mr. *Petit*, the former is to be return'd before any Attempt is made to reduce the latter; for, unleſs this Caution is obſerv'd, the Inteſtines almoſt always fall down again. On the contrary, when the Omentum is fallen out along with the Inteſtines, the latter are always to be replac'd before the former. (6.) If, with the Sacculus of the Peritonæum, the Inteſtine is alſo wounded, Suture muſt be us'd, in order to join the Inteſtine to the Wound of the Abdomen. As for the other Meaſures to be taken, they are the ſame with thoſe us'd in Wounds of the Inteſtines. See ABDOMEN. (7.) When the Inteſtine is found corrupted, the corrupted Part is to cut off, and the ſound Part, by Suture, join'd to the Wound of the Abdomen. (8.) It ſometimes happens, that the Bladder, eſpecially in pregnant Women, and thoſe labouring under a Suppreſſion of Urine, falls thro' the Ring of the abdominal Muſcles. When this Accident happens, the prolaps'd Part of the Bladder is to be replac'd in the ſame manner we have directed for the Reduction of the Inteſtines. (9.) After the Operation is perform'd, the looſe and ſuperfluous Parts of the Skin of the Scrotum are to be cut off with a Pair of Sciſſars; for thus a cloſer and ſtronger Cicatrix is form'd, by which means the Return of the Hernia is the more powerfully prevented. And, laſtly, Compreſſes are to be apply'd to the Scrotum, and ſecur'd by a Bandage proper for ſuſpending the Scrotum.

Of an EPIPLOCELE, *or Deſcent of the* OMENTUM.

A Tumor ariſing from the Deſcent of the Omentum into the Proceſs of the Peritonæum, or Scrotum, is termed an Epiplocele. The Diagnoſtic of this Diſtemper is ſomewhat difficult; however, we may conclude it to be preſent, when we find an unequal, ſoft, and ſlippery Tumor, not greatly increaſed by holding the Breath, or ſtraining for a Stool, about the Proceſs of the Peritonæum, or ſometimes extending from them to the Scrotum; upon a Preſſure of the Fingers, there is no Noiſe, nor is there any ſuch Hardneſs, or Inflation, as we obſerved in an Enterocele. Sometimes the Omentum may be return'd, ſometimes it adheres ſo firmly to the neighbouring Parts, or ſwells ſo exceſſively, that it cannot. I found an Inſtance of both theſe Caſes in the Diſſection of a Man after his Death; though ſome deny, or doubt the Reality of theſe Herniæ. The Tumor is not ſo large or dangerous in an Epiplocele, as in an Enterocele; but the Patient may, with little Pain, and few Medicines, tranſact his Buſineſs; and this, indeed, ſeldom happens, as the Omentum in general is ſo ſmall, that it cannot reach the Proceſs of the Peritonæum, much leſs deſcend into it. Some, indeed, have miſtaken a Tumor of that Part from an extraordinary Diſtention of the Membrana Adipoſa in that Part, for an Epiplocele. I learnt formerly from *Ruyſch*, and have ſince read in *Dionis* and *Garengeot*, that there have been Examples of an Epiplocele, exactly reſembling an Enterocele, not only in the Symptoms, but likewiſe in the Conſequences and Danger; ſo that an Inciſion has been found neceſſary, tho' nothing but the Omentum afterwards appear'd to be fallen down.

In the Cure of an Epiplocele, after returning the Omentum, if that is practicable, apply a Bandage proper for Ruptures, as in the Inguinal or Scrotal Rupture: If the Omentum cannot be reduced, and yet the Patient ſuffers no great Pain, it is better to refrain from the Operation, than torture him by a Remedy worſe than the Diſeaſe. But as ſoon as the fallen Omentum ſwells, and induces an Inflammation, Pains, Fever, and Vomiting, which is common in incarcerated Ruptures of the Inteſtines, you muſt have recourſe to the Knife, as we adviſed for an incarcerated Hernia of the Inguen or Scrotum; always obſerving, not to reduce the thick corrupted Part of the Cawl, but tying it with a Thread, to cut it off, and only return the ſound Part, as we ordered in Wounds of the Abdomen; or you may wait for the ſpontaneous Separation of it, without a Ligature. See many remarkable Obſervations on this Diſorder, in *Le Dran's Chirur. Tom.* 2.

When the Inteſtines fall down, together with the Omentum, it is term'd an Entero-epiplocele, but it is ſcarcely diſcernible from a ſimple Enterocele. But the Diſtinction, indeed, is very immaterial, ſince they are both attended with the ſame Dangers, and require the ſame Cure. When the Tumor in a Ramex now-and-then vaniſhes or decreaſes, leaving only a ſmall ſoft Swelling, we may, with great Probability, conjecture there is an Entero-epiplocele; but it is manifeſt, this is leſs dangerous than an Enterocele, inaſmuch as the Fat prevents the Inteſtines from being compreſſed by the Annuli of the abdominal Muſcles, as they would have been, had they deſcended alone. In the Cure of this Diſorder, the Surgeon ſhould firſt reduce the Inteſtines and Omentum; and after the Agglutination of the Wound, ſecure them with a Bandage, as for an Enterocele.

Of SPURIOUS HERNIÆ.

A SARCOCELE.

We have already ſaid, that Tumors of the Scrotum are call'd *ſpurious*, or *falſe*, when neither the Inteſtine nor Omentum falls down, but they proceed either from a Scirrhus of the Teſticle, or Humours collected therein, or a Swelling of the ſpermatic Veſſels. And it is peculiarly term'd a *Sarcocele*, when the Tumor of the Teſticle is remarkably hard, and like a Scirrhus, or when there is a preternatural Exceſcence of Fleſh in it, which is attended with acute Pains, and ſometimes exulcerates, and, by degrees, becomes cancerous. We may immediately diſtinguiſh between an Inflammation of the Teſticle, and a Sarcocele; becauſe the latter is very ſlow in its Progreſs, and, at firſt, gives but little Pain; whereas the former, as in all Inflammations, is quick in its Progreſs, and begins with violent Pains and Heat. This Diſorder has many Cauſes: For, when the Teſticle is tumefied with any Degree of Hardneſs, we aſcribe the Sarcocele to the ſame Origin which produces a Scirrhus. If there is an Exceſcence of Fleſh, it is attributed to a Contuſion, or ſome ſuch external Force; though I once attended a Patient, labouring under this laſt kind, who never remember'd to have felt any external Violence. The Size is various, and, in the Opinion of ſome Surgeons, never larger than an Hen's Egg; though I have cur'd Men, whoſe Teſticles were bigger than my Fiſt; as a Proof of which I have preſerv'd ſome ſuch in Spirits. The moſt diſtinguiſhing Mark of a Sarcocele is Hardneſs, and particularly of the Teſticle; for other Ruptures are ſoft, and the Teſticle perceptible to the Fingers. I have learnt, both from *Wepfer*, and my own Experience, that, unleſs the Tumor is timely reſolv'd, a Sarcocele will degenerate into a Cancer, or, at leaſt, become very troubleſome from its Bulk and Pain, and affect, or entirely take away, the Power of Generation, eſpecially if both Teſticles are vitiated. If the Tumor aſcends through the Inguen to the Belly, the Attempt of a Cure by the Knife is ineffectual, and attended with Death, becauſe the Corruption has reach'd the internal Parts: It is, therefore, better to refrain from it.

* *Garengeot* ſays, in *Oper. Chirur. Tom.* 1. *p.* 320. *Edit.* 11. that the Teſticle is ſometimes confounded with the fallen Inteſtine, but this ſeldom happens, becauſe it is included in a peculiar Sack.

† Some adviſe a total Extirpation of the Teſticle, if it adheres to the Inteſtine, but it is better to tear off a ſmall Portion; for ſuch a Wound may, and does often, heal again.

When a Sarcocele is recent, it may ſometimes be reſolv'd by internal and external diſperſing Medicines. *Matthiolus*, *Aquapendente*, and *Scultetus*, recommend the Powder of the Root of Reſt-harrow, giving the Patient one Dram in Wormwood-wine, and applying externally the following Plaiſter:

Take of Gum Galbanum, Ammoniac, and Bdellium, each half an Ounce; diſſolve them in Vinegar, and add, of Duck's Fat, melted and ſtrain'd, an Ounce and an half; of yellow Wax, two Ounces; Oil of Lilies, and the Marrow of an Ox's Leg-bone, each ten Drams: Make a Plaiſter.

Spread this on Linen, and renew it every Day. *Dionis* recommends a Plaiſter of the Diabotanum Divinum, and that of *Vigo*, mixt, which he has us'd with Succeſs. Some prefer the *Emplaſtrum Norimbergenſe*, alone, as a good Digeſtive; or mixt with the preceding: Others, the Fomentations directed for the Cure of a Scirrhus. But I am convinced, from long Experience, that internal Remedies are moſt efficacious, as a Decoction of the Woods, and Mercurial Remedies; eſpecially if the Patient takes them every Morning, with a ſudorific Regimen; and a Mercurial Purge every third or fourth Day.

When all theſe Medicines prove ineffectual, and the Tumor and Pains increaſe, and become very troubleſome, and ſeem to threaten a Cancer, if the Diſorder has not reach'd the Annulus, there is but one Remedy, and that a deſperate one, to prevent its aſcending to the Abdomen, and becoming incurable: This is, to extirpate the tumefied Teſticle, or both, if they are affected, with an Inciſion-knife; which is term'd *Caſtration*.

This muſt be perform'd almoſt in the ſame manner as Celotomy by the Empirics; though we ſhould be more circumſpect than the Generality of them are; nor, after the Inciſion into the Skin and Scrotum, ſhould the Teſticle be rudely and violently torn out, leſt it occaſion great Pains and Convulſions, but looſen'd with the utmoſt Tenderneſs from the Parts to which it adheres, by a Knife, or Sciſſars, as the Caſe requires; firſt tying the ſpermatic Veſſels near the Inguen or Abdomen, and then dividing them; this will leſſen the Patient's Agony; laſtly, heal the Wound by the uſual Method of curing Herniæ. Since, upon the Diviſion of the ſpermatic Veſſels, now much diſtended, altho' they are tied, yet the Hæmorrhage is ſometimes ſo copious as almoſt to exhauſt the Patient, ſome, for this Reaſon, uſe a double Ligature, one under another; or, after looſening the Teſticle from the Scrotum, only make a Ligature upon the ſpermatic Veſſels, without immediately extirpating it; but, ſome Days afterwards, when it decays and putrefies, which is a Proof, that the ſpermatic Veſſels are properly tied up, they divide them; for then the Uſe of the Knife is not attended with Danger, or a Profuſion of Blood. If the Teſticle does not decay, it is plain the firſt Ligature is not tight enough: You muſt, therefore, make a ſecond, more tight. *Le Dran*, with good Reaſon, adviſes to perforate the Part which is to be tied, with a Needle and double Thread, and afterwards tie up each Half with theſe Threads, as a more certain way of preventing the Hæmorrhage. *Aquapendente*, *Scultetus*, and others, after having divided the Teſticle, apply a Cautery to the ſpermatic Veſſels, as moſt conducive to this End: But I prefer the former Method. To cure, then, a dangerous Sarcocele, which tends to a Cancer, we may, and, indeed, ſometimes muſt, caſtrate; for otherwiſe the Patient will ſcarcely ever be reſtor'd to his former Health; and the remaining Teſticle will ſuffice for Generation. I am ſenſible, that ſome looſen the Nerves from the ſpermatic Veſſels, before they bind them up, leſt the Ligature ſhould cauſe Spaſms, or Convulſions: But I am certain this is unneceſſary; for I cannot conceive a Poſſibility of looſening theſe ſmall Nerves from the ſpermatic Veins, with which they are ſo wondefully interwoven; to ſay nothing of the Improbability of Spaſms proceeding from the Ligature, when the Nerves, as I juſt now ſaid, are ſo very ſmall, and ſurpriſingly intermix'd with the other Parts. As for the reſt, lay Lint, or a ſmall Compreſs, below the Ligature; then take off the Teſticle about an Inch below it.

If there is a painful Excreſcence of the Teſticle, which Medicines will not diſperſe, and the Teſticle ſtill continues ſound, it may be remedied, and the Teſticle preſerv'd, by opening the Scrotum, and cutting off the Excreſcence *. But if it has affected the Teſticle, the prominent Parts cannot be taken off without violent Torture: Then you muſt remove the whole Teſticle, or ſome Part of it, in the manner already propos'd. The Skin, likewiſe, of the Scrotum, which is uſeleſs after the Loſs of the Teſticle, ſhould be extirpated with the Sciſſars; for this will promote the Healing of the Wound, and render the Scrotum more uniform. We muſt obſerve one Thing in regard to the Dreſſing; that you firſt lay on Lint and Compreſſes, with the Faſcia Inguinalis, call'd *Spica*; next, to mitigate the Inflammation, which generally happens in this Caſe, apply diſperſing Cataplaſms; laſtly, heal the Wound with digeſtive Ointment, and vulnerary Balſam, as after Celotomy. You may ſee ſome Obſervations on Caſtration in *Tulpius's Obſ. Lib. 4. Cap. 32.* and *Saviard's Obſ. Chirurg. 125.*

Of an Hydrocele.

An Hydrocele is a ſurpriſing Diſtention of the Scrotum, proceeding from ſome Humour; and, though it gives no Pain, it is very troubleſome. This Tumor is as big as an Egg, a Fiſt, a Head, and ſometimes larger; it uſually affects one Side only, though ſometimes both. Every Age, young, as well as old, are liable to this Diſorder; and ſome Children are born with it, or have it preſently after their Birth. This pernicious Humour does not always appear in the ſame Part, tho' it is commonly collected in the vaginal Coat, that is, between the Teſticle and the Coat next it, ſo that the Teſticle, as it were, ſwims in it, and is imperceptible to the Touch; then it ſeems to ariſe from the Eroſion or Burſting the lymphatic Veſſels of the Teſticle; tho' it is found under the Skin of the Scrotum, as *Celſus* long ago obſerv'd, eſpecially in new-born Children, or dropſical Perſons: Then it encompaſſes both Teſticles; but this is, by ſome, call'd a Dropſy of the Scrotum, and diſtinguiſh'd from an Hydrocele. Some Authors tell us of a preternatural Collection of Liquor † in the Proceſs of the Peritonæum above the Teſticle; and farther, that, in the Diſſection of a dead Body, they have found a great Quantity, in the Production of the Peritonæum, occaſion'd by an inteſtinal Rupture. Sometimes the Liquor is of a ſanguine Colour; or Blood itſelf is found in the Cavity of the Scrotum. This was not unknown to *Celſus*, as appears from *Lib. 7. Cap. 9.* We may properly call this an Hæmatocele, or Bloody Rupture, of which more hereafter.

An Hydrocele then may be known and accurately diſtinguiſh'd, 1. From a Dropſy of the Scrotum; for in this a Preſſure of the Finger leaves a Pit, as in tumefied Legs; the Skin is ſmooth, and the Penis commonly very much ſwell'd; whereas, on the contrary, in a true Hydrocele, the Penis contracts, the Skin is rough, and the Finger leaves no Pit. Beſides, in an Hydrocele the Tumor never ſubſides entirely; and it is ſoft, unleſs there is a great Plenty of the Humour; but then it makes a Reſiſtance like an inflated Bladder tied cloſe. The Veins too in the Scrotum are inflated, and the Humour gives way to the Fingers, and increaſes the Size of that Part which is not preſſed. 2. An Hydrocele is diſtinguiſh'd from an Enterocele, or Epiplocele, principally by the following Symptom: The Lymph encompaſſes the tumefied Teſticle to ſuch a Degree, that it is imperceptible to the Sight or Touch; but, in the latter, it may be perceiv'd on one Side. 3. Between a Sarcocele and Hydrocele (the Difficulty of diſtinguiſhing of which has miſguided many experienc'd Surgeons) this is the principal Difference: The latter often grows to a prodigious Magnitude, and appears (which is the moſt infallible Sign) like a Bladder diſtended with Water, while the former is very hard, but ſeldom of any extraordinary Bulk. Some, I know, adviſe to take the Patient in the Dark, and place a Candle behind the Scrotum; for they judge an Hydrocele to be then tranſparent, and that you may ſee through it as you may through a Bladder fill'd with Water, in the ſame Situation. But ſince this Water, as *Celſus*, *Ægineta*, myſelf, and others, have obſerv'd, is often turbid, and as black as Coffee, or bloody, every judicious Perſon will eaſily acknowledge there is no certain Dependence upon this. It is certain, when there is ſuch an Appearance, that there is an Hydrocele; but any other Appearance will not aſſure us, without further Reaſons, that there is no Hydrocele, as the Humours may be bloody. An Hydrocele is rather troubleſome than dangerous; for the Patient, if it is of any Size, can neither ride nor walk without Difficulty; and, when it is left within too long, there is Reaſon to fear the Teſticle may be corrupted, and grow callous, and, conſequently, a Scirrhus, or Sarcocele, or Cancer, enſue; though I have known Perſons live to a very great Age, without any ill Conſequence, more than the Inconvenience caus'd by the Bulk of it. But, as the Quantity of the Fluid unnaturally contracts the Penis, and hides it under the Tumor, the Act of Generation is render'd very troubleſome, if not entirely impeded. Though the Cure of an Hydrocele, either by Medicines, or the Inciſion-knife, is difficult; yet young Men are ſooner freed from it than old. When it is attended with a Dropſy, remove that firſt.

* *Dionis*, and others, recommend corroſive Medicines, for making a Wound in the Scrotum, and taking off the ſuperfluous Parts of the Teſticle, which is often ſucceſsful; but the Cure by the Knife ſeems more ſafe and expeditious.

† *Wideman*, *Lib. de Litho & Celotomia*, p. 84. and *Boerhaave*, *Aphor. Pract.* § 1227. and *Garengeot*, in *Chirurg. Operat.* and *Le Dran*, *Tom. 2. Obſ. 75.* ſay, that they have found Caſes of an Hydrocele, where the Teſticle might be touch'd with the Finger, and that the Swelling and Humour was then in the Proceſs of the Peritonæum above the Teſticle: But that the contrary ſometimes happens in an Enterocele, the Inteſtines, as I have obſerv'd, penetrate into the vaginal Coat, through that natural Septum which diſtinguiſhes the Teſticle from the Proceſs of the Peritonæum. But the Caſes, mention'd by theſe Authors, muſt be very uncommon; for I have cur'd many, both of an Enterocele and Hydrocele; yet never met with any thing of this kind.

Sometimes the ſame Perſon labours under this, a Sarcocele, and Hydrocele, at the ſame time.

Diſperſing and corroborating Medicines, applied internally and externally, often work a Cure of an Hydrocele, in young Men. Externally, Compreſſes, dipt in Wine, or Spirit of Wine, in which Roſemary, Sage, Chamomile, Fennel, Cumin, Marjoram, and the like, have been boil'd, being laid warm on the Tumor ſeveral times in a Day, are of great Service; nor is it amiſs to add, as ſoon as you take it off the Fire, Lime-water, and Spirit of Wine, or a ſmall Quantity of the latter by itſelf. The beſt Remedy for new-born Infants is, for a Man in good Health, and faſting, to chew ſome Nutmeg, and breathe often, every Day, for ſome time, upon the affected Scrotum. I the more readily recommend this, as I have frequently ſeen the good Effects of it; in the mean time we do not deſpiſe the holding Spirit of Wine in the Mouth, and, at the ſame time, breathing upon the Scrotum. If both theſe fail, lay the Cumin-plaiſter, ſpread upon Linen, ſeveral times in a Day, upon the Tumor, warm; or apply a Compreſs, moiſten'd with Spiritus Matricalis, warm likewiſe. As for internal Remedies, frequent Purging, particularly in Infants, is beſt; at the ſame time giving ſtrengthening, diſperſing, and diuretic Medicines. The Arcanum duplicatum of *Ludovicus* was eſteem'd wonderfully efficacious for the Hydrocele in Adults, as a few Doſes of it, according to him, with external diſcutient and nervous Medicines, will cure the Diſorder in a few Days. But I think it will do more Service in a Dropſy, than in an Hydrocele. If theſe diſappoint you, have recourſe to Inciſion; though that Operation, in Adults, is not always ſucceſsful. If an Inflammation be joined with an Hydrocele, forbear the Knife, till that is abated.

There are two Kinds of Cure, by Operation, one perfect or radical, the other palliative or imperfect: For the Surgeon has two Views in the Management of an Hydrocele; 1. To extract the noxious Fluid out of the Scrotum; 2. To prevent a Return of it: And, as the perfect Cure is ſuitable to both Deſigns, ſo the imperfect only extracts the collected Humour; and, as the firſt Method confines the Patient to his Bed for ſome Weeks, and expoſes him to Pain and Danger, while the other may be perform'd more readily, and repeated with leſs Inconvenience and Hazard, it is no Wonder the laſt is prefer'd: Wherefore I ſhall firſt conſider the palliative Cure.

The Antients, in performing the palliative Cure, uſed a Lancet, for the Perforation of the Scrotum; this they extracted after the Operation, then inſerted a Tube, through which the Humour was diſcharged: The modern and more commodious Practice is, to uſe a Trocar (ſee *Tab.* XLV. *Fig.* 1.). The Method is this: The Patient ſtands or ſits on the Edge of a Chair; then the internal Humour is preſſed downwards, from the ſuperior Part of the Scrotum, to diſtend the inferior, and kept thus by a flat Ligature; next, the Trocar, about a Finger's-breadth long, ſufficient to perforate the diſtended Integuments, which, in an inveterate Diſorder, are generally thick, is introduc'd into the lower Part of the Scrotum, and directed outwards, that the Teſticle may receive no Injury. When the Scrotum is thus perforated, the Needle is drawn out, and the Tube left behind, through which the collected Humours are diſcharged: After this, the Tube is extracted, and then the Operation is complete. Nor is the Scrotum only immediately contracted again, but the Wound alſo heals, without Plaiſter or Medicine; and the Patient may walk, and do his Buſineſs, without the leaſt Inconvenience; tho' the Practice of thoſe, who, after the Completion of their Work, involve the Scrotum in thick Compreſſes, dipt in Spirit of Wine and Lime-water, is by no means to be condemn'd. But, if the Humour is collected above the Teſticle, it muſt be extracted by a new Inciſion. Further, as, after this Operation, the Scrotum generally fills again in ſome Months, you muſt repeat it, leſt the Serum there collected ſhould, by contracting an Acrimony, corrupt the internal Parts, and, principally, the Teſticle; whence the Diſorder becomes much more dangerous: This is ſometimes repeated, two, three, or four times in a Year; and, ſometimes, not for ſeveral Years, according to the quick or ſlow Increaſe of the Humour. By theſe means, Perſons afflicted with this Diſtemper continue often in good Health, with little Inconvenience, and live to a great Age, as I have often ſeen: For, when the Water is once extracted, ſome robuſt Men are ſo happily cured, that they never have a Return; though, as this is not common, the Reaſon for terming it a palliative Cure is very manifeſt. When the Humour is turbid or thick, or when it is thick and tenacious, as ſome ſay it is, after many repeated Operations, and cannot be extracted by the Needle and Tube, but, inſenſibly, contracts a fetid Smell and obſcure Colour, not unlike Blood, you muſt, immediately, attempt the perfect Cure, leſt the Corruption and Diſorder increaſe. So, likewiſe, if an Hæmorrhage attends the Wound, *Garengeot* adviſes to open the Scrotum with a Knife, to ſearch for the injured Vein, and, when found, to tie it. But this never occurred to me.

When the above-mention'd Accidents happen, or when the Teſticle is corrupted, or the Patient deſires to enjoy perfect Health; the perfect Cure may be undertaken in one of the following Methods: Firſt, The Patient is laid on his Back, upon a Table or Bed, and either ſecured by four or five ſtrong Men, or, if it ſeems neceſſary, bound both Hand and Foot, as we ſaid before in Celotomy; then a lateral Inciſion is made with a Knife, (ſee *Tab.* XXII. G or I) about the ſuperior Part of the Scrotum, where the noxious Humour is contain'd; next, introduce into the Wound the Director, or, rather, the fore Finger of your Left-hand; and divide the Scrotum, to the very Bottom, with an Inciſion-knife or Sciſſars; by this means, the corrupted Humour will find an eaſier Paſſage: When that is diſcharged, examine the Teſticle: If it proves ſound and unaffected, fill the whole Wound with Lint; laying on a Compreſs, and the T Bandage: When theſe are taken off, fill it with digeſtive Ointment upon Lint, and apply the Bandage, that the hard and callous Coats of the Bag may be brought to a Suppuration, and ſeparated, and, conſequently, the Veins, whence the noxious Humour flow'd, be extirpated, and a Relapſe prevented. But, if theſe Membranes are very thick and hard, the digeſtive Unguent will not be ſufficient; but you muſt mix red Precipitate with it, or lay on the Precipitate, with that over it: If this diſappoints you, remove as much as you can, with the Inciſion-knife, or Sciſſars; then eat off what remains, with red Precipitate, burnt Alum, and a Digeſtive: After this, apply a vulnerary Balſam, and bind up the Wound, till it is cleanſed and healed. An adipoſe Excreſcence is ſometimes found in the Scrotum of one troubled with an Hydrocele: This muſt be removed, as we juſt now directed for callous Membranes, partly by Inciſion, and partly by corroſive Medicines. Though, upon opening the Scrotum, the ſeminal Veſſels may appear tumefied, do not, after the Advice and Practice of ſome, inconſiderately remove the Teſticle as uſeleſs and noxious; for Nature alone often cures theſe Tumors; but the ſpermatic Veſſels muſt be tied with a Thread, and the Teſticle taken away, as we have ſhewn under the Article SARCOCELE, when the ſeminal Veins are remarkably indurated, and the Patient feels extreme Pains. You muſt, likewiſe, examine very accurately, whether the tumefied Teſticle contains, internally, any Fluid; for this ſometimes happens; and, if you perceive any by your Touch, you may conclude, it is Water or Pus: Nor is this a ſufficient Reaſon for taking it off, as ſome do, ſince it may be cured by an Inciſion and Cleanſing only; but, if it be found very callous and corrupted, you muſt bind and extirpate it, as above, to prevent a Cancer. If the Humour is contain'd, as ſome Writers affirm it may be, in the upper Part of the Proceſs of the Peritonæum, and the Teſticle is not affected, though the Scrotum is diſtended; take particular Care, while you cut the hard Membranes, that the Teſticle receives no Damage.

Since many dread the Inciſion-knife, the Scrotum may be open'd by corroſive Medicines, and the Water extracted. For this Purpoſe, apply a Plaiſter with a long narrow Aperture to the external Side of the Scrotum; lay a cauſtic Stone, or ſome other proper Corroſive, on the Aperture; then cover it with an entire Plaiſter and Compreſs, and ſecure the Whole with the T Bandage. If the Cauſtic does not perforate the Coats of the Scrotum, the Eſchar muſt be divided by a Probe, Knife, or ſome other proper Inſtrument, the Water diſcharg'd, and the Cavity of the Wound fill'd with Lint; then proceed, as we directed before, till the Patient recovers: In this manner I have cured ſeveral. Here I muſt obſerve, that *Garengeot* dreads many ill Conſequences from the Cauſtic, as it may mix with the morbid Humour, and injure the Teſticle: But his Fear is groundleſs; for, as ſoon as that has perforated the Integuments of the Scrotum, the diſcharging Liquor repels and waſhes it off; or, if any ſhould find a Paſſage into the Scrotum, the Water will temperate it in ſuch a manner as to make it entirely inoffenſive: And I am confirm'd in this Opinion by Experience.

The third Method of performing the perfect Cure is this; a Piece of Tape, or a narrow Linen Cloth, in a large Needle, (as we recommended for a Seton, (ſee *Tab.* XXXIX. *Fig.* 12.) is paſſed through the ſuperior lateral Part of the Scrotum, ſo as not to injure the Teſticle, and brought out again at the Bottom. The Tape is left in, as in a Seton; and, after rubbing it with digeſtive Ointment, is drawn backwards and forwards twice or thrice every Day: This not only promotes the Diſcharge of the noxious Humour, but prevents an Inflammation, and cauſes an internal Suppuration; ſo that the corrupted Veins and Integuments are ſeparated from the ſound Parts. In twenty Days, or more, when the Suppuration is complete, and little or no Humour diſcharges, extract the Tape, and heal the Wound. If the Suppuration does not ſucceed by rubbing the digeſtive Ointment on the Tape, mix with it ſome red Precipitate. However, ſince the preceding Methods do more commodiouſly extract the noxious Humours, cleanſe the Sack, and diſcover whether the Teſticle is ſound or not, and whether there is a latent adipoſe Body, it is no Wonder they are preferr'd, as more ſafe and effectual than this: For if any putrid Matter, Scirrhus, or Corruption, has ſeized the Teſticle, it will be better to proceed by Celotomy; or, if the Membrane is adipoſe, to remove that, than, by leaving them, to render the Cure not only precarious, but expoſe the Patient to more and greater Dangers.

Marini, a modern *Italian* Surgeon, prefers the following Method to any other, as the moſt uſual (perhaps in *Italy*). The

Body

Body being prepar'd, the Scrotum is divided in its upper Part, immediately under the Inguen, by an Incision large enough to admit a Finger, and then a Tent of Wax, the Thickneſs of a Finger, and about three Fingers-breadth long; the Point of this muſt be ſomewhat crooked: This is rubbed with Ointment of Marſhmallows, and introduc'd into the Cavity of the Scrotum, where, after it has continu'd twenty-four Hours, the Part affected will be ſound. The Water is not evacuated, the Tent is gradually ſhorten'd, as the Cavity diminiſhes, and the Tumor diſperſed by an emollient Plaiſter. When there is a Suppuration, the Tent is dreſſed with the digeſtive Ointment of *Galen*, and Ointment of Roſes put into the Scrotum. In ſeven Days, the Tent is rub'd with compound Oil of St. John's-wort, the Sinus cleans'd, and, the Tumor being digeſted, the Wound gradually leſſens and heals; then the Tent is taken out, and the Cure completed by a proper Regimen. The Author forbids this Operation, while the Sun is in *Scorpio*, as that would protract the Cure; but this is mere Superſtition. *Ruyſch* deſcribed much the ſame Method before that Author. If you attempt a Cure, ſays he, by opening the Scrotum in the ſuperior Part, on one Side, then fill the Wound with an oblong Tent, rubbed with Ointment of Roſes mixt with red Precipitate, till a gentle Inflammation, and a ſmall ſucceeding Suppuration, has putrefied the Membranes; then extract them with a Forceps. I have known many perfectly cured by this Way. Obſerve, that the Practice of theſe Authors will be effectual only when the Teſticle is ſound: On the contrary, if we ſuſpect, or know, that to be corrupted, we muſt have recourſe to the firſt or ſecond Method of a perfect Cure.

Some itinerant Quacks perſuade themſelves, they have ſtill a more ready and ſafe Method: They make an Inciſion into the Inguen, make a Ligature upon the Proceſs of the Peritonæum and Teſticle, as they do in an Enterocele; then tear it out, tho' it is ſound. I am ſo far from approving of this, that, I think, they deſerve the ſevereſt Puniſhment for their Barbarity, who cruelly deprive a Man of a Part ſo neceſſary for the Continuation of the Species, when it might be ſaved. To conclude, the perfect Cure will be more ſucceſsful in young and robuſt Perſons, than thoſe advanced in Years, and infirm: I would, therefore, recommend the palliative Cure for them. In a word, the utmoſt Care is neceſſary, not to miſtake an Enterocele for an Hydrocele, leſt the Patient ſhould be deſtroy'd by wounding the Inteſtine, while we deſign only to make an Inciſion into the Scrotum.

An Explanation of the forty-ſixth Table.

Fig. 1. Repreſents a latent Inciſion-knife, (Gall. *Biſtouri herniaire cachée*) for dividing the Parts in incarcerated Ruptures, and cutting Fiſtulæ in the Anus: The acute Part A is elevated out of the Groove, and cuts, when the Handle B is depreſſed; C C C is the Groove, which conceals the Knife, till it is elevated: D D the Handle of the whole Inſtrument; E the Screw, or Hinge, about which the Knife is moved, upon depreſſing the Handle: F the Spring, which returns the Knife into its Groove, when B is not depreſſed.

Fig. 2. A B repreſent almoſt the ſame Inſtrument, but out of the Groove C C: The inferior Part is furniſhed with a Plate, in the Form of an Heart, D, which prevents the Inteſtines, in the Operation for an incarcerated Rupture, from riſing above the Knife, and being wounded: E a different kind of Handle from the former; the Hinge and Spring likewiſe vary.

Fig. 3. A is the Scrotum, moderately diſtended, on the Right Side, by an Enterocele: B exhibits the Manner in which the Inteſtine C C deſcends, and is reduplicated in the Scrotum (which is here divided). This Figure is taken from *Berengere's French* Treatiſe on Ruptures.

Fig. 4. A ſhews the Proceſs of the Peritonæum, near the Inguen, as yet cloſed; but, at its other Parts, B B B B open'd by the Knife: C is the Teſticle, with the ſpermatic Veſſels E: D the Sacculus, which is the inferior Coat of the Peritonæum, diſtended and lengthen'd by a Deſcent of the Inteſtines, or Omentum, or both, here extended almoſt down to the Teſticle.

Fig. 5. 6. *&c.* to 15. Repreſent various ſorts of Truſſes, for retaining the reſtored Inteſtines. Some of theſe (*Fig.* 6. 12. and 13.) are made of Cotton, eſpecially for Infants; or of Leather, for Adults: Others (*Fig.* 5. 7. 8. and 15.) of Steel, cover'd with Leather: Some of Steel Plates, with moveable Joints, (as *Fig.* 15.) ſo as to be more commodious: Some are deſign'd for Ruptures on both Sides (as *Fig.* 8. and 9.): Some for a Rupture on the Right Side only (as *Fig.* 6. 7.): Others on the Left (as *Fig.* 5. 10. 13. 14. and 15.): Some are faſten'd to the Body with Tapes (as *Fig.* 9. 10. 13.): Others with Straps and Buckles (as *Fig.* 6. 9. 13.): Others with Hooks and Eyes (as *Fig.* 5. 7. 8. 15.): Others again with different Contrivances (as *Fig.* 11. 12.). A ſhews the Bolſter in each Truſs, which ought to be ſomewhat hard; and is applied to the Ring of the abdominal Muſcles, after the Rupture is reduced: The Belt B B encompaſſes the Belly, and is faſten'd with Strings C C, paſſed through the Apertures D D; or with Buttons, (*Fig.* 6. and 14.) E E; or with Hooks and Eyes (*Fig.* 5. 7. 8. 15. *a a*). In moſt of theſe Truſſes, beſides the Belt ſurrounding the Belly, there is one which hangs down, as (*Fig.* 5. 6. 10. 11. 12. 13. and 14.) F F: This is carried between the Legs, and faſten'd on the oppoſite Side, with Buttons, Hooks, *&c.* *Fig.* 10. *a* exhibits the oppoſite Part of the Bolſter A, made of Leather. *Fig.* 11. *b c* is the anterior Part of a Wooden Bolſter, *d* the poſterior, where it is convex: This is laid on the Rupture, and faſten'd with the Button *e e*, at the three Extremities G, H, I, where the triangular Holes are. There is a great Variety of Truſſes; but I have only exhibited thoſe which ſeem beſt adapted to the Cure.

Of the Hæmatocele.

When, inſtead of Serum or Water, the Scrotum is diſtended with Blood, or a bloody Humour, it is called an Hæmatocele. This Diſorder has been obſerved by myſelf, and ſeveral Moderns, as well as by *Celſus* and *Paulus*, among the Antients. This is diſcovered by the ſame Indications as the aqueous Rupture; but, if the Scrotum is nicely examined by a Candle, it is ſo far from being tranſparent, that it is rather dark, and inclined to black. The moſt certain Symptom is, when, upon a Perforation of the Scrotum by the Trocar, a bloody Humour is diſcharged inſtead of a Serum.

The Cauſe is generally ſome external Violence, as a Contuſion, Laceration, or Rupture of the Veins in the Scrotum, by which the Blood is diſcharged into the Scrotum; and, if it continues long there, is corrupted, and injures the Teſticle, the Conſequences are very bad.

The proper Treatment is, to open the entire Scrotum on the affected Side, and diſcharge the bloody Humour; then to cleanſe it well, and, if the Teſticle is ſound, conſolidate the broken Veſſel, and heal the Wound with Balſamics. But, when the Teſticle, and ſpermatic Veſſels, are corrupted, but the Corruption has not reach'd into the Abdomen, the Veſſels ſhould be tied in the Inguen, and the vitiated Teſticle ſhould be taken off.

Of a Dropſy of the Pudenda.

We call it a Dropſy of the Pudenda, when they are diſtended by any noxious or redundant Humours, ſo that they retain the Print of a Finger, whilſt the Skin is ſmooth, and the Penis not drawn back. In this Caſe, the Humour is generally lodged in the exterior Coats of the Scrotum, eſpecially in the cellular Membrane, which diſtinguiſhes it from an Enterocele, and Hydrocele. This happens ſometimes whilſt the reſt of the Body is unaffected; at other times, the Whole is, at the ſame time, ſwelled; and then you can never hope for a Cure, till the general Diſorder is removed. When the Pudenda only are ſwelled, an internal and external Application of the digeſtive and corroborating Medicines, recommended for an Hydrocele, join'd with a proper Diet, will be very ſerviceable. If this will not ſuffice, it is often proper to ſcarify the Scrotum and Penis in Men, and Labia Pudendorum in Women, that the Humour may gradually diſcharge itſelf through thoſe Parts. Great Advantages may accrue from a warm Fomentation of Lime-water, either alone, or ſtrengthened with the Lapis Medicamentoſus of *Crollius*; and from a frequent Application of Compreſſes, moiſtened with Spirit of Wine, and other Medicines recommended for an Oedema. *Garengeot* prefers, above all, laying on the ſcarified Part the *Norimberg* Plaiſter, full of ſmall Holes, through which the Humour may flow: The Plaiſter of Cumin and Diaphoretic Plaiſter of *Mynſicht* are proper for the ſame Purpoſe. When the Scarification unites, or grows dry, it may be diſcretionally repeated; but, if the Scarification alone will not work a Cure, make a kind of Seton in the loweſt Parts of the Pudendum.

Of the Hydro-sarcocele.

An Hydro-ſarcocele is diſtinguiſhed from a ſimple Hydrocele, by the Perception of a Humour fluctuating about the hard Body of the Teſticle; and ſtill better, if the Teſticle continues preternaturally diſtended and indurated, after a Diſcharge of the Humour; for, when the Scrotum is enlarged by Water, it is very difficult to know one from the other, as the Teſticle is imperceptible to the Touch, unleſs the Quantity of Water be very ſmall. If the Patient therefore is only deſirous of being freed from the redundant Humour, it may be eaſily done in the manner directed in the ſimple Hydrocele. But when the Teſticle is greatly enlarged, callous, and painful, and the Patient willing to try the perfect Cure, you muſt remove the Hydrocele and Sarcocele by the ſame Operation. Firſt open the Proceſs of the Peritonæum; next tie up the ſpermatic Veſſels, and Tunica Vaginalis, which is contiguous to the Proceſs of the Peritonæum; and then extirpate the vitiated Teſticle. Thus, by removing the corrupted Coats, and Veins of the Teſticle, with the Teſticle itſelf, they are both cured.

Of an Hydro-enterocele.

We know an Hydro-enterocele, by a Tumor ſtill remaining on the ſame Side of the Teſticle, after the Reduction of the Inteſtine. But, when the Hydrocele is on one Side, and the Enterocele on the other, they are two diſtinct Diſorders, and therefore to be treated in two different Methods. In the firſt,

firſt, the Inteſtines are to be returned into the Abdomen, and ſecured by a proper Bandage; in the ſecond, the Humours are to be diſcharged, and this by the perfect or palliative Cure, according to the Surgeon's Diſcretion, and the Patient's Inclination. But great Care ſhould be taken, not to open the Scrotum, till the Inteſtine is reſtored, and retained by an Aſſiſtant, leſt, in dividing the former, you wound the latter; and, inſtead of Relief, bring infallible Death. When theſe Diſeaſes are on different Sides of the Scrotum, the Danger is not ſo great.

Of the Pneumatocele, *or* Flatulent Rupture.

Several Writers aſſure us, there is ſuch a Diſtemper as the Pneumatocele, though, in my Opinion, it does not appear either from Reaſon or Obſervation: I am rather inclin'd to think an Hydrocele or Enterocele, cured by Medicines, or ſpontaneouſly returning into the Abdomen, have been miſtaken for this Diſorder; and am confirmed in my Opinion, by the Reſemblance it bears to an Hydrocele, both in the Symptoms, and Method of Cure. I myſelf have attended Patients, whom others thought afflicted with a Pneumatocele, when it was only one of the former. Thus that experienced Surgeon *Meekren* intitles *Cap. 15. in Obſ. Chirurg. de Paracenteſi Scroti in Hernia Flatulenta*: Whence any one would imagine, that there really was a flatulent Rupture; but, upon Peruſal of the whole Chapter, he will find the ſole Diſcharge to be Water, without any Flatus.

The Signs, by which theſe Authors pretend to diſcover a Pneumatocele, are, 1. The Scrotum ſeems to the Touch like an inflated Bladder. 2. Conſequently it is much lighter, than if it was replete with a Humour, and tranſparent at the Approach of a Candle. Laſtly, If it is ſtruck with the Finger, it ſounds like a Bladder diſtended with Wind. For my Part, I never met with this Rupture, though I have cured many other Sorts; and therefore believe it not ſo common, as ſome would inſinuate. However, if ſuch a Diſeaſe ſhould occur, it may be treated in the following manner: Apply externally the diſcutient Medicines, Fomentations, and Plaiſters, which we recommended for the Cure of an Hydrocele. Preſcribe internally Carminatives, and gentle Purges. But, if theſe will not remove the Tumor, and the Patient is willing to be cured by an Operation, introduce the Trocar, together with its Canula, into the Scrotum; when that is perforated, the Contents, whether Wind or Water, will diſcharge themſelves. I do not think this ever occurred to *Garengeot*, as he has not once mentioned it in all his Writings. In *Paulus Ægineta*'s time, it was taken for a dilated Artery; and therefore the Cure was never attempted, for fear of a mortal Hæmorrhage. *See Lib. 6. Cap. 64.*

Of the Hernia Varicoſa, *or* Cirſocele.

Sometimes the ſpermatic Veins are preternaturally diſtended, immediately above the Teſticles, in the Proceſs of the Peritonæum, in the Bottom of the Scrotum, and ſometimes higher, even in the Inguen; ſo that they reſemble a Varix, the Inteſtines of a Bird, or a Quill, ſometimes with unequal Nodes, which are frequently pretty large; by which means the Teſticle hangs below its proper Situation. Phyſicians term this Diſorder, a Ramex varicoſus, Varicocele, and Cirſocele, though perhaps it may be more properly called Varices of the ſpermatic Veſſels. The Veins of the Scrotum, according to *Celſus*, are liable to Dilatation; but, with *Fabricius ab Aquapendente*, this may rather be termed Varices of the Scrotum, than a Rupture. However, they are often confounded, and eſteemed one and the ſame Diſeaſe.

Both theſe Diſorders are aſcribed, either to a Redundance, or too thick Conſiſtence, of the Blood; the Stagnation of which, in thoſe Veins, occaſions a painful Diſtention. Sometimes this Diſeaſe proceeds from an external Violence, whereby the Veins are contuſed or weakened, and the Circulation of the Blood ſtopt. I have obſerved it in the Scrotum of young Men, who are very libidinous, and too full of ſeminal Juices; for their Veins are dilated by an unuſual Quantity of Blood convey'd to the Teſticle; however, it gives no great Uneaſineſs, and cannot properly be accounted a Diſtemper: Not only Operations therefore, but Medicines, are unneceſſary; tho', when they are accompanied with Pain, the ſubſequent Method muſt be followed.

When this Diſorder ariſes in robuſt healthy Men, from too great a Quantity of Semen in the ſpermatic Veſſels, recommend Matrimony to them. If this will not cure them, or they are already married, or if it proceeds from external Violence, Medicines will be of very little Service; for they will ſcarcely reſtore the diſtended, weakened, or lacerated Veins, to their former Vigour; tho', as theſe Diſorders are known to ariſe principally from an Inſpiſſation of the Blood, diluting and corroborating Remedies may be proper. You may, after Bleeding, apply externally ſuch aſtringent and ſtrengthening Fomentations, as are recommended in an Hydrocele.

When the preceding Medicines were ineffectual, and both the Tumor and Pains increaſed, the Antients recommended a Cautery, or a Ligature of the Veins in the Coats of the Scrotum; but, as this Method has an Appearance of Cruelty, if the Varices are in the Coats of the Scrotum, I would adviſe to open the diſtended Veins, the whole Length of the Tumor, and let out ſome Ounces of Blood; then dreſs the Wound with Lint, and a vulnerary Plaiſter, ſecuring them with a proper Compreſs and Bandage. In the following Dreſſings uſe a vulnerary Balſam and Plaiſter, till the Wound is united; for this will not only free the Patient from the inſpiſſated Blood, and concomitant Pains, but ſtrengthen the lax Part of the Vein by a firm Cicatrix, ſo as to prevent a Relapſe. If the Diſorder is in the Scrotum, divide that, and the Proceſs of the *Peritonæum*; then proceed as before. In the mean time adviſe the Patient to drink plenty of thin Liquor, to uſe frequent Exerciſe, with attenuating Medicines, and bleed two or three times in a Year. On the contrary, prohibit all groſs and hard Food, and a ſedentary Life, as conducive to inſpiſſating the Blood. This Advice is neceſſary at the Beginning to prevent the Increaſe, or remove the Cauſe, of the Diſtemper. If the Swelling is very painful, ſome tie up the ſpermatic Veſſels, and Proceſs of the *Peritonæum*, in the Inguen; and extirpate the Teſticle with the varicoſe Veins. But, if the Veſſels are indurated to the Annulus, it is better to refrain from this Operation, as Death uſually attends it.

Hernia Humoralis.

A Hernia Humoralis is a painful and inflammatory Tumor of one or both Teſticles, ariſing generally from a Suppreſſion of a virulent Running in a Gonorrhœa, or from too ſtrong and ſtimulating Cathartics, eſpecially if the Patient happens to take the leaſt Cold during their Operation. The Cure of this Symptom muſt commence with Bleeding; and a Bag-Truſs muſt be immediately provided, which may ſupport the Weight of the Tumor, and contain and ſecure the proper Applications; among which none excels a Cataplaſm of Bean-meal, with ſimple Oxymel, adding to it a little of the Oil of Roſes, or Ointment of Elder, to preſerve it from hardening and drying. Or a Decoction may be prepared of the Flowers of Chamomile, Meliſot, Elder, and red Roſes, which is to be inſpiſſated with Bean-meal, adding towards the Concluſion the Oxymel as above. Thus:

> Take of the Tops of the leſſer Centaury, one Handful; of the Flowers of Chamomile, Meliſot, and Elder, each half an Handful: Boil in three Pints of Forge-water, to the Conſumption of half the Quantity; then ſtrain it, and, putting it a ſecond time on the Fire, let it be reduced to the Form of a Poultice, with Bean-meal, adding, towards the End, of ſimple Oxymel, four Ounces; and, of the Ointment of Elder, two Ounces: Preſerve for Uſe.

During theſe Applications, forbear all reſtringent or balſamic Medicines, and purge the Patient briskly with Calomel, and Pilulæ ex duobus; but particular Care muſt be taken, that he gets no Cold; by which Method the Swelling is uſually, in a few Days, diſperſed, and the Running again appears, which muſt be carried off by the ſame or the like Cathartic, repeated at proper Intervals.

But if, notwithſtanding this Method, the Pain and Fluxion ſtill increaſe, with Inflammation, threatening an Abſceſs, the Patient muſt be vomited with the Turpeth Mineral; ſuch Intervals being obſerved, as may prevent any Soreneſs of his Chaps, till the Tumor ſubſides; then purge off the Reliques; when, if any ſcirrhous Hardneſs ſhould remain, you may endeavour to diſperſe it with the *Emplaſtrum Diaſulphuris*, the *Emplaſtrum de Razis cum Mercurio, de Cicuta cum Ammoniaco, ex Ammoniaco*, the *Diagalbanum*, or with a Suffumigation with Vinegar.

This is the Method propos'd by *Turner*, for the Cure of an Hernia Humoralis. But I muſt remark, that, as the Pilulæ ex Duobus is a Purge never eligible in any Sort or Stage of the Venereal Diſeaſe, ſo, particularly in this, it generally increaſes the Pain and Fluxion by its exceſſive Stimulation. And, upon the Whole, I think any ſort of Purging, in this Caſe, much better omitted, till the Pain ceaſes, and the Tumor ſubſides. Mean time, copious Bleeding, ſucceeded immediately by one or more Turpeth-vomits, in the very Beginning, or any Stage of the Diſorder, promiſe fairer to remove it, and prevent a Suppuration, or Induration of the Part.

But *Deſault*, a *French* Author, propoſes another Method of curing an Hernia Humoralis, which he lays great Streſs upon, and celebrates with conſiderable Encomiums. It is, to rub into the tumefied Teſticle, a ſufficient Quantity of Mercurial Ointment, made with three Parts Axungia, to one of Quickſilver; after copious Bleeding, adminiſtring a Purge of Jalap-root after it, and repeating it ſo as to keep up a perpetual artificial Diarrhœa, ſo long as the Uſe of the Ointment is continu'd. When a Tumor, ſays he, ſeizes one or both Teſticles with Pain and Pulſation, threatening Suppuration, I bleed the Patient copiouſly, and repeat it according to the Age of the Perſon, and as there is occaſion, till the Inflammation ſeems no more inclinable to ſuppurate. I fly quickly to Frictions and Purges, which make the Pain ceaſe after the third time.

The Doſe of the Ointment ought to be proportioned to the Number and Violence of the Complaints. I am not ſatisfied with applying it only upon the Parts aggrieved; I rub it in upon the neighbouring Places, and inner Parts of the Thigh. In proportion as the Diſorder is conſiderable, I employ ſix Drams, and even an Ounce of the Ointment. *Deſault.*

We have, in a Note above, taken ſome Notice of the Prior *de Cabrier's* celebrated Method of curing an Enterocele, which was purchaſed by the King of *France*, for the Good of the Public. It is done by Spirit of Salt, mix'd with red Wine, in a Quantity ſuitable to the Age of the Patient; and thus drank for ſeven Mornings, faſting, the Patient remaining for four or ſix Hours afterwards without taking either Victuals or Drink: But if it ſhould happen not to agree with the Stomach, then it may be taken only every other Day. For a Child from two Years old to ſix, the Doſe is three or four Drops, in a Spoonful or two of red Wine; from ſix Years to ten, let a Dram of the Spirit be mix'd with a Pint of Wine, for ſeven Doſes. It is to be continued, if neceſſary, for a Fortnight longer, in the ſame manner. From ten to fourteen Years, the Quantity of the Spirit may be increas'd to two Drams; from fourteen to eighteen, to two Drams and an half; and after eighteen, to five Drams. During four Months, after this Courſe is begun, a Steel Truſs muſt be worn Night and Day, exactly fitted to the Rupture. The Patient ought never to ſit down, but either to ſtand, or lie, and neither run, ride, nor go in a Coach, taking great Care to commit no Error in Diet. Under the Truſs the following Plaiſter is applied to the Part, being firſt ſhav'd:

Take of Maſtich, half an Ounce; Labdanum, three Drams; Hypocyſtis, one Drams; three dried Cyprus-nuts; of ſeal'd Earth, one Dram; black Pitch, three Ounces; Venice Turpentine, one Dram; yellow Wax, one Ounce; dry Comfrey-root, half an Ounce: Make into a Plaiſter, according to Art. *Geoffroy.*

HERNIARIA.

The Characters are;

The Root is fibrous, the Calyx multifid, quadrifid for the moſt part, or quinquefid, expanded in form of a Star, and furniſhed with five Stamina. The Fruit grows to the Bottom of the Flower, and becomes a round, membraneous, ſtriated Capſule, divided into eight Cells, each containing one ſmall acuminated oval Seed.

Boerhaave mentions three Species of this Plant; which are,

1. Herniaria; glabra. *J. B.* 3. 378. *Tourn. Inſt.* 507. *Boerh. Ind. A.* 2. 69. *Herniaria.* Offic. Ger. 454. Emac. 569. Raii Synop. 96. Hiſt. 1. 214. *Millegrana major, ſive Herniaria vulgaris.* Park. Theat. 446. *Polygonum minus, ſive Millegrana major.* C. B. 281. RUPTUREWORT.

This is a ſmall low Plant, ſpreading its weak Branches on the Ground, ſcarce a Span long, with two little Leaves leſs than Mother of Thyme at each Joint. The Tops of the Stalks are loaded with a great Number of ſmall herbaceous Flowers, ſucceeded by ſmall Seed-veſſels full of very minute Seed. The Root grows deep in the Ground, having many Fibres. It grows in ſandy Ground, but is not very common; and flowers in *June* and *July*.

Rupturewort is cooling, drying and binding, and accounted a Specific for Ruptures of all kinds: It alſo provokes Urine, and is good for the Stone in the Kidneys and Bladder. It is, however, but ſeldom uſed.

Rupturewort gives a faint Tincture of Red to the blue Paper; it is acrid, and a little ſaltiſh: Its Salt does not appear different from that which is obtain'd from the Earth, without the Aſſiſtance of Fire: It gives almoſt the ſame Marks of Acidity with Sal Ammoniac; but, in this Plant, this Salt is united with a great deal of Sulphur and Earth. They affirm, that Rupturewort, apply'd as a Cataplaſm, cures Ruptures, eſpecially if one gives to drink, at the ſame time, the Juice, or diſtil'd Water of it: Some preſcribe a Dram of the Powder of it in an Opiate, or in Broth. They uſe this Plant alſo with Succeſs in a Retention of Urine, and nephritic Colic, adding a Dram of Marmalade of Orange-flowers to each Quart of the Piſan which they prepare. *Martyn's Tournefort.*

The Herb, or whole Plant, is uſed, and is of a refrigerating and drying Quality: Its principal Uſe is in curing an Hernia, in waſting the Stone in the Kidneys and Bladder, in inciding Mucoſities of the Stomach, and other Parts, and bringing them away, in evacuating Bile and Water, and conſequently curing the Jaundice. *Dale* from *Schroder.*

2. Herniaria; Alſines folio. *Tourn. Inſt.* 507. *Boerh. Ind. A.* 2. 96. *Arenaria*, Offic. *Paronychia, Alſines folio incana.* J. B. 3. 366. Raii Hiſt. 2. 1026. *Anthyllis maritima Alſines folio.* C. B Pin. 282. *Anthyllis maritima incana*, Park. Theat. 281. *Anthyllis altera.* Ger. 497. *Anthyllis marina incana Alſine-folia.* Ger. Emac. 622. SEA CHICKWEED.

It grows in maritime Places, and amongſt Vines, and flowers in Summer. The Herb, which is the Part uſed, cures a *Paronychia*, and the *Favi*, being rubbed thereon. *Dale* from *Dioſcorides.*

3. Herniaria; hirſuta. *J. B.* 3. 379. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 96.

HERODIUS. A Name in *Aldrovand. Ornithol.* for the *Chryſaetos*, or *Hierofalco*; that is, the Golden Eagle, or largeſt Species of Eagle, ſo call'd, becauſe it bears the Rank of Heroes in compariſon of other kinds of Eagles. *Caſtellus.*

HEROS. *Paracelſus, de Morb. Tartar.* after his ſublime Manner, calls the Spirit of Salt, *Herſem Coagulationis*, "the "Hero of Coagulations." *Caſtellus.*

HERPES, ἕρπης, from ἕρπω, to ſpread, is a bilious Puſtule, which, breaking out in different Manners upon the Skin, accordingly receives different Denominations.

If they appear ſingle, as they frequently do in the Face, the Baſe is inflamed, and the Top pointed; and, having diſcharged a Drop of Matter, the Redneſs and Pain go off, and they dry away.

There is another Sort more corroſive, and of greater Malignity, when a Cluſter of Puſtules riſe in a Ring, accompanied with Smart, and ſometimes great Itching. This Species is term'd *Serpigo*, and vulgarly, the Tetter, or Ringworm. It ſeizes the Face, Hands, and other Parts of the Body, is of an obſtinate Nature, eating into the Skin; and, forſaking the Place where it firſt appears, it ſpreads its Taint into the adjacent Parts. It neither forms Matter, nor comes to Digeſtion; but, when rubbed, will ſometimes emit a thin ſharp watry Humour; and excites Smart, Heat, and Itching.

Another Kind of this Diſeaſe appears in larger Cluſters upon the Neck, Breaſt, Loins, Hips, and Thighs, attended with a ſlight Fever and Inflammation. The Heads are white and mattery, which are ſucceeded by a ſmall round Scab, reſembling Millet-ſeed; whence its Name *Herpes Miliaris*, and is commonly called the Shingles. Both the two laſt Kinds are termed by the Antients, *Vermis repens & mordicans, Formica miliaris*, or (according to Mr. *Wiſeman*) *Ambulativa*; by *Celſus, Ignis Sacer*; which may rather mean the Eryſipelas.

Another Species, from its greater Degree of Virulence and Corroſion, is named ἕρπης ἐσθιόμενος, *Herpes exedens, vel depaſcens.* See ULCUS.

The ſimple bilious Puſtle, which commonly riſes in the Face, requires but little Aſſiſtance from Medicine; for, tho' it burns, ſmarts, or itches a Day or two, yet it naturally comes to a Head, ſoon dries, and diſappears.

The Serpigo is ſometimes very difficult to be exterminated; and, after it appears dead, it will, at certain Seaſons of the Year, obſtinately break out again. Tho' Bleeding at firſt is by ſome condemned, yet repeated Purging, eſpecially with cholagogue Medicines, is univerſally approv'd: Theſe not ſucceeding, recourſe muſt be had to Mercurials, eſpecially if there be the leaſt Suſpicion of any old Venereal Taint remaining in the Blood. Having removed the Cacochymy, we may proceed to Topics. *Ambroſe Paré*, after general Evacuation, preſcribes the following:

Take of the Powder of Oak-galls, Pomgranate-peel, Balauſtines, and Armenian Bole, each half an Ounce; of Roſe-water, half an Ounce; of the ſharpeſt Vinegar, half an Ounce; of Gooſe-greaſe, and Oil of Myrtles, each ſix Drams; of Turpentine, half an Ounce: Make up into an Ointment for Uſe.

Or,

Take of Sulphur, calcin'd Vitriol, and Alum, of each one Dram: Macerate them in ſtrong Vinegar, which is to be ſtrain'd thro' a Linen Cloth, and uſed as a Lotion for the Tetters.

Or,

Take of Roſe-water, and Alum-water, each two Ounces; of Lime, two Drams; of Alum, three Drams; of Sublimate Mercury, four Scruples: Let them boil gently *in Balneo Mariæ*, and filtrate for a Lotion of the ſame Uſe with the former.

Or,

Take of the Oil of Tartar, two Ounces; and of common Soap, four Ounces: Mix for a Liniment.

Or,

Take of the Ointment of Elecampane, two Ounces; of Ceruſs, half an Ounce; of Quick-ſilver, three Drams; of the Juices of the Citron, and ſharp-pointed Dock, each half an Ounce: Incorporate them for an Ointment.

Galen commends the Juice of Plantain, or Nightſhade, mixt with Oxycrate.

Zacutus Luſitanus propoſes the following Preparation, which he calls a celebrated Remedy.

Take of the white Wool ſhorn off from Cloth. This, when burnt in an earthen Veſſel, acquires a highly black Colour; and, when triturated, and mixt with Roſe or Plantain-water, reſembles Ink. With this Liquor rub every Part of the

Ulcer

Ulcer, by which it will be gradually dried up, and ſpread no farther.

Barbet impures the Cauſe of the *Herpes* rather to the Lymph, than the Bile, and ſalt Phlegm blamed by the Antients. He orders the Patient to be firſt well purg'd, and kept to a Decoction of China-root. He directs faſting Spittle to be apply'd to the Part affected, which has certainly a deterſive and mundifying Property, as well as Urine. Some, ſays he, uſe Muſtard; to which others, not improperly, add Gun-powder. He commends the Unguentum Fuſcum of *Felix Wurtz*; and for an obſtinate Herpes, the following.

Take of the Ointment of *Felix Wurtz*, three Drams; of white Camphire, a Dram and an half; of Ceruſs, Sulphur, and Myrrh, each one Dram; of Litharge, a Dram and an half; of Mercurius Dulcis, and Verdegriſe, each half a Dram; and, of Oil of Roſes, a ſufficient Quantity.

Or,

Take of Sal Prunellæ, one Dram; Flowers of Sulphur, half an Ounce; Salt of Lead, a Dram and an half; and, of old Rape-ſeed Oil, a ſufficient Quantity.

Among the Simples uſeful in theſe Caſes, he reckons Plantain, Nightſhade, red Roſes, Balauſtines, Cypreſs-nuts, Pomgranate-rinds, Frankincenſe, Maſtich, Turty, Ceruſs, Litharge, Red-lead, Burnt-lead, Sulphur, Pepper, Ginger, Mercury; to which may be added Vitriol, Alum, Tartar, Nitre. The Compoſitions he enumerates are, the *Unguentum Ægyptiacum*, the *Unguentum fuſcum*, the *Unguentum Diapompholygos*, the *Unguentum de Plumbo*, the *Unguentum de Minio*, the *Unguentum Griſeum*, and the *Emplaſtrum de Ranis cum Mercurio*.

Among other Remedies, the common People uſe Ink, which, by reaſon of its Compoſition, may probably ſucceed. Some, in Caſes of extraordinary Virulence, and ſpreading Corroſion, when other Applications have fail'd, have check'd the Diſeaſe, by lightly touching the Parts affected with Aqua-fortis, or Oil of Vitriol. But theſe Remedies are not to be uſed without particular Caution.

Bathing the Part with the following Water made hot, has been try'd ſucceſsfully, Univerſals firſt premiſed. The Receipt is taken from Dr. *Bates*'s *Pharmacopœia*.

Take of Alum, and white Vitriol, each an equal Quantity: After mixing them, boil in an earthen Veſſel over a ſlow Fire, till they become hard like a Stone: Put a Spoonful of this, reduced to Powder, into two Pints of boiling Water, till it is diſſolv'd; then filtrate for Uſe.

The Vinegar of Litharge, and of Alum, of the ſame Author, are uſeful Remedies, as are alſo his *Aqua Herpetica*, and *Unguentum ad Herpetem*; but the laſt muſt be uſed cautiouſly, and only in ſtubborn Caſes, on account of the Arſenic and Quick-lime in its Compoſition.

The Preparation of Aqua Herpetica is, by *Bates*, in his Diſpenſatory, directed in the following Manner:

Take of Alum, one Ounce, of white Vitriol, two Ounces; of the beſt Vinegar, one Pound; of the recent Roots of Elecampane, two Ounces; and, of the green Leaves of Tobacco, one Handful: Boil to a Conſumption of the third Part of the Vinegar; and add, to the ſtrain'd Liquor, half an Ounce of calcin'd Vitriol.

Apply Cloths, wet in this Preparation, to the Herpes, letting them remain till they become dry, for three or four times, till an Eſchar is produced, and a new Epidermis, or Scarf-skin, form'd.

Herpeticum Unguentum.

According to the ſame Author, this Ointment is prepar'd in the following Manner:

Take of Quick-lime, and Orpiment, each one Dram; of Tartar, common Salt, and black Soap of the common kind, each two Drams; and of the Oil of Elder, a ſufficient Quantity for making into an Ointment.

With this Preparation anoint the Part affected duly, ſuffering it to remain on it for twenty-four Hours. By this means an Eſchar will be form'd, which is to be remov'd with the white Ointment. But the moſt effectual and ſafe Method of curing an Herpes is ſaid to be by anointing it with Pomatum, mix'd up with the *Mercurius Præcipitatus Albus*.

The miliary Eruptions call'd *Shingles*, not bearing ſuch ſharp and exiccating Applications, are to be differently treated; and greater Care muſt be taken before the Uſe of Topics, that the bilious Cacochymy is purg'd off, the ſharp Humours contemperated, and the nobler Parts ſecur'd from their Recrements, or from the ſtriking in of Puſtules, which ſeem'd to be breaking out; but, happening to be reſorb'd by the capillary Veſſels, are ſometimes return'd into the Blood. The internal Preſcriptions for this Purpoſe are the ſame with thoſe for the Erysipelas; which ſee.

When the Puſtules are all ripen'd, their Heads may be cut off with a Pair of Sciſſars, and the Humours abſorb'd with a ſoft Rag, to prevent farther Corroſion. Then a Cerate of Oil and Wax may be laid over the Parts, and kept on with a Bandage, to prevent the Puſtules ſticking to the dry Linen; in the Declenſion, the *Unguentum Diapompholygos*, the *Unguentum de Minio*, *Unguentum de Calce*, and the *Unguentum album camphoratum*, are proper. The two laſt, becauſe of their great Refrigeration, may be a little ſuſpected. *Turner*'s Cerate of Lapis Calaminaris may be prefer'd, being moderately digeſting, and healing at the ſame time.

Some Authors have deliver'd a Prognoſtic, from which the Vulgar have taken the Hint, that, when the Dieaſe has got round the Body, it proves mortal. But the contrary of this has been obſerv'd; and the Danger is to be computed more from the Malignity of the Humour, and its Retroceſſion, than by the Number of Puſtules, or their Poſition in the Body. *Turner de Morb. cutaneis.*

HERPETON, ἑρπηστὸν, ἑρπηστικὸν, from ἕρπω, to creep, Reptile, in *Hippocrates*, ſignifies a creeping Ulcer, or Puſtule, and ſo is the ſame as Herpes. It is, alſo, a general Epithet of all Reptiles.

HESMIS. A Quarter of a Pound. *Rulandus. Johnſon.*

HESPERIS.

The Characters are;

It has a long, ſmooth, cylindrical, bivalve Pod, divided into two Capſules, or Cells, which are ſeparated by an intermediate Partition, and furniſh'd with cylindrical or globular Seeds.

Boerhaave mentions four-and-twenty Species of this Plant; which are,

1. Heſperis; hortenſis: flore purpureo. *C. B. P.* 202. *M. H.* 2. 251. *J. B.* 2. 877. *Viola hyemalis, purpurea.* Tab. Ic. 308. *Viola matronalis, flore purpureo.* H. Eyſt. Vern. o. 8. F. 3. Fig. 3.

2. Heſperis; hortenſis; flore candido. *C. B. P.* 202. *Heſperis, flore albo.* J. B. 2. 877. *Viola hyemalis, flore albo.* Tab. Ic. 308. *Viola, matronalis, flore candido.* H. Eyſt. Vern. o. 8. F. 3. Fig. 2.

3. Heſperis; hortenſis; flore purpureo, pleno. *H. R. Par.*

4. Heſperis; hortenſis; flore albo, pleno. *H. R. P.*

5. Heſperis; hortenſis; flore vario, pleno. *H. R. P.*

6. Heſperis; montana; pallida; odoratiſſima. *C. B. P.* 201.

7. Heſperis; Allium redolens. See Alliaria.

8. Heſperis; folio dentato; flore pallido; procumbens. *Draba alba, ſiliquoſa, repens.* C. B. P. 109.

9. Heſperis, lutea, ſiliquis ſtrictiſſimis. *T.* 222. *Draba lutea, ſiliquis ſtrictiſſimis.* C. B. P. 110. *Draba lutea, quibuſdam.* J. B. 2. 870.

10. Heſperis; Leucoii folio non ſerrato; ſiliqua quadrangula. *T.* 223. *Leucoium, luteum, ſylveſtre, anguſtifolium.* C. B. P. 202. *Leucoium ſylveſtre.* Tab. Ic. 310.

11. Heſperis; Leucoii folio ſerrato; ſiliqua quadrangula. *T.* 223. *Leucoium, luteum, montanum, ſerrato folio.* C. B. P. 202.

12. Heſperis; exigua; lutea; folio dentato, anguſto. *Ind.* 146.

13. Heſperis; flore albo; minimo; ſiliqua longa; folio profunde dentato. *Ind.* 147.

14. Heſperis; maritima; perfoliata; parva; flore cœruleo. *Pluk. Almag.* 183. *Leucoium, maritimum, latifolium.* C. B. P. 201.

15. Heſperis; maritima, latifolia; ſiliqua tricuſpide. *T.* 223. *Leucojo affine, Tripolium Anguillare, & Leucoium maritimum, Camerarii.* J. B. 2. 876.

16. Heſperis; hirſuta; flore purpureo vario; folio aſpero, parvo, Lavandulæ, ſiliquis Cornu Cervini diviſura. *Indic.* 174.

17. Heſperis; Chia; ſaxatilis; Leucoii folio ſerrato flore parvo. *T. C.* 16.

18. Heſperis; altiſſima; folio Leucoii anguſto, flore aureo, plurimo; ſiliquis longis, gracilibus.

19. Heſperis; maritima; anguſtifolia; incana. *T.* 223. *Leucoium maritimum, anguſtifolium.* C. B. P. 201. J. B. 2. 876.

20. Heſperis; folio craſſo, lato, rigido, dentato; floſculis violaceis; ſiliquis longis, ramoſe diſpoſitis.

21. Heſperis; folio anguſto; craſſo, ſerrato, caulem amplexo, floſculo purpureo, ſiliqua longa; Draba ſiliquoſa, repens, purpurea, Cretica. *H. Mauroc.* 68.

22. Heſperis; folio ſcabro, dentato, floſculo rubello; vix conſpicuo; ſiliqua quadrangula aſpera.

23. Heſperis; ſylveſtris; parvo flore. *C. B. P.* 102. *Prodr.* 103.

24. Heſperis; montana; pallida; odoratiſſima. *C. B. P.* 201. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 18.

The firſt, ſecond, third, fourth, and fifth Sorts are cultivated in Gardens; and flower in *April*, *May*, and *June*. The Parts in Uſe are the Herb and Seeds, which, as *Cluſius* ſays, cure Convulſions and Difficulty of Breathing; they alſo provoke Urine

and Sweat, and are inciſive, abſterſive, and digeſtive. *J. B.* As the Heſperis taſtes like Rocket, ſo it ſeems to be endow'd with much the ſame Virtues. *Dod. Dale.*

This Plant is antiſcorbutic and diaphoretic, and very ſerviceable in the Aſthma, Coughs, and Convulſions. The outward Uſe of it is recommended againſt Inflammations, Cancers, a Gangrene, Sphacelus, and contagious Diſeaſes. Bruis'd, it very potently reſiſts Putrefaction; and, applied to peſtilential Buboes in the Arm-pits, ripens and ſoftens them. It is highly commended by *Hildanus*, in his Treatiſe of Inflammations, Sphacelus, and Gangrene; and I myſelf have had Experience of its Virtues, in the following Inſtance: There was a Student, who, being on a Journey, had the Misfortune, not only to break, but very much bruiſe, both the Tibia and Fibula; and, before the Surgeons could be ready with their Aſſiſtance, the Parts were ſeiz'd with a Gangrene. When the Surgeons were come, and had view'd the Place, they ſent for me, becauſe they deſpair'd of a Cure: I bruis'd this Herb in Wine, and apply'd it to the Leg, which perfectly cur'd the Patient of his Gangrene. *Hiſtoria Plantarum*, aſcrib'd to *Boerhaave*.

HESTIA, ἑστία. The ſame as Focus; which ſee. It is alſo the Name of a celebrated Plaiſter among the Antients, deſcrib'd by *Aetius, Tetrab. 4. Serm. 3. Cap. 2.* ſo call'd from the Number of Drams contain'd in the Ingredients, which amount to five hundred and ſixteen; the Number expreſs'd by the *Greek* Letters in the Word ἑστία for σ ſignifies 200; τ, 300; ι, 10; ε, 5; and α, 1; which, added together, make 516.

HETERORRHOPOS, ἑτερόῤῥοπος, from ἕτερος, importing Either, one of the two, and ῥέπω, to bend, or incline, this, or that Way, or either Way. Thus, 1. *Epidem.* ἐπάδεμάλα ἢ παρὰ τὰ ὦτα πολλοῖσιν ἑτερόῤῥοπα ἦν. "Many were afflicted with "Swellings about the Ears, on one Side or the other." And, *Lib. eodem*, φλεγμοναὶ μετ' ὀδύνης ἐς ὄρχιν ἑτερόῤῥοπαι. "Inflamma-"tions, with Pain, affected one or other of the Teſtes." Thus, again, ἑτερόῤῥοπίας κάμνουσας, in *Hippocrates*, are Patients on the Verge of a Diſorder, and inclining either to Death or Recovery; as, *Lib. de Rat. Vict. in Morb. acut.* he adviſes to take particular Obſervation of odd Numbers in Days; becauſe ſuch Days ἑτερόῤῥοπίας ποιοῦσι τὰς κάμνουσας, "cauſe an Inclination in "the State of the Sick, either one Way or other;" that is, as *Galen* expounds the Place, make a conſiderable Alteration towards Death or Recovery. *Foeſius.* But I take this Word, when applied to Tumors, ſometimes to import ambiguous or doubtful, whether they will recede, or come forwards, and ſuppurate.

HETERORRYTHMOS, ἑτερόῤῥυθμος. See ARYTHMUS, and ENRYTHMUS.

HETICH *Americum.* Thevet. Lugd. *Hetich Indis & Æthiopibus.* Dalechamp. in Plin. *Rapum Americanum foliis Bryoniæ.* C. B. A Species of *American* Turnep, which has Leaves like Bryony, with a Root a Foot and an half in Length, and of the Bigneſs of two Fiſts; good to eat, and agreeable to the Taſte. It is eſteem'd aperitive. *Lemery des Drogues.*

HEXAGIUM, ἑξάγιον, from ἕξ, ſix. The Name of a Weight among the antient *Greeks*, being the ſame as the *Roman Sextula*; and ſo call'd, becauſe it was the ſixth Part of an Ounce, or four Scruples. *Arbuthnot.*

HEXAPHARMACUM, ἑξαφάρμακον, from ἕξ, ſix, and φάρμακον, a Medicine. The Name of a Plaiſter, deſcribed by *Ægineta, Lib. 3. Cap. 79.* and ſo called, becauſe it conſiſted of ſix Ingredients.

HEXIS, ἕξις, from ἔχω, to have; an Habit. Ἕξις ſignifies a firm and permanent Habitude; in oppoſition to χέσις (*Scheſis*) and διάθεσις (*Diatheſis*); which imports no more than a Diſpoſition which is tranſient, or eaſily removed: Thus *Galen, ad Thraſyb.* and *Lib. de bono Habitu*, explains the Word. *Hippocrates, Lib. de Alimento*, oppoſes ἕξις to διάθεσις, where he ſays, διάθεσις ἀθλητικὴ ἡ φύσει, ἕξις ὑγιεινὴ κρείσσων, "An athletic Diſpoſition is "unnatural, a ſound Habit is better." *Hippocrates*, in *Mochlico*, among the Cauſes of Luxations, reckons ἕξις and χέσις, or a Habit and Diſpoſition of Body more tumid than is requiſite; where by ἕξις he ſeems to mean the Structure and Compoſition of the ſolid Parts; and, by χέσις, the Contexture of the Veſſels and Humours; or elſe, certainly, χέσις there ſignifies an adventitious or acquired Habit of Body; as *Galen, Lib. 3. de Cauſ. Pulſ.* explains the Word from *Lib. de Artic.* and ἕξις means τὴν τοῦ σώματος κατασκευὴν, "The Structure of the Body," as Nature has completed it; and this is oppoſed by *Galen, Lib. 4. Salut.* to the *Genus venoſum* and Humours: But theſe Senſes of ἕξις and χέσις are both comprehended, *Lib. de Artic.* under χέσις, where it is ſaid, that the χέσις of the Body, whether full and carnous, or lean and extenuated, makes a Difference, with reſpect to a Diſpoſition to Luxations. *Galen* alſo explains ἕξιν by τὴν τῶν μορίων κατασκευὴν, "The Structure of the Parts," when it is joined to the Word φύσις, "Nature," as in ſeveral Places of the Book *de Rat. Vict. in Morb. acut.* Laſtly, ἕξις (*Hexis*) ſignifies the Habit of Body, under which the ſolid Parts are comprehended: Whence a hectic Fever takes its Denomination, becauſe it is ſeated in thoſe Parts, and thus affects the Habit. "Thoſe Fevers (ſays *Galen, Lib. 1. de Diff. Feb.*) are "called ἑκτικοὶ, (*Hectic*) either becauſe they are permanent, and "difficult to be removed, in the Nature of a Habit; or becauſe "they have their Seat in the very Habit of the Body, by which "are uſually meant the ſolid Parts, as diſtinguiſhed from the "Fluids."

HIANTICILLA. The ſame as GALBULUS; which ſee.

HIATULA. The ſame as CHAMA; which ſee.

HIBERNICUS LAPIS. See TEGULA HIBERNICA.

HIBISCUS, a Name for the ALTHÆA.

HICESIA, ἱκεσία, ἱκέσας, the Name of a Plaiſter among the Antients, very good for Strumæ and Abſceſſes of the Spleen and Joints, mention'd by *Galen, Lib. 4. de C. M. P. G.* and deſcribed by *Ægineta, Lib. 7. Cap. 17.* It is corruptly written in *Latin, Iceſii Emplaſtrum.*

HIDROA, ἱδρῶα, ἱδρῶα, from ἱδρὼς, Sweat. A kind of Puſtules, ariſing from bilious, and viſcid, ſaline Humours, irritating the Skin, and moſt troubleſome in the Summer-time; when they make their Eruption with the Sweat: They are reckon'd by *Hippocrates*, 3 *Aph.* 21. among the Diſeaſes attending the Summer.

HIDROCRITICA, ἱδρωτικὰ, from ἱδρὼς, Sweat, and κρίνω, to judge. Signs taken from Sweat. *Blancard.*

HIDRONOSOS, ἱδρωνόσος, from ἱδρὼς, Sweat, and νόσος, a Diſeaſe. The ſame with SUDOR ANGLICUS. *Blancard.*

HIDROPYRETOS, ἱδρωπυρετὸς, from ἱδρὼς, Sweat, and πυρετὸς, a Fever, is the ſame as the preceding. *Blancard.*

HIDROS, ἱδρὼς, Sweat. See SUDOR.

HIDROTICA, ἱδρωτικὰ, Sudorifics. See SUDORIFICA.

HIDROTOPOEA, ἱδρωτοποία, from ἱδρὼς, Sweat, and ποιέω, to make or cauſe, is the ſame with the preceding Word. *Caſtellus.*

HIDUS. Flos Æris. *Rulandus. Johnſon.* See the *Flos Æris*, under the Article Æs.

HIERA DIACOLOCYNTHIDOS.

Take of Colocynth, Agaric, Germander, white Horehound, Stœchas, of each ten Drams; of Opopanax, Sagapenum, Parſley-ſeeds, round Birthwort-root, and white Pepper, of each five Drams; of Spikenard, Cinnamon, Myrrh, and Saffron, of each four Drams. Let the Gums be rubbed in a Mortar, and the reſt ſifted; then ſtir them into three Pounds, three Ounces, and five Drams, of deſpumated Honey, ſo as to make the Whole into an Electuary, *S. A.*

The Shops have not hitherto been accuſtomed to make it; becauſe not yet order'd in common Preſcription, nor ſeeming ever to deſerve Notice enough to make it; its Loathſomneſs rendering it unfit for any thing but Clyſters.

HIERA PICRA, ἱερὰ πικρὰ in *Engliſh, Holy Bitter.*

This is made by a Mixture of the Species of Hiera Picra with deſpumated Honey, or Syrup of Violets, into an Electuary.

The *Species Hieræ Picræ* is thus prepared:

Take of Cinnamon, Zedoary, Aſarum, the leſſer Cardamom-ſeeds, and Saffron, of each ſix Drams; Cochineal, one Scruple; of the beſt Aloes, twelve Ounces; and let them all be made into a Powder together.

This is a Compoſition of long ſtanding, amongſt Diſpenſatory-writers; but, by them, it is generally order'd into an Electuary, with Honey; and, ſometimes, ſeems to have been deſign'd for little other Uſe than Clyſters; as it appears, from the Annotations of *Zwelfer*, in the *Auguſtan* Diſpenſatory: But the latter Practice hath very much experienced it, in a Tincture, commonly called the *Tinctura Sacra*, the *Holy Tincture*; as the Name of the Species itſelf imports an *Holy Bitter*. There are larger and more perplex'd Compoſitions, under this Title, as one of *Nicolaus Myrepſus*, called *Hiera Logadii*; and another of *Nicolaus Alexandrinus*, which *Scribonius Largus, de Compoſit. Med. Cap. 27.* aſcribes to *Pachius*, and extols prodigiouſly for its Virtues.

The *Tinctura Hieræ*, or *Tinctura Sacra*, popularly called *Hiera Picra*, is thus prepared:

Take of the Species of Hiera Picra, one Ounce; of White-wine, one Pint: Digeſt, and then ſtrain off the fine Liquor. After the ſame manner may it be made with *French* Spirits.

This was not in the former Diſpenſatory, but in *Shipton's* Additions to it, under the Title of *Tinctura Sacra, ſeu Hiera*, with ſome ſmall Variations, as the Cochineal; which has no regard to the Medicine, but as it heightens the Colour: The Proportion of the Species, likewiſe, is but half there to what it is here; which made a requiſite Doſe, to ſome Perſons, more than the Quantity of Wine or Spirit therein was agreeable to, eſpecially if taken in a Morning. It is indeed doubted by ſome, whether the Menſtruum will take up above a certain Quantity of the Ingredients, eſpecially of the Aloes, which if rightly order'd, the former

former of *Shipton* may be as ſtrong as this; but it does not ſeem probable, becauſe the Aloes is capable of Solution and Impregnation, to a very great Quantity, in almoſt any Liquor: This may be ſo managed, as to become a good Alterant. It is generally given over Night, from two to three Ounces; and, ſometimes, in the Quantity of one Spoonful only, at Night, with excellent Effects, in a Cachexy, Chloroſis, and Obſtructions of the Menſes.

HIERABOTANE, ἱερόβοτάνη, from ἱερὸς, holy, and βοτάνη, an Herb, Holy Herb, in *Dioſcorides*, is a Species of VERBENA; which ſee.

HIERACANTHA. A Name, in *Boerhaave*, for the *Carlina; Sylveſtris; vulgaris.*

HIERACITES, ἱερακίτης, the Name of a Stone; or, according to *Pliny*, a Gem: So called from its Colour, which reſembles that of the *Hierax*, or Hawk. It is recommended by *Paulus Ægineta*, for repreſſing the Hæmorrhoids. *L. 7. C. 3.*

HIERACIUM. Hawkweed.

The Characters are;

The Stalks are full of Branches, ſlender, and elegant; the Leaves are diſpoſed alternately; the Calyx is thick, firm, and expanded; the Seeds are ſmooth and angulous, or ſtriated.

Boerhaave mentions forty Species of this Plant; none of which have any medicinal Virtues aſcribed to them, except the 13. 16. 18. and 29.

The thirteenth Species is thus diſtinguiſh'd:

Hieracium; Folio Chondrillæ; caule vimineo, lævi. *Boerh. Ind. A.* 86. *Hieracium minus.* Offic. *Hieracium Leporinum.* Ger. 233. *Hieracium minus ſive Leporinum.* Ger. Emac. 296. *Hieracium minus præmorſa radice, ſive Fuchſii.* J. B. 2. 1031. Raii Hiſt. 1. 230. *Hieracium Chondrillæ folio glabro, radice ſucciſa majus.* C. B. 127. Tourn. Inſt. 470. THE LESSER HAWK-WEED.

It grows every-where in Paſture-grounds, and flowers in *June* and *July*. The Leaves are uſed, but the Juice ſeldom or never: It is effectual for the ſame Purpoſes as the *Sonchus repens multis, quibuſdam Hieracium majus*; which ſee. Taken inwardly, it ſharpens the Sight, and expels black Bile: It has the Virtues of the *Sonchus*, only is a little more bitter, and much ſuperior to it. *Dale.*

The ſixteenth Sort is thus diſtinguiſhed:

Hieracium; Alpinum; latifolium; maculatum; hirſutie incanum; flore magno. *C. B. P.* 128. *Boerh. Ind. A.* 86. *Tourn. Inſt.* 472. *Herba Coſta.* Offic. *Hieracium 1. Cluſii.* Ger. 237. *Hieracium 1. latifolium Cluſii.* Ger. Emac. 301. Raii Hiſt. 1. 239. *Hieracium latifolium Pannonicum 1. Cluſii.* Raii Synop. 73. Park. 800. *Hieracium Pannonicum latifolium 1. Cluſio. Piloſellæ majori, ſive Pulmonariæ luteæ accedens.* J. B. 2. 1026. *Hieracium montanum, non ramoſum, caule aphyllo, flore pallidiore.* Raii Cat. 162. *Dens Leonis foliis integris, caule raris foliis veſtito, monanthes fere.* Raii Hiſt. 1. 244. HUNGARIAN HAWK-WEED.

It grows on chalky Hills, and flowers in *June*; the Herb is in Uſe, which is highly extolled for its Efficacy in pulmonic Diſorders. *Buxb.* It is of ſingular Service in the Phthiſis. *Cam. Dale.*

The eighteenth Sort is thus diſtinguiſh'd:

Hieracium; dentis Leonis; obtuſo folio; majus. *C. B. P.* 127. *Tourn. Inſt.* 470. *Boerh. Ind. A.* 87. *Hieracium longius radicatum.* Ger. 234. Emac. 298. Park. 790. Raii Hiſt. 1. 230. Synop. 72. *Hieracium macrocaulon junceum, ſive minus, primum Dodonæo.* J. B. 2. 1031. LONG-ROOTED HAWK-WEED.

The Root of this Hawkweed ſtrikes deep into the Earth, long, thick, and but little branched. The Leaves lie flat on the Ground, round about the Root, being ſomewhat rough and hairy, and round-pointed at the End, and cut in, in ſeveral Places, like Dandelion: The Stalks are tall, branched, and rough, having ſeveral Flowers, like thoſe of Dandelion, but leſs, of a yellow Colour, which turn into Down, having long ſlender Seed. It grows every-where in the Fields and Meadows; and flowers in *May* and *June*.

This is a Plant ſeldom uſed; but, from the Likeneſs of the Leaves and Flowers, it is eſteem'd to be of the Nature of Dandelion, or Sow-thiſtle, aperitive, cooling, and diuretic.

It grows in Paſtures, and flowers in *June*, *July*, and *Auguſt*. The Leaves are commonly uſed, which agree in Virtues with thoſe of the other Hawkweeds; the Herb drank is a Remedy for Pains in the Sides. *Dale.*

The twenty-ninth Sort is thus diſtinguiſhed:

Hieracium; murorum; folio piloſiſſimo. *C. B. P.* 129. *Raii Hiſt.* 1. 239. *Synop.* 74. *Tourn. Inſt.* 471. *Boerh. Ind. A.* 87. *Pulmonaria Gallica, & Pulmonaria aurea.* Offic. *Pulmonaria Gallica ſive aurea latifolia.* Ger. Emac. 304. *Piloſella major quibuſdam, aliis Pulmonaria flore luteo.* J. B. 2. 1033. FRENCH or GOLDEN LUNGWORT.

It grows in Woods, and on old Walls, and ſhady Banks; and flowers in *June* and *July*. The Herb is uſed, which agrees in Virtues with the *Pulmonaria maculoſa*. See PULMONARIA.

HIERACIUM is, alſo, a Name for ſeveral ſorts of *Sonchus* and *Dens Leonis.*

Hieracium, capitulum inclinans. A Name for the *Hedypnois; annua.*

Hieracium, minus. A Name for the *Hyoſeris; anguſtifolia.*

Hieracium, montanum. A Name for the *Chondrilla; Hieracii folio; annua.*

Hieracium, ſtellatum. A Name for the *Rhagadiolus; alter.*

HIERATICUM, ἱερατικὸν. The Name of a *Malagma*, in *Galen, de C. M. S. L. Lib.* 8. *Cap.* 5. aſcribed to *Aſclepiades*, and appropriated to Diſorders of the Stomach, Liver, and Pains of the Viſcera.

HIERAZUNE. A Name for the *Lotus; pentaphyllos; ſiliquâ cornutâ.*

HIEROGLYPHICA, ἱερογλυφικὰ, from ἱερὸς, ſacred, and γλύφω, to engrave. Characters in Medicine, invented, as pretended, by *Hermes Triſmegiſtus*. It ſometimes, alſo, means the Lines, and other Marks, in the Palm of the Hand, which are conſulted in Chiromancy.

HIEROS, ἱερὸς, ſacred, holy: An Epithet applied to a Variety of Things. See SACER.

HIGUERO, *Oviedi*, J. B. Park. *Arbor Indica Fructu Cucurbitæ Forma & Sapore.* THE CALEBASH-TREE.

It is a large Tree, of the Size of the black Mulberry-tree, and very common in all the Iſlands of *America*, and, alſo, on the Continent. The Flowers, in Shape, almoſt reſemble a Lily, and are of a Colour mixed of white and green, but of a nauſeous Smell: The Fruit is of various Sizes and Figures; ſometimes like an Oſtrich's Egg; ſometimes round, and of the Bigneſs of a Man's Head; and ſometimes oblong; green at firſt, but, when ripe, black and hard, and containing Seeds like a Gourd, and of the Size of Cucumber-ſeeds, with a yelloviſh Kernel. The unripe Fruit contains a white juicy Pulp, of a Smell almoſt like Naſturtium, but of a ſweetiſh Taſte.

The unripe Fruit is preſerv'd with Sugar, and uſed in Fevers; and the ripe ſerves for Cups, and other Drinking-veſſels. The ripe Pulp of the Fruit is not eatable, but is an excellent Remedy for the Head-ach; eſpecially when it proceeds from the Heat of the Sun, if a Cataplaſm be made thereof, and applied to the Forehead and Temples. *Ray's Hiſt. Plant.*

HILUM. The blackiſh Spot in Beans, commonly called, the Eye of the Bean.

HIMANTOPUS, *Plinii, Geſn.* an aquatic Bird, rarely found, and living upon Inſects: It has long Legs of a Blood-red Colour; whence it has its Name *Himantopus*, which is deriv'd from αἷμα, Blood, and πούς, a Foot.

Its Fat is reſolvent, and good for the Gout. *Lemery des Drogues.*

HIMAS, ἱμὰς, properly a Thong, or Strap of Leather, in Medicine, is a Laxneſs of the Uvula, when it becomes long and ſlender, in a pendulous Poſture: It differs from *Cionis*, in that, under this latter Diſorder, the Uvula is not extenuated, but, on the contrary, ſeems to acquire a greater Thickneſs.

HIMEROS, ἵμερος, ſignifies an amorous Longing, or Deſire; as appears from the following Verſe in *Homer*, quoted by *Erotian*, Ὡς σέο νῦν ἔραμαι, καί με γλυκὺς ἵμερος αἱρεῖ, "As now "with Love I'm ſeiz'd, and ſoft Deſire." *Il. γ. Verſ.* 446. and *Il. ξ. Verſ.* 328. where ἵμερος expreſſes the amorous and conjugal Deſires of *Paris* and *Jupiter* to *Helena* and *Juno*. It comes from the Verb ἱμείρομαι, which, in *Hippocrates*, frequently imports a Venereal Congreſs.

HINNULUS, νεβρὸς, a Hind; the Young of the Deer or Goat Kind. The Rennet of a young Hind of a Deer, taken within nine Days after it is brought forth, is a Preſcription in *Scribonius Largus* for the Epilepſy. The Hind, he ſays, is known to be under nine Days old, by the Ears lying flat, whereas, after nine Days, they are erected. This Rennet he directs to be dried in a Place where neither Sun nor Moon can tranſmit their Rays; and then to be adminiſter'd to Children in a Pill, of the Size of a Vetch, in two Cyathi of warm Water; but, to Adults, of the Size of a good Bean, in three Cyathi of warm Water, for thirty Days together, drinking afterwards two or three Cyathi of pure Water. He who communicated this Remedy, ſays *Scribonius*, ſaid it would be more likely to ſucceed, if the Hind is killed with a Knife, which had before been employed in cutting the Throat of a Gladiator. *Pliny, Lib.* 28. *cap.* 9. ſay, that the Rennet of a Hind, cut out of the Dam's Uterus, is preferred before the greateſt Remedies, for its medicinal Virtues.

HIPPACE, ἱππάκη. What they call *Hippace*, is Cheeſe made of Mares-milk, which is indeed of a rank Smell, but very nouriſhing, and may be compar'd with Cheeſe made of the Milk of Cows. Some give the Name of *Hippace* to the Rennet of a Colt. *Dioſcorides, Lib.* 2. *cap.* 80.

HIPPION. A Name for the *Gentiana, Alpina, pumila, vera, major.*

HIPPOCAMPUS. Offic. Rondel. de Piſc. 2. 114. Bellon. de Aquat. 446. Charlt. Exer. 63. Salv. de Aquat. 72. C. Jonſ. de Piſc. 77. Mouff. Inſect. fol. ult. Aldrov. de Inſect. 736. Raii Ichth. 157. Ejuſd. Synop. Piſc. 45. The SEA HORSE.

It is taken in the *Mediterranean* Sea. The Aſhes of the burnt Fiſh, mixed with Tar or Fat, or Amaracinum Unguentum, and the

the Part anointed, cures an Alopecia. *Dioscorides.* It is a Remedy against the Bite of a mad Dog. *Ælian. Dale.*

HIPPOCASTANUM.

The Characters are;

The Leaves are digitated, and like those of the common Chestnut; the Calyx is quinquefid, and, as it were, bilabiated. The Flower is rosaceous, pentapetalous, anomalous, and, in a manner, bilabiated, the Petals growing round the Base of the Ovary; whence, also, arise five, six, or seven Stamina. The Flowers are disposed on a long Spike, making a specious Appearance. The Ovary is seated in the Bottom of the Calyx, and produces a long, thick Tube, with an uniform or hooked Apex; and becomes a prickly, unicapsular Fruit, gaping on all Parts, and full of Seeds, like those of the Chestnut.

Boerhaave mentions three Species of this Plant, which are;

1. Hippocastanum; vulgare. *Tourn. Inst.* 611. *Boerh. Ind. A.* 2. 250. *Castanea equina.* Ger. 1253. Emac. 1442. Park. Theat. 1401. Raii Hist. 2. 1683. *Castanea equina folio multifido.* J. B. 1. 128. *Castanea folio multifido.* C. B. Pin. 419. HORSE CHESTNUT. It is cultivated in Gardens and Walks, and flowers in *May* and *June*. The Fruit is used, and esteemed an Errhine. *Dale.* It is said to be good for broken-winded Horses.

2. Hippocastanum; vulgare; folio constanter variegato.

3. Hippocastanum; vulgare; flore maculis flavis picto.

Boerh. Ind. alt. Plant. Vol. 2. *p.* 230.

HIPPOCRAS. See CLARETUM.

HIPPOCRATES. Having already given a pretty full Account of the Method and Practice of Medicine, as established by this great Physician in the Preface, it may be sufficient, under this Article, to give a brief historical Account of his Life, his Family, and the various Editions of his Works. *Hippocrates* was descended from *Æsculapius*, in the eighteenth Degree of Succession; and, by his Mother's Side, he was in the twentieth Degree of Descent from *Hercules*, according to the following Genealogy, which was drawn up by the Antients, from the Memoirs of *Eratosthenes*, *Pherecydes*, *Apollodorus*, and *Arius Tarsensis*. *Æsculapius*, who was educated by *Chiron*, married *Epione*, the Daughter of *Hercules*, and by her had several Daughters, and two Sons, *Podalirius* King of *Caria*, and *Machaon*, who reigned in *Messenia*: The Descendants of *Podalirius* were *Hippolochus*, *Soστratus* I. *Dardanus*, *Cleomittades* I. *Chrysamis* I. *Theodorus* I. *Sostratus* II. *Chrysamis* II. *Cleomittades* II. *Theodorus* II. *Sostratus* III. *Nebrus*, *Cnosidicus* of *Coos*, *Hippocrates* I. *Heraclides* of *Coos*. The great *Hippocrates*. This Branch of *Podalirius* reigned in *Caria* till *Theodorus* II. under whom they were dispossessed by the *Heraclidæ*, and obliged to retire into the Isle of *Coos*, which is over-against *Caria*; where they all practised Medicine with high Reputation, especially *Nebrus*, *Cnosidicus*, *Hippocrates* I. and *Heraclides*. But the Heir of all their Fame and Talents was our *Hippocrates* II. whom Nature had favour'd with so strong a Constitution, that no Labour or Hardship could alter it; and with so prodigious a Penetration, and Capacity of Mind, that she is fabled to have conducted him into her deepest Abysses, and there discover'd to him all her Mysteries. He was born at *Coos*, in the first Year of the eightieth Olympiad, four hundred and fifty-eight Years before the Birth of our Saviour, and in the fifth Year of the Reign of *Artaxerxes Longimanus*; and was cotemporary with *Socrates*, *Herodotus*, and *Thucydides*, and other great Men of these Times. His Father *Heraclides*, and Grandfather *Hippocrates*, both great Physicians, took care to teach him, not only Medicine, but Logic, Physics, or Natural Philosophy, Geometry, and Astronomy: He studied Eloquence under *Gorgias* the *Leontine*, the most celebrated Rhetorician of his Time.

The Isle of *Coos*, the Place of his Birth, is very happily situated; and had, for a long time, been famous for a public School of Medicine, founded by his Ancestors: He had therefore all the necessary Conveniencies for learning the Theory of Medicine, without going out of his own Country; but, as the greatest Cities in those Times were not very populous, so, in order to perfect himself in the Practice of his Art, he follow'd the Precept which he gives to others in his Νόμος, Law; where he says, that, "after acquiring the Science of Medicine, it is necessary to "travel, and visit foreign Cities, in order to be something more "than a Physician in Name; for Ignorance, which proceeds "from want of Experience, is but a bad Stock for those who "possess it, and an unfortunate Incumbrance by Night and by "Day."

He travell'd in *Macedon*, *Thrace*, and *Thessaly*; and, in making the Tour of these Countries, he made the greatest Part of those Observations which are contained in his Book of Epidemic Diseases. He went indeed over all *Greece*, curing not only particular Persons, but Cities, and whole Provinces. The *Illyrians* sent Embassadors to intreat him to come and remove a cruel Pestilence, which ravaged the whole Country: *Hippocrates* was very willing to go to the Assistance of these People; but first informing himself of the Winds, which were then predominant in *Illyria*, of the Heats of the Season, and of every thing which preceded the Contagion, he was sensible, that there was no Remedy for the Distemper, and refused to go. But, foreseeing that this Pestilence would soon be carried into *Thessaly* and *Greece* by the same Winds, he immediately sent his two Sons, *Thessalus* and *Draco*, with his Son-in-law *Polybus*, and several of his Pupils, to different Places, with necessary Instructions; and went himself to the Assistance of the *Thessalians*, from whence he passed to the *Dorians*, and thence to *Phocis*, visiting *Delphos*, where he offered up Prayers and Sacrifices; and, passing thro' all *Bœotia*, made his Appearance at *Athens*, behaving himself all the Way like another *Apollo*; or, to use the Words of *Callimachus*, doing the Office of that divine Panacea, "whose precious Drops expel Diseases wheresoever "they fall."

On another still more pressing Occasion, he delivered the City of *Athens* from the great Plague, which had made infinite Ravages, and is so well described by *Thucydides*, an Eye-witness, and after him by *Lucretius*. They say the general Remedies, which he made use of on that Occasion, were great Fires, which he caused to be kindled in all the Streets; and directed all Sorts of aromatic Flowers and Drugs to be cast therein, in order to purify the Air; a Method practised, a long time before *Hippocrates*, by the *Egyptians*, who, as we are inform'd by *Plutarch*, purified the Air in the Morning with Perfumes of Rosin, burnt Myrrh in the Middle of the Day, and in the Evening, at Night-fall, kindled up Torches, call'd CYPHI, the Preparation of which may be seen under that Article. Some, however, are of Opinion, that the Plague, describ'd by *Thucydides*, was not the same which *Hippocrates* cured at *Athens*.

So great was his Reputation, that most Princes and Kings try'd to get him to their Courts. He was sent for to the Court of *Perdiccas*, King of *Macedonia*, who was thought to be ill of a Consumption; where, after considering the Distemper, he discovered that the Cause of it was nothing but a Love for his Father's Mistress, named *Phyla*.

Artaxerxes offer'd him immense Sums of Money, and entire Cities, to oblige him to come and remove a Pestilence, which made terrible Devastations in his Armies and Provinces; and order'd him a Present of a hundred Talents, by way of Advance. *Hippocrates* regarding those Riches as Enemies to his Country, and an eternal Reproach to his House, he refused them, and return'd the Governor of the *Hellespont* this generous Answer: "Write to your Master, that I am rich enough; and that I "cannot, with Honour, accept his Offers, nor go and cure "*Barbarians*, who are Enemies to the *Greeks*." Somebody telling him on this Occasion, that he did wrong to slight so great a Fortune, and that *Artaxerxes* was a very good Master, he answer'd, "I have no Business with a Master, how good "soever he may be."

He was sent for by the Senate of *Abdera* to cure *Democritus*, who passed for a Madman in the Opinion of the Populace, who are always ready to mistake a Man, who is wise above the common Rate, for a Fool, or a Madman. *Hippocrates* gave, on this Occasion, a signal Proof of his Contempt of Riches, in refusing ten Talents, which were offer'd him.

When the *Athenians* sent *Alcibiades* into *Sicily*, *Hippocrates* gave them his Son *Thessalus*, for a Physician to their Army, and defray'd the Expences of his Voyage. The ill Success of that Expedition did not prevent the *Athenians* from honouring *Thessalus* with a Crown of Gold at his Return, after three Years Service.

No Citizen ever gave greater Proofs of Patriotism, than *Hippocrates*. When the *Athenians* made Preparations to carry their Arms into the Isle of *Coos*, *Hippocrates* immediately went to implore the Protection of the *Thessalians*, and the neighbouring States; and sent his Son *Thessalus* to *Athens*, to endeavour to allay the Tempest which threaten'd his Country. Both Father and Son met with Success; for *Macedonia*, *Thessaly*, and *Peloponnesus*, were all up in Arms, and ready to march to the Assistance of *Coos*; and the *Athenians*, either out of Fear or Gratitude, hearken'd to the Remonstrances of *Thessalus*.

Pythagoras taught, that the Way for Mortals to render themselves like the Deity, was to speak the Truth, and to do Good to all the World. According to this Maxim, no Man ever more justly deserved the Title of *divine* than *Hippocrates*. The Good, which he has done to all succeeding Ages, is very well known; and he was so great a Lover of Truth, that he was willing to advertise Posterity of a Mistake, into which he had fallen, and which might have been buried in Oblivion, like those of other Physicians, whose good Success is publish'd to all the World, and their Errors industriously conceal'd. In the fifth Book of his *Epidemics*, he confesses, with an Ingenuity, of which none but great Minds are capable, that, being called to attend on *Automonus*, who had received a Wound in his Head, he unfortunately mistook the Wound for one of the Sutures, and neglected trepanning him: Some Days after, the Patient being seized with a great Pain in the Side, and Convulsions in both Arms, he was sensible of his Fault, and applied the Trepan, but in vain; for, it being the fifteenth Day, and the Summer Season, the Patient died the next Day.

Hippocrates desir'd of the Gods, in Recompence of his Labours, neither Riches nor Pleasures, but a long Life in perfect Health, Success in his Art, and to render himself famous to Posterity. This Desire of his is declar'd in his *Oath*, and it was accomplish'd in its full Extent; for he lived one hundred and nine Years in Soundness of Mind and Body; he succeeded so well in his Art, that he has been regarded as the Founder of it; and he received, during his Life, such great Honours, as were never given to any Mortal. The *Argians* erected a Statue of Gold to his Honour; and the *Athenians* decreed him Crowns of the same Metal, pass'd an Act, that himself, and his Descendants, should be maintain'd in the *Prytaneum*, and initiated him into the great Mysteries; an Honour very rarely confer'd on Strangers, and never before on any but *Hercules*; and he has left behind him an immortal Reputation. *Plato* and *Aristotle*, the two greatest Geniuses which perhaps ever appear'd, follow'd him as their Master, and made it their Business to explain his Sentiments. In short, *Hippocrates* has been always regarded as the most faithful Interpreter of Nature; and, in all Appearance, he will preserve the Glory and Reputation, of which more than two thousand Years have not been able to deprive him, to the latest Ages.

He died in *Thessaly*, in the second Year of the one hundred and seventh Olympiad, three hundred and forty-nine Years before the Birth of Christ, and was buried between *Larissa* and *Gortona*.

Having thus given some of the most remarkable Passages of this great Man's Life, it will be easy from thence to form his Character; and therefore we shall do no more than give an Account of the various Editions of his Works, as we find them in *Fabricius's Bibliotheca Græca*.

The *Greek* Editions are,

1. That at *Venice*, An. 1526. by *Aldus*, in Folio.

2. At *Basil*, 1538. Folio, by *Frobenius*, corrected after three Manuscript Copies by *Janus Cornarius*.

Latin Editions.

The antient *Latin* Version of *Hippocrates* and *Galen* is lost, but there are *Latin* Editions of *Hippocrates*, since the Publication of some Treatises of his, which were most of them translated out of *Arabic* into *Latin*, and printed at *Venice* 1493. and 1497.

1. That, translated by several Hands, at *Basil*, printed by *A. Cratander*, 1526. Folio.

2. The Version of *M. Fabius Calvus*, of *Ravenna*, at the Command of Pope *Clement* VII. from *Greek* Manuscripts in the *Vatican*, and printed at *Rome* 1549. Folio.

3. The Version of *Janus Cornarius*, printed at *Venice* 1545. Octavo; and at *Paris* 1546. Octavo; and the same Year at *Basil*, in a more beautiful Letter, by *Frobenius*, in Folio; and again, at the same Place, in 1553. in Folio; and 1554. in Octavo, 2 Vols. Again, in the same Place, by *J. Culman* of *Geppingen*, 1558. Folio; at *Lyons*, 1562. Octavo, and 1564. Folio, with the Commentary of *Marinellus*, and the Arguments of *Culman*; at *Venice* 1575. and 1619. Folio; at *Vicenza* 1610. Folio, with a paraphrastic Translation of the Epistles, and some other Treatises of *Hippocrates*, done by *Cornarius*, and inserted before the Work; at *Cologn* 1542. Octavo.

4. The *Latin* Version of *Anutius Foësius*, printed at *Francfort*, *apud Wechelos*, 1596. Octavo.

The *Græco-latin* Editions are,

1. That of *Hieron. Mercurialis*, printed at *Venice*, 1588. Folio.

2. Of *Anutius Foësius*, printed at *Francfort*, *Typis Wechelianis*, 1595. Folio. Re-printed at the same Place, 1621. and 1645. and at *Geneva*, 1657. Folio.

3. Of *Joh. Antonid. Vander Linden*, with the Version of *Cornarius*, printed at *Leyden*, 1665. Octavo.

4. Of *Renatus Charterius*, who revised and compar'd, by Manuscripts, the Works of *Hippocrates* and *Galen*, corrected the Version in Multitudes of Places, adding the various Readings, and Corrections at the End of each Volume; printed at *Paris*, 1679. 13 Vol. Folio.

Besides the Editions mentioned, *Prosper Martianus*, on the Works of *Hippocrates*, and his posthumous Annotations, were published by *Petrus Castellanus*, at *Rome*, 1626. Folio. Twenty-two Treatises, with the Version of *Cornarius*, and an Analysis, or Tables, and Animadversions of *Theod. Zwinger* were printed at *Basil*, 1579. Fol. and are now very scarce. *Fabricii Bibliotheca Græca.*

HIPPOCRATICA *Facies*. See FACIES.

HIPPOCRATICUM *Scamnum*. See BATHRON.

HIPPOCRATICUM *Vinum*. See CLARETUM.

HIPPOGLOSSUM. See BISLINGUA.

HIPPOGLOSSUS. A kind of Fish, being a larger Species of Sole; whose Use in Food see under ALIMENTUM.

HIPPOLAPATHUM. See LAPATHUM; *Alpinum*; *folio subrotundo*.

HIPPOLITHUS, ἱππόλιθος, from ἵππος, a Horse, and λίθος, a Stone; a Stone found in the Stomach or Intestines of a Horse. See EQUUS, and BEZOAR.

HIPPOMANES, ἱππομανὲς, from ἵππος, a Horse, and μαίνομαι, to be mad, is a Name for the CYNOCRAMBE, or APOCYNUM, so called, because it makes Horses, which eat of it, mad, *Theocrit. Idyl.* 2. and for the expressed Juice of the *Tithymallus*, *Theophrast. Hist. Plant.* It also signifies a Juice distilling from the Genitals of a Mare in the time of her Covering. *Aristot. Hist. Anim.* Some, again, take it for the Secundines of a Mare; and, lastly, it signifies a fleshy Substance, adhering to the Forehead of a Colt newly foaled, which some imagine to have a Virtue of procuring Love, and promoting the Birth.

HIPPOMARATHRUM, ἱππομάραθρον, from ἵππος, an Horse, and μάραθρον, Fennel; Horse-fennel.

HIPPOMARATHRUM is Wild Fennel, large, and bearing a Seed like *Canchry*, or *Cachry*. The Root is sweet-scented, and, being drank, cures the Strangury, and, used in a Pessary, provokes the Menses. The Seed, or Root, taken internally, bind the Belly, cures the Bites of venomous Animals, breaks the Stone, and removes the Jaundice. The Decoction of the Leaves, drank, procures Plenty of Milk, and purges Women after Child-birth. There is another Plant called *Hippomarathrum*, which has narrow, slender, oblong Leaves, with round, Coriander-like, acrimonious, sweet-scented, and hot Seeds: Its Virtues are the same with those of the preceding, only less efficacious. *Dioscorides*, *Lib.* 3. *Cap.* 82.

Ray mentions a *Hippomarathrum Sphærocephalum*, or round-headed *Hippomarathrum*, propagated by Seeds sent from *Egypt* by *Prosper Alpinus*, which differs from the Cachryophorous, or Cachry-bearing *Hippomarathrum*, in that it is much larger, having longer and bigger Stalks, and bearing Umbels of a violet Colour, almost perfectly spherical, and producing Seeds like those of Fennel. *Raii Hist. Plant.*

HIPPONE. The Name of a Malagma, invented by *Philagrius*, and described by *Aetius*, *Tetrab.* 3. *Serm.* 3.

HIPPOPHAES, ἱπποφαὲς, according to *Dioscorides*, is a shrubby Plant, which is of Service to Fullers in scouring their Cloth: It is also called ἱπποφαὲς, (*Hippophaes*) and ἱπποφυὲς, (*Hippophyes*) and ἱππόφυον, (*Hippophyon*) by *Theophrastus*. In *Pliny*, *Lib.* 21. *Cap.* 15. we read *Hippophaes*, and *Lib.* 22. *Cap.* 12. we find it *Hippophyes*. *Gaza* renders the Word in *Theophrastus* by *Lappago*; and *Galen*, in his *Exegesis*, says, it is also called κνάφος, (*Cnaphos*) and σύβος, (*Stybos*) for which some read σίλβος (*Stilbos*).

Hippophaes, says *Dioscorides*, grows in maritime and sandy Places, is a Shrub of the spriggy Kind, [τραγανώδης] which sends forth its Shoots thick and close on all Sides, has long Leaves, nearly resembling those of the Olive-tree, but narrower and softer, among which are interspersed dry, whitish, angulous Thorns, distant from one another. The Flowers resemble Clusters of Ivy-berries, being collected in Bunches, but smaller and soft, and of a whitish, and partly red Colour. The Root is thick, soft, bitter, and full of a milky Juice. From this Plant, as well as from the *Thapsia*, they extract a Juice, which is reposited either by itself, or work'd up with the Flower of the Ervum, and dry'd. The Weight of half a Scruple of the Liquor taken alone purges bilious, watry, and pituitous Humours; but the Dose of the Ervum, impregnated with the same, is two Scruples in Hydromel. The Plant, together with its Root, is dry'd, triturated, and exhibited in half a Pint of Hydromel. They prepare a Liquor from the Plant, and its Root, as is done from the *Thapsia*; the Dose of which is a Dram, for a Purge. *Dioscorides*, *Lib.* 4. *Cap.* 162.

The Author above-mention'd says, that "the *Hippophæstus*, "which some call *Hippophaes*, grows in the same Places with "the *Hippophaes*, and is a kind of *Fullers Thorn*; that it is a "low Ground-herb, and has only small prickly Leaves, with "gaping, empty Heads, and bears neither Stalk nor Flower; "the Root is thick and soft." By this Description it appears, that the *Hippophaes* and *Hippophæstus* are the same Plant; and that the latter is only the *Hippophaes*, in its recent State, before it produces a Stalk. But on what Plant to fix this Name, is a Point much controverted, and not easy to be determined. *Columna* calls the *Carduus Stellatus* the *Hippophaes*, and doubts whether the *Rhamnus Salicis Folio* of *C. B.* ought not to be so named. *C. Bauhine* separates the *Hippophaes* of *Anguillara*, from the *Hippophaes* of *Dioscorides*, referring the former to the *Rhamnus*, how justly, I will not determine; for I suppose none of them to be genuine, because none of their Roots afford a milky Juice. *Matthiolus* writes, that *Hieronymus Amatheus*, a Physician of *Oderzo*, in the State of *Venice*, shew'd him a Plant, which he had sent him from *Venice*, by *J. Baptist. Ropisso*, a Physician of *Pavia*, which not only answer'd all the Characters of the *Hippophæstus* of *Dioscorides*, but also the Virtues, as he assures us he found by an Experiment; and this put him in Hopes of discovering it. *Parkinson* thinks it a Species of *Tithymalus*, and I see no Reason to disagree with him; and therefore I have placed it under the Head of *Tithymalus*, and collected and compared the Synonyma. *Dale.*

Hippocrates often uses the Juice of the *Hippophaes*, as well as the *Coccus Cnidius*, as a Purge for the Head; he prescribes it also

to evacuate white Phlegm, and for the Anaſarca, to expel pituitous Humours in the Sciatica; in the *Typhus*, a ſort of burning Fever, he exhibits the Juice of *Hippophaes* with the *Coccus Cnidius*, as a Cathartic; and *Lib. de intern. Morb.* he adviſes purging downward by *Hippophaes*, and upwards by *white Hellebore*.

The Synonyma, according to *Dale*, are;

Hippophaes, Hippophæſtum, & Hippomarates. Offic. Park. Theat. 197. *Hippophaes Anguillare & Dodonæi, ſive Spina purgatrix.* J. B. 1. 410. *Hippophaes quibuſdam ἄκανθα καθαρτικὴ*, i. e. *Spina purgatrix.* C. B. P. 293. *Rhamnus Catharticus Oleæ folio.* Ejuſd. *Tithymalus maritimus.* Ejuſd. *Tithymalus ſpinoſus.* Wheeler. Itin. 307. *Tithymalus maritimus, Creticus ſpinoſus.* Park. PURGING-THORN.

It grows in the *Morea*; the Juice is uſed to purge off, by Stool, pituitoſe Humours.

Boerhaave gives the Name of *Hippophae* to the *Rhamnoides; fructifera; Salicis foliis; baccis leviter flaveſcentibus:* And alſo to the *Facea; ſtellata; folio papaveris erratici.*

HIPPOPHÆSTUM, *ἱπποφαιστον.*

Dioſcorides makes different Chapters of the *Hippophaes* and *Hippophæſtum*, and, giving the Virtues of the latter, ſays, that a Juice is extracted from the Leaves, Root, and Heads, which, dry'd, and exhibited to the Weight of a Scruple and half, purges Water, and Phlegm, and is particularly ſerviceable in the Orthopnœa, Epilepſy, and nervous Diſeaſes. *Dioſcorides, Lib.* 4. *Cap.* 163. See HIPPOPHAES.

HIPPOPOTAMUS. Offic. Aldrov. de Quad. Digit. 181. Geſn. de Quad. Digit. 493. Charlt. Exer. 14. Jonſ. de Quad. 76. Raii Synop. A. 123. Mont. Exot. 5. Bellon. de Aquat. 25. THE SEA-HORSE, or rather RIVER-HORSE.

The Teeth and Teſticles of this Animal are uſed in Medicine; the Teſticles, dried and triturated, are drank againſt the Bites of Serpents. *Dioſcorides.* The Teeth, made into Rings, are ſuppoſed to be of great Virtue againſt the Cramp. *Charlt. Dale.*

Another Species of *Hippopotamus* is the

Equus marinus. Offic. *Equus marinus & Hippopotamus falſo dictus.* Raii Synop. A. 191. *Roſmarus.* Jonſ. de Piſc. Tab. 44. *Waleus alius Mors.* Charlt. de Piſc. 49. *Mors ſeu Morſx, vel Roſmarus.* Geſn. de Aquat. 211. THE SEA-HORSE.

The Parts of this Animal uſed in Medicine are, the Pizzle, which is a round, bony Subſtance, a Cubit, or more, in Length; thick, ponderous, and ſolid; and much thicker and rounder at the End, near the Glands; and the Teeth, which are great, long, thick, ponderous, hollow, and white.

The Pizzle, pulverized, is uſed to expel the Stone; the Teeth, for Service and Value, are compared to Ivory, and are made into various Forms, as into Rings for the Cramp, and for other Purpoſes. *Dale.*

HIPPOSELINUM. See SMYRNIUM.

HIPPOSIS, *ἱππωσις*, from *ἱππάω*, or *ἱππόω*, to preſs, after the manner of Fullers, a Preſſure, Compreſſion, or Depreſſion: Thus, *Lib. de Artic. τὰ μὲν γὰρ ἐξεσεῶτα ἐς τὴν χώρην ἀναγκάζει ἡ ἵππωσις εἶναι*, "for things out of their Places are reduced into "their Situation by Compreſſion."

HIPPOSORCHIS, *ἱπποσόρχις*, from *ἵππος*, a Horſe, and *ὄρχις*, a Teſticle, in the *Ausburgh* Diſpenſatory, means the Powder of the Teſticles of a Horſe; but *Hipporchis* had been a more elegant Word, and better turned according to the Rules of Compoſition.

HIPPURIS, *ἵππουρις*, from *ἵππος*, a Horſe, and *οὐρὰ*, a Tail, is a Name given to ſeveral ſorts of *Equiſetum. Hippuris minor* is a Name for the *Ephedra*; *maritima*; *minor.*

Ἵππυρις, Lib. 7. *Epidem.* is ſuppoſed to ſignify an inveterate and ſtubborn Defluxion on the Pudenda of thoſe who continue too long, or mount too often, on Horſe-back, or ſome Weakneſs, or other Inconvenience, of the ſame Parts, proceeding from the ſame Cauſe.

HIPPUS, *ἵππος*, is an Affection of the Eyes, under which they are continually trembling, and twinkling, as is uſual with thoſe who ride on Horſe-back. The Author of the *Definitiones Medicæ* ſays, *ἵππος ἐστὶ διάθεσις ἐκ γενετῆς, &c.* "The *Hippus* "is an Affection contracted from the Birth, in which the Eyes "are unſettled, and always in Motion, being under a perpetual "Concuſſion and Trembling. This Diſorder was called by "*Hippocrates*, *ἵππος*, and is an Affection of the Muſcle which "ſuſtains the Eye, and embraces the Baſe of the viſual Organ."

HIRA. There are great Diſputes about the Orthography and Signification of this Word. The antient Copies read *Chira*, ſome *Hilla*. Some reſtrain its Meaning to the *Inteſtinum jejunum*, others extend it to all the Inteſtines; and *Linden*, in a larger Senſe, to all the Contents of the Abdomen. *Caſtellus.*

HIRBELLUM, in *Paracelſus, Tr. de Surditate*, is ſomething unknown, which renders Perſons delirious. *Caſtellus.*

HIRCI BARBA. See TRAGOPOGON.

HIRCULUS. A Species of Plant ſo called, becauſe of its rank, goatiſh Smell.

HIRCUS. The ſame as CAPER, which ſee. *Hircus Bezoarticus*; ſee BEZOAR.

HIRQUUS. The great Angle of the Eye.

HIRUDO, *Sanguiſuga.* Offic. Charlt. Inſect. 62. Mer. Pin. 207. *Hirudo ſive Sanguiſuga.* Mont. Exer. 323. *Hirudo maximè apud nos vulgaris.* Raii Hiſt. Inſect. 3. *Hirudo major, equina.* Schrod. 5. 342. THE LEECH.

Theſe are ſmall black Animals, deſtitute of Legs, variegated with Lines and Points, and living in watry Places. The ſmall Leeches are prefer'd to the large, as being leſs hurtful; and, among the ſmall ones, ſuch as are mark'd with Lines on the Back.

It is not impoſſible, but that the Antients might take the Hint of bleeding from theſe Inſects; for it is well known, that in the Spring, when Horſes are allur'd into Ponds and Rivers by the green Graſs, the large Leeches, called Horſe-leeches, ſeize their Legs, or Flanks, perforate a Vein, and excite a profuſe Hæmorrhage; and that, after this, the Horſes improve in Health, and Fleſh. See BDELLA.

Themiſon was, probably, the firſt Phyſician who uſed Leeches; he is, at leaſt, the firſt that takes notice of them: For *Hippocrates* never once mentions them; and *Cælius Aurelianus* quotes nothing concerning them in the Extracts he gives us from the Writings of thoſe Phyſicians who liv'd betwixt the Times of *Hippocrates* and *Themiſon.* Thoſe of the Sect of *Themiſon* us'd Leeches upon many Occaſions; and ſometimes applied Cupping-glaſſes to the Part, after the Leeches dropt off, in order to draw off more Blood. *Galen* does not mention them, perhaps, becauſe they were peculiar to the Methodic Sect, which he deſpiſed. Indeed they are mention'd in an imperfect Treatiſe *de Cucurbitulis, de Scarificatione, de Sanguiſugis*, &c. aſcrib'd to *Galen*, but, probably, without Foundation; becauſe *Oribaſius, Lib.* 7. ſpeaks to the ſame Purpoſe with regard to Leeches; and declares he extracted it from *Antyllus* and *Menemachus*, who were Methodics, at leaſt the laſt of them. This Remedy was, probably, firſt diſcover'd by the Peaſants.

Leeches are a Species of aquatic Worms or Inſects, which, being applied to the Body, bite through the Skin, extract Blood out of the Veins, and are very conducive to Health; for which Reaſon they were us'd in very early Times, by the *Greek* and *Roman* Phyſicians. Since there are various kinds of them, it will be proper to give ſome Direction for the Choice. Thoſe, then, taken out of clear Brooks and Rivers are beſt; for the others from Lakes, Fiſh-ponds, and ſtagnating Waters, are impure and malignant, exciting ſometimes violent Pains, Inflammations, and Tumors. The moſt experienced Surgeons likewiſe prefer thoſe with ſlender-pointed Heads, and greeniſh or yellowiſh Streaks on their Backs, with their Bellies of a Red-ſh-yellow; for when their Heads are large, and from a blue they incline to a black Colour all over their Bodies, we look upon them to be the moſt malignant Sort. But one Obſervation more ſeems abſolutely neceſſary, never to apply Leeches lately caught in Rivers, or foul Waters; but let them be firſt put into a Glaſs full of clean Water, and often ſhifted, that they may purge themſelves of their Filth and Venom. After keeping them ſome Months in this manner, they may be us'd ſafely. See *Tab.* XXXIII. *Fig.* 5.

Before the Leech is applied, it ſhould be taken out of the Water, and put into an empty Cup, or Glaſs; that, being thirſty, it may more ſpeedily inſinuate itſelf into the Skin, and draw off a greater Quantity of Blood. And as for the Part, it may be put on the Temples, or behind the Ears, if there is any Diſorder in the Head or Eyes, from a Redundance of Blood, and eſpecially if the Patient is delirious in a Fever. They may ſometimes be conveniently apply'd to the Veins of the Rectum, in the blind and painful Piles; nor will this Application be of leſs Service, in Hæmorrhages of the Noſe; and in ſpitting or vomiting Blood; for their Efficacy in promoting a Revulſion, eſpecially when an Obſtruction of the Hæmorrhoids occaſions this Profuſion, is very extraordinary. But before the Leech is uſed, the Part ſhould be rub'd, till it is hot and red; then the Tail muſt be taken hold of with a dry Cloth, or it muſt be laid half over the Edge of a Glaſs, and thus directed to the proper Place, where, when it is once fixed, it ſucks very greedily. If ſeveral are neceſſary, apply each ſucceſſively in this manner. When they will not adhere, as it ſometimes happens, it is proper to moiſten the Skin with warm Water, or the Blood of a Pigeon, or Chicken: If that will not entice them, others muſt be ſubſtituted in their ſtead. The Application of Leeches to the Caruncle in the greater Canthus of the Eye, after Phlebotomy, has been found very ſerviceable, in all inflammatory Diſorders of that Organ. Cream and Sugar, rub'd upon the Part, will invite Leeches to bite, when other things fail.

As ſoon as the Leeches are diſtended with Blood, they generally fall off ſpontaneouſly; but, if a larger Quantity of Blood is requiſite, new ones muſt be apply'd, or the Tails of theſe already fixed muſt be cut off; for then, the Blood running thro' them, they will be induced to draw more. If, after a ſufficient Evacuation, they do not ſpontaneouſly ſeparate themſelves from the Skin, upon ſprinkling a little Salt or Aſhes, they immediately drop off; and this Method is beſt, becauſe pulling them away, often cauſes an Inflammation, or Tumor. The Leech, which is whole, may be put again into the clean Water, and kept for future Uſe; but

but that which is cut, certainly dies. The Wound may be waſhed with warm Water, and dreſſed with a vulnerary Plaiſter, though it uſually heals without. Thoſe who deſire to know more of theſe Inſects, may read *Aldrovandus*, *Geſner*, *Botallus*, *Petr. Paul. Magnus*, *Sebizius*, *Heurnius*, *Cranſius*, *Schroder*, and *Stahl*, who have treated of them more at large.

When Leeches fall off, the Hæmorrhage generally continues for ſome time, as twelve Hours, and frequently longer. Upon this Occaſion, as the Blood cannot be receiv'd in Veſſels, but is abſorb'd by Linen, it makes a great Appearance, and ſeems much more than it really is: This alarms the Patient, and puts the Attendants into an unneceſſary Conſternation, upon a Suppoſition, that the Hæmorrhage will be ſo profuſe, as to occaſion Faintings, and Death, neither of which is likely to enſue; for the Bleeding may, at any time, be ſtopt by Compreſſure, or the Application of Styptics; as Brandy, with a little powder'd Colcothar. But it is more frequently neceſſary to bathe the Part wounded, with warm Water, in order to encourage a Diſcharge of Blood, when it does not flow in Quantities ſufficient to anſwer the End propos'd.

HIRUNDINARIA. See ASCLEPIAS.

HIRUNDO. A kind of Bird commonly call'd the *Swallow*, of which *Dale* mentions four Species; which are,

1. *Hirundo*. Offic. Schrod. 5. 320. Ind. Med. 59. Bellon. des Oyſe. 379. Mer. Pin. 177. *Hirundo domeſtica*. Aldrov. Ornith. 2. 662. Jonſ. de Avib. 83. Geſn. de Avib. 492. Charlt. Exer. 95. Will. Ornith. 155. Raii Ornith. 212. Ejuſd. Synop. A. 71. *Hirundo vulgaris*. Scalig. THE SWALLOW.

Of medicinal Uſe are the whole Bird, its Heart, Blood, Neſt, and Dung. Swallows, with their Young, burnt to Aſhes, are a Specific in the Epilepſy, and for Dulneſs of Sight, and Lippitude, if made into a Litus with Honey; it alſo cures the Quinſey, and Inflammations of the Uvula. The Heart alſo is ſaid to be good againſt the Epilepſy, and to ſtrengthen the Memory; ſome eat it againſt a Quartan. The Blood is thought to be of ſingular Benefit to the Eyes. The Neſt helps the Quinſey, and cures Redneſs of the Eyes, and heals the Bite of a Viper, if apply'd to the Place. The Dung heats mightily, and diſcuſſes, being of an acrimonious Quality. It is of excellent Service againſt the Bite of a mad Dog, in the Colic, and nephritic Diſorders, and excites the Belly to Excretion. *Celſus* tells us, *Lib.* 4. *Cap.* 4. that it was commonly ſaid, "that whoever eats a young Swallow, ſhall be free from all "Danger of a Quinſey for a whole Year."

2. *Hirundo riparia*. Schrod. 5. 320. Mer. Pin. 178. Aldrov. Ornith. 2. 694. Geſn. de Avib. 507. Jonſ. de Avib. 84. Charlt. Exer. 96. Raii Ornith. 213. Ejuſd. Synop. A. 71. Will. Ornith. 156. THE SAND MARTIN.

The whole Bird, and its Blood, are uſed in Medicine, with the ſame Intentions as the preceding.

3. The third Sort of *Hirundo* is the APOS; which ſee.

4. *Hirundo Indica*. Offic. *Hirundo maritima*. Act. Philoſ. Lond. N° 285. p. 1396. *Hirundo Sinenſis nido eduli Bontii*. Will. Ornith. 15. Raii Ornith. 215. Ejuſd. Synop. A. 72. *Hirundo Chinenſis*. Bont. 66. *An Hirundo exotica aquatica*. Jonſ. Mantiſſ? THE INDIAN SWALLOW.

It is found in the maritime Places of *China*. What relates to Medicine, is its Neſt, which is of a hemiſpherical Figure, of the Size of a Gooſe's Egg, pellucid, and in Subſtance reſembling the *Ichthyocolla*. It ſtimulates to Venery. It is a Queſtion, whether they are made of the Sperm of certain Fiſhes, or of the Gum of ſome Plants growing on the Rocks. In *China* theſe Neſts are eſteem'd delicious Food.

HISMAT. Spuma Argenti, or Litharge. *Rulandus*.

HISPANICUM *viride*, Verdegriſe. *Rulandus*.

HISPIDITAS, Hairineſs in general; but in a particular Senſe it is uſed to ſignify either the Diſeaſe called PHALANGOSIS, or that other named DISTICHIASIS. See theſe Words.

HISPIDULA. A Name for the HELICHRYSUM; *montanum*; *flore rotundiore*.

HISTORIA, Hiſtory, in Medicine, is uſually reſtrain'd to ſignify the ſame as *Caſus Medicus*, or *Obſervatio medica*, a medicinal Caſe, or Obſervation. See CASUS.

HISTOS, ἱστὸς, properly the Maſt of a Ship; but in *Hippocrates*, *Lib. de Artic.* is an erect Piece of Wood, on the Top of which is placed another horizontally, whence depends a Pully, conſtituting together a chirurgical Machine for reſtoring a Gibboſity of the Spine.

HOAXACAN, *Hern.* The ſame as *Guaiacum*. *Raii Index*.

HOBUS, *Hobus Indica Prunii Facie*. J. B. Ovied.

A Species of Plum-tree growing in the *Weſt-Indies*, and bearing a Plum of the Shape of our Damaſcen-plums, and yellow when ripe. The Plum is of an agreeable Taſte, being ſomewhat acrimonious, and is eaſy of Digeſtion, but difficult to chew, becauſe it is full of Fibres; ſome take it for a Species of *Myrobalans*.

From the tender Tops of the Branches, and the Bark, the *Indians* prepare a ſweet-ſcented Water, which is good to refreſh tired Limbs; they alſo uſe it in their Baths in *New-Spain*. The Fruit of the Tree ſtrengthens the Stomach, and ſomewhat looſens the Belly. If Inciſions be made in the Root, there diſtils a Liquor which is good to drink. *Lemery des Drogues*.

HOCIAMSANUM, Agrimony. *Marcellus Empiricus*, *Cap.* 20.

HOEDUS. See CAPER.

HOITZILOXITL. See *Balſamum Peruanum*.

HOLCAS, ὁλκὰς, in *Hippocr. Lib. de Flat.* is a Ship of Burden. *Foeſius*.

HOLCE, ὁλκὴ, the Name of a Weight, the ſame as *Drachma*. *Gorræus* from *Galen*. But properly, as in *Dioſcorides*, it ſignifies the ſame as σαβμὸς (*Stathmos*), a Weight in general.

HOLCIMOS, ὁλκιμὸς, from ἕλκω, to draw, tractile, is an Epithet appiy'd to what may be drawn out at Length, and ſtill preſerve its Continuity, which is the Property of viſcid and glutinous Subſtances. *Galen*, *Com.* 2. *in Lib. de Artic.* on a Paſſage where the Word in *Hippocrates* is εὐόλκιμον (*euolcimon*), eaſily tractile. *Holcimos* is alſo ſpoken of the Liver affected with a Tumor. *Galen de Loc. affect.*

HOLCUS, *Plin.* A Name for the *Hordeum*; *ſpontaneum*; *ſpurium*.

HOLERA, an antiquated Word for *Cholera*; ſometimes it was written for *Olera*, the Plural of *Olus*. *Caſtellus*.

HOLIPPÆ, very thin Cakes, prepar'd of fine Flour and Sugar, pour'd upon a hot Iron Plate figured, and then ſet to the Fire. The Name is now appropriated to Sweet-meats, tho' there are extant, in Diſpenſatories, Preſcriptions for purging *Holippæ*. *Caſtellus*.

HOLLI, the *Indian* Name for what the *Spaniards* call *Ulli*; which is a very uſeful reſinous Liquor, that diſtils from the Tree *Holquahuytl*, or *Chilli*: This is ſometimes, tho' but rarely, mixed with Chocolate; and eſpecially, in caſe of a Dyſentery and Diarrhœa, when, with four Ounces of *Cacao*, they mix one Ounce of *Holli*. But, by way of Precaution, the Cacao, on account of its Pinguiouſneſs, and the Gum *Holli*, becauſe of its extraordinary Tenaciouſneſs and Viſcidity, muſt firſt be torrefy'd, to prevent their obſtructing the Viſcera, and producing a Cachexy. *Ray*, *Hiſt. Plant.*

HOLMISCOS, ὁλμίσκος. See MORTARIOLUM.

HOLMOS, ὅλμος. See MORTARIUM. *Holmos* is alſo the Trunk of the Body, ſeparate from the Limbs. *Caſtellus*.

HOLOPHLYCTIDES. The ſame as PHLYCTIDES, or PHLYCTÆNÆ; which ſee.

HOLOSCHOENOS. A Name for the *Juncus*; *aquaticus*; *maximus*.

HOLOSTEO AFFINIS. See MYOSUROS.

HOLOSTEON. The Name of a Fiſh which is found in the River *Nile*: It is of no Uſe in Medicine. *Lemery des Drogues*.

HOLOSTEUM MINIMUM. A Name for the *Alſine*; *verna*; *glabra*; which ſee.

HOLOSTIUM. A Name for the *Plantago*; *anguſtifolia*; *albida*; *Hiſpanica*.

HOLOTHURION; whether a Plant, or Animal, or of the Claſs of Zoophytes, is not certain; but it deſerves to be mention'd, on account of an Obſervation made by *Bontius*, *Obſ. ſelect. Med. Ind. annex.* that exceſſive Drinking of a Liquor, prepared of Rice and *Holothurium*, and called *Arac*, was the Cauſe of a deplorable, complicated, chronic Diſeaſe, in a certain Caſe that fell under his Cogniſance; for which Reaſon he calls it, a curſed Liquor. *Caſtellus*.

HOLOTONICOS, ὁλοτονικὸς, from ὅλος, whole, and τείνω, to ſtretch, is ſpoken of an univerſal Convulſion, or Rigor of the whole Body; called alſo *Tetanus*. *Caſtellus*.

HOLSEBON, HELSATON, HELSEBON. Common Salt prepared. *Rulandus*.

HOMÆOMERES, ὁμοιομερὲς, from ὅμοιος, ſimilar, and μέρος, a Part, is an Epithet of any thing which conſiſts of ſimilar Parts.

HOMERDA, human Dung. *Caſtellus*.

HOMILIA, ὁμιλία, in *Hippocrates*, according to *Erotian*, bears three Senſes: Firſt, It ſignifies Converſation and Diſcourſe, as *Lib. de Medico*. Secondly, A Connexion and Coheſion of the Parts, and eſpecially of the Bones, *Lib. de Artic.* where the Verb ὁμιλέει is uſed. And, laſtly, It means Exerciſe; as in the Book juſt quoted. *Erotian apud Hippocratem*.

HOMO, Man, is not only the Subject of Medicine, but contributes with his Body to the *Materia medica*.

Officinal Simples, furniſhed from the Parts of the human Body, whilſt alive, are the Hairs, Nails, Saliva, Ear-wax, Sweat, Milk, Menſes, Secundines, Urine, Dung, Semen, Blood, the Stones of the Bladder, which are the *Bezoar Microcoſmi*, and the Membrane which covers the Head of the Fœtus.

The *Hair* is commended for the Production of Hair, for the Jaundice, Luxations, and for ſtopping an Hæmorrhage. The *Nails* are ſaid to provoke Vomiting, and to be an Hydragogue in Dropſies. The *Saliva* of a Man faſting is recommended againſt venomous Bites; as thoſe of Serpents, a mad Dog, and the like. The *Ear-wax* is ſaid to be a preſent Remedy in the Colic; outwardly uſed, it cures the Stings of Scorpions, conglutinates Wounds, and Fiſſures, and Cuts in the Skin. See CE-

RUMEN. The *Sweat* is said to be effectual against the Scrophula, if it be mixed with the Herb and Root of Mullein, and wrapt up in the Leaf, and so applied to the Place. The *menstrual Blood*, of the first Flux, dried, is commended, taken inwardly, for the Stone, and the Epilepsy: Externally used, it eases the Pains of the Gout; it is also said to be of Service in the Pestilence, Abscesses, and Carbuncles; it cures the Erysipelas, and cleanses the Face from Pustules. The *Secundines* are extol'd for removing strumous Tumors in the Throat, against the Epilepsy, and for invalidating the Effects of Philtra, or Love-potions; for exterminating a Mole and a Fœtus, and for destroying noxious Vermin, and Animals, even such as are procured in the Body by unlawful Arts. The *Urine* heats, dries, resolves, absterges, discusses, cleanses, resists Putrefaction; and is, therefore, of principal Service in Obstructions of the Liver, Spleen, Gall-bladder, in the Dropsy, Jaundice, and as a Preservative against the Plague. A Draught of the Husband's Urine, which the old Women call *Water of Castor*, is said to facilitate the Delivery of the Wife in hard Labour: Outwardly used, it dries the Habit, dissolves Tumors, cleanses Wounds, even though poison'd, prevents a Gangrene, loosens the Belly, absterges Scurf from the Head, mitigates the Paroxysms of Fevers, cures Exulcerations of the Ears, helps Redness of the Eyes, removes Tremblings of the Limbs, discusses Tumors of the Uvula, and eases Pains of the Spleen: There is prepar'd of it a *Sal Ammoniac*, which is an artificial striated Salt, made into Cakes, of a white Colour, and of a bitterish pungent Taste; the Method of Preparation is, by boiling together Urine, Soot, and common Salt; choose what is pure and white.

There seem to be some Foot-steps of a natural *Sal Armoniac* in *Dioscorides*, *Pliny*, and other antient Authors, who describe it as found under the Sands of *Libya*; but no such thing is to be found in the Shops at present; nor is it known what it was. See the Virtues of artificial *Sal Ammoniac* under AMMONIACUM.

Human *Dung* is mollifying, maturating, and anodyne; whence it is very serviceable in mitigating Pains excited by Charms, for ripening pestilential Carbuncles, and for a Phlegmon, particularly of the Throat, as in a Quinsey, and to prevent an Inflammation in Wounds: Some even prescribe it inwardly for the Quinsey, to repress the Paroxysms of Fevers, and for the Epilepsy. The *Semen*, or *Sperma*, is used by some for dissolving the malific Influence of Spells causing Impotence; and of the same is prepar'd a magnetic Mummy, which serves for a Philtre. The *Blood*, drank recent and hot, is said to be effectual against the Epilepsy, if the Patient, afterwards, uses vehement Motion, or Running till he sweats; it stops all sorts of Hæmorrhages: Used outwardly, it, also, represses all Eruptions of Blood, and, especially, from the Nose. The *Stone* in the human Bladder dissolves the Stone, and all tartarous Matter in any Part, and expels the same; for which Reason, it frees from all Obstructions. The *Membrane*, which sometimes surrounds the Head of the Fœtus, is said to be of extraordinary Efficacy against the Pain of the Colic.

Officinal Simples, taken from the human Carcase, are, the *Mummy*, which is a resinous, harden'd, black, shining Surface, of a somewhat acrid and bitterish Taste, and of a fragrant Smell. Under the Name of *Mummy* are comprehended, first, The Mummy of the *Arabians*, which is a Liquament, or concreted Liquor, obtain'd in Sepulchres, by Exudation from Carcases, embalm'd with Aloes, Myrrh, and Balsam. If this Mummy could be procured right and genuine, it would be preferable to the other Sorts. The second kind of Mummy is the *Egyptian*, which is a Liquament of Carcases, season'd with Pissasphaltus. A third Substance, which goes by the Name of *Mummy*, is a Carcase torrefied under the Sand, by the Heat of the Sun; but such a one is seldom to be met with in our Country. The other Parts useful in Medicine are the Skin, Fat, Bones, Marrow, Cranium, and Heart.

Mummy resolves coagulated Blood, and is said to be effectual in purging the Head, against pungent Pains of the Spleen, a Cough, Inflation of the Body, Obstruction of the Menses, and other uterine Affections; outwardly, it is of Service for consolidating Wounds. The *Skin* is recommended in difficult Labour, and hysteric Affections, and for a Withering and Contraction of the Joints. The *Fat* strengthens, discusses, eases Pains, cures Contractions, mollifies the Hardness of Cicatrices, and fills up the Pits left by the Measles. The *Bones*, dried, discuss, astringe, stop all sorts of Fluxes, and are, therefore, useful in a Catarrh, Flux of the Menses, Dysentery, and Lientery; and mitigate Pains of the Joints. The *Marrow* is highly commended for Contractions of the Limbs. The *Cranium* is found, by Experience, to be good for Diseases of the Head, and particularly for the Epilepsy; for which Reason it is an Ingredient in several antiepileptic Compositions. The *Os triquetrum*, or triangular Bone of the Temple, is commended as a specific Remedy for the Epilepsy: The *Heart* also cures the same Distemper. *Schrod. Dale.*

HOMOCHROEA, ὁμόχροια, from ὅμοιος, similar, and χρόα, the Skin, is an Equability of the Superficies, or a Smoothness of the exterior Habit of the Body; or of any Part thereof. *Hippocrates, de Cap. Vuln. & de Fract.*

HOMOGENES, ὁμογενὴς, from ὅμοιος, similar, and γένος, a Kind; homogeneous, or of the same Kind; is applied to every thing that always retains the same Nature, and keeps one constant Tenor: Thus a Fever is said to be ὁμογενὴς, homogeneous, when it is continual and uniform. *Gorræus.*

HOMOLINON. Crude Flax. In medicinal Authors, it generally imports, according to *Salmasius*, coarse Cloth made of Flax not previously macerated and whiten'd, which the Antients used in their Baths by way of Towel.

HOMONOPAGIA. A Head-ach. *Arculanus.*

HOMONYMIA. Homonymy, or Equivocation; that is, the comprehending various Things under one Name: This has caused much Confusion in the *Materia Medica.*

HOMAPLATÆ, or OMOPLATÆ. The Scapulæ, or Shoulder-blades.

HOMORUSIA. The Name of a Medicine described by *Avicenna*, and said to be good for Disorders of the Liver and Spleen, to provoke Urine, and break the Stone in the urinary Passages.

HOMOTONOS, ὁμότονος. Equal, equable, or proceeding in the same Tenor. It is an Epithet apply'd to Fevers, which proceed in the same Tenor from the Beginning to the End, without either Relaxation or Exasperation.

HOMUNCULUS. See ADOLESCENS.

HOPLE, ὁπλή. The Hoof of graminivorous Animals.

HOPLITODROMOS, ὁπλιτοδρόμος, from ὅπλον, Armour, and δρέμω, to run. A Person who took his Exercises arm'd, in order to render them more violent.

HOPLOCHRISMA, ὁπλόχρισμα, from ὅπλον, Armour, and χρῖσμα, an Ointment. The Dressing a Weapon, or wounding Instrument, with a View of curing the Wound made therewith by this means.

HOPLOMOCHLION. The Name of an Instrument inclosing the whole Body, like Armour, of which *Fabricius ab Aquapendente* gives a Figure in his chirurgical Works.

HOPLON, ὅπλον. Besides the common Signification of this Word, which is, a military Weapon, it imports a Cord, or Rope, in medicinal Authors.

HORA, ὥρα. Besides the common Acceptation of this Word, it imports that Season of the Year which begins about the Dog-days, when the Autumnal Fruits begin to be ripe. Hence

HORÆUS, ὡραῖος. An Epithet for Fruit; properly that which is ripe about Autumn. But it is us'd by modern Authors to express any Fruits which are perfectly ripe. See ALIMENTA.

I will not be certain, if I have not inadvertently translated *Fructus horæi, unripe Fruits*, which is an Error.

HORDEOLUM. A Disorder of the Eye. See CHALAZA.

HORDEUM.

The Characters are;

It has a thick Spike; the Calyx, Husk, Awns, and Flower, are like those of Wheat and Rye, but the Awns are rough. The Seed is swelling and sharp-pointed at both Ends, and closely united to its Husk.

Boerhaave mentions seven Species of Hordeum; which are,

1. Hordeum; polystichum; hybernum. *C. B. P.* 22. *Theat.* 438.

2. Hordeum; polystichum; vernum. *C. B. P.* 22. *Theat.* 439.

3. Hordeum; distichon, quod Spica binos ordines habeat Plinio. *C. B. P.* 23. *Tourn. Inst.* 513. *Boerh. Ind. A.* 2. 159. *Hordeum.* Offic. *Hordeum distichum.* Ger. 66. Emac. 70. J. B. 2. 429. Park. Theat. 1130. Raii Hist. 2. 1243. Synop. 3. 388. C. B. Theat. 440. BARLEY.

It is sown in Fields in the Spring, and the Seeds, or Corns, are us'd. Barley is cooling and drying, absterfive, aperitive, and digestive, emollient, diuretic, and nutritive. The Preparations of it is *Byne*, *sive Malta*, *Malt*; of which is made *Cerevisia*, *Wort*, which, boil'd with Hops, is call'd *Biera*, *Beer*; without Hops, *Ala*, *Ale*. See ALLA. See FARINA.

Barley, however prepar'd, never heats the Body, but moistens, or dries, according to its various Ways of Preparation. Thus, when it is boil'd, as in a Ptisan, it moistens; when it is torrefied, as in Polenta, it dries. Barley differs from Wheat, as it generates a mild and detergent Juice; whereas that of Wheat is thick and viscid, and has somewhat of an obstruent Quality. In antient times, Bread was made of the Flour of Barley, and in Use among the Subjects of very rich and potent States, for Instance, the *Athenians*; and now, in this latter Age, Barley-loaves are still prepar'd, but principally by the poorer Sort, and to supply a Dearth of Wheat. But, however, at present it is but of little Value among us, no more than it was among the *Romans* in *Pliny*'s time, for making of Bread, or any thing of that Kind; but it is in general Use, and high Esteem, for making of Beer; and is as necessary to the Northern People, on account of Drink, as Wheat is for Bread.

There

There are various Ways of preparing Barley, either as ſimple or medicinal Aliment. A Cataplaſm made of Barley-flour, and Butter, is an anodyne Remedy againſt all kinds of Pain. The Polenta of Barley, ſays *Sim. Paulli*, boil'd in Vinegar, and ſtrain'd through a Linen Cloth, frequently mitigates the intolerable Pain of the Teeth, being us'd as a Collution, or rather held for ſome time in the Mouth. A Kinſman of mine, ſays the ſame Author, labouring under moſt violent Pains of the Stone, with an intolerable Iſchury, after trying, in vain, the uſual Remedies, deſir'd my Aſſiſtance. I took as much Polenta as I thought fit, well bruis'd, and hot out of the Kettle, with an equal Quantity of Hops; and fry'd them together, with Plenty of Butter, [Oil might ſerve the turn] and made it into a Cataplaſm; which I folded in a Linen Cloth, and applied it, as hot as he could ſuffer it, to the Pecten and Perinæum. Within a Quarter of an Hour, the Patient receiv'd Relief, and was freed from his Torments, to the great Joy of his Family: And I have ſince us'd the ſame Cataplaſm on ſeveral Patients afflicted with the Stone and Dyſury, with the like happy Succeſs. *Raii Hiſt. Plant.*

Tho. Bartholine cur'd an epidemical Pleuriſy, only by a Decoction of Barley. *Ephemer. German. An.* 2. *Obſ.* 2. For Preparations of Barley, ſee PTISANA, POLENTA, MALTUM, and CEREVISIA.

4. Hordeum; diſtichum; ſpica breviore & latiore; granis confertis. *Raii Hiſt.* 1243. *Zeocrithon; ſive Oryza Germanica.* C. B. P. 22. Theat. 421.

5. Hordeum; diſtichum ſpica nitida; Zea, ſeu Briza nuncupatum. See BRIZA.

6. Hordeum; ſpontaneum; ſpurium; Holcus Plinii Anguillare. *Lob. Ic.* 30.

7. Gramen Gras Montbelgardenſium. *J. B.* 1. 438. *Feſtuca, Graminea glumis hirſutis.* C. B. P. 9. Theat. 143. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 159.

Beſides the foregoing Species of Hordeum, *Dale* mentions the two following; which are,

1. *Hordeum, mundatum & perlatum.* Offic. FRENCH, and PEARL BARLEY.

What we call *French* Barley, becauſe it is uſually imported from *France*, is no other than Barley decorticated in a Mill, adapted to that Purpoſe. See Dr. *Plot's Nat. Hiſt.* of *Oxfordſhire*. The beſt is what is round, white, and bright. What we call Pearl-barley, becauſe it reſembles *Scots* Pearls, is prepar'd after the ſame manner; only is twice or thrice ſubjected to the Mill, in order to be ground, and made leſs. Chuſe that which is ſmall, white, has Sprinklings of the Flour on all Sides, new, and not muſty. Some, you are to obſerve, will have Pearl-barley made of Millet, becauſe it is ſo ſmall; others, of Wheat. Both of them agree in Virtues with the common Barley, only are more nutritive.

2. *Hordeum cauſticum.* See CEVADILLA.

HORDEUM *nudum.* A Name for the *Triticum*; *ſpica Hordei Londinenſibus.*

HORIZON, in the ſpagiric Language, is the Mercury of Gold. *Rulandus.* The *Aurum horizontale*, otherwiſe called *Mercurius Corallinus*, is ſaid to be Mercury fix'd by the *Liquor Alcaheſt.* See AURUM.

HORMINUM.

The Characters are;

It reſembles the Sclarea, or Clary, in all reſpects; only the Galea is hollow, not falcated, or hooked, and ſhorter.

Boerhaave mentions fourteen Species of this Plant; which are,

1. Horminum; ſylveſtre; Lavandulæ flore. *C. B. P.* 239. *Park. Theat.* 57. *Raii Hiſt.* 545. *Synop.* 3. 237. *Tourn. Inſt.* 178. *Boerh. Ind. A.* 165. *Oculus Chriſti.* Offic. *Horminum ſylveſtre.* Ger. 628. Emac. 771. *Gallitrichis affine Maru, ſi non genus aliquod, Sclarea Hiſpanica.* J. B. 3. 313. WILD CLARY.

The Root of the wild Clary is thick and woody, not dying every Year, as the Sclarea does. The lower Leaves grow upon pretty long Foot-ſtalks, being about three Inches long, and about an Inch broad, cut into ſeveral Parts, and ſerrated about the Edges, and ſomewhat rugged and wrinkled. The Stalks are ſquare, and ſomewhat hairy; uſually leaning towards the Ground, not ſo tall as the Sclarea, having broader and ſhorter Leaves, ſet two oppoſite at a Joint, without Foot-ſtalks; ſerrated about the Edges. The Flowers grow in looſe Verticils, uſually ſix in a Whorle; they are much leſs than the Sclarea, having a ſmall Galea appearing but little above the Calyx, of a deep blue Colour. The Whorles ſtand at ſome Diſtance, having each two very ſmall Leaves ſet under it. The Calyx is pretty large, and cut into two Parts, the lower being ſlit in the Middle; and the upper divided into two Cavities, by a Partition in the Middle, and contains four pretty large oval, ſmooth, black Seeds. The Whole has a pretty ſtrong and not unpleaſant Smell. It grows frequently in gravelly Grounds, and flowers in *June* and *July*. The Seed is principally us'd.

This is ſuppoſed to have the ſame Virtues with the Sclarea, but in a lower Degree. But what this Plant is remarkable for, is the Seed, of which one, put into the Eye, will cleanſe it of any thing that is offenſive, and clear away Redneſs, Inflammations, or Specks.

It delights in a gravelly Soil, and flowers in *June*. See SCLAREA.

2. Horminum; pratenſe; flore minimo. *Schol. Bot. Par.* 68.

3. Horminum; vernum; folio Betonicæ, flore cœruleo.

4. Horminum; foliis alatis, hirſutis; verticillis non foliofis; caule & cauliculis rubris.

5. Horminum; ſativum. *Offic. C. B. P.* 238. *Raii Hiſt.* 1. 542. *Boerh. Ind. A.* 166. *Horminum ſativum genuinum Dioſcoridis.* Park. Theat. 56. *Horminum ſylveſtre, foliis purpureis.* Ger. 628. Emac. 771. *Horminum coma purpuro-violacea.* J. B. 3. 178. Tourn. Inſt. 178. PURPLE SPIKED CLARY.

With us it is cultivated in the Gardens of the Curious, and flowers in *July*. The Seed is us'd; which, drank in Wine, is accounted a Provocative to Venery. Mix'd with Honey, it clears the Eye from white Specks, and Albugines; it extracts Splinters out of the Body. *Dioſcorides.* It ſtimulates the Nerves, and inebriates; and is of excellent Service in a Dropſy, being of a heating Quality. *Dale.*

6. Horminum; coma rubra. *J. B.* 3. 309.

7. Horminum; coma viridi. *T.* 178.

8. Horminum; Verbenæ laciniis. *Triumf.*

9. Horminum; folio querno. *Volk.*

10. Horminum; Ægyptium; minimum; ramoſiſſimum. *Lipii.*

11. Horminum; ſativo ſimile; coma purpurea; flore vario. *H. Cath.*

12. Horminum; purpuro-violaceum; rigidius. *Suppl. alt.*

13. Horminum; minus; procumbens; folio Betonicæ.

14. Horminum; foliis alatis; flore violaceo. *Sher. Triumfett. Boerh. Ind. alt. Plant. Vol.* 1. *p.* 165.

Beſides the foregoing Species of Horminum, *Dale* mentions the following:

Horminum ſylveſtre. Offic. *Horminum ſylveſtre latifolium.* Ger. Emac. 771. Raii Hiſt. 1. 546. *Horminum ſylveſtre latifolium verticillatum.* C. B. Pin. 238. Tourn. Inſt. 178. *Horminum Germanicum humile.* Park. Theat. 56. *Horminum Gallitricho affinis planta, Horminum ſylveſtre latifolium Cluſio.* J. B. 3. 314. WILD CLARY.

It grows in many Places of *Germany*, and flowers in *June*. The Seeds are in Uſe, which are of greater Efficacy than thoſe of the Garden-ſort.

Horminum is, alſo, a Name for ſeveral Species of SCLAREA; which ſee.

HORNUS, or HORNOTINUS. A Species of Wheat, the ſame as SETANIOS, which ſee.

HORRIDUS, or HORRIFICA. In Medicine it imports either rough, as when the Skin is rough, like that of a Gooſe; or ſhivering, or attended with Shiverings; and is an Epithet of Fevers, importing the ſame as PHRICODES.

HORROR.

We are taught by *Galen, Com.* 7. *in Aph.* that a *Horror* is an Affection proceeding from depraved Humours paſſing through the Skin. And, *de Sympt. Cauſ.* he tells us, "This Diſorder is an "unequal Motion, or univerſal Concuſſion, of the Skin, as is "alſo a *Rigor* of the whole Body; but theſe two Affections are "diſtinguiſhed in this, that a *Horror* is a ſlight Motion, but a "*Rigor* a great and violent one." Hence ſome juſtly make a *Horror* to be a ſmall Rigor. *Galen, Lib.* 2. *de Diff. Feb.* ſays, it is a Medium between a *Rigor* and a *Refrigeration.* Horrors are produced by all ſuch things as cauſe a Rigor; for, as *Galen, Com. in* 7 *Aph.* obſerves, *Horrors* are effected in Bathing as well by Heat as Cold, by a Concourſe of acrimonious Humours to the Skin; for, as the ſame Author tells us, *Com.* 3. *in* 6 *Epidem.* all Bodies full of bad Juices, when vehemently heated, as by a Fever, or a Phlegmon, are affected with a *Horror.* And the Author of the *Prorrhet. Lib.* 1. writes, that *Horrors* may be excited by an internal Phlegmon, eſpecially ſuch *Horrors* as are tranſient, and ſoon paſs into an Anxiety. *Galen, de Cauſis Sympt. Lib.* 2. *Cap.* 5. thus writes: "My Sentiments, he ſays, of this "Matter, are, that the ſame Perſon who, while at Reſt, was "only ſenſible of an Inequality, upon putting himſelf in Mo"tion, is ſeiz'd with a *Horror*; and, upon uſing Exerciſe, with a "ſhaking *Rigor.*" And, a little after, he ſays, "We know ſome, "who, labouring under Crudities, were eaſy while they were "at Reſt; but, after they had enter'd the Bath, or ſtood in the "Sun, by heating, rarefying, and converting into Spirits, the "excrementitious Parts, which before remained quiet, have raiſ"ed a Commotion, in the ſame manner as Anger is excited "and kindled by the Paſſions." When thoſe excrementitious Parts, as being either bilious or pituitous, contract an Acrimony, as it uſually happens from an extraordinary Putrefaction, they are put in Motion, and, being tranſmitted to the Skin, are there the Cauſe of an *Horror.* Having thus given the Definition and Cauſes of a *Horror*, we are now to ſhew what may be predicted from them.

Firſt, then, *Horrors* are never good when they ſucceed continual Fevers, thoſe excepted, which are themſelves ſucceeded by an Intermiſſion of continual Fevers; for they are good: As, for Inſtance, when a *Coldneſs*, *Horror*, or *Rigor*, ſeizes the

Patient under a burning Fever, at the time when the Paroxysm is expected; for they are Signs, that Nature is very strong, and expels the vitious Humours from the Veins. Good critical *Horrors* are also very salutary, appearing when the Disease is, in some measure, concocted, and succeeded by some good Evacuation or Purgation. Of this Nature was that obsery'd by *Hippocrates* of the Virgin of *Larissa*, 3 *Epid. Sect.* 3. *Ægr.* 12. of whom he says, "On the fifth Day much Blood came from "her Nose; she was seiz'd with a *Horror*, and immediately "after with a copious and hot Sweat over all the Body, at-"tended with a Crisis, upon which the Fever left her." When Signs of Concoction, therefore, appear, together with other critical Signs, if a *Horror* seizes the Patient, it is a good Sign; for it usually precedes critical Evacuations and Purgations. To this Purpose the Author of the *Coac. Prænot.* writes, that "Pa-"tients under a *Horror*, Anxiety, and Lassitude, attended with "a Pain in the Loins, are subject to a Flux of the Belly." Such *Horrors*, in our Opinion, are no Signs of a Hæmorrhage in particular, but of a critical Perturbation in general, according to the Observation of the Author of the *Prorrhetica*, 149. "If "critical Sweats, he says, succeed an *Horror*, and this *Horror* "returns the next Day upon the Patient, with unaccountable "Want of Sleep, expect an Hæmorrhage from the Nostrils." But this is an uncertain Prediction, as *Galen* affirms in his Commentary on the Place. A *Horror*, therefore, is good only when succeeded by some Intermission of a continual Fever, or when it is a good critical Sign.

Bad Horrors are such as succeed an Empyema, or Tabes, bad critical ones; and such as happen in the Beginning of pestilential Distempers; which last are owing to a very great Depravation of the Humours, and a Weakness of Nature, which makes Efforts to move the Humours, but finds itself too feeble; which more plainly appears to be the Case, when the Patient, after an Horror, recovers but little Heat. Such was the Case of those, of whom *Hippocrates* speaks, 3 *Epid. Sect.* 3. who laboured under pestilential Fevers; "they were seiz'd, he says, "with a *Horror*, and were delirious a little before Death." The same was particularly obsery'd of *Crito*, who died the third Day of a pestilential Tumor. 1 *Epid. Sect.* 3. *Ægr.* 9. "He "took his Bed, says *Hippocrates*, the same Day, [he was seiz'd "with a violent Pain in his great Toe] being afflicted with "a Horror, Nausea, and could get but little Heat." This was also the Case of *Aristocrates*, 7 *Epid. Text* 52. who was seiz'd with an *Horror*, and dy'd the third Day of a pestilential Carbuncle.

Bad critical *Horrors* are, according to *Galen*, such as are dubious and difficult to be determin'd, or deadly: Such is that, 7 *Aph.* 4. where a Horror, succeeding a Sweat, is pronounced not beneficial; and the Author of 1 *Prorrhet.* 83. tells us, that "a Pain in the Loins, translated upon the Stomach, and accom-"panied with a Fever, Horror, and Vomiting of much thin "and aqueous Matter, a Delirium, and Loss of Voice, ends, "at last, in black Vomitings and Death." Again, *Coac.* 8. "Frequent Horrors of the Back, which are soon transient, "shew the Strength of the Disorder." Hence it appears, that *Horrors*, succeeding bad and destructive Vomitings, are of the bad critical Kind; which, as *Galen* observes, *Com. in* 7 *Aph.* 4. either import a difficult *Crisis*, that is, when not attended with mortal Symptoms; or fatal, when some mortal Sign attends them. In the *Coac. Præsag.* just quoted, it is said, that those *Horrors* are of a dubious Nature, which frequently recur, and soon pass off; which, in 1 *Prorrhet.* 75. is thus express'd: "Fre-"quent *Horrors* from the Back, which are soon transient, are "difficult to be supported, and indicate a painful Suppression "of the Urine." The same is still more explicitly and justly declared in the *Coac. Præsag.* above cited; where we read, "that "such *Horrors* are difficult to be supported, as indicating a Sup-"pression of Urine, and the Strength of the Disease; but a "thin or cold Sweat supervening, is a very bad Sign." Of these fatal *Horrors Hippocrates* speaks, 3 *Epid. Sect.* 3. "All "these [*Sorts of Fevers*] he there says, were attended with great "Perturbations: Many were disturb'd in the Belly, had Horrors, "with Sweats not critical, and Urine more in Quantity than "what was drank, and not thick, or shewing any Signs of Con-"coction." Such were the *Horrors* obsery'd in the Woman who lay ill at the cold Springs in *Thasos*; and of this Kind are the bad critical Horrors, which, with mortal Signs, always portend Death.

In the last Place, there are bad *Horrors*, which are not removed by a Fever, but are accompanied with very bad Evacuations, of which we read, *Coac.* 36. where it is said, that "they "who labour under a Lassitude, with a *Horror*, and a Sweat, in "manner of a Crisis, and a sudden Return of Heat, are in a "bad State; and the more, if, besides these Symptoms, Blood "also distils from the Nose." Frequent *Horrors* are Indications of a Tabes; for we find, they were common Attendants of that extraordinary and mortal Tabes, describ'd by *Hippocrates*, 3 *Epid. Sect.* 3. where he says, "the Patients were seiz'd with a Horror "and Delirium just before their Death." However, frequent *Horrors* are not of themselves sufficient to indicate a Tabes, without the Concurrence of some other Signs; such as a Difficulty of Breathing, and a constant Fever, which is exasperated at Night, with Sweats, a Desire of Coughing, a Pain, and other Signs, by which *Hippocrates*, *Lib. Prognost.* teaches us how to know those who labour under an Empyema. But, in a continual Fever, attended with an inward Phlegmon, or a Putrefaction of Matter in the Lungs, many, frequent, and irregular Horrors, with a Pain, and Difficulty of Respiration, always indicate a Suppuration or Purulence; and this seems to be the Sentiment of the Author of *Coac.* 17. where he says, "that frequent *Horrors*, and Difficulty "of Breathing, under Pains, indicate a Tabes," as they are Signs of Pus, and a future Tabes from thence. For, in a malignant Hæmoptoe, or where the Humours in the Lungs, or an Inflammation, is converted into a Suppuration, there are always *Horrors*, and a Cough, which are excited from an Irritation of the Membranes of the Lungs or Thorax, by the Acrimony of the putrid Humour. *Prosper Alpinus de Præsag. Vit. & Mort.*

HORTULANUS, named also *Milliaria* and *Cyncramus*, the Ortolan: It is a Bird little less than a Lark, very fat, and of different Colours; the Beak and Legs are inclined to red. It feeds upon several Sorts of Seeds, but prefers Millet, which fattens it most. It is found in warm Countries, such as *Provence*, *Dauphiny*, *Languedoc*, and *Italy*. The Flesh is tender, delicious, juicy, and of an exquisite Taste; and, as it has but few viscous and gross Humours, but abounds with oily and balsamic Juices, and volatile Salts, so it is reckon'd a Restorative, Strengthener, and Nourisher; increases the seminal Fluid, is easy of Digestion, produces good Juice, and is supposed to promote the Menses. Its Fat is of a lenifying, dissolving, and softening Quality.

HORTUS. The Female genital Organs are thus call'd.

HOTTONIA, *Water-violet.*

The Characters are;

It hath a Rose-shaped Flower, consisting of one Leaf, which is divided into five Parts, almost to the Bottom; in the Centre of the Flower arises the Pointal, which afterwards becomes a cylindrical Fruit, in which are contained several spherical Seeds.

We have but one Sort of this Plant; which is,

Hottonia. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 206. WATER-VIOLET.

This Plant is very common in deep standing Waters and Ditches, in several Parts of *England*. The Leaves of this Plant appear on the Surface of the Water the Beginning of *April*; and, in *May*, the Flowers appear on pretty long naked Stalks, growing in a Spike. These Flowers are of a fine Rose-colour, which, together with their fine-cut Leaves, make a beautiful Appearance on the Water. *Miller's Dictionary*, *Vol.* 2.

There are no medicinal Virtues attributed to this Plant, that I know of.

HOXOCOQUAMOCLIT. A Name for the *Sena*, *orientalis*, *fruticosa*, *Sophera dicta*.

HUART. The Name of a beautiful aquatic Fowl, found in *Canada*. The Fat is said to be resolutive, emollient, and good to fortify the Nerves.

HUCHA. The Name of a Fish, called also *Trutta fluviatilis altera*.

HUCIPOCHOTL, *Huaxacensis*, *seu Ricinus Novæ Hispaniæ*. Hernandez.

It is described by *Hernandez* as a Shrub, creeping like Vines, and bearing a Fruit nearly resembling a Hasle-nut, but inclosing three Kernels, after the manner of the *Ricinus*.

The distilled Liquor restores the decay'd Strength in such an effectual Manner, that they say it will raise the Patient, tho' almost at the Point of Death. The same is cooling and fattening, and the very Leaves of the Tree, eaten as Greens, work the same Effects, and cause a good Colour. The Tears, which distil from the broken young Shoots, are an admirable Remedy for an Inflammation of the Eyes. Five of the Kernels, or seven, if the Patient be robust, cleansed from a certain Membrane, which covers them, are an excellent Evacuant of Phlegm and Bile, both upwards and downwards, and in so safe a Manner, that the Working of it, if convenient, may be restrained by the slightest Thing taken for that Purpose.

HUMECTANTIA. Moistening Remedies. And

HUMECTATIO. Humectation. These are already explained under the Article FIBRA.

HUMERUS, in Anatomy, is the large Bone of the Arm, articulated at one End to the *Scapula*, and at the other to the *Ulna* and *Radius*. See BRACHIUM.

The principal Bandages, adapted to Disorders of the *Humerus*, are specified under the Article FASCIA.

HUMIDUM sometimes implies the same as *Humor*.

HUMILIS *Musculus*, is the same as Deprimens Oculum, or *Depressor Oculi*. See OCULUS.

HUMMATU. See NILA.

HUMOR. A general Name for any Fluid. The Antients seem to have call'd the nutritious Juices the *Radical Humor*; and to have constituted, as a Cause of Diseases, a Disproportion betwixt the *innate Heat*, and *Radical Moisture*.

HUMORISTA, a Name of Ridicule, beſtow'd by *Helmont* on the Phyſicians of the *Galenic* Sect. *Caſtellus*.

HUNC, *Hucci*. Jupiter, or Tin. *Ralandus*.

HURA. *The Sand-box-tree*.

The Characters are;

It hath a Funnel-ſhaped Flower, conſiſting of one Leaf, which is ſpread open at the Brim, and ſlightly cut into twelve Parts: At the Bottom of the Tube is placed the Pointal, which, afterwards, becomes a globular compreſſed Fruit, which has twelve Cells, in each of which is contained one roundiſh flat Seed.

We know but one Sort of this Plant; which is

Hura Americana, Abutili Indici folio, *H. Amſt.* AMERICAN HURA; *with a* Leaf like the *Indian Abutilon*. This is ſometimes called *Jamaica Walnuts*, and the *Sand-box-tree*; and, by others, *Warnelia* and *Havelia*.

This Shrub is a Native of the *Spaniſh Weſt-Indies*, from whence the Seeds have been brought into ſeveral Iſlands in the *Weſt-Indies*, where the Inhabitants cultivate theſe Plants in their Gardens, by way of Curioſity. It ariſes to the Height of fourteen or ſixteen Feet, and divides towards the Top into ſeveral Branches, which are adorned with large Leaves, indented on their Edges, and terminating in a Point. Theſe Leaves, as alſo the younger Branches, are of a deep-green Colour, and are full of a milky Juice, which iſſues out on their being broken or bruiſed. The Fruit of this Plant, if ſuffer'd to remain on till they are fully ripe, burſt in the Heat of the Day with a violent Exploſion, making a Noiſe like the Firing off a Piſtol; and hereby the Seeds are thrown to a conſiderable Diſtance. Theſe Seeds, when green, vomit and purge, and are ſuppoſed to be ſomewhat akin to the *Nux Vomica*.

The Fruit of this Plant is, by the Inhabitants of the *Weſt-Indies*, cut open on the Side where the Foot-ſtalk grew, and the Seeds carefully taken out; and the Shells are uſed as a Standiſh, to contain Sand for Writing; which gave Riſe to the Name of Sand-box-tree. *Miller's Dictionary, Vol.* 2.

HUSSO. A large cetaceous Fiſh, the *Mario* of *Pliny*, and almoſt peculiar to the *Danube*, where it comes from the Sea, for the ſake of freſh Water. It is ſometimes found four-and-twenty Feet in Length, and four hundred Pounds in Weight. This Fiſh is wholly cartilaginous, and void of Bones, except in the Head, and has no Scales. It produces the *Ichthyocolla*. *Schroder*.

HYACINTHUS.

The Characters are;

The Root is bulbous; the Leaves are long and narrow; the Stalk is erect, naked, and bears its Flowers on a Spike, which reſembles that of the Caryophyllus aromaticus: The Flower is hermaphrodite, naked, monopetalous, tubulated, and divided into ſix Segments, which are reflected outwards; it is ſhaped like that of the Caryophyllus aromaticus, cloſely embraces the Ovary, and is furniſh'd with ſix Stamina: The Fruit is roundiſh, and almoſt triangular: The Seeds roundiſh, or flat. *Boerhaave, Index alter, Pars* 2. *p.* 111.

Boerhaave mentions fifty-eight Species of this Plant; none of which have any medicinal Virtues attributed to them, except the firſt; which is thus diſtinguiſh'd.

Hyacinthus; oblongo flore, cœruleus; major. *C. B. P.* 43. *Tourn. Inſt.* 344. *Boerh. Ind. A.* 2. 111. *Hyacinthus.* Offic. *Hyacinthus Anglicus*. Ger. 99. Emac. 111. Raii Hiſt. 2. 1159. Synop. 3. 373. *Hyacinthus Anglicus ſive Belgicus*. J. B. 2. 585. *Hyacinthus Anglicus, Belgicus, vel Hiſpanicus*. Park. Parad. 122. HAREBELLS.

This Hyacinth has a round white bulbous Root, about as big as an Olive; from which ſpring ſeveral long, narrow, and thickiſh green Leaves; among which ariſes a long, ſmooth, brittle, round Stalk, eight or nine Inches high, bearing a Spike of ſix or ſeven long, round, ſweet-ſmelling Flowers, of a deep-blue or purple Colour, ſomewhat hollow, and turning back their Brims; the whole Spike hanging down its Head. When the Flowers are paſt, there come roundiſh Seed-veſſels, containing black corner'd Seed. It grows every-where in Woods, Hedges, and Thickets; and flowers in *May*.

The Roots are the only Parts uſed, and that but very rarely; tho' ſome Authors affirm, that they are good to ſtop all kinds of Fluxes, and that they are diuretic. *Miller's Bot. Off.*

Galen recommends it for the Jaundice.

HYACINTHUS is alſo a Name given to ſeveral Sorts of MUSCARI; which ſee.

HYACINTHUS STELLATUS.

The Characters are;

The Flower is hexapetalous, expanded after the manner of the *Ornithogalus*, with narrow Stamina; the Fruit is roundiſh, like that of the *Ornithogalus*; the Root is bulbous; and the Plant has the Leaf and Appearance of the *Hyacinthus*. *Boerhaave, Index alter, Pars* 2. *p.* 116.

Boerhaave mentions eleven Species of this Plant; none of which have any medicinal Virtue attributed to them, except that the Bulbs of all the Species are reckon'd poiſonous, and produce exceſſive Vomitings.

HYACINTHUS TUBEROSUS.

The Characters are;

The Root is tuberous; the Stalk erect, and ſurrounded, at Intervals, with foliaceous Vaginæ, or Sheaths; the Flowers are more like thoſe of the Lily, and much larger than thoſe of the bulbous Hyacinth.

Boerhaave mentions two Species of this Plant; which are,

1. Hyacinthus; Indicus; tuberoſus; flore Hyacinthi Orientalis. *C. B. P.* 47.

2. Hyacinthus; Indicus; tuberoſus; flore pleno. *Boerh. Ind. alt. Vol.* 2. *p.* 111.

Neither of theſe have any medicinal Virtues attributed to them at preſent, that I know of.

HYACINTHUS is alſo the Name of a Stone; which is thus diſtinguiſh'd by Authors.

Hyacinthus. Offic. Charlt. Foſſ. 38. Kentm. 30. Mont. Exot. 14. Schrod. 328. Aldrov. Muſ. Metall. 962. Schw. 381. Worm. 104. De Laet. 27. Boet. 159. Geoff. Prælect. 79. THE JACINTH.

The Hyacinth is ſo called from its Reſemblance to the Plant of that Name, in its yelloviſh-red Colour, of which there being ſeveral Degrees, the different Kinds of it are taken from thence: Some are of the Colour of red Lead, or bilious Blood; ſome of Saffron; ſome of yellow Amber, which are the leaſt eſteem'd. Hyacinths are diſtinguiſh'd into Oriental, which are brought from the *Eaſt-Indies*; and Occidental, which come from *Sileſia, Bohemia, Auvergne* in *France*, and other Places: Theſe Hyacinths ſeem to be different from that mention'd by the Antients, eſpecially by *Pliny*, which was of a ſhining Violet-colour, like the Amethyſt, tho' not ſo ſtrong. Many ſuperſtitious Virtues have been aſcribed to this Stone: They ſaid it was of a cold Nature; that it ſtrengthens the Heart, is gently aſtringent, and procures Sleep. *Schroder* reckons it a great Specific againſt Spaſms and Contractions: It is an Ingredient in the *Electuarium de Gemmis*, together with the other precious Fragments, as they are called; and it gives its Name to the famous *Confectio de Hyacintho*. *Geoffrey*.

This Gem is ſometimes imitated with Glaſs of Lead; but the true Stone is eaſily diſtinguiſh'd from the adulterated, by the Weight and Hardneſs.

CONFECTIO DE HYACINTHO.

Take of the Fragments of Hyacinth, red Coral, Bole Armoniac, and ſeal'd Earth, of each half an Ounce; Grains of Kermes, Tormentil-root, and Dittany, Seeds of Citrons, Sorrel, Purſlain, Saffron, Myrrh, red Roſes, all the Kinds of Saunders, the Bone of a Stag's Heart, Shavings of Hartſhorn and Ivory, of each four Scruples; Sapphire, Emerald, Topaz, Pearls, Leaves of Gold and Silver, of each two Scruples; Camphire, Muſk, and Ambergriſe, of each five Grains; Syrup of Lemons, as much as is ſufficient to make it according to Art.

HYÆNA, *Ὕαινα*, an Hyæna. It is not certain what was the Animal meant by the Antients, under this Name; ſome taking it for a Quadruped, and ſo make it a kind of Wolf, or Cat, or Civet-cat; and others will have it to be a Fiſh. Whatever it was, the antient Writers aſcribed great Virtues to it: Thus *Pliny, Lib.* 28. *Cap.* 8. ſays, that the Fleſh of the *Hyæna* eaten, but, eſpecially, the Liver, is of great Efficacy againſt the Bite of a mad Dog; that the Fat rubbed on the Wound, and the Skin ſpread under the Patient, are an effectual Relief in ſuch an Exigence. *Scribonius Largus*, N° 171, 172. relates, that, being inform'd, that there was an old Barbarian in the Iſland of *Crete*, who had been caſt there by Shipwreck, and receiv'd a Salary from the Government; and that he cured all who were bitten by mad Dogs, tho' affected with an Hydrophobia, and tho' they barked, and were ſeized with Spaſms, only by tying ſomething to their Left Arm; he had the Curioſity to inquire concerning the Matter, of *Zopyrus*, a Phyſician of *Gordium*, who was ſent on a Deputation from the States of that Iſland, and was entertain'd at his Houſe. He frankly told me, ſays *Scribonius*, as the beſt Return he could make for the Civilities he had received, that this wonderful Secret was nothing but a Piece of an Hyæna's Skin, tied up in a Cloth. I never yet had the Opportunity to try it, he ſays, and wiſh I never may; tho' I took care to provide myſelf, immediately, with an Hyæna's Skin, againſt ſuch an Exigence. Agreeably to this Relation of *Scribonius*, we are adviſed by *Ætius, Tetrab.* 1. *Serm.* 2. *Cap.* 162. to keep an Hyæna's Skin by us, that, whenever a Perſon happens to be bit by a mad Dog, we may tie it about him; becauſe, ſays he, it has a Property of preventing an Hydrophobia, and even relieves thoſe who are affected with that deplorable Symptom.

Of all Animals, ſays *Pliny*, the Hyæna was moſt celebrated and admired among the Magicians, as being itſelf endu'd with a Power of exerciſing magic Arts, as they pretended, and alluring infatuated Perſons within its Reach. The Skin of the Head, bound on the Part, cures the Head-ach: The Gall, rub'd on the Forehead, cures Lippitude; and the Decoction thereof, with three Cyathi of *Attic* Honey, and an Ounce of Saffron, prevents the leaſt Diſorder of that Nature, and removes all

Dimneſs

Dimneſs and Cataracts, Albugo, Aſperities, Excreſcences, and Cicatrices of the Eyes. The Sanies of the recent Liver, which diſtils upon broiling, cures the Glaucoma, being rubbed on the Place with clarified Honey: The Teeth cure the Tooth-ach, with a Touch, or being orderly faſten'd to the Parts: The Shoulders eaſe Pains of the Arms and Shoulders: The Teeth, taken from the Left Side of the Mouth, and bound to the Face, in the Skin of a Sheep or Goat, cure the racking Pains of the Stomach: The Lungs, eaten, cure the Colic: The Aſhes, with Oil, are a Remedy for ſtomachic Diſorders; being anointed on the Part: The Marrow of the Back, with old Oil and Gall, cures Diſtempers of the Nerves: The Liver cures Quartan Agues, being eaten thrice before the Fit: The Aſhes of the Spine, with the Tongue and Right Foot of a Sea-calf, and Bull's Gall, all boiled together, and ſpread on the Skin of the *Hyæna*, remove the Gout; the Gall, with the *Aſian* Stone, has the ſame Effect: They who are affected with Trembling, Spaſms, Twitchings, and Palpitation of the Heart, are to eat a Piece of the Heart; ſo as that the reſt of it be burnt to Aſhes, and made into a Litus, with the Brain of the Animal: The ſame is a good *Pſilothrum*, uſed alone, or with the Gall; the Hairs being firſt pulled out, from where you deſign none ſhall grow; and it ſerves to exterminate ſuperfluous Hairs in the Eyelids: The Fleſh of the Loins eaten, and anointed upon the Part with Oil, eaſes Pains of the Loins: The Eye, eaten with Liquorice and Dill, helps Barrenneſs, and promiſes Conception in three Days: One of the great Teeth, tied up in Linen, is ſaid to be a Remedy againſt nocturnal Fears, and Terrors of Ghoſts and Apparitions; and Maniacs are order'd to be ſuffumigated with the ſame, and to have it tied to the Breaſt, together with the Fat of the Kidneys, or with the Liver, or the Skin: The firſt of the Vertebræ of the Spine, called *Atlantia*, is accounted a Remedy for the Epilepſy: The Fat kindled is ſaid to drive away Serpents; and Part of the Jaw bruiſed with Aniſe, and eaten in Food, is ſaid to remove a Horror; the ſame uſed in Suffumigation, they ſay, provokes the Menſes. Thus far *Pliny*; who ſpeaks of many more ſurpriſing Effects aſcrib'd to this Animal; but, as they principally depend on ſome ſuperſtitious Obſervances in the Preparation or Application, we chuſe to omit them.

It is moſt certain, that the Hyæna is not the Zibetta, or Civet-cat; but is more likely, from the Sound of the Name, to be what they call *Ginetta*, *Genetta*, which is an Animal common enough in *Spain*, and agrees with the *Hyæna* in its Spots, and many other things, and is a Species of Wolf. The Antients wrote *Hyæna*, whence, by a way of forming Diminutives uſual in modern Languages, came the Words *Hyænetta* and *Jenetta*, like *Hyacinthus* and *Jacinthus*; thus are form'd *Capſetta* and *Tabuletta*, and Multitudes of others. So that the *Hyæna* may be the *Genetta* by its Spots, and ſome other things; but whether they agree in all, let others inquire; for I determine nothing. *Salmaſius*, *Plin. Exercit.*

Bellonius is miſtaken in aſſerting the *Hyæna* of the Antients to be the *Zibetta*; for they are nothing alike. The Hyæna is a Species of Wolf, the Zibetta rather of the Cat-kind. The *Arabians* ſo call this latter, which *Nicetas* call ζαπέτης (*Zapetes*); and the Ointment prepar'd of it, ζαπέτιον (*Zapetion*). Some ſay, the *Arabians* call the Hyæna *Adib*; but it is certainly of the Wolf-kind. Others tell you, that the *Arabic* Word for the Hyæna is *Dabab*; and *Belluenſis* writes, that the *Dabab*, or *Dabha*, is an Animal between a Dog and a Wolf, which devours Carcaſes, and is very common in *Syria*; this muſt be underſtood of the Hyæna. The ſame Author writes, that the *Adenant*, that is, the *Babus*, is an Animal like a Dog, which barks by Night, and feeds upon Carcaſes, and is frequently found in *Syria*, between *Damaſcus* and *Berytus*; and this too ſeems to be ſpoken of the *Hyæna*; for *Pliny* relates of the Hyæna, that it is the only Animal which digs up the Graves in Search of Carcaſes. Some ſay, that the *Arabians* call a Wolf by this Name. It is hardly credible, that the *Hyæna*, being ſo noted a Beaſt among the Antients, ſhould not, among other Properties, have been diſtinguiſhed by them, for its extraordinary Scent, if it were the *Zibetta*; and there is nothing weaker than to argue from the Silence of the Antients concerning the *Zibetta*, that therefore the *Hyæna* is the *Zibetta*; for neither have they ſaid any thing about the *Muſcus*, or Animal from whence Musk is taken: Does it therefore follow, that the Muſcus is the Hyæna? *Salmaſius*, *Plin. Exercit.*

HYALODES, ὑαλώδης, from ὕαλος, Glaſs, vitreous or glaſſy, in *Coac. T.* 150. is an Epithet applied to οὖρον, Urine, which depoſits much vitreous, cold, white, viſcid Phlegm, and indicates a favourable Criſis in Diſeaſes proceeding from crude Humours of this Kind, being reckon'd among the Cauſes, as well as Signs, of a Solution. The ſame Author ſeems afterwards to apply the Word γονοειδὲς, (*Gonoeides*) to the ſame ſort of Urine, and to uſe it as *Hippocrates* does in ſeveral Places, to ſignify much vitreous and groſs Phlegm of the Colour and Conſiſtence of the *Semen genitale*. And *Galen*, *Com.* 2. *in* 6 *Epid.* explains γονοειδὲς οὖρον, to be Urine depoſiting much vitreous Humour.

HYALOIDES, ὑαλοειδὴς, from ὕαλος, Glaſs, and εἶδος, a Reſemblance, is an Epithet of the vitreous Humour of the Eye.

HYANCHE, ὕαγχη, from ὗς, a Swine. A Quinſey, accompanied with an external Tumor on each Side of the Throat, is called by this Name, according to *Cælius Aurelianus*, *L.* 3. *Acut. C.* 1.

HYARITH. Luna. *Rulandus.* I ſuppoſe he means Silver.

HYBOMA, ὕβωμα. Gibboſity.

HYBOUCOUHU *Americanus*, *itemque* CARAMENO *fructus iiſdem.* Theveti. J. B.

This is an *American* Fruit, of the Figure and Size of the Date, but is not eatable; they expreſs from it an Oil, which they keep in a Veſſel made of the Shell of a Fruit, called *Carameno*, in the *Indian* Language.

This Oil is principally uſed for a Diſtemper common in *America*, called *Tom*, which ſeems to be the ſame as the Chigres; a Collection of very ſmall Worms, in the fleſhy Parts, cauſing a Tumor about the Size of a Bean. This Oil is alſo uſed to fortify the Limbs when fatigued, and to heal Wounds and Ulcers. *Lemery des Drogues.*

HYDARTHROS. A ſort of clear Ichor, which flows from the Joints when wounded, or ulcerated. The Farriers call it Joint-water. It is derived from ὕδωρ, Water, and ἄρθρον, a Joint. See GANGRÆNA.

HYDATINON, ὑδάτινον. The Name of a *Collyrium*, made principally of Rain-water, mention'd by *Galen*, in his Commentary upon the ſixth Book of *Hippocrates*'s Epidemics.

HYDATIS, ὑδατὶς, is a little tranſparent Veſicle, or Bladder full of Water, which is ſometimes found ſolitary, and ſometimes in Cluſters, upon the Liver, and various other Parts, eſpecially in hydropical Conſtitutions.

But *Hydatis*, in a particular Senſe, is a Diſorder of the Eye-lid, called alſo *Aquula*, of which *Paulus Ægineta* gives the following Account: The *Hydatis*, he ſays, is a preternatural pinguious Subſtance, ſeated under the Skin of the Eye-lid. In ſome Subjects, and eſpecially in Children, as abounding with Moiſture, it increaſes ſo as to become the Cauſe of many Symptoms, oppreſſing the Eye, and by that means inducing Rheums. In this Diſorder the Eye-lids appear watry, under the very Eye-brows, and are incapable of a due Elevation; and, if compreſſed with the Fingers, ſeparate; the Space between them is inflated; the Patient is infeſted with Defluxions, principally in the Morning, and is not able to behold the Splendor of the Sun without Tears, and is alſo ſubject to a continual Lippitude.

The Patient, in this Caſe, being placed in a right Poſture, we compreſs the Eye-lid with two Fingers, the fore Finger, and the middle Finger, a little ſeparated, that there may be ſome Collection of Water between them; we then order an Attendant, who ſtands behind, and ſupports the Head, gently to extend the Eye-lid, near the Middle of the Eye-brow; then, with a Lancet, we make a tranſverſe Inciſion in the Middle, no larger than we uſe in opening a Vein, but deep enough to divide the whole Skin, and even to touch the *Hydatis*, proceeding with much Care and Caution; for many, by carrying the Inſtrument too deep, have divided the Cornea Tunica, or, at leaſt, have wounded the Muſcle of the Eye-lid. If the *Hydatis*, therefore, immediately offers itſelf to Sight, we are to extract it; if not, we are gently to divide farther. Having open'd the Hydatis, we take hold of it with our Fingers, in ſoft Linen; and after moving it this way, and that way, and ſometimes turning it round, extract it. After Extraction we apply a doubled Linen Cloth, dipt in *Poſca*, to the Wound, and bind it up. Some, with the Head of a Probe, introduce pounded Salt into the Section, in order to conſume what may poſſibly be left of the Hydatis. When the Dreſſing is taken off, if no Inflammation appears, the Place is to be healed with ſome Collyrium, that is commonly uſed to anoint the Eye, or with *Licium*, or *Glaucium*, or Saffron. *P. Ægineta*, *Lib.* 6. *Cap.* 14.

St. Yves informs us, that there ſometimes comes on the Edge of the Cartilages of the Eyelids, or on the Conjunctiva, an Elevation, like the Bladders which appear on the Skin after Burns. They are as big as a Pea, or a Lentil, are fill'd with a very clear Liquor, and have the Name of Hydatides, from the Lymph which they contain. Sometimes a Seroſity is extravaſated between the Conjunctiva, and the Membrane which covers it; it ſeparates theſe Membranes, and, in the Movement of the Eye, a Sort of Wrinkle appears; which ſhews, that a Seroſity ſtagnates between theſe Membranes, and produces this Swelling. This Diſeaſe is not at all dangerous; it is only a little troubleſome, when it ſeizes only Part of the Conjunctiva, or the Edge of the Eye-lid. The ſureſt Remedy is to prick it dexterouſly with the Point of a Lancet, and to lay it open, according to the longitudinal Direction of the Tumor; the little Purſe immediately diſcharges its Humour, and the Cure, without any other Remedy, ſucceeds.

When all the Circumference of the Globe is filled with Water, the Conjunctiva becomes red: In this Caſe, the Patient muſt be let Blood. When the Seroſity ſeems to diminiſh, let him be purged, and apply to his Eye a Collyrium, compoſed with a Dram of the Lapis Medicamentoſus Crollii, diſſolved in half a Pint of common Water; or elſe you may make uſe of Wine, in which red Roſes, Sage, Thyme, and Wormwood, have been boiled.

Lime-

Lime-water is likewise very good. By these means, this Collection of Serosity is soon dispersed. *St. Ives.*

HYDATISMUS, ὑδατισμός. The Noise, or Sound made by the Humours contain'd in external Abscesses or Vomicas, as it fluctuates.

HYDATOCHOLOS, ὑδατόχολος. An Epithet sometimes apply'd to Stools, which are very liquid, and bilious.

HYDATODES, ὑδατώδης, or HYDATOIDES, ὑδατοειδὴς, from ὕδωρ, Water. Watery. It is an Epithet for Wine very much diluted; for limpid Urine; for the aqueous Humour of the Eye; and for a Person labouring under an *Anasarca.*

HYDEROS, ὕδερος. A general Name for the Dropsy. But, by *Galen*, it is apply'd particularly to the *Anasarca.* Ὕδερος πρὸς ἀμφίδα is the same as *Hydrops ad Matulam*; that is, a *Diabetes.*

HYDNON, ὕδνον. *Dioscorides, Lib.* 2. *Cap.* 175. says it is a round Root, without either Leaves or Stalks, and yellow: It is, he says, dug up in the Spring, and good to eat either raw, or boiled. The Interpreters translate the Word by *Tuber.* It should seem to be the Truffle.

HYDRA. The Name of a certain venomous Serpent, mentioned by *Aldrovandus.*

HYDRAGOGOS, ὑδραγωγὸς, from ὕδωρ, Water, and ἄγω, to bring away. Hydragogue. Remedies which evacuate a large Quantity of Water in Dropsies are thus called. In *Hippocrates, Epidem. Lib.* 7. it imports a Person grown hydropical, from drinking too large a Quantity of Water.

HYDRARGYROSIS. Mercurial Unction, with a View of exciting a Salivation.

HYDRARGYRUM. Quick-silver. See MERCURIUS.

HYDRARTHROS. See HYDARTHROS.

HYDRELÆUM, ὑδρέλαιον. A Mixture of Oil and Water. It is, by *Galen*, esteem'd refrigerating.

HYDRENTEROCELE, or rather, HYDRO-ENTEROCELE, from ὕδωρ, Water, ἔντερον, an Intestine, and κήλη, a Tumor. A Dropsy of the Scrotum, complicated with a Descent of the Intestine. See HERNIA.

HYDROA. See HIDROA, and SUDAMINA.

HYDROCARDIA. A Word coin'd by *Hildanus*, to express a serous, sanious, or purulent Tumor of the Pericardium.

HYDROCELE, ὑδροκήλη, from ὕδωρ, Water, and κήλη, a Tumor. A Dropsy of the Scrotum. See HERNIA.

HYDROCEPHALUS, from ὕδωρ, Water, and κεφαλὴ, the Head.

An Hydrocephalus is a preternatural Tumor of the Head, arising from a certain preternatural Lymph. It is term'd internal, when the Water is collected within the Bones of the Cranium; external, when retain'd between the Skin and Cranium. The first Kind is rarely seen, but in new-born Infants; and is contracted either in the Womb, or during a difficult Birth. Among others, the Reader may consult *Wedelius, de Morb. Infantum*, and *Ruysch. in Thesaur. Anat.* 2. *Tab.* III. which last has given us a very ample Account of this Disease. These Infants are generally in great Danger, and that increases in proportion to the Disorder, which is often found incurable; for, upon an Incision, the Lymph is no sooner discharged, than the Infant dies, as Experience has too often convinced us. If the Distemper is recent, it will be more adviseable to try the Power of Medicines; such as repeated gentle Purges, to draw the peccant Humour downwards, while a large Compress, dipt in Lime-water, Spirit of Lavender, or Hungary-water, is applied outwardly. The proper Bandage we have already describ'd, under the Article FASCIA.

The principal Difference between the external and internal Hydrocephalus is, the former makes the outward Superficies of the Head soft; whilst, in the latter, the Head is as hard as usual: The Reason of this appears from the last Paragraph. Though the former is not without Danger, it is more easily cur'd than the latter; but, the Difficulty is increased by the Greatness and Duration of the Disorder. The Cure is to be attempted by internal and external Remedies, such as Cathartics, Diaphoretics, Diuretics, attenuating and corroborating Medicines, for internal Use; and externally, the Method recommended in an internal Hydrocephalus is the most adviseable; for these may be apply'd with folded Linen Cloths, or with digestive aromatic Bags, made with Marjoram, Origanum, Mother of Thyme, Peny-royal, Chamomile, Sage, Rosemary, and Lavender. These, impregnated with the above-mention'd Epithems, are to be applied warm to the Head, and then secure them by a proper Bandage. *Hildanus* says, he has cur'd an Hydrocephalus by the repeated Application of Lime-water alone, as a Fomentation, with a Sponge. Besides these Remedies, we may apply an Errhine, or cephalic Snuff, made of Marjoram, Lilies of the Valley, true Marum, Cubebs, the Horse-chestnut, and Tobacco.

Further, it is proper to chew Tobacco, which will discharge the Lymph from the Head. Lastly, some foment with the Fumes of burning Spirit of Wine, highly rectified; but, if all these Remedies are ineffectual, we must then proceed to chirurgical Treatment; and, first, lay Blisters, prepar'd of Cantharides, behind the Ears, and on the Neck. And, if this fails, the next Method is to cup the Parts. *Piso* affirms, that he cured an Hydrocephalus by an Issue in the Neck; and, therefore, a Seton, which has the Effect of two Issues, may be serviceable. When all other Means have proved unsuccessful, some of the Antients have recommended a deep transverse Incision, for discharging the Water, at the Bottom of the Head; but, as this may wound or divide the Veins or Muscles, I cannot approve of it, but think it much better to promote the Discharge by several longitudinal Wounds, or Scarifications. After this, the Wounds must be dress'd with Lint, spread with a digestive Ointment; and, that they may be kept open, a little red Precipitate must be sometimes added. Having thus removed the Disorder, the Wounds should be heal'd with a vulnerary Balsam; and the Patient should be kept to proper internal Medicines, and a regular Diet. We find Examples of this Distemper in *Paré, Zacut. Lusitanus, Kerkringius*, and others: Particularly *Vesalius* says, he found nine Pounds of Serum in the Ventricles of the Brain of a Person afflicted with this Disease.

HYDROCOTYLE.

The Characters are;

The Root is very creeping, the Leaves umbilicated and rounded. The Flower is pentapetalous, rosaceous, and seated in the Ovary: The Ovary consists of two flat semiorbicular Seeds.

Boerhaave mentions two Species of this Plant; which are,

1. Hydrocotyle; vulgaris. *T.* 328.

2. Hydrocotyle; Zeylanica; Asari folio. *T.* 328. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 70. 71.

I know of no medicinal Virtues ascrib'd to this Plant; except only, that it is possess'd of an acrid Quality.

HYDROCRITHE, from ὕδωρ, Water, and κριθὴ, Barley. Barley-water. *Blancard.*

HYDRODES FEBRIS. A Fever, in which the Patient is affected with copious symptomatical Sweats, from the very Beginning of the Disorder.

HYDRO-ENTEROCELE. See HYDRENTEROCELE, and HERNIA.

HYDROGARON. Garum, diluted with Water. *Aetius, Tetrab.* 1. *Serm.* 3. *Cap.* 84. describes a purging Hydrogaron.

HYDROLÆUM. The same as HYDRELÆUM.

HYDROLAPATHUM. A Name for the *Lapathum aquaticum*; *folio cubitali.* See BRITANNICA.

HYDROMELI, ὑδρόμελι. Hydromel, otherwise call'd *Mulsum, Aqua Mulsa*, or *Melicratum.* Water impregnated with Honey, either before or after Fermentation, is thus call'd. There are various Ways of preparing it, some of which are describ'd by *Columella, Lib.* 12. *Cap.* 12. We have, under the Article ALCALI, specified the medicinal Virtues of Hydromel, made without Fermentation, from *Hippocrates.* That made by Fermentation is call'd Vinous Hydromel, or Mead, and is esteem'd good for the Gravel. See MEL.

HYDROMELON, ὑδρόμηλον. This is made of one Part of Honey impregnated with Quinces, and two Parts of boil'd Water, set in the Sun, during the Dog-days. *Dioscorides, L.* 5. *Cap.* 30.

HYDROMPHALON, from ὕδωρ, Water, and ὀμφαλὸς, the A Navel. A Tumor of the Navel, containing Water. See HERNIA.

HYDRONOSOS, from ὕδωρ, Water, and νόσος, a Disease. A Name for the SUDOR ANGLICUS.

HYDROPEGE, from ὕδωρ, Water, and πηγὴ, a Fountain. Fountain-water.

HYDROPHOBIA, from ὕδωρ, Water, and φοβέω, to fear. A Dread of Water. This is a Symptom of that Species of Madness caused by the Bite of a mad Animal, whence the Distemper itself is named *Hydrophobia.* But the Symptom is not peculiar to the Distemper above-mention'd, tho' it is always an Attendant; for we meet with several Instances of Fevers accompany'd with a Dread of Water; and this led *Cœlius Aurelianus* into a Mistake, when he quotes *Hippocrates*, as mentioning this Species of Madness. The Place he alludes to, is in the first Book of the *Prorrhetics*, Text 16. and runs thus, οἱ φρενιτικοὶ βραχυπόται, ὑφὲν καταπίνοντες, τρομώδεες. This is again repeated in the *Coacæ Prænotiones*, Text 96. Thus, Οἱ φρενιτικοὶ βραχυπόται, ὑφὲν καταπίνοντες, τρομώδεες ἢ σπασμώδεες. By βραχυπόται, he means only, as *Galen* explains it, those who in Fevers drink very seldom, and then but in small Quantities. And, by the whole Passage, he only seems to mean, that those phrenitic Patients, who drink but seldom, and little at a time, and who are affected with any small Noise, are subject to Tremors and Convulsions.

And I remember, that *Hippocrates*, somewhere in his Epidemics, uses the Word λυσιωματεῖν, which *Calvus* reads λυσιτωματεῖν, and translates it accordingly, as if it came from λύω, the Madness caus'd by the Bite of a mad Animal; whereas it only imports a great Dissolution of the Body, from λύω, to dissolve.

But we meet with Histories of Cases, where this Symptom of an Hydrophobia was very remarkable. Thus we are told, that a Person walk'd to *Harlem*, from *Leyden*, in a very hot Day; and, being much fatigued, fell into a violent Fever, attended with

with this extraordinary Circumſtance, that he could neither drink, nor ſwallow his Spittle.

In the *Edinburgh* Medical Eſſays, Vol. I. Dr. *Waugh*, of *Kirkleatham*, gives a Hiſtory of a Girl, that had ſtrange convulſive Fits, upon endeavouring to drink or eat any thing. Towards the End of the Fit, ſhe fell to the Ground as dead; but, in a Quarter of an Hour, began to ſpeak, complaining of an intolerable Pain in her Breaſt, and a Weight upon her Spirits, or Anxiety which ſhe could not expreſs; and, with her Finger, pointed to the Part affected, which was under the upper Part of the Sternum, where it is joined with the Clavicles. About two Months before, ſhe had a Quinſey, with a violent Fever; and, when it was expected every Minute that ſhe would be ſuffocated, the Swelling about her Throat ſuddenly diſappearing, ſhe was relieved in a great meaſure; but was ſenſible of a painful Weight remaining in her Breaſt, at the Place ſhe pointed at; and, from that time, Deglutition had met with ſome Obſtacle, which had daily grown worſe. About three Days after the Doctor had ſeen her, a Tumor broke, which almoſt ſuffocated the Girl with the Stench and Quantity of Matter, and ſhe recovered.

In the ſame Volume, Dr. *John Innes*, of *Edinburgh*, gives a remarkable Caſe of an *Hydrophobia*, which I don't find proceeded from the Bite of a Mad Dog. This was in a young Gentleman, who was ſeiz'd with a violent Pain at the upper Orifice of the Stomach; his Pulſe was much oppreſs'd, and very irregular, and often intermitting, and his Extremities chill'd. He was almoſt ſuffocated, fetching heavy Sighs, and, very often, looking ghaſtly, ſpouting out Saliva frequently. In his Intervals he would call for Drink; but, the Moment he ſaw it, fell into the moſt ſurpriſing Horrors, and, as it approach'd him, ſtarted, look'd frighted, had Convulſions, eſpecially about the Mouth, and peeviſhly put it away with his Hand; and then, with an Air that ſpoke at once both Fright and Reſentment, he would ſtare after the Drink, and, ſoon after, impatiently call for it; and repeated the ſame Scene frequently. He was cured by repeated Bleeding.

Great Diſputes have aroſe concerning the Antiquity of the Hydrophobia; and *Plutarch* is quoted by ſome, particularly *Le Clerc*, as alleging that it firſt appeared in the Days of *Aſclepiades*: But this is a Miſtake, for *Plutarch* only relates a Diſpute between *Philo* the Phyſician, and *Diogenianus*, whether Nature could produce new Diſtempers, or not. *Plutarch* quotes *Athenodorus*, who ſays, that the *Elephantiaſis* and *Hydrophobia* both firſt appeared in the Time of *Aſclepiades*. *Diogenianus* anſwers as to this Particular, that the *Hydrophobia* was known to *Homer*. *Plutarch* never denies this, but endeavours to prove, that new Diſeaſes may be produced.

Cœlius Aurelianus, in order to prove the Antiquity of this Diſtemper, quotes a Paſſage out of the Eighth *Iliad* of *Homer*, where *Teucer* calls *Hector* κυνὶ λασιοπύρῳ; tho' he does not ſeem to depend much upon it. He has, however, omitted ſome other Paſſages in the ſame Author, which are, in my Opinion, more for his Purpoſe, and come fully up to the Point. Thus, in the Ninth *Iliad*, the artful *Ulyſſes* is introduced addreſſing *Achilles*, a Hero, who had made Phyſic a Part of his Studies, in theſe Words:

——Ἕκτωρ δὲ μέγα φέρτ βλεμεαίνων
Μαίνεται ἐκπάγλως πίσυνος Διΐ, ἐδέ τι τίεται
Ἀνέρας ἠδὲ θεούς· κεχαρηὼς δὲ ἑ λύσσα δέδυκεν.

In the thirteenth *Iliad*, *Hector* is again called Λυσσώδης by *Neptune*.

It muſt be obſerved, that λύσσα, λυσσητὴς, and λυσσώδης, properly imply this particular Species of Madneſs. The Word λύσσα or λύτα is uſed to ſignify the Madneſs of Dogs by *Ariſtotle*, *Galen*, and *Dioſcorides*. And λυσσώδεντος is uſed by the laſt-mentioned Author to ſignify a Man bit by a mad Dog. Λυσσάω is uſed by *Aretæus* in this Senſe, and Λυττάσας by *Plutarch*, to ſignify the ſame thing.

The *Hydrophobia*, or Madneſs caus'd by the Bite of a mad Animal, is always, in Man, excited by the Bite of ſome Animal previouſly mad: Thus, Dogs, Cats, Wolves, Foxes, Horſes, Aſſes, Mules, Cows, Swine, Monkeys, Men, and even Cocks, affected with this Diſtemper, have been known to propagate it by their Bites to Men, and other Animals. But Dogs, Wolves, and Foxes, are moſt frequently affected, and that without any previous Bite from another Animal: In theſe the Diſtemper ſhould ſeem to be only a Symptom, accompanying all the Fevers they are ſubject to. And this is confirm'd by the Obſervation, that we may make almoſt any Dog run mad, by keeping him ſome time without Water, and, by that means, giving him a Fever, eſpecially if, at the ſame time, his Aliment is rancid, ſalt, putrid, and fetid. And this ſort of Food, together with want of Water, a very hot Climate, or one ſubjected alternately to exceſſive Heats, and immoderate Cold, an extremely hot and dry Seaſon long continued, and Worms generated in the Kidneys, Brain, Inteſtines, and Cavities of the Noſe, are, by *Boerhaave*, juſtly eſteem'd the preceding Cauſes of Madneſs in theſe Animals.

With reſpect to the Propagation of this Diſtemper from Brutes to Man, the Diſeaſe ſeems to be, as it were, inoculated by the Bite into the Animal, which receives it; for it is remarkable, that the Wound, whereby the Poiſon is received, grows ſore, and feſters ſome little before, or about, the Time the Diſtemper begins to appear. Something very like this happens in the Inoculation of the Small-pox; for the Inciſions, where the variolous Matter had been introduced, begin to grow ſore and painful about the fourth or fifth Day, that is, about the Time that the Diſtemper begins to ſhew itſelf. It is further remarkable, that, when the Inoculation does not take Effect, the Inciſions heal up in a few Days, like a common Cut; and I have ſome Reaſons to believe we may form a Judgment, with ſome Degree of Certainty, of the Danger a Patient is in from the Bite, by obſerving the Wound; for, while that remains with a Scab upon it, I look upon him to be in great Danger; but, when once it is cicatrized, I am in no great Pain for the Conſequences. However, I would not pretend to eſtabliſh this as a certain Maxim, but ſhould rather recommend it as worthy Obſervation, to Phyſicians, who ſhall hereafter be concerned in ſuch Caſes.

The Signs of an approaching Madneſs in Dogs are, according to *Boerhaave*, theſe: They become dull, ſolitary, and endeavour to get out of Sight, and hide themſelves; they are mute, as to their Bark; but make a kind of murmuring Noiſe, refuſing, at the ſame time, all kinds of Meat and Drink; they are enraged, and fly upon Strangers, but, in this Stage, remember and reſpect their Maſters; their Ears and Head hang down, and they walk nodding, as if overpower'd by Sleep. This is the firſt Stage of the Diſtemper, and a Bite received then is very dangerous, but not of the worſt Kind. Then they begin to pant, and hang out their Tongue, to emit a great deal of Froth from their Mouths, which they keep perpetually open; ſometimes they walk ſlowly, and as if half aſleep; and then ſuddenly run, but not always directly forward, as is pretended; at laſt they begin to forget their Maſters; mean time their Eyes look diſpirited and dull, full of Tears, and red; their Tongue is of a lead Colour; they are ſuddenly extenuated, and now rage exceſſively. They ſeldom ſurvive this ſecond Stage thirty Hours; and a Bite received at this time, (*Boerhaave* ſays) is incurable; but the more raging the Animal is, the longer he has been affected, and the nearer he is to Death, the more dangerous is the Bite, the more violent are the ſubſequent Symptoms, and the ſooner they come on; and *vice verſa*.

Boerhaave has omitted two Circumſtances, which are very material, as being the moſt certain Signs of approaching Madneſs: One is, that all other Dogs, upon ſmelling the Dog going mad, will avoid him, and run away with Horror, ſhaking their Heads with ſome Vehemence. *Lommius* ſays, other Dogs are even terrified at the Sight of mad Dogs, or at hearing them bark.

The other Circumſtance is, that the Tone of the Dog's Voice, when he barks, will be quite alter'd from what it was, and ſeem hollow and hoarſe; and this is one of the firſt perceivable Alterations. And tho', as our Author obſerves, the Dog may poſſibly be mute, in that Sort commonly called the dumb Madneſs; yet it is more frequently found, that a Dog, eſpecially if confined, ſhall bark for a Day or two, without ceaſing.

The Symptoms of this Species of Madneſs in Cattle, according to *Vegetius*, are a great Diſtention of all the Veins, Inflammation of the Eyes, Sweats, Tremors, Grinding of the Teeth, Beating themſelves againſt the Wall, and ſoon after direct Madneſs.

The Poiſon communicated by the Bite of a mad Animal is of a very extraordinary Nature: For a ſlight Scratch, and that thro' the Clothes, and even without drawing Blood; the Application of the Foam diſcharg'd by a mad Animal, whilſt recent, or even after it has been long dry'd, to the Lips or Tongue; a Kiſs given to a mad Animal; a Wound made with an Inſtrument, with which a mad Animal had been killed many Years before; eating the Milk or Fleſh of a mad Animal; or much touching and handling any thing infected with this Poiſon, may all excite the Diſtemper in another ſound Animal. Thus *Cœlius Aurelianus* informs us, that a certain Perſon had contracted this Diſtemper by a Wound received from an infected Dunghil Cock. The ſame Author relates, that a Woman, in mending a Garment, which had been torn by a mad Dog, licked the Seam with her Tongue, in order to make the Needle paſs thro' the more readily, and became mad within three Days. *Dioſcorides* tells us, that *Themiſon* the Phyſician contracted this Diſeaſe, by a too diligent Attention on a Friend, who was ill of it; and *Aretæus* ſays directly, that the Breath of a mad Dog will make a Man run mad without any Bite. Some other Moderns alſo, quoted by *Stalpart Vander Weil*, give Inſtances to the ſame Purpoſe; as *Palmarius*, who relates, that a Country Fellow, ill of this Diſtemper, begged earneſtly to kiſs his Children before he died; he accordingly did, but ſeven Days after they were all ſeiz'd with the ſame Illneſs, and died. *Cardan* gives an Account of a noble *Venetian*, who was infected by kiſſing a favourite Whelp, which, being mad, was ordered to be drowned. *Matthiolus* alſo tells us, he had ſeen two Perſons mad, who were infected only by touching the Foam of a Dog, without

the leaſt Bite. That a ſmall Scratch of a Tooth is capable of producing this Miſchief, is proved every Year, by melancholy Inſtances in our own Country. But, farther, that the Scratch of a Cat's Claw, or the Peck of a Cock, has ſometimes been fatal, we have the Teſtimonies of *Hildanus*, *Bartholine*, and *Baccius*, concurring with the Authority of *Cœlius Aurelianus*. *Baccius* gives an Inſtance of Madneſs in a Gardener, conſequent upon a ſmall Wound received from a Cock. *Hildanus* relates, that one *Daniel Perrin*, a young Man, was ſeized with a kind of Melancholy, attended with ſtrange Apprehenſions and Imaginations, ſome Months after he had been ſcratch'd, in the Thumb, by a Cat; the third Day he himſelf was called to him, and found him labouring under an Hydrophobia. The ſame Author gives a remarkable Caſe of a Woman, who, having mended her Gown, which had been torn by a mad Dog, inadvertently bit off the remaining Thread; and, in about three Months, ſhe was ſeiz'd with all the uſual Symptoms of an *Hydrophobia*, and died raving.

There is no Poiſon known which produces ſuch terrible Effects as that communicated by a mad Animal, nor which induces ſuch a Change in a Man who receives it; which rages with ſuch Violence, and ſo ſuddenly, when it one begins to act; and which may, notwithſtanding, lie concealed for ſo long a time, before it manifeſts itſelf by its Effects; for though, in ſome, the Diſtemper breaks out very ſoon after the Poiſon is receiv'd, yet, in others, it has been known to lie dormant for more than twenty Years; and, after that, to excite an *Hydrophobia*, with all the Train of terrible Symptoms attending it. This Diverſity ſhould ſeem to depend upon the Heat of the Seaſon, the Degree of the Diſtemper in the Animal which communicates the Poiſon, and the Conſtitution of the Patient who receives it; and the Diet, and Medicines, taken by way of Preſervative. Bilious Conſtitutions are more likely to be ſoon affected, than ſuch as are pituitoſe, and hydropical.

Cœlius Aurelianus only obſerves, that ſome fall ill ſooner after the Bite, others later; that ſome are a Year or more before they are ſenſible of its Effects, but moſt perceive it after forty Days. *Galen* is of much the ſame Opinion. *Dioſcorides* relates, not upon his own Knowledge, but Report, that People have gone mad ſeven Years after the Infection was received. *Paulus* and *Actuarius* agree with *Galen* and *Dioſcorides*, as to the Time. *Stalpart Vander Wiel* quotes Caſes from ſeveral Authors, where the Infection has broke out in an Hydrophobia, eighteen, thirty, even forty Years after the Bite. Of the three Caſes *Hildanus* gives us, the two firſt continued perfectly well for three Months; but the Man who received a Scratch upon the Thumb, continued well about ſeven. In Dr. *Liſter*'s Patient the Conſequences of the Poiſon appeared in five Weeks; and in Dr. *Hoſman*'s in ſix. See the *Philoſophical Tranſactions*.

There are ſome Caſes upon Record, which ſhew that the Diſorders, cauſed by the Bite of a mad Animal, are ſometimes periodical, and not always immediately fatal. Thus *Roſcius*, in a Letter to *Hildanus*, which the laſt-mentioned Author has given us, after the 86th Obſervation, *Cent.* 1. relates the following Caſe:

In the Month of *Auguſt* 1581. a Lady received a Wound in her Left Arm, by a mad Dog, which ſhe had the Misfortune to meet in the Street. A ſtrong Ligature was made upon her Arm above the Bite, and Topics applied. The Place was alſo cauterized, and had Inciſions made upon it. Alexipharmics were preſcribed by her Phyſicians. After this, ſhe continued well till the ſeventh Year, when ſhe was ſeized with violent Pains in the Arm formerly wounded, which ſeem'd to her as if a Dog was gnawing it. This was ſucceeded by a Raving, and Delirium, a Melancholy, and Dejectedneſs, pertinacious Watchings, inſatiable Thirſt, a Fever, and great Weakneſs: She had alſo a great Averſion to Food, but had no *Hydrophobia*, for ſhe drank freely. With proper Care, in a few Days, ſhe recover'd, the Symptoms gradually diſappearing. Seven Years after this ſhe was again ſeiz'd with violent Diſorders, which began in the ſame Arm. The Place particularly where the Bite formerly had been, was extremely painful, and ſomewhat convulſed. Beſides this, ſhe felt almoſt inſufferable Gripings, and, at the ſame time, her old Watchings and Thirſt returned. However, ſhe, at leaſt, ſeem'd to be cur'd a ſecond time; but, in ſix Years after, all the ſame Symptoms return'd. This was twenty Years after receiving the Wound. The next Year ſhe had another Fit of the ſame Illneſs; in the twenty-ſecond, two; and in the twenty-third, three; and in the Year 1604, when this Letter was wrote, ſhe had been tormented with two more. It is likewiſe remarkable, that ſhe felt convulſive Motions and Pains in the wounded Arm, upon any Alterations in the Weather.

Dr. *Liſter* tells us of a Tradeſman, in *London*, who had, for twenty-five Years, been troubled with Convulſions of his Head, which often obliged him to move it with great Velocity, ſideways, from Shoulder to Shoulder; and in thoſe Paroxyſms, which ſeiz'd him in the Night, he would make a ſtrange Noiſe, reſembling the Barking of a Dog. Upon Examination, the Doctor thought there was great Reaſon to believe, this odd Diſorder was originally cauſed by the Bite of a Dog, which he had received many Years before. And in this he was much confirmed, by ſome Accounts given him by the Man's Wife, which, he ſays, are not to be mentioned.

In the *Philoſophical Tranſactions* we are told, that in *Ireland*, about the laſt of *October* 1679. two Boys, about nine or ten Years old, handled and waſhed the Head of a Dog, which had been bitten by a mad one. The Dog never was diſorder'd, but, about *May* 1680. the Children were ſeized with a grinding Pain, towards the Bottoms of their Bellies, which aſcended gradually towards their Navels. About *July* 1. they were ſeized with a ſlow Flux, and fainting Fits, when the Pain aſſaulted them. Some time after, this Pain got above the Stomach, upon which they had very violent convulſive Motions, particularly about the Stomach and Belly, with foaming at the Mouth, in the Intervals of their Fits. Theſe Symptoms continued and increaſed till the latter End of *Auguſt*, that they were taken with a *Fear of Water*, inſomuch that, upon the Sight of any thing *liquid*, they would fall down as dead, and continue ſome little time as in a Swoon; then they would tumble and toſs with violent Motion, and Diſtortions of their Bodies, accompanied with heavy Groans; and ordinarily, the eldeſt eſpecially, ſnarl'd, and bark'd, and endeavoured to bite like a Dog. In about an Hour they would recover, and creep away, as if afraid of any body that was near them. They came entirely to themſelves when the Fits went off, which returned daily, till about the Middle of *September*; and then their Diſorder was more violent, and they more wild than ever, inſomuch that in the Intervals they could not endure any Company, not even that of each other. This continued about a Week, and then the eldeſt cry'd out to his Father, as one ſurpriſed, that he was well; which accordingly both he and his Brother were, and continued ſo for three or four Days; then they fell ill again, and recovered in ſeven Days, without any farther Relapſe. It is remarkable, that they both went into, and came out of, their Fits, at the ſame time. 'Tis, alſo, worthy of Obſervation, that, in *Auguſt*, they took Doſes of *Mercurius Vitæ*, and Antimony, with *Venice* Treacle, and the teſtaceous Powders.

I have been told, alſo, by a Gentleman of Veracity, of a Caſe where the Diſtemper appear'd periodically, in a Boy, who was Whipper-in to a Pack of Fox-hounds, in the North of *England*.

The Symptoms of this Species of Madneſs are thus deſcrib'd by *Cœlius Aurelianus*.

Thoſe who are juſt about to fall into an *Hydrophobia*, are ſeiz'd with a certain Anxiety, without any evident Reaſon, are prone to Anger, have their Bodies render'd uneaſy, and ſubjected to preternatural and unuſual Motions. Their Sleep is either reſtleſs and diſturb'd, or they are affected with perpetual Watchings. Their Aliments become corrupted, their Stomachs oppreſſed, and they are inclined to ſtretch out their Legs and Arms. They are afflicted with a continual Oſcitation, and a violent Nauſea, or Inclination to vomit. They make unaccountable Complaints with reſpect to the Weather, as thick and rainy, when, at the ſame time, the State of the Air is pure, ſerene, and clear. They are rendered uneaſy, fretful, and diſcontented, by Showers and Falls of Rain, and have an unuſual ſmall Appetite for Drink.

When the Diſorder comes on, they are afflicted with a violent and inſatiable Thirſt, but, at the ſame time, are ſtruck with an unaccountable Terror and Dread, not only at the Sight, but alſo at the Sound or Name, of Water. Then they become afraid of Fomentations of Oil uſed for their Relief, and their Pulſe is thick, ſmall, and irregular. Some are ſeiz'd with a ſlight Fever, convulſive Throws of the Stomach, a Torpor and Numbneſs of the Joints, a preternatural Elevation of the Præcordia to the ſuperior Parts, and a coſtive State of the Belly: Then they diſcharge their Urine frequently, and by little at a time, and are ſeized with a Trembling, and Convulſions. Their Voice becomes hollow, and reſembling the Barking of a Dog. The Poſture of their Bodies is like that of a Dog, when lying aſleep on the Ground. Their Reſpiration is difficult, and their whole Body is rendered highly reſtleſs, and uneaſy, upon the Entrance of any Perſon into the Room, for fear he ſhould bring Water with him. Their Eyes and Countenance become red, their Bodies ſlender, and the ſuperior Parts of it pale, and covered with Sweat. The Tongue hangs out of the Mouth, and, in Men, the Penis is ſeiz'd with a frequent Tenſion, accompanied with an involuntary Emiſſion of the ſeminal Fluid.

The laſt Stage of the Diſorder is accompanied with an Hiccup, and a Vomiting of Bile, which is generally of a blackiſh Colour. Some are ſtruck with an unaccountable Dread, and, upon ſtretching out their Hands to any Veſſel with Liquor in it, they forthwith retract them with Horror. Some, upon the Sight of Water, frankly acknowledge, that it is a natural Liquor, and that to which they have been accuſtom'd; but, when they ſee it put in Motion, recede from it with the utmoſt Averſion. Thus *Soranus* informs us, that he knew a Perſon labouring under this Diſorder, who made ſuch a Confeſſion; but tells us, at the ſame time, that he could not prevail upon him to take the Water. *Artorius*, alſo, gives us an Inſtance of a certain Soldier, who, labouring under this Diſorder, upbraided

himſelf

himſelf with his inexpreſſible Dread of Water, the darling Liquor to which he had been ſo much accuſtom'd; ſince, in the horreſt Battles, he had never felt the ſmalleſt Emotions of Cowardice in his own Mind. *Eudemus*, a Follower of *Themiſon*, makes mention of a certain Phyſician labouring under an Hydrophobia, who, conſcious of the Danger, earneſtly intreated thoſe, who entered the Room, to keep at a Diſtance from him; and, at laſt, a Torrent of Tears burſting from his Eyes, the Drops had ſuch a ſurpriſing Influence upon him, that he ſtarted up, and tore his Garment. *Soranus* informs us, that he ſaw an Infant, afflicted with this Diſorder, ſtruck with Terror at its Mother's Breaſts. The ſame Author, alſo, ſays, that a certain *Athenian* told him, that he had ſeen a Man labouring under an Hydrophobia, who, being baniſhed from the Houſe in which he lay, came to a Place, where he died, with his Body folded up like that of a ſleeping Dog; and that, before his Death, he was ſo furiouſly mad, that he haſtily ran to a Dog, who lay there, and bit him.

Boerhaave thus deſcribes the Symptoms of an Hydrophobia.

A Perſon, before in perfect Health, when affected with this Diſorder, begins ſometimes ſooner, and ſometimes later, to labour under the following Symptoms, almoſt in the ſame Order in which they are enumerated: Firſt, the Part into which the Contagion was immediately receiv'd, is affected with Pain; then wandering Pains are perceiv'd in other Parts, eſpecially thoſe adjacent to that primarily affected; a Wearineſs, Heavineſs, and Liſtleſſneſs, are induced on all the muſcular Parts of the Body. The Patient's Sleep is reſtleſs, diſturb'd, and accompanied with Frights, Convulſions, and Twitchings of the Tendons: He is, alſo, afflicted with continual Uneaſineſs, Sighing, Sadneſs, and a Love of Solitude. The firſt Stage of the Diſorder is, generally, both accompanied and ended with theſe Symptoms; and, during this State of the Patient, Blood taken from the Veins has all the apparent Signs of laudable Blood. Then all the already enumerated Symptoms are increas'd, together with an Addition of a violent Uneaſineſs about the Precordia, and a Difficulty of Breathing, accompanied with Sighs and Horror; then the Patient is ſeiz'd with Horripilation and Trembling, upon the Sight either of Water, Fluids of any kind, or any Object which is either pellucid, or capable of reflecting the Rays of Light, like a Mirror. The Appetite is entirely loſt, whilſt, at the ſame time, a Power of ſwallowing the moſt ſolid Subſtance remains. The Approach of any Liquor to the Body, eſpecially to the Tongue and Lips, produces an incredible Uneaſineſs, Trembling, Convulſions, and a State next to direct Rage and Madneſs. A yellow bilious Kind of viſcid Subſtance, or a porraceous Bile, is vomited up. The Patient becomes hot, feveriſh, ſubject to continual Watchings, and is afflicted with a Priapiſm, and a Train of incoherent, diſorderly, and unuſual Thoughts. The Diſorder proceeds in this manner, and its ſecond Stage generally ends here. Afterwards the above-enumerated Symptoms are increas'd, and the Tongue becomes rough, and hanging out; the Mouth gaping, and the Voice hoarſe. The Patient is, alſo, rack'd with an inſatiable Thirſt, but unfortunately ſeiz'd with an unaccountable kind of Madneſs upon every Attempt to drink, or upon the Sight, or Contact of any Fluid. The Froth is collected in his Mouth, and he is neceſſarily prompted by his Diſorder, to diſcharge it on others. He is poſſeſs'd of an ardent Deſire of biting every Object which comes in his Way; nor can this Deſire be check'd by the Influence of his Will. He froths at the Mouth, grins, and gnaſhes his Teeth; his Pulſe and Reſpiration become defective; he is ſeiz'd with a cold Sweat, and a violent Degree of Madneſs; whilſt, at the ſame time, his Senſes remain entire, inſomuch that he is himſelf fearful, leſt he ſhould do any Injury to others. A convulſive Death, accompanied with a violent Difficulty of Breathing, almoſt always puts an End to his Life, within four Days after the Approach of his Diſeaſe.

The Diagnoſtic of this Diſtemper is evident from the preceding Hiſtory thereof. With reſpect to the Prognoſtic, the Degree of the Infection may be eſtimated from that of the Violence of Madneſs in the Animal from which it was receiv'd; from the Seaſon and Climate; and from the Conſtitution of the Patient, in the manner above-mention'd. But, in general, *Boerhaave* affirms, that there is no certain Preſervative againſt it, yet known; and that there is no Example, that can be depended upon, of any one having been recover'd, who was once ſo far gone as to dread Water. This Author adds, that it is much to be lamented, that, after the common Methods have been put in practice perpetually without Succeſs, for ſo many Ages, others have not been tried, different from thoſe which ſo long Experience has convinced us were ineffectual.

By the Diſſection of Bodies, deſtroy'd by an Hydrophobia, we learn, that the Organs of Deglutition are in ſome Degree inflamed; that various Sorts of bilious Viſcidities are collected in the Stomach; that the Gall-bladder is full of black Bile; that the Pericardium is dry; that the Lungs are incredibly diſtended by Blood coacervated therein; that the Heart is full of almoſt dry Blood; that the Arteries are full, but the Veins almoſt empty; that the Blood is extremely fluid, ſo as ſcarcely to concrete when expoſed to the Air; mean time all the Muſcles, Viſcera, Cerebrum, Cerebellum, and ſpinal Marrow, appear more dry than uſual.

Thus upon diſſecting the Body of a Patient, who died in conſequence of the Bite of a mad Dog, there was no Moiſture found in the Pericardium; the Sinuſes of the Heart were found dry, and deſtitute of Blood; and a certain Portion of the Pericardium was almoſt burn'd, and reduced to Powder. *Capivaccius, Pract. Lib. 7. Cap. 12.*

Upon diſſecting the Body of a young Man, who died of the Bite of a mad Dog, the Brain was found entire and untouch'd; but all the Viſcera, deſtin'd for the Performance of the natural and vital Functions, were exceſſively dry: However, it was uncertain, whether this Phenomenon was produced by the Nature of the Poiſon, or the preceding Evacuations, to which the Patient had been ſubjected. *Bonetti Specul. Anat.*

A certain young Man was ſuddenly ſeiz'd with an Hydrophobia, to ſuch a Degree, that he could not ſwallow a ſingle Drop of any Kind of Liquor, though he could, at the ſame time, ſwallow any ſolid Subſtance. Notwithſtanding all the Meaſures us'd for his Relief, he was, on the third Day, ſeiz'd with Madneſs; and the Saliva, flowing copiouſly from his Mouth, was thrown on all the By-ſtanders. Upon the fourth Day, ſitting in a Seat, out of Bed, he was ſuddenly ſuffocated, after a Struggle or two. Upon laying open the Body, it appear'd extenuated and conſum'd, as if he had died of a long-protracted Hectic; all the muſcular Part of the Fleſh, together with the Fat, was almoſt totally conſum'd. The Omentum was, alſo, entirely conſum'd, ſo that the Inteſtines appear'd naked, and diſtended with Flatulences. The Glands of the Meſentery, and the Pancreas, were extenuated. The convex Part of the Liver appear'd to be ſound; but the concave Part was inflam'd, and adher'd ſo ſtrongly to the Spleen, that it could hardly be ſeparated without breaking. The Left Lobe of the Lungs adher'd ſo firmly to the Spleen, that an Inciſion was neceſſary in order to ſeparate them. The Gall-bladder was full of a greeniſh Bile, and adher'd cloſely to the Ribs. The interior Coat of the Stomach was ſo corrupted, that it might be abraded by the Fingers. The ſuperior Orifice of the Stomach was very ſmall, and the whole Oeſophagus was narrow and conſtricted. The Lungs were dry; and, on both Sides, adher'd to the Ribs. There was not a ſingle Drop of Water found in the Pericardium. The Heart was flaccid and extenuated; but its Right Ventricle was full of grumous Blood, whereas in the Left Ventricle the Blood was ſufficiently fluid. The Kidneys were pretty large, and free from every apparent Defect. Upon interrogating the Patient, when he was in his Senſes, whether he had been bit by a mad Dog, he ſaid he remember'd no ſuch Circumſtance. But a Scar on his Left Leg made it pretty probable, that he had met with a Misfortune of this Kind. But there are Inſtances of Hydrophobias produced without the Bites of mad Animals. See *Pliny, Lib. 8. Cap. 40. Marcellus Donatus, Hiſt. Medic. Mirab. Lib. 6. Cap. 1. Salmuth. Cent. 2. Obſ. 52. Zacut. Luſitan. de Medic. princ. Hiſt. 20. Borell. Cent. 3. Obſ. 38. Joh. Henric. Brechtfeld, in Actis Danicis Bartholinianis, anno* 1682.

Mr. *Tawry* having, for ſome Days, attended a young Man, who had the Misfortune to be bit by a mad Dog, and whoſe Death he had predicted as infallible, laid open his Body, though in great Haſte, thinking, by the Diſſection, to diſcover ſomething remarkable, which might account for the Dread of Water.

The internal Part of the *Oeſophagus* was inflam'd, as, alſo, the *Arteria Trachea*, tho' not in ſo high a Degree: In the Bottom of the Stomach there were about three Spoonfuls of a glaucous viſcid Subſtance, of a pretty-dark browniſh Colour, and reſembling that which the Patient often vomited, when alive: The Gall-bladder was full of a Bile which was almoſt entirely black: The *Pericardium* contain'd a very ſmall Quantity of Water: The Arteries were full of a very fluid Blood; but the Veins contain'd very little: No coagulated Blood was any-where to be found. The Patient's Blood, after his Death, did not coagulate, when expoſed to the cold Air; whereas the Blood, taken from him by Veneſection ſome Days before, eaſily coagulated: The Brain, and almoſt all its Parts, were a great deal drier than uſual, as well as the Beginning of the Spinal Marrow, and all the Muſcles. *Hiſt. de l' Acad. Royale des Sciences, Ann.* 1699.

A Farmer of *Monchenſtein*, in the Canton of *Baſil*, upwards of thirty-ſix Years of Age, very early in the Morning of the fourteenth Day of *January* 1687. heard his Dog bark and howl violently, in a Neighbour's Stable. Upon this he riſes, and goes to ſee the Reaſon of this unuſual Noiſe: When he came near the Place, he obſerved a ſtrange mad Dog making towards him, over the ſnowy Meadows; which Sight terrified him ſo much, being unarm'd, and in his Shirt, that he called a Servant to his Aſſiſtance: But, before he came, the Creature, which he had taken for a Wolf, attacked him furiouſly: They engaged for a conſiderable Time, till, at laſt, both lay proſtrate on the Ground: Before this, the poor Man had receiv'd ſeveral Wounds in his

Left-hand and Arm: At length, up comes the Servant, and frees him from his Adverſary; he returns to Bed, and anoints his Wounds with ſome Oil of Lizards, which he happen'd to have by him; and bound it on with Linen, dipt in warm Wine. At Day-break he ſent for an experienced Phyſician; who came with a Surgeon, and preſcribed, internally, Alexipharmics and Theriacals, Scarifications and Cupping, to extract the deleterious Saliva of the Animal; and, indeed, omitted no one Remedy uſual in theſe Caſes. Every thing ſeem'd to have the deſired Effect; there were no bad Symptoms, no Appearance of Poiſon, either in the Blood, Spirits, or Wounds; he was neither thirſty, nor did he loſe his Appetite; the Inflammation of his Hand and Arm was diſperſed by vulnerary Fomentations; and the Wounds, diſcharging a well-digeſted Matter, were healed in ſeven Weeks.

The Farmer, finding himſelf in perfect Health, follows his Employ, without any Inconvenience; but, as he had been long prohibited the Uſe of Wine, to make up for his loſt Time, he would often intoxicate himſelf. The fourteenth of *March* following, he came for my Advice; and told me, that, as he lay in his Bed the Night before, he felt a ſhooting, pricking, and heavy Pain, in thoſe Parts where he had been formerly wounded; but that it grew eaſier upon his getting out of Bed. I examined his Hand and Arm, ſaw the Wounds well conſolidated; nor were the Pains more acute there, than in other Parts of the Arm; but, beginning at the Extremity of the Hand, continued to the Axilla, without any Tumor, or Alteration in the Colour of the Skin: I then view'd the reſt of his Body, and found it fleſhy, and in a good State: His Appetite was good, he was not thirſty, and complain'd only of a ſort of Laſſitude. Upon weighing theſe Things, I ſuſpected his preſent Complaints to ariſe from the former Accident, and immediately order'd a Scarification and Cupping, upon the affected Arm and Back, together with the uſual Antidotes.

He follow'd my Preſcriptions for a Day and a Night; but, as his Diſtemper increaſed the next Day, and he was told his Diſorder muſt neceſſarily ariſe from the Bite of the mad Dog, and would certainly be the Death of him, unleſs he applied to an Executioner, who was famous for curing this Diſeaſe, he directly hurries to him, tells his Caſe, gets an Ointment, and, perhaps, took ſomewhat internally; however, he would not own it. In the Evening, after having drank a free Glaſs, he returns home, makes uſe of the Ointment, ſwallows an Egg poached ſoft, and goes to Bed. In about half an Hour the poor Wretch begins to ſigh, and complain frequently, to draw his Breath deeper, with great Pain, and with his Head erect; at the ſame time he dreaded Water, and all Liquids: This was follow'd by ſo exceſſive a Pain in his Breaſt, that he knew not how to turn himſelf. On the ſixteenth I was called in, and, finding him in this Condition, but ſtill ſenſible, offer'd him Spring-water, Broth, and a Cardiac Mixture: At the Sight of theſe he grew very uneaſy, leaped out of Bed, ſhook his Hands and Legs, and ran from Place to Place: He could not draw his Breath, without Convulſions of the Neck and Breaſt; ſoon after he uttered Noiſes, mix'd with Howlings, which did not ſo much reſemble the Barking of a Dog, as a Voice interrupted by frequent Concuſſions of the Jaws and Breaſt: The Shortneſs of his Breath permitted him to ſpeak but half Words. All this while he diſcover'd not the leaſt Inclination to bite the Company; but, being perfectly in his Senſes, wiſhed for Death. In the mean time, he felt an inextinguiſhable Thirſt, either not being able, or not daring, to drink: If the Door or Windows were open'd, the Symptoms increaſed; for he dreaded the Air no leſs than Liquor: His Difficulty of Breathing, after a ſmall Intermiſſion, would return greater, bringing with it a plentiful cold Sweat, which accompanied him to the laſt: Tho' he abhor'd all Liquids, or, if he was prevailed on to taſte them, was ſeized with a Tremor in all his Limbs, as if he dreaded inſtantaneous Suffocation, yet he ſhew'd no ſuch Diſlike to Solids; for, in Hopes of Relief, tho' with great Difficulty, he would ſwallow Bread, a comforting alexipharmic Electuary, or any thing of a thick Conſiſtence: He had frequent Reachings, but never vomited; ſometimes went to Stool, and diſcharged a ſmall Quantity of lixivious Urine: His Pulſe was unequal and weak, the Tendons of his Muſcles almoſt always in a ſtrong Vibration: His Abdomen never ſwelled; there was no Alteration, either in the Size or Colour of his Arm, at leaſt as it appear'd to me twelve Hours before his Death: Towards his End he complain'd, that the Pains were remov'd from his Arm to his Breaſt and Heart, and that his Difficulty of Breathing increaſed every Moment. When he could take no more internal Medicines, and all Externals were found inefficacious, on the ſixteenth of *March*, about Midnight, after he had been afflicted with the Hydrophobia above thirty Hours, he was ſuffocated.

Fifteen Hours after his Death, I open'd him, in the Preſence of *Johannes Hoferus*, and others, and obſerv'd the following remarkable Circumſtances: The Scars of his Wounds were neither red nor livid, but retained the natural Colour of the Skin; but there appear'd manifeſt Indications of a Gangrene and Sphacelus on the Shoulder and Scapula of the affected Side, and all over the Back; for theſe Parts were very livid; and the ſame Appearance reached to his Left Breaſt. Upon opening his Abdomen, we found the Inteſtines not inflated, but interſperſed with ſeveral red Spots, the Signs of ſo many Inflammations: In the Stomach we met with a ſmall Quantity of a Humour, which was crude, turbid, yelloviſh, and ſomewhat fetid; in this were contain'd ſome yellow Moleculæ, like the hard Yolk of an Egg.

In the Coats of the Stomach, eſpecially about the Orifices, there appear'd ſome red Spots, larger than thoſe of the Inteſtines: The other Viſcera of the Abdomen were found entirely ſound: But, when I laid open the Thorax, I was ſurpriſed to find it overſpread with Blood, and of a rediſh and ſomewhat livid Colour.

The Lungs, every-where adhering to the Pleura, reſembled a Maſs of concreted Blood: Extravaſated and coagulated Blood was found in their Veſicles, ſo that an unequal Tumor of the Lungs was obſervable.

The membranous Interſtices between the cartilaginous Ringlets of the Aſpera Arteria were intenſely red: That Part of the Diaphragm which was adjacent to the Ribs, diſcover'd ſome Marks of a beginning Gangrene, by its preternaturally red and livid Colour. Upon making an Inciſion into the Ventricles of the Heart, the large Veſſels about this Organ, or into the Lungs, all was found full of a concreted Blood, almoſt entirely deſtitute of Serum. *D. Theodorus Zwingerus, in Ephem. German. Dec. 3. A. 2.*

That I may not miſlead any one, I muſt remark, that this Caſe manifeſtly contradicts what I have ſaid above, relative to the Healing of the Wound.

The Prevention and the Cure of this Diſorder, if we except a few Inſtances, are highly dubious and uncertain. The Reaſons of this want of Succeſs ſeem to be a boaſting Pretence to many Specifics, and the Neglect of a due Method, founded upon the Hiſtory of the Diſorder.

So far, therefore, as we may conjecture from the Hiſtory of this Diſorder, from comparing it with other Diſeaſes, and from the few Inſtances in which it has terminated happily, it ſeems to conſiſt in a particular Affection of the Nerves, of the convulſive Kind, with which the Viſcera, and their reſpective Veſſels, are ſeiz'd. From theſe a peccant Condition of the Blood and Humours approaching, as it were, to a gangrenous Inflammation, takes its Riſe. The principal and original Seat of the Diſorder ſeems to be about the Stomach, and the Parts moſt contiguous to it.

With reſpect to the Methods of Cure, *Celſus* propoſes the following:

When a Perſon is bit by a mad Dog, the Poiſon is to be extracted by means of Cupping-glaſſes; after which, if the Part is neither nervous nor muſcular, the actual Cautery is to be apply'd to the Wound; but, if it cannot be cauteriz'd, it is expedient to take a due Quantity of Blood from the Patient. When the Wound is cauteriz'd, the ſame things are to be apply'd to it, which are proper for other cauteriz'd Parts. When the Application of the actual Cautery is contra-indicated by the Circumſtances before-mention'd, the Wound is to be dreſs'd with ſtrong Corroſives. After which, no other Treatment is requir'd, ſince the Wound is to be incarn'd and heal'd in the ordinary manner. Some, immediately after the Bite of a mad Dog, immerſe the Patient in a warm Bath, where they permit him to ſweat as long as his Strength will allow, with the Wound in the mean time open, that the Poiſon may be the more effectually diſcharg'd. Then they dreſs the Wound with a large Quantity of rich Wine, which is contrary to all Poiſons; and, when theſe Meaſures have been perſiſted in for three Days, the Patient is thought to be ſecur'd againſt Danger.

But, when the Effects of Wounds of this kind are not duly guarded againſt, that Species of Diſorder, which the *Greeks* call *Hydrophobia*, is generally produc'd, in which the Patient is tormented, at once, with a Dread of Water, and an inſatiable Thirſt. In this Caſe, few or no Hopes of Relief are to be conceiv'd. The only remaining Step to be taken, is to throw the Patient unexpectedly into a Pond, in which, if he cannot ſwim, he is to be ſuffer'd to ſink, and be rais'd alternately, till he has drank enough; if, on the contrary, he is a skilful Swimmer, he is to be immers'd in the Water, till he has ſwallow'd a ſufficient Quantity of it. By this means, both his Thirſt, and his Dread of Water, will be remov'd; but, if his Body is weak and tender, it is to be dreaded, leſt the Coldneſs of the Water ſhould produce Convulſions, which may prove fatal to him. In order to prevent this Accident, he is to be immers'd in warm Oil, immediately after he is taken out of the Pond. *Celſus, Lib. 5. Cap. 27.*

Boerhaave's Directions are thus:

In order to prevent the Effects of a Bite inflicted by a mad Dog, it is neceſſary, firſt,

That as ſoon as the Poiſon is received into the Body, the whole Part immediately affected, and thoſe adjacent to it, ſhould have deep Scarifications made in them, ſo that they may diſcharge large Quantities of Blood. Then large Cupping-glaſſes, which attract ſtrongly, are to be apply'd; or the Part is to be burn'd pretty deep with the actual Cautery, and afterwards kept in a continual

continual Suppuration, by the Application of such Things, as by their perpetual Corrosion induce an exulcerated State of the Parts. During the Whole of this Time, from the very Beginning to the End, the Part is, without Interruption, to be fomented with a Brine or Pickle prepar'd of Sea-salt and Vinegar, and these Measures are obstinately to be persisted in for six Months.

Secondly, The Cloths, or other Things, which have touch'd, or come near the Poison, are to be thrown away, and carefully avoided.

Thirdly, The Patient is, immediately after receiving the Misfortune, to be thrown headlong into the Sea, or some River, with a great deal of Apparatus, threatening Words, and other Circumstances capable of striking Terror into him; for which Purpose he is to be frequently immers'd in the Water, and again taken up. And this Method is to be often repeated with the same Train of Circumstances; for the good Effects are only produc'd by the Dread and Consternation into which the Mind is thrown, and not by the Salt-water; as we learn from the melancholy Case of a certain Man, who, after being bit by a mad Dog, was shipwreck'd, but was afterwards seiz'd with an Hydrophobia, tho' he had been oblig'd to swim for several Hours in the Sea, and been frequently immers'd in the Waves. The Patient is also to be frequently purg'd with Rhubarb, Agaric, and the Juice of Elder-bark.

Fourthly, Let the Patient have a gentle Sweat excited every Morning before Eating, by taking a Mixture of aromatic Vinegar, Sea-salt, and warm Water.

Fifthly, Let the Patient daily foment his Feet and Hands in a Bath of Water. Let him also wash his Head, Mouth, and Fauces. 'Tis also expedient he should swim, or bathe, as often as possible.

Lastly, Let him frequently drink cold Water, till he throws it up by Vomit: He must often, likewise, use acidulated Liquors; and his Diet must be moist, light, and laxative; but he may frequently take them so liberally, as to vomit them again. He must, also, carefully abstain from large Quantities of aromatic Substances, from Wine, from Things of a heating Quality, from violent Exercise of Body, and all Commotions of Mind.

The Cure of the Disorder, when actually present, is principally to be attempted in the first Stage, or the Beginning of the second; for the Consequence of neglecting it longer is always fatal. It seems probable, says *Boerhaave*, that the following Method may be of some Efficacy, especially as this is confirm'd by some few Experiments.

Immediately upon the Signs of approaching Madness, the Case is to be treated as extremely inflammatory; in pursuance of which, a large Quantity of Blood must be taken away, by a large Orifice, even till the Patient faints. Then directly inject nitrous Clysters, mix'd with a little Vinegar. Thus:

Take Barley-water, ten Ounces; Nitre, two Drams; Elder-vinegar, and Honey of Roses, each an Ounce.

Or,

Take Rue-water, ten Ounces; Sea-salt, two Drams; Vinegar impregnated with Marigold-flowers, six Drams; Honey, an Ounce: Make a Clyster.

Let these be repeated boldly, and more frequently than is consistent with Prudence in other Cases. After this, his Eyes are to be blindfolded, and he is to be thrown into a cold Pond; or cold Water is to be thrown upon him, till he is not any longer afraid of Water. Then let him be immediately forc'd to drink a large Quantity of Water, and towards the Evening of the Day, in which he has been thus treated, let a Sleep be procur'd. Let his Diet be always highly slender, and moistening.

In the *Histoire de l'Academie Royale des Sciences*, for the Year 1699, it is asserted, that Patients, labouring under an Hydrophobia, have been cured by throwing large Quantities of Water upon them; and an Instance is given of a Man ty'd to a Tree, and cured, by throwing two hundred Pails of Water upon him, without any other Means at all used.

But Mr. *Morine* furnishes us with a well-attested Case of a Girl of twenty Years of Age, bit in the Hand by a young Boy, who was mad. Upon this, she was seiz'd with all the Symptoms of Madness. And, at last, sixteen Days after the Bite, those who had the Charge of her, judg'd it expedient to bathe her in a large Tub full of River-water, rather cold than hot, and in which a Bushel of Salt was previously dissolved. In this she was plung'd quite naked, and taken up at different times. After she had been violently tormented in this manner, they left her sitting in the Bath in a great Consternation; and, when she look'd at the Water in which she was, she was astonished that she could view it without any Emotion.

After this, her Disorder was of the common Kind; she was seiz'd with a Fever, which was treated in the ordinary manner. She had frequent Inclinations to vomit, and her Vomiting afforded her Relief, whilst, in the mean time, Nature was assisted by other proper Means; she was several times afterwards put into the Bath, and at last perfectly cured in little more than a Month's time.

In Imitation of this, vast Quantities of Water were pour'd upon a Chandler, as I remember, of *Leiden*, till he no longer dreaded Water; and this was several times repeated; but at last he dy'd, notwithstanding this Method.

Boerhaave farther says, that as this Method, which he recommends, is deduc'd from the Nature of the Disease, and the Rules of Art, so nothing can be more pernicious, than to murder the Patient, already parch'd with his Disorder, by the Exhibition of acrid, heating, and drying Medicines, and such as irritate the Nerves. Mean time, nothing can be more cruel and inhuman, than either utterly to neglect the Patient, without attempting his Relief; or to suffocate him, as is customary in *Holland*, after having obtain'd an Order from the Magistrates for that Purpose.

Hitherto, says *Boerhaave*, there is no Account, which can be depended upon, of any Remedy capable of curing this miserable Distemper, tho' many are celebrated for this Purpose; all which owe their Reputation either to barren Speculation, or too great Confidence in the Reports of others; not excepting the Secret of *Æschrion*, mention'd by *Galen* and *Oribasius*, consisting of calcin'd River-crabs; nor the famous Opiate for the *Sicilian* Madness describ'd by *Scribonius Largus*; nor the Skin of an *Hyæna* (see HYÆNA); nor the Medicine extol'd by *Aetius*, *Rufus*, and *Posidonius*, consisting of the Ashes of Crabs with Mithridate; nor the boasted Remedy of *Palmarius*; nor the Remedy compos'd of Tin and Mithridate, too much extol'd by *Mayern*, *Grew*, and the Sportsmen; nor the Root of the Dog-rose, tho' revealed by a Dream, as is pretended; nor the *Lichen Cinereus terrestris*, however recommended; nor Pimpinel; nor the fry'd Liver of the mad Dog.

Thus far *Boerhaave*.

For an Account of the Efficacy of calcin'd Crabs, see CANCER.

The celebrated Remedy of *Palmarius* is this:

Take of the Leaves of Rue, Vervain, Sage, Plantain, Polypody, common Wormwood, Mint, Mugwort, Bastard Baum, Betony, St. John's-wort, and lesser Centaury, each equal Parts. All these must be gathered at the Time of Year when they are in the greatest Perfection, and must be dry'd separately, in a Place where they are exposed neither to the Wind, nor the Sun. When these are powder'd and mix'd, a Dram, or a Dram and an half, must be given every Day; or, if the Bite has been long received, three Drams is the Dose. Mean while, the Wound must be dry'd with a Sponge, and embrocated twice or three times a Day, with Wine, or Hydromel, in which half a Dram of this Powder is mix'd; and a common Plaister must be laid upon it.

In the *Philosophical Transactions*, I find the following Medicines recommended, which are those hinted at above by *Boerhaave*.

Take Leaves of Rue, pick'd from the Stalks, and bruised, six Ounces; *London* Treacle, (or, which is better, *Venice* Treacle) Garlick peel'd and bruised, and fine Filings of Tin, each four Ounces: Put them in four Pounds of Canary, or good White-wine; or, in case of a nice or hot Constitution, into the same Quantity of strong and well-work'd Ale, in an earthen Vessel, well stopt. Then let there be made a Digestion, or gentle Boiling of it, in a Bath-heat, for four Hours, shutting in the Steam; then press it, and strain it. The Dose is from two to three Ounces, (and in some Persons more) to be taken every Morning, for nine Days. The Party bitten must fast for three Hours after it, and the Dregs that remain after Expression, must be bound upon the Wound received, renewing it every twenty-four Hours. *N. B.* The ninth Day, after the Bite, should not be let slip before this Medicine be taken, lest the Poison seize the Blood too strongly. It must be given cold, or, at least, only a little air'd. A double Quantity may be given to a Beast, soon after the Bite.

I never found this Remedy to fail. *Theo. de Vaux.*

Take dried Rue, and Scordium, each two Drams; *Virginia* Snake-root, one Dram and an half; Flower of St. John's-wort, three Drams; fine Filings of Tin, and Garlick, cut small, each four Drams: Let them be all beaten, and exactly mix'd together, adding Syrup of Lemon-peel, enough to make it into an Electuary; divide this into nine equal Parts, one to be taken every Day, drinking after it a small Draught of good strong Ale. Let him walk upon it, and not dine till four Hours after. Use as little of the aforesaid Syrup of Lemon-peel as may be; and if that be not at hand, a Syrup made of *Malaga* Wine, adding as much Sugar as it can dissolve, may serve the Turn.

Mr. *Dampier*, who, as I apprehend, was Nephew to the celebrated Traveller of that Name, gives an Account, in the *Philosophical*

loſophical Tranſactions, of a Cure for the *Hydrophobia*: It is, he ſays, a ſort of Jews-ear; but Sir *Hans Sloane* ſays, it is the *Lichen Cinereus Terreſtris*, or Aſh-colour'd Liverwort, deſcrib'd by Mr. *Ray*, and grows commonly in barren Places all over *England*. This muſt be dried in an Oven, by the Fire, or in the Sun: Powder it, and paſs it through a fine Sieve; and then mix it with the like Quantity of Pepper, finely powder'd, of which Compoſition four Scruples make a Doſe. When given to a Dog, he muſt be kept from Meat a convenient Time; then blooded, and afterwards well waſhed all over; then give him the Medicine, mixed in a ſufficient Quantity of Milk, or Broth, warm. If it be for Cattle, they muſt alſo be blooded, and well-waſhed. The Doſe muſt be adminiſtered in a Drenching-horn, and proportioned to the Strength of the Animal. If to a Man or Woman, it muſt be given after Bleeding, and well waſhing the Face, Hands, and Place wounded, and all the Cloaths, which the Perſon had on when bitten, to waſh away the Saliva that may have fallen from the Mouth of the Dog, or other mad Creature; which is all the Reaſon for waſhing. A Man or Woman may take it faſting, in warm Milk, Beer, Ale, Broth, or how they beſt like it, two or three Mornings, to make ſure.

This has been taken into the College Diſpenſatory, under the Title of *Pulvis Antilyſſus*; and is the celebrated Remedy publiſhed by Dr. *Mead*, with ſome Variation in the Proportion of the Pepper to the other Ingredients. The Directions, as made public, are, firſt, to take away nine or ten Ounces of Blood, and then to uſe the following Medicine:

Take of powder'd Aſh-colour'd Liverwort, four Drams; and of the Powder of black Pepper, two Drams: Mix theſe together, and divide into four Doſes, one of which is to be taken faſting, for four Days ſucceſſively, in half a Pint of tepid Cows Milk. After taking theſe four Doſes, the Patient is to be put, faſting, every Morning, for a Month, either into a cold Bath, a cold Spring, or a River. Let him immerſe the whole Body, and remain in it, with his Head above Water, not longer than half a Minute, if the Water is exceſſively cold: Then let him bathe thrice a Week, for fifteen Days.

The Opiate of *Scribonius Largus* is thus directed:

Take of *Syrian* Spikenard, of Saffron, of Myrrh, of Coſtus, of Cinnamon, of Camel's Hay, of white Pepper, of long Pepper, of Caſtor, of Galbanum, of the Reſin of Turpentine, and of Opium, each three Drams; of white Henbane, two Drams; of Aniſe, one Dram; of the Seeds of Smallage, and Gum Tragacanth, each ſix Drams; of *Athenian* Honey, one Sextarius; and of *Falernian* Wine, one Ounce. In this latter the Tragacanth, and the Opium, are to be macerated: And, next Day, the other Ingredients, being bruiſed, are to be mixed with the Galbanum, the Honey, and the Roſin, which are to be melted over a Fire, in an earthen Veſſel: Then the dry Ingredients are to be ſprinkled in, and, if neceſſary, a little Honey may be added: and, that the whole Mixture may acquire the Thickneſs of a Cerate, it is to be again put on the Fire, and ſtir'd with an aſhen Spatula. This Medicine is to be boil'd, till it has aſſum'd a ſaffron Colour; then the Ingredients, which are macerated in the Wine, are to be added, and the Antidote kept for Uſe, in a glaſs Veſſel.

The Bulk of an *Egyptian* Bean, of this Medicine, is to be exhibited in Water. It removes Diſorders of the Stomach, eſpecially when accompanied with Fluxes; it alſo contributes to the Removal of that Species of Diſorder in the Eye, called *Epiphora*; and cures Gripes, Inflations of the Colon, Coughs, Pains of the Breaſt, and Liver. It is alſo good againſt Poiſons, and the Bites or Wounds of Serpents. The Part bit by a mad Dog, or wounded by a Serpent, is to be kept long exulcerated, and the Formation of a Cicatrix is to be prevented, that the Poiſon may be the more effectually diſcharg'd: For this Purpoſe ſuch things are to be externally applied, as exulcerate ſound Parts of the Body, ſuch as Garlick, Dittander, Celandine, *Batrachium*, Muſtard, Squills, and Onions, with Vinegar. The Bark of the *Caprificus*, triturated, and applied by itſelf, is, alſo, excellent for this Purpoſe; and *Laſer*, by itſelf, does the ſame. *Scribon. Larg.* 172.

Pliny gives the following Account of the Diſcovery of the Virtues of the Root of the Dog Roſe-tree.

The only Remedy for the Bite of a mad Dog, and which was but lately diſcovered, by ſomething like an Oracle, is the Root of the Wild Roſe, which is called *Cynorrhodos*. *Pliny*, *Lib.* 8. *Cap.* 41.

It lately happen'd, that a Woman, who had a Son that was a Soldier in the *Prætorian* Guards, was admoniſhed, in a Dream, to ſend the Root of the Wild Roſe, which they call *Cynorrhodos*, and which ſhe had obſerved, but the Day before, as it were, courting her, with its pleaſing Aſpect, from among the Shrubs, to her Son, then making the Campaign among the *Lacetani*, in the hithermoſt Part of *Spain*: This Son had the Misfortune to be bit by a mad Dog, and the Hydrophobia was coming upon him. The Preſent came with an Epiſtle from the Mother, conjuring him, by all means, to comply with the divine Admonition. The Succeſs juſtified the Oracle, and the Man's Life was preſerved, though his Caſe was look'd upon to be deſperate; and the ſame Remedy has been always found ſucceſsful in the like Exigence. *Pliny*, *Lib.* 25. *Cap.* 2.

Boerhaave, in his Aphoriſms, treating of the canine Madneſs, adviſes us, not to deſpair of diſcovering a peculiar Antidote againſt this ſingular kind of Poiſon: And this, ſays he, we are encouraged to hope for, from the certain Inſtances we already have of Remedies effectual againſt particular Sorts of Poiſons.

This, I believe, is applicable to moſt, perhaps all, other Diſtempers, at preſent eſteem'd incurable, as well as to the Hydrophobia; for I am firmly perſuaded, that the ſame Providence which has thought proper to inflict Diſtempers upon Mankind, has, at the ſame time, taken care to furniſh us with Remedies adequate to their Cure; and that theſe might be diſcovered by a diligent Inveſtigation, provided our Reſearches were directed with Prudence, and our Induſtry equal to the Task.

Encouraged by this way of thinking, ſomewhat more than ten Years ago, I had a mind to try what Effect Mercury would have upon Animals under canine Madneſs. And as my Endeavours to diſcover a Cure for this hitherto terrible Diſtemper were crown'd with a greater Degree of Succeſs than I could reaſonably hope for, I delivered in a Memorial to the Royal Society, in 1735. containing an Account of ſome ſucceſsful Experiments; and I afterwards gave ſome more Caſes, in a Pamphlet, publiſhed upon the ſame Subject.

The firſt Experiment was made upon two large Fox-hounds, in *February* 1731-2. They were ſo far gone as to refuſe Food of all ſorts, particularly Fluids; they ſlavered much, and had all the ſtrongeſt Symptoms of an Hydrophobia. At Night twelve Grains of the *Turpeth Mineral* were given to each of the Dogs, which vomited and purged them gently. Twenty-four Grains were given to each, twenty Hours after, and forty eight-more after the ſame Interval. The Dogs ſalivated conſiderably, and ſoon after lapt warm Milk. At the End of twenty-four Hours more, twenty-four Grains were repeated to only one of the Dogs; and, after this Doſe, he lay upon the Ground, ſalivated extremely, was in great Agonies, and had all the Symptoms of a Salivation too precipitately raiſed, which he recovered, and lived many Years after. The other Dog relapſed, and died.

As the greateſt Part of the reſt of the Pack were ſuſpected to have been bit, ſeven Grains of the *Turpeth* were adminiſtered to each of them, for the firſt Doſe; and twelve more, after twenty-four Hours Diſtance, which was repeated every other Day, for ſome time, and likewiſe at the two or three ſucceeding new and full Moons. From this time the Pack continued ſound; and, though ſeveral were afterwards bit by ſtrange Dogs, the *Turpeth* always prevented any ill Conſequences.

The ſame Experiment has been made ſince, upon a Multitude of Dogs, and never once fail'd, though Dogs bit at the ſame time, and by the ſame Dogs, have run mad after moſt other Methods have been tried.

In 1733. A Girl, about fourteen Years old, had the Calf of her Leg ſo torn by a mad Dog, that the Surgeon was obliged to uſe means to prevent a Mortification from the Bite. She was vomited by the *Turpeth*. Three Days before the next Change of the Moon, the Vomit was repeated; and again the very Day of its changing. The ſame Method was purſued the next full Moon: And the Girl continued well.

In *November* 1734. a Boy, about ten Years of Age, had four Holes made in one of his Legs, by a mad Dog. The Turpeth was given as above, and the Wounds dreſt with Digeſtives; and he continued well. Theſe two liv'd near *Burton-upon-Trent*, and Mr. *Towndrow*, of that Place, was Apothecary.

A young Man of about Eighteen, near *Tamworth*, was bit in the Hand, and many Dogs were wounded at the ſame time in the Town where he liv'd, ſeveral of which ran mad, about ſix Days after the Miſchief was done. Upon this Circumſtance, he applied to Mr. *Wilſon*, Apothecary in *Tamworth*, to whom I had communicated the Succeſs of the Turpeth, in theſe Caſes. The young Man was, at this time, very melancholy and dejected, had Tremors, and ſlept very little for ſome Nights before, though he was not apprehenſive, that the Dog, which bit him, was mad. He had a dry Scab upon his Hand. On applying to Mr. *Wilſon*, he was vomited with emetic Wine.

The next Medicine he took was made according to the following Preſcription:

Take of Turpeth Mineral, twelve Grains; Lapis Contrayervæ, one Dram; Venice Treacle, a ſufficient Quantity to make three Boluſes.

Let one be taken every Night, at Bed-time, with four Spoonfuls of the following Julap:

Take of Rue-water, six Ounces; Treacle-water, two Ounces; Syrup of Peony, one Ounce and an half; Tincture of Castor, two Drams: Mix, and make a Julap.

Upon taking these, he sweated very much, and had two loose Stools every Day after them; his Tremors went off, and he slept better. After this, he went into the Cold Bath, and continued perfectly well.

But what is remarkable in this Case is, that the Wound ran a thick digested Matter, after this Method, and threw off the Scab like an Eschar; after which it heal'd of itself.

A Boy, about Seventeen, and a Dog, were bit at the same Hour, by a mad Fox, which had some time before been bit by a mad Dog. The Boy, for some little time, took Turpeth Mineral and Camphire, as an Alterative, and remained well: The Dog died mad in ten Days.

A large Hound, that had been bit by a mad Dog, was quite raging on *Monday*; and fourteen Grains of the Turpeth, made up with Butter, were thrust down his Throat, by means of a Hazle-stick. On *Tuesday* he had another Dose of the Turpeth, and he eat very heartily; on *Wednesday* the Turpeth was repeated; on *Thursday* he was unchain'd; and on *Friday* he went a hunting.

A Neighbour's Dog, being mad, came into my House, and wounded a middle-siz'd Spaniel Bitch, in several Parts. Immediately before, and after, he attack'd several other Dogs in the Neighbourhood. My Spaniel had her Wounds dress'd with a Mercurial Ointment, and took, every Day, for a Fortnight together, Turpeth Mineral, in small Doses, by way of Alterative. She was afterwards dipt, every Day, in cold Water, over Head, and is now alive and well.

As some of the other Dogs were much valued, the Tin Medicine was given to them, and some other things, commonly esteem'd Specifics; but, in a Fortnight, most of them ran mad, and the rest were destroy'd.

A Gentleman of *Warwickshire* had an *Irish* Wolf-dog, of uncommon Size, which, running mad, met his Daughter, about five Years old, in a Passage, threw her upon her Face, and had certainly kill'd her, had not a Garland been fortunately fasten'd to his Collar. A Garland is made of two Hoops, crossing each other, which, hanging before a Dog's fore Legs, prevents his running after Sheep, or being otherwise mischievous. When I arrived, six or eight Hours after the Accident, I found the Dog raging; and was inform'd, that her Cap had been pull'd off, her Hair very much disorder'd, and that the Dog had her whole Head several times in his Mouth. We were not, indeed, certain that she was bit, though there were several Scratches on the back Part of her Head; but, possibly, they might be made by the Comb. I directed for her Turpeth Mineral, in small Quantities, loaded with Camphire; which disorder'd her so much, that I was oblig'd, instead of it, to give Pills made with crude Mercury, divided with Turpentine, and Pilulæ Ruffi. She afterwards us'd the Cold Bath for some time, and continued perfectly well.

A Boy, about Fourteen, was brought to me, whose Arm had been much torn by a mad Dog, about ten Days before: His Wounds look'd very livid. He took the Turpeth, in large Quantities; his Wounds heal'd, and he continued well. Another Boy, who had been bit by the same Dog in the Head, and had not taken this Precaution, died mad in a very few Days.

I have, since, had so many certain Examples of the Efficacy of Mercury in preventing and curing an Hydrophobia, that I cannot doubt of its being, at least, as infallible in such Cases, as any one Medicine can be in any Distemper.

About six Years ago, the late Mr. *John Douglas* sent me a Letter, and in it inclos'd a printed Half-sheet, containing Instructions for the Prevention and Cure of the Hydrophobia. In this Paper he quotes *Desault*, an Author I, at that time, had neither seen nor heard of, which Mr. *Douglas*, at my Request, sent me a few Months after.

As the Method, which *Desault* proposes, and the Cases which he gives, strongly confirm the Efficacy of Mercury, it will not be superfluous to insert a Part of what he says upon this Subject, omitting his Theory, and whatever else seems of less Importance.

The Remedy, which I have tried, says he, with constant Success in the Hydrophobia, is a Mercurial Ointment, made of one third Part of Mercury reviv'd from Cinnabar, one third Part of human Fat, and as much of Hog's Lard.

One or two Drams of this Ointment at a time should be rubbed, by Intervals, or successively, upon and about the Wound.

When a Person comes to me immediately after the Bite of a mad Creature, 1. I send him to bathe in the Sea; not that I have any Dependence upon its Efficacy, but, as it is authorized by public Opinion, it raises the Patient's Confidence, calms his Mind, and abates the great Fear which disturbs him Night and Day.

2. Immediately after his Return, I order him one Dram of *Palmarius's* Powder in White-wine, to which I have added Coralline, an excellent Anthelmintic. Those who cannot bear Wine, may take it in warm Water. This Dose must be repeated every Morning, for thirty Days, by those who have receiv'd a considerable Wound by the Bite; but only for twenty Days by those who had no more than a few Holes made with the Teeth.

3. From the first Day of using the Powder, I order a Friction of Ointment, to be administer'd as above directed. At first, the Friction must be repeated every other Day; after the third time, every third Day; and, after the sixth, every fourth, till two or three Ounces of Ointment have been us'd; the Quantity of which ought to be proportioned to the Strength, Age, Temperament, Sex, and Bite.

But when the Patient comes several Days after the Bite; to prevent the Rabies, I order him to make the Frictions every Day, to four or five times, and increase the Dose of the Powder. Then I interpose a Day or two, to avoid a Salivation; though I have often thought, a slight Ptyalism could not but produce a good Effect; for the Poison of the Rabies adheres to the Saliva; and, as Mercury naturally tends to the Mouth, doubtless the sovereign Antidote of so many contagious Poisons would likewise destroy that of the Hydrophobia.

4. I allow the Patient to wear Amulets about his Neck, and to apply any such trifling Remedy, to which he is advised, provided they do not weaken the Virtue of my Powder and Ointment; because they serve to pacify the Mind, which is a material Point.

5. I permit him to eat his usual Meals, prohibiting all Excesses; and Wine I allow him, in Moderation, which inspires him with Courage, and dispels his tormenting Fears. I take care, that they be not left alone, and desire their Relations to keep them Company, forbidding them to mention Madness, or mad Creatures. And I have found Music, while it lasted, suspend their Horror and Sadness.

A mad Wolf attack'd, before Day, two Dogs, belonging to *Pey Dumeniu*, of the Parish of *Soussans*, at *Mendoc*, the Farm belonging to M. *de Latour Demons*. The Engagement occasioned a great Noise, which waked *Dumeniu*, who run out, in his Shirt, to help his Dogs; and the Wolf bit him in both his Hands, and his Arm. His Son, named *Cousiot*, runs out also, in his Shirt, to the Assistance of his Father, whom the Wolf leaves, and bites the Son severely in the Arm. The Father, though wounded, came to the Relief of the Son; and the Wolf, runing away, meets a Neighbour, one *Jean Guiraud*, whom he bites in the Arm, making four large, besides several small Openings. *Guiraud*, seizing the Animal by one of his hind Legs, made him quit his Hold. The Wolf pursues his Course, and afterwards bites one *Criq*, a Shepherd of M. *Brethonneau*. At last, the Animal was kill'd. The four wounded Men go to bathe in the Sea, and return with some Confidence of their Cure.

Some Days after, *Pey Dumeniu* feels a numb'd Pain about his Scars, which harden'd, and rose like Embroidery; and, soon after, he and *Criq* were seiz'd with all the Symptoms of Madness, and in that Condition they both expir'd.

Cousiot, having seen the dreadful Death of his Father, expects the same unhappy Fate; and begins to perceive a Pain, and a hard Swelling in his Cicatrices. *Jean Guirard*, his Companion, is in the same Case. M. *Joutard*, Merchant, of *Castlenau*, immediately sends them to me. I was surpris'd at the Largeness of the Wounds, and, from their Appearance, did not question but Madness would soon ensue, if not prevented by an immediate Remedy.

I made them presently anoint the Cicatrices, and the whole Arm, with a Dram and an half of Mercurial Ointment, which was repeated three Days successively; then interpos'd a Day; and after the fifth Friction, two Days; and order'd, every Day, a Dram and an half of *Palmarius's* Powder.

After the third Friction, the Cicatrices grew flat and soft; the Pain went off; their Courage return'd; their Minds resum'd their natural Tranquillity; and, at last, being perfectly cur'd, they return'd again to the Plough.

Can there be a stronger Instance, than this, of the Efficacy of Mercury in curing the Hydrophobia? Four Men are bit the same Day, and the same Hour, by the same Animal; two of them die of Madness, and the remaining two perceive the same Symptoms which foreboded Madness to the others; but Mercury secures them, assisted by *Palmarius's* Powder.

REMARKS.

1. Old *Dumeniu* was bit in both his Hands, in the Arm and Thigh; the Number of his Wounds might accelerate his Madness; besides, as he was in his Shirt, they were made in Parts uncloath'd.
2. In the Consternation the two Patients, who came to me, were in, I omitted nothing to raise their Courage; and even gave them my Advice and Medicines *gratis*, to shew them, by not being mercenary, how confident I was of Success.

3. As in the Venereal Diſeaſe Buboes, and Cicatrices, which grow hard and ſwell, are manifeſt Signs of the Pox; ſo the Swelling, Pain, and Hardneſs of their Cicatrices foretold, ſome Days before, that Madneſs was approaching. The Venereal Diſorder is contracted by the Intromiſſion of the Poiſon from one Body to another; ſo is the *Hydrophobia*. The Venereal *Virus* is ſome time before its Symptoms appear; the ſame Caſe happens in the Rabies. Authors obſerve, that the Venereal Diſtemper has concealed itſelf many Years before it appear'd; the ſame Obſervation has been made in the *Rabies*. Every one who expoſes himſelf to receive the Infection from Women, does not catch it; ſo all thoſe, who are bit by mad Dogs, do not contract the *Hydrophobia*. All theſe Strokes of Reſemblance, between the two Diſtempers, are ſo many inconteſtable Proofs of the Uſefulneſs and Efficacy of Mercury in the *Hydrophobia*.

As a farther Confirmation of the Efficacy of Mercury in the canine Madneſs, I muſt take notice of a Medicine which I hear has been ſucceſsfully uſed, both as a Preſervative from, and a Cure for, the *Hydrophobia*.

Mr. *Cobb*, of *Buſſelton*, near *Briſtol*, a Gentleman formerly in the Service of the *Eaſt-India* Company, brought from *Tonquin* a Sort of red Powder, which is much celebrated in that Country as efficacious in this Diſtemper. Upon Examination, this Powder proved to be native and factitious Cinnabar; and, according to the beſt Information I can get, Lady *Frederick* brought the ſame Remedy from the ſame Place. The Preſcription is as follows:

Take of native and factitious Cinnabar, each twenty-four Grains; Muſk, ſixteen Grains. Let them be powdered and mixed well together.

This Powder is to be taken all at once, in a Tea-cup full of Arrack; and is ſaid to ſecure the Patient for thirty Days: After which time, the Doſe is to be repeated in the ſame manner; but it ſhould be done as ſoon as poſſible after the Bite is received.

But, if the Patient has any Symptoms of the Diſeaſe upon him, the ſecond Doſe muſt be repeated three Hours after the firſt; and this is ſaid to be ſufficient for a Cure.

Mr. *Cobb* communicated this to Mr. *Roberts*, an Apothecary in *Pall-Mall*, who publiſhed the Receipt in ſome of the daily Papers; and, I hear, Sir *Benjamin Wrench*, of *Norwich*, has made ſome Experiments with it ſucceſsfully, as well as many others.

The original Receipt was given me by another Hand in this Form:

Take two Candarines of the beſt Muſk, five Candarines of native Cinnabar, and five Candarines of Vermilion; grind them fine, and mix them in a Cup of ſtrong Arrack or Brandy.

A Candarine of China is the ſeventy-ſecond Part of a *French* Crown or Dollar, and the eightieth Part of an *Engliſh* Crown; ſo that one phyſical Ounce is rather more than ſeventy-ſix Candarines.

Factitious Cinnabar is made of three Parts Mercury, to one of Sulphur; and one Pound of good native Cinnabar yields fourteen Ounces of Mercury; and therefore it ſeems, that the good Effects of this Medicine ought to be principally, if not entirely, aſcribed to the Mercury. As to the Muſk, it is an animal Subſtance, and conſequently of an alcaline Nature; and as Alcalis have, in all Ages, been recommended in this Caſe, it ſeems to be, at leaſt, not prejudicial, excepting in the Largeneſs of the Doſe, when taken in this Climate, by People much leſs uſed to Perfumes than the Orientals, who, probably, gave Muſk with the Cinnabar, in order to render the Medicine more agreeable.

That I may omit nothing which can contribute to ſet the Efficacy of Mercury againſt this ſort of Madneſs in its true Light, I muſt confeſs, I heard it was made uſe of once, without Succeſs; but I was ſoon after informed by the ſame Gentleman, who had firſt tried the Experiment upon his own Hounds, that a great Number of Hounds had run mad in the Gentleman's Kennel where the Remedy had failed, and, probably, had bit every Dog in it; that the Servants, being afraid to come near the Dogs, to give them the Medicine properly, threw a great Number of Balls, made with *Turpeth mineral* and Butter, into the Kennel; by which means ſome got more than their Share, and others none; ſo that thoſe which got none went mad, and bit the others again. He added, that he had not the worſe Opinion of the Medicine for this Trial, having never known it to fail, in a Multitude of Experiments made by himſelf.

HYDROPHTHALMIA, *ὑδροφθαλμία*, from *ὕδωρ*, Water, and *ὀφθαλμὸς*, an Eye, an Hydrophthalmy, is a Diſeaſe of the Eye, when it is diſtended by Water, or Serum, to an enormous Bulk, and ſwells out beyond its Orbit. See OCULUS.

HYDROPHTHALMION, from the ſame as the preceding, is the Part under the Eye, which uſually ſwells in cachectic and hydropic Caſes. *Blancard.*

HYDROPHYLLON, Water-leaf.

The Characters are;

It hath a bell-ſhaped Flower, conſiſting of one Leaf, and cut into ſeveral Segments; from the bottom Part of the Flower ariſes the Pointal, which afterward becomes a Fruit, opening in two Parts, incloſing Seeds of the ſame Shape as the Veſſel.

We have but one Kind of this Plant; which is,

Hydrophyllon; Morini. *Joncq. Hort.* WATER-LEAF OF MORINUS.

There are no medicinal Virtues attributed to this Plant at preſent, that I know of.

HYDROPHYSOCELE, *ὑδροφυσοκήλη*, from *ὕδωρ*, Water, *φύσα*, a Flatus, and *κήλη*, a Hernia, is a Hernia proceeding from Water mix'd with Flatulences. *Caſtellus.*

HYDROPICA (*Medicamenta*) Medicines againſt a Dropſy. *Blancard.*

HYDROPIPER, a Name for the *Perſicaria urens.*

HYDROPNEUMOSARCA, *ὑδροπνευμοσάρκα*, from *ὕδωρ*, Water, *πνεῦμα*, Spirit or Wind, and *σάρξ*, Fleſh, is a Humour, or Abſceſs, produced from a Mixture of aqueous, flatulent, and carnous Subſtances. *Caſtellus.*

HYDROPOIDES, *ὑδροποιδὴς*, from *ὕδρωψ*, a Dropſy, and *εἶδος*, a Reſemblance, is applied to aqueous Excretions, ſuch as are familiar to thoſe in Dropſies. The Word occurs in *Hippocrates, Lib. 4. de Morb.* and in ſome other Places.

HYDROPOTA, *ὑδροπότης*, from *ὕδωρ*, Water, and *πότης*, a Drinker. A Water-drinker. There is an Obſervation of *Helwigius* in *Bonet. Med. Septentr.* of one who contracted a Dropſy by drinking Water, and was cured by drinking Wine. *Caſtellus.*

HYDROPS.

That a Cachexy was a Diſorder next in Degree to a Dropſy, was unanimouſly maintain'd by the Antients; for which Reaſon, in their Works, they generally treated of the latter, immediately after conſidering the former; but by none of them has the Analogy between theſe two Diſorders been more judiciouſly ſhewn, than by the incomparable *Aretæus*, who, in the firſt Chapter of his ſecond Book of *Chronical Affections*, uſes the following Words: "A "Dropſy in any of the more noble and important Viſcera ren- "ders the whole Body of a bad Habit, ſo that no Part is free "from its Share of the Misfortune; for Water, fluctuating in "the lower Part of the Abdomen, is not properly what we call "a Dropſy, ſince the Fault is not lodged there: But, when the "Diſorder is ſucceeded by Tumor, Inflation, and Unſeemlineſs of "Colour, that Diſpoſition, in conſequence of which the Juices "are colliquated, and converted into Water, is a Dropſy, ſtrictly ſo "call'd; for tho', in a Dropſical Patient, there ſhould be a "ſpontaneous Diſcharge of the Waters, or tho' thoſe ſhould be "artificially evacuated, by making Inciſions in the Præcordia, "yet the Dropſy is not, by theſe means, removed, but keeps "its former Seat: The principal Cauſe, therefore, of this Diſ- "order, is a Cachexy, or bad Habit of Body." By this Paſſage the celebrated Author inſinuates, that the primary Diſorder is a Cachexy, or bad Habit of Body, which is attended with an aqueous Tumor or Swelling, as its Symptom and Effect; ſince, tho' this was removed, the Diſorder would ſtill remain. In the ſubſequent Part of the Chapter, he continues thus: "Thoſe la- "bouring under an Anaſarca are of a Colour reſembling that "which reſults from a Mixture of black and green, and their "Veins are of a dark or obſcure Colour." Now theſe Symptoms are very familiar to thoſe who labour under a Cachexy. Beſides, a Dropſy is produced by the ſame Cauſes, from which a Cachexy draws its Origin; as is ſufficiently obvious, not only from the Teſtimonies of Authors, but alſo from the more ſacred and inviolable Sanction of Experience. See CACHEXIA.

Since, then, a Cachexy is of ſo near Affinity to a Dropſy, that the former is juſtly accounted the Cauſe and Foundation of the latter; we may juſtly define a Dropſy a highly depraved Habit of Body, with reſpect to all its Parts and Functions, accompanied with a preternatural Stagnation and Collection of ſerous Humours, either in the whole Body, or in ſome particular Cavities of it.

That the vital, natural, and animal Functions, are, in a Dropſy, highly vitiated and injured, is ſufficiently obvious from its Symptoms, which are judiciouſly and accurately collected by *Aretæus* in the before cited Part, in the following Words: "All Patients "labouring under a Dropſy are pale, and afflicted with a Diffi- "culty of Breathing, and Cough. They are, at certain times, "ſlow, lazy, and have an Averſion to Aliments; and, if they eat "any thing, tho' in a ſmall Quantity, and free from a flatulent "Quality, they are, nevertheleſs, much inflated and diſtended: "Their Skins are entirely deſtitute of all Moiſture; neither can "a Sweat be raiſed on them by warm Baths. Beſides, they are "of a whitiſh Colour, and effeminate; their Sleeps are oppreſſive, "troubleſome, and ſhort; they are ſubject to Deliriums, anxious "and uneaſy about Trifles, and exceſſively fond of living."

A Dropſy, almoſt from the very Infancy of Medicine, has been divided into three Species, *Anaſarca*, *Aſcites*, and *Tympanites*:

penites: The firſt is, when the entire Body is tumid; the ſecond, when the Abdomen is turgid, and a Lymph, ſtagnating within its Cavity, overflows the Viſcera; and the third, when the Abdomen is not ſo ſoft as to yield to the Impreſſions of the Fingers, but appears highly inflated and hard. But *Aretæus* has added a fourth Species, and made a certain Difference between an Anaſarca, and a Leucophlegmatia, imagining, that tho', in both theſe Species of Dropſies, the Face and Arms are tumid; and that in a Leucophlegmatia, ariſing from a Redundance of Phlegm, as well as in an Anaſarca, the whole Body is filled, and that all the Parts ſuperior and inferior, the Breaſts not excepted, become tumid, which principally happens to thoſe who are young, robuſt, and in the Flower of their Age; yet, in an Anaſarca, the Fleſh is colliquated into a kind of ſanious Juice, reſembling that which is diſcharg'd from Members violently contus'd. Beſides, he maintain'd, that a Leucophlegmatia was a milder, and more eaſily cur'd, Species of Dropſy; becauſe there were various ways, by which it might be removed, ſuch as by Sweat, Urine, and, ſometimes, copious Stools; whereas, in the other Species of Dropſies, eſpecially thoſe of the complicated Kind, the Phyſician muſt change the whole Habit of the Body, before he can cure the Patient. By this peculiar Diſtinction, of ſingular Uſe in Practice, *Aretæus* ſeems to have inſinuated, that in a Leucophlegmatia, as well as in an Anaſarca, there was a large Quantity of Water, ſtagnating between the Skin and the Muſcles; but that, in an Anaſarca, the Blood, by which the Muſcles are nouriſhed, was, at the ſame time, highly corrupted, and conſequently the Diſorder proportionably more terrible. This beautiful Diſtinction is ſtill more conſpicuouſly made in the ſame Chapter, in the following Words: "Water between the Muſcles "and Skin is ſometimes form'd immediately after liberal Draughts "of cold Liquor; when, for Inſtance, any one under the In"fluence of exceſſive Thirſt drinks large Quantities of cold "Water, and the Liquor is afterwards conveyed to the Peritonæum, by which the Heat of the Stomach and Abdomen are "abated. Then the Drops of Water are diſcharged upon the "Ilia, which, being converted into Air, are carried off by Per"ſpiration. When this, therefore, happens, before any of the "Viſcera, or the whole Body, is affected, the Diſorder is pro"portionably the more eaſily cured."

To declare my Sentiments freely, Experience and Fact oblige me to maintain, with *Aretæus*, that a Leucophlegmatia is a gentler, and more eaſily cured, Species of Dropſy, than an Anaſarca. Theſe two are indeed generally confounded by modern Phyſicians; whereas by *Aretæus*, and *Cœlius Aurelianus*, the former of theſe is ſtyled *Intercus*, becauſe the Water collected ſtagnates in the Cellulæ of the Fat, and, by that means, acquires a paliſh Colour; whereas in an Anaſarca, or Hypoſarca, in conſequence of a greater Corruption of the Blood than in a Leucophlegmatia, the Colour of the Skin and Fleſh is more unſeemly, and appears of a blackiſh-green Hue; which is a manifeſt Sign, that the Viſcera ſubſervient to Sanguification, and the Depuration of the Humours, ſuch as the Lungs, Liver, and Kidneys, are either too much relaxed, or infarcted, and conſequently leſs fit for performing their natural Functions. When, therefore, a Leucophlegmatia is complicated with an Anaſarca, a more terrible Species of Dropſy is produced, ſince the former is only the Beginning, and the latter the perfect State or Height of the Diſorder.

But a ſtill more formidable, and almoſt incurable, Species of Dropſy, is that called Aſcites; the Symptoms of which are accurately enumerated by *Aretæus*, in the Part already quoted: "In Patients, ſays he, labouring under an Aſcites, the Ilia "are tumid, and the Feet inflated; whereas the Face, the "Arms, and all the other Parts of the Body, are extenuated. "The Teſticles become tumid, and the Prepuce, and whole "Penis, appear to be ſwreathed, as it were, by reaſon of the "Inequality of the Swelling. Upon reclining the Body to either "Side, the Water produces both a Tumor and Fluctuation in "the reclined Part, and the Noiſe of the fluctuating Liquor is "heard." From theſe Symptoms we may infer, that in conſequence of the large Number of ruptur'd lymphatic Veſſels, there is a copious Extravaſation of Lymph, and as it were an Inundation of the Viſcera, by which they are, in Proceſs of Time, totally corrupted.

As for that Species commonly called Tympanitis, and the dry Dropſy, in which the Abdomen, highly tenſe and inflated, ſounds like a Drum, upon being ſtruck with the Hand, we muſt obſerve, that it is rather a Symptom of an Anaſarca and Aſcites, than a diſtinct and ſeparate Species of Dropſy; but if it accompanies theſe Diſorders, as it generally does an Aſcites, it denotes a highly deplorable and incurable Caſe, which, ariſing either from Flatulencies pent up in the Inteſtines, or from the Vapours exhaled from the Waters extravaſated in the Abdomen, ſo deſtroys the Tone of the abdominal Muſcles, that they become entirely languid.

But, that we may the more accurately inveſtigate the Nature and Genius of a Dropſy, we ſhall deſcribe its Beginning, trace its Progreſs, and enumerate the various Symptoms with which it is attended: Firſt, then, a Swelling ſeizes the Feet, which, in Proceſs of Time, riſes to the Thighs, the Groin, the Ilia, the Abdomen, and the Pit of the Stomach. Sometimes the Abdomen, turgid with Water, is ſo exceſſively prominent, that the Patient cannot ſee his own Feet, but dreads a Rupture of his Abdomen. In Proceſs of Time a Quantity of Water falls down into the Scrotum, and frequently diſtends it ſo much as to render it as large as one's Head. Not only the Scrotum, but, alſo, the Prepuce, and Penis, are ſo ſwell'd, as to become intorted, and prevent the free Diſcharge of the Urine. In which Caſe 'tis perceived, that the Water, which diſtends the Penis, is convey'd from the adjacent Region of the Groin, and inſinuates itſelf between the Skin and Muſcles of the Penis; whereas the Water which diſtends the Scrotum, is generally convey'd from the Abdomen through the Proceſſes of the Peritonæum. Sometimes, alſo, eſpecially in Patients labouring under an Anaſarca, and Leucophlegmatia, it happens, that the aqueous Humour collected about the Groin, inſinuating itſelf under the common Integuments of the Teſticles, proves the Cauſe of a Swelling of the Scrotum, whilſt the Abdomen, in the mean time, is entirely free from Water. Nor, in all dropſical Patients, does the Scrotum become tumid, ſince I have known ſome Patients die of a Dropſy, without any Swelling in that Part. In Women, alſo, the Groins become tumid, and the Vagina is ſometimes ſo diſtended by the Waters, as to fall down. Beſides, a common Symptom of dropſical Patients is a Difficulty of breathing; which being increaſed by violent Motion, and eſpecially in the Night-time, by reaſon of the eaſy Aſcent of the Water in the Abdomen, in conſequence of the reclining Poſture of the Body, frequently induces a Danger of Suffocation. Hence, if the miſerable Patients have a mind to breathe freely, they are obliged to ſhift their Poſture, and rather ſit erect, than lie in Bed, as other Perſons do. They are, alſo, afflicted with a Cough, which is generally of the dry Kind, and without Expectoration; whilſt at the ſame time, an acrid, ſaline Lymph, which is peccant throughout the whole Body, in a particular manner, ſtimulates and irritates the ſlender Fibres of the Larynx, and Bronchia.

'Tis obſervable, that, in an Anaſarca, the Urine is diſcharg'd thin and white, whereas in an Aſcites it is evacuated in ſmall Quantities, but thick, and with a copious red and lateritious Sediment. In the Beginning of a Dropſy, the Quantity of Urine, for the moſt part, correſponds to that of the Liquor drank; the Body, alſo, is ſoluble, and the Appetite good; but all theſe lucky Circumſtances gradually fail, in proportion as the Diſeaſe advances. Beſides, the Patient is rack'd with a violent and inſatiable Thirſt, ſo that the Poet might juſtly ſay,

Quo plus ſunt pōtæ; plus ſitiuntur Aquæ.

The Reaſons why a Dropſy is accompanied with this inſatiable Thirſt, are principally theſe: The Saliva, in conſequence of an Obſtruction of the ſalival Glands, can no longer lubricate and moiſten the parched Fauces; beſides, the ſmall Quantity of Saliva, which is diſcharged from theſe Glands, is not only viſcid and ſaline, but alſo immediately dried up by the febrile Heat; for the worſt State of the Diſorder is almoſt always accompanied with a ſlow and continual Fever, which may be ſufficiently known from the ſmall and frequent Pulſe, and which, gradually preying upon the Fleſh of the ſuperior Parts, and impairing the Strength, at laſt puts an End to the Patient's Life. In an Anaſarca, as well as in an Aſcites, there is often a conſiderable Itching perceiv'd in the membranous Parts of the Feet, which are alſo obſerv'd full of livid Spots, and Veſicules, which latter, when open'd, diſcharge a Serum, that, by its Acrimony, corrodes or inflames the adjacent Parts. Hence malignant Ulcers are frequently produced, which, according to *Hippocrates*, in the eighth Aphoriſm of his ſixth Section, are not to be cured and conſolidated without the greateſt Difficulty; for the Afflux of acrid Serum is too great to be mitigated by lenitive and drying Medicines. And this Species of Dropſy is generally accompanied with a Fever, which draws its Origin from an Inflammation of the Inteſtines, brought on, in a great meaſure, by draſtic Medicines; and a Horror and Rigor, ſucceeding, are Signs that the Viſcera are ſphacelated, and fatally corrupted.

We now proceed to take a View of the Phenomena obſervable in diſſecting thoſe who have died of Dropſies: And, firſt, as for the Liver; we know, from the *Miſcellan. Nat. Curioſ.* *Bonetus's Sepulchretum*, and the Works of other Anatomiſts, that this Organ, in dropſical Perſons, is, for the moſt part, found diſorder'd: Sometimes it is pale, and almoſt without Blood; at other times it is tumid, black, denſe, ſcirrhous, full of Hydatides, and, together with the Gall-bladder, contains either a Matter which is aqueous, and leſs bitter, or thick, and concreted, as it were, into ſmall Stones. *Horſtius*, in *Lib.* 3. *Obſ.* 9. and *Tulpius*, in *Lib.* 2. *Obſ.* 36. inform us, that, in young Perſons, they have obſerv'd the Liver contracted, as it were, into a Globe, and indurated to ſuch a Degree, that it made a Noiſe upon the Application of the Knife, when they endeavour'd to make an Inciſion in it; and, that, in a Tympanitis, they obſerv'd it dry and torrefied, like corrugated Leather. But *Ruyſch*, in his *Obſervations*, and *Bonetus*, in his *Sepulchretum Anatomicum*, furniſh us with Inſtances in which this Organ has been found ſound, and, apparently, free from

from every Diſorder. Of this, alſo, *Riverius* ſeems to give us an Inſtance, in *Obſervat. Communicat.* 4. who, in a certain dropſical Patient, found the Liver in tolerable good Order, but the Spleen corrupted, and almoſt the Whole of its Subſtance reſembling black Bile. With reſpect to the other Viſcera, it is to be obſerv'd, that the Omentum, in diſſecting thoſe who have died of an Aſcites, is generally found either corrupted and ſphacelated, or extenuated and conſum'd: The Pancreas is generally found ſcirrhous, and the Meſentery diſtended to a large Bulk, in conſequence of the Veſicles filled with Water generally adhering to it, and its Glands ſwell'd to the Bulk of a Bean: Of this there is a memorable Inſtance, in the 35th Obſervation of the fourth Book of *Tulpius*: Nor do the Stomach and Inteſtines eſcape the Fury of this Diſorder; for I have obſerv'd them inflam'd, ſphacelated, and corroded. In a Tympanitis I have, alſo, obſerv'd the Stomach and Inteſtines turgid with Flatulences, as well as the Cavity of the Abdomen. Inſtances of this Kind are given by *Felix Platerus*, in *Lib.* 3. *Prax. Cap.* 3. *Obſ.* 50. and by *Hercules Saxonia*, in *Prælect. Part.* 2. *Cap.* 27. With reſpect to the Stomach, it is obſervable, that its interior Coat is full of gibbous Knots, as large as ſmall Nuts, which ſeem to be nothing but thoſe miliary and round Glands, which, in a natural State, are ſmall; and which, at other times, are obſerv'd ſcatter'd up and down the villous Coat, on that Side where it adheres to the nervous Coat.

Nor are the Viſcera of the Lower-Belly only affected by this Diſorder; but it is, alſo, remarkable, that, in a Dropſy, whether of the Thorax or Abdomen, the Heart, and, eſpecially, its Right Ventricle, is often diſtended to a ſurpriſing Bulk; ſo that, in two Subjects, I found it as large as the Heart of an Ox: With reſpect to this, the *Miſcel. Nat. Curioſ. Dec.* 1. *An.* 5. *Obſ.* 64. and *Bartholin. Cent.* 2. *Hiſtor.* 66. may be conſulted. I can, from my own Experience, affirm, that in all the dropſical Subjects I have order'd to be diſſected, I have, beſides the Diſorders of the Viſcera, found polypous Concretions in the Heart, and its Veſſels; and this is confirm'd by the Obſervations of ſeveral Anatomiſts. A memorable Inſtance, of this Kind, is recorded in *Miſcel. Nat. Curioſ. Dec.* 2. *An.* 5. *Obſ.* 66. where, in a Perſon cut off by an Anaſarca, the Inteſtines, the Omentum, the Pancreas, the Liver, and Spleen, were found perfectly ſound; but, in the Right Ventricle of the Heart, there was a Polypus found, another in the Vena Cava, and another in the Pulmonary Artery; ſo that the Patient, during his Life, had juſt Reaſon to complain of a Rupture in the Right Side of his Heart. In the ſame Work, *Cent.* 9. *Obſ.* 50. we have an Account of the Diſſection of a dropſical Woman, in the Right Ventricle of whoſe Heart there was a Polypus, a Quarter of an Ell long, and running down into the Pulmonary Artery. More Examples of this Kind may be ſeen in the ſame Work, *Cent.* 3. *Obſ.* 117. *Cent.* 8. *Obſ.* 41. and *Decad.* 2. *An.* 6. *Obſ.* 73. Only we muſt obſerve, that where the Veſſels of the Heart are full of polypous Concretions, there is, generally, a large Quantity of Serum found in the Cavity of the Thorax.

As for the Serum collected in the Cavities of the Body, it generally varies, with reſpect to its Quantity, Colour, and Conſiſtence; for ſometimes it is like Water, but ſomewhat thicker, and, when put over the Fire, is concreted into a Jelly; at other times it is yellowiſh, and not unlike the Waſhings of Fleſh. As for the Quantity of the Serum, this alſo varies, in proportion to the Bulk of the Body, and the Length of the Diſeaſe; for ſometimes it has been found equal to thirty, ſometimes to ſixty, and, at other times, to an hundred Pints. But the greateſt Part of this Water, or Serum, is contain'd in the Cavity of the Abdomen, or between the Peritonæum and Muſcles of the Abdomen: But that this Water is ſometimes included in a Sack, form'd in the Duplicature of the Peritonæum, is ſufficiently obvious from anatomical Obſervations; and, of this, we have a memorable Inſtance, recorded by Mr. *Littre*, in the *Memoires de l'Academie des Sciences*, for the Year 1707.

Having thus enumerated the Phenomena obſervable in diſſecting Perſons who have died of Dropſies, we now come to inveſtigate the principal and immediate Cauſes, which generate or produce the Waters. The Antients, who were ignorant of the curious Laws of Hydraulics, ſo accurately obſerved in the human Body, and, eſpecially, of the Circulation of the Blood, aſſigned, as the Cauſe of this, a bad Sanguification, and a Converſion of the Blood to Water, in conſequence of ſome Diſorder in the Liver: But, in our Days, as the Structure of the human Body, and the Laws of the animal Oeconomy, are more accurately inveſtigated, we may, with far better Reaſon, aſſign the following Cauſes for this Effect. In my Opinion, then, a more ſatisfactory Reaſon can hardly be advanced for a dropſical Swelling, than the difficult, ſlow, and obſtructed Circulation of the Blood thro' the Veſſels. This Aſſertion is ſufficiently confirm'd by an Experiment firſt made, ſo far as I know, by the celebrated Anatomiſt *Lower*, who, with a Thread, tied up a large Vein in a live Animal, and ſuffer'd the Ligature to remain for an Hour; upon which he forthwith perceived an œdematous Tumor, in that Part to which the Ramifications of that Vein were diſtributed. Something analogous to this is obſerv'd, when, in order to ſtop violent Hæmorrhages, the Inſtrument, commonly called the Tournequet, is applied; for, if this Inſtrument remains applied for a long time, the Part is gradually raiſed into a Tumor. This is, alſo, illuſtrated by another Experiment; for, if the Subclavian Vein in the Right Arm, for Inſtance, of a dead Perſon, is ſtrongly compreſſed, and a ſomewhat thick red Liquor afterwards injected, by means of a Syringe, into an Aperture made in the Vein of the Hand, the Arm becomes tumid; and, upon laying it open, we find that a large Quantity of the red Liquor has penetrated into the Cellulæ of the Fat, lying under the Skin; for no other Reaſon, than that the injected Liquor, in conſequence of the Reſiſtance made by the Ligature, too much diſtends the Veins running through the Cellular Membrane, and is, at laſt, extravaſated through their Pores.

From theſe Experiments it is, if I miſtake not, ſufficiently obvious, that the true Cauſe of the Swelling of the Body in a Dropſy, of the Secretion of the Serum from the Blood, and of its Stagnation in the Cavities, is a too ſlow and languid Circulation of the Blood, eſpecially through the Veins. The Truth of this Aſſertion will be ſtill more evident, if we conſider, how eaſily the Circulation of the Blood, through the Veins, is ſtopt; and that, principally, for theſe Reaſons. The Motion of the Blood through the Veins, from the inferior to the ſuperior Parts, is, in conſequence of their perpendicular Situation, and the ſtated Laws of Hydraulics, much ſlower than in the Arteries; hence the Veins are not only more numerous, but have, alſo, larger Diameters, than the Arteries: The Coats of the Veins, alſo, are not furniſh'd with ſo ſtrong a ſyſtaltic, moving, and elaſtic Force, as is found in the Arteries: Beſides, the Coats of the Veins are highly ſlender, porous, and, conſequently, capable of allowing a thin Fluid to paſs eaſily through them. Now, if, by means of a Redundance of ſerous Humour, the Tone and Strength of the Veſſels, eſpecially of the Veins, ſhould, in conſequence of their too great Diſtention, be impair'd and weaken'd, the Circulation of the Blood through the whole Body, which regulates all its Functions, and preſerves them entire, muſt neceſſarily become languid, and be diminiſh'd; as is obvious from the Pulſe, which, in this Caſe, is rare, ſoft, and weak. From this languid Circulation of the Blood we deduce the genuine Cauſe and Reaſon, not only of the preternatural Swelling, but, alſo, of the other Symptoms which accompany a Dropſy; ſuch as Wearineſs, Heavineſs of the Body, Liſtleſneſs, and a Diminution of the ſalutary Excretions by Sweat, Urine, and Stool.

Beſides theſe, an inſupportable Difficulty of Breathing is almoſt a perpetual Symptom of every Dropſy, and, ſometimes, riſes to ſuch a Height, as to endanger a Suffocation: This formidable Symptom can hardly have any other Cauſe aſſigned for it, than a too weak ſyſtaltic Force of the Heart and Arteries; in conſequence of which, the Blood, abounding with a viſcid Serum, cannot paſs ſufficiently freely through the minute Ramifications of the Pulmonary Artery and Vein; hence it ſtagnates in theſe Ramifications, and, regurgitating to the Right Ventricle of the Heart, produces a ſtrange Uneaſineſs: And, ſince the principal Office of the Lungs conſiſts in this, that whilſt the Blood paſſes thro' the numerous and minute Veſſels of their veſicular Subſtance, the Lymph and Chyle may be intimately mix'd with its Parts, and impregnated with a kind of ſubtle and elaſtic Air, that thus the Blood may be render'd ſpirituous, fluid, and fit for adding Strength to the Body, hence we may juſtly infer, that a ſlow and languid Circulation of the Blood through the Lungs is the fatal Cauſe of the terrible Symptoms, with which the Dropſy is accompanied; for, by this means, the whole Work of Sanguification is injured, and, inſtead of a Blood ſufficiently florid and temperate, the Veſſels muſt neceſſarily be filled and infarcted with a redundant Serum. The State of the Patient is ſtill more deplorable, when polypous Concretions are already form'd in the larger Veſſels of the Heart and Lungs; ſince, by this means, the Circulation of the Blood through the Veſſels of the Heart and Lungs is not only retarded, and, ſtagnating there, produces various Misfortunes, but, alſo, begins to ſtop in the whole Vena Cava, and all the Parts to which it is diſtributed; hence an incredibly large Secretion of Serum is produced. The more difficult it is to remove this deep-rooted Obſtruction, the more rationally we may conclude, that the Dropſy ariſing from it is of the worſt kind, and not to be cured without the greateſt Difficulty.

Having thus traced the Generation of a Leucophlegmatia and Anaſarca, we now come to conſider that of an Aſcites: In this Species of Dropſy, therefore, I ſhall not heſitate to affirm, that the Liver is principally diſorder'd, ſince the Circulation of the Blood is not ſo ſlow in any of the other Viſcera as in this; and tho' the ſuccuſſory Commotion of the Liver, by means of the Diaphragm, in the Act of Reſpiration, and the Strength of the Coats, with which, from anatomical Obſervations, we know the Vena Portæ to be furniſh'd, ſeem greatly to promote the Circulation of the Blood; yet, when a viſcid Blood is convey'd to the Vena Portæ, this Vein, in conſequence of its wanting both a Pulſation and Valves, with Difficulty tranſmits the viſcid Blood through the numberleſs minute Ramifications of the Vena Cava: Hence a ſtrong Tendency of the Blood to Stagnation and Infarction

farction is brought on. If, therefore, in conſequence of uſing a ſmall Quantity of Drink, a ſedentary Life, a free Uſe of Acids, the Abuſe of ſpirituous Liquors, Hæmorrhages, or Fevers prepoſterouſly cured by Aſtringents, a Redundance or Lentor of the Blood and Lymph ſhould be brought on; or if, in conſequence of many violent Commotions of Mind, and the Shock of preceding Diſeaſes, the Tone of the Liver, and its Veſſels, ſhould be preternaturally weaken'd; theſe Veſſels muſt, of neceſſity, be infarcted, and the due Proportion of their Diameters to the Blood, which ought to move through them, being, by this means, deſtroy'd, it ſtagnates here-and-there, in their Cavities; and its aqueous Part, being ſecreted, fills the lymphatic Veſſels, great Numbers of which are found there: Beſides, the preternatural Spiſſitude of the viſcid Lymph renders its Circulation through the Liver proportionably more or leſs faint and languid. If a pretty thick Lymph, ſecreted from the Blood, ſhould remain in the Liver, and, in conſequence of the Diſſipation of its more fluid Parts, aſſume a proportionably greater Degree of Thickneſs, the Coats of this Organ will become thick, indurated, and, at laſt, degenerate into a Scirrhus; but the Induration will be principally obſervable in the more internal Parts; whereas the Scirrhus will be form'd in the external membranaceous Parts, and the Veſſels lying neareſt to the Surface. That the principal Seat, therefore, of an Aſcites is the Liver, is ſufficiently obvious from the Inſtances of Diſſections already given.

But, beſides the Liver, the other abdominal Viſcera are not entirely free from the Effects of the Diſorder; for *Riverius*, *Schenkius*, *Foreſtus*, and myſelf, have frequently ſeen the Spleen preternaturally large, diſtended with a black Blood, and cover'd with a ſcirrhous Membrane. According to *Rondeletius* and *Peyer* in *Obſervat. Anatom.* the Pancreas is, almoſt in all dropſical Patients, found hard, ſcirrhous, and ſometimes totally conſum'd: The Omentum is putrid and emaciated; the Glands of the Meſentery, Inteſtines, Duodenum, and Stomach, are preternaturally tumid and indurated. In my Opinion, theſe Viſcera receive the Taint from the preternatural State of the Liver, and the too languid Circulation of the Blood through its Veſſels, and that, principally, by reaſon of the ſtrict Union, and intimate Connection, between their reſpective Veſſels; for it is certain, from anatomical Obſervations, that all the Blood, which returns from the Stomach, the Inteſtines, the Meſentery, the Pancreas, the Omentum, and the Spleen, is convey'd into the Vena Portæ, and, by its means, through the vaſcular Structure of the Liver, to the Vena Cava, and the Heart. If, therefore, the progreſſive and circular Motion is ſtopt there, it is abſolutely neceſſary, that the Blood, regurgitating to the abdominal Viſcera, ſhould, in them, produce Stagnations, Infarctions, a ſcirrhous Diſpoſition, and Corruption.

As the Return of the Blood is highly ſlow through the Uterus, eſpecially through the ſpermatic Veſſels, which are contorted, folded up, and divided into various Curls, as it were, like the Tendrils of Vines, which makes its Journey to the Heart ſo much the longer; hence it happens, that in the Uterus, and its Appendages, ſuch as the Fallopian Tubes, and the Ovaria, copious Inundations, and aqueous Tumors, are ſometimes produc'd; for the fluid and aqueous Part never more readily and expeditiouſly ſecedes from the Blood, than when its Circulation through the Viſcera is ſlow and languid, as is obvious in the Liver. And, for this Reaſon, there is no-where a greater Number of lymphatic Veſſels, than in the Subſtance of the Uterus and Liver, and their adjacent Parts; which Veſſels, being diſtended by a copious Congeſtion and Afflux of Lymph, are raiſed into large Veſicles, by the *Greeks* called *Hydatides*, by the Breaking of which a Dropſy is ſometimes ſuddenly generated, and an incredible Quantity of Serum diſcharged into the Cavity of the Abdomen. Thus *Salmuthus*, *Cent.* 1. *Obſ.* 38. informs us, that in a certain Woman, who died of a difficult Labour, he found a large Number of Hydatides in the Confines of the Uterus: And *Pechlinus*, in his 19th Obſervation, tells us, that he ſaw the ſame, in diſſecting a Woman, who died during Geſtation. That in the *Cornua* and Tubes of the Uterus large Quantities of Water are, ſometimes, collected, is ſufficiently confirm'd by *Tulpius*, who, in the fourth Book of his Obſervations, *Obſervat.* 45. gives us an Inſtance of a Woman, who, in both *Cornua* of the Uterus, had about nine Pints of Water and Pus included in a large Number of ſmall Bladders. More Inſtances of this Nature may be found in *Schenkius*, *Lib.* 3. *Obſ.* 6. and 7. in *Rolfinkius de Organ. Genital. Cap.* 20. and in *Sydenham*, *de Hydrope.* This Truth is, alſo, confirm'd by an Obſervation of *Harder*, who tells us, that in a Country-woman not only the Left Ovary contain'd two Pints of a ſaline and fetid Water, but, that there was, alſo, a conſiderable Hydatis or Veſicle full of Water, in the Fallopian Tube, annexed to it. And I myſelf, twenty Years ago, obſerv'd, in a Woman of forty Years of Age, a Swelling, produced by a violent Fall, on the hypogaſtric Region, and accompanied with a tenſive Pain: This Swelling was ſucceeded by a large Diſcharge of limpid Water, which was, at firſt, evacuated with the menſtrual Blood, and continued to flow for half a Year after the menſtrual Evacuation ſtopt; ſo that, at leaſt, one Pint of this Water was daily diſcharged, till, at laſt, the Patient, having in vain tried a great many Remedies, and, being ſpent with a Conſumption, and ſlow Fever, exchanged her miſerable Life for another State.

There are, alſo, frequent Inſtances, ſome of which I myſelf have ſeen, in which a Dropſy has been concealed under the Diſguiſe of Pregnancy: Hence it is, that young Phyſicians are ſo often miſguided in their Eſtimates, with reſpect to this latter State. But I have ſeen pregnant Women, who, at the ſame time, laboured under a Dropſy, preſerved by a copious Diſcharge of Water after Labour; whereas thoſe who have not the Advantage of this Circumſtance, generally die; ſince the Humour is previouſly diſcharged into the Cavity of the Abdomen.

Platerus, in *Lib.* 3. of his Obſervations, gives us a memorable Inſtance of a Woman, who was ſeized with an Aſcites every time ſhe became pregnant: For this Reaſon I am of Opinion, that dropſical Swellings, in Women, ariſe rather from the Fault of the Uterus than that of the Liver, and Viſcera connected with it; and that they are more eaſily cured, than when the Liver is primarily affected; becauſe, in the former Caſe, a freer Diſcharge is afforded to the ſtagnant Serum through the Pores of the Uterus, than in the latter.

As for the procatarctic Cauſes of this Diſorder, we obſerve, that Perſons of a tall Stature are, in a peculiar manner, ſubject to Dropſies, both of the Abdomen and Thorax; for, as in theſe the Diſtance between the Feet and Heart is greater than in others, and the Situation of the Body at the ſame time perpendicular, ſo the Circulation of the Blood is, generally, ſlow and languid, and, conſequently, render'd difficult by the ſlighteſt accidental Cauſes: Hence it is, that polypous Concretions are generally found in tall Perſons, who have died of a Dropſy of the Thorax, or an Anaſarca. Thoſe, alſo, who are of a ſoft ſpongious Habit of Body, who have leſs firm Fibres, in which an aqueous Subſtance predominates, thoſe we call phlegmatic or ſanguineophlegmatic, are highly ſubject to Dropſies: Thoſe who are over-fat, thoſe who in their Infancy have been afflicted with catarrhous Defluxions, or who have been often ſubject to œdamatous Swellings, are, alſo, highly obnoxious to Diſorders of this Kind: Old Perſons, in whom, by reaſon of the impair'd Elaſticity of the Veſſels, the Excretions are not duly carried on, and the Lymph acquires a preternatural Lentor and Viſcidity, are, for this Reaſon, frequently ſubject to dropſical Swellings: Thoſe who lead ſedentary Lives, ſuch as Taylors, Shoemakers, and Weavers, are, all other Circumſtances being alike, more ſubject to this Misfortune than others: Thoſe, alſo, who breathe a moiſt Air, which impairs the Vigour of the Fibres, ſuch as Bathkeepers, Fiſhers, Fullers, and ſuch as waſh Clothes, are more ſubject to Misfortunes of this Kind than others: The Places and Countries in which we live, have, alſo, a very conſiderable Influence in producing this Diſorder: For which Reaſon more dropſical Patients are found in marſhy Places, and on the Sea-coaſt, than in Continents, and Places remote from the Sea: An Inſtance of this we have in *Holland*, both on Account of the Impurity of its Air, and its Contiguity to ſo large a Quantity of Water.

It may alſo happen by Accident, (a Change of the Inhabitants Method of Living, for Inſtance) that a Place, before not naturally ſubject to generate Dropſies, may afterwards become ſo. This, Dr. *Liſter*, in his Treatiſe *de Hydrope*, has very judiciouſly ſhewn to be true, with reſpect to *England*; for improper Aliments and Liquors contribute very conſiderably to the Generation of Dropſies. Among Aliments, thoſe which are thick, crude, viſcid, and ſweet, or Voracity alone, eſpecially in thoſe who uſe little Exerciſe, pave the Way, and, as it were, lay a Foundation, for this Diſorder. But Dropſies are more frequently produc'd by the Liquors drank, when peccant, either with reſpect to Quantity or Quality. Hence we obſerve, that thoſe who drink exceſſively large Quantities of Liquors, ſufficiently innocent when moderately us'd, generally become dropſical in a Tract of Years, unleſs an uncommon Strength of Nature, and Soundneſs of the Viſcera, prevent their Misfortune. This is ſufficiently confirm'd by the Fate of thoſe who ſwallow large Quantities of new and ill depurated Ale, eſpecially that which is prepar'd of Wheat. But we are certain, from daily Experience, that no Liquor is more prejudicial in this reſpect, than Brandy and Malt Spirits. Hence the Spirits diſtil'd from Malt, ſharpen'd with Aromatics, and commonly call'd Aqua-vitæ, may, with far better Reaſon, be call'd the Waters of Death, eſpecially when taken on an empty Stomach. Beſides, nothing more ſpeedily generates this Diſorder, than large Draughts of cold Liquors, immediately after exceſſive Heats; ſo that *Aretæus*, in the Paſſage before quoted, juſtly affirm'd, that "a Dropſy is ſometimes generated by drinking large Quantities of cold Liquors, in order to remove "an inſatiable Thirſt." Thus, *Sylvius*, in his Treatiſe *de Morbis Epidemicis*, tells us, that, by liberal Draughts of cold Liquor, during a febrile Heat and Thirſt, a Dropſy was brought on in two or three Days time. This Diſorder is ſtill more to be dreaded from the liberal Uſe of marſhy ſtagnant Waters, which *Hippocrates*, long ago, claſs'd among the Cauſes of a Dropſy. Hence alſo, the Reaſon is obvious, why, as we have already obſerv'd, Dropſies are moſt frequent in marſhy Places, and on the Sea-coaſt.

coast. Dropsies may, also, be produc'd by the unseasonable Use of mineral Waters, whether of the hot or cold Kind, without a proper Regimen; many tragical Instances of which have occur'd to myself in Practice.

But, among all the Causes which concur to the Production of other chronical Disorders, and especially the Dropsy, none is more considerable than the Passions of the Mind; especially long-continued Grief and Sorrow, which have so surprising an Influence, that by destroying the Vigour, Tone, and Strength of the Viscera, and moving Fibres, they render the Circulation of the Blood languid, and produce a Suppression of the Excretions. Nor does violent Anger contribute less effectually to the Production of this Disorder, especially if large Quantities of cold Aliments or Liquors are used immediately after; for such an Error is immediately succeeded by a violent Uneasiness and Constriction of the Præcordia, a cachectic Colour, a Loss of Appetite, a Difficulty of Breathing; and, in Process of Time, a Dropsy. Instances of this, I myself have more than once observ'd. The Reason of these Misfortunes seems to be this: That, by the violent Commotion of Mind, the Stomach and Duodenum, together with the adherent biliary Ducts, are violently and spasmodically constricted. Hence the due Secretion of the Bile and pancreatic Juice, in order to promote a laudable Digestion, is not only prevented, but, also, in consequence of the large Quantity of Aliments and Liquors, excessive Flatulences are generated, which check the due Discharges by Stool, and render the Circulation of the Blood unequal.

Besides, nothing more directly contributes to the Production of Dropsies, than the Suppression of usual and critical Evacuations of Blood, such as the Menses and Lochia in Women, and the Hæmorrhoids in Men, as *Hippocrates* has justly observ'd in the twelfth Aphorism of his sixth Section. Thus, *Dion Cassius* informs us, that the Emperor *Trajan*, upon a Suppression of the hæmorrhoidal Discharge, was seiz'd with an Ascites, of which he was cured; but, happening to relapse, fell a Sacrifice to the Disorder. 'Tis, also, certain from Experience, that violent Hæmorrhages, whether from Wounds, the Nose, the Uterus, or the Veins of the Anus, contribute very powerfully to the Generation of Dropsies; for the sacred and inestimable Treasure of Life is wrapt up in the Blood: So that, when too large a Quantity of this is evacuated, the minute Vessels, subservient to the Purposes of Secretion and Excretion, collapse, and become too narrow. In consequence of this, neither is a laudable Blood generated, nor the nervous Fluid duly secreted, a Circumstance which produces a Weakness and Imbecillity of the Solids. Nor are the impure and recrementitious Juices eliminated, in consequence of which, an insupportable Load of Impurities is accumulated in the Body. I would not be thought to affirm, that every large Evacuation of Blood produces the Dropsy; but in Patients, where other Causes concur, I am of Opinion, that this Circumstance very readily produces it. Thus I have known some Persons, who, in consequence of an Obstruction of the Viscera, labouring under Scurvy and Cachexy, and abounding with an acrid and impure Blood, have, after frequent and violent Hæmorrhages, fallen into a Dropsy; certainly not in consequence of the Hæmorrhages alone, but also in consequence of the bad Habit of Body, and Dyscrasy of the Humours produc'd by the Obstructions. Immoderate Dysenteries, also, frequently lay a Foundation for Dropsies. Hence, *Hippocrates*, in the forty-third Aphorism of his sixth Section, justly affirms, "that Persons labouring under Disorders of the Spleen, when seiz'd with a Dysentery, which "continues for a long time, die either of a Dropsy, or a Lientery."

Preposterous Methods of curing Diseases, used by unskilful Physicians, also, frequently prove the productive Causes of this Disorder; when, for Instance, they all on a sudden stop and suppress immoderate Discharges of Blood, or other Humours, by Astringents, Opiates, or Narcotics. Dropsies are also generated, when intermittent Fevers, especially of the Quartan-kind, which generally have their Seat in the Liver, are, before the Obstruction is remov'd, and the febrile Matter corrected, too soon stopt by Specifics, among the Number of which is the Peruvian Bark; for these Fevers very readily terminate in a Cachexy and Dropsy, as *Hippocrates* and *Galen* long ago observ'd. 'Tis certain from Experience, that this Misfortune frequently happens in Northern Countries; and I have often observ'd Dropsies succeeding epidemical Fevers, especially in the poorer Class of People, whose Circumstances could not afford proper Medicines. Dropsies, also, sometimes seize those who, in acute Fevers, in order to extinguish the Heat, or quench the Thirst, use too large Quantities of Drink, without having sufficient Evacuations by Urine or Perspiration. It also, frequently happens, that ill-manag'd Mercurial Salivations colliquate the Blood to a kind of Serum, and by destroying the due Tone of the moving Parts, bring on Dropsies. The more drastic Purgatives are also justly enumerated among the Causes of Dropsies, since by their means, the due Tone of the Viscera is not only destroy'd, but also the Strength too much impair'd by an excessive Loss of Serum, in consequence of thirty, or perhaps more Stools a Day; by which means, instead of a pure and temperate Blood, crude Humours are generated in the Veins.

Both Dropsies of the Breast, and an Ascites, are also frequently generated by the Recess, or preposterous and injudicious Repulsion of the Itch, arthritic Disorders, and the Gout; as also by the sudden Consolidation of old Ulcers and Fontanels. And, which is still more surprising, I have observ'd a Repulsion of œdematous Swellings of the Feet, by whatever means, succeeded by a violent Oppression and Uneasiness of the Breast, which were again followed by a Dropsy; for the thick and vapid Serum, which lay stagnant in the Feet, is by Swathing forc'd upwards; and, being absorb'd by the sanguiferous Veins, is convey'd to the Præcordia; and, being thence carry'd with the rest of the Humours, from the Right Ventricle of the Heart, to the Pulmonary Artery, and its Ramifications, fills them with such an excessive Load of Humours, as by compressing the pulmonary Vesicles, resists the Ingress of the Air into them in a Degree sufficient to propel the Blood thro' the Veins. The Blood, therefore, in this Case, regurgitates to the Right Ventricle of the Heart, and, by distending it, creates great Uneasiness, and a Difficulty of Breathing. Since, therefore, by this means the Circulation of the Blood thro' the Lungs is render'd highly slow and languid, the Serum is not only secreted through the Pores in the Cavity of the Breast, and extravasated from the numerous lymphatic Vessels of the Lungs; but the Circulation of the Blood in the whole Vena Cava is, also, in some measure, stopt and retarded, so that it is not surprising, that there should, also, happen large Stagnations and Extravasations of Serum in the inferior Parts.

Having thus taken a View of the Ætiology of this Disorder, it now remains, that we accurately distinguish it from other aqueous Tumors, that by this means we may be able to take the more judicious Measures for its Cure. A Dropsy then ought not to be confounded with œdematous Swellings of the Feet, since the latter may happen without any Danger in sound Persons of a soft and spongious Habit, who are addicted to a sedentary Life. These kinds of œdematous Swellings are very frequent in pregnant Women, but, after Delivery, cease spontaneously, without the Assistance of Medicine; for they are produc'd by the great Dilatation of the Uterus, which so compresses the Vena Cava, between that and the Vertebræ of the Loins, that the Blood cannot rise to the superior Parts with its usual Freedom. It, also, frequently happens, that Tumors are produc'd in the inferior Parts, by a Compression of the Iliac Vessels, by means of Flatulences strongly distending the Intestines. But when the Tone of the Intestines is restor'd, and the Flatulences expel'd, these Tumors are easily remov'd. Sometimes, also, we observe Swellings of the Legs produc'd by an Obstruction of the free Circulation of the Blood, in consequence of a violent and tensory Compression of the Thighs, in riding long Journeys.

We must be highly careful not to confound an Ascites with Pregnancy, which is no hard Task to a judicious Observer; for, in pregnant Women, the Colour of the Countenance is fresh and lively, and the Tumor of the Abdomen unequal, and rising, as it were, to the Præcordia; whereas, in dropsical Patients, the lower Part of the Abdomen is tumid, the Tumor is equal, and the Breasts subside. This latter Case is, also, accompanied with a Thirst, which, in Gestation, is far less. Besides, in an Ascites, there is always a Fluctuation perceived in the Abdomen, and the Water falls whichever Way the Patient reclines. The Motion of the Fœtus, also, in the Uterus, which generally happens about the twenty-seventh Week, removes every Possibility of a Mistake. Nor is it to be denied, that, in pregnant Women, leucophlegmatic Swellings now-and-then appear at the same time; but this principally happens when they are with Child of Twins, or too plethoric, in consequence of having neglected Venesection.

'Tis, also, to be observed, that a Polypus of the Heart is sometimes accompanied with a Swelling of the Thighs and Legs, without either an Anasarca, or an Ascites. This is known to be the Case, by the violent Straitness of the Breast, by the unequal intermittent, and frequently varying Pulse; and, especially, by a Dread of Suffocation, after the Sallies of Passion, or violent Exercise. 'Tis not, however, to be denied, that this State is, when other Causes concur, succeeded by a true and legitimate Dropsy.

There is, also, a considerable Difference between a spurious and legitimate Ascites. The former is, when the Water is not contained in the Cavity of the Abdomen, but is pent up in Membranes, and included, as it were, in the Sack of the Peritonæum; for which Reason, some Authors call it *Hydrops Saccatus*. With respect to this Species of Dropsy, the Reader may consult the *Miscel. Nat. Curios. Decad.* 2. *An.* 8. *Obs.* 23. as also Mr. *Littre*, in the Work before quoted. He may also consult a Dissertation delivered before *Albertus de Hydrope Saccato, per Lapsum in Abdomen curato.* In an Ascites, on the Contrary, the extravasated Water stagnates in the Cavities of the Thorax and Abdomen.

With respect to the Prognostics, and Event, of this Disorder, *Aretæus*, in the Part already quoted, remarks, That "All

" All the Species of Dropſies are bad; the mildeſt is a Leuco-
" phlegmana; a Tympanitis is dangerous; but an Anaſarca
" worſe." We may, in general, affirm, that an Aſcites is incurable when inveterate, and ariſing from other Diſorders, in which the Viſcera are already corrupted, or beginning to be ſo; when the Water is diſcharged from ruptured lymphatic Veſſels or Hydatides; when the Patient is racked with Thirſt, and the ſuperior Parts of his Body extenuated; and when the Urine is ſmall in Quantity, highly red, and depoſits a Sediment. On the contrary, we aſſert, with *Hippocrates*, that the Dropſy admits of a Cure, in which the Viſcera are obſtructed, but not ſcirrhous and corrupted; in which the Patient retains his Appetite, breathes with Eaſe, and diſcharges thin Urine, eſpecially if he has the Advantage of Youth on his Side. When a Dropſy, eſpecially a Leucophlegmatia, or an Anaſarca, ariſe from an Aſthma in plethoric Patients; from drinking too much in Fevers; from too keen an Appetite after the Cure of Fevers; or from violent Hæmorrhages; there are ſufficient Hopes of a Cure, provided the Relief of the Patient is ſeaſonably attempted by proper Remedies.

A Cough, happening in an Aſcites, is an unlucky Omen, as *Hippocrates*, in *Aph.* 35. of *Sect.* 6. and *Aph.* 47. of *Sect.* 7. juſtly obſerv'd: But we do not here mean that ſlight and gentle Cough, which generally ſeizes the Patient about the Beginning of the Diſorder. It is alſo a bad Symptom, when the Appetite and Strength are loſt; when the Thirſt is increaſed; when a large Quantity of Liquor is drank, and but little diſcharged by Urine: Febrile Horrors, accompanied with an internal Heat, happening in an Aſcites, are bad Symptoms, and generally prognoſticate the Death of the Patient. Hæmorrhages from the Lungs, and the Veins of the Anus, happening in an Aſcites, generally prove fatal Symptoms; as alſo an Eryſipelas of the Legs, accompanied with a Fever, as is obſerved by *Hippocrates* in the ſeventh Book of his *Epidemics*. The Perſon who, after the Cure of an Aſcites, relapſes, is not to be cured without the greateſt Difficulty; and, if he ſhould relapſe a ſecond time, he rarely ever eſcapes. The Reverſe of this holds true, with reſpect to an Anaſarca; which, when periodical, is not ſo dangerous as that which is fixed and permanent. 'Tis, beſides, to be obſerved, that Perſons do not readily die of Dropſies, except they have polypous Concretions in the Heart, and pulmonary Veſſels, a Scirrhus in the Liver, the Glands of the Meſentery tumefied; or, if Women, unleſs the Uterus is ſcirrhous and corrupted.

A Dropſy is ſometimes happily terminated by the powerful Efforts of Nature, without any Aſſiſtance from Art; whilſt the Water makes way for its own Diſcharge, either from the Feet, a Rupture of the Navel, or an Aperture of ſome other Part of the Abdomen. *Hippocrates*, in his *Coacæ Prænotiones*, obſerves, that a Diarrhœa, happening in the Beginning of a Dropſy, is ſalutary. Inſtances of this kind have occur'd to myſelf, in which, during the Courſe of a long-continued Diarrhœa, pure Water has been diſcharged by Stool, and the Dropſy, by that means, happily removed. On the contrary, if, in a conſummate and inveterate Dropſy, where the Viſcera are already corrupted, a Diarrhœa happens, the Hopes of Recovery are but faint and ill-grounded. *Fernelius*, in his *Pathologia*, *Lib.* 6. gives us a memorable Inſtance of a Woman, in whom, juſt on the Approach of her Menſes, a Humour congeſted in the lower Part of her Abdomen was ſpontaneouſly diſcharged thro' the Uterus, ſo that in two Days time the whole Swelling ſubſided; and, as it was again formed next Month, it was, at the ſtated time, again totally diſcharged in the ſame manner.

The Cure.

Before the Phyſician attempts the Cure of this Diſorder, he ought carefully to conſider, whether it will admit of a Cure, or is abſolutely incurable. If he ſhould perceive, that it is incurable, he ought rather to decline the Attempt, than hazard his Reputation; or, at leaſt, to ſecure the latter, by making a poſitive and abſolute Prognoſtic, with reſpect to the Fate of the Patient. The moſt genuine Method of Cure conſiſts in purſuing theſe two Intentions: Firſt, to evacuate the ſtagnating Waters, collected in the Cavities of the Body, and between the Skin and Muſcles; and, ſecondly, to remove the Cauſe, by means of which the Waters have been, and are ſtill, daily accumulated. The Evacuation of the Waters ſeems but to contribute very little to the Cure, unleſs the Cauſe, producing the Extravaſation of the Waters, is, at the ſame time, removed; for, when the Cauſe is not taken away, the Waters are ſoon generated afreſh. But, becauſe the Force and Energy of the Medicines, proper for removing the Cauſe of this Diſorder, are much impaired by the Load of Waters; and becauſe the Parts, in which they ſtagnate, are, in Proceſs of Time, injured and corrupted, the Phyſician's principal Care ought to be to free the Body, as much as poſſible, from all Impurities and recrementitious Juices.

For this Purpoſe, unleſs Nature does the Work, either by a copious Diarrhœa, or a Diſcharge of the Water from the Feet, we are carefully to deliberate, whether the End can be commodiouſly, and without Danger, obtained by the Paracenteſis. With reſpect to this, there is a memorable Paſſage, in the 21ſt Chapter of the third Book of *Celſus*, which runs thus: " *Eraſiſtratus* condemned the Method of Cure by the Paracen-
" teſis, becauſe the Water is in vain evacuated; ſince, in con-
" ſequence of the Diſorder of the Liver, it is ſoon generated
" afreſh. But this Diſtemper does not ariſe ſolely from the
" Fault of the Liver; for the Spleen is affected, and the whole
" Habit of the Body bad. Beſides, if the preternatural Col-
" lection of Waters is not evacuated, it proves injurious,
" not only to the Liver, but alſo to the other Parts. 'Tis cer-
" tainly expedient, that the Patient ſhould, if poſſible, be cured;
" tho' this Evacuation does not promote the Cure, but only
" make way for the Operation of Medicines, which was pre-
" vented and fruſtrated by the included Waters. 'Tis alſo cer-
" tain, that all Perſons cannot be cured by this means, but only
" young and robuſt Patients, who are either entirely free from
" a Fever, or, at leaſt, have long and favourable Intermiſſions;
" for thoſe whoſe Stomachs are corrupted, thoſe in whom a
" Redundance of black Bile has produced this Diſorder, or who
" are of a bad Habit of Body, are by no means fit Patients for
" having this Method of Cure tried upon them."

My Opinion, with reſpect to the Paracenteſis, is, that, when in the Beginning of the Diſeaſe, whilſt the Viſcera are as yet ſound, and the Abdomen turgid with an intolerable Load of Water, which frequently happens in a Leucophlegmatia, both with and without an Anaſarca, and when the Waters cannot be ſafely evacuated by Purgatives, then the Operation may be performed, provided the Patient will ſubmit to it, and the Operator obſerve thoſe Cautions laid down by *Brunner*, in the *Miſcell. Nat. Curioſ. Decad.* 2. *An.* 8. for this celebrated Phyſician there directs a Tincture prepared of Myrrh, Aloes, and camphorated Spirit of Wine, to be injected, in order to prevent the Putrefaction of the Serum contained in the Abdomen, which eaſily happens by the Admiſſion of the Air after the Paracenteſis. " Nor, to uſe his own Words, have we any Reaſon to be afraid
" of the Effects of this Preparation in the Abdomen; for it is
" ſo far corrected by the Water lodg'd there, that the Tendons
" and Nerves are not in the leaſt irritated by it; for in a Dog,
" when the Inteſtines have been inflam'd, I have, with Succeſs,
" uſed Spirit of Turpentine, which is ſtill hotter. Nor do I
" doubt, but that if, by any Art or Expedient, this Fermentation
" of the Lymph in the Abdomen, and the Inflammation, could
" be prevented, the Paracenteſis might be had in greater Eſteem,
" and ſuch Effects brought about by it, as have to others ap-
" peared impoſſible; for, after the Evacuation of the Waters in
" the Abdomen, the lymphatic Veſſels, whether corrupted or
" corroded, would be ſooner healed than otherwiſe they are."
This Operation is not only uſed without any Danger, but is in a manner abſolutely neceſſary in a Dropſy of the Peritonæum. In a deſperate Aſcites, I have known it uſed, not in order to produce a Cure, but with a View to prevent Suffocation, and preſerve the Patient a little longer alive. Beſides, in an Anaſarca, I have often ſeen a large Quantity of Water happily evacuated by Scarifications duly made in the Scrotum and Legs. But, in this Caſe, a Gangrene of the Parts is carefully to be guarded againſt.

But when, in an Anaſarca, or a Leucophlegmatia, a large Quantity of Waters may be eaſily evacuated by Medicines, this is to be attempted in the Beginning of the Diſeaſe, eſpecially by pretty ſtrong Purgatives, exhibited in ſufficient Doſes, and ſeconded by a proper Regimen. Let us, therefore, inquire what Medicines have been us'd by Phyſicians, for this Purpoſe. Firſt, then, Elaterium has been highly recommended, not only by the Antients, but, alſo, by the Moderns, as proper for evacuating the Waters. Thus *Dioſcorides*, in *Lib.* 4. *Cap.* 151. tells us, "That Elaterium is highly beneficial to dropſical Patients,
" by evacuating the Waters without Danger, and without
" proving offenſive to the Stomach." *Avicenna*, *Celſus*, *Alexander Maſſarias*, *Jacobus Bontius*, *Hercules Saxonia*, *Johannes Heurnius*, *Gabriel Fallopius de Medicinal. Aquis*, *Reiſner*, and *Henricus ab Heer*, beſtow very high Encomiums upon this Medicine. Among the *Engliſh* Authors, *Liſter* and *Sydenham*, in his *Tractat. de Hydrope*, prefer Elaterium, for this Purpoſe, to all other Purgatives. The latter of theſe Authors uſes the following Words: " Elaterium, exhibited in a ſmall Quantity,
" powerfully contributes to diſcharge the Fæces, and eliminate
" large Quantities of ſerous and aqueous Humours." After Elaterium, Gamboge, about a Century ago, began to be highly celebrated, as proper for evacuating the Waters; and, for this Purpoſe, half a Scruple, or twelve Grains, may be exhibited. Extract of Spurge is, for this End, warmly recommended by *Rulandus*; and the Juices of common Orris, and the middle Bark of Elder, are juſtly eſteem'd efficacious Hydragogues, not only by Phyſicians, but, alſo, by the Vulgar.

As for the Operation of theſe Medicines, it is to be obſerv'd, that by means of their acrid, volatile, and cauſtic Principle, they vellicate the nervous Parts of the Stomach, and, by that means, excite a Vomiting, even in ſound Perſons. But, in dropſical Patients, like Emetics prepar'd of Antimony, they operate rather

rather more by Stool, than Vomit; perhaps, becauſe the nervous Coats of the Stomach and Inteſtines are render'd too flaccid and relax'd by the ſtagnating Water. Hence, at the ſame time, it ſufficiently appears, that the more mild and gentle Purgatives are by no means ſufficient to eliminate, by Stool, the great Load of Waters treaſur'd up in the whole Body; but that ſuch Medicines are requir'd for this Purpoſe, as, by a certain ſubtile and penetrating Salt, ſtimulate the whole Syſtem of the nervous and muſcular Parts, eſpecially the Stomach and Inteſtines, and by that means eliminate large Quantities of Water. The Hydragogues and Emetics, already mention'd, are, of all others, the moſt efficacious, if their Doſes are duly proportion'd to the Vigour or Delicacy of the ſeveral Conſtitutions to whom they are exhibited; for there are numberleſs Inſtances of Perſons cur'd of Dropſies by a large Doſe of a proper Hydragogue, after thirty or more Stools.

Theſe draſtic Purgatives and Emetics may be made up into various Forms, which I have us'd with Succeſs in Practice. Thus,

Take of Elaterium, of the Extract of black Hellebore, of Wormwood, of the leſſer Centaury, and of Mercurius dulcis, each one Dram; of the Extract of Saffron, twelve Grains: Mix together, and, with *Peruvian* Balſam, form into a Maſs, from every half Dram of which prepare twenty Pills to be taken in the Morning.

Or a purgative Infuſion may be prepar'd thus:

Take of the middle Bark of Elder, of Bryony-root, of common Orris, of the fibrous Roots of black Hellebore, of *Alexandrian* Rhubarb, of red Gentian-root, of Swallow-wort, of Lovage, and of freſh Orange-peel, each one Ounce and an half; of the Tops of the leſſer Centaury, four Pugils; of Cloves, three Drams; and of the Tartarus tartariſatus, one Ounce: Infuſe in two Pints of Wine, a ſixth Part of which is to be taken for a Doſe, twice a Week.

Beſides the Purgatives taken by the Mouth, Clyſters are, alſo, of ſingular Efficacy in eliminating the Waters, eſpecially thoſe prepared of the Roots of Aſarum, the middle Bark of Elder, the Roots of common Orris, the Tops of the leſſer Centaury, Elder-flowers, and the Four carminative Seeds, together with Wine and Water, adding a ſufficient Quantity of the Oil of common Chamomile, and two Drams of *Epſom* Salt. Nor in all dropſical Patients is it at all times neceſſary to attempt the Elimination of the Waters by draſtic Medicines; for it is ſometimes more adviſeable to exhibit thoſe of a more mild and gentle Nature, in larger Doſes, which often produce the ſame Effect, with more Eaſe and Safety; for I have often ſeen more than ten Pints of Water diſcharg'd with Eaſe, by drinking, in half an Hour's time, three Ounces of the beſt-Manna, two Drams of Sena-leaves, and the ſame Quantity of Cream of Tartar, diſſolv'd in Spring-water. Among the more ſafe Hydragogues we may, alſo, reckon a Dram or two of the Powder of white Mechoacan, either with or without Cream of Tartar. Rhubarb, whether in Subſtance, or reduced to an Eſſence, with Terra foliata Tartari, is, alſo, juſtly recommended for this Purpoſe. Thus *Adolphus Otto* has, from *Montanus*, given us a memorable Inſtance of a certain Man, who, when his Abdomen, Legs, and whole Body, were ſwell'd to ſuch a Degree, that his Life was deſpair'd of, had the Serum entirely eliminated, and a perfect State of Health reſtor'd, by the continual Uſe of Rhubarb, proceeding from Drams to Ounces of this Medicine.

After a ſufficient Evacuation by Stool, Diuretics of an attenuating Nature, and ſuch as reſolve viſcid Humours, are to be us'd. The moſt conſiderable and efficacious of this Kind are the Salts of medicinal Springs, ſuch as thoſe of *Egra*, the *Caroline*, and *Sedlitz* Waters in *Bohemia*, which, when drank pretty liberally, not only powerfully evacuate the Waters, but are, at the ſame time, poſſeſs'd of an aperient and diuretic Quality. For this Purpoſe, we muſt, alſo, recommend neutral Salts, ſuch as the Tartarus tartariſatus, the Terra foliata Tartari, Sal Polychreſtum, antimoniated Nitre, a Solution of Crabs-eyes prepar'd with Cream of Tartar, volatile Salt of Amber, reduced to a neutral Salt with Oil of Tartar *per Deliquum*, and, eſpecially, purified Nitre, or, which is ſtill more efficacious, Nitre regenerated from a Mixture of Spirit of Nitre and Oil of Tartar *per Deliquium*; all which Medicines are highly efficacious in reſolving Obſtructions of the Viſcera, and opening the urinary Ducts of the Kidneys. But it is to be obſerv'd, that all theſe are to be taken in a large Quantity of Liquor.

Beſides theſe, no leſs conſiderable an Advantage is promiſed from exciting a Diſcharge by Urine with the Salts of Herbs, obtain'd by Incineration, ſuch as the Salts of Wormwood, and Carduus Benedictus, the Salt of Tartar alone, duly calcin'd, the Liquor of fixed Nitre, and the *Liquor Silicum* of *Glauber*; which when exhibited in pretty large Doſes, I have often known to produce wonderful Effects, in removing œdematous Tumors. To this Claſs of Medicines, alſo, belong the ſweet Spirit of Nitre, the Anodyne mineral Liquor, the Clyſſus Antimonii; which liquid Medicines may, with great Succeſs, be exhibited either alone, or in Conjunction with the above-mentioned Salts, according as the State and Circumſtances of the Patient require.

The Vehicle in which theſe Medicines are taken, is, alſo, a Circumſtance of very conſiderable Importance; for the neutral Salts, above-mentioned, prove far more efficacious, if exhibited either in Whey, or the Water of Strawberries, or in *Moſelle* Wine, which is a powerful Diuretic, than in any other Liquor. I have, alſo, to the ſurpriſing Relief of Patients, order'd a Decoction of the Five aperient Roots, the Roots of Eryngo and Reſt-harrow, the Seeds of Carrot and Celery, Juniper-berries, and Winter-cherries; which Decoction may, alſo, be uſed for common Drink.

Sudorifics are by no means proper, when the whole Body abounds with impure and ſordid Juices, and when the ſubcutaneous Emunctories are block'd up and concreted; for dropſical Patients are not, without great Difficulty, diſpos'd to ſweat. And if, by being kept too warm, or by means of volatile Sudorifics, Sweats ſhould be forced, an Inflammation accompanied with a Fever, or a Tranſlation of the Serum to the Heart or Brain, or a Suffocation, or a Lethargy, or an Apoplexy, are juſtly to be dreaded. This Caution ought, alſo, to be carefully obſerv'd with reſpect to the Uſe of Laconic Baths, prepared with Spirit of Wine. But when the Body is freed from the preternatural Load of Humours, both by Purgatives and Diuretics, and when Nature herſelf tends to a freer Perſpiration, and an Evacuation by Sweat, then we are not to uſe the draſtic, but the more mild and gentle Diaphoretics, ſuch as the Mixtura ſimplex, the Mineral Liquor, mix'd with a ſmall Quantity of the Bezoardic Spirit of *Buſſius*, Tincture of Antimony, or Powders of the Ceruſs of Antimony, of Salt of Carduus Benedictus, and of purified Nitre, either alone, or mix'd with Rob of Elder, or dwarf Elder; all which Medicines are highly beneficial, eſpecially when frequently and prudently us'd, or when their Operation is aſſiſted by Fomentations of warm Wine, eſpecially *Hungarian* Wine, applied with Linen Cloths.

In order to render theſe internal Evacuants ſtill more efficacious, we are to ſecond them with external Applications, which are of ſingular Uſe and Advantage in Dropſies; for when a large Quantity of excrementitious Humours are collected in the external Parts under the Skin, and deſtroy the Tone and Strength of the ſolid Parts, common Senſe informs us, that ſuch external Applications, as by their corroborating, balſamic, and reſolvent Quality, not only attenuate the ſtagnant Humours, and render them fit for being received into the Pores of the Veſſels; but, alſo, reſiſt Putrefaction, and reſtore the Strength and Tone of the relaxed Parts, muſt neceſſarily contribute very much to the Elimination of theſe Humours through proper Emunctories; and I, myſelf, have often known more happy Effects produc'd, and in an eaſier manner, by theſe external Applications, than by internal Remedies. The Subſtances moſt proper for anſwering this Intention are, the Roots of Lovage, Orris, Squills, and Sow-bread; the Leaves of dwarf Elder, the Herbs Germander, Carduus Benedictus, and Wormwood; the Flowers of Roman and common Chamomile, together with thoſe of Elder, Bay, and Juniper-berries; together with the Seeds of Caraway and Cumin. Of theſe Sacks, or Epithems, may be prepar'd, and after being immers'd in Wine, Wine-vinegar, or boil'd in Lime-water, apply'd warm to the Abdomen, Legs, and Scrotum, and renewed when they become cold. Theſe Epithems are, in my Opinion, far more proper than external Applications in other Forms, ſuch as Plaiſters and Ointments.

Though theſe Remedies, both of the internal and external Kind, are of great Efficacy in removing a Dropſy, yet they do not abſolutely complete the Cure, ſince, for that Purpoſe, the Cauſes muſt be removed, and the future Generation of the Waters prevented. To theſe Evacuants we muſt, therefore, join Corroboratives, ſince the impair'd Tone, and weaken'd ſyſtaltic Force, both of the Viſcera and Veſſels, are the principal Cauſes of the ſlow and languid Circulation of the Blood and Lymph, and conſequently of the Stagnation. Corroboratives, therefore, are, of all other Medicines, the moſt efficacious, both for preventing this Diſorder, and Relapſes into it. For anſwering this Intention we recommend the Roots of Burnet, Swallow-wort, Arum, and Zedoary; the Extracts of Wormwood, red Gentian, Carduus Benedictus, Germander, and the leſſer Centaury; as alſo Peruvian Bark, Caſcarilla, and Caper-bark, Myrrh, Amber, and Cinnamon. Of theſe an Eſſence, or Elixir, are to be prepar'd, with ſome thin Menſtruum, and *Hungarian* Wine, which may be exhibited according to the State of the Patient, with ſome chalybeated Liquor, ſuch as the Tinctura Mortis Zwelfferi, and continued for a due time, in proper Doſes; for this Medicine not only ſtrengthens the Stomach and Inteſtines, but alſo the Viſcera ſubſervient to Chylification and Sanguification, ſuch as the Liver, Lungs, and Spleen. It alſo ſucceſsfully promotes the ſalutary Excretions, if they ſhould happen to be either obſtructed or ſuppreſs'd.

It is a Queſtion of great Importance, whether Veneſection is proper in dropſical Caſes. Though this Evacuation may poſſibly ſeem improper, becauſe the Body is rather filled with Serum, than Blood; and the ſolid Parts are entirely deprived of their Vigour and Strength; and though Authors, eſpecially thoſe of a latter Date, ſcarcely mention Veneſection, as beneficial in the Cure of this Diſorder; there are, however, in the Works of the antient Phyſicians, many Paſſages where Veneſection is highly extol'd in the Cure of a Dropſy. Thus *Hippocrates*, in his Treatiſe *de Diæta in Acutis*, expreſſes himſelf in this manner: "If a dropſical Patient is afflicted with a Difficulty of Breathing, if this "ſhould happen in the Spring, and if the Perſon is young and "robuſt, a proper Quantity of Blood muſt be taken from his "Arm." And the learned *Jacobus Sponius*, in his *Aphoriſm. Nov. Sect.* 5. §. 87. ſubjoins a very memorable Obſervation in the following Words: "I have often ſeen, ſays he, a Dropſy "cured by Veneſection, which was rather increaſed, than re"mov'd and abated, by Hydragogues and Diuretics, of what"ever Kind." With reſpect to this important Affair, *Alexander Trallian* thus gives his Sentiments: "'Tis ſometimes neceſ"ſary to cure an Anaſarca by Veneſection. If not only the "Liver, but alſo the Stomach and Spleen, have contracted a "Swelling and Hardneſs, Evacuations of Blood, in ſmall Quan"tities, and at different Times, may be boldly uſed, eſpecially "if a ſufficient Degree of Strength does not contra-indicate it, "if a large Quantity of Blood is perceptible in the Veins, if "the Patient is in the Flower of his Youth, and the Seaſon "of the Year not very cold." *Paulus Ægineta*, in the forty-eighth Chapter of his third Book, confirms this Doctrine, but with certain Conditions, thus: "In the Cure of an "Anaſarca we begin with Veneſection, eſpecially if the Diſ"order has deriv'd its Origin from a Suppreſſion of the Hæ"morrhoids, or Menſes." My own Experience, in a great many Inſtances, has taught me, that in a Leucophlegmatia and Anaſarca, if the Patient is plethoric, and if the Diſorders have principally drawn their Origin from a ſanguineous Aſthma, Veneſection contributes not a little to the Cure: But, in an Aſcites and Tympanitis, I deny that Veneſection can be uſed without Danger; and *Trallian*, towards the End of the above-mention'd Paſſage, abſolutely excludes Phlebotomy in an Aſcites and Tympanitis.

As in a Leucophlegmatia and Anaſarca, in order to evacuate the ſerous Colluvies, a draſtic Purgative, exhibited in a pretty large Doſe, is ſometimes neceſſary; ſo, in an Aſcites, nothing is more dangerous than draſtic Medicines, ſince by their means I have often known a Sphacelus and fatal Inflammation of the Inteſtines ſuddenly brought on, as was obvious upon diſſecting the Perſons after Death: But, with reſpect to ſtrong Purgatives, I muſt obſerve, that they are beneficial in the Beginning of the Diſeaſe, ſo long as there is a ſufficient Degree of Strength; and that they ought not to be uſed too often, but at the Diſtance of ſix or ſeven Days from each other, whilſt the Patient's Strength is, in the mean time, to be ſupported by ſuch Medicines and Aliments, as afford a laudable Juice. But 'tis ſometimes more expedient to abſtain from theſe draſtic Medicines, ſuch as Gamboge, Elaterium, Coloquintida, and Hellebore, which are of a kind of colliquative and injurious Quality, which a naturally weak and delicate Stomach cannot bear; and, in their ſtead, rather to uſe Purgatives, mixed with Emetics, which either in the Form of Pills, or an Infuſion, produce the ſame happy Effect, in a far more ſafe and eaſy manner.

As Perſons labouring under a ſcorbutic Dyſcracy of the Humours are highly ſubject to Dropſies, they are to uſe ſuch antiſcorbutic Medicines as are thought to be poſſeſs'd of a ſpecific Virtue againſt the Dropſy, ſuch as the Roots of wild Horſe-radiſh, the Juices of Water-creſſes, and Garden-creſſes, as alſo of Scurvy-graſs, eſpecially if drank liberally and frequently, either with Whey, or a Decoction of red Beets; for I have often known poor People entirely cured of Dropſies by theſe ſimple Medicines, after having daily diſcharged, by their means, an incredible Quantity of Serum by the urinary Paſſages.

The Powder and Vinegar of Squills were, by the Antients, ſuch as *Galen*, *Cœlius Aurelianus*, *Celſus*, and others, highly eſteem'd for the Cure of this Diſorder, eſpecially when accompanied with an Aſthma, ſo violent as to threaten a Suffocation. And I can, from my own Experience, affirm, that I have known many receive unexpected, and almoſt incredible, Relief from theſe Medicines; for the penetrating and acrid Salt of this Root, inſinuating itſelf into the Coats of the Stomach, and other nervous Parts, ſtimulates them to a new Vigour, and briſker Motion, by which means the Circulation of the Blood is greatly aſſiſted. As for the Doſe, ſix or eight Grains may be mixed with the ſame Quantity of the Roots of Burnet, or Arum, and with the Addition of a few Grains of Nitre, exhibited in a warm Vehicle.

In a Tympanitis the Uſe of Clyſters, prepar'd of carminative Ingredients, is highly beneficial and efficacious. I have, alſo, obſerv'd, that in this Diſorder, purgative mixed with anodyne Pills, ſuch as the Pilulæ Starkii, the Pilulæ Wildeganſii, and thoſe prepar'd of the Extract of black Hellebore, Mercurius dulcis, Sagapenum, Opopanax, and Aſafœtida, have produced very ſalutary and happy Effects. Beſides theſe, ſome Relief is afforded by an external Anointing of the Abdomen, continued for ſome Days, with the Oleum Philoſophorum, or the Oil of Camphire prepar'd with Oil of ſweet Almonds.

In an Aſcites, when the Viſcera are much affected, and few Hopes of Recovery left, gentle Laxatives and Corroboratives are only to be uſed. This End is anſwered by the Pilulæ Polychreſtæ, prepared according to the Directions of *Becher*, interpoſing between each Doſe of them, a Doſe of the aperient Salts. By this Method, unleſs the Caſe is abſolutely deſperate, the miſerable Patients are either cured, or at leaſt preſerved longer alive: But theſe Medicines promiſe more happy Effects, and afford greater Relief, in an Anaſarca.

It ſometimes happens, that dropſical Patients loſe large Quantities of Blood, by Hæmorrhages either from the hæmorrhoidal Veins, or the Noſe, and Women by the menſtrual Diſcharge, not without a very conſiderable Danger, and Loſs of Strength; in which Caſe nothing is more abſurd and fooliſh, than the Uſe of Narcotics, in order to ſuppreſs theſe Hæmorrhages, ſuch as the Pilulæ de Cynogloſſo, or any other Medicines of a ſtyptic Quality; for by their means the Obſtructions of the Viſcera, which produce the Defluxions, are increaſed, and the Strength conſequently impaired.

Sometimes a Dropſy ſucceeds an ill-managed Salivation; in which Caſe the Diſorder is to be treated with Decoctions prepared of Guaiacum, Saſſafras, Root of the ſharp-pointed Dock, Oak-wood, Quick-ſilver, and Antimony, tied up in a Bag.

When the Scrotum, either in conſequence of an Hydrocele, or a Defluxion of Humours from the Abdomen, becomes ſo turgid as to render lying in Bed, and Motion of any Kind, highly uneaſy, many recommend the Operation of the Paracenteſis; which, however, is ſo little beneficial, that it often produces terrible Diſadvantages, and cannot be performed without endangering a ſucceeding Sphacelus. And as the Humour, contained within the Membranes of the Teſticles, is conſiderably viſcid, the Diſcharge is, of conſequence, generally ſmall. In ſuch a Caſe, 'tis, therefore, more expedient to attempt the Cure by diſcutient Cataplaſms, which often diſperſe the Humour, and afford great Relief to the Patient.

When Nature, the ſovereign and moſt skilful Phyſician, opens the Pores of the Skin, either in the Legs or Abdomen, thro' which large Quantities of Serum are continually diſcharged, and the Patient greatly relieved, we are carefully to endeavour to prevent Corruption; which End may be obtained by the Epithems above recommended frequently applied. Nature, in the mean time, is to be aſſiſted, the Corruption of the internal Parts prevented, and the Strength ſupported, by corroborative and balſamic Elixirs exhibited internally.

Hippocrates, in the fourth Book of his *Epidemics*, propoſes the following Method of curing a Dropſy: "A Perſon, ſays he, "labouring under a Dropſy, ought to fatigue himſelf by Exer"ciſe, to ſweat, to eat Bread, to drink little, and that of White"wine; to ſleep very moderately, and to uſe Purgatives; by "which means the Water and Phlegm are evacuated." This Method of Cure is principally proper in a Leucophlegmatia; to which thoſe are highly ſubject, who have previouſly been afflicted with chronical Diſorders, and violent Hæmorrhages; or who eat and drink exceſſively. For Patients of this kind *Hippocrates* recommends Exerciſe, in order to promote Perſpiration; as, alſo, Sweating, in order to carry off a Part of the redundant Serum; and the Eating of Bread, which does not generate a ſerous, but a ſufficiently laudable Chyle. 'Tis, alſo, proper to abſtain from large Quantities of Liquor, both becauſe the Dropſy naturally increaſes, and the Thirſt is not extinguiſhed, unleſs the Cauſe of the Diſorder is previouſly removed; and becauſe, in conſequence of the Heat augmented by Thirſt, the ſuperfluous Moiſture is diſſipated. There are, alſo, frequent Inſtances of Dropſies entirely cured by abſtaining from Drink for a whole Year. White-wine provokes Urine, and Sleep increaſes the Waters; but Hydragogues are, in this Diſorder, the moſt effectual Means of Relief, becauſe they carry off the ſuperfluous Moiſture.

As œdematous Tumors, which are, as it were, the Beginning of a Dropſy, are eaſily generated by Flatulences of the Primæ Viæ, eſpecially in hypochondriac Patients, 'tis, in this Caſe, expedient not to uſe Purgatives, but Clyſters prepared of carminative and coroborating Ingredients; ſuch as Bay and Juniper-berries, Rue, Marjoram, Leaves of dwarf Elder, Flowers of Roman and common Chamomile, and the Four carminative Seeds, boil'd either in Water or Milk, with an Addition of a ſufficient Quantity of the Oil of Dill and Chamomile. This Piece of Practice I have, alſo, uſed with great Succeſs, in Caſes where the gouty Matter, being either repel'd or retain'd, has produced Spaſms and Flatulences of the Inteſtines, and threaten'd an approaching Dropſy.

Women are far more ſubject to Dropſies than Men, eſpecially if the menſtrual Diſcharge is either defective, or ſuppreſſed, or abſolutely ceaſes for ſome time. But this Misfortune principally happens to thoſe Women who lead a ſeden-

ſedentary Life, indulge themſelves in Eaſe and Sleep, or have been long afflicted with exceſſive Care and Grief. In this Caſe, Veneſection, Exerciſe, Traveiling, and Change of Air, contribute greatly both to the Prevention and Cure of the Diſorder. If theſe ſhould prove ineffectual, Mineral Waters are to be uſed, both internally and externally. Theſe are, alſo, highly efficacious in recalling the hæmorrhoidal Diſcharges when ſuppreſſed.

The Cure of œdematous Swellings of the Feet ought to be very cautiouſly manag'd; ſince there are many Inſtances of fatal Misfortunes produced by prepoſterous Meaſures taken for this Purpoſe. Thus, for Inſtance, if they are treated with Aſtringents and Cataplaſms, the Swellings indeed ſubſide, but the Serum is tranſlated to more noble Parts; and, when conveyed to the Lungs, produces a ſuffocative and fatal Catarrh. 'Tis, therefore, far more ſafe to cheriſh theſe Swellings with warm Cloths, or Bags full of hot Sand, or Bran, in order to keep up a continual Perſpiration. 'Tis, alſo, expedient to uſe broad Swaths, beginning at the inferior, and continuing them to the ſuperior Part of the Swelling. Some order Scarification, or, with *Celſus*, a deep Inciſion; for, ſays this Author, "An Inciſion is to be made in the "internal Part of the Leg, about four Fingers-breadth, above "the Ankle; that the Humour may be copiouſly diſcharged "for ſeveral Days: Inciſions muſt, alſo, be made in other Parts of "the Swelling." But this Method ought to be very cautiouſly uſed, and never attempted in an Aſcites, or in Caſes where there is a ſcorbutic Dyſcraſy of the Humours; for a Sphacelus is eaſily brought on by this means; and the Inciſions, in conſequence of the Laxity of the Fleſh, and the Afflux of the Humours, cannot be conſolidated without the greateſt Difficulty.

That we may the better aſcertain ourſelves, with reſpect to the Event of this Diſorder, we muſt have a due Regard to that beautiful Maxim of *Celſus*, compriſed in the following Words: "'Tis expedient to meaſure the Abdomen daily with a Thread, "which is to have the Circumference of the Body marked upon "it; and next Day we are to obſerve, whether the Body is "groſſer or ſmaller; for, when it becomes leſs, 'tis a Sign that "the Medicines operate duly. 'Tis, alſo, expedient to meaſure "the Drink and Urine of the Patient; for 'tis a hopeful Sign, of "Recovery, when more is diſcharged by Urine, than is drank." *Frederic Hoffman.*

The celebrated *Boerhaave* gives the following Account of Dropſies.

When an extravaſated aqueous Serum, received into the Cavities of the Body, or becoming ſtagnant any-where, preternaturally diſtends the Veſſels, the Diſorder is call'd a Dropſy.

This Diſeaſe may, therefore, happen, in whatever Part the Veſſels deſtin'd for the Conveyance of the Serum are found; that is, either in the whole Habit of the Body, or in any particular Part thereof.

Thus an *Hydrocephalus* may ariſe from a ſordid Collection of Water, either between the external Integuments of the Head; between theſe and the Cranium; between the Cranium and the Membranes of the Brain; between theſe Membranes and their Duplicatures; between theſe Duplicatures and the Brain; between the Foldings of the Brain; and, laſtly, in its Cavities, but yet without producing immediate Death.

This Diſorder is eaſily known, but the laſt-mentioned Species of it is incurable; whereas the others are either to be cured by gentle Cauterizing, Terebration, or Puncture, prudently and cautiouſly practis'd; exhibiting, at the ſame time, Hydragogues and Corroboratives, internally; or they are to be removed by the external Application of Diſcutients.

In a Dropſy of the Thorax, in which the Lymph may be collected from various Parts, the Symptoms are almoſt the ſame with thoſe of an *Empyema*. But a due Attention to the antecedent Cauſes of each Diſorder diſcovers the Differences between them. This is to be cured by the Operation for the Empyema, together with the due Uſe of ſuch Medicines as are oppoſite to its Cauſe.

In a Dropſy of the Thorax, ſometimes Hydatides, and ſometimes dropſical Abſceſſes, are found form'd in the Lungs, by an Accumulation of the Lymph diſcharg'd from the Veſſels, and received into the large Sinuſes. This Species of the Diſorder is equally difficult to be known and cured; unleſs, perhaps, the Meaſures taken to remove other preſent Symptoms, ſhould, at the ſame time, fortuitouſly produce a Cure of this Species of Dropſy.

When, by whatever Cauſe, Lymph is collected, and becomes ſtagnant, in the anterior, and moſt conſpicuous Part of the Aſpera Arteria, a Species of *Bronchocele* often appears. But Authors inform us, that, if this Diſorder is carefully adverted to, it is eaſily known, and moſt ſucceſsfully cured by Puncture, Diſcutients, and ſuch Things as derive the Humours from the Parts affected.

The Follicule of any Gland may be ſubjected to the like Misfortune, and the Diſorder removed by the like Means.

A remarkable Species of Dropſy ſometimes affects the *Ovaria* of Women, but moſt frequently of thoſe who are barren and ſuperannuated. This Diſorder is of ſo latent a Nature, that it is hardly to be known, till the Body of the Patient is laid open. It is never capable of being cured, but frequently changes into an Aſcites.

In the Cavity of the Uterus, when its internal Orifice is cloſed up, there is often ſo large a Quantity of Water collected, that the whole Abdomen appears as if the Patient labour'd under an *Aſcites*. This Species of Diſorder is, in like manner, not to be known, without the greateſt Difficulty, by reaſon of the fallacious Signs of Pregnancy, with which it is attended. It is to be cured by a Relaxation of the Orifice of the Uterus, by means of Fomentations, Vapours, and the due Uſe of uterine Medicines.

When, thro' the whole ſubcutaneous Fat, this Lymph either becomes ſtagnant, or is effuſed, that Species of Dropſy which is called Anaſarca, Hypoſarca, and Leucophlegmatia, is produced; which ſometimes affects the Parts about the Abdomen, and thoſe about the Scrotum.

When this Water is collected either in the Duplicature of the *Peritonæum*, in the Cavity of the *Abdomen*, between the *Peritonæum* and abdominal Viſcera, in the dilated Cavities of the Glands, or in the Veſſels contained in the Abdomen, the Diſorder is call'd *Aſcites*; as alſo *Tympanitis*, when the Abdomen is turgid with rarefied Vapours, ariſing either from Water, Pus, Ichor, or Air pent up there, and putrefied by the Heat.

A Dropſy of the Teſticles is, firſt, either that of the Scrotum, which is known by the Touch, the conſpicuous Pellucidity of the Parts, and the remaining of an Impreſſion made by the Finger; or, ſecondly, of the Bag, formed by the Production of the Peritonæum in a legitimate *Hernia*. This Species of the Diſorder happens in a violent *Aſcites*, and may be diſtinguiſh'd by the preceding Signs of an *Aſcites*, or a *Tympanitis*; by its Diſappearance, upon its being preſſed, upon the Patient's lying on his Back, with his Head and Body lower than the other Parts, and upon the Evacuation of the Water from the Abdomen; by the ſudden Increaſe and Decreaſe of the Diſorder, without any manifeſt Cauſes; and, laſtly, by the Tumor running out from the Scrotum to the Groin, in the Form of a Hog's-pudding. And, thirdly, a Dropſy of the *Tunica Vaginalis* of the Teſticles happens, when the Humours, there ſecreted, are not reabſorbed by their proper Veſſels, but, becoming ſtagnant, are accumulated and frequently diſtend the Coat in which they are contained, to an enormous Size; or, if in conſequence of a Rupture, or Obſtructions of the Veſſels, the Humours ſhould be there collected: An Inflammation, Suppuration, and Collection of Ichor, often produce a Diſorder, which has much the ſame Appearance with this Species of Dropſy; this ſort of Dropſy is to be known and diſtinguiſhed by the want of Elaſticity in the Tumor, its Reſiſtance, its Hardneſs, and the Slowneſs of its Production; as, alſo, by the Abſence of thoſe Symptoms which attend the firſt and ſecond Species of Dropſies of the Teſticles; by the round, or, at leaſt, the oval Figure of the Tumor; by the apparent Pellucidity, when, upon ſtraitening the Scrotum, the Bag of collected Matter, expoſed to a lighted Candle, appears clear and tranſparent. But if, beſides theſe, there ſhould be ſuch a Tumor between the nervous Coat and the Subſtance of the Teſticle, or even in the Subſtance of the Teſticle, the Diſorder can hardly be ſo accurately inſpected, as that it may be eaſily diſtinguiſhed from the preceding Species, nor perhaps is there any other Cure for it than Extirpation. The Diſorders of this Kind are called Hydroceles. *See* HERNIA.

All the Diſorders of this Kind are produced, firſt, by every Cauſe which is capable of ſo confining the Serum, that it cannot return into the Veins, but ſtagnates in the diſtended Veſſels: Or, ſecondly, by every Cauſe which ſo ruptures the Veſſels, that the Serum is diſcharged within the ſlender Membranes: Or, thirdly, by every Cauſe which ſo obſtructs the Veſſels which convey the Fluids from the Cavities, or ſo little moves the Humours contained in them, that they are neither exhaled nor reabſorbed.

The Cauſes of this Kind are principally obſerv'd to be an hereditary and natural Diſpoſition; the ſudden drinking of too large Quantities of cold Liquors, which are neither diſcharged by Vomit, Stool, Sweat, nor Urine, excited by Heat or Motion; acute Diſeaſes, either accompanied with an inſatiable Thirſt, and exceſſive Drinking, or without theſe Circumſtances; a lienteric Dyſentery long protracted; all obſtinate Obſtructions of the Viſcera, ſuch as Scirrhuſes of the Liver, Spleen, Pancreas, Meſentery, Kidneys, Uterus, and Inteſtines; the Jaundice, violent and long protracted quartan Fevers; Lienteries; Diarrhœas, Dyſenteries of long ſtanding; the Cœliac Paſſion; Empyemas; a Spitting of Blood; the Gout; exceſſive Evacuations of any Kind, and eſpecially of the arterial Blood; drinking of acrid and fermented Liquors; viſcid Aliments, and ſuch as are of difficult Digeſtion; a conſiderable Number of large Hydatides, hanging pendulous in the Cavity of the Abdomen; and many other Diſorders of a ſimilar Nature, ſuch as Melancholy, the Scurvy, and ſome others.

The Effects and Progreſs of this Diſeaſe are generally as follows: The Feet become tumid, eſpecially towards the Evening; and this Tumor is gradually increaſed and augmented; then a daily

daily increaſing Tumor appears in the Abdomen. In a *Tympanitis* the diſtended Abdomen ſounds, when ſtruck; in an Aſcites, when the Water flows freely in the Cavity of the Abdomen, the Noiſe of fluctuating Water is heard, upon moving the Body. But in that Species of *Aſcites*, where the Waters are included in their proper Veſicles, this Symptom does not always happen, and conſequently is not to be depended on. Add to theſe a Difficulty of breathing, Thirſt, a Senſation of Weight, Torpor, Coſtiveneſs; a ſmall Diſcharge of Urine, a ſlow Fever, no Evacuation by Sweat, a Degree of Leanneſs and Extenuation in the general Habit, proportion'd to the Largeneſs of the Tumor, in the particular Part affected: Then appears an *Anaſarca* of the Thighs, *Scrotum*, and abdominal Skin; Hydatides; an Acrimony of the Water become ſtagnant and putrefied, in conſequence of the Heat and Cloſeneſs of the Part in which it is confined; Ulcers, Gangrenes, Hæmorrhages from the Noſe, an Exomphalus, a Sphacelus of the Viſcera, and, at laſt, the Death of the Patient.

In the Cure of a Dropſy, the following Intentions are to be purſued:

Firſt, To procure a due Fluidity and Motion to the Lymph, whether it is Water or Serum, of the bilious, ichorous, or bloody Kind.

Secondly, To evacuate the Waters already diſcharged into the Cavities of the Body.

Thirdly, To remove the Weakneſs of the Viſcera, whether this Weakneſs is the Cauſe, or the Effect, of the Dropſy.

The Fluidity of the Lymph is procured, by removing thoſe Cauſes which prevent ſuch a Fluidity; which are, firſt, The too languid Force of the vital Powers ſubſervient to Circulation. Secondly, The Compreſſion, Rupture, or Obſtruction, of the Veſſels. And, thirdly, The exceſſive and preternatural Viſcidity of the Fluids.

With reſpect to the too languid Force of the vital Powers ſubſervient to Circulation; this is moſt commodiouſly remov'd by, what we call, Cardiacs, Corroboratives, and Medicines of a ſtimulating Quality; which, if the Patient is not afflicted with a violent Thirſt, are to conſiſt of aromatic, ſaline, oleous, and hot Subſtances; which may be eaſily prepar'd, in the various Forms of Electuaries, Mixtures, medicated Wines, medicated Ales, Pills, Decoctions, Syrups, or Lozenges. Thus, for Inſtance,

Take of the Roots of Maſterwort, both Species of Birthwort, Zedoary, and Mountain Hartwort, each one Ounce; of Ginger, ſix Drams; of the Flowers of the leſſer Centaury, two Ounces; of Roſemary-flowers, one Ounce; of Hedge-hyſſop, four Drams; of Elder and Juniper-berries, each half an Ounce; of Thyme, Mother of Thyme, and *Syrian* Marum, each one Ounce; of the Seeds of Wormwood, Tanſey, and Wormſeed, each one Ounce: Reduce all to a fine Powder; then take of this Powder, ſix Ounces; and of pure *French* Wine, four Pints: Make into a medicated Wine, of which let the Patient take two Ounces, four times a Day, upon an empty Stomach, uſing, at the ſame time, a proper Regimen.

Or,

Take of the above preſcribed Powder, two Ounces; Conſerve of Roſemary-flowers, one Ounce; and of *Fernelius's* Syrup of Mugwort, a ſufficient Quantity for making a Conſerve, of which half a Dram is to be taken every fourth Hour.

Or,

Take of the preceding Powder, twelve Ounces; and of ſtrong Ale, a proper Quantity: Make into a medicated Ale, for common Uſe.

Or,

Take of the ſame Powder, four Drams; and of the beſt White-wine, eight Ounces: Make into an Infuſion, of which let the Patient drink one Ounce every two Hours.

This Intention is, alſo, anſwer'd by Elixir Proprietatis, volatile, oleous, and aromatic Salts; volatile, acrid, and oleous Spirits, of the aromatic, cephalic, and ſtomachic Kind; as, alſo, thoſe appropriated to Diſorders of the Uterus.

If the Thirſt is intenſe, the Cauſe of a hot Kind, and the Diſorder accompanied with a hot Fever, which frequently happens, the Thirſt is remov'd by refreſhing Cardiacs, grateful Acids, and Liquors gently aromatic. Thus, for Inſtance,

Take of the diſtilled Oils of Cinnamon, Citron and Orange-peel, each three Drops; of the Oils of Lavender-flowers, and of Juniper, each two Drops; and of Sugar, ſix Drams: Make an Elæoſaccharum, with which mix of the Robs of Elder and Juniper, each three Ounces; of the Spirit of Salt, one Dram; of the diſtil'd Waters of Cinnamon, Citron, and Orange-peel, each two Ounces; and of the diſtil'd Water of Mint, ten Ounces: Of this Preparation let the Patient take one Ounce every two Hours.

Or,

Take of the Juices expreſſed from the cut and recent Herbs of Fumitory, Succory, Dandelion, and Sorrel, each one Pint; and of Cream of Tartar, half a Pound. Over a gentle Fire, boil, to a Conſumption of Half; then, with every ten Ounces of this Decoction, when depurated, mix ten Ounces of Elder-rob: And, of this Preparation, let the Patient take half an Ounce every two Hours.

Or,

Take of dulcified Spirit of Nitre, four Drams; of the Spirit of Scurvy-graſs, ſix Drams; of the Syrup of Succory, with Rhubarb, and the Syrup of the Five aperient Roots, each one Ounce; and of *Rheniſh* Wine, one Pint: Mix all together, and of this Preparation let the Patient take an Ounce every two Hours.

In both Caſes, Frictions, Motion, and Heat, are proper.

When the Veſſels are compreſſed, ruptured, or obſtructed, the Cauſe producing ſuch Effects is to be inveſtigated, and, if poſſible, remov'd; or this Cauſe may be often corrected by Mineral Waters.

The exceſſive Viſcidity of the Fluids may be remov'd, either in a hot or cold Dropſy; firſt, By the Medicines already preſcribed: Secondly, By alcaline Subſtances, eſpecially Salts, both of the volatile, and, principally, of the fixed Kind; and, thirdly, By chymical Preparations of Mercury, Antimony, and Copper, duly prepar'd, and judiciouſly exhibited: Thus, for Inſtance,

Take of Turpeth Mineral, half a Grain; and of white Ginger, ten Grains: Make into a Powder, to be taken every other Morning, in the Pulp of a roaſted Apple.

Or,

Take of red precipitate Mercury, one Grain; and of Nutmeg, ſix Grains: To be made into a Powder, for the ſame Intentions with the former.

Or,

Take of Mercurius ſublimatus dulcis, ſeven Grains; and of Winter's Cinnamon, eight Grains: Reduce to a Powder, to be applied to the ſame Uſes with the former.

Or,

Take of emetic Tartar, half a Grain; and of an Elæoſaccarum of the Oil of Citrons, ſix Grains: Make into a Powder, to be taken every third Day.

Or,

Take of the mild Emetic, prepar'd by Detonation, from Antimony, two Parts, and Nitre, five Parts, four Grains: Reduce to a Powder, to be taken every Morning.

Or,

Take of the Filings of Copper, ten Grains; and of Sal volatile Oleoſum, ſix Drams: Make into a Tincture, of which let the Patient take twelve Drops, three times a Day, on an empty Stomach, with half an Ounce of the Syrup of the Five aperient Roots.

The Waters, collected in the Cavities of the Body, are to be evacuated, firſt, By the *Paracenteſis*: Secondly, By procuring new Outlets for it: Thirdly, By Urine: Fourthly, By Vomit: Fifthly, By Purging: And, ſixthly, By Diſſipation.

If the Cauſe of that Species of Dropſy, called *Aſcites*, is recent, and the Diſeaſe ſuddenly produc'd, by ſome external Cauſe; and if the Strength is entire, the Patient young, the Viſcera in good Order, and not injured by any other Diſeaſe, and the Water not putrid by its long Stagnation in thoſe Parts, the Operation of the *Paracenteſis* is forthwith to be perform'd.

This Operation is to be perform'd three Inches below the Navel, and as many from the Linea alba: But this Meaſure is to be eſtimated, as if the Body was ſound, and the Abdomen not diſtended. The Operation is to be perform'd in the Side oppoſite to the Source of the Dropſy, by making a Puncture, with a proper Inſtrument, lodged in a *Cannula*, and again drawn out of it: From this Cannula a ſmall Quantity of Water is to be evacuated, twice a Day, for, at leaſt, fifteen Days, uſing, at the ſame time, the Medicines already preſcrib'd: Or, according to a later Method, the Abdomen is, by means of Swaths, to be compreſſed, in proportion to the Quantity of Water evacuated, leſt the lax and pendulous Veſſels and Viſcera ſhould, after the Evacuations, fluctuate in the empty Abdomen.

If the Conditions, enumerated in the preceding Paragraph, are wanting, or if the State of the Patient is quite oppoſite, the *Paracenteſis* accelerates his Death.

Outlets made by the actual Cautery, Cauſtics, Veſicatories, Lancets, and Setons, in a fleſhy, but dependent Part, are highly beneficial; eſpecially if the Nature of the Diſeaſe admits of their being kept open.

Theſe Operations only take place when the Water is contain'd in the Cellular Membrane, without being effuſed into the Abdomen; and then, if the Viſcera are ſound, we may follow the Example of *Hippocrates*, and the *Egyptians*, and of the modern *Chineſe*, and apply an actual Cautery below the Knee, and then mollify the Eſchar with Butter, that it may fall off, and give Vent to the Water. *V. Proſper Alpinus de Med. Ægypt.*

As the Cellular Membrane, all over the Body, communicates, this Practice ſeems to be very rational. Care, however, muſt be taken to prevent a Mortification, by proper Bandages to the ſubſiding Parts; warm, aromatic, and lixivious Fomentations, and Dreſſings of warm Balſams applied to the Ulcer, or Emiſſary: And this muſt be done, when an artificial Emiſſary is made by any means whatever.

As there are many Inſtances of the Evacuation of the Waters by Urine, we are, when we diſcover ſuch a Tendency in Nature, to attempt this Method, by the Uſe of ſpecific, urinous, fixed, and compound Salts, animal Salts, vitriolated Salts, diſſolved Metals, and Specifics for Diſorders of the Kidneys.

Since, by Vomits, the viſcid Humours are reſolved, the obſtructing Matter ſhaken, and the ſtagnant Fluids expelled; they are, therefore, ſingularly beneficial in this Diſorder.

But the Vomits, for this Purpoſe, muſt be draſtic, frequently repeated, and exhibited at ſmall Intervals of Time: Thus, for Inſtance,

Take of the common emetic Wine, two Ounces and an half for a Doſe.

Of emetic Tartar, ſix Grains for a Doſe.

Of Turpeth Mineral, ſeven Grains for a Doſe.

Of the recent Juice expreſſed from the middle Bark of Elder, one Ounce; and of the Syrup of Violets, half an Ounce; for a Doſe.

Of the Leaves of the *Soldanella Marina*, one Ounce for a Doſe.

Of Elaterium, four Grains; and of the cathartic Syrup of Buckthorn-berries, one Ounce: To be made up for a Doſe.

Theſe Medicines are not only emetic, but, alſo, generally purge pretty briskly; and ſometimes promote a *Diureſis*.

The Evacuation of the Serum by Stool is obtain'd by the liberal and frequently repeated Uſe of draſtic Purgatives, exhibited in various, but, eſpecially, in liquid Forms: Thus, for Inſtance,

Take of the Reſins of Jalap and Scammony, each one Dram; of the Powder of Sena-leaves, and the bruiſed Seeds of baſtard Saffron, each four Drams; and of rectified Spirit of Wine, one Pint: Make a Tincture; with which mix four Ounces of the ſolutive Syrup of Roſes, with Sena: Of this let the Patient take one Ounce in the Morning.

Or,

Take of the cathartic Silver of *Boyle*, and of Crums of Bread, each four Grains: Mix up into a Maſs, of which make Pills, conſiſting of two Grains each: Of theſe let the Patient take one, every Half-hour, till the Purging begins.

The Waters are diſſipated by the Heat either of a Fire, a Stove, Sand, the Sun, Salt, or Dung; ſince, by means of theſe, a *Diaphoreſis*, or a Sweat, are excited.

But the Waters are, in a particular manner, diſſipated by a rigid Abſtinence from Drink, and eating Biſcuit with a little Salt, and a very ſmall Quantity of oleous Wine.

The Weakneſs of the Viſcera is to be remov'd by chalybeate Preparations, Steel in Subſtance, and Corroboratives of a gently aſtringent Quality, exhibited in due Doſes, and at proper Times; as, alſo, by dry Aliments, Exerciſe, and Wine which is ſtrong, old, and aſtringent: Thus, for Inſtance,

Take of the recent Filings of Steel, before they are ruſted, two Ounces; of *Peruvian* Bark, and *Winter's* Bark, each two Ounces; of dried Rhubarb, half an Ounce; and of the beſt *Rheniſh* Wine, two Pints: Make into a medicated Wine, of which the Patient is to take two Ounces, thrice a Day, upon an empty Stomach.

A *Tympanitis* is to be cured by the ſame means, and in the ſame manner, if it draws its Origin from the rarefied Vapours, exhaling from the extravaſated and putrefied Humours; for, in this Caſe, the Cauſe of the Diſorder being remov'd, the Diſeaſe muſt of courſe be cured: But if it ariſes from the Air falling down into the Cavities, through the perforated Membranes of the putrefied Inteſtines, and not being able to return, but becoming rarefied by the Heat; in this Caſe, by the concurring Influence of the Air, all the Parts ſoon become putrefied; and the Diſorder, when proceeding from this Cauſe, is almoſt always incurable: Hence a dry Dropſy is accounted far more incurable than one of the moiſt Kind. Puncture frequently affords Relief, but rarely produces a perfect Cure.

The Species of Hydrocele, firſt mention'd, is cured, firſt, if the Anaſarca, whoſe Effect it is, is cured. Secondly, By the Heat, either of a Fire, a Stove, Sand, the Sun, Salt, or Dung.

Take of the beſt Roots of Bryony, and Jalap, of the Leaves of Rue, Wormſeed, and the Garden Artichoke, of the Leaves of Melilot, and the leſſer Centaury, and of the Bulbs of Onions and Garlick, each two Ounces: Boil to the Conſiſtence of a Cataplaſm, with a ſufficient Quantity of Water; adding, towards the End, of Galbanum, diſſolved with the Yolk of an Egg, two Ounces; of the Meal of Linſeed, one Ounce; of the Oil of Linſeed, four Drams; and of Sal Ammoniac, four Drams: Mix all together for a Cataplaſm to be applied to the Part affected.

Or,

Take of *Venice* Soap, four Drams; and of the *Spiritus Vini theriacalis*, twelve Ounces: Mix carefully for a Fomentation, to be applied with Woollen Cloths.

Or,

Take a ſufficient Quantity of decrepitated, highly dry, hot, and finely triturated Sea-ſalt: This, contained in a thin Linen Cloth, is to be applied, and renew'd when it becomes moiſt.

Or,

Take of Benzoin, Olibanum, Sarcocolla, and the Reſin of Guaiacum, each half an Ounce; of Camphire, half a Dram; of Maſtich, one Ounce; and of Sal Ammoniac, two Scruples: Reduce to a Powder, to the Steam of which, when kindled, the naked Scrotum is to be expoſed; after which Cloths, render'd hot with this Steam, are to be applied.

Thirdly, By ſtrong Diſcutients, in Conjunction with Corroboratives, apply'd to the Scrotum, and by external Heat continually excited, in order to induce a greater Motion, and Efficacy. The ſecond Species of Hydrocele mention'd, is moſt commodiouſly cured, firſt, by extirpating the Hernia; ſecondly, by removing the Matter of the Aſcites, and intercepting the Source, from which it flow'd; and, thirdly, by Machines adapted to compreſs the Part from which the Matter is diſcharg'd, as in Hernias. But this Species of Dropſy, when once form'd, is rarely perfectly cured. The laſt Species of Hydrocele is cur'd, firſt, by the often repeated Exhibition of draſtic Hydragogues, and the Uſe of drying Aliments; ſecondly, by the moſt efficacious Diſcutients and Corroboratives; thirdly, by the Paracenteſis of the Scrotum; and, fourthly, by Cauſtics and Suppuration. See HERNIA.

From what has been ſaid, it ſufficiently appears, that, in the Cure of a Dropſy, greater Difficulty ariſes from the Nature of the ſtagnant and putrefied Water, than from the original Cauſes of the Diſorder; for limpid Water may be abſorb'd by the bibulous Veins, and reconvey'd into the Circulation; which cannot happen, if the Humours effus'd, are viſcid, tenacious, and putrefy'd.

From what has been ſaid, it is, alſo, obvious, why, after an Evacuation of the Waters, a Gangrene of the Parts, which floated in them, is accelerated; for the Preſſure of the Water ſupports the Texture of the macerated and weaken'd Parts, which collapſe, and tend to Putrefaction, when this Preſſure is remov'd:

Why, upon a ſudden Evacuation of the Waters from the Thorax, or Abdomen, Death, or a violent Deliquium, enſue; for, the Preſſure of the Water being taken from the Arteries, they become larger, and the Blood ruſhes into them ſuddenly, deſerting, at the ſame time, the Brain:

Why dropſical Patients are afflicted with ſo inſatiable a Thirſt; what this Thirſt denotes; why Acids are often ſo beneficial in the Cure of a Dropſy; for this Thirſt is excited by a Fever, which is rais'd by an alcaline Putrefaction of the ſtagnating Juices: This is a very bad Symptom, and muſt be cur'd by Acids, which prevent Putrefaction:

Why, upon the Evacuation of a large Quantity of Water, at one time, by means of draſtic Evacuants, the Tumor of the Abdomen appears the ſame, or rather larger; and why, by the Exhibition of Opium, this Tumor ſubſides; for this Swelling proceeds from Flatulences excited by the violent Operation of the Evacuants; and, when the Agitation of the Humours is taken off by Opium, the Tumor ſubſides. And hence we learn, why Bandages are ſo beneficial in this Diſorder, and how far.

The Method of Tapping.

Experience aſſures us, that a Paracenteſis of the Abdomen is uſeleſs in the Tympanitis, though its Succeſs is fully confirmed in the Aſcites, by Inſtances of Perſons recovered from that Diſorder, by an accidental Perforation, through which the Water has diſcharged itſelf, upon which the Patients, beyond all Expectation, have been reſtored. The Encouragement, therefore, given to this Operation, is founded upon ſolid Reaſons: Though, to confeſs the Truth, it affords but a temporary Relief; for either Delay, or the infirm State of the Patient, or the Corruption of the Viſcera, generally bring on Death; but in young robuſt Perſons, lately attacked by the Diſtemper, it may be performed with Succeſs. For this Reaſon, if a proper Diet, and Courſe of Phyſic, do not, in ſome Weeks, alleviate the Diſeaſe, I adviſe an immediate Recourſe to Tapping, before the Patient's Strength is exhauſted, or his Viſcera corrupted by the morbid Humours. On the contrary, when it is attended with a Scirrhus, internal Abſceſs, or Conſumption, it ſeems altogether proper to refrain from the Operation. The ſame Rule ſhould be obſerved in thoſe Dropſies, which come on all at once; for there we may be ſure ſome large lymphatic Veſſel is burſt. As for the Wound itſelf, it is neither dangerous nor troubleſome, ſince it is but ſmall, and made in a fleſhy Part.

For the Diſcovery of Water in the Abdomen, the Surgeon muſt apply one Hand to each Side of the Patient's Belly, while he ſits or ſtands; and, by ſhaking it, he will perceive a Fluctuation of the Water, from Side to Side; if not, the Lymph is not extravaſated into the Cavity of the Abdomen, and conſequently a Paracenteſis is unneceſſary.

There are ſeveral different Methods of performing this Operation. The firſt, and moſt modern, is this: The Patient is laid on the Side of a Bed, and the triangular Needle, call'd the *Trocar*, (*Tab.* XLV. *Fig.* 1.) is thruſt into his Belly, about eight Fingers-breadth from the Navel, or in the Middle between the Angle of the Os Ilii and the Navel; then this Inſtrument (*Fig.* 2.) is extracted out of the Cannula (*Fig.* 3.), which is left in the Wound, till as much Water is drawn off, as the Strength will permit; which, if he does not grow faint, may be the whole Quantity. And, to prevent this Languor, an Aſſiſtant ſhould, with his Hands, preſs each Side of the Abdomen, or a Swathe of broad Linen, perforated in the Middle (*Tab.* XXVI. *Fig.* 8.), ſhould be carry'd round the Body, and gradually tightened, as in longitudinal Wounds of the Abdomen, till all the Water is evacuated; after which a Bandage muſt be apply'd, for this frequently enables the Patient to walk about immediately after the Operation; and without it, as *Hippocrates* obſerves, a plentiful Diſcharge of Water, at one Opening, is always attended with Faintneſs, and often with Death. Many, therefore, adviſe an Evacuation proportionable to the Strength of the Patient; after which, they extract the Tube, and, as the Wound is but ſmall, almoſt cloſing of itſelf, dreſs it with two ſquare Compreſſes, a Plaiſter and Bandage; next Day they repeat the Operation on the other Side, and, on the third, make another Aperture about two Fingers-breadth above the firſt; and ſo proceed, from Side to Side, alternately, till the Patient recovers or dies. They make freſh Wounds, to prevent an Inflammation, which is deſtructive to dropſical Subjects. In the mean time, the Patient ſhould be aſſiſted with a proper Regimen, and Courſe of Phyſic. As for the Poſture, he was formerly ſeated on a Chair or Bed; but the Moderns, after *Petit*, lay him on one Side of the Bed; for thus the Needle is more commodiouſly introduced into the lateral and lower Part of the Belly, the Water more perfectly diſcharged, and the Patient leſs ſubject to faint. Some, alſo, draw off the whole Quantity, at the firſt Tapping, and repeat it upon a Return of the Diſorder; but, where the Patient is infirm, I muſt prefer the other Method, as the ſafeſt. *Petit* approves of the Inſtrument, whoſe Cannula has a Slit in it (*Tab.* XLV. *Fig. a a*), as moſt convenient for diſcharging the Water; but, what Inſtrument ſoever the Operator chuſes, he ſhould lubricate the End with Oil, for the more free Admiſſion of it into the Abdomen.

The Antients, firſt perforating the Skin with a Cauſtic, thruſt a Knife, about a third Part of an Inch broad, into one Side of the Abdomen, about four Fingers-breadth below the Navel; and then introducing a Tube of Lead, Copper, or Silver, diſcharged as much Water, as the Patient's Strength would permit; this Inſtrument was about three or four Fingers-breadth long, (*Tab.* XXIII. *Fig.* Q S) either with the Edges bent outwards, or with a Rim, to prevent its ſlipping quite into the Abdomen.

After a ſufficient Evacuation, the Tube remaining there, the Orifice of the Tube was ſtopt with Lint, or a Cork. Over this they laid a ſticking Plaiſter, thick Compreſſes and Bandage, with the Napkin and Scapulary, as a Security againſt any involuntary Emiſſion. Next Day they repeated the Diſcharge, and continued this Method till the Patient recover'd, or died. But the modern Practice is certainly preferable; for the Introduction of the Cannula, after extracting the Knife, is a Task of no ſmall Difficulty; and leaving it in the Wound muſt unavoidably excite an Inflammation, and other bad Symptoms. Theſe Inconveniencies induced *Barbett* to contrive a hollow kind of Needle, of Silver, with a Foramen on each Side, as in *Tab.* XLV. *Fig.* 1. and 3. to perforate the Abdomen, and diſcharge the Water, at the ſame time; but as this ſharp-pointed Inſtrument, continuing in the Abdomen, might injure the Inteſtines, the Moderns have, more judiciouſly, ſubſtituted, in the room of it, the triangular Perforator, and Cannula, now call'd *Trocar*.

Though the Perforator is ſharp-pointed, there is no Danger of wounding the Inteſtines; becauſe the intervening Water keeps them at a conſiderable Diſtance from the Inſtrument; and, was it to touch them, their Lubricity would preſerve them from any great Injury. If the Tube ſhould be obſtructed, the Inſertion of a Probe will remove the Obſtacle. Sometimes the Navel is ſurpriſingly diſtended in hydropical Subjects. See *Hildanus*, *Obſ.* 47. *Cent.* 1. and *Purman's Chirurg. curioſ. p.* 330. In this Caſe, ſome adviſe a Perforation of the Part; and are encouraged to it by reading of a Patient, cur'd by a ſpontaneous Rupture there; though it is generally incommodious; for, beſides the Difficulty of diſcharging all the Humour, this Wound ſcarcely ever heals.

Sharp, in his Treatiſe on Chirurgical Obſervations, ſays, that, if the Navel protuberates, you may make a ſmall Puncture with a Lancet through the Skin, and the Waters will be readily voided by that Orifice, without any Danger of an Hernia ſucceeding, as is apprehended by many Writers.

Though a Paracenteſis of the Abdomen does not always cure a Dropſy, it, at leaſt, eaſes the Patient of the Oppreſſion, Difficulty of Breathing, and other Symptoms, which hinder his Sleeping, and oblige him to ſit up both Day and Night, ſo that the Operation is abſolutely neceſſary. Inſtances of its Succeſs may be ſeen in *Volteri Schola Obſtetricia, p.* 63. *Pechlini Obſ.* 62. *Nuckei Adenograph. p.* 122. *Brunner, in Ephem. Nat. cur. Dec.* 2. *An.* 8. *Sinibaldi Meth. parva. Saviardi Obſ.* 119. *Memoires de l'Academie Royale des Sciences, anno* 1703. *Dionis, Chirurg. Helvetii Lib. de Sanguinis Profluviis, p.* 79. *Act. Med. Berilinenſ. vol.* 9. *&* 10. *Heiſter. Inſtitut. Chirurg.*

Sharp ſays, that, during the Evacuation, the Aſſiſtants muſt keep preſſing on each Side of the Abdomen, with a Force equal to that of the Waters before contain'd there; for, by neglecting this Rule, the Patient will be ſubject to fall into Faintings, from the Weight on the great Veſſels of the Abdomen being taken off, and the ſinking of the Diaphragm ſucceeding; in conſequence of which, more Blood flowing into the inferior Veſſels than uſual, leaves the ſuperior ones of a ſudden too empty, and thus interrupts the regular Progreſs of the Circulation. To obviate this Inconvenience, the Compreſſion muſt not only be made with the Hands, during the Operation, but muſt be afterwards continued by ſwathing the Abdomen with a Roller of Flannel, about eight Yards long, and five Inches broad, beginning at the Bottom of the Belly, ſo that the Inteſtines may be bore up againſt the Diaphragm. You may change the Roller every Day, till the third or fourth Day, by which time the ſeveral Parts will have acquir'd their due Tone. For the Dreſſing, a Piece of dry Lint and Plaiſter ſuffice; but, between the Skin and Roller, it may be proper to lay a double Flannel, a Foot ſquare, dipt in Brandy, or Spirits of Wine. *Sharp.*

The Place where chirurgical Writers determine the Perforation to be made with the Trocar, in tapping the Belly, is four or five Inches below, and as much to the Side of, the Navel; or the Point where a Line, at that Diſtance from, and parallel to the Linea alba, would be interſected by another Line drawn perpendicular to the Linea alba at four or five Inches below the Navel. If this Point is ſuppoſed to be determin'd on a healthy Man, of middle Growth and Stature, it certainly is a very ſafe and convenient Place for making the Puncture; for it is ſufficiently dependent, eſpecially when the Perſon lies on the ſame Side. There are no thick fleſhy Bellies of Muſcles to pierce, nor are the Muſcles entirely tendinous, but are become tendineo-carnous; and at this Place there are no large Blood-veſſels or Nerves in hazard of being wounded: All which Advantages no other Part of the Abdomen has. But, then, this Rule of meaſuring four or five Inches is certainly not to be apply'd to hydropic People, as being very precarious, and, conſequently, very often dangerous; for, though the Diſtance is taken in full Meaſure, when the Abdomen is diſtended, yet, when the Belly ſubſides, the Perforation will be found nearer to the Navel, in proportion to the Degree of Diſtention; as, for Inſtance, Suppoſe that the anterior Part of the Abdomen is diſtended by Water, to double its natural Length and Wideneſs; that when the Water is drawn off, this Cavity is contracted to its natural Size; and that all the Parts have been equally ſtretched, and are again equally contracted; then, though four Inches were taken both Ways from the Navel, it is plain, that, after the Contraction, the Diſtance each Way will be but two Inches; ſo that the Perforation is not depending enough, the Rectus Muſcle is pierced, and, probably, ſome of the larger Branches of the epigaſtric Veſſels are wounded. What undoubtedly is meant, is to make a proportionable Allowance for the Quantity of Diſtention, and ſome Authors have ſaid as much; but none of them, except *Garengeot*, have laid down any other general Rule for chuſing the Place of Tapping: He, indeed, ſays, that the Puncture

ſture ought to be made in the Middle, between the Navel and the Spine of the Os Ilium; but as this Spine is of a conſiderable Extent, his Rule is much too uncertain, eſpecially conſidering, that the preciſe Point to be pierced can be determin'd in all Subjects, and different Degrees of Diſtention, which the Belly ſuffers in Dropſies, by only remarking, that, in a ſound State, a Point, four Inches below, and to a Side of, the Navel, is the Middle betwixt the Navel and anterior ſpinal Proceſs of the Os Ilium; and that the muſcular Parts of the Abdomen are near equally ſtretch'd in the Hydrops Aſcites aperrus; whence it follows, that this middle Point between the Navel and this ſpinal Proceſs is invariable, or nearly ſo; and, therefore, is the Part where the Perforation ought always to be made in Tapping.

Till of late, that Dr. *Mead*, by preſſing on the Abdomen, with an Aſſiſtant's Hands, while the Water of the Hydrops Aſcites was evacuated, diſcover'd the ſudden taking off the Preſſure from the deſcending Aorta, in ſuch Subjects as ſcarce have Blood enough to fill the Veſſels of the Body, to be the true Reaſon of the Syncope, Inflammation, and great Diſtention of the Veſſels of the abdominal Bowels, and, particularly, of the Inteſtines, Surgeons were very careful to draw off a ſmall Quantity of Water at once; and rather choſe to repeat the Operation more frequently, though they were ſenſible, at the ſame time, of ſeveral Diſadvantages attending their Method; for, beſides the Pain and Uneaſineſs to the Patient, and the Danger Orifices, made any-where in the Teguments of hydropic People, are in of mortifying, the Guts ſtill loſe more of their Tone by ſoaking longer in the Water, the Air being neceſſarily admitted by the Cannula into the Cavity of the Abdomen, is liable ſometimes to rarefy, diſtend the Belly, and form a Tympanitis; and never miſſes to haſten the Putrefaction of the Water, from which a Train of various bad Symptoms muſt follow.

All theſe evil Conſequences might, then, be prevented by drawing off all the Water at once, and preſerving the Preſſure ſtill on the Belly, which can be ſupplied by Art, but ought, for greater Safety, to be done gradually and equally, as the Water runs out; which neither the Preſſing with Hands, in time of the Operation, and applying a Bandage afterwards, which is the Practice of *England*, nor the Swathing with a Towel immediately afterwards, as I have ſeen done in the Hoſpitals at *Paris*, are rightly calculated for; and, therefore, theſe ſeveral Years, I have always us'd a Belt made of fine Flannel, cover'd with ſtrong Linen. The Body of the Belt is only ſo wide as to reach from the Spine of the one Os Ilium to that of the other; to one End of this Body ſtrong Tape, or Ribbands, are ſowed at a ſmall Diſtance from each other, and to the other End as many well-poliſh'd Buckles are put: Near the inferior Side of the Belt, and at a ſmall Diſtance from each End, a little Window is cut, which can be ſhut with two Buckles and Straps.

When the Operation of the Paracenteſis is to be perform'd, I mark, with Ink, the middle Point between the Navel and Extremtiy of the Spine of the Os Ium of the Side which I deſign to pierce; then I apply the Belt, with the Flannel-ſide next the Skin, well-charg'd with Fumes of Benzoin, Maſtich, and ſuch other drying and corroborating Medicines, taking care that the Point of the Skin, formerly mark'd with Ink, ſhall be in the Middle of one of the Windows, or Openings of the Belt; after which a Linen Compreſs is put on the Back, to defend it from being hurt by the Buckles: And, laſtly, the Straps, or Tapes, are put through the Buckles, and drawn a little tight, by which the Water is preſs'd in greater Quantity to the Part of the Abdomen: where there is the leaſt Reſiſtance, which will be the Part uncover'd by the Belt, or the open Window; and, therefore, that Part becomes more prominent and tenſe, which facilitates the Perforation, and makes a greater Diſtance there between the containing Parts and Viſcera, and, conſequently, makes leſs Danger of the Guts being wounded by the Point of the Trocar.

Gradually as the Water is drawn off, the Straps are pull'd tighter; and, if the Patient will be ingenuous, the ſame Preſſure can be kept on the Abdomen, all the time of the Operation, and after the entire Evacuation, as was on it before one Drop of the Water was taken away; becauſe the Operator has a certain Gauge, the Breathing, to judge by; for the Difficulty of Breathing, which hydropic People labour under, being wholly the Effect of the Water preſſing the Diaphragm upwards, and thereby ſtraitening the Lungs, any Force equal to that of the Water, preſſing all the Parts of the Abdomen equally, will have the ſame Effect: For this Reaſon the Patient muſt, from time to time, acquaint the Surgeon, if he is ſenſible of his Breathing more freely, when the Straps are to be drawn tighter, till the Patient judges the Difficulty of Breathing to be the ſame as it was before. In this Way I have drawn off, more than once, from very feeble emaciated Patients, ſixteen *Scots* Pints, or ſixty-four Pounds of Water at once, without the leaſt Faintneſs or Uneaſineſs.

After all the Water is evacuated, which is greatly aſſiſted by the Preſſure, a Pledget and Plaiſter are to be put on the Orifice from which the *Cannula* was taken, in the common way; and a Compreſs being applied over theſe, the Window is to be ſhut upon this, and brought to the ſame Tightneſs with the reſt of the Band. At Pleaſure this Window can be opened and ſhut, and the Wound can be dreſſed; and the whole Belt may, as Occaſion requires, be ſlackened or ſtraitened.

The Belt juſt now deſcribed is what I have only made uſe of hitherto; but have ſometimes been ſenſible of Inconveniences, in applying it when the Belly is very greatly diſtended; for, in ſuch a Caſe, the Oſſa innominata keep the Belt from being right applied to the lower Part of the Belly, which is ſtretched down over the Patient's Thighs; the ſuperior Part of the Abdomen, being conſiderably ſmaller than the lower, is not ſufficiently ſtraitened; and, after the Operation is finiſhed, the Belt is liable to be gathered all in Wrinkles round the Loins, eſpecially if the Patient is reſtleſs and careleſs.

To prevent theſe Inconveniencies, I think a farther Improvement may be made to the Belt. Let a ſlanting Flap be added to its inferior Edge; from which let two Straps, with Buckles at their Extremities, go out to paſs between the Patient's Thighs, and to be faſtened to other Straps, which come out from the upper Edge of the circular Band, or to a ſcapular Bandage, brought over the Patient's Shoulders: It is evident, that the Flap will compreſs the hypogaſtric Region, which the Belt could not reach; and that the additional Straps, being tightly drawn, will keep the circular Band ſtretch'd at its full Breadth.

Monro, in *Medical Eſſays*, *vol.* 1. *p.* 214. where there is a Figure of this Belt.

HYDROPYRETOS, ὑδροπύρετος, from ὕδωρ, Water, and πυρετὸς, a Fever. A kind of malignant ſweating colliquative Fever. *Caſtellus*. According to *Blancard*, it is the ſame with the *Sudor Anglicus*.

HYDRORODSATON, ὑδρορόδσατον, from ὕδωρ, Water, and ῥόδον, a Roſe, is a Drink made of Water, Honey, and the Juice of Roſes, mix'd, according to *Ægineta*, *Lib.* 7. *Cap.* 15. in the Proportion of four Pounds of Roſes, freed from the Ungues or Bottoms, with five Pints of Water, and two Pints of Honey.

HYDRORRHODINON, ὑδρορρόδινον, from ὕδωρ, Water, and ῥόδον, a Roſe, is Water mix'd with Oil of Roſes; it is cooling, and provokes Vomiting, and was given, by *Galen*, to thoſe who had taken Poiſon.

HYDROSACCHARUM, ὑδρόσακχαρον, from ὕδωρ, Water, and σάκχαρον, Sugar, is a Mixture of Water and Sugar, anſwering to Hydromeli, by changing Honey for Sugar. *Caſtellus*.

HYDROSARCA, ὑδρόσαρκα, from ὕδωρ, Water, and σάρξ, Fleſh. A Tumor, or Abſceſs, produced of Water and Fleſh. *M. A. Severinus*.

HYDROSARCOCELE, ὑδροσαρκοκήλη, from ὕδωρ, Water, σάρξ, Fleſh, and κήλη, an Hernia. A Species of HERNIA; which ſee.

HYDROSELINUM, ὑδροσέλινον, from ὕδωρ, Water, and σέλινον, Parſley. Water-parſley. *Blancard*.

HYDROTICUS, ὑδρωτικὸς, from ὕδωρ, Water, is us'd by ſome Moderns in the ſame Senſe as HYDRAGOGUS; which ſee.

HYDRUS, HYDRA, ὕδρος, ὕδρα, from ὕδωρ, Water: A Water-ſerpent, call'd by the *Latins*, *Natrix*, and very venomous.

The Bite of this Serpent produces a large livid Ulcer, whence diſtils much black fetid Sanies, as from an Ulcer of the phagedenic Kind. The Cure requires a long Time, and is perform'd with much Difficulty.

To the Wound apply Origanum, bruis'd, and work'd in Water; or a Lixivium of Oak-aſhes, mix'd with Oil, or Barley-flour made up with Honey. Inward Remedies are, two Drams of Ariſtolochia, in diluted Wine; or two Cyathi of Poſca; after theſe may be taken the Juice of Horehound, or its Decoction in Wine, or wild Naſturtium, or the Seed or Flower of Haſta regia, or the Seed of Fennel in Wine. A recent Honeycomb, eaten with Vinegar, is, alſo, a good Medicine. *Paulus Ægineta*, *Lib.* 5. *Cap.* 16.

HYEMS, χειμών. The Winter.

The Diſeaſes particularly incident to this Seaſon of the Year, are Pleuriſies, Peripneumonies, Lethargies, Catarrhs, Hoarſeneſs, Coughs, Pains of the Breaſts, Sides, and Loins, Head-achs, Vertigo, and Apoplexy. *Hippocrates*, 3 *Aph.* 23.

In the Winter it is proper to eat more, and drink leſs, but what is ſtronger; to eat much Bread, Fleſh rather boiled, and moderately of Greens. Chuſe all things hot, or of a heating Quality. Venereal Indulgences are not ſo pernicious in this, as in ſome other Seaſons. *Celſus*, *Lib.* 1. *Cap.* 3.

The Winter requires much Labour and Exerciſe, and more plentiful Feeding, eſpecially if the Conſtitution of the Seaſon be Northerly, or dry and cold, as when the North Wind blows; but, when the contrary happens, the Labour ought to be the ſame, but the Diet more ſparing; and the Body is to be dried, in proportion to the Moiſtneſs of the Seaſon; and, by the ſame Rule, in Oppoſition to the Cold, it is adviſeable, to render our Bodies

hotter by Labour and Exercise, and the Use of hot Flesh-meats, and acrimonious Greens, and larger Allowances of Wine. *Oribas. Eupor. Lib.* 1. *Cap.* 10.

HYGIDION, ὑγείδιον. The Name of a Collyrium ascrib'd to *Ammonius*, and described by *Ægineta*, *Lib.* 7. *Cap.* 16.

HYGIEIA, HYGEIA, ὑγίεια, ὑγεία, from ὑγιὴς, sound. Health, Soundness. Health is a right Disposition of the Body, and all its Parts, for performing their several Functions, consisting in a due Temperature, a right Conformation, and a just Connection. Health admits of Latitude, and is not one and the same in all Subjects, but is more perfect in one than another, who may yet be said to be in Health. The Word is, also, transfer'd to the Mind, and in that Sense means a just Disposition of the rational Powers, and the Passions, for their proper Actions; and this, in a great measure, depends on bodily Health.

Hygieia is, also, the Name of a Plaister, otherwise called *Panacea*, and *the Plaister of the three Brothers*, and described by *Aetius*, *Tetrab.* 4. *Serm.* 3. *Cap.* 13.

HYGIEINE, ὑγιεινὴ, from ὑγιὴς, sound, healthy, is the first Part of methodical Medicine, being that which prescribes Rules for the Preservation of Health. *Castellus.*

HYGRA, ὑγρὰ, liquid Plaisters, in Opposition to XERIA, ξήρια, dry Plaisters. *Castellus.*

HYGREMPLASTRA, ὑγρέμπλαστρα, from ὑγρὸς, humid, and ἔμπλαστρον, a Plaister; liquid Plasters. The Word occurs in *Pliny. Lib.* 34. *Cap.* 15.

HYGROBLEPHARICUS, ὑγροβλεφαρικὸς, from ὑγρὸς, humid, and βλέφαρον, an Eye-lid; an Epithet given to some Ducts, or Emunctories, discovered in the extreme Edge, or inner Part, of both Eye-lids. They are otherwise called *Hygrophthalmici. Castellus.*

HYGROCIRSOCELE, ὑγροκιρσοκήλη, from ὑγρὸς, humid, κίρσος, a Varix, and κήλη, an Hernia, is a Species of Hernia, compounded of an aqueous and varicous one, when varicous Obstructions arise in the Veins, which supply the Testes, and there is, at the same time, a copious Collection of Water in the Scrotum. *Galen in Def. Castellus.*

HYGROCOLLYRIUM, ὑγροκολλύριον, from ὑγρὸς, humid, or liquid, and κολλύριον, a Collyrium. A liquid Collyrium, consisting, for the most part, of liquid Ingredients. *Castellus.*

HYGROMETRUM, ὑγρόμετρον, from ὑγρὸς, humid, and μέτρον, a Measure, an Hygrometer. A Name which *Wedelius* has bestow'd, by way of Allusion to the Machine so called, on those infirm Parts, whose Contexture has been injured by a Fracture, though cured; and, by its Susceptibility of Impressions, shews the different State of the Air, with respect to Moisture, with greater Niceness and Certainty than the artificial Hygrometer. The same Author scruples not to call the Skin, a living *Thermometer* and *Hygrometer*. *Castellus.*

HYGROMYRON, ὑγρόμυρον, from ὑγρὸς, liquid, and μύρον, an Ointment. The Name of a liquid sweet-scented Ointment, described by *Aetius*, *Tetrab.* 4. *Serm.* 4. *Cap.* 114.

HYGROPHOBIA, ὑγροφοβία, from ὑγρὸς, liquid, and φόβος, Fear, imports the same Disorder as *Hydrophobia*, and with Propriety enough, because the Patients conceive a Dread, not only of Water, but of all Liquids. *Cœlius Aurelianus*, *Acut. Morb. Lib.* 3. *Cap.* 9. See HYDROPHOBIA.

HYGROPHTHALMICUS, ὑγροφθαλμικὸς, from ὑγρὸς, humid, and ὀφθαλμικὸς, belonging to the Eyes, is the same as HYGROBLEPHARICUS, which see.

HYGROS, ὑγρὸς, humid; ὑγρὸν, the Feminine, is used simply for liquid Rosin, in Opposition to ψυκτὴν, (*phryctè*) torrefy'd. *Galen*, *Lib.* 6. *M. M.* *Hygra* is, also, spoken of ophthalmic Medicines; and means the same as HYGROCOLLYRIUM.

HYLARCHICUS, ὑλαρχικὸς, from ὕλη, Matter, and ἄρχων, a Prince, or Chief, is an Epithet given, by Dr. *Henry More*, in his *Exchirid. Metaphys.* to the universal Spirit of the World, which orders and governs the First Matter. *Castellus.*

HYLE, ὕλη, Matter, in Medicine, comprehends whatever comes under the Consideration of the medicinal Art, called, by *Galen*, *Com.* 4. *in* 6 *Epid.* ὕλαι τῆς τέχνης. *Hyle*, in *Paracelsus*, seems, also, to signify *Matter*. *Lib.* 2. *de Morb. Fossor. Theat. Chymic. Vol.* 2. *p.* 145. It is, also, a Term, in chymical Authors, for the Philosophers Stone. *Theat. Chymic. Vol.* 1. *p.* 16. And hence that Mixture, in the spagiric Operation about the Philosophers Stone, or the fermentable Mass of *Terra alta foliata*, usually called *Chaos*, takes, also, the Name of *Hyle*. *Libavius Synt. Arc. Chym.*

HYMEN, ὑμὴν, signifies a Membrane in general, but commonly means that circular membranous Fold, with which the exterior or anterior Extremity of the great Canal, in Virgins, and especially before the first Eruption of the Menses, is commonly border'd. This Fold is of different Breadths, more or less smooth, and sometimes semilunar, and in some Subjects leaves but a very small Opening, in others a larger Opening, and, in all, renders the external Orifice narrower than the rest of the Cavity. The Hymen is formed by the Union of the Internal Membrane of the great Canal, with that on the Inside of the *Ala*; and represents a membranous Circle, of different Breadths, and sometimes uneven: It is commonly ruptur'd after the Consummation of Marriage; is quite lost in Delivery, and afterwards only some irregular Portions of it remain, which, from their supposed Resemblance to Myrtle-leaves, have been termed *Caruncuiæ Myrtiformes*. This Circle may, also, suffer some Disorder by too great a Flux of the Menses, by Imprudence, Levity, and other particular Accidents. *Winslow.*

With respect to the Hymen, upon which the *Jewish* Test of Virginity depends, it must be remark'd, that this Membrane is frequently not to be found in Girls a Month old, and very seldom in those of a more advanced Age. This I thought myself obliged to take notice of, because I have, sometimes, known Families render'd unhappy by a Disappointment, as to some unreasonable and ill-grounded Expectations, which, however it may happen in *Judæa*, and the warmer Climates, ought to raise no Suspicions of Incontinence in ours.

HYMENODES, ὑμενώδης, from the preceding; membranous, or full of Membranes, or Pellicles. Thus ὑμενώδεις ἰκμάδες, and ὑμενώδες ὑγρὸν, is Urine with Membranes or Pellicles; and ὑμενώδεα ἐπιμήνια, *Lib.* 1. περὶ γυναικ. are membranous or fibrous Menses, abounding with viscid Phlegm; and αἷμα ὑμένων ἀνάπλεων, *Lib. eodem*, is Blood full of Fibres and Pellicles.

HYOIDES, ὑοειδὴς. An Epithet of a forked Bone, at the Root of the Tongue, called the *Os Hyoides*. See LINGUA.

HYOPHARYNGÆUS *Musculus*. See PHARYNX.

HYOPHTHALMOS, ὑόφθαλμος, from ὗς, a Swine, and ὀφθαλμὸς, an Eye, Hog's-eye, is a Name for the *Aster Atticus*, and, also, for a Species of ACHATES. *Gorræus.*

HYOSCYAMUS.

The Characters are;

The Leaves are alternate, soft, and flat; the Calyx is Bell-shap'd, short and wide-mouth'd, and divided into five acute Segments. The Flower is monopetalous, tubulous below, and expanded above, into five obtuse Segments, and furnished with five Stamina. The Fruit, inclosed within the Calyx, resembles a Pot with a Lid on it, and is divided into two Cells.

Boerhaave mentions eight Species of this Plant; which are,

1. Hyoscyamus; vulgaris; vel niger. *C. B. P.* 169. *Tourn. Inst.* 118. *Boerh. Ind. A.* 229. *Hyoscyamus*. Offic. *Hyoscyamus niger*. Ger. 283. Emac. 353. *Hyoscyamus vulgaris*. J. B 3. 627. Raii Hist. 1. 711. Synop. 3. 274. Park. Theat. 362. *Hyoscyamus niger vulgaris*, *Apollinaris*, *Altercum*. Merc. Bot. 1. 43. HENBANE.

Common Henbane grows to be two or three Feet high, having large, thick, round, hairy Stalks, set thick with soft, hairy, clammy Leaves, cut into several sharp Laciniæ, and sharp-pointed at the Ends; of a rank, strong, offensive Smell. The Flowers grow on the Tops of the Branches, several together, which flowering, by degrees, before they are all blown, the Stalk is extended to a pretty great Length, the Seed-vessels standing in a long Series, one under another: These Flowers are of a pale-yellow Colour, full of purple Veins, with several purple Chives in the middle, being monopetalous and Bell-fashioned, cut into five Segments, growing not much above the Calyx. The Seed is small, and somewhat flat, growing in a tumid Vessel, hid in the Calyx, which stands above it, appearing with five Corners, being stiff and hard. The Root is pretty long and thick, whitish both within and without, and not so offensive to the Smell as the Leaves; it grows frequently near Highways, and Ditch-banks; and flowers in *May* and *June*. The Leaves, Root, and Seed, are used.

The Leaves of Henbane are emollient, cooling, and anodyne, good for Inflammations, and to stop Defluxions of hot Rheum; and are often put into cooling, repelling Ointments. The Roots are accounted narcotic, and are but rarely used inwardly; they are frequently hung about Childrens Necks, being cut to pieces, and strung like Beads, to prevent Fits, and cause an easy Breeding of the Teeth. The Seed is commended by Mr. *Boyle* against spitting of Blood, as well as any other Hæmorrhage, made into an Electuary, with Conserve of Roses, and white Poppy-seeds. *Miller's Bot. Off.*

Its Leaves are insipid, and have an ill Scent; they give a pretty deep red Tincture to the blue Paper. The Root gives it a little fainter Red; it is sweetish, and has the Taste of an Artichoke. It is likely, that the Sal Ammoniac, which is in this Plant, is involved in a great deal of Sulphur and Earth; for,

By the chymical Analysis, its Leaves yield some volatile concreted Salt, and a great deal of Oil. Henbane is very soporific, resolving, and lenifying; it is seldom taken inwardly. *Helidæus* set a great Value upon its Seed, and mixed it with the Conserve of Roses, for spitting of Blood. *Tragus* affirms, that the Juice of Henbane, or the Oil made by Infusion of its Seeds, cures Pain in the Ears, if one syringes them with it. Henbane is used in anodyne Cataplasms, to resolve Tumors: For Example; they boil, in a certain Quantity of Milk, two Handfuls of Henbane-leaves; as much of those of Mandrake and Nightshade; and one Ounce of the Seeds of Henbane, and Poppy: Strain it all through a Sieve, and add the Yolk of an Egg, and a little Saffron. Some boil only the Leaves of Henbane in Milk, and apply them to the Part that is afflicted with the Gout. Some soften the Leaves of the same Plant, under the

the Coals; and lay them upon the Breasts, to free the Passage of the Milk, or dissipate the Clods. *Tabernæmontanus* says, that the Seeds of it must be bruised with Wine, and applied as a Cataplasm upon the Breasts of Women newly brought to Bed. The Oil prest out of this Seed has the same Virtues. For Chilblains on the Hands, hold them over the Smoke of Henbane Seeds burning upon Coals; and squeeze the Fingers, till the extravasated and condensed Lymph comes out: This Lymph, as it passes thro' the Pores of the Skin, takes the Shape of little Worms. *Martyn's Tournefort.*

An Oil is prepared of the Seed, which is of mighty Efficacy in procuring Sleep, the Temples being anointed with it: It is also of Service in the Gonorrhœa, or an immoderate Flux of the Menses, being applied to the Region of the Loins, and to the Perinæum. *Dale from Buxb.*

2. Hyoscyamus; rubello flore. *C. B. P.* 169. *M. H.* 2. 495.

3. Hyoscyamus; albus; major; vel tertius Dioscoridis; & quartus Plinii. *C. B. P.* 169. *Tourn. Inst.* 118. *Hist. Oxon.* 2. 494. *Boerh. Ind. A.* 229. *Hyoscyamus albus.* Offic. J. B. 3. 627. Ger. 283. Emac. 353. Park. Theat. 262. Raii Hist. 1. 712. WHITE HENBANE.

White Henbane differs from the black, in being a lesser Plant, and not so woolly; the Leaves are broader, shorter, and less jagged, standing on long Foot-stalks, and are less offensive to the Smell; the Flowers are fewer, being of a pale-yellowish Colour, and not so big as the black; the Tops of the Calyces are larger, and the Seed whiter. It grows wild in the warmer Regions, but, with us, only in Gardens, flowering in *July*.

This Species of Henbane is accounted to be of a milder and less noxious Nature than the black Henbane, and therefore safer to be given inwardly, without Fear of any dangerous Consequences attending. *Miller's Bot. Off.*

It is to be met with, tho' but seldom, in the Gardens of Botanists. The Part in Use is the Seeds, which are small, round, flat, of an Ash-colour inclining to brown, of a fat and somewhat viscid Taste, and of a narcotic and ungrateful Smell: It is prescribed in an Hæmoptoe, or Spitting of Blood. *Dale.*

The antient Physicians frequently used either the Juice of the white Hyoscyamus, expressed from the green Stalks, Flowers, and Seeds; or the dry'd Seed, macerated in warm Water, and then bruised, for mitigating acute Pains, especially of the Eyes; for which Purpose, Collyria were prepared of the same. The same Medicine was in Use for acute Pains of the Ears; tho', indeed, the Use of these Kinds of Medicines, which take away the Sense of Pain, and are called by the Greeks ναρκωτικά, Narcotics, has been much suspected by the best Physicians; for it cannot but be pernicious, as it diminishes the sensitive Faculty in Bodies. *P. Alpinus de Plant. Exot.*

4. Hyoscyamus; major; albo similis; umbilico flore atropurpureo. *T. C.* 5.

5. Hyoscyamus; albus; Ægyptius. *Alp. Exot.*

The white Seeds of this Plant are very much inquir'd after in *Europe*. But our Apothecaries, instead of them, very erroneously substitute the Seeds of the yellow *Hyoscyamus*, which are yellow; and the Plant is erroneously taken by the vulgar Sort for the white *Hyoscyamus*.

The Juice of the white Hyoscyamus is very useful in a Cough proceeding from a Distillation of acrimonious and salt Humours from the Head, and the Forerunner of a Phthisis. To prevent so troublesome a Disorder, the *Egyptians*, when they go to sleep, take a Spoonful of the Seeds, very finely triturated, with an equal Quantity of Sugar pulverized; and find great Relief by it, in blunting and sweetening the Acrimony and Saltness of the Humour, and inducing Sleep. The Women also pound the Seeds, and take them in Sugar, for an immoderate Flux of the Menses. *Prosper Alpinus de Plant. Exot.*

6. Hyoscyamus; Creticus; luteus major. *C. B. P.* 169. *Prodr.* 192. *M. H.* 2. 494.

7. Hyoscyamus; aureus. *Alpin. Exot.* 99.

This Plant grows in the Island of *Crete*, or *Candy*; and bears small Flowers of a Gold Colour, whence it takes its Name: The Seeds are very small and yellow. Besides this Species, called the *Golden Hyoscyamos*, there grows in the same Island another kind of Hyoscyamus, which bears yellow Flowers, and produces yellowish Seeds; which are taken by our Apothecaries for those of the white Hyoscyamus.

Galen, Lib. 8. *Simpl.* says very justly of all the Hyoscyami, "The Hyoscyamus, which bears black Seed, causes Madness and Lethargy; and that with the yellow Seeds nearly resembles it in Qualities: But the third is very useful in Medicine, being reckon'd in the third Order of Refrigerants." *P. Alpinus de Plant. Exot.*

8. Hyoscyamus; folio in tenuissimas & acutiores lacinias scisso. *Boerh. Ind. alt. Plant. Vol.* 1.

The *Hyoscyamus*, taken in a small Quantity, inebriates; in a greater, it induces a Sopor; in a Dose still larger, it brings on Convulsions; and, if the Quantity be still increased, its Effects are most certain Death. However, it has an anodyne Virtue; for, if the Leaves be bruised with Vinegar, they remove Pain, where it is proper to be removed; they act, or exert their Virtue, by way of Suffocation. The Leaves, boiled in sweet Milk, are an admirable Anodyne in Pains of the Gout, being applied to the affected Parts, especially with an Addition of Oil of *Hyoscyamus*, mixed with Oil of Olives. The Seeds are reckon'd among Narcotics, but are to be used with Caution; for they induce Sleep, while they remove Pain. In *D. Lodovici Pharmacia moderno Sæculo applicata*, there is describ'd a Cataplasm, prepared of the Leaves of Hyoscyamus, boiled in Oil, and reduced, with Wax, into the Form of a Cataplasm, which has admirable Virtues. The Oil, injected into the Ears, has a good Effect in Pains, or Hardness, proceeding from heterogeneous Matter therein. The Leaves, mollified at the Fire, are very good to dissipate Milk. In the Tooth-ach, the Smoke of the Seed is received thro' a Funnel; the same is a very good Remedy in Chilblains of the Hands and Feet. This Plant is an Ingredient in the *Populeum*; but these Suffumigations of the Teeth and Ears are to be used with Moderation, for fear of inducing a Stupor and Delirium.

The Name Hyoscyamos, ὑοσκύαμος, is derived from ὗς, a Swine, and κύαμος, a Bean, that is to say, *Hogbean*, because its Fruit resembles a Bean; and, as *Ælian* tells us, when the wild Swine have eaten of Hyoscyamus, they immediately fall into such violent Convulsions, that they would immediately die, if they did not throw themselves into Water, where, by plentiful eating of Crabs, they are perfectly recovered. *Hist. Plant. ascript. Boerhaave.*

Hyoscyamus is also used for several Sorts of Nicotiana; which see.

HYOSERIS.

The Characters are;

The Leaves about the Stalk are sessile, or without Pedicles. The Calyx bends forward, is contracted into a conic Form, and the Stalk wreathed; the Seeds are disposed in a flat Disk.

Boerhaave mentions but one Species of this Plant; which is,

Hyoseris; angustifolia. *Tab. Ic.* 180. *Hieracium, minus, folio dentis Leonis oblongo, glabro.* C. B. P. 127. T. 470. *Boerh. Ind. alt. Plant. Vol.* 1.

It agrees in Virtues with the *Cichoreum* or *Succory*, according to the *Historia Plantarum* attributed to *Boerhaave*.

HYOTHYROIDES, a Name given to two Muscles, which serve to dilate the Chink of the Larynx. See Larynx.

HYPACTICOS, ὑπακτικὸς, from ὑπάγω, to subdue, or bring down, or under, is a Word appropriated to express the Virtue of cathartic Medicines.

HYPÆTHROS, ὕπαιθρος, from ὑπὸ, under, and αἴθρος, the Cool of the Morning. A Place in the open Air, where Walking, and other Exercises, in Use among the Antients, were usually performed. The Word occurs in *Hippocrates, de R. V. I. A.*

HYPALEIPTRON, ὑπάλειπτρον. A sort of Spatula, for spreading Plaisters or Ointments, from ἀλείφω, to anoint.

HYPALEIPTON, ὑπάλειπτον. A Liniment.

HYPECOUM.

The Characters are;

The Leaves are finely jagged, like those of the *Fumaria tenuifolia*. The Calyx consists of four Leaves, (one Pair of them small and herbaceous, the other Pair larger and floral) withers, and falls off. The Flowers are dipetalous, the Petals bifid, in such a manner, as to make the Flowers appear tetrapetalous. From each Division of the Petals arises another sort of Petal, closely covering the Ovary, and four Stamina, on both Sides. The Ovary is furnished with a corniculated Tube, and becomes a flat, jointed Pod, containing, in each Joint, a single Seed.

Boerhaave mentions but one Sort of this Plant; which is,

Hypecoum; latiore folio. *Tourn. Inst.* 230. *Boerh. Ind. A.* 307. *Hypecoon.* Offic. C. B. P. 172. *Hypecoon siliquosum.* J. B. 2. 899. *Hypecoon legitimum Clusii.* Park. Theat. 371. Raii Hist. 2. 1328. *Cyminum cornulatum, sive Hypecoon Clusii.* Ger. 909. Emac. 1067. HORNED WILD CUMIN.

It grows in *Provence* and *Languedoc*, and flowers in *May*. *Dioscorides* says, it is possess'd of the same Virtues with Poppy; and the modern Accounts thereof agree with his.

Hypecoumalterum. See Cuminum siliquosum.

HYPELÆON, ὑπέλαιον, from ὑπὸ, under, and ἔλαιον, Oil. The Dregs or Sordes of Oil.

HYPELATOS, ὑπήλατος, from ὑπὸ, under, and ἐλαύνω, to agitate. An Epithet of cathartic Medicines.

HYPENE, ὑπήνη, usually signifies a Beard; but, according to an Interpreter of *Homer*, it is the upper Lip, where the first downy Hairs appear. *Cœlius Aurelianus* writes, that the first downy Appearance of a Beard, about both the Lips, is so called. *Gaza* renders the Word from *Aristotle* by *Mystax*, the Hair of the upper Lip, or Mustaches. *Gorræus.* Τρῶπη, in *Ruffus Ephesius*, is the Hair under the Chin. *Pappos*, πάππος, the Hairs upon the Chin; and the first Appearance of the Hairs on the upper Lip, he calls προπωγώνιον (*Propogonion*); which, when come to Maturity, take the Name of μύσακες (*Mustaces*). *Ruffus Ephesius, Lib.* 1. *Cap.* 7.

HYPENEMIUS, ὑπενέμιος, from ὑπὸ, under, and ἄνεμος, the Wind, is an Epithet of barren Eggs, or such as are not impregnated by the Tread of the Cock. These Eggs are otherwise called *Ova Zephyria*, because *Zephyrus*, or the West Wind, was thought to contribute towards their Generation. *Castellus.*

HYPERBOLICUS, ὑπερβολικὸς, from ὑπερβάλλω, to exceed, or go beyond Measure, hyperbolical, or exceſſive, is a Term applied by *Galen*, *Com.* 1. *In Prognoſt.* No. 13. to the Poſition of the Body in Decubiture, when the Arms and Legs, and Spine, the Vertebræ of the Neck included, are extended or retracted beyond their due and ordinary Meaſure.

HYPERCATHARSIS, ὑπερκάθαρσις, from ὑπὲρ, a Prepoſition importing Exceſs, and κάθαρσις, Purgation, is an immoderate or exceſſive Purgation, the uſual Effect of a colliquating, corroſive, and ſtimulating Medicine. *Hippocrates*, 5 *Aph.* 4. and *Coac.* 565. ſays, that Convulſions, or the Hiccough, ſucceeding an *Hypercatharſis*, are bad Symptoms; and, in ſuch a Caſe, adviſes, as quoted by *Aetius*, to put the Patient immediately into a warm Bath, and let him drink a generous yellow White-wine, before and after Bathing.

An *Hypercatharſis* happens, when, by a continual Irritation of ſome corroſive and ſtimulating Cathartic, the Tone of the Veſſels belonging to the Belly is relaxed, and their Orifices opened. In the Beginning of this Diſorder, a very thin Matter, and ſuch as Nature does not want, is evacuated; but, afterwards, when the Relaxation and Aperture of the Veſſels are increaſed, the neceſſary Humours are diſcharged; and, firſt, there is an Excretion of yellow Bile, then of Phlegm, after that of black Bile, and laſt of all of Blood, a Fluid the moſt neceſſary to Nature of all the Humours: But, before this happens, the thineſt of the Humour is firſt diſcharged, and the thickeſt laſt of all. If you adminiſter, therefore, too ſtrong a Phlegmagogue, after Phlegm is evacuated, there comes an Excretion firſt of yellow, next of black Bile, then of Blood. If you give a violent Cholagogue, the Diſcharge of the Bile is ſucceeded by an Evacuation firſt of Phlegm, next of black Bile, and laſtly of Blood. Too violent a Melanagogue, after evacuating the black Bile, expels the yellow, then Phlegm; and, laſt of all, cauſes an Excretion of Blood, as if it were from Veſſels quite depriv'd of their natural Tone and Firmneſs. For, when the Veſſels, through Imbecillity, can no longer retain the other Juices, and their Orifices are opened, and the Medicine never ceases to irritate, when it can no longer attract the Humour to which it is appropriated, it is neceſſary, that the reſt ſhould follow in the Order above-related. *Oribaſ. Med. Coll. Lib* 14. *Cap.* 42.

They who labour under an *Hypercatharſis*, muſt be treated with Frictions of the Skin, and a warm Bath, drinking, before they bathe, thin, red, or yellow Wine, for ſuch is eaſieſt of Diſtribution, with Sops of Bread, and Pomegranates. If the Evacuation proceeds, let the Limbs be bound in ſuch a manner, that the Bandage may be carry'd from the upper to the lower Parts; and, by its Aſtriction, may cauſe an Interception of the Blood and Spirits, and ſo prevent an exceſſive Effuſion and Diſſipation. Exhibit, alſo, a ſmall Quantity of Theriaca, to be taken with the Fleſh of Vipers; for this Medicine paſſes to the Skin, and, in a ſhort time, makes a Revulſion, and diverts the Courſe of the Humours from the Belly, and blunts what is poiſonous and operative in Cathartics. If this be wanting, you may take, inſtead thereof, Troches of Theriaca, or Troches of Seeds, (ſee *Paſtillus de Seminibus*) and of the Antidote called *Philonium*. Cupping-glaſſes may, alſo, be apply'd to the Stomach, and Cataplaſms of Polenta and Mulſum; after which you muſt uſe aſtringent Epithems; but the greateſt Relief is obtained from Frictions of the whole Body, and potable Remedies. The Patient muſt keep himſelf from the cold Air, and what is very warm; for the firſt repels the Humours from the external Parts inwards, and ſo increaſes the Flux; and the other diſſipates and diſſolves the natural Strength and Spirits. If the Evacuation, thro' the corroding Force of the Cathartic, be increaſed, the aforeſaid Cataplaſms muſt be apply'd, and Obtundents be injected in Clyſters, ſuch as the Fat of a Gooſe, ſweet Wine, Oil of Spike, and others of the like Nature. *P. Ægineta*, *Lib.* 7. *Cap.* 7.

In an *Hypercatharſis*, Drinking is to be ſparingly indulg'd, and Sleep procured. Auſtere Wine, diluted with Spring-water, is to be exhibited in ſmall Quantities. Thick Polenta, roaſted and ſprinkled in the Drink, or a ſmall Quantity of the Heads of Poppy, or of Galls, is of Service in this Caſe. The Flower of decorticated or huſked Lentils, boiled with Vinegar and the black Beet, with an Addition of Sumach, and a ſmall Quantity of Poppy-heads, are very effectual. Dry'd Pears, expreſſed with the Juice of Quinces, are, alſo, good. If the Purging continues with Violence, we muſt uſe more effectual Remedies, and ſuch as are preſcrib'd in cœliac Diſorders. To thoſe who are eaſy to vomit, plenty of warm Water is to be given to drink, and Vomiting is to be promoted, either with the Finger, or intruding a Feather; and this muſt be attempted two or three times together. Then warm ſome Oleum Melinum (ſee *Melinum Oleum*) and Wine, and apply a Linen Cloth dipped in it to the Belly; and, after ſome moderate Diſtance of Time, exhibit the Quantity of a Bean of Theriaca, to be taken in Wine. *Aetius*, *Tetrab.* 1. *Serm.* 3. *Cap.* 118.

HYPERCORYPHOSIS, ὑπερκορύφωσις, from ὑπὲρ, above, and κορυφὴ, the Vertex, an Eminence, or Protuberance. *Hippocrates* calls the Lobes of the Liver, and of the Lungs, *Hypercoryphoſes*, ὑπερκορυφώσεις.

HYPERCRISIS, ὑπέρκρισις, from ὑπὲρ, above, and κρίσις, a Criſis, an Hypercriſis, is an exceſſive and violent Criſis of a Diſeaſe, when Nature, oppreſſed with the Abundance of the morbific Matter, makes extraordinary Efforts to free itſelf by immoderate Evacuations, attended with the greater Danger to the Patient, *Galen*, *Com.* 3. *in Prognoſt. T.* 1. It is alſo called *Hypercecriſis*, ὑπερέκκρισις, a Superexcretion. *Galen*, *de C. M. S. L. Lib.* 3.

HYPEREPHIDROSIS, ὑπερεφίδρωσις, from ὑπὲρ, ſignifying Exceſs, and ἱδρὼς, Sweat. An exceſſive, or immoderate Sweating. *Blancard.*

HYPERESIA, ὑπηρεσία, Miniſtry, Office, in *Moſchion de Morb. Mul.* is uſed to ſignify the organical Function of the ſeveral Parts of the Body.

HYPERETRIA, ὑπερέτρια, a Female Aſſiſtant, or Midwife, at the Time of Labour; on which Occaſion, *Moſchion*, *de Morb. Mul.* requires there ſhould be three, at leaſt, preſent.

HYPERICUM.

The Characters are;

The Root is fibrous; the Leaves are conjugated, or grow by Pairs, at the Joints of the Stalks. The Calyx conſiſts of one Leaf, is quinquefid, not caducous, expanded. The Flowers are roſaceous, pentapetalous, adorned with many Stamina, embrace a conic Ovary, which is furniſhed with three long bended Tubes, and becomes a ſmall oblong Fruit, conſiſting of three Capſules cloſely joined, and filled with numerous minute Seeds.

Boerhaave mentions thirteen Species of this Plant; which are,

1. Hypericum; vulgare. *C. B. P.* 279. *Park. Theat.* 572. *Tourn. Inſt.* 274. *Boerh. Ind. A.* 1. 241. *Hypericum.* Offic. Ger. 432. Emac. 539. Raii Hiſt. 2. 1018. Synop. 3. 342. *Hypericum vulgare ſive perforata caule rotundo, foliis glabris.* J. B. 3. 381.

ST. JOHN'S-WORT.

St. John's-wort grows to be about two Feet high, very much ſpread out into Branches, which are ſmooth and round, having at each Joint two ſmall oblong Leaves, growing without Foot-ſtalks, with three pretty large Veins, running on the back Side of each, and, upon being held up againſt the Light, appearing full of ſmall Holes; whence it is called *Perforata*. The Flowers are numerous on the Tops of the Branches, conſiſting of five yellow Leaves, with a great Number of Apices and Stamina, when bruis'd between the Fingers, emitting a bloody Juice. The Seed-veſſel is longiſh and angular, ſomewhat like a Corn of Barley, divided into three Partitions, full of a very broad ſmall Seed; it has ſomewhat of a reſinous Smell. The Root is hard and woody, ſpreading much, and abiding many Years. It grows in Hedges, and among Buſhes, and flowers in *June* and *July*. The Leaves and Flowers are uſed.

St. John's-wort is aperitive, deterſive, and diuretic, helpful againſt tertian and quartan Agues, is alexipharmic, and deſtroys Worms, and is an excellent vulnerary Plant. A Tincture of the Flowers, in Spirit of Wine, is commended againſt Melancholy and Madneſs. Outwardly, it is of great Service in Bruiſes, Contuſions, and Wounds, eſpecially, in the nervous Parts. *Gerard*, in his Herbal, gives a very good Receipt of a compound Oil, of great Service in the foregoing Accidents. *Miller's Bot. Off.*

Its Leaves are ſtyptic, and a little ſaltiſh; they have a Salt reſembling Sal Ammoniac, but it is united with a great deal of Earth, and diſſolv'd in a Liquor not unlike Spirit of Turpentine; for the tranſparent Points upon the Leaves of this Plant, which ſeem to be ſo many Holes, the black Points upon the Borders of its Flowers, and the little Knobs upon its Fruits, ought to be regarded as ſo many Bottles fill'd with this Liquor. It is no wonder then, that St. John's-wort ſhould be vulnerary, deterſive, diuretic, febrifugous, and good for the Vapours. They diſtil this Plant, and make an Oil and an Extract of it; the Oil is ſimple or compound. The Simple is made thus: Infuſe the Tops of St. John's-wort between Flower and Seed, in a ſufficient Quantity of Olive-oil; ſet it for ſome Days in the Sun; ſtrain it out, and reiterate the Infuſion, till it be of a deep Red. For the Compound Oil, infuſe one Pound of the Tops of the ſame Plant in two Pounds of Oil, and one Pound of Red-wine; after it has been macerated three Days, boil it *in Balneo Mariæ*, till the Wine be conſumed: Make three Infuſions after the ſame manner, and in the laſt dilute a Pound of *Venice* Turpentine, and four Scruples of Saffron. Theſe Oils are excellent for all ſorts of Wounds; they give half an Ounce or an Ounce of it to drink, for Spitting of Blood, and the Dyſentery; for the Sciatica, Rheumatiſm, and ſuch-like Diſeaſes, they rub the Part with two Ounces of Oil of St. John's-wort, and one Ounce of good Spirit of Wine. This Mixture is very reſolving. To make the Extract of this Plant;

Take the Flowers in the Bud, put them to digeſt for two Days in good Spirit of Wine, ſqueeze out the Infuſion, and let it evaporate to the Conſiſtence of an Extract: They give from a Scruple to a Dram of it.

Angelus Sala preſcribes the Uſe of it for Madneſs, Melancholy, and raving Fits, which come without a Fever, or any manifeſt Cauſe. They have given the Name of *Fuga Dæmonum*

to

to St. John's-wort, becauſe they believ'd it to be good to cure thoſe whom they fancy'd to be poſſeſs'd; but it is worth our Obſervation, that theſe People are commonly Cheats, or really hypochondriac; and, generally ſpeaking, all the Herbs which are thought good for pretended Poſſeſſions, are excellent for Vapours, Madneſs, and Melancholy: The Decoction of St John's-wort, the diſtil'd Water of this Plant, and the Infuſion of its Seed, kill Worms, and provoke Urine. It is uſed in the antinephritic Syrup of *M. Charas*, aperitive and cachectic Syrup of the ſame Author; Syrup of Mugwort, Powder which *Paulmier* (*Palmarius*) has preſcribed for Madneſs, *Venice* Treacle, reform'd Treacle of *M. Charas*, Mithridate, compound Oil of Scorpions, the *Unguentum Martiatum*, and in the *Mundificativum ex Apio*. *Martyn's Tournefort.*

2. Hypericum; Aſcyron dictum; caule quadrangulo. *J. B.* 3. 382. See ASCYRUM.

3. Hypericum; villoſum; erectum; caule rotundo. *T.*

4. Hypericum; elegantiſſimum, non ramoſum, folio lato. *J. B.* 3. 383.

5. Hypericum; ſupinum; tomentoſum; Hiſpanicum. *Cluſ. H.* 181.

6. Hypericum; minus; erectum. *C. B. P.* 279.

7. Hypericum; minus; vel minus; ſupinum; glabrum. *C. B. P.* 279. *M. H.* 2. 469.

8. Hypericum; perfoliatum; & perforatum. *T.* 255.

9. Hypericum; folio breviori. *C. B. P.* 279. *M. H.* 2. 469.

10. Hypericum; fruteſcens; Canarienſe; multiflorum. *H. A.* 2. 135.

11. Hypericum; fœtidum; fruteſcens. *T.* 255.

12. Hypericum; Orientale; flore magno, *T. Cor.* 19.

13. Hypericum; criſpum; triquetro, & cuſpidato, folio. *Bocc. Muſ. p.* 2. *T.* 12. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 242.

Milier enumerates thirty Species of this Plant.

Hypericum, fruteſcens. A Name for the *Spiræa*; *Hyperici folio, non crenato.*

Hypericum maximum. See ANDROSÆMUM.

Hypericum ſaxatile. See CARIS.

HYPERINESIS, ὑπέρινησις, from ὑπὲρ, importing Exceſs, and ἴνησις, an Evacuation. An immoderate Evacuation. The Word occurs in *Hippocrates*, *de Loc. in Hom.* and means the ſame as HYPERCATHARSIS before.

HYPERINOS, ὑπέρινος, from ὑπὲρ, denoting Exceſs, and ἰνέω, to evacuate, ſignifies one who is immoderately evacuated or purged, and, alſo, one who is extenuated. *Galen*, *Com. in* 6 *Epid.* explains the Word by κεκενωμένος (*cecenomenos*) "evacuated;" but, in his *Exegeſis*, he ſays, ὑπέρινος ὁ ὑπερκαθαρμένος ἄνθρωπος, ἢ αὐτὴ ὑπερίνησις, &c. "*Hyperinos* ſignifies "both the Perſon who is over-purged, and the Super-purgation "itſelf; and ſome have expounded it by ſaying, ὑπέρινος "ἰσχναίνει, *Hyperinos* is one who is extenuated: But the Word "ſeems to me to have a double Meaning, after the manner of "μακρόπνους (*macropnus*) and βραχύπνους (*brachypnus*)." His Meaning is, that as theſe Words, μακρόπνους, and βραχύπνους, ſignify not only long and ſhort Reſpiration, but, alſo, the Subjects affected by them; ſo *Hyperinos* is uſed, indifferently, for an immoderate Evacuation, and the Perſon who is exhauſted by ſuch a Diſcharge. *Varinus* explains ὑπέρινος by ὁ σφόδρα λεπτὸς, "One who is much extenuated;" and *Pollux*, ἐξινωμένος, "immoderately evacuated, or exhauſted."

HYPEROA, ὑπῷα, from ὑπὲρ, and ὠὸν, an upper Place, the upper Part of the Mouth, called alſo *Palatum*, and *Baſis Cerebri*. *Caſtellus.*

HYPEROS, ὕπερος, is a Peſtle, which *Hippocrates*, *Lib. de Fract.* uſes inſtead of a Staff, for the Extenſion of broken Bones. *Foeſius.*

HYPERPHYES, ὑπερφυὴς, from ὑπὲρ, above or beyond, and φύω, importing to be generated in the natural Way, is an Epithet which imports ſomething beyond, or contrary to the ordinary Courſe of Nature; and is applied by *Hippocrates*, *Lib. de vet. Med.* to Diſorders which are extremely bad and dangerous.

HYPERSARCOSIS, ὑπερσάρκωσις, from ὑπὲρ, importing Exceſs, or Superfluities, and σὰρξ, Fleſh, is an Excreſcence of Fleſh.

HYPEXODOS, ὑπέξοδος, from ὑπὸ, under or beneath, and ἔξοδος, a Paſſing-forth or out, ſignifies Excretions, or a Flux, of the Belly.

HYPEZOCOS, ὑπεζωκὼς, from ὑπεζώννυμι, to undergird, is ſpoken of thoſe Membranes which are ſpread under other Parts; thus the *Pleura* is extended under the Ribs. *Cœlius Aurelianus*, *Lib.* 2. *acut. Morb. Cap.* 16. aſcribes a Cough to the Conſent of the Parts which are near and contiguous ὑπεζωκότι *Membranæ*, "To the ſurrounding Membrane."

HYPHEAR. See VISCUS.

HYPHEGESIS, ὑφήγησις, from ὑφήγεμαι, to lead; a going before, a leading or ſhewing the Way: Thus, *Lib. de Natura Pueri*, ἡ ὑφήγησις ἐγένετο τότῳ ὥσπερ ὕδατι ἐπὶ τραπέζης, "And a Way "was mark'd out for it, like Water poured on a Table." For in the Birth the Way was made for the Paſſage of the Fœtus, by the previous Flowing of the thin Ichor, or Water, as Water, poured on a Table, is derived and drawn along by the Finger, till it finds a Way to flow off. And, in *Jurejurando*, τὸν ὑφηγήσομαι ξυμβουλίην τοιήδε, "Nor will I be the Author, or Adviſer of any Counſel of that Nature," that is, of giving deadly Medicines to any Perſon whatſoever.

HYPNOBATES, ὑπνοβάτης, from ὕπνος, Sleep, and βαίνω, to go; one who walks in his Sleep.

HYPNOLOGICA, ὑπνολογικὰ, from ὕπνος, Sleep, and λόγος, a Diſcourſe, is a Part of Medicine, teaching a due Regulation of Sleep and Waking.

HYPNOPOEOS, ὑπνοποιὸς, from ὕπνος, Sleep, and ποιέω, to make or cauſe, is an Epithet of ſuch Medicines as procure Sleep.

HYPNOS, ὕπνος, Sleep. See SOMNUS.

HYPNOTERION, ὑπνωτήριον, the Name of an hepatic Epithem in *Aetius*, *Tetrab.* 3. *Serm.* 2. *Cap.* 11. where he treats of the Cure of a ſcirrhous Spleen.

HYPNOTICUS, ὑπνωτικὸς, from ὕπνος, Sleep; the ſame with HYPNOPOIOS, before.

HYPNUM, a kind of fertile Moſs, furniſhed with a Multitude of little calyptrated Heads, whoſe Calyptræ, for the moſt part, ſit obliquely on them; the Heads fall off tranſverſely, with their Margin ſometimes indented, ſometimes entire; and ſtand upon pretty long Pedicles, produced from the Wings of the Leaves, along the Stalks and Branches; and have their lower Part ſurrounded with ſquamous Involucra, or Covers, different from the Leaves: To this it may be added, that the Stalks are, for the moſt part, more diſperſed, and more fertile of Branches, than in the *Bryon. Ray's Synopſis Strip. Brit.* The general Diviſions of *Hypnums*, ſee under the Article BOTANY.

HYPO, ὑπὸ, a Prepoſition ſignifying *under*; but, in Compoſition, imports, not only an Inferiority with reſpect to Situation, but a Remiſſion or Diminution; as will be obvious from Examples in ſome of the ſubſequent Words.

HYPOBRYCHIOS, ὑποβρύχιος, from ὑπὸ, and βρύχιος, demerged, ſunk, in *Hippocrates* and *Aretæus*, ſignifies latent, or deeply ſeated; and is applied to the ſlow Beginning of a Fever, and to the Veins, and other deeply ſituated Parts. *Caſtellus. Foeſius.* See BRYCHIOS.

HYPOCAPNISMA, ὑποκάπνισμα, from ὑπὸ, and καπνίζω, to fumigate. Suffumigation. *Moſchion de Morb. Mul.*

HYPOCARODES, ὑποκαρώδης, from ὑπὸ, importing a Diminution, or lower Degree, of any Quality, and κάρος, a Carus, is one who labours under a Sopor, or lower Degree of a Carus. *Hippocr.* 1. *Prorrhet. & Coac.* In *Lib.* 3. *Epid.* we read ὑποκαρωθὲς (*Hypocarothis*) in the ſame Senſe.

HYPOCATHARSIS, ὑποκάθαρσις, from ὑπὸ, importing Diminution, and κάθαρσις, Purgation, is a ſlight Purgation downwards, and ſo oppoſed to HYPERCATHARSIS. The Word, however, is ſometimes taken, ſimply, for any Degree of Purgation by the Belly, as in *Hippocrates*, *Lib. de Ulcer.* and *Galen*, *M. M. Lib.* 4. *Cap.* 6.

HYPOCAUSTUM, ὑπόκαυστον, from ὑπὸ, under, and καίω, to burn, is properly an Apartment for Bathing or Sweating, which is heated by a Fire under its Floor; but is generally uſed to ſignify a Stove.

HYPOCEPHALÆON, ὑποκεφάλαιον, from ὑπὸ, under, and κεφαλὴ, the Head, is a Pillow, or any Support for the Head. *Hippocrates*, 1. *de Morb. Mul.*

HYPOCERCHALEON, ὑποκερχαλέον, from ὑπὸ, and κέρχνος, an Aſperity of the Fauces, in 7. *Epid.* is a ſtridulous kind of Aſperity of the Fauces and Aſpera Arteria.

HYPOCHOERIS, a Species of *Sonchus*, not ſo prickly as the others: It comes from ὑπὸ, importing Diminution, and χοῖρος, a Swine. *Blancard.*

HYPOCHEOMENOS, ὑποχεόμενος, is one labouring under a Suffuſion, or Cataract. *Galen*, *de Sanit. tuend. Lib.* 6. *Cap.* 9.

HYPOCHLOROMELAS, ὑποχλωρόμελας, from ὑπὸ, importing Diminution, χλωρὸς, of a kind of pale Colour, and μέλας, black. Of a paliſh Colour inclining to black. *Hippocrates*, *Lib.* 6. *Epid.*

HYPOCHONDRIA, ὑποχόνδρια, from ὑπὸ, under, and χόνδρος, a Cartilage. The Hypochondria, or that Part of the Body, on both Sides, which lies under the ſpurious Ribs, and is extended to the Ilia, comprehending not only the Muſcles, but the internal Viſcera; becauſe, as *Pollux* ſays, τῷ χόνδρῳ ὑπόκειται, "It is ſubjacent to a Cartilage." *Celſus*, from ſeveral Places of *Hippocrates*, renders the Word by *Præcordia*; and *Cœlius Aurelianus* often puts *Præcordia inflammata*, for an Inflammation of the Hypochondria.

Affections of the *Hypochondria*, in *Hippocrates*, are;

Hypochondrion aneſpaſmenon, ὑποχόνδριον ἀνεσπασμένον, a Revulſion and Retraction of the *Hypochondrium* inwards, without any proper Diſorder of the Part, which is a Prognoſtic of an Hæmorrhage, and a Phrenſy. *Coac.* 119.

Hypochondria diaborborizonta, ὑποχόνδρια διαβορβορίζοντα, a Rumbling of the Hypochondria, 5 *Aph.* 64.

Hypochondrii Entaſis, &c. ὑποχονδρίου ἔντασις λάπαρος, & ὑπόλαπαρος, a ſoft or ſoftiſh Tenſion of the Hypochondria, without a Tumor or Inflammation, *Lib.* 3. *Epid. Ægr.* 2. & 10.

&

& Ægr. 16. *post Stat. post.* There is also ὑποχονδεία ἕλασις τάσμαχός, an oblong Tension of the Hypochondrium, proceeding from an Inflammation of the two strait Muscles of the Epigastrium, which are extended from the Thorax, in a strait Line, to the Ossa Pubis. 1. *Prorrhet.* 144.

Hypochondria Catexeraſmena, &c. ὑποχόνδεια καλλιξηραμένα σφόδρα, ἢ ἰσχυρῶς αὐχμώδη, Hypochondria very squalid and dried up, ἢ περισπαλμένα, and contracted and depressed by an excessive Dryness, not ἀποσπασμένα, drawn inwards by an internal Inflammation. *Galen, Com.* 1. *in Lib. de R. V. I. A.*

Hypochondria meteora, ὑποχόνδεια μέτεωρα, elevated or tumid Hypochondria, 1. *Epid. Ægr.* 8. 4 *Aph.* 72. The same are expressed, *Lib. de R. V. I. A.* by ἐπημένα (*epermena*) raised or lifted up, meaning by Flatulences, as *Galen* explains it.

Hypochondrii Xyntaſis, ὑποχονδείε ξύντασις, such a Distention of the Hypochondria, as proceeds from an Inflammation, 1. *Epid. Ægr.* 2. 3. 8. 10. and elsewhere.

Hypochondrii Scoliotes, ὑποχονδείε σκολιότης, an Obliquity of the Hypochondrium, that is, an Inequality of that Part: Thus, in the following Passage, *Lib. de R. V. I. A.* ὑποχόνδειον μὲν γὰρ εἰ ἐπὶ πόνῳ ἔσται, ἢ ἐπημένον, ἢ ἔχει τινὰ σκολιότητα, "If, therefore, the Hypochondrium be pained, or tumefy'd, or contract an Obliquity." Σκολιότης is explain'd, in *Galen*, by ἀνωμαλία, Inequality.

Hypochondrium chronium, ὑποχόνδειον χρόνιον, an Hypochondrium affected with an inveterate Disorder, *Coac.* 292. So, also, 1. *Prorrhet.* we read τὰ ὑποχόνδεια μέτεωρα χρονιώτερα, Hypochondria which have been tumefied for a considerable Time.

HYPOCHONDRIACUS MORBUS.

The hypochondriac Disorder is none of the least considerable among those of the spasmodic Kind, incident to the nervous System: Because it, principally, exerts its Tyranny under the Ensiform Cartilage, and the spurious Ribs, in the Region of the *Hypochondria*, it is, for this Reason, called the hypochondriac Affection. If we thoroughly consider its Nature, it will be found to be a spasmodico-flatulent Disorder of the *Primæ Viæ*, that is, of the Stomach and Intestines, arising from an Inversion or Perversion of their peristaltic Motion, and, by the mutual Consent of the Parts, throwing the whole nervous System into irregular Motions, and disturbing the whole Oeconomy of the Functions.

But, before we enter upon the History of this Disorder, we think it expedient to premise, that no Part or Function of the Body escapes the Influence of this tedious and long protracted Disease, whose Symptoms are so violent and numerous, that it is no easy Task either to enumerate or account for them; for, as, among acute Diseases, a Fever, in a particular manner, deserves the Name of Universal; so, among those of a chronical Kind, the same may be justly said of the hypochondriac Disorder. But, that we may proceed regularly, and trace the Beginning and Progress of this Proteus-like Disorder, we shall begin from the Cavity of the lower Belly, which is first of all subjected to the Tyranny of this Distemper. In the Beginning, therefore, of the Disorder, violent Tensions, and flatulent Inflations, of the Stomach and Intestines are perceiv'd, especially under the spurious Ribs, and that most generally in the Left Region of the Hypochondria, on which a pretty hard Tumor sometimes appears. As for the particular Disorders of the Stomach and Oesophagus, the Patient is afflicted with Nauseas, loathing of Food, and a varying Appetite, sometimes craving nothing, and at others somewhat more keen; the Aliments are ill-digested, and by that means acid and viscid Crudities are generated: The Stomach is affected with an oppressive and heavy Pain, especially after Meals: The *Oesophagus* is spasmodically constricted, and a limpid Mucus is frequently discharged out of the Mouth: Deglutition is difficult, and the Patient labours under a violent Cardialgia, a Heat of the Stomach, acid Eructations, Attempts to vomit, and Vomitings, the Matter of which is of so acrid a Quality, that Authors inform us, that the Teeth are not only benumbed, but, also, Linen Cloths corroded by it. In hypochondriac Patients I have, also, observed purely sebaceous Vomitings; with respect to which, the Reader may consult the *Miscell. Nat. Curios. Decad.* 1. *An.* 3. *Obs.* 253. Besides, in the Intestines, particularly the small ones, there are perceiv'd, about the Navel, violent and racking Pains, Contorsions, lancinating Twitches, Rumblings, and Murmurings: Violent Gripes are, also, produced in the large Intestines. Sometimes the Patient is seiz'd with a Flux, and, at other times, with an obstinate Costiveness, accompanied with a Retention of the Flatulences, which, when discharged either from the Mouth or Anus, in some measure, relieve the other Symptoms, but are, soon after, copiously generated. The Patient often labours under frequent Desires of going to Stool; and, generally, Tubercles, or blind Hæmorrhoids, appear about the Anus, and a symptomatic Discharge of Blood sometimes succeeds: In some, the Discharge of the Urine is difficult and painful, and the Urine itself is thin, diluted, and white, sometimes with a copious sandy Sediment. Besides, this Disorder, when attended with a Pain in the Region of the Kidneys, often resembles the Stone.

Nor does this Disorder affect the Abdomen alone, but, also, draws other Parts into Consent. Thus in the Breast there is great Uneasiness, Constrictions, a violent Difficulty of Breathing, sometimes joined with an Oppletion of the Breast, Tremors, and Palpitations of the Heart. As the Disease increases, the Head is, also, affected; in the exterior Parts of which, Cephalalgias, Hemicranias, various constrictive Pains, accompanied with Rigidity and Immobility, and that particular Species of Pain called *Clavus*, are perceiv'd. In the internal Parts a Vertigo, a Ringing of the Ears, and a Difficulty of Hearing, are perceiv'd; the Eyes are dull, and the Sight dim: Some, also, see Objects double: The Eyes are painful and dry; the Tongue, especially in a particular Part, is frequently seiz'd with a burning and uneasy Pain; and the Saliva is copiously discharg'd: At last the animal Functions are impair'd, the Mind is, without any Reason, or by the slightest Cause, provok'd and thrown into violent Commotions. Hence Restlessness, Anxiety, Terror, Sadness, Anger, Fear, Diffidence, idle Whims, and irregular Workings of the Fancy; the Memory is impair'd, the Reason weaken'd, the Sleep turbulent, uneasy, and full of Terror. Some Symptoms of this Disorder affect the whole Body, which is frequently overspread with intense Heats, or profuse Sweats; the Strength is lost, and the whole Body, becoming languid, and averse to Labour, gradually wastes away. The Limbs are frequently affected with a pricking and lancinating Pain. At last, all the Secretions and Excretions, especially those of the sanguineous Kind, are perverted and disorder'd. But 'tis hardly possible to enumerate all the various Symptoms of this Disorder, which are different in almost every Individual they torment.

The Accounts of this Disease, receiv'd from the most antient Physicians, correspond with those we have already given. Thus *Galen*, in his First Book *de Locis affectis*, furnishes us with a Passage of *Diocles*, in which hypochondriac Disorders of the flatulent and melancholic Kind, arising from the Stomach, are mentioned; and which, for the sake of its Brevity and Perspicuity, deserves to be transcribed: "The Patient, says he, after "eating, especially such Aliments as are of difficult Digestion, "or capable of exciting Heats, spits large Quantities of Moi"sture; is afflicted with acid Eructations and Inflations; he "perceives an Exæstuation in his Præcordia, and a Fluctuation "when he checks the Eructations. Sometimes, also, violent "Pains of the Abdomen are perceiv'd, which, in some, reach "above the Diaphragm, but are allay'd, when the Aliments are "concocted. But, as soon as the Patient eats again, he is af"flicted in the same manner. These Pains sometimes, also, rack "the Patient, when fasting, and after Supper. If at any time "the Patient vomits, the Matter thrown up consists of crude "Aliments, and a Phlegm, which is bitter, hot, and acid to "such a Degree, that the Teeth are benumb'd by it." This Author is of Opinion, that because cold Substances afford Relief, the Disease arises from the Heat of the internal Parts.

Before we quit the History of this Disease, we shall lay down some Cautions very necessary to be known: As, then, this Disorder has several Degrees or Stages, which direct us in forming our Prognostics; so it has, also, Exacerbations, which amount to pretty violent Paroxysms; for, tho' hypochondriac Patients are never perfectly well, yet their Symptoms are far more violent in the Winter, Autumn, and cold Weather of any kind; whereas the hotter the Atmosphere is, the better State of Health they enjoy. Women subject to this Disorder are observ'd to be most afflicted by it at the time their *Menses*, which are generally deficient, ought to flow. It is, farther, worth our Observation, that hypochondriac Patients are rarely afflicted with continual, epidemical, and contagious Fevers, or the Plague, but remain free from these and many other raging Distempers. The Reason of this surprising Phenomenon seems to be this, that these Patients have, generally, in their *Primæ Viæ*, a large Quantity of acid and viscid Crudities, which resist the Efficacy of the Contagion, which operates by the Fineness of the sulphureous Parts, that are in a manner fixed by these Crudities. Hence it, also, happens, that old and melancholic Patients are rarely affected by acute Diseases, or even those of a contagious Nature.

We find from Experience, that this Disorder is most incident to young Persons, and those arriv'd at their full Growth, that is, from about the twentieth to the fiftieth Year of their Age; after which this Disorder generally changes itself into arthritic Pains, the Gout, a Pain of the Loins, sciatic Pains, the Stone, a Cachexy, a Scurvy, the *Morbus Niger*, Obstructions of the Viscera, an Hectic, and other formidable Disorders. Those, also, who are of a spongious, soft, lax Habit, and have small Vessels, are more subject to this Disorder, than those who are of a more firm and robust Constitution. Those, also, are more subject to it than others, who are naturally languid, or who have received from their Parents an hereditary Disposition to it; as, also, those who by an imprudent Method of Living, or previous Diseases, have their natural Strength and Vigour greatly impair'd. Those are, farther, in a peculiar manner, subject to this Disorder, who lead a sedentary Life, and indulge themselves too much in Study, continual Meditations, and Lucubrations. Hence the Disorder is very common among the *Literati*. For the same Reason the Female Sex are observ'd to be afflicted with this Disorder, though not so frequently as Men. But the

hypochondriac Diſorders of Women are falſely confounded with thoſe of the hyſteric Kind, and paſs under the ſame Name. See HYSTERICA.

Both Antients and Moderns have err'd in aſſigning the Seat of this Diſorder: The former, as they frequently obſerv'd a tenſive inflated Tumor under the ſpurious Ribs on the Left Side, where the Spleen is ſituated, imagin'd that the Seat of the Diſorder was in this Organ. This Opinion is eſpouſed by *Rhodius* and *Heurnius*. But beſides that the Spleen, in conſequence of its Structure, is not ſuſceptible of that acute and lancinating Pain perceived by hypochondriac Patients, we are taught by Experience, and the Diſſection of Carcaſes, that in hypochondriac Patients the Spleen is often found without any Diſorder. *Sylvius*, in his *Diſſert. de Uſu Lienis*, *Hoefferus*, *de Hercule Medica*, *Lib.* 3. *Cap.* 3. and *Hochſtederus*, *Dec.* 5. are of my Opinion. We are not, however, to deny, that there may, in this Diſorder, be an Infarction of the Spleen, though this Infarction is neither the Cauſe of the acute Pain, nor the Spleen the Seat of the Diſorder.

Some of the Moderns place the Seat of this Diſorder in the *Vena Portæ*, and its Ramifications, and think that the Blood ſtagnating there is the ſole and genuine Cauſe of all the Symptoms, which, in Men, have a Relation to the hæmorrhoidal, and in Women to the menſtrual Diſcharge; and that when theſe Diſcharges are promoted, the Symptoms ceaſe. But though 'tis not to be denied, as we ſhall afterwards obſerve, that Irregularities of theſe Evacuations, and the conſequent Stagnation of the Blood, eſpecially in thoſe Ramifications which are diſtributed through the nervous Coats of the Inteſtines, may often prove the ſecondary Cauſe of this Diſorder; yet we muſt obſerve, that this is not always the ſole and only Cauſe; for which Reaſon neither the Seat of the Diſorder, nor the Nature of the Symptoms, are to be ſought for here; for frequently there is no Diſpoſition to an hæmorrhoidal Diſcharge in hypochondriac Patients. And frequently Blood is copiouſly diſcharg'd from the Veins of the Anus, without any ſubſequent Relief of the Diſorder, as we are inform'd by *Rhodius Centur.* 2. *Obſ.* 93. *Claudinus*, *Conſil.* 89. and *Montanus*, *Conſil.* 246.

But I am of Opinion, that the true and genuine Seat of this Diſorder is lodged in the alimentary, membranous, and highly nervous Canal, which conſtitutes the Stomach and Inteſtines. This Canal conſiſts principally of four Coats: The innermoſt, known by the Name of villous, is furniſhed with erect and pervious Villi, like Papillæ. The Coat next to the villous is the nervous Coat. The third is the muſcular Coat, ſomewhat ſtronger, conſiſting partly of a few longitudinal, and partly of annular Fibres, and containing a large Number of Blood-veſſels. The outermoſt is the membranous Coat. There are three cellular Contextures between theſe Coats, one betwixt the villous and nervous Coat, another betwixt the latter of theſe and the muſcular Coat, and a third between that and the membranous Coat, commonly called the *Tunica Celluloſa* of *Ruyſch*. By the Strength of the muſcular Coat, and its annular fleſhy Fibres, theſe Parts are furniſhed with a kind of vermicular or periſtaltic Motion, which conſiſts in a gentle Conſtriction and Relaxation from the ſuperior to the inferior Parts. The natural Strength and Soundneſs of this Motion contribute not a little to the Preſervation of Health; for, by its means, the Digeſtion of the Aliments is duly carried on; the Secretion of the Bile, and pancreatic Juice, aſſiſted; the Preparation of a laudable Chyle, and its Propulſion into the lacteal Veſſels, promoted; by which means the other Juices of the human Body are render'd, at once, balſamic and ſpirituous. Beſides, by this periſtaltic Motion of the Inteſtines, the Crudities, Sordes, flatulent and aerial Vapours, left by thoſe digeſted Aliments, which are depriv'd of a laudable Juice, are propel'd through the alimentary Duct, and eliminated by the Anus. The Tone of theſe Parts, when ſound, and in its natural Degree, greatly facilitates and aſſiſts the free and equable Circulation of the Blood, and thus proves the principal Means by which the Functions, by Nature aſſign'd to the Inteſtines, may be duly perform'd.

After premiſing theſe things, we ſhall find it more eaſy to aſſign the immediate Cauſe, and account for the various Symptoms with which this Diſeaſe is attended. The Cauſe, then, of this Diſtemper conſiſts in a preternatural State of this periſtaltic Motion; when, for Inſtance, it is partly in one Place impair'd and deſtroy'd, partly in another too intenſe, and ſtrong, and every-where inverted, that is, perform'd from the inferior to the ſuperior Parts; for ſuch a Relaxation, and ſpaſmodic Diſtention, exiſting at one and the ſame time, in the Inteſtines, but ſucceeding each other in different Parts, conſtitute the true and genuine Nature of the hypochondriac Diſorder, and lay an excellent Foundation for accounting for all its Symptoms. This Opinion is confirm'd not only by Experience, but, alſo, by the Authorities of the moſt learned and celebrated Phyſicians, ſuch as *Ortlobius*, *Ettmuller*, *Needham*, *Wedelius*, and *Conringius*, in his *Diſſert. de Morbo Hypochondriac. Sect.* 11. Let us, therefore, try, whether, from this Cauſe, we can aſſign rational and ſatisfactory Reaſons for the numerous and direful Train of Symptoms with which this Diſorder is accompanied.

The immediate Conſequences, therefore, of a weakened periſtaltic Motion, are, a diſturb'd Digeſtion, an impair'd Chylification, and an obſtructed Excretion of the recrementitious Sordes. Hence theſe remain in the Inteſtines, and their acid and viſcid Crudities are, in a particular manner, inſinuated into the Flexures and Foldings of them, and a large Quantity of Flatulences is generated. Hence it happens, that theſe Sordes, by their long Stay in the Inteſtines, recede from their natural Qualities, and contract a certain Acrimony, by which they vellicate the nervous Coat of the Inteſtines, and excite ſpaſmodic Strictures. This Canal of the Inteſtines is, therefore, ſo violently conſtricted in ſome Places, that it cannot tranſmit the Flatulences. Theſe Flatulences fluctuate in that Part of the Canal, which is free from the Spaſms, and ſurpriſingly diſtend it; and this Circumſtance accounts for the Rumblings, Murmurings, and uneaſy Inflations. Beſides, the Flatulences, not finding a Paſſage downwards, by reaſon of the Spaſms, are forced farther upwards; and, in this Caſe, they principally poſſeſs the Colon, and are pent up in its Flexures, which are very numerous. For we muſt obſerve, that the Colon, eſpecially where it forms Flexures, under the ſpurious Ribs in both the Hypochondria, and coheres with the *Sactus Adipoſus* of the Kidneys, is far narrower than in its Middle. But here, eſpecially on the Left Side, it is frequently and violently diſtended with Flatulences, and elevated into a painful Tumor, which is falſely aſcribed to a Fault of the Spleen. When theſe Spaſms are continued, the periſtaltic Motion inverted, and the Diſorder increaſed, theſe Vapours penetrate into the Cavity of the Stomach, which they ſurpriſingly diſtend, and induce an uneaſy Inflation perceptible by the Senſes. The Stomach, being thus preternaturally diſtended, hinders the free Motion and Deſcent of the Diaphragm: Hence the Difficulty of Breathing ariſes. And, which is worſt of all, the Left or both Orifices of the Stomach are frequently conſtricted; by which means the Vapours are pent up in its Cavity, and produce terrible Uneaſineſſes of the Præcordia, and Cardialgias; which are conſiderably abated and mitigated when the Conſtrictions ceaſe, and the Vapours are diſcharged in Eructations.

Theſe are the Effects produced by the Flatulences, which, in conſequence of the deſtroyed periſtaltic Motion of the Stomach and Inteſtines, are, at once, copiouſly generated, and hindered from a due Diſcharge. The Diſorders of this kind were, by the *Greeks*, call'd τὰ παθήματα φυσώδεα. Let us now inquire, what Symptoms are produced by the Crudities left in the Stomach, the Duodenum, and the Foldings of the Colon, by the Aliments taken and diſſolved in the Stomach, in conſequence of an undue periſtaltic Motion. Theſe Crudities, by reaſon of their long Continuance, eſpecially in the Duodenum, where they meet with a large Quantity of the Bile and pancreatic Juice, are ſoon corrupted, become aceſcent, and aſſume an high Degree of Acrimony. Hence, by vellicating the Parts, they prove the Cauſe of Spaſms, tenſive Griping, lancinating and corroding Pains, which violently afflict the Region of the Stomach, and the reſt of the Abdomen, eſpecially about the Navel; by which means they lay a Foundation for a perpetual and uninterrupted Generation of freſh Flatulences. From theſe Sordes, alſo, ariſe the Keenneſs of the Appetite, Nauſeas, Cardialgias, Inclinations to vomit, Eructations, and acid Vomitings; and ſince in every Digeſtion they are put into a more violent fermentative Motion, hence the Reaſon is obvious, why hypochondriac Patients are worſt after feaſting ſumptuouſly: And ſince, in conſequence of ſo continual a Stimulus of the Inteſtines, their alternate Spaſms, and flatulent Diſtentions, are produc'd, hence the Reaſon is obvious, why hypochondriac Patients are coſtive, and that, ſometimes, to ſuch a Degree, that the fine Exhalations cannot be diſcharged, much leſs the Fæces.

It ſtill remains, that we enumerate the Diſadvantages accruing to the Circulation of the Blood, from the diſorder'd periſtaltic Motion: For, as, when this latter is in its due and natural State, a free and equable Circulation of the Humours is performed thro' the Inteſtines; ſo, when the periſtaltic Motion is either impair'd or deſtroy'd, the Circulation of the Blood thro' them is, of courſe, render'd proportionably ſlower, and more unequal; for in one Part of the Inteſtines there is a Spaſm, which, at once, conſtricts and compreſſes the Blood-veſſels; in another Part, Flatulences diſtend and expand the Sides of their Coats, and, by that means, violently compreſs the adjacent ſmall Veſſels. By this means, the Return of the Blood thro' the hæmorrhoidal Vein is more retarded, ſince the Situation of that Vein is perpendicular. Hence there every-where ariſe Stagnations of Humours in the Coats of the Inteſtines, which, as they may, for the Reaſon already given, be Symptoms attending the Flatulences, ſo they generally prove the Cauſes of them, as we ſhall afterwards ſhew. Firſt, it frequently happens, that the Blood is accumulated about the Extremity of the Rectum, and elevated into a Tubercle, called the blind Hæmorrhoids; and, alſo, frequently burſting forth with Force, terminates in an hæmorrhoidal Diſcharge; which, in this Caſe, is ſymptomatic. From this Stagnation ariſe, alſo, the Suppreſſions both of the *Menſes* and *Hæmorrhoids*, which always happen as the Diſorder increaſes. And from this Stagnation we may, alſo, account for the bloody

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and black Diſcharges by Urine, Vomit, and Stool, which Authors, of great Veracity, affirm to have been made by Perſons labouring under violent Degrees of this Diſorder. With reſpect to ſuch an Evacuation by Vomit, the Reader may conſult *Kiolanus Anthropol. Lib. 2. Cap. 2.* An Inſtance of one by Stool may be ſeen in *Adrianus Spigelius's Anatom. Lib. 6. Cap. 5.* and in *Solenander, Conſil. 7. Sect. 2.* And I myſelf, ſays *Hoffman*, ſaw the Urine of an hypochondriac Patient tinged with an intenſely red Colour.

Theſe Things happen in the inteſtinal Canal, but, after this, the Diſorder growing worſe, the moſt terrible Symptoms ariſe thro' all the Body, and diſturb all its Functions. This happens in conſequence or the Conſent between all the Nerves and nervous Parts, by means of which the Spaſms of the Inteſtines are propagated to other, and even the moſt remote Regions. Where there is a ſpaſmodic Stricture of the Nerves, there the Circulation of the Blood is unequal. Hence the Reaſon is obvious, why in inveterate hypochondriac Diſorders there are ſpaſmodic Strictures, and a ſlow Circulation through the whole Body. Thus the Parts of the Abdomen, adjacent to the Inteſtines, are firſt conſtricted; and, in conſequence of the Diſorder of the Bladder, and its Sphincter Muſcle, and of the Kidneys, the Urine is diſcharged thin, diluted, and aqueous. By means of the violent Convulſions of the nervous Membranes ſurrounding the Kidneys, Pains reſembling thoſe of the Stone are produc'd. The Spaſms convey'd to the Breaſt induce its Conſtrictions, together with Tremors and Palpitations of the Heart. When theſe Spaſms are conveyed to the Head, Pains of various Kinds are brought on; and, when they are propagated to the external Parts, they produce Coldneſs of the Extremities, and frequent Horripilations.

Since, therefore, in the hypochondriac Diſorder, a thick and impure Chyle is generated, Spaſms produced in the whole Body, the Circulation of the Blood render'd unequal, and the ſalutary Excretions by Sweat, Urine, and Stool, obſtructed, a ſcorbutic Dyſcraſy muſt of courſe be gradually increaſed, and thus the hypochondriaco-ſcorbutic Diſorder is formed. If, in Women, the Menſes are ſuppreſs'd, and by this means the Blood, or ſeminal Humours, become ſtagnant about the Uterus, and Parts ſubſervient to Generation, eſpecially when a ſalacious Temperament concurs, then hyſteric Fits are readily complicated with hypochondriac Diſorders; and the hypochondriaco-hyſteric Affection is produced. When thick and viſcid Humours are, by the Spaſms of the Lower Belly, copiouſly convey'd to the ſuperior Parts and Head, where they circulate ſlowly in the Veſſels of the Brain; the animal Functions are deſtroyed; the Senſes languiſh; the Force of the Memory, and Brightneſs of the Genius, are impair'd; the Patient is prone to Sadneſs, Diffidence, and Tears; fooliſh Fancies, and vain Ideas, ariſe in the Mind; and thus, by ſlow Degrees, an hypochondriac Melancholy is produced.

We now come to conſider the direct and immediate Cauſes of this Diſorder: Of theſe the moſt conſiderable, and frequent, is a Stagnation of the vital Juices between the nervous and muſcular Coats of the Inteſtines, which is, moſt frequently, owing to their ſlow Circulation through the Liver: Now the Liver is a vaſcular Organ, furniſh'd with more Veins than Arteries; the two moſt conſiderable of the former are the Vena Cava, and the Vena Portæ: Now it is certain, that the latter of theſe, from which the whole Inteſtines, Stomach, Meſentery, Spleen, Pancreas, and Uterus, receive, if not all, yet, at leaſt, moſt, of their Ramifications, by a peculiar Mechaniſm, receives the Blood returning from all the Viſcera of the lower Abdomen, and, diſcharging the Office of an Artery, but without a Pulſation, conveys it into the Liver: Hence the Reaſon is obvious, why, in a ſound State, the Circulation of the Blood is ſlower through the Liver, than through any of the other Viſcera of the Body: Hence it is no hard Task to conceive, why, in a preternatural and diſorder'd State, the Circulation of the Blood through this Organ ſhould be firſt of all retarded and obſtructed: Now, when the Circulation is retarded here, the Blood, according to the Laws of Hydraulics, muſt, neceſſarily, regurgitate to thoſe Viſcera, from which it was before convey'd to the Liver: For this Reaſon it greatly diſtends the Veſſels of theſe Parts, eſpecially the Veſſels of the Meſentery and Inteſtines, whoſe ſoft Coats are not capable of making great Reſiſtance. Thus, from this ſlow Circulation of the Blood through the Liver, ariſes its Stagnation in the Inteſtines, which deſtroys the due Æquilibrium between the Solids and Fluids, and is, as it were, the immediate Cauſe which deſtroys the Tone and Strength of the periſtaltic Motion, a Circumſtance which produces the hypochondriac Diſorder.

This is the Reaſon, why, in the Carcaſes of thoſe who have died of the hypochondriac Diſorder, degenerated into ſome other Diſeaſe, ſuch Phenomena appear, as proceed partly from a faulty Circulation of the Blood through the Abdomen, and partly from Cauſes which tend to render this Circulation ſtill more faulty. Thus *Guarinonius, in Conſil. 484.* informs us, that, on diſſecting the Body of an hypochondriac Patient, he found the Veins of the Meſentery obſtructed, and ſo dilated, that they, in a manner, reſembled Inteſtines. *Ludovicus Mercatus, Tom. 3. L. 1. C. 7.* tells us, that he found the meſeraic Veſſels of an hypochondriac Patient highly varicoſe. *Brunner. in Conſil. 7.* informs us, that he found a great Quantity of viſcid Blood in the meſeraic Veins. *Rhodius, in Cent. 2. Obſ. 76.* tells us, that he found the Colon ſcirrhous. *Welſchius*, in his *Diſp. de Malo hypochondriaco*, tells us, that he found the whole Colon diſtended with Flatulences; but ſo contracted at its Inſertion into the Inteſtinum Rectum, that it ſeem'd to be, as it were, grown together. *Blaſius*, in his *Comment. in Veſlingium*, informs us, that in ſome hypochondriac Patients the Liver has, after Death, been found incredibly large. And I myſelf ſaw the Pancreas obſtructed in a Perſon who died of the hypochondriac Diſorder. *Highmore*, in his *Diſquiſ. Anatom.* and *Harder. in Obſ. 59.* inform us, that they found the Pancreas ſcirrhous and ulcerated in hypocondriac Patients.

Among the remote Cauſes which greatly contribute to the ſlow Circulation of the Blood through the Liver, and its conſequent Stagnation in the Viſcera of the lower Belly, and, principally, the Inteſtines, the moſt conſiderable are Diminutions and Suppreſſions of the Menſes in Women, and of the Hæmorrhoids in Men.

Thus, it is certain, from Obſervation, that thoſe Perſons, who, when young, have been much ſubject to large Hæmorrhages from the Noſe, readily fall into this Diſorder, if, at a more advanced Age, they are ſeiz'd with the Hæmorrhoids, which generally ſuppoſe an hereditary Diſpoſition, and greatly facilitate the Circulation of the Blood through the Abdomen and Liver, and theſe Hæmorrhoids are, by any means, ſuppreſs'd; for the redundant Blood, being, in conſequence of this Suppreſſion, retain'd, is accumulated in the Abdomen, and, conſequently, for the Reaſon already advanced, circulates more ſlowly thro' the Liver, and, regurgitating to the Inteſtines, undergoes a deplorable and injurious Stagnation. The ſame holds true with the menſtrual Diſcharge, which, when diminiſh'd, or ſuppreſs'd, produces an Accumulation of Blood in the meſeraic Artery, where it attempts its Diſcharge by the hæmorrhoidal Veins; and, this being denied, regurgitates to the Inteſtines, and renders the Circulation of the Humours proportionably more difficult. Thus, in the Female Sex, hypochondriac Diſorders are frequently generated, which may be eaſily complicated with thoſe of the hyſteric kind, if, at the ſame time, a Stagnation of the Blood ſhould happen about the Uterus. In Caſes of this Nature, a ſpeedy and ſeaſonable Reſtitution of theſe Evacuations proves the moſt certain and natural Cure of hypochondriac Diſorders.

But there are ſtill a great many other Cauſes, which may diſorder the periſtaltic Motion of the Inteſtines, and, by that means, generate the hypochondriaco-flatulent Diſorder. Among theſe, the moſt conſiderable is what we call *Hereditary Diſpoſition*, which conſiſts in a weak Conſtitution of the nervous Parts, eſpecially of the Inteſtines, convey'd from Parents to Children, by means of which the Inteſtines are highly ſuſceptible of irregular Motions. To this we muſt, alſo, aſcribe the Smalneſs of the Veins, and the lax and ſpongious Habit generally obſerv'd in hypochondriac Patients. As this hereditary Diſpoſition is the Foundation of many Diſeaſes, ſo it, in a particular manner, contributes to the Production of the hypochondriac Diſorder, and the Hæmorroids. Thus, hypochondriac Patients propagate Children ſubject to the ſame Misfortune; and thoſe Mothers, who, during Geſtation, have been affected with hyſteric Fits, or indulged themſelves in Sallies of Paſſion, bring into the World Children, who, when advanced in Years, are, upon the ſlighteſt Occaſion, ſubject to hypochondriac and flatulent Diſorders.

Some of the Non-naturals, alſo, contribute not a little to the Generation of this Diſorder. Thus, a cold Air is of conſiderable Efficacy in the Production of this Misfortune; ſince, by conſtricting the external Surface of the Body, it forces a larger Quantity of the Humours inwards, which, the more they are accumulated, the more readily they become ſtagnant. A moiſt State of the Atmoſphere relaxes the Tenſion of the moving Fibres; a Circumſtance by which all the Diſeaſes, ariſing from a Want of due Tone in the Parts, are both generated and increaſed. Cold is, in a particular manner, prejudicial to the Inteſtines, when too freely admitted to the Abdomen, or Feet, the near Connection of which laſt with the Inteſtines is ſufficiently obvious from this, that delicate Perſons are forthwith ſeiz'd with Gripes, and Flatulences of the Inteſtines, if they walk barefoot upon cold Floors; as *Foreſtus, Lib. 10. Obſ. 10.* obſerves of his Brother. Hence the Reaſon is obvious, why hypochondriac Patients enjoy better Health in Summer, than in Winter; as, alſo, why, in Northerly Climates, this Diſorder is far more frequent, than in thoſe Countries which are bleſs'd with a more ſerene and temperate Air.

Beſides the Air, coarſe and thick Aliments, alſo, prove the antecedent Cauſe of the hypochondriac Diſorder. Crude, acid, flatulent Aliments, Puliſes, Summer-fruits, Preparations of Milk, Sallads, Cakes, eſpecially when recent and hot, generate a thick and impure Chyle, leave many Sordes in the Primæ Viæ, and remarkably diſorder the periſtaltic Motion of the Inteſtines, eſpecially in Perſons who do not uſe ſufficient Exerciſe. Ali-

ments either not ſufficiently maſticated, or greedily eaten, by Perſons whoſe Stomachs are weaken'd by previous Diſeaſes, are highly prejudicial, and contribute much to the Production of this Diſorder. For this Reaſon *Blancard, in Prax. Cap.* 61. affirms, that this Diſorder is highly incident to the Inhabitants of *Friſeland*, in conſequence of their Abuſe of Peas, Preparations of Milk, and Sallads. And *Simon Paulli*, in his *Quadripartit. Botan.* gives us an Inſtance of a Woman, who became hypochondriac, by eating Bread immediately taken from the Oven. Drink may, upon a double Account, produce this flatulent Diſorder; either when it is taken too liberally, or taken cold when the Body is hot. In the latter Caſe, the Misfortune is almoſt inſtantaneouſly produced: In the former Caſe, the Diſorder is contracted by reiterated Acts, and proves a ſufficient Puniſhment for the paſt Indulgence in Gluttony. The Drink may, alſo, contribute to the Production of this Misfortune, if its Quantity is too ſmall, or too large; or if it is aqueous, too thick, or feculent.

This Diſorder frequently ariſes from an idle and ſedentary Life, which is often the only Cauſe of the Diſeaſe: For, as due Exerciſe not only increaſes the Strength and Motion of the ſolid Parts and Muſcles, but, alſo, renders the Humours more fluid; ſo, upon an Intermiſſion of this Exerciſe, the Strength becomes languid, the Elaſticity of the Fibres is impair'd, and the Humours, in conſequence of their undue Circulation, become thick. This ſedentary Life contributes ſo much the more effectually to the Production of this Diſorder, if immoderate Lucubrations, Meditations, and protracted Studies, are join'd with it. Any of theſe Cauſes contributes conſiderably to impair the Elaſticity of the ſolid Parts, eſpecially when they, who indulge themſelves in theſe things, hang their Bodies in a ſleeping Poſture over their Books; and are ſo ſedulous, that they are intent on their Studies amidſt the moſt delicious Banquets. Hence it is, that thoſe Women who indulge themſelves in Idleneſs, and drink little, as, alſo, ſtudious Men, are highly ſubject to hypochondriac Diſorders.

The Paſſions of the Mind, alſo, contribute conſiderably to the Production of this Misfortune; but the moſt conſiderable and powerful of theſe are long Grief, Care, and an anxious and uneaſy State of Mind. The Efficacy of theſe, in deſtroying the Strength of the ſolid Parts, and impairing the Digeſtion, is ſufficiently obvious from Experience. Thus *Horſtius*, in *L.* 4. gives us an Inſtance of a Man, who, for the Death of his Son, griev'd ſo long, that he became hypochondriac, and, at laſt, melancholy. And *Pechlinus, in Obſ.* 31. informs us of a certain Taylor, who was ſo griev'd for his Misfortunes, that he became ſubject to violent Flatulences, and hypochondriac Diſorders. A ſalacious wanton Turn of Mind, and its natural Conſequence, immoderate and too early Venery, are of ſo great Efficacy in weakening the Strength of the Stomach and Inteſtines, that I have frequently known hypochondriac Diſorders produced by this means.

It, alſo, frequently happens, that thoſe who are weakened by previous Diſeaſes, eſpecially when prepoſterouſly cured by aſtringent Medicines, Opiates, and Narcotics, as, alſo, Women debilitated by hard Labours, are afflicted with this Diſeaſe; for in theſe the Tone of the Stomach and Inteſtines, being highly languid, is eaſily deſtroy'd by the ſmalleſt Error in Regimen, or by giving way to the Tranſports of Paſſion. In like manner, I have often obſerv'd Perſons ſeiz'd with Colics, Gripes, Diarrhœas, and Dyſenteries, who, having the Misfortune to have their Diſorders treated with Aſtringents, have gradually fallen into violent Flatulences, and hypochondriac Affections. I have, alſo, more than once obſerv'd the ſame Misfortune produced by ſtopping a Gonorrhœa, or Fluor albus, too ſoon, by means of Magiſtery, and Sugar of Lead. A Caſe of this kind may be ſeen in *Hoffman, Conſult. ac Reſponſ. Medic. Tom.* 2. § 3. *Caſ.* 99. And nothing is more common, than the Production of hypochondriac Diſorders by the prepoſterous Suppreſſion of intermittent Fevers, or the unskilful Uſe of the *Peruvian* Bark under them; eſpecially if the Patient abounds with thick Humours, is addicted to a ſedentary Life, or ſubject to Spaſms of the Primæ Viæ. *Horſtius, in Lib.* 10. *Obſ.* 28. furniſhes us with an Inſtance of this kind. And I myſelf have often ſeen hypochondriac Affections brought on by the Suppreſſion of tertian Fevers. Women, alſo, frequently become hypochondriac after difficult, or ill-managed Labours. And, in general, whatever Diſeaſes, whatever Cures, or whatever Cauſes, are capable of injuring or deſtroying the periſtaltic Motion of the Stomach and Inteſtines, are juſtly claſs'd among the productive Cauſes of hypochondriac Diſorders. Among theſe we muſt, alſo, claſs Purgatives, and draſtic Emetics, frequently exhibited, eſpecially Preparations of Aloes, and the unskilful or exceſſive Uſe of Pills which contain Aloes; by which the Humours are invited to the Anus, and, being denied a Diſcharge, become ſtagnant there.

It now remains, that we diſtinguiſh this Diſorder from ſome others, in order to prevent their being confounded with each other, and then ſubjoin ſomething with reſpect to the Prognoſtics. The Difference, then, between this Diſorder and hyſteric Fits is ſpecified under the Article HYSTERICA AFFECTIO. We have already obſerv'd, that in this Diſorder the periſtaltic Motion of the Inteſtines is inverted; but ſince this Inverſion is, alſo, the Cauſe of ſome other Diſorders, we muſt inquire, what Difference there is betwixt theſe, and that of which we now treat. Thus, in Vomiting, and the Iliac Paſſion, the periſtaltic Motion is inverted; but, in Vomiting, this Inverſion begins from the Pylorus, or, perhaps, the Duodenum, and is continued thro' the Stomach and Gullet to the Fauces; whereas, in the Iliac Paſſion, the Motion of the whole inteſtinal Canal, from the Sphincter of the Anus to the Orifice of the Oeſophagus, is inverted by violent Spaſms and Convulſions, which are accordingly ſucceeded by a Vomiting of the Fæces. But it is quite otherwiſe in the hypochondriac Diſorder; for in it the Inverſion of the periſtaltic Motion is only in ſome Parts of the Inteſtines; and thoſe which are free from it, afford a Seat for the flatulent Vapours. Hence we are enabled to account for the Rumblings and Noiſes which are ſometimes pretty loud in the Abdomen; as, alſo, for the Flatulences carried up and down through all the Parts of the Abdomen, and to the Sides, eſpecially in the Morning, or after intenſe Application of Mind, without any ſubſequent Diſcharge of Wind, or of the Fæces, by the Anus; for theſe Vapours, being pent up in particular Parts of the Inteſtines, are ſoon after driven, by the Spaſms, with a conſiderable Impetus, to other Parts; which Circumſtance ſufficiently accounts for the Noiſe and Rumbling.

The hypochondriac Diſorder is, alſo, different from the Colic, which frequently ſucceeds it; for, as the former is a long-protracted Diſorder, which ſometimes ſeizes, notwithſtanding the Obſervation of the moſt accurate Regimen; ſo a Colic is ſhorter, more tranſitory, generally ariſes from ſome Fault of the Aliments, and is accompany'd with Gripes of the Inteſtines, and an obſtinate Conſtipation, upon the Removal of which, it directly ceaſes; whereas the hypochondriac Diſorder is accompany'd with far more numerous and violent Symptoms. Hypochondriac Affections ought, alſo, to be carefully diſtinguiſh'd from the Stone in the Kidneys; for, tho' the former is frequently attended with Pains reſembling thoſe of the latter, yet no Excretion of ſmall Stones enſues; and if, perhaps, in the Urine, any Sand ſhould be obſerv'd, it after ſome time adheres to the Bottom of the Pot, like that Matter which is diſcharged in conſequence of a ſcorbutic Dyſcraſy of the Fluids; whereas, in genuine nephritic Pains, the Urine is, immediately after its Diſcharge, obſerv'd to contain Sand, and the Caſe is known by the Evacuation of ſmall Stones. Nor is a ſimple Flatulence, which is ſuddenly produc'd by Aliments of hard Digeſtion, and may be eaſily remov'd by the Exhibition of Carminatives, to be forthwith taken for the hypochondriac Diſorder, tho' the former may indicate the Beginning of the latter.

As for the Prognoſtics of this Diſorder, recent, and if it is left to itſelf, it is rather troubleſome, than ſpeedily fatal: But, when inveterate, it is not to be cured without great Difficulty; and when the Cure is prepoſterouſly attempted, or a bad Regimen obſerv'd, it generally is accompany'd with a violent and formidable Train of Symptoms, ſuch as Obſtructions and Scirrhuſes of the Viſcera, Cachexies, Dropſies, Hectics; and, by a Tranſlation, convulſive Aſthmas, Madneſs, incurable Melancholy, and Polypuſes, which prove mortal: A memorable Inſtance of which laſt, we are furniſh'd with by *Zachias*, in *Lib.* 3. *Cap.* 15. If the hypochondriac Diſorder is ſupported by Suppreſſions of the Menſes, or Hæmorrhoids, the Misfortune is often totally remov'd by a ſeaſonable Reſtitution of theſe Diſorders, either by Nature or Art. But great Care is to be taken, leſt, when the Diſeaſe is long protracted, we ſhould take a ſymptomatic hæmorrhoidal Diſcharge, for one of the critical and ſalutary Kind; for, by the former, the Diſeaſe is far from being reliev'd, whereas the latter is generally highly beneficial and advantageous.

THE CURE.

The Cure of a recent hypochondriac Diſorder is eaſily and ſoon perform'd; but when the Diſeaſe is ſo deep-rooted, that the Circulation of the Humours thro' the whole Body is diſordered and irregular, and the Tone of the ſolid Parts almoſt totally deſtroy'd, theſe Cauſes of themſelves not only require laborious, continued, and long-protracted Meaſures for their Removal, but, alſo, the incredible Perverſeneſs of the Patients, renders the Cure more difficult; for, in conſequence of the ſlow Circulation of the thick Blood thro' the Brain, they are inclined to continual Dread and Diffidence; for which Reaſon, they are always afraid not only of the greateſt Danger, but alſo of Death itſelf. Beſides, being fickle, giddy, and unconſtant, they apply to many Phyſicians, and make Trial of various Medicines; by which means their State is render'd ſtill worſe. The Phyſician, therefore, who attempts a Cure of this Diſeaſe, ſhould firſt order the Perſon, labouring under it, to be conſtant and patient; and then to purſue the following Intentions of Cure:

Firſt, To evacuate the flatulent Matter, and to correct, and gradually, eliminate, the acrid, viſcid, and bilious Sordes of the Primæ Viæ, which ſupply the Diſorder with perpetual Nouriſhment.

Secondly,

Secondly, After allaying the Spaſms to reduce the inverted periſtaltic Motion of the Inteſtines to its natural State, and, if too languid, to corroborate it, that the Concoction of the Aliments may be duly carry'd on, and a rich and laudable Chyle, and other Humours generated.

Thirdly, To diſcuſs the ſtagnant Juices, render the Circulation of the Blood thro' the Abdomen, and all the other Parts of the Body, equal; and to purge the Humours from Acrimony, by facilitating the cutaneous and urinary Excretions. And,

Laſtly, To corroborate the whole nervous Syſtem.

The firſt of theſe Intentions is principally to be anſwered, during the hypochondriac Paroxyſms, or when the Symptoms are preternaturally exaſperated, which generally happens after violent Commotions of Mind, Errors in Regimen, or in the Winter or Autumn. In order, therefore, to derive the inverted Motion of the Inteſtines downwards, allay the Spaſms, expel the Flatulences, and eliminate the Sordes, no Remedy is more infallible and efficacious than Clyſters which may be prepar'd of emollient Herbs, a Decoction of Oats, of Chamomile-flowers, of the Tops of Yarrow, the Oils of ſweet Almonds, Dill, Chamomile and Linſeed; with an Addition of the carminative and diſcutient Species, the Seeds of Dill, Caraway, and eſpecially Cumin. The Cure is to be begun with an Injection of theſe Clyſters, and, as the Spaſms of the Inteſtines frequently prevent their due Effects, they are to be often repeated, eſpecially if the Fæces are indurated; in which Caſe 'tis alſo expedient to exhibit large Quantities of the Oil of ſweet Almonds, internally, or to order the Patient to drink liberally of Water-gruel. Nor is the internal Exhibition of demulcent and gently laxative Medicines to be neglected; the moſt efficacious of which are, Infuſions prepar'd of Manna, Rhubarb, and Cream of Tartar; with an Addition of Oil of Juniper. Thus *Rhodius*, in *Cent.* 2. *Obſ.* 2. informs us, that he knew the hypochondriac Diſorder ſucceſsfully remov'd by the frequent Exhibition of Rhubarb.

A ſpeedy and ſingular Relief is, alſo, afforded by the frequent Exhibition of a Dram, or more, of the neutral Salts obtained from the *Epſom*, *Sedlitz*, and *Caroline* Waters, if exhibited with ſome proper Abſorbent, Rhubarb, Orange-peel, and Nitre, and drank in a large Quantity of pure Water. Very happy Effects are, alſo, produc'd by Raiſins impregnated with Rhubarb, laxative Apples boil'd, or, if the Stomach can bear them, raw; and laxative Prunes, which have frequently render'd the Body ſoluble, when all other Purgatives have been tried in vain, as we are inform'd by *Thonerus*, in his *Obſervat.* Great Benefit is alſo obtain'd from mild balſamic Pills; ſuch as the Pilulæ Solænandri, the Pilulæ Cratonis, the Pilulæ Aloephanginæ, the Pilulæ Marocoſtinæ, the Pilulæ Tartareæ Schroederi, or the Pilulæ Becherianæ, the Pilulæ Stahlianæ, or the balſamic Pills, interpoſing an aperitive Powder between each Doſe. Or, if there is a Load of acid Fæces in the Inteſtines, Crabs-eyes, or the Magneſia Alba, alone, generally render the Body ſoluble. In the Intervals between the Paroxyſms, the Body is, alſo, to be kept ſoluble, and the Generation of Sordes prevented, by an alternate Exhibition of theſe Medicines, every eighth or fourteenth Day, as the State of the Patient ſhall require.

After the Body is render'd ſoluble, the next Intention of Cure is, to correct and qualify the acid and bilious Sordes lodg'd in the Primæ Viæ, and eſpecially in the Duodenum. This Intention is moſt effectually anſwered by abſorbent, precipitating, antiſpaſmodic, and gently carminative Powders, which not only mitigate the Spaſms, but by corroborating the Inteſtines, powerfully expel the Flatulences. The Powders of this kind may be prepar'd of Crabs-eyes, Mother of Pearl, the Pulvis Marchionis, purified Nitre, prepar'd Amber, Cinnabar, vitriolated Tartar, the Arcanum Duplicatum, and a little Caſtor, and exhibited in antiſpaſmodic Waters, eſpecially that diſtil'd from Chamomile-flowers, and Ale prepar'd of Wheat. But theſe Powders will be far more efficacious, if about twenty Drops of the Anodyne mineral Liquor are exhibited with them. This Intention is, alſo, promoted by ſuch Infuſions, as by a Diaphoreſis carry off the Sordes lodg'd in the Maſs of Blood, when ſupt in Bed in the Morning. The moſt uſual Ingredients for compoſing theſe, are the Herbs Baum, Paul's Betony, Betony, Agrimony, Scordium, Carduus Benedictus, the Tops of Yarrow, the Flowers of Daiſy, and common Chamomile, Fennel-ſeed, and ſtellate Aniſe.

In order to corroborate the Stomach, and reſtore its digeſtive Power, we may call in to our Aſſiſtance balſamic, and gently carminative Eſſences. But we muſt take care that they are not too ſpirituous, and by that means capable of throwing the Humours into more violent Commotions; which Misfortune infallibly attends the Exhibition of Aqua-vitæ, and the ſtomachic Eſſences generally us'd for this Purpoſe. But we may more ſafely uſe the Eſſence of Orange-peel duly prepar'd, the Tincture of Tartar, the Spiritus Nitri Dulcis, or Elixirs prepar'd of balſamic Herbs or Roots, with ſome lixivial Menſtruum; ſuch as the Elixir Viſcerale Stomachicum, which I have from long Experience found to be highly beneficial in flatulent and hypochondriac Diſorders; but the Uſe of theſe muſt be perſiſted in for a conſiderable time. In hypochondriac Paroxyſms, no ſmall Advantage is reap'd from waſhing the Feet in Baths moderately warm, which invites the Humours to the external Parts, and relaxes the Spaſms of the lower Belly. Baths for this Purpoſe may be prepar'd of River-water alone, with Bran, and Chamomile-flowers. But theſe ought not to be too hot, but moderately warm; and the Feet are to be immers'd pretty deep in them.

By the due Uſe of theſe Meaſures, the Violence of the Paroxyſms will be either totally remov'd, or conſiderably abated. But, ſince they are very ſubject to return, we muſt, to prevent this Misfortune, purſue the third Intention of Cure, which is to remove the Cauſes, diſcuſs the Stagnations of the Humours, open the Obſtructions of the Viſcera, and render the Circulation of the Humours equable thro' all the Parts of the Body. This Intention is excellently anſwer'd by Veneſections in proper Parts. But theſe are rarely to be us'd in the ſuperior Parts of the Body, leſt by this means we ſhould more effectually invite the Humours to them, which are already too copiouſly forced upwards by the ſpaſmodic Strictures of the lower Belly. Veneſections, in the Feet, are therefore moſt proper and beneficial, and, more or leſs, is to be taken away, according to the Quantity of Humours contain'd in the Patient's Body. The moſt commodious Seaſons for Veneſection are the Spring and Autumn, about the Equinoxes, or, if there is a Neceſſity for it, about the Solſtices, at which times, Commotions of the Blood are more frequent than at others. Veneſection will prove the more effectual, if the Body is previouſly render'd ſoluble, and the Humours deriv'd to the inferior Parts, by bathing the Feet. Beſides, if there is a Diſpoſition to the hæmorrhoidal Diſcharge, and if a Suppreſſion of this Evacuation excites the Diſeaſe, every Month a few Leeches are to be cautiouſly apply'd to the Anus. In this Caſe, it is alſo expedient, ſucceſſively for ſome Days, to exhibit mild balſamic Pills, with a nitrous antiſpaſmodic Powder.

But, in order to remove the Obſtructions of the Viſcera, correct the acid and impure Humours, promote the Excretions by Stool, Urine, and Sweat, provoke the ſuppreſs'd Diſcharges, and render the Circulation of the Blood equal, thro' all the Parts of the Body, I know of no Medicine, whether of the dietetic or pharmaceutic Kind, which is more ſafe and effectual than the prudent Uſe of Mineral Waters, with which Nature has ſo bountifully ſupplied us. But theſe Waters muſt neither be drank too liberally, nor muſt the Uſe of them too long be perſiſted in; for, by this means, they rather weaken and deſtroy the Tone of the Stomach and Inteſtines. The Body is alſo to be prepared for them, by removing the Sordes of the Primæ Viæ, and diminiſhing the Quantity of the Humours. Mild Laxatives, and due Exerciſe, are alſo to be uſed along with them. But there is a Choice to be made, with reſpect to theſe Waters; ſince, for Women, thoſe of a highly lax, and ſpongious Habit, and ſuch as are violently afflicted with Spaſms, hot Waters, and eſpecially the *Caroline* Springs, are moſt proper; or, if they ſhould rather chuſe cold mineral Waters, theſe ought to be uſed warm; whereas, for ſuch as are ſanguine, phlegmatic, and of robuſt Conſtitutions, the cold Mineral Waters of *Schwalbac*, *Ægra*, and *Pyrmont*, are moſt beneficial. Thoſe, on the contrary, who are of a firmer Habit, more agile, and of choleric Conſtitutions, receive moſt Benefit from the *Selteran* Springs, thoſe of the *Spaw*, *Toenſtad*, and *Wildungen*.

Great Relief is, alſo, to be expected from a due Regimen, which, if neglected, will render all Methods of Cure fruitleſs and ineffectual. A pure and temperate Air is, therefore, to be choſen, and the Patient is carefully to avoid a cold, moiſt, and cloudy Atmoſphere; and, in a particular manner, to refrain from ſleeping in ſuch an Air. Nor ought an exceſſive Dread of the Injuries of the Weather to reſtrain the Patient entirely from the free Uſe of the Air; leſt, by this over-done Care, his Conſtitution ſhould become too ſenſible and delicate; and, by that means, ſubject to be injured upon the ſlighteſt and moſt inconſiderable Change of Weather. But, above all, every Degree of Cold, eſpecially that ariſing from Northern Blaſts, is to be carefully kept from the Stomach, Loins, and Feet; ſince, when this is freely admitted to theſe Parts, the Inflation of the Stomach, the Pain of the Back about the lumbar Region, and the Gripes of the Inteſtines, forthwith return. Proper Aliments are, alſo, to be moderately uſed; ſince, when the Primæ Viæ are full of acrid and bilious Sordes, the moſt nutritive Subſtances are moſt prejudicial, according to *Hippocrates*, in *Aph.* 10. *Sect.* 2. where he tells us, "that the more we nouriſh Perſons, whoſe Juices are impure, "the more Injury we do them." The Patient is, alſo, carefully to abſtain from all Acids, ſalted Aliments, flatulent Subſtances, Pot-herbs, ſweet Cakes, Apples, Preparations of Flour, hot and aromatic Subſtances; nor is he to indulge his Appetite too much, eſpecially at Supper; for Abſtinence is the moſt ſovereign Remedy for all chronical Diſeaſes, as the Antients juſtly obſerv'd, and as *Carolus Piſo*, in his Treatiſe *de Morbis a ſeroſa Colluvie*, beautifully ſhews.

A right Choice of Liquors is, alſo, of great Efficacy and Importance in the Cure of this Diſorder. All Kinds of Malt Liquors load the Stomach, and are offenſive to it; but hot and ſpirituous Liquors are found ſtill more prejudicial. However,

old and generous *Rhenish*, or *Burgundy* Wine, diluted with Water, and drank ſparingly, may be allow'd at Meals, in order to ſtrengthen the Stomach. At other times, ordinary Drink, or the *Selteran* Waters, mixed with Wine, are to be uſed alternately. For this Purpoſe Decoctions to be drank cold, prepared of the Roots of Vipers-graſs, Succory, Sarſaparilla, and China-root, the Shavings of Hartſhorn or Ivory, the Roots of Liquorice and Carduus Benedictus, to which may be added Lemon or Orange-peel, are very proper. In ſanguine and choleric Patients, pure Water alone, if the Stomach is capable of bearing it, is highly beneficial, ſince it excellently allays the Commotions of the Blood.

In alleviating hypochondriac Diſorders, nothing is ſo powerful and efficacious as due Exerciſe, which ought never to be ſeparated from the other Means of Cure; for, by this, the Circulation of the Blood and Humours, together with a ſalutary Tranſpiration, a due Secretion and Excretion, are promoted, the Humours render'd more fluid, their Paſſage thro' the Lungs remarkably facilitated, the Motion of the Stomach and Inteſtines, and, conſequently, the Digeſtion, excellently aſſiſted. But, tho' Exerciſe is of ſo great Importance, yet the various Kinds of it, whether Riding, Walking, or riding in a Coach, are only to be moderately uſed; and are moſt proper, when the Digeſtion is at an End, and the Stomach not loaded with Aliments. Beſides, the Tranſports of Paſſion, and an immoderate Load of Medicines, are carefully to be avoided, as Things of the moſt pernicious and deſtructive Tendency. This Regimen, if, at the ſame time, the Body is kept ſufficiently ſoluble, and Veneſection is duly repeated, is not only the moſt efficacious Method of curing, but, alſo, of preventing, hypochondriac Diſorders.

When the Symptoms of the hypochondriac Diſorder are thus mitigated, the Cauſes removed, and all the Excretions rendered free and uninterrupted, a Relapſe is to be prevented by corroborating the Primæ Viæ, and the whole nervous Syſtem. This Intention is excellently anſwered, not only by a long-continued Uſe of the balſamic viſceral Elixir, and the Regimen already recommended, but, alſo, by Chalybeates; which, by their gentle Aſtringency, reſtore a due Strength and Tone to the weakened Fibres. Theſe are moſt commodiouſly exhibited in a liquid Form, as in Tinctures; or the Filings or Crocus of Mars may be commodiouſly exhibited in Powders, prepared of the Fæcula of Arum-root, Crabs-eyes, Amber, Cinnabar, the Arcanum duplicatum, and the aperitive Crocus of Mars, with the Addition of a few Drops of the Oil of Saſſafras-wood. The Barks of Caſcarilla and China-root, mixed with theſe Powders, are no leſs conſiderably efficacious. Another Powder may be, alſo, prepared of the Roots of Burnet and Arum, the Bark of Caſcarilla and Orange-peel, Amber, Mace, Cumin-ſeed, and Salt of Wormwood; which, by their mild and balſamic Quality, ſtrengthen the Stomach and Inteſtines, aſſiſt the Digeſtion, and prevent the Generation of Crudities. Nor is ſmall Advantage to be expected from the external Uſe of Chalybeate Baths; ſuch as thoſe of *Lanchſtad*, *Freyenwald*, and *Toeplitz*, to be uſed after drinking the *Caroline* Waters; ſince theſe, in Conjunction, greatly ſtrengthen the Body.

Nor are external Remedies to be omitted; ſince they are of ſingular Efficacy in violent Inflations of the Inteſtines. Among theſe, I am, from long Experience, convinced of the ſingular Virtue of the Emplaſtrum Camphoratum Soporatum of *Barbette*, or the Emplaſtrum Antiſpleniticum of *Fabricius ab Aquapendente*, applied to the Hypochondria. No leſs happy Effects will be produced by the Balſamum Vitæ, mixed with two Parts of Hungary Water, and applied by way of Ointment, Morning and Evening, to the Hypochondria.

Practical Cautions.

No Diſeaſe is more troubleſome, either to the Patient or Phyſician, than hypochondriac Diſorders; and it often happens, that, thro' the Fault of both, the Cure is either unneceſſarily protracted, or totally fruſtrated; for the Patients are ſo delighted, not only with a Variety of Medicines, but alſo of Phyſicians, that 'tis frequently requiſite to remind them of the following Maxim of *Montanus*: "Neither conſult Phyſicians, nor uſe "Medicines, and you'll ſoon recover." On the contrary, few Phyſicians are ſufficiently acquainted with the true Genius and Nature of this perplexing Diſorder; for which Reaſon they boldly preſcribe almoſt every thing contained in the Shops, not without an irreparable Injury to the Patient. Few pharmaceutical Preparations are of any Service for the Alleviation of this Diſtemper; and ſtrong generous Medicines, or thoſe called Cordials, are abſolutely next to Poiſon.

Among the Number of theſe, are, firſt, Vomits, which the Patients take ſometimes of their own accord, and, perhaps, oftener by the Advice of their Phyſician; eſpecially if they are afflicted with a violent Uneaſineſs of the Præcordia, Inflations of the Stomach, Naufeas, Efforts to vomit, Eructations, and ſuch an Obſtruction and Conſtriction of the Hypochondria, that they ſeem to be compreſs'd, as it were, with a Rope, or preſſed with a Weight. Nor is it to be denied, that, in ſuch a Situation, the Symptoms are, in ſome meaſure, relieved by a gentle Emetic. But I would have them abſolutely abſtain from the more draſtic ſtimulating Subſtances, for the Relief they afford is not only ſhort in itſelf, but brings after it a Train of highly terrible Symptoms. We are not, however, entirely to diſcharge gentle Vomits of Ipecacuanha mixed with Crabs-eyes. Nor are we to dread thoſe Vomits, which, by ſpaſmodical Conſtrictions of the Stomach, frequently happen to hypochondriac Patients, when they firſt begin to drink the *Caroline* Waters; for, when the Drinking is perſiſted in for ſome time, and the Mucus evacuated from the Bottom of the Duodenum, they will ceaſe ſpontaneouſly, and the Operation of the Water ſucceed the better.

Beſides, as the Phyſician's principal Care ought to be to preſerve the Body ſoluble, ſo he muſt beware of increaſing the Diſorder, by the Uſe of draſtic Purgatives, Preparations of Scammony and Jalap; for theſe ſtimulate the Inteſtines to violent Spaſms, throw the Humours into preternatural Commotions, deſtroy the Tone of the Parts ſtill more, and leave behind them a more obſtinate Conſtipation. Nor are Patients of delicate and tender Conſtitutions capable of bearing large Doſes of neutral Salts; but reap far greater Advantage from lubricating Aliments, Clyſters, Preparations of Manna and Rhubarb. Nor are the Pilulæ Polychreſtæ Balſamicæ, which contain Aloes, proper to be uſed by every Patient, or too frequently by any; eſpecially where there is no natural Diſpoſition to the hæmorrhoidal Diſcharge; and where the Redundance of Humours is not previouſly leſſen'd; for they ſtimulate the Inteſtinum Rectum, excite fruitleſs Efforts, and render the Stagnation and Dryneſs greater than they were before. On the contrary, when the Diſeaſe is encourag'd by a Suppreſſion of the Menſes, or hæmorrhoidal Diſcharge, theſe Pills are of ſingular Advantage, if exhibited every Month for ſome Days ſucceſſively. Nor is it improper, if they ſhould excite a Commotion of the Humours, to mix a due Quantity of the precipitating nitrous Powder with them. In ſome Patients, whoſe Primæ Viæ are loaded with acid Crudities, the Body is frequently rendered ſufficiently ſoluble by Crabs-eyes, or prepar'd Shells alone, ſince, by uniting with the Acid of the Stomach, they form a neutral bitteriſh Salt, which, by its gentle Stimulus, excites the Inteſtines to a Diſcharge of the Fæces; at leaſt they produce far better Effects than even the *Magneſia*, which, when there is no Acidity to encounter, vellicates the Stomach and Inteſtines.

Some hypochondriac Patients have their Bodies rendered ſoluble, and their Flatulences increaſed, or even Efforts to vomit, a Naufea, and actual Vomitings, produced by Preparations of Manna. In this Caſe, they ought to be entirely abſtained from, and the Relief of the Patient is to be attempted by Preparations of Rhubarb and Clyſters. Nor are there a few Patients, eſpecially of the Female Sex, to whom Clyſters are highly troubleſome and uneaſy; in which Caſe, they are to be prepared with a large Quantity of Oil, and frequently repeated, exhibiting internally, at the ſame time, ſuch Medicines as ſeem beſt adapted to the particular Conſtitution of each Patient.

As in the Cure of hypochondriac Diſorders nothing is of greater Uſe than Veneſection, ſo nothing is more hurtful and pernicious, when adminiſtred unſeaſonably, or in an improper Place; for it is abſurd and ridiculous to uſe it too often, on account of the ſuppoſed Thickneſs of the Blood; ſince, by this means, thoſe, who are already too weak, by an exceſſive Loſs of Blood, are rendered ſtill weaker: On the contrary, when the Veſſels are turgid with Blood, or the uſual Evacuations of Blood totally ſuppreſſed, liberal Veneſection is not only expedient, but highly advantageous: Nor ought this Evacuation to be made from the Arm, except in certain Caſes. At the Time of Veneſection the Patient ought to be particularly careful to preſerve an eaſy State of Mind, to guard againſt Cold, and abſtain from groſs Aliments, leſt, by the cold Air, a ſalutary Perſpiration ſhould be check'd, or, by the groſs Aliments, Crudities generated in the Primæ Viæ.

Great Caution is alſo requiſite in the Application of Leeches; for where there is no Propenſity to the hæmorrhoidal Diſcharge, or where that Evacuation is of the ſymptomatic Kind, we ought to be ſo far from promoting it by Leeches, that we ought rather to make a Revulſion and Derivation of the Blood from theſe Parts: But when the hæmorrhoidal Diſcharge has been ſtopt, and again ſeeks for a Vent; when there are violent Pains in the Os Sacrum, and Inteſtinum Rectum; or when a griping hæmorrhoidal Colic afflicts the Patient, nothing is more ſalutary and beneficial than Leeches: But 'tis frequently neceſſary to premiſe an univerſal Evacuation of the Humours by Veneſection: It is alſo expedient to cheriſh the Parts about the Anus with Fomentations, and apply the beſt Leeches, at the very Time when Nature makes an Effort to promote the Eruption.

That Exerciſe may produce the more ſalutary and happy Effects, it is to be performed in a ſerene and mild Air, leſt the Injury the Patient ſuſtains from the external Cold, ſhould not be compenſated by the Advantages accruing from the Exerciſe. Nor is it to be violent, but moderate, and continued gradually, till a gentle Heat is raiſed on the Body. We muſt, alſo, be highly careful, that the Maſs of Humours be diminiſhed, and the Body ſufficiently ſoluble, leſt the Exerciſe ſhould throw the Blood

into too violent Commotions. No Species of Exercise, especially Riding, either on Horseback, or in a Coach, ought to be used immediately after eating, since, by the Succussions, the Flatulences are rendered more troublesome. The most commodious Time for Exercise is, in the Morning, after drinking a few Cups of some warm Infusion; or in the Afternoon, when the Digestion is finished.

With respect to Drink, nothing can be absolutely determined; but every one ought to be at due Pains to discover what Liquor best agrees with himself: Some are very well with drinking light and weak Ale; for which Reason, the Use of that Liquor is not to be denied them. Others reap a very considerable Advantage, either from cold Water alone, or from a Decoction of Water with Cinnamon, which may be safely allowed them. When the hypochondriac Disorder is complicated with a scorbutic Disposition of the Humours, after purging the Primæ Viæ, not only Whey, if the Stomach is capable of bearing it, is of considerable Service; but also Milk, mixed with the *Selteran* Mineral Waters, may be advantageously exhibited. With respect to cold Mineral Waters, we must observe, that those, who are afflicted with excessive Spasms, or labour under a violent Cardialgia, ought not to drink them cold, because Cold is highly prejudicial to the Nerves: 'Tis therefore more expedient for such Patients either to use hot Mineral Waters, or such as are cold, made warm. All acid Wines, such as *Rhenish* and *Moselle* Wine, increase the Acidity of the Stomach when recent; whereas a moderate Use of old *Rhenish* or good *Burgundian* Wines, diluted with Water, may be safely permitted.

As irregular and disorderly Workings of the Fancy almost always accompany this terrible Disorder, the Patient ought carefully to avoid every Opportunity of having his Mind ruffled and discomposed, because, unless the Passions are kept in due Subjection, the Attempts of the Physician, tho' otherwise proper, will prove entirely fruitless and ineffectual: Facetious Company is, also, to be kept, and the Mind diverted by all the innocent Amusements of Life. For this Reason Journeys to Baths are beneficial to hypochondriac Patients, in several respects; since, by this means, they have Exercise, Change of Air, agreeable Company, and the Advantages to be reaped from the Waters themselves. On the contrary, Lucubrations, and close Study, especially during, or soon after Meals, are to be forbid; because 'tis certain from Experience, that nothing has a more direct Tendency to destroy the Digestion of the Aliments, than long-continued Application and Fatigue of Mind. In order to prevent the Generations of Flatulences in those Literati, who, in consequence of their Functions, cannot absolutely abstain from Study, besides Exercise, I know of no more valuable and efficacious Medicine than the Elixir Balsamicum.

When the hypochondriac Disorder is complicated with such a Degree of Melancholy, as to threaten the Appearance of direct Rage and Fury, which frequently happens, nothing affords a more speedy or infallible Relief than moderately warm Baths of sweet Water: For, as the Foundation of these melancholic Disorders, bordering upon Madness, consists in the spasmodic Constriction of the exterior and inferior Parts of the Body; and more especially in a violent and impetuous Conveyance of the Humours to the Head; so nothing is of more Efficacy in relaxing the Spasms, and restoring the equal Circulation of the Blood than these Baths; with which may be joined the internal Use of cold Mineral Waters, together with Venesection in the Feet, and sometimes an Evacuation of Blood from the Nostrils.

Chalybeate Medicines are highly celebrated in the Cure of hypochondriac Disorders: But as these are highly beneficial, when properly exhibited, so nothing is more certainly prejudicial and destructive than the Use of them without any regard to Time, or other Circumstances of Importance. If the Spasms are violent, the Viscera obstructed, the Patient costive, the Humours redundant, and the Primæ Viæ loaded with Crudities, we are to abstain from an immoderate Use of them; because, in this Case, the Disorder easily degenerates into a Cachexy. But when the Spasms are remitted, and the Mass of Blood diminished, they are of singular Service, by rendering the Excretions more free; only they are to be prescribed with a sufficient Quantity of diluting Liquors, and a due Degree of Exercise. Those who have not an Opportunity of using Mineral Waters, may, in their stead, substitute Broths prepared of the aperient Roots, together with the Tinctura Martis Zwoelfferi, and impregnated, either with Juice of Apples, or Quinces. These Broths are frequently to be used in proper Doses. *F. Hoffman.* See MELANCHOLIA and MAGNESIA.

HYPOCHOREMA, HYPOCHORESIS, *ὑποχώρημα, ὑποχώρησις*, from *ὑποχωρέω*, to retire or recede, is properly spoken of Matters which pass off by Stool. *Galen, Com. in Aph.* By *Hypochorema, ὑποχώρημα*, however, 7 *Aph.* 68. 69. 82. are to be understood Things voided by Urine.

HYPOCHYMA, *Hypochysis, ὑπόχυμα, ὑπόχυσις*, from *ὑπὸ* and *χύω*, to pour, the same as CATARACTA. See AMAUROSIS.

HYPOCHYTOS, *ὑπόχυτος*. See DIACHYTOS.

HYPOCISTIS. Offic. C. B. I. B. Park. *Purpurea flore cæsio dicante & flore luteo.* T. Coral. *Orobanche quæ Hypocistis dicitur.* R. H. *Minor à Cisto nascens.* H. Ox. RAPE or CISTUS.

This is a Kind of *Orobanche* or *Rape of Cistus*, growing usually as *Clusius* says, under the *Cistus Hypocistidem ferens:* It is a low dry Plant, thick-set with small round Leaves. The Flowers grow on the Top of the Stalks, in Shape somewhat like the Flowers of Pomegranates of a pale Colour. The Seed-vessels are large, resembling those of Henbane, in which lie a great deal of small dusty Seed. The whole Plant, especially, when it first springs out of the Ground, is of a red, or greenish-red Colour.

Of this Plant is made the *Succus Hypocistidos*, which is of a hard, tough Consistence, and a black shining Colour on the Inside, not much unlike the *Spanish* Juice, or Liquorice, of a rough, styptic, and a little sourish Taste. It is very drying and binding, being useful for a Diarrhœa and Dysentery, the Hepatic Flux, the Excess of the Catamenia and Fluor Albus; and likewise against Vomiting and Spitting of Blood.

HYPOCLEPTICUM *Vitrum*, a Glass Funnel, contrived for separating Oil from Water. The Word is formed of *ὑπὸ*, under, and *κλέπτω*, to steal, because it steals, as it were, and conveys away the Water from the Oil. *Blancard.*

HYPOCOELON, *ὑπόκοιλον*, from *ὑπὸ*, under, and *κοῖλον*, (Cœlon) the Cavity above the upper Eye-lid, is the Cavity under the lower Eye-lid, answering to the *Cœlon* before-mentioned. *Ruffus Ephesius, Lib. 1. Cap. 4.*

HYPOCRANIUM, a kind of Abscess, or Suppuration, so called because seated under the Cranium, between that and the Dura Mater. *Castellus.*

HYPODERIS, *ὑποδερίς*, in *Ruffus Ephesius*, is the Extremity of the fore Part of the Neck.

HYPODERMIS, the same as EPIDERIS, or the CLITORIS, *Ruffus Ephes.*

HYPODESIS, *ὑπόδεσις*; from *ὑπὸ*, under, and *δέω*, to bind; *Hippocrates, de Offic. Medici*, is the Juncture of the two Fillets, which he calls *Hypodesmides, ὑποδεσμίδες*; and directs to be applied in Fractures, before the Application of the Compresses. *Galen, Com. 2. in Lib. de Off. Med. Tit. 2.*

HYPODESMIS, *ὑποδεσμίς*. See the preceding Word, and the Article EPIDESMOS.

HYPOGASTRICA *Sectio*, from *ὑπὸ*, under, and *γαστὴρ*, the Belly, in Lithotomy, is what they call The high Operation.

HYPOGASTRION, *ὑποσάσειον*. See ABDOMEN.

HYPOGLOSSIS, HYPOGLOSSIUM, *ὑποglωσὶς, ὑπογλώσσιον, ὑποglωσσὶς*, from *ὑπὸ*, under, and *γλῶσσα*, the Tongue; in a physiological Sense, is the inferior Part of the Tongue, adhering to the Jaw; and the Seat of the Disease called *Rana*; whence that Disorder is called by *Aetius, Tetrab. 2. Serm. 4. Cap. 39. ὑποglώσσῳ βατραχῳ*, the *Rana*, or Frog under the Tongue. *Hypoglossis, ὑποglωσὶς*, in a pathological Sense, is a Tubercle under the Tongue, *Hippocrates, Lib. 2. de Morb. Hypoglottides, ὑποglωττίδες*, are a kind of *Bochic*, or medicinal Preparations, for Disorders of the Aspera Arteria, to be held under the Tongue, till they are insensibly dissolved. Several Sorts of these are described by *Galen, de C. M. S. L. Lib. 7.*

HYPOGLOSSUM. See BISLINGUA.

HYPOGLOTTIDES *Pilulæ*. Pills for a Cough, to be held under the Tongue. See HYPOGLOSSIS.

HYPOGLUTIS, *ὑποglουτὶς*, from *ὑπὸ*, under, and *γλουτὸς*, the Nates, is the fleshy Part under the Nates, towards the Thigh. *Gorræus.* It is otherwise expounded, the Flexure of the *Coxa*, under the Nates.

HYPOMIA, *ὑπωμία*, from *ὑπὸ*, under, and *ὦμος*, the Shoulder, in *Galen's Exegesis*, is expounded *τὸ ὑποκείμενον ἢ τοῦ τῇ ἐπωμίδι, ἢ αὐτῷ τῷ ὤμῳ*, "The Part subjacent to the upper "Part of the Shoulder, or to the Shoulder itself."

HYPONOMOS, *ὑπονόμος*; from *ὑπὸ*, under, and *νομὴ*, a phagedenic Ulcer, is a deep and sinuous phagedenic Ulcer.

HYPONOS, HYPONISCOS, *ὕπνος, ὑπόνισκος*, from *ὑπὸ*, under, and *ὄνος*, *Onos*, (a Name, in the antient Surgery, for the versatile Axes of a Machine contrived for the Reduction of Fractures and Luxations, *Galen, Com. in Lib. de Artic.*) seems to be an Instrument for managing the *Onos*, or turning it a different Way from what was done by the *Mochlos*, or Lever. *Hippocrates, Mochlicus*; where *ὑπόσονος* (*Hyposonos*) is corruptly read for *ὕπνος*. *Foesius.*

HYPOPEDIUM. A Cataplasm for the Sole of the Foot.

HYPOPHASIA, from *ὑποφαίνομαι*, to appear a little.

A sort of Winking, when the Eye-lids are drawn pretty close together, so that but very little of the Eye appears, that but a small Number of the Rays of Light may be admitted at once.

HYPOPHASIS. Of the same Derivation as *Hypophasia.*

This imports a Symptom very common in Diseases, and is of very bad Presage. It is, when the Eyes are almost closed, during Sleep; but, in such a manner, that part of the White of the Eyes appears; and a slight Motion of the Eye is perceiv'd. *Hippocrates.*

HYPOPHORA, *ὑποφορὰ*, from *ὑποφέρομαι*, to be carried or convey'd underneath.

A deep fistulous Ulcer.

HYPOPHTHALMION, ὑποφθάλμιον, from ὑπὸ, under, and ὀφθαλμὸς, the Eye.

The Part immediately under the Eye, which is ſubject to ſwell in a Cachexy or Dropſy. It ſometimes imports the ſame as HYPOPION.

HYPOPHYLLOCARPODENDRON.

The Name of a Plant in *Boerhaave*, of which he mentions two Species; which are,

1. Hypophyllocarpodendron; foliis lanuginoſis; in apice trifido, rubro, quaſi floreſcens.

2. Hypophyllocarpodendron; foliis inferioribus apice trifido, rubro, ſuperioribus penitus rubris, glabris.

There are no medicinal Virtues attributed to either of theſe Plants at preſent, that I know of.

HYPOPHYLLOSPERMOUS, of ὑπὸ, under, φύλλον, a Leaf, and σπέρμα, Seed, are ſuch Plants as bear their Seeds on the Backſides of their Leaves. *Mil. Dict. Vol.* 1.

HYPOPIA, ὑπόπια, imports Sugillations in the Parts immediately under the Eyes.

HYPOPLEURIOS, ὑποπλεύριος. A Name for the PLEURA.

HYPOPSATHYROS, ὑποψαθυρὸς, from ὑπὸ, importing Diminution, and ψαθυρὸς, friable. Somewhat friable. It is applied to the Excrements of the Belly, in *Hippocrates's Prorrhetics*.

HYPOPYON, ὑπόπυον, from ὑπὸ, under, and πύον, Pus, or Matter.

We frequently meet with a Collection of purulent Matter, immediately under the Cornea, near the aqueous Humour. This Diſorder is term'd *Hypopyon*, or *Pyoſis*: It proceeds from an Extravaſation of Blood, or Tranſlation of Pus, after a violent Inflammation, the Small Pox, couching a Cataract; or from any external Injuries of the Eye, as a Blow, Fall, Contuſion, or Burn. It is attended, in the Beginning, with acute Pains, both of the Head and Eye; and, according to the Degree of the Injury, is follow'd by a Diminution of Sight, Blindneſs, or Death itſelf.

St. Yves ſays, that Abſceſſes which affect the tranſparent Part of the Cornea, begin, ſometimes, with a little white Spot, which appears on the firſt Pellicle of that Membrane; this Symptom is ſucceeded by an external Elevation of the Part: They are eaſily cured, by ſlightly pricking them with a Lancet, without piercing the other Pellicles. But if the Abſceſs lies deeper, and in the Middle of the Cornea, and overſpreads almoſt the whole internal Part of that Membrane, it then becomes what is called an *Hypopyon*; but, if this Abſceſs be not ſo large, and it breaks, ſpontaneouſly, on the Inſide of the Eye, ſo that the Pus falls into the anterior Chamber, between the Iris and the tranſparent Part of the Cornea, and is there collected in a Speck, ſhaped like an Half-moon, reſembling that which appears at the Bottom of our Nails, it is then called *Onyx*.

Sometimes the tranſparent Part of the Cornea is free, and the Abſceſs lying between the *Conjunctiva* and *Sclerotica*, or in the Subſtance of the latter, the Pus breaks into the anterior Chamber, between the *Iris* and the tranſparent Part of the Cornea: In the firſt Caſe, the Preſſure of the Eye-lids may cauſe it; in the ſecond, it may proceed from the Preſſure of the *Aponeuroſes* of the Muſcles of the Globe.

The principal Methods of Cure are three: The firſt, and mildeſt, is the Uſe of reſolvent Medicines; ſuch as a frequent Application of a Decoction of Sage, Eyebright, Hyſſop, and Fennel-ſeeds, in Wine; or of little Bags, filled with thoſe Ingredients, and boiled in Wine: To theſe may be added, Bleeding and Purging; for, by theſe, unleſs the Blood or Pus is in a very great Quantity, the Eye may be reſtored to its former Vigour, as I am aſſured from long Experience. When theſe Remedies, therefore, appear to have any Effect, they ſhould be continued, till the Blood or Matter is diſperſed; but when the Pains, and other Symptoms, are increaſed by them, an Operation is abſolutely neceſſary; for, otherwiſe, in all Probability, the contain'd Matter will deſtroy the internal Parts of the Eye, or corrode the Cornea, and, after the moſt excruciating Pains, bring on an incurable Blindneſs.

But, before we enter upon the Operation, it will not be amiſs to deſcribe the Method of *Juſtus*, a celebrated Oculiſt in *Galen's* Time: He placed the Patient on a Seat oppoſite to himſelf, and, taking hold of his Head, with both Hands, ſhook it very aſſiduouſly about, till the Matter diſappeared. During this Agitation, it is very remarkable, what *Galen* teſtifies, that the Spectators could diſcern the Pus gradually ſubſiding to the Bottom of the Eye. Some, indeed, reject this as uſeleſs and ridiculous; but I muſt diſſent from them; and am confirm'd in my Opinion, not only by the Authority of *Galen*, but my own Experience: I had a Patient under my Care for an *Hypopyon*, who was obliged to take a Journey in a Chariot; upon his Return, the next Day, I found the purulent Matter diſperſed by the Concuſſion, and it was undoubtedly thrown down behind the Uvea. I ſhould, therefore, adviſe a Trial of this Practice, before any Inſtrument is uſed: But, before the Concuſſion, the Head, or whole Body, ſhould be diſpoſed in a ſupine Poſture, and the Eye preſſed gently with the Fingers, to looſen the Matter: When the Greameſs and Obſtinacy of the Diſorder, or the Quantity of Pus, renders this Agitation ineffectual, recourſe muſt be had to the Operation, which *Galen*, *Aetius*, and other Antients, have deſcribed and recommended, tho' the Moderns have ſo far neglected it, that we ſhould ſcarce have heard of it at preſent, had not *Riverius*, *Meekren*, *Nuck*, and *Bidlow*, revived it, in the laſt Century.

As for the Operation, the Patient muſt be ſeated in a very light Room, directly againſt the Light, as in the Couching of a Cataract, his Hands and Head being held tight by Aſſiſtants. The Surgeon himſelf depreſſes the lower Eye-lid, while an Aſſiſtant elevates the upper; the Operator then takes a Lancet, and makes an Inciſion through the Cornea, below the Pupil, and about the Space of a Line from the White of the Eye, large enough to diſcharge the Matter, and aqueous Humour; all this with the utmoſt Caution, leſt he ſhould wound the *Uvea* beyond the Pus. If the Humour does not diſcharge itſelf ſufficiently, the Eye muſt be gently preſſed by the Fingers. Having thus diſcharged the corrupted Humour, a Compreſs, moiſten'd with a Collyrium of Roſe or Plantain-water, mixed with the White of an Egg, or with the Mucilage of Quince-ſeeds, either with or without Camphire, is to be applied, every third or fourth Hour, to the Eye. For this will both heal the Wound in the Cornea, and reſtore the aqueous Humour, with the Sight, if there is no very conſiderable internal Injury: For tho' there does remain a ſmall *Cicatrix* in the *Cornea*, yet, as it is below the Pupil, it will be little or no Detriment to the Sight. In the mean time, that the Operation may be perform'd with Safety, the Lancet ſhould be rolled in Lint, or a Piece of Plaiſter, ſo that not above a Straw's-breadth of its Point may be left uncover'd, that it may not penetrate too deep into the Eye. *Meekren*, for this Reaſon, invented a peculiar Inſtrument, publiſh'd in the tenth Chapter of his chirurgical Operations, and repreſented in our *Tab.* XXXIX. *Fig.* 10.

Sometimes the Matter is too thick to be diſcharg'd through this ſmall Aperture of the Cornea; then it will be proper to uſe the Needle, (*Tab.* XXXIX. *Fig.* 12.) which is, alſo, employ'd for making Setons: For, beſides that the *Uvea* is not ſo eaſily wounded by this curve-pointed Inſtrument, the triangular Figure will make a larger Inciſion, and, of conſequence, the inſpiſſated Matter will be more readily diſcharged; but this muſt be involved in the ſame manner as we directed the Lancet ſhould. *Platnerus* has delineated a peculiar Inſtrument for this Uſe, (ſee *Tab.* XXXIX. *Fig.* 13.) with almoſt the ſame triangular Point; and aſcribes the Invention of it to *Woolhouſe*. If the inherent Matter is too tenacious, *St. Yves* adviſes to introduce a ſmall Probe, or inject ſome cold Water with a Syringe, and to continue this; or, if the Diſorder returns in two or three Days, to repeat it, till the whole Pus is diſſipated; after which, the Wound may be healed. If there is an Inflammation, the Patient ſhould loſe ſome Blood, be bliſter'd, ſcarified, and diſcutient Fomentations, with other proper Medicines, ſhould be applied to the Part affected, as the Circumſtances require. *Heiſt. Chirurg.*

HYPORINION, ὑποῤῥίνιον. A Name for the Parts of the upper Lip, immediately below the Noſtrils.

HYPORISMA. The ſame as EMBORISMA.

HYPOSARCA, and HYPOSARCIDIOS, import an *Anaſarca*.

HYPOSPADIÆUS. One whoſe Urethra is terminated underneath the Glans.

It implies, ſtrictly, being almoſt an Eunuch.

HYPOSPATHISMUS, ὑποσπαθισμός.

This Operation, in Surgery, takes its Name from the Inſtrument with which it is perform'd. The *Hypoſpathiſmus* is of Uſe in copious Defluxions of pituitous Humours upon the Eyes, attended with a Redneſs of the Face, and a Senſation, as it were, of Worms or Ants crawling about the Forehead. In this Caſe, we firſt ſhave the Head, near the Forehead; then, ordering the Patient to move his lower Jaw, we avoid the temporal Muſcles, and make three ſtrait and ſimilar Inciſions in the Forehead, each two Digits in Length, as deep as the Bone, and three Digits diſtant from one another: After the Inciſions are made, we are, with the Inſtrument Spatula, to begin at the Inciſion next to the Left Temple, and raiſe all the Parts, together with the Pericranium, lying between it and the middle Inciſion; then paſſing the Inſtrument forward, in the ſame manner, from the middle Inciſion to that on the Right Temple, we are to paſs a ſharp Knife, whoſe Back is directed to the Bone, and its Edge to the Skin, from the firſt to the middle Inciſion, and thence to that of the Right Temple, cutting, as we paſs along, all the Veſſels which are diſtributed from the Head to the Eyes, taking care, at the ſame time, not to paſs the Knife entirely through the Skin. Then, after a moderate Evacuation of Blood is made, and the grumous Part expreſſed, a Pledget is to be put in each Inciſion, and a Dreſſing of Lint, ſoak'd in Water, applied, and ſecured by proper Bandage. Next Day, by reaſon of the Inflammation, we are to moiſten the Wounds, and temporal Muſcles, with a Mixture of Wine and Oil: And, on the third Day, removing the Dreſſings, we are liberally to anoint the affected Parts with the ſame, and continue to perform the reſt of the Cure, by the Uſe of Pledgets dipt in a Solution of Baſilicon, with Oil of Roſes. *Paul Æginet. Lib.* 6. *Cap.* 6.

HYPOSPHAGMA, ὑπόσφαγμα. The ſame as APOSPHAGMA. It, alſo, imports Sugillation, or Inflammation of the Tunica adnata of the Eye.

HYPOSTASIS, ὑπόστασις, from ὑφίσημι, to ſubſide. The Sediment in Urine. See URINA.

HYPOSTATHME, ὑποστάθμη, from ὑπὸ, under, and στάθμὸς, a Station. The thick Sediment which ſubſides in any Liquors, as the Amurca in Oil, or the Fæces in Wine. It is, ſometimes, us'd in the ſame Senſe as HYPOSTASIS.

HYPOSTEMA, ὑπόστημα. The ſame as HYPOSTASIS.

HYPOSTROPHE, ὑποστροφὴ, imports either a Patient's Turning himſelf, or a Relapſe. It is deriv'd from ὑποστρέφω, to deflect, turn aſide, or to return.

HYPOTHENAR. A Name for the *Abductor minimi Digiti Manus*. See ABDUCTOR. It, alſo, imports that Part of the Hand which is oppoſite to the Palm.

HYPOTHETON, ὑπόθετον, from ὑποτίθημι, to put under. A Suppoſitory.

HYPOTRIMMA, ὑπότριμμα. A ſort of Aliment mention'd by *Hippocrates*, in his ſecond Book *de Diæta*. According to *Heſychius*, it is made of Dates, Honey, Cumin, and other Ingredients, bruis'd together.

HYPOTROPE, ὑποτροπὴ, from ὑποτρέπω, the ſame as ὑποστρέφω, to return. A Relapſe.

HYPOXYLON. A Name for a Species of Agaric, which *Boerhaave* calls *Agaricus; digitatus; niger*.

HYPOZOMA, ὑπόζωμα, from ὑποζώννυμι, to ſurround. A Name for the Diaphragm.

HYPSILOGLOSSUS. The Name of a Muſcle of the Tongue. The ſame as CERETOGLOSSUS.

HYPSILOIDES. A Name for the Os Hyoides; ſo call'd from its Reſemblance to the *Greek Υſilon*.

HYPTIASMOS, ὑπτιασμὸς, from ὑπτιάζω, of ὕπτιος, ſupine. It imports Reſupination, or a ſupine Decubiture; or a Nauſea and Sickneſs at the Stomach, with frequent Inclinations to vomit.

HYPULUS, from ὑπὸ, *ſub*, under, and οὐλὴ, a Cicatrix. An Ulcer which lies conceal'd under the Cicatrix.

HYSMA, ὕσμα. Rain. *Hippocrates*.

HYSSOPIFOLIA MAJOR. A Name for the *Salicaria*; *Hyſſopi folio, latiore*.

HYSSOPIFOLIA MINOR. A Name for the *Salicaria*; *Hyſſopi folio, anguſtiore*.

HYSSOPITES. An Epithet for Wine impregnated with Hyſſop. *Dioſcorides, Lib.* 5. *Cap.* 50. recommends it againſt Diſorders of the Breaſt, Pleura, and Lungs, old Coughs, and Aſthmas. He adds, that it is diuretic, and good againſt Gripes, and periodical Rigors; and that it provokes the Menſes.

HYSSOPUS.

The Characters are;

The Leaves are oblong and narrow; the Galea is erect, roundiſh, and bifid; the Beard trifid, the Middle Segment being hollow, like a Spoon, bicuſpidated, or double-pointed, and, as it were, winged. The Flowers are cloſely ſet in Whorles, which, at firſt, are placed at a good Diſtance from one another, but are afterwards collected into a Spike, and take up only one Part of the Stalk.

Boerhaave mentions ſeven Species of this Plant; which are,

1. Hyſſopus; Officinarum; cœrulea, ſeu ſpicata. *C. B. P.* 217. *Tourn. Inſt.* 200. *Boerh. Ind. A.* 160. *Hyſſopus vulgaris*. Park. Theat. 1. *Hyſſopus vulgaris ſpicatus anguſtifolius*. J. B. 3. 274. Raii Hiſt. 1. 579. *Hyſſopus Arabum*. Ger. 464. Emac. 576. HYSSOP.

Our common Hyſſop grows to be almoſt a Foot high, or more, with many Stalks, which are ſquare at firſt, but grow to be round, as they come to flower. The Leaves are long, narrow, and ſharp-pointed, ſet two at a Joint. The Flowers grow in long Spikes, made of thin Whorles, of pretty large thin Flowers, diſpoſed all on one Side the Stalk. They have a Galea cut in two, and the Labella divided into four Segments. The Seed is ſmall, and black, growing four together in the Calyx. The Root is thick, woody, and much divided. The whole Plant is of a pretty ſtrong aromatic Smell; it is ſown in Gardens, and flowers in *July*. The whole Plant is us'd.

Hyſſop is healing, opening, and attenuating; good to cleanſe the Lungs of tartarous Humours, and helpful againſt Coughs, Aſthmas, Difficulty of Breathing, and cold Diſtempers of the Lungs; it is alſo reckon'd a Cephalic, and good for Diſeaſes of the Head and Nerves. The bruis'd Herb, applied outwardly, is famous for taking away black and blue Marks out of the Skin.

The only Officinal Preparation of Hyſſop is the Simple Water.

Of how great Efficacy Hyſſop is, in Sugillations of the Eyes, we learn by an Inſtance from *Riolanus* the elder: I found by Experience, ſays that Phyſician, the Truth of what *Archigenes* affirms, in *Galen*, which is, that if the Tops of Hyſſop be tied up in a Cloth, and boil'd in Water, and the Cloth afterwards applied warm to the livid Eye, the Blood will be attracted by the Hyſſop to ſo manifeſt a Degree, as to ſtain the Linen. Upon this Authority I have, ſeveral times, preſcrib'd a Decoction of Hyſſop againſt Sugillations, even of the Eyes; only, inſtead of Water, I ſometimes order'd the Bag to be boil'd in Wine; and, directing the Application of it, ſomewhat warm, to the Eyelids, when the Patient went to bed, his Eyes being ſhut, the Lividneſs was remov'd as well as I could wiſh. *Simon Paulli*.

Mr. *Boyle* tells us, that a noted Gentleman of his Acquaintance, who had his Thigh terribly bruis'd by a Kick from an Horſe, was, by the ſole Application of a ſort of Cataplaſm prepar'd of the Leaves of Hyſſop cut very ſmall, and mix'd with freſh or unſalted Butter, in a few Hours freed from his Pain, and the very Skin clear'd from all livid or other Marks of the Blow. *Raii Hiſt. Plant.*

Hyſſop has a very pleaſant Smell, and a penetrating Taſte, leaving the grateful Reliſh of its aromatic Humour in the Mouth. Its heating, diſſolvent, ſtimulating, and deterſive Virtues appear from its aromatic and balſamic Smell. On theſe Accounts it muſt be very proper for freeing the Lungs from groſs, viſcid, purulent Phlegm; and an Infuſion of the Leaves in Water, ſweeten'd afterwards with Honey, is accounted one of the beſt Pectorals; but, if there be a conſiderable Inflammation, this Remedy is improper. Hyſſop, in Surgery, has its Uſe in heating and ripening, and in Caſes where an Expulſion by Sweat and Urine is required, as in the Gout, Leucophlegmatia, Scurvy, Aſthma, Dropſy, Pleuriſy, Cough, and Diſeaſes owing to Viſcidity. Preparations of it are an Infuſion, Decoction, the recent Juice, the diſtil'd Water, and the Conſerve. A Cataplaſm of the recent Leaves cleanſes foul Ulcers. The Vapour, receiv'd into the Ears, takes off their Ringing. Some prefer it to Wormwood, for corroborating the Stomach.

The Word *Hyſſop* comes from the *Hebrew Exeb*, ſignifying an holy Herb, or an Herb appointed for cleanſing holy Places; whence the Pſalmiſt prays, *Purge me with Hyſſop*. But the Hyſſop of the Antients is unknown: Many take it to be Wall-rue; we are certain, at leaſt, that it was a Wall-plant; for *Solomon*, the Prince of Botaniſts, treated of Plants from the Cedar even to Hyſſop, a ſmall Plant growing on the Wall. Now, in Wall-rue there is a detergent Quality, as well as in Hyſſop, whence it is accounted ſerviceable in cutaneous Diſeaſes, eſpecially the Itch: But, whether this, or any other Herb, be the Hyſſop of the Antients, the Name is at preſent appropriated to the Plant above deſcrib'd. *Hiſtoria Plantarum*, aſcrib'd to *Boerhaave*.

2. Hyſſopus; latifolia. *C. B. Prodr.* 107.

3. Hyſſopus; vulgaris; alba. *C. B. P.* 218. *M. H.* 3. 361.

4. Hyſſopus; rubro flore. *C. B. P.* 217. *M. H.* 3. 361.

5. Hyſſopum; montanum; Macedonicum; Valerandi Dourez. *J. B.* 3. 276.

6. Hyſſopus; anguſtifolia; montana; aſpera. *C. B. P.* 218.

7. Hyſſopus; humilior; Myrtifolia. *H. R. Par. Boerh. Ind. alt. Plant. Vol.* 1. *p.* 160.

Miller enumerates thirteen Species of this Plant.

HYSSOPUS AUSTRIACA. A Name for the *Ruyſchiana*; *flore cæruleo, magno*.

HYSSOPUS CAPITATA. A Name for the *Thymus*; *capitatus*; *qui Dioſcoridis*.

HYSTERA, ὑστέρα. The UTERUS; which ſee.

HYSTERIALGES, ὑστεριάλγης. An Epithet for any thing which excites Pains of the Uterus. It is, by *Hippocrates*, applied particularly to Vinegar: From ὑστέρα, the Uterus, and ἄλγος, Pain.

HYSTERA-PETRA. The Name of a Stone, otherwiſe called *Hyſterolithos*, found frequently in *Italy* and *Germany*. It is of the Shape of the Uterus; and hence ſome ſuperſtitious Virtues are attributed to it; as, that it cures Vapours, and provokes the Menſes, if tied about the Thigh.

HYSTERICA, ὑστερικὰ (τὰ), from ὑστέρα, the Uterus, or Womb, are Affections or Diſeaſes of the Uterus, 5 *Aph.* 35. where *Galen* explains the Word ὑστερικῶν by ὑστερικὴν πνίγα ἢ ἄσφυξιν, "hyſteric Strangulation, or Suffocation." Τὰ ὑστερικὰ ἐν κοιλίῃσι σκληρύσμαλα, are Hardneſſes of the Uterus in the Belly, perceivable by the Touch, and a Senſe of Weight on the Part. *Coac.* Τὰ ὑστερικαὶ (*Hyſtericæ*) are Women labouring under hyſteric Diſorders: Thus, 1 *Prorrhet.* 119. αἱ ἐν ὑστερικαῖς ἀπύρῳ σπασμοὶ δ' χερεῖς, "Women eaſily ſeiz'd with hyſteric Diſorders, "without a Fever, are ſubject to Convulſions." And this is repeated *Coac.* 349. and 554.

That Diſtemper, or rather Series of Diſtempers, which the Antients termed hyſteric Affections, may be very properly referred to the ſpaſmodico-convulſive Paſſions of the nervous Kind, as it frequently brings the whole nervous Syſtem into Diſorder, there being ſcarcely a Fibre, in the human Machine, exempt from its Influence. We define it, therefore, a ſpaſmodico-convulſive Affection of the nervous Kind, proceeding from a Retention or Corruption of Lymph, or Blood, in the uterine Veſſels, which, by means of the Nerves of the Os Sacrum, thoſe of the Loins, and the ſpinal Marrow, influences all the nervous Parts of the Body.

The Generality of Moderns make no Diſtinction between this and the hypochondriac Diſorder, but in the Subject, calling it in Women the hyſterical Affection, and in Men the hypochondriacal;

chondriacal; but as there certainly is a much wider Difference, it cannot be amiss to give an exact Account of the Distemper. For this Purpose, if we consult *Hippocrates*, *Aretæus*, *Fernelius*, *Duretus*, *Montanus*, *Ballonius*, *Holierius*, *Mercurialis*, and *Johannes Heurnius*, we shall find them unanimously agreed, that the true, essential Symptoms are, a Strangulation about the Fauces, a suffocating Interception of Respiration, Fainting, a Privation of Speech, and Drowsiness; and that, before the Paroxysm, the Patient perceives an Ascent of a kind of Globe; whence many Women idly imagine, that the Womb ascends towards the Throat.

These are the principal Symptoms of hysterical Affections; but before the Paroxysm, and afterwards, many others are observable, which spare no Part of the Body: For, at the Approach of the Fit, the Patient is seized with a violent Pain in the Forehead, Temples, and Eyes, together with an Effusion of Tears, Dimness of Sight, an oppressive Pain, Terror of the Mind and Senses, Anxiety, and Uneasiness. Those who are seiz'd with the Disorder, are generally costive, and have frequent Inclinations to discharge their Urine, which is limpid as Water; mean time they are tormented with Restlessness, Anxiety, an almost suppress'd Respiration, and universal Languor. To these succeed a considerable Pain in the Loins, Cold, and Shivering: The Belly is indurated and inflated, the Navel shrinks very deep inwards, and then is perceived the Ascent of a sort of Globe from the Abdomen to the Hypochondria, and Diaphragm. Immediately after this begins a Palpitation of the Heart, with a Tremor; the Pulse is unequal and hard, and sometimes intermits; the Extremities grow cold, the Fauces seem contracted, and have a Sensation, as if they were compressed with a Cord; the Face is pale, Respiration is difficult, the Speech fails, and the Pulsation of the Arteries is scarcely perceptible. The Stricture of the Belly is so great, that no Wind can be discharged, nor a Clyster be administered, on account of the Resistance it meets with; and the convulsive Agitations of the Head and Limbs are, in some, so excessive, as to be easily perceivable, sometimes accompanied with Clenchings of the Hands, and sometimes without. Others lie buried without Sense or Motion, in a profound Sleep. The Faces and Necks of some are very red, and inflamed, and their Pulse strong; others break out into immoderate Laughter, and upon the Recovery of their Speech talk incoherently.

The Paroxysm, at certain Periods, will often remit; and then the Pulse, which was before weak, languid, and sunk, becomes higher, softer, and stronger, the Extremities recover their usual Heat, the Patient breaks Wind upwards, the Intestines rumble, and the Patient awaking, as it were, from a profound Sleep, recovers her Speech, Sense and Motion, but still complains of a heavy Pain in the Head, and a Languor and Heaviness of the Thighs, Legs, and whole Body. It is very surprising, that, from so instantaneous a Change, the Person, who was just before at Death's Door, should now appear to enjoy a most perfect State of Health. Some, from the long Continuance of this Disorder, have been mistaken for dead, and buried alive, which Accident might be avoided, if we would remember, that they seldom die without an Attack of an Epilepsy or Apoplexy.

Frederic Hoffman, we see, thinks the hysteric and hypochondriac Diseases different from each other, but our great Countryman, *Sydenham*, believes them the same. As the last quoted Author's Description of hysteric Complaints are extremely accurate and exact, it must not be omitted.

Of all the chronical Diseases, says he, this seems to occur most frequently; and as Fevers, with their Attendants, upon being compared with the whole Number of chronical Distempers, appear to constitute two thirds of the Diseases of Mankind; so hysteric Disorders, or such at least as bear that Name, amount to half the remaining third Part, that is, to one half of chronical Distempers: For very few of the Female Sex are entirely free from every Species of this Disorder, if those are excepted, who are inured to Labour; and not a small Number of the Men, who are accustomed to a studious and sedentary Life, are subject to the same Distemper. And though the Antients imputed the Symptoms, produced by hysteric Diseases, to some Disorder of the Womb, yet, if we compare hypochondriac Complaints, which, we think, proceed from certain Obstructions of the Spleen, or other Viscera, with the Symptoms which appear in hysteric Women, they will be found very nearly to resemble one another. But it must be allowed, that Women are much more subject to this Disease than Men; not that the Womb is more indisposed than any other Part of the Body, but for other Causes.

But the Frequency of this Disease is not more remarkable than the Variety of Forms, by which it discovers itself, as it assumes the Appearance of almost every Distemper with which miserable Mortals are afflicted. For it always produces Symptoms peculiar to whatever Part of the Body it seizes; and, unless the Physician be a Person of Judgment and Penetration, he will be deceived, and imagine such Symptoms to belong to some Disease essential to the Part affected, and not to the Hysteric Passion.

Sometimes, for Example, it attacks the Head, and causes an Apoplexy, which, also, terminates in an Hemiplegia, exactly resembling that kind of Apoplexy, which proves fatal to some aged and corpulent Persons, and arises from an Obstruction or Compression of the Nerves, occasioned by a copious Phlegm, contained in the cortical Part of the Brain. But the Apoplexy, in hysteric Women, seems to be produced by a very different Cause; for it seizes them frequently after a difficult Delivery, attended with great Loss of Blood, or proceeds from some violent Commotion of the Mind.

Sometimes it produces dreadful Convulsions, resembling an Epilepsy; attended with a Rising of the Belly and Præcordia towards the Throat, and with such strong convulsive Motions, that, though the Patient be otherwise but of a moderate Strength, she can scarcely be held by the Attendants, uttering, at the same time, Sounds wild and inarticulate, and beating her Breast. Women of a very sanguine and robust Constitution are most liable to this Species of the Disease, which is commonly named the *Strangulation of the Womb*, or *Fits of the Mother*.

Sometimes it seizes the external Part of the Head, between the Pericranium and the Cranium, and is accompanied with an almost intolerable Pain, fixed in one Place, not exceeding the Breadth of the Thumb, and likewise with enormous Vomiting. This Species I call the *Clavus Hystericus*, and those are most subject to it who are troubled with the Green-sickness.

Sometimes it falls upon the vital Parts, and produces such a violent Palpitation of the Heart, that the Patient is convinced those about her must hear the Heart strike against the Ribs: Slender and weakly Women, who seem consumptive, and Girls who have the Green-sickness, are principally afflicted with this Species.

Sometimes it affects the Lungs, causing an almost perpetual dry Cough; and, though it does not shake the Breast so violently, yet the Fits are more frequent, and the Patient's Senses are, also, disordered. This Species of the hysteric Cough rarely occurs, and principally happens to Women of a phlegmatic Constitution.

Sometimes, attacking the *Colon*, and the Parts below the *Scrobiculum Cordis*, it occasions a most violent Pain, not unlike the Iliac Passion, and the Patient is likewise seized with an excessive Vomiting of a certain green Matter, resembling porraceous Bile, and sometimes of an unusual Colour. After the Pain and Vomiting have continued several Days, and almost worn out the Patient, the Fit is terminated by an universal Jaundice. Besides, the Patient is seized with such Apprehension and Terror, as to reject all Hopes of recovering; and this Dejection and Despair, I have always observed to accompany this Species of the Hysteric Passion, which principally afflicts Women of a crude and lax Texture of the Body, and those who have greatly suffered by being delivered of large Children.

Sometimes this Disease affects one of the Kidneys, and, by the Violence of the Pain, it entirely resembles a Fit of the Stone, not only in the Nature of the Pain, and the Situation, but likewise in the excessive Vomiting, with which it is attended, and the Pain extending through the whole Duct of the Ureter. So that it is difficult to distinguish whether the Symptoms proceed from the Stone, or from an hysteric Cause; unless, perhaps, some Accident has a little before depressed the Woman's Spirits, or the Discharge of the green Matter by Vomit should inform us, that the Symptoms ought rather to be ascribed to an hysteric Disorder, than to the Stone. Nor does the Bladder always escape unaffected with this delusory Symptom, where a Pain and a Suppression of Urine are occasion'd, as if the Passages were obstructed by a Stone. This last Species in the Bladder rarely happens, but the former, in the Kidneys, more frequently; both usually attack such Women whose Health and Strength have been exhausted by frequent hysteric Fits.

Sometimes, affecting the Stomach, it occasions continual Vomiting; and, sometimes, fixing in the Intestines, it produces a Purging. But, though the green Matter often appears in both these Symptoms, neither of them are attended with Pain. Those who have been greatly debilitated by frequent hysteric Fits, are most subject to both these Species.

As this Disease affects almost all the internal Parts, so likewise the external Parts, and muscular Flesh, are sometimes attacked by it; sometimes causing Pain, and sometimes a Tumor in the Fauces, Shoulder, Hands, Legs, and Ancles; of which Kind the Swelling of the Legs is most remarkable. In dropsical Swellings it is always observable, that they increase towards Night, and pit, and retain the Print of the Finger, when forced against it; but, in this Tumor, the Swelling is largest in the Morning, nor does it yield to, or take any Impression from the Finger, and generally seizes but one of the Legs. If the Magnitude, Surface, and other Particulars, be observed, it, in them, differs so little from dropsical Tumors, that the Patient can scarcely be persuaded to believe it any other.

Nor do the Teeth themselves (which is scarcely credible) escape this Disease, tho' free from any Cavity, or apparent Defluxion, that might produce Pain; which, nevertheless, is not milder, of shorter Duration, or more easily expel'd. But the

external Pains and Swellings principally affect those Women, who, by the long Continuance and Violence of hysteric Fits, are almost entirely spent, and can scarcely be said to live.

Among all the tormenting Symptoms of this Disease, none is more frequent than a Pain in the Back, which usually attends even the slightest Degree of it. But one Consequence, which follows all the Pains above-mentioned, is, that, after they are removed, the Part which they affected cannot bear the Touch, and continues tender and painful, as if it had been beaten; but this Tenderness goes off by degrees.

One Circumstance, well worthy of Observation, is, that all these Symptoms are preceded by a remarkable Coldness, which generally continues till the Conclusion of the Fit. This Coldness, I have observed, is equal to that of dead Bodies, though the Pulse is not in the least disorder'd. Most of the hysteric Patients, who have been under my Care, have complained of a Lowness, or (as they say) a Sinking of the Spirits; pointing to the Region of the Lungs, when they would mark the Part affected. And it is well known, that hysteric Women sometimes burst into Laughters, and sometimes into Tears, without any apparent Provocation.

Of all the Symptoms of this Disease, the most peculiar and universal is, a copious limpid Urine, pure as rock Water; which, upon Inquiry, I find to be a distinguishing Sign of those Distempers, which we call Hysteric in Women, and Hypochondriac in Men. And in Men I have sometimes observed, that soon (almost the next Moment) after having voided an amber-coloured Urine, being suddenly affected with a violent Perturbation of Mind, they have had a plentiful Evacuation of Urine, clear as Crystal, with a rushing continued Stream. Nor did the Fit disappear, till the Urine resumed its former Colour.

Besides, all hysteric and hypochondriac Patients, who have long laboured under the Disease, are troubled with fetid, and, sometimes, highly acid Eructations, after eating, even moderately, in proportion to the Appetite; the digestive Faculty being greatly impaired, and the Juices thereby vitiated.

Hysteric Patients are frequently troubled with a Discharge of thin Saliva, not inferior to an artificial Ptyalism, which may be produced by the Spirits disturbing the Mixture of the Blood; whence it is rendered unfit to perform the natural Excretions; and the Serum is not discharged by the Kidneys, but derived to the Glands by the Extremities of the Arteries, and empties itself by the salival Ducts. To the same Cause may be ascribed those profuse Night Sweats, which seize hysteric Women; for the irregular Motion of the Blood, producing the ill State of the Serum, disposes it to be thrown upon the Habit.

Nor is it their only Misery, that the Body is so severely disorder'd and shaken, and is become like a House every-where threatening to fall into Ruins; for the Mind still suffers more grievous Afflictions than the Body. For it is the Nature of this Disease to be accompanied with an incurable Despair; so that they cannot endure to be told of the smallest Hopes of their Recovery; and they easily fancy themselves exposed to all the Ills that can befal Mankind, which they imagine impossible to be avoided, and therefore presage the most dismal Events to themselves. Upon little or no Occasion they indulge Terror, Anger, Jealousy, Distrust, and other grievous Passions; and are Enemies to Joy and Hopes, which, if they accidentally appear, as they seldom do, quickly vanish away, and agitate the Mind no less than the depressing Passions. They know no Moderation, and are constant only in Inconstancy. Those of whom they are one Minute extravagantly fond, the next they will abhor. Now they propose doing one thing, immediately they lay aside their Design, and engage in something of a quite contrary Nature, which still they do not conclude of, continually tormenting themselves in this manner with new Perplexities. What the *Roman* Orator asserts of the Superstitious, exactly agrees with these melancholy Persons. "Sleep seems to be a Relief from Labour "and Inquietude, but even from that many Cares and Fears arise;" nothing being represented to them in their Dreams, but dismal Prospects of the Funerals and Apparitions of their deceased Friends. So much are they tormented, both in Body and Mind, that this Life seems no better than a Purgatory, in which they must expiate the Crimes by them committed in a pre-existent State. Nor is this the Case only of Lunatics and Madmen, but even of those, who, excepting these violent Commotions of the Mind, are Men of Prudence and Judgment; and who, in Depth of Thought and Solidity, greatly excel those whose Minds never felt the Pangs of these distracting Thoughts. Justly then did *Aristotle* observe, that melancholy Persons are endow'd with the greatest Capacities.

But those are only subject to this most dreadful State of Mind, who have long labour'd under this Distemper, and are at length overcome by it; especially if Misfortune, Grief, Anxiety, or too strong an Application to Study, accompanied with a bad Habit of Body, have contributed to the Disease.

It would require too much Time to enumerate all the Symptoms of this Disease; so different, and even opposite, are their Appearances. *Democritus* therefore, tho' he was mistaken in the Cause of the Disease, yet seems to have affirm'd, not without Reason, in his Letter to *Hippocrates*, that *the Womb was the Source of six hundred Evils, and innumerable Calamities.* Besides the Variety of these Symptoms, they are so irregular, as not to be comprehended under any uniform Appearance, like those in other Distempers, but they are a mixed disorderly Train; and hence arises the Difficulty of writing the History of this Disease.

The procatarctic or external Causes of it are either violent Exercises of the Body, or, more frequently, some extraordinary Commotion of the Mind, arising from some sudden Fit of Anger, Grief, Terror, or the like Passions. For this Reason, whenever I am consulted by Women, on any particular Disorder, the Cause of which does not appear from the common Rules of discovering Diseases, I always carefully inquire, whether they are not principally attack'd with it, after Sadness, Vexation, or some other Disturbance. If this they own, I am well assured, that the Disorder belongs to that Class of which we are now treating; especially if the Diagnostic is confirmed by a plentiful Discharge of limpid Urine. But to these Perturbations of the Mind, which generally produce this Disease, must be added, Emptiness of the Stomach from long Fasting; immoderate Evacuations, either by bleeding profusely, or administring Emetics or Cathartics, superior to the Strength of the Patient.

Thus far *Sydenham*. *Frederic Hoffman*, in his Dissertation on Hysteric Affections, proceeds thus to distinguish betwixt these and Hypochondriac Disorders.

We may, says he, easily distinguish between this and the Hypochondriacal Affection. For tho' there are Symptoms common to both, each has some peculiar to itself. The Hypochondriacal Disease continues very long, and requires a long Regimen; whilst the other affects principally pregnant or breeding Women, or Women just after their Delivery, Widows, those full of Blood, or labouring under any Uneasiness of Mind, or Virgins after a sudden Suppression of the Menses; and is often so perfectly cured, as not to return. Its Attacks are sometimes so unexpected and violent, that the Patient falls down void of all Sense and Motion, which never happens to Hypochondriac Persons; and this too is peculiar to Hysteric Disorders, that the most severe of them are often alleviated or removed, by only burning a Feather under the Nose: Besides, in the Fit, the abdominal Muscles are contracted, and the Navel drawn inwards; while, in the other, the Belly is rather distended. In the former, the Loins are seized with a violent incredible Coldness, perceptible to the Hands, and cannot be taken off by the Application of warm Napkins; the Top of the Head seems, as if it were bored thro' with an Augre, and therefore this Pain is called *Clavus Hystericus*; and many perceive the Ascent of a little Ball from the Abdomen; all which Hypochondriacal Persons are free from; nor are they equally subject to frequent Faintings, sudden Difficulty of Breathing, or violent Strangulations at the Fauces; and, lastly, none of them are ever mistaken for dead, and interred alive, as it sometimes happens in Hysterical Cases.

With respect to the Circumstance here mentioned, of being mistaken for dead, we have very antient Accounts of such Cases, the Truth of which is confirm'd by modern Histories. *Empedocles* is the first upon Record who took notice of this; and *Heraclides* is said to have wrote a Treatise upon it. See APNOIA.

These Distempers differ as to their Causes. For, as the Hypochondriac Affection exerts itself by Spasms and Flatuses in the membranous Canal of the Intestines, Ventricle, and Oesophagus; and these Spasms arise from a Stagnation of the Blood in the nervous Coats of the Intestines, for want of a due Circulation through the hepatic Vessels, and the Ramifications of the Vena Portæ, so the Origin of hysteric Convulsions is to be deduced from the Uterus; from whence, by its Consent with the Bladder, uterine Convulsions are propagated to the Sphincter of the urinary Bladder, and the Patient feels a perpetual Stimulus to make Water, which hypochondriac Persons do not perceive, according to *Hoffman*; but *Sydenham*, with greater Truth, affirms the contrary. And, from this Diversity of Causes, says *Hoffman*, it will manifestly appear, that the same Symptoms may proceed from different Origins. Thus, a Difficulty of Breathing is common to both; but in one, it takes its Rise from an Inflation of the Stomach, which hinders the Descent of the Diaphragm; and in the other, from a violent Contraction and Compression of the abdominal Muscles. Lastly, They vary no less in their Events and Changes; for one generally terminates in Melancholy, Scurvy, a slow Fever, and the *Morbus Niger*: The other in an Epilepsy, mortal Syncope, *Furor uterinus*, and an acute Fever. Further, upon opening hypochondriac Subjects, we generally find the Viscera of the lower Belly, the Liver, Spleen, and Pancreas, hard, scirrhous, and corrupted; whereas the Cause of hysteric Disorders is seated in the Womb, or Ovaries. I thought it absolutely necessary to be thus particular in the Distinction between these two Distempers, to disengage Physicians from the Error, which they too easily run into, of confounding one with the other.

But there still remain other Diseases, which ought to be accurately distinguished from this. In a Syncope the Pulse absolutely ceases, the Face is pinched in, and like a dying Person's; but,

but, in a Suffocation of the Uterus, the Face is ruddy, and ſwelled, whilſt the Pulſe is languid, which continues for two or three Days; and this cannot be ſaid of the former. In an Apoplexy, under a Privation of all Senſe, and voluntary Motion, there is a Rattling in the Throat, with Difficulty of Breathing, and Quickneſs of the Pulſe, which never occur in hyſteric Diſorders. It differs, likewiſe, from an Epilepſy, the Cauſe of which is ſeated in the Dura Mater, and the Beginning of the ſpinal Marrow, from whence proceed Convulſions of the whole Body; but this has its Seat in the Uterus; from whence Spaſms are propagated to the ſpinal Marrow, and all the Nerves. *Celſus*, *Lib.* 4. *Cap.* 20. gives a very exact and elegant Deſcription of the different Symptoms of both theſe Diſtempers. The Hyſterics, ſays he, as well as the Epilepſy, ſometimes deſtroy the Patient; but, in the former, the Eyes are never cloſ'd, there is no Foaming at the Mouth, nor univerſal Convulſions. It differs no leſs from Pains excited by the Stone; for, though they agree in many Symptoms, the calculous Patient is not afflicted with a Strangulation at the Fauces, Fainting, nor Difficulty of Breathing, and the Patient is not injur'd ſo much by the Smell of Perfumes. *Ballonius*, *de Virginum Morbis*, diſtinguiſhes between this and a Flatulence of the Primæ Viæ, in the following Words: "We "commonly obſerve, that young Women, who eat too much, "eſpecially if their Bellies are large, or if they indulge themſelves "in eating Summer-fruits, are afflicted with incredible Pains of "the lower Belly; by which means Faintings, an unequal Pulſe, "and a Difficulty of Breathing, are produc'd, ſo that the Diſ"order is thought to be of the hyſteric Kind, tho' it is not truly "ſuch. But, becauſe, in this Impetus and Perturbation of the "Humours, the Uterus, in conſequence of the Conſent of the "Parts, can hardly remain unaffected, the Diſorder is, therefore, "ſaid to be of the hyſteric Kind, more in Compliance with Cu"ſtom, than in Conformity to Truth."

It is to be obſerved, that all Women are not equally ſubject to this Diſorder, but that it more particularly ſeizes Virgins, before their firſt menſtrual Diſcharge, ſuch as are marriageable, young Widows, and Wives; eſpecially if they are full of Blood and Moiſture, and have not borne Children: As, alſo, ſuch as are brought up in Idleneſs, or are of a ſoft Texture, and delicate Conſtitution. The Antients, and particularly *Galen*, aſſert, that Widows, when their Menſes ceaſe, when they are paſt Childbearing, and when Venereal Inclinations leave them, are ſubject to hyſteric Affections. *Foreſtus*, *Lib.* 28. *Obſerv.* 28. ſays, that robuſt, maſculine Women, if they are corpulent, full of Blood, and continent, tho' inclin'd to Venereal Enjoyments, and live at Eaſe, feeding upon hot, moiſt, and flatulent Diet, and indulging themſelves in generous Wines, and Delicacies, which prove a Stimulus to Venery, are frequently ſeized with this Diſorder, without a Suppreſſion of the Menſes: And this is confirmed by *Ballonius*, in the Book already quoted, and by *Levinus Lemnius*, *Lib. de occultis Naturæ Miraculis*, *Cap.* 6. Beſides, we have, among others, the Teſtimony of *Aretæus*, that young Women, whoſe nervous Syſtems are delicate and weak, who are of a tender Habit, and ſubject to the exorbitant Sallies of lawleſs Paſſion, are in greater Danger of this ſpaſmodic Diſeaſe, than thoſe who are robuſt, hardy, laborious, and of a more ſteady Mind. 'Tis alſo obſervable, that Women of ſanguine, choleric Conſtitutions, and prone to impetuous Commotions of Mind, are ſubject to ſevere Convulſions of the nervous Parts. On the contrary, thoſe of a phlegmatic and languid Diſpoſition are not ſubject to ſo violent Convulſions; but rather fall into more frequent Deliquiums, and are impatient of the leaſt Noiſe, Breath of Wind, and ſweet Odour.

Having premiſed thus much, we ſhall next inquire into the Seat of this Diſorder, which *Highmore*, *Sylvius*, and *Sydenham*, confounding it with the Hypochondriac Affection, aſſert to be the Stomach, Pancreas, Meſentery, and Vena Portæ; and *Carolus Piſo* no leſs erroneouſly places the Seat of this Diſorder in the Brain, or rather the Beginning of the Nerves, without diſtinguiſhing between the Subject of the morbific Cauſe, and of the Patient's Death. But, with the Antients, I am fully perſuaded, that it ariſes from the Womb, and its Membranes and Veſſels, particularly thoſe of the ſpermatic Kind; and that the ſpaſmodic Stricture of theſe Parts communicates itſelf to the adjacent Nerves of the Os Sacrum and Loins; and thence, in conſequence of the mutual Conſent of the Parts, gradually ſeizes the nervous Membranes of the ſpinal Marrow, propagating itſelf from the inferior to the ſuperior Parts. For which Reaſon we find, that when Women, after Delivery, are ſeiz'd with this Diſorder, the Convulſions begin at the internal Orifice of the Uterus, or even of the Vagina, becauſe, theſe Parts becoming cold and dry, the Diſcharge of the Lochia is ſuppreſſed, and the Body render'd coſtive. Then the Spaſms and Pains, accompany'd with a Senſe of Cold, ſeize the Loins, and, paſſing thence to the abdominal Muſcles, produce a Retraction of the Navel, accompany'd with an Hardneſs of the lower Belly; then they mount up to the Diaphragm, the intercoſtal Nerves, and the Par Vagum, and bring on a Difficulty of Breathing, almoſt to Suffocation, with a Strangulation of the Fauces; and this, for want of a free Circulation of the Blood thro' the Heart, is followed by a Palpitation thereof, Fainting, and at length, when the Blood cannot paſs thro' the Brain, by a Privation of Senſe and Underſtanding. From all which, it is very evident, that hyſteric Affections may be juſtly claſs'd among thoſe of the ſpaſmodic and convulſive Kind, which affect the whole nervous Syſtem.

I agree with the Generality of Phyſicians, that the direct and material Cauſes are, partly a Corruption of the ſeminal Juices, and partly a peccant State of the menſtruous Blood in the Uterus; and each of theſe deſerves a very accurate Examination. For we are ſufficiently convinced by Inſpection into human Bodies, that Males are furniſhed with peculiar Organs, call'd Teſticles, where the ſubtile, ſpirituous, ſeminal Liquor is ſecreted from the Blood, which paſſes through the ſpermatic Arteries, and is lodged in proper Receptacles; but in Females no ſuch Organs are found; inſtead of which, Nature has placed, at the Sides of the Uterus, certain globular Bodies, conſiſting of Blood-veſſels, Membranes, and Veſicles, termed Ovaries; and the ſpermatic Veſſels are carry'd in numberleſs Ramifications to the Subſtance of the Uterus. Since, therefore, the modern Naturaliſts look upon theſe Veſicles in the Ovary, wherein is contained an infinitely minute Fœtus, to be fecundated by the Male Sperm, it will be worth while to inquire, whether this can be vitiated, and in what manner; then, how it gives Birth to hyſteric Diſorders, after its Corruption.

For the better underſtanding of which, we muſt premiſe ſome Things, eſpecially with reſpect to the Alterations the human Body undergoes, particularly about the Years of Puberty. We obſerve then, that Girls, about the fourteenth Year of their Age, grow more ruddy, their Faces become fair, and their Breaſts ſwell; that, in Boys of the ſame Age, the Beard grows, the Voice is more ſonorous, the Strength and Vigour of every Part of the Body is increas'd, and that both Sexes are inclined to Venereal Enjoyments. For, as in Males there is a greater Afflux of the Blood to the Teſticles, for the Secretion of the ſeminal Fluid, and Erection of the Penis, ſo in Females a more copious Quantity of Blood is convey'd to the Uterus, and its Veſſels, to fecundate the Ovum, if there is any; and hence, in Caſes where there is no Impregnation, we deduce the Cauſe and Origin of the Menſes. This naturally leads me to conſider the muſical and wonderful Harmony between the Paſſions and the vital Motion of the Blood, towards certain Members, eſpecially thoſe deſtin'd to Procreation. For this copious Afflux is directly followed by a Deſire of Enjoyment; and, on the other hand, when the Contemplation of a deſireable Object provokes Venereal Inclinations, this Circumſtance excites a greater Afflux of Blood and Spirits to the Organs deſtin'd to the Purpoſes of Generation.

Whenever the Humours flow too plentifully through the ſpermatic Veſſels, to the Ovaries and Uterus, whether it proceeds from Age, or ſalacious Inclinations, the nutritious Lymph is collected in thoſe Parts, where it ſtagnates, corrupts, and gives Riſe to hyſterical Diſorders. Conſequently, Girls, about Fourteen, and ſprightly, unmarry'd, wanton, warm, ſanguine Women, are ſubject to this Diſorder in the higheſt Degree. *Charleton*, *Exercit. Pathol.* 7. confirms this Opinion in the following Paſſage: "Some Women, ſays he, of warm Conſtitutions, are "thrown into Hyſterics by the abundant Stimulation of the "ſpermatic Juices." For this Reaſon the Antients attributed it to a Retention of the ſeminal Matter, and either preſcribed Marriage, or gave Medicines to promote the Diſcharge thereof. See *Zacutus Luſitanus*, and *Petrus Foreſtus*; and they add, that, after the Paroxyſm, a large Quantity of moiſt Liquor is diſcharg'd from the relax'd Pudenda. See *Galen. Comment. in Hippocratem*, *Lib.* 6. *de Locis affectis*, *C. V.*

That corrupted ſeminal Juices may produce Hyſterics, appears, firſt, from their Tendency to prejudice the pure Juices circulating in the Nerves and Fibres, by their noxious Effluvia; and it is well known, that many other kinds of Effluvia will excite hyſteric Paroxyſms.

A ſecond Reaſon is, that the violent Diſtention of the Veſſels, and nervous Membranes, by this preternatural Collection of Humours, muſt cauſe ſpaſmodic Motions, which are propagated thro' the whole nervous Syſtem. And this no one can doubt, who will but conſider, that hypochondriacal Affections, and ſevere Convulſions in the Colic, frequently ariſe from a bare Stagnation of Blood, in the Coats of the Stomach and Inteſtines.

That this is really the Caſe, farther appears from the Diſſection of Women, who have died of hyſterical Diſorders. Thus *Veſalius*, *Lib.* 5. *de Humani Corporis Fabrica*, *Cap.* 15. ſays, that he has found the Teſticles of hyſteric Women larger than a Ball, replete, ſometimes, with a yellow, and ſometimes with a fetid Humour of other Colours. *Riolanus*, *Anthropol. Lib.* 2. *p.* 35. ſays he found an hard Teſticle larger than one's Fiſt.

Binnengerus, *Cent.* 2. *Obſ.* 90. relates, that he ſaw the Teſtes (*Ovaria*), together with the Fallopian Tubes, and ſpermatic Veſſel, exceſſively tumid, inflated, and ſtuffed with a thick, white, and ſomewhat indurated Humour, like a Steatoma, and of half a Pound Weight, in a Woman who died of Hyſterics.

Manageta, *in M. N. C. D.* 1. *a.* 1. *Obſ.* 32. ſays, he met with an Uterus and Teſticles turgid with a corrupt ſeminal Matter, not unlike an hard Curd. And *Diemerbroek*, *Anat. Lib.*

de Ventre inferiore, *Cap.* 24. relates, that in hysterical Women he has generally found something or a Tumor about the Womb, and in that an æruginous or yellow Liquor. From all which it is very evident, in what Manner the vitiated seminal Juices produce this Disorder.

Let us now consider the second Cause, which, we said, was a Corruption of the menstrual Blood. That Irregularities, however, of this critical Evacuation, are not always the immediate Causes of hysteric Disorders, I am sensible; because Virgins, and Women in Years, have been afflicted with Hysterics, without any Suppression of the Menses, or habitual hæmorrhoidal Flux; which *Piso* acknowledges. In the mean time, we often observe, that, during hysterical Disorders, this menstrual Discharge often becomes irregular, which should, at that time, be look'd on as an Effect and Symptom of the Distemper; because Convulsions are of such a Nature, as to disturb and prevent Excretions of all kinds. But, certainly, this must be acknowledged as one of the Causes; since Virgins, at the Age of Puberty, from a Cohibition of the Menses, at that time approaching, and the consequent Distention of the Vessels; and Women, whose Discharge is something difficult a little before the Evacuation, are much afflicted with hysterical Affections. And the *Clavus Hystericus*, fix'd in one Point of the Head, which is often accompanied with Cardialgias, and Vomitings, will corroborate this Argument; and we are furnish'd with Instances of Hysterics, and even Epilepsies, attacking Women of a delicate Frame, after a sudden Suppression of the Menses, caus'd by a Fright.

Pregnant Women, especially those of a sanguineo-choleric Constitution, are not exempt from hysterical Affections; for I have seen some, about the third or fourth Month, on account of violent Anger, seiz'd with a Suffocation, Loss of Strength, and a Syncope of some Hours Duration; but they were happily reliev'd by opening a Vein, and the Application of spasmodic and nitrous Medicines. That, after Delivery, a Suppression of the Lochia will give Birth to Hysterics, *Hippocrates*, *Lib. de Natura Mulierum*, assures us. And I myself have known Women fall into violent Hysterics, from too cold an Air admitted to the Abdomen, an inconsiderable Commotion of the Mind, or sitting up too long, the first Days after their Delivery; and, a Suppression, or Defect, of the Lochia, unless seasonably reliev'd by Phlebotomy, will produce the same Effects. An immoderate or too long-continued Flux of the Lochia, upon the Accession of any slight external Cause, will excite hysterical Disorders, particularly Faintings, and Refrigeration of the Extremities; which, however, are more easily remov'd, provided proper Measures are pursu'd.

Whatever, therefore, conduces to a preternatural Afflux of the seminal Juices to the Region of the *Uterus*, or produces any Impediment, Difficulty, or total Suppression of the menstrual Flux, may be esteem'd an occasional Cause of hysterical Affections. Among these Causes we may principally reckon the Years of Puberty, and an Abstinence from habitual Venereal Enjoyments. To these may be added a sanguine or choleric Constitution, Salacity, an heating, vinous, delicate Diet, strong Passions, and violent Commotions of the Mind and Body. On the contrary, a sedentary Life, thick, acid, cold Food, a Neglect of Phlebotomy in Constitutions accustomed to it, and continual Uneasinesses, Sorrow, and Cares, by inspissating the Fluids, weakening the Solids, and, of consequence, rendering the menstrual Discharge difficult, contribute to excite this Disease; nor is it promoted less by a sudden Fright, or Refrigeration of the Body, which, particularly at the Time of the menstrual Flux, puts a Stop to this Evacuation. Lastly, Perfumes, as Amber, Civet, Musk, and the like, from their peculiar Disposition, induce violent Paroxysms.

This Distemper, however terrible, with respect to its Symptoms, is not very dangerous, unless it happens in a weak and valetudinary Constitution, or is preposterously treated by ill-adapted Medicines, or an improper Regimen. But no Distemper so readily induces Epilepsies and Convulsions as Hysterics, insomuch that by these we may distinguish hysteric from hypochondriacal Disorders. Again, we find Relapses very common, either from a Miscarriage, difficult Labour, or any slight nervous Disorder. Nor is it unusual to meet with a Complication of the hysterical and hypochondriacal Affections, which is generally of long Continuance, and difficult to be cured, especially in Patients of a sedentary Life, and strong Passions, or such as pursue an improper Diet and Regimen, which disturb the menstrual and hæmorrhoidal Discharges, and cause such a Complication of Disorders.

Cure.

Having thus fully explained the Genius, Seat, Causes, and Differences of hysterical Affections, we shall now proceed to the Method of Cure. But as the Cure of all Diseases requires a thorough Knowledge of the Patient's Constitution, and an Administration of Remedies proper to remove the Cause, so, in hysterical Cases particularly, the Physician's principal Care must be to make himself Master of these Circumstances, since not only the Causes of the Distemper, but, also, the Nature of Women, are, according to *Hippocrates*, found widely different.

In order to the Cure of Hysterics, the first Inquiry to be made is, whether the Patient's Body is plethoric, or exhausted of Blood and Strength: In the first Case, nothing affords so immediate Relief as Bleeding, in case of Spasms and Convulsions, which, in sanguine Constitutions, are the most excessive. This must be proportioned to the Redundance of Blood, and if that is very great, it may even be repeated. I have known this give immediate Relief to Women, who had lost all manner of Sense and Motion, and lay, as it were, apoplectic; with their Faces very red and tumid; and, also, to sanguine Virgins, almost deprived of their Respiration, and Speech, or seized with an epileptic Paroxysm, on account of a sudden Suppression of the Menses by a Fright. Many practical Authors prefer Bleeding to all other Remedies, when the Disorder is excited by a Redundance of Blood, or Retention of the Menses. *Mercatus* and *Rodericus à Castro*, *Hæstederus*, *Dec.* 4. *Cas.* 2. *Highmore*, *L. de Passione Hysterica*; *Panarolius in Iatrologismis*, *Sententia* 2. *Obs.* 30. *Riverius*, *Septalius*, and *M. N. C. D.* 1. *Anno* 10. *Obs.* 42. & 58. were strongly of this Opinion, as well as many others.

During the Paroxysm, all our Endeavours should be directed to mitigate the Violence thereof. Pursuant, therefore, to the Directions of *Hippocrates*, I advise the Application of fetid Substances to the Nose, as Castor, Asa-fœtida, and burnt Partridge-feathers, which last is a popular Remedy, and of great Efficacy. Among compound Medicines, the acid Water of Swallows, with Castor, and urinous Spirits, impregnated with Oil of Rue, and Essence of Castor, may be applied to the Nostrils with very good Effect, but, above all, a Rag previously dipt in strong Vinegar.

I have seen Women, as it were, lethargic, and in all Appearance at the Point of Death, recovered, in a very surprising manner, by the Use of these Medicines; for the saline volatile Vapours of these Remedies, by penetrating into the nervous Membranes of the Brain, inspire them with new Strength and Vigour, restore their lost systaltic Power, and disperse the Blood and Humours, stagnating therein. Women, after Delivery, find great Benefit from a Compression of the Abdomen with a *Russia* Leather Girdle, the Smell of which is very serviceable, both to hysterical and hypochondriacal Persons. In the Fit, great Relief may be expected from an immediate Evacuation by Stool; for the Patient is, in this Case, generally excessive costive; for this Reason Clysters are of excellent Use, if prepared of proper Ingredients, as the Roots and Seeds of Lovage, which, in this Case, are Specifics, the Flowers of common Chamomile and Elder, the Herb Paul's Betony, and the Four carminative Seeds, boil'd in Whey, with an Addition of a sufficient Quantity of Oil of Dill, or Chamomile, made by Coction. But, when the Stricture of the Belly and Rectum will not admit of this Remedy, that Defect must be supplied by an Injection of pure expressed Oils or Lards, such as the Fat of the Badger, or the Beaver, the Oil of Dill, and some others of a like Quality, by which the *Menses* and *Lochia* are, also, considerably promoted.

For external Remedies, the Antients recommend the Application of fetid Plaisters, such as those prepared of Opopanax, Bdellium, Galbanum, Sagapenum, and Asa-fœtida, to the Navel, or Pudenda. *Forestus*, in *Lib.* 28. *Obs.* 32. gives a remarkable Instance of the Efficacy of these. Nor must we omit taking notice of the Application of Perfumes immediately to the Uterus, as these are recommended by *Hippocrates* and *Galen*. And though I can affirm nothing of them from my own Experience, I would not absolutely reject them, as they seem very likely to succeed, because Perfumes, as Musk, Civet, Storax, and Benzoin, of which Suffumigations for the Uterus are prepar'd, by their sulphureous and salutary Exhalations, relax the constricted Fibres of the *Uterus*, insomuch that, as *Forestus* observes, their Application frequently causes a Discharge of thick putrid Humours, immediately from the Part.

Amongst internal Remedies, the most efficacious are, the Essence of Castor, mixed with three Parts of the anodyne Liquor, and the antispasmodic Pills, prepar'd of Myrrh, Sagapenum, Opopanax, Asa-fœtida, Castor, Saffron, and the Theriaca, each half a Dram, adding, sometimes, six or eight Grains of Camphire, and Laudanum Opiatum. From each Scruple of this Mass ten Pills may be made, two of which are to be taken every Hour, with a due Quantity of the Water of Chamomile-flowers. I have often seen surprising and almost incredible Effects produced by this Medicine.

These are the principal Remedies, during the Continuance of the Fit; let us now consider, what is proper to remove the Cause, when the Paroxysm is over. Guided, therefore, at once, by Reason and Experience, we assert, that the *Primæ Viæ*, which are generally filled with a Load of peccant Humours, are to be purged by proper Medicines; which Practice is so much the more necessary, because, during the Paroxysm, large Quantities of Anodynes, fetid Substances, and such as stop violent Commotions, have been exhibited. For answering this Intention, the most efficacious Medicines are, the *Pilulæ Becherianæ*, or some others of a like Virtue, especially when, by way of Stimulus, a due Quantity of the *Extractum Panchymagogum Crollii*, of pre-

pared Cinnabar, and a Grain or two of the Extracts of Saffron and Caſtor, as Antiſpaſmodics, are added. When, by this means, the *Primæ Viæ* are ſufficiently purged of the peccant Humours, ſuch Medicines are to be uſed, as, being poſſeſs'd, at once, of a ſedative and diaphoretic Quality, may direct the Motion of the Blood and Humours to the external Parts, and, by promoting a free Perſpiration, procure the Diſſipation of the peccant Serum. The Medicines of greateſt Efficacy for anſwering this Intention are, the Spirit of Hartſhorn, or that of Ivory purified by Rectification; the *Spiritus Bezoardicus Buſſii*, the ſuccinated Spirit of Hartſhorn, and the Spirit of Tartar, duly prepared; which volatile Spirits may be commodiouſly exhibited in ſmall Doſes, either by themſelves, or in Conjunction with the anodyne mineral Liquor, the Eſſence of Saffron, Caſtor, or Amber, or even with the Liquid Laudanum, than which Medicine, prudently uſed and exhibited, according to the Circumſtances of the Patient, nothing is more beneficial and efficacious; for, as, by the Aſſiſtance of Nature alone, theſe ſpaſmodic Diſorders are often ſpontaneouſly terminated by profuſe Sweats, it ought to be the Phyſician's principal Care to obtain this End, and act, as it were, in Concert with this Tendency of Nature.

For anſwering the ſame End, with theſe we may interpoſe other Medicines of no leſs Efficacy, ſuch as the Powders which are poſſeſs'd of a kind of peculiar and ſpecific Virtue, in mitigating Spaſms, and convulſive Motions. Of this Kind, ſays *Hoffman*, are the *Pulvis Marchionum*, the *Specificum Cephalicum Michaelis*, my Antiepileptic Powder, as, alſo, that prepar'd of a dry'd human Secundine, Miſletо, Amber, Coral, Saffron, Caſtor, and Cloves By the prudent Uſe of theſe I have often ſeen convulſive and epileptic Motions allay'd and mitigated in a moſt ſurpriſing manner. But Medicines of this Kind muſt not be uſed till the Plethora is removed, and the peccant Humour ſufficiently evacuated by Stool.

Since this Diſorder, unleſs judiciouſly treated, is very ſubject to recur, or to degenerate into ſome other chronical Diſorder, eſpecially of the hypochondriac Kind, theſe Misfortunes are to to be guarded againſt with all poſſible Care; which is done by having a due Regard to the *Menſes*, after the Termination of the Diſeaſe, whether an irregular Evacuation of theſe produced the Diſorder, or whether the Diſcharge was faulty, during the Continuation of the Diſeaſe, as it generally is. For promoting the *Menſes*, therefore, and preſerving them in that State which Nature requires for Health, I have found nothing more efficacious than the internal Uſe of the *Caroline* Waters, in Conjunction with a proper Regimen; for hot mineral Waters are generally obſerved to be more ſafe and powerful in the Cure of Diſorders peculiar to the Sex, than cold mineral Springs. Thoſe Medicines are, alſo, to be uſed, which, by reſtoring the Strength and Tone of the *Uterus*, remove the Diſorders ariſing from its preternatural Weakneſs. The moſt efficacious Medicines of this Kind are temperate Balſamics, prepared of Myrrh, Amber, bitter and carminative Extracts, eſpecially thoſe of Zedoary and Orange peel, reduced to an Elixir, with a gently ſpirituous Menſtruum, and frequently uſed; for theſe both excellently promote the Menſes, and aſſiſt the Digeſtion, eſpecially when, at the ſame time, the inteſtinal Fæces are duly eliminated by temperate Balſamics, and the *Pilulæ Polychreſtæ*.

There ſtill remains another highly natural, and efficacious Method of Cure, which is, that to be expected from Marriage. Reaſon, Experience, and the Authorities of the greateſt Phyſicians, concur in pronouncing Matrimony highly beneficial in removing hyſteric Diſorders. *Hippocrates*, in his Treatiſe *de Virginum Morbis*, recommends it for this Purpoſe. *Valeſcus de Taranta*, in *Philom. Pharm. Lib.* 6. *Cap.* 10. uſes the following Words: "If, ſays he, any young Woman labours under Diſ-" orders ariſing from a Retention of the Menſes, let her marry, " and her Misfortunes will be removed." *Capivaccius* gives ſome very extraordinary Directions on this Occaſion, which are not extremely decent, nor of much Importance. *Duretus, in Enarratione ad Caput* 59. *Hollerij*, and *Zacutus Luſitanus* 52. *Prax. Med. Admirand. Obſ.* 91. give us memorable Inſtances of the happy Effects produced by Matrimony, in the Cure of hyſteric Diſorders.

Practical Cautions,

When hyſterical Affections proceed from an Orgaſm of the uterine Lymph, all warm Medicines are extremely pernicious; as appears from many Inſtances in *Rodericus a Caſto de morbis mulierum, Lib.* 2. *Ludovicus Mercatus, Lib.* 2. *de Morbis Uteri, Cap.* 3. We ſhould, therefore, temperate the Acrimony of the Lymph, and check the Orgaſm of the Blood and Humours, by cooling Drink; as Water, Whey, and nitrous Liquors; the Efficacy of which, for the Extinction of Salacity, *Timæus a Guldenklee* greatly recommends.

Since the Nature of Women is ſo very various, it is no Wonder, that the ſame Remedy differs in its Operation upon different Subjects. Thus I have ſeen ſome unable to bear the Application of Fetids, either internally or externally; whilſt others have found immediate Relief from them. Some I have ſeen, who were oppreſſed with a Syncope in every Paroxyſm, reſtored by only ſprinkling a little Water upon the Face, when ſtronger ſpirituous Remedies had been tried in vain. Some are of ſo hot a Conſtitution, that they cannot bear warm Medicines, either externally or internally; and ſuffer greatly from hot nervous Baths, Fomentations, and Ointments. Some are eaſed by Anodynes and Opiates, whilſt others, whoſe Nerves are very much weakened, find them extremely prejudicial. Some, again, have I met with, who were relieved by a Draught of Water only, which has been very pernicious to others. Of ſuch Conſequence is it, as *Hippocrates* long ago obſerv'd, *Lib.* 1. and 2. *de Morbis Mulierum*, to be well acquainted with the Natures of Women.

Though, in our Days, the hypochondriac Diſorder is never mention'd among the Diſeaſes, which Women are ſubject to, but every Affection attended with Pains, Spaſms, Flatulences, and Anxieties, is termed Hyſterical; yet an accurate Diſtinction between them is abſolutely neceſſary. For as, in hypochondriac Caſes, Exerciſe, carminative, ſpirituous, volatile, ſtomachic, and aromatic Medicines, Salts of a neutral and ſtimulating Kind, Mineral Waters, bitter Purges, and, above all, Chalybeates, are moſt ſerviceable, ſo are they very noxious to hyſteric Women; who are more reliev'd by Bleeding, Reſt, Anodynes, nitrous, antiepileptic, and cooling Remedies, with the drinking cold Water and Whey, and an Abſtinence from all warm Things, even Wine.

To prevent a Relapſe, and ſecure the Diſtemper from becoming chronical, it will be proper to regulate the Evacuations by Stool, and the menſtrual Diſcharge, by a proper Diet and Regimen, always obſerving not to uſe any great Quantity of Aloes and reſinous Gums. For I can affirm, from my own Experience, that they increaſe and prolong the Diſorder, particularly in Women, who are plethoric, or of a ſoft and tender Frame. In ſuch Caſes Currants gently boiled in an Infuſion of Rhubarb, are exhibited with much better Effect. Mean time all ſorts of Cakes, Sweet-meats, and Sallads, are carefully to be avoided; for as an immoderate Uſe of theſe things, together with an idle Life, too ſcanty and incongruous drinking, and ungovernable Paſſions, give Birth to hypochondriacal and hyſterical Diſorders, ſo People already affected with theſe Diſorders ought more rigidly to abſtain from them.

Though daily Experience convinces us of the Uſefulneſs of Caſtor Medicines in both Diſeaſes, yet we muſt not put too much Confidence in them, becauſe they are not capable of removing the Cauſe; and too great a Quantity of them is prejudicial, as their anodyne Vapour induces a dangerous Weakneſs, with reſpect to the Head and Nerves.

If hyſteric Women, after Delivery, are coſtive, they ſhould not be purged with highly ſtimulating neutral, and, as they are called, digeſtive Salts; for by large and frequent Doſes of theſe Salts I have ſeen a dangerous Increaſe of the Symptoms.

In a violent hyſteric Suffocation, nothing is more efficacious in rouſing the Patient, than volatile Sal Ammoniac, mix'd with Eſſence of Caſtor, or the Water of Swallows, with Vinegar and Caſtor applied to the Noſtrils; and Frictions with a rough Cloth about the Præcordia and Feet. Theſe are far more proper than the Smoke of highly fetid Subſtances, ſuch as Feathers; as, alſo, than Aſa-fœtida, or Camphire, which few can bear.

I have found extraordinary Benefit, ſays *Hoffman*, in hypochondriaco-hyſteric Subjects, of a choleric, and very ſenſible Conſtitution, from precipitating nitrous Powder, mix'd with an equal Quantity of Amber, and a ſmall Quantity of Saffron; as, alſo, from the frequent Uſe of my Elixir Viſcerale, mix'd with an equal Quantity of my anodyne Liquor.

For alleviating the Paroxyſms, in the Intermiſſion, nothing is better than Clyſters, compoſed of gentle, paregoric, carminative Herbs, with the Addition of a large Quantity of expreſs'd Oil; for they have an immediate Effect upon the Womb, by relaxing it by their temperate Warmth.

After the Fit, very temperate Baths, for the Feet, are highly efficacious; but, if too hot, I have more than once obſerved, particularly in plethoric Subjects, that they are too ſubject to occaſion a Relapſe. *Frederic Hoffman.*

The celebrated *Sydenham* propoſes the following Methods of Cure for hyſterical Diſorders.

The principal curative Indication, in this Diſeaſe, appears to be that which directs the ſtrengthening of the Blood, which is the Fountain and Origin of the Spirits; that the invigorated Spirits may preſerve an Order, agreeable to the Whole, and every Part of the Body. But as this Diſorder of the Spirits may, by its long Continuance, have vitiated the Juices, it will be proper to diminiſh their Quantity by bleeding and purging, if the Strength of the Patient can bear theſe Operations, before we proceed to ſtrengthen the Blood; and this Deſign is difficult to be executed, whilſt Collections of feculent Humours obſtruct the Paſſages. But as the Pain, the Vomiting, and the Purging, are ſometimes ſo exceſſive, that they cannot ſafely be neglected, we are to diſregard the Cauſe for a time, and begin the Cure by quieting the Symptoms, for that Purpoſe exhibiting an Opiate. And, as we learn from Experience, that there are many fetid Medicines adapted to compoſe the Commotions of the Spirits,

which have, therefore, been named Hyſterics, let them be preſcribed when ſuch Intentions are to be anſwered.

With this View, I firſt order Bleeding in the Arm, and then a Purge, for three or four ſucceſſive Mornings. During theſe Evacuations, the Diſeaſe ſeems rather to increaſe than diminiſh, becauſe of the Commotion by them excited. Of this Circumſtance I carefully inform the Patient, to prevent that Deſpondency which is ſo natural to this Diſorder. However it be, Part of theſe foul Humours, which we ſuppoſe to have been collected by the long Duration of the Diſtemper, muſt be remov'd before the primary Intention can be conveniently anſwer'd.

For the next thirty Days I preſcribe chalybeate Medicines, which ſerve to impregnate the vapid and languid Maſs of Blood with a certain volatile Ferment, whereby the drooping Spirits are rous'd and reviv'd. This is manifeſt from the Effects of Steel in the Green-ſickneſs; for it evidently raiſes and quickens the Pulſe, warms the external Parts, and changes the pale death-like Colour of the Face into a florid Red. But it ought carefully to be obſerv'd, that Bleeding and Purging are not always to be premis'd to Chalybeates, with which we ought to begin when the Patient is extremely weaken'd, and almoſt ſpent with the Duration of the Diſeaſe.

Steel is, in my Opinion, beſt exhibited in Subſtance; for as I have never obſerv'd or heard, that it was prejudicial to the Patient when taken in this manner, ſo repeated Experience has convinced me, that it cures with more Eaſe and Expedition than any of the common Preparations: For officious Chymiſts rather leſſen than improve the Virtues of this and other excellent Medicines, by their Methods of preparing them. I have likewiſe been inform'd, that the crude Ore operates more efficaciouſly than Iron refin'd by Fuſion; and, if this Circumſtance be true, it ſtrongly ſupports our Aſſertion: But I am not certain of it from my own Experience. This, however, I undoubtedly know, that the moſt excellent Remedies hitherto diſcover'd derive their principal Virtues from Nature; and therefore Antiquity gratefully ſtyl'd them the Remedies, or Hands, of God, and not of Man. But, that a Medicine may produce ſurpriſing Effects from its own native Power and Goodneſs, in whatever Form it is adminiſter'd, is evident from the admirable Virtues of the Bark and Opium. Nor does the Skill of a Phyſician ſo much appear in preparing Medicines, as in ſelecting and adapting thoſe which Nature has produced, and liberally beſtows. Our only Buſineſs, therefore, is to reduce them to a Form, by which their Subſtance, or Virtues, may be the more effectually communicated to the Body; a Buſineſs which we are ſufficiently enabled to execute. Next to Steel in Subſtance, I would uſe its Syrup, which is prepar'd by infuſing the Filings of Iron, or Steel, in *Rheniſh* Wine cold, till it is ſufficiently impregnated; afterwards ſtraining it off, and boiling it, with a ſufficient Quantity of Sugar, to the Conſiſtence of a Syrup.

During a Courſe of Chalybeates I never exhibit Cathartics; becauſe they ſeem to deſtroy the Effects of Steel, both in hyſteric and hypochondriac Diſorders. For when I principally intend to quiet the Spirits, and to reſtore and ſtrengthen their Frame, the gentleſt Purge undoes, in one Day, all the good Effects which Steel has produced in a Week. And, doubtleſs, when this Practice of Purging is preſcrib'd during the Uſe of chalybeate Waters, they are thereby render'd leſs efficacious. Nor am I ignorant, that ſome have recover'd, not only when Purgatives have been interpos'd, but even when they have been daily adminiſter'd with Steel; but the Succeſs is here rather to be aſcribed to the powerful Virtues of the Steel, than to the Skill of the Phyſician.

If it be objected, that Steel Filings may ſtick to the Bowels, and do Miſchief, unleſs Cathartics are ſometimes exhibited; I anſwer, that I never obſerv'd any ſuch bad Conſequences produced by them; and it is more probable, that the Steel, without Cathartics, being involop'd in the mucous and excrementitious Humours of thoſe Parts, will at length be evacuated with them, than if they are agitated by Purgatives, which occaſion unuſual Gripings and Contractions of the Inteſtines; by which means the Particles of Steel, which adhere to their Coats, may be more deeply fixed.

During a Courſe of Chalybeates, in order to ſtrengthen the Blood, and animal Spirits, hyſteric Medicines are to be adminiſter'd, in ſuch a Manner and Form as are moſt agreeable to the Patient; though, if they can be taken in a ſolid Form, they will more effectually influence the Spirits, than in a liquid, ſuch as a Decoction, or Infuſion; for the Subſtance itſelf affects the Stomach longer, and communicates its Virtues more intimately to the Body.

In order to anſwer all the Indications above enumerated, I uſually direct the following few common and ſimple Remedies, with Succeſs.

Let eight Ounces of Blood be taken from the Right Arm.

Take of Galbanum, diſſolv'd in Tincture of Caſtor, and ſtrain'd, three Drams; Tacamahac, two Drams: Mix them together, for a Plaiſter, to be applied to the Navel.

Next Morning let the Patient begin the following Pills:

Take of the greater Pil. Cochiæ, two Scruples; Caſtor, powder'd, two Grains; Balſam of *Peru*, four Drops: Make them into four Pills, to be taken at five in the Morning, ſleeping after them.

Let them be repeated two or three times, either every Morning, or every other Morning, according to their Operation, or the Strength of the Patient.

Take of the diſtil'd Waters of black Cherries, Rue, and Briony, each three Ounces; Caſtor, tied up in a Piece of Linen, and ſuſpended in the Phial, half a Dram; fine Sugar, enough to ſweeten the Whole: Mix them for a Julap; of which let four or five Spoonfuls be taken when the Patient is faint, or low-ſpirited, dropping into the firſt Doſe, if the Fit be violent, twenty Drops of Spirit of Hartſhorn.

After having taken the purging Pills, as above directed, let the Patient proceed to the Uſe of the following Remedies:

Take of the Filings of Iron, eight Grains; Extract of Wormwood, enough to make it into two Pills, to be taken early in the Morning, and at five in the Afternoon, for the Space of thirty Days, drinking after each Doſe a Draught of Wormwood-wine.

Or, for daily Uſe,

Take of the Filings of Iron, and Extract of Wormwood, each four Ounces: Mix them together. Let ſixteen Grains, or a Scruple, of this Maſs be made into three Pills, and taken at the times above-mentioned.

Or, if a Bolus be more agreeable,

Take of the Conſerve of *Roman* Wormwood, and Orange-peel, each one Ounce; candy'd Angelica, Nutmeg, and *Venice* Treacle, each half an Ounce; candy'd Ginger, two Drams; Syrup of Orange-peel, enough to make the Whole into an Electuary.

Take of this Electuary, a Dram and an half; the Filings of Iron, finely pulveriz'd, eight Grains; Syrup of Orange-peel, enough to make them into a Bolus, to be taken every Morning, and at Five in the Afternoon, with a Draught of Wormwood-wine after it.

Take of the fineſt Myrrh, and Galbanum, each one Dram and an half; Caſtor, fifteen Grains; Balſam of *Peru*, enough to make them into a Maſs, of every Dram of which let twelve Pills be form'd; three whereof muſt be taken every Morning during this Proceſs, with three or four Spoonfuls of compound Bryony-water after them.

But if theſe Pills ſhould looſen the Belly, as ſometimes they do, in ſuch as are eaſily purg'd, on account of the Gums they contain, let the following be ſubſtituted in their ſtead:

Take of Caſtor, one Dram; volatile Salt of Amber, half a Dram; Extract of Rue, enough to make them into twenty-four Pills, three of which are to be taken every Night.

But here it muſt be obſerv'd, that Chalybeates, in whatever Form or Doſe they are exhibited, ſometimes bring upon Women great Diſorders both of Body and Mind, not only in the Beginning, which commonly happens, but during the whole Courſe. In this Caſe the Uſe of Chalybeates is not to be interrupted; but, that they may be enabled to bear them, a proper Doſe of Laudanum muſt be given every Night, for ſome time, in any hyſteric Water.

But when the Diſeaſe is gentle, and ſeems not to require the Uſe of Steel, I judge it ſufficient to bleed once, and purge three or four times; and then to order the alterative hyſteric Pills above deſcrib'd, every Morning and Night, for ten Days. This Method is generally ſucceſsful, when the Diſtemper is not ſevere; and the Pills alone have often excellent Effects without Bleeding or Purging.

It is, however, to be carefully remark'd, that ſome Women, on account of a certain Peculiarity of Conſtitution, entertain ſo great an Averſion to hyſteric Medicines, which are ſo generally ſerviceable in this Diſeaſe, that, inſtead of being reliev'd, they are greatly injur'd by them. In theſe, therefore, they are to be entirely omitted; for, as *Socrates* wiſely obſerves, *it is fruitleſs to oppoſe the Tendency of Nature.*

This Idioſyncracy is ſo remarkable, and ſo common, that, unleſs Regard be had to it, the Life of the Patient may be endanger'd. And in this Circumſtance hyſteric Remedies are far

from

from being singular: I shall produce only one Instance. Some Women, in the Small-pox, cannot bear Diacodium, because it occasions Giddiness, Vomiting, and other hysteric Symptoms, whilst liquid Laudanum agrees very well with them.

In this manner hysteric Diseases, and most kinds of Obstructions, but especially the Green-sickness, are generally cured. But if the Blood be so weak, and the irregular Motion of the Spirits so considerable, that the Disorder will not yield to a Course of Chalybeates, as above directed; the Patient must drink some Steel-water, such as that of *Tunbridge*. For the chalybeate Virtues of these Waters is more intimately communicated to the Blood, on account of the large Quantity that is drank, and, also, of their Agreeableness to Nature; and proves more effectual in curing Diseases, than the choicest Preparations of Iron, however magnified by the Chymists. But this Caution must be particularly observ'd, that if any Disorder happens, which may be refer'd to hysteric Symptoms, the Waters are to be omitted for a Day or two, till that Symptom disappears, which would otherwise hinder their Passage. For though these Waters are not so subject to agitate the Humours, and occasion a Disorder of the Spirits, as the gentlest officinal Cathartic, yet they, in some Degree, occasion such a Disturbance by their diuretic Quality, and, besides, they often purge. But if the Waters themselves obstruct their own Passage, by raising Commotions in the Humours and Spirits, how improper must it be to prescribe Cathartics, once or twice a Week, during the Course! and how much more absurd, to mix Purgatives with them; which occasion these and other mineral Waters to operate more slowly and difficultly!

If the Disorder will not yield to Steel-waters, recourse must be had to hot sulphureous Waters, as those of *Bath*: Drink them three Mornings successively, and bathe in them the fourth; drinking and bathing in this manner alternately for two Months. For the Course must be continued not only till the Patient finds some Relief, but till he perfectly recovers.

Venice Treacle alone, frequently us'd, and continued for a sufficient time, has an excellent Effect in this Disease, and many others proceeding from a Want of Heat and Digestion.

If the Patient be not of a slender and bilious Habit of Body, an Infusion of Gentian, Angelica, Wormwood, Centaury, Orange-peel, and other strengthening Simples, in *Canary* Wine, does great Service, a few Spoonfuls of it being taken thrice a Day; and I have found some hysteric Women remarkably reliev'd by drinking, for some Nights successively, a large Draught of *Canary* alone, at Bed-time.

I have known several hysteric Women, and hypochondriac Men, who were reduced to great Weakness, recover by taking a Scruple of the Bark every Morning and Night for some Weeks. But this Remedy proves more effectual, when the Disease is accompanied with violent Efforts and Convulsions.

But, when any of the Remedies above directed do not agree with the Patient, as it frequently happens in thin and bilious Habits, recourse may be had to a Milk-diet; by which some Women have been cured of long and obstinate hysteric Disorders, especially of the Hysteric Colic, which can only be relieved by repeated Opiates, the Pain returning as soon as the Effect of the Anodyne ceases. That Milk, which affords only a cold and crude Nourishment, should, nevertheless, by Use, strengthen the Spirits, does not seem repugnant to Reason, if we consider, that, as it affords only a simple Aliment, so it does not give Nature so much Trouble in digesting it, as Food and Liquors of a more heterogeneous Kind; and that an equal Mixture of the Blood and Spirits necessarily follows this perfect Digestion. But some cannot support the Inconveniences which generally attend the Beginning of a Milk Diet; because it is subject to coagulate in the Stomach, and does not afford sufficient Nourishment to maintain the ordinary Strength of the Body.

But the best Thing I have hitherto found, for chearing and strengthening, is a frequent and long-continued Practice of Riding on Horseback: For as this kind of Exercise gives a great Shock to the lower Belly, which is the Seat of the excretory Vessels, appointed, by Nature, to carry off all the excrementitious Parts of the Blood, it should seem, that every Disorder of the Functions, or natural Weakness of the Organs, must be relieved by the often repeated Agitation of the Body in the open Air: Neither can any Person have the innate Heat so extinguished, as not to be excited by this Exercise: Nor can there be any preternatural Substance, or vitiated Juice, so intimately lodged in any Cavity of these Parts, which cannot, by the Use of Riding, either be reduced to such a State as is agreeable to Nature, or dissipated and expelled: And, by this Motion, the Blood, being continually agitated and mixed, is purified and strengthen'd likewise: And though this Exercise does not agree so well with Women, who lead an easy and sedentary Life, and may be injured by Motion, especially in the Beginning, it is, nevertheless, very proper for Men; and soonest recovers their Health.

This is the general Method of curing this Disorder: But, when the Fit comes on, accompanied with any of the above-mention'd Symptoms, and is so violent as to admit of no Respite; for strengthening the Blood and Spirits, we must have Recourse to hysteric Medicines, which, by their strong fetid Smell, compel the disorder'd Spirits to return to their deserted Stations, being either taken inwardly, held to the Nose, or outwardly applied: Such are Asa-fetida, Galbanum, Castor, Spirit of Sal Ammoniac; and whatever has a disagreeable Odour, whether it be naturally fetid, or is render'd so by Art, admirably answers this Intention.

When the Paroxysm is attended with a very violent Pain of any particular Part, excessive Vomiting, or a Looseness, besides the hysteric Remedies above-mention'd, we must exhibit Laudanum, which is the only Medicine that can quiet these Symptoms. But, unless the Pains occasion'd by Vomiting be, in a manner, intolerable, we must be cautious of mitigating them by any Opiate, before proper Evacuations have been made: First, Because, sometimes, there is so considerable a Plenitude of Blood and Juices in the Body, (especially in sanguine and robust Women) as to render the frequent Repetition of the most powerful Opiate ineffectual: In such, therefore, bleeding in the Arm is indispensably necessary, and a Purge must be administer'd; and then the Opiate will answer the End, in a moderate Dose. Secondly, Much Experience hath taught me, that when the Patient has been, by degrees, accustomed to Laudanum, and proper Evacuations have not been previously made, she has been compel'd, when the Pain return'd, and the Virtue of the Opiate ceased, to repeat it every Day, for some Years, gradually augmenting the Dose; so that, in time, the Patient cannot forsake it, although it impairs all the digestive Faculties, and weakens the natural Functions; tho' I do not conceive, that the Use of Laudanum immediately injures the Brain, Nerves, or animal Faculties.

But I judge it necessary to evacuate, before the exhibiting of Opiates: For Instance, in every robust and plethoric Woman, Bleeding must precede, which must be succeeded by Purging: But, when weak slender Women have had a quick Return of a Fit, and Pain, of this Kind, it will suffice to cleanse their Stomachs with three or four Quarts of Posset-drink, and then to prescribe a large Dose of *Venice* Treacle, or Orvietan, and a few Spoonfuls of some grateful spirituous Liquor, with a few Drops of liquid Laudanum, to be taken immediately after it.

But, if the Vomiting has long continued, before the Physician was called, so that an Emetic may greatly disturb the Spirits, and too much debilitate the Patient, Laudanum must immediately be exhibited in such a Dose, and repeated so often as the Continuance and Urgency of the Symptom demand; so that it may be able to conquer it.

Two Cautions are to be particularly observ'd here: First, When, after necessary Evacuations, the Use of Laudanum is begun, the Dose must be sufficiently large, and so frequently repeated, that all the Symptoms may be remov'd; only allowing such an Interval, that the Effect of one Dose may be known, before another is exhibited. Secondly, When Laudanum has been administer'd, no Evacuation must be attempted; for the gentlest Clyster of Milk and Sugar is sufficient to destroy all the good Effects of the Opiate.

But, tho' the Pains above-mention'd remarkably require Opiates, a violent Vomiting indicates much the largest Dose, and a frequent Repetition: For, in this Case, the peristaltic Motion of the Stomach being inverted, the Medicine is ejected, by Vomit, before it can produce any Effect, and must, therefore, be exhibited afresh, and, particularly, in a solid Form; or, if in a Liquid, the Quantity of the Vehicle must be very small, that it may barely moisten the Stomach; as a few Drops of Laudanum in a Spoonful of strong Cinnamon-water. The Patient, also, must be caution'd to compose herself immediately after taking the Laudanum, and to keep her Head steady, the least Motion of which extremely promotes Vomiting. When the Vomiting is, in a manner, overcome, it is proper to repeat the Anodyne, Morning and Night, for some Days, in order to prevent a Relapse; and this should be observed in hysteric Pains, or a *Diarrhœa*, which have been cured by an Opiate.

By this Method the symptomatic Pain and Vomiting may be easily cured, which, because they often resemble other Diseases, deceive the Physician more than any other Symptom that requires his Assistance: Thus, in that kind of hysteric Disorder which imitates a nephritic Paroxysm, the Pain attacks the same Part in both Diseases, and is, also, attended with a Vomiting; but yet their Causes are so different, and require such different Treatment, that what relieves in the one, injures in the other: The same may be affirmed of that Species of hysteric Disorders which resembles the bilious Colic; the violent Pain, and the green Matter discharg'd upwards and downwards, being nearly the same in both Distempers. For these Reasons particular Caution must be observed, to guard against all Errors in the Diagnostics; Errors which have often proved fatal to the Patient.

Another Mistake, which proves equally fatal to Numbers of Women, is, when, after a happy Delivery, they are persuaded to rise too soon from Bed; which is immediately followed with an hysteric Disorder; and, as it increases, the Lochia are first diminished, and then entirely suppressed: This unseasonable Stop-

page is ſucceeded by a numerous Train of Symptoms, which ſoon are deſtructive, unleſs great Skill and Diligence be uſed to prevent it: Sometimes a Delirium proceeds from the ſame Cauſe, which, augmenting continually, occaſions Convulſions, and then Death; or, if the Patient eſcapes, ſhe loſes her Senſes, for the Remainder of her Life. Sometimes a Suppreſſion of the Lochia is followed with a Fever, which nearly, or, perhaps, entirely, reſembles the then reigning epidemic Diſtemper; and the ſame hyſteric Diſorder, which firſt occaſion'd the Suppreſſion of the Lochia, now rages more violently than before.

In theſe Caſes, the curative Indications are, Firſt, To compoſe the Spirits diſturbed by this Motion. Secondly, To remove the Suppreſſion of the Lochia; this being the immediate Cauſe of theſe Symptoms: This Method, however, muſt not be obſtinately purſued; for, if the ordinary Remedies fail, after being uſed ſome time, they are to be left off; becauſe, as forcing Medicines are not to be adminiſter'd here; ſo neither ought we to perſiſt in exhibiting thoſe of a milder Kind, on account of the extreme Weakneſs and Lowneſs of Spirits, which Child-bed Women, who are thus affected, labour under: For Inſtance, as ſoon as the Lochia are ſuppreſſed, it is proper to put the Woman to Bed, applying an hyſteric Plaiſter to the Navel, and to preſcribe the following Electuary, to be exhibited with all convenient Expedition:

Take of the Conſerve of *Roman* Wormwood, and of Rue, each an Ounce; Troches of Myrrh, two Drams; Caſtor, Saffron, volatile Sal Ammoniac, and Aſa-fetida, each half a Dram; Syrup of the Five opening Roots, a ſufficient Quantity to make them into an Electuary; Of which let the Quantity of a large Nutmeg be taken every three Hours, drinking after it four Spoonfuls of the following Julap.

Take of the diſtilled Water of Rue, and compound Bryony-water, each three Ounces; fine Sugar enough to ſweeten it; mix them for a Julap.

If theſe Medicines be given as ſoon as the Suppreſſion of the *Lochia* appears, they generally effect a Cure; but if the Diſorder continues, after the whole Quantity, here directed, is taken, we muſt exhibit, for once, a ſingle Doſe of Laudanum; which, tho' it be naturally aſtringent, yet, by allaying the Hurry of the Spirits, whereby the uſual Flowing of the *Lochia* is check'd, it does great Service, and may ſometimes remove the Suppreſſion, when Emmenagogues fail: But Opiates are moſt commodiouſly exhibited along with Hyſterics and Emmenagogues; as fourteen Drops of liquid Laudanum, in compound Bryony-water; or a Grain and half of ſolid Laudanum, and half a Scruple of Aſa-fetida, made into two Pills.

But if the *Lochia* do not flow afreſh by giving a ſingle Doſe of Opium, it is by no means to be repeated; becauſe it would ſuppreſs them ſo powerfully, that they could not afterwards be promoted: If, therefore, after having waited ſome time, to be aſſured of its Effects, we find it fail, we muſt return to Emmenagogues, join'd with Hyſterics, and then inject a Clyſter of Milk and Sugar, a Repetition of which, if one does not bring down the Lochia, would tend to divert them another Way.

This Method having been uſed, it is ſafeſt, and incumbent on a prudent Phyſician, to wait and ſee what Effect Time will produce; for the Danger leſſens every Day; and, if the Patient outlives the twentieth Day, ſhe is in a manner ſafe: For, when the Woman has had a Reſpite, and recover'd ſome Degree of Strength, ſhe will be able to ſupport the propereſt Method of removing the Diſorder; whereas, by continuing to give a Multitude of Remedies, when the firſt proves ineffectual, the Diſeaſe, and the Hurry of Spirits occaſioning it, may be increaſed.

But, beſides the natural Weakneſs of the Spirits, which is the primary Cauſe of Hyſteric Diſorders, there is, ſometimes, an adventitious Weakneſs, occaſion'd by an immoderate Flux of the *Menſes*, either in Child-bed, or at other times, which is productive of that Sort of Hyſterics called Vapours. The firſt Species principally happens ſoon after a difficult Labour, and is attended with a numerous Train of hyſteric Symptoms; but it ſoon goes off, being eaſily remedied by an incraſſating Diet, wherewith the following Drink may be joined.

Take of Plantain-water, and Red-wine, each a Pint; boil them together, to the third Part; and then ſweeten the Decoction with a requiſite Proportion of fine Sugar: Give half a Pint of it twice or thrice a Day.

In the mean time, ſome ſufficiently weak hyſteric Julap may be exhibited at times, and the following Compoſition held to the Noſe.

Take of Galbanum, and Aſa-fetida, each two Drams; Caſtor, a Dram and an half; volatile Salt of Amber, half a Dram: Mix them together. Or,

Take Spirit of Sal Ammoniac, two Drams: And let the Patient ſmell to it often.

But, as to an immoderate Flux of the Menſes, in Women who are not pregnant, tho' it ſeizes them at any time, yet it moſt frequently comes a little before the Menſes entirely ceaſe, which happens about the Age of Forty, if they began early to flow; or about fifty, if they began late. In ſuch Subjects, violent and frequent hyſteric Fits are occaſion'd, from the large Quantity of Blood which is continually loſt. Tho' hyſteric Medicines are to be uſed in this Caſe, both internally and externally, avoiding the ſtronger Kind, for fear of promoting the Flux; yet the principal Step towards the Cure conſiſts in checking the menſtrual Diſcharge; which may be ſoon effected, in the following manner.

Take eight Ounces of Blood from the Arm, and, the next Morning, give the common purging Potion; which muſt be repeated every third Day, for twice: And let her take an Ounce of Diacodium every Night, at Bed-time, during the Courſe of the Diſeaſe.

Take of the Conſerve of dried Roſes, two Ounces; Troches of *Lemnian* Earth, a Dram and half; Pomegranate-bark, and red Coral prepar'd, each two Scruples; Blood-ſtone, Dragons-blood, and *Armenian* Bole, each a Scruple; and as much ſimple Syrup of Coral as will make the Whole into an Electuary: Of which let the Quantity of a large Nutmeg be taken every Morning, and at Five in the Afternoon, with ſix Spoonfuls of the following Julap.

Take of the diſtil'd Waters of Oak-buds, and Plantain, each three Ounces; ſmall Cinnamon-water, and Syrup of dried Roſes, each an Ounce; Spirit of Vitriol, enough to give it an agreeable Sharpneſs.

Take of the Leaves of Plantain, and Nettles, each a ſufficient Quantity; bruiſe them well together, in a Marble Mortar, and preſs out the Juice, and, laſtly, clarify it: Let ſix Spoonfuls of it be taken three or four times a Day.

After the firſt Purge, let the following Plaiſter be applied to the Region of the Loins.

Take of Diapalma, and Rupture-plaiſter, each equal Parts: melt them down together, and ſpread the Maſs on Leather.

A cooling and incraſſating Diet muſt be preſcribed; only it will be convenient to allow the Patient a ſmall Draught of Claret, once or twice a Day; which, tho' it be not altogether ſo proper, as it is ſubject to raiſe an Ebullition, may be indulged, in order to repair the Strength.

There is, alſo, another Cauſe of hyſteric Diſorders, tho' it happens more rarely; and this is, a Bearing-down of the Womb, after a difficult Labour, attended with numerous hyſteric Symptoms; which, however, may be eaſily cured, by the following Method.

Take of Oak-bark, two Ounces; boil it in two Quarts of Spring-water, to one; and, towards the End of the Boiling, add of Pomgranate-peel bruiſed, one Ounce; Red Roſe-leaves, and Balauſtines, each two Handfuls; and, laſtly, half a Pint of Red-wine: Strain off the Liquor for a Fomentation, to be applied with Flannels, in the uſual manner, every Morning, two Hours before the Patient riſes; and at Night, after ſhe is in Bed: Continuing the Uſe of it till the Diſorder ceaſes. *Sydenham.*

With reſpect to hyſteric Diſorders, the Subject of this Article; *Hoffman*, we ſee, is of Opinion, that they are different from hypochondriacal Affections, contrary to the Sentiments of moſt medicinal Writers: And it muſt be confeſſed, that the Circumſtance of Tumors being found in the *Ovaria*, and Region of the Uterus, upon the Diſſection of hyſterical Subjects, ſeems to favour his Syſtem. I ſhould, however, ſuſpect, that theſe Tumors, full of ſtagnating Juices, are rather the Effects than the Cauſes of Hyſterics; for when the Veſſels of the Uterus, and thoſe adjacent to it, are extremely relax'd, the Fluids which ought to be propelled through them, or diſcharged from them, ſtagnate, and acquire a Degree of Acrimony, which, producing ſpaſmodic Conſtrictions, increaſe their Propenſity to retain the Fluids; which, in an healthy State, ought to be convey'd through them. It is farther worthy of Remark, that the *Uterus*, and Female Organs deſtin'd to Generation, are extremely nervous and ſenſible Parts: Hence ſome Variety of Symptoms may ariſe; and ſuppoſing hyſterical and hypochondriacal Affections to be excited by the ſame Cauſe, many ſpaſmodic Diſorders, hyſteric Fits, and convulſive Strangulations, may be produced in one Sex, from which the other, deſtitute of ſuch Parts, may, in a great meaſure, be exempted.

Upon the Whole, I apprehend both hyſterical and hypochondriacal Diſorders to be produced by a Relaxation of the Abdominal Viſcera; the Conſequences of which are abundantly explained, under the Article FIBRA: For the whole World can furniſh us with very few Inſtances of hypochondriacal or hyſterical Perſons, amongſt thoſe whoſe habitual Way of Living procures and preſerves a due Tenſity and Strength of the Fibres: Thus Women whoſe Subſiſtence depends upon their Labour, and Men inured to ſtrong Exerciſes, eſpecially in the Country Air, who go ſoon in the Evening to Bed, and riſe with the Sun, or before it, who drink their Liquors cold, and thoſe of no very ſpirituous Sort, may die of acute or chronical Diſtempers, but are utter Strangers to the very Names of Hyſterics, Vapours, and hypochondriac Affections: Whereas thoſe, whoſe Affluence of Fortune permits them to indulge in Eaſe and Indolence; who ſleep much, and that long in the Morning; and, in conſequence thereof, go to Bed unſeaſonably, and late; who drink copiouſly of warm Liquors, as Tea; all which debilitate and deſtroy the Tone of the animal Fibres, Veſſels, and Viſcera; moſt of theſe do a ſevere Penance for their Folly, and expiate their Diſobedience to the Laws evidently pointed out by Nature and Providence, as *Sydenham* expreſſes it, by a Purgatory of hyſterical or hypochondriacal Tortures.

The rational Method of Cure, therefore, conſiſts, firſt, in clearing the Stomach and Inteſtines of all the indigeſted and putrid Sordes retain'd therein, and exciting no very deſirable Symptoms: The ſecond Step to be taken is, to attenuate and carry off the Juices ſtagnating in the Veſſels and Viſcera; and, for both theſe Purpoſes, nothing is more effectual than Mercurials prudently exhibited. When theſe are accompliſh'd, the reſt of the Cure will be readily completed, by going to Bed ſoon, and riſing early; by proportioning the Aliments to the Powers of Digeſtion; by Exerciſes duly begun, and cautiouſly increas'd; and by Medicines, which by their gentle and ſalutary Stypticity, ſtrengthen the digeſtive Organs, brace up the Fibres, and contribute to procure a due Tone in all the vaſcular Syſtem. Such particular Directions, with reſpect to theſe, are already given under the Article FIBRA, that it would be ſuperfluous to repeat any Part of them in this Place. I ſhall only add, that, ſo far as I can judge, the Method here recommended is ſo obvious and ſucceſsful, that I am perſuaded, very few can miſs of a Cure, unleſs their own Obſtinacy or Appetites, interfere.

HYSTEROCELE, ὑστεροκήλη, from ὑστέρα, the Uterus, and κήλη, a Rupture. An Hernia caus'd by the Uterus falling through the Peritonæum. *Blancard.*

HYSTERON, ὕστερα, the ſame as DEUTERON, the Secundines. It is alſo uſed in the Plural, *Hyſtera*, ὕστερα, *Galen* in 5 *Aph.* 35.

HYSTEROTOMIA, ὑστεροτομία, from ὑστέρα, the Uterus, and τόμος, a Section, a Section of the Uterus, is the ſame as CÆSAREA SECTIO; which ſee.

HYSTEROTOMOTOCIA, ὑστεροτοκοτομία, from ὑστέρα, the Uterus, τόμος, a Section, and τόκος, Birth. A *Cæſarean* Birth, produced by a *Cæſarean* Section.

HYSTRIX. Offic. Charlt. Exer. 19. Aldrov. de Quad. Digit. 471. Geſn. de Quad. 563. Jonſ. de Quad. 119. Raii Synop. A. 206. *Balatnametimic*, Indis. THE PORCUPINE.

It is found in the Province of *Caraga*, and is of the Size of a Pig eight Months old. What is uſed in Medicine, is the whole Animal, and the Stone, called *Pedro del Porco*, found in the Gall-bladder, called, alſo, by the various Names of *Bezoar Hiſtricum*, *Lapis Hyſtricis*, *Lapis Malacenſis*, *Lapis Porcinus*, *Mont. Exot.* 5. and *Lapis ſeu Pila Hyſtricis*, *Ind. Med.* 65. This Part is rather to be called an *Ægagropila*, than a Stone, as conſiſting of a woolly kind of Fibres, and a rediſh, bitteriſh, and friable Matter, with its Outſide cover'd in ſome Parts with a kind of blackiſh Scales, like Nails. It has neither Laminæ, nor Membranes, and is neither ponderous nor ſmooth, like the Bezoar, but light, and ſomewhat like the *Ægagropila*. *Jonſ.*

This Animal ſeems to be endu'd with the ſame Virtues, as the *Erinaceus*. Dr. *Tancred Robinſon* obſerves, that it is eſteem'd an excellent Alexipharmac. *Dale.*

HYVOURAHE, Theveto, Cluſ. in Monard. *Hyvourai Braſilianis*, *Guaiaci Species.* Lerio.

A large Tree growing in *Braſil*, whoſe Bark is of a ſilver Colour on the Outſide, and rediſh within; and, when newly ſtript, yields a milky Juice of a ſalt Taſte, and very much like that of Liquorice. The Fruit is of the Size of a moderate Plum, of a gold Colour, tender, of an agreeable Smell, and a very ſweet Taſte, and incloſing a ſmall Stone. This Fruit is very acceptable to ſick Perſons, on account of its fine Taſte.

The Bark of this Tree is ſudorific, drying, and aperitive, and uſed in *Braſil* for the *Lues Venerea*, in the ſame manner as we uſe the Bark and Wood of the *Guaiacum* for the ſame Diſeaſe in *Europe*. The Name *Hyvourahe*, in the *Braſilian* Language, ſignifies *a rare Thing*. *Lemery des Drogues.*

I.

I. FOR the Signification of this Letter in the Chymical Alphabet, ſee ALPHABETUM.

JAAROBA, a Species of *Phaſeolus*, growing in *Braſil*, and bearing a Fruit like that of the *Cuiete*, or *Higueri Oviedi*, but generally leſs, of the ſame Pulp and Seeds, and of the ſame Uſe. It grows every-where, but principally in Gardens, where it is cultivated. The Roots are ſerved at Table at a ſecond Courſe. *Raii Hiſt. Plant.*

JABATAPITA, Marcg. Piſon. *Arbor baccifera racemoſa Braſilienſis*, *Bacca trigona prolifera.* A Tree in *Braſil*, of a moderate Height; its Flowers grow in Tufts, are pentapetalous, yellow, and of a very ſweet Smell. The Fruit, which is ripe in *March*, grows in Bunches, that is, on every Pedicle grows a Berry of the Size of a Cherry-ſtone, of a conical, or ſomewhat triangular Figure, with three or four other Berries ſeated on it of an oval Figure, and of the ſame Size with that under them, all of a black Colour like our Myrtle-berries, and giving a Colour like them; they are without Stones, are of an aſtringent Taſte, and ſerve not only for the ſame Uſes, as our Myrtle-berries, but yield an Oil in common Uſe for Sallads. *Raii Hiſt. Plant.*

JABORANDI, Marggr. A Plant of the Height of two Feet, of a ligneous and round Stalk, nodous, writhed, and unequal; the Root is not thick, but divided into many leſſer ones, and Filaments; the Flowers are white and tetrapetalous, and the Seeds cover'd with a double Huſk, as in Hemp, are of a brown Colour, flat, and reſembling the Figure of an Heart, with a Part cut off from one Side. The Place of Growth of this Plant is not aſſigned, but the Root is ſaid to be an Alexipharmac.

JABUTICABA, Piſo, Marcgr. is a fine, tall, ſtrait, pomiferous Tree in *Braſil*, with very large Branches, and bearing a Fruit of an Aſh-colour, of the Bigneſs of a Lemon, of a ſweet Juice, and cover'd with a thin Pellicle, like a full-ripe Grape, of a temperate and ſalutary Quality, and very grateful to feveriſh Perſons. It bears no Flowers, but produces its Fruit from a tuberous Subſtance, with which it is inveſted from the Bottom of the Root, to the Tops of the Branches, in ſo plentiful a manner, that the Tree ſeems to be one continued Cluſter.

There is another Species of this Tree, which grows in the Woods of *Tabacurana*, but the Fruit is not to be compar'd with the other: The Inhabitants, however, expreſs from it a delicious and ſweet Wine, which muſt be drank preſently, for it grows the worſe for keeping, and degenerates into Vinegar. Both the Species grow only in vaſt Foreſts.

JACA *Indica.* J. B. *Jaaca vel Jaca.* Park. *Tijaka marum.* H. M. *Palma Fructu aculeato ex Arboris Trunco prodeunte.* C. B. THE JACK-TREE.

It is a very large, tall Tree; the Fruit, called *Jaca*, grows out of the Trunk, and the biggeſt Branches, and is often bury'd in the Earth with the Bottom of the Trunk, to which it adheres. It is of a round-oblong, or rather conical Figure, a Span in Breadth, and two Spans in Length, and frequently weighs above twenty-five Pounds; the Rind of it is green, thick, and cover'd with a Multitude of prickly ſcaly Tubercles, like Diamonds, but white and lacteous within. *Acoſta* ſays, the Prickles are not at all ſharp and pungent, tho' they look threatening. Within theſe larger Fruits are innumerable ſmaller ones, under one common Rind, of an oblong Figure, a thick yelloviſh Pulp, and of a ſweet and very grateful Taſte and Smell; every one of theſe contains, in the Middle of it, a Nut, which is lodged within the Pulp, as in a Bag. Theſe Nuts are of an oblong Figure, and cover'd with a thin, cartilaginous, whitiſh, and tranſparent Rind, under which is another rediſh one, containing a thick Kernel of

the ſame Taſte with our Cheſnuts. Moreover, in the Middle of this large Cone ariſes a thick, whitiſh, and lacteous Style, like a Pillar, on which, as on a common Baſe, the leſſer Fruits are placed in circular Order, having one Extremity inſerted therein, and by the other adhering, in diametrical Oppoſition to the Rind. Among them are obſerv'd Multitudes of whitiſh and yellowiſh coriaceous Ligaments, which are, alſo, affix'd to the Style, and the Rind; and, when the Fruit is cut up, diſcharge together with the Style, and the Rind, a glutinous milky Juice, by which Birds are taken.

The Tree grows in *Malabar*, and over all the *Eaſt Indies*; there are above thirty Species of it, which are diſtinguiſh'd by their Fruits, tho' they are all reduced to two Kinds, one of which bears a Fruit of a ſucculent Pulp, which is of a very grateful and honey-like Taſte; and the other produces Fruit of a looſe, ſoft, and leſs ſavoury Pulp: The former is called *Varaca*, by *Acoſta Barca*; and the other *Tijaka Papa*, by *Acoſta*, *Papa*; or *Giraſal*.

The ripe Fruits, deprived of their Rinds, are eaten at Entertainments; but, when us'd too freely, are difficult of Digeſtion. The Natives uſe the tender Fruits in their *Caril*, a ſort of Food ſo called, or preſerve them in Pickle, or cut them in Pieces, and boil them, or fry them in Oil of Palm. The Nuts roaſted, after the manner of common Cheſnuts, are of a ſweet Taſte, and are ſerved up among Sweetmeats in a ſecond Courſe at Entertainments; but, eaten too freely, they affect the Breaſt and Fauces with a burning Heat, ſucceeded by a Hoarſeneſs. The Natives uſe theſe, alſo, in their *Caril*, or dry them in the Sun, and make Cakes of the Flour, which they call *Apas*; and the thin inner Rind, which immediately incloſes the Pulp, ſerves inſtead of *Arequa*, or *Kanoga*, in chewing of Betel. Of the Aſhes of the tender Fruit, is prepared a Lye with which they waſh their Linen; and the Wood employs the Carpenter and Joiner. *Acoſta* writes, that the yellowiſh viſcous Pulp, which involves the Nuts, is of a grateful Taſte, and much like the Pulp of the fineſt Melon, but difficult of Concoction, and very burdenſome to the Stomach; and that, if undigeſted, it generates noxious and virulent Humours; and that they who frequently indulge themſelves in this Food, eaſily fall into that moſt pernicious and infectious Diſeaſe, called *Morxi*.

Of the Roots of the Tree, they prepare a Decoction, which ſtops a Diarrhœa; and of the Powder of the Leaves, mix'd with the Dung of the *Bubalus*, is prepared a Cataplaſm, which, apply'd hot to the Cheeks, cures the Spaſmus Cynicus. The milky Juice of the Fruits, pounded with the Powder of *Calamus Aromaticus*, and the Eyes anointed therewith, is good for the *Nyctalopia*. The Wood, bruiſed in Vinegar, is effectual in a Relaxation of the Uvula, and an Inflammation of the Fauces and Tonſils. The Root bruiſed with the Pulp of the Fruit, and with an Addition of Sugar reduced to a Plaiſter, and apply'd to the Part, cures a malignant Herpes, attended with Worms, deſtroying thoſe Vermin. *Raii Hiſt. Plant.*

JACAPE. A Species of thickRuſh-like Graſs, growing in *Braſil*, bearing neither Flower nor Seed. It is ſaid to be effectual againſt the Bites of Serpents, if it be ty'd about the Limb above the Wound. *Piſo*, from his own Experience, commends the Decoction of the Roots againſt Poiſons. *Raii Hiſt. Plant.*

JACAPUCAYA *Arbor* Marcgr. *Jacapucaio* Piſon. *Nucifera Braſilienſis, Cortice Fructus ligneo, quatuor Nuces continente.* It is a very tall Tree growing in *Braſil*, and bearing a Fruit which hangs by a thick ligneous Pedicle, as big as a Child's Head, of an elliptical Figure, and its lower Part faſtigiated in manner of an obtuſe Cone, and its upper next the Pedicle depreſſed, reſembling a Cup with a Cover; its Rind is ligneous and hard. The Fruit, when ripe, opens, and the Cover falls off, diſcovering a Fruit divided into four Cells, each containing a wrinkled Nut, of the Size of an ordinary Plum, and of a yellow, inclining to an Aſh-colour, which, broken, diſcovers a white Kernel, of an excellent Taſte: The Nuts, when mature, which is only in the Middle of Winter, are, alſo, diveſted of their Coats, and fall out of their Calyces. The Tree abounds in the Marſhes and midland Places, to ſuch a Degree, as to be ſufficient to ſupport an Army with its Fruit, which, for its Taſte and Goodneſs, may compare with the Piſtachio, and is ſaid to be provocative of Venereal Inclinations.

Potions, Panadas, and ſuch Kinds of Preparations, are made of the Fruit, as well for Medicinal Uſes, as for Food; a pinguious Oil is, alſo, expreſſed from it, which is hotter than that of Almonds. It is better to eat the Fruit roaſted than raw, becauſe it affects the Head; the Boxes, or Cells, are ſo hard as to ſerve not only for Drinking-veſſels, but for Diſhes and Pots.

There are two Species of this Tree, which are alike in Appearance, but differ in Qualities; for one produces more deformed Calyces, whoſe Nuts are of leſs Value, and the immoderate Uſe of them, as we are aſſured by the Inhabitants, produces an *Alopecia*. The Wood of both Species wonderfully reſiſts Putrefaction, and, for its exceeding Hardneſs, is choſen for making the Axes of their Sugar-mills, being vaſtly preferable to other Trees, for that Purpoſe: Of the outer Bark, dry'd and bruiſed, they make Oakum for calking of Ships.

JACARANDA *Braſilienſibus* Marcgr. *Jacaranda alba* Piſonis, *Fructu Manus Magnitudine & Craſſitie.* It is a Tree like the *European* Plum-tree, and grows in the open midland Places of *Braſil*: Its Fruit is of the Bigneſs and Thickneſs of the Palm of the Hand, very remarkable for its gibbous, ſinuous, and writhed Figure, and always pendulous, by reaſon of its Ponderoſity; it is not eatable, unleſs boiled. The Inhabitants prepare of it a ſort of Portage, or Gruel, called *Manipey*, which is very good for the Stomach.

There is another Species of this Tree, whoſe Wood is black, ſweet-ſcented, and hard: It grows very commonly in the Bay of *All-Saints* in *Braſil*. *Raii Hiſt. Plant.*

JACE *Braſilienſibus* Marggr. *Citrullo affinis, Melo Indicus, ſive Patheca.* J. B. *Melo Indicus Fructu oblongo.* C. B. *Raj* makes this a Species of *Anguria*, or *Citrullus*, and calls it the *Water-melon.* The Fruit is round, globous, or oval, of the Bigneſs of a Man's Head, more or leſs, cover'd with a green Rind, with a white Pulp, and in the Middle, where the Seed lie, red or Blood-coloured, extremely juicy, and of a good Taſte. The Seeds are numerous, and the Size and Figure of thoſe of the *Pepo*, or Pompion, of a black, and, in ſome, of a rediſh Colour. *Raii Hiſt. Plant.* See the Virtues under CITRULLUS.

JACEA.

The Characters are;

The Leaves and Stalks are deſtitute of Spines, and the Leaves have their Margins equal, not ſerrated. *Boerhaave, Index alter, Pars* 1. *p.* 140.

Boerhaave mentions forty-one Species of this Plant, none of which have any medicinal Virtues attributed to them, except the 1ſt, 2d, 22d and 31ſt.

The firſt is the

Jacea; ſtellata; folio papaveris erratici. See CALCITRAPA.

The ſecond is the

Jacea; ſtellata; ſpina ſolſtitialis dicta; folis Cyani. See CALCITRAPA.

The twenty-ſecond is thus diſtinguiſh'd:

Jacea; nigra; pratenſis; latifolia. *C. B. P.* 271. *Tourn. Inſt.* 443. *Boerh. Ind. A.* 142. *Jacea.* Offic. *Jacea nigra.* Ger. 588. Emac. 727. Raii Hiſt. 1. 325. Synop. 89. *Jacea nigra vulgaris.* Park. 468. *Jacea nigra vulgaris capitata & ſquamoſa.* J. B. 3. 27. KNAPWEED, or MATFELLON.

Tabernæmontanus recommends the Decoction of it for Ruptures: There are ſome that give it in Powder in Pottage. By the chymical Analyſis it yields hardly any thing but a Subſtance loaded with acrid Salt. *Martyn's Tournefort.*

It is too frequent in Paſture-grounds, and flowers in *July* and *Auguſt*. The Herb, which is uſed, is effectual againſt Tumors of the Tonſils; and in Hernias and Wounds. *Dale* from *Schroder.*

The thirty-firſt is thus diſtinguiſh'd:

Jacea; foliis Cichoraceis, villoſis; altiſſima; flore purpureo. *Tourn.* 444. *Boerh. Ind. A.* 142. *Stœbe.* Offic. *Stœbe argentea major.* Ger. 590. Emac. 730. *Stœbe major foliis Cichoraceis, mollibus, lanuginoſis.* C. B. 273. *Stœbe Salmantica prima Cluſii.* Park. 476. Raii Hiſt. 1. 324. *Stœbe Salmanticenſis prior Cluſii, ſive Jacea Intybacea.* J. B. 3. 36. SILVER KNAPWEED.

It is cultivated among us in Gardens, flowers in *July*, and the medicinal Parts are the Herb and Seeds. The Leaves and Seeds are aſtringent; for which Reaſon a Decoction of them is uſed in Clyſters for the Dyſentery, and, alſo, inſtilled into purulent Ears. A Linus, prepared of the Leaves, removes a Lividneſs occaſion'd by Blows about the Eyes, and repreſſes an Hæmorrhage. *Dale* from *Dioſcorides.*

So ſhort and imperfect is the Deſcription which *Dioſcorides* has given us of the *Stœbe*, as to occaſion a great Variety of Opinions among Botaniſts; ſome beſtowing that Name upon one Plant, ſome on another. The Plant, whoſe Synonyma I have here given, has as good, and, perhaps, a better Right to that Name, ſince it grows more plentifully in hot Countries, than either the *Jacea magna*, of which *Matthiolus* has given us the Figure, or that which *Dodonæus* took from the Imperial Library; but whether it agrees in Virtue with that of *Dioſcorides*, muſt be tried by Experiments. *Dale.*

JACEA is alſo a Name for ſeveral Sorts of XERANTHEMUM and SERRATULA.

JACENS, κειλαχέμενος, from κεῖμαι, to lie, Jacent, or Lying, is ſpoken of a Perſon in the Situation or Poſture of Lying; attended with a Ceſſation of the Actions proper to the Muſcles and Tendons. *Galen. de Muſcul.* The Ears are called *jacentes*, lying, which were never erected, as in a newly-fallen Hind. *Scribon. Largus*, No. 13. Nature is ſaid by *Helmont* to be *jacens*, jacent, when the Diſeaſe is riſen to an Head, and intimately connected with Nature; that is, when the morbific Cauſe ſtrives to ſuppreſs the vital Forces or Flame. *Helmont, Natura contr. neſcia.*

IACINTHUS, or HYACINTHUS. See HYACINTHUS.

JACOBÆA.

The Characters are;

The Leaves are pretty deeply jagged, and the Calyx the ſame as of the *Doria*. *Boerhaave, Index alter, Pars* 1. *p.* 99.

Boerhaave mentions eighteen Species of this Plant, none of which have any medicinal Virtues aſcribed to them, except the ſeventh and tenth.

The ſeventh is thus diſtinguiſh'd:

Jacobæa; maritima. *C. B. P.* 131. *Jacobæa marina, ſive Cineraria.*

Cineraria. J. B. 2. 1058. *Cineraria.* Dod. p. 642. *Achaovan. Abiet.* Alp. Ægypt. 37. *Jacobæa fruticosior, foliis utrinque candicantibus.* M. H. 3. 109. See ACHAOVAN.

The *Egyptians* use it medicinally for many Purposes: The Decoction of the Leaves, they say, expels the Stone from the Bladder and Kidneys; and is good to open inveterate Obstructions of the Viscera, especially of the Uterus. It is, also, accounted a Remedy for other uterine Disorders; as Coldness, Strangulation, Sterility, and Inflations, and for a Suppression of the Menses; whence those Women, who are subject to Hysterics, find great Relief by Insessions over a warm Decoction of the Leaves and Flowers. *Prosper Alpinus de Plant. Ægypt.*

The tenth is thus distinguish'd:

Jacobæa; vulgaris; laciniata. *C. B. P.* 131. *Tourn. Inst.* 485. *Boerh. Ind. A.* 99. *Jacobæa.* Offic. Ger. 218. Emac. 280. *Jacobæa vulgaris.* J. B. 2. 1057. Raii Hist. 1. 284. Synop. 82. *Jacobæa vulgaris major.* Park. 668. RAGWORT or SEGGRUM.

The lower Leaves of Ragwort are of a dark-green Colour, about half a Foot long, and about two Inches broad, blunt-pointed, and deeply cut into several smaller jagged Divisions, those next the Root smallest. The Stalks are about two or three Feet high, hollow, and striated, having several paler green Leaves set on, without Foot-stalks, which are in Proportion broader, and more finely cut. The Flowers grow on the Tops of the Branches Umbel-fashion, and are each made up of about a dozen yellow Petals, set about a yellow fistular Thrum, which passes away into Down, containing small flatish Ash-coloured Seed. The Root is spreading, and full of long whitish Fibres. It grows every-where in dry Fields and Banks, and flowers in *June* and *July*.

The Leaves of Ragwort are commended by some as good for the Sciatica, or Hip-gout, used in Cataplasms, Fomentations, and Ointments; as also for cleansing foul sordid Ulcers and Sores; and are good for the Cure of Wounds; but it is seldom used. *Miller's Bot. Off.*

Its Leaves are bitter, aromatic, a little astringent, and give but a very faint Tincture of red to blue Paper: They contain a great deal of Oil, and terrestrial Parts; their Salt very much resembles that which is natural in the Earth. *Dodonæus* says, that Ragwort is vulnerary, detersive, and good for the Diseases of the Throat. An Ointment made at *Paris*, with its Juice, is commended for the St. Antony's Fire; but it would be better to bathe the Face with the Juice itself warmed. *Martyn's Tournefort.*

It has the same Virtues as *Senecio*, or Groundsel: Applied hot, in the Form of a Cataplasm, to the Belly, it has been successful, as *C. Hoffman* observes, in giving Relief under intolerable Pains of the Belly, proceeding from the Dysentery. It is, also, good in a Gargarism for the Quinsey, and Inflammations of the Tonsils, which it discusses, and perfectly cures. *Dale* from *Schroder.*

JACOBÆA is, also, a Name for several Sorts of DORIA and SENECIO; which see.

JACUA ACAUGA. A Name for the *Heliotropium; Americanum; cæruleum; foliis Hormini angustioribus.*

JACULUS, The Name of a poisonous Serpent, the same as ACONTIAS, and CENCHRITES; which see.

JADE. The Name of a precious Stone, otherwise call'd *Lapis Divinus.*

This is a Stone of a greenish Colour, somewhat inclining to grey; so extremely hard and difficult to be cut, that the Powder of Diamond must be employed for this Purpose. It is very much esteemed by the Inhabitants of the *East Indies*, and no less valuable in the Eyes of the Natives of *South America*, but for very different Reasons; the former accounting it a precious Stone, more valuable than the Diamond; and the latter a medicinal Stone, of uncommon Efficacy against the Epilepsy and Gravel.

It is by some said, that, when worn on the Region of the Kidneys, it is proper to expel the Stone and Sand by Urine; and that it, also, contributes to the Cure of an Epilepsy; but the pretended Virtues of this Amulet are unworthy of that Regard which is always due to Truth.

JAGRA. A particular Species of Sugar, prepared from the *Coco* or *Cocker-nut.*

JALAPA.

The Characters are;

The Root is thick, carnous, long, succulent, and perennial; the Leaves are conjugated, like those of the Solanum; the Branches and Stalks are geniculated; the Calyx resembles a Tube, is monophyllous, and quinquefid; within the Calyx, upon the Ovary, grows a monopetalous, Funnel-shap'd, and, in some measure, quinquefid Flower. The Ovary lies conceal'd in the Centre of the Calyx, furnish'd with a long Tube, with an orbicular Apex. This becomes an oblong, pentagonal, umbilicated Fruit, containing a farinaceous Kernel.

Boerhaave mentions six Species of this Plant; which are,

1. Jalapa; flore flavo. *T.* 129. *Mirabilis Peruviana, flavo flore.* H. L. Clus. H. 90. *Solanum Mexicanum, flore magno flavo.* C. B. P. 168.

2. Jalapa; flore purpureo. *Tourn. Inst.* 129. *Boerh. Ind. A.* 78. *Comm.* 58. *Mirabilia Peruviana.* Ger. 272. Emac. 343. Park. Parad. 364. Raii Hist. 1. 398. *Solanum Mexicanum flore magno.* C. B. Pin. 168. *Jasminum Mexicanum sive Flos Mexicanus multis.* J. B. 2. 814. MARVEL OF PERU.

This Plant is cultivated in Gardens, and flowers in the Month of *August*. Its Leaves and Root are used in Medicine; the former of these, when bruised, dissipate cold Tumors, if applied to them; and the Water, in which an Ounce or two of the recent Roots have been boiled, is an excellent Purgative for dropsical Patients. *Boerh. Hist. Plant. Hortusius, ad Clusium Hist. Plant.* informs us, that two Grains of the Root, taken internally, are highly efficacious in evacuating Waters in a Dropsy. *Dale Pharmacologia.*

3. Jalapa; flore ex luteo, albo, & rubro, misto. *T.* 129.

4. Jalapa; parvo flore. *T.* 130. *Solanum Mexicanum flore parvo.* C. B. P. 168. *Solanum Mexicanum, Jasminum Indicum dictum, flore minore.* C. B. Prodr. 91.

5. Jalapa; Officinarum fructu rugoso. *T.* 130.

It was a Root unknown to the Antients, and, also, in *Europe*, till the Discovery of *America*. It usually comes from the *Spanish West Indies* in transverse Sluices, about half an Inch thick, being rugged, and of a dark-brown Colour on the Outside, and whitish within, full of black, shining Resin. The whole Root is oblong or oval, the lower End being narrowest; of a pretty firm heavy Substance. This has been believed by most Authors to be the Root of a *Convolvulus*; Mr. *Ray* calling it *Convolvulus Americanus, Jalapium dictus*; but, if we may rely on the Account which Father *Plumier* gives of it, it is a Species of *Mirabilis Peruviana*, or Marvel of *Peru*, having smaller Leaves and Flowers than the common; and is called, by *Tournefort*, *Jallapa Officinarum, fructu rugoso*: Which may well enough be; for *Prevotius*, in his *Medicina pauperum*, says, that two Drams of the Root of the *Herba mirabilis Hispanorum, variegatum Florem gerentis*, which I take to be the common Marvel of *Peru*, purges serous Humours very kindly, and is, therefore, of singular Service in the Dropsy, Gout, and Rheumatic Pains: It is likewise a good Purge for the Itch, and all cutaneous Distempers, from half a Dram to a Dram. It is used with great Success in Obstructions of the Viscera of the Abdomen; being given in a Bolus, in the Quantity of twelve or fifteen Grains, with Mercurius dulcis. It may, likewise, be joined with the *Peruvian* Bark, twenty-four Grains to an Ounce of Bark, and made into a soft Electuary, with three Ounces of Syrup. A Dram of this Electuary will purge very well; and hence we see, that the Bark assists Jalap in its Action; for, in a Dose of this Purge, there are about three or four Grains of the Root. It may be advantageously given in this Manner, in habitual intermitting Fevers, accompanied with a bad Habit of Body.

The only officinal Preparation from this Root is, the Resin extracted by Spirit of Wine. The Resin ought to be given in very small Doses, that is, from five to twelve Grains at most; and it ought to be remembered, that, if this Resin is not either very well dissolved or mixed, it sticks to the Folds of the Intestines, and raises great Heats, and other Disorders. Therefore it is always better given in Substance. This Resin loses its Virtue by being long kept. If given in the Quantity of fifteen or twenty Grains, it purges very briskly; and *Simon Paulli* compares it, on that account, to Scammony. *Wepfer*, in his Treatise *De Cicuta Aquatica*, mentions some Experiments made with Jalap-roots, on Dogs; the Event of which was, that the Dogs died, and their Intestines were found to be perforated.

That which breaks blackest and most brittle, sound, and shining within-side, is best, the Parts which give it those Properties, being supposed to contain its medicinal Virtues. Some take great Pains to extract its Resin, which is to be done with any spirituous Menstruum, but afterwards it requires Correctors. The most common is Salt of Tartar, or Loaf-sugar; for its being rubbed much with the latter, makes it operate milder, for the same Reason as the Salt of Tartar does. But if correcting it consists in separating its Parts, what Occasion was there for drawing them from the Root, and joining them in the Form of a Resin? The following Experiments made by M. *Bouldue* are taken from the Memoirs of the Royal Academy of Sciences, for 1701.

He says it is one of the best Cathartics we have, and wonders it is so little used; for as it is so gentle as to need no Corrector, it, on the other hand, wants nothing to promote its Operation; Qualities which can scarcely be ascribed to any other Purgative. Yet, he observes, that there are many Methods given to correct it, which rather spoil than meliorate it. Some have observed, that it binds the Body too much after the Operation; but this Effect is common to other Purgatives, especially Hydragogues. His Experiments of Extraction were made with Spirit of Wine, and common Water. Twelve Ounces of the Root yielded, with Spirit of Wine, two Ounces of a resinous Extract well dried: The Remainder, being likewise well dried, weighed nine Ounces, and six Drams. Out of this Remainder, by Water, he got four Ounces of a very solid and pure Extract. He took twelve Ounces more of the same Root, and digested it in common Water, with a gentle Fire; then, by Evaporation, he got a good Extract, weighing six Ounces and an half, the thick and muci-

mucilaginous Parts, which he ſeparated by Filtration, being well dried, weighed one Ounce and an half, and the Reſidue weigh'd about four Ounces and an half.

Hence he obſerv'd, that the Extract made with Water, if given from twenty-four Grains, to thirty-ſix, purged gently; but was very diuretic, as he had experienced in many hydropical Caſes: That the Reſidue, which yet contained a little of what was reſinous, purged reaſonably, but with Gripings; that the Remainder, deprived of its ſaline and reſinous Parts, purged very little, but was extremely diuretic. Whence he concludes, that Extracts, to purge effectually, and without Irritation, ought to contain both the ſaline and reſinous Parts; for the former only paſs by Urine, and the other always, if taken alone, occaſions Diſorders; but, both joined together, their Effects are laudable; for the ſaline, opening the reſinous Parts, and diſſolving and accelerating their Diſtribution, thereby hinder them from adhering to, and inflaming the Parts they paſs thro'.

According to his Opinion and Experience, both concerning this, and other Drugs of the like Nature, the more Pains is taken in their Preparation, the worſe they are; becauſe Nature ſeems to have furniſhed them with the beſt Correctors in their Production. The Jalap-root itſelf, therefore, ſimply powder'd, is the beſt way of taking it, which may be mixed into a Draught, or a Bolus. It may be given to Adults, from half a Dram to one Dram; and to Children ſome give ſo many Grains as they are Years old; but that is ſomewhat in too ſmall a Quantity, eſpecially when they are advanced above ten Years. The only Reaſon that can be aſſigned for uſing the Reſin, is, that of the Root itſelf, one Parcel abounds with more, another with leſs, of the purgative Parts, which reſide in the Reſin: Hence the Doſe of the Root will become uncertain; but thoſe of the Reſin, being thought to be all of the ſame Efficacy, may have its Doſe determined very exactly; and its griping Quality may be certainly corrected by fixed Salts, or Loaf-ſugar.

Resina Jalapii. Resin *of* Jalap.

Take of ſelect (that is, black, heavy, and ſound) Jalap powder'd, one Pound; put to it of rectified Spirit of Wine, three Pounds; invert a Bolt-head, and lute it; ſet it upon warm Sand, three or four Days, and ſhake it, every Day, two or three times; when the Spirit is well tinged, decant it carefully, through a Hair Sieve, into a Cucurbit; ſet it in a gentle Heat of Sand, and draw off the Spirit of Wine, to one Pint, which may be returned upon the Jalap, to make a ſecond Extraction: Decant the Spirit as formerly; lute on its Head and Receiver, and diſtil as before: Let all cool, and in the Cucurbit there will be a Reſin, in the Form of Turpentine; which waſh in three or four Waters, and, in a gentle Heat, dry it, till it will beat into Powder.

Many fraudulent Chymiſts, when Jalap is dear, have a Trick of putting Scammony, which is, of itſelf, almoſt all Reſin, amongſt it, and ſometimes Gamboge; by which means they can afford to ſell it cheaper, than the Price it can be honeſtly made for. But their moſt notorious Cheat is, in mixing with it common black Reſin; two Parts of the latter to one of the former, as I have been informed: But this may be known by putting it into rectified Spirit, which will again diſſolve the Reſin of Jalap, but not touch the other. The Virtues are the ſame with thoſe of the Root, but it works rougher, becauſe all ſuch Subſtances ſtick to the Coats of the Stomach and Inteſtines, ſo as to occaſion much Pain and Uneaſineſs; for which Reaſon this is corrected with Sugar, Cream of Tartar, or the like; by which means it is brought into the ſame State as Nature firſt preſented it to us in the Root. For ſome Purpoſes, indeed, where the Form is required to be ſmall, as often in Adminiſtration to Children, this is moſt convenient. Its Doſe is from three Grains to one Scruple. *Quinſey.*

Miller, in his *Gardeners Dictionary*, ſays, theſe Plants are all affirmed, by *P. Plumier*, to be different Sorts of Jalap: But the *Jalapa Officinarum, Fructu rugoſo*, he ſays, is the particular Plant, whoſe Root is commonly uſed in Medicine; but that he has been ſince informed, by Mr. *William Houſtoun*, that the Jalap is the Root of a Convolvulus, and is not akin to either of theſe Plants.

JAMACARU. The Name of ſeveral Species of *American* Fig-trees. *Ray* takes notice of ſix. All theſe are eſteem'd cooling and moiſtening, except the Grains, which are drying and aſtringent. The Gum, therefore, the Fruit, the Leaves, and the Roots, either exhibited internally, or externally apply'd, are eſteem'd good in Fevers.

IAMBLICHI SALES. A ſort of compound Salt was thus called, which is ſaid to have been invented by *Iamblichus*, and was in great Eſteem for concocting the crude Humours, and for gently promoting Stools. It was thus prepar'd:

Take of Sal Ammoniac, one Pound; of Cappadocian Salt, ſix Ounces; of Pepper, three Ounces; of Ginger, three Ounces; of the Seeds of *Cnicus*, eighteen Scruples; of the Seeds of Rocket, ſixteen Scruples; of Biſhop's-weed, eighteen Scruples; of Hyſſop, eighteen Scruples; of Silphium, one Scruple; of the Tops of Thyme, Phyllon, and the Seeds of Smallage, and Parſley, each eighteen Scruples; of Origanum, an Ounce. Let them be all powder'd together, and ſifted. The Doſe is half a *Cochleare*, in a poach'd Egg, or any convenient Liquor, to be taken faſting. *Gorræus.*

JAMBOLONES Garciæ. *Jamboloins* Acoſtæ. A Shrub, which grows in the *Eaſt-Indies*, ſomewhat like Myrtle. It bears a Fruit ſomewhat reſembling large Olives, of a very aſtringent Taſte, which is pickled like Olives. The Fruit is eaten with Rice, and is ſaid to excite an Appetite, but is not eſteem'd very wholſome. *Raii Hiſt. Plant.*

JAMBOS. A Tree, growing in *Malabar*, of which *Ray* enumerates ſix Species.

1. *Prunus Malabarica Fructu umbilicato Pyriformi, jambos dicta minor. Jambos*, Park. J. B. Piſon. *Malacca. Schambu.* H. M. *Perſici Officulo Fructus Malacenſis.* C. B. The *Malabar* Plum-tree, with an umbilicated Pear-ſhaped Fruit, called the *Jambos minor.*

The Fruit is uſually eaten in the Beginning of Meals, before other Meats; it is of a ſweet and grateful Taſte, and of a very pleaſant Roſe-like Smell, which it emits even in eating; its Pulp is cold and moiſt, and extremely tender. Both the Fruits and Flowers are preſerv'd in Pickle, and by their cooling Succulency extinguiſh Thirſt in Fevers, and comfort the vital Spirits.

2. *Jambos prior* Acoſtæ. *Nati-Schambu*, H. M. *Prunus Malabarica Fructu umbilicato Pyriformi, Jambos dicta major.* The *Malabar* Plum-tree, with an umbilicated Pear-ſhap'd Fruit, called the *Jambos major.*

This Tree bears Fruit twice in the Year, which is of a more delicate Taſte than that of the preceding. The Bark of the Tree bruiſed, and taken in ſour Milk, cures the Dyſentery.

3. *Blatti, ſeu Jambos Silveſtris*, H. M. The *Blatti*, or wild *Jambos* of the *Hortus Malabaricus.*

The Natives boil the Fruit of this Tree, and eat it with other Food. The expreſſed Juice, mixed with Honey, cures *Aphthæ*, and is a potent Cooler in feveriſh Heats. A Cataplaſm prepared of the bruiſed Leaves, and apply'd to the Head, ſhaved, in continual Fevers, removes a Delirium, by procuring Sleep.

4. *Jambos ſylveſtris Malabarica, Samſtravadi dictus, Caipa Tijambou.* H. M. The wild *Malabar* Jambos, call'd *Samſtravadi*, the *Caipa Tijambou* of the *Hortus Malabaricus.* It is always ſeen with Leaves, Flowers, and Fruit; whence it is call'd by the Brachmans *Sada-pala*, that is, the Fruit-bearing Tree. The Pagans, call'd *Jogues*, or the Pilgrims, adorn themſelves with the floriferous and fructiferous Sprays of this Tree, and hang them about their Necks as an Amulet, and uſe them in numbering their Prayers. The Leaves are eatable, and their expreſſed Juice, boil'd with Oil of Palm, to the Conſiſtence of an Ointment, cures the Itch. The Kernels of the Fruit, pulveriz'd, and mix'd with Goats Dung, Sugar, and Butter-milk, and exhibited, cure a Diarrhœa; the ſame Powder, mix'd with Ginger, and the Juice of Lemons, cures a Teneſmus; taken in human Urine, is an Antidote againſt all ſorts of Poiſons; drank in Wine, it cures the Colic; when in Water, or outwardly applied, it eaſes the Pains of the Hæmorrhoids; drank in Woman's Milk, it excites Vomiting, and cures the Jaundice, and other bilious Affections; and, applied to the Eyes, is a Remedy for ophthalmic Diſorders.

5. *Jambos ſylveſtris, Samſtravadi dictus alter. Trijeria Samſtravadi.* H. M. The wild Jambos, call'd the Other *Samſtravadi*, the *Tijeria Samſtravadi* of the *Hortus Malabaricus.* The Wood of this Tree is hard and ſolid, and accommodated to the Uſe of Carpenters and Joiners; but the Virtues of the other Parts are juſt the ſame with thoſe of the preceding.

6. *Jambos ſylveſtris montana.* The wild Mountain Jambos, the *Malla-katou, Tijambu* of the *Hortus Malabaricus.* There are no peculiar Virtues aſcrib'd to this Tree. *Raii Hiſt. Plant.*

JANGOMAS, *Prunis ſimilis.* J. B. Pruno ſimilis ſpinoſa. *C. B.* It is a Tree of the Size of an ordinary Plum-tree, which grows ſpontaneouſly in the Fields, and, alſo, in the Gardens of *Raſaim, Chaul*, and *Batequalo*, bearing a Fruit like that of the Sorbus or Service-tree, and of a Taſte like that of a rough and aſtringent Sort of Plum. *Raii Hiſt. Plant.*

JANIPABA *Braſilienſibus.* Piſon. & Marcgr. *Genipat.* Park. *Pomo ſimilis Braſiliana.* C. B. *Junipappeeywa Braſilianorum, Nucum Foliis, ſive Genipat.* J. B. *Junipa.* Rochefort. *Pomifera Indica tinctoria. An. Panitsjica Marum Malabarenſibus.* H. M. A very tall and large Tree, growing in *Malabar.*

The tender Leaves, bruiſ'd in Water, which is the common Form in Uſe among the *Aſiatics*, and the Liquor drank, or the expreſs'd Juice of the tender Fruits, is an excellent Remedy for Aphthæ, and Fiſſures of the Tongue, if it be held in the Mouth. The ſame Juice, inſtil'd into the Eyes, is good for an Ophthalmy. The Bark of the Tree, pulveriz'd, and mix'd with an Infuſion of Rice, and the milky Juice of the mature *Indian* Nut, is an excellent Allayer of Thirſt in the violent Heat of a Fever.

a Fever. They prepare, alſo, a Decoction of the Bark, which, mix'd with Honey, and exhibited, eaſes the Pain of the Gripes. The expreſs'd Oil of the Seeds, taken with Ginger and Cumin-ſeeds, gives Relief in the Dropſy, eaſes the tormenting Pains of the Belly, and evacuates the ſame. The ripe Fruit, with its Kernels, is eaten by the Natives; and the glutinous, gummy, and pellucid Juice of the immature Fruit, concreting and reddening, or blackening, in the Rays of the Sun, becomes an excellent ſort of Glue, us'd on all Occaſions by the Inhabitants, and particularly by the *Jews* and *Portugueſe*, in binding their Books, which, by that means, are ſecur'd from Worms. The immature Fruit, cut in Pieces, and rub'd on the Skin, dyes it of a black Colour, inclining to blue, which can by no means be waſh'd out, but vaniſhes ſpontaneouſly at the End of eight or nine Days. The Savages colour themſelves with it at their Feaſts, and when they go to War, in order to appear more terrible to their Enemies.

JANIPABA is, alſo, the Name of the talleſt Tree in *Braſil*, which has the Appearance of a Beech, and bears an Apple of the Size of an Orange, green when immature, and putrefying when ripe, like Medlars, in which State they are eatable, being us'd raw, not boil'd, and render'd more delicious by candying and preſerving. They are preſcrib'd, with Succeſs, in a Flux of the Belly; allay the burning Heat of the Mouth and Stomach; and are comfortable to ſick and ſound Perſons; only they are ſubject to affect the Head with their ſtrong Smell. The unripe Apples, reduced to a Cataplaſm, are applied to the malignant Ulcers and Nodes of the Lues Venerea. The Wine, or expreſs'd Juice, is preſerv'd for the ſame Uſes; but, when it grows old, it becomes hotter, and leſs aſtringent. The Natives of *Braſil* extract a Liquor from the unripe Fruit, by the Help of Fire, which they reſerve for the Purpoſes aforeſaid. *Rochefort* tells us, that the Fruit, in its Fall, makes a Noiſe like the Diſcharge of a Gun, which, he ſays, is owing to ſome Flatulences included within the Pellicles ſurrounding the Seeds, which, burſting by the Fall, give a ſudden Vent to theſe flatulent Particles, and ſo occaſion ſuch an Exploſion. Both Birds and Hogs, which feed on the fallen Fruit, have their Fleſh and Fat ting'd with a violet Colour. *Raii Hiſt. Plant.*

JANITOR. A Name for the PYLORUS.

JANITRIX. The Vena Portæ is ſo call'd.

JANUA *Emplaſtrum.* The *Emplaſtrum de Betonica*, deſcrib'd in *Lemery's Pharmacopée univerſelle.*

JANUARII CATAPLASMA. A Cataplaſm for the Spleen, invented by one *Januarius*, and deſcrib'd by *Marcellus Empiricus*, C. 23.

JAPARANDIBA. Marcgr. & Piſonis. *Arbor Pomifera Braſilienſis, Flore Roſæ, Fructu rotundo, Segmento ſuperius velut ablato.* A pomiferous Tree in *Braſil*, with a Flower like a Roſe, and a round Fruit, but flat at the Top, as if Part was cut away.

The Leaves, entire or bruis'd, being applied to the Region of the Liver, diſcuſs an Hardneſs of the Hypochondria; and have the ſame Effect, when reduced by Art into the Form of an Apozem, and exhibited; whence they are to be reckon'd in the Number of Aperitives. *Raii Hiſt. Plant.*

JAPONICA TERRA. See TERRA JAPONICA.

JAPONICA VERNIX. A Verniſh made of Gum Lac, and Spirit of Wine, deſcrib'd in the *Collectanea Chym. Leydenſ.* C. 508.

JARUINA, Nieremberg. A Tree growing in the Iſland of *Jucaija*, and reſembling a Fig-tree. It bears a Fruit a Span and an half long, ſoft as a Fig, ſavoury, and a good Vulnerary. The Leaves are ſaid to reſtore Limbs when almoſt pull'd aſunder. *Raii Hiſt. Plant.*

JASMELÆUM. A ſort of medicinal Oil, call'd by the *Perſians*, *Jaſme*, and prepar'd by putting two Ounces of the white Flowers of Violets into a Pint of Oleum Seſaminum, or Oil of Seſamum. It is in Requeſt among the *Perſians*, who uſe it at Entertainments, on account of its Fragrancy. It is very proper to to anoint the whole Body, after Bathing; and for Bodies which require Heat and Relaxation. It has a pretty ſtrong Smell, which is offenſive to many. *Aetius, Tetrab.* 1. *Serm.* 1.

JASMINOIDES. A Name for the *Rhamnus*; *ſpinis oblongis; cortice albo Monſpelienſium.*

JASMINUM.

The Characters are;

The Leaves are generally pinnated; the Calyx conſiſts of one Leaf, which is quinquefid. The Flower is monopetalous, funnel-ſhap'd, and pentapetaloidal in the ſuperior Margin, with a villous Centre, and generally five Stamina, ſometimes fewer: The Ovary is ſeated in the Centre of the Calyx, is furniſh'd with a long Tube, and becomes a Berry, containing generally two Seeds, but ſometimes only one.

Boerhaave mentions ten Species of this Plant; which are,

1. Jaſminum; vulgarius; flore albo. *C. B. P.* 397. *Tourn. Inſt.* 597. *Boerh. Ind. A.* 2. 216. *Jaſminum.* Offic. *Jaſminum album.* Ger. 743. Emac. 892. Park. Parad. 406. Raii Hiſt. 2. 1599. *Jaſminum, ſive Gelſeminum, flore albo.* J. B. 2. 101. *Gelſeminum, vel Jaſminum album vulgare.* Park. Theat. 1464. *Samback, ſive Zamback, Jaſminum.* Chab. 112. WHITE JASMINE, or JESSAMY.

This is a Tree, or Shrub, ſhooting out long, ſlender, green Twigs or Branches, which muſt be ſupported, or elſe they will hang down; the are cloth'd with long pinnated Leaves, made of ſeveral ſharp-pointed Pinnæ, ſet oppoſite to each other with an odd one at the End, larger than the reſt. The Flowers come forth among the Leaves, ſeveral together on a common Foot-ſtalk, but each ſtanding on a ſlender ſhort one of its own, being longiſh Tubes, ſpreading out at the Top into five broad Segments, ſtanding in very ſhort Calyces, ſo that they eaſily fall off, when full-blown; they are of a white Colour, and of a pleaſant agreeable Smell. Each Flower is ſucceeded by a Berry, divided into two Parts, but ſeldom coming to Perfection here. Jeſſamy is uſually planted in Gardens, and flowers in *June* and *July*.

The Flowers only are us'd, and that but ſeldom in our Shops; though *Schroder* commends them, as good to warm and relax the Womb, to heal any Scirrhi therein, and to facilitate the Birth; as well as to be uſeful for a Cough, Difficulty of Breathing, Pleuriſy, and Pains of the Stomach, Inteſtines, and Womb. The Oil, made by Infuſions of the Flowers, is made uſe of in Perfumes.

The Oil prepar'd of the Flowers diſcuſſes crude Humours, and is ſerviceable to thoſe who are ſubject to Colds and Catarrhs, and uſeful in the Winter Seaſon. In Perſons of an hot Temperature, it excites the Head-ach; and, if long ſmell'd to, endangers an Hæmorrhage from the Noſe. It is principally ſerviceable in Contractions and Hardneſſes of the Limbs; for it heats, mollifies, and relaxes the Joints, Tendons, and Nerves. It cures Diſorders of the Uterus, not only when applied to the Hypogaſtrium and the Pudenda, but alſo drank, or adminiſtred in a Clyſter: It is no leſs effectual in the Colic proceeding from cold and viſcid Humours. The Flowers are principally us'd in Diapaſms, and Perfumes for Gloves and Linen. *Raii Hiſt. Plant.*

2. Jaſminum; humilius; magno flore. *C. B. P.* 398.

The Bark of the Plant, with the Leaves, boil'd in Oil, or Butter, to the Conſiſtence of an Ointment, cures Ulcers and phagedenic Abſceſſes. *Raii Hiſt. Plant.*

3. Jaſminum; humile; luteum. *C. B. P.* 397.

4. Jaſminum; luteum; vulgo dictum bacciferum. *C. B. P.* 398.

5. Jaſminum; Indicum; flavum, odoratiſſimum. *Ferr. Flor. Cult.* 393.

6. Jaſminum; Africanum; folio Ilicis; flore ſolitario; ex alis foliorum proveniente. *Comm. Rar. Exot.* 6.

7. Jaſminum; Azoricum; trifoliatum; flore albo odoratiſſimum. *H. A.* 2. 159.

8. Jaſminum; ſive Sambach Arabum; Alpini. *J. B.* 2. 102. Syringa Arabica, foliis Mali Aurantii. *C. B. P.* 398. Sambac Leſmin Arabicum. *Alp. Ægypt. Cap.* 19. *p.* 182.

The Flowers of this Plant are more ſerviceable for Ornament than Health. There is, however, an Oil prepar'd of them, which the Women uſe in their Baths, in order to warm and relax the Uterus; and they experience it to be very conducive to the diſcuſſing of ſcirrhous Tumors in that Part, and to facilitate the Birth; for which Purpoſe they both take the Oil warm inwardly, and anoint therewith the Region of the Uterus. It is us'd, taken at the Mouth, warm; or outwardly applied to anoint the Thorax, for Coughs, Difficulty of Breathing, and for mortal Kinds of Pleuriſies, in which the Patient is incapable of expectorating but with the greateſt Difficulty; alſo for a Peripneumony, and violent Pains of the Stomach, Inteſtines, and Uterus. *Proſper Alpinus, de Med. Ægypt.*

9. Jaſminum; Arabicum; foliis Limonii conjugatis; flore albo, pleno, odoratiſſimo.

10. Jaſminum; Arabicum; Caſtaneæ folio; flore albo, odoratiſſimo; cujus fructus Coffy in officinis dicuntur nobis. See COFFEE. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 216.

JASMINUM *Indicum, & Mexicanum.* A Name for ſeveral ſorts of JALAPA.

JASMINUM *Perſicum.* A Name for the *Lilac folio Liguſtri*, and for the *Lilac; laciniato, folio.*

JASPACHATES. A precious Stone compounded of the ſmaragdian Jaſper and an Agate. It has a lenient Virtue, and, taken inwardly, is effectual in Dropſies, hepatic Diſorders, a Peripneumony, and Pleuriſy; it renders, alſo, the Body florid, and of a ſpecious Appearance. *Aetius, Tetrab.* 1. *Serm.* 2. *C.* 37.

JASPIS. Offic. Boet. 250. De Laet. 79. Calc. Muſ. 253. Schw. 381. Aldrov. Muſ. Metall. 884. Charlt. Foſſ. 32. Worm. 93. Kentm. 50. Mont. Exot. 14. THE JASPER.

It is an opake Gem, of a green, and, ſometimes, a blood Colour. It is found in the *Eaſt Indies*, and agrees in Virtues with the Cornelian. *Dale.*

IATRALEIPTES, ἰατραλείπτης, from ἰατρὸς, a Phyſician, and ἀλείφω, to anoint, is a Phyſician, who pretends to cure Diſeaſes by Ointments and Frictions. Such an one was *Dictus*, mention'd by *Galen, de C. M. S. L. Lib* 7. *Cap.* 5. This Method of Cure was call'd ἰατραλειπτικὴ, *Iatraliptice*; and was firſt inſtituted

inſtituted by *Prodicus*, a Native of *Selymbria*, and a Diſciple of *Æſculapius*, as we are inform'd by *Pliny*, *Lib.* 29. *C.* 1.

IATREON, ἰατρεῖον, in the *Ionic* Dialect ἰητρήϊον, from ἰατρὸς, a Phyſician; in *Hippocrates*, means the Art or Function of a Phyſician, on which Subject he has written a Book, intituled περὶ ἰητρῆς, in which he treats principally of Surgery. *Caſtellus.*

IATRICE, ἰατρικὴ, from ἰατρὸς, a Phyſician, is the Art of Medicine, where τέχνη, Art, is underſtood. *Caſtellus.*

IATROCHYMICUS, a Chymical Phyſician, call'd *Chymiater*. Thus we read, alſo, *Iatrochymia*, and *Iatrochemia*; by which we are to underſtand the Art of curing by chymical Medicines.

IATROPHYSICUS, an Epithet beſtow'd on ſome Writings, which treat of phyſical Subjects with relation to Medicine. *Caſtellus.*

IATROS, ἰατρὸς, from ἰάομαι, to cure. A Phyſician, who is properly one that cures Diſeaſes.

IBA-CURA-PARI *Braſilienſibus*, Marcgr. is a pruniferous umbellated Fruit, growing in *Braſil*, and bearing a kidney-ſhap'd Plum with two Stones, but of no Uſe in Medicine. *Raii Hiſt. Plant.*

IBA-CURU-PARI *Braſilienſibus*, Marcgr. is a nuciferous, or nut-bearing Tree, growing in *Braſil*, and producing a ſtriated Fruit, ſhap'd like a Gourd, and diſtinguiſh'd by as many Striæ as it contains Nuts, which are, perhaps, five, ſix, or ſeven, of the Bigneſs of our Cheſnuts, whoſe Kernels are very white, and eatable, but of no Uſe in Medicine. *Raii Hiſt. Plant.*

IBA-PARANGA, Marcgr. A pruniferous or plum-bearing Tree of *Braſil*, producing a Fruit of a ſweetiſh Taſte, incloſing a Stone of the Shape and Bigneſs of an Almond, which contains three Kernels. The Fruit, or Plum, is eatable; but I find no Virtues aſcrib'd to this, or any other Part of the Tree. *Raii Hiſt. Plant.*

IBEIXUMA *Braſilienſibus*. Marcgr. A bacciferous Tree, growing very plentifully in *Braſil*, bearing a globular Fruit, of the Size of a Tennis-ball, which, before it is ripe, is green, and mark'd all over with brown Tubercles, and contains a ſlimy Matter like Birdlime; but, when mature, turns black, and cleaves into five equal Parts, each containing brown, roundiſh, oblong Seeds, of the Bigneſs of Muſtard-ſeeds. The Bark of this Tree is glutinous, and, when the outer browniſh Skin is ſcrap'd off, excellently ſerves for all the Purpoſes for which *Spaniſh* Soap is us'd, and is much better than the Fruit Saboon, or Quity, which, by its Acrimony, is prejudicial to Clothes. *Raii Hiſt. Plant.*

IBERIS. A Name for the *Lepidium*; *gramineo folio, ſive Iberis.* Sciatica Creſſes; call'd, alſo, *Agriocardamum.*

IBERIS *humilior*. A Name for the *Thlaſpi*; *Virginianum*; *foliis Iberidis amplioribus & ſerratis.*

IBEX. Offic. Aldrov. de Quad. Biſul. 730. Geſn. de Quad. 303. Charlt. Exer. 10. Jonſ. de Quad. 53. Raii Synop. A. 77. *Hircus ferus.* Bellon. Obſ. Ed. Cluſ. 20. THE STONE BUCK.

This Animal is found on the higheſt Parts of the *Alps*. *Geſner* recommends the Blood, taken in Wine, againſt the Stone. The Dung is ſaid to be good in arthritic and iſchiadic Pains. And *Seraphinus* aſcribes the ſame Virtues to the Coagulum, or Runnet, as to that of the Hare.

This is, by ſome, ſaid to be the ἰξαλοῦ αἶξ, mention'd by *Homer*, the Horns of which were employ'd for making Bows.

IBIBIRABA *Braſilienſibus*, Marcgr. & Piſon. A bacciferous Tree of *Braſil*, bearing a roſaceous Flower, and an umbilicated Fruit of the Size of a Cherry, and containing ſeveral ſoft Stones, which are eaten together with the Pulp. The Fruit is ſweet, mix'd with ſomewhat of a reſinous Taſte; and, after frequent Uſe, leaves a burning Heat in the Throat, like what is produced from Pepper.

The Leaves and Flowers, mix'd with Camara, are very effectually us'd in Lotions of the Feet, for Pains of the Head. From the Flowers, gather'd early while the Dew is on them, as, alſo, from the Leaves, a Water is diſtil'd, which, being of a refrigerating, and, at the ſame time, of a mundificant Quality, is of excellent Service in Inflammations of the Eyes. *Raii Hiſt. Plant.*

IBIGA. The ſame as ABIGA, or CHAMÆPITYS.

IBI-PITANGA, *ſeu Ceraſus Braſilianus*. Piſon. & Marcgr. The *Braſilian* Cherry-tree. *Raii Hiſt. Plant.*

IBIRA *Braſilienſibus*. Marcgr. Piſon. A Tree growing in *Braſil*, and bearing a Fruit of an oval Figure, of the Size of a Filbert, of an aromatic and acrimonious Taſte, which, dried and pulveriz'd, is us'd inſtead of Pepper. It is remarkable for its aromatic Virtue, and is not ſo acrimonious as the Pimento. The Bark of the Tree, on account of its extraordinary Viſcidity, ſerves inſtead of Ropes, and for Matches to Guns: When firſt ſtript, it is white, after it is ſeparated from the outer brown thin Rind, and becomes red in a quarter of an Hour. *Raii Hiſt. Plant.* Ibira is, alſo, a Name for the PINDAIBA; which ſee.

IBIRACE. A Name for Guaiacum. *Raii Hiſt. Plant. Ind.*

IBIRAEEM, *ſive Liquiritia ſylveſtris*. Piſon. A wild Species of Liquorice, growing in *Braſil*. *Raii Hiſt. Plant.*

IBIRA-PITANGA. See BRASILIA.

IBARAREMO. A Species of *Braſilian* Alliaria, with oval Leaves and Fruit, and a Wood ſo hard, that Cheſts are made of it. *Piſon. Raii Hiſt. Plant. Index.*

IBIRUBA *Braſilienſibus*. Marcgr. Piſ. A *Braſilian* Plum-tree, which, in Bark, Wood, and manner of Growth, reſembles the Guaiaba. The Fruit is of a yellow or gold Colour, umbilicated, of the Size of an ordinary Plum, but pear-ſhap'd, and containing a Stone, and ſometimes two, flat on one Side, where they are cloſely conjoin'd, and round on the other: This Stone is of the Size of a Cherry-ſtone, and like the Ubapiranga, and it is not eaſy to diſtinguiſh them. The Fruit is ſold in the Markets, and very freely eaten with Ham. *Raii Hiſt. Plant.*

There is another Species of the Ibiruba, call'd *Ibiruba alba* or *white Ibiruba.*

IBIS. The Name of a celebrated *Egyptian* Bird, reſembling, a Stork. The Fat is eſteem'd reſolutive and mollifying; but, if *Pliny* was well inform'd, this Bird has contributed more to the Improvement of Medicine by its Example, than to the Cure of Diſeaſes by affording any Remedy; for the Hint of injecting Clyſters into the Anus was, according to him, taken from the Ibis, which was frequently obſerv'd to fill its Throat with Sea-water, or that of the *Nile*, and to inject it into the Anus, by introducing its Beak, and, by this means, to procure Stools.

IBISCUS. The ſame as ALTHÆA.

IBIXUMA. A Name for the ARBOR SAPONARIA; which ſee.

ICACO. *American* Plum.

The Characters are;

It hath a roſe-ſhap'd Flower conſiſting of ſeveral Petals, which are placed in a circular Order, from whoſe Flower-cup ariſes the Pointal, which afterward becomes an oval, ſoft, fleſhy Fruit, incloſing a rough Stone of the ſame Form, in which is contain'd a round Kernel.

Miller mentions four Species; which are,

1. Icaco fructu ex albo rubeſcente. *Plum. Nov. Gen.* THE MAIDEN PLUM-TREE.

2. Icaco fructu nigro. *Plum. Nov. Gen.* AMERICAN PLUM-TREE.

3. Icaco fructu purpureo. *Plum. Nov. Gen.* PLUM-TREE WITH PURPLE FRUIT.

4. Icaco fructu luteo. *Houſt.* THE YELLOW PLUM-TREE.

None of theſe have any medicinal Virtues attributed to them, that I know of.

ICESIUM EMPLASTRUM. The Name of a Plaiſter mention'd by *Paulus Ægineta*; for a Deſcription of which, ſee ABSCESSUS.

ICHNEUMON. Offic. Raii Synop. A. 202. Charlt. Exer. 19. Geſn. de Quad. Digit. 568. Jonſ. de Quad. 105. Aldrov. de Quad. Digit. 300. Bellon. de Aquat. 44. Ejuſd. Obſ. Ed. Cluſ. 96. THE EGYPTIAN RAT.

This Animal is remarkable for its Enmity to the Crocodile, whoſe Eggs it takes all Opportunities of deſtroying; and, whilſt the Crocodile ſleeps, the Ichneumon creeps down its Throat, and eats through its Belly, in order, as it is ſaid, to feaſt on the Liver.

The Part principally uſed in Medicine is the Dung, which, together with Muſtard-ſeed, and Vinegar, is eſteem'd a good Topic in the Gout; and is ſaid to cure an *Alopecia*. A Broth, prepar'd of the Fleſh, is ſaid to be ſudorific; to be good for the Colic, and venomous Bites; and to purify the Blood. It is an amphibious Animal.

Ichneumon is, alſo, the Name of an Inſect.

ICHNOS, ἴχνος. The Sole of the Foot. In *Hippocrates*, *Lib. de Art.* it imports a kind of Sock, made of Leather, or Lead, accommodated to the Sole of the Foot.

ICHOR, ἰχὼρ, by ſome is called *Sanies*; by others, an aqueous Humour of the Blood: Some take it for an aqueous and ſerous Humidity, either of the Blood, or of ſome other Humour, and that, moſt properly, when conſider'd as in the Body: For, out of the Body, it is *Sanies*. *Ichores*, ἰχῶρες, according to *Galen*, are the thin and ſerous Humidities, contained in the Body, and its Veſſels; and are obſervable in all the Humours, or are evacuated together with them; and have different Qualities and Appellations, according to the various Nature of the Humours, from which they are ſecreted. *Galen, Com.* 2. *in* 6 *Epid.* The ſame Author, *Com.* 4. *in Lib. de R. V. I. A.* ſays, that *Ichores*, ἰχῶρες, in *Hippocrates*, are thin and ſerous Humidities: *Ichor*, ἰχὼρ, in particular, is the thinner and ſerous Part of the Blood, which is degenerated into an aqueous Nature, like the Serum of Milk, or Whey. But *Com.* 2. *in Lib.* 6. *Epid. & Lib.* 8. *de Placit. Hippocr. & Plat.* he writes, conformably to the Sentiments of *Plato*, that the ſerous Humidities, which are obſerved in all the Humours, correſpond to Whey; for as in Milk there is the Whey, which is thin and watery, and not coagulated into Butter or Cheeſe; ſo, alſo, in the Blood, and the reſt of the Humours, whether conſider'd ſeparately, or as mixed with the Blood, there is an aqueous Kind of Humidity, ſwimming upon

its

its reſpective Humour, which anſwers to *Ichor*, partaking of the Quality of the Humour whence it was produced. To this purpoſe, *Plato* writes, *in Timæo*, ἰχὼρ ὁ μὲν αἵματος ὀξέος πικροῦ, ὁ δὲ μελαίνης χολῆς ἐξέος τε, ἁλεροῦ· "The *Ichor* which is the "Whey of the Blood, is of a mild and gentle Quality; but "that which is the Whey of black and ſharp Bile, is of a ferine "and incorrigible Nature." By ἰχωροειδὲς αἷμα, "Ichor-like "Blood," in *Lib. 6. Epid. Sect. 2. Aph.* 29. as expounded by *Galen*, "We are not to underſtand, ſimply, a thin and watery "Blood, but ſuch as is affected with ſome virulent and malig-"nant Quality." And again, he ſays, that the Epithet of ἰχωροειδὴς, *Ichor-like*, is applied to Blood, containing a thin corrupt Humidity, not ſuch as is aqueous, and void of Corroſiveneſs, but what is acrid and corroding. Ἰχὼς, in *Ariſtotle*, *Lib.* 2. *de Part. Animal. & Lib.* 3. *de Hiſt. Animal.* ſignifies a pituitous Excrement, and a crude, aqueous, unconcocted Blood. And *Homer* calls the thin Humour, flowing from the Skin of *Venus*, wounded by *Diomedes*, by the Name of *Ichor*. *Hippocrates*, *Lib.* 2. *Epidemic.* calls the corrupt, thin, and ſerous Humours, which, by an Irruption, excited an Itching of the Skin, *Ichores*, ἰχῶρες. And, *Lib. de Rat. Vict. in Morb. acut.* he calls thoſe acrimonious and corrupt Humours, which kindle up a burning Fever, δριμέας καὶ χολώδεας ἰχῶρας, "Acrid and bilious Ichors." That ſerous and mucous Humour which flows from the Uterus, during the Birth, and immediately after, is called, by *Ariſtotle*, *Ichor*. A thin Fluid is, alſo, called *Ichor*, which flows from ſome Kinds of malignant Ulcers; eſpecially when the Nerves and Tendons are injured. And when the Parts near the Joints are wounded, or exulcerated, a thin *Ichor* is diſcharged, which the Farriers call Joint-water, and *Hildanus* names *Hydrarthron*.

ICHTHYA, ἰχθύα. The Skin of the *Squatina Marina*. Monk-fiſh; which is ſaid to be ſerviceable in an *Alopecia*. See SQUATINA. It alſo imports an Hook for the Extraction of the Fœtus, ſo called, ſays *Galen*, from the Likeneſs it bears to the Scale of a Fiſh: But it ſeems more probable, that it acquired this Name from its Similitude to a Fiſh-hook. Ἰχθύα is, alſo, explained, by *Erotian*, Raſpings.

ICHTHYELÆUM. The Oil of Fiſhes.

ICHTHYEMATA, ἰχθυίματα, properly imports the Scales of Fiſhes; but, figuratively, the Raſpings, or Scrapings, of the Barks of Trees.

ICHTHYITES. The Name of a Stone; ſo called, becauſe a Cavity is found in it, in Shape reſembling a Fiſh.

ICHTHYOCOLLA. Offic. Bellon. de Piſc. 104. Rondel. de Piſc. 2. 177. Geſn. de Aquat. 50. Raii Ichth. 244. Ejuſd. Synop. Piſc. 114. Aldrov. de Piſc. 567. *Huſo Ichthyocolla*. Schrod. 5. 329. THE ISINGLASS FISH.

Iſinglaſs is drawn from the Entrails, Fins, and Tail, of a large Fiſh, called, according to ſome, by the ſame Name; and *Huſo*, according to others; found in the *Volga*, *Danube*, and ſome other great Rivers. It is an Ingredient in ſome agglutinant Plaiſters, and is, alſo, reckon'd emollient and reſolvent. Wine Merchants uſe it in fining their Wines; for which Purpoſe, they beat up a ſufficient Quantity of it with Wine, and, afterwards, throw this Mixture into the Cask, where it firſt forms a Skin, or fine Network, on the Surface; and, then, precipates to the Bottom, carrying along with it all the groſſer Parts of the Liquor; ſo that the Filtre may, in this Caſe, be ſaid to paſs through the Liquor, and not the Liquor through the Filtre. This is a very harmleſs Way of purifying Wine; which is more than can be ſaid of the other Methods.

The Glue of this Fiſh, commonly called Iſinglaſs, is uſed, and is a yellowiſh Subſtance, made up in a ſpiral Form, of a glutinous Conſiſtence, and of no Smell: It is prepar'd of the Skin, Inteſtines, Stomach, Fins, and Tail, of this Fiſh, in the following Manner. Theſe Parts of the Fiſh, when cut in ſmall Pieces, are macerated in a ſufficient Quantity of Water: Then they are boiled over a ſlow Fire, to the Conſiſtence of a Poultice; after which they are to be moiſten'd, and ſpread into Pellicules, before they become cold, and reduced to a hard Maſs: This Subſtance, according to *Schroder*, is of a drying, incarning, and, in ſome meaſure, of an emollient Quality; it inſpiſſates the Blood, and is of an anodyne Nature: It is uſed in Exulcerations of the Lungs, and Fauces; and, in a Fluor Albus, it is exhibited with Succeſs: Some, alſo, preſcribe it in Dyſenteries. It is of a conglutinating Nature, when externally applied. *Dale*.

ICICARIBA. See ELEMI.

ICTAR, ἴκταρ. *Galen*, in his *Exegeſis*, and *Erotian*, both mention this Word, as occurring in *Hippocrates*: And *Galen* informs us, that it imports the Female Pudenda. But no ſuch Word occurs in the Copies of *Hippocrates* now extant. *Foeſius*.

ICTERIAS. The Name of a Stone, or Gem, mention'd by *Pliny*, *Lib.* 27. *Cap.* 10. and ſuperſtitiouſly recommended againſt the Jaundice, on account of its Colour.

ICTERITIA. The ſame as ICTERUS. *Icteritia Rubra* is an Eryſipelas: *Icteritia Alba* is a Chloroſis.

ICTERUS, ἴκτερος.

Among the various Species of Cachexies, or depraved Habits of Body, there is one, which diſcovers itſelf by a yellowiſh and ſomewhat blackiſh Colour of the Skin; and which is, by Phyſicians, called *Iterus*, *Morbus Arquatus*, and *Morbus Regius*; which are equivalent to what we call the *Jaundice*. This Diſorder is no more than a vitiated and corrupted State of the Blood and Humours, by means of an excrementitious Bile, ariſing from a Fault of the bilious Ducts, greatly injuring the Functions of the whole Body, and rendering the Skin highly unſeemly, by a yellow or livid Colour.

The Signs by which this Diſorder diſcovers itſelf, are principally theſe following: Firſt, In the Tunica Albuginea of the Eye, there is perceived a certain yellow Colour, with which, in Proceſs of Time, the whole Skin is tinged: The Urine is thick, of a dark-red Caſt, and tinges Linen with a Saffron-colour, whilſt, in the mean time, the Excrements, diſcharged by Stool, are pale. As the Diſorder grows worſe, the Saliva becomes yellow, and every thing the Patient takes, ſeems to have a bitter Taſte. Beſides, thoſe labouring under this Diſorder complain of a certain Senſation of violent Stricture, Preſſure, and Tenſion, in the Right Hypochondrium, as, alſo, of an Uneaſineſs about the Præcordia, a Difficulty of Breathing, and a preternatural Uneaſineſs of the whole Body.

The Hiſtory and Progreſs of this Diſorder are accurately and fully deſcribed by ſome of the moſt antient Phyſicians, and, eſpecially, by *Aretæus*, who, in *Lib.* 1. *Chron. Cap.* 15. uſes the following Words: "The Jaundice is a Diſorder affecting the whole "Habit, and ſpreading its Influence to every Member of the "Body; but, particularly, the Whites of the Eyes, and thoſe "Parts of the Forehead which are moſt contiguous to the Tem-"ples, become preternaturally yellow: Thoſe who labour under "a black Jaundice, are render'd unſeemly, by a Colour reſem-"bling that which reſults from a Mixture of black and green: "They are, alſo, cold, weak, liſtleſs, ſad, and dejected; their "Breath is fetid, and every thing they take has a bitter Taſte; "they breathe with Difficulty, and perceive a kind of biting "Pain in the Stomach; their Excrements are porraceous, black-"iſh, dry, and diſcharged with conſiderable Difficulty; their "Urine is high-colour'd, and ſomewhat inclining to black; they "are, alſo, afflicted with Crudities, loath their Aliments, and "are tormented with Watchings, Sadneſs, and Melancholy. But, "in the whiter Jaundice, the Colour of the Patient reſembles "that which reſults from a Mixture of white and green, his "Mind is more brisk and chearful; he is, at firſt, unwilling "to take his Aliments; but, after he has begun, he eats heartily; "he digeſts more eaſily than thoſe who labour under the other "Species of Jaundice; his Excrements are white, dry, and "chalky, and his Urine of a Saffron-colour. In both Species "the whole Body itches, a ſmall and biting Heat is perceived "in the Noſtrils; bitter Things, when taſted, do not appear "bitter; for, if the Tongue is cover'd with Bile, the Idea of "Bitterneſs is not, by that means, excited in the Mind, whereas "ſweet Things appear bitter to the Taſte. If it is evident, that "none of the Viſcera are over-heated, the Diſorder is not dan-"gerous, but laſts for a long time: If it laſts long, and any of "the Viſcera becomes inflamed, it degenerates into a Dropſy, "and many, who have laboured under it, have died of colli-"quative Sweats, without any Signs of a Dropſy." From what has been ſaid, I think it plainly appears, that almoſt all the Functions of the Body are preternaturally affected in this Diſorder. The Reaſon of this is ſufficiently obvious; for, as a ſound and natural State of the Functions principally depends upon, and is ſupported by, a due and laudable Craſis of the Blood and Humours, ſo, on the contrary, when this due Craſis is vitiated by impure, and more or leſs corrupted Humours, it is not to be wonder'd at, if, by this means, all the Actions of the human Body, whether vital, natural, or animal, ſhould be more or leſs injured.

But the Obſervations of various Authors are ſtill more capable of convincing us of the ſingular Efficacy of the recrementitious Bile, in inducing a Change on the Solids, as well as the Fluids, of the human Body. Thus the Blood, taken from the Vein of a Perſon labouring under the Jaundice, is frothy and yellow, according to *Theodorus Wingerus*, who affirms, that he has ſometimes been ſurpriſed to find, by Veneſection, that, in Patients of this Kind, there was not one Drop of red and florid Blood, but only ſuch as was of a yellow Colour, reſembling that of the Urine of Horſes: "Nay, ſays he, in a Woman, who "labour'd under a violent Jaundice, I ſaw the Blood and Urine, "which ſhe evacuated, highly thick, and ſimilar to each other; "but fifteen Days after, when the Jaundice was almoſt entirely "removed, the Blood taken from her Veins was highly red and "florid." The Viſcera and Inteſtines, ſuch as the Lungs and Stomach, alſo, loſe their natural Colour, and are, as well as the Fat and Membranes, more or leſs tinged with a yellow Colour. With reſpect to this, the Reader may conſult *Zacutus Luſitanus*, in *Prax. admirabili*, *Lib.* 3. *Paiſenius*, in *M. N. C. An.* 4. *Obſ.* 194. and *Thonnerus*, who, in his *Obſervat. Lib.* 3. *de Ictero*, *Obſ.* 1. makes mention of a certain Cardinal, who died of a Jaundice, the whole Parts of whoſe Body he found yellow upon Diſſection. Beſides, *Kerkringius*, in his *Spicileg. Anatom.* tells us, that he found the Bones tinged with a yellow Colour, in a Boy born of a Mother who labour'd under a Jaundice.

And

And *Dolæus*, in his *Encyclopæd. Medica, Lib.* 3. *Cap.* 8. informs us, that, in a Man of forty Years of Age, who died of a Jaundice, he ſaw all the Viſcera of the Abdomen and Thorax, the Brain itſelf, together with the Bones and Cartilages, tinged with a yellow Colour. 'Tis, alſo, remarkable, that *Galen* and *Sextus Empiricus* inform us, that, to Perſons labouring under a Jaundice, all Objects appear yellow, in conſequence of the yellow Colour of their Eyes. The Truth of this Obſervation is called in queſtion by *Hieronymus Mercurialis*, in *Prælect. Bononienſibus*, becauſe neither *Celſus*, nor *Cœlius Aurelianus*, *Aetius*, nor *Avicenna*, make mention of this Symptom. But I, myſelf, have had two Inſtances of it, in Perſons pretty far advanced in Years, who labour'd under this Diſorder.

But, that we may the more accurately know the Nature of this Diſorder, and, conſequently, be the better able to form juſt Notions of its Cauſes, Events, and Method of Cure, we muſt obſerve, that the yellow Jaundice, in particular, is of various Kinds, widely different from each other; for we find, from daily Experience, that one Species of it is obſtinate, long continued, and not to be cured without great Difficulty; whilſt another ſoon ceaſes, and is eaſily removed by proper Remedies: That another Species is permanent and continual, whilſt another returns at ſtated Periods, and only continues, for Inſtance, during a few Hours; or is, in ſome Patients, annual. Beſides, there is an idiopathic and ſymptomatic Jaundice: The Cauſes of the former are deeply rooted in the Liver; but the latter appears in Conjunction with ſome other Diſeaſe: Sometimes, for Inſtance, a convulſive and hyſteric Colic, a Cardialgia, or the Iliac Paſſion, a Vomiting or Purging, after the Uſe of too draſtic Emetics, or purgative Medicines. There is, alſo, a critical Jaundice, which, in acute Fevers, is ſometimes a ſalutary Sign; and, at others, a highly unlucky Omen; when, for Inſtance, it is either accompanied or ſucceeded by an Inflammation of the Stomach. There is, alſo, a great Difference between the yellow and black Jaundice, both with reſpect to the Cauſes, from which they proceed, and the Danger with which they are attended, ſince, in the latter, a far greater Corruption of the Humours, and a more conſiderable Injury done to the Viſcera, are to be ſuſpected.

Having thus given the Hiſtory and Differences of the Diſeaſe, we now come to inveſtigate the Cauſes, which give Birth to it, and the ſeveral Symptoms, with which it is attended. 'Tis, therefore, agreed upon among all Phyſicians, that, in a Jaundice, the Liver is almoſt always preternaturally affected. Let us, therefore, inquire, how this Diſorder of the Liver contributes to the Production of a Jaundice. Now, if we conſider, that the Liver is, by Nature, furniſhed with ſuch Plenty and Variety of Ducts, principally for this Reaſon, that it might ſecrete from the Maſs of Blood and Humours that ſulphurous and hot Liquor, which is, as it were, alcaliz'd with the viſcid Lymph, and which we call Bile, and, after having ſecreted it, convey it, by peculiar Ducts, to the Duodenum, in order to promote Digeſtion, we muſt readily perceive, that, when the Courſe of the Bile to the Inteſtines is either obſtructed, or totally intercepted, it muſt, of courſe, regurgitate to the lymphatic Veſſels and Blood, and, conſequently, prove the immediate and principal Cauſe of the Jaundice. And ſince, by this means, the Serum, and nutritious Juices, are infected by the Bile, it will be no hard Task to explain, why the natural Colour of the Skin ſhould be changed to that of yellow, why the Nutrition ſhould be vitiated, and the Urine render'd thick, and tinged with a rediſh Colour. Hence, alſo, the Reaſon is obvious, why the Fæces, diſcharged by Stool, are not yellow; why the Digeſtion of the Aliments becomes languid; and why many Diſorders are perceived about the Primæ Viæ.

But, ſince there are ſo great Differences among the ſeveral Species of Jaundice, as we have above repreſented, 'tis neceſſary we ſhould, in a more particular and accurate Manner, inquire what Parts and Ducts of the Liver are generally preternaturally affected, and from what particular Cauſes their Diſorder ariſes. Now, that theſe Cauſes conſiſt either in the Fault of the Matter obſtructing the Veſſels, or in the ſpaſmodic Motions contracting theſe Veſſels, is univerſally allow'd, by every one who is, in the leaſt, acquainted with the Theory of Medicine. Let us, therefore, take an accurate Survey of each of theſe States.

Firſt, then, 'tis certain from Experience, that Spaſms frequently lay a Foundation for the Jaundice; for when this Diſorder ſeizes the Patient ſuddenly, which it frequently does, and, terminating in a ſhort time, recurs at certain Periods; then the Cauſe ſeems to reſide neither in the peccant Matter, nor the Obſtruction and Infarction of the Veſſels, but rather in the ſpaſmodic Conſtriction of the Ductus Cholodochus, which is furniſhed with a highly ſenſible nervous Coat. For this Reaſon we find, that violent Anger has a powerful Tendency to induce a Jaundice; as, alſo, that corroſive and draſtic Medicines, whether of the emetic or purgative Kind, or the Bile in Choleras, Cardialgias, and the Beginnings of bilious Fevers, ſometimes produce this Diſorder. Now all theſe Things, duly compared with each other, ſufficiently convince us of the ſpaſmodic Agitation of the biliary Ducts: Beſides, in diſſecting thoſe who have died of Dropſies, there are not found in the Duct, which conveys the Bile to the Duodenum, the fainteſt Traces of an Obſtruction, either from a calculous, a mucous, or viſcid Matter.

We now come to conſider the other Cauſe of a Jaundice, the Obſtruction of the Veſſels, of which we have no Reaſon to be in the leaſt dubious, ſince it is certain, from daily Experience, that the Gall-bladder is frequently filled with Stones, of a conſiderable Bulk. This, alſo, holds true, with reſpect to the other hepatic Ducts, eſpecially that called the Cholodochus; which are ſometimes found to contain not only Stones of different Sizes and Colours, but alſo a gritty, tophaceous, and viſcid Matter; but the more ſoft and fine this Matter is, the Symptoms are proportionably the milder. With reſpect to this, the Reader may conſult the *Miſcel. Nat. Curioſ. An.* 1. *Obſ.* 44. and *Bonetus* in *Sepulchreto*, *Lib.* 3. *Sect.* 8. *Obſ.* 36.

But a Jaundice is not always induced by ſmall Stones obſtructing and infarcting the biliary Ducts: Thus, *Ettmuller*, *in Praxi*, *Part* 2. tells us, that, upon diſſecting a Woman, there were ſeveral large and ſmall Stones found in her Gall-bladder; tho', during her Life, ſhe had been perfectly free from a Jaundice. *Petermannus*, alſo, Profeſſor at *Leipſic*, in his *Diſſert. de Scrutinio Icteri ex Calculo Veſicæ felleæ*, informs us, that, in an old Woman, he found ſcarce any Bile, but only ſeventeen Stones in the Gall-bladder; tho', at the ſame time, the Patient, during Life, was entirely free from a Jaundice. Since theſe Phenomena ſometimes happen, we muſt endeavour to account for them, which, in my Opinion, may be done in the following manner. So long as the Stone in the Gall-bladder is not mov'd, but remains at Reſt, like the Stone in the Ducts of the Kidneys, it creates no Uneaſineſs. But, when it is forc'd from its Place, and propel'd to the cyſtic Duct, ſticking there, it, by a violent Diſtention, produces exceſſive Pains and Spaſms, which draw all the biliary Ducts into Conſent. Thus it proves the Cauſe of the Jaundice, and of all the terrible Symptoms, with which it is complicated; and which, when the Stone is diſcharged by Stool, totally ceaſe, as I have frequently obſerv'd.

There are ſome Signs, by which we may be pretty well aſſur'd, that there are Stones in the biliary Ducts; ſuch as an oppreſſive and lancinating Pain in the Right Hypochondrium, about the Pit of the Stomach, conſtantly afflicting the Patient, though with ſome Remiſſions, and attended with a violent Uneaſineſs of the Præcordia, a Difficulty of Breathing, a Compreſſion of the Breaſt, a Nauſea, and ſometimes Vomitings, Conſtipation of the Belly, Reſtleſſneſs, and Watchings. Beſides, Patients who have the Misfortune of Stones in the biliary Ducts, cannot walk erect, but go with their Bodies more or leſs bended, and ſtooping.

But a Jaundice is not only produced by Bile concreted in the biliary Ducts, but, alſo, by an Infarction of the minuteſt Ducts, ſubſervient to the Secretion of the Bile, by a tenacious and viſcid bilious Matter; for, when this happens, the Bile muſt neceſſarily be convey'd, not to the biliary Ducts, but through the diſtended lymphatic Veſſels, along with the Lymph, to the Blood. With reſpect to this, *Jacobus Camenicenus*, in *Epiſt. ad Matthiolum*, informs us, that he ſaw the Veins of the Liver, in its concave Part, before they terminate in the common Trunk of the Vena Portæ, obſtructed and diſtended by ſmall Stones, which were externally black, and internally of a yelloviſh Colour. *Borelli*, alſo, informs us, that he found the Glands, adjacent to the hepatic Artery, and the biliary Duct, which runs to the Inteſtines, ſo tumid and diſtended as to compreſs this biliary Duct to ſuch a Degree, that the ſmalleſt Inſtruments could ſcarcely have Acceſs into it. Beſides, *Cabroleus*, in *Obſer. Chirurg.* 10. and *Meckern*, in *Obſer. Chirurg.* 43. have obſerv'd, that a Jaundice may be produced by a Compreſſion or Obſtruction of the Ductus Cholodochus, by means of fleſhy Exceſcences. And *Argenterius*, in *Lib.* 4. *Aph. Hipp.* tells us, that, upon diſſecting a certain Cardinal, he found the Ductus Cholodochus entirely dry, and totally obſtructed; which Circumſtances had produced the Jaundice, under which he labour'd whilſt alive. But Inſtances of this kind are very rare.

We now come to conſider the immediate productive Cauſes of this Diſorder; the moſt conſiderable of which is a Plethora, or a larger Quantity of Blood and Humours than Nature can bear. That this Circumſtance ſhould produce a Jaundice, is not at all ſurpriſing; for, ſince, in a natural State, the Circulation of the Blood through the Liver is highly languid, in conſequence of the Want of a ſtrong Impulſe in the Vena Portæ, it muſt of neceſſity happen, that, in a plethoric State, the thick and viſcid Blood muſt very eaſily ſtagnate there, and obſtruct the minute Veſſels. Hence, alſo, we obſerve, that, in Leucophlegmatias, Scirrhuſes, and Indurations of the Liver, for want of a Separation of the bilious Parts, the Skin aſſumes a yellow, and ſomewhat greeniſh Colour. Nor is it to be doubted, but the black Jaundice, of all others the moſt terrible and obſtinate, is produc'd by an almoſt irreparable Diſorder of the Liver, and a violent Corruption of the Bile.

Aliments of hard Concoction, ſuch as Peaſe, Beans, Lentils, and Cheeſe, may prove the antecedent Cauſes of a Jaundice, ſince, in conſequence of their firm and coarſe Texture, eſpecially when uſed in large Quantities, they are, with Difficulty, digeſted, and generate a thick and impure Blood. To this Claſs, alſo,

alſo, belong acid and auſtere Wines, aceſcent Ales, and Waters impregnated with clayey and tophaceous Particles; all which produce ſtill worſe Effects, when joined with an idle and ſedentary Life. But nothing contributes ſo powerfully to the Production of thoſe Diſeaſes, which ariſe from Diſorders of the Liver, as the immoderate Uſe of rich Wines, and eſpecially Brandy, by which the Chyle and nutritious Juices are coagulated, and ſuch a Dyſcraſy of the Bile, as is highly prejudicial to Health, induced. Beſides, under a bad Regimen, we may juſtly include the Paſſions of the Mind; among which, beſides Anger, long-continued Grief is of the moſt unlucky Influence, ſince by generating a thick Blood, and conſequently rendering its Circulation proportionally ſlower, it, of courſe, powerfully contributes either to the Production, or Recalling, of a chronical and obſtinate Jaundice.

A Jaundice, alſo, frequently ariſes from ſome previous Diſorder. Hence, that intermittent Fevers, prepoſterouſly ſuppreſs'd by Aſtringents, are frequently ſucceeded by a Jaundice, is not only confirmed by Experience, but, alſo, by the Authority of *Ramazini*, who gives us an Inſtance of a Jaundice produced by the Suppreſſion of ſuch a Fever, by means of the *Peruvian* Bark. It, alſo, frequently happens, that a Jaundice is produced by an Obſtruction, or Diminution, of the menſtrual and hæmorrhoidal Diſcharges.

The Prognoſtics of this Diſorder vary with reſpect to Age, the Habit, the Strength, and Conſtitution of different Patients, as, alſo, according to the Virulence or Mildneſs of the Cauſes, and the Duration or Termination of the Diſeaſe; for, when this Diſorder ſeizes young Perſons, is ſingle, and not complicated with other Diſeaſes, ſuch as a quartan Fever, the hypochondriac Diſorder, an Obſtruction or Scirrhus of the Liver, and is not of long ſtanding, it may be eaſily removed, by proper Remedies both of the dietetic and pharmaceutic Kind. But if, after the Cure, it frequently recurs, accompanied with a yellow-greeniſh Colour, and an Induration of the Liver, it generally terminates either in an Hectic, or a violent Hæmorrhage. A Jaundice ariſing from the violent Tranſports of Anger, or the ſpaſmodic Stricture of the Inteſtines and biliary Ducts, by means of a draſtic Purgative or Emetic, eaſily yields to proper Medicines, if the Cure is attempted in due Time. But this Diſorder is not to be cured without greater Difficulty, if it is encourag'd by long-continued Grief, or if the Body is weaken'd by ſome previous Diſorder.

When a Jaundice is complicated with a Fever, the former often produces a critical Solution and Termination of the latter. Thus, in Practice, I have frequently had an Opportunity of obſerving, that thoſe Fevers which are excited, in hypochondriac Patients, by the Tranſports of Anger, and are accompanied with Spaſms of the lower Belly, bilious Vomitings, and an intenſe Heat, are happily terminated by a ſupervening Jaundice; which is, alſo, confirmed by *Hippocrates*, who, in *Sect.* 4. *Aph.* 63. uſes the following Words: "If, ſays he, a Jaundice ſeizes a "feveriſh Patient, on the ſeventh, the ninth, the eleventh, or "fourteenth Day, it is a lucky and ſalutary Circumſtance, unleſs, at the ſame time, the Right Hypochondrium ſhould be "indurated." In like manner a Jaundice appearing in intermittent Fevers, eſpecially about the Beginning of the Paroxyſm, is no unlucky Circumſtance, ſince upon the Ceſſation of the former, the latter generally diſappears. A Jaundice happening in an Inflammation of the Liver, Duodenum, or Stomach, renders the Safety of the Patient precarious and uncertain. A Jaundice, alſo, frequently ſeizes pregnant Women about the End of their Geſtation; but in this Caſe it is eaſily removed by ſeaſonable Veneſection. A Stone contained in the Gall-bladder, of ſo large a Size as almoſt entirely to fill it, is frequently the Cauſe of a Jaundice, and ſome very terrible Symptoms; the moſt conſiderable of which are, a burning Pain, about the Pit of the Stomach, in the Left Side; violent Gripes about the ſame Side, a Nauſea, Vomitings, Faintings, Difficulty of Breathing, and an unſeemly livid Aſpect. When theſe Symptoms appear, the Diſeaſe is dangerous, and terminates in a fatal Aſcites. Hence, in diſſecting Perſons, who have been cut off by theſe Symptoms, I have frequently ſeen the whole Gall-bladder filled with ſmall Stones, the adjacent Parts, ſuch as the Colon, and Bottom of the Stomach, ting'd with a yellow Colour, and their external Parts corroded, perhaps, by the Tranſudation of an acrid Bile through the Pores of the Gall-bladder. In like manner the Repletion of the Gall-bladder, by a large Quantity of calculous Concretions, frequently lays a Foundation for a convulſive Aſthma, which generally brings on a fatal Dropſy, both of the Thorax and Abdomen.

A Jaundice of the black Kind, in conſequence of the violent and malignant Corruption of the Humours, which aſſume a fix'd, terreſtrial, acid, and corroſive Quality, generally induces a Train of fatal Symptoms, and, if at all curable, requires uncommon Pains and Judgment for that Purpoſe. This Species of the Diſorder is principally incident to old Perſons, and eaſily degenerates into a Maraſmus, a Cachexy, œdematous Tumors, a malignant Eryſipelas, a Sphacelus, or violent Hæmorrhages.

The CURE.

In order to the judicious and prudent Cure of the Jaundice, 'tis abſolutely neceſſary, that the Phyſician ſhould pay a due Regard to the various Cauſes, Conſtitutions, Seaſons, and other important Circumſtances; for, in proportion as theſe vary, proportionably different Meaſures of Cure are indicated. Thus, for Inſtance, if by draſtic Medicines, Poiſons, or the Conſent of the Parts, in a ſpaſmodic, hæmorrhoidal, or hyſteric Colic, a Jaundice, which frequently happens, is ſuddenly induced, and is as yet recent, 'tis highly probable, that it ariſes from a violent Stricture of the biliary Ducts, diſtributed through the Subſtance of the Liver; in which Caſe the firſt Intention of Cure is, to relax the tenſe and conſtricted Parts, and, by that means, to reſtore the free and natural Secretion of the Bile, and its Deſcent into the Inteſtines; and then, in the ſecond Place, to mitigate and correct the Acrimony of the Bile, which is the Cauſe of the Spaſms.

The former of theſe Intentions is excellently anſwered by Emulſions of the Four greater cold Seeds, together with thoſe of Poppies, Hemp, and ſome others, which, on account of their highly ſubtile and vaporous Sulphur, are, by *Sylvius*, greatly extolled, and may be commodiouſly prepared with Waters of a ſedative Virtue, ſuch as thoſe of Lime-flowers, of the Flowers of the *Egyptian* Thorn, of Cowſlips, of Lily of the Valley, of common Chamomile, of Yarrow, and of black Cherries, adding a ſufficient Quantity of the Syrup of white Poppies. For anſwering this Intention, the anodyne Liquor is, alſo, highly efficacious, if mixed with a few Drops of the diſtil'd Oil of Mace; or, in Caſes where there are Colics, and hyſteric Diſorders, with the Eſſence of Caſtor, the Eſſence of Saffron, and the Laudanum of *Sydenham*. But, in order to allay and correct the Acrimony of the Bile and Humours, nothing is more efficacious than the abſorbent, and gently nitrous Powders. Thus, for Inſtance:

> Take of Crabs-eyes, Mother of Pearl, and the Pulvis Marchionis, each one Dram; of prepar'd Amber, and purified Nitre, each half a Dram; and of the Oil of Mace, four Drops; to which may be added, according to the Circumſtances of the Patient, a few Grains of the Extract of Caſtor, or Saffron.

As a Vehicle for this Medicine we may uſe Whey, Milk diluted with Water, an Emulſion of ſweet Almonds, or Water-gruel, mixed with a Spoonful or two of the Oil of ſweet Almonds.

Anodyne and paregoric Preparations, applied warm to the Region of the Præcordia, alſo, afford conſiderable Relief. For this Purpoſe we recommend a Bladder, filled with the Flowers of Elder, common Chamomile, Yarrow, and Sage, boil'd in Milk: Or, if this Preparation ſhould prove diſagreeable to the Patient, an Epithem prepar'd of equal Portions of Treacle, expreſſed Oil of Nutmeg, and Sperma-ceti, with the Addition of a little Saffron, and Camphire, may, with great Advantage, be applied to the Pit of the Stomach, eſpecially when the Diſorder is attended with a Cardialgia, or violent Spaſms of the Stomach, and an exceſſive Vomiting. Clyſters prepared of the paregoric Species, boiled in Milk, with the Addition of a ſufficient Quantity of Fat, of the Oil of Chamomile by Coction, are, alſo, of ſingular Efficacy, ſince they prove, as it were, an internal Bath, and remarkably cheriſh and relieve the Parts afflicted with painful and racking Spaſms.

The ſame Method of Cure, and Medicines, are to be uſed, when an obſtinate Jaundice, accompanied with violent Spaſms, ariſes from ſmall Stones firmly impacted in the cyſtic Duct, or the Ductus Cholodochus. Theſe Medicines, alſo, exert their uſual happy Effects, in Caſes where a Stone, lodged in the Ureters, produces violent Symptoms in the adjacent nervous Parts; for, upon the Removal of theſe Symptoms, in conſequence of the Relaxation of the Spaſms, Nature, aſſiſted only by her own Force, often happily expels the Obſtacle from theſe narrow Paſſages.

Theſe are the principal Meaſures and Medicines to be uſed in that Species of Jaundice, which ariſes from a ſpaſmodic Stricture of the biliary Ducts, and which is eaſily remov'd. Let us now inquire, what Steps are to be taken in the Cure of that more obſtinate, and frequently recurring Species, which draws its Origin from an Obſtruction of the Veſſels of the Liver. In this Caſe, therefore, the Intentions to be purſued are theſe following: Firſt,

To diſſolve and remove the Obſtructions of the biliary Ducts, ariſing from the mutual Concretion of the bilious, viſcid, terreſtrial, and cretaceous Sordes, and by this means to reſtore the free Courſe of the Bile to the Duodenum, that the Buſineſs of Chylification may be duly carried on. Secondly,

By proper Medicines to open, and render pervious, the Veſſels ſubſervient to the Secretion of the Bile, and which are infarcted with a tenacious Blood, that by this means they may freely tranſmit the Bile to the biliary Ducts: And, thirdly,

To render the languid and obſtructed Circulation of the Blood, which is the Foundation of the Obſtructions and Concretions, through the whole vaſcular Syſtem of the Lungs, natural and equable.

Theſe Intentions are moſt effectually and commodiouſly anſwered by Decoctions, or Apozems, prepared of ſuch Ingredients as are poſſeſs'd of a kind of ſpecific Virtue in reſolving viſcid Humours, and opening the obſtructed Paſſages of the Liver; ſuch as the Five aperient Roots, and that of Turmeric, either boiled in Water, or reduced to a Syrup, which is commonly ſold in the Shops. To this Claſs, alſo, belong the lactiferous Plants; ſuch as Lettuce, Vipers-graſs, Dandelion, Goats-beard, Sow-thiſtle, Endive, and Hawk-weed, which produce very happy Effects, if boiled in Water, or if their recent expreſs'd Juice is exhibited either with Whey or Aſſes-milk. I am of Opinion, that the ſame Virtues are juſtly to be aſcrib'd to the Juice of recent Graſs. Hence, *Sylvius* and *Boerhaave* inform us, that in the Winter-time, when Cows and Oxen feed upon Straw and Hay, their Livers have been found full of ſmall Stones, which were no longer to be diſcover'd, when, in the Summer-time, they came to eat Graſs; without doubt, becauſe, by the reſolvent Juices of the Herbs, the Liver is powerfully purg'd of viſcid and coagulated Humours. And, for Patients labouring under a Jaundice, I have often, with great Succeſs, preſcribed a Decoction of the Roots of Graſs, Eryngo, Succory, and Fennel.

But, in the Cure of all Diſorders of the Liver, and conſequently that of the Jaundice, nothing affords a more ſpeedy, infallible, and efficacious Relief, than Mineral Waters, both of the hot and cold Kind, drank in Conjunction with a proper Regimen; ſince, not only in conſequence of the Quantity of Waters, impregnated with a ſpirituous elaſtic Principle, but, alſo, on account of the neutral Mineral Salt, with which they abound, they are highly beneficial and powerful in reſolving viſcid Humours, removing Obſtructions of the Veſſels, and promoting all the ſeveral Excretions. And, to declare my Sentiments freely, a chronical and often-recurring Jaundice is rarely or never to be cured in a ſatisfactory manner, without the due Uſe of ſalutary Mineral Waters, ſuch as thoſe of *Egra*, *Spaw*, *Schwalbach*, and the *Caroline* Springs.

Neutral Salts, alſo, which, on account of their aperient, deterſive, diuretic, and purgative Qualities, are accounted beneficial againſt a Jaundice, deſerve our particular Conſideration. Among theſe, the moſt conſiderable are, the Terra foliata Tartari, Tartarus Tartariſatus, Sal Polychreſtum, the Arcanum duplicatum, purified Nitre, antimoniated Nitre, a Solution of Crabs-eyes, with Citron-juice, vitriolated Tartar, and Borax. To this Claſs, alſo, belong the Salts obtain'd from the Mineral Waters of *Epſom*, *Egra*, *Sedlitz*, and the *Caroline* Springs: But the Efficacy of theſe Salts is increas'd, if they are exhibited in a ſufficient Quantity of Whey, or ſome proper Decoction, and their Uſe is perſiſted in for a conſiderable time. Nor are we to omit Rhubarb, which, in Diſorders of the Lungs, is of a ſingular and ſpecific kind of Virtue, in reſolving and correcting the Humours, whether exhibited in Subſtance, mix'd with the abovemention'd Salts, or infus'd in Wine, together with the abovemention'd Herbs, or reduc'd to a Tincture, or an Eſſence, with the Terra foliata Tartari.

The laſt Intention of the Phyſician is, by gently corroborating Medicines, to reſtore the due and natural Tone of the weaken'd Veſſels of the Liver, which is the Cauſe of the Obſtructions and Concretions. This Intention is excellently anſwer'd by chalybeate Preparations, eſpecially of the liquid Kind, ſuch as the Tincture of Steel, prepar'd with Apples, or Quinces; the Tinctura Ludoviciana; the Tinctura Zwolfferi; as, alſo, the Peruvian Bark, and that of Caſcarilla, exhibited either in Powder, or in a Decoction. This Intention is, alſo, excellently anſwer'd by *Pyrmont* Waters, in conſequence of the chalybeate Principle with which they are ſo richly impregnated.

Tho' in a Jaundice Emetics are often indicated as highly proper, and afford a very ſpeedy and inſtantaneous Relief, yet they are frequently found highly prejudicial; when, for Inſtance, the Diſorder draws its Origin from violent Anger, Spaſms of the Stomach, and a Cardialgia, or from a ſpaſmodic Colic, as, alſo, in Caſes where a Stone, lodg'd in the cyſtic Duct, excites a violent Uneaſineſs about the Præcordia. But, if the Propriety of Vomits ſhould be indicated, it is expedient to uſe thoſe of the milder Kind, ſuch as that prepar'd of the Root of Ipecacuanha, with one Grain of emetic Tartar, which, when a bilious Sordes, lodging in the Duodenum, and cloſing up the Orifice of the Ductus Cholodochus, intercepts the Paſſage of the Bile, or when a tenacious, moveable, and not highly-concreted bilious Matter blocks up the hepatic Ducts, are of ſingular Uſe and Efficacy in evacuating it; for ſuch is the Nature and Power of Emetics, as to exert their Influence and Operation on the biliary Ducts, which conſiſt of highly nervous Coats, and by increaſing their ſyſtaltic Motion, to produce a highly beneficial and ſalutary Excretion of the peccant Humours.

Draſtic Purgatives are always obſerved to be prejudicial in a Jaundice, becauſe they increaſe the Spaſms, throw the Blood into violent Commotions, and impair the Strength. Hence, *Hippocrates*, in his Treatiſe *de Ratione Victus in Acutis*, claſſes thoſe, who labour under a Jaundice, among the Number of ſuch as ought not to be purg'd: "For, ſays he, the Phyſician who treats "them with Purgatives, will expoſe them to Danger, without "doing them any manner of Service." And, in the fifth Section of his Book *de Affect.* when he gives the Cure of a Jaundice, he makes mention of Purgatives, in the following Words: "The "external Part of the Body is to be ſoften'd by warm Baths, "but the Inteſtines and Bladder are to be lubricated; for this "Diſorder happens, when the Bile, thrown into a preternatural "Commotion, is lodg'd and depoſited immediately under the "Skin; and if the moſt ignorant Phyſician is but ſufficiently acquainted with this Circumſtance, he will not readily prove unſucceſsful in the Cure of the Diſeaſe; for, by the ſlighteſt and moſt inconſiderable Circumſtances, Diſeaſes are long protracted, and render'd far more violent than they would have otherwiſe been: All Aliments, Potions, Sorbitions, or Medicines calculated for the Alleviation of Pain, may be ſafely us'd in this Diſorder, provided they are exhibited with due Caution and Judgment. But ſuch Medicines as either purge Bile or Phlegm, are dangerous, and the Preſcription of them renders the Phyſician juſtly chargeable with Ignorance, and bad Management." From this celebrated Paſſage, I think it is ſufficiently obvious, that, in a Jaundice, *Hippocrates* abſolutely condemn'd the Uſe of ſuch Medicines as depoſited the Bile immediately under the Skin; and branded the Phyſicians, who us'd ſuch a Practice, as Fools and Murderers. *Cœlius Aurelianus*, in the fifth Chapter of his third Book, is no leſs explicit in condemning the Uſe of cholagogue Purgatives in a Jaundice, in the following Words: "The frequent Exhibition of ſuch Medicines, as "purge and carry off the Bile by Stool, is juſtly to be condemn'd "in a Jaundice; ſince, by their means, the Thirſt is increas'd, "the Loathing of the Food augmented, the Strength impair'd, "the Aliments taken corrupted, and all the Parts of the Body "reduc'd to a worſe State, by ſuch a Farrago of Medicines; "which Error we have frequently ſeen thoſe guilty of, who, in a "Jaundice, have preſcribed the frequent and continued Uſe of "Wormwood, Aloes, and Coloquintida."

Sudorifics, eſpecially of a too hot and volatile Kind, which, by their expanſive Sulphur, throw the Humours into a violent inteſtine Commotion, are by no means to be us'd in the Cure of a Jaundice, in which Diſorder the viſcid bilious Humours are far more properly evacuated thro' the Liver and Kidneys, than thro' the narrow ſubcutaneous Emunctories. Nor are we to be leſs cautious in the Uſe of too hot Baths in the Height of the Diſorder, and under an immediate Paroxyſm: Nor is it a hard Task to aſſign a ſufficient Reaſon for this Piece of Practice; for, ſince, in a Jaundice, the cutaneous Emunctories are obſtructed, the Patients do not eaſily ſweat, the exceſſive Heat, by throwing the Blood into Commotions, and rendering the Humours more acrid, produces a Rupture of the Blood-veſſels in other Parts. But tepid and temperate Baths, prepar'd of River-water, with Bran and Milk, may be ſafely us'd in Caſes where there are violent Spaſms about the Primæ Viæ; and Baths ſomewhat hotter, prepared with emollient and deterſive Herbs, may be ſafely us'd, in order to remove the yellow Colour, when the Diſeaſe is on the decline, and the Emunctories of the Skin ſufficiently open and pervious.

Tho' in the Cure of a Jaundice, bitter Medicines, prepar'd of the Root of Gentian, of Marſh-trefoil, the leſſer Centaury, Wormwood, and Carduus Benedictus, are highly extol'd by various Authors; yet I can from my own Experience affirm, that they often do more Injury than Good; for, tho', by ſupplying the Defect of the Bile, they may ſeem to facilitate the Digeſtion and Excretion of the Aliments, yet, when they paſs with the Chyle to the Maſs of Blood, they often render the Diſorder more obſtinate, by increaſing and accumulating the bilious Sordes. And, if at any time we find happy Effects produced by them in the Primæ Viæ, this is principally obſerved to happen, when, during a highly coſtive State of the Patient, they evacuate the impure Sordes by Stool; for neither the Bile, nor other bitter Subſtances, are friendly to the State and Condition of the vital Humours, but ought to be eliminated with the Fæces; for which Reaſon, Rhubarb is, in this Caſe, a highly efficacious Medicine; and the bitter Ingredients above-mention'd may, alſo, be uſed, when infuſed in Wine, and exhibited in Conjunction with ſome gentle Purgative, ſuch as Rhubarb, Sena-leaves, Agaric, or tartareous Salts.

As in a Jaundice, both of the black and yellow Species, there is a great Impurity, or Cacochymy of the Humours, mercurial Preparations, by ſome Phyſicians highly commended, prove greatly prejudicial. Thus, by ſmall Doſes of Mercurius dulcis, exhibited in the Form of Pills, I have ſeen a Swelling of the Gums, a violent Stench of the Mouth, Cardialgias, and a Loſs of Appetite and Strength, produced; for Mercury, when mix'd with acid, and much more with alcaline Salts, aſſumes a highly corroſive and poiſonous Quality.

Veneſections are rather to be uſed with a preſervative, than with a curative Intention; for a Redundance of Blood, by diminiſhing the Circulation of the Fluids, which in the Liver is always

always ſloweſt, contributes greatly to the Generation of the Diſeaſes peculiar to that Organ. Nor, when the Diſeaſe is preſent, and accompanied with a Plethora, are we abſolutely to diſcharge Veneſection; ſince this Practice is productive of very happy Effects, when the Diſorder either draws its Origin from, or is ſupported and ſuſtain'd by, a Suppreſſion of the menſtrual or hæmorrhoidal Diſcharge. Veneſection is, alſo, beneficial, when Women, after the fiftieth Year of their Age, when the Menſes ceaſe, are ſeiz'd with a Jaundice.

As for Topics, we muſt obſerve, that, when applied to the Region of the Liver, they are of ſingular Efficacy in aſſiſting the Circulation of the Blood and Humours through the hepatic Ducts, and, for that Reaſon, contribute greatly to the ſucceſsful and expeditious Cure of a Jaundice. For this Purpoſe I have frequently, with excellent Succeſs, preſcrib'd Cataplaſms, or Bags, prepar'd of the Herbs Wormwood, Horehound, and Mint, together with the Flowers of *Roman* and common Chamomile, boil'd in *Rheniſh* Wine; or the *Emplaſtrum Saponatum* of *Barbette*, well camphorated, or ſimple Diachylon mix'd with Saffron.

In the Cure of a Jaundice, due Regard is, alſo, to be had to the Aliments; and we are carefully to obſerve, whether they are agreeable to the peculiar Conſtitution of the Patient; ſince all Aliments are not equally ſuited and adapted to Perſons of all Habits. But this Caution is, in a particular manner, to be obſerv'd, with reſpect to the Patient's Drink; for ſome, with great Propriety and Succeſs, uſe Whey, others Spring-water, either alone, or with Cream of Tartar and Sugar; others, *Rheniſh* Wine, mix'd with Citron-juice; and others, Ale: Whilſt, on the contrary, others reject theſe Liquors, and find them entirely diſagreeable to them. But, with reſpect to Wines in general, I would have them exhibited in very ſmall Quantities, becauſe, in this Diſorder, all ſpirituous Subſtances do more Injury than Good. Among Aliments, the Patient is, in a particular manner, to abſtain from ſmok'd Fleſh, Fiſh, Sweat-meats, things fried with Butter, and all leguminous Subſtances, except aqueous Fruits, ſuch as Cherries, Currants, Cucumbers, and boil'd Prunes, which are generally ſafely us'd.

The firſt Approaches of this Diſorder, or Relapſes after a Cure, are moſt effectually prevented by Changes of Air, Travelling, and ſufficient Exerciſe; to which may be join'd the liberal Uſe of ſome proper Liquor, and a calm and eaſy State of Mind. Thus, I have known Perſons, who, by a prudent and due Uſe of all theſe, have remov'd an obſtinate Jaundice; whereas it is confirm'd by daily Experience, that thoſe who lead a ſedentary Life, and are addicted to the Uſe of ſpirituous Liquors, or are ſunk in long-continued Grief, are not only highly ſubject to the Jaundice, but, alſo, with great Difficulty, totally freed from it. We ſhall now put an End to this Article, by ſubjoining the Regimen in this Diſorder recommended by *Celſus*, in the twenty-fourth Chapter of his third Book: "Thro' "the whole Courſe of this Diſorder, ſays he, the Patient is "to uſe Exerciſe, Frictions, and Baths; he is, alſo, to have the "Advantage of a warm and delicate Bed and Chamber, Sports, "Mirth, and every other Circumſtance that has a Tendency "to exhilarate and chear the Mind; for which Reaſon the "Diſorder ſeems to have been call'd *Morbus regius*. A Malagma, alſo, of a digeſtive Quality, applied to the Præcordia, "is beneficial." *Frederic Hoffman.*

Methods of Cure, recommended by other Authors, are as follow.

In order to the Cure, if the Pulſe be ſtrong, and will bear it, Phyſicians commonly begin with Bleeding and Vomiting; after which, Purging takes place, eſpecially with the cholagogue Medicines, and, during the whole Courſe, deobſtruent or aperient Remedies ought to be preſcrib'd, but with ſome Variation in regard to thoſe call'd ſelect and ſpecific Remedies, ſome of which we ſhall inſert from Authors of Reputation.

After Bleeding and Vomiting, *Riverius* gives the following purging Bolus:

Take of the Electuary of the Juice of Roſes, and the Diaprunum ſolutivum, each three Drams; of the Powder of Rhubarb, one Dram; and of Saffron, half a Scruple: Mix all together.

Willis firſt orders the following Vomit, in the Uſe of which Regard is to be had to the Strength and Age of the Patient:

Take of the Sulphur of Antimony, ſeven Grains; of Scammony, impregnated with Sulphur, eight Grains; Cream of Tartar, half a Scruple: Mix, and reduce to a Powder, to be exhibited in one Spoonful of Panada.

Or,

Take of Gamboge, prepar'd, eight Grains; and of vitriolated Tartar, ſeven Grains: Reduce to a Powder for Uſe.

He then directs this Purge:

Take of the Electuary of the Juice of Roſes, three Drams; of the Powder of Rhubarb, one Dram; of Salt of Wormword, and Cream of Tartar, each half a Scruple; and Syrup of Rhubarb, a ſufficient Quantity for making a Bolus.

For weaker Conſtitutions thus:

Take of the beſt Rhubarb, two Drams; of the Troches of Agaric, half a Dram; of Cinnamon, and Ginger, each half a Scruple: Infuſe in White-wine, and Succory-water, each three Ounces; let the Infuſion be continued for three Hours, in a cloſe Veſſel, the Liquor being kept warm all the while. To the Liquor, when ſtrain'd, add of the Syrup of Rhubarb, one Ounce; and of the Water of Earth-worms, two Drams: Mix for a Potion.

Or,

Take of the Powder of Rhubarb, between half a Dram and one Dram; and of the Salt of Wormwood, half a Scruple: Mix, and reduce to a Powder.

Or,

Take of the Pilulæ Ruffi, one Scruple, and of the Extract of *Rudius*, half a Scruple: Mix, and make into four Pills, to be taken in the Morning, obſerving a due Regimen at the ſame time, and repeating it after four or five Days.

Forms of deobſtruent Apozems to be taken through the whole Courſe of Cure, ſometimes mix'd with Purgatives:

Take of the Roots of ſharp-pointed Dock, one Ounce; of the Tops of leſſer Centaury, and Roman Wormwood, each two Pugils; of the Roots of Gentian, and Turmeric, each two Drams; and of yellow Sanders, one Dram: Boil in a Pint and an half of Spring-water to one Pint, adding, towards the End, ſix Drams of Sena-leaves; of Rhubarb, three Drams; of Agaric, one Dram and an half; of Coriander-ſeeds, two Drams; and of White-wine, two Drams: Boil in a cloſe Veſſel for two Hours; and let the ſtrain'd Liquor be depurated by ſubſiding. The Doſe is from four to ſix Ounces, with Syrup of Rhubarb, one Ounce; and Water of Earth-worms, three Drams, for a Potion, to be repeated three or four Days ſucceſſively, or alternately. *Willis.*

After univerſal Evacuation, *Riverius* ſays, the Diſeaſe, if recent, may be overcome by uſing the following Preſcription, for a Week together:

Take of the Roots of Madder, half an Ounce; of the Leaves of the greater Celandine, one Handful; of the Tops of *Pontic* Wormwood, and the leſſer Centaury, each one Pugil; of Cinnamon, and Saffron, each half a Scruple: Infuſe, for a Night, in eight Pints of White-wine. To the ſtrain'd Liquor add of the Syrup of the Five aperient Roots, one Ounce. Let the Patient take it every Morning.

Or,

Take of the Whole of Celandine, one Handful; of the Flowers and Leaves of St. John's-wort, each half an Handful; of the Shavings of Ivory, and the Powder of Gooſe's Dung, each three Drams; and of Saffron, half a Dram. Let the Dung and Saffron be tied up in a Bag, and let the Whole be boil'd in equal Parts of Wormwood-water, and White-wine, to one Pint. Diſſolve in the ſtrain'd Liquor one Ounce of white Sugar, and mix up for three Doſes, to be taken in the Morning.

Quercetan, *Fonſeca*, and *Paré*, with many others, greatly extol Gooſe-dung gather'd in the Spring, and taken from half a Dram to a Dram. *Paré* gives two Drams, diſſolv'd in White-wine, and ſtrain'd for a Potion.

The Powder of Millepedes and Earth-worms are, likewiſe, recommended.

Steel, and ſome of its Preparations, are frequently directed with Advantage.

Geſner praiſes the Roots of the Stinging-nettle, bruis'd, to one Pound, with one Scruple of Saffron, to which he adds White-wine; and gives the clear expreſs'd Tincture to four Ounces, for four or five Days.

The Chymiſts, not without Reaſon, recommend their vitriolated Tartar, Salt of Tartar, and Cream of Tartar, which they adminiſter with a chalybeate Wine, for ſome Days. And, for the ſame Purpoſe, their tartariz'd *Elixir Proprietatis*, and the Tincture of Antimony.

Willis

Willis directs the following Electuary:

Take of the Conſerve of *Roman* Wormwood, and the yellow Rinds of Oranges and Lemons, each two Ounces; of the Species Diacurcumæ, one Dram and an half; of the Powders of Ivory, yellow Sanders, and Aloes-wood, each half a Dram; of the Troches of Capers, one Dram; of the Powder of Rhubarb, half a Dram; of the Salt of Wormwood, two Drams; and of the Syrup of Succory with Rhubarb, a ſufficient Quantity for making an Electuary. Let the Patient take the Bulk of a Cheſnut, twice a Day; drinking, after each Doſe, three Ounces of the following Julap:

Take of the Waters of the greater Celandine, Fumitory, Wormwood, and Elder-flowers, each five Ounces; of the compound Waters of Snails, and Earth-worms, each two Ounces; and of Sugar, half an Ounce: Mix all together.

The common Remedy is a Lemon, roaſted under hot Embers, or before a gentle Fire, with Saffron incloſed in it, which, then, is ſteeped, or ſqueezed, into a Glaſs of White-wine.

Sylvius, in ſome Caſes, preſcribes a Decoction of Hempſeed and Caſtile-ſoap; which he believes proper to blunt the Edge of that raging volatile Salt, which, according to his Hypotheſis, renders the Bile, at theſe times, immiſcible with the Maſs of Blood.

Dioſcorides adviſes the Juice and Decoction of the white Horehound: Others, the Decoctions of the Barberry, and Caper-bark.

Sennertus directs the Seeds of Columbine, which he gives in Powder, to half a Dram; with one Scruple of the Powder of Earth-worms, and half a Scruple of Saffron, in a Glaſs of Wine; as, alſo, a Decoction of red Vetches, with Aſparagus-root, for common Drink.

When the Jaundice, ſaith *Sylvius*, ſucceeds the poiſonous Bite of a Viper, or other venomous Creature, as is not unuſual; Sudorifics are neceſſary, abounding with a volatile Salt: To which End conduce the volatile Salt of Hartſhorn, Bezoar Mineral, diaphoretic Antimony, Treacle, and Preparations of Vipers.

Augenius ſays, that one Dram of Gum Ammoniac, diſſolved in two or three Ounces of Oxymel or Hydromel, given four or five Days, or more, together, in the Morning faſting, cure the Jaundice to a Miracle.

The Decoction of Strawberry-leaves is accounted, likewiſe, a great Anti-icteric.

The Vulgar pretend to find Relief from ſwallowing five, ſeven, or nine Lice; for, without an odd Number, no good Effects are expected. Whatever Succeſs they have, ought, certainly, to be aſcribed to their volatile Salt; but, ſince many leſs ungrateful, and more powerful Remedies are diſcover'd, there ſeems to be no Reaſon why one ſo loathſome ſhould be directed.

Some affirm, the beſt Cures have been perform'd by Acids; ſuch as are the vitriolated or chalybeated Tartar, and the Sal Diureticum of *Bates's Pharmacopœia*.

Turner prefers the following Preſcription, which, he ſays, he has tried ſucceſsfully, when many others have failed; and believes it may be relied on, except where the Glandules of the Liver are ſo much conſtricted, that the Bile can no longer be ſecreted; or when the Duct, which empties itſelf into the Duodenum, is entirely obſtructed by indiſſoluble Stones; whence proceed thoſe excruciating Colics, with bilious Vomitings, which attend this Diſeaſe.

Take of white *Venice* Soap, or pure *Caſtile* Soap, two Drams; of the Powder of Rhubarb, one Dram; of Saffron, cut ſmall, half a Dram; and of the liquid Extract of Gentian, a ſufficient Quantity, beat up into a Maſs, of each Dram of which ten Pills are to be made; of which the Patient is to take four every ſix Hours, drinking, after each Doſe, four Ounces of the following Apozem:

Take of the Roots of Madder, one Ounce; of ſliced Turmeric, half an Ounce; of the Herb Celandine, with its Tops, St. John's-wort, the leſſer Centaury, and white Horehound, each half an Handful: Boil them gently, in a ſufficient Quantity of Spring-water, for two Pints of the ſtrain'd Liquor; adding, towards the End, half a Pint of White-wine, to the ſtrain'd Liquor, when depurated by ſubſiding: Add of the Syrup of the Five aperient Roots, one Ounce and an half, for an Apozem.

He acknowledges, however, to have more than once ſeen a ſtubborn Jaundice, which had fruſtrated the Endeavours, both of himſelf and others, at laſt overcome with the Juice of the green Leaves of the Artichoak: This, he adds, is a harſh Medicine, working both upwards and downwards, and, conſequently, improper for weak and worn-out Conſtitutions. The Doſe is three Spoonfuls, with an equal Quantity of White-wine, twice a Day.

But if the Tone of the Blood is broken by Intemperance, and the ſecretory Organs perverted in their Office, or the Liver indurated; whence a Dropſy enſuing upon the Jaundice, and the yellow Complexion changing for one more intenſely deep; the Kidneys, alſo, no longer able to derive the Serum, unleſs in ſmall Quantity, ſaturated with Bile, like an Elixivium in its Colour, through the urinary Paſſages, as formerly; the upper Parts of the Body waſted; with the lower, as the Belly, Thighs, and Legs, upon a Stretch; the Caſe is here, become deſperate, and the Sick by no means to be relieved.

Upon removing the Obſtructions, and recovering a former State of Health, the yellow Complexion, which accompanies this Diſeaſe, inſenſibly waſtes, by the Help of the native Heat, through the Pores, in the ſame manner as black and blue Spots on the Skin, occaſion'd by external Contuſion and Extravaſation. But, in order to haſten the Diſappearance, *Hippocrates*, *Galen*, and others, propoſe Bathing, either in warm Water, or in the natural, nitrous, and ſulphurous Baths: *Sylvius* preſcribes Sudorifics, endued with a volatile Salt; which, he ſays, are profitable, whether Sweating follows or not: *Paulus*, and others, according to *Meſſarias*, preſcribe Sulphur inwardly, to one Dram: But this is a hazardous Remedy, eſpecially if taken by hectical Patients, and ſuch as are of a hot and dry Temperament.

The Yellowneſs, remaining on the Tunica adnata of the Eye, is diſperſed, by receiving into it, at convenient Intervals, the Fumes of Vinegar, after the manner of a Suffitus.

The black Jaundice, ſo called from the deeper Dye, is nearly allied to the former; or is, rather, the ſame Diſtemper degenerated, inducing a Scirrhus upon the Liver, and a Rottenneſs upon the reſt of the Viſcera; by theſe means, the Temperament of the Blood being ſpoiled, and a Dropſy coming on, the whole Conſtitution is broken, and the human Frame quickly deſtroy'd. However, the Cure may be attempted after the ſame manner with the former, or with ſome little Variation, as the Symptoms may happen to indicate.

Sydenham obſerves, that the yellow Jaundice ſometimes ſucceeds the hyſteric or hypochondriac Colic; and, in curing this Species, he is either for refraining entirely from Purgatives, or for exhibiting Rhubarb only, or ſome other gentle Lenitive; becauſe the Purging might raiſe a new Commotion of the Spirits, and, conſequently, occaſion a Return of the hyſteric Symptoms: And the Jaundice, proceeding from this Cauſe, generally goes off, ſpontaneouſly, in a ſhort time: But, if it continues long, or abates ſlowly, he propoſes the following Apozem.

Take of the Root of Madder and Turmeric, each an Ounce; the Roots, together with the Leaves, of the greater Celandine, and the Tops of the leſſer Centaury, of each an Handful: Boil them in equal Quantities of *Rheniſh* Wine, and Spring-water, to a Quart: To which, when ſtrain'd off, add two Ounces of the Syrup of the Five opening Roots: Mix them together for an Apozem, of which let the Patient take half a Pint warm, every Morning and Night, till the Cure is completed.

The *Edinburgh* Diſpenſatory preſcribes this Decoction.

Take the Roots, together with the Leaves of the greater Celandine, the Roots of Turmeric and Madder, of each an Ounce; Spring-water, three Pints: Boil them together till there remains a Quart of the ſtrain'd Liquor; to which, when cold, add the Juice of two hundred Millepedes, and two Ounces of the Syrup of the Five opening Roots; and mix them together.

But, ſays Dr. *Sydenham*, where the Jaundice is the original Diſorder, beſides the Alteratives juſt ſet down, it is convenient to exhibit ſuch Medicines, once or twice, as evacuate the Bile by Stool, before taking the Apozem above preſcribed; and once a Week afterwards, while it is continued.

Take of the Electuary of the Juice of Roſes, two Drams; Rhubarb finely pulverized, half a Dram; Cream of Tartar, a Scruple; Syrup of Succory, with Rhubarb, enough to make them into a Bolus: To be taken betimes in the Morning, drinking after it a Glaſs of *Rheniſh* Wine.

But, if the Diſeaſe ſtill remains obſtinate, he adviſes the Patient to the Uſe of ſome chalybeate Mineral Waters, ſuch as *Tunbridge*, to be drunk every Morning, at the Fountain-head, till he recovers. *Turner* recommends the *Spa* Waters.

Sheeps-dung, infuſed in Beer, is a Remedy uſed, with Succeſs, by the poorer Sort of People.

Ettmuller ſays, that Emetics, Chalybeates, and thin Bitters, perform the whole Cure: Univerſals being premiſed, make uſe of Stomachics, Chalybeates, (crude Filings of Steel, in the black Jaundice) Preparations of Rhubarb, Worms, Vipers; alcaline, volatile, and bitter Subſtances; Mineral Waters, and Gum Ammoniac.

Bleeding and Purging are very rarely uſed in this Diſtemper. The following are the beſt Specifics; the greater Celandine, Horehound, Flowers of St. John's-wort, Saffron, Broom, Wormwood, and Hempſeed boiled in Milk, Turmeric-root, Madder, the Drinking of Urine; the Dungs of all Birds or Animals, Lice, the Stone in the Gall-bladder of an Ox: In general, it is adviſed, that, in the Cure of the Jaundice, anti-icteric Medicines be continued for ſome conſiderable time; becauſe it is a chronical and ſtubborn Diſtemper: And, as long as the Urine looks thin and ſplendid, ſo long the Uſe of them ought to be continued, till the Signs of Concoction appear, and the Urine becomes thick and turbid, and full of Sediment; for, when there are theſe Appearances, they afford great Hopes of a Recovery. When the Cure is effected, Friction and Bathing are proper, to take away the yellow Colour of the Skin.

But, as a Jaundice is always moſt dangerous, when either preceded by a Scirrhus of the Liver, or accompanied with one; this, if curable, may be removed by the following, or ſome ſuch-like Preparations: We are, therefore, after the previous Uſe of ſuch things as are effectual in a Jaundice, to foment the Right Hypochondrium with the following Decoction.

Take of the Leaves of Mallows, and Wormwood, together with the Flowers of Melilot, and Chamomile, each one Handful; of the Leaves of Baum, and Ground-pine, each half an Handful; and of the Seeds of Fenugreek, an Ounce and an half: Boil in four Pints of Water, adding, towards the End, two Pints of White-wine. Let the Side be, every Morning and Evening, fomented with Woollen Cloths, dipt in this Liquor, warm.

Then apply a Plaiſter of the *Diachylon cum Gummi*, and Melilot, malaxated with Oil of Worms, or the *Emplaſtrum de Cicutæ cum Ammoniaco*, or the *Emplaſtrum de Ranis cum Mercurio triplicato*.

Decoctions of Sarſaparilla, and Guaiacum, drank warm in the Morning, for a long time, are, of all other Liquors, the moſt proper Drink; and if, by theſe Meaſures, the Diſorder is not removed, we muſt have recourſe to the internal Uſe of Mercurius dulcis. *Pitcarn. Elem. Phyſ. Math.*

But, in the very worſt Jaundices, provided there is no conſiderable Inflammation, nothing is eſteem'd more effectual than *Bath* Waters.

Young Children, ſoon after their Birth, are ſubject to the Jaundice; which, generally, yields to any gentle Purgative, or any Medicine that increaſes the Contraction of the Inteſtines.

For this Diſorder *Sylvius* recommends the following Remedy.

Take of *Engliſh* Saffron, and Bezoar Mineral, of each one Grain: Mix them together for a Powder.

An Infuſion of the Lens paluſtris, in Wine, is eſteem'd a Specific for a Jaundice.

ICTIS, ἰκτὶς, in Zoology, imports either a Kite, or a Ferret.

ICTUS imports either a Stroke, or Pulſation, of the Artery; or a Blow; or a Sting from ſome venomous Inſect. See VENENUM.

IDAM is explain'd, by *Rulandus*, *Pulmentum*.

IDEA. A Name for the Victorialis; ſpotted Ramſons. *Blancard*.

IDEACH. *Paracelſus* ſays, that Ideach occurs in every Plant; but it is not eaſy to determine what he means by it.

IDECHTRUM. A Term coin'd by *Paracelſus*; by which he means the firſt Man, the firſt Plant, or the firſt Creature of any Kind.

IDESTRUM, is another Term of *Paracelſus*, which it is not very eaſy to underſtand, or tranſlate. The Paſſage in his *Fragmenta de Tartaro*, is thus: *Durities Tartari coagulationem ſuam ex ſalibus Mineræ habet. Sal in hac generatione accidens Elementale eſt & aqueum, Liquor humoralis, & Ideſtrum. Ideſtrum autem ſine Compoſito non eſt. Compoſitum eſt de mineralibus per quatuor formas. Ideſtrum Conjunctio humoralis, naturalis, & mineralis.*

IDEUS is another Term of *Paracelſus*: It is not very clear whether he means by it the Chaos, or the Creator, or both, in different Paſſages.

IDIOCRASIA, ἰδιοκρασία. The ſame as IDIOSYNCRASIA; which ſee.

IDIOPATHEIA, from ἴδιος, private, peculiar, and πάθος, an Affection.

This implies a primary and proper Affection of any Part: Thus the Head is affected idiopathically, in a Lethargy; and the Lungs, in a Pleuriſy: But, when theſe Parts ſuffer by Conſent, that is, by Diſorders reſiding in other Parts, they are then ſaid to ſuffer by Sympathy, *Sympathia*.

IDIOSYNCRASIA, ἰδιοσυγκρασία, from ἴδιος, peculiar, σὺν, with, and κεράννυμι, to mix.

Idioſyncraſy. Every Individual has a State of Health peculiar to himſelf; and as different Bodies ſeem to vary from each other, both with reſpect to the Solids and Fluids, tho' each may, at the ſame time, be in a ſound Condition, this Peculiarity of Conſtitutions, by which they differ from other ſound Bodies, is called Idioſyncraſy; and the Diſorders ariſing from this Peculiarity are, ſometimes, accounted incurable; becauſe they are thought to be preſent, from the very firſt Formation of the Body.

Sydenham, treating of hyſteric Diſorders, remarks, that ſome Women, by reaſon of a certain Idioſyncraſy, or Peculiarity of Conſtitution, have ſo great an Averſion to hyſteric Medicines, which are ſo generally ſerviceable in this Diſeaſe, that, inſtead of being reliev'd, they are injur'd thereby. In ſuch, therefore, they are to be wholly omitted; for, as *Hippocrates* obſerves, it is fruitleſs to oppoſe the Tendency of Nature: And, in reality, this Idioſyncraſy, or Antipathy, is ſo remarkable, and ſo common, that, unleſs Regard be had to it, the Life of the Patient may be endanger'd; and this not only from hyſteric Medicines, but from ſeveral others: In Confirmation whereof, I will, ſays he, at preſent, produce only a ſingle Inſtance. Thus, ſome Women, in the Small Pox, cannot bear Diacodium, becauſe it occaſions Giddineſs, Vomitings, and other hyſteric Symptoms; whilſt liquid Laudanum agrees with them very well. I experienced this, whilſt I was writing this, in a young Lady, in the Small Pox, to whom I had given Diacodium on the ſixth and ſeventh Day; and ſhe was ſeized on both Nights with the above-mention'd Symptoms; and the Inflammation of the Puſtules did not go on regularly; but, afterwards, upon uſing Laudanum, ſhe was freed from theſe Symptoms, and the Swelling of the Face increaſed; the Puſtules filled every Day, and the Reſtleſſneſs and Anxiety (which made a kind of Paroxyſm of the Small Pox) were wholly removed, every time this Opiate was exhibited; the Patient being ſtrengthened and revived thereby.

IDIOTA, ἰδιώτης, from ἴδιος, private. This properly imports a private Man, who bears no Office in the Government. But, in the modern or figurative Acceptation, Perſons concern'd in Government are not always exempt from this Appellation; for it implies a ſuperlative Fool. *Hippocrates* particularly compliments unſkilful Phyſicians with the Name of Idiot; I ſay, compliments, becauſe a Perſon who practiſes Medicine without underſtanding it, or taking proper Pains in order to inform himſelf, ſatisfies his Honour and his Conſcience very ill, and is ſomething worſe than a Fool.

IDIOTROPIA, ἰδιοτροπία. The ſame as IDIOSYNCRASIA; which ſee.

IDOS, ἶδος, the ſame as ἱδὼς, Sweat. It occurs in *Hippocrates's Coac. Prænot.*

IDOU MOULLI, H. M. P. 4. T. 18. p. 41. *Prunus fructu umbilicato, pyriformi, ſpinoſa, racemoſa.*

The Name of a tall *Indian* Tree, which grows ſeventy Feet high, and bears a ſort of Plum. The Bark, Flowers, and Fruit, are eſteemed good againſt Madneſs, a Phrenitis, and other Diſorders of the Head. A Decoction is made of the Bark in common Water, which is ſaid to be powerfully effectual againſt the Jaundice, Dropſy, and other chronical Diſeaſes. A Cataplaſm, made of the Bark of the Root, powder'd together with red Sanders, by the Help of Womens Milk, has the Reputation of curing Venereal Bubos, if applied thereto.

IDROAGIRA. *Rulandus* explains this by *Aqua Alcali*.

JECORARIA VENA. The Hepatic Vein. See VENÆ.

JECTIGATIO. A Palpitation.

JECUIBA. Margraav. The Name of a Tree which grows in *Braſil*, the Wood of which is of a reddiſh Brown, undulated with black, and excellent for Carving; but of no Uſe in Medicine.

JECUR. The Liver. See HEPAR.

The Livers of Animals, conſider'd as Food, are eſteem'd extremely unwholſome Aliments; for no Humours in the Body are ſo ſubject to Putrefaction, as Bile and Urine. But, as a Portion of Bile is always contain'd in the Liver, this diſpoſes the Liver to a ſpontaneous Corruption: Hence it becomes acrimonious, and not only ſtimulates the Stomach and Inteſtines, but cauſes what is uſually call'd a Surfeit, and ſupplies a very bad chylous Juice. Hence, probably, the *Jews* were forbid to eat the Entrails of Animals, among which is the Liver. But, of all others, the Livers of Fiſhes are the worſt.

JEJUNIUM, νησεία, Faſting, or Abſtinence. See ABSTINENTIA.

JEJUNUM *Inteſtinum*, one of the ſmall Inteſtines; which ſee fully deſcribed under the Article COELIA.

JENTACULUM, a Breakfaſt, or eating early in the Morning; which is reckon'd to be wholſome for thoſe who are accuſtom'd to it, and even neceſſary for Children. *Caſtellus*. See ACRATISMA.

JEQUI TINGUACU, a Species of the Saponiferous, or Soap-bearing Tree. *Ray Index*.

JERASOY, a ſort of exotic Fruit, imperfectly deſcribed by *J. Bauhine*, in *Ray's Hiſtoria Plantarum*, p. 1822. but with no Uſe or Virtues aſcribed to it.

JESEMINUM, the ſame as *Jaſminum. Blancard.*

JETAIBA. The *Braſilian* Name for the *Locuſta Arbor*, or Locuſt-tree. *Ray, H. P.*

JETICA. A Name by which the *Braſilians* call *Spaniſh Potatoes.*

JETICUCU. The *Braſilian* Name for MECHOACAN. *Ray. H. P. p.* 1723.

IETREION, *ἰατρεῖον*. See IATREION.

IGBUCAINI *Braſilianorum*. De Laet. A Tree growing in *Braſil*, and bearing a Fruit reſembling a ſmall Apple, full of ſmall Kernels; and, as it is ſaid, a preſent Remedy againſt a Dyſentery. *Raii Hiſt. Plant.*

IGCIGA, & IGTAIGCICA. De Laet. *Weſt India* Plants. The firſt of theſe is a Tree, which produces a kind of Maſtich, of a very pleaſant Smell. The Bark, bruiſed, yields a ſort of white Liquor, which, being condenſed, ſerves inſtead of Frankincenſe, and is effectual in Plaiſters for cold Diſtempers. The other Species, called *Igtaigcica*, which, in the Language of the Country, ſignifies *Stony Maſtich*, produces a Roſin ſo hard and pellucid, that it may be almoſt taken for Glaſs; the Natives commonly uſe it to glaze their earthen Veſſels. *Raii Hiſt. Plant.*

IGNAVIA, Idleneſs, Sloth, beſides other ill Effects, is obſerv'd by *Celſus* to blunt the Forces of the Body, and accelerate old Age. *Celſus, Lib.* 1. *Cap.* 1.

IGNIS, *πῦρ*. Fire. In Pathology, there are many Diſtempers called by the Name of *Ignis*, but principally a *Cauſus*, or burning Fever: Which is very frequently termed *πῦρ*, *Ignis*, by *Hippocrates*, in his Books of *Epidemics*, of the *Glandules*, and of *Diſeaſes*. The *Eryſipelas* goes alſo by the Name of *Ignis ſacer*, or *Ignis Sancti Antonii*; and *Herpes ferus*, or *Zona*, and *Ignis Perſicus*. The *Impetigo*, alſo, is called *Ignis volaticus, volagrius*, and *ſylvaticus*. *Ignis*, in a ſpagirical Senſe, alſo bears different Significations; ſome take it for the Oil, which ſwims at the Top in Diſtillations. Mercury is called *Ignis*, by the Conſent of all Philoſophers. *Th. Chymic. Vol.* 4. 756. 767. *& alibi. Ignis algir* is a very ſtrong Fire; *Ignis elementaris* is Sulphur, but not that in common Uſe; *Ignis ſapientum* is hot Horſe-dung; *Ignis extinctus* is extinguiſhed Sulphur; *Ignis pruinus adeptus* is the Quinteſſence of Wine, or, as ſome will have it, of Vitriol, rectified with Tartar; *Ignis lenis* is the Element of Fire, the Æther, *Jupiter argos*; *Ignis Gehennæ* is a Name given by *Paracelſus* to a ſpecific Corroſive.

The Chymiſts, in order to perform their Operations, uſe Fires of various Kinds; ſuch as thoſe of Sand, Filings of Iron, and Aſhes, the Reverberatory Fire, the *Ignis Rotæ*, or Fire for Fuſion, the Lamp Fire, the *Balneum Mariæ*, the Vapour-bath, and the Fire of Suppreſſion. They, alſo, uſe ſeveral other Kinds of Heats, which may be claſſed among the Fires; ſuch as Inſolation, a Bath of Horſe-dung, a Bath of the Skins of Grapes, and the Heat of Quick-lime.

The Fires or Baths of Sand, Filings of Iron and Aſhes, are, when the Veſſel, containing the Matter to be heated, has its Bottom and Sides totally ſurrounded with the Sand, the Filings of Iron, or the Aſhes; that, by this means, the Veſſel may be ſlowly and gradually heated.

The Reverberatory Fire is made in a Furnace, covered with a Dome, that, by this means, the Heat or Flame, which has always a Tendency to make its Eſcape at the ſuperior Parts of the Furnace, may be reverberated, or beat back on the Veſſel immediately expos'd to it.

To expoſe a Veſſel to a naked Fire, or to diſtil with a naked Fire, is, when there is no intermediate Subſtance between the diſtilling Veſſel and the Fire; or when it touches the Fire, or receives its Heat, without the Intervention of any other Body.

The *Ignis Rotæ*, or Fire for Fuſion, is, when a Crucible, or any other Veſſel, containing the Matter deſtin'd for Fuſion, is ſurrounded with live Coals.

The Lamp Fire is, when any Matter, contained in a Glaſs Veſſel, is render'd hot, by the equable Heat of a lighted Lamp. The Fire of a very hot Lamp is, alſo, uſed to ſoften the Necks of ſmall Veſſels, in order to have them hermetically ſealed. The Lamp Fire, or that of a Candle, is, alſo, uſed to heat the Neck of a ſmall Matras, or of any Glaſs Veſſel, at the Part we intend to break it, by applying to it a Rag dipt in cold Water.

The *Balneum Mariæ* is, when the Alembic, containing the Matter to be heated, is placed in a Veſſel full of Water, under which a Fire is put, that, by this means, the Water, becoming hot, may, in its turn, heat the Matter contained in the Alembic.

A Vapour-bath is, when a Veſſel, containing any Matter, is heated by the Steam of hot Water.

The Fire of Suppreſſion is, when, in order to diſtil *per Deſcenſum*, the Fire is laid above the Matter; ſo that the Moiſture forced from it, by means of the Heat, is precipitated to the Bottom of the Veſſels: Or, when the Body of a Retort, or other Veſſel, is cover'd over with Fire, this is called a Fire of Suppreſſion.

Inſolation is, when any Matter, deſign'd either to be put into Fermentation, or dried, is expoſed to the Rays of the Sun.

The Bath of Horſe-dung, called alſo the Horſe's Belly, is, when a Veſſel, containing any Matter, to be either digeſted or diſtil'd, is placed in a large Heap of Horſe-dung.

A Bath of the Skins of Grapes, collected in large Quantities after the Vintage, may, like the Bath of Horſe-dung, ſerve for Digeſtions or Diſtillations. But the principal Uſe made of theſe Skins, in warm Climates, where they become hotter than in ſuch as are temperate, is, to penetrate and produce a Ruſt on Copper, for the Production of Verdegriſe.

The Heat of Quick-lime, moiſtened, may ſerve for ſome Diſtillations. When, for Inſtance, after being mixed with Sal Ammoniac, it makes a very ſubtle Spirit diſtil from it, without the Aſſiſtance of any other Fire.

To make a Fire of the firſt Degree, two or three live Coals, capable of producing a moderate Heat, are only neceſſary.

For a Fire of the ſecond Degree, 'tis neceſſary there ſhould be four or five Coals, which communicate a Heat capable of heating the Veſſels ſenſibly; but only to ſuch a Degree, that the naked Hand may endure it for ſome time.

For a Fire of the third Degree, a large Coal Fire is neceſſary. And,

For a Fire of the fourth Degree, we muſt uſe Coals and Wood together, which produce a violent and intenſe Heat.

The Fires of Sand, Filings of Iron, and Aſhes, have generally their Degrees, from the firſt to the third; but that of the Filings of Iron has a ſtronger Heat than the other, becauſe the Filings eaſily become firſt hot, and then red. The Fire of Aſhes is the moſt moderate, becauſe they do not retain ſo great a Heat as the other Subſtances.

The Reverberatory Fire has its Degrees, from the firſt to the fourth; which is that generally raiſed to the greateſt Violence.

The *Ignis Rotæ* is always a large Coal Fire, without any Degrees, becauſe it only ſerves for Calcinations and Fuſions; in which we only uſe Veſſels of a porous Earth, and ſuch as eaſily reſiſt the ſtrongeſt Fires.

A Veſſel may receive different Degrees of Heat from a lighted Lamp; by either keeping it at a certain Diſtance, or gradually advancing it nearer the Veſſel. But, when the Veſſel is once heated, an equal Heat is always continued, becauſe the Wick of the Lamp burns equally in that Species of ſmall Furnace in which it is plac'd.

The *Balneum Mariæ*, and Vapour-bath, have, alſo, their Degrees; for, according as the Water of the Bath is more or leſs heated, the Diſtillation is more or leſs promoted. We may, therefore, call it the firſt Degree of the *Balneum Mariæ*, or Vapour-bath, when the Bath or Vapour are only moderately tepid, as they ought to be when any Matter is put in a Veſſel, and expoſed to them for the ſake of Digeſtion. Their Heat of the ſecond Degree is, when the Water of the Bath, and the Steam of the Water, are ſo hot, that one cannot hold his Hand in them; as they ought to be when a gentle Diſtillation is to be produced. Their third Degree of Heat is, when the Waters of both Baths boil, in order to haſten the Diſtillation.

The Fire of Suppreſſion has, alſo, its Degrees; ſince ſometimes warm Aſhes are only uſed in order to excite a very mild and gentle Heat; and this is the firſt Degree. At other times a ſmall Quantity of live Coal is mixed with the warm Aſhes, and this is the ſecond Degree; and at other times they place upon a thin Bed of Aſhes a large Quantity of live Coal; and this is the third Degree of Heat, peculiar to the Fire of Suppreſſion.

Inſolation has, alſo, its Degrees, in proportion to the Heat of the Sun, to which the Subſtances are expoſed. The beſt Inſolation is that made in the Months of *July* and *Auguſt*, becauſe the Sun has then more Force and Vigour than at other times.

The Bath of Horſe-dung has, likewiſe, its Degrees, according to the Bulk of the Heap, or the Place in which 'tis lodg'd; for a large Heap of Dung communicates a proportionably greater Heat than one which is ſmaller. And if the Dung is lodged in a Stable, or any other cloſe and hot Place, it will become much warmer, and produce more conſiderable Effects in Digeſtion and Diſtillation, than a Heap of equal Bulk, expoſed to the free and open Air.

The Bath of Grape-skins has, alſo, its Degrees like that of the Bath of Horſe-dung; but in hot Climates it communicates a far greater Heat than in temperate Countries.

The Heat of Quick-lime has, alſo, its Degrees; for, according as we deſire it more or leſs ſtrong, we expoſe it, in Powder, longer or ſhorter, to the open Air: And, when we have occaſion for all its Heat, we uſe it as quick as we poſſibly can. *Lemery, Cours de Chymie.*

Beſides the Degrees of Fire already mention'd, the later Chymiſts reckon a fifth, which is that whereby Gold is made to emit Fumes, and evaporate.

This was firſt diſcovered in the Year 1690. by Mr. *Tſchirnhauſen*, whoſe Burning-glaſs rendered every thing, even Gold itſelf, volatile.

I muſt

I muſt appriſe the Reader, that whenever any Degrees of Fire are mentioned, in Quotations from *Boerhaave*, they are ſuppoſed to be meaſured by a Thermometer, wherein the freezing Point is at about thirty-one, and the Degree ſufficient to make Water boil, at about two hundred and twelve.

IGNITIO, *πύρωσις*, the ſame as CALCINATIO; for which ſee CALX.

IGNIVORUS, *πυρφάγος*. See PYROPHAGUS.

IGNORANTIA, *ἄγνοια*. See AGNOIA.

IGNYS, IGNYE, *ἰγνύς, ἰγνύη*. The Ham, or Part behind the Knee; in Latin *Poples*, *ἰγνύην τέμνειν*, 6 *Epid. Sect.* 1. *Aph.* 5. is to bleed in the Vein of the Ham. *Foeſius.*

JITO *Braſilienſibus.* Marcgr. Piſon. A pomiferous Tree, growing in *Braſil*; its Fruit, or Apple, is of the Size of an ordinary Hand-ball, of a dark-yellow Colour, and containing three oval Seeds, of the Size of thoſe of a common Apple, covered with a dark-yellow Cuticle, and of a whitiſh Subſtance. I find no Virtues aſcribed to it. *Jito* is, alſo, a Name for another very different Tree, the

Jito prior, Piſon. a bacciferous Tree, of *Braſil*, whoſe Fruit grows in Cluſters, like Grapes, and, at a Diſtance, both for Figure and Colour, has the ſame Appearance, but is ligneous on the Inſide, and good for nothing: They hang on the Tree throughout the Year, being of a lively Yellow in the Spring, and afterwards of a dark Vermilion-colour. Neither the Fruit, Leaves, nor Wood, of the Tree are of any Eſteem, but all the medicinal Virtue lies in the hot and acrid Bark of the Root, which purges violently, and diſturbs the Humours to ſuch a Degree as renders it unſafe for vulgar Uſe. The Natives, and the robuſteſt ſort of Labourers among the *Portugueſe*, pulverize the Bark, and take it in an indeterminate Quantity, about half a Pugil, againſt inveterate Obſtructions. I ſeldom uſe it, ſays *Piſo*, and never but for want of a more gentle Medicine, and with Correctors, to diminiſh its cathartic Force. *Raii Hiſt. Plant.*

ILAPHIS. The Name of a Simple, in *Myrepſus*, *Antidot. C.* 412. which is immediately explained to be what the *Latins* call *Bardana*; that is, the Burdock.

ILECH. A Term in *Paracelſus*, by which he ſeems to mean ſomething which is Firſt, or a Principle. *Ilech primum*, in *Rulandus*, is a Principle; *Ileias*, *Ileadus*, *Ilech*, *ſupranaturale*, *vel primum*, is a ſuperceleſtial Conjunction of the Stars, or an Union of the Stars of the Firmament with the Stars of inferior things. *Ilech magnum* is the Aſcendant, or Conſtellation of Medicine, which we receive, together with Medicine, in which it has its Reſidence, like the ſuperior Stars in the Firmament, and the inferior in Man. *Ilech crudum* is a Compoſition of the Firſt Matter of the three firſt Things, which are Mercury, Salt, and Sulphur; and, in this Senſe, it is the ſame as the *Iliaſter*, or *Iliadum*. *Rulandus*, *Caſtellus.*

ILEIDOS, in the ſpagirical Cant, the elementary Air, the *Heoa Pheresbios*, (ἑῶα φερέσβιος) or Life-bringing Morning, Heaven: In Man it is the Spirit, which pervades all the Members. *Rulandus*, *Johnſon.*

ILEUM INTESTINUM. One of the ſmall Inteſtines; for which ſee the Article COELIA.

ILEUS, *εἰλεός*. The ſame as ILIACA PASSIO; which ſee.

ILEX.

The Characters are;

The Leaves are rather indented than ſinuated, as thoſe of the common Oak; the Flowers are amentaceous, conſiſting of many Stamina, ariſing from a Funnel-ſhaped Calyx. The Fruit is like that of the Oak.

Boerhaave mentions three Species of this Plant; which are,

1. Ilex; aculeata; cocciglandifera. *C. B. P.* 425. *Tourn. Inſt.* 583. *Boerh. Ind. A.* 2. 177. *Ilex coccigera.* J. B. 1. 2. 106. Ger. 1159. Emac. 1342. Raii Hiſt. 2. 1392. *Ilex aquifolia ſive coccigera.* Park. Theat. 1394. THE SCARLET OAK.

The Produce of this Plant, uſed in Medicine, is the CHERMES; which ſee.

2. Ilex; folio rotundiori; molli; modiceque ſinuato; ſive Smilax Theophraſti. *C. B. P.* 425. *Tourn. Inſt.* 583. *Boerh. Ind. A.* 2. 177. *Smilax Arborea.* Offic. *Smilax Arcadum glandifera major.* Park. Theat. 1398. *Smilax Dalechampii.* J. B. 1. 2. 101. THE GREAT SCARLET OAK.

This is common in *Italy* and *Languedoc.* The Bark, Leaves, and Acorns, are uſed, which are eſteem'd more aſtringent than thoſe of the Oak.

3. Ilex; oblongo; ſerrato, folio. *C. B. P.* 424. *Ilex arborea.* J. B. 1. 95. *Ilex, anguſtifolia.* Tab. Ic. 969. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 177.

ILEX BACCIFERA. See AGRIFOLIUM.

ILIA (The Plural of ILE). The lateral Parts of the hypogaſtric Region, or Flanks.

ILIACA PASSIO. The Iliac Paſſion.

As to a Suffuſion of the Blood, or Serum, within the Coats of the Inteſtines, by which an Inflammation, or painful Tumors, are excited, I grant it is ſometimes ſo in reality, and have ſeen it with my own Eyes; but I obſerved, that it did not excite a Colic, but an Iliac Paſſion; becauſe, upon opening ſeveral, who died of a Twiſting of the Guts, I found in moſt of them, that an Inflammation and Sphacelus of ſome Inteſtine was the Cauſe both of the Diſeaſe and Death: Nor is this ſurpriſing; for the great Solution of Continuity excited Spaſms and Corrugations, ſo perpetual and violent, in the tender and exquiſitely ſenſible Membrane, that the periſtaltic Motion of the affected Inteſtine, by which the Excrements of the Belly are protruded towards the Anus, was ſtopped, and abſolutely inverted. *Willis de Anima Brutorum.*

The large Inteſtines have the ſame Coats as the ſmall, and, as the Fæces aſcend directly in the *Colon*, there is a Neceſſity for more robuſt, fleſhy Fibres, to produce a ſtronger Contraction: Hence, if an Inflammation, or Sphacelus, (which I have often known) happens about the Beginning of the Colon, ſo that the fleſhy Fibres, being injured, cannot perform the Contractions for the Elevation of the Excrements, they, ſtagnating towards the *Ileum*, induce an incurable *Iliac Paſſion. Willis Pharmaceutice Rationalis.*

A certain Woman ſeemed to labour under the Iliac Paſſion, accompanied with Hyſterics; in the Summer ſhe was ſeized with this Pain, and, in three Days time, it ended in a Twiſting of the Inteſtines, of which ſhe died the fourth: She had a ſcirrhous Tumor upon the Confines of the *Colon*, which was replete with very acute Oſſicles, and, as it were, pricking and vellicating the Inteſtine: Wherefore, an Obſtruction being made in the Inteſtine, and an Inflammation ariſing, ſhe died in the utmoſt Agony, vomiting Excrements. *Hippolytus Boſcus.*

I knew a Countryman, who died after long Contorſions, and continued Inflammations of the Abdomen; and, being opened, there was a large Fiſſure in the Inteſtine; out of which I ſaw freſh Grapes diſcharg'd, which he had juſt eaten. *Benevenius.*

In the Year 1668. a Man of Forty died at *Amſterdam.* He, for ſeveral Years, waſted, as if he had been in a Conſumption: At length, fourteen Days before his Death, he was ſeized with a Fever; after the tenth he voided no Excrements downwards, and on the eleventh he diſcharged them by his Mouth; three Days after, he expir'd. In the Opinion of every body, he was afflicted with a Twiſting of the Inteſtines; and that really was his Diſorder.

In the Diſſection I found no Convolution of the Inteſtines, but obſerved, that they were more ſtrictly compreſſed and inflamed about the Beginning of the *Colon*; and, when I had opened them by a cautious, gentle Inciſion, I diſcovered an Ulcer, which denied a Paſſage to the Excrements downwards; and conſequently the Inteſtines, which were below it, were empty, and theſe above full of Excrements; the Stomach, being full of Ordure, was diſagreeable both to the Sight and Smell. Having diſcovered the Cauſe of the Diſeaſe, I ſearched for the Origin of that Cauſe, when the *Pancreas* offered itſelf, half as long again, three Fingers-breadth broader, abundantly thicker, and fourteen Ounces heavier than uſual, for it weighed nineteen Ounces, whereas the common Weight of a Man's is five, of a Horſe's eleven: It was every-where full of ſcirrhous Glandules, as big as Pigeons Eggs. The *Ileum*, compreſſed by this bulky Pancreas, being firſt inflamed, then exulcerated, denied a Paſſage to the Excrements. *T. Kerkringii Obſervat. Anat.*

I formerly opened ſome Subjects, who died of the Iliac Paſſion, in whom the Omentum, and all the Inteſtines, were ſeized with a Sphacelus: The fetid Smell, ariſing from thence, would not permit me to examine thoroughly into the Cauſe of the Diſtemper. *Hildanus, Lib. de Gangræna, Cap.* 4.

A Clergyman, twenty-two Years old, was ſeized with Shivering and Heat, continual Vomitings of various Subſtances, which were, at laſt, cineritious and blackiſh, with an immoderate Pain in his whole Belly: His Hypochondria were very painful, and diſtended; he could lie on neither Side, had a continual Fever, and great Anxiety; he could bear Bleedings, but was not relieved by them; and his Belly was obſtinately coſtive: Hence there was a great Suſpicion of the Iliac Paſſion. On the fifth Day he died ſuddenly: He vomited perpetually, and perceiv'd an exceſſive internal Heat. When dead, he ſwelled very much.

Upon opening the Body, his *Colon* was, in a manner, become black; his whole *Epipleon* putrid; a purulent Sanies was found at the Region of his Liver: The Whole was ſo fetid, that it was impoſſible to remove the Viſcera. *Ballonius, L.* 2. *Epidem. & Ephem.*

The celebrated *Gui Patin* thinks, that this Diſorder always proceeds from an inflammatory Diſpoſition of the *Ileum*; and, therefore, that ſeveral are cured by opening a Vein, warm Fomentations, *Semicupia* of warm Water, and emollient Clyſters: He informed me, by Letter, that, about thirty Years before, this whole Inteſtine, of a certain Archbiſhop's Coachman, who died of the Iliac Paſſion, was corrupted, black, and gangrenous. *Blaſius in Veſlingii Syntagma Anatom.*

I have obſerved a mutual Entrance of the thin Inteſtines into each other, above a Finger's Length; eſpecially in ſome who have died of the Iliac Paſſion. *Columbi. Anat.*

Sometimes the Inteſtine enters into the Cavity of another, which is followed by an Obſtruction, and Corruption of the Fæces, ſucceeded by Death, as I have obſerv'd in an anatomical Diſſection;

Diſſection; for a young Man, afflicted with this Diſorder, died without any Relief from Quickſilver; which, as it could not paſs, I found near the Obſtruction. *D. Pazarollus.*

I diſſected a Woman, who died of the Iliac Paſſion: The ſuperior Part of her Inteſtine was inſerted into the inferior. *Plempii Fundam. Medic.*

The Inteſtine is ſometimes folded, like the reduplicated Finger of a Glove, which abſolutely obſtructs the Paſſage of the Inteſtine; whence proceeds a Vomiting of the Fæces through the ſuperior Parts. *Patin* ſays, this Reduplication is entirely fictitious, becauſe he could never ſee it: But it occurred twice or thrice to *Walæus*, and myſelf, in diſſecting dead Bodies. *Blaſius in Veſling. Anat.*

Towards the latter End of the Year 1676. I diſſected, in our Hoſpital, a Woman: Before her Death, ſhe ſuffered ſevere Pains in her Belly, and Anxieties; had bloody Stools, and, at laſt, Vomitings. Upon opening her Abdomen, I found the *Ilium* plainly contracted in ſome Parts, and, as it were, ſtrangulated with a Cord tied round it: One Part of it, four Fingers-breadth long, being very much contracted, and ſtraitened, was wholly concealed in the Cavity of the next ſuperior Part; and, by its Appearance, ſeemed to reſemble ſuch a real Intro-ſuſception, as is deſcribed by *De le Boe Sylvius, Ideæ Prax. Med. Lib.* 1. *Cap.* 15. But internally, not only the Inteſtines, principally the Ileon, but the Stomach, alſo, were inflamed.

A poor Man died in the utmoſt Agony of the Diſtemper termed *Miſerere Mei*: Upon opening him, I found the Ileon ſo twiſted, in ſeven different Places, that there could not poſſibly be any Paſſage for Meat, Drink, or Fæces. *P. Barbette.*

Among the violent Diſorders of the nervous Syſtem, which afflict the Mind with uneaſy Senſations, and the Body with dangerous Symptoms, we may juſtly claſs racking Pains of the Inteſtines; the moſt conſiderable of which is that, which, ſeizing the *Ilium*, an Inteſtine of a highly tender and ſenſible Nature, is, for that Reaſon, called the *Iliac Paſſion*. *Hippocrates* called this Diſorder, *the Pain of the Ilium*, becauſe its Cauſe was ſeated there; whilſt others of the *Greek* Authors ſtyled it *Chordapſus*, becauſe the Inteſtine affected was render'd tenſe, like a Chord. It is, by the *Latin* Writers, termed *Volvulus*; becauſe, in Patients who die of it, the Inteſtines, in ſome meaſure, appear twiſted with each other. *Celſus* calls it the *Diſeaſe of the ſmall Inteſtines*.

It is an highly acute Pain of the ſmall Inteſtines, eaſily degenerating into an Inflammation; and under which their periſtaltic Motion is ſo violently inverted, that they throw up their Contents, and whatever Aliments are taken, by Vomit; whilſt, at the ſame time, no Flatulences are diſcharged by the Anus, which is obſtinately cloſ'd; in conſequence of which, terrible and fatal Symptoms are often brought on.

The Progreſs and Symptoms of this Diſorder happen in the following Manner. 'Tis preceded by a Conſtipation of the Belly, which is ſoon after ſucceeded by acute and violent Pains; accompanied with Inflation, Diſtention, and a hard Tumor in the umbilical Region. The Patient is ſo totally coſtive, that neither Flatulences nor Fæces can be diſcharged by the Anus: Afterwards the Flatulences diſcharge themſelves by the Mouth; and, after a previous Nauſea, a bilious and pituitous Matter is frequently vomited firſt of all. The Patient breathes with Difficulty; and whatever Aliments, or Drink, are taken, tho' they deſcend into the Stomach, are yet ſoon after thrown up, becauſe they cannot paſs thro' the Inteſtines; and the Matter thus vomited is a rediſh Sordes, not unlike Excrements, and frequently diſcharged with an highly fetid Smell. This Condition is ſucceeded by a Loſs of Strength, a preternatural Heat, an hard and contracted Pulſe, an immoderate Thirſt, a Redneſs of the Urine, and a Difficulty in diſcharging it. When the Diſorder has arrived at its worſt State, the Patient is ſeized with a Hiccup, a Delirium, Convulſions, and a cold Sweat, whilſt, in the mean time, violent Convulſions and Faintings frequently put an End to Life. *Hippocrates*, in his third Book *de Morbis*, accounts for this Diſorder in the following Words: "The Inteſtines, ſays he, are "dry'd, and, by the Heat of the Inflammation, ſo block'd up, "that neither Flatulences nor Fæces can be diſcharg'd. But "the Belly is hard, and the Patients ſometimes vomit, firſt a "mucous, then a bilious Matter; and, laſt of all, Excre"ments."

Celſus thus deſcribes the Iliac Paſſion:

There are two Diſeaſes, which have their Seat within the very Inteſtines, one of which affects the ſmall Inteſtine, the other the great one. The former of theſe Diſorders is acute, the other may continue for a conſiderable time. *Diocles Caryſtius* calls the Diſeaſe of the ſmall Inteſtine, χορδαπσὸς, *Chordapſus*, that of the other, εἰλεὸς, *Ileos*; but the Generality of Moderns, I obſerve, give the Name of εἰλεὸς, to the former, and call the other κολικὸς, *Colicus*. The firſt of theſe Diſorders excites a Pain ſometimes above the Navel, ſometimes below it; in either Caſe, there is an Inflammation of the Part, with Conſtriction of the Belly, ſo as not to tranſmit the leaſt Wind below. If the upper Parts are affected, the Patient vomits up his Food; if the lower, his very Excrements: Both Caſes are to be feared, and the Danger is increaſed, if what is thrown up by Vomiting, be bilious, of an ill Smell, of various Colours, or black. *Celſus, Lib.* 4. *Cap.* 13.

Aretæus thus deſcribes it:

Children are much ſubject to the Iliac Paſſion, as being moleſted with Crudities; but the Diſorder proves not fatal to them, born becauſe they are accuſtom'd to it, and, alſo, on account of the Humidity of their Inteſtines, which renders them lubricous. Old Perſons are not often viſited with this Diſtemper, but very rarely eſcape, when ſeized with it. The Diſorder is, alſo, more frequent in Summer, than in the Spring; in Autumn, than Winter; but the Summer affords more Inſtances of it, than both the other Seaſons.

The Patient often ſinks immediately under the griping Torments of the *Ileos*; ſometimes Pus is generated in the Part, and ſometimes the Inteſtine becomes black and purrefy'd, and falls off, and the Patient dies. When the Diſeaſe is more moderate, the Sick are ſenſible of a twiſting Pain, a Redundance of Humidities in the Stomach, a general Faintneſs and Feebleneſs, with fruitleſs Eructations, which afford no Relief; a Rumbling in the Belly from Flatulences, which make their Way as far as the Anus, but are there intercepted, and prevented from being diſcharged.

If the *Ileos* be confirm'd, the Contents of the Viſcera have their Courſe wholly diverted upwards, and Phlegm, Bile, and Flatoſities, are all diſcharged by Vomit, there is a Paleneſs of the Countenance, and a Coldneſs over all the Body, with much Pain, a Difficulty of Reſpiration, and a Thirſt.

When the Diſeaſe proves mortal, the Patient falls into a cold Sweat, with a Difficulty of rendering his Urine, and a Conſtriction of the Anus, to ſuch a Degree, as not to admit a thin Probe; he vomits up his Excrements; loſes his Voice; and his Pulſe, which at firſt was ſlow and ſmall, at the Approach of Death becomes very quick, ſmall, and weak. Such, then, are the Symptoms of this Diſeaſe, as incident to the ſmall Inteſtines.

But the *Colon* is, alſo, ſubject to the ſame Diſorder, which is attended with the like Symptoms, and bears the ſame Characteriſtics, tho' the Patient, in this Caſe, ſometimes happens to recover, even when there is a Generation of Pus in the *Colon*, becauſe of the fleſhy Thickneſs of that Inteſtine. But, whereas, in ſuch an Affection of the ſmall Inteſtines, there is an acute and ſubtile Pain [σφόδρα ἰσχυὸς], when the Diſeaſe happens to be ſeated in the *Colon*, it is attended with a Redundance of Humidities, and a Senſe of Weight on that Part; the Pain ſometimes extends itſelf to the Ribs, ſo as to cauſe a Suſpicion of a Pleuriſy, and the more, becauſe the Patient is not free from a Fever; ſometimes it ſhifts from Place to Place under the ſpurious Ribs, ſo as to be thought a Pain of the Liver or Spleen, and thence deſcends again to the Ilia; for the *Colon* is a very large Inteſtine, and extends its Convolutions into every Part; ſometimes the Pain fixes itſelf in the Os Sacrum, the Thighs, and the Cremaſter Muſcles. In Diſorders of the *Colon*, there are more fruitleſs Vomitings, and what is diſcharg'd, is of a thin, bilious, Oil-like Subſtance. The *Colic* is leſs dangerous than the *Ileos*, in proportion as the *Colon* is more fleſhy, thicker, and better provided againſt the Shock of a Diſeaſe, than the ſmall Inteſtines. *Aretæus de Cauſ. & Sign. Acut. Morb.* 2. *Cap.* 6.

Cœlius Aurelianus thus diſtinguiſhes the Iliac Paſſion from ſome other Diſorders, which bear a Reſemblance to it:

The Diſeaſe to which we have appropriated the Name of *Tormentum*, (*Cœlius Aurelianus*'s Term for the Ileos) differs from that griping Diſorder, the Cœliac Paſſion, in Degree; for the Patient, under the latter, is only affected with a ſlight Pain, ſufficient to give him the Denomination of *Ventriculoſus*, or *Torminoſus*. Theſe Diſorders are diſtinguiſh'd, alſo, by their Seats; for the Cœliac Paſſion is higher ſeated in the Belly, and under the Hypochondria, and frequently happens without Gripes of the Inteſtines. The Ileos has, alſo, its Marks to diſtinguiſh it from the Pains of the Colon; for this latter is an Affection principally of one Inteſtine, and one of thoſe Diſeaſes which the *Greeks* call χρόνια, chronical, affecting the Patient for a very long time; whereas the Tormentum (*Ileos*) is always an acute Diſeaſe, and affects all the Inteſtines. Some have given this Diſorder the Name of CHORDAPSUS, (ſee that Word) becauſe the Inteſtines are ſtretch'd out like Cords, and the antient *Greeks* call'd the Inteſtines by the Name χορδαὶ, Cords. Some, as *Hippocrates, Praxagoras*, and *Euriphon* the *Cnidian*, make the *Chordapſus* to have one common Signification with *Tormentum*; others have made a Difference betwen them, particularly *Diocles*, in his Book of Diſeaſes with their Cauſes and Cures. For the Tormentum, he ſays, is always attended with Eructations, and Diſcharges of the Wind below, without any Fæces; the Belly, alſo, under this Diſorder, is not neceſſarily conſtricted, but admits Injections of Clyſters, and the Pain, too, begins more from the upper Parts: But in the Chordapſus, if the Diſtemper be moderate, the Patient vomits up liquid Matter; if violent, ſtercoraceous; and will admit of no Injections by Clyſters, but labours under a continual Conſtriction and Tenſion of the Belly, which is alſo elevated into a round Tumor: The lower Parts of the Inteſtines are the principal Seat of the Pain; and the Stomach, alſo, remains in a State of Immobility, or Inflexibility. *Cœlius Arelianus, Acut. Morb. Lib.* 3. *Cap.* 17.

Upon diſſecting thoſe who have died of this Diſorder, the Ilium appears as it were twiſted, and inflam'd, and ſphacelated, and putrefied in the particular Part where the Seat of the Diſorder reſided; whilſt, at the ſame time, above the Inflammation, a large Part of the Ilium free from this Misfortune is render'd ſo turgid with Flatulences, that it ſometimes exceeds the Colon in Bulk.

The immediate Cauſe of this Diſorder conſiſts in an inverted periſtaltic Motion of the nervous and muſcular Coats of the Inteſtines, in conſequence of the violent Coarctation and Conſtriction of the Ilium, by means of which nothing can be tranſmitted to the inferior Parts.

The Cauſe of this terrible and tormenting Diſorder is generally an Hernia of the Scrotum, or Groin, when a Part of the Ilium is forced between the Proceſſes of the Peritonæum, where they go off, in Men, to the Scrotum, and, in Women, where they penetrate the round Ligaments of the Uterus. Now it is certain, from anatomical Obſervations, that, whilſt the Proceſſes penetrate the Muſcles of the Abdomen, they make this Perforation, as it were, in certain Angles or Degrees, in ſuch a manner, that, when they have perforated one Muſcle, they proceed a little between it and the following, before they penetrate the next, in order to paſs farther. This is a Piece of wiſe Contrivance in Nature, to prevent the too eaſy Falling down of any thing from the Cavity of the Abdomen to the Region of the Scrotum, or the Groin. But if a Part of the Ilium ſhould, with Violence, fall down into theſe Parts, and the Annuli, of which it conſiſts, be too much dilated, it eaſily happens, eſpecially when other Cauſes concur, that it cannot be reduced to its former Situation, but remains there, incarcerated, as it were, and abſolutely prevents all Paſſage of its Contents.

In Women this is a Circumſtance of a ſtill more dangerous Nature; ſince the Proceſſes are there narrower, and the prolaps'd Part of the Inteſtine, of courſe, return'd with greater Difficulty. And, though in the Groins of ſome Women the Tumor is ſo ſmall as hardly to equal a Bean in Bulk, yet it may lay a Foundation for this Diſorder. In ſcrotal Hernias there is the leſs Danger of an Iliac Paſſion, in proportion as the prolaps'd Portion of the Inteſtine is larger; for I have frequently ſeen a third Part of the Inteſtines fall down into the Scrotum, where they form'd a large Tumor, without any Danger of a ſucceeding Iliac Paſſion; becauſe, in this Caſe, the Contents may paſs more eaſily.

Beſides Hernias, this violent Diſorder is frequently produced by the mutual Ingreſs of the Parts of the Ilium into each other; which is obſervable upon diſſecting ſome of thoſe who have died of this Diſorder. And though ſome Authors abſolutely deny this, and account it impoſſible; yet the contrary is ſufficiently vouch'd by Experience and Obſervation. Thus the celebrated *Peyer*, *in Tract. de Glandulis Inteſtinalibus*, when giving an Account of the Diſſection of a Woman, who died of an Iliac Paſſion, uſes the following Words: "Upon opening "the Abdomen, we ſaw the Ilium plainly conſtricted, and, as "it were, ſuffocated by a Ligature, for about four Inches; "and, being much contracted, it lay entirely conceal'd within "the Cavity of the adjacent ſuperior Part of the Inteſtine." A Caſe of the like Nature is deſcrib'd by *Sylvius*, *in Prax. Med. Lib. 1. Cap.* 15. And ſuch a mutual Ingreſs of the Parts of the Ilium, in three different Parts, was, by *Peyer*, ſhewn in a Girl, who died of an Iliac Paſſion.

Though this Phenomenon may, at firſt, appear pretty hard to be accounted for, it is not, however, abſolutely incomprehenſible; for, if one Portion of the Ilium is violently conſtricted, it may be impetuouſly thruſt into the adjacent Portion now diſtended with Flatulences. Such an Ingreſs may be the Cauſe, not only of an intenſe Pain, but alſo of an Inflammation, which muſt be produced by a Compreſſion and Conſtriction of the Veſſels of the Ilium, together with a Portion of the Meſentery. Beſides, upon diſſecting the Bodies of thoſe who have died of this Diſorder, theſe Parts have been found ſphacelated. And *Lazarus Riverius*, *in Cent. 3. Obſ.* 26. gives us a memorable Caſe, in which, upon diſſecting a Body, he found the Extremity of the Ilium wrapt up, as it were, in three Convolutions, and compacted into one Maſs, the Whole of which, together with the adjacent Part of the Meſentery, were affected with a Gangrene, whilſt the other Inteſtines were very large, and ſurpriſingly diſtended with Flatulences.

To ſuch a mutual Ingreſs of the Parts of the Inteſtines, which produces the Iliac Paſſion, many other latent Cauſes may contribute; and the Obſervations of various Authors evince, that this Diſorder may be produced by the gnawing of Worms contain'd in the Ilium, and found there after the Death of the Patient. Thus *Henricus ab Heer*, *in Obſ.* 24. tells us, that he diſſected a Girl, who died of an Epilepſy complicated with an Iliac Paſſion, and who, during her Life, vomited Worms; and that about the Extremity of the Ilium he found five Cluſters of Worms, ſome of which crept from below upwards, and others from above downwards. And, in the *Miſcell. Nat. Curioſ. Decur. 2. An.* 5. *Obſ.* 19. we have an Account of a Woman, of thirty Years of Age, who, being ſeiz'd with the Iliac Paſſion, vomited, together with liquid Excrements, ſixteen round large Worms, and, at laſt, died in a cold Sweat. Upon diſſecting her Body, in the Middle of the Inteſtinum Ilium the Membranes appear'd diſtended like a Cap, and there was a Perforation, as large as a green Fig, externally cover'd by a very ſlender Membrane on both Sides a Finger's-length of the Ilium; and two Inches of the Duodenum appear'd black, and corrupted by a Gangrene. This ſeems, alſo, to be aſſign'd as a Cauſe of the Diſorder by *Lommius*, *in Obſ. Med.* when he uſes theſe Words: "When the Diſorder has "arriv'd at its worſt State, Worms are now-and-then vomited "up by the Patients."

Nor are we to exclude from the antecedent Cauſes, capable of producing the Iliac Paſſion, and inducing, not only a Stricture and Coarctation of the Inteſtines, but, alſo, of inverting their periſtaltic Motion, Poiſons, as alſo draſtic Purgatives, and Emetics, eſpecially if the Inteſtines labour under any previous Diſorder. Thus *Cœlius Aurelianus*, who, after *Hippocrates*, wrote the beſt concerning this acute Diſorder, among the Cauſes of it, reckons Poiſon, taken either by way of Aliment, or Drink; as alſo the Eating of Fungi. And *Alpinus*, *Med. Method.* makes mention of one *Guilandinus*, who, by taking Pills, and uſing half an Ounce of Hiera, fell into an Iliac Paſſion, which prov'd mortal. Nor, in ſuch Caſes, can I recommend the Uſe of Pills, in which Aloes is an Ingredient; ſince, after their Operation, they not only dry the Inteſtines, but, alſo, procure a greater Afflux of Blood to them; ſo that, according to my own Obſervation, they produce Coarctations of the Inteſtines here-and-there, which hinder the free Paſſage of the Excrements, and diſpoſe to Colics.

Nor, as Cauſes of the Iliac Paſſion, are we to omit Obſtructions of the Inteſtines, eſpecially of the ſmall Inteſtines, which are generally produced by dry and aſtringent Aliments, or ſuch as are not ſufficiently diluted with Moiſture: Among ſuch, Phyſicians have obſerv'd to be dry Bread, Biſcuits, and Cheſnuts, frequently eaten; as alſo Pears, Apples, and eſpecially Quinces, unripe and ſour Fruits eaten in large Quantities, eſpecially by ſuch as lead a ſedentary Life, are afflicted with Grief, drink little, or have the Strength and Tone of their Stomach and Inteſtines deſtroyed.

Beſides, the large Inteſtines, obſtructed by a long Retention of the Fæces, may produce this terrible Diſorder, whilſt they allow a Paſſage for nothing that is taken by the Mouth; eſpecially when, from a Principle of Modeſty, the Want of a proper Place, or any other Cauſe, the Inclination of going to Stool is ſuppreſſed. By this means a large Quantity of Excrements is accumulated, which afterwards ſo violently diſtends the Coats of the Inteſtines, that their elaſtic, ſyſtaltic, and expulſive Force is totally deſtroy'd. Thus, I remember, ſome Years ago, to have had an Account, from a ſkilful Phyſician, of a certain illuſtrious Perſon, who, upon a too long and violent Retention of the Fæces, was ſeiz'd with an Iliac Paſſion; and, upon opening his Body, after Death, the Colon was found full of Fæces, and in one Part ruptur'd, whilſt about twenty Pound weight of Sordes was taken away. *Henricus ab Heer*, in his *Obſervat.* alſo, furniſhes us with a memorable Caſe, in which, upon diſſecting the Abdomen of a Perſon who died of the Iliac Paſſion, the Inteſtines burſt ſpontaneouſly, and the Fæces were diſcharg'd with ſuch Violence as to fly over the Cloaths of all the By-ſtanders.

But, among all the antecedent Cauſes of an Iliac Paſſion, none has a more immediate and direct Tendency to produce it, than violent Anger, eſpecially in thoſe who previouſly labour under an *Hernia*, or any Diſorder of the Inteſtines. Nor is it a difficult Task to account for this, ſince ſuch is the Nature of this Paſſion, as to induce Spaſms and Convulſions, eſpecially on the nervous Parts, and eaſily to produce a Stagnation, and conſequent Inflammation, by reaſon of a copious Afflux of Blood to the weaker Parts, among which we may juſtly reckon a Portion of the Inteſtines, prolapſed and fallen out of the Abdomen.

'Tis no eaſy Task to determine whether, according to the common Opinion, and the Doctrine of the Antients, *Fæces*, eſpecially, in that Species of the Iliac Paſſion which ariſes from an incarcerated Hernia, or a mutual Ingreſs of the Parts of the Ilium, can be thrown up by the Mouth. This ſeems highly dubious, firſt, becauſe the Fæces cannot ſlip back and regurgitate through the Valve of the *Colon*, with which the Entrance of the *Ilium* into the *Cæcum* and *Colon* is furniſhed. Beſides, 'tis not poſſible to conceive how the Fæces can penetrate, and make their Way, through a ſmall Part of the Ilion, conſtricted and firmly cloſed up in an Hernia. I have no Intention totally to reject the Authorities of Phyſicians of approved Veracity in other Caſes; but I ſhall only relate what I have, in the Courſe of my own Experience, obſerved in ſome Patients afflicted with this Diſorder; which is, that they have vomited a Matter of a rediſh Colour, in external Appearance not unlike Fæces; but, when this Matter was applied to the Noſtrils, it had no Stench, but rather ſmell'd of the Subſtances taken, and appear'd, as it were, bubling with the Froth. I will not, however, deny, that when the Diſorder neither proceeds from an incarcerated Hernia, nor a Convolution of the Inteſtines, but only from a ſpaſmodic Stricture of the *Ilium*, when, at the ſame time, the large

Inteſtines, the *Rectum*, and the *Colon*, labour under violent ſpaſmodic Strictures, highly liquid Fæces, and, as others have obſerved, Clyſters, may penetrate through the Valve of the *Colon*, to the ſuperior Parts. But I recommend this Obſervation, with reſpect to vomiting the Fæces in an Iliac Paſſion, to the farther Scrutiny, and ſtricter Examination, of Phyſicians.

As for the Prognoſtics of this Diſeaſe, there are tolerable Hopes of Safety left, ſo long as there is no Inflammation; whilſt Clyſters are receiv'd, and return'd by Stool; whilſt the Pains ſhift from Place to Place, and the Pain and Vomiting not continual, but ſeize at Intervals; and the Diſorder is produced by an Obſtruction of the Inteſtines, by means of the Fæces contained in them. But the Hopes of Recovery are ſtill greater, if a laxative Medicine, taken by the Mouth, begins to operate by Stool. But if an Inflammation is already preſent, which may be known from the Fever, the Violence of the Gripes, the Suppreſſion of the Urine, the hard and quick Pulſe, the inſatiable Thirſt, the Toſſing of the Body, the Loſs of Strength, and the Coldneſs of the Extremities, ſmall or no Hopes of a Recovery remain. A ſudden and total Ceſſation of the Pain, accompanied with a great Loſs of Strength, a weak Pulſe, Deliquiums, and a fetid Smell of the Mouth, are infallible Signs, that the Inflammation has degenerated into a Sphacelus. We muſt, alſo, obſerve, that this terrible Diſorder, if in its Beginning proper Remedies are exhibited to prevent the Inflammation, and allay the Pain, may, ſometimes, be protracted for two or three Weeks, before it is totally removed.

The CURE.

In no Diſeaſe is a ſpeedy Relief more neceſſary than in an Iliac Paſſion, ſince, without this, 'tis ſometimes ſo violent as to deſtroy the ſtrongeſt and moſt robuſt Man in three Days; and, as Time hurries away with Rapidity, it frequently carries along with it the ſeaſonable Opportunity of relieving the Patient; for which Reaſon that practical Caution of *Hippocrates*, laid down in his firſt Book *de Morbis*, is, in this Caſe, to be carefully adverted to: "If, ſays he, any Phyſician was ever beneficial to a "Patient in the Cure of a Diſeaſe, he muſt neceſſarily have "employed his Skill at a proper Seaſon." For which Reaſon, if in any Diſorder, certainly in this, which is ſo dangerous and ſo quickly fatal, a skilful Phyſician is immediately to be called, whoſe principal Intention it ought to be, by proper Remedies, both of the internal and external Kind, to mitigate the acute and intenſe Pain which lays a ſufficient Foundation for the Inflammation of the Parts, and the ſubſequent Death of the Patient.

The Man who is in the leaſt converſant with the Works of the antient *Greek* Phyſicians, will eaſily perceive, that they have been very full and accurate, not only in giving the Hiſtory, but, alſo, the Cure, of the Diſorders, and eſpecially the Pains, incident to the nervous Parts; for this Reaſon, no Doubt, that in conſequence of the exceſſive Heat of their Climate, and their intemperate Method of Life, Diſorders of this Kind frequently recur'd, and called for the Aſſiſtance of the Phyſician. Let us, therefore, inquire into the Meaſures *Hippocrates* took for the Cure of this Diſeaſe. The Diſorder itſelf he deſcribes in his third Book *de Morbis*; and for the Cure of it orders a pretty long Suppoſitory, prepar'd of Honey, and whoſe anterior Part is anointed with the Gall of a Bull, to be twice or thrice introduced into the *Anus*: "By which means, ſays he, the indurated "Fæces about the *Inteſtinum Rectum* may be ſoften'd and "brought away." After this he orders the Injection of a Clyſter, and ſubjoins theſe truly memorable Words: "If theſe Meaſures prove ineffectual, a Smith's Bellows is to be introduced "into the *Anus*, and, by its means, ſuch a Quantity of Air in"jected as is ſufficient to diſtend the Abdomen, and remove the "Contraction of the Inteſtines." Then, removing the Bellows, he orders a Clyſter to be injected, which conſiſts not of hot Ingredients, but of ſuch as reſolve and colliquate the Fæces. "Then, ſays he, ſtopping up the Anus with a Piece of Sponge, "in order to prevent the Diſcharge of the Clyſter, let the Pa"tient ſit in warm Water." To which he adds, "If this In"jection is retained, and again diſcharg'd, the Patient will be "reſtor'd to Health." We ſhall here ſubjoin what this venerable Author farther ſays, with reſpect to the Method of treating this Diſorder. "The Stomach, ſays he, is, with all Expedition, to be "freed from all Sordes, and a proper Quantity of Blood taken "from the Head, and thoſe Parts of the Arms, where the Joints "of the Elbows are, that, by this means, the Heat of the ſu"perior Belly may ceaſe: Then all the Parts above the Diaphragm, "except the Heart, are to be cool'd; whereas the inferior Parts "are to be kept hot, the Patient is to be placed in a Bath of "warm Water, and carefully anointed with Oil."

I am ſo far from diſapproving of this Method of Cure uſed by *Hippocrates*, that I highly commend it; ſince it has a direct Tendency to procure an Evacuation by Stool, and to remove the ſpaſmodic Stricture of the large Inteſtines, which prevents it; as, alſo, to prevent an Inflammation of the ſuperior Parts, which muſt neceſſarily be productive of the greateſt Danger. But, in the Cure of this Diſorder, we think it incumbent on the Phyſician to direct his Views to its firſt Cauſe and Origin.

When, therefore, this Diſorder draws its Origin from an incarcerated Hernia, which it frequently does, the Phyſician's firſt and principal Intention ought to be, after having ſoften'd the prolapſed Portion of the Inteſtine, to reduce it to its natural Place and Situation, if it ſhould not ſpontaneouſly ſhrink up. That this may be done with more Eaſe and Expedition, Clyſters muſt be injected every two Hours, in order to expel the Flatulences from the Abdomen. Then the Part affected is to be ſoftened with pinguious and oleous Subſtances. For which Purpoſe, a Swine's Bladder, half full of Human or Dog's Greaſe, is to be applied to the Part affected, and the whole Abdomen is to be covered with the Omentum of ſome Animal, a Calf, for Inſtance; or, if that cannot be had, with a clean Linen Cloth, immerſed in Rape-ſeed or Linſeed-oil. Then the Patient is to be laid on his Back, with his Belly and Abdomen a little rais'd, and his Head ſomewhat lower; and the Surgeon, ſeparating his Legs, is, with his Hand, anointed with Oil of Almonds, gently to attempt the gradual Reduction of the prolapſed Part of the Inteſtine into the Abdomen, but in ſuch a manner, as not to fold, or any ways injure, the Inteſtine; for unleſs an *Hernia*, whether of the ſcrotal, the inguinal, or the crural Kind, is ſpeedily reduced, an Inflammation readily happens, which terminates in a Sphacelus; for when the Blood, in conſequence of a Portion of the *Ilium* being conſtricted, and, as it were, ſuffocated by the Rings of the Abdomen, cannot return through the compreſſed Blood-veſſels, it becomes ſtagnant, and produces a Sphacelus.

The next Intention, of no leſs Importance, is, by proper Medicines, to allay and mitigate the violent Pains; for ſuch is the Force and Influence of the Pain, as, by means of the mutual Conſent between the nervous Parts, to excite all the terrible Symptoms with which this Diſorder is attended, ſuch as the Vomitings, Hiccups, continual Watchings, Uneaſineſs, Fever, Delirium, and Loſs of Strength; as, alſo, the Stricture of the whole inteſtinal Canal, to the inferior Parts, and even the Anus. The Tremors, alſo, of the Extremities, and the Difficulty of diſcharging the Urine, depend upon this Circumſtance. But when the Pain is allay'd, all theſe Symptoms are generally mitigated, and, in a proportionable Degree, remov'd. For which Reaſon, ſays *Hoffman*, in Caſes of this Nature, I generally, with great Succeſs, preſcribe a Spoonful of gently ſpirituous Mint-water, which is, alſo, poſſeſſed of a mild anodyne Quality, to be taken every Hour, mix'd with ten or fifteen Drops of the anodyne Mineral Liquor, and two Drops of the *Laudanum Opiatum*, prepar'd according to the Directions of *Helmont*. And, externally, for allaying the Hiccup and Vomiting, I order a Plaiſter prepared of equal Quantities of old *Venice* Treacle, and Oil of Nutmeg, with an Addition of a ſufficient Quantity of Oil of Mint and Camphire, to be applied to the epigaſtric Region. When the Vomiting and Hiccup are thus ſtopt, gentle Laxatives of Manna, Cream of Tartar, and Oil of ſweet Almonds, are the better retain'd, and, conſequently, the more capable of producing happy Effects, when the Diſorder proceeds from a long Retention of the Fæces, in the Flexures of the Inteſtines.

Nor, among the other Intentions of Cure, are we to neglect the Prevention of an Inflammation, by all poſſible means; becauſe it degenerates, at laſt, into a Sphacelus, and deſtroys the Patient; for, according to the Generality of medicinal Obſervations, no Patient, labouring under an Iliac Paſſion, readily dies without a Sphacelus of the Inteſtines, whether ariſing from an *Hernia*, or a Convolution and Ingreſs of the Inteſtines into each other. In order, therefore, to prevent an Inflammation, beſides Clyſters, external Emollients, and Anodynes, internally exhibited, which not only alleviate the Spaſms, but, alſo, the ſubſequent Inflammation, nothing is of greater Efficacy than Veneſection, which *Hippocrates* orders with an Intention to prevent or alleviate the Fever. The antient Phyſicians, for this Purpoſe, generally preſcribed Phlebotomy in the Arm; but I have, with Succeſs, uſed it in the Feet, eſpecially in Women. Veneſection is both the more uſeful and neceſſary, the greater Quantity of Blood is found in the Veſſels; in which Caſe it is to be repeated as the State of the Patient ſhall require.

In order to check the febrile Heat and Inflammation, as depurated Nitre is ſuperior to all other Medicines, ſo, in this Diſeaſe, 'tis of ſingular Uſe, if, for a Doſe, ſix or eight Grains of it, mixed with the *Pulvis Marchionis*, adding ſometimes a fourth Part of a Grain of Camphire, are, now-and-then, exhibited in a proper Vehicle. The antiſpaſmodic nitrous Powder may, alſo, be exhibited, with Succeſs, in an Emulſion prepar'd of ſweet and bitter Almonds, Seeds of the white Poppy, and paregoric Waters. Externally, in order to prevent an Inflammation, the Parts affected are to be anointed with a Liniment, prepar'd of one Ounce of human Fat, and a Dram of Camphire.

If the Diſorder ſhould prove ſo obſtinate as not to yield to any of theſe Meaſures, we are to have recourſe to Quickſilver; which I have frequently uſed with Succeſs, and indeed no Medicine is either more efficacious; or affords more ſpeedy Relief; when there is a mutual Ingreſs of the Parts of the Ilium unto each other. I know a great many Phyſicians are afraid of preſcribing this Remedy; but their Fear is without any juſt Foundation;

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tion; provided it is only exhibited at a proper time: Thus *Rhodius, in Observat. Medicin. Cent.* 2. *Obs.* 80. affirms, that a Patient, labouring under a violent Iliac Paſſion, was cured by five Ounces of Quickſilver, taken in ſolutive Honey of Roſes. *Henricus ab Heer*, who, by means of this Medicine, reſtored many, after they were brought to the very Gates of Death, in his *Obſervat. Medicinal.* gives us an Inſtance of an Iliac Paſſion cured, and the Excrements forthwith diſcharged, by taking half a Pound of Quickſilver. *Zacutus Luſitanus*, as we learn from his *Prax. Adm. Lib.* 2. *Obſ.* 35. with Succeſs, preſcribed a whole Pound of it, for a certain General, who laboured under this Diſorder. And *Paré*, in *Oper. Chirurg. Lib.* 20. *Cap.* 38. affirms, that many, in the moſt imminent Danger of loſing their Lives by the Iliac Paſſion, have been preſerv'd, by taking ſeveral Pounds of Quickſilver in Water.

Practical Cautions.

With reſpect to the Iliac Paſſion, we are carefully to remember, that it is highly unſafe to exhibit draſtic Purgatives, in order to render the Body ſoluble; becauſe they never fail to increaſe the Pains, Spaſms, and all the other Symptoms: Nor is it expedient to uſe Clyſters, prepar'd of exceſſively hot and carminative Subſtances: Much leſs are carminative and ſtomachic Eſſences, or medicated Wines, to be exhibited internally; ſince, tho' theſe may prove beneficial in a flatulent Colic, ariſing from a cold Cauſe, as the Antients uſed to ſpeak, they are yet by no means to be exhibited, when the Diſeaſe is of the acute Kind, and all the Fluids in a violent and preternatural Motion.

But, when the Strength begins to fail, and Deliquiums to ſeize the Patient, mild Analeptics may be ſafely and advantageouſly uſed; ſuch as thoſe, for Inſtance, prepar'd of the Waters of black Cherries, Turkiſh Baum, Lilies of the Valleys, and Cinnamon, without Wine, or a Spoonful of generous Wine, may be now-and-then exhibited, with ſingular Advantage.

If the Patient is plethoric, Veneſection is forthwith to be inſtituted, and, even, repeated, if the Caſe requires it. Great Regard is, alſo, to be had to the judicious Obſervation of the learned *Paſcoli*, who in *Tom.* 2. uſes the following Words: "When "a Fever, and the Signs of an approaching Inflammation of the "Viſcera, are preſent, a Vein is to be forthwith open'd, rather "in the inferior than in the ſuperior Parts: Hence we almoſt "always obſerve, that Leeches, eſpecially when applied to the "Inteſtinum Rectum, have been of ſingular Uſe in the Cure of "an Iliac Paſſion; ſince the Blood, diſcharged from the hæmor-"rhoidal Veins, relieves the Part affected, in the moſt imme-"diate manner of all others." See Hæmorrhoides.

When the Uſe of Quickſilver is indicated as proper and neceſſary, it is previouſly to be depurated, waſhed, and paſſed through Leather: When thus prepar'd, it is not adviſeable to exhibit more than a Pound, or half a Pound; which is moſt commodiouſly taken in fat Broth. Immediately after it is taken, it is expedient the Patient ſhould lie for ſome time on his Right Side, that it may the more quickly paſs through the Right Orifice of the Stomach: Beſides, if his Strength permits, he is to walk, or uſe Geſtation, that it may the better reach the inferior Parts. But, when an Inflammation is already preſent, and the Strength much impair'd, we are to abſtain from the Uſe of this Medicine, leſt the By-ſtanders, and ſuch as are not capable of forming a right Judgment, ſhould be of Opinion, that the Patient is deſtroy'd by this Remedy, which has the bad Fortune to be ſuſpected almoſt by every one.

In this Diſorder, great Hopes of Safety and Recovery are juſtly placed in Clyſters, provided they are only uſed at proper times, and in due Quantities; for theſe, when the large Inteſtines are conſtricted by violent Spaſms, by relaxing their Fibres, and rendering them flaccid, greatly allay the Inverſion of the periſtaltic Motion. It is moſt expedient, if the Strength of the Patient permits it, to inject a Clyſter of warm Water, mixed with *Fernelius*'s Syrup of Marſhmallows, every two Hours, and that during the firſt Day of the Diſorder, that, by this means, the Fæces may be render'd more liquid.

As for Topics, I cannot help approving of the Caution of *Cœlius Aurelianus*, who adviſes us to abſtain from heavy Cataplaſms, which, by their Weight and Roughneſs, increaſe the Diſorder, and the Pains with which it is accompanied; for ſometimes the Inflation and Diſtention of the Abdomen are ſo great, that the Patient cannot bear it to be moderately touched with the Hand.

When the Anus, in conſequence of the ſpaſmodic Strictures, is ſo braced up, that it cannot admit a Clyſter-pipe, much leſs the Noſe of a Pair of Bellows, it is then expedient to apply to it a moderately warm Fomentation, and, with a ſmall Pipe, to attempt the Injection of pure tepid Oil, that the ſpaſmodically conſtricted Coats of the Inteſtinum Rectum, being, by this means, ſoften'd, may be, afterwards, capable of receiving a larger Quantity of Liquor.

When the Diſeaſe is upon the Decline, Baths are highly commodious; and may be, alſo, uſed in the firſt Days of the Diſorder, when their Propriety is indicated by proper Circumſtances; For theſe contribute greatly to the Termination of the Diſeaſe, and the Expulſion of the peccant Matter, by relaxing the Fibres: Thus Baths were, by the Methodics, with great Succeſs, recommended in the Decline of Diſeaſes, as we learn from *Cœlius Aurelianus*.

In order to mitigate the Pains which are, almoſt, the only Cauſe of ſo many violent Symptoms, and of the inverted periſtaltic Motion of the Inteſtines, we are not to be afraid of uſing Opiates, provided they are exhibited in the Beginning of the Diſeaſe, when the Strength is as yet entire, a Plethora remov'd, and no Signs of a Sphacelus to be diſcover'd. With reſpect to the great Efficacy of Opiates in this Diſorder, the Reader may conſult the Sentiments of *Wedelius*, found in the *Miſcell. Nat. Curioſ. Dec.* 1. *An.* 2. *Obſ.* 238.

If the Iliac Paſſion proceeds from a crural Hernia, and a Sphacelus, and Death is apprehended, from an Impoſſibility of reducing the prolapſed Inteſtine; the laſt Recourſe is Inciſion, which, if dexterouſly perform'd by a skilful Surgeon, in the Preſence of a judicious Phyſician, is without any Danger, and may ſave the Patient from an otherwiſe unavoidable Death: But, in Caſes of this Nature, it is abſolutely neceſſary, the Operation ſhould be perform'd in due time, and before the Signs of a preſent Sphacelus appear.

We muſt, alſo, obſerve, that the Iliac Paſſion is very ready to recur: Thus I have known ſome who have relapſed a ſecond, and a third time, into it; but it is to be remarked, that thoſe laboured under an Hernia. In order, therefore, to prevent this Misfortune, all poſſible Care is to be taken of the Hernia, which is to be retained with a Truſs; or, if that cannot be commodiouſly done, it is to be carefully defended from every Degree of Cold. The Patient is, alſo, to abſtain from all Aliments of a flatulent Quality; ſuch as Summer Fruits, Peaſe, all the Species of Pot-herbs, and Onions, and Turneps: But he is, above all, to abſtain from Subſtances of an aſtringent and drying Quality, that, by this means, his Body may be preſerv'd ſufficiently ſoluble; and, as I have found from Experience, that, in Patients labouring under an Hernia, nothing has a more immediate Tendency to excite the Iliac Paſſion, or produce a Relapſe, than Anger, and draſtic Purgatives, theſe are carefully to be avoided, as things of the moſt pernicious and fatal Conſequence. *Frederic Hoffman.*

As I believe, with *Celſus*, that moſt Iliac Paſſions proceed, originally, from an Inflammation of the Inteſtine, Bleeding ſhould ſeem to be the firſt Step neceſſary to a Cure, and this may be repeated in any Conſtitution capable of an Inflammation. And I have known the moſt powerful Cathartics, and theſe repeated, of no Effect, when adminiſter'd previous to Bleeding, which have, however, operated very well, and produc'd plentiful Stools, immediately after a ſufficient Quantity of Blood has been taken away; for when the Tenſion, and inflammatory Stricture of the Inteſtine, is remov'd by Bleeding, and the intercepted periſtaltic Motion thereby reſtor'd, the Excrements are readily protruded towards the Anus, and expelled. I have, farther, obſerved very ſalutary Effects from anodyne, emollient, and gently diſcutient Fomentations, continued for a long time, and frequently repeated; and if, in the Intervals of the Fomentations, the warm Omentum, or Inteſtines, or both, of ſome Animal juſt killed, are applied, and kept perpetually on the Abdomen, our Endeavours for a Cure will be the more likely to ſucceed. Inſtead of theſe, I have ſometimes known a warm Sheep-ſkin applied with very good Effect: But this muſt be ſtript off from the Animal with the utmoſt Expedition, the Moment it is kill'd, and laid to the Abdomen reeking hot; and another muſt be applied when that becomes cool, which uſually happens in four, five, or ſix Hours.

An entire Interception of Urine, in the Iliac Paſſion, is eſteem'd a moſt certain Prognoſtic of ſpeedy Death. See Intestina.

Sydenham's Method of treating this Diſorder is ſpecified under the Article Depuratoria Febris.

Celſus, conſidering the Diſorder as an Inflammation, directs it to be treated accordingly, thus:

The Cure of the Ileos conſiſts in Bleeding, and the Application of Cupping-glaſſes to many different Parts, tho' without ſcarifying every-where; for that will be ſufficient, if done in two or three Places: In the reſt, drawing away the Wind will be ſufficient. We are then carefully to ſearch out the Seat of the Diſorder, which has, uſually, a Tumor upon it. If it be ſituated above the Navel, Evacuation of the Belly would be uſeleſs: If it lies in the Parts below the Navel, it will be, ſometimes, very proper, according to the Advice of *Eraſiſtratus*, to evacuate by Stool; and, indeed, this kind of Remedy has been often found ſucceſsful in thoſe Parts. The Method of doing it is by adminiſtring a Clyſter of ſtrained Cremor of Piſan, mixed with Honey and Oil, and no other Ingredient. If no Tumor appears, lay both your Hands on the Top of the Belly, and draw them down gently, by which means you will diſcover the Seat of the Diſorder; for it will neceſſarily reſiſt the Touch, and, from this Diſcovery, you will be able to judge, whether you are to evacuate the Belly, or not.

Common Remedies are, Applications of hot Cataplaſms, from the Breaſts as far as the Groins, and the Spine of the Back, often changing them: Strong Frictions of the Arms and Legs, or bathing the whole Body in hot Oil. If the Pain continues, three

or four Cyathi of hot Oil are to be forced into the Belly thro' the Anus: When, by ſuch Methods, we have open'd a Vent for the Tranſmiſſion of Wind, we may allow the Patient to take a moderate Draught of warm Muſſum; but, before this is effected, all manner of Drinking is very carefully to be avoided. If the Muſſum agrees with him, he may afterwards take ſome ſorbile Liquor.

When the Pain and Fever are ceaſed, the Patient may be allow'd to eat pretty freely, tho' not of ſuch Food as cauſes Inflation, or is hard of Digeſtion, for fear of injuring the Inteſtines, not yet ſufficiently confirm'd; but his Drink is to be only pure Water; for whatever is vinous, or acid, is quite improper in this Diſeaſe. After this, all Bathing, Walking, Geſtation, and other Motions of the Body, are to be avoided; for the Patient is ſubject to a Relapſe, upon the leaſt Occaſion; and the Diſeaſe is ſure to return after a Cold, or any Jactation, if the Inteſtines are not well confirm'd. *Celſus, Lib. 4. Cap. 13.*

ILIACA VASA. The Iliac Veſſels, form'd by the Bifurcation of the *Aorta Deſcendens*, and *Vena Cava*.

ILIACUS MUSCULUS. This is a broad thick Muſcle, lying on the whole Inſide of the Os Ilium. It is fixed by fleſhy Fibres to the internal Labium of the Creſt of the Os Ilium, to that of the Slope between the two anterior Spines, to the Inſides of theſe Spines, to the ſuperior Half of the Inſide of this Bone, and to the adjacent lateral Part of the Os Sacrum.

All theſe Fibres, contracting by degrees, run obliquely towards the lower Part of the Muſculus Pſoas, uniting with it, and being fixed, by a kind of Aponeuroſis, to the Outſide of its Tendon, all the Way to the little Trochanter. They cover the Head of the Os Femoris, and ſome of the loweſt are inſerted in that Bone, a little above, and behind the little Trochanter, and others a little lower down.

On the Outſide of the lower Extremity of the Iliacus, there is ſometimes a ſmall ſeparate Muſcle fixed immediately under the anterior inferior Spine of the Os Ilium; from whence it runs obliquely downward, joins the Iliacus, and is inſerted below the little Trochanter. It repreſents, in ſome meaſure, the Roman V, with the Pectineus; and might be reckoned an Iliacus minor, if the large Muſcle had not ſometimes an Inſertion in the Side of the Eminence, called Ilio-pectinea.

The Iliacus and Pſoas, thus united, paſs under the Ligamentum Fallopii, over the Slope or Chanel, between the anterior inferior Spine of the Os Ilium, and Eminentia Ilio-pectinea, in a ſort of ligamentary Capſula, very ſmooth and poliſhed, that Part of it, which covers the Chanel, appearing like a Cartilage. *Winſlow.*

ILIACUS *Externus* is a Name for the MUSCULUS PYRIFORMIS.

ILIADUS, *Iliadum, Iliaſter, Ileidos* (they are, alſo, written with a Υ for the firſt Letter). The Firſt Matter of all Things, conſiſting of Mercury, Salt, and Sulphur; the Chaos: For there is nothing in the Nature of Things, which conſiſts not of theſe three, and theſe are the three Principles of *Theophraſtus* (*Paracelſus*) which are diſcovered by ſpagirical Analyſis: We can find nothing but theſe three, which are each in each Element. *Iliaſter*, in general, is the occult Virtue of Nature, whence all Things have their Increaſe, are nouriſhed, multiply'd, and have their vegetable Growth. See *Paracelſ. de Meteor. Generation.* The *Iliaſter* may be underſtood, as in the Elements, or in Man: In the Elements it is the vegetative Power or Virtue of Nature, which is fourfold, according to the Number of Elements: It is called *Chaos*. There are, alſo, four *Iliaſtri* concerned in the Longeviry of Man. The firſt or native *Iliaſter* is the Term of Life, or rather Life itſelf, or its Balſam in Man. The ſecond or prepared *Iliaſter* is the Term of Life, which we have from the Elements, or elementary Things, and Life itſelf. The third *Iliaſter* is the prepared Term of Balſam, which we have from the Quinteſſence of Things. The fourth *Iliaſter* is the Retirement of the Soul or Mind into another World, as in the Caſes of *Enoch*, *Elias*, and others. Thus far is from *Rulandus* and *Johnſon*, and ſeems for the moſt part to be taken out of *Paracelſus's* Books of *Long Life*, where he reckons three *Iliaſtri*, beſides a Quinteſſence; one of them he calls *Sanctitum*, another *Paratetum*, and the third *Magnum*. According to the *Magnum*, which is the fourth of *Rulandus*, he calls Men *Henochdiated*, or *Elizæated*. *Iliadus* is, alſo, a mineral Spirit, which is contained in every Element, and is the Cauſe of all Diſeaſes. *Iliadus*, alſo, is what makes a Criſis. From the *Iliadus* proceed all Diſeaſes; and in the *Iliadus* all Things, all Simples, conſiſt: To ſome it gives Health; to others Sickneſs. To the *Iliadus* are, alſo, aſcribed three Ages: The firſt Age endures as long as it continues uncorrupted, tho' the Subject, or Perſon, be ſeventy Years of Age: for, as long as he remains free from Diſeaſes, he is in the firſt Age of the *Iliadus*; but, as ſoon as the *Iliadus* is infected, he paſſes into its ſecond Age: The third Age commences at the time of Death. In the firſt Age no Medicine is to be uſed, becauſe it is not neceſſary; nor in the third, becauſe it can adminiſter no Relief; and therefore the ſecond Age is the only Seaſon in which Medicines can be proper. *Paracelſus de Tartar.*

ILINGOS, ἴλιγγος, from ἴλιγξ, a Vortex. A Vertigo, in which all Objects appear to turn round, and the Eyes grow dim. See VERTIGO.

ILISCUS. Madneſs cauſed by Love, according to *Avicenna. Foreſtus.*

ILIUM. See INNOMINATA OSSA.

ILLAMBONIS *Collyrium.* ἰλλάμβωνος κολλύριον. A Name for a *Collyrium* for Ulcers of the Eyes, mentioned by *Paulus Ægineta, L. 3. C. 22.* and *7. C. 16.*

ILLECEBRA. A Name for the *Sedum*; *parvum*; *acre*; *Flore luteo.*

ILLEGITIMUS. Illegitimate. An Epithet for the ſpurious Ribs, and for certain anomalous Fevers, which are, alſo, call'd *ſpurious.*

ILLINCTUS. An *Eclegma*, or *Linctus. Blancard.*

ILLISIO. The ſame as ENTHLASIS; which ſee.

ILLITIO. Inunction, or the Anointing any Part.

ILLOS, ἴλλος. The Eye.

ILLOSIS, ἴλλωσις. A Diſtortion of the Eyes.

ILLOTA LANA. The ſame as *Lana Succida.* See LANA.

ILLOTI *Piſces* are Fiſh which ſmell and taſte of Mud. *Celſus* calls theſe *Viroſi Piſces.*

ILLUTIO. The ſame as ALUSIA; which ſee.

ILLUTATIO. Illutation. This is a Beſmearing any Part of the Body with Mud, and renewing it, as it grows dry, with a View of heating, drying, and diſcuſſing. This is principally done with the Mud found at the Bottom of Mineral Springs.

ILLYS, ἴλλυς. A Perſon whoſe Eyes are diſtorted, or who ſquints.

ILYS, ἰλύς. The Fæces of Wine. Hence the Epithet ἰλυώδης, is applied to the Sediment in Stools, which reſemble the Fæces of Wine; and to the *Hypoſtaſis* in Urine, when like theſe *Fæces.*

IMAGINATIO. Imagination. The Fancy, once excited by the Appearance of an agreeable Object, preſently raiſes Deſire, and produces local Motion, either to approach or avoid the Object according to its different Circumſtances.

If it be agreeable, the whole Bent of the Soul is to court and embrace it, earneſtly endeavouring to be united to it. She is, as it were, expanded in Pleaſure; while the animal Spirits, in a kind of Ovation, being carried within the Brain, are conſtantly exciting the moſt pleaſing Ideas; and, acting in a lively Manner upon the nervous Syſtem, cauſe the Eyes and Countenance to ſparkle, while the Hands and every Member exult for Joy: Beſides, the Influence of the Brain affecting the Præcordia, by means of the Nerves, they propel the Blood with more Rapidity, and pour it with Vigour on every Part of the Body.

But, if the Object appear dreadful or grievous to the Imagination, the Soul, as it were, ſubſides, and is contracted. The Spirits ſeem to retire precipitately, and are ſunk in Fear and Sadneſs. Hence the Countenance is dejected, and the Limbs enfeebled; and, the ſame Affection being carried by the Nerves from the Brain to the Præcordia, they are contracted, and reſtrain the Blood from its due Excurſion. The Blood, being thus collected into one Place, produces an Heavineſs and Oppreſſion at the Heart; while the exterior Parts, being deprived of their uſual Influx, languiſh, and are diſordered. Such are the Effects of the Power of Imagination; Effects which are ſometimes almoſt incredible, and which have been thought ſufficient to reſtore and renovate, to ruin and deſtroy, the human Structure.

To the Virtue of the Mother's Fancy have been aſcribed the Lineaments of the Embryo or Fœtus, with the Marks impreſt upon its Body, both at and after the Time of Conception. Tranſanimation or Ecſtaſy, Transformation of Body, Tranſplantation of Diſeaſes, the ſtrange Alterations of Bodies by the Virtue, Reliques, and the Invocation of Saints, are all imputed to this Power of the Imagination. In a Word; Sickneſs and Health, Recovery, and Death itſelf, are within the Limits of its Sway. But it may be proper to premiſe, that, by the Power of *Imagination* or *Fancy*, we do not mean, that this Faculty, as an immediate Efficient, by a direct Property of itſelf, produces any Effect; but mediately, by the Interpoſition of the Blood and nervous Fluid, influenced by Deſire.

Among common Accidents, ſtanding on a Precipice, or going along a narrow Bridge, and looking down from us, are ſubject to make us tremble and grow giddy. The ſeeing a Perſon eat ſome auſtere or crabbed Fruit, will cauſe a kind of Stupor in the Teeth; or the beholding another feeding on Delicacies, of which we are fond, occaſions a real Flux of Saliva; or, according to the common Expreſſion, makes our Chops water. The Sight of a Perſon in Affliction, in Miſery, or in Torture, will make the Compaſſionate fancy, that he feels a Pain like that of the unhappy Sufferer. The longing Deſire of ſuckling a deſtitute Infant has been known to have produced Milk in the Breaſt of an old Woman, as is ſaid. And nothing is more frequent, than for a grating, jarring Noiſe to ſet the Teeth on edge; or the Sight of another Yawning, to occaſion in us the ſame Action.

Thus, alſo, the Imagination, upon Joy, cauſes a pleaſant and ſerene Countenance; of any thing ſhameful, produces Bluſhing. But more remarkable have been the Effects of the dreadful Apprehenſions of an approaching Execution, as may appear by the following Relations.

Schenkius, *Lib.* 1. tells us, that *Don Diego Oſorius*, a noble *Spaniard*, being in Love with a young Lady of the Court, obtain'd of her a private Meeting, under a Grove in the King's Gardens, which was a capital Crime. By the unfortunate Barking of a little Dog, they were diſcovered, and the young Nobleman was ſeiz'd, impriſoned, and condemned to die. After hearing his Sentence, in one and the ſame Night, he was, in Appearance, both young and old, his Hair being turned grey, as in hoary Age. The Gaoler related the Accident to the King as a Prodigy, who was pleaſed to pardon him, ſaying, he had been ſufficiently puniſh'd for his Fault.

The ſame Author informs us, that a young Nobleman of the Emperor's Court had violated a Lady's Chaſtity, though, by her ſmall Reſiſtance, ſhe ſeemed not altogether reluctant. He was impriſon'd, and condemned to loſe his Head the next Day. Being brought into the Imperial Preſence, before the Execution of his Sentence, he was known to none; the Beauty of his Face being vaniſhed, his Countenance like the Countenance of a Corpſe, and his Hair and Beard entirely grey. On ſo wonderful an Alteration, a Counterfeit was reaſonably ſuſpected; but after a ſtrict Examination, no Impoſture appearing, the Emperor was moved to Pity, and pardoned the Criminal.

Mr. *Boyle*, in his Experimental Philoſophy, relates, that, when he was in *Ireland*, an *Iriſh* Captain, coming with ſome of his Followers, to ſurrender to Lord *Broghil*, was caſually intercepted by a Party of the *Engliſh*, his Lordſhip being then abſent. Upon this Misfortune, ſo prodigious was the Captain's Terror of Death, that, before Lord *Broghil*'s Return, his Hair changed its Colour in a peculiar manner; ſome of his Locks, which were turned perfectly white, being interſperſed with the reſt, which retained their uſual rediſh Hue.

The bare Imagination of a purging Potion has, I am credibly inform'd, produced Stools, like thoſe called Phyſical. With regard to Vomiting, *Turner* ſays, he, one Morning, viſited a young Gentleman, who had Occaſion for ſeveral Vomits, not of the mildeſt Sort. Being provided with plain Poſſet-drink, he deſired me, ſays he, to ſhew him his Bolus. I had no ſooner opened it, than he began to heave and retch extremely; then I carry'd the Bolus out of the Room, till he had recovered himſelf. He took a Draught of Poſſet-drink, which was ſoon followed by a ſecond; neither of them returning, the Bolus was again preſented, upon the firſt Glance of which, he began to vomit plentifully, ſo continuing, till I made him believe, that it was again removed out of the Room. Having drank more Poſſet-drinks, I unexpectedly pulled the Bolus out of my Pocket, which again had the ſame Effect. He ſaid, he had thus vomited with ſeveral of his laſt Boluſes, and found as much Advantage, and as ſtrong an Operation, as from the firſt, which he had taken into his Stomach. So ſurpriſing was this Gentleman's Idioſyncraſy, though in perfect Health, if a Bolus was mentioned, or if he accidentally thought on it, he would fall a vomiting.

The Fancy, ſays *Fienus*, in his *Tract. de Viribus Imag.* by cauſing a Motion of the Humours and Spirits, is capable of producing almoſt every Diſeaſe: For, as it has Power to determine theſe Humours to any Part, it is able to cauſe the Indiſpoſition incident to the Part. And ſome have been obſerved to have contracted the Small-pox or Plague, by Fear, or Force of Imagination, ſome putrid Humours, with a peſtilent Atmoſphere, prediſpoſing. A condemned Malefactor, the ſame Author takes notice, being carry'd out to Execution, as he believed, having his Cap pulled over his Eyes, and a wet Cloth ſtruck haſtily about his Neck, dropt down dead, imagining he was beheaded. And there are ſeveral ſurpriſing Inſtances of the Force of Imagination in Hypochondriacs.

We ſhall now proceed to take notice of ſome monſtrous, or marked Births, occaſioned by the ſtrong Imagination, or diſappointed Longings, of the Mother; which have had Power not only to divert and diſturb the plaſtic or formative Faculty, but to ſtamp its Characters, to diſmember and diſlocate, and to make large Wounds in the Fœtus, long after Conception, when it has been completely formed.

The Deſire, ſays *Hippocrates*, of the pregnant Woman is capable of marking the tender Infant with the Thing deſired. And St. *Jerom*, in his Lectures upon *Geneſis*, ſays, that a Lady having brought forth a Child of an *Ethiopic* Complexion, was in Danger of ſuffering as an Adultreſs; from which Puniſhment ſhe was delivered by *Hippocrates*, who wiſely imputed this Event to a Picture reſembling the Child exactly, and which he found ſhe had been often very intently viewing. To the ſame Cauſe *Heliodorus* aſcribes the Whiteneſs of *Charicleæ*, who was born of *Ethiopian* Parents.

Soranus, as St. *Auſtin* obſerves, informs us, that, however deformed and ugly the Tyrant *Dionyſius* was, he would always have a beautiful Picture placed before his Wife in the Bed-chamber. *Galen*, in his *Lib. de Theriac. ad Piſon. C.* 14. ſays, that the Sight of a Picture is ſufficient to change the Fœtus into the ſame Likeneſs. And the Patriarch, in *Geneſis*, *Chap.* xxx. by placing the ſtreaked Rods before the Cattle, at the Time of their Conjunction, ſhewed himſelf no Stranger to theſe Effects.

Heſiod, *Lib.* 2. *de Op. & Dieb.* exhorts his Friends to abſtain from Embraces after their Return from Funerals, or thinking of any Calamity, which has befallen them; leſt the ſorrowful Idea be tranſmitted to the Conception, and the tender Fœtus marked with ſome frightful Character.

Pet. Meſſias, in his *Lib. Lect. var. C.* 7. reports from *M. Damaſc.* that a Girl was born all over hairy, from the Mother's viewing the Picture of St. *John Baptiſt*, drawn in his hairy Veſture hanging by her Bed-ſide. The like Caſe is taken notice of by *Schenkius*, and *Amb. Paré*.

Bartholine, in his *Hiſt. Anat. Cent.* 3. ſays, that a Woman, big with Child, being exceedingly frightened by a Cat, was delivered of a well-ſhaped Child, but with an Head like that of a Cat.

Gulielm. Paradin. in his Hiſtory of *Savoy*, *Epilog. ad Cap.* 46. declares, that a Niece of Pope *Nicolas* III. of the Family of the *Urſini*, had a Birth covered with Hair, with the Claws of Bears, inſtead of Fingers and Toes, which ſhe aſcribed to her looking on the Picture of that Creature, which was every-where repreſented in the Dwellings of that Family. Upon this Event, his Holineſs gave Order for deſtroying all the Pictures of Bears throughout the City of *Rome*.

On *July* 18. 1610. (ſays the ſame Author, in his *Additam. ad Donat. per Hoſt. Lib.* 7. *C.* 3.) a Boy was born at *Prague*, whoſe Liver, Inteſtines, Stomach, Spleen, with Part of the Meſentery, hung out all naked below his Navel; he lived but a few Hours. The Mother, upon Inquiry, ſaid, that, three Months before her Delivery, ſhe was forced by ſome Soldiers to be preſent at the killing of a Calf; at the opening of which, ſhe felt an extraordinary Motion in herſelf, when ſhe ſaw the Bowels tumbling from the Belly. About the ſame Time and Place, another Boy was born, with his Fore-ſkin cut and inverted. Three Weeks before, the Mother had liſtened attentively to one who was deſcribing the Manner of the *Jewiſh* Circumciſion.

Ludovicus Vives, in his Comment upon St. *Auſtin's City of God*, *Lib.* 13. *C.* 25. mentions a looſe Fellow of *Brabant*, who, having perſonated the Devil in a Play, went home in his Habit, and would needs enjoy his Wife, ſaying, he would beget on her a young Devil. The Woman conceived, and afterwards brought forth a Child of the ſame diabolical Figure, in which the Man was dreſſed.

Schenkius, in his *Obſ. Med.* tells of a Woman very big, who, converſing with her Neighbours, told them, that ſhe reckoned to the Time of the *Epiphany*, or the Feſtival of Three Kings. One of them wiſhed ſhe might bring forth Three Kings; and ſhe merrily anſwered, With all her Heart; and, at the time, ſhe bore three Sons, one of them black, as the *Ethiopian* Kings are painted. This Relation is confirmed by *Cornel. Gemma*, in *Coſmocrit. Lib.* 1. *Cap.* 6. who reports of another, near her Time, who being purſued by her Husband, with his drawn Sword, threatening to cut her over the Forehead, ſhe, from the Fright, ſoon fell in Travail, and was delivered of an Infant with a large Wound on its Forehead, of which the Bleeding could not be ſtopt, and the Child preſently dy'd.

Gulielmus Fabricius tells us of a Woman at *Bern* in *Switzerland*, who, being big with Child, and quarrelling with another, fell into a violent Paſſion, after which, falling into Labour, ſhe was brought to-bed of a Daughter, of a courageous and heroic Mind, but her Feet and Hands contracted, as if ready to fight, and her whole Body in a continual Motion; ſo that ſhe walked, as it were, dancing and trembling, like one in the Height of Anger.

A young luſty Woman, big with Child, was much frightened by a Perſon falling down by her, in a Fit of an Epilepſy. At the Expiration of her Time, ſhe was delivered of a Son, who was ſoon after ſeized with epileptic Paroxyſms, which carry'd him off before he was a Year old. This Author adds, that the Cauſe may be aſcribed to the Force of the Mother's Imagination, at the Time of the Fright, communicated to the Brain of the Infant.

The Caſe of a Man born without Arms, and living to a great Age, which was occaſioned by his Mother's Surprize at the Sight of a Beggar in the ſame Condition, is related in *Cent.* 6. *Obſ.* 66. by the ſame Author. And I knew, ſays *Turner*, a Lady, who, being with Child, was frighted at the unexpected View of a Beggar's ſtump Arm upon her Coach-door, and was delivered of a Child wanting one of its Hands. The ſame *Fabricius* gives an Account of an Hydrocephalus contracted by the Mother's Imagination: Of the Infant's Head pierced through, by reaſon of the Mother's receiving a Fright: Of the Small-pox this way communicated: Of a Child born with the Leg broken, or diſtorted, by the Mother's looking on a Crucifix, and viewing the broken Limbs of one of the Malefactors on the Side of our Saviour: Of a Female Child being born with a *Prolapſus Uteri & Veſicæ*, by the Mother's beholding a poor Woman under that Misfortune.

Fienus, *de Virib. Imaginationis*, tells us of a Girl born without an Head, but complete in the reſt of her Body: The Likeneſs of a Shell-fiſh was joined to her Neck, having two Valves, which ſhut and opened, and by which, from a Spoon, ſhe took her Nouriſhment.

riſhment. This was occaſioned by the Mother's longing for Muſſels in the Market, which ſhe could not procure. This Monſter lived eleven Years, but, happening, in an angry Mood, ſtrongly to bite the Spoon with which ſhe was fed, and breaking thoſe teſtaceous Valves, ſhe dy'd quickly after.

The Caſe related by *Sebaſtian Munſter*, in his *Coſmograph. Lib.* 3. of two Children born growing together by the Forehead, occaſioned by two Perſons wantonly ſtriking their Heads together behind the Mother, ſeems leſs ſtrange to thoſe, who have ſeen, in *London*, two Girls, brought from *Germany*, conjoined about the Loins and Buttocks, with one common Anus and Pudendum.

In the *Zodiacus Medico-Gallicus, pro Menſ. Nov. & Decemb.* 1682. we are told of a pregnant *Burgundian* Woman, who, being often intent upon looking up to the Images of two Angels, in the Church, with their Arms and Legs acroſs each other, was, on *Auguſt* 24. delivered of two Girls, deprived of Life, on account of the difficult Birth, with their Bodies joined in the ſame manner.

Ambroſe Paré ſays, that in 1517. a Child was born with its Face like that of a Frog, which was occaſioned by the Mother's holding that Creature in her Hand, to allay the Heat of a Fever, about the Time of her Conception.

A Gentlewoman with Child, ſays *Turner*, being cut for the Repoſition of an inguinal Rupture, was delivered of the Infant with a large Wound on the ſame Place, and the Scar continued when he was a Man.

Fienus records a Woman at *Antwerp*, who, in Countenance and Geſture, reſembled an Ape; her Mother, when pregnant, being uſed to play with a Creature of that kind. He likewiſe informs us of a Lizard, that frightened a Woman with Child, by leaping into her Boſom; and ſhe brought forth an Infant, with a fleſhy Excreſcence on the Breaſt, exactly reſembling the Lizard, with its Head fixed in the Child's Fleſh, and the reſt of the Body hanging out.

Schenkius takes notice of a Letter ſent him by *Jacobus Suterus*, where he tells him, that his Wife being deny'd a certain Joint of Meat by a Butcher, ſhe bled at the Noſe, and with her Finger wiped the Blood off her Lip, and was delivered of a Child wanting the upper Lip.

Dr. *Cyprianus*, in *Phil. Tranſ.* abridged, *Vol.* 3. *p.* 222. gives the following Caſe: A Lady was delivered of a Girl, with a Wound in her Breaſt, above four Fingers long, and penetrating to the Muſculi Intercoſtales, being an Inch broad, and hollow under the Fleſh about the Wound: There was, alſo, a Contuſion at the lower Part of the Wound, which, being treated with Suppuratives, came to an Head, was opened, and healed with the Wound. The Birth was eaſy, and, conſequently, the Child received no Harm in it. But, about two Months before, the Mother, being gone to Bed, heard a Report, that a Man had murdered his Wife by wounding her in the Breaſt with a Knife; at which Relation, it was obſerved, that ſhe changed Countenance, and ſeemed concerned.

Mr. *Boyle* acquaints us, that an ingenious Phyſician, being call'd to a young Lady, who, he believed, only fancy'd herſelf Sick, ſcrupled to give her Phyſic; and adviſed her Friends to divert her by little Journeys of Pleaſure. In one of theſe, going to *St. Winifred*'s Well, this Lady, who was a Catholic, continued ſome time in the Water, to perform her Devotions, and attentively fixed her Eyes upon the red Pebbles under the Water. A while after, ſhe was delivered of a Child, whoſe Skin was copiouſly ſpeckled with Spots of the Colour and Size of thoſe Stones; which Marks the Child ever retained.

A Kinſwoman of mine, ſays Sir *Kenelm Digby*, in his Treatiſe of Bodies, being fond of wearing Patches, I uſed to tell her, in Jeſt, that her next Child would be marked with a great black Spot in the Middle of its Forehead. This Apprehenſion was ſo ſtrong in her Imagination, at the time ſhe proved with Child, that her Daughter was born exactly as the Mother imagined.

Horſtius recites ſeveral Caſes, in which he found the Infant not only variouſly diſcoloured, but marked with Strawberries, Cherries, and other Fruits, on ſeveral Parts of their Bodies. Many of which, as *Hildanus* remarks, are not to be deem'd incurable, but may be attempted according to their Situation. But no Part of the Skin or Fleſh, preternaturally coloured, muſt be left behind; for, if it is, they will riſe again. Some have recommended the Blood of the Secundine to be rub'd on the Mark. But *Sergerus* inſtances a Maid, who had the Back of her Left-hand of a fiery red Colour, by the Mother's apprehending a ſudden Burning, when ſhe was with Child. She anointed the diſcolour'd Place with the Blood of an After-birth, which increas'd the Inflammation with much Swelling and Pain. The Surgeon, with Difficulty, ſtopt theſe Symptoms, and the Mark remained.

Willius, in Act. Danic. An. 74. *Obſ.* 83. recommends Section for removing the maternal Marks; which is eaſily performed, if the Tumor can be ty'd about with a Thread, and ſuch Medicines apply'd, as may intercept the affluent Humours; but Care muſt be taken, that no Artery, great Veſſel, or Nerve, be hurt. For, ſays he, if Nature permits the Loſs of a Noſe, an Ear, or Eye, why may ſhe not do the ſame in theſe her ſpurious Productions? He gives an Example of a Child, who was cured of many ſoft Excreſcences growing over its Eyelids and Forehead.

To give my own Opinion on this Subject, ſays *Turner*: What Monſters are fit to be deſtroyed, or preſerv'd, ſhould be left to the Determination of the Civil Law, and the Judgment of Phyſicians before conſulted. Diſtorted Members may be ſometimes rectified, of which *Hildanus* gives us an Example, in *Cent.* 3. *Obſ.* 56. And I knew, ſays *Turner*, a Child born with both Feet inverted, and treading on the Ancles; yet, with proper Splints, and Bandage, and a ſmall Steel Plate, from the Shoe to the Knee, continued for ſeven Years, he was perfectly cured. To attempt to remove Diſcolourings of the Skin, is to little Purpoſe, as they penetrate it, and the Scar is like to prove a greater Blemiſh than the Stain itſelf.

In the Extirpation of large Excreſcences reſembling Fruits, or Foods, they are ſubject to degenerate into malignant Ulcers; and ſome of them, being ſupplied with a large Plexus of Veſſels, endanger an Hæmorrhage: And, if they cannot be entirely eradicated, they will riſe again, and be more obſtinate and troubleſome than at firſt. In theſe Attempts, therefore, it is neceſſary to conſider their Situation, Extent, and Depth, what Veſſels ſuſtain them, and whether the Knife or Cautery be moſt proper for deſtroying them. Thoſe which I have undertaken, ſays *Turner*, have been the Currans, Cherry, Rasberry, Mulberry, and the like leſſer Fruits, when they have been ſecurely ſeated, and their Surfaces not too much ſpread; or when their Baſis has been ſmall like a Stalk, and the Excreſcence ſoft and pliable, without Inflammation, livid Complexion, or any Appearance of Malignity; whence I have known them degenerate into Cancers. The Time of Extirpation is, when they look paleſt, are flatteſt, and ſofteſt; for, like the Fruits they reſemble, they have their Seaſons of blooming, ripening, and languiſhing, but never entirely dying.

If they are join'd by a ſlender Stalk, or if their Baſis will admit, I, ſays *Turner*, prefer the Ligature, taking care, when the Excreſcence is dropt off, to penetrate the Root with a Cauſtic. The ſame Caution is to be obſerved in uſing the Knife, when I apply a ſmall, hot, pointed Cautery, which ſtops Bleeding, waſtes the remaining Fibres, and corrects any Malignity, and the Sore may be healed like a common Burn.

Hildanus being call'd to the Son of a Senator of the Canton of *Bern*, three Years old, having an Excreſcence, like half a Cherry, on the upper Part of his Noſe, which, at firſt, was no bigger than a Lentil, but increas'd as he grew, he undertook the Cure in the following manner.

Paſſing a Needle, with a Thread, through the Body of the Excreſcence, he, with his Knife, ſeparated it from its Bottom all round; when, paſſing the Point of the Knife towards the Forehead, a Branch of a Blood-veſſel, being cut, hinder'd his Procedure. He contented himſelf with taking out what he had divided, and dreſſing with Aſtringents. When he open'd the Wound, he found ſome Remains in the diſcolour'd Fleſh, which he waſted with an Eſcharotic, made of the Aſhes of Vine-tendrils, and Quick-lime, digeſting out the Eſchar with a Mixture of Turpentine, and Gum Elemi; he afterwards incarn'd, and brought on a ſeemly Cicatrix. In theſe Caſes he recommends the Uſe of the Precipitate in tender Habits, beforehand waſh'd and edulcorated, which I have ſometimes known, ſays *Turner*, after the Removal of the external Skin, capable of waſting theſe fungous Appearances, to deterge the Ulcer, and diſpoſe it for healing.

Cases from Turner.

A Gentlewoman having been born with the Mark of a Raſberry, near her Eyebrow; about the ripening Seaſon of that Fruit, it, as uſual, aſſumed a florid Complexion, felt tender, and appear'd higher than ordinary, with ſmall Grains, and little Hairs between them. By haſtily running againſt the Edge of a Straw Hat, the Excreſcence was cut through the Middle, which occaſion'd great Pain, and much Trouble, for ſome Days, to ſtop the Bleeding; but, at laſt, dried up with a Scab. Some time after, the Scab, being pull'd off, in her Sleep, occaſion'd a more plentiful Effuſion of Blood than at firſt; upon which Account I was ſent for, only to ſtop the Bleeding. I, however, prevail'd with her to have it entirely eradicated. I, at firſt, applied the Lunar Cauſtic, the Operation of which being impeded by a Diſcharge from a ſmall Artery, I had recourſe to the Lapis Infernalis, which ſecured the Veſſel, and burnt deep into the Body of the Excreſcence. After wiping out the Salts, with an arm'd Probe, I dreſs'd the Ulcer with a Pledget of Baſilicon dipped in the warm Balſam of Turpentine. As it ſeparated, I perceiv'd that I had taken in the whole Compaſs of the diſcolour'd Skin; yet, at the Bottom, the Fleſh, in ſome Places, aroſe granulated, like that already waſted, ſome of which I touch'd again with the Lunar Cauſtic, others with the End of my Probe, dipt in the Butter of Antimony, when, digeſting out the Slough with warm Liniment and Balſam of Turpentine, I found the Fleſh was ſtill of the ſame kind, even as low as the Pericranium. Having proceeded as far with the Eſcharotics as was convenient, I fill'd the Ulcer with red Precipitate, and let it remain two Days, laying over the Digeſtive. Taking off the Dreſſings, there came out a thick Slough, made of the Remains

of

of the Excreſcence, under which the Membrane appear'd fair and clear, though ſomewhat inflamed. To prevent it from ſloughing off, I dreſſed with Lenients, and haſten'd Incarnation; yet the Cranium was bare about the Compaſs of a ſmall Spangle; however, it heal'd without the leaſt Exfoliation, and left an handſome Scar.

A Child having the Reſemblance of a Currant on the internal Canthus of the Eye, towards the Top of the Noſe, and it increaſing, ſhe was like to contract a ſquinting Caſt of her Eye, by often endeavouring to view it. In order to remove it, I was conſulted. Obſerving the Baſis would admit of a Ligature, having a Needleful of wax'd Silk, and placing the Child on a Servant's Knee, I made a very cloſe Ligature, apprehending that the Child would not ſuffer it to be ſtraiten'd again, if there ſhould be Occaſion; and applied a Defenſative all round, leaving a Hole in the Middle to let out the Excreſcence. To prevent the Accidents of a Fever, the Child had a Clyſter in the Morning, and had been blooded the Day before. Next Morning the Eye was inflam'd, the Eyelids ſwell'd up, and the Child became feveriſh; the Excreſcence was grown livid, and ſeem'd near mortified. The Child being brought to the Window, with both her Eyes ſhut cloſe, I paſs'd the Point of my Sciſſars under the Ligature, ſnipt off the Excreſcence, which was follow'd with but a few Drops of Blood, nor did the Child complain. Then I preſt the Button-end of the Probe, made red-hot, moderately upon the Root or Stalk; after which, embrocating the Parts with Oil of Roſes, the Tumor went off in two or three Days; and in two or three more the Burn was heal'd with ſo many Dreſſings of my Ointment of Lapis Calaminaris, (the firſt Dreſſing being only a ſmall Pledget dreſs'd with Baſilicon) and ſcarce left any Mark behind.

A Servant-maid having the Mark of a Shrimp upon her Cheek, the Removal of it had been attempted by Eſcharotics, by a Pretender to Surgery. Finding it troubleſome, ſhe applied to me; but it then ſeem'd a phagedenic Ulcer, with jagged and callous Lips on one Side, and on the other an overgrown Fungus. I propos'd to her the hot Iron, but, frighten'd at this fiery Trial, ſhe would not ſubmit to it. Afterwards, applying to an Empiric, her Cheek was overſpread with the Malady, which was deem'd cancerous. *Turner, de Morb. cutaneis.*

IMBIBITIO, in Chymiſtry, imports a kind of Cohobation, when the Liquor aſcends, and deſcends again, upon the ſolid Subſtance it is join'd with, till, at laſt, it is fix'd and coagulated with this Subſtance, ſo as to be no longer capable of riſing. *Rulandus.* It, alſo, ſometimes imports, ſimply, Cohobation; and any Sort of Impregnation.

IMMERSIO. Chymical Immerſion is a Species of Calcination, when any Body is immers'd in any Fluid, in order to be corroded: Or it is a Species of Lotion, as when any Subſtance is plunged into any Fluid, in order to deprive it of a bad Quality, or to communicate to it a good one.

IMMERSUS. The Name of a Muſcle. See SUBSCAPULARIS.

IMPAR. An Epithet for the critical Days, importing Odd. See CRISIS.

IMPASTATIO. Impaſtation is a Reduction of Powders, or any other Subſtance, to the Form of a Paſte, by the Aſſiſtance of ſome convenient Fluid.

IMPATIENS HERBA. See BALSAMINA.

IMPERATORIA.

The Characters are;

The Leaves are not very ramous, but divided into three Segments, each of which is ſubdivided into three others. The Seeds are flat, oval, ſlightly ſtriated, and marginated.

Boerhaave mentions three Species of this Plant; which are,

1. Imperatoria; major. *C. B. P.* 156. *Tourn. Inſt.* 371. *Boerh. Ind A.* 53. *Imperatoria & Aſtrantia.* Offic. *Imperatoria.* J. B. 3. 137. Raii Hiſt. 1. 436. Ger. 848. Emac. 1001. *Imperatoria, ſive Aſtrantia vulgaris.* Park. Theat. 942. MASTERWORT.

The Roots of Maſterwort are long, and full of Knots or Joints, about a Finger thick, running obliquely into the Ground, ſhooting out many Fibres from the Joints, of a ſtrong aromatic Smell, and a pretty hot Taſte; the lower Leaves are hardly a Span high, ſomewhat like Angelica, but much leſs, and divided into three Segments of roundiſh Leaves, crenated about the Edges; the Stalks ſeldom grow above a Foot high, with but few Leaves on them, and have, on their Tops, Umbels of ſmall, white, five-leav'd Flowers, each of which is ſucceeded by two round, whitiſh, ſomewhat flat Seeds. It is cultivated with us in Gardens, its native Place being the *Auſtrian* and *Stirian* Mountains, and other *Alpine* Countries, flowering in *July*.

The Roots, which are the only Part uſed, are cordial, ſudorific, and alexipharmic, of great Uſe in putrid malignant Fevers, and all contagious peſtilential Diſtempers; they reſiſt Poiſon, and the Bites of venomous Creatures. They help Pains of the Stomach, and the Colic; in all nervine Affections, and Diſorders of the Head, they are uſed with good Succeſs. *Miller's Bot. Off.*

The Roots are oblong, about an Inch thick, wrinkled, cirrous and geniculated, brown without, white within, of an aromatic acrid Taſte, and fragrant Smell.

The *Hiſtoria Plantarum*, aſcrib'd to *Boerhaave*, aſcribes the following Virtues to theſe Roots: They are attenuating, he ſays, and aperitive; provoke Saliva, if held in the Mouth; and are cathartic, if taken inwardly, whence the Root of *Imperatoria* is called *The Countryman's Purge.* Taken in a leſſer Quantity it proves ſudorific and diuretic. In the hyſteric and convulſive Colic, and the Tympanitis, it often works with ſuch Violence as to require Correctors, ſuch as *Leviſticum, Meum*, or ſome other ſweet and viſcid Root. In intermittent Fevers, eſpecially Tertians and Quartans, it is a ſpecific Remedy, as well as in comatous Diſorders. It has the ſame aromatic, hot and igneous Taſte and Smell in every Part of it; and, whether it be uſed in Infuſion or Decoction, is inferior to no Medicine for Speed in giving Relief under the Effects of Poiſons of a volatile Kind, working by gentle Sweat, and, if exhibited in a larger Quantity, by Stool. It is recommended, alſo, in the Dropſy, being taken to the Weight of an Ounce in Honey, provided the Viſcera be ſound: It is, alſo, an Antiſcorbutic. It is highly commended in Caſes where any one of the Viſcera requires to be ſpeedily freed from ſome viſcid Matter. *Baglivi* very much commends it for Diſeaſes of the Breaſt, for the Pleuriſy and Peripneumony, in Caſes where the Matter is concocted, but the expulſive Faculty deficient: For theſe Purpoſes the Root is infuſed in Water, which is afterwards ſweeten'd with Honey, and proves an excellent Promoter of Expectoration, to the Relief of the Patient from the Diſeaſe. It is one of the principal Ingredients in the ſame Antidotes as Angelica: Being heating and aperitive, it is effectual for diſcuſſing of Tumors, where there is no Inflammation, or in thoſe of the ſcorbutic Kind. If the Root be divided in the Middle, you diſcover a Multitude of Veſicles full of an oily and balſamic Subſtance, endued with an igneous Quality, which renders the Root more heating than that of Angelica, and as good a Corrector of a fetid Breath. The Root is to be taken up in the Middle of Winter, in its ſecond Year. The Leaves bruiſed are good to diſcuſs cold Tumors. The diſtilled Oil, as well as the Spirits, are carminative and ſtomachic. The Root is juſtly accounted one of the beſt Antiſcorbutics, and, boiled in Water, affords an excellent Remedy for the Gravel in the Kidneys, and a Stoppage of Urine.

2. Imperatoria; Alpina; maxima. *T.* 317.

3. Imperatoria; quod Laſerpitium. *Proſperi Alpini Exot.* 211. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 53.

The laſt *Proſper Alpinus* takes to be the *Laſerpitium* of *Theophraſtus, Dioſcorides*, and *Pliny*. He informs us, that this Plant was raiſed at *Padua*, from Seeds brought from *Thrace*. He ſays, the whole Plant is hot, of a grateful Smell, and acrid Taſte.

IMPERFORATIO. Imperforation is, when any of the natural Paſſages are not perforated. See ANUS, VAGINA, and URETHRA.

IMPERIALIS CORONA. See CORONA IMPERIALIS.

IMPETIGO. The ſame as *Lichen*. See LEPRA.

IMPETUS, when uſed relative to the Heart, and Circulation of the Blood, means, ſimply, Force. With reſpect to Diſeaſes, it is the ſame as a Paroxyſm. Sometimes it imports the ſame as *Impetigo*.

IMPIA HERBA. See FILAGO.

IMPLICATUS, or IMPLICITUS, imports complicated. See COMPLICATIO.

IMPLUVIUM. An Embrocation.

IMPOTENTIA. Impotence, with reſpect to Men, is the ſame as Sterility in Women; that is, an Inability of propagating the Species. There are many Cauſes of Impotence, as a natural Defect in the Organs of Generation, which ſeldom admits of a Cure; Accidents; or Diſeaſes; and in ſuch Caſes the Impotence may, or may not, be remedied, according as theſe are curable, or otherwiſe. But I am inclined to believe, that the moſt frequent Cauſes of Impotence are prepoſterous Methods of Venery, (ſee *Gonorrhœa*) and too often repeated Venereal Injuries.

I have ſome Reaſon to believe, that a ſudden Impotence happening to a Perſon not accuſtom'd to any Diſorders of that Kind, and not accountable for from any preceding Accident, is a Forerunner of ſome great Diſorder. And in ſuch Caſes Provocatives are very dangerous, becauſe 'tis poſſible they may increaſe the Diſorder which cauſes the Impotence, and make it fatal. Thus I have ſometimes met with terrible and fatal Fevers, excited by the Exhibition of warm and ſtimulating Provocatives.

Hippocrates, in his Treatiſe *de his quæ Uterum non gerunt*, adviſes a Man, who has a mind to get Children, not to be drunk, nor drink White-wine, but that which is ſtrong and unmix'd, nor to uſe the warm Bath.

Another principal Cauſe of Impotence is the execrable Habit of drinking Spirits, that is, Drams; inſomuch that, if Legiſlators do not take care to put ſome effectual Stop to it, in a few Centuries the whole Race of Mankind will, probably, be extinct, without a Conflagration, or a ſecond Deluge.

Relative

Relative to Impotence, Dr. *Cockburn*, in the *Edinburgh* Medical Eſſays, gives the following remarkable Caſe: A noble *Venetian*, aged twenty-two Years, was married to a very fine Lady, with whom he cohabited with a good deal of Vigour, but his Embraces were never attended with an Emiſſion; whereas in his Dreams this happen'd very freely. This Misfortune very much afflicted him and his Family; and, as no Remedy could be found at Home, the *Venetian* Ambaſſadors, reſiding in the different Courts of *Europe*, were deſired to conſult ſome of the moſt eminent Phyſicians, in the Parts where they reſided, to account for the Cauſe, and to find out a Cure for this extraordinary Complaint of the Difference of the States when in Sleep, and during actual Embraces.

I was of Opinion it conſiſted altogether in the Urethra being cloſely ſhut up by the Vigour of the Erection, which form'd ſo great a Reſiſtance, that the Powers which throw the ſeminal Juices out of the *Veſiculæ Seminales* could not overcome it; whereas, in Dreams, the Preſſure of the Urethra being much leſs, an Evacuation was made.

The Method of Cure was not leſs ſucceſsful than obvious, from the foregoing Account; for gentle Evacuations, and a ſlender Diet, brought about, and fully completed, their Deſires.

IMPRÆGNATIO. Impregnation.

Upon the Ceſſation of the menſtrual Flux, which happens ſometimes, but rarely, at the Age of thirty-five or forty, generally at forty-five or fifty, the Belly ſwells conſiderably, and, after ſome Months, great Floodings come on, accompanied with ſlight Pains about the Regions of the Loins, and the lower Part of the Belly; and from theſe Circumſtances the Woman is deceiv'd with a Belief, that ſhe is really with Child.

In this Caſe the Belly, though large, is equally ſoft all over, without any more Hardneſs or Reſiſtance in the lower, than the upper Part. But the ſureſt way of diſtinguiſhing this Caſe from Impregnation is, by the Touch; for, if the Woman is not with Child, the *Os Internum* will be found open, and in its uſual State.

When a Woman is really with Child, her Belly grows leſs, or at leaſt not bigger, till the End of the ſecond Month; whereas in any falſe Conception it enlarges from the very firſt Day.

A Woman perceives the Child to move at different Periods, the ſooneſt at the End of forty Days, the lateſt at the End of four Months and an half, or five Months.

It ſometimes happens, that a Woman becomes pregnant without ever having had the menſtrual Flux; others, again, have been with Child, notwithſtanding which, the *Menſes* have not ceas'd till the fifth, ſixth, and even ſeventh Month; others again, though really with Child, have grown big from the very Beginning; and thoſe whoſe *Menſes* have not ceas'd for many Months, but have continued, have, at laſt, proved with Child, though they have ſcarce ever perceiv'd its Motion. Some, alſo, have perceiv'd a Movement not unlike that of a Child, without being really pregnant.

La Motte ſeems to think, that a very large Child, and a very ſmall Quantity of Waters, may be the Reaſon why a pregnant Woman, ſometimes, ſcarcely at all perceives the Motion of the Child.

It is not an eaſy Matter to be certain when a Woman is with Child, before the End of the fourth Month, all the Marks of Pregnancy, till that time, being equivocal, and capable of deceiving; but the ſenſible Motion of the Child makes the thing ſure, which it is eaſy to diſtinguiſh from certain convulſive Motions of the Uterus, and adjacent Parts, which Women ſometimes feel, and thence deceive themſelves into an Opinion of being with Child.

But the moſt infallible way of aſcertaining the thing is, by the Touch; the Method of which is thus: The Woman is to be ſet in a couring Poſture, that is, as if ſhe was going to ſit down, with the ſuperior Parts of her Body bent forwards; then one, or rather two, Fingers are to be introduced into the Vagina, and, in Pregnancy, the *Os Internum* will be found entirely clos'd; the Neck of the *Uterus*, or that Part which protuberates into the Vagina, will be felt but very little, or not at all, according as Pregnancy is more or leſs advanc'd; for, as the Woman approaches nearer the Term of Delivery, the more the Neck of the Womb is dilated, ſo as to diſappear entirely in the laſt Month of Geſtation. At the ſame time the Body of the Uterus will be felt full, and diſtended.

The Motion of a Child in the Uterus, join'd to theſe Circumſtances, renders the Signs of Pregnancy certain.

La Motte, before he makes this Eſſay by the Touch, lays the Woman upon her Back with her Knees elevated, and the Heals near the *Clunes*; and if he finds the Belly more hard and diſtended in the Hypogaſtrium, than in the *Epigaſtrium*, he judges the Woman to be pregnant.

It is not ſo eaſy to diſtinguiſh Pregnancy by the Touch before the End of the fourth Month, as afterwards; and then a Perſon of Experience may foretel the Time of Delivery by the State of the *Os Uteri*.

Some Women are ſenſible of being with Child, from the very Moment of Conception. In this Caſe they perceive a greater Degree of Pleaſure than uſual during the Enjoyment; which is followed by a ſomewhat painful Senſation about the Navel, and a Shivering all over. Mean time the external Parts of the *Pudenda* are more dry than uſual, becauſe the Male ſeminal Fluid remains in the *Uterus*.

The Man, alſo, upon theſe Occaſions, has his particular Senſations, feeling a kind of Suction at the End of the Glans, at the time of Emiſſion, which is attended with ſome Degree of Pain, notwithſtanding the uſual Ecſtaſy. *La Motte. Traité des Accouchemens.*

IMUS VENTER ſometimes, in general, ſignifies the *Abdomen*; and ſometimes the lower Part of the *Abdomen*, or the Hypogastrium.

INAIA *Guacuiba*. A Name for the *Palma*; *Indica*; *coccigera*; *anguloſa*.

INANITIO. See Cenosis.

INAPPETENTIA. See Anorexia.

INAURATIO. Gilding. This is of Uſe in Medicine, only in beautifying Pills, or Boles.

INCARCERATA HERNIA. See Bubonocele.

INCARNANTIA. Medicines which aſſiſt Nature in filling up Wounds, or Ulcers, with Fleſh; or, rather, remove the Obſtructions to it. Internal Incarnants are Aliments which ſupply a balſamic Chyle, and, conſequently, generate Fleſh, and produce a full Habit.

INCENDIUM imports a burning Fever; or, ſometimes, any febrile Heat.

INCENSIO. The ſame as Incendium; or it ſignifies a hot inflammatory Tumor.

INCERATIO. Inceration is the Reduction of any dry Subſtance to the Conſiſtence of ſoft Wax, by the gradual Admixture of any Fluid therewith.

INCERNICULUM. A Sieve, Sierce, or Strainer. In Anatomy, the Pelvis of the Kidney is called *Incerniculum*.

INCIDENTIA. Inciding Medicines. See Alterantia.

INCINERATIO. Incineration is, properly, the Reduction of any Body to Aſhes, by the Application of Fire. This Term is principally uſed, with reſpect to Vegetables, when reduced to Aſhes, in order to make fixed alcaline Salts, which are called Salts by Incineration.

INCISIO. An Inciſion or Cut, or the making an Inciſion. Inciſion is generally uſed relative to Chirurgical Operations; for, in Surgery, there are various Sorts of Inciſions; which are taken notice of, under the Articles to which they belong.

INCISORES. An Appellation for the four anterior Teeth: See Dens.

INCISORIUM, τομεῖον. A Table whereon a Patient is laid, in order to have an Inciſion made in any Part.

INCLINATIO. Inclination, in Pharmacy, is the changing the perpendicular Situation of a Veſſel, to one which is oblique, that the limpid Liquor, contain'd therein, may flow out of the Mouth, and the ſubſiding Fæces remain behind. With reſpect to the Humours, their Inclination is their Tendency to any particular Part.

INCOCTUS has two oppoſite Significations; for it either imports *not boiled*, or elſe *well boiled*: This Ambiguity ariſes from the Force of the Particle *in*, which has, as the Grammarians expreſs it, both a privative and intenſive Signification.

INCONTINENTIA. Incontinence. Beſides the moral Senſe, it ſignifies, in Medicine, an Inability in any of the Organs, to retain what ſhould not be diſcharged, without the Concurrence of the Will. See Acrasia.

But Incontinence is moſt frequently uſed, with reſpect to an involuntary Diſcharge of Urine.

The Bladder is ſometimes ſo debilitated in Men, that their Urine flows from them involuntarily: This may proceed from a Stone in the Bladder, or a Palſy of the Sphincter. In the firſt Caſe, the only Remedy is Lithotomy, or an Extraction of the Stone: Nor is Lithotomy infallible; for that Operation frequently cauſes the Diſorder. But, if it proceeds from a Weakneſs of the Neck of the Bladder, ſtrengthening and nervous Medicines are moſt likely to remove it.

But, as this Diſorder often baffles the utmoſt Power of Medicines, the Surgeons have contrived Inſtruments to retain the Urine. Some recommend a Leathern Bag, lined with Pitch, to be worn in the Breeches, between the Thighs, large enough to contain half a Pint: Others prefer a Braſs or Steel Pot, faſten'd to the Penis, (ſee *Tab.* XLVII. *Fig.* 7.), which are to be emptied, when near full. But, as theſe are very inconvenient, ſome of our Moderns have invented more light and eaſy Inſtruments, whereby the Penis and Urethra are gently compreſſed, ſo as to retain the Urine in the Bladder, and diſcharge it at Pleaſure, during either the Day or Night, by opening or ſhutting this light Inſtrument, (ſee *Tab.* XLVII. *Fig.* 8.) which is lined with Leather, and taken from *Nuck*. Another, ſtill more convenient, is repreſented at *Fig.* 9. which may be tightened or relaxed, according to the different Size of the Penis: This, ſays *Heiſter*, I have often uſed with Succeſs; nor was it ever before delineated by any one.

An Inſtrument was formerly recommended by *Nuck*, and lately by *Winſlow*, for this Diſorder; not unlike that uſed for Ruptures (and repreſented *Tab.* XLVII. *Fig.* 10.): It is to be faſten'd round the Body, in the manner directed for compreſſing Fiſtulas in the Perinæum, ſo that the Bolſter F may be fixt right upon the Perinæum. Thus, by turning the Screw D, the Urethra may be compreſſed or relaxed, and the Urine diſcharged or retained, at Pleaſure. But, tho' I would not abſolutely reject this Method, Experience convinces me, that the other, abovemention'd, is much more eaſy and commodious.

An Incontinence of Urine, in Women, frequently proceeds from a difficult Labour, or from a Weakneſs of the Sphincter, by the violent Extraction of a large Stone; tho' it ſometimes happens from a natural Weakneſs, or Palſy, as in Men. But, whatever the Cauſe may be, when it is inveterate, or proceeds from the Palſy, it will neither ſubmit to internal Medicines, nor external Machines.

If, however, it ariſes from the Extraction of a Stone, eſpecially in Girls, or young Women, it often goes off ſpontaneouſly, or by the external and internal Uſe of Aſtringents: If theſe fail, it is, generally, looked upon as incurable. *Hiſcherus*, however, affirms, in a Diſſertation upon this Subject, that the beſt Method is, to introduce a Peſſary, or Ring, of a proper Size, into the Vagina, as for a Prolapſus Uteri (ſee *Tab.* LV. *Fig.* 6. 7. 8.): For the Introduction of this into the Vagina, under the Urethra, compreſſes the latter ſo firmly, that the Urine may be retained or diſcharged at Pleaſure.

INCORPORATIO. Incorporation is much the ſame as Impaſtation, being a Reduction of dry Subſtances to the Conſiſtence of a Paſte, by the Admixture of ſome Fluid: Thus Pills, Boles, Troches, and Plaiſters, are made by Incorporation. Another ſort of Incorporation is, when things of different Conſiſtences are, by Digeſtion, reduced to one common Conſiſtence.

INCRASSANTIA. Incraſſating Medicines, that is, ſuch as reduce the too fluid Blood, and Juices, to a proper Conſiſtence, and a due Condenſation. See ALTERANTIA.

INCRUSTATIO, in Surgery, is the Induction of a Cruſt, or Eſchar, upon any Part.

INCUBA is interpreted, by *Rulandus*, *Sponſa ſolis*.

INCUBUS. This Word is not found in *Hippocrates*; but *Cœlius Aurelianus*, who calls it *Incubo*, has a Chapter upon it.

The Incubo, ſays that Author, takes its Name, according to ſome, from the Form or Similitude of a Man; others derive it [*quaſi ab Incumbendo*, from lying or preſſing upon] from the Imagination of the Patients, who fancy they feel ſomething aſcending and ſitting upon their Breaſt. *Themiſon*, in the ſecond Book of his Epiſtles, calls this Diſeaſe πνιγαλίων, [from πνίγω, to ſuffocate] becauſe it ſuffocates the Patients. Some of the Antients gave it the Name of ἐφιάλ]ης, *Ephialtes*, [from ἐφάλλομαι, to leap upon]; others called it ἐπιβολὴ, *Epibole*, [from ἐπιβάλλω, to preſs upon] an Oppreſſion; becauſe the Patients imagine, that ſomebody leaps upon them, and oppreſſes them: The Diſorder is incident to Perſons after a Debauch, and to thoſe who are continually moleſted with Crudities. A ſingle Fit of the Incubus, not ſucceeded by any Complaint from the Patient, nor any viſible Dyſareſteſis, or Moroſeneſs, but only diſcovering itſelf by a diſturbed Sleep, can by no means be called a Diſeaſe, no more than a ſingle Emiſſion of the Semen in Sleep, which the *Greeks* call ὀνειρόγονον, *Oneirogonos*, can be called a Diſeaſe, unleſs it returns frequently, and is attended with Inconvenience to the Body. The Incubo lays a Foundation for the Epilepſy; for that it is neither a God, nor Demigod, nor *Cupid*, has been very fully demonſtrated, by *Soranus*, in his αἰτιολογέμενα, *Aitiologoumena*, or Books of Cauſes.

The Patient, under this Diſorder, cannot ſtir himſelf, but with the utmoſt Difficulty; is ſeized with a Numbneſs, and a Senſe of Weight, with a Dread of Suffocation, and an Oppreſſion, as from ſomebody falling ſuddenly upon him, with an Intent to deprive him of Life and Senſe, not ſuffering him to cry out: Hence it is uſual with ſuch Perſons to ſtart up, and cry out, in a confuſed inarticulate Voice. Some are affected to that Degree, as to imagine, that they ſee or hear the Voice of the Phantom preſſing upon them, and alluring them to forbidden Pleaſures; but, when they endeavour to lay hold of it by the Fingers, it ſeems to ſlip from them. When they ariſe from Sleep, they feel their Face, Eyes, and other Emunctories, bedew'd with Moiſture, and a Stiffneſs of the Neck, with a gentle tickling Cough. The Diſeaſe, when grown inveterate, is attended with Paleneſs, and Extenuation of the Body, naturally conſequent from want of Sleep, occaſion'd through Fear.

This appears to be a Diſeaſe of Stricture, from the Senſe of Weight attending it; and of the chronical Kind, from the Length of Time; and it is not always without Danger, for ſome have died under the Violence of the Suffocation. *Silimachus*, a Follower of *Hippocrates*, writes, that the Incubo was once contagious at *Rome*; and that Multitudes died under it, as by a Peſtilence. *Cœlius Aurelianus*, *Morb. Chronic. Lib.* 1. *Cap.* 3.

The Incubus is of a bad Kind, when it ſeizes the Patient, tho' awake, in the Night; but, worſt of all, when, after moleſting him in his Sleep, it leaves him to awake under a cold Sweat, and Palpitation of the Heart. This Diſorder ſeldom or never happens to Perſons lying on their Side: They, who have been long and often ſubject to it, have Reaſon to apprehend ſome dangerous Diſtempers of the Head, as a Vertigo, Apoplexy, Epilepſy, Convulſions, or ſudden Death: It is certain, that many, under this Diſorder, have been found dead in their Beds. *Lommii*, *Med. Obſ.*

The Ephialtes demands our Care in the Beginning; for, when it is grown inveterate, and moleſts the Patient every Night, it is a Prognoſtic of ſome great Diſeaſe, as an Apoplexy, Madneſs, or Epilepſy, when the Cauſe of the Diſeaſe is tranſlated to the Head; for they, who labour under an Incubus, ſuffer after the ſame manner, in their Sleep, by Night, as epileptic Patients in the Day-time.

The Cure conſiſts in Evacuations by Phlebotomy, and Cathartics. A very proper Purge, on this Occaſion, is prepared of a Dram of black Hellebore, half a Dram of Scammony, mixed with ſome ſweet-ſcented Simples, as Aniſe, *Daucus*, and *Petroſelinum*. *Hiera*, prepared of the *Cucurbita Sylveſtris*, relieves the Patient, alſo, to a great Degree: This is *Rufus's* Preſcription. The Patient muſt be kept to a thin Diet, and avoid all flatulent Food. The Seed of Peony is, alſo, of Uſe in this Caſe, fifteen of the black Seeds being taken every Day, bruiſed in Water. *P. Ægineta*, *Lib.* 3. *Cap.* 15.

INCURSUS, in *Bellini*, imports the Pulſation of the Arteries.

INCUS. The Name of a ſmall Bone in the internal Ear. See AURIS.

INDARION. The Appellation of a Collyrium, deſcribed by *Aetius*, *Tetrab. Serm.* 4. *Cap.* 113.

INDEX. The fore Finger. The Days on which future Criſes may be preſaged, are, alſo, called *Dies Indices*. See EPIDELOS, and CRISIS.

INDICANTES DIES. See DIES INDICES.

INDICANTIA are thoſe Circumſtances obſerved in a Patient, relative to his paſt, preſent, and future State, which indicate or direct what is to be done for his Relief.

INDICATA. The things indicated to be done by the Circumſtances of a Patient, in order to preſerve Life or Health, or remove Diſeaſes. See FIBRA.

INDICATIO. Indication. This is explain'd under the Article FIBRA. The prophylactic, or preſervatory, Indication relates to the Preſervation of Health, by averting Diſeaſes; the curatory Indication, to the Removal of Diſeaſes; and the vital Indication, to the immediate Preſervation of Life. But there is another Indication, called Urgent, Mitigatory, or Palliative, which relates to the Mitigation of the Symptoms, when too violent to be neglected till the Termination of the Diſeaſe.

INDICATOR. The Name of a Muſcle; the ſame as EXTENSOR INDICIS.

INDICIUM. A Sign, in Diſeaſes, of ſomething future.

INDICO. See INDIGO.

INDICON, Ἰνδικὸν, as *Hippocrates* tells us, *Lib.* 2. *de Morb. Mul.* is what the *Perſians* call Pepper, whoſe round Fruit is call'd *Myrtidanos*. Here *Galen*, in his *Exegeſis*, ſays, that the Compilers of Catalogues of Simples took the Indicon to be Ginger (ζεγγίβεως), from a miſtaken Notion, that Ginger was the Root of Pepper; when it is certain, that Ginger and Pepper belong to different Plants, as appears from *Dioſcorides*, *Lib.* 2. *Cap.* 189, 190. But *Dioſcorides* the younger, who wrote a Gloſſary, ſays, that the Indicon was a Plant, growing in *India*, much reſembling Pepper, and bearing a Fruit called Myrtidanus, from its reſembling a Myrtle-berry: Thus far *Galen*. *Indicum Medicamentum*, and *Indici Potus*, are mention'd by *Hippocrates*, *Lib.* 2. *de Morb. Mulier.* and the former is recommended for a fetid Breath. See INDIGO.

INDIGENA. A Name for the *Eruca*; *Tanacetifolia*.

INDIGESTIO. Indigeſtion.

INDIGNATORIUS MUSCULUS. A Name for the ABDUCTOR *Oculi*.

INDIGO.

Indicum. Offic. *Indigo vera Coluteæ folii utriuſque Indiæ*. Act. Philoſ. Lond. N°. 276. p. 703. & N°. 276. p. 1016. *Nil, ſive Anil, Glaſtum Indicum*. Park. Theat. 600. *Nil, ſive Anil, ſive Indigo Indica*. Hiſt. Oxon. 2. 202. *Anil, ſive Nil, Indorum color*. J. B. 2. 945. *Emerus Americanus ſiliqua incurva*. Tourn. Inſt. 666. *Coronilla Indica, ex qua Indigo*. Volch. 124. *Caachira prima*. Piſ. (ed. 1658.) 198. *Herva de Anil Luſitanis*. Marcgr. 57. *Xivhquilith pitzahac, ſive Anil tenuifolia*. Hern. 108. *Colutea Indica herbacea, ex qua Indigo*. Herm. Cat. Hort. Lugd. Bat. 168. Hort. Monſp. 61. *Colutea Indica humilis, ex qua Indico folio viridi*. Par. Bat. Prod. 325. *Coluteæ foliis Anil*. Chab. 82. *Coluteæ affinis fruticoſa, floribus ſpicatis, purpuraſcentibus, ſiliquis incurvis, e cujus Tinctura Indigo conficitur*. Cat. Jamaic. 141. Hiſt. 2. 34. Tab. 179. f. 2. *Sesban Aniliferum Indicum Coronellæ foliis, vel Indigo Indica*. Breyn. Prodr. 2. 91. *Ameri*. Hort. Mal. 1. 101. f. 54. *Polygala Indica fruteſcens Hermanni*. Raii Hiſt. 1. 926. *Phaſeolus Americanus vel Braſilianus ſextus*. C. B. P. 242. *Iſatis Indica foliis Roriſmarini, Glaſto*

Glaſto affinis. Ejuſd. 113. *Hin awaru, Polygala Indica, ex qua Indigo minor.* Herm. Muſ. Zeyl. 43. BLUE INDIGO. See ANIL.

This Juice is brought both from the *Eaſt* and *Weſt Indies*, made up in different Forms. The moſt eſteem'd is that of *Guatimala*; which is the Fæcula of a Plant term'd *Emerus Americanus, ſiliqua incurva.* I. R. H. Some Phyſicians have recommended Indigo in the Quantity of a Dram; but others look upon it as a Poiſon: And in *Saxony* the internal Uſe of it is prohibited. *Geoffroy.*

INDUCTIO. Induction, in Pharmacy, implies ſpreading a Plaiſter, or the Application of any thing to any Part of the Body.

INDUS. *Indian.* An Epithet for ſome medicinal Compoſitions. Thus, certain purging Pills, deſcribed in the *Auguſtan* Diſpenſatory from *Meſue*, are call'd *Pilulæ Indæ Haly.* And *Galen, Lib. 4. Cap. 13. de Comp. Med. P. G.* mentions the *Emplaſtrum Indum Tharſei Chirurgi.*

INDUSIUM. A Shirt, or Shift. It has been a controverted Point among ſome Phyſicians, Whether it is proper to change the Linen in Diſtempers, or not? I think the Whole may be reduced to this: If a Perſon does not ſweat, there ſeems to be but very little Danger of taking cold; and then clean and freſh Linen is not only agreeable, but of Uſe, as it contributes to promote Perſpiration. If the Patient ſweats, provided theſe Sweats are ſymptomatical, it does no Injury to check them; if critical, it may not be ſo prudent to change the Linen, whilſt they flow plentifully; but, if they remit, there is more Danger of taking Cold from the wet Linen, than from changing it, provided it is previouſly well air'd. In all Caſes the perſpirable Matter, or that of Sweat, impregnates the Linen, and becomes in ſome Degree acrimonious, which muſt have a very bad Influence, in acute Diſtempers particularly. And that the Acrimony contain'd in Linen may have a very bad Effect on the Body, *Diemerbroek* confirms by a memorable Inſtance of a Perſon, or, as I remember, of ſeveral Perſons, upon Recovery from the Plague, who relaps'd immediately, and died, upon putting on Linen waſh'd with Soap.

As many People contract a Habit of wearing Flannel Shirts, or Shifts, in order to ſet them right, I ſhall give the Judgment of *Wainwright* thereon.

By what Fate ſo many of late fall in with an Opinion of the Advantage of wearing Flannel, I cannot tell; but this I am well ſatisfied of, that it does Hurt to two for one that receives Benefit from it, and there is none to whom Flannel is more prejudicial than thoſe to whom it is generally preſcrib'd, being weak, faint, or hectic People. Indeed it muſt be confeſs'd, that there are ſome that receive Benefit by it; but they are very few: And I queſtion not but ſome aſcribe that to Flannel, which is owing to ſome other Cauſe unknown, and which had perform'd the Cure more ſpeedily and perfectly, had the Perſon never uſed it.

A Man of a robuſt Conſtitution, who eats and drinks well, and yet uſes not Exerciſe enough to throw off the Remains and Dregs of a full and nouriſhing Diet, and who is ſubject to Defluxions, Catarrhs, Pains in the Joints, and ſuch Diſtempers as are owing to a Plethora, will receive Benefit by wearing Flannel; though too long a Uſe of it may ſo relax the Tone of the Fibres of the Skin, as to hinder that Perſpiration which before it helped: For, though the Quantity of perſpirable Matter be in proportion to the Wideneſs of the Pores of the Skin, yet they are not the wideſt when the Skin is moſt relaxed; however, it is neceſſary, that the Skin be conſiderably relaxed, that the Pores may be increaſed to their greateſt Diameter.

The moſt certain and conſtant Effect of wearing Flannel is, to make a more free and plentiful Perſpiration; which, though it be attended with great Advantages (according to *Sanctorius*) when moderate, yet, when exceſſive, nothing is more pernicious. The other Effects we obſerve from it, as they are more uncertain, ſo are they but the Conſequences of this: Now, ſince the Increaſing of one Evacuation is the Leſſening of another; therefore, whenever too much is thrown off from the Blood, either by Stool, Urine, or Spittle, it may be proper to wear Flannel.

Both *Waldſchmied* and *Baglivi* obſerve, that Diarrhœas from immoderate Grief are incurable; and that principally from a Suppreſſion of Perſpiration. Grief contracts the Skin, as all troubleſome Paſſions of the Mind do; ſo that the perſpirable Matter, being retained, will be thrown upon ſome other Glands; and, if on thoſe of the Inteſtines, will continue a Diarrhœa. It is, alſo, obſerved, that the Uſe of Venery makes the Body coſtive; and this it does only by promoting Perſpiration by an univerſal Relaxation of all the Fibres, which is always proportionable to the Intenſeneſs of the Pleaſure: And for the ſame Reaſon it is, that weak Perſons are ſubject to a Looſeneſs in Winter, (when the cold Air ſhuts up the Pores of the Skin) which they are free from in Summer. In a Dyſentery, the laſt-mentioned Authors, above all things, order the Body to be kept warm, and eſpecially the Feet, to promote Perſpiration; and the latter obſerves a Conſent between the Skin and the Inteſtines, as *Hippocrates* did before him.

Sanctorius, in his 46 *Aph. Sect.* 1. tells us, that the perſpirable Matter retained, neither being reſolved by Nature, nor a Fever ſupervening, diſpoſe the Body preſently to a malignant Fever. And Dr. *Cockburn*, in his Treatiſe of the *Diſtempers of Seafaring Men*, gives Inſtances enough of Fevers from a ſuppreſſed Perſpiration. In ſuch Caſes as this, where, by the preceding Symptoms, (as a Dejection of Appetite, ſpontaneous Laſſitude, ſudden Loſs of Strength, a Stupidneſs with Inclination to ſleep, the Want of uſual Stools, and the like) a Fever is threatened, nothing will contribute more to prevent it, than reſtoring Perſpiration to its wonted Freedom; and Flannel may very well act its Part in this Scene. But theſe Caſes I have taken notice of, are ſuch as Flannel is ſeldom or never order'd in, though in theſe only we may expect Advantage from its Uſe.

That it may appear how prejudicial Flannel is to thoſe who perſpire too much, as moſt weak People do, and to whom the wearing of Flannel is generally preſcrib'd, I ſhall obſerve from *Sanctorius*, that inſenſible Perſpiration is double to all the ſenſible Evacuations made by Urine and Stool put together; and that it is to that made by Stool as Forty to Four, ſo that it is ten times greater than that by Stool: Therefore a Man will be made no weaker by having ten times as many Stools as he uſed to have, than he will be by perſpiring only double the Quantity he does at other times. Further, if we conſider, that the greateſt Part of our Stools are the Remains of our Food, that could not enter the Lacteals, we ſhall find the Difference much greater; for we cannot imagine, that above one tenth of what we void by Stool, is evacuated from the Maſs of Blood by the Liver, and inteſtinal Glands; ſo that upon this Account there is as much derived from the Maſs of Blood in one Day by Perſpiration, as by Stool in an hundred; therefore, if Perſpiration by any means be doubled, in twenty-four Hours it will make a Man as faint, as if he had an hundred times more Stools in the ſame time than uſual. And there are none but who expect a Weakneſs from an unuſual Purging; and we daily experience the ſudden Danger of a Diabetes, wherein the Quantity of Urine is increaſed; but take little notice of an increaſed Perſpiration, becauſe inſenſible; for which Reaſon we are ſubject to aſcribe the Miſchief it occaſions to ſome other Cauſe.

A conſumptive Gentlewoman, in *Sheffield*, by the Advice of a Phyſician, putting on a Flannel Shift, though ſhe was able very well to walk about the Houſe, in two Days time ſhe was confin'd to her Bed, (from whence ſhe never roſe) without any other evident Cauſe than wearing Flannel.

If what I have ſaid be of Force enough to perſuade any to leave off wearing it, I would adviſe them to do it in a warm Seaſon; and, at the ſame time, either to make uſe of the cold Bath, or the Fleſh-bruſh, which will prevent the Inconveniences that would otherwiſe attend it.

I was perſuaded, ſays *Wainwright*, to wear Flannel next my Skin, above ten Years ago, for a ſevere Cough that I had got; by which, I think, I received ſome Advantage. But, after I had worn it a Year or two, I found it very troubleſome, and prejudicial to my Health; it made me ſo exceedingly tender, that I was not able to bear the leaſt Cold; and I found, by the Experiment of leaving it off, how much it diſpos'd me to Faintneſs, which I mightily ſuſpected before; and, therefore, I attempted ſeveral times, in vain, to get quit of it, but could not, without ſome Inconvenience greater than I was willing to bear; till about two Years ſince, in an hot Seaſon, going into a cold Bath, I left it off without any Damage. *Wainwright of the Non-naturals.*

INDUSIUM, alſo, ſignifies the AMNIOS.

INESIS, ἴνησις, from ἰνέω, to empty. Evacuation.

INFANS. An Infant, or Child.

Mankind is every way ſurrounded with ſo many and ſo great Miſeries, that inexpreſſible Care, Solicitude, and Diligence, are neceſſary, in order to avert the Violence of ſo many Diſeaſes, to which we are ſubjected. New-born Infants are flagrant Inſtances of this our Frailty; ſince, as ſoon as they have well ſaluted this Scene of Woe with their Cries, they are beſet with numberleſs Dangers, and require our perpetual Care for their Preſervation. And at the ſame time that theſe frequent Dangers threaten them, their tender and almoſt defenceleſs Age is not furniſhed with Abilities to diſcover Remedies proper for the Cure of Diſeaſes; or to expreſs the Condition and Violence of them, unleſs they move the Compaſſion of others by Complaints, and other obſcure Signals. How ſtrictly, therefore, is it incumbent on the Phyſician, who ſtudies the Preſervation of Mankind, accurately and diligently to undertake the Cauſe of this feeble Age, and inquire what Diſtempers it is moſt liable to, by what Symptoms they are to be diſcovered and foretold, by what Cautions they are to be prevented, and, laſtly, by what Art and Medicines to be ſubdued? For theſe Reaſons, ſays *Frederic Hoffman*, am I now induced, after all my former Labours, finiſhed with ſome little Succeſs, to ſay ſomething of the Diſeaſes of Infants; eſpecially as I find, that others, who have labour'd in the ſame kind of Studies, have

have left many Things untouched, and not well digested; or, at least, capable of Improvement. Nor do I flatter myself with less Hopes of Success in this, than my former Undertakings; as I shall not propose Things vain, imaginary, and founded on false Opinions, but true, and conformable both to Reason and Experience; which I have learnt from the Practice of half an Age and more.

But we will first shew the principal Diseases of Infants, before we enter upon an Inquiry into the Causes of them; and, in this Pursuit, choose *Hippocrates*, the great Father of our Art, for a Guide, who, *Lib.* 3. *Aphor.* 24. 25. and 26. thus describes the Distempers of that Age, with his usual Elegance and Conciseness: The Diseases, which the different Stages of Infancy are subject to, are generally these: To little Children, and those newly born, the Thrush, Pukings, Coughs, Watchings, Startings, Inflammations of the Navel, Runnings of the Ears, (to which we add Gripes) are familiar. When they begin to breed Teeth, troublesome Itchings of the Gums, Fevers, Convulsions, Diarrhœas happen, especially when they put forth the canine Teeth; and in those particularly, who, amongst Children, are very gross, and inclinable to be costive. But, when they are advanced in Years, (which may very properly be supposed to mean from four to ten, and longer) they labour under Inflammations of the Tonsils, inward Luxations of the Vertebra next the Head, Asthmas, Stone, round Belly-worms, Ascarides, pensile Warts, Satyriases, Stranguries, scrophulous Tumors, and other Tubercles, but principally the above-mentioned afflict them. Whoever considers these Things thoroughly, will perceive, that some Distempers are incident to every Age of Infants, which affect the Body differently, are of a longer or shorter Continuance, and threaten more or less Danger. For the Texture of the Body being changed by Age, and the manner of Living alter'd, the Disposition of the Subjects to receive Disorders must necessarily be varied, and the last Cause of Distempers differ widely from the former. If, therefore, we will treat of the Affections of Infants, we ought to include each Period of their Infancy, and not confine the Term, in a strict Sense, to those newly born, but extend it even to those of ten Years old; lest, whilst we are explaining one kind of Disease, we omit another.

Thus have I, from *Hippocrates*, enumerated the principal Diseases of Infants; some of which are discovered very easily, others not without Difficulty. My next Endeavour shall be to specify their proper Diagnostics; which, however, are so difficult and obscure, that even the most penetrating are deceived in their Judgment. Nor can Children themselves, for want of articulate Sounds, reveal to us the Nature of their Disorder, and its manner of hurting them; nor can we form a certain and unerring Judgment, either from the Urine, though examined with the greatest Care; or from the Beating of the Pulse, however accurately observed; or from the external Habit, which, as it easily changes for the worse, so does it suddenly for the better. For the Urine of Infants, whether in Health or Sickness, is often thick and turbid; and the Pulse may be altered from almost innumerable Causes, and either accelerated, or retarded, so as to impose upon the most skilful. But that the Physician may not be left uncertain, he should thoroughly examine the Women, who have the Care of the Children, whether they cry, toss about with Restlessness, pass both Day and Night without Sleep; whether their Eructations are acid or nidorous; whether they have Inclinations to vomit, and Vomitings, and of what sort; whether they are disturb'd with Hiccups and Agitations of the Nerves; whether they are afflicted with a Cough and Difficulty of Breathing; whether they discharge their Wind and Excrements freely; what Colour the Excrements are of, and of what Consistence, and the like. Further, he may receive great Light, by a narrow Examination of the Body from Head to Foot, whether there appears externally an inflammatory Redness of any Part, or any Species of Eruptions, or any other Disorder: He should, likewise, inquire diligently, whether their Breath is hot; whether their Fauces are affected with Pustules, or their Gums with a Tumor and Inflammation: For from these, as from known Principles, he may securely draw Conclusions, with respect to what he wants to discover.

In explaining the Causes of the Diseases of Infants, we shall not deviate from the Truth, if we ascribe the formal and material Cause thereof, first, to a lax and soft Habit of Body, a redundant Plenty of pituitous Juices, and the exquisitely delicate Sensation of the Fibres and Membranes: For, since, in this first Age, the solid Parts, by reason of their excessive Softness and Tenderness, cannot propel the Fluids with sufficient Celerity, and drive them on through the minute Canals, the Circulation of the Blood and Humours may be easily retarded, and the most salutary Business of Excretion suppressed: If this happens, the Juices do not only increase more and more in Quantity, but become inspissated, and acquire a salino-acrid Temperature. From such a Plenitude of Humours proceed not only Stagnations, and various Corruptions of the retarded Fluids, but, from the Pressure and Distention of the subjacent Nerves, violent Spasms are excited; by the Vehemence of which, all, both the solid and fluid Parts, with the whole Oeconomy of the Functions, are disturbed; and the tender Bodies of the Infants, which are very much disposed to receive even the slightest Impressions, are readily thrown into sudden and violent Disorders. From the Phenomena already related, it will be no difficult Matter to give the true Reasons of the principal Diseases in Infants. For, upon a Supposition of the Redundance and Stagnation of the pituitous Humours, it may be easily conceived, why this tender Age is subject to frequent catarrhous Defluxions, Rheumatisms, Oppressions of the Breast, liquid Stools, and Diarrhœas, Tumors of the Glands, humid Sordes of the Ears, and the like Affections. Upon a Supposition of the Depravity and Acrimony of the Juices, it is very evident, why Children are often afflicted with the Thrush, and other Eruptions of the Skin: And, lastly, upon a Supposition of the exquisite Sensation of the nervous System, it clearly appears, why they are tormented with Contorsions and Spasms, as well of the internal as external Parts, upon the slightest irritating Cause. For thus, on account of the sensible Texture of the intestinal small Fibres, they may fall into painful Gripes, very troublesome Distentions of the Stomach and Intestines, and dangerous Anxieties; and because the Membranes investing the Brain and spinal Marrow are easily irritated, they very frequently fall into epileptic Spasms, and convulsive Twitchings of the Extremities: Moreover, because the Lungs are furnished with very fine Ramifications of Nerves, these are frequently affected, and the Children very often labour under a convulsive Cough, and Asthma, so as to endanger Suffocation; and, lastly, because of the exquisite Sensation of the Membranes, which are spread internally in the Mouth, they are affected with violent Symptoms, from a Difficulty in Dentition.

Secondly, A predominant Acid has no inconsiderable Share in constituting the material Causes of the Diseases of Infants; and to this *Harris*, an excellent Author on the Subject of infantile Diseases, attributes so much, that he does not hesitate to deduce every Affection, familiar to that tender Age, from thence. For in many, both from the acid Smell of their Eructations, Vomits, and Excrements, it may be conjectured, or even sufficiently discerned, that not only the Milk, on which Infants subsist, easily becomes acid, and undergoes a Coagulation, but, also, that their Juices, which are thin and lymphatic, scarcely incline more to any Disposition, than the acid. For, as Men of a more advanced Age, endued with a phlegmatic Temperature, and turgid with a great Plenty of pituitous Juices, are more inclined than others to a noxious Coagulation of the Lymph, and very subject to that Species of Eruptions called *Purpura Alba*, which is thence generated; so is it the less to be doubted, but that, in Infants, an acid Intemperature of the Humours may much sooner and more easily happen.

Let us next inquire into the remote Causes: Now, if we consider the Debility of the Solids, we find that all Infants are in their own Natures altogether weaker than Adults, and of a more exquisite Sensation: There ought to be, however, some particular Causes, which may principally contribute to the extraordinary Weakness and Mobility of the nervous System, so that in some more, in others less, perverse Motions are excited. But nothing, in my Opinion, out of the whole Class of Causes, conduces more to this, than an hereditary Disposition, descended from one of the Parents to the Offspring. For this Reason it often happens, that Parents in an ill State of Health, or decayed thro' too frequent an Use of Venery, or too close an Application to Study, or worn out with Age, or corrupted with Luxury, propagate Children, who, from the first Act of Conception, are infirm, and have connate Defects, which no Art or Skill can cure. If this was not the Case, we should not have every-where so many goury and calculous Patients, who, in vain, seek Relief for their Miseries from Physicians.

But, if any Distemper is transferred to the Child from the Parents, this, I conceive, proceeds principally from the Mother: For it cannot be expressed, how inclined many pregnant Women, unless restrained by Prudence, are, to Appetites altogether depraved; and how much they are agitated by unnecessary Cares, vain Desires and Imaginations, Terror, Fear, Sorrow, Passion, Pride, Love of Revenge, and other Commotions of the Mind: From whence the Circulation of the Blood must necessarily be disturbed in various Manners, and a certain Violence impressed, detrimental to the most tender, and, at this time, tremulous Stamina of the Fœtus. The same Misfortune is to be feared, if the Mothers, given to Intemperance, overcharge their Stomachs with Food, and that often improper; or by spirituous Liquors often excite a Plethora, collected during their Pregnancy. To these we may add Women who are very subject to hysteric Motions, and, after Conception, often admit the Embraces of their Husbands; for too frequent Enjoyments of this Kind, according to some, are thought to conduce very much to the Generation of a sickly and weak Offspring.

In the very Birth, the tender Progeny is often debilitated, whilst the Mothers, either through Fear or Indolence, retard, or, thro' Impatience, accelerate, the Exclusion of the Fœtus. The same happens from hot Remedies, promoting the Birth, or from the ignorant Performance of Midwives, by a violent Extraction of the Fœtus, and some Injury or other thereby done to it; as

the Sutures of the Head, laxly united, are often compreſſed by thoſe careleſs Women. Hence Epilepſies, Palſies, and other dreadful Symptoms, attended with Danger of Death, are excited.

In Children newly born, the tender ſmall Fibres of the Nerves are, alſo, eaſily ſtimulated to anomalous Motions, if, at any time, they are either ſtruck with an unexpected Terror, as by ſudden Clamours, being awakened out of Sleep, or by jocoſe Impertinences of Nurſes made by Words and Geſtures; or if they who ſuckle them, being diſturbed by any Affection of the Mind, eſpecially Terror and Anger, give them the Breaſt too ſoon. Hence nothing is more common, than for Spaſms of various Kinds, Vellications of the Nerves, Corroſions, Heats, griping Pains of the Inteſtines, and Inflammations, to follow immediately, which ſufficiently manifeſt themſelves by Inquietudes, Watchings, Agitations of the Hands and Feet, Startings, Cryings, and even by epileptic Convulſions.

But, beſides theſe, in debilitating and diſturbing the Strength of the Solids, much may be attributed to the exceſſive Intemperature of the Air, eſpecially Cold, or the ſudden Changes of Heat and Cold ſucceeding each other; which, as they are very prejudicial to Perſons more advanced in Years, who are afflicted with a Weakneſs of the Nerves, by ſuppreſſing Tranſpiration, ſo do they much more threaten the moſt dangerous Conſequences to Infants, who themſelves know not how to guard againſt the Injuries of the Air. Nor, laſtly, on the other hand, muſt we exclude a too curious, hot, and delicate Regimen of Infants, and a frequent Uſe of Phyſic without any Neceſſity. For thus Children, unaccuſtomed to the open Air, are not only incapable of bearing the leaſt Breeze, but their very Conſtitution is, in general, greatly alter'd by Medicines, particularly the more active, and diſturbed in regulating the Motions of the animal Oeconomy. And, ſince this is the common Practice of rich and noble Families, it is no Wonder, that their Children are far weaker, and more ſubject to Sickneſs, than thoſe of mean Birth, who are brought up in a manner directly oppoſite.

But all theſe Things have their Effects, not only on ſucking Children, but, alſo, are to be underſtood, in the ſame manner, of thoſe ſomething older: For the Strength of the Solids being impaired, and a Diſpoſition to Diſtempers contracted either in the Mother's Womb, or from a Fault in the Nurſe; it is obvious, that neither leſs nor fewer Diſeaſes may ſucceed, after they are weaned, as, to our Sorrow, numberleſs Examples of diſtemper'd Infants fully demonſtrate.

The Cauſes, which conduce to the Generation of a Redundance of Acid, are again various, ſome of which we have already enumerated. But to theſe ſhould principally be referred every thing, which corrupts the Milk, either in the Nurſe, or the ſucking Infants, and makes it groſs and impure, or entirely condenſates it into a Curd. On the Part of the Nurſes, this may happen ſeveral ways, and principally, if they indulge inordinate Paſſions of the Mind, eat plentifully of Summer Fruits, Cheeſe, Sallads, acid, acrid, and ſalt Food, and drink too freely of ſour Wines, and Brandy, or Spirits of Wine: For by theſe the Milk is render'd viſcid, and groſs; which, when given to Infants, ſoon grows acid, and not only diſpoſes to obſtinate Obſtructions of the Primæ Viæ, and Meſentery, but, alſo, greatly promotes a Generation of the Stone in the Bladder, which is not uncommon to this Age; not to mention, that by too free an Uſe of ſpirituous Liquors, the Milk ſuddenly conceives an Heat, and, being tranſmitted thro' the Breaſts to the ſucking Infants, may excite burning Fevers. Nor is the Quality alone, but the exceeding Quantity of Food, alſo, prejudicial; whilſt Nurſes ſtuff themſelves beyond meaſure with Meats, tho' the beſt, or drink too thick Malt Liquors, and but ſparingly of them, and do not uſe ſufficient Exerciſe, but rather live in a State of the utmoſt Idleneſs; by which means a thicker Conſiſtence cannot but be produced in the Milk, and a Loſs of Health occaſioned. Violent Cold, careleſly admitted to the Breaſt, has the ſame injurious Effect, as, by contracting the Tubes of the Breaſts, which convey the Milk, it greatly diſpoſes it to Inſpiſſation. Beſides, this milky Liquor is altered in an extraordinary manner, and diſpoſed to receive a vitiated Diſpoſition in the Stomach of ſucking Infants, if the Mothers or Nurſes admit the unſeaſonable Embraces of their Husbands, while they give Suck, or if their Menſes, which ordinarily ceaſe in pregnant Women, and thoſe who give Suck, begin to flow: For then the Children generally become languid, full of Tears, and weak, and ſeem by their Geſtures to indicate ſufficiently, that Sucking ſhould be deferred, till theſe ceaſe, and the Mother recovers her former Vigour. Nor, laſtly, is the Milk a little corrupted, when the Nurſe is ſubject to Hyſterics, or afflicted with a Coſtiveneſs; and from Spaſms and Flatulences, collected in the Primæ Viæ, various Accumulations of Blood and Humours are produced in various Parts of the Body.

On the Part of the Infants, many Things, likewiſe, will produce the ſame ill Effects: But they are principally affected, when they take too much Aliment, and when, being out of Temper, they are obliged to ſuck againſt their Inclinations, or are overſtuffed with viſcid Pap: For when Infants, and thoſe eſpecially, who are tender and ſmall, cannot digeſt ſo great a Quantity; this frequently generates acid Fæces, from whence the Tone of the Stomach and Inteſtines is deſtroy'd, and cardialgic Inflations of the Stomach, Straitneſs of the Breaſt, and the like, are induced, which greatly interfere with Health. To this Purpoſe, *Ettmuller*, in his Diſſertation, intituled, *Valetudinarium Infantile*, has truly ſaid, "Mothers often deſtroy their Children by feeding them "too much with a ſuperfluous and almoſt coagulated Milk: "For all exceſſive Repletion, as of Bread to Adults, ſo Milk "to new-born Children, is very detrimental." It is, likewiſe, a very great Error, to feed them with Varieties of Meats, and thoſe often incongruous, acid, acrid, or ſalt, and with much unneceſſary Fleſh, or to give often Wine, as the Cuſtom is, in order to ſtrengthen them, and quiet their Cries; for theſe Mixtures, with the Milk, by cauſing a Coagulation, very much weaken the Stomach, and produce many Diſtempers. To this may be added, the frequent Change of Milk and Nurſes: For, as Adults cannot well bear the Alteration of Meat and Drink, ſo, for the ſame Reaſon, is it to be expected much leſs in the tender Bodies of Infants.

All theſe Errors, in the time of Sucking, generally purſue and affect Children, after they are weaned, or, at leaſt, exert themſelves at that very time, eſpecially when, neglecting all Rules of Diet, they ſuddenly paſs from a thin to a more groſs Aliment, to eating of Fleſh, and other improper Aliment.

With reſpect to the Prognoſtic; I muſt firſt remark, that Infants, who have not been generated by tender, delicate Parents, nor thoſe diſtemper'd both in Body and Mind, eſpecially Mothers, are uſually more firm in Body and Mind, more briſk and robuſt, than others; nor do they ſuffer ſo eaſily from external Cauſes; nor are they ſo readily affected with Diſeaſes; and, when they are, the Cure is more ſucceſsful. I apprehend, the ſame Prognoſtic might be made, with reſpect to healthy Children, who are not confin'd exactly and nicely in their Diet and Regimen, but accuſtomed to ſucceſſive ſeaſonable Alterations: For they may be ſo formed, and, as it were, hardened from their Infancy by Cuſtom, as not to be ſo eaſily affected by external Injuries; which is very evident from the Children of Ruſtics, and poor People, who neither ſo ſuddenly contract Diſeaſes, nor are afflicted with ſuch violent and laſting Diſtempers, as the delicate Infants of Perſons of Diſtinction. Farther, it muſt be obſerved, that all Diſeaſes of Infants, though they are innumerable, may be more eaſily cured, than thoſe of Adults, eſpecially if they are properly treated: For, as the very tender Bodies of Infants readily receive a noxious Impreſſion from unſalutary Things; ſo, on the contrary, they very ſoon are ſuſceptible of a better from Medicines and Things agreeable to Nature; ſo that there would be no Neceſſity to lament the Death of ſo many Children, if Phyſicians did not often procure it by Miſconduct. Beſides, it is a conſtant Obſervation, that Infants who are corpulent, and have a ſpongy Fleſh, and eat large Quantities of Milk, or have a Nurſe full of Juices, and corpulent, are more frequently afflicted with Diſorders than others, and are principally ſubject to the Rickets, convulſive Cough, and Thruſh; whilſt, on the contrary, thoſe that are lean, more frequently fall into Fevers and Inflammations. Thoſe that are laxative, generally enjoy a better State of Health, than thoſe who are coſtive. And, laſtly, ſince convulſive Twitchings of the Extremities, and Gripes, deprive moſt Infants of Life, it muſt be obſerved, that it is a very bad Symptom, if theſe are attended with long-protracted Watchings.

The Regimen of young Children.

Whoever would avert the more violent Diſeaſes of Infants, ſhould be particularly cautious in removing, from the firſt Moment of their Birth, all the Cauſes, which are capable of generating Diſtempers, and expoſing their tender Bodies to Danger. I hope, therefore, it will be of ſome Importance, briefly to lay down ſome Rules for the Direction of the Diet, Regimen, and other Non-naturals, as well with regard to the Infant, as the Nurſe; leſt, from an imprudent Uſe of theſe, innocent Children ſhould too early lay a Foundation for future Diſorders, without any Fault of their own; and, in their very Infancy, contract the Principles of a weak Conſtitution. And this ſeems the more neceſſary, in order to prevent Repetitions; for there are ſome general Precautions, which may hereafter be apply'd to ſome Uſe, in the particular Explication of ſeveral Diſeaſes.

As ſoon as the Child is brought into the World, it ought, immediately after the Ligature, and cutting of the umbilical Veſſels, to be waſhed in a warm Bath, prepared of Water alone, or a Mixture of Wine and Water; which is attended with this Advantage, that it promotes an equal Diſtribution of the Blood thro' the whole Body. The Midwife, too, ſhould be allowed a convenient Place and Time, that if there appears, in the Head, or any other Part of the Body, any thing ill-formed by the Birth, ſhe may faſhion it better, and reſtore it to its natural Shape. Let her, therefore, examine every Limb by gentle and frequent ſtroking them; and often contract and expand the Legs and Feet, that whatever Mucus, or Lentor, reſides in the Articulations, may be diſſipated: She ſhould, likewiſe, often ſtroke the Belly with the Hollow of her Hand; and, by gently rubbing the Parts deſtined to Excretion, excite them to a Diſcharge of the Fæces.

But, above all, ſhe muſt obſerve, whether the Child is ſtrong and robuſt, or weak and infirm. This may be diſcovered from its weak Voice and Reſpiration; or, if the Mother is of a tender and morbid Conſtitution, and, in the Courſe of her Pregnancy, was affected with various Diſorders of the Body and Mind, if the Motion of the Fœtus, while in the Womb, was weaker than it ought to be, or if the Birth was difficult, and happen'd before the uſual time, in the ſeventh or eighth Month, we may conclude the Child to be weak: For Infants are, by all theſe things, debilitated, and rendered ſubject to Diſeaſes; whilſt, according to the wiſe Maxim of *Celſus*, Weakneſs paves the Way to all Diſtempers. If the new-born Infant, therefore, is, from theſe Symptoms, concluded to be preternaturally weak, it is proper to refreſh it, which is beſt done, after the received Practice of Midwives, by waſhing it with warm Wine, rubbing it gently, anointing the Breaſt, Back, and Vertex, with ſome analeptic Spirit, or by breathing ſtrongly into its Mouth, after chewing aromatic Cloves, and other Aromatics, or giving it a ſmall Quantity of *Rheniſh* Wine, or Cinnamon-water.

But as the tender Infant muſt be ſecured from the Injuries of the Air by ſoft Linen, and commodious Bandages, great Caution is requiſite, leſt out of Negligence, or Ignorance, ſome Damage be done, and a Foundation laid for future Diſorders: For, beſides that Infants frequently become gibbous from too great a Stricture of the Breaſt by Bandage, and fall into a Conſumption, or often vomit, and are ſubject to Ruptures, many Inconveniencies, on account of obſtructing the Circulation, and exceſſive Crying, proceed from too ſtrict a manner of binding the Body of a tender Child.

Having obſerved theſe things, the next Care is, that Infants, who, for want of a Diſcharge by Stool in the Womb, bring into the World their Inteſtines replete with many Excrements, be ſeaſonably purged: And now, as ſoon as they begin to breathe, and draw the circumambient Air into their Lungs, by that mutual and frequently repeated Action of the Diaphragm and Abdominal Muſcles, the Stomach and Inteſtines are not only compreſſed, and the Fæces, contained in them, diſpoſed to be diſcharg'd, but, alſo, by this ſalutary Act of Reſpiration, the Bile is forced into the Inteſtines, and particularly the *Duodenum*, which, then, from its detergent and ſtimulating Quality, which is very powerful, by gently irritating the ſenſible Membranes of the Inteſtines, excites them to a greater Contraction, and a Diſcharge of the Fæces; ſo that thoſe tenacious Excrements are often ejected by ſpontaneous Vomits and Stools. But if this does not happen, and the weak Nature of the Infants is not ſufficient of itſelf, Providence has kindly furniſhed the Mother, at firſt, with thin, ſerous, ſweetiſh Milk, termed *Coloſtrum*, whoſe deterging and diluting Quality opens the Body much better and ſafer, than the moſt ſelect Evacuants. And, though many Phyſicians adviſe to reject this *Coloſtrum*, as an impure Milk, and very prejudicial to the tender Stomach of Infants, my Experience convinces me, that no Danger is to be dreaded from it, unleſs that milky Liquor flows from an impure Spring, when the Woman, after Delivery, is either infected with any Contagion; or, immediately before the Birth, was afflicted with ſome violent Diſtemper; or, under the Difficulty of the Birth, agitated by convulſive Motions, and is ſtill indiſpoſed; or unleſs any other Circumſtances concur, which forbid the Uſe of ſuch a Medicine elaborated by Nature in the Breaſts of Women.

But if the Nipples of the Mother's Breaſt are ſo ſmall, that the Child cannot conveniently keep them in its Mouth, nor draw any Aliment from them, but by violent Attraction; or if they are ſo thick, that he cannot receive them; or if the Mother, after Delivery, has not a mind to give Suck, or has not Milk in her Breaſts ſoon enough; then it is abſolutely better, for the firſt four-and-twenty Hours, that the Body ſhould be freed by other ſuccedaneous proper Laxatives, from its *Meconium*, than immediately after the Birth to deliver the Infant to a robuſt, fat Nurſe, to be ſuckled. For, ſince the Milk of Women, who have given Suck for a long time, is generally of a groſſer Diſpoſition, and contains a large Quantity of alimentary and pinguious Subſtance, the tender Stomach muſt neceſſarily be overloaded with it; and from thence a more ready Opportunity given for an acid Crudity, and the Coagulation of the Milk. But there are ſeveral Methods of promoting Stools: Thus the Vulgar, in *Germany*, both from Cuſtom, and the Advice of Phyſicians, give Honey, with unſalted Butter, or Barley-ſugar, with Oil of ſweet Almonds, the firſt Days after the Birth. The *French* and *Dutch* preſcribe Wine, ſweetened with Sugar; others give other things for the ſame Purpoſe, with very good Succeſs. But, as theſe do not always anſwer the End, the following more effectual Cathartics may be exhibited in a ſmall Quantity, as ſolutive Syrup of Roſes; of Succory, with Rhubarb; of Peach-flowers; Manna, with ſome Grains of Cream of Tartar, in Broth, and the like. Nor do I diſapprove of their Practice, who with the ſame View of procuring Stools, recommend gentle Suppoſitories, or, when theſe fail, Clyſters. For the *Inteſtinum Rectum*, in Infants, is of ſo exquiſite a Senſation, that, upon the ſlighteſt Vellication, it ſoon parts with the contained Excrements. Whence *Boerhaave*, in *Aphor. de cognoſcendis & curandis Morbis*, 55. 1347. judiciouſly adviſes, to inject a Clyſter of Whey, with Soap or Honey.

There are, however, ſome Phyſicians, who object againſt this early purging off the Meconium; becauſe it is not neceſſary to diſcharge this out of the Body, before it has acquir'd an Acrimony, and Tendency to do Prejudice; but it can never be proved, that theſe Excrements of Infants, which remained for ſo many Months in the Inteſtines without any Detriment, ſhould be immediately diſcharged, as noxious, by a Cathartic. And, indeed, upon an accurate Inquiry, we find, that there is not that acrid and venomous Quality in the Meconium, as is generally thought; for it is contained, for ſeveral Months, in the very tender alimentary Tube; and yet does not produce an Inflammation, or Corroſion, of the Inteſtines, or excite them to diſcharge it, nor ſtimulate the Colon, where it principally reſides; nor does it, on account of any contracted Putrefaction, emit fetid Flatulences and Exhalations; nor is it dried with Heat, but, as the Diſſections of Infants, dying immediately after their Birth, ſhew, has the Conſiſtence of Honey, and is without Smell. And though I, with good Reaſon, reject a premature and forced Purgation of Infants, yet I think we ſhould act otherwiſe, when they neither can by their own natural Strength, nor the Aſſiſtance of the *Coloſtrum*, diſcharge the impure Sordes remaining from the Nutriment received from the Mother; for then it is abſolutely expedient to aſſiſt them with a gentle Stimulus, eſpecially ſince we have known, that violent Gripes, Inquietudes, Watchings, cardialgic Paſſions, Ruptures, obſtinate Coſtiveneſs, convulſive Motions, and other Symproms, have aroſe from too late an Evacuation of the *Meconium*, becauſe theſe Excrements not only very tenaciouſly adhere to the Coats of the Inteſtines, and often, as it were, glue them together, but, alſo, upon the Acceſs of Milk to them, even the beſt, aſſume a very different Nature, and that very prejudicial; whence many Women are induced to ſuffer their new-born Infants to faſt for twenty-four Hours; and in the mean time give them Honey and Butter, leſt the Milk, the Body not being yet purged, ſhould coagulate into a Curd.

Theſe things being obſerved, a proper Diet, and due Regimen, ſhould be directed for Infants: But Milk deſervedly conſtitutes the principal, and, as it were, univerſal Aliment, becauſe it ſupplies both Meat and Drink at the ſame time, is grateful to the Stomach, and for this Purpoſe was it wiſely ordered by the Creator, that healthy Women, immediately after their Delivery, ſhould accumulate a ſufficient Quantity of it in their Breaſts: But, ſince Infants are nouriſhed by the Breaſts, either of their Mother, or an hired Nurſe, it is certainly the Duty of Parents, and thoſe entruſted with the Health of Children, to take care, that they generate pure and temperate Milk. This is beſt obtained, if Women, who give Suck, obſerve an exact Method of Diet, and avoid all thoſe things, which communicate any Taſte to the Milk, even imperceptible to the Senſes, and eſpecially ſuch as are noxious, and capable of producing Diſtempers. Particularly let the Nurſe, if there is a Neceſſity for one, be healthy, in the Flower of her Age, from twenty to thirty, rather lean than fat, of good Morals, compoſed in Mind, neither melancholic, paſſionate, nor a Drunkard; nor, laſtly, let her Milk be too ſtale. Farther, let her obſerve a regular Diet; and, ſince Women, who are poor, and in a mean Situation of Life, generally undertake this Buſineſs, great Care muſt be taken, that they do not, at once, paſs from their former Method of Living, or from an hard and ſparing Food, to one which is delicate, ſoft, and plentiful; but let them rather accuſtom themſelves to it by Degrees. If, at any time, they are deprived of their Sleep, in the Night, by the Reſtleſſneſs of the Infants, let them recover that Loſs in the Morning; yet, with this Caution, that they do not indulge it too far, and lead a lazy, idle Life.

He that conſiders theſe things, will ſoon find, how blameable thoſe Mothers are, who, without any Danger, either from an Impurity of the Humours, and want of Strength, or any other Reaſon, deliver their tender Progeny to mercenary Nurſes, with a Barbarity exceeding that of the Brute Creation, and do not ſo much as conſider, whether they hire an healthy, or an unſound, a virtuous, or a wanton Nurſe. It is no Wonder, then, according to the Teſtimonies of the moſt approved Authors, that Infants are often affected with Ulcers, the Itch, ſcald Heads, Achors, and other cutaneous Diſorders, by Nurſes, whoſe Diet is irregular; or, if the Nurſes are afflicted with the Venereal Diſeaſe, that the Children contract the ſame; or, as I have often obſerved, are contaminated with Puſtules, and cruſtaceous Eruptions, and a thouſand other Infirmities. And ſince not only Defects of the Body, but of the Mind, alſo, are communicated by the depraved Milk, it certainly is not uncommon for Children born of the beſt Parents, ſometimes, to be corrupted with the worſt Morals. Thus I have known Infants render'd Drunkards, by ſucking the Milk of a Nurſe addicted to drinking. Nor do many Authors ſearch for any other Origin of the Drunkenneſs and Cruelty of ſome great Men, than Nurſes tainted with the ſame Vices. *Wirdig.* in *Medic. Spirit. Lib.* 1. *Cap.* 25. 56. has a very

very remarkable Paſſage to this Purpoſe: Children, ſays he, nurſed by ſtrange Milk, uſually degenerate, and aſſume the Nature of their Nurſes; from the Milk and Spirits of their Nurſes, they aſſume the Natures and Morals of their Nurſes: The wildeſt Animals are tamed by human Milk, from the mild Spirits which they ſuck in with the Milk; as, on the contrary, Men fed with Beaſts Milk become beſtial and fierce, as appears from *Romulus* and *Remus*.

The Quantity of Milk to be ſucked cannot be exactly determined; but the general Practice of Women is, to give the Child the Breaſt, for the firſt Month after its Birth, every two Hours; after three or four Months, ſix or ſeven times; and at laſt only twice or thrice, in a Day, till the Year is completed. But here, in general, I would obſerve, that Women ſhould be cautious of giving the Breaſt too often, and unneceſſarily, but rather, by all means, when they are too greedy, remove them from it, becauſe they are ignorant what Quantity they ought to take; otherwiſe thoſe Symptoms may ariſe, which have been mentioned above.

It often happens, that the Temperature of the Milk is corrupted by various Cauſes: Precautions, therefore, are neceſſary to prevent impending Danger. But the Milk, as we have already obſerved, is moſt of all vitiated by a Terror of the Woman, who gives Suck; and, conſequently, the beſt Preſervative againſt the Injury hence ariſing is, not to give the Breaſt immediately after a Fright. The ſame holds true with reſpect to Anger: And ſince the Injury done to the Milk by violent Paſſion, upon a long Continuance in the Breaſts, endangers both the Child, and the Nurſe, to prevent this, the Milk ſhould be ſeaſonably extracted. It ſometimes, alſo, happens, that either the Infant is incapable of ſucking the Milk out of the Breaſts, or the Nurſe, from Illneſs, or ſome other Cauſe, of affording it. In this Caſe other proper Aliments ſhould be provided; amongſt which are to be accounted ſweet Whey, Barley-broth, Water-gruel, Emulſions of Almonds, or Barley boil'd to the Conſiſtence of a Pulp, with the Addition of the Yolk of Eggs, and the like.

The ſame things are proper, and may be uſed, if the Milk alone is not ſufficient to ſupport the Child; though there are other Aliments contrived for this Purpoſe, ſuited to various Countries and People. The moſt common among us are, ſeveral Kinds of Paps, made of Flour, or Crums of Bread, boiled with Milk or Water, and reduced to a tenacious, and glutinous, and viſcid Conſiſtence. But whether Infants, eſpecially the very tender ones of Families of Diſtinction, on account of the Debility of the Stomach, are capable of diſſolving perfectly this viſcid Food, is what I very much doubt, and rather think, that by them the Way is often paved for Obſtructions of the Viſcera and Meſentery: Thus *Hildanus*, *Cent. 6. Obſ.* 34. obſerved a deſperate Obſtruction of the Pylorus from the Uſe of ſuch Pap. Much leſs ought a weak Stomach to be overcharged with ſuch Aliment, or a freſh Quantity of it again exhibited unſeaſonably, before the former Aliment is digeſted; becauſe we have made it appear, that, by this means, the Infant is greatly injured. Nor can I approve of that pernicious Cuſtom of ſome Women, who give Children Pap, rolled firſt in their Mouths, and mixed with the Saliva; for though this Maſs, impregnated with the Saliva of an healthy Mother, may ſeem more eaſily convertible into Chyle, agreeable to the tender Age of the Child, I cannot heartily approve of it, for the following Reaſons; becauſe, by ſuch Maſtication, not only the moſt ſubtle Part of the Pap is ſuck'd out, and conſumed, but, alſo, any Infection of the Saliva, and corrupted Teeth, which, from the great Subtilty of the foreign Matter, are ſcarce perceptible, are eaſily communicated to the Infants.

When Children, under this Diet, are arrived at ſuch an Habit, that they ſeem fit to take and digeſt other Aliments, which happens within the Space of a Year, or ſomething more, they may be weaned: But, at that time, no leſs than before, great Care ſhould be taken, that the Misfortunes, hitherto eſcap'd, do not oppreſs the tender Patient; but principally a large Quantity and Variety of Food, and Aliments of an hard Conſiſtence, ſhould be avoided. Thus Food too ſalt, viſcid, auſtere, acid, and pinguious, too plentifully taken, and not well concocted, produce a greater Increaſe of acido-viſcid Crudities. So likewiſe, in Summer, Prejudice is done by crude and immature Summer Fruits, which commonly conceal, in the Contexture of their Particles, a latent Acid, which, by irritating and ſpaſmodically afflicting the Fibres of the Inteſtines, may excite Diarrhœas, Dyſenteries, Gripes, and other Symptoms, particularly at the Approach of Autumn. The ſame Conſequence attends Bread not duly fermented, or too new, not excluding ſugar'd and ſweet things, by which the Chyle eaſily degenerates into viſcid Fæces, by which Worms, Gripes, Hardneſs of the Belly, and other troubleſome Symptoms, are induced.

It now remains, that we briefly enumerate ſome Preſervatives. I have found nothing more uſeful for the Prevention of the Diſeaſes of Infants, than to give often, not only to the Nurſe, but the Child alſo, in a large Quantity, Infuſions of Herbs which ſweeten the Blood, made with Water: For this Uſe I cannot but earneſtly recommend an Infuſion of Betony, Root of Viper-graſs, Liquorice, Fennel-ſeed, and the like: For thus the Milk is render'd thin and fluid, ſo that it cannot obſtruct the ſmall Veſſels; but may be more freely convey'd through all the Tubes of the Body, and the winding Ducts of the Glands. Nor do they act amiſs, who, ſometimes, after a Meal, eat a Quantity of Seeds of Fennel and Aniſe, which increaſes the Milk, and prevents Gripes in the Infant.

Since the Milk, ſtagnating in the Stomach and Duodenum, ſoon grows acid, becomes corroſive, and is coagulated, and thus excites a thouſand dangerous Symptoms; it requires the utmoſt Care and Diligence, to prevent this ſo dangerous Coagulation of the Milk: For which Purpoſe Powders are extremely efficacious, which contain Crabs-eyes, Egg-ſhells, the Root of *Florentine* Orris, Saffron, the Seeds or Oil of Aniſe, Sperma-ceti, Cinnabar, and a Solution of Crabs-eyes; of which a Doſe may properly be exhibited twice or three times a Week. But, ſince the Health of Infants greatly depends, alſo, upon a due and ſufficient Diſcharge of the Excrements by Stool, and a Preſervation of the Tone of the Stomach and Inteſtines; ſometimes gentle Laxatives, if neceſſary, ſhould be interpoſed, by which the Injuries from coagulated Milk are, likewiſe, in a great meaſure, prevented.

But I here affirm, that all ſtrong and acrid Purges, as Reſin of Jalap, Scammony, black Hellebore, and the like, are improper, and abſolutely pernicious, to Infants; as they diſpoſe, not only to Gripes and Coſtiveneſs, but, alſo, to Atrophy, and convulſive Affections. Let Infants, likewiſe, abſtain from Aloes; becauſe of the two great Heat, and Ebullition, which it excites; and, alſo, from the Leaves of Sena, becauſe, by the more Remedies the Belly is irritated to Excretion, the greater Difficulty, afterwards, of going to Stool, and Coſtiveneſs of the Belly, follow: Nor are theſe Things prejudicial only, when given to the Children, but, alſo, when given to the Nurſes; for, being mix'd with the Milk, they often excite Convulſions in the tender Infants: Hence *Sydenham* rightly ſays, The Epilepſy of Children often attacks them, in the firſt Month, from too frequent Stools; and *Galen*, in his Time, juſtly aſſerted, that the Bodies of Children ought not to be exſiccated with Purgatives, which would prevent their growing. And, really, it is inexpreſſible, how much the tender and weak Stomach of new-born Infants is prejudiced by Purgatives: For theſe Medicines, from their Acrimony, with which they abound, irritate the Fibres, diſpoſe the Stomach and Inteſtines to ſpaſmodic Strictures, and, at laſt, deprive them of their Tone and Strength; ſo that, then, Digeſtion being deprav'd, the Milk eaſily grows acid, and is corrupted.

I juſtly, and with very good Reaſon, eſteem Remedies of Mercury, however prepared, eſpecially when given to ſucking Infants in Powder, and in conſiderable and repeated Doſes, to be deleterious, and highly prejudicial; partly becauſe, by their Gravity, they firmly adhere, in ſeveral Places, to the Folds of the Stomach and Oeſophagus; and partly, becauſe, by the Addition of a more acrid Bile, and corroſive Acid, they aſſume a more violent and corroding Nature: From whence the Tone of the Inteſtines is not only ſurpriſingly injured, but a Foundation laid for ſuch Diſtempers as ariſe from the Weakneſs of the nervous Syſtem, and Spaſms; and the more ſo, if they are injudiciouſly given to Infants, who have a Collection of corroſive Humours in the Primæ Viæ, which may be known by the Greenneſs of the Excrements. The ſame Effect have other metallic Remedies, as Aurum fulminans, Preparations of Iron, Copper, and Antimonials, as Mercurius Vitæ, and the like; which ought, certainly, to be uſed with the utmoſt Caution, becauſe they are very treacherous and dangerous Remedies, which, as they are reſolved by the Humours reſiding in the firſt Region, exert their Operations, either in a more gentle, or violent manner, and, for the moſt part, almoſt deſtroy the tender Patient.

But, farther, not only the preceding violent Medicines lay a Foundation for bad Symptoms, but even the more gentle cathartic Syrups themſelves, and Powders, given too often, and in too large a Quantity, frequently affect the tender Bodies of Infants very much. Upon this Subject let us conſult *Cardan*, who, *de malo recentium Medicorum medendi Uſu*, *Cap.* 48. ſo very ſeverely reprehends the Practice of the Phyſicians of his own Time, for giving Syrups and Powders. " It is an Error, ſays he, when to " new-born Infants, with a View of relieving them, ſome ad- " viſe Syrups, ſome Powders, and others, other things; for it " is evident, that their tender Conſtitutions ought not to be " changed by any Quality, either purgative, or aſtringent: For " their very tender Compoſition of Members can ſcarcely bear " any thing but Milk, without Injury." Oil of ſweet Almonds, likewiſe, mixed with Sugar, often adminiſter'd, is not abſolutely free from ill Conſequences, as *Harder* aſſures us, in *Apiario Obſ. Med.* 99. where he relates, that a certain Infant, to whom the Women often gave Oil of ſweet Almonds, mixed with Sugar, from its Birth, being ſeized with almoſt continual Gripes, and, at length, with an Epilepſy, died in a few Weeks; and that, upon opening the Body, there were found in him, not only green Excrements, ſuch as he had diſcharged, whilſt alive; but

but the inferior Part of the Ilium was, alſo, affected with a manifeſt Gangrene. And *Weiſius*, in his Diſſertation *de Abuſu Purgantium in recens natis*, furniſhes us with an Inſtance, much of the ſame Kind, of an Infant who died of the like Diſorder, by taking Oil of ſweet Almonds every other Day.

Of Gripes and Flatulences in Children.

Of all the Afflictions which torture tender Infants, violent Pains of the Abdomen, and Inflations, moſt frequently occur; which ſhew themſelves, principally, by theſe Signs: Firſt, The Patients, being very unquiet, toſs and twiſt themſelves into Variety of Poſtures, and kick with their Feet; are averſe to the Breaſt, and almoſt continually crying; the Belly is viſibly turgid with Flatulences, and their Reſpiration is ſhort and difficult; Eructations, ſometimes, burſt impetuouſly out of the Mouth; the Belly is generally coſtive; or, if they have Stools, the Excrements are generally viſcid, tenacious, more or leſs tinctured with a green and æruginous Colour; or fluid, like Water, and yellow; and ſometimes grumous, like the indurated White of an Egg; and ſometimes ſo acrid and corroſive, that the Anus is excoriated, and a perpetual Teneſmus excited.

The immediate Cauſes of theſe exceſſive Tortures are, principally, the ſpaſmodic Strictures of the inteſtinal Membranes, which are of a nervous and very ſenſible Nature: By theſe Strictures, continuing for a long time, the natural Strength, Tone, and periſtaltic Motion, are ſo weaken'd, and deprav'd, that the Excretions, both of the Flatulences and Excrements, are not only retarded, but, alſo, the Digeſtion, Correction, and due Secretion, of the Aliments is impeded: And, tho' theſe intenſe Strictures and Criſpatures of the nervous Membranes are very painful of themſelves; nevertheleſs, becauſe the Flatulence, or ſubſequent Effect of the Spaſms, induces a great Diſtention of the Inteſtines, it neceſſarily follows, that the Oeconomy of all the Functions in the whole Body is ſurpriſingly diſturbed.

The mediate Cauſes of theſe Affections are generally violent Commotions of the Mind, by Anger, Terror, Fear, and Sorrow, in thoſe who give Suck; which, firſt of all, and immediately, exert their Power on the nervous Parts of the Body, principally of the Stomach and Inteſtines, perverting their natural and equable Tone, either by too great Relaxation, or Stricture: And whenever Mothers, during their Pregnancy, are often, and violently, ſeized with theſe pernicious Perturbations of Mind, the Infants, directly from their Birth, are more ſeverely, and for a longer Continuance, affected with excruciating Pains of the Belly.

Acute Pains, and Spaſms of other Parts, are no uncommon Cauſes of Gripes, and Inflations: Thus, frequently, troubleſome Flatulences of the Belly, and Gripes, with preternatural and undigeſted Stools, attend a difficult and painful Dentition of Infants. A careleſs Admiſſion of Cold to the Belly and Feet, by which a free Tranſpiration is not only hinder'd, but the very Texture of the nervous ſmall Fibres injured, and diſpoſed to cauſe Stagnations, alſo, frequently excite theſe Diſorders.

It very often happens, likewiſe, that a too frequent Uſe of Laxatives, and, much more, an incautious Uſe of Purgatives, lay a Foundation for ſuch Diſorders; and this I may obſerve to be the Caſe, not only of Infants, but Adults; for ſometimes, when the latter, upon perceiving an Heavineſs, have been treated with Purgatives, they have not only been tormented with intolerable Pains of the Belly, but have often had their Bellies tumefied and inflated, like dropſical Perſons; ſo that the highly ſenſible alimentary Duct could afterwards ſcarcely, with the utmoſt Care, be reſtor'd to its natural State.

If we examine into the more remote Cauſes, we find that griping Pains of the Inteſtines often proceed from the Meconium being too long retain'd, and not ſufficiently purged off by the Coloſtrum, or ſome other gentle Evacuant; ſince this, accumulated, diſtends the Fibres of the Inteſtines, excites Flatulences, and, being render'd more acrid by the Milk, ſtimulates the ſenſible Membranes of the Inteſtines, ſo as to excite a painful Stricture. Another Cauſe may be, the Milk itſelf corrupted in the Primæ Viæ, growing acrid, and collected, as it were, into Globules, which, by a Mixture of the Bile, and gaſtric Juices, aſſuming a cauſtic Nature, pricks, corrodes, and, as it were, tears the Inteſtines. But this noxious Acrimony of the Fæces, and acid cauſtic Diſpoſition, ſhews itſelf ſufficiently, not only by the green Colour, with which they are tinctur'd, and their Corroſion of the Veſſels, into which they are receiv'd, when diſcharged; but, particularly, by an Experiment, in which the green Colour of the Excrements is changed into yellow, by an Affuſion of Oil of Tartar *per Deliquium*; to ſay nothing of Dogs, who, otherwiſe, readily devour the natural Fæces of Infants, but will not touch theſe green Excrements.

Laſtly, In Infants, eſpecially after Weaning, Summer Fruits, Aliments prepar'd with Honey, too much Sugar, and other things, with which Children willingly overcharge themſelves, contribute very much to induce ſpaſmodic Pains of the Inteſtines: For hence, a Fermentation being raiſed in the Primæ Viæ, very acrid Juices are readily generated, and upon Anger, and taking cold, a large Quantity of uſeleſs Sordes is accumulated; whence Anxiety about the Præcordia, Vomitings, violent Pains of the Inteſtines, and bilious Fevers, are excited.

As to the Prognoſtic, the following Circumſtances ſeem moſt worthy of Obſervation: The longer theſe exquiſite Gripings of the Inteſtines continue, and the more frequently the ſenſible Bodies of tender Infants are affected therewith, the more ſevere and dangerous they uſually are: For Fevers, Palſies, Aſthmas, epileptic Convulſions, and other mortal Symptoms, are eaſily aſſociated with them, which, if they are not ſoon check'd by convenient Remedies, quickly deſtroy the miſerable Patients: Nor, in prognoſticating the Event, is it of ſmall Moment, to conſider the Condition of the affected Subjects: If they are deſcended from weak Parents, and Mothers diſpoſed to hyſteric Spaſms, it is to be feared, the Diſorder will affect the Infants more violently, and return more frequently.

The Cure.

The principal Intention of the Phyſician, in order to cure the griping Pains of Infants, is to abſorb, correct, and gently evacuate, the corroſive Acid of the Primæ Viæ: For which Purpoſe, if the Diſorder, as it generally happens, is cauſed by corrupted or vitiated Milk, it is extremely neceſſary to change the Nurſe; or great Care muſt be taken, that ſhe does not, at that time, indulge herſelf with flatulent Food, Summer Fruits, Pulſes, Wine, Acids, or feculent Aliments; becauſe, by all theſe, the Affection is either much increaſed, or render'd more obſtinate. At that time, alſo, gentle Laxatives, if ſhe is coſtive, are proper for the Nurſe: Among theſe I would, principally, recommend Preparations of Rhubarb: Thus, for Example, half a Dram of the Extract of Rhubarb, diſſolved in half an Ounce of the Liquor of Terra Foliata Tartari, and Cinnamon-water, may be taken Morning and Evening, in the Quantity of ſixty Drops, or more. Nor, at this time, are carminative Medicines leſs beneficial to the Nurſe; and Infuſions, after the manner of Tea, drank in a large Quantity; as they are of great Efficacy in diluting and reſolving the Thickneſs of the Milk: But, for the Infants themſelves, to temper the Acid lodged in the Primæ Viæ, I muſt recommend the following Powder, as of experienc'd Virtue:

> Take of Crabs-eyes, Mother of Pearl, diaphoretic Antimony, the Root of *Florentine* Orris, each half a Dram; Saffron, three Grains; Oil of Aniſe, and of Mace, each two Drops: Let five or ſix Grains be taken every two Hours, in a Decoction of Hartſhorn; or in ſome antiſpaſmodic Water, as that of Lime-flowers, of black Cherries, or Baum, with a little Diaſcordium.

But nothing relieves more than Clyſters, which both, by their kindly Warmth, relax the Spaſms of the Inteſtines, and remarkably diſſipate and carry off the Flatulences, which are the Cauſe of, or, at leaſt, accompany the Gripes. For this Purpoſe I have often, with great Succeſs, preſcribed Clyſters prepar'd of Marjoram, Chamomile-flowers, carminative Seeds, thin Water-gruel, and a ſufficient Quantity of Oil of Chamomile; or a ſufficient Quantity of a Decoction of Dill, render'd more efficacious by the Addition of a few Drops of the Oil of Aniſe. The ſame Intention is excellently anſwer'd by the internal Exhibition of Preparations of Rhubarb; ſuch as Syrup of Succory, with Rhubarb: The Medicine before preſcrib'd for the Nurſe, exhibited in a ſmall Doſe, and an Electuary, prepar'd of equal Quantities of Rhubarb, and Crabs-eyes, together with ſolutive Syrup of Succory, or Roſes, and the Addition of a proper Quantity of Manna; to be taken in Barley-water. And I cannot, in this Place, but approve, and greatly commend, the Method of *Heurnius*, who, in *Method. ad Praxin, Lib. 2. Cap. 26.* aſſerts, that he had found by Experience, that, by one Scruple of Aniſeed, pounded in a groſs manner, new-born Children were moſt commodiouſly cleanſed from green Bile, and fetid Phlegm, and, at the ſame time, that the violent Pains of the Belly were quieted, if it was given with the firſt Spoonful of ſugar'd Pap.

If there is a Suſpicion of Worms breeding in the Inteſtines, it is proper to give the Remedies, which, under the Article Vermes, we ſhall ſhew accommodated to kill and diſlodge theſe hoſtile Animals.

External Remedies ſhould, alſo, be applied, againſt the Violence of this Diſorder: For this I would recommend Emollients; ſuch as the Flowers of Chamomile, Elder, Melilot, and Mullein; the Seeds of Fenugreek and Dill; as, alſo, Saffron, boiled in Milk, and applied to the Abdomen, either in a Swine's Bladder, or in a Linen Cloth: Nor is it an improper Piece of Practice, to anoint the Region of the Navel with diſtil'd Oils of Cumin, Carraway, Aniſe, Chamomile, and Fennel; or the expreſſed Oil of Nutmeg, or Oil of Chamomile, prepar'd by boiling, mixed up with ſome Lard.

As for the neceſſary Cautions in this Diſorder; Care muſt be taken to abſtain from all ſalt, acrid, and ſtrongly ſtimulating things, eſpecially Purgatives; for it is very dangerous to convey the highly acrid Sordes, before they are duly corrected, through the long Canal of the Inteſtines. But reſinous things are endued with highly noxious Qualities, ſuch as Reſin of Jalap, which is

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moſt imprudently adminiſtered to Children ſubject to Diſorders, in conſequence of their ſucking corrupt and acrid Milk; and though this Reſin ſometimes diſcharges a large Quantity of Humours, yet it proves highly injurious by its continued Stimulus, and Irritation of the Inteſtines. Purging, which, however, is rarely requiſite, is much more ſafely performed by the Powder of white Mechocan, exhibited with ſome proper Syrup: After which the Sordes collected in the Stomach and Duodenum are to be corrected by Abſorbents and Correctors, and eliminated by Preparations of Manna, or Rhubarb, or by means of Clyſters.

Theſe Gripes of the Inteſtines are often produced not ſo much by a material Cauſe lodged in the Primæ Viæ, as by a violent Agitation of the Nerves, from an acute Pain, for Inſtance, in other Members, in conſequence of the Conſent of the Parts: In which Caſe, laying aſide all Laxatives, the firſt and principal Intention of Cure is, to ſooth and alleviate the Pains and Spaſms.

No Medicines, as we have already obſerv'd, are more juſtly commendable for the happy Effects they produce, than Clyſters; ſince they immediately reach the Inteſtines, and afford great Relief, as well by quieting as diſſipating the Flatulences, if the Intention for which we inject theſe warm Fomentations, is attended to, ſo that in preparing them we make a proper Choice. For thus, if the Excrements diſcharged by Stool, are liquid, and ſo highly acrid, that they not only occaſion violent Gripes, but, alſo, an Excoriation of the Anus, Clyſters of Milk and Sugar are ſerviceable, or Turpentine diſſolved in the Yolk of an Egg, which, by moderating the Acrimony, prevent the Corroſion of the large Inteſtines, and the Anus. But if a viſcid Sordes, lodg'd in the Inteſtines, lays the Foundation for Gripes and Flatulences, Clyſters, endued with a greater Power of reſolving, ſhould rather be uſed, which, by ſtimulating the large Inteſtines, cauſe the Mucus, which lodg'd in the reſt of the Inteſtines, to deſcend afterwards more eaſily. For this Intention a Clyſter may be prepared of one or two Ounces of a Decoction of Chamomile-flowers, with the Addition of a Dram or two of Honey of Rue, half a Dram of *Venice* Soap; and a few Drops of the Oil of Aniſe.

Laſtly, ſeveral Women, tired with the Cries of Infants, to procure Sleep, in this Diſeaſe, give various Sedatives, ſuch as Mithridate, the Requies Nicolai Myrepſi, and ſome others; but with the greateſt Hazard, and a very bad Effect; for, beſides many ill Conſequences, a wonderful Dulneſs of Mind uſually follows the imprudent Uſe of Opiates.

Convulsions *of* Children.

Under the Article Epilepsy we have fully deſcribed that Diſorder, and Convulſions; and there, by concluſive Arguments, proved, that the Cauſe of one conſiſts in a Spaſm of the Dura Mater; and that of the other in a ſpaſmodic Stricture of the Membranes inveſting the ſpinal Marrow. However, that it may be known ſeparately, what Cauſes principally ſubject Infants to theſe terrible Affections, and by what Remedies they ought to be removed, I think it expedient, in this Treatiſe of infantile Diſorders, to add ſome things, which have a particular Relation to theſe Indiſpoſitions in Children.

Epilepſies, then, and Convulſions, are generally more incident to Childhood, which continues from the firſt to the ſeventh Year, for no other Reaſon, than that, in Infants, the nervous, membranous and exquiſitely ſenſible Parts, are compoſed of very tender and very moveable ſmall Fibres, which, being irritated, tho' in the ſlighteſt manner, are very eaſily thrown into irregular and ſpaſmodic Commotions: Wherefore it is uſual for an Infant, the more tender and young he is, and the greater Senſibility he has obtained from his Parents, which were either ſubject to Affections of the Mind, or formerly afflicted with the ſame Diſorder, to be ſeized more violently, and readily, with Epilepſies and Convulſions.

Beſides, theſe dreadful Affections eaſily happen, not only when the Mothers, who bore the Infants, have neglected a ſalutary Courſe of Diet, but, alſo, when the Nurſes, who give them Suck, are afflicted with Hyſterics, or other Paſſions of the nervous Kind; if they eat too plentifully of Sallad, Acrids, Summer Fruits, and other incongruous things, drink ſpirituous Liquors too freely, or feed the Children, committed to their Care, with too large a Quantity of groſs and impure Milk. Nor is it uncommon, as I have often obſerv'd in Practice, for ſucking Children readily to fall into epileptic Convulſions, and theſe difficult to be cured, when the Nurſes, ſeized with a violent Affection of Mind, eſpecially Anger, Terror, and Fear, offer the Breaſt immediately, before a due Diſcharge and Correction of the Milk; or if, at any time, the menſtruous Purgations come on, which, from the Beginning of giving Suck, to that time, they have been Strangers to.

Farther, Experience ſhews, that the Falling-ſickneſs, as well as Convulſions, are ſometimes excited, when any nervous Parts are agitated with Spaſms or Pains, and, at the ſame time, by means of the Conſent of Parts, the Membranes of the Meninges, and ſpinal Marrow, are affected. I have obſerved this to happen, principally, from the Meconium being retained in the Primæ Viæ, and, by its Continuance there, render'd more acrid; from Gripes, likewiſe, and Worms, lacerating the ſenſible Coats of the Inteſtines, and from Pains proceeding from difficult Dentition, and ſtrong Purges, eſpecially when often given: For all theſe things are of ſuch a Nature, that, in Patients endued with delicate Conſtitutions, they eaſily excite epileptic and convulſive Motions.

Laſtly, as thoſe Children are preſerv'd or freed from an Epilepſy and Convulſions, upon whom that Species of Eruption, called *Favi*, a Cruſta Lactea, or an Itch with Puſtules, appear; ſo theſe dangerous Diſorders very frequently draw their Origin from theſe Impurities, injudiciouſly repelled: The ſame holds true of the Small-pox, and Meaſles; of which an obſtructed Eruption, noxious Retroceſſion, or improper Cure, deſtroys numberleſs Infants, by Epilepſies and Convulſions.

The Convulſions and Epilepſies, which accompany acute, petechial and variolous Fevers, are bad Signs; and are not without Danger, when, proceeding from difficult Dentition and Gripes, they afflict for a long time. *Hippocrates, Sect.* 3. *Aphor.* 28. and Experience, teſtify, that whoever is not freed from theſe Diſorders about the ſeventh Year, is, for the moſt part, miſerably afflicted with them, till his very Death. Nor, laſtly, are we to neglect to take the Prognoſtic from the Frequency of the Fits; where it is to be obſerved, that the more frequent the Attacks, the more Danger there is, that, Nature being at laſt too much weaken'd, the Patient fall a Victim to his Diſorder.

The Cure.

As in all ſorts of Diſtempers, ſo in the Diſorders now under Conſideration, the Phyſician's whole Intention ſhould be directed to the Cauſes. If, therefore, this Diſorder takes its Riſe from a Fright, or violent Paſſion, of the Nurſe, laying aſide all ſpirituous, acrid, and irritating Remedies, it is proper to give what gently curbs the inordinate and ſpaſtic Motions of the nervous Syſtem; ſuch as Clyſters prepared of emollient and carminative Subſtances, antiſpaſmodic Powders made up of the Pulvis Marchionis, Cinnabar, and a little Muſk, and either exhibited alone, or in ſome Water of a ſedative Quality; ſuch as Water of the Lime-tree, Lilies of the Valley, Cowſlips, or Orange-flowers.

But the Cure is very different, when the Diſorder ariſes from the Milk, corrupted and rendered corroſive in the Infant; for, in this Caſe, beſides demulcent Clyſters, abſorbent Powders, exhibited with Saffron, Muſk, or a ſmall Quantity of the Extract of Caſtor, are of ſingular Service; eſpecially if, at the ſame time, a pretty rich Decoction of Harts-horn is uſed for Drink. But, if the Primæ Viæ are to be purged from any Sordes they contain, this End may be commodiouſly obtained by a Decoction impregnated with Manna, ſucceſſively exhibited with a few Drops of the Oil of Tartar per Deliquium dropt into it.

When too large a Quantity of groſs Milk lays the Foundation of the Diſorder, the Infant ſhould be fed with leſs Milk, and ſuch Aliments given, as render it more fluid and ſerous. In ſuch a State, likewiſe, the Stomach is often very much ſtuffed by ſtagnating and coagulated Milk, where a gentle Emetic, given out of the Paroxyſm, is often ſerviceable. This Emetic may be prepared of a third or fourth Part of a Grain of Emetic Tartar, mixed with Syrup of Violets, and ſome proper diſtilled Water.

When the Meconium, not properly purged off in the firſt Months, and becoming acrid by Continuance, produces this Diſorder, it ought to be evacuated by gentle Laxatives, mixt with Abſorbents; eſpecially by an Electuary, compounded of the Syrup of Succory, with Rhubarb, Crabs-eyes, and the Pulvis Marchionis. Worms, on the contrary, are to be deſtroyed and expelled by Remedies accommodated to them.

If an epileptic Diſorder, at any time, proceeds from a Repulſion of the Itch, a Scald Head, or other Eruptions; thoſe Things ſhould be uſed, which have a Power of recalling the impure Matter to the Surface of the Body; and I have often known particular Advantages ariſe in ſuch a Caſe, from Veſicatories, applied to the Nape of the Neck. And this too ſeems confirmed by the Experience of *Fernelius*, who mentions many epileptic Perſons, as cured by Fontanels and Setons.

It is the Practice of ſome Phyſicians, and thoſe of no mean Note, for appeaſing the violent Commotions of the Solids, to recommend Opiates; ſuch as the Pilulæ de Cynogloſſo, the Theriaca cœleſtis, and ſome others of a like Nature. But, ſince I have frequently ſeen the ill Effects of them, I am of Opinion, they ought to be uſed very cautiouſly. The ſame may be ſaid of Volatiles, which, even externally applied, very often prove injurious.

Atrophy of Children.

Among the various Diſeaſes familiar to Infants, a Tabes is not the moſt inconſiderable: This is a gradual Conſumption of the whole Body, attended commonly with an Inflation of the Abdomen, and an extraordinary Injury of the ſeveral Functions.

At the Beginning of the Diſorder, both the inferior and ſuperior Limbs begin to grow flaccid, and decay; but the Abdomen

is diſtended. The Patient breathes with Difficulty, is ſeized with a Laſſitude of Body, is ſometimes coſtive, and at other times has his Body ſoluble; his Appetite is irregular and uncertain, but principally fond of cold Aliments: In the Increaſe of the Diſorder, the Countenance, in conſequence of a collapſed State of the Temples, becomes unſeemly and pale; the Eye-lids, after Sleep, become tumid; the Ribs are protuberant; the Scapulæ prominent, like Wings; the Food is diſcharged generally half digeſted; and gnawing Pains are often felt about the Region of the Navel; the Urine is ſometimes thick, and ſometimes of a rediſh Colour; Sleep is turbulent; and, about Night, a ſlow Heat, accompanied with Thirſt, and Dryneſs of the Mouth, begin to afflict the Patient.

But this Diſorder ought not to be confounded with Extenuation and Leanneſs of Body; which, proceeding from a Defect of Fat, often poſſeſſes one Part only, without injuring the Functions of the whole Body. It ought, likewiſe, to be carefully diſtinguiſhed from the Rickets, in which ſome Parts are, indeed, waſted; whilſt, at the ſame time, the Limbs are deformed with Tumors, Contractions, and Incurvations. Beſides, we muſt be very careful not to miſtake a primary or original Tabes, for that Extenuation, which, as a Symptom, ſucceeds other Diſeaſes; ſuch as Fevers, Small-pox, Meaſles, Diarrhœas, and Worms. Laſtly, a genuine Tabes differs from that Leanneſs, which ariſes from a Want of Milk; which may be diſcovered, if the Breaſts of the Nurſes are flaccid, and abſolutely without Milk; if the Nurſes themſelves have not good Appetites; if the Children diſcharge but little Urine; cry and complain; if, after taking Aliments, they are quiet; and if they greedily ſnatch at the Breaſts.

Thoſe who die of this Diſtemper, when laid open, are generally found to have the Glands of the Meſentery tumefied, ſcirrhous, or even affected with Abſceſſes. The Liver, alſo, and Spleen, are ſeldom ſeen without ſome Diſorder, Infarction, and a preternatural Magnitude. The Muſcles, particularly of the Abdomen, are ſo extenuated, as to be hardly thicker than a Membrane. The Inteſtines, on the contrary, are very much inflated, and filled with a fetid, and, ſometimes, a black Sordes.

We attribute the immediate Cauſe of this Diſorder, either to a Defect of nutritious, temperate, and gelatinous Juice, or an inſufficient Application of it to the ſolid Parts; but the more remote Cauſes we aſcribe to a depraved Digeſtion of the Aliments, an impure and thick Chyle, and an Obſtruction of its Paſſage thro' the lacteal Veſſels to the thoracic Duct, and Maſs of Blood. But we muſt here principally blame the Defect, or languid Condition, of the Bile, occaſioned by a preternatural State of the Liver, by which Digeſtion is not only very much injured, but alſo the Mouths of the villous Coat of the Inteſtines, becauſe not properly freed from mucous Sordes, receive and tranſmit the Chyle with more Difficulty.

The remote and occaſional Cauſes of this Diſorder are various: Though I have generally obſerved, that this violent and chronical Indiſpoſition has followed Diſeaſes of many Kinds; ſuch as the Small-pox, Meaſles, convulſive Motions from difficult Dentition, and ſome others; eſpecially when the Patients, upon Recovery, indulging their Appetite too much, have taken Aliments of a groſs Texture; ſuch as Cheeſe, Bread not well fermented, farinaceous Subſtances, ſweet Cakes, with Summer Fruits, acid Aliments, and Wines, of the ſame Quality. But nothing, as frequent Experience aſſures us, is more prejudicial, than if Infants, when hot and moiſt with Sweat, often uſe cold Drink in the Night, or when, being hot in Bed, they are, whilſt awake, removed into the cold Air. For, by the Suppreſſion of Tranſpiration, and Conſtriction of the minute Ducts of the external Parts, the nutritious Juice is not only diverted and repreſſed from the Periphery to the Centre, and inferior Parts, but, likewiſe, acquires a depraved ſaline and acrid Quality.

Nor do I heſitate, with the celebrated *Chuden*, to aſſert, that Infants are ſubject to a Tabes, from an Obſtruction of the Pores of the Skin, unleſs they are well waſhed and cleanſed from their Sordes. But they, who affirm that Worms, which they call *Comedones*, are generated in the Skin of new-born Infants by a Neglect of Waſhing, and, as they ſuppoſe, draw off great Part of the laudable Nutriment, will not gain my Aſſent, becauſe this new Aſſertion is not yet to me ſufficiently confirmed by my own Experience.

Nor can it be deny'd, that theſe conſumptive Diſorders happen to Infants from a prepoſterous Uſe of Medicines, eſpecially thoſe of the earthy, abſorbent, and aſtringent Kind, in Diarrhœas, intermitting Fevers, Gripes, and Small-pox. For they, who have diſſected the Bodies of Children, who died of this Diſtemper, teſtify, that they have found, both in the Stomach, and the ſmaller Inteſtines annexed to it, ſome Cruſts of Matter grown ſolid, which could ſcarely be ſeparated from the Subſtance of them; which indicates, that not only the Separation of the gaſtric Liquor was by that means prevented, but, alſo, the Secretion of the Chyle, in conſequence of an Obſtruction of the Mouths of the Lacteals, retarded.

A Tabes, alſo, is properly denominated Scorbutic, when the Children are generated by Parents affected with an impure Dyſcraſy of the Humours; are ſuckled by morbid Nurſes, or ſuch as are troubled with a Cachery, or any other ſcorbutic Diſorder. Something of a Venereal Taint is too often complicated with this Diſorder, on which the Atrophy depends; as the Effect does on its reſpective Cauſe.

Worms, likewiſe, lodg'd in the Inteſtines, are often the Cauſe of an Atrophy; for they not only deſtroy the moſt laudable Parts of the Aliments and Chyle, but, alſo, taint them with vitious Exhalations. In *A. N. C. Vol.* 3. *Append.* 61. we are furniſh'd with a remarkable Inſtance of a Boy, who dy'd of an Atrophy; and, upon Diſſection, in his Inteſtines, ſeveral Parcels of Worms, ſome larger, ſome ſmaller, were found adhering ſo firmly to the interior villous Coat, that they appeared, in a manner, growing to it, and could not be ſeparated, without injuring the Coat itſelf.

Beſides, Infants, before ſound, and apparently in a State of perfect Health, without any manifeſt previous Cauſe, often begin to languiſh, and become extenuated. But they are expos'd to this Misfortune, when they change the Mother's or Nurſe's Milk, for more ſolid Food; and, tho' before they could ſtand on their Legs, and ſupport the Weight of their Bodies, they now become incapable of ſtanding, and are averſe to touching the Ground; but the genuine Nature of the Diſorder immediately ſhews itſelf, when their Limbs become ſenſibly pendulous, and the Habit of the Body flaccid and corrugated, as appears principally in the Nates and Thighs. In the mean time, ſuch Patients are continually eating, and have Appetites ſo voracious, that they can ſcarcely be ſatisfy'd.

It is very common for many, and even ſome Phyſicians, when the Diſorder continues long, to refer the Cauſe to Faſcination: But as this trifling and empty Excuſe plainly ſhews, that thoſe Men, who fly to ſo abſurd an Aſylum for their Ignorance, neither knew the genuine Cauſes of the Diſtemper, nor are able to cure it by proper Remedies; ſo we deſervedly reject this Method of accounting for the Diſorder, as fooliſh, and unworthy of a Philoſopher and Phyſician.

When the Diſorder proceeds from an imprudent Uſe of Aſtringents, or an exceſſive Uſe of ſaline and abſorbent Medicines, it generally requires a long time for the Cure; but if the Matter of the earthy Abſorbents has already acquired ſome Degree of Solidity, the Hopes of Recovery are doubtful, and many are carry'd off by Death, before the Removal of the Cauſe. When the Diſeaſe is inveterate, and the Meſentery, Liver, Spleen, Pancreas, Kidneys, and Lungs, are already obſtructed and ſcirrhous, then it is ſeldom, or never cured. On the contrary, Hopes of Recovery may be entertain'd, if, the Concoction of the Food being amended, the Appetite becomes more conſtant and regular, the Tumor of the Abdomen decreaſes, and the Strength is recovered. If there is a Diarrhœa, and a mighty fetid purulent Matter mix'd with Blood, diſcharg'd from the Anus, and if, beſides, the Body is very much emaciated, the Diſtemper cannot be cured without very great Difficulty, if at all; for the Diarrhœa ſtill conſumes the remaining Strength, and the fetid Matter ſhews a Corruption already begun in the Abdomen, which Death generally very ſoon ſucceeds. When the Infarction or Scirrhus degenerates into an Exulceration, and an hectic Fever ſucceeds, which we commonly know from a flame-coloured and rediſh Urine, preternatural Heat, and Fluſhings after Aliments, then the Infants moſt certainly die. Laſtly, frequent Obſervation proves, that a Tabes is, ſometimes, happily removed by intermitting Fevers.

The Cure.

Tho' the Cure of this Diſorder is very different, according to the Diverſity of the Cauſes from which it proceeds, yet, in general, we are to take care, that Infants, after weaning, be ſupply'd with Food of ſuch a Kind, as adds Nutriment and Strength to the languid Body, and emaciated Parts. This Intention is excellently anſwer'd by Broths of bruis'd Fowls or Capons, prepar'd without the Fat, or a perceptible Quantity of Salt, as, alſo, by Paps of Apples prepar'd with the Yolks of Eggs and Sugar, together with a little Cinnamon, Mace, and Wine.

When the Mouths of the lacteal Veſſels and Ducts of the meſeraic Glands are obſtructed by a viſcid Sordes, then Broths of old Fowls boil'd with the recent Roots of Graſs, Fennel, Parſly, Aſparagus, and Celery, without the Fat, and adding a ſmall Quantity of the Spiritus Nitri dulcis, or a few Drops of the Spiritus Vitrioli Martis, or a Solution of Crabs-eyes, are of all other Medicines the moſt efficacious. But theſe Broths ſhould be continued for ſeveral Days, and even Weeks, in ſuch a manner, that three or four Ounces ſhould be taken every four Hours.

Among the deobſtruent Medicines of great Efficacy, in this Diſorder, the principal are, the ſaline Liquors of a neutral Quality; thoſe, for Inſtance, prepared of a Solution of Crabs-eyes, with Lemon-juice, the Terra foliata Tartari, and the Arcanum Tartari, diſſolved with the Waters of Fennel, or Parſley, and exhibited in a due Doſe frequently every Day: From which Remedies I have often experienced an extraordinary and wonderful Effect.

In order to promote a laudable Digeſtion of the Aliments, eſpecially when a balſamic Bile is deficient, and acid and viſcid Sordes predominate, the temperate balſamic Elixir, mixed with

the Aliments, in a ſufficient Quantity, produces very happy Effects. But in a Complication of Gripes, Pains, Inquietudes, and other Symptoms, the anodyne mineral Liquor, mixed and given with a thin Solution of Salt of Tartar, is a moſt effectual Remedy.

When the Diſorder proceeds from an Obſtruction and Infarction of the ſubcutaneous Ducts, or an interrupted Tranſpiration, Baths prepared of the Roots of Marſhmallows and Ferns, the Herbs Mallows and Melilot, Chamomile-flowers, and *Venice* Soap, with the Addition of a ſufficient Quantity of Milk, are highly beneficial. And it is obſerved, that a frequent Uſe of Baths, the firſt Month after Birth, is an excellent Preſervative.

Externally, for diſcuſſing the Tumor, Oil of Chamomile, or Oil of Dill, boiled, and moderately impregnated with Camphire, are highly efficacious.

When this Tabes draws its Origin from an impure ſcorbutic Milk, the Nurſe muſt be removed, and ſweet Whey, or Aſſes Milk, with ſome Drops of Oil of Tartar *per Deliquium*, exhibited.

To theſe we are to add diluting Infuſions of Paul's-betony, Ground-ivy, the Roots of Liquorice, and Succory, together with a Solution of Salt of Tartar, and Arcanum duplicatum.

In Children who are weaned, ſome other diluting Drink, with ſome Oil of Tartar *per Deliquium* dropt into it, muſt always be ſubſtituted in the room of Beer.

If the Diſorder ariſes from an exceſſive Uſe of Abſorbents, diluting Infuſions, in conjunction with Laxatives prepared of Manna, Rhubarb, or Syrup of Succory with Rhubarb, will prove highly beneficial. It is, alſo, ſometimes expedient to free the Stomach from viſcid Sordes, by a pretty large Doſe of the Powder of *Florentine* Orris.

Purgatives rather exaſperate this Diſorder, and diſpoſe it to an Hectic, eſpecially in Patients of delicate Conſtitutions: For the Stomach and Inteſtines are often inflamed by them, a Circumſtance ſoon ſucceeded by Death.

Cardialgia.

We ſhall now briefly treat of ſome Diſorders incident to Children, not becauſe they are inconſiderable, and unworthy of a particular Examination, but becauſe they do not require ſo long and accurate an Account of their Cauſes; and but very few things are requiſite to the Cure, if they are uſed in a proper Time, a due Order, and in conjunction with a ſuitable Regimen.

We ſhall, firſt, then, conſider a Cardialgia, which diſcovers itſelf principally by an uncommon Straitneſs over the Breaſt, join'd with difficult Reſpiration; by Inflations of the Abdomen and Præcordia under the ſpurious Ribs; by Inquietudes and Eructations often attending them; to which ſlight Fevers and Convulſions are frequently join'd.

This kind of Diſorder proceeds from a violent and ſpaſmodic Stricture of the Orifices of the Stomach, and the Flatulences by that means included in it, which, by diſtending the ſenſible Membranes of the Stomach, produce the utmoſt Anxieties, Inquietudes, and, from an obſtructed Deſcent of the Diaphragm, a Difficulty of Breathing, with the other Symptoms. But this Effect is principally produced by the Meconium, when not properly evacuated; by the Milk coagulating or ſtagnating; or by any other viſcid Humours lodged in the Primæ Viæ, and reſolved into Flatulences: Neither are we to exclude other Cauſes, which, by irritating the nervous Coats of the Stomach, are capable of ſtimulating it to a ſpaſmodic Conſtriction, and, conſequently, of inducing a noxious Retention of the Flatulences.

During the Fit, let but little Milk be given to the Infant, and antiſpaſmodic abſorbent Powders, with ſome carminative Water, be adminiſtered both to the Nurſe and Infant; and, for their Drink, let them uſe gelatinous Decoctions of Hartſhorn, and correcting Emulſions. But, ſince a due Diſcuſſion and Diſcharge of the Flatulences is of the utmoſt Service in ſuch a Caſe, this Intention muſt be anſwered principally by gently carminative and emollient Clyſters: An outward Application of Paregorics is, likewiſe, very beneficial. For this Purpoſe it is expedient to anoint the Abdomen with a Liniment prepared of the Oils of Chamomile and Dill by boiling, with the Addition of a few Drops of the Oil of Cumin, Mint, or Cloves, and a few Grains of Camphire.

When the Body is rendered ſoluble by means of Clyſters, gentle Carminatives are ſerviceable; unleſs an Increaſe of the Fever ſhould contraindicate their Uſe: For which Reaſon *Wedelius*'s carminative Eſſence of Orange-peel, mixed with a due Quantity of the anodyne Liquor, is to be exhibited to the Nurſe; and the Infant is to have an Æleoſaccharum prepared with a few Drops of the genuine Oils of Aniſe and Chamomile, drinking after it a Draught of warm Water-gruel.

After the Fit, in order to remove the Fomes of the Diſtemper, not only the Nurſe, but, alſo, the Infant, ought to be gently freed from the Sordes lodged in their Stomach and Inteſtines; which Intention is excellently anſwered by the following Powder:

Take of the beſt Rhubarb, and Crabs-eyes, each half a Dram; and of Cumin-ſeeds, ſix Grains.

Six, eight, or ten Grains of this Powder are to be exhibited at proper Intervals, not omitting, at the ſame time, the Uſe of corroborating and ſtomachic Medicines, ſuch as the *Elixir Balſamicum Viſcerale*.

Suppreſſion of Urine.

When Infants either diſcharge no Urine, or do it only by Drops, and with Shrieks, this Suppreſſion of Urine often ſubjects them to intolerable Pains; becauſe, at that time, they, in conſequence of their Uneaſineſs and Inquietude, not only ſuck greedily, but are, alſo, incapable of diſcharging the ſuperfluous Milk by Urine. This Difficulty of making Water is produced, when the Nurſe's Milk is corrupted by groſs, acid, and acrid Food; or when ſhe herſelf, by drinking unwholſome Liquors, makes Water with Difficulty; for ſuch, generally, is the Urine, and its Diſcharge, in the Child, as are his Humours; and the State of his Humours is as the Milk he ſucks from the Breaſts of his Nurſe.

Retention of Urine in Children, from the Stone.

An Iſchury is, alſo, frequently produced by a Stone lodged in the Bladder, to which Infants, in conſequence of a copious Production of acid Juices, are highly ſubject, eſpecially if they are inclined to the Generation of a Stone, by an hereditary Diſpoſition, derived from their Parents. If it proceeds from this Cauſe, the Infants ſcratch the Genitals with their Fingers, and the Urine is not only diſcharged by Drops, and with Shrieks, but the fabulous Particles, alſo, which are, at the ſame time ejected, ſubſide, if the Urine is kept. But, if all theſe Symptoms cannot be depended on, the Stone may be diſcovered eaſily by an artificial Search.

As for the Cure, the Diet of the Nurſe, while ſhe gives Suck, and of the Infant, when weaned, muſt be amended; which is beſt performed by carefully avoiding all improper Aliments, and unwholſome Drinks. But, further, this Diſeaſe is often ſupported by an obſtructed Evacuation by Stool. This, therefore, ought, above all things, to be promoted; unleſs we intend to bring on a greater Afflux of the Humours to the urinary Paſſages. This Intention is commodiouſly anſwered by Reſins impregnated with Rhubarb, taken in proper Aliments, or by Clyſters duly injected.

After this, a convenient Drink, both of a diluting and gently diuretic Quality, ſhould be preſcribed to the Nurſe, as alſo to the Infant; ſuch as Decoctions of light Water, with the Roots of Aſparagus, Carrot, Parſley, Graſs, Fennel, Saxifrage, and Succory, drank warm in the Morning, and through the reſt of the Day cold, as ordinary Drink. Of no leſs Efficacy is the acidiſh Serum of Milk, corrected with Crabs-eyes, which Liquor is, alſo, poſſeſſed of a temperating Quality.

When the Diſcharge of Urine is ſuppreſſed by calculous Fragments obſtructing the Urethra, and irritating its highly ſenſible Coat, ſo as to excite violent and racking Pains, emollient Clyſters are, in like manner, of Service. But, internally, in order to allay the Spaſms, it is expedient to exhibit *Fernelius*'s Decoction of Marſhmallows prepared with *Venice* Soap, or Oil of ſweet Almonds, with a few Drops of the anodyne Liquor, in warm Barley-water, or Water-gruel. When, by means of theſe, the Spaſms are relaxed, we may, with Advantage, uſe Powders of Crabs-eyes, calcin'd Egg-ſhells, Solutions of Crabs-eyes, and other things which gently promote a Diſcharge of Urine.

Externally, if the Pain from the Stone and Iſchury is very violent, Baths of ſweet Water, in which emollient Subſtances, ſuch as Mallows, Marſhmallow-roots, and Chamomile-flowers, have been boiled, are highly beneficial. It is, alſo, of conſiderable Service to apply Bags, filled with the ſame things, warm to the Region of the Pubes, the anointing which with Oil of Scorpions is, alſo, productive of happy Effects.

Catarrhous Diſorders in Children.

Infants, alſo, in conſequence of a large Quantity of pituitous Juices, are highly ſubject to catarrhous and ſerous Diſorders, among which we reckon a Coryza, a Stuffing of the Head, Hoarſeneſs, Coughs, Aſthmas, Infarctions of the Breaſt, accompanied with a kind of Snorting and Wheezing, Inflammations of the parotid Glands, and the Cruſta lactea: All which Diſtempers agree, in general, in this, that they, for the moſt part, derive their Origin from a Fault in the Air, a ſudden Change of Weather, and a Suppreſſion of Tranſpiration.

As to what belongs particularly to the Aſthma and Cough, eſpecially of the dry and violent kind, it muſt be obſerved, that theſe Diſorders, accompanied with a great Difficulty of Breathing, and Dread of Suffocation, not only often rage epidemically, but, alſo, in a particular manner, as Experience teſtifies, attend a difficult Dentition, if the Nerves ſubſervient to Reſpiration

are convulſed and vellicated, in conſequence of the mutual Conſent of the Parts. Theſe Diſorders, alſo, frequently happen from an improper Treatment of the Small-pox and Meaſles; eſpecially when, after the Diſeaſe is ſubdued, neither an Evacuation by Stool, nor inſenſible Tranſpiration, are duly promoted; or, alſo, when a certain acrid excrementitious Matter, in an Eryſipelas, Purple Fever, or Cruſta Lactea, has been repelled to the internal Parts; for then Infarctions of the Lungs, and troubleſome Irritations of the pulmonary Nerves, which excite an Aſthma and Cough, are generally produced by the acrid and viſcid Humour. Laſtly, theſe Diſorders are principally produced by an exceſſive Inflation of the Stomach, occaſioned by viſcid Milk ſtagnating there in too large a Quantity, and obſtructing the Deſcent of the Diaphragm. Hence we often obſerve, that Vomiting, either ſpontaneous, or excited by Art, affords conſiderable Relief, as well to Perſons afflicted with a Cough, as to thoſe labouring under an Aſthma.

For the Cure of a Cough and Aſthma, abſorbent Powders internally exhibited, with Root of *Florentine* Orris, Sperma Ceti, and Sugar-candy, are highly beneficial; as, alſo, a balſamic Elixir, prepared of the Tincture of Tartar, the Eſſences of Myrrh, Saffron, Nutmeg, and Orange-peel, together with Spirit of Sal Ammoniac. But, in dry and more delicate Patients, it is more expedient to exhibit a proper Doſe of the following pectoral Elixir:

Take of the Extract of Saffron, four Grains; of the Waters of Paul's-betony, and Hyſſop, each half an Ounce; and of the Syrup of white Poppies, or the Syrupus de Eryſimo Lobelii, two Drams: Make into an Elixir.

To theſe we may commodiouſly add, at proper Intervals, warm Infuſions of pectoral Herbs; by which, eſpecially during a moiſt and cold Temperature of the Air, Tranſpiration is not only greatly promoted, but a Reſolution of the inſpiſſated Fluids commodiouſly obtain'd: And theſe are, likewiſe, ſalutary, when an obſtinate and dry Cough ariſes either from, or is accompanied with, an acrid Lymph, irritating the Larynx; eſpecially when, at the ſame time, in order to correct the Acrimony, Sperma-ceti is diſſolved in Broths, or reduced to the Form of an Electuary, with Oil of ſweet Almonds, Sugar-candy, *Fernelius*'s Syrup of Marſhmallows, and a few Drops of the Oil of Aniſe, and exhibited at proper Intervals.

If at any time an Aſthma, attended with a Cough, proceeds from acid and viſcid Crudities, fluctuating in the Stomach, and producing an Inflation of it, we often, with Succeſs, give a mild Emetic, prepar'd of half a Grain, or a Quarter of a Grain, of emetic Tartar, mixed with diſſolv'd Manna; or a few Grains of the Root of Ipecacuanha, infuſed in warm Water, which is to be edulcorated by the Addition of ſome proper Syrup. This End is very well anſwer'd, likewiſe, by emollient and carminative Clyſters, which, by preparing a Paſſage downwards for the Flatulences, contribute greatly to a ſucceſsful Removal of the Diſeaſe.

If a repel'd, acrid, and excrementitious Matter gives Birth to the Diſorder; beſides internal Diaphoretics, gentle Veſicatories, applied to the Nape of the Neck, often produce an happy Effect. But, externally, in theſe Diſorders of the Breaſt, conſiderable Relief is afforded, by anointing the Parts affected, with human Fat, and vinous Spirit of Sal Ammoniac.

Achors, Vari, and Tineæ, are ulcerous Tubercles, proceeding from a peccant, corrupted, ſaline, and viſcid Serum, contain'd in the ſubcutaneous Glands and Ducts; and generally draw their Origins from an exceſſive Voracity, corrupted Milk of the Nurſe, and a Suppreſſion of Tranſpiration, by means of Cold. The ſame Cauſes produce Inflammations of the parotid Glands, and a Diſcharge of Matter from the Eyes and Ears.

All theſe Diſorders, as well as other catarrhous Defluxions, are beſt remedied, partly by exhibiting to the Nurſe ſuch Infuſions as dilute the Blood and Lymph, thoſe, for Inſtance, prepar'd of Liquorice-root, the Bark and Root of Saſſafras, and Fennel-ſeed; and partly by means of *Crato*'s Pilulæ de Succino, both with and without Mercury; as, alſo, by the pectoral Elixir laſt mention'd. But to the Infant we are to exhibit Powders, prepar'd of diaphoretic Antimony, Crabs-eyes, *Florentine* Orris, Milk of Sulphur, a little Saffron, and Oil of Aniſe. For this Intention we, alſo, exhibit Laxatives, and Preparations of Mercurius Dulcis, Rhubarb, and Manna. Inflammations of the parotid Glands are, beſides the internal Uſe of Reſolvents, to be treated externally with the ſimple Diachylon Plaiſter, mixed with Camphire; and, if the Tumor cannot be diſcuſſed, it is to be maturated by emollient Cataplaſms.

Of Hiccups and Vomiting in Children.

Hiccups, as well as Vomitings, ariſe from the Stomach, and are excited by Crudities accumulated in it: For, if a tenacious acrid Mucus is firmly ſeated in the ſuperior Orifice of the Stomach, this Organ is not only ſtimulated to a Diſcharge of its Contents, or a Vomiting; but, alſo, the Diaphragm, in conſequence of their mutual Conſent, is affected with convulſive Motions; and, the Diaphragm being contracted in Inſpiration, Hiccups, ſometimes of a very obſtinate Nature, are excited: Hence it, alſo, frequently happens, that Infants are afflicted with the Hiccups, and a Vomiting, at one and the ſame time.

Both theſe Diſorders often proceed from too great a Repletion of Milk, or a Corruption of that Liquor in the Stomach: When this is the Caſe, a milky kind of Subſtance, commonly of a bad Colour, and diſagreeable Smell, is, for the moſt part, diſcharg'd by Vomit. But extreme Cold is often productive of theſe Misfortunes; or even difficult and painful Dentition may be the Cauſe, if, in conſequence of the Conſent of the Parts, the Diaphragm and Stomach are affected.

If Vomitings and Hiccups proceed from taking too large a Quantity of Milk, they ſcarcely prognoſticate any Danger; ſince every one knows, that, in this Caſe, Children are generally relieved by Vomiting: But, if they ſpring from a Corruption of the Milk, the State of the Patient is more dangerous, becauſe Epilepſies and Convulſions often enſue, and prove fatal.

The Cauſes of theſe Diſorders indicate a proper Method of Cure: For if Milk, taken plentifully, offends, its Quantity ought to be leſſened for the future; but, if the Diſorder proceeds from its depraved Quality, we ought to procure a proper Excretion of it, both from the Nurſe and Infant. The Method of obtaining this End has been already ſpecified.

But, in both theſe Diſorders, ſingular Relief is generally afforded by Syrup of Mint, or Betony, exhibited with a few Drops of the Oil of Mace, or of the anodyne Liquor, as alſo the Waters obtained from Chamomile-flowers, Yarrow, Mint, and black Cherries, mixed with a proper Quantity of the ſame anodyne mineral Liquor. Externally, great Relief is afforded by Frictions with warm Cloths, and by anointing the Region of the Stomach with the following Ointment:

Take of the Oil of Dill, one Ounce; of the Oil of Mint, half a Dram; of Saffron, one Scruple; and one Yolk of an Egg: Make into an Ointment.

Of Costiveness in Children.

Infants are ſometimes coſtive, and at other times have their Bodies too ſoluble. The former of theſe Misfortunes is produced, when Infants are too voracious; or when the Nurſes, whilſt yet ſuckling them, indulge themſelves in the Uſe of groſs and acid Meats, or ſpirituous Liquors. But though no Injury ariſes immediately from a ſlow Excretion of the Fæces, yet, if they are retained too long, they often lay a Foundation for great and violent Diſorders.

In order, therefore, to render the Body duly ſoluble, the principal Intention to be purſued, is to take care, that the Nurſe uſes a light and reſolving Diet, exhibiting, at proper Intervals, Currants, either reduced to the Form of an Electuary, with Rhubarb and Sugar, or boil'd with Apples. But the Infant is relieved either by Syrup of Succory, with Rhubarb, and a few Grains of white Mechoacan, exhibited at proper Intervals; or by Clyſters prepared either of a Decoction of Oats with Honey and Butter, or of Whey, and *Venice* Soap. It is, alſo, of great Service to anoint the lower Part of the Abdomen, about the Navel, with Oil of ſweet Almonds, mixed with a due Quantity of the Trochiſci Alhandal, reduced to Powder.

Of Fluxes in Children.

The Diſorder oppoſite to Coſtiveneſs is a Diarrhœa, or exceſſive Flux, which happens to numberleſs Infants, from the Tranſports of Paſſion, and the improper Diet of the Nurſe; from an obſtructed Perſpiration; a vitiated Digeſtion of the Food; and an Acrimony of the Bile, occaſioned by theſe means; whence Fæces of various Colours, Smells, and Conſiſtences, and often bloody, are frequently diſcharged, for no other Reaſon, but becauſe the Intettines, either ſpaſmodically conſtricted, expreſs the contained Sordes, or, for want of a due Tone, let them ſlip involuntarily through them. For this Reaſon it often happens, that ſuch Stools not only attend violent Pains, thoſe, for Inſtance, produced by difficult Dentition, but are, alſo, very familiar to thoſe who either labour under an Atrophy, or a Palſy.

Though this diſagreeable Diſtemper is very troubleſome both to Infants and others, and often threatens a fatal Event; yet it ought not to be ſuddenly checked, eſpecially if Children bear it well, and if its Suppreſſion is not indicated as proper, by Inquietudes, Watchings, Gripings, an Atrophy, and other Symptoms. But, when this happens, we muſt firſt of all have regard to the Milk of the Nurſe, if the Child ſtill uſes it; and, if ſhe lays a Foundation for the Diſtemper, ſhe muſt be changed, uſing, at the ſame time, for Drink, a Ptiſan prepared with Juice of Quinces; or Broths, boiled with Fowls, Rice, and Millet.

The diſordered Infant may be relieved by taking internally Powders of *Armenian* Bole, and Crabs-eyes, with a few Grains of the Bark of Caſcarilla; to which, according to the Circumſtances, may be added Amber, or a third Part of the Theriaca cœleſtis, for a Doſe: But, externally, nothing is of more Service than anointing the Belly with the following Liniment warm.

Take of the expreſſed Oil of Nutmeg, and of the Oil of Jeſſamine, each half an Ounce; of Peruvian Balſam, and of the Oil of Mint, one Dram. Make into a Liniment.

And, beſides theſe, in ſuch a State of the Diſeaſe, great Advantage accrues from the Uſe of Clyſters, prepared of ſweet Whey, boiled with Millet and Rice, and ſtrained; which, alſo, affords great Relief in a Teneſmus, with which this Diſorder is frequently accompane d; tho' this Misfortune, when of long ſtanding, is moſt effectually removed by Suppoſitories prepar'd of the Yolk of a roaſted Egg, with Saffron, Frankincenſe, and one Grain of Opium. *Frederic Hoffman.*

Boerhaave thus treats of the Diſeaſes of Infants.

New-born Infants are ſubject to ſome Diſorders peculiar to themſelves; and which ariſe, firſt, from glutinous, caſeous, and viſcid Strigments, lodged in the Mouth, the Oeſophagus, the Stomach, and the Inteſtines.

From this Cauſe alone often ariſe Nauſeas, Vomitings, Gripes, Hiccups, and Convulſions, and a conſequent Indigeſtion of the Aliments.

The Diſorders produced by this Cauſe are eaſily cured by Faſting for ten or twelve Hours; by repeated Doſes of a ſmall Quantity of Wine, mixed with Honey, during this time of Abſtinence; or by a gently ſtimulating Purgative. Thus:

Take of Honey, *French* Wine, and Hydromel, each half an Ounce: Mix all together for one Doſe.

A gentle ſtimulating Purgative may be prepared in the following manner:

Take of the Syrup of Succory with Rhubarb, three Drams; of *Venice* Soap, half a Dram; and of diſtilled Baum-water, half an Ounce: Mix all together for one Doſe.

In order to waſh away theſe pituitous and mucous Sordes, Epithems moderately aromatic and ſpirituous are often highly efficacious. For this Purpoſe,

Take of Cinnamon, Mace, Nutmeg, Maſtich, and Olibanum, each two Drams; and of the Spiritus Vini Theriacalis, four Ounces: Make into a Tincture. Then

Take one Yolk of an Egg; of the above preſcribed Tincture, half an Ounce; and of diſtilled Roſe-water, two Drams: Mix with a ſmall Quantity of the Crumbs of Bread, and apply to the Stomach.

Or,

Take of the yellow Rind of Citrons, grated, half an Ounce; of Nutmegs, two Drams; and of Spaniſh Wine, three Drams: Triturate all together in a Mortar, mix with Crumbs of Bread, and apply to the Stomach as before.

Secondly, Infants are generally ſubjected to many Diſorders, when the Meconium is not ſufficiently ſoon expel'd, either by reaſon of the Weakneſs of the Infant; the Hardneſs of the Matter; its exceſſive Quantity; or the Dryneſs of the Parts thro' which it ought to paſs.

Hence, in conſequence of the long Retention of the Meconium, and the Acceſs of the Air to it, it becomes acrimonious, acid, putrid, and is reſolved into Vapours; by which means, Gripes, Convulſions, Nauſeas, Vomitings, Hiccups, Coughs, Sneezings, Shrieks, Cries, Watchings, Startings, Fevers, Leanneſs, and, at laſt, Death, are produced.

The weaken'd Force, which ought to expel the Meconium, is augmented and increaſed by gentle Purgatives, mild Suppoſitories, and ſweet and gentle Cordials. Thus:

Take of the recent Extract of Caſſia, half a Dram; of Rhubarb, three Grains; and of the Syrup of Succory with Rhubarb, two Drams: Mix all together for one Doſe.

Or,

Take of Calabrian Manna, two Drams; of the ſolutive Syrup of Roſes, one Dram; and of diſtilled Elder-flower-water, four Drams: Mix all together for one Doſe.

Or,

Take of Virgin Honey, three Drams; of ſolutive Syrup of Roſes, with Sena, one Dram; and of diſtilled Succory-water, four Drams: Mix all together for one Doſe.

Or,

Take of the beſt Rhubarb, ſix Grains; of the beſt Agaric, two Grains; and of the Syrup of Violets, two Drams: With theſe, when carefully triturated together, mix two Drams of diſtilled Baum-water.

For Suppoſitories,

Take *Venice* Soap, form'd into a ſmall Globule or Cone.

Or,

Take a ſmall Globule or Cone of Loaf Sugar.

Or,

Take Honey, boiled to a ſufficient Degree of Hardneſs, and formed into the Shape of a ſmall Suppoſitory.

Or,

Take a ſmall Quantity of Candle-tallow, and form it into the Shape of a Suppoſitory.

Cordials to be uſed in Caſes of this Nature may be prepared in the following Manner.

Take of Honey, one Dram; of *Spaniſh* Wine, two Drams; and of the Yolk of an Egg, two Drams: Mix all together for a Draught.

Or,

Take of diſtilled Cinnamon-water, two Drams; of Elixir Proprietatis, prepared with Salt of Tartar, ſix Drops; and of the Syrup of Kermes, one Dram: Mix all together for a Draught.

The Hardneſs or Induration of the Meconium is corrected by Draughts of recent Whey, with a little Honey diluted therein, and by Clyſters impregnated either with Soap or Honey. Thus:

Take of recent Whey, four Drams; and of Honey, one Dram: Mix for a Draught.

Or,

Take of recent Whey, two Ounces; of *Venice* Soap, a Dram and an half; and of Honey, two Drams: Mix all together for a Clyſter.

The Inteſtines are lubricated by taking internally Linſeed-oil, Oil of Olives, and that of ſweet Almonds; by injecting theſe Oils by way of Clyſters; and by anointing the Abdomen with Liniments of a ſimilar Nature. Thus:

Take of Linſeed-oil, one Dram; and of the Syrup of Marſhmallows, two Drams: Mix together for a Doſe.

Or,

Take of Oil of Olives, and of the Syrup of Maidenhair, each two Drams: Mix for one Doſe.

Or,

Take of the recent Oil of ſweet Almonds, three Drams; and of the Syrup of Liquorice, two Drams: Mix for one Doſe.

Take of Linſeed-oil, half an Ounce; of the Yolk of an Egg, two Drams; of the Honey of Mercury, half an Ounce; and of recent Whey, one Ounce: Mix for a Clyſter, to be uſed once a Day, till the Inteſtines are lubricated.

Take of the compound Ointment of Marſhmallows, one Ounce; and of Linſeed-oil, half an Ounce: Mix up for a Liniment, with which the Abdomen is to be anointed every Morning and Evening.

By this Method, and the Uſe of theſe Medicines, all the terrible Diſorders, ariſing from a Retention of the Meconium, are eaſily removed.

But if, in any Diſorders, Antiacids are beneficial, they are, in a peculiar manner, ſo, in Caſes of this Nature; and eſpecially Abſorbents. Thus:

Take of Crabs-eyes, Oſteocolla, Chalk, the Jaw-bone of the Pike, and of Oyſter-ſhells, each two Drams: Mix together, and reduce to a Powder; of which ſix Grains are to be taken twice or thrice a Day.

Or,

Take of the diſtilled Waters of wild Poppy-flowers and Fennel, each two Ounces; of Crabs-eyes, two Drams; of *Venice* Soap, ſeven Grains; and of the Syrup of Marſhmallows, half an Ounce: Make into a Mixture, of which let the Patient drink two Drams every Hour, if he is not aſleep.

In theſe Diſorders of Infants, Opiates are rarely, and not without great Circumſpection, to be uſed.

We muſt, alſo, avoid all Medicines of too attenuating a Nature; and all Subſtances of a ſtimulating and volatile Quality.

A Remedy for each of the Diſorders, ariſing from a Retention of the Meconium, is eaſily diſcovered; provided we know the Hiſtory and Method of Cure in other analogous Diſeaſes.

Thirdly, Infants are ſubject to various Diſorders, when the Milk, being ſoon and ſtrongly coagulated in the Stomach, is form'd into one weighty Maſs of an acrid Quality.

This concreted Maſs, becoming gradually more acrid and acid, renders the Fæces of a greeniſh Colour, and acid Smell; and the Matter thrown up by Vomit, acid. Hence ariſe Gripes, Flatulences, Pains, and numberleſs other Diſorders, eſpecially Convulſions.

All theſe Diſorders are cured by antiacid Medicines, of a fixed Nature, mixed with Purgatives, by Clyſters of ſimilar Qualities, by mild Carminatives, and by oleous Subſtances, uſed both internally and externally. Thus:

Take of *Venice* Soap, two Drams; of the Yolk of Eggs, four Drams; of Crabs-eyes, three Drams; and of Rhubarb, half a Dram. By due Trituration mix theſe with four Ounces of diſtil'd Mint-water, and an Ounce and an half of the Syrup of Marſhmallows. Of this Preparation let the Patient take half an Ounce every Hour, till the Symtoms are abated.

Take of *Venice* Soap, half a Dram; of Sal Gemmæ, three Grains; of the Honey of Roſemary-flowers, half an Ounce; and of diſtil'd Fennel-water, an Ounce and an half: Mix together for a Clyſter.

Or,

Take of the Gall of an Ox, half a Dram; of the Honey of Mercury, half an Ounce; and of diſtil'd Mint-water, an Ounce and an half. Mix all together for a Clyſter.

The oleous Subſtances to be uſed internally are the ſame with thoſe before recommended, for lubricating the Inteſtines, in order to procure an Evacuation of the Meconium. But the oleous Subſtances to be uſed externally, in Caſes of this Nature, are the Unguentum Martiatum, and the Unguentum Nervinum; the Oils of Wormwood, Dill, Chamomile, and Rue, obtain'd by Infuſion; and the expreſs'd Oils of Bay, Mace, Nutmeg, and Palms.

From this Coagulation and Concretion of the Milk in the Stomach, generally ariſe the epileptic Fits of Children, becauſe the nervous Syſtem is irritated by means of the vellicating Acrimony, which, in Proceſs of Time, the coagulated Maſs acquires.

Hence theſe epileptic Fits, if capable of being cured, are only to be removed by means of the Remedies laſt preſcrib'd.

Fourthly, when Children have ſurmounted all theſe Diſorders, and begin to uſe crude Aliments, Summer Fruits, Fleſh, Cheeſe, and other things of a like Nature, Worms are generated in their Inteſtines.

Theſe are produced by the Eggs of Inſects, either living on the Earth, or in the Air, taken into the Stomach, and not capable of being deſtroyed by the languid Action of the Parts in Infants.

The Phlegm of the Inteſtines affords a proper Nidus for theſe Eggs, in which they ſtick, are cheriſh'd, hatch'd, and enlarg'd.

Hence Worms are rarely obſerv'd in Adults, and, if they are, they are only found in Patients of languid and leucophlegmatic Habits.

Theſe Worms are either round, broad, or of that Kind commonly called Aſcarides.

Theſe Inſects, by their Irritation of the Parts, produce Nauſeas, Vomitings, Fluxes, Deliquiums; ſmall, deficient, and intermitting Pulſes; as, alſo, an Itching of the Noſtrils, and epileptic Fits.

Theſe Animals, alſo, by conſuming the Chyle, produce exceſſive Hunger, Paleneſs, Weakneſs, Coſtiveneſs, and a conſequent Tumor of the Abdomen, accompanied with Eructations, and Rumblings of the Inteſtines.

Theſe noxious Inſects, alſo, frequently perforate the Inteſtines themſelves.

For which Reaſon they are ſo often obſerved to prove mortal.

The Preſence of Worms may be known from the Age of the Patient, his Food, his peculiar Habit of Body, and from the Effects theſe Inſects produce, and which are already enumerated.

This Species of Diſorder is to be cured, firſt, by deſtroying that Phlegm of the Inteſtines, which affords a proper Nidus for theſe Animals, by means of fix'd Alkalis, ſuch Gums as expel Phlegm, Preparations of Mercury and Antimony, together with aromatic Bitters. Thus:

Take of Gum-opopanax, one Dram; and of the Yolks of Eggs, two Drams: Mix according to Art. Then add of *Venice* Soap, one Dram; of Syrup of Mugwort, one Ounce and an half; and of diſtil'd Fennel-water, three Ounces. Of this Preparation let the Patient take one Dram, every four Hours, for one or two Days, uſing, at the ſame time, a proper Regimen.

Or,

Take of Æthiops Mineral, and Troches of Agaric, each one Dram; and of the fineſt Sugar, one Dram and an half: Reduce to a Powder, to be divided into ten Doſes, one of which the Patient is to take every Morning and Evening, on an empty Stomach.

Or,

Take of the Salt of Cardus Benedictus, two Drams; of the Syrup of the Five aperient Roots, one Ounce; and diſtil'd Fumitory-water, four Ounces: Mix all together, and let the Patient take three Drams, every three Hours.

Or,

Take of common Wormwood-ſeeds, Worm-ſeed, and Tanſey-ſeeds, each two Drams; and of Honey, two Ounces: Mix all together, and let the Patient take two Drams every Morning.

The Phlegm of the Inteſtines, which affords a Nidus for theſe Animals, is, alſo, deſtroyed by anointing the Abdomen with Balſams prepar'd of ſtrong Aromatics, mix'd with purgative and oleous Subſtances. Thus:

Take of the Ointments of Agrippa, and Sow-bread, each an Ounce: Make into a Liniment, with a little of which let the Region of the Navel be now-and-then anointed.

Or,

Take of the Gall of a Bull, and pure Aloes, each one Dram; and of the Ointment of Marſhmallows, one Ounce. Make up into a Liniment, for the ſame Uſe.

Or,

Take of the Oils of Tanſey and Caſtor, each half an Ounce; and of the Unguentum Nervinum, one Ounce: Make all into a Liniment, for the ſame Purpoſe.

But in the Uſe of theſe Medicines we are carefully to obſerve, whether they operate too violently; in which Caſe we are to abſtain from an immoderate Uſe of them, leſt by this means a Dyſentery ſhould be brought on.

The ſecond Intention to be purſued in the Cure of this Diſorder is, to kill the Worms, which is done by Medicines prepared with Honey; by ſaline Subſtances; by ſuch things as cannot be digeſted by theſe Inſects; by bitter Aromatics; by Preparations of Mercury; by Acids; and by Preparations of Vitriol, obtain'd from Iron, or Copper. Thus:

Take of Honey, two Ounces; of Sal Gemmæ, a Dram and an half; and of diſtil'd Succory-water, four Ounces: Mix up for a Liquor, of which the Patient is to drink half an Ounce every Hour of the Day.

Or,

Take of calcin'd Hartſhorn, one Scruple; mix with two Drams of the Syrup of pale Roſes, and exhibit to the Patient four times a Day.

Or,

Take of Sea-coral, two Drams; and of the Filings of Steel, half a Dram. Reduce to a Powder, to be divided into ſixteen Doſes, for the ſame Purpoſe.

Or,

Take of Worm-ſeeds, the Seeds of Rue, Tanſey, and Wormwood, each one Dram; and of Sugar, three Drams: Reduce to a Powder, to be divided into ſixteen Doſes, for the ſame End.

Or,

Take of recent Hydromel, one Pint; of Worm-ſeed, and Tanſy-ſeeds, each an Ounce. Make into a medicated Wine, with which, when depurated, mix two Ounces of Virgin Honey. Of this Preparation let the Patient take an Ounce, in the Morning, on an empty Stomach.

Or,

Or,

Take of Æthiops Mineral, eight Grains; and of Vitriol of Iron, gently calcin'd, two Grains: Reduce to a Powder, to be divided into two Doſes; one of which is to be taken in the Morning, and another at Night, on an empty Stomach.

Or,

Take of Mercurius Dulcis, ſeven Grains; and of Diagrydium, five Grains: Reduce to a Powder, to be taken with Hydromel, in the Morning.

Or,

Take of vitriolated Tartar, four Grains; and of Vitriol of Iron, three Grains: Reduce to a fine Powder, to be divided into three Doſes; of which one is to be taken in the Morning, the other at Noon, and the third at Night, on an empty Stomach.

Or,

Take of common Vitriol, two Grains; and of the Syrup of Violets, four Drams: Mix together for one Doſe, to be taken in the Morning, on an empty Stomach.

The third Intention to be purſued is, to expel and diſlodge the Worms, whether dead or alive, by means of bitter Purgatives, ſuch Medicines as evacuate Phlegm, and Preparations of Mercury. Thus:

Take of Diagrydium, four Grains; and of Mercurius Dulcis, ſix Grains: Reduce to a fine Powder, to be taken for one Doſe.

Or,

Take of Jalap-root, and Æthiops Mineral, each twelve Grains: Reduce to a Powder, to be us'd in the ſame manner with the preceding.

Or,

Take of Agaric, eight Grains; and of Æthiops Mineral, twelve Grains: Reduce to a Powder for the ſame Intention with the former.

Or,

Take of Aloes, three Grains; of Reſin of Jalap, one Grain; and of Vitriol of Iron, two Grains: Reduce to a Powder, to be us'd with the ſame Intention as the former.

Worms, whether dead or alive, are alſo excellently diſlodg'd by means of Clyſters, Suppoſitories, and Ointments externally apply'd. Thus:

Take of the Oil of Linſeed, three Ounces; and inject as a Clyſter.

Or,

Take of Honey, two Ounces; and of diſtil'd Succory-water, two Ounces: Mix and inject as a Clyſter.

Or,

Take of a Decoction of Tanſey, three Ounces; and of Aloes, ſix Grains: Mix for a Clyſter.

Or,

Take of the Vitriol of Iron, fifteen Grains; and of diſtil'd Succory-water, four Ounces: Mix for a Clyſter.

Take of Honey, boil'd to a due Thickneſs, four Ounces; of Aloes, half an Ounce; and of the Vitriol of Iron, two Drams: Make into ſmall Suppoſitories, to be us'd immediately after going to Stool.

The Ointments, in this Caſe, to be us'd externally, are the ſame with thoſe before recommended, for deſtroying the Phlegm of the Inteſtines, which affords a Nidus for the Worms.

When the Teeth, eſpecially thoſe of the ſharp Kind, begin to make their Eruption, by reaſon of the Tenſion, Puncture, and Laceration of the Gums, which are liberally furniſh'd with Nerves and Blood-veſſels, there ariſe Inflammations, Tumors, Gangrenes, Convulſions, Fluxes, the Matter evacuated in which is green; preternatural Diſcharges of the Saliva, Fevers, and Death.

That all theſe Symptoms proceed from one and the ſame Cauſe, is ſufficiently certain.

But, when the Irritation of the Nerves is remov'd, theſe Diſorders ceaſe ſpontaneouſly.

Now, the Irritation of the Nerves is remov'd, firſt, by mollifying, refrigerating, and ſoothing the Gums, by means of emollient, glutinous, and antiphlogiſtic Medicines. Secondly, by frequently rubbing them againſt hard and ſmooth Bodies. And, thirdly, by laying them open with a Lancet. Thus:

Take of Nitre, twenty Grains; of the Spirit of Salt, five Drops; of the Syrup of Violets, one Ounce; and of diſtil'd Elder-flower-water, three Ounces: Mix all together; and with this Mixture let the Gums be fomented.

Or,

Take of the recent Cream of Milk, and the Yolks of Eggs, each an Ounce; of the Syrup of Violets, ſix Drams; and of diſtil'd Roſe-water, three Ounces: Mix all together for the ſame Uſe with the former.

Or,

Take of the Flowers of Roſes and Elder, each half a Pugil; include them in a Linen Cloth with a Piece of Lead hung to it, ſufficient to keep it from ſwimming; then put it into a long cylindrical glaſs Veſſel, and pour upon it new Milk, and let the Whole remain in Digeſtion for a due time: And the Cream, which floats on the Surface of the Milk, is is to be apply'd to the inflam'd Gums.

The Convulſions, produc'd by Dentition, are happily remov'd by a moderate Doſe of the Spirit of Hartſhorn. Thus:

Take of the Spirit of Hartſhorn, three Drops; and of the Syrup of Kermes, two Drams: Mix together, and exhibit to the Patient thrice a Day. *Boerh. Aphor.*

INFECTIO, in Medicine, is Contagion, or Infection.

INFELIX *Lignum.* A Name for Elder.

INFIBULATIO. Infibulation. It was a Cuſtom, among the *Romans*, to infibulate their Singing-boys, in order to preſerve their Voices; for this Operation, which prevented their retracting the Prepuce over the Glans, and is the very Reverſe to Circumciſion, kept them from injuring their Voices by premature and prepoſterous ideal Venery, ſerving as a kind of Padlock, if not to their Inclinations, at leaſt, to their Abilities. It appears by ſome Paſſages in *Martial*, that a leſs decent Uſe was made of Infibulation among the luxurious *Romans*; for ſome Ladies of Diſtinction, it ſeems, took this Method of confining their Paramours to their own Embraces. *Juvenal* too, as I remember, hints at ſome ſuch Practice. *Celſus*, a chaſte Author, ſays, Infibulation was practis'd ſometimes for the ſake of Health, I ſuppoſe he means for the Preſervation of it; for nothing deſtroys it more, than the filthy Practice this Operation ſeems intended to prevent. I believe Infibulation is not likely to be reviv'd: If, however, any one, who has ſuffered much in his Conſtitution by prepoſterous Venery, ſhould be able to get Children, which is not very likely, and ſhould be inclin'd to prevent the ſame Misfortunes in them by Infibulation, the Method of doing it is thus.

The Skin, which is above the Glans, is extended, and mark'd on both Sides with Ink, where it is to be perforated, and then ſuffer'd to retract itſelf. If the Marks recur upon the Glans, too much of the Skin has been taken up, and we muſt make the Marks farther; if the Glans remain free from them, they ſhew a proper Place for affixing a Fibula: Then they paſs a Needle and Thread thro' the Skin, where the Marks are; and, tying the Thread together, take care to move it every Day, till the Parts about the Perforations are cicatrized; which, being perfectly effected, they take out the Thread, and put in the Fibula, which the lighter it is, the better. *Celſus, Lib. 7. Cap. 25.*

Authors have not determin'd what the *Fibula* of the antient Surgeons was, tho', no doubt, they were, for different Purpoſes. In the preſent Caſe, the *Fibula* ſeems to mean a Ring of Metal, not unlike that which the Country People put thro' the Noſes of Swine.

INFLAMMATIO.

That Diſorder, to which we give the Name of *Inflammation*, or *Phlegmon*, is ſo call'd, becauſe it produces Effects ſimilar to thoſe of Fire.

By means of Thermometers we know, that a larger Quantity of Fire is lodg'd in an inflam'd Part, than any-where elſe in the Body; and that, preciſely, the ſame Effects are produc'd by it, as would be produc'd by the Application of elementary Fire. Thus, for Inſtance, when a ſound Man puts his Hand too near a Fire, he will begin to perceive a greater Heat than uſual, and the Part will gradually become red. If he puts it ſtill nearer, a Tumor and Pain will be produc'd; and, if he continues to put it ſtill nearer, the Pain will be greatly increas'd, the Epidermis rais'd in Bliſters will be ſeparated, and, at laſt, by the increas'd Action of the Fire, the Skin will be burn'd into an Eſchar, which, being entirely mortify'd, muſt afterwards be ſeparated from the live Parts by a Suppuration. Now, the ſame Symptoms happening in the ſame Order, ſucceed Inflammations; for an Inflammation in the Back of the Hand is accompany'd with Heat, Redneſs, Tumor, and Pain, all which are increas'd according as the Diſorder is augmented. In a violent Inflammation tending to a Gangrene, the Epidermis is, in like manner, rais'd in

Blisters, and gangrenous Crusts are form'd, which must afterwards be separated from the live Parts by Suppuration. If the Violence of the Inflammation proceeds still farther, all the Parts to the very Bone are render'd black, as if they had been burn'd to a Coal by live Fire; and, in this Case, a Sphacelus is said to be present. Hence *Hippocrates* call'd a burning Fever τὸ πῦρ, because, in that Disorder, such an Heat is often excited about the vital Parts, as to make the Patient believe, that a real Fire is lodg'd there. By this Circumstance, sudden Death is often produc'd. And, in a Fever of the most intensely burning Kind, that is, the Plague, whilst the Malignity of the Disorder is, by a Translation, conveyed to the other Parts of the Body, these are burned in the same manner as if the actual Cautery had been applied to them, as is obvious in pestilential Carbuncles, which afterwards fall off, by a Suppuration happening all round them, just as when the Part is burned by the Application of the actual Cautery. Thus the sagacious Antients, observing the Similitude between the Effects of Fire, and an Inflammation, gave the latter its Denomination from the former; since the Causes and Effects exactly correspond to each other. This Doctrine is beautifully confirmed by modern Experiments with respect to the Nature of Fire.

An Inflammation is a Pressure and Attrition of the red arterial Blood stagnating in the smallest Canals, produced by the Motion of the rest of the Blood, thrown into violent and forcible Commotions, by means of a Fever.

Here we have the Definition of an Inflammation from its Causes, though the Antients defined this Disorder from its Symptom. Thus *Galen, in Comment.* 3. *in Lib. Hippocratis de Fracturis*, informs us, that they defined an Inflammation, a preternatural, resisting, hard, red, and hot Tumor, accompanied with a pungent Pain, and generally with a Fever. But it is to be observed, that this Definition only regards Inflammations, which happen in those Vessels, which naturally contain the red Blood, or, at least, which, being dilated, are capable of receiving it. But what happens in an Inflammation of the more minute Vessels, we shall afterwards consider.

In this Definition Author, two things occur, which, when joined together, constitute the Nature of an Inflammation; that is, Obstruction, and an increased Celerity of the Blood flowing into the Part obstructed; for in an Inflammation the Blood stagnates, and cannot pass through the narrow Cavities of the Vessels, though pressed forward by an impelling Liquor. Hence it is obvious, that in this Case there is an Obstruction. The obstructing Matter is red Blood, but of the arterial Kind; because an Obstruction, properly so called, can only happen in the Arteries. The Parts obstructed are the narrowest Chanels of the minute Ducts; because it is obvious, that the Molecules, incapable of passing through these, may be conveyed through the larger Cavities of the Vessels. These Molecules will, therefore, stop about the Ends or Terminations of the converging Vessels. But here we do not speak of the most minute Ducts of the human Body, but only of the narrowest Ramifications of the larger Vessels, which contain the red Blood, the thickest Part of the human Fluids. Hence these Canals are only called minute, as compar'd with the larger Vessels, but they are, at the same time, the largest among the minute Ducts; for the Extremity of the Artery containing red Blood is always larger than the Artery containing the Serum, which arises from it, and which, in consequence of the Smalness of its Diameter, naturally excludes the red Part of the Blood. Thus, in like manner, the Extremity of the Artery containing the Serum is, for the same Reason, larger than the Artery containing the Lymph which arises from it. Hence it is obvious, that a true Phlegmon can scarcely happen except in the minute Arteries containing the red Blood, or in the Arteries containing the Serum, so dilated as to receive it. But when Molecules, in consequence of their Bulk, stick in the narrow Cavities of the converging Vessels, the Fluid acting upon them, in consequence of the vital Motion, will necessarily compress them with a pretty great Force; for by the Action of the Heart and Arteries, the Blood is carried to the obstructed Parts with a Force sufficient to have conveyed it to the Extremities of the Body with a due Degree of Celerity. Hence the Pressure will be great, and renewed at every fresh Contraction of the Heart and Arteries. But, since these obstructing Molecules seem to remain immoveably fix'd in the narrow Chanels of these minute Ducts, it may, at first, seem improbable, that there should be any Attrition, which supposes the Motion of these Molecules backwards and forwards; but it is obvious, that these Molecules are not always absolutely immoveable, but sometimes forced back to a wider Part of the Artery, by its Contraction, and, at other times, protruded into the narrow Cavities, by the Action of the Heart, which fills the Arteries with Blood. Hence there is, in this Case, a true and genuine Attrition.

What has hitherto been said, is equally applicable to Obstructions formed in the minute Ducts, by a Stagnation of the red arterial Blood, as to Inflammations. Hence, in the Definition of an Inflammation, these Words are added, *by means of a Fever.* When an Inflammation seizes any considerable Part of the Body, or any of the Viscera, 'tis almost always found to be accompanied with a Fever. And it may, also, be asserted, that slight Inflammations, especially of small external Parts, are accompanied with a Fever; tho' Ophthalmias and inflammatory Quinseys are often found to be unattended with any Change or Alteration of the Pulse. *Galen*, in his Treatise *de Pulsibus ad Tyrones, Cap.* 12. has beautifully explained this, when treating of the Nature of those Pulses, which accompany an Inflammation. His Words run thus: "When an Inflammation is beginning, "the Pulse is greater, more vehement, quick, and frequent, "than in its natural State; in proportion as the Inflammation "increases, all these Qualities are augmented, and the Pulse be"comes sensibly harder." A little after, he subjoins; "This "Inflammation is capable of changing the Pulse thro' the whole "Body, according to the Bulk or Importance of the Part in"flam'd. If it should not affect the whole Body, there will, "nevertheless, be a similar Pulse in the Part inflamed." Under this Limitation, we are, therefore, to understand the Assertion, that every Fever is accompanied with an Inflammation; for, if the Strength and Celerity of the Pulse are not increased thro' the whole Body, yet they will be so in the inflamed Part; and this is, as it were, a Fever of the Part itself, as *Galen*, in his Treatise *de Methodo Medendi ad Glaucon. Lib.* 2. *Cap.* 1. justly observes; for, after he has said, that there are various Kinds of Inflammations, he affirms, that almost all of them are accompanied with a Fever. Then he lays down the first Difference of Inflammations, which is that between the moist, and the dry Kind: "The moist, says he, is produced by "a Fluxion of hot Humours to the Part; whereas the dry Kind "is the Effect of a preternatural Heat, kindled in the Part, with"out any Congestion of the Humours: And this is, as it were, "a Fever of the Part affected." 'Tis, also, confirmed, by the Opinion of the most antient Physicians, that an accelerated Motion of the Fluids always accompanies an Inflammation. Thus *Celsus*, in his Preface, when recounting the various Sects and Opinions of Physicians, uses the following Expressions: "If "the Blood is transfused into those Veins, which ought to con"tain the Spirits, it excites an Inflammation; and that Inflam"mation produces a Commotion, like that which happens in a "Fever, as *Erasistratus* maintained;" where it is to be observed, that 'tis not expressly said, that a Fever is produc'd whilst the Inflammation is present, but only that such a Commotion, as happens in Fevers, is brought on.

Hence *Simson*, in his *System of the Womb*, has, with great Justice, given a Caution to Physicians, not to be deceived, by imagining that there cannot be an Inflammation where there is no Fever; since it often happens, that an Inflammation of the Stomach and Intestines produces fixed Pains, when no Fever can be observed by feeling the Pulse. He, also, affirms, that he has known spurious Epidemical Pleurisies afflict Patients for several Months, without a concomitant Fever, unless speedily removed by Venesection, and other Medicines proper for carrying off an Inflammation.

From what has been said, it is sufficiently obvious, that Obstructions have many things in common with Inflammations; for no Inflammation can be conceived without concomitant Obstruction. Besides, a violent Obstruction in some Vessels increases the Velocity of the Fluids circulating in others, which remain pervious and open; that is, produces a Fever. But as soon as a Fever accompanies an Obstruction, an Inflammation is present; which may, therefore, be called an Obstruction with a Fever, either in the whole Body, or some Part of it.

An Inflammation may, therefore, happen in the Extremities of the Arteries, or in the Vessels which convey the Serum and Lymph, or in other smaller arterial Vessels, which, in consequence of the Dilatation of their Mouths, have admitted the red Globules, or other thick Elements of the Fluids, but cannot convey them through their Extremities. If the Blood, also, is conveyed into those Veins, which ought only to contain the Spirits, an Inflammation is produced. *Cels.*

An Inflammation, therefore, or Phlegmon, properly so called, as is obvious from the Definition, can only happen in these Vessels which naturally contain the red Blood; or in those whose Orifices are in certain Diseases, observed to be so dilated, as to admit some Part of the red Blood. In the other smaller Vessels, the Elements of a thinner Fluid, concreted by whatever Cause, may, in like manner, so remain, as not to find a Conveyance through them; and a succeeding Fluid may, also, with a considerable Velocity, act upon these obstructed Parts; but, so long as no Redness appears in the Part affected, the Disorder is not called an Inflammation, but an Erysipelas, or an Oedema, attended with Heat, as we shall afterwards observe. But how far the red Part of the Blood may penetrate, or into what particular Number of decreasing Series of Vessels it may enter, are Points

not

not as yet ſufficiently aſcertained by Experience. It is, however, certain, that the red Blood may, in certain Diſeaſes, not only enter theſe Veſſels, which, being next in Bulk to the Blood-veſſels, contain the yellow Serum, but, alſo, thoſe far more minute Veſſels, which naturally contain only pellucid Fluids. Thus the White of the Eye, which, in a ſound Perſon, almoſt reſembles the Splendor of Pearls, upon the Approach of an Inflammation, often becomes totally red, and exhibits numberleſs Ramifications of ſmall Veſſels; which, being diſtended with red Blood, may be diſtinctly obſerved by the naked Eye, though in a natural State they contained nothing of a coloured Fluid. In violent Ophthalmias, I have often evidently perceived a Veſſel full of red Blood paſs through the highly pellucid Subſtance of the Tunica Cornea. But that the Veſſels of the Cornea are ſmaller than thoſe of the Adnata, is not to be doubted, ſince thoſe of the former, in a State of Health, appear perfectly pellucid, with their Contents; and, when an Inflammation ariſes in the Eye, the minute Veſſels, about the Disk of the Cornea, appear diſtended with red Blood, before the Cornea itſelf is affected; till, at laſt, by the Strength and Duration of the Diſeaſe, its Veſſels, being gradually dilated, may admit the red Blood. Hence it is obvious, that a true ſanguineous Inflammation may, ſometimes, happen in highly minute and ſmall Veſſels.

As for the Paſſage here quoted from *Celſus*, it is certain, that the antient Phyſicians, under the Name of Veins, comprehended not only the Veins, but, alſo, thoſe Veſſels by the Moderns called Arteries. *Eraſiſtratus*, and many of his Followers, were of Opinion, that the Blood was not contained in the Veins furniſhed with a Pulſe, or what we call the Arteries; but that theſe contained the Spirits, which produced the Pulſation in them. In the Days of *Galen*, ſeveral Phyſicians confidently affirmed, the ſame thing: And ſome aſſerted, that they could demonſtrate, that the Aorta contained no Blood. But *Galen*, in the ſixteenth Chapter of his ſeventh Book *de Anatom. Adminiſtrat.* beautifully ridicules this Notion, and ſhews it to be falſe, by accurate and ſatisfactory Experiments.

Hence, at leaſt according to *Celſus*, it is obvious, that *Eraſiſtratus* thought an Inflammation was preſent when the Blood paſſed from the Veins into the Arteries, naturally deſtitute of Blood, that is, when it was lodged in Parts where it ought not to be. But now, ſince the Circulation of the Blood is known, we admit of no ſuch Doctrine: However, this Maxim is, in ſome Senſe, to be admitted, ſince an Inflammation is produced when the Blood enters ſuch Veſſels as ought only to contain the thinner and finer Humours.

The Seat, therefore, of an Inflammation is every Part of the Body, in which there are reticular Diſtributions of Arteries, or the Origins of lymphatic and arterial Veſſels.

After *Ruyſch* diſcover'd, that almoſt every-where in the Body the Arteries were diſtributed into highly minute Ramifications, and that almoſt in every Point the ſmall Ramifications ſent off from the larger Trunks had a mutual Communication with each other, it became cuſtomary with Phyſicians, to call theſe Diſtributions of Arteries *Reticula*, or *reticular Plexuſes*; becauſe the Interſtices left between thoſe Ramifications, which meet, and are mutually complicated with each other, very nearly reſemble the Meſhes of a Net. When this great Man, for many Years, applied himſelf carefully to the Cultivation of Anatomy, he often found, that the ſmall Interſtices left between the reticular Plexuſes, which ſeemed to have no Veſſels, contained a large Number of ſmall Veſſels, diſtributed almoſt in the ſame Order as before in the large Ramifications. But where-ever the Arteries are obſerved to be divided into minute Ramifications, the Molecules of the Fluid, becoming incapable of paſſing, either by Concretion, or Change of Figure, may ſtick there; or, by leſſening the Cavities of theſe Veſſels, the Paſſage of the Fluid, which ought naturally to flow in them, may be hindered. Hence Obſtructions, and, in conſequence of the increaſed Motion of the ſucceeding Fluid, Inflammations may be produced. Since, alſo, in almoſt every Part of the Body there are ſmall Ramifications diſtributed from the Arteries containing the Blood, which, in conſequence of their Smallneſs, exclude the red Part of the Blood, the Beginnings of theſe ſmall Veſſels being dilated, through an *Error Loci*, Part of the red Blood may enter theſe ſmall Veſſels, and remain, incapable of paſſing forwards, in their narrow Chanels. Hence all the like Misfortunes will be produced.

Hence Inflammations may happen in the Arteries, Veins, Nerves, Membranes, Muſcles, Glands, Bones, Cartilages, Tendons, all the Viſcera, and, conſequently, almoſt in all the Body; but no-where more frequently, or obſtinately, than in the Fat.

Since it is certain from the anatomical Diſcoveries of the Moderns, that almoſt all the Parts of the Body are furniſhed with Veſſels perceptible by the Eye, it is obvious, that an Inflammation may happen in almoſt the whole Body, and in all the Parts here enumerated.

As for the Arteries and Veins; the Coats of theſe Veſſels are compoſed of other ſmaller Veſſels, as may be demonſtrated to the Eye by anatomical Injections in the larger Trunks of theſe Veſſels; and, in Animals killed immediately after long and faſt Running, the whole external Surface of the Aorta has frequently appeared black, in conſequence of too large a Quantity of Blood diſtending the minute Veſſels, which, by a curious and truly ſurpriſing Texture, are diſtributed through the Membranes of this large Veſſel.

As for the Nerves; theſe may be conſidered in two reſpects, either as they contain the tender Branches of the Brain, Cerebellum, and ſpinal Marrow; or as they conſiſt of tough Vaginæ, furniſhed with all kinds of Veſſels, by which Vaginæ the highly ſoft and pulpous Subſtance of the Brain, and ſpinal Marrow, is ſafely conveyed to all the Parts of the Body. It is not abſolutely certain, that the highly minute and imperceptible Veſſels, which conſtitute the Subſtance of a Nerve, properly ſo call'd, are at any time ſuſceptible of an Inflammation; yet, ſince thro' theſe an incredibly fine Fluid is conveyed from the Brain, the Cerebellum, and ſpinal Marrow, it is not abſurd to ſuppoſe, that an Inflammation may happen even in theſe: But it is ſufficiently obvious, that a genuine Inflammation may happen in thoſe larger Veſſels, which are ſo palpably diſcovered by anatomical Injections, and which, by their Texture, conſtitute the Vaginæ and Coats of the Nerves.

As for the Membranes; we know, from anatomical Injections, that thoſe Membranes which were, by the Antients, accounted the moſt ſolid, and thought to be entirely without Blood, are nothing but a Congeries of Veſſels.

As for the Muſcles and Tendons; it is, from modern Diſcoveries, certain, that numberleſs Arteries are every-where diſtributed through the muſcular Fleſh: We, alſo, know, that Tendons, apparently the moſt ſolid, and entirely white, may, by an artificial Injection, be rendered totally red, not only on account of a Repletion of thoſe Veſſels, which conſtitute the Vaginæ that cover the Tendons; but it is, alſo, certain, that many ſimilar Veſſels run between the Fibrils of the Tendons. Hence it is that Inflammations may happen in the Tendons; and that in violent Rheumatiſms, where the Muſcles are inflamed, ſo violent Pains are produced, upon making the ſlighteſt Attempts to Motion.

As for the Glands; it will amount to the ſame thing whether theſe are Convolutions of Veſſels, or hollow Follicules, diſcharging, through Emiſſories, the Fluid collected in their Cavities, and, which, being ſecreted from the numberleſs ſmall Veſſels which are diſtributed through the Membranes of ſuch Follicules, is conveyed into their Cavities; for in both Caſes numberleſs arterial Veſſels are ſaid to conſtitute the Fabric of the Gland. Hence an Inflammation may happen in them, as we daily obſerve in the parotid, ſubmaxillary, axillary, and inguinal Glands.

As for the Bones; under the Article CAPUT it is ſhewn, that the Veſſels, carried from the Perioſteum to the Bone, run between its Laminæ, whilſt others paſs through particular Perforations, to the Diploe of the Cranium; and, in other Bones, to the Marrow. Hence the Separation of the corrupted Parts, and the Reſtitution of ſuch as are loſt, are to be aſcribed to the Efficacy of the Veſſels diſperſed through the Subſtance of the Bone. An Inflammation may, therefore, be produced here, either in the arterial Veſſels running between the Laminæ of the Bone, or in the minute Veſſels of the Marrow. Hence ariſe deep-ſeated and obſtinate Pains, a Spina Ventoſa, and other Diſorders of a very terrible Nature. See the Article Os. *Galen*, in the ſecond Chapter of his Treatiſe *de Tumoribus præter Naturam*, obſerves, that an Inflammation may ſometimes happen in the Bones; for, after he has affirmed, that the Coats of the Veſſels, the Membranes, Nerves, and Tendons may be inflamed, he adds theſe Words: "Wherefore an Inflammation "may ſometimes happen in the Bones, in ſuch a manner that "they are primarily and originally affected." From what precedes this Paſſage, it is ſufficiently obvious, that *Galen* not only thought, that Inflammations of the exterior Parts might not only reach the Bone; but, alſo, that an Inflammation, originally beginning in the Bone, may ſometimes propagate itſelf to the other Parts.

As for the Cartilages; next to the Bones are the Cartilages, many of which are, in Proceſs of Time, transformed into Bones, as is obvious from the Doctrine of the Generation of Bones. But ſince, in thoſe Bones, which were before Cartilages, there is a vaſcular Structure found, it is highly probable, that a ſimilar Structure pre-exiſted in the Cartilages. Beſides, *Havers*, *Ruyſch*, and other curious Anatomiſts, have, by their Induſtry, diſcovered Veſſels in the Cartilages. Hence it is obvious, that an Inflammation may happen in the Cartilages, as well as in the Bones.

As for all the Viſcera, and, conſequently, almoſt all the Body; it is certain, that the Viſcera conſiſt of a moſt ſurpriſing Texture, which

which differs almoſt in every one of them; and the acute Diſeaſes of the Viſcera evidently prove, that an Inflammation, with all its Conſequences, ſuch as a Suppuration, Gangrene, and Scirrhus, have been ſometimes obſerved in every one of them, the Heart itſelf not excepted. Hence we may juſtly conclude, that almoſt all the Body is ſubject to Inflammations, ſince it is certain from modern Diſcoveries, that almoſt all its Parts are of a vaſcular Structure.

As for frequent and obſtinate Inflammations in the Fat; it is certain, that the Membrana Celluloſa is found in almoſt every Part of the Body, and receives different Names, according to the different Subſtances it contains: For, if a white granulated Matter, capable only of being fuſed by Heat, fills the Cellulæ of this Membrane, it is called the Membrana Adipoſa; but, when the Matter contain'd in it almoſt diſſolves ſpontaneouſly, it is called Membrana Pinguedinoſa. But in thoſe Parts of the Body, in which the Structure of this Membrane is moſt tender, and its Cellulæ ſo ſmall, that their contained Fat eſcapes the Eye, it is only called ſimply Membrana Celluloſa; as, for Inſtance, in the Back of the Hand, and Forehead. How ſurpriſingly this Membrane is diffuſed through the Body, will ſufficiently appear, if we conſider, that not only all the Muſcles and Tendons are covered with ſuch a cellular Membrane, but, alſo, that all the Fibres of the Muſcles, ſo far as the Diligence and Patience of the moſt accurate Anatomiſts can carry them, are covered with ſimilar cellular Vaginæ. Almoſt all the Veſſels run along in ſuch a cellular Subſtance, which, in ſome meaſure, alſo, conſtitutes the Structure of the Veſſels and Viſcera. Hence it is obvious, that Inflammations may very frequently happen in this Membrane, whether diſtinguiſhed by the Epithets *Celluloſa*, *Pinguedinoſa*, or *Adipoſa*. And, when they happen in this Part, they are often ſo obſtinate, as to be incapable of a Reſolution, but generally tend to a Suppuration, or a Gangrene; for, as the Arteries diſperſed through this Membrane in a State of Health, ſecrete a pinguious, unctuous, and oleous Subſtance, ſubſervient to the Lubrication of the Parts, and depoſite it in the ſo eaſily dilatable Cells of this Membrane, it is probable, that when theſe Veſſels are dilated, or ruptured, by an Inflammation, the red Part of the Blood is diſcharged from them, and accumulated in the Cellulæ of this Membrane. Hence a red and hard Tumor, the Characteriſtic of a genuine Inflammation, is produced, and is almoſt always lodged only in the Membrana Celluloſa. Beſides, it is ſufficiently evinced by the Terminations of Inflammations, that they are moſt frequently ſeated in the cellular Membrane; for if a violent Inflammation is ſucceeded by a Suppuration, or a Gangrene, upon opening the Skin, a Collection of Pus, or a gangrenous Sordes, are almoſt always found lodged in the Membrana Adipoſa.

This Stagnation is produced in the moſt minute Arteries, by whatever preſſes, diſtracts, diſtorts, ruptures, contuſes, burns, corrodes, or corrugates the Extremities of the Veſſels, whether conical, or cylindrical, in ſuch a manner that the Diameters of their Cavities are leſs than thoſe of the Particles of Blood which ought to paſs through them. The ſame Misfortune is, alſo, produced by Heat, violent Exerciſe, ſharp Bodies fixed in the Parts, Ligatures, incumbent Weights, acrid Subſtances taken inwardly, or applied externally, intenſe Cold, and ſtrong Frictions: All the Cauſes of Wounds, Contuſions, Corroſions, Fractures, Luxations, and Obſtructions, alſo produce the ſame Effect.

In the Definition of an Inflammation, two things are conſidered; that is, the Stagnation of the red arterial Blood in the moſt minute Canals; and the Preſſure and Attrition made by the ſucceeding Blood on theſe Parts, already obſtructed by ſtagnating Blood. Now in this Aphoriſm are enumerated the Cauſes capable of producing this Stagnation in the moſt minute Arteries, which, however, are naturally capable of tranſmitting the red Part of the Blood.

The Arteries which contain the red Blood, after by lateral Ramifications its finer Part is ſecreted for various Uſes, convey that Part of the red Blood, which, by the determinate Bulk of its Molecules, cannot naturally enter the ſmall Veſſels, to the Veins, with which they make ſo many continued Canals. Where, therefore, ſuch a minute Artery terminates, there a Vein begins. But an Artery, from its greateſt Largeneſs, through its whole Courſe, becomes gradually ſmaller; whereas a Vein, from the narroweſt Part of its Beginning, becomes gradually larger, thro' its entire Courſe. Hence, in the Arteries, the Fluids move from the Baſe to the Apex of the Cone; whereas, in the Veins, they move from the Apex to the Baſe: For which Reaſon the Veins, as well as the Arteries, may be called Conical Canals. But, about the Part where the narroweſt Portion of the Arteries is joined to the ſmalleſt Part of the Vein, the Canal ſeems, for ſome Length, to be cylindrical, and to have its Sides neither converging nor diverging; but, accordingly as we proceed farther, either in the Artery or Vein, the Canal aſſumes the Figure either of a direct, or inverted Cone. But at the very Part where the Artery terminates, and the ſmalleſt Part of the Vein begins, the Canal is narroweſt. Hence the Molecules of Blood, rendered incapable of paſſing by any Cauſe whatever, will, of courſe, moſt frequently ſtick here. Now, if we ſuppoſe, that the Extremities of the Veſſels are, by any Cauſe, rendered narrower, there muſt neceſſarily happen a Stagnation of the Fluids, which cannot paſs through theſe narrow Parts. From what has been ſaid, we, alſo, ſee the Reaſon why, in the Aphoriſm, Veſſels, both of a conical and cylindrical kind, are ſpecified. The moſt minute Particles of Fluids circulating in Animals, and only viſible by Microſcopes, appear ſpherical, and, about the narroweſt Parts of the Veſſels, ſeem to be almoſt only ſingle Molecules, which, however, paſs with a kind of apparent Difficulty. Hence it is ſufficiently obvious, that, when the narrow Extremities of the Veſſels are leſſen'd, the free Paſſage of the Fluids is hinder'd, and the Cavity of the Canal block'd up; ſince the Bulk of the Molecule ſurpaſſes the Diameter of the Veſſels, through which it ought to paſs: Hence happens an Obſtruction, which is the Concomitant of every Inflammation.

Since a Section of the human Canals, perpendicular to their Axis, makes a Circle, a Figure which of all others contains the largeſt Area; it is hence obvious, that every Cauſe which changes the Figure of the Canals, produces a Stagnation of the Fluids, which ought to paſs through their moſt narrow Parts. The moſt conſiderable of theſe Cauſes are here enumerated.

As for whatever preſſes the minute Arteries; whatever preſſes upon them muſt, of neceſſity, leſſen their Diameters, retard the Circulation of the Fluids through them, and, by that very means, tend to induce a Stagnation.

As for whatever diſtracts or diſtorts them; the more any Canal or Veſſel is elongated and ſtretched, the ſmaller its Cavity becomes; as we ſee in Glaſs Tubes, render'd flexible by a Lamp-heat, in order to be ſtretch'd: But this Circumſtance muſt, in the very Nature of the thing, contribute to the Production of a Stagnation: Thus, when, in order to puniſh Malefactors, Weights are hung to their Limbs, or Pullies uſed to diſtort their Bodies, the ſubſequent Pain, Redneſs, and Inflammation, ſufficiently teſtify, that this Elongation or Diſtraction produced a Stagnation.

As for whatever ruptures them; it is certain, that, in conſequence of the Elaſticity of the Veſſels, their divided Orifices will ſpontaneouſly contract themſelves, prevent the Egreſs of the Fluid circulating in them, and, conſequently, induce a Stagnation, which, in its Turn, may lay a Foundation for an Inflammation.

As for whatever contuſes them; ſince the Idea of a Contuſion implies, an Accumulation of ſmall Wounds, it is ſufficiently obvious, from what we have juſt now ſaid, that a Stagnation of the Fluids, and a ſubſequent Inflammation, may be produced by it: Beſides, as a Contuſion is always made by an hard and obtuſe Inſtrument, injuring the Parts of the human Body, it cannot poſſibly happen without a proportionable Degree of Compreſſion, which, by leſſening the Diameters of the Veſſels, retards the Circulation of the Fluids, and, by that means, tends to induce a Stagnation and Inflammation.

As for burning, corroding, or corrugating the Veſſels; by all theſe Methods a Part of the Body is either entirely deſtroy'd, as by the actual Cautery, or ſtrong Cauſtics: Hence, in the Circumference of ſuch a Part, the live Veſſels are obſtructed, and hence a Stagnation and Inflammation enſue: Or, if theſe Cauſes ſhould operate more mildly, the Solids are contracted, the Fluids inſpiſſated, and render'd uncapable of paſſing through many Veſſels: A Circumſtance by which Stagnations and Inflammations will neceſſarily be produced.

As for Heat; this may produce a Stagnation, when its Degree ſurpaſſes that which is found in a ſound Body; for, by this means, the ſolid Fibres are dried, contracted, and render'd rigid: But, in proportion as the Rigidity of the Fibres is increaſed, the Contractility of the Veſſels compounded of them is augmented, and their Cavities, conſequently, leſſen'd: Hence Obſtructions muſt neceſſarily happen. Beſides, if we conſider, that, by intenſe Heat, the moſt fluid Parts of the Humours are diſſipated, and the Blood, and its Serum, coagulated into ſolid Maſſes, which can hardly afterwards be reſolv'd, it will be ſufficiently evident, that intenſe Heat is to be juſtly accounted among the Cauſes of an Inflammation.

As for violent Exerciſe; an Increaſe of Motion, in the very Nature of the thing, produces a proportionable Increaſe of Heat, which we have juſt now ſhewn to be capable of producing an Inflammation.

As for ſharp Bodies fixed in the Parts; theſe, when lodged in any Part, not only injure and compreſs the adjacent Veſſels, but, alſo, produce an uninterrupted Pain, and continual Irritation: Hence, it is obvious, an Inflammation muſt enſue, eſpecially, if ſuch a Body is lodged near thoſe Parts which are furniſh'd with an exquiſite Senſation; for, in this Caſe, the Diſorder is ſeldom removed, till, after a Suppuration, Nature throws out the offending Body.

As for Ligatures; theſe, by compreſſing the Veſſels, diminiſh their Cavities; but they act principally on the Veins, both becauſe their Coats are leſs firm than thoſe of the Arteries, and

becauſe

becauſe moſt of them, generally, lie near the Surface of the Body: But, when Ligatures are made very tight, they, alſo, compreſs the Arteries, as well as the Veins: Thus, in Veneſection, if the Ligature is but moderately tight, the Blood, upon opening the Vein, burſts out with Violence; but, if it is ſo tight, as, at the ſame time, to compreſs the Artery, ſcarcely any Blood is diſcharged from the Orifice; ſo that when Surgeons obſerve this, they ſlacken the Ligature, in order to promote a Diſcharge of the Blood. For the ſame Reaſon, any Weight reſting externally on the Body, by compreſſing the Veſſels, produces Obſtructions.

As for acrid Subſtances, whether taken inwardly, or applied externally; almoſt all the Parts of the human Body, whether internal or external, ſeem capable of being contracted by the Application of acrid Subſtances, as may be ſhewn by many Experiments: Thus, for Inſtance, if a Drop of Vinegar is put into the Eye, the Eye-lids are, without the Concurrence of the Perſon's Will, ſo powerfully contracted and ſhut, that they cannot be ſeparated without a conſiderable Force. Acrid Poiſons, taken internally, contract the Stomach and Inteſtines: Hence violent Inflations are produced, by the Retention, and ſubſequent Heat of the Air. When, by means of a Pledget, I applied a ſmall Drop of Oil of Vitriol to the bare Inteſtine of a live Dog, it was immediately contracted in the ſame manner as if a Ligature had been applied to it. Now, 'tis probable, that theſe acrid Subſtances, if conveyed to the ſmaller Veſſels, muſt, alſo, in them produce ſimilar Contractions: Hence Obſtructions, and, upon an Increaſe of the Circulation, Inflammations, may be produc'd. Thus, alſo, when an acid Taint has affected the Blood, Itchings are produced, and Obſtructions, Puſtules, and Ulcers, obſerv'd about the cutaneous Veſſels. When in dropſical Patients the Serum, ſtagnating in the Legs, begins to grow acrid, the Skin is frequently inflam'd by it. If acrid Subſtances, eſpecially when externally applied, are capable of producing a Solution of Continuity in the Veſſels, they muſt, from what has been ſaid, be ſtill more capable of producing an Inflammation.

As for intenſe Cold; 'tis certain, that by Cold the ſolid Parts of the human Body are leſſen'd in all their Dimenſions, by which means the Cavities of the Veſſels muſt neceſſarily be diminiſh'd: 'Tis, alſo, certain, that by Cold the Molecules of the Blood are united with each other. By both theſe Effects of Cold, not only Obſtructions and Inflammations, but, alſo, ſudden Gangrenes, may be produc'd, as is ſhewn under the Article GANGRÆNA. Hence the Reaſon is obvious, why Country-people are ſo frequently ſeiz'd with a Pleuriſy, by fooliſhly expoſing themſelves to a cold Air, after they are over-heated by exceſſive Labour; for the Air, which is cold when inſpired, almoſt immediately touches the intercoſtal Spaces, ſince nothing is interpos'd between it and them, but the ſlender Membrane of the pulmonary Veſicles; whilſt, at the ſame time, the cold Air externally ſurrounding the Body, perhaps not duly cover'd, increaſes the Diſorder.

As for ſtrong Friction; though Friction is of great Efficacy in removing Obſtructions, yet when it is either too violent, or too long continued, it is capable of producing a hot Fever in the coldeſt dropſical Patient, as is ſhewn under the Article FIBRA; for, when the Motion of the venous Blood is augmented, the Heart contracts itſelf more forcibly and quickly, by which means the Circulation of the Blood is augmented; and, if this Circulation ſhould be too briſk, 'tis moſt certain, that it may produce Inflammation; ſince the briſker the Motion, the greater the Heat; and the greater the Heat, the greater the Diſſipation of the fine and fluid Parts of the Humours in conſequence of which a Stagnation and Inflammation may be produc'd. Thus, by ſtrong Friction, we obſerve, that the Parts of the Body are render'd hot, tumid, and painful; but theſe Symptoms denote a preſent Inflammation, which, however, may be ſoon removed, unleſs the Friction is long continued, or exceſſively violent. In Storms at Sea, when the Ropes are ſuddenly drawn through the Hands of the Sailors, the violent Attrition produces ſo intenſe a Pain and Heat, that the Epidermis is inſtantaneouſly raiſed in gangrenous Veſicles. Beſides, if we conſider, that by Frictions the red Part of the Blood is forc'd into ſmall Veſſels, which it does not naturally enter, as is evinc'd by the Redneſs produc'd by Friction, it will be ſtill more obvious, that exceſſive Frictions are capable of producing Inflammations.

How all the Cauſes of Wounds, Contuſions, Coroſions, Fractures, Luxations, and Obſtructions, may contribute to the Production of Inflammations, may be underſtood from what has been already ſaid.

A Stagnation is, alſo, produced by whatever blocks up the Paſſages, and, at the ſame time, applies to the Parts any thing of an acrimonious Quality, ſuch as oleous, ſaline, and acrid Subſtances.

'Tis certain, that the whole internal and external Surfaces of the Body are pervious to a perſpirable Matter; for, in every Moment of Life, a fine and ſubtile Exhalation is forced thro' minute arterial Ducts, whoſe Extremities are open in the external Surface of the Body. This Exhalation, when reverberated by a ſmooth Plate of Metal, or a cold Mirror, is condens'd into a fine Lymph, the Whole of which exhales without leaving any Fæces. Now, if by any means thoſe Paſſages, through which the perſpirable Matter is convey'd, ſhould be obſtructed, they will neceſſarily be dilated by the impel'd Fluid; and, when thus dilated, they will admit the groſſer Humours: Hence an Obſtruction and Stagnation will neceſſarily enſue. When the moſt minute of theſe exhaling Veſſels are thus obſtructed, as the next in Bulk to theſe cannot convey the thinneſt Part of the Fluid they contain to the former, they will, in like manner, be dilated; and thus the Diſorder may be propagated from theſe minute exhaling Veſſels, to thoſe which contain the Blood.

Since this highly fine exhaling Fluid, almoſt in every reſpect, reſembles Water, and ſince Oil hinders, or at leaſt retards, the Ingreſs of Water into minute glaſs Tubes, hence it, perhaps, is, that an Eryſipelas and Inflammations are ſo often produced by the external Application of Oils to the Skin. *Hieronymus Mercurialis*, in his Treatiſe *de Arte Gymnaſtica*, *Lib.* 1. *Cap.* 8. informs us, that, among the Antients, the Bodies of the Wreſtlers were anointed with Oil, leſt their Strength ſhould be diſſipated by profuſe Sweats; and that, after bathing, Unctions were uſed, leſt the Moiſture, convey'd to the Body by the Bath, and the native Heat, ſhould make their Eſcape through the relaxed and open Pores. In many Perſons the Skin is immediately inflam'd by the Application of a pinguious Plaiſter, or Ointment; and the internal Parts of ſome Perſons ſeem to have ſomething of a ſimilar Diſpoſition, ſince they immediately become feveriſh upon eating fat Subſtances, and eſpecially Bacon. If, at the ſame time, there is any Degree of Acrimony in theſe pinguious and oleous Subſtances, they may produce very obſtinate Inflammations. Oil of Almonds, which is highly mild, when recently expreſs'd, in the Summer-time, becomes rancid in a few Days, and acquires ſuch a Degree of Acrimony, that a ſmall Quantity of it, ſwallow'd, forthwith inflames the Fauces. The ſame holds true with reſpect to Butter, either become rancid, or fried too long in a Pan. But an acrid Subſtance, mixed with one of a pinguious Nature, is ſo much the more hurtful, becauſe it tenaciouſly adheres to the Part to which it is applied, and cannot be eaſily waſh'd away by aqueous Liquors. The Berries of the Mezereon, or Spurge-olive, and the Fruit of the Spurge-laurel, when preſſed with the Fingers, diſcharge a pure pinguious Oil; which, when taſted, at firſt, appears mild and gentle, but, immediately after, inflames the Fauces to ſuch a Degree, that it is ready to ſuffocate any one who taſtes it without due Caution. In like manner it has been obſerv'd, that the acrid empyreumatic Oils, by ſtrong Fire obtain'd from Hartſhorn, Guaiacum, and other Subſtances of a like Nature, as, alſo, the expreſs'd Oils, ſo much recommended for curing Rigidities of the Joints, ariſing from Infarctions of Matter, have, when imprudently applied to the Skin, produced the worſt of Inflammations, and ſometimes Gangrenes; for in theſe there is, at once, an oleous Tenacity, by which the Veſſels are obſtructed, and a ſtrong Degree of Acrimony, by which the irritated Veſſels are conſtricted.

Stagnations are, alſo, produced by ſuch things as coagulate the Blood, ſuch as violent Exerciſe, and a Derivation of the fineſt Parts from the Blood, by Sweat, Urine, Saliva, and Diarrhœas. Coagulating Subſtances, alſo, produce the ſame Effect.

An Obſtruction is formed by the Exceſs of the Fluid to be tranſmitted, above the Cavity of the Veſſel tranſmitting; ſo that its general Cauſes muſt be too great a Narrowneſs of the Veſſels, or an increaſed Bulk of the Molecules of the Fluid to be tranſmitted, or both theſe in Conjunction. We have already treated of thoſe Cauſes, which produce a Stagnation in the moſt minute Arteries, which convey the Blood, ſo far as it proceeds from a Coarctation of theſe Veſſels; but we now come to conſider thoſe Cauſes, which, allowing the Capacities of the Veſſels to remain the ſame, ſo coagulate the Blood, that it cannot paſs through the ſmalleſt Parts of the moſt minute Arteries. Among theſe we ſhall, firſt, conſider

Violent Exerciſe. In the Blood there is always a Tendency to Concretion, which is ſtill the ſtronger, the greater the Action of the Veſſels upon the Blood they contain. The Blood of a robuſt Man, taken from the Vein, immediately concretes; and, when left in a State of Reſt for ſome time, exhibits a large Quantity of a red concreted Subſtance, but very little of a fluid Serum; whereas 'tis directly otherwiſe in the Blood of a tender and ſickly Girl. But the Whole of this depends on the weaker or ſtronger Action of the Veſſels on the Blood. Now, by an increas'd Motion, or Exerciſe, the Action of theſe Veſſels, within a certain given Time, both more frequently and forcibly exerts itſelf upon their contain'd Fluids. Hence a proportionably greater Condenſation of them will enſue: Beſides, by an Increaſe of Motion, the moſt fluid Parts of the Humours are diſſipated, becauſe, in the ſame time, a greater Quantity of the Fluid to be ſeparated from the Blood is applied to the Organs deſtin'd for Secretion and Excretion; by which means the Concretion of the Blood is augmented. An Increaſe of Motion is, alſo, ſucceeded

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by an Increaſe of Heat, by which, in like manner, the Blood is ſo inſpiſſated, that it can no longer paſs through the ſmalleſt Parts of the moſt minute Arteries. Hence, in acute Diſeaſes, when the Heat is much increaſed, the injured Actions of the Brain, and a difficult Reſpiration, immediately inform us, that the Blood is ſo inſpiſſated, that it can no longer freely paſs through the Brain, and the Organs deſtin'd for the Purpoſes of Reſpiration.

As for a Derivation of the finer Parts of the Blood by Sweat; Experience has taught us, that red Globules conſtitute the thickeſt Part of the human Blood; and that a large Quantity of a fine and thin Fluid is interpos'd between the Globules, in order to hinder their mutual Contact, and prevent their too eaſy Concretion. When, therefore, by any Cauſe whatever, this moſt thin and fine Part is carried off from the Blood, the larger Molecules, becoming contiguous, and being moſt compreſs'd about the ſmalleſt Parts of the Arteries, are there united, and form'd into Concretions. Hence an Obſtruction of the Canals, and a Stagnation of the Fluids, enſue. Thus, in phthiſical Patients, waſted with Night-ſweats, the Blood begins to ſtagnate about the cutaneous Veſſels, and to produce inflammatory Puſtules. For this Reaſon *Hippocrates* condemned Sweats in the Beginning of acute Diſeaſes. And *Sydenham* obſerv'd, that Sweats always proved injurious in the Beginning of the Small-pox.

As for a Derivation of the finer Parts of the Blood by Urine; hyſteric and hypochondriac Patients often diſcharge an incredible Quantity of thin Urine, like Water, after their Minds have been ruffled by the Tranſports of ſome exceſſive Paſſion. But, when the Blood is thus deprived of its diluting Vehicle, its thicker Part begins to be concreted, and violent Inflammations ſometimes enſue; or the Craſſamentum of the Blood, depoſited about the abdominal Viſcera, produces obſtinate Obſtructions. Hence Melancholy ſo frequently ſucceeds hyſteric or hypochondriac Diſorders.

As for a Derivation of the finer Parts of the Blood by the Saliva; the Saliva, ſpontaneouſly flowing from the Mouth of a ſound Perſon, is ſufficiently thin naturally; and only rendered more tenacious, by an Admixture of the Mucus of the Mouth and Fauces, promoted by the Motion of the Tongue, and adjacent Parts. And, when this Saliva is chymically examined, 'tis found to be almoſt entirely aqueous; ſince, from ſixty Ounces of Saliva, by a gentle Fire, almoſt fifty-nine may be drawn off, which have apparently all the Qualities of Water. The Saliva, in like manner, is not concreted in boiling Water; ſo that it muſt neceſſarily be thinner than the Serum of the Blood. By a copious Diſcharge, therefore, of Saliva, a large Quantity of a thin and fine Fluid is evacuated from the Body; in conſequence of which, the Blood becomes incapable of circulating with its uſual Freedom. For this Reaſon, thoſe who, either thro' a bad Habit, or the Abuſe of Tobacco, loſe large Quantities of Saliva, are ſo often afflicted with obſtinate Obſtructions of the Inteſtines. After all the Parts of the Mouth have been long covered with thick Aphthæ, when theſe fall off, an incredible Quantity of Saliva is diſcharged from the dilated Veſſels. And, unleſs this immoderate Diſcharge is removed by proper Remedies, the Patients are exhauſted to ſuch a Degree, that they either fall a Sacrifice to their Diſorders, or afterwards labour under chronical Diſeaſes; ſince, when this fineſt Part of the Blood is loſt, Obſtructions are very eaſily form'd. Nor to this Doctrine can it be objected, that under a Salivation, protracted for ſeveral Weeks, a large Quantity of Fluids is daily evacuated, without any ſubſequent Inſpiſſation of the Blood; ſince, in this Caſe, it is not the Saliva, properly ſo called, but the diſſolved Humours, which are diſcharged under the Form of a putrid Water. Hence the fineſt Part of the Blood is not loſt, and its thicker Part rendered incapable of circulating; but there is a real Diſſolution even of the red Part of the Blood; for which Reaſon, People are able to bear a Salivation, provided, by a good Diet, freſh Humours are ſupplied, whilſt thoſe before in the Body are evacuated.

As for a Derivation of the finer Parts of the Blood by Diarrhœas; it is ſufficiently obvious, that by theſe the finer Parts of the Blood may be, alſo, diſcharged from the Body. For this Reaſon, if, in a burning Fever, the Patient is ſeized with a violent Diarrhœa, *Hippocrates*, in his *Coac. Prænot.* and elſewhere, pronounces it a mortal Sign; for, as in this Diſeaſe the inſpiſſated Blood already begins to ſtick in the minute Arteries, the Diſorder is rendered incurable when the finer Parts of the Fluids are carried off by Stool.

As for coagulating Subſtances; theſe are either of an acid, auſtere, or ſpirituous Quality; though, at the ſame time, all Acids do not coagulate the Blood, ſince tartiſh Wines, Vinegar, the Juice of ripe acid Fruits, and Butter-milk, rather diſſolve it; but foſſil Acids, as alſo Preparations of Sea-ſalt, and Nitre, induce a Coagulum on the Blood. When theſe Acids are injected into the Veins of a live Animal, the Blood is forthwith concreted into large Clods, which, being conveyed to the Right Ventricle of the Heart, thro' Veins which become gradually large, and being thence propel'd to the Lungs, excite at firſt a great Uneaſineſs, and ſoon after bring on Death. The Mouths, however, of the bibulous Veſſels do not eaſily admit theſe Acids of an highly acrid Quality; ſince they immediately contract themſelves on the Application of a far more gentle Stimulus. When the black Bile, ſometimes ſo acid as to corrode as powerfully as Aqua-fortis, corrodes the Veſſels, and is mixed with the Blood, ſudden Death is frequently produced by the Coagulation of the Blood. Some auſtere Subſtances, alſo, induce a very ſtrong Coagulum on the Blood; ſuch as Alum, and the various Species of Vitriol. Spirituous Subſtances are, alſo, capable of coagulating the human Fluids; for, in Chirurgical Operations, 'tis ſufficiently known, that Alcohol, applied to divided Veſſels, ſtops the moſt violent Hæmorrhages, by means of the Coagulum it induces on the Blood. The Serum of Blood, by an Affuſion of Alcohol, is forthwith indurated. Hence 'tis obvious, that thoſe who indulge themſelves much in theſe fermented Spirits, expoſe themſelves to terrible Misfortunes.

A Stagnation is, alſo, produced in the lymphatic, arterial Veſſels, firſt, by all the Cauſes, which ſo enlarge their Orifices, that the groſſer Parts of the Blood enter them; which, being propel'd farther, arrive at narrower Parts, where they undergo all the Changes mentioned in the preceding Aphoriſm. Among the Cauſes of this Kind, are the Laxity of the Veſſel at its Beginning, and the violent Motion of the arterial Fluid. And, ſecondly, by all the Cauſes common to Inflammations of whatever kind.

We have hitherto conſidered the Cauſes, by which the free Circulation of the thickeſt or red Part of the Blood thro' the ſmalleſt Arteries is hinder'd, which act either by leſſening the Cavities of the Veſſels, or rendering the Fluid, which ought to paſs thro' them, incapable of being tranſmitted. An evident Example of this is found in an Ophthalmia, in which the whole Adnata, and even the Cornea, are red; the Veſſels being filled with red Blood, in ſuch a manner as to be perceptible to the naked Eye, tho', naturally, there is no red Blood contained in them. Such an Inflammation muſt, therefore, have been preceded by certain Cauſes, capable of dilating theſe Veſſels in ſuch a manner as to admit the red Blood. But it is ſufficiently obvious, that the red Part of the Blood, after it has enter'd theſe ſlender Veſſels, muſt create Obſtructions, ſince, in its Progreſs, it continually arrives at narrower Parts of the converging Veſſels. Hence, in this Caſe, a Stagnation will be produced, tho' the Cavities of the Veſſels remain the ſame, and the Molecules of the Fluid to be tranſmitted are not enlarged. Such a Diſorder is juſtly ſtyled *Error Loci*, ſince the red Blood, entering the minute Veſſels, becomes ſtagnant, and is not capable of paſſing thro' the narroweſt Parts of theſe Veſſels; for the Whole of the Diſorder conſiſts in this, that the red Blood is lodged in a Place where it ſhould not naturally be. The ſame Misfortune may happen in all the Parts of the Body, in which the ſmall Veſſels, containing the finer Parts of the Fluids, are derived from larger Veſſels: So that an *Error Loci* can never happen in the Veſſels, naturally containing the red Blood; ſince, in ſound Blood, no Particle is larger than a red Globule: But, in the other decreaſing Series of Veſſels, an *Error Loci* may happen. How far the red Blood may, poſſibly, penetrate, is not yet certain from Experience; only this we know, that in Diſeaſes it enters far ſmaller Veſſels, than thoſe which contain the Serum of the Blood, ſince it ſometimes enters thoſe of the Tunica Cornea. But as all that Fluid, which, in ſound Blood, is thinner than the red and ſerous Globules, is called Lymph; ſo the Veſſels, thro' which it moves, are called lymphatic Veſſels; and theſe are either Veins or Arteries. But an Obſtruction cannot happen in the Veins, unleſs, by an external Compreſſion, the Fluid, which ought to paſs thro' them, is intercepted. Hence, by an *Error Loci*, the thicker Parts of the Fluids may be lodg'd in the lymphatic Arteries; under which Name we comprehend all thoſe Arteries, which naturally exclude the red and ſerous Globules, and only admit the finer Parts of the Fluids.

To the Production of an *Error Loci* 'tis therefore requiſite, that the Beginnings of the lymphatic Arteries ſhould be ſo dilated, as to admit the red Part of the Blood. Now 'tis ſhewn under the Article *Fibra*, that the Largeneſs of the Veſſels depends on two different Cauſes; that is, the Reſiſtance of the Sides of the Veſſels, and the Momentum or Quantity of Motion of the impel'd Fluid; and is, for this Reaſon, in a Ratio compounded of the direct Ratio of the Impetus of the impel'd Fluid, and the inverſe Ratio of the Reſiſtance of the Sides. If, therefore, a greater Laxity is by any Cauſe produc'd in the Beginning of a ſmall lymphatic Veſſel, it will be dilated, tho' the Impetus of the impel'd Fluid continues the ſame. And, on the contrary, the ſame will happen, if the Impetus of the impel'd Fluid is augmented, whilſt, at the ſame time, the Firmneſs of the Veſſels continues the ſame. But this Dilatation will happen moſt conſiderably when theſe two Cauſes concur. See the Article FIBRA; where Reaſons are, alſo, given, why, by an accelerated Motion of the arterial Fluid, the Beginnings of the Veſſels are enlarg'd. This Doctrine is ſufficiently confirm'd by Experience; for a Part of the Body, expoſed to the Steam of tepid Water, becomes more turnid and red than in its natural State, by means of the Ingreſs of the red Blood into the relaxed

relaxed ſmall Veſſels: And, after violent Running, we obſerve the whole external Skin to become red, and the Eyes Bloodſhot, in conſequence of the Ingreſs of the red Blood into improper Veſſels, preternaturally dilated by the increaſed Impetus of the impelled Fluid.

When the red Blood has enter'd the lymphatic Veſſels, it is ſufficiently obvious, that all thoſe Cauſes, which were capable of leſſening the Cavities of the larger Veſſels, may produce the ſame Effect, when acting on the ſmaller Veſſels. But theſe Cauſes have been already enumerated.

Hence, a ſimilar Diſorder may happen in every conical Veſſel, where the Fluids are convey'd from wider to narrower Parts; for, as in the red Blood, ſo, alſo, in the Lymph, there is, perhaps, a Part thicker than the reſt.

In ſound Blood, newly taken from the Body, by means of a ſmall Wound, and received into minute Glaſs Tubes, Microſcopes enable us to diſtinguiſh different Parts; and, by their means, we are, alſo, render'd capable of obſerving the Motion of the Fluids in the Veſſels of the pellucid Parts of Animals; for Globules are perceived ſwimming in a thin pellucid Fluid, which itſelf appears homogeneous. But it ſeems highly probable, that, in the thin pellucid Lymph of the Blood, there are ſome Parts thicker than the reſt; which, in conſequence of the determined Bulk of their Maſſes, are contain'd in Veſſels peculiar to themſelves, and cannot, naturally, enter into ſuch Veſſels as are ſmaller; for, unleſs the red Globules were ſo large, that, in a State of Health, they could not enter the Veſſels deſtin'd for containing the Serum, and ſuch as are ſmaller, it is ſufficiently obvious, that all the Blood would be deriv'd to the ſmaller Veſſels, and all the larger ones render'd empty. The ſame holds true in the Veſſels which convey the Serum of the Blood, and the other ſmaller Veſſels of the human Body: Hence, when in any Diſeaſe the Blood becomes too fluid, all the Humours are either diſſipated, or accumulated in the larger and ſmaller Cavities of the Body, as we may obſerve in dropſical Patients: But, in Caſes of this Nature, the large Veſſels always collapſe, for want of that due Quantity of thick Blood which uſed to diſtend them. In like manner, all the decreaſing Series of Veſſels, from the largeſt Blood-veſſels to the ſmalleſt in the Body, ſeem to contain Fluids proper to their reſpective Series, and which contain Molecules ſo large, that they cannot enter the next ſmalleſt Order of Veſſels, but are contained in thoſe peculiar to themſelves: Hence, if, by any Cauſe, the Cavities of theſe converging Veſſels are leſſen'd, or the Molecules which, when ſingle, paſs through their narroweſt Parts, are united, an Inflammation, not of a red, but of a pellucid Colour, may enſue in theſe minute Veſſels. Beſides, if the Orifices of a ſmaller Series of Veſſels ſhould, either by a Relaxation, or an exceſſive Motion of the impelled Fluids, be ſo dilated as to admit the groſſeſt Molecules of the Veſſels next in Bulk, the like Diſorder will be produced from an *Error Loci*. As many intermediate Series of Veſſels therefore, as there are between the largeſt and the ſmalleſt, ſo many different Kinds of Inflammations there may be; and, in each of theſe intermediate Series, theſe Inflammations may be of two Sorts; either ſuch as ariſes from their own proper Fluid becoming incapable of Circulation, either in conſequence of the enlarged Bulk of their Molecules, or the Narrowneſs of the Veſſels; or ſuch as ariſes from an *Error Loci*, by reaſon of the Ingreſs of the groſſer Molecules of the larger Veſſels into the dilated Beginnings of ſuch as are ſmaller: But, in the largeſt Blood-veſſels, an *Error Loci* can never produce an Inflammation; ſince, in the Blood, no Part is found larger than a red Globule. It is highly probable, that Rheumatiſms, arthritic Pains, and Gouts, are produced by an Inflammation in the minute Veſſels.

From what has been ſaid, appears the true Difference between a Phlegmon, an Eryſipelas, an Oedema, and a Scirrhus with Inflammation.

With reſpect to a Phlegmon; tho' the Antients, by this Name, meant any Inflammation in general, yet, in Proceſs of Time, Phyſicians afterwards confined the Word to a preternatural Tumor, which was red, reſiſting, hot, and accompanied with a Pulſation, and Pain, in the ſofteſt Parts, and a Fever, either of the whole Body, or the Part affected. Now a Phlegmon is produc'd by a Stagnation of the red Blood about the Extremities of the Arteries, whilſt the reſt of the Blood, propelled by the Force of the Heart and Arteries, acts with a greater Impetus on the obſtructed Parts: A Phlegmon may, therefore, happen in the narroweſt Parts of the Arteries, which convey the red Blood, which rarely occurs; or it may ariſe from the red Blood, through an *Error Loci*, forc'd into the lymphatic Veſſels, or thoſe deſtin'd for the Serum; which is far more frequently obſerv'd. But it is obvious, from what we have before obſerv'd, that a legitimate Phlegmon is principally lodged in the Membrana adipoſa.

As for an Eryſipelas; this Diſorder, which ſeems highly analogous to a true Phlegmon, is, by *Galen*, in *Lib. 2. Method. Medend. ad Glaucon. Cap. 1.* defined in the following Words: "A Defluxion, *ſays he*, of Blood, and yellow Bile, mixed together, and preternaturally hot, or of Blood alone, but intenſely hot and thin, is called an Eryſipelas, which is much hotter, and of a more yellow Colour, than an Inflammation: And, if it is touch'd, the Blood, which appears exquiſitely thin and red, eaſily recedes, and returns again. But an Eryſipelas is not ſo painful as an Inflammation; nor is it accompanied with a Pulſation, Compreſſion, or Diſtention, like thoſe of any of the Species of Inflammation. Sometimes an Eryſipelas creates but little Trouble, eſpecially when it is diſperſed through the Skin only, without affecting the ſubjacent Fleſh: This Species of Diſorder, which moſt frequently occurs, is a legitimate Eryſipelas." And a little after he ſubjoins, that "A legitimate Eryſipelas is only a Diſorder of the Skin." But, as the Colour of the Part affected with an Eryſipelas ſeem'd to be a kind of Mixture of Yellow and Red, the antient Phyſicians accuſed the Bile as the principal Cauſe of an Eryſipelas; but we are now convinced, that the Serum of the Blood is naturally of a yellowiſh Colour: Hence, when a ſmall Quantity of red Blood is, with a great deal of Serum, lodged in the obſtructed and inflamed Veſſels deſtined for the Serum, this yellowiſh-red Colour is produced in the Part affected. It is, at the ſame time, ſufficiently obvious, how great an Affinity there is between an Eryſipelas, and a Phlegmon; ſince they only differ with reſpect to the Bulk of the obſtructing Molecules: For, in a Phlegmon, the red Part of the Blood is accumulated in the diſtended and obſtructed Veſſels; whereas, in an Eryſipelas, the Serum of the Blood, principally, mixed with a ſmall Quantity of the red Part, remains pent up, and incapable of circulating in the Veſſels. A Phlegmon is principally ſeated in the Membrana Adipoſa; whereas an Eryſipelas affects not only the external Integuments of the Body, but, alſo, the internal membranous Parts. It is, alſo, obvious, that an Eryſipelas may degenerate into a Phlegmon, when, for Inſtance, the Veſſels are ſo dilated as to admit a larger Quantity of red Blood, ſo that the Diſorder is propagated to the Membrana Adipoſa; and that ſometimes ſuch an Inflammation may ariſe, as preſerves a kind of middle State between an Eryſipelas, and a Phlegmon; in which Caſe the Antients gave it a Name compounded of both Diſorders: For to the Words already quoted from *Galen*, that Author ſubjoins theſe following: "As that Species of the Diſorder, *ſays he*, which affects the ſubjacent Fleſh, and is not produced by a Defluxion of abſolutely thin Humours, is not only an Eryſipelas, but a Diſorder compounded of an Eryſipelas and a Phlegmon, in which the Symptoms peculiar to an Eryſipelas are ſometimes the moſt prevalent, this Diſorder is, by the later Phyſicians, called a phlegmonoide Eryſipelas. Sometimes, on the contrary, the Symptoms of a Phlegmon are moſt prevalent; in which Caſe, the Diſorder is called an eryſipelatous Phlegmon: But, if the Symptoms of neither palpably prevail over each other, but appear equal, a Phlegmon and Eryſipelas are ſaid to be complicated with each other."

As for an Oedema; tho' by this Word the Antients meant ſimply a Tumor in general, yet it afterwards came to be generally appropriated to a ſoft Tumor without Pain, eaſily yielding to the Touch, without any Change of Colour in the Skin; and generally produced by aqueous Humours diſtending the Membrana Adipoſa: But the Oedema here treated of is of a quite different Nature; and, in order to diſtinguiſh it from the common Oedema, has the Epithet *hot* generally beſtow'd upon it: For we have already ſhewn, that a true Inflammation may happen in thoſe arterial Veſſels, which are ſo ſmall as to exclude the Serum, and the red Part of the Blood. A painful Tumor then, which is hot, but not red, ſomewhat yelloviſh, and ſometimes entirely white, is called an hot Oedema, which only differs from an Eryſipelas in this, that it is ſeated in far ſmaller Veſſels: It is alſo, called an eryſipelatous Oedema; becauſe it approaches very near to the Nature of an Eryſipelas. It frequently appears in the Face and Head, in which Caſe, it is commonly called *Roſa bullata*.

Since, therefore, this hot Oedema is a legitimate Inflammation, ſeated in the ſmalleſt lymphatic Arteries, it is always to be apprehended, leſt, perhaps, ſuch a State is induced in the fineſt Lymph of the Blood, as, by rendering it ſtagnant, obſtructs the Veſſels in which it ought to move: Hence the Functions, eſpecially of the Brain, which depend on the free Circulation of the Humours through the ſmalleſt Arteries, may be diſturbed; whether the Diſorder is produced originally in the Brain, or, by a Tranſlation, convey'd from the external to the internal Parts. Beſides, if this Species of the Diſorder is violent, it deſtroys the tender Veſſels, and ſpeedily tends to a Gangrene.

As for a Scirrhus, with Inflammation; a Scirrhus is a hard uneven Tumor, almoſt without any Pain, and principally ſeated in the glandulous Parts of the Body. If this Tumor is confirm'd, and of long ſtanding, it conſiſts of ſuch a Matter as can neither be reſolved by any Methods hitherto known, nor ſeparated from the ſound Parts by a benign Suppuration. Hence it is obvious, how dangerous an Inflammation is, in the Parts which are contiguous to a Scirrhus, or in the Teguments which cover it;

ſince, in this Caſe, the Scirrhus ſoon degenerates into a Cancer. *Galen, in Comment. in Text.* 30. *Epidem. Hippocrat. Lib.* 6. beautifully diſtinguiſhes between the Reſiſtance of a Phlegmon, and the Hardneſs of a Scirrhus, in the following Words: "A Phlegmon, ſays he, is not a hard, [σκληρὸν] but a reſiſting [ἀντίτυπον] Tumor, juſt like Bags fill'd with Air, or any liquid Subſtance."

When the Cauſes, already mention'd, have produc'd a Stagnation in the Veſſels, then the Force of the Blood, impel'd by the vital Powers, produces ſuch Effects as are the Signs of an Inflammation.

In every Inflammation, ſeated in whatever Series of Veſſels, there are two Things to be obſerv'd: That is, the Stagnation of the Fluid, in conſequence of the leſſen'd Cavities of the Veſſels, the Concretion of its conſtituent Molecutes, or an Error Loci; and the vital Force of the Heart and Arteries, propelling the Humours with an increaſed Velocity to the obſtructed Veſſels. When theſe two Circumſtances concur, an Inflammation is produc'd. So long as there is only a Stagnation of the Fluid, there is only an Obſtruction, which is the antecedent Cauſe of an Inflammation; but its procatarctic or immediate Cauſe is the increas'd Motion of the Fluids acting upon the obſtructed Part. In the mean time, there happen ſome Changes in the inflam'd Part, which, if duly adverted to, afford the diagnoſtic Signs of a preſent Inflammation. But theſe Signs are conſider'd and enumerated in their due Order, in the following Paragraph.

Firſt, the minute and hardly viſible Arteries, being obſtructed, are enlarg'd by the diſtending Blood; by which means a red Tumor is produced. Secondly, the ſame happens to the arterial lymphatic Veſſels, before pellucid and inviſible; by which means the Redneſs is increaſed, eſpecially when the tender Veſſels and Veſicles in the Membrana Adipoſa are filled with a thick Blood, deprived of its more liquid Parts. Thirdly, the diſtended Veſſels are ready to burſt: Hence ariſes the pungent Pain in the minute nervous Fibres diſpers'd thro' them. Fourthly, the Liquids and Solids are rendered highly compact: Hence ariſe the Hardneſs and Reſiſtance of the Part. Fifthly, by means of the accumulated red Part of the Blood, and the ſtrong Impulſe of the ſucceeding Fluids, the Part aſſumes a ſhining red Colour. Sixthly, by means of the Reſiſtance, Pulſation, Colliſion, and Coarctation of the as yet pervious Veſſels, by the Tumor, there is a violent mutual Attrition produced between the Parts of the Fluid among each other, between them acting upon the Solids, and the Solids upon them: Hence ariſe the Heat and Burning. Seventhly, the Pulſation is produced, becauſe the Impetus of the Blood propel'd from the Heart, acting upon the Extremities of the obſtructed Veſſels, dilates their Sides. Eighthly, by the Irritation of the Fibres, and the accelerated Motion of the Blood, becauſe it is return'd thro' the Veins, and ſtopt in many Arteries, the Pulſe is render'd quick, and a Fever accompany'd with Thirſt, Heat, Watching, Weakneſs, and Uneaſineſs, produced.

1. 'Tis ſufficiently obvious, that obſtructed Veſſels muſt neceſſarily be extended and dilated; for that Force by which the Heart forces the Blood into the Arteries, makes their Sides recede from the Axes of their reſpective Canals, becauſe they are full, and converge, or become gradually narrower. The Reſiſtance, therefore, about the Extremities of the Arteries, and their Fulneſs, are the principal Cauſes, why they are dilated by the impel'd Blood. But in the obſtructed Canals there is the greateſt Reſiſtance, and, at the ſame time, the greateſt Plenitude; becauſe nothing can paſs thro' their Extremities: Here, then, the greateſt Dilatation muſt neceſſarily enſue. Beſides, if we conſider, that an Inflammation accompanies an increas'd Motion of the Blood, it will be ſufficiently obvious, that the Canals muſt be ſtill more extended, when an Inflammation is preſent, than in a ſimple Obſtruction. But when this Dilatation is a producing in thoſe Arteries, which naturally contain the red Blood, or, at leaſt, when after their Dilatation they are capable of receiving it, 'tis evident, that the Tumor ariſing from the Diſtention of the Veſſels muſt be red; for, if the Obſtruction, or Inflammation, is ſeated in the ſmalleſt Veſſels, the red Part of the Blood, as we have already obſerv'd, may be excluded from them, even during the greateſt Dilatation they could bear without a Rupture. And, 'tis not impoſſible to conceive, that, in Veſſels ſo minute, the Tumor, produced by their Dilatation, ſhould be ſo very ſmall, as not to fall under the Cognizance of our Senſes. But a genuine and legitimate Inflammation always happens in thoſe Veſſels which are either naturally, or by Dilatation, capable of admitting the red Part of the Blood, as is obvious from the Definition of an Inflammation already given. Beſides, an increas'd Degree of Heat, the Concomitant of every Inflammation, as we ſhall afterwards ſhew, contributes to the Augmentation of the Tumor; for 'tis certain, from Experience, that an Increaſe of Heat expands Bodies in all their Dimenſions.

2. The Arteries conveying the Serum are like ſo many Ramifications from a common Trunk, diſtributed from the ſmalleſt Arteries, which contain the Blood. But the Sides of the Arteries, which contain the Blood, cannot be diſtended without, at the ſame time, diſtracting and enlarging the Orifices of the Arteries deſtin'd for the Serum which ariſe from them. Hence the red Part of the Blood may enter the dilated Orifices of theſe Veſſels: The ſame will hold true, with reſpect to the lymphatic Arteries deriv'd from thoſe deſtin'd for the Serum; for that theſe latter may be ſo diſtended, as to admit the red Part of the Blood, is ſufficiently obvious in Ophthalmias, as we have before obſerv'd: Hence, therefore, 'tis manifeſt, that the Tumor and Redneſs muſt be increas'd. Nor would it ſeem probable, that, from a Diſtention of all theſe Veſſels, ſuch enormous Tumors as frequently appear in violent Inflammations ſhould be produced; but we have already ſhewn, that obſtinate Inflammations happen nowhere more frequently than in the Membrana Adipoſa, whilſt not only the tender Veſſels of this Membrane are loaded with red Blood, incapable of circulating, but, alſo, the red Part of it poured thro' the dilated Orifices of theſe Veſſels into the Cellulæ of this Membrane. Hence the Membrana Adipoſa, eaſily capable of Expanſion, is frequently diſtended in a very ſurpriſing Manner. *Galen*, in his Treatiſe *de Tumoribus præter Naturam, Cap.* 2. beautifully takes notice of this Origin of the Tumor in a Phlegmon; for, after he has affirm'd, that no Tumor can be produced without an Acceſſion of ſome new Subſtance to the Part affected; or, unleſs the Parts, being, as it were, fus'd by the great Heat, were transform'd into a kind of Vapour, capable of diſtending it to a larger Bulk, juſt, for Inſtance, as Water, by Heat, reduced to Vapours, may poſſeſs an immenſe Space, he proves, that in a Phlegmon the Tumor is not produced by ſuch a Rarefaction of the Fluids, as to convert them to Vapours. "For, ſays he, if "the Part affected with a Phlegmon is laid open, a large Quan"tity of Blood is diſcharg'd, and the whole Part is ſpongious, "and full of Blood; but ſuch a Vapour is neither then, nor after"wards, diſcharg'd." And, in the End of the ſame Chapter, he ſubjoins theſe Words: "But, in Inflammations, all the Parts are "fill'd with Blood, diſcharg'd through the Coats of the Veſſels, "and, like Dew, mix'd with every Part of the Fleſh." That, by the Word Fleſh, *Galen* meant the Membrana Adipoſa, is ſufficiently obvious from ſeveral Paſſages of *Galen*; for, in the Chapter juſt quoted, he obſerves, that the Tumor, which accompanies an Inflammation, is of a quite different Nature from that which is the Effect of an enlarg'd Habit of Body; and uſes the Word πολυσαρκία, in order to denote Corpulence, or Fatneſs.

But, whilſt the red Part of the Blood enters the ſmaller Veſſels when dilated, the Serum and finer Lymph will remain with it in thoſe Veſſels. But the red Part alone will remain fix'd in the narrow Chanels of the Veſſels, whilſt the other finer Parts of the Blood, being compreſſed between this reſiſting Obſtacle, and the impelled Fluids, will be carried off in lateral Ramifications. Hence the red Part alone will be more and more accumulated in the obſtructed Veſſels; by which means the Redneſs of the inflamed Part is increaſed.

3. When, therefore, the Veſſels, obſtructed by a ſtagnant Liquor, are diſtended by the Impetus of an impelled Fluid, their Coats, and, conſequently, the nervous Fibres diſtributed thro' them, will be diſtracted: Thus Pain is produced. But ſince the largeſt Veſſels among thoſe of the moſt minute Kind, that is, the narroweſt Parts of the Arteries, conveying the red Blood, are not equal in Thickneſs to the tenth Part of an Hair, 'tis obvious, that the Diſtraction of the nervous Fibrils, diſpers'd thro' the Coats of ſuch Veſſels, muſt excite a Pain like that which affects the ſmalleſt Point of the Body; for which Reaſon it is called a punctory Pain: But this ſmall Artery, deſtin'd for the Conveyance of the red Blood, far exceeds the Bulk of an Artery deſtin'd for the Serum or Lymph; in which, however, by an Inflammation, a ſimilar Diſtraction, and a Pain poſſeſſing a ſtill ſmaller Space, are produced. Hence, tho' an hundred of theſe ſmall Veſſels ſhould be inflam'd, the Pain ſeems to affect only one Point, and is produced by the Impetus of the impel'd Fluid, which ſo diſtends them, that the nervous Fibres, which conſtitute their Sides, are in Danger of being ruptur'd. Hence, when, in a violent Pleuriſy, the Patient is blooded till he faints, the Pain ceaſes entirely, or, at leaſt, is much diminiſh'd.

4. The human Blood, when left in a State of Reſt, is ſeparated into two Parts, that is, a red concreted Maſs, and a fluid Serum, in which this red Part ſwims. But there are two Cauſes, which principally prevent the Concretion of the Blood; that is, its perpetual Motion, and the Interpoſition of a thinner Fluid between the red Globules, in order to prevent their mutual Contact. But when this red Part becomes ſtagnant, either in the Blood-veſſels, or thoſe which are ſmaller, when dilated, the moſt fluid Parts are expreſs'd from it, as we have already obſerv'd. Hence, an Union and Compreſſion of the red Globules to each other are produced; and, as they are flexible, their ſpherical Figures will be ſo chang'd, that they will come into a great many Points of Contact, and, conſequently, begin to cohere proportionably

tionably ſtronger. Hence, as theſe Cauſes continue to act, this red concreted Subſtance will be accumulated in the diſtended Veſſels, as alſo, in the cellular Subſtance of the Membrana Adipoſa: And by theſe means a greater Hardneſs and Reſiſtance of the inflam'd Part muſt neceſſarily be produced: And as the diſtended Veſſels compreſs thoſe adjacent to them, in conſequence of the leſſen'd Cavities of theſe laſt, the Diſorder will be propagated thro' all the inflam'd Part. For this Reaſon *Hippocrates* often us'd the Words, *Hardneſs accompanied with Pain*, for an Inflammation. Thus, in his Prognoſtics, 71. when treating of an Inflammation of the Bladder, and the Diſorders produced by it, he ſays, Κύστεις ὃ σκληραί τε καὶ ἐπώδυνοι, "hard and painful Bladders." And in other Places, as *Hollerius*, in *Comment. in Coac. Prænot.* remarks he diſtinguiſhes a Phlegmon from other preternatural Tumors, by the Hardneſs and Pain with which it is accompanied.

When the thinner Fluid is totally expreſs'd, the red Part alone remains accumulated in the diſtended Veſſels. Hence, if all other Circumſtances are alike, the Redneſs is the greater, the more violent the Inflammation is. But the Skin, which in moſt Parts of the Body is lax and moveable, is render'd highly tenſe by the Membrana Adipoſa, which is ſtuffed and tumid with ſtagnant Blood. Hence the Skin becomes ſmooth and ſhining; for ſuch a Tenſion of the Skin is always attended with a kind of bright and ſhining Colour.

6. 'Tis certain from Experience, that not only a conſiderable Heat, but, alſo, actual Fire, may be produced by the mutual Attrition of Bodies on each other. 'Tis, alſo, certain, that by ſuch an Attrition the greater Heat is produced, the more rigid and elaſtic the Bodies are, the more forcibly they are applied to each other, and the briſker their Motion is. 'Tis true, indeed, that Water, or any other Fluid, interpoſed between Bodies in a State of mutual Attrition, prevents ſo great a Degree of Heat as would be otherwiſe produced. Hence it would ſeem, that Heat could not be readily produc'd by the Attrition of our Fluids with the Canals in which they move. But if we conſider, that the Globules of the Blood are not only elaſtic themſelves, but, alſo, move with a rapid Courſe through elaſtic Canals, and are only preſſed almoſt ſingle through the narroweſt Parts of the Arteries which convey the Blood, and that conſequently, the finer Parts being carried off by lateral Ramifications, they produce a ſtrong Attrition with the Sides of the Veſſels, it will be ſufficiently obvious, that Heat muſt be generated by this Attrition. Hence, in robuſt Perſons, whoſe Blood is thick, a greater Heat is always obſerv'd, than in thoſe whoſe Blood is thinner, and leſs elaſtic. For the ſame Reaſon a briſk Circulation of the Blood through the Veſſels is productive of a proportionable Degree of Heat. Nor is it to be objected, that, in the inflam'd Part, the Blood continues ſtagnant in the obſtructed Veſſels; for, by an Experiment of Mr. *Leewenhoek's*, mention'd in his *Experiment. & Contemplationes*, 'tis obvious, that ſuch an obſtructing Molecule is, at the time the Heart does not act, repel'd by the Contraction of the Artery, and immediately after propel'd to the narrow Part through which it could not paſs, by the Syſtole of the Heart, expelling the Blood into the Arteries. Hence 'tis obvious, that ſuch an obſtructing Molecule may move backwards and forwards in the obſtructed Veſſel. But, ſince from what has been ſaid, 'tis certain, that the finer Fluids are expreſſed, the thick and ſtagnating Part accumulated, and continually condens'd; and, at the ſame time, the Motion of the Fluids accelerated in the inflam'd Part, the Reaſon will be ſufficiently obvious, why ſo great an Augmentation of Heat muſt neceſſarily enſue. But the adjacent Veſſels, as yet not obſtructed, will be compreſs'd, and conſequently have their Cavities leſſen'd, by the dilated and inflam'd Veſſels. Hence in theſe, alſo, the Attrition will be increas'd, partly on account of their leſſen'd Cavities, and partly by reaſon of the increas'd Celerity of the Fluid circulating through them; for if, among an hundred Veſſels, fifty ſhould be obſtructed, the Fluids, unleſs a Stagnation ſhould happen, will circulate with ſo much the greater Celerity through the reſt. All theſe things, therefore, concur, by which we are certain from Experience, that a greater Degree of Heat may be produced; for the Blood, when its moſt liquid Parts are expreſs'd, is concreted almoſt into a ſolid Maſs, which, by the ſtrong Action of the Veſſels, and the Impetus of the propel'd Fluids, is continually more and more condens'd. The Veſſels compreſs'd by the adjacent tumid ones are, at the ſame time, more forcibly applied to the Fluids they contain, and the Motion of the Fluids through the Veſſels is accelerated. Hence we ſee, that an Inflammation, both in its Cauſes and Effects, reſembles a Fire, from which it derives its Name.

7. Since from modern Diſcoveries 'tis certain, that the human Body is almoſt in every Point furniſh'd with Arteries, all of which are dilated when the Heart is in its Syſtole, but next Moment contracted when the Heart is in its Diaſtole; 'tis obvious, that there is a Pulſation in almoſt all the Parts of the Body, every Moment of Life. But we do not advert to thoſe Motions, though very ſtrong, which are always carried on by the ſame ſtated and uninterrupted Law: But, ſo ſoon as they deviate from this Law, we forthwith become ſenſible of them. Thus the ſtrong Pulſation of the Heart, ſo eaſily to be felt by applying the Hand to the Breaſt, is not perceived by a ſound Perſon. But when, by the Paſſions of the Mind, violent Exerciſe, or any other Cauſe, this Pulſation recedes from its natural Order, the Heart is forthwith perceived to palpitate. 'Tis not, therefore, to be wonder'd at, that a Pulſation, before not perceptible, ſhould be perceived in the inflam'd Part; for the Blood, by the Force of the Heart, projected into the Arteries, obſtructed about their Extremities, employs its whole Force in dilating them. Hence the Sides of the Arteries muſt neceſſarily recede more from the Axes of their reſpective Canals. But, when the Action of the Heart ceaſes, the Arteries re-act with ſo much the more Force, the more they have been diſtended. The Pulſation, therefore, in the inflamed Part, being preternaturally increaſed, both with reſpect to its Strength and Celerity, is diſtinctly perceived.

8. When the Extremities of the Arteries are obſtructed, the Fluids contain'd in the Veins correſponding to theſe Arteries are conveyed back to the Heart; but, being afterwards expel'd from that Organ, they cannot paſs through the obſtructed Arteries, but muſt, with ſo much the greater Velocity, be conveyed through the pervious and unobſtructed Arteries; for the Quantity of the Fluid to circulate through the Veſſels is not diminiſhed, but the Number of theſe Veſſels, through which it ought to paſs, is only leſſen'd. Hence 'tis obvious, that the Velocity of the Fluid, to be conveyed through the other pervious Veſſels, muſt be increas'd: But it appears, at the ſame time, that, by this Cauſe, ſuch an increaſed Velocity, in the Motion of the Fluids, cannot be produced, as ſhall be obſervable by the Phyſician, unleſs the Part affected is of ſuch a Bulk, that the Number of obſtructed Veſſels compar'd with thoſe which are pervious and open, are conſiderable enough to induce a remarkable Alteration; for, if the thouſandth Part of the Arteries ſhould be obſtructed by an Inflammation, the Increaſe of Celerity requiſite to convey the Blood through the other pervious Veſſels is not eaſily perceiv'd. There muſt, therefore, be another Cauſe, why a Fever often accompanies or ſucceeds an Inflammation, though it ſhould only affect a very ſmall Portion of the Body. Thus in a Paronychia there is frequently a ſtrong Fever, whilſt the Inflammation only affects a very inconſiderable Part of the Body; for this Reaſon an Irritation of the Fibres is ſpecified in the Aphoriſm. 'Tis certain, that Pain produces a Fever, for which Reaſon the moſt painful Inflammations are accompanied with the ſtrongeſt Fevers; for ſuch as are little or hardly at all painful, are often without any Degree of a Fever. Hence the Fever ſeems principally to be excited by the Irritation of the nervous Fibres diſtributed thro' the inflamed Veſſels, or the adjacent Parts compreſs'd or diſtracted by them. That there is ſuch a Tendency to Irritation in our Veſſels as is capable of accelerating the Circulation of the Humours, is ſufficiently obvious from ſeveral Obſervations; for whilſt, in acute Diſeaſes, the reſolv'd Matter of the Diſorder flows through the Veſſels, in order to be depoſited by a Tranſlation in other Parts, or expelled from the Body by critical Evacuations, great Commotions are frequently produced in the Body, and the Pulſe is accelerated and diſorder'd in a ſurpriſing manner. Whilſt the Chyle, generated from too large a Quantity of Aliments, ſuch as the Patient is not accuſtomed to, or ſuch as are acrid, or of hard Digeſtion, circulates with the Blood through the Veſſels, a Fever is produc'd; which frequently ſhews, that an Irritation of the Fibres may produce a Fever.

But the Fever thus produced is accompanied with the principal Symptoms of a Fever; ſuch as Thirſt, Heat, Watching, Weakneſs, and Uneaſineſs. But we muſt obſerve, that theſe Symptoms do not accompany every Inflammation, but only appear when the whole Maſs of Blood has acquir'd ſuch an inflammatory Spiſſitude, that it cannot, without ſome Difficulty, paſs through the ſmalleſt Veſſels; for 'tis certain, that in ſound Blood there is a natural Propenſity to Coheſion, which is ſtill the greater, the more robuſt the Perſon is. But as long as this Tendency to Concretion can be ſurmounted by the Energy and Efficacy of the Veſſels and Viſcera, ſo long Life remains ſafe. Thus we daily obſerve, that, in acute Diſeaſes, the Blood ſo degenerates as ſcarcely to remain any longer fluid, and is forthwith concreted as ſoon as the Attrition of the Veſſels, which prevented its Concretion, ceaſes. Thus, in a burning Fever, Drops of Blood, falling from the Noſe, are forthwith concreted. And theſe Drops, ſometimes, ſo obſtruct the open'd Arteries of the internal Noſe, as entirely to fruſtrate the ſalutary Effort of Nature attempting the Solution of ſuch Diſeaſes by profuſe Hæmorrhages. Hence *Hippocrates*, in his *Coacæ Prænotiones*, juſtly condemns theſe ſmall Drops as a bad Symptom: And, in the firſt Book of his *Epidemics*, he gives us Inſtances of three Perſons, who died after having diſcharged a ſmall Quantity of Blood from the Noſe, on the fourth and fifth Days. When, therefore, this Propenſity of the Blood to Concretion begins to be increaſed, 'tis ſufficiently obvious, that it muſt, with Difficulty, paſs through the ſmalleſt Arteries. Hence a greater Reſiſtance is made to the Heart, and ſince the Lungs muſt immediately receive and convey through the narroweſt Parts of the pulmonary Artery, the Blood expel'd from the Right Ventricle of the

Heart, the ſmalleſt Degree of ſuch a beginning Concretion is perceiv'd in the Lungs. Hence, by an increas'd Reſpiration, the Patients endeavour to procure a Paſſage for the Blood, thus diſorder'd, through the Lungs. Then ariſes that Uneaſineſs which is a bad Sign in all acute Diſeaſes, eſpecially thoſe of the inflammatory Kind: The Reſpiration becomes laborious and difficult, and the Patients teſtify their uneaſy State, by continually changing the Poſture and Situation of their Bodies. This is the Συνοχεία of *Hippocrates*, which, though it may be produced by other Cauſes, yet frequently draws its Origin from a Concretion of the Blood.

From what has been ſaid, 'tis obvious, that a Phlegmon may be known by theſe Signs; that it is a red Tumor, attended with a pricking Pain, and Pulſation, hard, ſhining, hot, and accompanied with a Fever, either of the whole Body, or, at leaſt, of the Part affected.

This is a Species of the Diſorder as yet not arriv'd at its full Height.

All the Signs enumerated in the preceding Paragraph are obſerved in a Phlegmon not as yet arrived at its full Height, but which is approaching to it; for Phyſicians have, in all Diſeaſes, obſerv'd three Periods, or Stages; the Increaſe, the State, and the Decline. The Increaſe is that Stage, in which all the Symptoms are ſtill increaſing: The State is, when they are arriv'd at their full Height, and are not obſerv'd to be either ſenſibly increas'd or diminiſh'd: And the Decline is, when both the Violence and Number of the Symptoms are diminiſh'd; for, when a Phlegmon is arriv'd at its State, it then begins to be diſpos'd to various Terminations, either in Health by a Reſolution, for Inſtance, or in other Diſorders, a Suppuration, a Gangrene, a Sphacelus, or a Scirrhus. But, then, moſt of thoſe Phenomena, which accompany a Phelgmon not as yet arriv'd at its full State, are charg'd; new Symptoms, before not preſent, are brought on. Thus the Redneſs, Tenſion, Pain, and Hardneſs of a Phlegmon, begin to be diminiſh'd, when it tends to a Gangrene; at laſt they entirely ceaſe, and the Senſation of the Part is deaden'd; it aſſumes a pale, cineritious, or brown Colour; then it becomes flaccid, and Puſtules full of Ichor ſucceed. In a Phlegmon, therefore, as well as in other Diſorders, theſe Stages are carefully to be adverted to; that ſomething certain may be determin'd, both with reſpect to the Diagnoſtic, the Prognoſtic, and the Intention of Cure.

In Inflammations, Blood freely diſcharg'd from a large Orifice made in a Vein, and receiv'd in a Baſon, when it becomes cold, forms a white, hard, thick, and rigid Pellicle, almoſt like a Swine's Skin.

When, in violent Inflammations, Blood is taken from the Veins, a pretty ſurpriſing Phenomenon appears therein. Every one knows, that Blood, received in a clean Veſſel, as it flows from the Vein, is ſoon after coagulated, and then ſeparated into two Parts; that is, a thin yelloviſh Liquor call'd Serum, and the red concreted Part generally floating in this Serum, like an Iſland But, in moſt inflammatory Diſorders, the ſuperior Part of this Iſland is cover'd with a white, and ſomewhat blueiſh Pellicle, frequently ſome Lines thick, firmly adhering to the Iſland, and often ſo tough, that it can hardly be divided by a Razor. But, becauſe, in the Blood of Perſons labouring under a Pleuriſy, ſuch a coriaceous Pellicle is frequently obſerved, Phyſicians have, for this Reaſon, call'd ſuch Blood pleuritic Blood, tho' the Pellicle is, alſo, frequently obſerv'd in other Diſorders. Various Authors have made ſurpriſing Obſervations, with reſpect to this Phenomenon. Thus *Sydenham*, in his Treatiſe *de Pleuritide*, obſerves, that if the Blood does not flow horizontally from the Vein, but, running along the Skin, falls perpendicular, tho' with a pretty quick Motion, there is not then ſuch a coriaceous Pellicle produced on the Blood: and that incomparable Author ingenuouſly confeſſes, that he was ignorant of the Cauſe of this Phenomenon. He obſerves, at the ſame time, that in Caſes of this Nature the Patients were not ſo much reliev'd, as if the Blood had been forcibly diſcharged in a full Stream, and been cover'd with this Pellicle. He, alſo, tells us, that the Formation of this Pellicle is prevented by whatever hinders the free Diſcharge of the Blood from the Vein; and that the Patient is leſs reliev'd by ſuch a Veneſection. And what ſeems more ſurpriſing is, that tho' the Blood is freely diſcharged from a large Orifice, yet, if it is agitated with the Finger, this Pellicle is not form'd. The Origin, therefore, of this Pellicle in the Blood ſeems to be ſufficiently obſcure. Some are of Opinion, that it is produced by the Serum of the Blood rendered prone to a greater Concretion by the Diſeaſe. But this Pellicle of the Iſland, which floats in the Serum, always retains the ſuperior Part. Others are of Opinion, that this Pellicle is form'd of crude Chyle, as yet not elaborated into perfect Blood. This is the Opinion of the accurate *Simpſon*, in his *Diſſert. de Re Medica*. But, I think, it may be objected to this Doctrine, that the Chyle, when mix'd with the Blood, and not ſufficiently elaborated, always ſwims fluid in the Serum of the Blood, but does not adhere to the Iſland. The ſame Author affirms, that if a Ligature is tightly apply'd to the Arm or Thigh, and, after three or four Hours, a Vein ſo open'd, that the Blood is freely diſcharg'd, this Pellicle will always be form'd; as, alſo, in the Blood of pregnant Women. And, for the Reaſon of it, he advances, that, for ſome time after the Application of the Ligature, the Blood is ſtopt in the obſtructed Veſſels; and that, about the Uterus of pregnant Women, the Blood, in ſome Degree, ſtagnates, or, at leaſt, moves very ſlowly. To ſpeak my Sentiments freely, I am in Suſpenſe what to determine, with reſpect to this tenacious Pellicle always adhering cloſely to the red Part of the Blood. Some celebrated Phyſicians have been of Opinion, that this Pellicle was produced, when, by an increas'd Velocity of the Circulation, the condens'd Blood was rendered more diſpos'd to a Concretion; and, conſequently, that it is not the prediſpoſing Cauſe, but rather the Effect of the Diſeaſe. But I myſelf have often ſeen ſuch a Pellicle form'd on the Blood of the moſt ſound and robuſt Perſons, when, in the Spring, Blood has been yearly taken from them. And, in a weak Man, who, in order to prevent a Spitting of Blood, to which he was ſubject, was blooded every three Months, I always obſerv'd ſuch a Pellicle. There was, therefore, a Diſpoſition of the Blood to generate this Pellicle, tho' no Inflammation was preſent. On the contrary, in the moſt violent inflammatory Diſorders, ſuch a Pellicle has ſometimes been found wanting, which, however, is always look'd upon as a bad Sign.

In proportion as the Diſeaſe increaſes, the ſame Train of Symptoms we have already enumerated, are proportionably augmented, the expreſs'd Lymph is ſeparated, and the red Part of the Blood condenſed.

All the Symptoms already enumerated, draw their Origin from this, that the concreted Fluid ſticks in the narrow Parts of the Arteries, whilſt, at the ſame time, the Impetus of the more quickly impel'd Blood acts upon the obſtructed Parts. If, therefore, the Toughneſs of the obſtructing Matter is increaſed, or if the ſame Misfortune ſhould happen in a large Number of Veſſels, and increaſe the Quantity of Motion in the impel'd Fluid, it is ſufficiently obvious, that all theſe Symptoms muſt be by theſe means augmented. Hence ariſe the greater Swelling of the Part affected; the deep-red Colour inclining to a Purple; the burning Heat; the intenſe Pain from the Fibres ſo diſtracted, that they are ready to be burſt; and an highly ſhining Colour of the tenſe Part. And ſince the Blood, forced into the obſtructed Veſſels, cannot paſs thro' them, the fineſt Part of it will be carry'd off by lateral Ramifications, the red Part alone will remain ſtagnant, and, being apply'd to the obſtructing Matter, and compacted to it by the Impetus of the impel'd Fluid, the Quantity of the obſtructing Matter will be, by this means, continually increas'd, and, conſequently, not to be removed without proportionably greater Difficulty.

If the circulating Humours are mild, their Motion not exceſſive, the obſtructing Cauſe not too much confirm'd, the Obſtruction itſelf ſmall, and that eſpecially in the Arteries, or Beginnings of the lymphatic Veſſels; if the Canals are moveable, and a ſufficient Quantity of diluting Lymph is contain'd in the Blood, the concreted Humours are render'd fluid, thoſe that were ſtagnant put in Motion, and the Inflammation is terminated by Reſolution.

Every Diſeaſe terminates either in Health, ſome other Diſorder, or Death. This general Rule holds in Inflammations, and is the principal Circumſtance, by which their various Events are to be eſtimated. When an Inflammation terminates in ſuch a manner, that no Diſorder remains, and all the Functions of the Part affected are reſtored to their natural Soundneſs, without any ſucceeding Diſeaſe, then a Cure is ſaid to be performed. But, if the Inflammation degenerates into a Suppuration, the former is indeed removed; but another Diſorder, that is, an Abſceſs, ſucceeds it. The ſame holds true in Caſes where the inflam'd Part is indurated into a Scirrhus. But when an Inflammation is ſo violent, as totally to prevent the Influx and Efflux of the vital Fluids, the Inflammation indeed ceaſes, but is ſucceeded by a Gangrene, and afterwards by a Sphacelus, which is a true and legitimate Mortification of the Part.

The moſt deſireable Termination, therefore, of an Inflammation, is what Phyſicians call Reſolution. When, for Inſtance, by means of the remaining Principle of Life, and the Uſe of proper Medicines, the ſtagnating Matter, lodg'd in the obſtructing Veſſels, is ſo reſolved, or the Veſſels, in which 'tis contain'd, ſo diſpoſed, that it may paſs into the Veins, or be forced back into the larger Veſſels; ſo that, the Veſſels remaining entire, a free Circulation of the Humours thro' Canals before impervious is reſtored; and the concreted Part of the Fluids, being now reſolved, and mix'd with the circulating Humours, is without any Difficulty capable of paſſing thro' theſe narrow Chanels, which, according to the ſtated Laws of Health, it ought to pervade. When theſe happy Circumſtances concur, the Inflammation is ſaid to be terminated by a Reſolution.

We are, therefore, carefully to inquire into thoſe Signs which denote the Poſſibility of ſuch a Reſolution; for a widely different-

Method of Cure is requiſite, when 'tis certain, that any other Termination of the Inflammation is to be expected. The Signs of the Poſſibility of ſuch a Reſolution are theſe following.

When the circulating Humours are mild. All the Humours of the human Body, except thoſe of the excrementitious Kind, and, perhaps, the Bile, are of a Quality ſo mild and gentle, that the Eye, or bare Nerves, in recent Wounds, can bear their Contact without any Senſe of Pain. This was requiſite, that, in a State of Health, the Fluids might, with a due Impetus, be carried through the Veſſels, without injuring them. Since, therefore, the Reſolution of an Inflammation ſuppoſes the Motion of the ſtagnating Fluids, and the reſtor'd Fluidity of ſuch as were concreted, without any Deſtruction of the Veſſels, 'tis ſufficiently obvious, that, in this Caſe, there can be no great Acrimony of the Juices; for, whilſt the Blood, by the Force of the Heart, is preſſed into the ſmall obſtructed Veſſels, and by them repreſſed when the Heart is in its Diaſtole, there muſt be, as it were, a continual Attrition of the Blood upon the Sides of theſe Veſſels: If, therefore, the Blood abounds with Particles of an acrid Quality, 'tis ſufficiently apparent, that theſe Veſſels muſt be reſolved and deſtroyed. This is the Reaſon why, in Patients of a ſcorbutic Habit, the ſlighteſt Inflammation, tho' produced in the Legs by external Cauſes, cannot be cured by Reſolution, but almoſt always degenerates into an ulcerous State and Condition. The ſame is, alſo, obſerv'd to hold true in all other cacochymic Habits, where there is an Acrimony of the Juices.

When the Motion of the Fluids is not too violent. When an Obſtruction happens, the obſtructed Veſſel is, by the Impulſe of the vital Fluid, extended, dilated, attenuated, and, at laſt, its Coheſion deſtroyed, even when the Celerity of the circulating Fluids is no greater than it uſually is in a State of Health. Now 'tis ſufficiently obvious, that when the Impetus of the Humours upon the obſtructed Part is increaſed, the Coheſion of the obſtructed Veſſels muſt be proportionably ſooner deſtroyed. But, in order to the Reſolution of an Inflammation, 'tis requiſite the Veſſels ſhould remain entire. When, therefore, an Inflammation is accompanied with an highly accelerated Motion of the Fluids, no Hopes of a Reſolution are to be entertained.

When the obſtructing Cauſe is not render'd too ſolid. Too quick a Circulation of the Juices is not only injurious, as it may break the obſtructed Veſſels, but, alſo, becauſe, by its means, the obſtructing Molecules are, with proportionably greater Force, compacted and united to each other. But to the Reſolution of an Inflammation 'tis neceſſary, that the obſtructing concreted Matter ſhould be again reſolved into thoſe Molecules, by the Union and Combination of which it is form'd: But the more thoroughly the thin Fluid, hindering the mutual Contact of the groſſer Molecules, is expreſs'd, and the more ſtrongly theſe Molecules are compreſſed and united to each other, the more firmly they will cohere, and their future Reſolution become proportionably the more difficult. But, when the Velocity of the Circulation is increaſed, the finer Parts of the Fluids are diſſipated, the groſſer Parts united, and the Cauſes, combining the Molecules lodg'd in the obſtructed Veſſels, more frequently applied to theſe Molecules in a certain given Time. This is the Reaſon why, in Pleuriſies, and other Diſorders, where there is a violent Fever of about twelve Hours Continuance, Phyſicians deſpair of a Reſolution, and direct their whole Intentions of Cure to the Concoction and Excretion of the inflammatory Matter.

When the Obſtruction is ſmall, and that eſpecially in the Arteries or Beginnings of the lymphatic Veſſels. An Obſtruction is ſaid to be ſmall, either with reſpect to the Place it poſſeſſes in the obſtructed Veſſel, or becauſe it is only lodg'd in few Veſſels of the affected Part. Thus, for Inſtance, if, in the dilated Beginning of one of the Veſſels deſtined for the Conveyance of the Serum, a red Globule ſhould remain incapable of paſſing, ſuch an Obſtruction will be far more eaſily removed, than if this Globule had penetrated and made its Way to the narroweſt Parts of ſuch an Artery. Thus, alſo, if the greater Number of the Veſſels of any Part of the human Body ſhould be obſtructed, each of theſe, being dilated, will, of courſe, compreſs and leſſen the adjacent Veſſels: Hence the Reſolution of ſuch an Obſtruction will always be proportionably more difficult. But, all other Circumſtances being alike, the Reſolution of an Inflammation in the larger Veſſels is, of all others, the moſt eaſily obtain'd; for Veneſection, and moſt of the other Remedies for an Inflammation, exert their Efficacy principally in the larger Veſſels. Thus, for Inſtance, if the red Part of the Blood remains ſtagnant in the narroweſt Part of an Artery, deſtined for the Conveyance of the Blood, or, thro' an Error Loci, has enter'd the Veſſels deſtin'd for the Serum, or the lymphatic Veſſels, which are next in Bulk to them, this obſtructing Matter muſt be ſo reſolved, or the obſtructed Veſſel ſo relax'd, that it may paſs thro' it; or the obſtructing Matter muſt be repelled from ſuch narrower to wider Parts: But a red Globule of Blood, according to the Obſervations of *Leewenhoeck*, is eaſily reduced to the ſerous Globules, of which it is compoſed. Thus a ſerous Globule may, in like manner, be reſolved into other ſmaller Globules. Such an Obſtruction, therefore, in the Arteries deſtin'd for the Blood, or for the Serum, or the Beginnings of thoſe appropriated for the Lymph, may be reſolved. But if a red Globule of Blood ſhould enter far ſmaller Veſſels, whoſe Beginnings are dilated, tho' it ſhould be reſolved into ſerous or ſmaller Globules, it cannot, however, paſs thro' the narroweſt Parts of ſuch Veſſels. Hence, in ſuch a Caſe, the Difficulty of a Reſolution is ſufficiently obvious. Another Remedy of great Efficacy in reſolving Inflammations is, by liberal Veneſection, ſo to diminiſh the Quantity of the Blood, and weaken the Impetus of the ſucceeding Fluids, that, by the proper Contraction of the Veſſel, the obſtructing Matter may be forced from a narrower to a wider Part. But this Effect depends entirely on the Reaction of the Veſſels, when the diſtending Cauſe is removed; for which Reaſon it muſt be moſt efficaciouſly produced in the largeſt Veſſels, which have the moſt firm and elaſtic Coats: But, in the moſt minute and tender Veſſels, no great Degree of Benefit is to be expected from this Circumſtance. Hence the Reaſon is obvious, why, in order to the Cure of an Inflammation by Reſolution, 'tis requiſite that the Obſtruction ſhould not be ſeated in the moſt minute Veſſels. Practical Obſervations ſufficiently confirm this Doctrine, but in no Inſtance more palpably or beautifully, than in Inflammations of the Eyes, where the inflamed Veſſels are ſubjected to our Senſes; for ſo long as only the Veſſels of the Tunica Adnata are red, without any apparent Diſorder in the Cornea, there are great Hopes of the Poſſibility of a benign and gentle Reſolution, without the Diſadvantage of any remaining Misfortune. But when the highly tender and pellucid Veſſels of the Cornea, being dilated, admit the groſſer Humours, the Diſorder will never be totally reſolved, but a Suppuration will always enſue, or a dark Speck remaining, will, for a long time, ſpoil the Beauty of the Cornea, or even continue during the Patient's Life.

When the Canals are moveable. In order to the Preſervation of Health, 'tis neceſſary that the Canals of the human Body ſhould be capable of yielding to the impel'd Fluids, and of returning to their former Largeneſs, when the diſtending Cauſe ceaſes to act. This is called the Mobility of the Canals. Now there are two Circumſtances by which the due Mobility of the human Canals is diminiſh'd, and ſometimes totally deſtroyed; when, for Inſtance, their Sides are ſo relaxed, that they eaſily yield to the Fluids impel'd by the Force of the Heart; but, when the Action of that Organ ceaſes, have ſo little Strength and Vigour, that they cannot propel the Blood impel'd from the Heart to them. On the contrary, ſo great a Rigidity is ſometimes produced in the Sides of the human Canals, that they will not ſuffer themſelves to be ſufficiently dilated by the impel'd Fluids. The former of theſe Misfortunes is called the too great Weakneſs, and the latter the too great Strength, of the Veſſels. In Caſes of too great Debility, the Veſſels capable of being dilated by the ſmalleſt Force may, by an *Error Loci*, admit the groſſer Fluids; and, ſince they eaſily yield, their Extremities may, in this Caſe, be ſo dilated, as to convey thoſe groſſer Fluids, which have enter'd them, to the Veins. Hence, in ſuch a Caſe, the Obſtruction is eaſily removed. Beſides, in theſe Caſes, the Motion of the Humours is always languid; and, in conſequence of the Weakneſs of the Veſſels, the Fluids are never thick and compacted. Hence 'tis ſufficiently obvious, that, in Conſtitutions of this kind, Inflammations not only rarely happen, but are, alſo, eaſily cured when they are produced. But, when the Veſſels are too ſtrong, the Blood is always thick and compact, and its moſt liquid Parts diſſipated. Hence its groſſer Parts become united, and the Inflammation produced is, with Difficulty, reſolved; partly by reaſon of the greater Incapacity of the condenſed Fluid to paſs thro' the Veſſels, and partly by reaſon of the ſtrong Contraction of the obſtructed Veſſels, by which they not only cloſely confine the obſtructing Molecules, but, alſo, reſiſt their own Dilatation. It is often obſerv'd in Practice, that in Women, and young Perſons, acute and inflammatory Diſorders are frequently cur'd by a benign Reſolution, which rarely happens in Adults, or thoſe accuſtomed to hard Labour. *Hippocrates*, in his *Coacæ Prænotiones*, makes the ſame Obſervation in the following Words: "Perſons of denſe Habits of Body, and "thoſe accuſtomed to Exerciſe, are ſooner cut off by pleuritic "and peripneumonic Diſorders, than thoſe not habituated to "Exerciſe."

When there is a ſufficient Quantity of diluting Lymph. When, in the Beginning of acute Diſeaſes, the moſt liquid Parts of the Juices are diſſipated by Sweat, Stool, or any other Evacuation, an unlucky Termination of the Diſorder is always to be dreaded; for the groſſeſt Molecules of the Blood are hinder'd from mutual Contact, and Concretion, by the Interpoſition of the finer and more ſubtile Parts of the Fluids.

Blood flowing from the Vein of a ſound Perſon appears an homogeneous Fluid, but, after remaining for ſome time in a State of Reſt, ſeparates into two diſtinct Parts; for the red Molecules, being united, are concreted, whilſt the fluid Serum is ſecreted from them. But if Blood, immediately after 'tis taken from the Vein, is agitated with a Spatula or Stick, till it becomes cold, this Separation of the Serum from the red Part of the Blood is prevented, and the whole Maſs remains fluid. Hence appears the Neceſſity of a fine diluting Liquid, in order

to prevent the Concretion of the Blood. For this Reason *Hippocrates*, in the Beginning of acute Diseases, always condemn'd an Excretion of the more fluid Parts of the Blood by Sweat, Stool, or any other Evacuation. Thus, in his *Prorrhet. Lib.* 1. *Num.* 57. he tells us, "that profuse Sweats are bad in acute "Fevers." And in his *Coacæ Prænotiones*, *Num.* 30. he informs us, "that, in burning Fevers, immoderate Fluxes prove mortal." *Sydenham*, also, who accurately observ'd the various Efforts of Nature in curing Diseases, informs us, that in the Beginning of the Small-pox all the Symptoms are increased by profuse Sweats.

When all, or at least most, of the Conditions above enumerated happen, then a Resolution, or a Change of the inflammatory Disorder into a State of perfect Health, is to be expected without an Expulsion of the Matter of the Disease, or a Destruction of the Vessels; since the Matter is only render'd capable of Circulation, and the obstructed Vessels open'd, and render'd pervious. But, if any of these Conditions requisite for a Resolution should be wanting, we are to endeavour to supply this Defect by Art. By a mild Regimen, and softening Medicines, a due Degree of Lenity is procured to the Humours. By Venesection, Rest, and the Influence of a pretty cool Air, the Velocity of the Circulation is check'd. By Fomentations applied to the Part affected, the Vessels are so relax'd, that they become capable of yielding more easily. By thin and aqueous Drink, the diluting Vehicle of the Blood is supplied. In the mean time all those things are to be avoided, by which the most fluid Parts of the Humours are eliminated, and carried out of the Body. But all these shall be afterwards considered under the Cure of an Inflammation.

If the circulating Humours are mild, their Motion accelerated, the Obstruction great, incapable of a Resolution, and attended with a violent Train of Symptoms, the Vessels distended, and ruptur'd with Pain, Heat, Pulsation, and Tumor, discharge their contained Fluids, which are resolv'd, become gently putrid, and produce an Attrition on the tender Solids, which they dissolve, and mix with the Fluids into one homogeneous, white, thick, glutinous, and pinguious Humour, called Pus. This is Suppuration, the other Manner in which Inflammations terminate.

When the obstructing Molecules are so impacted in the Extremities of the converging Vessels, that there is no Access for a diluting Vehicle, by which being dissolv'd, they may penetrate into the Veins, whilst, in the mean time, the succeeding Fluid, by an accelerated Motion, continues more and more to protrude the obstructing Matter into narrower Parts of the Vessels, 'tis obvious, that, at last, the stagnating Fluid, being much press'd, will remain absolutely immoveable in the obstructed Vessel, and become incapable of being forced from these narrow to wider Parts thereof. All this Part, therefore, of the inflamed Vessel will be totally deprived of the Influx of the vital Humours, and must consequently be separated from the other live and sound Parts. A careful Observation of Nature, in her Efforts to cure Diseases, has taught Physicians, that a Suppuration arising, produces a most perfect Separation of all that which is affected by the Inflammation, from the remaining sound and live Parts. Hence it is obvious, that a Suppuration is not highly dangerous, except in those Parts of the Body, the Soundness of which is absolutely necessary to Life and Health, such as the Brain, for Instance, or in Cases where Pus, already form'd, cannot be eliminated without Danger, as in Inflammations of the intercostal Parts: But how, by a Suppuration, all those Parts, rendered totally unfit for the vital Motion of the Fluids, are separated, is beautifully illustrated by the various Phenomena which happen in every Wound, inflicted in a sound Body, from the very Beginning to the perfect Cure: For, first, the Blood is discharged from the Vessels divided by the wounding Cause; then, their Orifices being contracted, a rediish thin Ichor is eliminated. Then the Surface of the Wound becomes almost dry, and a true Inflammation is produced by the vital Motion of the Humours acting upon the Extremities of the obstructed Vessels; as is obvious from the Pain, the Redness, the Heat, the Swelling, the gentle Fever, and the Thirst. Afterwards the impervious Extremities of the Vessels are separated, together with that Part of the stagnating Liquor which is impacted in the Extremities of these Vessels. Then, in the Wound, appears a tenacious, white, and pinguious Liquor, called Pus. When this is cautiously wiped off, the whole Surface of the Wound appears equably moist; a manifest Sign, that the Orifices of the Vessels, before obstructed, are open'd, the contracted and impervious Extremities of the Vessels being separated. A Suppuration, therefore, is the salutary Effort of Nature, by which all those Parts, become unfit for the vital Motion of the Humours, are separated from the other live and sound Parts. Hence *Hippocrates* justly observ'd, that Wounds made with sharp Instruments might be cured without a Suppuration; whereas contused and lacerated Flesh must become putrid, and be converted into true Pus. But though in treating of a Suppuration we use the Word Putrefaction, yet we do not mean that Kind of Putrefaction, which happens in a Carcase, where there is no Life; but a particular Change and Depravation of the Humours, brought about by the remaining Principle of Life. *Galen*, in his Treatise *de Febribus*, *Lib.* 1. *Cap.* 7. beautifully distinguishes between these two Species of Putrefaction; for he commended a white, smooth, and equal Sediment of the Urine, as the best Sign of the Resolution and Evacuation of the Matter of the Disease. This Change he calls Putrefaction, in the following Words: "But the Putre- "faction of the Humours, which happens in Abscesses, is simi- "lar to that which happens in Inflammations, Abscesses, and "other Tubercles." He informs us, that there are two Kinds of this Putrefaction. "One, says he, happens by the superior "Power and Energy of Nature; and the other in consequence "of her being overcome and foil'd. When Nature is victo- "rious, Pus is form'd, as in Inflammations, and all Tumors of "the tuberculous Kind. But, in the Humours of the Arteries "and Veins, that which subsides in the Urine is analogous to "Pus. But this Putrefaction is not simply Putrefaction, but, in "some measure, partakes of the Nature of Concoction; for, so "long as the Faculty of Concoction remains in the Vessels, the "putrescent Humour is thus chang'd." Hence it appears, that the Formation of Pus is widely different from a spontaneous Degeneration of the Humours into Putrefaction.

The Transition of an Inflammation incapable of a Resolution, into a Suppuration, seems to be in this manner: The succeeding Fluid, the Celerity of whose Motion is increas'd by the concomitant Fever, is, by each Pulsation of the Heart, forced upon the obstructed Part. Hence, by this continued Pulsation, the distended Sides of that Part of the Vessel between the Heart, and the Part obstructed, begin gradually to be lacerated, and the Cohesion of the obstructed Extremity with the rest of the Vessel is destroy'd. Whilst this happens, the Humours are discharged from the open Vessels. By the Heat of the Parts these are dissolved, and begin to become, as it were, putrid. The stagnant Fluid, lodged in the separated Extremities of the Vessels, also, begins to be dissolved by the same Causes. The highly tender solid Parts, before containing this stagnating Liquor, suffer, also, an Attrition, are divided, and, being changed by their Stagnation, and the Heat of the Parts, are converted, together with the discharged Fluids, into an homogeneous Liquor, called Pus. It may, perhaps, appear surprising, that the solid Sides of the Vessels should be so dissolv'd, that a Mixture of them with the discharg'd Humours should appear an homogeneous Fluid: But the Truth of this will be sufficiently obvious, if we consider the almost incredible Smallness of these Vessels; for from the Experiments of Mr. *Leewenhoeck*, and others, mention'd in the second Volume of the Medical Essays, 'tis obvious, that, according to an accurate Calculation, almost fifty Millions of red Globules of Blood are only equal in Weight to one Grain. But the smallest Arteries, destin'd for the Conveyance of the Blood, transmit only one such Globule. Hence it appears how small and tender these Vessels must necessarily be. But the smallest of the Arteries destin'd for the Conveyance of the Blood are the largest among the minute Vessels. We have before proved, that an Inflammation of the sanguineous Kind may, also, happen in the Vessels destin'd for the Serum, and the small lymphatic Arteries. 'Tis, therefore, no Wonder, that the solid Stamina of such Vessels should, by Attrition, be so mixed with the Fluids, as totally to disappear. In phthisical Patients the whole Substance of the Lungs is sometimes so consum'd and evacuated by way of Spit, that upon viewing the Patient's Body, after Death, Physicians are often surpris'd to find Life so long protracted, whilst so small a Portion of so noble an Organ was left.

But this Humour, consisting of the discharged Fluids, and the tender Solids, as it were, triturated and mix'd together, is called Pus; the Properties of which, when the Maturation is perfect, and the Concoction of the inflam'd Fluids duly made, are here enumerated; for, in this Case, the Pus always appears white, of the Consistence of the Cream of Milk, pinguious to the Touch, every-where equable, and containing nothing heterogeneous. But the Pus, which recedes from these Conditions, is justly to be condemn'd. *Hippocrates*, in his *Prognostics*, 42. takes notice of all these Circumstances, in the following Words: "That "Pus is the best, which is white, equal, smooth, and not at all "fetid: That, on the contrary, is worst, which most palpably "recedes from these Qualities." *Celsus*, also, in the twenty-sixth Chapter of his fifth Book, when treating of the various Matters discharged from Wounds and Ulcers, that is, Sanies, Blood, and Ichor, uses the following Words: "Among all these Pus is the "best: But this, also, is of the worst Kind, when it is discharg'd "in large Quantities, or is thin and diluted, especially at first; "as, also, when its Colour resembles Serum; or when it is pale, "livid, feculent, or fetid; unless the Place itself excites the "Smell. On the contrary, it is the better, the smaller its Quan- "tity, the thicker, and the whiter it is; as, also, when it is "smooth, without any Smell, and equable." A little after he beautifully observes, that Inflammations are terminated by the Formation of Pus; for he goes on in these Words: "But the "Pus ought to be proportion'd both to the Bulk of the Wound,

" and the Time; for a larger Quantity may be naturally so dis-
" charg'd from a large Wound; and in Cases where Inflammations
" are not as yet terminated." But, when the inflammatory Matter, to be concocted into Pus, is of an obstinate and rebellious Kind, or when the concocting Powers are weak, or when both these Misfortunes concur, then a Pus, with the above enumerated Conditions, is not form'd; but another Liquor, degenerating more or less from them, as *Galen*, in *Comment.* 1. in *Prognost. Hippocr.* beautifully observes, when explaining this Passage of *Hippocrates*; for, after he has told us, that, in a Phlegmon, the Blood discharged into the Interstices adjacent to the Vessels, that is, into the Tunica Cellulosa, could not be restored to its former Nature, but must be changed, and become putrid, just like all other Substances, which become excessively warm in an improper Place, he subjoins the following Words: " If, therefore, *says he*, the innate
" Heat recedes much from its due Temperature, the Blood be-
" comes putrid, as in a Carcase. But so long as this innate Heat
" retains its proper Energy, a kind of mixed Change is produced
" in the Blood; partly by a preternatural, and partly by a natural
" Cause; of which, as the former putrefies, so the latter con-
" cocts: Whichever of these is most prevalent, their proper
" Symptoms necessarily ensue, both in the Colour, the Smell,
" and the Consistence of the Matter."

The Formation of Pus, therefore, depends on the remaining Principle of Life: For this Reason *Hippocrates* justly reckon'd it among the worst Signs, when an Ulcer, appearing before or during a Disease, discharged no more Pus, but became dry; for in his *Prognost.* 22. he affirms, that the Patient, whose Fate this is, will die.

But that the inflamed Part tends to a Suppuration, may be known from the following Conditions.

If the circulating Humours are mild: For, if there is a considerable Acrimony of the Humours, this, by the Stagnation and great Heat of the Part, will be increased: Hence an Erosion and Destruction of the Vessels will happen; but not that mild and gentle Separation of the Extremities of the obstructed Vessels, which ought to be in a legitimate Suppuration.

If the Motion of the Humours is very violent. In the Resolution of the Inflammation, the Mildness of the Humours, and their regular Motion, are requisite: But, where a Suppuration is to ensue, there is always a proportionably greater Velocity of the Circulation: Hence a Suppuration is a kind of Medium between a benign Resolution, and a Gangrene. In a Resolution, without any farther Injury done to the Vessels, or an Evacuation of the obstructing Humours, the concreted Fluids are reduced to their former Fluidity, and those which were stagnant put in Motion. But, in a Gangrene, a true Mortification of the Part affected happens; and the Whole of this mortified Part must afterwards be separated from the adjacent live Vessels: But, in a Suppuration, the Extremities of the obstructed Vessels are torn asunder, and the extravasated Fluids to be converted into Pus, with the tender Solids, must be eliminated. In this it differs from a Resolution, and from a Gangrene; because by a Suppuration the Whole of the Part affected is not destroy'd. For this Reason the increased Velocity of the Humours, which accompanies an Inflammation, must be very moderate, before a Resolution can be expected. On the contrary, if a violent Fever is present, a Gangrene will soon ensue: But, in a Suppuration, the Motion of the Humours is neither so moderate as in a Resolution, nor so brisk and swift as it generally is in a Gangrene: Hence, when there are no Hopes of a Resolution, it may prove equally dangerous to lessen the Fever, as it is imprudent to excite it; as will afterwards appear.

When the Obstruction is great. When the Obstruction is said to be small, or great, as, also, what the Signs of a Resolution are, we have already specified: But it is principally known, that an Inflammation tends to a Suppuration, if the Tumor, Heat, Pain, Redness, and other Symptoms, already enumerated, are increased; not with the greatest Velocity, for then a Gangrene would ensue; but by a kind of continued and uninterrupted Increase. It may seem difficult accurately to ascertain the precise Boundary, where the Possibility of a Resolution ceases, and the Beginning of a Suppuration happens: This however, is certain, that the Pain, Pulsation, Fever, and Heat, are manifestly increased at the time the inflamed Part is suppurating. But, when the Pus is formed, all these are again lessen'd, as *Hippocrates*, in the forty-seventh Aphorism of his second Section, justly observes, in these Words: " About the time Pus
" is forming, Pains and Fevers rather happen, than when it is
" already form'd." Nor is this surprising, since the distended Vessels, ready to burst, are capable of exciting the most intense Pain; but, when they are ruptured, the Pain produced by this means ceases.

If the Humours are acrid, and their Motion violent, the Obstruction great, the Vessels rigid, and all the Symptoms violent; then the Vessels are suddenly ruptur'd, the Fluids become putrid, and the Ichor discharg'd is collected under the Skin, like the Washings of Flesh, or a yellow Sanies: The Colour of the Part becomes cineritious, pale, brown, and at last black. The Redness, Pain, Heat, Pulsation, and Tumor, cease in the Part affected, but appear in those adjacent: The Part affected becomes mortified: And this is called a Gangrene, the third Manner in which Inflammations terminate.

We now come to treat of the third Manner in which Inflammations terminate, which is a Gangrene: When by any Cause whatever, in a soft Part of the Body, the Influx of the vital Humours through the Arteries, and their Return through the Veins, are destroy'd, then the Mortification of such a Part happens; which, from its Beginning as it increases, is called a Gangrene. This Termination therefore of an Inflammation differs from a Suppuration, since, in the former, all Motion of the Humours ceases in the Part affected, in consequence of the sudden Rupture of the Vessels; whereas, in a Suppuration, the obstructed Extremities of the Vessels are gradually separated by the Motion of the succeeding vital Juices. An Inflammation principally tends to a Gangrene, when the following Circumstances happen.

When the Humours are acrid. All highly acrid Substances, externally applied to the Body, produce a Gangrene; nor is it matter of any Moment, whether these acrid Substances are of an acid, an alcaline, or any other Nature: Thus Oil of Vitriol, the potential Cautery used by Surgeons, and prepar'd of an acrid alcaline Salt, boiled with Quick-lime, acrid empyreumatic Oils, or the expressed Oils of Guaiacum, and volatile alcaline Salts, when applied to the Skin, produce true gangrenous Eschars. The same will happen, if the Mass of Blood is contaminated with acrid Substances. It is true, such highly acrid Things cannot easily enter the Blood; yet, in some Diseases, there happen such surprising Depravations of the Humours, that, acquiring the highest Degree of Acrimony, they suddenly destroy all the Parts. In a malignant putrid Scurvy, the Gums have an intolerable Stench, and are affected with a true Gangrene; then malignant Ulcers, which soon become gangrenous, appear in various Parts of the Body, and especially in the Legs. The like Disorders are observ'd to be produced by the black Bile, when redundant, and put into Commotions: Hence it is obvious, that, if an inflammatory tenacious State of the Blood is at the same time accompanied with a considerable Acrimony, the Vessels must soon be destroy'd, and a Gangrene produc'd.

When the Motion of the Humours is violent. A moderate Motion of the Humours favours the Resolution of an Inflammation; a Motion somewhat brisker promotes a Suppuration; but an highly violent Motion acts with such Force on the obstructed Extremities of the highly minute Arteries, that all the Parts are suddenly ruptured, and not gradually separated, as in a Suppuration. The brisk Motion of the Humours through the whole Body is known by the increased Velocity of the Pulse, and a preternaturally quick Respiration: The intense Pain, and violent Heat, in the inflam'd Part indicate the same. If at the same time the Velocity of the Humours is accompanied with an Acrimony, it is sufficiently obvious, that the tender Vessels must be very quickly destroy'd, since acrid Fluids are both with a greater Impetus, and more frequently, applied to them within a given Time: Besides, it is certain, that, by an increased Celerity alone of the Circulation, the Salts and Oils of the Blood are render'd more acrid; and that thus fresh Stimuluses are produced, which increase that Velocity of the Circulation which first gave Birth to them. From all these Circumstances it is sufficiently obvious, that the inflam'd Part is in imminent Danger, when there is a violent Fever.

When the Vessels are rigid. It is shewn under the Article FIBRA, that by an increased Rigidity of the Vessels the Blood is highly condensed, and its most liquid Part dissipated, by which means it is rendered more prone to Concretion; and, as we have already observed, the due Mobility of the Canals, and the diluting Vehicle of the Blood, are justly reckoned among those things from which the Resolution of an Inflammation is to be expected. If the contrary Circumstances should happen, a proportionably worse Event will always ensue. And since, in this Case, the Humours are moved through the Vessels with great Velocity, the whole Impetus will act upon the obstructed Extremities of the Vessels, whereas otherwise a great Part of it is employed in dilating the Sides of the flexible Vessels. Thus the Extremities of the Vessels, together with the concreted Fluid, with which they are loaded, will be suddenly torn asunder by this violent Force, and all the Circumstances to be afterwards mentioned will happen. Hence the Reason is obvious, why inflammatory Disorders are generally so fatal to Persons worn out by hard Labour.

When all the Symptoms are violent. If the Tumor of the inflamed Part very suddenly increases, if the Redness is very deep, and tending to a purple Colour, the Heat burning, the Pain intense, and continually increasing, the Pulse excessively quick, and the Respiration difficult, a Gangrene will soon be brought on.

In this Case the Vessels are suddenly ruptured. If we consider, that an acrid Fluid, moved with a violent Motion, acts upon the Extremities of the Vessels so loaded with a stagnating Matter,

ter, that nothing can paſs through them, it eaſily appears, that a ſudden Rupture of the Veſſels is to be expected, eſpecially if their too great Rigidity prevents their being eaſily diſtended without a Rupture. But from the ruptured Veſſels the Fluids are diſcharged, and, by a ſpontaneous Principle of Change, are very ſoon corrupted; ſince an intenſe Heat, the perpetual Concomitant or a violent Inflammation, greatly favours a Putrefaction. Whilſt all theſe Circumſtances happen in the inflamed Part, ſome ſenſible Changes are obſerved, which manifeſtly inform us, that ſuch a Diſorder is either already preſent, or will ſoon be ſo. But all theſe Phenomena are perfectly ſimilar to thoſe produced by Fire, when applied to any Part of the Body, as we have already obſerved: for then the Epidermis begins to be ſeparated from the ſubjacent Skin, and, by the diſcharged Humours, raiſed into Bliſters, generally full of a rediſh Ichor; or, in a worſe State of the Diſorder, a thin yellow Sanies is contained in theſe Bliſters. This ſhining red Colour is changed into a cineritious, pale, brown, and, at laſt, a black Colour; and, according as the Colour recedes from cineritious, or pale, and approaches to that of black, the greater or ſmaller Progreſs of the Diſorder is to be eſtimated. Then almoſt all the Symptoms of the Inflammation are mitigated, and ſometimes appear to be totally removed. Nor is this to be wondered at, ſince they draw their Origin from the increaſed Celerity of the vital Motion of the Humours in the Part affected. Hence the Redneſs diſappears, ſince, when the Influx of the Humours ceaſes, the Blood is no longer carried through the Veſſels of the Part thus affected. And when, for the ſame Reaſon, the nervous Fibres are no longer diſtended, the Pain is, of courſe, removed. As the Heat and Pulſation ſuppoſe a violent Attrition of the impelled Fluid on the Sides of the Veſſels, they, in like manner, ceaſe, when a Gangrene ſucceeds an Inflammation. This ſudden Remiſſion of the Pain, and other Symptoms, in acute and inflammatory Diſorders, without previous good Signs, is, therefore, juſtly accounted ſo fatal a Symptom; for, when in an external Part of the Body a Gangrene happens after a violent Inflammation, the Preſence of ſuch a Diſorder may be known from the above enumerated Signs. But, if the internal Parts of the Body labour under the like Diſorder, the principal Sign is to be taken from the ſudden Ceſſation of the Pain. Thus in a violent Pleuriſy, and highly painful Inflammations of the Inteſtines, the intenſe Pain frequently ceaſes ſuddenly; and, whilſt the miſerable Patients fondly believe, that the Diſorder is happily ſubdued, an End is ſoon after put to their Lives. Theſe are the fallacious Intervals of Reſpite, which, in violent Diſorders, ſo often impoſe upon judicious Phyſicians; whilſt thoſe not much converſant in Practice often both hope and predict a ſalutary Termination of the Diſorder, which, in ſuch Circumſtances, never fails to prove ſoon mortal.

When, therefore, the Veſſels are deſtroyed, the Influx and Efflux of the Humours in the Part affected is totally aboliſhed, that is, a Mortification is produced; and then all the ſubſequent Diſorders ariſe from the ſpontaneous Corruption of the Part already mortified: For, if we conſider thoſe Changes which happen eſpecially in a warm and moiſt Air, to the Fleſh of newly kill'd Animals, it is obvious, that they are almoſt ſimilar to thoſe which happen in gangrenous Parts; for the red and lively Colour of recent Fleſh begins to be gradually deſtroyed; a pale cineritious Colour ſucceeds, which, by degrees, becomes more and more brown; at laſt, ſuch putrefied Fleſh becomes almoſt black, and is diſſolved into a kind of putrid Gore, though before it was ſufficiently firm. But all theſe Phenomena happen ſooner in a gangrenous Part, becauſe the Heat of the adjacent live Parts augments the Putrefaction of that which is mortified.

Though the Parts adjacent to ſuch a mortified Part are as yet pervious to the vital Humours, yet in the Boundary between the mortified and live Parts there muſt neceſſarily be an Obſtacle put to the Humours conveyed thither, ſince they cannot poſſibly penetrate into the mortified Parts. Hence in this Boundary a kind of new Inflammation is produced, after which a Suppuration happening, the mortified and gangrenous Part is ſeparated from the adjacent live Parts, and the Gangrene ſpreads, the vital Motion of the Humours being ſuffocated in the contiguous Parts. This Phenomenon has ſometimes impoſed upon unskilful Practitioners, whilſt they believed, that a Gangrene was not yet preſent, becauſe Pain was perceived in the Part affected; though, properly ſpeaking, there is no Power of Senſation in the gangrenous Part, ſince the Pain ariſes from the ſubjacent and circumambient live and inflamed Parts. But it is always reckoned a good Sign, when, in the whole Circumference of the Part already gangrenous, Redneſs, Pain, Heat, and Tenſion, are perceived, provided theſe Symptoms are not ſo violent as to lay a Foundation for dreading, leſt this Inflammation, alſo, ſhould degenerate into a Gangrene; but in this Caſe we know, that the remaining Life in the other Parts of the Body attempts the Separation of the gangrenous and corrupted, from the live and adjacent Parts.

When an external Compreſſion happens to a Part thus affected, or when an intenſe Heat diſſipates the Fluids, the mortified Part becomes indurated like a Piece of dried Leather, and ſuffocates and corrupts the Parts which are inferior to it.

In a Part already gangrenous there is no Motion of the Humours through the Veſſels, but a perfect Reſt and Stagnation: Hence Changes will happen, ſimilar to theſe, which, by the ſame Cauſes, are produced in Carcaſes. The Heat of the ſubjacent and circumambient live Parts, if, at the ſame time, there is any Moiſture, will convert the whole mortified Part into a putrid Gore. But if, by an external Compreſſion, or an intenſe Heat, the moſt fluid Parts of the Humours are diſſipated, then the mortified Part is dried, indurated, and perfectly reſembles a Piece of black Leather; and is often ſo tough, that it can ſcarcely be divided by a Razor. But this Phenomenon is principally obſerved in the external Parts, covered with Skin; for in other Parts the gangrenous Portions are rather colliquated into a kind of Gore. Thus in a Man formerly in good Health, who died of an incarcerated Hernia, *Van Sweiten* informs us, that he ſaw the Inteſtines converted into a putrid kind of Poultice during the two Days the Diſorder laſted. But when, in acute Diſeaſes, a Gangrene is produced about the Os Sacrum, and Os Coccygis, by lying in Bed, highly black and dry Spots appear in the Part affected. How ſoon, by external Compreſſion alone, a Gangrene is not only produc'd, but, alſo, the Skin rendered black and indurated like a Piece of Leather, even in the ſoundeſt Perſon, may be learned from numberleſs Caſes, which daily occur in Practice. But when ſuch an hard and coriaceous Covering firmly adheres to the ſubjacent Parts, theſe will, of courſe, become inflamed, ſo that being rendered tumid, if this Covering cannot be raiſed and ſeparated from the live Parts, to which it adheres, theſe will in like manner be compreſſed, and the Diſorder will penetrate deeper.

Things actually, or potentially, cold, Aſtringents, coagulating Subſtances, Repellents, pinguious and acrid Subſtances, thoſe of an emplaſtic Nature, Narcotics, ſtrong Ligatures, and external Compreſſion, ſoon promote this Change of an Inflammation into a Gangrene.

In this Paragraph are enumerated ſuch things as we know from Experience, when applied to an inflamed Part, ſoon change the Inflammation into a Gangrene.

As for the Things actually or potentially cold; among the Things which diſpoſe an Inflammation to degenerate into a Gangrene, we may juſtly reckon a great Obſtruction, and the Rigidity of the Veſſels. But the Effects of Cold are a greater Contraction and Strength of the Solids, and an increaſed Stagnation of the Fluids. The higheſt Cold, therefore, by conſtringing the Solids, and coagulating the Humours, totally prevents the Circulation of the Humours. Hence a ſudden Mortification of any Part is produced by intenſe Cold. But, when the Principle of Life is able to ſurmount theſe Obſtacles, in any Part of the Body pinched with Cold, then a violent Heat is produced by the Attrition of the condenſed Fluids circulating thro' the contracted Veſſels. Thoſe who rub their Hands with Snow, find this to be experimentally true; for, after the uneaſy Senſation of Cold, a pretty intenſe Heat is perceived. Hence 'tis obvious, that cold Subſtances, applied to inflam'd Parts, prove injurious; either as they entirely ſuffocate the Motion of the Fluids, or as they afterwards increaſe the Heat, which is already too great. Sometimes, however, cold Subſtances applied may prove beneficial; when, for Inſtance, in conſequence of an *Error Loci*, the groſſer Humours, having enter'd the ſmaller Veſſels, would be repel'd into the larger Ramifications, in conſequence of the Contraction of the Veſſels by Cold, eſpecially if the Diſorder ſhould prevail in the finer Fluids; for the red Part of the Blood is immediately coagulated in cold Water, but not the Serum, and finer Part of the Lymph. But 'tis ſufficiently obvious, that no Advantage is to be expected from the Application of cold Subſtances, unleſs the Diſorder is at once recent and mild; for, if the obſtructing inflammatory Matter ſhould be immovably pent up, and impacted in the narroweſt Parts of the Veſſels, the Diſorder will be rather increaſed by them. Theſe Sentiments exactly agree with the Doctrine of the Antients; for, after *Hippocrates*, in the 17th and 20th *Aphoriſms* of his fifth Section, has inform'd us, that Cold, among other Misfortunes, produces *Blackneſſes* [μελασμους], he, in the 23d *Aphoriſm* of the ſame Section, when recounting the Advantages of Cold, affirms, that it is uſeful in Caſes where "Inflammations and Heats, pro-"duced by recent Diſcharges of Blood, begin to appear red, "and, as it were, bloody; for, ſays he, it induces a Blackneſs "on inveterate Inflammations, helps an Eryſipelas when not ul-"cerated, but does Harm to that which is of the ulcerated Kind." And tho' *Galen*, in his *Method. Medend. Lib.* 13. *Cap.* 6. recommends the Uſe of cold Subſtances in a Phlegmon, he yet ſubjoins very proper Cautions in the following Words: "In "beginning Phlegmons we are rather to uſe cold and aſtringent, "than diſcutient Subſtances, eſpecially when the congeſted "Matter is not thick; for, when there is a violent Incuneation "or Impaction [στάσις] in the inflamed Part, we are no longer

"to

" to uſe Repellents, but Diſcutients." *Galen* could not have ſpoken more juſtly upon this Subject, if, from a Knowledge of the Circulation of the Blood, he had been acquainted with the general Nature of an Inflammation. And in his *Method. Medend. Lib.* 14. *Cap.* 3. when treating of the Cure of an Eryſipelas, he tells us, that it requires a greater Degree of Refrigeration than a Phlegmon, and then ſubjoins the following Words: " But let " Refrigeration be no longer uſed, than a Change of Colour " happens in the Part; for, upon ſuch a Change, a genuine " Eryſipelas ceaſes; but, by too much refrigerating an Eryſi- " pelas, which is not genuine, but, in ſome meaſure, of the " phlegmonoide Kind, the Skin is rendered livid; and if we do " not then give over the Refrigeration, it becomes black, eſpe- " cially in old Perſons; ſo that ſome Parts, thus refrigerated, are " not to be perfectly cured by the Uſe of Diſcutients, but con- " tinue with a kind of ſcirrhous Tumor upon them." Hence 'tis ſufficiently obvious, how dangerous the Uſe of cold Subſtances is in the Cure of Inflammations; ſince, by their means, they ſo eaſily degenerate into worſe Diſorders, unleſs, when uſed in the Beginning, or in Caſes where the Misfortune ariſes, not from the Entrance of the red Blood, but of the finer Humours, into Veſſels not naturally deſtin'd for their Conveyance; as, for Inſtance, in an Eryſipelas, an hot Oedema, and other Diſorders of a like Nature.

Things potentially cold are thoſe, which, when applied to a ſound Body, deſtroy or leſſen the Heat, tho' they themſelves are actually hot, or, at leaſt, not much colder than the Part of the Body to which they are applied. They are, therefore, ſuch Subſtances as either leſſen, or entirely remove, the Cauſes of Heat in the Part: But Heat ariſes from the Motion of the Humours thro' the Veſſels. When the latter is diminiſhed, the former decreaſes; and the Heat is increaſed in proportion as the Motion is augmented. 'Tis therefore obvious, that potentially cold Things are ſuch as either deſtroy or leſſen the Velocity and Strength of the Circulation. Thus, for Inſtance, warm Water, applied to the Part affected, may by relaxing the Veſſels, and diluting the obſtructing Molcules, remove the Heat of the inflamed Part. Hence ſome Things are ſaid to be potentially cold, tho' they are, at the ſame time, actually hot. But 'tis ſufficiently obvious, that theſe, and other Things of a like Nature, rarely prove prejudicial in Inflammations, as we ſhall afterwards ſhew; for they do not deſtroy the Motion of the Humours thro' the Veſſels, but, removing the Obſtacles, reſtore a free and equable Circulation. But thoſe Things would prove highly injurious, which, by ſuffocating the Life of the Part, ſhould induce a Coldneſs, as is reported concerning ſome Poiſons. Thus the divine *Socrates*, after having drank the poiſon'd Draught, ſuppoſed to conſiſt of Hemlock-juice, perceived his Legs becoming cold; and, when this Coldneſs aſcended above his Pubes, he calmly expir'd.

As for aſtringent and coagulating Circumſtances; by theſe the Cavities of the Veſſels are diminiſh'd, and the Fluids render'd incapable of Circulation. Such Subſtances, therefore, contribute to increaſe the Cauſes of the Obſtruction, and, conſequently, deſtroy the free Motion of the Humours thro' the Veſſel. But, when this Motion is entirely deſtroyed in the Part, a Gangrene is preſent.

As for Repellents; the inflamed Part, for the Reaſons already aſſign'd, becomes tumid, and that frequently in a very high Degree. Hence the antient Phyſicians concluded, that a certain Matter was here congeſted, which was not lodged in the Part before, but came from ſome other Quarter. But, as they frequently ſaw this Accumulation very ſoon form'd, they imagin'd that it was produc'd by Fluxion. For this Reaſon a Part of their Cure conſiſted in repelling what had flowed into the Part, eſpecially in the Beginning of the Diſorder, as we have before ſhewn from *Galen*. That ſuch a Repulſion of the Blood from the Extremities of the Arteries to their Baſes is poſſible, we know from certain and undeniable Obſervation; for, when the ſoundeſt Man is ſuddenly frighted, the Paleneſs of the Face and Lips ſufficiently informs us, that the Blood has retir'd towards the Heart, and larger Veſſels. Hence a Palpitation of the Heart, and a kind of Uneaſineſs, immediately ſucceed this Paleneſs. The ſame is, alſo, ſufficiently obvious in Deliquiums. But, by this Repulſion, the Molecules of the Blood, which, thro' an *Error Loci*, had enter'd ſmaller Veſſels, may be again forced back into ſuch as are larger; and thus the Obſtruction would be removed. But, how far Things of this Nature may prove beneficial, we have already conſider'd, when treating of the Application of cold Subſtances to inflam'd Parts. But as all Things externally applied, in order to promote this Repulſion, act only by increaſing the Contraction of the Veſſels, 'tis ſufficiently obvious, that their Uſe is dangerous, except in the Beginning of an Inflammation ariſing from an *Error Loci*; and that the Diſorder is increaſed by them, unleſs they prove beneficial on their firſt Application.

As for pinguious and acrid Subſtances, or ſuch as are of an emplaſtic Nature; we have already ſaid ſomething concerning theſe: For, ſince they are ſubject to produce an Inflammation, they will, of courſe, augment one already produced by other Cauſes, eſpecially if the emplaſtic Subſtances adhere ſtrongly to the Part affected; for, in this Caſe, they render it ſtill more imperſpirable, and the acrid Subſtance mixed with them will adhere to it for a long time.

As for Narcotics; theſe, from their Nature, may, perhaps, appear not ſo much to be condemn'd, eſpecially if they are judiciouſly uſed. But as all the Medicines of this Claſs blunt the Senſe of Pain whilſt its Cauſe remains, by this means an Inflammation is often increaſed every Moment; and, the Veſſels being deſtroyed without any Senſe of Pain, a Gangrene enſues. But the intenſe Pain, the Heat, the Pulſation, and other Symptoms, would have ſufficiently admoniſh'd both the Patient, and thoſe who have the Charge of him, that the worſt of Misfortunes were to be dreaded, if the Senſe of Pain had not been allay'd by theſe Narcotics. Hence the moſt efficacious Remedies are neglected, which might have prevented the Tranſition of this Inflammation into a Gangrene.

As for tight Ligatures; how a Gangrene may be produced by this means, we have already ſpecified; but 'tis ſufficiently obvious, that this Diſorder is much ſooner to be expected, when an inflamed Part is violently conſtricted by a tight Ligature.

As for external Compreſſion; we have already conſider'd its Effects.

Then a Continuation of the Uſe of the above-mentioned Things augment the Diſorder into a Sphacelus.

We have already ſhewn, that a true Phlegmon has its Seat moſt frequently in the Tunica Celluloſa, and that it is ſometimes diſtended to an enormous Bulk. Thus, when an Inflammation ariſes in the Back of the Hand, where this Coat or Membrane is moſt tender, a Tumor ſometimes happens two Inches thick, and frequently more. But, when a Gangrene ſucceeds an Inflammation in this Part, this whole corrupted Maſs muſt afterwards be ſeparated; and, in ſuch a Caſe, a Knife may be thruſt pretty deep, without any Senſe of Pain, from which Circumſtance all the ſubjacent Parts might be thought mortified. But it often happens, that the ſubjacent Tendons and Muſcles remain alive, in which Caſe the Diſorder is not as yet a Sphacelus; for a Sphacelus is only ſaid to be preſent, when all the Parts, to the very Bone, are mortified. But when the Membrana Adipoſa, highly diſtended, already corrupted with a Gangrene, and at the ſame time pent up within a tough Skin, preſſes upon all the ſubjacent Parts, the vital Circulation of the Humours may be, alſo, totally ſuffocated in them; and then the Gangrene degenerates into a Sphacelus, that is, a perfect Mortification of the Part. All the Things, therefore, enumerated in the preceding Paragraph, as capable of converting an Inflammation into a Gangrene, may ſo increaſe a form'd Gangrene, as to convert it into a Sphacelus.

If the Part inflamed is glandular, the internal or external Heat great, the impacted Matter immoveable and thick, the Emunctories of the Glands obſtructed, and their Follicules and Sides diſtended, an hard Tumor, free from Pain, is form'd in the Glands, which is called a *Scirrhus*, the fourth Manner in which an Inflammation terminates.

This is the laſt Manner in which an Inflammation terminates, when, for Inſtance, it is neither reſolved, nor that which is render'd unfit for the carrying on the vital Motion of the Humours, ſeparated from the ſound adjacent Parts. This morbid Part, therefore, remains ſo united to the ſound Parts, that it, at laſt, acquires ſuch an obſtinate Diſpoſition, as to be incapable of a Separation from the ſound Parts by all the future Efforts of Nature, or the Efficacy of any Medicine hitherto known; but muſt be removed by the Knife, or the Cautery. But in thoſe Parts of the Body, through which the Blood is continually convey'd, with a rapid Motion, 'tis ſufficiently obvious, that the Veſſels, infarcted with a ſtagnating Matter, cannot remain long unchang'd: For, by this continual Pulſation, all that which reſiſts the free Motion of the Humours through the Veſſels, will be either ſeparated by a mild and gentle Suppuration, or ſoon corrupted by a Gangrene, or a Sphacelus. But when ſuch is the Condition of the Part affected, that the Impetus of the arterial Blood can act but little, or not at all, upon it; 'tis then to be apprehended, that the impacted Matter, when its more liquid Part is diſſipated, may remain there, and form that Species of hard Tumor, which is without Pain, and is called a Scirrhus. But this Termination of an Inflammation is moſt frequently obſerv'd in the glandular Parts; for, the Emunctories of theſe Glands being obſtructed, none of the ſecreted Fluids can be diſcharged through their Fabric. Theſe Fluids, being inſpiſſated by their Continuance and Stagnation, will fill and diſtend their Cavities, or their intricate vaſcular Fabric. And, as the Impetus of the circulating Fluids cannot act directly on this impacted Matter, it will remain, be deprived of its moſt liquid Part, and form a Scirrhus. Of this we have a palpable Inſtance in Inflammations of the Breaſt; for the Milk ſecreted from the Blood convey'd through the mammary Arteries, remaining in the Ducts, which prepare the Milk, begins to be coaguiated, a thin Serum drops through the Tubes of the Nipple. The Remainder is in-

ſpiſſated there, as it were, without the Sphere of the Circulation; and, after the Inflammation is allay'd, often leaves a hard Tumor free from Pain, all the reſt of the Patient's Life. For the ſame Reaſon a Scirrhus ſo frequently ſucceeds an Inflammation of the Teſticles; for if we conſider, that the highly ſmall ſpermatic Artery ariſing from the Trunk of the Aorta, by Ramifications ſent off by a true Anaſtomoſis, communicates the red Blood to correſpondent ſmall Veins, and then, by innumerable ſmall Ramifications, wreath'd up and ſeparated from each other, conſtitutes the Subſtance of the Teſticles, it will be ſufficiently evident, that the Impetus of the arterial Blood on theſe Parts is ſcarcely any at all. Hence a Matter once impacted here often produces Tumors, which prove ſo obſtinate againſt the Efficacy of the beſt Medicines. But an Inflammation in the glandular Parts is principally ſucceeded by a Scirrhus, when the following Circumſtances appear.

When the internal and external Heat is great. Women in Child-bed frequently commit the Cure of inflam'd Breaſts to their Nurſes, and often to other doating old Women. And as they generally dread nothing more than a Suppuration, and the laying open of the ſuppurated Part by a Lancet, they endeavour by all poſſible means to prevent this Misfortune. But if by the Application of the ſofteſt Fomentations they endeavour to procure the Reſolution of the Inflammation, their Conduct would not be in the leaſt culpable. But, by a dangerous Error, they expoſe the inflam'd Breaſt to live Coals, or continually cheriſh it with dry and hot Linen Cloths, or they apply Spirit of Wine, almoſt boiling, to it. But this Procedure is often ſo far from being ſucceeded by a Suppuration, that the moſt liquid Parts of the Fluids being diſſipated, and the Remainder by that means inſpiſſated, an incurable Scirrhus is form'd; then the miſerable Women, who were before ſo much afraid of the Prick of a Lancet, are often, afterwards, forced to undergo a cruel and ſometimes a pretty dangerous Operation. The ſame Misfortune, alſo, frequently enſues, if a violent Fever accompanies the Inflammation of a glandular Part, for the ſame Reaſons.

When the Matter impacted is immoveable or thick. Since the Milk contains in it ſo large a Quantity of a thick caſeous Coagulum, which by its Continuance and Stagnation is ſo eaſily ſeparated from the ſerous Part with which it was diluted, Scirrhuſes are, for this Reaſon, more frequently formed in the Breaſts than in any other Parts. When the Fæces of the Blood, deprived of its moſt fluid Parts, and conſtituting what the Antients called the Black Bile, or Melancholy, has, by its pitchy Tenacity, infected the Maſs of Fluids, the ſlighteſt Obſtructions, happening in glandular Parts, eaſily degenerate into Scirrhuſes.

When the Emunctories of the Glands are obſtructed. All that which, by the Fabric of the Glands, is ſecreted from the Blood conveyed to the Arteries, ought to be diſcharged thro' their Emiſſaries for proper Purpoſes. Now, if by any Cauſe the Diſcharge of the ſecreted Liquor is prevented, this Liquor will be accumulated, and diſtend the Follicule in which it is contain'd. But the moſt fluid Part of the ſecreted Humour being either reabſorb'd, or diſſipated, the reſt is by that means render'd thicker, and will remain ſtagnant there. But the Impetus of the circulating Humours may act upon the Veſſels, which conſtitute the Sides of ſuch an infarcted Follicule, but not at all on the Matter contained in its Cavity, as is ſufficiently obvious. Hence this Matter will often remain incapable of a Reſolution by any means but by Stagnation, and a Diſſipation of the moſt liquid Parts. We certainly know, that the fineſt Humours in the human Body are capable of being ſurpriſingly concreted. The Bile ſtagnating in the Gall-bladder, when its Emunctory is obſtructed, is often concreted into ſmall Stones. The moſt limpid Urine, by too long a Stay in the Body, lays a Foundation for the Stone; and 'tis certain from Experience, that ſuch calculous Concretions have been found in the Ventricles of the Brain, and the Cavity of the Abdomen, which Places are only water'd, as it were, with a fine and ſubtile Dew, exhaling from the ſmalleſt Arteries. In a ſound Perſon, when the Noſtrils are perfectly clean, their internal Surface is wet with a ſufficiently fine Lymph; but in the Space of a few Hours, the moſt fluid Part being diſſipated, the remaining Part is concreted. More Inſtances might be produced; but theſe are ſufficient to ſhew, that the fineſt Humours in the Body may lay a Foundation for the moſt terrible Concretions.

The Cauſe, the Part affected, the Largeneſs, the Deepneſs, the quick Increaſe, and Symptoms of the Inflammation, together with the Nature of the Patient, compar'd with the Signs and Effects, give the moſt infallible Prognoſtic.

Having already enumerated the Signs and various Terminations of an Inflammation, we now come to conſider the Prognoſtic which determines what Diſorders are to be dreaded, and what lucky Events expected. But that we may know whether an Inflammation will terminate either in a benign Reſolution, a Suppuration, a Gangrene, or a Sphacelus, we muſt advert to the following Circumſtances.

The Cauſe. Thus, for Inſtance, the Contagion of the Small-pox, in three Days time, ſo changes the Body of the ſoundeſt Perſon, that the whole external Skin, and frequently the internal Surface of the Oeſophagus and Stomach, are full of inflammatory Puſtules. A Reſolution, in this Caſe, is never to be expected, but always a Suppuration, or, in the worſt Species of the Diſorder, a Gangrene, ſucceeds. But by the Contagion of the Meaſles the external Skin is, indeed, inflamed, but a Suppuration never follows, ſince, upon a Deſquamation, or Scaling off of the Epidermis, the Diſorder is terminated. Authors who have treated of the Plague, inform us, that in various Parts of the Body there ſometimes ariſe Inflammations ſo violent as in a few Hours to burn the Part affected to a Coal; which when a Suppuration happens all around it, is ſeparated from the ſound Parts, and falls off. 'Tis therefore obvious, that the Terminations of Inflammations are various, according to the different Cauſes from which they ariſe.

As for the Part affected; 'tis to be carefully conſider'd, whether this is more or leſs neceſſary to Life and Health. Thus, for Inſtance, a pretty large inflammatory Tumor in the Hand is eaſily ſupported: But if, about the Fiſſure of the Glottis, the Membrane covering theſe Parts ſhould be render'd tumid by an Inflammation, the Patient will be ſuffocated by a very ſmall Tumor there. If, in the Hand or Foot, a Phlegmon ſhould degenerate into a Gangrene, in theſe Parts the mortified Portion may be ſeparated from that which is alive: But, if the alike Diſorder ſhould happen in the Brain, 'tis ſufficiently obvious, that there are hardly any Hopes of the Patient's Recovery left. Not only a greater or ſmaller Danger depends on the Diverſity of the Part affected, but, alſo, for the ſame Reaſon, the quite different Termination of the Inflammation. In glandular Parts a Scirrhus is to be dreaded. But in thoſe Parts of the Body where the largeſt Quantity of Fat is, Inflammations ariſing often degenerate into obſtinate Suppurations and Fiſtulas, as about the Anus, for Inſtance, and ſome other Parts.

As for the Largeneſs of the Inflammation; the larger the Part affected with a Phlegmon is, the more Veſſels are obſtructed, the greater Quantity of ſtagnating Fluids remain fix'd in the Veſſels, and as has been already obſerved, the greater is the Velocity of the Circulation through the other pervious and unobſtructed Veſſels. But all theſe Circumſtances are repugnant to the Conditions requiſite to the Reſolution of an Inflammation. Hence, in ſuch a Caſe, a Suppuration or a Gangrene are always to be expected.

As for the Deepneſs of the Inflammation; we have already ſhewn, that almoſt all the Parts of the Body are ſubject to Inflammations, but that they happen no-where more frequently than in the Tunica Pinguedinoſa. Hence Inflammations may be ſeated either in this Coat, or in other Parts. If an Inflammation is ſeated in the Fat, which runs pretty deep in the Interſtices of the Muſcles, the Efficacy of Remedies externally applied can ſcarcely penetrate to it, and a Suppuration, or a Gangrene, happening after ſuch an Inflammation, are not to be cured without the greateſt Difficulty. But, if an Inflammation affects the Tendons, Muſcles, Veſſels, Membranes, Perioſteum, and Bones, the Difficulty of the Cure is, for the ſame Reaſon, ſufficiently obvious. The Diſorders which may happen when the Viſcera are inflamed, are well enough known to thoſe who have frequent Opportunities of treating acute inflammatory Diſtempers.

As for the quick Increaſe of the Inflammation; whilſt the Liquids remain ſtagnant in the obſtructed Veſſels, the Fluids propel'd to theſe Parts by the remaining Principle of Life produce ſome Effects, which are the already enumerated Signs of an Inflammation; but if theſe increaſe very quickly, if the Redneſs, Tumor, Heat, and Pain, are continually augmented, we may eaſily foreſee, that the tender Veſſels will be ſoon ruptured; that a Reſolution is by no means to be expected; but that a Gangrene will ſpeedily enſue: For this Reaſon we reckoned a moderate Motion of the Blood among the Conditions requiſite to the Reſolution of an Inflammation; whereas an accelerated Circulation of the Humours prognoſticates a Suppuration, or a Gangrene.

As for the Nature of the Patient; every Man has a State of Health peculiar to himſelf: And tho' the Qualities of the Solids and Fluids may, in two diſtinct Perſons, ſeem entirely different, yet they often both enjoy perfect Health; tho' the one may be diſpos'd to ſome Sorts of Diſeaſes, and the other to others. If a Countryman, inur'd to hard Labour, is ſeiz'd with a Pleuriſy, he will ſcarcely recover; for the Denſity of his Blood, and the Rigidity of his Veſſels, leave but little Hopes of a benign Reſolution. But, in Perſons of lax and weak Habits of Body, ſuch Diſorders are far more eaſily cured. The morbid Temperament, alſo, of thoſe who labour under Inflammations, will produce different Terminations of an Inflammation. Thus, Perſons of cold and mucous Conſtitutions rarely labour under Inflammations; and thoſe, with which they are afflicted, are generally of the gentleſt Kind. But, if a putrid Scurvy has tainted the Humours, the gentleſt Inflammation, or even a ſlight Wound, degenerates into an obſtinate Ulcer, or a Gangrene.

As for the Symptoms of an Inflammation; theſe we have before conſidered. From all theſe, duly adverted to, we may eaſily foreſee

ſee in what manner an Inflammation will terminate. And thus a due Prognoſtic is made.

'Tis, alſo, obvious, that various Intentions of Cure muſt be purſued, according to the various States of this Diſorder.

From what has been ſaid, we now come to deduce curative Intentions, with reſpect to the moſt proper Method of removing this Diſorder, when known. Nothing is certainly more prejudicial in the Art of Phyſic, than to preſcribe a general Method of Cure for any Diſeaſe, without having a due Regard to its various States and Conditions. Thus, under the common Name of Pleuriſy, are comprehended Diſeaſes widely different, which, tho', at firſt, they might reſemble each other, yet, in their Progreſs, they vary much, and require widely different Methods of Cure; for far different Meaſures are to be taken in the Beginning of a Pleuriſy, from thoſe to be us'd after it is of two or three Days ſtanding, and the manifeſt Signs of a Suppuration appear. A general Cure, therefore, cannot be preſcribed for Inflammations, but the Meaſures muſt vary according to the particular manner of Termination to which the Inflammation tends. 'Tis true, that, in the Cure, the Reſolution of an Inflammation is always to be attempted, provided it ſeems in any Degree poſſible. But, if the Signs of a Gangrene are preſent, the only remaining Relief is, a Separation of the corrupted Part, by means of a Suppuration ariſing in all its Circumference, and the whole Intention of Cure ought to be directed to this End. But a Suppuration is carefully to be guarded againſt, ſo long as there are any Hopes of the Poſſibility of a Reſolution, eſpecially when the Inflammation has ſeiz'd any internal Part of the Body. The four different Manners, therefore, in which Inflammations terminate, are to be conſider'd ſeparately, and the Method of Cure, proper in each, deſcrib'd.

Firſt, then, we ſhall conſider the Method of curing an Inflammation by Reſolution; that is, when, by rendering the concreted Humours fluid, and putting thoſe that are ſtagnant in Motion, the Inflammation is terminated.

If any of the Cauſes, therefore, already enumerated, produce an Inflammation in any Part, ſo that the firſt enumerated Symptoms and Conditions are preſent, the following Intentions of Cure are to be purſued.

1. The farther Injury of the Veſſels is to be prevented.
2. The Injury already done them, is to be removed.
3. Fluidity and Mildneſs, are not only to be reſtored to, but alſo preſerved in, the obſtructing Matter.
4. Or, if this End cannot be obtain'd, it is to be forced back into larger Veſſels.

Since theſe Intentions are of ſingular Uſe in the Cure of Pleuriſies, Peripneumonies, Quinſeys, and other Diſorders of a like Nature, we ſhall conſider them accurately, and apart.

The Condition of the Diſorder, whoſe Cure we are to deſcribe, is exactly determined in the Aphoriſm; for from whatever Cauſe the Inflammation ariſes, or whatever Part of the Body it affects, whether internal or external, provided it is recent, and the Conditions firſt enumerated preſent, a Reſolution may be attempted, and is to be obtain'd, if the following four Intentions can be effectually anſwered.

1. To the Reſolution of an Inflammation, 'tis requiſite the concreted obſtructing Matter ſhould be rendered fluid, and that which is ſtagnant put in Motion, as we have already obſerv'd. But, unleſs the Veſſels are preſerv'd entire, the Fluids diſcharg'd from them, will neceſſarily become ſtagnant. Now, in every Inflammation, the Tumor, in conſequence of the Diſtention of the Veſſels, and the Pain ariſing from the Diſtraction of the Fibres, which are ready to be broken, ſufficiently teſtify, that the Veſſels would ſoon be ruptured, if the ſame Cauſes continued to act. But, when a Solution of Continuity is made in the Veſſels, a Suppuration enſues, or, if the Solution ſhould be ſudden, a Gangrene. 'Tis, therefore, obvious, that in order to the Reſolution of an Inflammation, 'tis neceſſary the farther Injury of the Veſſels ſhould be prevented.

2. So long as the inflam'd Veſſels are as yet entire, the Injury to be done to them conſiſts in too great a Dilatation, their Sides being diſtracted by the vital Fluid impel'd upon the obſtructed Part. If, therefore, the too great Diſtention of the Veſſels is remov'd, this Intention is anſwered.

Both theſe Intentions reſpect the Solids, whereas thoſe which follow, have a relation to the Fluids.

3. The concreted ſtagnant Fluids remain in the obſtructed Veſſels, and as an Inflammation, properly ſo call'd, can only happen in the Arteries, as we have already obſerv'd, the Impetus of the ſucceeding Fluids will always force the obſtructing Matter into narrower Parts of the Veſſels: 'Tis, therefore, requiſite this Matter ſhould be ſo attenuated, as to become capable of paſſing thro' the narroweſt Part of the obſtructed Veſſel. But the Attenuation of the concreted Fluid is not enough, unleſs the mild and benign Diſpoſition of the Humours be at the ſame time preſerv'd; for, when a Putrefaction ariſes, the concreted Blood is indeed reſolv'd, but, at the ſame time, acquires a great Degree of Acrimony. But the acrimonious Subſtance, mix'd with the Blood, and, with a rapid Motion, carry'd thro' the tender Veſſels, already too much weaken'd by the previous Diſtention, muſt certainly ſoon deſtroy them. Hence, in this Caſe, a Gangrene, inſtead of a benign Reſolution, will enſue; for we have already ſhewn, that the Acrimony of the Humours ſoon converts an Inflammation into a Gangrene. 'Tis, therefore, obvious, that the Mildneſs of the Humours ought always to accompany the Reſolution of the concreted Matter.

4. It ſometimes happens, that Molecules ſo large enter the dilated Beginnings of the Veſſels, that they cannot be ſo far attenuated, as to paſs freely thro' their narroweſt Parts. Thus, in violent Inflammations of the Eyes, the red Blood enters the Veſſels of the pellucid Cornea, which are ſtill far ſmaller than thoſe of the Adnata; but theſe are naturally ſo narrow, as to exclude every coloured Fluid. Though, therefore, the red Blood, remaining ſtagnant here, was reſolved into Serum, and that Serum into Lymph, which is ſtill finer, yet it could not paſs thro' the Extremities of theſe highly minute Veſſels. In this Caſe, the only remaining Method to bring about a Reſolution is, to attempt a Retropulſion of the obſtructing Molecules from the narrow Parts in which they are fix'd, to wider Parts of the Veſſels, and thence into larger Veſſels, that thus the Impetus of the Blood being weakened, its Motion, and Attrition on the Veſſels, and adjacent Molecules, may be taken away, and the Inflammation determin'd.

The farther Injury of the Veſſels is prevented,

Firſt, *By removing, or correcting, the known productive Cauſes of the Inflammation.*

In the Cure of Diſeaſes, all the Efforts of Art can do no more than reſtore Health. But the Cauſes of an Inflammation, before enumerated, are of ſuch a Nature as to produce an Inflammation, when apply'd to the ſoundeſt Body: All Attempts, therefore, to promote a Cure, are vain and ineffectual, unleſs theſe Cauſes can be remov'd. Thus, when, by long lying, an Inflammation is produced about the Os Sacrum and Os Coccygis, if the Compreſſion of theſe Parts by the incumbent Body cannot be prevented, the Inflammation muſt neceſſarily degenerate into a Gangrene. That the ſame holds true, with reſpect to the other Cauſes of an Inflammation, is ſufficiently obvious.

Secondly, *By leſſening the Impetus of the arterial Blood, by means of the Veneſection and Purging.*

Two Things concur in an Inflammation, that is, a Stagnation of the arterial Blood in the ſmalleſt Canals, together with the Preſſure and Attrition made by the Motion of the Blood, by the Fever forcibly impel'd upon the obſtructed Part. Now, the Blood remaining ſtagnant in theſe Canals, produces an Obſtruction indeed; but there would by this means be no farther Injury done to the Veſſels of the obſtructed Part, unleſs the Impetus of the arterial Blood acted upon it. The principal Thing, therefore, required, in order to prevent the farther Injury of the inflam'd Veſſels, is ſo to diminiſh this Impetus, that the Veſſels may be neither ruptur'd nor more diſtended by this Cauſe. Tho' the Motion of the arterial Blood cannot be entirely taken away, whilſt Life remains, yet it may be render'd ſo moderate, as to prove no longer prejudicial; and this End is obtain'd

By Veneſection.

We have already obſerv'd, that the remaining Principle of Life, where ſuch a Stagnation is preſent, produces ſome Effects, which are the Signs of an Inflammation. By the Number and Violence of theſe the Malignity of the Inflammation is eſtimated, and its various Events prognoſticated. When, therefore, by whatever Cauſe, Life is weaken'd and render'd leſs powerful, thoſe Effects muſt, of courſe, be diminiſh'd, which depend upon the vital Motion of the Humours acting upon the obſtructed Parts. We may, therefore, by Veneſection at Pleaſure, leſſen the Motion of the Blood thro' the Veſſels till Death, that is, a perfect State of Reſt in the Blood is produced. We are, conſequently, capable of more or leſs repreſſing the Impetus of the Circulation, according to the various Degrees of this Evacuation. *Helmont*, and after him ſome others, have condemn'd this Evacuation of Blood as uſeleſs, and prejudicial in the Cure of inflammatory Diſeaſes; for this Author, as we find in *Capit. Pleura Furens*, fooliſhly imagin'd, that a Pleuriſy, for Inſtance, was produced by an hoſtile Acid ſticking like a Thorn in the intercoſtal Spaces. Hence he, and his equally abſurd Followers, tell us, *That Veneſection is, in this Caſe, vain and uſeleſs; that the pleuritic Thorn is to be drawn out; that a Blood-thirſty* Moloch *preſides over the Profeſſors of the Healing Art; that the Diſeaſe is to be conquer'd by Specific Remedies, but that the Strength is not to be impair'd by Veneſection.*

But from what has been ſaid, 'tis ſufficiently obvious, that this pleuritic Thorn is the ſtagnating Blood fix'd in the arterial Veſſels; that the Fluids, propel'd from the Heart, act upon this Thorn, and by the Diſtraction of the Fibres, produce the intolerable Pain. 'Tis true, a perfect Cure might be produced, if the ſtagnant Blood, there lodg'd, could be forthwith reſolv'd, and reduced to a State of Fluidity. But, ſurely, *Helmont* could never

never produce ſo ſurpriſing an Effect by all his Specifics. He, for this Purpoſe, extoll'd the Blood which flow'd from a Goat immediately after Caſtration, when dry'd, and reduced to a Powder; the Penis of a Stag, and the Flowers of wild Poppies. But to any one who reads, in the Cloſe of this Article, what he ſays with reſpect to his own Diſeaſe, it will be ſufficiently obvious, that theſe boaſted Remedies were of but little Efficacy. Since, therefore, it is not as yet certain, that there are any Remedies, which, when either externally applied, or internally exhibited, have a ſpecific Virtue of ſuddenly reſolving this ſtagnating and obſtructing Blood; no more proper Method can be taken, than to prevent the farther Protruſion of this obſtructing Matter into narrower Parts of the Veſſels, and to guard againſt its greater Compaction and Conſolidation. But both thoſe Intentions may be obtained by leſſening the Impetus of the arterial Blood, which may be both commodiouſly and ſafely done by Veneſection: As alſo by

Purging; for this, after Veneſection, is a moſt efficacious Method of allaying the preternatural Impetus of the Blood. There are Purgatives, which, without increaſing the Motion of the Fluids, produce this Effect, and, at the ſame time, reſolve the Humours. *Sydenham*, after thirty Years Practice, and a careful Obſervation of the various Meaſures Nature took in Diſeaſes, recommends this Method in his *Schedula Monitoria de Novæ Febris Ingreſſu*, publiſhed towards the latter End of his Life. In an inflammatory Fever, accompanied with a Determination of the morbific Matter to the Brain, after Veneſection, this ſucceſsful Practitioner ordered a purgative Draught, prepared of Tamarinds, Rhubarb, Sena-leaves, and Manna. In the Evening, he allayed the Commotions excited by this gentle Purgative, by exhibiting a mild Paregoric. Every other Day, for three times, he preſcribed ſuch a Purgative; and this Method he found ſucceſsful during a Diſeaſe, otherwiſe of a very dangerous Nature. But he carefully inculcates, that ſuch Purgatives prove injurious, unleſs Veneſection is previouſly inſtituted.

But it is ſufficiently obvious, that all theſe Meaſures are not requiſite in every Inflammation, but only in Caſes where the Soundneſs of the Part abſolutely requiſite to Life, or Health, does not admit of other Terminations of the Inflammation; or when the Inflammation is in ſuch a Part of the Body, that, after Suppuration, the Pus cannot be commodiouſly diſcharged; from which Circumſtance the worſt of Diſorders might afterwards be expected.

ANTIPHLOGISTIC PURGATIVES are,

Cream of Tartar, ſix Drams. Cryſtals of Tartar, ſix Drams. Tartar itſelf, ſix Drams. Sal Polychreſton, five Scruples. The Pulps of Tamarinds, three Ounces. Tamarinds, four Ounces. Elder Rob, four Ounces. Rhubarb, a Dram and an half.

Take of the beſt Rhubarb, one Dram; of Sal Polychreſton, a Scruple and an half; of the Syrup of Succory with Rhubarb, one Ounce: Triturate all together, and mix with two Ounces of the diſtilled Water of Elder-flowers, and two Drams of Cinnamon-water, for a Draught.

Take of the Pulps of the beſt Tamarinds, two Ounces; of Cryſtals of Tartar, reduced to a fine Powder, two Drams: Mix all together, and let the Patient take one Dram every half Quarter of an Hour, till he is purged.

Take of the beſt Sena-leaves, without the Stalks, two Drams; of the beſt Agaric, one Dram; of the beſt Tamarinds, two Ounces: Boil for a Quarter of an Hour in a cloſe Veſſel, with the diſtilled Water of Elder-flowers. Then, with every five Ounces of the expreſs'd Decoction, mix of pure Nitre, one Dram; and of the ſolutive Syrup of Roſes with Sena, ſix Drams, for a Draught.

Take of Sena-leaves, three Drams; of Tamarinds, two Ounces; and of Agaric, three Drams: Boil for a Quarter of an Hour with Water, and with each Pint of the Decoction mix of the Syrup of Succory with Rhubarb, one Ounce: Of this let the Patient take an Ounce every half Hour, till he is purged.

Thirdly, *By leſſening the Quantity of the Humours by means of Veneſection and Purgatives.* We have already obſerved, that the moſt frequent Cauſe of an Inflammation is a preternatural Dilatation of the lymphatic and arterial Veſſels; in conſequence of which, they admit Parts of the Blood too groſs for paſſing thro' their Extremities. Now 'tis certain, that a Plethora is one of theſe Cauſes, by which the Beginnings of the Veſſels are dilated. Since, therefore, Veneſection and Purging leſſen the Quantity of the Humours, they muſt, of courſe, prove beneficial by this very means. Beſides, when the Quantity of the Humours is leſſen'd, the Preſſure and mutual Compaction of the Elements of the Blood are render'd leſs. But, from this Preſſure, an inflammatory Denſity of the Blood often draws its Origin; for, if the Blood forc'd from the Heart ruſh'd into the empty Arteries, there would be no Reſiſtance, and, conſequently, no Compreſſion; but, when the Heart expreſſes the Blood into full Arteries, theſe Arteries muſt either be dilated, or the Blood contained in their Cavities compreſs'd. Now the fuller the Arteries are, the more they reſiſt their Dilatation, and, conſequently, a Condenſation of the Blood muſt be produced. An Inflammation is, therefore, juſtly enumerated among the Effects of a Plethora; and, conſequently, a Diminution of the Quantity of the Fluids, circulating thro' the Veſſels, will ſo diſpoſe the Body, as to render it entirely free from an inflammatory State, and rather make it tend to the oppoſite Condition, that is, a Dropſy, which generally ſucceeds large Evacuations of the Humours.

Fourthly, *By deriving the Impetus of the Blood to other Parts by Suction, Friction, Epiſpaſtics, Veſicatories, Fomentations, Baths, Fontanels, Setons, and ſtrong Purging.* Theſe were the Meaſures always employ'd by the ſagacious Antients for this Purpoſe, as appears from their Works. Thus *Hippocrates*, in the ſecond Chapter of his Treatiſe *de Locis in Homine*, when treating of a Quinſey, thus expreſſes himſelf: "Patients labouring under this Diſorder are to "be blooded in the Arm, and purged, that the Matter which "produces the Diſorder may, by this means, be carried off." *Galen*, alſo, in his *Method. Medend. ad Glaucon. Lib.* 1. *Cap.* 16. when treating of the Method of curing the Head-ach, tells us, that "an univerſal Revulſion is to be made by acrid Clyſters, "Ligatures, and frequent Frictions of the inferior Parts; as, "alſo, by Veneſection, if there is a Neceſſity for it. A Revulſion "is, alſo, made by ſprinkling on the Head Things of a repel-"ling Quality." In theſe Authors many more Paſſages occur, which ſufficiently teſtify, that, in ſeveral Diſeaſes, they repoſed the greateſt Confidence in Revulſions. *Helmont*, who, on all Occaſions, diſcovers himſelf an Enemy to the antient Phyſicians, laughs at Revulſions; and, ſince the Appearance of the incomparable *Harvey*, many have deſpiſed this Method as uſeleſs, and repugnant to the known Circulation of the Blood. But the Uſe of Revulſion, in various Diſeaſes, is confirmed both by Reaſon and Experience; for, as ſoon as the Reſiſtance to the Blood propel'd thro' the Veſſels in any Part of the Body is either leſſen'd, or entirely removed, the Blood is forthwith derived to that Part with greater Velocity. When an Artery of a conſiderable Size is cut, the whole Blood is diſcharged from the Part, becauſe its Reſiſtance is deſtroyed. When, after the Excluſion of the Fœtus, the Veſſels and Viſcera are freed from ſo conſiderable a Preſſure, unleſs the pendulous and flaccid Parts are ſupported by proper Bandages, the whole Blood is often derived thither with ſuch a violent Force, that a due Preſſure being wanting in the Veſſels of the Brain and Cerebellum, the Patient dies of a Syncope. The ſame happens in thoſe who labour under that Species of Dropſy called Aſcites, whilſt, after a ſudden Performance of the Paracenteſis, all the Water is eliminated, unleſs the Abdomen is carefully ſwath'd up. 'Tis, therefore, obvious, that, by diminiſhing the Reſiſtance in any Part of the Body, the Blood is more copiouſly, and, with a greater Force, deriv'd to it. But the Blood, propell'd from the Heart thro' the Veſſels, is reſiſted by their Plenitude, and the Firmneſs of their Sides, in conſequence of which they reſiſt their Dilatation. All Things, therefore, which empty the Veſſels of any Part of the Body, or render their Sides more capable of yielding to the diſtending Blood, derive the Humours more copiouſly, and with a greater Force, to that Part. Now, if we conſider, that the Blood forc'd from the Heart is partly diſtributed to the Head, and ſuperior Parts of the Trunk of the Body, and partly to thoſe which are inferior, it will be ſufficiently obvious, that by a Depletion of the inferior Veſſels, or a Diminution of their Reſiſtance, the Blood is more copiouſly, and, with a greater Impetus, derived thither, and diverted from the ſuperior Parts. 'Tis, therefore, poſſible to make a Revulſion of the Force of the arterial Blood, from the inflam'd, to any other Part; eſpecially if the Place, to which the Revulſion is made, receives its Blood from the ſame large arterial Trunks. Thus, in inflammatory Diſorders, Phyſicians foment the exterior Part of the Head, that, by increaſing the Impetus of the Blood thro' the Ramifications of the external Carotid, the Preſſure upon the internal Parts of the Head may be diminiſhed. When the Callus of a fractured Bone became luxuriant, *Celſus* informs us, that "it is of ſome "Advantage to apply Preparations of Muſtard and Figs to the "correſponding Member, till it is ſomewhat corroded, and the "offending Matter, by that means, eliminated." But all Revellents either relax or empty the Veſſels; for by Friction, or Stimulation, a more frequent Contraction of the Veſſels is produced in the Part, towards which the Revulſion ought to be made. Now a Revulſion is principally obtained by the following means:

By Suction. This is moſt advantageouſly done by means of Cupping-glaſſes, by which the Preſſure of the Atmoſphere is removed, or, at leaſt conſiderably diminiſhed on the Part to which they are applied, either when the Air is exhauſted, by means of an Embolus, or by Suction, or highly rarefied by raw Flax kindled in the Cavity of the Cupping-glaſs. As ſoon as in this Part the equable Preſſure of the Air on the Surface of the Body is leſſened, all the Veſſels are proportionably more diſtended; the Part becomes tumid and red; and, if the Cupping-glaſſes remain a conſiderable time applied, a genuine Inflammation, or even a Gangrene, may be produced. *Galen*, in the laſt

Chapter

Chapter of his twelfth Book *de Method. Medend.* obſerves, that Pains are ſurpriſingly mitigated, after making a Revulſion by Cupping-glaſſes. *Hippocrates, in Sect.* 5. *Aph.* 50. in order to repreſs an immoderate Diſcharge of the Menſes, orders the Application of large Cupping-glaſſes to the Breaſts. And *Van Sweiten* informs us, that he has frequently ſeen the moſt obſtinate Inflammations of the Eyes, which would yield to no other Remedies, removed by no other means than the Application of Cupping-glaſſes to the Nape of the Neck. How much Cupping-glaſſes were uſed by the *Egyptians*, in Diſeaſes of this Nature, we may ſee under the Article CUCURBITULÆ.

As for Frictions; the Veins, in conſequence of their being eaſily compreſſed, are emptied by Friction. Hence the Arteries correſponding to theſe Veins more eaſily evacuate their Contents into the empty Veins; the Reſiſtance, therefore, to the Blood, which afterwards is to flow into theſe Arteries, is leſſened: For which Reaſon, it muſt be more copiouſly, and with a greater Force, derived thither, as is obvious from what has been already ſaid. For this Reaſon, any Part of the Body may, by Friction alone, become hot, red, and inflamed; and if the Friction is continued, the Heat and increaſed Motion are communicated to the whole Body. For this Reaſon *Celſus*, in the 14th Chap. of his 2d Book, in acute Diſeaſes condemns long Friction in the following Words: "It is improper, in acute Diſeaſes to uſe "long Friction, as alſo in the Increaſe of Diſeaſes, except with "a View to procure Sleep to phrenitic Patients." And, a little after, he mentions the Uſe of Frictions, in order to make Revulſion, in the following Words: "Frictions alleviate long-pro-"tracted Pains of the Head, though not under the immediate "Paroxyſm; and a paralytic Member is ſtrengthened by Fri-"ction. But, when one Member is afflicted with Pain, its cor-"reſponding Member is far more frequently to be rub'd, eſpe-"cially when we intend to derive the Matter from the ſuperior, "or middle Parts of the Body. For this Purpoſe Friction of "the extreme Parts is uſed."

As for Epiſpaſtics; theſe Medicines are ſo called from their attractive Quality, becauſe they derive the Humours more copiouſly, and with a greater Force, to the Part to which they are applied. Now, tho' all thoſe things, which relax and debilitate the Veſſels in any Part of the Body, may be ſaid to be poſſeſſed of an attractive Quality, becauſe the Humours more eaſily enter the relaxed Veſſels; yet the Epithet attractive is commonly beſtow'd on theſe things, which, by their acrid Stimulus, irritate the Veſſels of the Part to which they are applied, to more frequent and ſtrong Contractions, that is, accelerate the Motion of the vital Humours through the Veſſels: Now theſe Subſtances of an attractive Quality, receive different Names, according to their greater or ſmaller Degree of Acrimony: Such as only excite a gentle Redneſs in the Part to which they are applied, are called *Phœnigmoi*: When they produce a greater Degree of Redneſs, Heat, Itching, and Tumor, they are generally called *Sinapiſms*; becauſe Muſtard-ſeed triturated, and applied to any Part of the Body, produces all theſe Effects: Subſtances ſtill more acrid, and capable of raiſing the Epidermis in ſmall Bladders, are called *Veſicatories*: But if, like Fire, they burn the Parts to which they are applied, they are called *Cauſtics*. All theſe things excite a true Inflammation in the Part to which they are applied; and, if they are highly acrid, may increaſe this Inflammation into a Gangrene. Of how great Efficacy theſe are, in deriving the Impetus of the Blood to other Parts, we are convinced from Inſtances which daily occur in Practice. If the Feet of a Patient, labouring under an acute Phrenitis, are cover'd with a Paſte, mix'd with triturated Muſtard-ſeed, Shavings of Horſe-radiſh, or other Subſtances of a like Nature, the Diſorder is often, in a few Hours, alleviated, by the Pain and Inflammation produced in theſe Parts; and the Patient begins to recover. When Nature endeavours to ſecrete the hurtful Parts from the common Maſs of Humours, and depoſite them in ſome particular Parts of the Body, Phyſicians, by means of Epiſpaſtics, generally, with great Succeſs, derive the peccant Matter to thoſe Parts, where it will, in all Probability, prove leaſt injurious: Thus, when, in the Beginning of the Small-pox, the Feet and Legs are fomented with emollient Decoctions, and Epiſpaſtics are applied to the Soles of the Feet, the Pocks appear very thick on the inferior Parts of the Body; whereas very few are found on the Face, and ſuperior Parts; as *Van Sweiten* informs us, he has often obſerv'd. From what has been ſaid, the Uſe of Subſtances of an attractive Quality is ſufficiently underſtood.

As for Veſicatories; theſe, as we have already obſerv'd, are ſtronger then Epiſpaſtics; and, when applied to a Part of the Body cover'd with Skin, ſeparate the Epidermis, and raiſe it into Bliſters, diſtended with Fluids; from which Circumſtance they receive their Name. Now all things capable of exciting a violent Inflammation are, alſo, Veſicatories; for, whilſt an Inflammation is degenerating into a Gangrene, theſe Bliſters of the Epidermis are the firſt Signs of the beginning Gangrene: Thus, alſo, live Fire raiſes the Epidermis into Bliſters: Hence all highly acrid Remedies, ſuch as Meadow Crow-foot, Water-pepper, or the leſſer acrid Houſleek, if applied in large Quantities, or for a conſiderable time, excite Bliſters. But, for this Purpoſe, Cantharides are moſt generally uſed, which are dry and juiceleſs Inſects, ſometimes capable, as *Van Sweiten* informs us, of being kept for thirty Years, in a Glaſs Veſſel but indifferently cloſed, without loſing their Virtues: Theſe Cantharides, groſly triturated, are mixed with adheſive Plaiſter, or Paſte, which, for eight or ten Hours, is to be applied to the Part to which the Revulſion is to be made, in which time the Bliſters generally appear. But if this Application is continued too long, by irritating the nervous Pulp lying under the Epidermis, it often excites intolerable Pains, and ſometimes an uneaſy Strangury, and a Diſcharge of bloody Urine.

As all theſe things are poſſeſſed of a conſiderable Acrimony, by irritating the Part to which they are applied, they often increaſe the Motion of the Blood through the whole Body. But as this Circumſtance is repugnant to the Intention to be purſued in this Caſe, as we have already ſhewn, Cantharides are, for that Reaſon, to be uſed with the greateſt Caution.

As for Fomentations and Baths; theſe are generally prepared of Water, with an Addition of ſuch things as are poſſeſſed of an emollient and relaxing Quality: But all the Preparations of this Kind act only as they relax the Solids, and leſſen the Reſiſtance made by the Sides of the Veſſels: Hence they are more eaſily dilated, tho' the ſame Cauſes continue to diſtend the Veſſels. The moſt efficacious of all theſe are Vapour-baths; for any Part of the Body, for a Quarter of an Hour, expoſed to the Steam of tepid Water, begins to ſwell. But, when the Revulſion is to be made, to ſuch Parts of the Body as cannot be commodiouſly immerſed in a Bath, Fomentations are, of all others, the beſt Succedaneum; provided they be kept warm.

As for Fontanels; the Skin is cut as deep as the Membrana Adipoſa; or, in thoſe who are afraid of the Knife, the deſired Effect is to be obtain'd by the potential Cautery. When a Wound is thus made, a Globe of Gold, Silver, Ivory, or any other Matter not ſoon ſubject to change, is to be put into it, and ſo ſecured by an adheſive Plaiſter, that it may not fall out: Thus, by the Interpoſition of the foreign Body, the Concretion of the Lips of the Wound is prevented, and a ſlight Contuſion is made, in all the Circumference of the Wound, by the Preſſure of this hard Body: Hence there is produced a continual ſlight Inflammation, and a gentle Irritation in the Part to which the Impetus of the arterial Blood is to be deriv'd. Fontanels are principally advantageous to thoſe Patients whoſe Solids are ſo flexible, that, by the leaſt Exceſs of the Force of the Blood, they may be eaſily dilated, and, by an *Error Loci*, admit the groſſer Parts of the Fluids: Thus, for Inſtance, Fontanels often prove highly advantageous to thoſe who, on the ſlighteſt Accounts, labour under an Ophthalmia. But, when a violent Inflammation ſuddenly ſeizes any Part, it is ſufficiently obvious, that Fontanels are of no Uſe; for the Part affected may be long corrupted by a Gangrene, before the Efficacy of the Fontanel can be reaſonably expected. The ſame holds true with reſpect to

Setons. Theſe are generally made in the Nape of the Neck; for which Purpoſe, the Surgeon raiſing the Skin, and Membrana Adipoſa, with a Forceps, with a large Needle made on purpoſe, paſſes a groſs Thread through the Part, and leaves it in the Wound, through which it is to be daily drawn: Hence there is produced an Irritation, and continual Inflammation, in the Part in which the Seton is. Setons are of the ſame Uſe with Fontanels, but generally produce a greater Pain and Irritation. *Van Sweiten* tells us, that he has ſeen obſtinate Head-achs, which would yield to no other Remedies, cured by the Revulſion made by Setons; and, in practical Authors, many Obſervations occur, which confirm this Truth.

As for ſtrong Purging; how beneficial it is, in inflammatory Diſeaſes, to leſſen the Impetus and Quantity of the Humours by Purging, as, alſo, what Purgatives are moſt proper for this Purpoſe, we have already obſerved. But we muſt, alſo, obſerve, that theſe are, likewiſe, beneficial for making a Revulſion of the Impetus from the inflamed Part; eſpecially if the Diſorder is lodged in the ſuperior Parts of the Body: For, by the meſeraic Veſſels, ſo large a Derivation may be made to the Cavity of the Inteſtines, that ſcarce any Preſſure ſhall remain on the Veſſels of the Brain: Hence it is, that draſtic Purgatives frequently produce Vertigos, and even Deliquiums. In Inflammations of the Eyes, when the whole Adnata is red, in conſequence of the Ingreſs of the groſſer Parts of the Blood into the ſmall Veſſels, by exhibiting a draſtic Purgative, the Eyes and Face become pale, and, the Blood being repelled into larger Veſſels, a Cure is often ſuddenly and ſucceſsfully perform'd. Clyſters, in like manner, frequently injected, produce this Effect; partly by relaxing, and partly by their gentle Stimulus, deriving the Impetus of the Humours to theſe Parts. *Hippocrates*, in his Treatiſe *de Locis in Homine*, when treating of the Method of curing Pains of the Ears, after ordering the Application of Cupping-glaſſes to the oppoſite Part, in order to prevent a Fluxion of the Humours to

the Part affected, uſes theſe Words: "If, *ſays he*, theſe Meaſures are of no Service, a Purge is to be exhibited; but Vomiting is of no Advantage." And a little after, when treating of Inflammations of the Eyes, he ſubjoins theſe Words: "If the Eyes become ſuddenly inflamed, we are not to anoint them with any thing; but the inferior Parts are to be ſtrongly cauterized, or the Humours leſſen'd by ſome draſtic Purgative; taking care, at the ſame time, not to excite a Vomiting." Hence it is obvious, that the antient Phyſicians uſed Purgatives, in order to make a Revulſion from inflamed Parts, and theſe of a very ſtrong and draſtic Quality: For, in the Paſſage now quoted, *Hippocrates* uſes the Word ἀνιγνῶναι, which implies an Extenuation of the Body, and a collapſed State of the Veſſels, in conſequence of a violent Evacuation. But, in Caſes of this Nature, he carefully cautions againſt Vomiting; becauſe, during this time, the Impetus of the Blood to the Head is increaſed, as is ſufficiently obvious, when we only look at a vomiting Perſon; for the Eyes become red, and diſcharge Tears, whilſt the Lips, and whole Face, are diſtended and render'd turgid with Blood.

Fifthly, By a ſomewhat cold and dry Air; the total Extinction, or, at leaſt, great Moderation of the Paſſions; Reſt, either natural or artificial; a thin, liquid, and antiphlogiſtic Diet; Drink of the ſame Kind; together with diluting, and, at the ſame time, refrigerating Medicines.

We now come to conſider theſe things, by which the Motion of the Humours through the Veſſels may be render'd highly moderate, in order to prevent the farther Injury of the inflam'd Veſſels.

As for a ſomewhat cold and dry Air; this is beneficial, in ſo far as it is receiv'd into the Lungs, in Reſpiration: For it is certain from Phyſiology, that the Blood, forced from the Right Ventricle of the Heart, through the narrow Chanels of the Pulmonary Artery, ſoon becomes hot by its Attrition, and, conſequently, ſtands in need of the cooling Influence of the Air: But, if the external Air is too hot, this cooling Quality is not to be expected in it; for *Boerhaave*, in the firſt Volume of his Chymiſtry, has, by various beautiful Experiments, ſhewn, that, in live Animals, an highly acute Fever is excited, which, in a few Hours, proves mortal, when they are long pent up in a too hot Atmoſphere, and depriv'd of the grateful and refreſhing Influence of a cooler Air: It is, therefore, obvious, that a ſomewhat cold Air contributes greatly to the moderate Circulation of the Blood; and, all other Circumſtances being alike, a dry is always preferable to a moiſt Air. And, if a moiſt Air is, at the ſame time, cold, it may do Harm, by cooling too much; for it is obſervable, that, in the Autumn and Winter, Perſons are more affected with a Senſe of Cold, when the Air is moiſt, than when it is dry, though, at the ſame time, the Thermometers ſeem to retain the ſame Degree of Heat: This ſeems to happen, becauſe the Air ſurrounding our Bodies is ſooner render'd warm by their Heat, when it contains no Water, or, at leaſt, a very ſmall Quantity; for, as *Boerhaave* juſtly obſerves, in the firſt Volume of his Chymiſtry, "The more denſe any Bodies are, whether fluid or ſolid, the more Time they require to become equally warm by the ſame Fire."

As for a total Extinction, or, at leaſt, a great Moderation of the Paſſions; it is certain from daily and undeniable Experience, that the Circulation of the Humours may be very much accelerated by violent and exorbitant Paſſions of the Mind: Hence it is obvious, that theſe are carefully to be avoided; and, when, excited, forthwith check'd and allay'd.

As for Reſt, natural or artificial; it is certain, that Reſt is of the moſt happy Influence, in Diſorders attended with too violent a Circulation of the Juices. Now, when the Mind is ruffled by no Paſſions, and when nothing acts forcibly upon the Organs of Senſe, the Patient generally falls into a calm and profound Sleep: For this Reaſon, in acute inflammatory Diſeaſes, the antient Phyſicians order'd the Patients to be lodg'd in dark Rooms, remote from Noiſe. But if, by theſe means, Sleep cannot be procured, after taking the Meaſures before ſpecified, Anodynes may be ſafely uſed.

As for a thin, liquid, and antiphlogiſtic Diet; in order to reſtore what, by the neceſſary Effects of Life and Health, is daily loſt by the Body, Aliments are neceſſary, which, tho' of the beſt Kind, are ſtill of a foreign Quality, and muſt, by the Action of the Veſſels and Viſcera, be ſuited and adapted to the Nature of our Fluids. But, whilſt this Change of the Aliment taken is performing, if its Quantity is either too large, or if it produced, in the ſoundeſt and moſt robuſt Perſons, a ſlight Fever, by which the Matter exciting theſe Commotions is either corrected or expelled: And the ſoundeſt Perſons, almoſt every Day, perceive their Pulſes quicker for ſome Hours after Dinner. The weaker thoſe Powers are, which change the crude Aliments into laudable Blood, the more the Circulation will be accelerated, by the Aliments taken. If a tender Girl ſhould eat ſmoaked Fleſh, Bacon, or any other Aliments of difficult Digeſtion, ſhe will be feveriſh for ſome Hours after Dinner. Phthiſical Patients, alſo, gradually waſted by an hectic Fever, perceive their Diſorder increaſed by a copious Uſe of Milk: But, ſince the Aſſimilation of the Aliments to the Nature of ſound human Fluids principally depends upon the Action of the Solids upon the Fluids, and the large Quantity of the Humours already concocted, with which a little of the crude Chyle is gradually mix'd; as is ſhewn under the Article FIBRA; and ſince, by Veneſection and Purging, the concocted Humours are to be evacuated, and the Impetus of the Circulation leſſen'd, in order to cure an Inflammation by Reſolution it is ſufficiently obvious, that only ſuch Aliments ought to uſed, as are very eaſily digeſted. In Caſes of this Nature, all thoſe Subſtances are, alſo, proper, which, by the gentleſt Action of the Chylopoietic Viſcera, eſpecially of the Lungs and Arteries, eaſily farther elaborated into Blood: Hence Whey, and, eſpecially, the acidulated Serum of Butter-milk; Milk diluted with a double or triple Quantity of Water; Piſans, prepar'd of Barley and Oats; and the recent Juices of Summer-fruits, are ſo beneficial in Caſes of this Nature, eſpecially when uſed often, but in ſmall Quantities; for ſuch a Regimen will never overload the Body, but prove a grateful Cooler to it; a Circumſtance of no ſmall Importance, in acute inflammatory Diſorders: Hence, in intenſe Summer Heats, Perſons who are ſound, and Patients labouring under hot Diſeaſes, ſpontaneouſly deſire thin, liquid, and refrigerating Aliments, and are diſguſted at thoſe of a contrary Quality; whereas, in the Winter Seaſon, and in languid Diſeaſes, proceeding from a cold Cauſe, the oppoſite Regimen is beneficial. Thus *Hippocrates*, in his *Epidemics*, *Lib.* 6. *Text.* 18. tells us, that "Weak Aliments are cooling, and ſuch as are ſtrong heating."

As for thin, liquid, and antiphlogiſtic Drink; the Juices of Lemons, Oranges, Cherries, Currants, or their inſpiſſated Syrups, or Robs, ſold in the Shops, when diluted with a large Quantity of Water, make a very grateful Drink; and, ſince there may be a great Variety of theſe, and ſince every thin and cooling Liquor is proper, the Patient may chooſe which is moſt agreeable to his Palate.

As for Medicines of a diluting, and, at the ſame time, of a refrigerating Quality. The arterial Blood remains ſtagnant in the minute Canals, and, by the Impetus of the Blood, propelled from the Heart, is preſſed, and put in a State of Attrition, as is obvious from the Definition of an Inflammation; and we have already ſhewn, that an intenſe Heat is produced by this Attrition. In order, therefore, to prevent the farther Injury of the inflam'd Veſſels, thoſe Medicines are proper, which, by their diluting Quality, are at once capable of reſolving the concreted and obſtructing Matter, and of removing the preternatural Heat. In theſe Caſes there is, properly ſpeaking, only one Diluter, which is Water; and all other Medicines only prove diluent, in conſequence of the Water they contain: But we have juſt now obſerved, that liquid Aliments, and thin, that is, aqueous Drinks, were proper in this Caſe; for which Reaſon they will concur with the Medicines, in order to promote the Dilution. Refrigerating Medicines are ſuch as either remove or leſſen the Cauſes of a preternatural and intenſe Heat: But we have already ſhewn, that the exceſſive Heat accompanying an Inflammation ariſes from an increaſed Circulation, and the violent Attrition of the Solids upon the Fluids, and of the Fluids on the Solids, in the inflam'd Veſſels, as, alſo, in the adjacent Veſſels, as yet pervious, but render'd narrower by the Tumor of the obſtructed Veſſels lying contiguous to them: Refrigerating Medicines, therefore, are all ſuch as are capable of removing the preternatural Denſity of the Fluids, relaxing the infarcted Veſſels, and diminiſhing the exceſſive Force of the Circulation. All aqueous Subſtances are, therefore, not only diluting, but, at the ſame time, refrigerating; for it is obſervable, that, the colder the Temperament of the Body is, the greater Quantity of Water is found in it; and, on the contrary, that the greater the Heat is, the leſs diluted the Blood appears to be: Hence all the Parts of dropſical Perſons are cold; whereas there is a great Degree of Heat in robuſt Perſons, and thoſe accuſtom'd to Exerciſe. Water is, alſo, beneficial, in as far as it relaxes the Solids of the Body, as is ſhewn under the Article FIBRA. Now, when the Blood is diluted by aqueous Subſtances, and the Veſſels relaxed, the Impetus of the Circulation is always diminiſh'd, as is ſufficiently obvious in thoſe tender Girls, who, by the Abuſe of tepid aqueous Liquors, render themſelves ſubject to ſo many Languors: When, therefore, there are any Hopes, that the Inflammation may be reſolved, the Baſis of all antiphlogiſtic Medicines is Water; to which are added, the moſt emollient farinaceous Subſtances, in order the more to relax the Veſſels; and highly reſolvent Medicines, in order to attenuate the inflammatory concreted Matter, and render it capable of circulating. There may be various Formulas of Medicines of this Kind, ſome Specimens of which we ſhall ſubjoin. But, before we proceed to this, we ſhall juſt obſerve, that Veneſection and Purging prove cooling in inflammatory Diſeaſes.

A Medicine *which is at once of a diluting and a refrigerating Quality.*

Take of the Roots of Sorrel, two Ounces; of the Roots of Graſs, and Vipers-graſs, each two Ounces; of the Leaves of Brooklime, Wood-ſorrel, and Agrimony, each one Handful: Boil in Water for half a Quarter of an Hour; then add, of the Flowers of Borrage, Bugloſs, Roſes, and Violets, each one Pugil. Let them ſtand in Digeſtion for half a Quarter of an Hour; and, when depurated, with every three Pints of the Liquor, mix of pure Nitre, two Drams; and of Elder-rob, three Ounces: Of this Preparation let the Patient drink three Ounces every Hour of the Day.

Or,

Take of the diſtilled Water of Elder-flowers, fifteen Ounces; of Elder-rob, two Ounces; and of pure Nitre, one Dram: Mix all together, and let the Patient drink an Ounce of the Liquor every Hour.

Or,

Take of the bruiſed Seeds of the Burdock, four Drams; of the Seeds of Parſley, ſix Drams; and of the Seeds of Succory, one Ounce: With diſtilled Parſley-water make into an Emulſion; with every twelve Ounces of which, mix of pure Nitre, one Dram; and of the Syrup of the Five aperient Roots, one Ounce: Of which Preparation let the Patient take an Ounce every Hour.

Or,

Take of unwaſhed diaphoretic Antimony, one Dram; of Sal Prunellæ, half a Dram; and of Zedoary-root, one Scruple: Make into a Powder, to be divided into ſix Doſes; one of which is to be taken every three Hours, in ſome proper Priſan.

6. By allaying the Impetus in the Part affected by the external Application of Refrigerants, Repellents, and Aſtringents, variouſly mix'd up with Anodynes and Aperients, as the Nature of the Caſe ſeems to require.

We have already conſider'd thoſe Remedies, which by changing other Parts, or the whole Body, prevented the farther Injury of the Veſſels; but we now come to treat of theſe, which, being externally apply'd to the Part affected, are capable of allaying the preternatural Impetus of the Humours. We have already obſerv'd, that by the Irritation of the Fibres, in the Part affected, the Motion of the Humours is accelerated not only in that, but, alſo, thro' all the reſt of the Body. Every thing, therefore, which, being apply'd to the inflam'd Part, is capable of removing this Irritation, will allay the Impetus of the Humours. But this Irritation was produced, becauſe the Blood, acting upon the obſtructed Veſſels, diſtracted their Sides. Every thing, therefore, capable of reſolving the Obſtruction, and procuring a free Paſſage to the Blood thro' pervious Veſſels, will remove this Irritation. But this End may be obtain'd in two Manners, either by ſo relaxing the obſtructed Veſſels, that they may tranſmit thro' their Extremities the obſtructing Molecules into the Veins; or by ſo conſtricting the Veſſels, by means of Refrigerants, Repellents, and Aſtringents, that the obſtructing Matter may be repel'd from the narrow to wider Parts of the Veſſels. This latter Method was frequently us'd by the Antients in the Cure of Inflammations, when, without any evident previous Cauſe, any Part of the Body was ſuddenly inflam'd, in which Caſe they deduced the Origin of the Diſorder from Fluxion. *Galen*, in his *Method. Medend. ad Glaucon. Lib. 2. Cap. 2.* when treating of this Subject, informs us, that ſome Phyſicians, attach'd to the Sect of the *Methodics*, affirm'd, that Inflammations requir'd relaxing Medicines, becauſe they thought they proceeded from Stricture; for the Phyſicians of this Sect deduced the Cauſes of all Diſeaſes from Stricture and Relaxation; and that, afterwards, many raſhly embraced this Opinion. But, a little after, he ſubjoins, that both Reaſon and Experience teach us, that, after due Evacuations, the inflam'd Part is to be anointed with ſuch Remedies as are capable of repelling the influent Humours, and at the ſame time of evacuating thoſe already contained in the Part affected, and reſtoring the Tone and Strength of the Parts. For theſe Purpoſes, he recommended Houſleek, Pomgranate-peel, and Sumach, which are manifeſtly poſſeſs'd of a refrigerating and aſtringent Quality. And, in the following Chapter of the ſame Book, he tells us, that Inflammations, ariſing from any other Cauſe than a ſudden Fluxion, may be moiſtened and rendered warm.

From what has been juſt now ſaid, as, alſo, from what was advanced concerning the Effects of actual and potential cold Subſtances apply'd to inflam'd Parts, 'tis obvious, that Refrigerants, Repellents, and Aſtringents, are only ſometimes, but not always, beneficial; and that great Caution is neceſſary in their Application, ſince they may prove very injurious, where they are not beneficial. In ſlight Inflammations, they are often highly ſerviceable, if apply'd in the Beginning. Thus *Van Sweiten* tells us, that he has frequently ſeen beginning Inflammations of the Eyes cured by the Application of cold Water alone. But when the Diſeaſe is of longer ſtanding, the inflammatory obſtructing Matter impacted in the Veſſels is not capable of being ſo eaſily repelled. Hence, the Veſſels being, by theſe Applications, conſtricted, and the Fluids coagulated, the Diſorder will be increas'd. In this Caſe, therefore, relaxing and aperient Medicines, which open the Veſſels, and reſolve the obſtructing Matter, are of all others moſt proper. The prudent Phyſician muſt, therefore, chuſe Remedies adapted to the particular State and Condition of the Diſorder.

With theſe, Anodynes, or ſuch Medicines as allay Pain, may, alſo, be mixed. Now thoſe Medicines which allay Pain, act in three Manners; for they either remove the Cauſe, or ſo diſpoſe the Part of the Body to which the dolorific Cauſe is apply'd, as to render it leſs affected by it. Or, laſtly, whilſt the Cauſe ſubſiſts, and without inducing any Change on the Part affected, they remove the Senſe of Pain. All the Things, therefore, now enumerated, are Anodynes, in ſo far as by opening and relaxing the obſtructed Veſſels, or repelling the obſtructing Matter, from narrower to wider Parts of the Veſſels, they either remove the Cauſes of the Pain, or ſo diſpoſe the Part, as to be leſs affected by theſe Cauſes. Beſides, ſuch Things may be us'd as ſooth the Senſe of Pain in the Parts to which they are apply'd, provided, at the ſame time, thoſe Medicines are not neglected, which are capable of removing or correcting the Cauſes of the Pain. Hence, the Leaves of Nightſhade, Henbane, and Hounds-tongue, may be mixed with the Fomentations to be apply'd to inflam'd Parts; for the Effects of violent Pain are a Fever, Heat, Thirſt, and Dryneſs, all which are injurious to inflam'd Parts; and, as moſt of theſe ariſe from the Senſe of Pain, 'tis obvious, that much Advantage is to be expected from ſuch Medicines as allay Pain.

The Injury done to the Veſſels is remov'd by the Uſe of the ſame Things mention'd in the preceding Aphoriſm; for the preternatural Diſtraction being remov'd, the proper Strength of the Fibre will reſtore it to its natural Form, and Nutrition will afford a freſh Supply of Strength.

The Injury done, is the Diſtention of the obſtructed Veſſel, by the Preſſure of the vital Fluids acting upon the Part obſtructed. Now, ſince all the things enumerated in the preceding Aphoriſm either leſſen or divert the Impetus of the Blood, 'tis obvious, that the Injury done muſt be remov'd by the ſame Remedies; for ſo long as there are any Hopes of a Reſolution left, the Coheſion of the Veſſels is not deſtroy'd, tho' they may have been violently diſtracted. Hence, as ſoon as the Obſtruction is reſolv'd, the diſtracted Fibres, by their proper Strength, gradually return to their former Dimenſions; for the whole Diſorder then remaining is a Weakneſs of the Fibres produced by too great a Diſtraction [ſee the Article Fibra], which is cured when the diſtracting Cauſes are removed, and the Parts loſt reſtored by proper Aliments duly changed by the Force of the Viſcera and Veſſels. Now, the firmer and more elaſtic the Veſſels diſtended by the Inflammation are, the ſooner they return to their priſtine Form; and, on the contrary, the more tender the Veſſels are, in which the Inflammation is lodg'd, the longer Time is requiſite, before their due Strength can be reſtored. Perhaps, from this Circumſtance, we may account for ſome Phenomena, which, after inflammatory Diſorders of the Brain, cured by Reſolution, often continue for a long time afterwards. It, alſo, ſometimes happens, that after a Phrenitis, or violent Deliriums in acute Fevers, and the Small-pox, the Patients continue incredibly weak, or labour under a Perturbation of all, or only ſome of the Functions, which depend on the Brain. If, in Caſes of this Nature, the Cure is attempted by Veſicatories, Cathartics, Sudorifics, and other Evacuants of a like Nature, or ſuch Things as throw the Fluids into violent Commotions, the Patient is rendered worſe; but, if the Diſorder is committed to Time and Nature, it gradually diſappears. The incomparable *Sydenham*, who was both induſtrious and ſagacious in traceing and inveſtigating the true Natures of the moſt latent Diſeaſes, declares himſelf of this Opinion, in his *Schedula Monitoria de Novæ Febris Ingreſſu*; for he obſerv'd, that in a continual epidemical Fever, which, ſoon affecting the Head, generally produced a Phrenitis, after general Evacuations by Veneſection and Cathartics, a Coma remained for ſome time; which, however, after a conſiderable Number of Days, diſappeared, provided the Patient daily roſe out of Bed, and was not haraſs'd by draſtic Medicines; for, in Caſes of this kind, the equable Motion of the Humour thro' the Veſſels of the Brain ſeems to remain diſturbed, till the due and natural Strength is reſtored to the Veſſels weakened by the two great Diſtention.

The Fluidity of the obſtructing Matter is procured by attenuating, and diluting it:

1. By reſtoring the elaſtic Oſcillations of the Veſſels; by diminiſhing the diſtending Fluids, by means of Veneſection, and ſtrong Purging; as, alſo, by adding a Stimulus to the Fibres, by means of thin aromatic Liquors drank warm, Fomentations, Frictions, the Application of Cupping-glaſſes, and Scarifications.

The third Circumſtance, requiſite for the Cure of an Inflammation by Reſolution, was, to procure and preſerve a due Degree of Fluidity and Mildneſs to the obſtructing Matter, as we have already obſerved; ſo that we now come to treat of the Method and Remedies by which theſe Ends may be obtained. We ſhall, therefore, firſt, conſider thoſe things by which the Fluidity of the obſtructing Matter is ſo effectually procur'd, that it may, without any Obſtacle, paſs through the narroweſt Extremities of the Veſſels. This Effect ſeems capable of being produced in two Manners; either by Dilution, when, for Inſtance, Water, by the Admixture and Interpoſition of its Parts, ſeparates the united Molecules of the Blood; or by an Attenuation, perform'd by the Attrition of the Veſſels, and Frictions; as, alſo, by ſuch Remedies as, by the Figure and Rigidity of their Parts, are capable of dividing the concreted Molecules. Diluent and attenuating Medicines may, therefore, be ſo mix'd, as, by their joint and concurring Virtues, to produce more conſiderable Effects, than either would do ſeparately.

The human Blood, if left in a State of Reſt, ſpontaneouſly tends to Concretion; and ſo much the more, the ſtronger the Perſon is. A continual Motion and Change of Situation are, therefore, requiſite in the Particles of the Blood, in order to prevent their Concretion; and, by this Motion and Change of Situation, thoſe Parts, which had already begun to be concreted, are again reſolved. When a Perſon falls into a Deliquium, the Blood ſtagnates in the large venous Receptacles about the Heart, and eſpecially a large Quantity of the Blood is collected between the Right Ventricle of the Heart and the Lungs, in the Auricle, and the venous Sinus, where it immediately tends to Concretion. When, by the Sprinkling of cold Water, ſuch a Patient begins to recover, a violent Palpitation of the Heart forthwith ariſes. The Blood, which is now viſcid, and, as it were, beginning to be converted into polypoſe Concretions, ſticks in the narrow Parts of the pulmonary Artery, by the Contraction of which theſe Concretions are forced back: Thus they are carried backwards and forwards, till, by their repeated Attrition on the Sides of the Veſſels, they are reſolv'd. Then all the Patient's Anxiety is remov'd, and a free Paſſage given to the Blood expelled from the Right Ventricle of the Heart, thro' the narroweſt Parts of the pulmonary Artery. The ſame Effect may be expected in an Inflammation, if the elaſtic Oſcillations, with which the Veſſels were before mov'd, are reſtor'd to them; for, if we conſider thoſe Cauſes, by which, in a State of Health, the human Veſſels are mov'd, it is obvious, that, in an inflam'd Veſſel, the oſcillatory Motion, by which it ought to be alternately diſtended and contracted, muſt be wanting; for, when the Heart contracts itſelf, it expels all the Blood contain'd in its Cavities into the full Arteries, which, as they are flexible, are by that means dilated. But, in a Moment after, when the Heart is in its Diaſtole, the Arteries, by their proper Elaſticity, and the Action of their muſcular Fibres, are again contracted; by which means the Blood, contain'd in their Cavities is carried forwards: And, ſince the Valves of the Aorta hinder the Blood from being preſs'd back to the Heart, that Fluid is, by this Force, convey'd from the Arteries to the Veins. Now, if we ſuppoſe any Obſtacle lodged in the Cavity of an Artery, capable of hindering the free Circulation of the Blood, the Blood, impel'd by the Force of the Heart, may dilate ſuch an Artery; but the Artery dilated cannot be next Moment contracted, becauſe the Blood contained in its Cavity cannot paſs through its obſtructed Extremity, and the Impetus of the ſucceeding Fluids will hinder its Regreſs: Such an Artery will, therefore, remain diſtended and full, but without Motion, ſince its Elaſticity and muſcular Force are not capable of ſurmounting the Reſiſtance of the obſtructing Fluid. Now the oſcillatory Motion of ſuch an Artery can only be reſtor'd by diminiſhing the Quantity of the diſtending Fluid; but its obſtructed Extremity prevents the Conveyance of this Fluid into the correſponding Vein. Hence nothing remains to be done, but ſo to diminiſh the Quantity and Force of the Fluids, that the natural and efficacious Contraction of the Artery may be reſtor'd, and, conſequently, the contain'd Blood forced back to the Baſe of the Artery. Then this obſtructing Matter, being no longer acted upon by the ſucceeding Fluid, will, by the Contraction of the Artery, be forced into its wider Parts, unleſs it remains firmly impacted, and totally immoveable in the narrow Parts; but, the Moment after, it is propel'd into the former narrow Chanels. Thus, by being carried backwards and forwards, there will be an Attrition of it on the Sides of the Veſſels, and the contiguous Molecules of the Blood. Hence an Attenuation and Diviſion of the concreted Molecules may be juſtly expected. But that the concreted Molecules may be again ſo diſſolv'd, as to become capable of paſſing through the narroweſt Parts of the Arteries, is, in ſome Caſes, obvious to the Senſes. Thus *Leeuwenhoeck*, in his *Experiment. & Contemplat.* ſupplies us with an Obſervation, which effectually demonſtrates the Efficacy of this alternate Motion of the Veſſels, in diſſolving concreted Blood. In a Bat, reduced to a languiſhing Condition by Cold and Hunger, but afterwards a little recover'd, he, with a Microſcope, view'd the thin Membrane us'd by that Animal as Wings; but he obſerv'd no Motion either in the Arteries or Veins. Six Hours afterwards, however, when the Animal became more vigorous, he ſaw an oblong Particle of concreted Blood filling the whole Artery, protruded, and immediately after repel'd, and in this manner continually carried backwards and forwards, till, being reſolv'd by the Attrition, the whole Maſs became capable of paſſing from the Artery to the Vein. How the Quantity and Impetus of the diſtending Fluid may be diminiſhed by Veneſection and Purging, we have already ſpecified. But how much the Diminution of the diſtending Fluids contributes to reſtore the oſcillatory Motion of the Veſſels, ſuffocated by too great Plenitude, is ſufficiently obvious in plethoric Patients, in whom, if the Diſorder riſes to a great Height, the Pulſe is hardly perceptible; but when, by copious Veneſection, the Quantity of the Blood is diminiſhed, the Pulſe beats ſenſibly, and all the Functions, before almoſt ſuppreſs'd, are reſtor'd.

By the Addition of a Stimulus to the Fibres, by means of thin aromatic Liquors, drank warm. The celebrated *Baglivi*, in his Treatiſe *de Fibra Motrice & Morboſa*, has demonſtrated, that the ſolid Parts of the Body are poſſeſſed of ſuch a ſurpriſing Property, that, when irritated by any Stimulus, they are often capable of exciting wonderful Commotions either by increaſing the natural Motion, which in a State of Health they ought to perform; or by entirely perverting and diſordering it. It is certain from Experience, that in the larger Parts any Stimulus produces this Effect. The Aliments taken, by the Motion of the Stomach and Inteſtines, are gradually carried through all their Gyrations and Meanders, to the Extremity of the Inteſtinum Rectum; and, during the Whole of this Paſſage, being deprived of all their diſſolvable Parts, are, at laſt, eliminated from the Body. But if the Inteſtines are irritated by a purgative Stimulus, the Aliments are, in a ſhort time, diſcharged by Stool; ſince they are propel'd by the accelerated periſtaltic Motion of the Inteſtines. Whilſt acrid Poiſons corrode the internal Surface of the Inteſtines, they often contract all the Parts they touch ſo violently, as entirely to cloſe them up. Hence, in conſequence of the intercepted elaſtic Air, enormous Tumors of the Abdomen are ſometimes produced. And this Irritability is ſo eſſential to ſome Parts of the Body, that it remains after Death, and when theſe Parts are ſeparated from the reſt. Thus we are inform'd by Lord *Bacon*, that the Heart of an embowel'd Man, when thrown on the Fire, jump'd pretty high, and continued to do ſo for ſeven or eight Minutes. *Peyer*, upon laying open the Breaſt and Abdomen of a Cat, who died after Abortion, and had been ſtiff for a conſiderable time, and inflating the Receptacle of the Chyle, was ſurpriſed to find, that as ſoon as the Air was conveyed to the Heart, firſt the Auricles, and then the whole Heart, vibrated for ſeveral Hours. By this caſual Diſcovery being induced to make the ſame Experiment on human Carcaſes, it was attended with the like Succeſs, though in ſome the Motion of the Heart was excited with more, and in others with leſs Difficulty: And ſometimes, alſo, beſides the Air blown in, which muſt be warm, he found a Neceſſity for an external Fomentation. But *Peyer*, in his *Parerg. Anatom.* informs us, that the Hearts of Perſons hanged are not only eaſily ſuſceptible of Motion, but, alſo, retain it for a long time. From all theſe Circumſtances it appears, that the Fibres of the Viſcera and Veſſels may, by the Application even of a gentle Stimulus, be irritated to greater Motions. When the ſoundeſt Perſon uſes too large a Quantity of Salt, Aromatics, or Wine, the Heart and Veſſels will, by theſe, be ſtimulated into a briſker Motion, and a Fever produced. When, therefore, the obſtructed Veſſels are long and violently diſtended by the Impetus of the ſucceeding Fluids, the Fibres, being often too much diſtracted, loſe their Force, and do not re-act with ſufficient Strength upon the contain'd Fluids. After, therefore, by Veneſection and Purgatives, the Quantity of the diſtending Fluids is leſſened, and the Impetus of the arterial Blood diminiſhed, it will be expedient to exhibit ſuch Medicines as, mixing with the Blood, and being conveyed through the arterial Veſſels, may, by their gentle Stimulus, irritate the Fibres of the Veſſels to a ſtronger Contraction, and, by that means, ſeparate and divide the obſtructing Molecules, ſo that they may, without any Difficulty, paſs through the narroweſt Parts of the Veſſels; and, in this Caſe, the Inflammation will be cured by Reſolution. This End is obtained by mild Aromatics infuſed in large Quantities of Water, to be drank by the Patient; or Infuſions, or weak Decoctions, of Sanders, Saſſafras, the Five aperient Roots, and other Subſtances of a like Nature, which can never prove injurious in Caſes of this Kind.

A thin AROMATIC LIQUOR, *to be drank warm.*

Take of white, yellow, and red Sanders, each one Ounce; of the Roots of the Carline-thiſtle, one Ounce; of Parſley, and Fennel-roots, each three Ounces: Boil for half an Hour, in Water; then add of the Shavings of Saſſafras, two Ounces; and of the Leaves of Berony, Rue, Scabious, and Colts-foot, each an Handful: Let them ſtand in a very hot Digeſtion, for half an Hour, in a cloſe Veſſel; and of the depurated Liquor let the Patient have five Pints, of which let him take two Ounces every Hour, warm.

But, whilſt large Quantities of ſuch Medicines are taken, in order to determine their Efficacy to the Part affected, Fomentations, Frictions, Cuppings, and Scarifications, are to be uſed. Frictions are, in this Caſe, highly beneficial, becauſe by the alternate Preſſure and Relaxation they, in a great meaſure, reſemble, and ſupply the Defect of, the Action of the Veſſels upon the Fluids. But it is ſufficiently obvious, that gentle Frictions are only requiſite in this Caſe, and that they ought never to be uſed in the inflamed Part, till the Tenſion and Pain are remov'd by Evacuants, and the Impetus of the Blood either entirely removed, or much diminiſhed, by ſuch Remedies as leſſen its Quantity.

2. By drinking other thin and aqueous Liquors warm, and diluting the impacted Matter.

When, by means of Evacuants, a great Part of the Fluids is eliminated, and the oſcillatory Motion of the Veſſels reſtor'd, nothing is more conducive to the Cure of an Inflammation by Reſolution, than to fill the Veſſels with a Fluid capable of paſſing through the ſmalleſt of them. Now Water is poſſeſs'd of ſuch a Quality; and the moſt ſubtle Part of the human Fluids, which comes under the Cognizance of the Senſes, almoſt, reſembles Water in all its Properties. Hence it follows, that Water is capable of paſſing through the moſt minute Veſſels of the Body. This Fluid, when drank warm, is the moſt efficacious Remedy in all inflammatory Diſorders; for, by the Laws of the Circulation, being convey'd to theſe Parts of the Body, where the obſtructing inflammatory Matter is compacted, it will act upon it, and, by the Concurrence of the Action of the Veſſels, attenuate it; and thus, gradually interpoſing itſelf betwixt the Molecules of the concreted Matter, it will ſeparate and dilute them. But we have already obſerved of how great Efficacy Water is in removing Obſtructions, by diluting and attenuating. Beſides, we muſt obſerve, that Water ſerves as an excellent Vehicle for all the other Remedies calculated for attenuating and reſolving inflammatory Concretions. All thin Liquors, therefore, in which Water is moſt predominant, are highly beneficial in theſe Caſes, ſuch as Whey, Milk and Water, ſmall Ale, Decoctions of Barley and Oats, together with Infuſions of Coffee and Tea.

3. By uſing Attenuants, Reſolvents, and things oppoſite to the Nature of the obſtructing Matter, both internally and externally, either in the Form of Decoctions, Baths, Fomentations, Steams, Cataplaſms, Plaiſters, or Ointments.

Tho' Water is capable of diſſolving a great many Concretions, ſuch as thoſe of the ſaline, ſaponaceous, mucous, and gelatinous Kinds; yet there are many which cannot be diſſolved by Water alone. For this Reaſon, together with the aqueous Subſtances, ſuch things are to be taken as are poſſeſſed of a reſolvent Quality: Of this Kind thoſe are to be choſen, which are moſt oppoſite to the Nature of the obſtructing Matter. But, in this Caſe, the obſtructing Matter is red Blood, or a thinner Fluid, remaining ſtagnant in its proper Veſſels, or, by an Error Loci, forced into Veſſels by Nature not deſtined for it. There are preſent, at the ſame time, an increaſed Motion and Heat, which give the Humours of the human Body a great Tendency to Putrefaction: Hence the Medicines intended to attenuate inflammatory Concretions ought, at the ſame time, greatly to reſiſt Putrefaction. But there are known Medicines, which are, at once, highly reſolvent and antiſeptic. Honey, by the antient Phyſicians ſo much uſed in inflammatory Diſorders, is remarkably poſſeſſed of theſe Qualities; for, by the immoderate or long-protracted Uſe of Honey, the Blood may be ſo reſolved, as to be diſcharged by Stool, like Water; whilſt, at the ſame time, all the Parts of Vegetables are excellently preſerved from Corruption in Honey. *Herodotus*, in *Lib.* 1. informs us, that ſome of the *Babylonians* were buried in Honey: Sugar, at preſent ſo much uſed, is poſſeſſed of the ſame Quality. The recent Juices of unripe Fruits, and the highly reſolvent Decoctions of Succory, Dandelion, Vipers-graſs, and Goats-beard, are of ſingular Efficacy, in Caſes of this Nature. Among the ſaline Attenuants, Nitre is preferable to the reſt; becauſe theſe are either alcaline, and, by that means, more diſpoſe our Humours to Putrefaction; or, by their Stimulus not to be ſo eaſily ſurmounted by the Force of the Veſſels, and Viſcera, too much increaſe the Impetus of the arterial Blood. Of theſe, various and ſufficiently grateful Remedies may be prepared for internal Uſe: But it will, at the ſame time, be beneficial to apply externally, to the inflam'd Part, Things of the ſame Nature, either in the Form of Baths, Fomentations, Steams, or Cataplaſms: But theſe external Medicines ſeem not only to act ſo far as the Water, impregnated with attenuating Medicines, inſinuating itſelf into the bibulous Veins of the external Skin, and being mix'd with the Blood, is, by the Laws of Circulation, convey'd through all the Parts of the Body; or ſo far as by Remedies of a deriving, attractive, or propellent Quality, it is more determin'd to the inflam'd Part; but, alſo, as theſe very Remedies, diluted with Water, penetrate directly the Arteries themſelves, and may, by this means, be convey'd with their entire Virtues to the obſtructed Parts. For that Portion of the Artery, which lies behind the obſtructed Part, is empty; there is now no Impetus of the Blood impelled from the Heart, and all the Ramifications ariſing from ſuch an Artery, beyond the obſtructed Part, will, in like manner, be empty: Hence the Fluids applied will enter thoſe Ramifications, with a Force equal to that with which highly minute Tubes attract contiguous Fluids: Whilſt, therefore, the internal and external Medicines thus conſpire, the ſtagnant Molecules, lodged in the obſtructing Veſſels, are, on both Hands, acted on by Attenuants; and if, at the ſame time, the oſcillatory Motions of the Veſſels are reſtor'd, it is ſufficiently obvious, that theſe Molecules are, as it were, triturated with thoſe Remedies, and may, by this means, be reſolved, if there are any Hopes of a benign Reſolution left. But the Plaiſters or Ointments, which, in order to obtain this End, are applied to the inflamed Part, ought not to be too tenacious, or acrimonious; becauſe they would then rather increaſe the Diſorder, as we have already obſerv'd: Hence ſuch Preparations are only uſed, as ſlightly adhere to the Skin, repel and confine the exhaling fine Dew, that thus the Part affected may be, as it were, in a Bath of its own Steam, and that the Virtues of the Medicines applied may more eaſily inſinuate themſelves into the relaxed bibulous Veins.

The Lenity of the Humours is procured by drinking aqueous Liquors; by a mild Diet; by Medicines gently diluting and obtunding; or ſuch as are in a ſingular and ſpecific manner oppoſite to the prevailing Acrimony.

We have already obſerved, that a mild Diſpoſition of the Humours is requiſite to the Reſolution of an Inflammation; for which Reaſon it is not ſufficient to procure a due Fluidity to the obſtructing Matter, unleſs, at the ſame time, its Lenity is preſerv'd, or its Acrimony, if any, corrected. Water, and all aqueous Subſtances, are principally ſubſervient to this Intention; for nothing is more mild than pure Water, by means of which, the moſt acrid Subſtances may be ſo diluted, as to prove no longer hurtful. The moſt concentrated Oil of Vitriol, which, like Fire, in a Moment deſtroys the Parts to which it is applied, may, by the Affuſion of a large Quantity of Water, be ſo weaken'd, that it may be ſafely uſed inwardly: Hence, as ſoon as any acrid Subſtances are mix'd with the Blood, Thirſt forthwith forces the Patient to uſe large Quantities, either of Water, or ſome other thin Liquor, till the peccant Matter is expelled, either by Urine, or Sweat. The ſoundeſt and moſt healthy Perſons experience this, if at Dinner they eat too large a Quantity of ſalt Fleſh, or any other thing of a like Nature. Beſides, thin aqueous Liquors anſwer all the Intentions of Cure, ſpecified above: A Diet, conſiſting of the ſofteſt frumentaceous Grains, ſuch as Barley, Oats, Buck-wheat, and Rice, as, alſo, of Milk, and the ſofteſt Pot-herbs, is here highly beneficial. *Hippocrates*, as appears from his Treatiſe *de Victu in Morbis acutis*, ſupported thoſe labouring under acute Diſeaſes, almoſt entirely with Barley-ptiſan alone. In Caſes of this Nature, the beſt Medicines are thoſe prepar'd of emollient and gently viſcid Subſtances; ſuch as the Decoctions of Marſhmallows, Mallows, Mullein, and other Subſtances of the like Qualities. Emulſions of farinaceous and ſomewhat oleous Subſtances, as, alſo, the ſofteſt expreſſed Oils, are, likewiſe, of ſingular Service in Diſorders of this Kind, becauſe they ſo obtund and ſheath up every Degree of Acrimony, as to render it inactive and languid. But becauſe theſe Oils very ſoon become rancid, eſpecially in a conſiderable Heat, Emulſions are generally preferable to them, which contain the obtunding Virtues of the Oils, and, at the ſame time, are not ſo ſubject to degenerate into a rancid Acrimony. But if, before or after the Inflammation, an acrimonious Cacochymy of the Humours is obſerved, in this Caſe thoſe things are proper, which are of a ſpecific Virtue againſt the known Acrimony: Thus an acid Acrimony is to be treated with Abſorbents, or Alcalines; whereas Acids are moſt proper for correcting a putrid Acrimony.

The obſtructing Matter is forced from narrow to wider Parts of the Veſſels;

1. By a large Evacuation of the arterial and venous Fluids, by means of Veneſection.
2. By a Relaxation of the Fibres.
3. By artificial Frictions.

We have already obſerved, when enumerating the general Intentions of Cure to be purſued in curing an Inflammation by Reſolution; that, if the obſtructing Matter cannot be render'd ſo fluid as to paſs thro' the narrow Parts of the Arteries, the only Method remaining is to repel it from theſe narrow Parts to larger Veſſels, where, being carried off by the Circulation of the Blood, it is ſo divided as afterwards to become capable of paſſing through thoſe Veſſels, in which it naturally ought to flow. This Method may be uſed in all Inflammations, but principally in thoſe ariſing from an *Error Loci*; when, for Inſtance, groſs Molecules of the Humours, having enter'd the dilated Orifices of the moſt minute Veſſels, cannot paſs through their Extremities;

for if, in such a Case, a red Globule, for Instance, which has enter'd an Artery destin'd for the Serum, can be repel'd, it will again return into the Arteries destin'd for the red Blood, thro' the narrowest Parts of which it is naturally capable of passing; in consequence of which the Inflammation will be resolv'd. But that this Retropulsion may be brought about, the Impetus of the Fluids on the obstructed Part must be removed, or at least very much diminish'd; the Fibres of the obstructed Vessel must be so relax'd as to permit the Regress of the impacted Molecule; and, lastly, this Molecule must be put in Motion, that it may return to larger Parts of the Vessel.

Whilst an Artery, distended by the Force of the Heart, contracts itself, it will, of course, force back its contain'd Liquor towards a wider Part, unless the Impetus of the succeeding Fluid prevents this Effect. When, therefore, the Quantity of this thin Fluid is lessen'd, and its Impetus diminish'd, the Fluid contain'd in the Arteries will move, as it were, from the Apex to the Base of these conical Vessels. Thus, with respect to the Determination of the Motion of the Fluids, the Arteries will, for a time, become Veins. Now Venesection answers both these Intentions; for it lessens the Quantity of the Fluids contain'd in the Vessels, and impairs the Strength of the Heart, by which they are impel'd; for by Venesection we may, at Pleasure, weaken the Strength of a Man, even to Death.

But that these Intentions may be successfully answered, the Evacuation of Blood must be both large and sudden; for, if it was small, the Quantity of Blood would not be sufficiently diminish'd; and, unless it is sudden, the Force of the Heart impelling the Blood is not so much weaken'd: For the strongest Man can hardly bear the free Discharge of two Pounds of Blood, in a full Stream, from a large Wound, without falling into a Deliquium; whereas he can bear the Loss of three times that Quantity, when the Blood is discharg'd, by Drops, from his Nose, or when, after the Drawing of a Tooth, any small Artery discharges Blood, Night and Day, as has often been observ'd to happen. But in neither of these Cases does the Patient fall into a Deliquium.

This is sufficiently confirm'd by what happens in acute inflammatory Disorders: Thus, whilst a Patient, labouring under an acute Pleurisy, cannot draw in the Air by reason of his intense Pain, and is, for that Reason, ready to be suffocated; if a large Orifice is made in one of the Veins of his Arm, the Pain often begins to be diminish'd, and sometimes totally ceases, whilst the Blood is flowing from the Vein, since, by this retrograde Motion of the Humours to larger Vessels, the obstructed Canals are set, as it were, at Liberty. When inflam'd Eyes are become entirely red, by the Blood impel'd into improper Vessels, by liberal Venesection even to a Deliquium, the Redness immediately disappears, since the Blood is repel'd into larger Vessels; for in this retrograde Motion 'tis not necessary the obstructing Molecules should pass through a large Space, before they enter larger Trunks; since, from anatomical Injections, we know, that in very small Interstices there are Anastomoses and Divarications of the Trunks into frequent and numerous Ramifications.

2. The obstructing Molecule remains strongly impacted in the narrow Part of the Vessel. Hence, if the Fibres of this Vessel are rigid, they will so compress this Molecule, as to render it immoveable. In such a Case, therefore, it will be expedient to relax the Fibres, after having previously, by Venesection, diminish'd the Impetus of the impel'd Blood; for otherwise the obstructing Molecules would be forced into narrower Parts, because the relax'd Fibres would more easily suffer themselves to be distended, a Circumstance repugnant to this Intention, which requires the Retropulsion, and not the Propulsion, of the obstructing Matter through the relax'd Vessels. But in what manner, and by what Medicines, the Fibres of the human Body may be relax'd, is shewn under the Article FIBRA.

3. When the Impetus of the Fluids, acting upon the obstructing Molecule, is removed, or, at least, much diminished, then the sole Contraction of the Vessel itself repels the obstructing Mass to a wider Part. Every thing, therefore, which increases the Contractility of the Vessels, or conspires to promote the same End, will assist this retrograde Motion. But Friction, by externally compressing the Sides of the Vessels, produces the same Effect which their own Contractility would have done, the Efficacy of which it, also, augments. Hence its Use is sufficiently obvious, especially if the Friction is made from the Extremities of the Vessels to their Bases. How beneficial this is, we learn from Experience. A Pleurisy is much more happily terminated by Venesection, if, at the very time the Blood is discharged, the Side affected is gently rub'd; or if the Patients, by a deep and often repeated Inspiration, or in consequence of a Cough, move the Part affected. For this Reason, by holding warm Wine or Vinegar to the Patient's Nose, we frequently force him to cough contrary to his Inclination, whilst he is afraid to do so for fear of the intense Pain he before felt. When, in Hunting, Animals are hotly pursued, upon taking off their Skin, the Tunica Adiposa, and even the muscular Flesh, are observed to be blackish, in consequence of the Blood being forc'd into improper Vessels. For this Reason, also, Grooms, after Horses have been hard run, rub them carefully over, in order to remove this Accident; for they have learn'd from Experience, that, without this Method, such Animals languish'd, and became good for nothing.

The Antients put Persons, fatigued by long Journeys, into a Bath, and rubbed them; and this Method is used in *Asia* to this very Day.

Hence in all inflammatory Diseases, whether internal or external, we understand what that Resolution is, which is always to be desired, if possible; what a perfect Cure of an Inflammation is; as, also, what a Cure without a Crisis is.

In whatever Part of the Body an Inflammation is, its Definition remains always the same, that is, an Obstruction of the arterial Canals, with a violent Impetus of the impel'd Fluids acting upon the Part obstructed. There will, therefore, be a Resolution of the Inflammation, when the Molecule obstructing the Artery is so attenuated and divided, or the obstructed Vessel so relax'd, that there may be a free Circulation of the Humours through the Vessel before impervious, or, also, when such a Molecule is repel'd to wider Vessels. 'Tis sufficiently obvious, that this Method of curing Inflammations is of all others the best and most safe; because, without any farther Injury of the Parts, it restores a perfect Soundness of the Functions. But it is not always in the Power of the Physician to cure an Inflammation by Resolution; the Measures, however, requisite for this End, we have already specify'd.

As for a perfect Cure; Resolution alone can properly be call'd a perfect Cure of an Inflammation, because it removes it without inducing any other Disorder; but the other Terminations of an Inflammation in a Suppuration, or a Scirrhus, are not perfect Cures, though they remove the Inflammation; for in these Cases the Inflammation terminates in another Disease, which again requires a fresh Cure before perfect Health is restor'd. But when an Inflammation terminates in a Gangrene, or a Sphacelus, it does not tend to the Cure, but to the Death of the Part.

As for a Cure without a Crisis; tho' the Word Crisis has had different Ideas affix'd to it, both by the Antients and Moderns, yet 'tis sufficient here to observe, that an Inflammation is then said to be cured, when the Matter of the Disease, that is, the stagnant Fluid, lodg'd in the arterial Vessels, by the remaining Principle of Life, and the Medicines exhibited, is so disposed as again to flow freely thro' the Vessels, entirely agreeably to the Laws of Health. When, therefore, this Matter of the Disease is so changed as to become moveable, and remains no longer impacted in the narrow Parts of the Vessels, and is, at the same time, destitute of those Conditions, which are requisite for its Circulation with the sound Humours through the Vessels, without any Hindrance of the Functions, 'tis then either eliminated from the Body, or deposited in some particular Parts of it. In this Case the Inflammation is said to be cured by a Crisis, and the Evacuation of the Matter, and its Deposition to other Parts, are said to be critical. When, for Instance, by an *Error Loci*, a red Globule has enter'd a Vessel destin'd for the Serum, and produc'd an Inflammation; if the red Globule is either forced back from this Vessel into the Artery destin'd for the red Blood, or divided into six serous Globules, of which Number, according to *Leewenhoeck*, it seems to be composed, this Inflammation will be cured without a Crisis; because the Matter of the Disease was so disposed as without any Impediment to be capable of passing through those Vessels, in which, during a State of Health, it ought to flow. But if the Extremity of the obstructed Vessel, together with the obstructing Molecule, are, by the Impetus of the succeeding mild and gentle Fluids, gradually separated; the Obstruction will be removed, but the Continuity of the Vessel being interrupted, the Humours will be discharged. The separated Extremity of the obstructed Vessel, together with its Molecule, can no longer obey the Laws requisite to a State of Heath, for which Reason it must be removed, since it is to be considered as an heterogeneous Body. Hence these highly tender Solids, when mix'd with the discharg'd Fluids, by the Heat of the Body, and the smallest Degree of beginning Putrefaction, are chang'd into Pus, which must be evacuated, since it can never acquire the same Nature with the human Fluids. An Inflammation, however, is cured in this manner, but not without a Crisis; because the Matter of the Disease is, by the remaining Principle of Life, separated and eliminated from the Body. Thus it evidently appears how the Resolution of an Inflammation differs from a critical Cure of it. This Doctrine seems to be beautifully confirm'd by a general Axiom of *Galen*'s, with respect to the various Terminations of Diseases, delivered in the fourth Chapter of his third Book *de Crisibus*, in the following Words: " τὰ μὲν γὰρ " μεγάλα κείνεται πάνλως, ὅσα δὲ σμικρὰ λύεται μόνον. Violent " Diseases are all critically determined, whereas those which are " slight are only resolv'd." Thus a violent Inflammation terminates in a Suppuration, or a Gangrene, whereas one that is gentle, may be resolv'd.

INFLATIO. Inflation. An Emphyſema is ſometimes thus call'd.

INFRA-SCAPULARIS *Muſculus*. A Name for the SUBSCAPULARIS; which ſee.

INFRA-SPINATUS MUSCULUS.

This is a triangular, fleſhy, and pretty broad Muſcle, in ſome meaſure penniform, filling the whole Infra-ſpinal Cavity or Foſſa of the Scapula.

It is fixed in the poſterior Half of the Infra-ſpinal Cavity, or Foſſa, and to the correſponding Part of the Baſis of the Scapula.

From thence ariſe a great Number of ſhort fleſhy Fibres, which run more or leſs oblique, and end in a middle tendinous Plane, which terminates a little below the broadeſt Part of the Spine of the Scapula, under the Root of the Acromium.

Then the fleſhy Fibres, leaving the Bone, unite in one fleſhy Maſs, which, paſſing under the Acromium, over the Articulation of the Head of the Os Humeri, and adhering to the capſular Ligament, terminates there in a flat broad Tendon, which, adhering, alſo, to the Capſula, is afterwards inſerted in the greater middle Surface of the great Tuberoſity of the Head of the Os Humeri. At the Place where the Fibres leave the Infra-ſpinal Foſſa, under the Acromium, there is a great Quantity of fat or adipoſe Cells, between the Bone and the looſe Portion of the fleſhy Maſs.

This Muſcle appears double a little below the Spine, and toward the Baſis of the Scapula, becauſe of the middle tendinous Plane. It, alſo, ſeems confounded with the Teres Minor, to which it is very cloſely join'd. Its Tendon is united, on one Side, with that of the Teres Major; and on the other, with that of the Supra-ſpinatus; and it is cover'd by the poſterior Portion of the Deltoides.

The Infra-ſpinatus, being inſerted, by its Tendon, in the middle Surface of the great Tuberoſity of the Os Humeri, muſt perform different Motions, according to the different Situations of that Bone. If it acts, while the Arm hangs down parallel to the Trunk of the Body, it may move the Os Humeri round its Axis from before outward; and, conſequently, if the fore Arm be, at the ſame time, bent, it will turn the Hand from the Body.

If, while the Arm is kept rais'd by the Deltoides, the poſterior Portion of that Muſcle draws the Arm backward; the Infra-ſpinatus has the ſame Uſe with reſpect to the orbicular Ligament, as the Supra-ſpinatus: And, as theſe two Muſcles adhere cloſely by the Edges of their Tendons, they may, in ſome meaſure, co-operate in their Action on that Ligament.

When the Arm, raiſed in the manner already ſaid, is ſtrongly pull'd forward by the Pectoralis Major, a conſiderable Force is neceſſary to prevent the Head of the Os Humeri from being thrown backward out of the Glenoide Cavity. The Structure of the Infra-ſpinatus, and the Number of its Fibres, which is much greater than in the Supra-ſpinatus, fit it for anſwering this Purpoſe; in which it is, alſo, aſſiſted by the flat, broad, thin Ligament, as mentioned under the Article SCAPULA.

This Muſcle may, likewiſe, aſſiſt the Teres Major in great Efforts. *Winſlow's Anatomy*.

INFRIGIDANS *Ceratum Galeni*. The ſame as the CERATUM ROSATUM.

INFUNDIBULUM is a kind of ſmall Conduit, which pierces the Dura Mater upon the Baſis of the Skull, and ſinks into the Subſtance of the Glandula Pituitaria. See CEREBRUM. The Infundibulum of the Kidneys is the Pelvis.

INFUSIO. Infuſion either implies the Action of infuſing any Ingredient, or Ingredients, in a proper Fluid; or the Medicine prepared by this Action. The Method of making Infuſions is ſpecified under the Article DECOCTIO.

INFUSUM. An Infuſion. A Medicine prepared by Infuſion. Sometimes it imports a Clyſter or Injection.

INGA. *Ray* takes notice of four different Trees, which are call'd by this Name: The firſt is the

Arbor ſiliquoſa Braſilienſ. foliis pinnatis, coſta media membranulis utrinque extantibus alata. Ingæ Species, Belgis vulgo Lotus. Marcgr.

The ſecond is the

Arbor ſiliquoſa Braſiliana, ſiliqua biſpida ferruginea, Ceratoniæ facie. Brem. *Inga Opea Piiba Braſilianorum.* Marcgr.

The third is the

Inga alia Species. Marcgr. *Siliquoſa Braſilienſis, Inga dicta, ſiliquis longiſſimis contortis.*

The fourth is the

Arbor ſiliquoſa Braſilienſis, foliis pinnatis, coſta media ad ſingula Pinnarum paria appendicibus Aurentiarum æmulis elatis. Inga Braſilienſibus. Marcgr.

I find no medicinal Virtues aſcribed to theſe.

INGERENDA, or INGESTA. All Sorts of Aliment, whether ſolid or fluid; that is, whatever is taken into the Body for its Nouriſhment.

INGRAVIDATIO. The ſame as IMPRÆGNATIO.

INGREDIENTIA. Ingredients in a Compoſition.

INGRESSIO, or INGRESSUS. In Medicine it imports either the Ingreſs of a Phyſician into the Patient's Chamber; or the entering of one Part of the Inteſtine within another, in the Iliac Paſſion.

INGUEN. The Groin.

INGUINALIS FASCIA, or SPICA. A Sort of Bandage. See FASCIA.

INGUINALIS HERNIA. See BUBONOCELE, and HERNIA.

INGUINALIS HERBA. See ASTER ATTICUS.

INHAME. See CARA.

INHUMATIO, in Chymiſtry, is a Method of digeſting, by burying the Veſſel, containing the Ingredients to be digeſted, in Horſe-dung, or Earth.

INJACULATIO. A Term us'd by *Helmont*, to expreſs a Diſtemper which conſiſts in a violent ſpaſmodic Pain in the Stomach, and an Immobility of the Body.

INJECTIO. An Injection. There are various Sorts of Injections us'd in Medicine, either for the Mouth, Anus, Urethra, Vagina, or for Wounds, Ulcers, and Sinuſes, which are taken notice of under the reſpective Articles to which they belong.

The Moderns have very much improved Anatomy, by injecting certain fluid Subſtances into the Blood-veſſels, and thereby inveſtigating their Courſe more accurately than could be done without ſuch a Contrivance. *Ruyſch* was the moſt famous of all others for his artificial Injections, the Method of doing which he kept a very great Secret. But *Rieger* gives the following authentic Account of his Method.

RUYSCH's *Method of injecting and preparing Bodies for anatomical Purpoſes, from his own Manuſcript, purchaſed of him by* Peter *the Great, and now in the Library of the Univerſity of* Petersburgh.

1. The Hypogaſtrium is to be laid open; after which two Inciſions, about an Inch, or ſomewhat more, in Length, are to be made in the deſcending Trunks of the Aorta, and the Vena Cava, in ſuch a manner, that two Tubes may afterwards be introduced.

2. The Subject being placed in cold Water, the Blood is frequently to be expreſs'd from the above-mention'd Inciſions, for a Day or two.

3. After this, warm Water is to be poured upon the Subject for four, five, or ſix Hours, according as it is young, or an Adult.

4. In the mean time the ceraceous Matter, for the Injection, is to be melted in an Earthen Veſſel, placed in an Iron Veſſel, with ſome common Water in it.

5. When the Matter is melted, a ſufficient Quantity of factitious Cinnabar is to be added to it, ſtirring them till they are ſufficiently incorporated.

6. For the Matter, we are, in the Winter-time, to take ſimple Suet; but, in the Summer-time, we muſt add a little white Wax to it.

Some, for this Purpoſe, uſe Wax, Turpentine, Roſin, and Oil of Turpentine.

Others uſe Spirit of Wine ſaturated with Cinnabar; and, when the Veſſels are fill'd with this Preparation, cloſe them with melted Wax, leſt the injected Matter ſhould be again diſcharged.

But, when theſe Methods are taken, the injected Veſſels cannot be ſeparated from the Carcaſe, as in my Manner.

7. When the Carcaſe has been thus warm'd for four, five, or ſix Hours, it is to be taken out of the Veſſel in which it lay, and placed upon a Table; after which two Tubes are to be introduc'd into the Artery, in ſuch a Manner, that one of them ſhall be directed to the ſuperior, and the other to the inferior Parts of the Carcaſe. The Tubes are, alſo, to be firmly ſecured in theſe Veſſels; but we muſt obſerve, in fixing them, to comprehend the deſcending Trunk of the Vena Cava before opened; and, for this Purpoſe, we muſt not uſe a Cord, but a thick and ſtrong Thread.

8. After theſe Meaſures are carefully taken, the Carcaſe is again to be immerſed, for a Quarter of an Hour, in the warm Water from which it was taken.

9. As this Water, in the mean time, becomes cold, it is to be pour'd out, and a Supply of ſufficiently warm Water is to be added.

10. After this, a Syringe, heated by means of live Coals, is to be applied to the Tubes; and firſt to that which is ſuperior, and then to the inferior Tube, gently compreſſing the Matter with the *Embolus*, till a ſufficient Quantity ſeems to be injected; and, if there ſhould not be a ſufficient Quantity of Matter, the Syringe is again to be filled, and the Matter injected in the ſame manner.

11. When the Veſſels are full, their Mouths are to be clos'd; and the Subject, being plac'd in cold Water, is to be perpetually mov'd, till the Matter is cold, leſt, in conſequence of the Gravity of the Cinnabur, it ſhould be white on one Side, and red on the other.

12. When the Carcaſe is cold, my Liquor is to be poured upon it, in which it is to remain for ſome Days, frequently moving it, that the aqueous Parts may be the more perfectly extracted. Then the Liquor is to be renew'd, and the Carcaſe kept in an Earthen Veſſel.

13. When the Carcaſe is to be expos'd to View, it is to be take out of the Liquor, wiped gently, and dreſſed in Cloaths.

I N N

14. The Liquor is Spirit of Wine, or Malt Spirits, to which, in the Diſtillation, we may add a Handful of black Pepper, that it may the more powerfully penetrate the muſcular Parts.

15. The Malt Spirits, which I now perpetually uſe, ought not to be too ſubtile, ſince when they are ſo, they cannot be retain'd in Phials: I therefore take the rectified Spirit, and add a third Part of Water to it, which I find to be the beſt Mixture of all others.

16. For Birds, Fiſhes, Quadrupeds, and Animalcules, I uſe common Alcohol, mix'd with pure Water; but this is not to be uſed for the Preſervation of an human Carcaſe, ſince, by this means, it would ſoon loſe its Beauty. But the Spirit I uſe for this Purpoſe, I myſelf diſtil from a tinn'd Alembic, with the Aſſiſtance of a ſlow Fire.

17. The Carcaſe, when expos'd to View, is not to be long kept out of the Liquor, ſince by that means it would loſe its Beauty.

18. If we intend to dry the Parts of a Carcaſe, we are neither to expoſe them to the Fire, nor the Rays of the Sun, but to a dry Air; otherwiſe the Matter injected would make its Eſcape.

19. Nothing is more difficult, than to dry and indurate Subjects thus prepar'd, by reaſon of the Mouldineſs with which they are continually cover'd. A Pencil, therefore, dipt in the Liquor, or ſaturated with Alcohol, is to be uſed, by which the Mouldineſs is immediately remov'd; and this Method is to be perſiſted in, till the Diſcharge of the Mouldineſs ceaſes.

20. Dry'd Subjects are, with the greateſt Care, to be preſerv'd from ſuch Animals as prey upon fleſhy or membranous Subſtances.

21. Among Animalcules, the moſt offenſive are, a ſmall Species of Scarabæus, eſpecially in the Months of *May*, *June*, and *July*; but they are rarely to be found in the Winter-time. They, alſo, produce a kind of hairy Animalcule, which is no leſs offenſive.

22. If, by chance, a Subject ſhould be infeſted with theſe Inſects, I cover it over with Alcohol, which immediately kills them; after which, I again expoſe it to the Air, in order to dry it.

23. For the better Preſervation of Subjects, I ſometimes cover them over with a Verniſh prepared of Gum-copal, and Oil of Spike.

24. When we intend to render the moſt minute Veſſels viſible, the Carcaſe is firſt to be moiſten'd with Oil of Spike, or Turpentine; then, taking care that no Object intercept the full Acceſs of the Rays of the Sun, we are to uſe good Microſcopes.

INIMBAY. A Name for the BONDUCH; which ſee.

INION, *inion*. The Occiput; or, according to others, the poſterior Part of the Neck. *Blancard* ſays, it is the Beginning of the Spinal Marrow.

INNOMINATA OSSA.

The Pelvis is the third and loweſt Part of the Trunk, conſiſting principally of two large Pieces, called Oſſa Innominata, which, being united anteriorly by a cartilaginous Symphyſis, and poſteriorly to the two Sides of the Os Sacrum, repreſent a kind of Baſon. When conſidered ſeparately, they have no regular Figure, being of different Breadths in different Parts, unequally convex on the Outſide, and unequally concave on the Inſide. Each Bone is but one Piece in adult Subjects, but, in Children, it conſiſts of three Pieces joined together by a Cartilage, which afterwards perfectly oſſifies, leaving, commonly, no Veſtige of the firſt Diviſion. Anatomiſts, however, conſider in it, even in Adults, three different Portions, and diſtinguiſh them by different Names, as if they were three diſtinct Bones. The largeſt of the three is ſuperior and poſterior, called Os Ilium; the ſecond, inferior, called Os Iſchium; and the third and ſmalleſt, anterior, called Os Pubis.

It is neceſſary to obſerve, that, in the entire Bone, there are ſeveral common Parts, which belong to more Portions than one; as a deep cartilaginous coryloide Cavity, called in *Latin*, *Acetabulum*; formed by all the three Portions: A large Opening, called Foramen Ovale, formed by the Os Iſchium, and Os Pubis: A large poſterior Notch or Sinus, called the Iſchiatic Notch, formed by the Os Ilium and Os Iſchium: An oblique Eminence, or Protuberance above the Acetabulum, towards the Foramen Ovale, made by the Os Ilium and Os Pubis. To theſe may be added, a Ridge on the Inſide of the Pelvis, which divides the upper wide Part from the Bottom, to which alone the Antients gave the Name of Pelvis.

The Os Ilium was ſo named by the Antients, becauſe it ſupports the Parts called by them Ilia. It is flat, very broad, unequally convex and concave, partly round, and partly of an irregular ſquare Figure. It is commodiouſly divided into the Criſta, Baſis, anterior and poſterior Edge, and two Sides, one external, and the other internal. The Criſta is the upper Part, being a pretty thick, arched Border, the Circumference of which is little more than the Quadrant of a Circle. The anterior and middle Part is convex outward; the poſterior Part a little convex inward. We diſtinguiſh in it two Labia, and a middle Space between them. It is originally an Epiphyſis, of which we ſometimes ſee plain Marks in a very advanced Age. The poſterior Portion of the Criſta, which is convex inward, is much thicker than the anterior; and, for that Reaſon, might be called the Tuberculum of the Criſta. The whole Criſta appears to be cruſted over with a Cartilage, which, in Reality, is no more than the dry'd tendinous Inſertions of the Muſcles.

The anterior Edge of the Os Ilium has two Eminences, or Tubercles, called the anterior Spines; one ſuperior, the other inferior; and likewiſe two Notches, one between the Spines, the other below the inferior Spine. The poſterior Edge is ſhorter and thicker than the anterior. It terminates, likewiſe, in two Eminences, or Spines, between which there is a conſiderable Notch. The Baſis, or inferior Part of this Bone, is the thickeſt and narroweſt. It forms, anteriorly, a Portion of the Acetabulum; and, poſteriorly, almoſt all the Iſchiatic Sinus. The Outſide is convex on the fore Part, and concave on the back Part. We obſerve on it the Remains of a long ſemicircular Line, which reaches from the upper anterior Spine to the great Iſchiatic Sinus, being a muſcular Mark. Above and behind this Semicircle, there are ſeveral other Impreſſions, and muſcular Marks. A little above the Edge of the Acetabulum, we ſee, likewiſe, many Inequalities, which ſurround Part of that Edge in a ſemicircular Form, being a Collection of muſcular and ligamentary Marks. The Inſide is unequally concave, and has ſeveral Inequalities toward the back Part, the principal of which is that large cartilaginous Surface of the Figure of an S, or of a Bird's Head, which anſwers to the lateral Surface of the Os Sacrum, with which it is connected by a cartilaginous Symphyſis. The other Inequalities are much of the ſame Kind with thoſe in the lateral Part of the Os Sacrum, with which they form ſeveral rough and irregular Cavities. From the upper Part of the cartilaginous Surface, or Symphyſis, all the Way to the oblique Eminence, runs a prominent Line, which bounds the Concavity of the Inſide of this Bone, and diſtinguiſhes the Margin of the Pelvis from the Bottom.

The Os Iſchium is the loweſt Portion of the Os Innominatum, as well as of the whole Trunk. It is divided into the Body, Tuberoſity, and Ramus, or Branch. The Body of the Os Iſchium forms the loweſt and greateſt Part of the Acetabulum, and ſends out an Apophyſis backward, called the Spine of the Iſchium. The Tuberoſity is very thick, unequal, and turned downward; and it is on this Part, that the whole Body reſts when we ſit. It appears cartilaginous, becauſe of the dry'd and hardened Remains of the Tendons. The whole convex Part of it is originally an Epiphyſis, of which the Marks are obliterated ſooner in ſome Subjects, than in others. Three muſcular Impreſſions may be diſtinguiſhed in it. The Branch of the Iſchium is a kind of ſmall, flat, thin Production, or Apophyſis, which aſcends forward from the Curvature of the Tuberoſity to the Os Pubis; and it is often cover'd, in Part, by a Continuation of the Epiphyſis of the Tuberoſity. Theſe three Parts of the Iſchium, taken together, form a large Opening, which makes the greateſt Part of the Foramen Ovale. Three other Notches are remarkable upon this Bone; one poſterior between the Tuberoſity and the Spine, for the Paſſage of the internal Obturator Muſcle, which is a little cartilaginous, and divided into three or four ſmall ſuperficial Chanels; one lateral between the Tuberoſity and the Acetabulum, for the Paſſage of the external Obturator Muſcle; and one anterior at the Edge of the Acetabulum, for Ligaments.

The Os Pubis is the leaſt of the three Portions of the Os Innominatum. The two together form the fore Part of the Pelvis; and in each we may diſtinguiſh the Body, Angle, and Branch. The Body of the Os Pubis is its upper Part, ſituated tranſverſely before the inferior Part of the Os Ilium. Its poſterior Extremity is very thick, and by its Union with the Os Ilium forms the oblique Eminence which diſtinguiſhes theſe two Portions of the Oſſa Innominata. It, likewiſe, contributes to the Formation of the Coryloide Cavity. Its anterior Extremity ends in a ſmall Eminence, or Tuberoſity, called the Spine of the Os Pubis, which is ſometimes double. The upper Edge has on its inner Part an oblique Ridge, which may be called the Criſta of the Os Pubis, and is continuous with that Ridge which diſtinguiſhes the Margin, and the Bottom of the Pelvis. Before this Criſta is a broad, oblong, oblique Slope. The lower Edge is obliquely notch'd, and forms the upper Part of the Foramen Ovale. The Angle of the Os Pubis is its anterior Portion, and makes Part of that Connection, called the Symphyſis of the Oſſa Pubis. This Portion is flat, and not very thick; and, in ſome Subjects, toward the upper Part of the fore Side, near the angular Curvature, it has an Eminence which increaſes the Size and Extent of the Spine already mentioned. The two Oſſa Pubis, connected together by this Portion, form on the fore Side an unequal Convexity, but, on the back Side, a pretty even Concavity. The Branch of the Os Pubis is a flat thin Apophyſis, which, running downward, unites with the Branch of the Iſchium, by a cartilaginous Symphyſis, of which only ſome Marks remain in Adults. It completes the Formation of the Foramen Ovale. The Branches of the two Oſſa Pubis form, on the fore Side, a pointed Arch, which, in the natural State, is much more round.

Beſides what has been ſaid of the Acetabulum in general, ſee other Particulars, under the Article ACETABULUM.

The Subſtance of all the three Portions of the Oſſa Innominata is moſtly ſpongy, except in the Middle of the Os Ilium, where

where the two Tables, uniting, render the Bone tranſparent; and the ſame is to be ſaid of the Acetabulum.

The Oſſa Innominata are join'd to the Os Sacrum, and to each other, by a cartilaginous Symphyſis. They are articulated with the Os Femoris, by Enarthroſis.

The Oſſa Innominata, together with the Os Sacrum, form the Pelvis, which is Part of the Cavity of the Abdomen, and ſupports ſeveral Viſcera, eſpecially thoſe which are the common Sewers of the Urine, and groſs Excrements, and thoſe by which the two Sexes are diſtinguiſh'd. The Pelvis is larger in Women than in Men; the Oſſa Ilium and Iſchium are wider. The Arch form'd by the Branches of the Oſſa Pubis is alſo greateſt in Females.

Moreover, theſe Bones, together with the Os Sacrum, ſupport the whole Trunk, and all the Parts belonging to it, and, alſo, the lower Extremities. In a Word, they are the Baſis of the whole Body of Man, and the general Centre of all its Motions, when ſitting, ſtanding, or lying.

The Cartilages of the Oſſa Innominata are not ſo numerous as one might imagine on examining the Skeleton only. We are ſubject to think, we ſee the dry'd Remains of Cartilages on the Criſta of the Os Ilium, on the Tuberoſity of the Os Iſchium, and on the Grooves and Notches, which give Paſſage to the Tendons of Muſcles: But none of theſe Incruſtations are true Cartilages, being, for the moſt part, tendinous, aponeurotic, or ligamentary; which, being dry'd, look more like Cartilages, than the true Cartilages themſelves. The Cruſt, which covers the Criſta of the Os Ilium, is principally tendinous, and a ſmall Part of it aponeurotic in Adults; but in Children, and very aged Perſons, it appears cartilaginous. In Children, the Parts which are not completely oſſified, are eaſily taken for true Cartilages; and, in Old-age, the Tendons are often hardened to ſo great a Degree, as to have the very ſame Appearance. The Subſtance which covers the Tuberoſity of the Iſchium, is almoſt entirely tendinous; and that which lines the Grooves and Notches of the Tendons is principally ligamentary.

The true Cartilages of the Oſſa Innominata, in Adults, are five in Number, three common, and two proper. The firſt and principal common Cartilage is that which makes the Symphyſis of the Oſſa Pubis. It reaches from the Interval, between the Spines of theſe two Bones, all the Way to the Angle formed by the two Branches, where they begin to ſeparate. It is ſomething thicker or broader at its upper Part, than for a conſiderable Space lower down; but the inferior Part is much the broader. It fills the Angle already mentioned, and forms a kind of Arch, which is more conſiderable in Women, than in Men. The two other common Cartilages join the Os Ilium to the Os Sacrum, but are thinner than that of the Os Pubis.

The proper Cartilages are thoſe which line the Cotyloide Cavities. In the Edge of each of theſe Cartilages, there is a Notch, or Opening between the anterior and inferior Parts; and, in the Cavity itſelf, there is a broad unequal ſhallow Depreſſion reaching from the Notch beyond the Middle of the Cavity. All the reſt of the Surface of the Acetabulum is covered with a white, ſhining, ſmooth Cartilage, which terminates preciſely at the Edge of the Cavity. The Circumference of the Acetabulum has, beſides, a Border of a particular Kind, the Subſtance of which is neither wholly cartilaginous, nor wholly ligamentary; but I chuſe to place it among the Ligaments.

The Ligaments of the Oſſa Innominata are of two Kinds, common and proper. The common Ligaments go between theſe and the neighbouring Bones, which are numerous. One ſuperior Ligament, inſerted by one End in the internal Labium of the poſterior Part of the Criſta of the Os Ilium, about an Inch above the Angle of that Criſta. It is about an Inch in Breadth, and is faſtened by its other Extremity in the whole inferior Edge of the tranſverſe Apophyſis of the laſt Vertebra of the Loins.

One inferior and anterior, fixed by one End in the inner Side of the Angle of the Criſta of the Os Ilium, and by the other in the ſuperior and anterior Part of the firſt falſe tranſverſe Apophyſis of the Os Sacrum. In this Ligament there are tranſverſe Openings, which make it appear more or leſs complex.

Several inferior and poſterior, fixed by one End along the internal Labium of the Tuberoſity of the Criſta of the Os Ilium; and, by the other, in the firſt three falſe tranſverſe Apophyſes; and from thence, extending laterally over the Marks of the falſe oblique Apophyſis of the Os Sacrum.

To theſe muſt be added, the Ligaments by which the Os Femoris is joined to the Os Innominatum, which are deſcribed among the other Ligaments of the Thigh.

The principal proper Ligaments are four; two called Sacro-ſciatic, one broad and external, the other ſmall and internal, one Obturator, and one Inguinal.

The broad Sacro-ſciatic, or internal ſciatic Ligament, is ſlightly faſten'd to the Inſide of the Tuberoſity of the Criſta of the Os Ilium, covers exteriorly the two poſterior Spines of that Bone, and continues to be inſerted along the anterior and exterior Edges of the falſe tranſverſe Apophyſis of the Os Sacrum. From thence this Ligament, diminiſhing in Breadth, deſcends obliquely towards the Tuberoſity of the Iſchium, and is inſerted immediately below the Sinus, which is between the Tuberoſity and the ſciatic Spine. This Inſertion is afterwards continued over the whole internal Labium of the inferior Portion of the Os Iſchium, and of the Branches of the Bone, and the inferior Portion of the Branches of the neighbouring Os Pubis. Thro' all this latter Courſe of its Inſertion, that is, after its Arrival at the Tuberoſity of the Iſchium, it produces a kind of ligamentary Falx, one Edge of which is fixed to the Bones, the other lies looſe; and, by this Situation of the Falx, it forms, together with the Bones, a kind of deep Chanel, or Groove.

The ſmall Sacro-ſciatic, or internal ſciatic Ligament adheres cloſely to the Inſide of the poſterior Portion of the former. It is fixed interiorly to the Edge of the inferior Part of the fourth falſe tranſverſe Apophyſis of the Os Sacrum, and from thence all the Way to the upper Part of the Os Coccygis. From this Inſertion it runs up a little obliquely to the Spine of the Iſchium, and in the ſharp Point, and upper Part, in which it is fixed. During this Courſe, it croſſes the broad Ligament, being cloſely united to the Inſides thereof, and loſes but little of its Breadth. By theſe two Ligaments, two diſtinct Openings are form'd, a large one, with the ſuperior ſciatic Sinus; and a ſmall one, with the inferior ſciatic Notch.

The Obturator Ligament fills up all the great Foramen Ovale, except the oblique Notch, at its upper Part. It is faſtened, preciſely, to the Edge of the Circumference of that Hole, from the anterior Part of the oblique Notch, all the Way to the Symphyſis, between the Os Pubis and the Os Iſchium.

From thence, to the poſterior Part of the inferior Notch, it is fixed to the internal Labium of the Edge of the Circumference, forming a kind of ſmall Chanel with the external Labium; and afterwards it is fixed to the common Edge of the Foramen Ovale, and Cotyloide Notch, or Opening.

By this Diſpoſition, an Opening is left between this Ligament and the ſuperior oblique Notch; and, immediately below this common Opening, there are two ſmall Perforations in the Ligament alone.

On the Inſide of the upper and anterior Part of the Os Pubis, there is a tranſverſe Ligament, reſembling the Shape of a Penthouſe, fix'd by its upper Part to the Os Pubis, from the oblique Notch of the Foramen Ovale, all the Way to the lower Part of the Symphyſis, at a ſmall Diſtance from the Circumference of the laſt-mention'd Hole.

This tranſverſe Ligament is about half an Inch in Breadth in an adult Body; and poſteriorly, below the ſuperior oblique Notch of the Foramen Ovale, it joins the Obturator Ligament, by means of a particular Fold; and, by parting from it afterwards, a kind of deep narrow Groove is form'd between them, the tranſverſe Ligament being, at this Place, ſupported by ligamentary Fræna of different Sizes.

The inguinal Ligament, call'd, from the Diſcoverer, *Ligamentum Fallopii*, is an aponeurotic, or ligamentary Band, faſten'd by one End to the anterior and ſuperior Spine of the Os Ilium; and, by the other, to the Spine of the Os Pubis. The middle Portion of it is very narrow, but it expands conſiderably toward both Extremities. It is cloſely join'd to the Muſcles of the Abdomen, and to the aponeurotic Faſcia of the Thigh. It ſeems to be often wanting.

Beſides theſe Ligaments, peculiar to each Os Innominatum, there is another ſmall, flat, and very ſtrong Ligament, which runs tranſverſely between the two Angles of the Cotyloide Notch, and may be term'd the proper, or tranſverſe Ligament thereof.

The elaſtic Border of the Cotyloide Cavity may, alſo, be reckoned among the Ligaments. It is a ſort of additional Piece ſtrongly united to the Edge of the Cavity, but eaſily yields both Ways to any Preſſure. It may be ſtretched out by pulling, and recovers and contracts again, when that Force is removed. It is of a very ſingular Texture, being compoſed of elaſtic Fibres, interwoven together thro' its whole Circumference; and which, in ſeveral Places, are, by degrees, inclined toward the bony Edge of the Cavity. It makes an entire Circle, and where it paſſes over the Notch, the tranſverſe Ligament before-mention'd ſerves to ſupport it, as the bony Edge of the Cavity does thro' all the reſt of its Circumference.

One of the two Ligaments, by which the Os Femoris is connected to the Os Innominatum, ſurrounds the whole Articulation, the other is contained therein. The firſt is called the orbicular Ligament, the other, very improperly, the round Ligament.

The orbicular Ligament is very ſtrong, and unequally thick. It ſurrounds the whole convex Circumference of the Supercilium of the Cotyloide Cavity, to which it is ſtrongly fix'd for the Breadth of near a quarter of an Inch, from the ſharp Edge outward, and from thence ſeems to ſend off a ligamentary Aponeuroſis.

Its Inſertion at the ſharp Edge of the Cotyloide Cavity joins that of the elaſtic Border; the reſt of the Ligament is diſtinct from the Border, and only touches it quite round; and where is paſſes over the Notch, it is fix'd in the tranſverſe Ligament.

The Ligament which lies in the Joint is not round, as its common Name would make us believe. It is a flat Cord, broad at one End, and narrow at the other, and therefore, in ſome meaſure, of a triangular Shape. By its narrow End, it is inſerted at the two Angles of the Notch of the Cotyloide Cavity; and, by the other, in the Os Femoris: This broad End may be reckon'd the Baſis of the Ligament; and from thence ariſe ſome diſtinct ligamentary Filaments, which are inſerted at different Diſtances, in the Circumference of the rough Impreſſion of the Cotyloide Cavity.

There is nothing in the Perioſteum of this Bone different from that which has been ſaid above, except what relates to the Inſertion of ſeveral Muſcles.

The rough unequal Depreſſion, at the Bottom of the Cotyloide Cavity, is filled by a broad flat mucilaginous Gland, border'd with a fatty Subſtance, and covered by a fine Membrane, through which a mucilaginous Liquor paſſes, to moiſten the Joint, and facilitate its Motions. This Membrane riſes above the Gland, and gives a ſort of Covering or Coat to the Liquor contain'd in the Joint. The Blood-veſſels of this Gland paſs between the Bottom of the Cotyloide Notch, and the tranſverſe Ligament thereof.

As theſe Bones have no internal Cavity, and their Subſtance being cellulous or cavernous, they contain no medullary Maſs. The ſmall Cells of their cavernous Subſtance contain a medullary Juice, which diſtils inceſſantly through the Membrane with which they are all lined.

The Blood-veſſels paſs principally through the ſmall Holes, in both convex and concave Surfaces of the Bones; and, ramifying upon the bony Cells, they end in a great Number of ſmall capillary Tubes, which make the medullary Juice appear red. *Winſlow's Anatomy.*

INOCULATIO. See VARIOLÆ.

INOPINUS, παράλογος, ſudden, unforeſeen, is ſpoken of ſuch unexpected Accidents, or Events, as happen either naturally or preternaturally in Diſeaſes, and ſeem to indicate ſome Alteration. But when the Sick find themſelves, in any meaſure, relieved or depreſſed beyond Reaſon or Expectation, we are not much to fear the one, nor truſt the other, as we are taught by *Hippocrates*, 2 *Aph.* 27.

INOSCULATIO, ἀναστόμωσις. See ANASTOMOSIS.

INPINGUEDO *Porci.* The Herb *Coſtus. Caſtellus.*

INQUIETUDO, ἀλυσμὸς, Reſtleſſneſs. See ALYSMUS.

INSANIA. Madneſs. See DELIRIUM, and MANIA.

INSECTUM, ἔντομον, an Inſect, ſo called, from its being mark'd or diſtinguiſh'd by Variety of Parts ſeparated, as it were, by Inciſions. The ſeveral Species of Inſects, uſeful in Medicine, ſee under their proper Articles.

INSERTIO, Inſertion, in Anatomy, is the Inſinuation and cloſe Conjunction of the Veſſels, Fibres, Muſcles, or Membranes, with ſome other Part.

INSESSIO, ἐνέδρα, *Ionice*, ἐνέδρη, Inſeſſion; ſee ENEDRE. It ſignifies, alſo, the ſame as ENCATHISMA, or SEMICUPIUM; which ſee.

INSESSUS. The ſame as SEMICUPIUM; which ſee.

INSIDENTIA, ἐπίστασις. See EPISTASIS.

INSIDIANS, λοχῶν, inſidious, latent, is an Epithet of Diſeaſes, which betray no evident Symptom, but are ready, on any Provocation, to break forth, as it were, by Surprize, upon the Patient. *Caſtellus.*

INSIPIDUS, ἄποος. See APOEUM.

INSIPIENTIA. See DELIRIUM.

INSOLATIO. An Inſolation, or expoſing to the Rays of the Sun. BLANCARD.

INSOLATUS. The ſame as EILETHERES, which ſee.

INSOMNIA, *Inſomnitas*, *Inſomneitas*, Want of Sleep.

INSOMNIUM, ἐνύπνιον, a Dream.

Something may be learnt concerning the preſent State of the Body, and Prognoſtics may be drawn from Dreams; for if, theſe are different from what may be expected from the Buſineſs or Occupation of the Day, they aſſure us of ſome Diſorder in the Body. Dreams of Fire indicate a Redundance of yellow Bile. To ſee a Smoke, or a thick Fog, ſhews, that black Bile abounds in the Body. To dream you ſee a Fall of Rain, or Snow, or Hail, or a Repreſentation of Ice, there is a Redundance of Phlegm in the internal Parts. He who fanſies himſelf converſant among Stinks, may be aſſured, that he harbours ſome putrid Humour within his Body. To have red things repreſented in Sleep, or to fanſy yourſelf to have a Comb like a Cock, is a Sign, that Blood abounds within. The Moon, appearing in a Dream, ſignifies Affections of the Cavities in the middle Part of the Body; the Sun thoſe of the middle Parts, and the Stars thoſe which affect the Ambit, or exterior Surface. If any one, therefore, of theſe Luminaries be leſſen'd, or obſcured, or ſtopt in its Courſe, the Part ſignify'd by it labours under ſome Diſorder, which is but ſlight, if what diminiſhes the Light be only Air, or a Miſt; but more conſiderable, if Water; and if it appears to be overpower'd by the Interpoſition of the Elements, to ſuch a Degree as to ſeem quite extinguiſh'd, the Patient, it is to be feared, will ſink under the Diſtemper; but if, ſurmounting all Obſtacles, the Luminaries begin to ſhine out, and appear ſplendid, the Sick is to be judg'd in a hopeful State. If the Luminaries ſeem to hurry along with ſurpriſing Swiftneſs, they indicate Madneſs; if they appear to deſcend in the Weſt, or to be precipitated into the Sea, or to the Earth, it, alſo, ſignifies Diſeaſes. A troubled Sea indicates an Affection of the Belly; and to ſee the Earth overflown with Water, is not good; for it ſhews a humid Diſorder, and much more, if one fanſies himſelf immerg'd in a Pond or River. It is worſe to ſee the Earth dry'd and burnt up with the Sun; for it is an Indication of great Drineſs. If any one fanſies, in his Sleep, that he greedily longs after Meat or Drink, it ſignifies, that he wants Aliment, or Drinking. To fanſy that you drink pure Water, is good; to take other Liquors, is bad. The Appearance of Monſters, or armed Enemies, occaſioning a Fright in Sleep, ſhews Sickneſs, and Danger of Madneſs. To fanſy yourſelf precipated from ſome very high Place, threatens a Vertigo, Epilepſy, or Apoplexy, eſpecially if the Head, at the ſame time, be burden'd with Humours. *Lommii Med. Obſ.*

The foregoing Obſervations of *Lommius*, on Dreams, are all, or moſt of them, taken from *Hippocrates*; who has written a Book expreſly on the Subject.

INSPIRATIO. Inſpiration. That Part of Reſpiration, by which the Air is drawn into the Lungs.

INSPISSATIO. Inſpiſſation, or Condenſation.

INSTILLATIO imports, ſometimes, the ſame as EMBROCATIO.

INSTINCTUS. Inſtinct. That Principle, in brute Animals, which enables them to make their Option of what is moſt beneficial to them. This Inſtinct frequently directs them to Medicines well adapted to the Cure of their Diſeaſes.

INSTITA. A Fillet. It, alſo, ſignifies a flat Worm of the Inteſtines.

INSUFFLATIO. Inſufflation; the blowing into any Cavity, in order thereby to convey any thing medicinal to a Part affected.

INSULTUS. The firſt Invaſion, or Acceſs of a Paroxyſm, or Fit.

INTERGASTRUM. A Term uſed by *Paracelſus*, importing the Decuſſation of the optic Nerves.

INTEGUMENTA. The Integuments. The *Cuticula*, *Cutis*, and *Membrana Celluloſa*, are generally underſtood by the Integuments.

INTEMPERANTIA. Intemperance, with reſpect to Meat and Drink. But it, alſo, ſignifies the ſame as DYSCRASIA.

INTEMPERIES. The ſame as DYSCRASIA.

INTENTIO. Intention. This imports either Extenſion, or Indication.

INTERCEPTIO. The ſame as APOLEPSIS; which ſee.

INTERCIDENS Pulſus. A ſort of Pulſe is thus called, when betwixt two regular Pulſations, a third Stroke is perceiv'd. It ſeems to be much the ſame as the DICROTUS.

INTERCISIO. The ſame as DIACOPE; which ſee.

INTERCOSTALES MUSCULI.

The intercoſtal Muſcles are thin fleſhy Planes, lying in the Interſtices, between the Ribs, their Fibres running obliquely from one Rib to another. In each Interſtice lie two Planes, an external and an internal, cloſely joined together, nothing but a thin, fine, cellular, membranous Web coming between them.

According to this natural Diviſion, there muſt be forty-four intercoſtal Muſcles, in the twenty-two Interſtices left between the twenty-four Ribs; and of theſe there are eleven external, and eleven internal, on each Side. The Fibres of the external Intercoſtals run down from behind, forward; and thoſe of the internal Intercoſtals, from before, backward; ſo that the Fibres of theſe two Series of Muſcles croſs each other.

The external Intercoſtals extend commonly from the Vertebræ to the Extremity of the upper Labium of the bony Portion of each Rib, and go no further. The internal begin forward, near the Sternum; and end backward, at the Angle of each Rib.

Therefore, between theſe Angles and the Cartilages, theſe fleſhy Planes are double, the Fibres, by their oppoſite Directions, repreſenting this kind of Figure X. But from the Vertebræ to the bony Angles, and in the Interſtices between the cartilaginous Portions, the Plane is ſingle, being that of the external Muſcles, backward, and of the internal, forward.

The Fibres of the external Intercoſtals are very oblique, near the Vertebræ; but this Obliquity decreaſes inſenſibly towards the anterior Extremities of their Ribs. Their Inſertions begin at the Ligaments, by which the Ribs are faſtened to the tranſverſe Apophyſes. They are a little tendinous, and run a ſmall Space beyond the Edge, on the Outſide of each Rib.

The Fibres of the internal Intercoſtals are, in general, ſhorter and leſs oblique than the former. They fill almoſt intirely the Interſtices between the cartilaginous Portions, and they are covered on the Outſide by a ligamentary Membrane, the Fibres of which, running in an oppoſite Direction to thoſe of the Muſcles, have been miſtaken for Continuations of the external Intercoſtals, over which this Membrane is likewiſe ſpread, only a little diminiſhed in Thickneſs.

Any Portion of the Breaſt of an Animal may be boiled ſo much as that the Fleſh ſhall eaſily part from the Bones, and the Ribs may be drawn out, diſordering neither the Muſcles nor Membranes. But we are not from thence to conclude, that all the Intercoſtals on one Side of the Thorax make but one Muſcle; becauſe, by the ſame Way of reaſoning, it might be proved, that all the Muſcles which immediately ſurround the Os Femoris, are but one; ſince, by a like Experiment, they, together with the Perioſteum, may be entirely ſeparated from the Bone, without breaking their Fibres.

The poſterior Fibres of the external Intercoſtals are fixed, by their upper Extremities, ſo near the Articulation of the Ribs with the Vertebræ, that they cannot depreſs that Rib in which they are ſo inſerted; whereas the Inſertions of their lower Extremities in the following Rib being at a greater Diſtance from the Articulation, they may move that Rib upwards: And from thence it follows, that all the remaining Part of each external Intercoſtal, which terminates at the bony Extremity of each Rib, can only ſerve to raiſe the lower Rib toward the upper.

The anterior Fibres of the internal Intercoſtals are ſo near the Articulation of the Ribs with the Sternum, that they cannot depreſs that Cartilage in which each of them is inſerted; whereas the inferior Inſertions of theſe Fibres being at a greater Diſtance from the Articulation, they are in a Condition to raiſe the Cartilages in which they are ſo inſerted. From whence it follows, that all the internal intercoſtal Muſcles have the ſame Uſe with the external, and that they can have no other.

The Portions which lie between the two Extremities of the Ribs, ſerve to increaſe the Force of the ſame uniform Action. And the firſt Rib, being immoveable, ſerves for a fixed Point for the Motions of all the other Ribs; and each Rib in particular ſerves for a fixed Point for the Motion of that below it.

The Supra-coſtales are powerful Aſſiſtants to the Intercoſtals in their common Action, and are therefore very juſtly termed Levatores Coſtarum. *Winſlow's Anatomy.*

INTERCURRENS FEBRIS. An *Intercurrent Fever.*

Stationary Fevers are ſuch as ariſe from ſome particular Conſtitution of a particular Year, not yet ſufficiently known. Every one of theſe prevails in its Order, and rages with great Violence; having, as it were, the Aſcendant over all the reſt, during that continued Courſe of Years. But there are, alſo, other continued Fevers, which, tho' they ſometimes rage leſs, and, at other times, more ſeverely; yet, becauſe they are mixed with all kinds of ſtationary Fevers, and likewiſe with each other indifferently, in the ſame Year, I conceive they ſhould be called *Intercurrents*: Theſe are, the Scarlet Fever, Pleuriſy, Baſtard Peripneumony, Rheumatiſm, Eryſipelatous Fever, the Quinſey, and, perhaps, ſome others.

But as all theſe Diſeaſes are, during their State, or at leaſt were, accompanied with a Fever, till it went off, the febrile Matter being thrown upon ſome particular Part, according to the Nature of the Diſtemper, I queſtion not, that the Fever is to be accounted the primary Diſeaſe; and that the other Diſorders, whence the Names are derived, are Symptoms which principally regard either the peculiar Manner of the Criſis, or the Part moſt affected.

It muſt be obſerv'd, that, as the ſtationary Fevers prevailed more or leſs epidemically, according as they were favoured by the Conſtitution of Years, reſulting from a ſecret and inexplicable Temperature of the Air; ſo, likewiſe, did theſe Intercurrents ſometimes, but leſs frequently. For, tho' they generally ariſe from ſome particular Diſorder of particular Bodies, whereby the Blood and Juices are vitiated; yet ſometimes they proceed, mediately, from ſome general Cauſe in the Air, which, by its manifeſt Qualities, ſo diſpoſes the human Body, as to occaſion certain Faults of the Blood and Juices, which prove the immediate Cauſes of ſuch epidemic Intercurrents: Thus, when a ſharp Froſt of long Continuance, late in the Spring, is ſuddenly ſucceeded by warmer Weather, Pleuriſies, Quinſies, and the like Diſeaſes, uſually ariſe, whatever be the general Conſtitution of the Year. And becauſe theſe Diſeaſes, which happen indifferently in all Years, ſometimes rage as epidemically as thoſe which only happen in a certain ſucceſſive Courſe of Years, we chuſe to call them *Intercurrents*, in order to diſtinguiſh them.

Notwithſtanding the conſiderable Difference between theſe two Kinds of Fevers, with reſpect to the Cauſe proceeding from the Air; yet they frequently agree in other external and procatarctic Cauſes. For, not to mention Infection, which ſometimes communicates ſtationary Fevers; and Surfeits, which give Riſe to both ſtationary and intercurrent Fevers; the manifeſt external Cauſe of the greateſt Part of Fevers is to be aſcribed, either, 1. To leaving off Cloaths too early in the Spring; or, 2. To imprudently expoſing the Body to the Cold, after being heated with violent Exerciſe: Whence the Pores being ſuddenly cloſed, and the perſpirable Matter retain'd in the Body, ſuch a particular kind of Fever is raiſed in the Blood, as the then general Conſtitution, or the particular Depravity of the Juices, is moſt inclined to produce. And indeed I am of Opinion, that more have been deſtroy'd by this means, than by the Plague, Sword, or Famine together; for, if a Phyſician examines his Patient ſtrictly concerning the firſt Occaſion of the Diſeaſe, he will generally find it to proceed from one of theſe Cauſes; provided it is one of thoſe acute Diſeaſes we have treated of above.

But it muſt here be carefully remarked, that tho' the Diſeaſes I now treat of, under the Title of *Intercurrents*, were moſt, if not all of them, eſſential Diſeaſes; yet, frequently, certain Diſorders happen in ſtationary Fevers, reſembling theſe Intercurrents as to the Phenomena, and likewiſe characterized by the ſame Name, which, however, are manifeſt Symptoms of thoſe Fevers. In this Caſe, they are not to be treated by the Method which is to be uſed when they are eſſential Diſeaſes; but rather by that which the Fever requires, whereof they are now Symptoms, which Method is only to be ſlightly adapted to their particular Cure. Great Attention muſt be had to the Fever of the Year, and to find out the Method whereby it may be eaſieſt conquer'd, whether by Bleeding, Sweating, or any other Procedure. Should it be objected, that the Diſorders under Conſideration, which I term eſſential, are, in reality, only Symptoms. I reply, that perhaps they may be Symptoms, with reſpect to the Fever to which they properly belong; but they are at leaſt Symptoms of Fevers, which always neceſſarily produce them. Thus, in an eſſential Pleuriſy, the Fever is of ſuch a Nature as always to depoſite the morbific Matter upon the Pleura; in an eſſential Quinſey, of ſuch a Nature as to throw the morbific Matter upon the Throat; and ſo in the reſt. But, when any of the abovementioned Diſeaſes ſucceeds a Fever, which belongs to a particular Conſtitution of Years, and is dependent thereupon, it is then produced accidentally only, and no way neceſſarily; and, therefore, there is a remarkable Difference between them.

But, in order to diſtinguiſh rightly between eſſential and mere ſymptomatical Diſorders, it is of Moment to conſider, that the ſame Symptoms, which accompany any particular ſtationary Fever at the Beginning, will likewiſe happen at the ſame time, in a Pleuriſy or Quinſey, when theſe are only accidental Symptoms of ſuch a Fever. We had a Proof of this in the ſymptomatic Pleuriſy, ſucceeding the Fever, which prevailed in the Winter of 1675. For all that were ſeized with the Pleuriſy were afflicted, in the Beginning, with a Pain in the Head, Back, and Limbs; which were the moſt certain and common Symptoms of all thoſe Fevers which preceded the Pleuriſy, and continued after that Diſeaſe went off: Whereas, when either of theſe Intercurrents is the eſſential Diſeaſe, it attacks in the ſame manner in all Years indifferently, having nothing in common with the then prevailing ſtationary Fever. Beſides, the Symptoms, which afterwards ariſe, are more apparent, as not being concealed and perplexed, by a Mixture of other Phenomena of a different Nature, and belonging to another Fever. Again, the Time of the Year wherein the greater Part of eſſential Intercurrents uſually make their Appearance, frequently points out the Kind of Diſorders whereto they ſhould be refer'd: But, laſtly, he is beſt qualified to diſcover the diagnoſtic Signs, both of theſe, and all other Diſeaſes, who, by daily and diligent Obſervation, hath ſearched ſo intimately into their Phenomena, as, at firſt Sight, to be able to diſtinguiſh the Genus; though, perhaps, the characteriſtic Differences of ſome of them may be ſo very ſubtle, that he cannot expreſs them by Words to another.

But as theſe different Species of Fevers, ſo far as I can learn by carefully conſidering their Concomitants, and the Method of Cure, proceed from an Inflammation of the Blood peculiar to every Diſeaſe, I place the principal Part of the Cure in cooling the Blood. In the mean time, I endeavour univerſally to expel the morbific Matter, by a Method of Cure varied according to the Nature of the Diſeaſe, and which Experience ſhews to be readily curative of the particular Species thereof. And in reality, whoever is thoroughly acquainted with the Method of expelling the febrile Matter, whether by Bleeding, Sweating, Purging, or any other more proper Way, will have the beſt Succeſs in the Cure of all Fevers. *Sydenham.*

INTERCURRENS *Pulſus.* The ſame as PULSUS INTERCIDENS; which ſee.

INTERCUS. That Species of Dropſy, called *Anaſarca*, is ſometimes thus nam'd.

INTERDENTIUM. The Intervals betwixt the Teeth of the ſame Order.

INTERDIGITIUM. A Corn betwixt the Toes.

INTERFOEMINEUM. The PERINÆUM; which ſee.

INTERLUNIUS MORBUS. The Epilepſy.

INTERMISSIO. An Intermiſſion; that is, the Interval betwixt two Paroxyſms, or Fits of a Fever, or other Diſtemper.

INTERMITTENS *Febris.* An intermitting Fever. See PYRETOS.

INTERMITTENS *Pulſus.* An intermitting Pulſe. See PULSUS.

INTERNODIA. The Internodes, or Joints of the Fingers.

INTERNUNTII DIES. Critical Days.

INTERNUS. The Appellation of a Muſcle of the internal Ear. See AURIS.

INTEROSSEI MUSCULI.

Theſe are ſmall Muſcles lying between the Metacarpal Bones, and filling the three Interſtices left between them, both exteriorly, or towards the Back of the Hand; and interiorly, or towards the Palm of the Hand. From this Situation they have the Name

of *Interoſſei*, and have been divided into external and internal. They are commonly reckoned ſix in Number, three external, and three internal; Regard being had only to the fleſhy Maſſes in the Metacarpus, and to the ſix tendinous Inſertions in the Fingers: But, if we conſider the Compoſition of theſe Maſſes, their Number may be increaſed.

The external Interoſſei are ſtronger, more compound, and take up more Space between the Metacarpal Bones, than the internal: Each of them is made up of two Portions; one which appears almoſt on a Level with the Bones; the other hid, and which runs in upon the internal Muſcles.

The apparent Portion is, in ſome meaſure, penniform, being fixed along the Sides of two Bones, and, alſo, by a ſmall Extremity, to the neareſt Bone of the Carpus. The other Portion, which lies hid, appears more ſimple, and ſeems to be fixed only to the Baſes of the ſame two Bones.

Near the Heads of the Metacarpal Bones, theſe two Portions of each Muſcle end in broad flat Tendons, which, having reach'd the Side of the firſt Phalanx of one Finger, are afterwards united with the neareſt Portion of the Tendon of the Extenſor Communis. One Portion is likewiſe inſerted in the Phalanx itſelf, by ſmall ſhort Tendons. Theſe Muſcles may therefore be reckoned Bicipital; eſpecially when the Tendons of the two Portions unite.

The firſt two external Interoſſei are, for the moſt part, inſerted in the middle Finger: They fill the Interſtices between the three firſt Metacarpal Bones, and ſurround the middle Bone all the Way to the Hollow of the Hand: Their Tendons are fixed in both Sides of the firſt Phalanx, and in both Sides of the ſecond Tendon of the Extenſor Communis.

The third external Interoſſeus lies in the Interſtice between the two laſt Metacarpal Bones, and is moſt commonly inſerted in the ring Finger; its Tendon being fixed in that Side of the firſt Phalanx fartheſt from the Thumb, and in the correſponding Edge of the third Tendon of the Extenſor Communis. The fleſhy Body of this Muſcle runs in between the two Bones, toward the Hollow of the Hand.

The internal Interoſſei are more ſimple than the former, and do not lie ſo much between the Bones. The Tendon of the firſt is inſerted in the Side of the firſt Phalanx of the fore Finger, next the little Finger, and in the correſponding Edge of the Extenſor Communis. The Tendon of the ſecond goes in the ſame manner to the Side of the ring Finger, next the Thumb; and the third, to the ſame Side of the little Finger.

There are, therefore, two external Interoſſei for the middle Finger, one for the ring Finger, but none for the fore and little Finger. The middle Finger has no internal Interroſſeus; but the Index, ring Finger, and little Finger, have each of them one.

The external Interoſſei appear ſometimes to be really double, the two Muſcles being ſeparated by a pinguious Line; ſo that in ſome Subjects we have ſix internal Interoſſei. But the fleſhy Portions, on each Side of the ſecond Metacarpal Bone, belong to the two firſt external Muſcles; and the fleſhy Portion, on the Side of the fourth Metacarpal Bone, next the Thumb, belong to the third external Interoſſeus.

The Interoſſei may have two different Uſes, according to their different Inſertions, and the different Situations of the Fingers in which they are inſerted.

In general, they aſſiſt the Extenſor Communis by their Inſertions in the lateral Angles of the rhomboidal Fiſſures; for thereby they act like lateral Ropes, which, together with the Tendons of the Extenſor, ſerve to extend the third Phalanx of each Finger.

By the ſame lateral Inſertions they perform the lateral Motions of the Fingers, that is, they preſs them all cloſe againſt each other, but do not ſeparate them all, nor move each Finger in particular towards or from the Thumb. In a general Separation of all the Fingers, the Interoſſei move only the middle and ring Fingers; the Index and little Finger being ſeparated by other Muſcles. In the Motion of the Fingers toward the Thumb, which is termed Adduction, they act only on three Fingers, the middle, ring, and little Fingers. In the contrary Motion or Abduction of the Fingers, they move alſo three; which are, the Index, middle, and ring Fingers.

The Uſes of the Interoſſei in particular, whether external or internal, may be different in different Subjects, according to the Variety of their Inſertions; and, therefore, in living Bodies, nothing can be determined about them.

According to the Situation in which I have deſcribed them, the firſt and ſecond external Interoſſei perform alternately the Adduction and Abduction of the middle Finger; the third performs the Abduction of the ring Finger, that is, moves it toward the little Finger.

The firſt internal Interoſſeus makes the Abduction of the Index, or moves it toward the middle Finger; the ſecond makes the Adduction of the ring Finger, by moving it, alſo, toward the middle Finger; and the third performs the Adduction of the little Finger, or moves it toward the middle Finger. *Winſlow's Anatomy.*

The Interoſſei of the Foot.

Theſe are ſeven ſmall Muſcles, which fill up the four Interſtices between the Metatarſal Bones, much after the ſame Manner as in the Hand. The four largeſt are ſuperior, the other three inferior. The common Diviſion of them into external and internal is very improper.

The firſt of the ſuperior Muſcles is fixed poſteriorly by fleſhy Fibres, in the Ligament which connects the Baſis of the two firſt Metatarſal Bones; in the Outſide of the firſt Bone, and in the upper Part of the Inſide of the ſecond. It ends in a ſmall Tendon, which is inſerted in the Inſide of the firſt Phalanx of the ſecond Toe.

The other three are fixed by fleſhy Fibres, in the inner and upper Parts of the laſt three Metatarſal Bones, and in the outer and upper Parts of the ſecond, third, and fourth Bones. They, alſo, end in Tendons, which are inſerted in the Outſides of the firſt Phalanges of the ſecond, third, and fourth Toes.

The three inferior Muſcles are fixed proportionably by fleſhy Fibres to the lower Parts of theſe Bones, principally to the third, fourth, and fifth, and to the Ligaments belonging to their Baſes. The firſt inferior Interoſſeus is likewiſe fixed by ſome Fibres to the Tendon of the Peronæus Maximus. The Tendons of theſe three Muſcles are inſerted in the Inſides of the Baſes of the firſt Phalanges of the laſt three Toes.

The Interoſſei of the Foot have the ſame Uſes as of the Hand. The firſt ſuperior Muſcle brings the ſecond Toe near the great Toe; the other three bring the ſecond, third, and fourth Toes, near the little Toe. The three inferior Muſcles move the laſt three Toes toward the other two. I here ſpeak according to the Situation which I have moſt frequently obſerved; but, as that Situation varies, the Uſes muſt likewiſe be different. *Winſlow's Anatomy.*

INTERPASSARE, in Medicine, is to quilt a Bag fill'd with medicinal Ingredients, in order to their equal Diſtribution.

INTERPELLATUS *Morbus*, in *Paracelſus*, is a Diſeaſe which is attended with irregular, or uncertain Paroxyſms.

INTERPOLATUS *Dies*, in *Paracelſus*, is a Day free from a febrile Paroxyſm; or a Day interpolated betwixt two Paroxyſms.

INTERSCAPULARIA. The Cavities betwixt the *Scapulæ* and *Vertebræ*. *Blancard.*

INTERSCAPULIUM. The Spine of the *Scapula*.

INTERSEPTUM. The Uvula, and the Septum Narium, are thus call'd.

INTERSPINALES COLLI, certain Muſcles of the Neck, call'd by *Winſlow*, *Spinales Colli Minores*.

Theſe Muſcles lie between the ſix ſpinal Apophyſes of the Neck, and between the laſt of the Neck and firſt of the Back; being inſerted in theſe Apophyſes by both Extremities on one Side of the poſterior cervical Ligament, which parts them from thoſe on the other Side.

The Inter-ſpinales are Aſſiſtants to the Semi-ſpinales in their mutual Action, and may, alſo, ſerve to bring back the Neck to its natural Situation, after ſmall Motions of Rotation. *Winſlow.*

INTERSTINCTUS. Diſtinct, relative to the Small-pox.

INTER-TRANSVERSALES *Muſculi*, called by *Winſlow* *Tranſverſales Colli Minores*.

Theſe are very ſmall ſhort Muſcles, found in the Interſtices of ſeveral tranſverſe Apophyſes, in which they are inſerted. *Winſlow.*

Their Uſe is to approximate theſe tranſverſe Apophyſes.

INTERTRIGO. A Galling. Gallings produced by the Wringing or Attrition of uneaſy Shoes are mollified and kept from Swelling by the Application of the Lungs of a Swine, or a Lamb, warm, to the grieved Part. Effectual to the ſame Purpoſe is the Powder of a burnt old Shoe, ſprinkled on the Place; or raw Wool, or the Flowers of the Garden Pomegranate, each of them burnt, and the Aſhes ſprinkled thereon; or *Acaſia* rubbed on the galled Part with Vinegar. To thoſe who have tender Fleſh apply the *Emplaſtrum ex Hordeo*. For Gallings, Burns, and Eruptions of Papulæ, a moſt excellent Plaiſter is prepared of three Ounces of Litharge, four Ounces of Wax, one Ounce of recent Swines Fat, and a Pound of Oil of Myrtle: To induce a Cicatrix, omit the Fat in the Preſcription. *Aetius, Tetrab. 4. Serm. Cap. 67.*

Balauſtines are much commended by *Oribaſius* for ſpeedily cicatrizing Gallings and old Ulcers: The Bark of the Pine-tree, alſo, is ſaid by the ſame Author to be excellent for Gallings, being applied to the Place.

Intertrigo takes its Name, according to *Varro de Lingua Latina, Lib. 4. ab eo quod duo inter ſe trita. Rhodii Lexicon Scriberianum.*

Children are ſubject to Inflammations and Excoriations, in ſeveral Parts of their Bodies, particularly behind the Ears, in the Neck and Thighs. Thoſe on the lower Parts uſually proceed from the Acrimony of the Urine, which ſometimes frets off the Epidermis, and leaves the Cutis bare. The Cure may be accompliſhed by waſhing the Parts gently with warm Water, twice or thrice a Day, which diſſolves and drinks up the acrimonious Salts

of the Urine lodged therein. Nurſes uſually diſſolve a little Fullers Earth in the Water, and apply it to the Part, after it has been well waſhed. Finely powdered Ceruſe, Chalk, or calcined Slate, will, alſo, ſerve for the ſame Purpoſe. But where the Inflammation and Excoriation are conſiderable, 'tis proper to uſe, by way of Fomentation, a Solution of Trochiſci albi Rhaſis in Plantain-water, twice or thrice a Day. In the mean time the Parts ſhould, by all means, be kept dry, or prevented from rubbing one againſt another by the Interpoſition of fine Linen Rags, or the Uſe of a little red deſiccative Ointment or Diapompholygos ſpread thin upon it.

INTERVALLUM. An Interval betwixt two Paroxyſms of a Diſtemper; or betwixt two Pulſations of the Artery.

INTERVERTEBRALES *Muſculi.*

They ariſe from the Body of one Vertebra laterally, and are inſerted, after an oblique Progreſs, into the back Part of the other Vertebra immediately above it.

Their Uſe is to draw the Bodies of the Vertebræ nearer one another, and a little to one Side. *Douglas.*

INTESTINA TERRÆ. Earth-worms.

INTESTINA. The Inteſtines. See COELIA.

As I have generally conſider'd the Stomach and Inteſtines together as one continued Canal, I ſhall, in this Place, give an Account of the Inflammations to which they are ſubject. And firſt of the Stomach.

This Organ, like all other Parts of the Body, may be ſeized with a true Inflammation, the Signs and Effects of which are generally theſe following: A burning, fix'd, and pungent Pain in the Stomach; an Exacerbation of this Pain, at the very time any thing is taken into the Stomach; a painful Vomiting immediately after Eating or Drinking, accompany'd with a tormenting Hiccup; a violent and perpetual Uneaſineſs about the Præcordia, and an acute continual Fever. The Cauſes of this Diſorder are either general Inflammations, the Contiguity of the Stomach to the other Parts inflam'd, or the taking acrid Subſtances into the Stomach.

An Inflammation of the Stomach generally ſoon proves mortal, unleſs expeditiouſly cured, in conſequence of the Injury done to the important Function of this Part, and the incredible Number of Nerves connected with it.

Like other Inflammations, it terminates either in Health, in ſuppuratory, ſcirrhous, cancerous, or gangrenous Diſorders, or in the ſudden Death of the Patient, accelerated by Convulſions.

As ſoon as this Diſorder is, from its Signs before enumerated, known to be preſent, we are forthwith, and with the greateſt Care, to uſe liberal Veneſection, which is to be repeated as Neceſſity requires, highly mild, nutritive, emollient and antiphlogiſtic Liquors, of a Quality oppoſite to the Cauſe of the Diſorder; as, alſo, Clyſters and Fomentations of a like Nature. But all acrid Subſtances, and eſpecially Vomits, are carefully to be abſtain'd from.

A mild and lenitive DRINK.

Take of the recent Leaves of Wood-ſorrel, three Ounces; of the Leaves of Mallows, an Handful and an half; of entire Oats, an Ounce: Boil with a ſufficient Quantity of Whey; to every twelve Ounces of which add two Yolks of Eggs, and one Ounce of the Rob of Currants.

A CLYSTER.

Take of the recent Leaves of Endive, Succory, Fumitory, Mallows, and Marſhmallows, each an Handful: Boil with Whey, and, after expreſſing the Decoction, uſe ten Ounces of it for a Clyſter, twice or thrice a Day.

If an Inflammation of the Stomach terminates in a Suppuration, many ſeemingly ſurpriſing Misfortunes enſue; but eſpecially a Nauſea, Vomiting, and Pain, which, when their Cauſe is unknown, are rarely cur'd; but when it is known, they are to be treated in the ſame manner with Abſceſſes.

When an Inflammation of the Stomach produces a Scirrhus, or a Cancer, it then excites exceſſive Vomitings, and intolerable Pains, which are heightened and protracted by taking the leaſt thing into the Stomach, of a fixed Nature, and augmented by all acrid Medicines.

By mild and lenient Medicines alone, this Species of the Diſorder may be alleviated, but rarely cured. Medicinal Waters are, however, in this Caſe, the moſt efficacious Means of Relief.

From what has been ſaid above, and under the Article HEPAR, the Origin, Nature, Effect, Knowledge, Prognoſtic, Cure, and palliative Cure of Inflammations, Suppurations, Gangrenes, Scirrhuſes, and Cancers, of the Spleen, Pancreas, and Omentum, may be deduced.

INFLAMMATIONS OF THE INTESTINES.

Not only the Stomach, but alſo the Inteſtines, eſpecially ſmall ones, are often ſubject to an acute Inflammation in their Membranes. This Misfortune is produced by the common Cauſes of an Inflammation, convey'd to the Inteſtines; either, for Inſtance, by the acrid Matter of Liquors drank, of Aliments, Spices and Pickles, Medicines, or Poiſons, taken into the Stomach, convey'd thence into the Inteſtines, and there retain'd in their valvulous Folds. This Misfortune may, alſo, be produced by an acrid, putrid, fetid, purulent, ichorous, gangrenous, bilious, or atrabilious Matter convey'd from the Oeſophagus, Stomach, Liver, Spleen, Pancreas, and Omentum, to the Inteſtines, where it remains and corrodes them. And, laſtly, an Inflammation of the Inteſtines may be produced by violent previous Convulſions, which create Flatulences, ſtop the Motion of the Fluids, and by that means produce an Inflammation.

This Diſorder contracts the Inteſtines, cloſes up their Cavities, prevents the Paſſage of what is convey'd to them, produces highly acute, burning, and fixed Pains; excites violent Convulſions, when the inflam'd Part is irritated by the Things convey'd to it; renders the Patient coſtive; excites a Vomiting of the Aliments, and of Things convey'd to the affected Part, ſooner or later, according as the Inflammation is near the ſuperior, or inferior Parts of the Inteſtines; produces painful Flatulences, acute Gripes accompanied with Rumblings, the Iliac Paſſion, that Diſorder call'd Volvulus, an Abſceſs, a Gangrene, a Scirrhus, a Cancer, a highly acute Fever, exceſſive Weakneſs, in conſequence of the intenſe Pain, and ſudden Death.

So long as the Diſorder continues in its inflammatory State, it is, by the Ignorant and Unſkilful, taken for a Twiſting of the Inteſtines; and being, through a dangerous Miſtake, aſcribed to Cold, Flatulences, and Wind, is for that Reaſon treated with hot Medicines, a Practice which proves fatal to the Patient.

But a genuine Inflammation of the Inteſtines is known from its concomitant continual acute Fever, intenſe Thirſt, exceſſive Heat, a hard Pulſe, a burning Pain, high-coloured Urine, and the Induction of a ſudden Weakneſs.

When an Inflammation ſeizes the Flexure of the Colon, the Diſorder reſembles the Colic; but, if it ſeizes the Extremity of the *Inteſtinum Rectum*, it is generally taken for the blind Hæmorrhoids; in which Caſe, its moſt happy Termination is by a mild, bloody, and bilious Dyſentery.

As ſoon as an Inflammation of the Inteſtines is known to be preſent, from the Signs before enumerated, we are, in its firſt Stage, with the greateſt Expedition, to attempt its Cure; which is to be obtain'd, firſt, by liberal and repeated Veneſection, as in a Pleuriſy; ſecondly, by the careful Injection of laxative, diluting, and antiphlogiſtic Clyſters, repeated three, four, or more times a Day; thirdly, by the frequent drinking of Liquors of a laxative, diluting, and antiphlogiſtic Nature, with a prudent Addition of Opium, and ſuch Things as are oppoſite to the particular known Cauſe of the Diſorder; fourthly, by Fomentations prepared of Subſtances of like Qualities apply'd to the whole Abdomen, and eſpecially Fomentations conſiſting of young, vigorous, and ſound Animals; fifthly, by carefully abſtaining from all kinds of Drink, Aliments, or Medicines which are of an acrid, hot Nature, or capable of increaſing the Impetus of the Fluids; as, alſo, by avoiding Exerciſe, and the Exorbitancies of the Paſſions; and, ſixthly, by perſiſting in the Uſe of theſe Things, till the entire Diſorder is remov'd, and does not return in three Days.

If this Diſeaſe is not cured by proper Remedies, and continues to rage with Violence longer than three Days, the Pain, Heat, and Diſtraction, are ſucceeded by a Shivering thro' the whole Body, without any apparent Cauſe, and by an obtuſe Pain, with a Senſation of Weight in the Part affected; theſe are Signs, that an Abſceſs is forming in it: Within fourteen Days after, the Abſceſs breaking, the Pus will be diſcharg'd: If this Pus is diſcharg'd into the Cavities of the Abdomen, it produces many Diſorders ſimilar to thoſe ariſing from a Diſcharge of Pus from the Liver, and mention'd under the Article HEPAR: But, if this Pus is diſcharg'd into the Cavities of the Inteſtines, it produces a purulent Dyſentery, ſmall or great, ſhort or long, according to the Nature of the Ulcer form'd. In this Caſe, entire Membranes of the Inteſtines are frequently diſcharg'd, and a Conſumption is often brought on.

As ſoon as an Inflammation of the Inteſtines is known to be preſent, all ſuch Aliments are carefully to be abſtain'd from, as are capable of generating a large Quantity of hard and thick Fæces: The Patient is only to be nouriſh'd with Broths boiled with gently detergent Roots; balſamic detergent Decoctions are to be copiouſly drank, and injected by way of Clyſters; or Medicinal Waters are to be copiouſly drank, and their Uſe perſiſted in till a perfect Cure is brought about.

The ALIMENT *to be uſed in this Diſorder.*

Take of the Roots of Viper's-graſs, Goat's-beard, Skirret, Parſley, and Succory, each two Ounces: Boil in Fleſh-broth, and, with every thirty Ounces of the Broth, mix two Yolks of Eggs, and a ſufficient Quantity of Salt.

A DECOCTION.

Take of the Roots of Garden Valerian, two Ounces; of the Leaves of Lovage, two Handfuls; of the Flowers of Saint John's-wort, one Handful; and of the Flowers of Agrimony, two Ounces: Boil with two Pints of Water; of which let the Patient drink two Ounces every Hour. This Decoction is alſo to be uſed as a Clyſter.

If the Diſeaſe proceeds from highly violent Cauſes, and ſuch as are productive of terrible Symptoms in the inflam'd Part, a Gangrene may be eaſily produced, which will at laſt prove mortal.

From the Violence of the Cauſes, and the terrible Nature of the Symptoms, we may eaſily foreſee, that a Gangrene will happen, if the Signs of a benign Reſolution and Cure do not, at the ſame time, appear.

That a Gangrene is forming, may be known, not only from the Circumſtances mentioned in the preceding Paragraph, but, alſo, from the ſudden Remiſſion of the intenſe Pain, without any apparent Cauſe; a weak and intermittent Pulſe; a Dyſentery, in which the Matter diſcharg'd is fetid, cineritious, ichorous, livid, or black; an inſenſible Evacuation of the Fæces; and, ſoon after, a calm and gentle Death.

The Diſorder, when attended with the laſt-mentioned Train of Symptoms, is rarely to be cured; but ought to have been ſo before theſe appeared: But the only beneficial Meaſures which can be taken, are, that the Patient ſhould abſtain from all Aliments capable of producing a large Quantity of hard, acrid, and thick Fæces; that he ſhould be nouriſh'd with Broths, in which gently detergent Roots are boil'd, drink large Quantities of balſamic and detergent Decoctions, have the ſame injected by way of Clyſter, and uſe large Quantities of Medicinal Waters.

But if the Part inflam'd is glandular, the Heat intenſe, the impacted Matter thick, the Emunctories of the Glands obſtructed, and their Follicules and Sides diſtended, a Scirrhus ariſes, which is a very different Diſorder from the preceding; and muſt be clearly and certainly known and diſtinguiſh'd.

If, therefore, an Inflammation in the ſmall Inteſtines, with the Conditions mentioned under the Article INFLAMMATIO, as neceſſary to form a Scirrhus, is of long ſtanding, but does not riſe to the greateſt Height; and, being neither cured by Reſolution, proper Medicines, nor Suppuration, leaves in the Part affected, a Stupor, a Senſe of Weight, and a conſtant Diſtraction, we have juſt Ground to ſuſpect, that a Scirrhus is forming there.

If this Scirrhus follows its general Nature, and produces its ordinary Effects already mentioned, in this Part, many violent and obſtinate Diſorders enſue, ſuch as Stupor, Weight, and Increaſe of Bulk, all which are daily augmented: Hence proceeds a Leſſening of the Cavity of the Inteſtines; a Stagnation of the Fæces and Chyle in them, and their Action on the reſiſting Parts; the Matter, in the mean time, becoming highly putrid by its Continuance. Hence ariſe an Obſtruction and Intortion of the Inteſtines, and the conſequent Detention of the Fæces; the Iliac Paſſion; that Diſorder called Volvulus, or a Dyſentery of a drier Species, produced by an acrid irritating Matter; Convulſions; Hiccup; Vomiting; continual Pain; a Fever; Extenuation; an Atrophy; and, at laſt, Death.

Medicines of whatever Kind are of little Efficacy in this Species of the Diſorder: Let the Patient, however, abſtain from all ſuch Aliments as generate large Quantities of thick and hard Fæces, and feed only upon Broths, in which detergent Roots are boil'd: He muſt, alſo, drink large Quantities of balſamic and detergent Decoctions; which are, alſo, to be injected by way of Clyſters. Medicinal Waters are, alſo, to be liberally uſed. By theſe means the Diſorder may be long protracted without any great Degree of Inconvenience.

But if the Scirrhus, generated in this Part, is join'd with the Cauſes capable of producing a Cancer, and is known by the Signs enumerated under the Article CARCINOMA, then the State of the Patient is highly miſerable, and incurable; and may be underſtood from what is ſaid under that Article, compared with the Nature, Function, and nervous Texture, of the Inteſtines. And the Patient is, in a particular manner, afflicted with an highly acrid, continual, and obſtinate Dyſentery, which burns, corrodes, and conſumes all the Parts it touches; and is attended with violent Convulſions, and intolerable Pains of a fixed and laſting Nature, till, at laſt, Death puts an End to the Patient's Misfortune.

When the Preſence of a Scirrhus is known by the Signs enumerated under that Article, great Caution is requiſite, and it is to be treated in the manner already directed. But if, in order to remove it, acrid Subſtances are us'd, eſpecially draſtic Purgatives, a Cancer is produced, and rages with uncommon Violence. In this Caſe the Drink is to conſiſt only of recent Whey; and the Patient is to be nouriſh'd only with Broths prepar'd of farinaceous Subſtances alone, or Fleſh, together with the Yolks of Eggs. Mild Clyſters, conſiſting only of a Decoction of Linſeed, Leaves of Nightſhade, or white Poppy-heads, are to be injected. Then Medicines highly demulcent, anodyne, gently narcotic, and not eaſily convertible into an acrid Nature, are to be exhibited.

From what has been ſaid, it is ſufficiently obvious, why, in Practice, ſo violent, fixed, obſtinate, intolerable, and inſurmountable Pains are perceiv'd in the Oeſophagus, the Mouth of the Stomach, the Liver, the Spleen, the Pancreas, the Ilium, and the Colon; as, alſo, how various and ſurpriſing a Diſorder a Dyſentery is in every reſpect; how improperly and unjuſtly, in Diſorders of this kind, a certain hectic Acrimony of the Humours is accus'd, and prejudicial Medicines exhibited, in order to remove this ſuppoſed Acrimony; how great Caution is requiſite in exhibiting Purgatives, in exceſſive Pains of theſe Parts; what is the Nature of that incurable Hypercatharſis, which, in ſome Patients, frequently ſucceeds the Exhibition of Purgatives; how various Remedies and Meaſures are requiſite to the Cure of Dyſenteries; how vain, fallacious, and deſtructive it is, to preſcribe one Medicine, as proper in all their various Conditions and Natures; or, in general, one univerſal Method of Cure.

INTORTUS. Writhed, twiſted. *Scribonius Largus*, N. 43. directs Vaporation of the Parotides, with fervent Sea-water, by means of recent Sponges dipt therein, and expreſs'd *per Linteum intortum*, through a twiſted Linen Cloth, for the greater Force. *Celſus*, *Lib.* 5. *Cap.* 28. for a Callus in a Fiſtula, directs us to introduce *Papyrum intortum*, a twiſted Piece of Papyrus, anointed over with ſome Cauſtic. *Intortæ Venæ & conglomeratæ*, in the ſame Author, *Lib.* 7. *Cap.* 18. are Veins twiſted or ſhrivel'd up, and conglomerated in a Cirſocele.

INTOXICATIO, from *Toxicum*, τοξικὸν, Poiſon, Venom, is properly the ſame as INFECTIO. *Paracelſus*, *Lib.* 1. *de Peſte*, reſtrains *Intoxicatio* to the external Poiſoning of Wounds and Abſceſſes. It is generally now us'd in a topical Senſe for *Inebriatio*, Inebriation. See ALCOHOL.

INTRICATUS. An Epithet of a Muſcle. See BICAUDALIS.

INTRITUM, ἴντριτον, ἴντριμμα, ὑπότριμμα, a culinary Word, ſignifying a ſort of minced Meat, ſo call'd *ab interendo*, from rubbing or grating. *Intrita*, according to *Pliny*, is Food prepar'd by rubbing or grating. *Donatus* ſays, it is properly *Mortarium alliatum*. *Intrita* and *Intritum*, in *Martial*, ſignifies Meats prepared by pounding in a Mortar; for which the Moderns uſe *contuſum*. *Celſus* uſes *Intrita* in the ſame Senſe; as do *Varro*, alſo, and *Columella*. *Rhodii Lexicon Scribonianum*.

INTROSUSCEPTIO, INTUSSUSCEPTIO. Introſuſception is a preternatural Ingreſs of one Portion of an Inteſtine into another, or a Reduplication of the Inteſtine. See ILIACA PASSIO.

INTSIA. The Name of a very large evergreen Tree, which grows in *Malabar*, call'd, alſo, *Acacia Malabarica Globoſa*. The Juice of the Leaves, and of the Bark, taken with a little Salt, mitigates Pains of the Belly: And the Bark, pulverized, and ſprinkled upon Ulcers, is ſaid to eaſe the Pains thereof. *Raii Hiſt. Plant.*

INTYBUS. A Name for the *Cichoreum*; *latifolium*: *ſive Endivia vulgaris*: For the *Hedypnois*; *annua*: For the *Hyoſeris*; *anguſtifolia*: And for the *Lampſana*.

INVERECUNDUM OS. The Os Frontis.

INVIDIA. Envy. This is eſteem'd a Cauſe of Diſeaſes by ſome Phyſicians, particularly of an Atrophy; and produces its Effect like all other Species of Sorrow.

INUNCTIO. Inunction. This imports either the Action of anointing, or the Materials with which a Part is anointed.

INVOLVULUS. The Name of a Worm found upon Vine-leaves.

INUSTORIA are Cauteries.

IOBOLOS. An Epithet for thoſe kinds of venomous Animals, which dart out their Poiſons.

IODES, ἰώδης, from ἰὸς, Ærugo, Verdegriſe. Æruginous, or of the Colour of Verdegriſe. It is frequently us'd as an Epithet for the Matter diſcharg'd by Vomit, in *Hippocrates*.

JOHUALXOCHITL. See COLCAQUAHUITL.

JOLLÆ COMPOSITIO. The Name of an Eſcharotic deſcrib'd by *Celſus*, *Lib.* 5. *Cap.* 22.

ION, ἴον. The Violet.

JONDRABA. A Name for the *Thlaſpidium*; *apalum*; *ſpicatum*.

IONIA. The *Athenian* Name for the Chamæpitys, according to *Paulus Ægineta*, *Lib.* 5. *Cap.* 45.

JONTHLASPI.

The Characters are;

It hath a Flower, conſiſting of four Leaves, which are placed in form of a Croſs; out of whoſe Flower-cup riſes the Pointal, which afterwards becomes a Fruit, which is flat, round, and ſhap'd like a Buckler, having but one Cell, in which is contain'd a flat round Seed.

Boerhaave mentions two Species of this Plant; which are,

1. Jonthlaſpi; minimum; ſpicatum; lunatum. *Col. p.* 1. 284.

2. Jonthlaſpi; luteo flore; incanum, montanum; *Dioscoridis*. *Col. p.* 1. 280.

Beſides the two foregoing Species of Jonthlaſpi, *Miller* mentions a third; which is,

Jonthlaſpi orientale, fructu echinato. *Tourn. Cor.*

The firſt Sort is found in Plenty upon the Mountains near the *Tiber*. The ſecond Sort grows wild about *Montpelier*; as alſo in the Fields near *Niſmes*, and other Places in the South of *France*; alſo in *Spain* and *Italy*. But the third Sort was diſcovered by Dr. *Tournefort* in the *Levant*, from whence he ſent the Seeds to the Royal Garden at *Paris*. *Miller's Dict. Vol.* 2.

The two firſt are eſteem'd deterſive, aperitive, and vulnerary.

IONTHOS, ἰωνθος. An hard and ſmall Pimple in the Face, call'd by the *Latins Varus*. See EPHELIS, FURUNCULUS, and VARUS.

IOS, ἰός. Æruga, Verdegriſe.

IOSACCAR, ἰοσάκχαρ. Sugar of Violets.

IOTACISMUS. A Defect in the Tongue, or Organs of Speech, which renders a Perſon incapable of pronouncing certain Letters.

IOUI. This is an alimentary and reſtorative Liquor, prepar'd in *Japan*, and capable of being preſerv'd ten or a dozen Years. It is fluid like Broth, aqueous, black, of an agreeable Smell, and good Taſte, ſalt, and ſavoury. With reſpect to the Manner of preparing it, no more is known, than that it is made of the Gravy of Beef, expreſs'd when half-roaſted: The *Japoneſe* keep the reſt a Secret, and ſell it very dear. This Liquor is very rare in *Europe*: Some, however, is imported either on account of Curioſity or Luxury. It is thought to be a Reſtorative after Diſeaſes, and, on this Account, is eſteem'd greatly all over the Eaſt.

JOVIS BARBA, or BARBA JOVIS.

The Characters, according to *Miller*, are;

It hath pennated or wing'd Leaves; the Flowers are papilionaceous, and are ſucceeded by ſhort oval Pods, in which is, for the moſt part, contain'd one roundiſh Seed.

Boerhaave mentions five Species of this Plant; which are,

1. Barba Jovis. *C. B.* 397. *Barba Jovis pulchre lucens.* J. B. 1. 11.

2. Barba Jovis; Africana; foliis viridibus pinnatis; flore cæruleo.

3. Barba Jovis; Hiſpanica; incana; flore luteo. *T.* 651.

4. Barba Jovis; Lagopoides; Cretica; fruteſcens; incana; flore ſpicato, purpureo, amplo. *Breyn. Prodr.* 2.

5. Barba Jovis; Græca; Linariæ folio argenteo, ampliori; flore luteo, parvo. *T. C.* 44. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 40.

There are no medicinal Virtues attributed to either of theſe Plants at preſent, that I know of.

Miller mentions nine Species of this Plant.

JOVIS FLOS. The Crocus. *Blancard.*

IOULOS, ἰουλος. The firſt Appearance of downy Hairs on the Chin is thus call'd; as alſo the downy Hairs on the Temples. *Ruffus Epheſius.*

IPECACUANHA. Offic. Pomet. 46. Piſ. (1648.) 101. (1658.) 231. Act. Philoſ. Lond. N. 238. 69. Mont. Exot. 7. Dougl. Ind. 46. Piſ. (Ed. 1648.) 101. (Ed. 1658.) 231. Comm. Cat. Plant. uſual. (Ed. 111.) 95. *Hippecacuanha.* Bagliv. Prax. 74. *Ipecacuanna Braſilienſibus.* Marcgr. 17. Raii Hiſt. 669. *Ipepocoanha.* Marl. Ob. *Igpecaya ſive Pygaya*, Laet. 566. Purch. Pilg. Vol. 4. 1311. *Herba Paris Braſiliana polycoccos.* Raii Hiſt. 1. 669. *Periclymenum parvum Braſilianum Alexipharmacum.* Pluk. Almag. 288. *Periclymenum accedens planta Braſiliana, floſculis congeſtis albis.* Hiſt. Oxon. 3. 535. Cod. Med. 61. *Ipecacuana*, Stroth. Mat. Med. 1. 60. Tourn. Mat. Med. 189. BRASILIAN ROOT.

This Plant is of ſome kin to the *Herba Paris*, but differs from it, in that it has more Leaves, ſix, ſeven, and ſometimes eight, which are of a dark Green above, and lighter underneath, full of tranſverſe Veins; from among theſe riſes one Stalk, bearing on the Top ſeveral five-leav'd white Flowers, growing together in a Cluſter, each of which is ſucceeded by a dark-brown Berry, as big as a ſmall Cherry. The Root, when dry, is about as thick as a Gooſe-quill, appearing wrinkled, and as it were geniculated and knotty, of a brown Colour on the Outſide, conſiſting, principally, of what we may call the cortical Part of the Root, and having but a ſmall whitiſh Pith; it is of a bitteriſh Taſte, and ſomewhat earthy Smell. It grows in *Baſil*, in moiſt, ſhady Woods. *Miller's Bot. Off.*

We have three Kinds of Ipecacuanha, the Grey, or Aſh-colour'd, the Brown, and the White; which laſt, called alſo *Pſeudipecacuanha*, M. *Tournefort* diſcovered to have no Virtue, and is, perhaps, that Kind mentioned by *Piſo*; ſo that, properly ſpeaking, we have only two Kinds of Ipecacuanha, that of *Braſil*, and that of *Peru*, called *Bexuguillo*. The Plant which produces this latter ſort is unknown; and the Root itſelf was not known in *France* till the Year 1672. One M. *Le Gras*, who was not a Phyſician, brought it firſt over, and gave it to M. *Craquenel*, an Apothecary; but it ſucceeded very ill in his Hands, he having given it in the Quantity of two Drams for a Doſe, which was too great. In 1687. Mr. *Garnier* attempted to re-eſtabliſh its Credit; in order to which he applied to the elder *Helvetius*, who made ſeveral ſucceſsful Trials of it. After which the King purchaſed, of *Helvetius*, the Secret, and Manner of giving it, and made it known to all the World; and it was afterwards of great Service in the Armies and Hoſpitals. *Geoffroy.*

Dr. *James Douglas* in the *Philoſophical Tranſactions*, takes notice of the following ſorts of *Ipecacuanha.*

The firſt general Diviſion of theſe Roots, ſays he, muſt be into true and falſe; and each of theſe may be again ſubdivided into ſeveral Species, the[illegible] taken from their Colour.

Of the true Ipecacuanha I have four Kinds, Black, Brown, Grey, and White; but I cannot pretend to determine whether they belong to different Plants, or are only Varieties of the ſame Plant, owing to the Soil in which they grow, as is affirmed by Sir *Hans Sloane*. And as theſe Roots are never imported to us entire, it is impoſſible to give any certain Deſcription of them in that State.

However, by comparing the ſeveral dried Pieces, as we have them, we may very probably conjecture, that a ſhort radical Trunk deſcends from a *Caulis*, and is afterwards divided into ſeveral large Branches; and theſe again into ſmaller ones, in different Series with minute Filaments, or Fibrillæ, going out from them.

Each Piece is made up of an outer or cortical Part, and an inner or fibrous one, which, like a white Nerve, or ſmooth compact Faſciculus of woody Filaments, runs through the Centre or Axis, of the Roots; and, perhaps, incloſes within it a ſmall Pith, which, however, is hardly diſcernible by the naked Eye.

The cortical Part is corrugated by two ſorts of Wrinkles, one ſuperficial, conſiſting either of circular Rings, or little Knots, which do not go quite round; the other penetrating into its Subſtance, being deep Inciſures, or Fiſſures, reaching all the Way to the Nerve.

What Lengths theſe Roots are of, when taken out of the Ground, cannot be determined: I have met with ſome Pieces above nine Inches, many above ſix, but the greateſt Number is ſtill ſhorter.

We find them bent, writhed, and contorted into all manner of Figures; and, indeed, few Pieces are altogether ſtraight for any conſiderable Length.

What has been hitherto ſaid, agrees to all the true Ipecacuanha-roots; but ſeveral other things are ſtill to be taken notice of, in which they differ.

The Black Sort is the ſmalleſt of the four, very hard, and the Fiſſures wide and numerous. The outward Colour of the Cortex is not equally black, in all the Pieces of this Kind; and its inner Subſtance, as well as the Nerve, is moſtly white, tho' not always in the ſame Degree,

The Brown Sort is larger than the Black, the Fiſſures at larger Diſtances, the inner Subſtance of the Cortex darker, and the external Colour has ſeveral Degrees of Redneſs in the ſeveral Pieces. The third, or Grey Sort, is ſometimes found of a darker, ſometimes of a lighter Colour; and the inner Subſtance of the Cortex is Brown, ſtreaked with White. It is much larger than the Black Sort, many Pieces being above one-fourth of an Inch in Diameter, but the Nerve is ſmall in proportion to the cortical Part. I have met with few Pieces of this Species above five Inches in Length; but, as I have already obſerved, nothing can be concluded from thence as to the Length of the whole Roots. The Fiſſures are here ſtill fewer than in the Brown Sort, and in ſome Pieces ſcarce any are to be met with. The ſuperficial Corrugations are various in different Roots, ſome being almoſt wholly ſmooth, and in others the Wrinkles rather longitudinal than circular.

The White Kind, as far as I can judge, by the ſmall Sample which I have of it, is of very different Sizes, ſome Pieces of it being larger than any of the Grey Sort, and the reſt much leſs. The whitiſh Colour of the Cortex has a yellowiſh Caſt, and the nervous Part is very large, in proportion to the reſt. Very few Fiſſures are to be obſerved therein, and hardly any reach ſo deep as the Nerve. The other Corrugations are, likewiſe, very ſhallow, and moſt of them longitudinal; but it ſeems to be more knotty than the other Kinds, and theſe Knots I take to be owing principally to the Fibrillæ, which go out from the larger Branches of the Roots.

The Places of Growth of theſe different Species of Ipecacuanha have not, as yet, been fully ſettled. The Black Sort is hitherto known to come only from *Braſil*, by the Way of *Lisbon*, and ſome of our Druggiſts, for that Reaſon, diſtinguiſh it by the Name of the *Braſil* Root.

About the Brown Sort I am informed, by Dr. *James Houſtoun*, who reſided ſeveral Years in *New Spain*, that it grows plentifully at ſome Diſtance from the City of *Cartagena*, in the Kingdom of *New Granada*; from whence it is frequently ſent in Saroons, or Skins, containing an hundred Weight, to *Jamaica*, and ſo to *England*; where it is certain we have had it, of late Years, in great Abundance.

The Grey Ipecacuanha is, with us, preferred to all the reſt, and by far the moſt generally uſed, when it can be had. It is ſaid, by Authors, to grow in *Peru*, from whence it is brought to *Portobello*, and from thence into *Europe*, by the *Spaniſh* Galleons. Some Parcels of it are, likewiſe, probably, ſent from *Portobello* to *Jamaica*; for we are certain, that it has, ſometimes, been imported hither from that Iſland. By ſome Specimens brought me from *St. Thomé*, a *Portugueſe* Iſland, under the Equator, whither they were ſent directly from *Braſil*, it is evident, that this Species is, likewiſe, a Native of that Country; and there-

fore

fore muſt either have been included by *Piſo*, under one of the two Species mentioned by him, or elſe diſcovered ſince his Time. According to Father *La Bat*, in his late Voyage to the Iſlands of *America*, this Species grows, alſo, plentifully in *Martinico*, where, for many Years paſt, it has been uſed by the Inhabitants.

The White Sort, called, by the *Portugueſe*, *Ipecacuanha Blanca*, is ſaid, by *Piſo*, to grow in *Braſil*; and, if we may believe Father *La Bat*, it is likewiſe found in *Martinico*.

Theſe are the four Kinds of true Ipecacuanha, which have hitherto come to my Knowledge; but I have met with two other Roots, to which that Name has been falſly aſcribed, which from their outward Colour I ſhall call White and Reddiſh-brown.

The White Sort agrees nearly, both in Colour and Surface, with the true White, but it is not near ſo knotty. It is, likewiſe, conſiderably larger in Size, ſtraighter, and ſofter to the Touch.

The Brown Sort is of a deeper Colour than the true Brown, and many Pieces have ſome Mixture of Red, (from whence it has been, ſometimes, called Red Ipecacuanha) and the inner Subſtance of the Cortex inclines to a reddiſh Yellow. The Pieces of it are much longer than any of the former Sorts, ſome of them meaſuring ſixteen Inches, and they are of a Size between the Black and the Grey. The Fiſſures are at greater Diſtances from one another, than in the true Brown, and the Spaces between them much ſmoother. In a Word, though this Root, when mixed with the true Brown, to which it bears the greateſt Reſemblance, may eaſily be confounded with it; yet, when they are attentively compared, the whole Appearance ſufficiently diſtinguiſhes them.

Both theſe falſe Kinds were brought me from *Maryland*, in 1725. by a Surgeon, who informed me, that they grow there in great Plenty, being called Ipecacuanha by the Inhabitants, and uſed as a Vomit by thoſe of inferior Rank. I have, ſince that Time, received a Sample of the Brown Sort, taken from a Parcel which lay in the Cuſtom-houſe, above twelve Years ago, and called by the Name of wild Ipecacuanha.

Sir HANS SLOANE informed me, that this falſe Brown Kind was the ſame which was formerly ſent to him from *Virginia* for the true Ipecacuanha, and which he afterwards diſcovered to be the Root of a poiſonous *Apocynum*, deſcribed by him in his *Natural Hiſtory* of *Jamaica*; in which Iſland it is very common, and likewiſe in *New Spain*, as appeared by the Specimens ſent him by Dr. *Burnet*. See APOCYNON.

M. BOULDUC's *Analyſis of* IPECACUANHA.

There are, ſays this Author, two Species of *Ipecacuanha*, known at preſent, one Grey, the other Brown, inclining on the Outſide to Black. The Grey is leſs violent in its Effects, and leſs certain in its Succeſs, than the Brown, as appears from Experiments made by myſelf and others: However, as we generally prefer mild before violent Remedies, the Grey Ipecacuanha is more frequently uſed than the Brown.

Since theſe two Roots came in Requeſt, we have been preſented with a third, which though of a white Colour, and little reſembling the others, they have been very ſolicitous to have it paſs for another Ipecacuanha; and, in Fact, it is now called *The White Ipecacuanha*, and is uſed in ſome Diſtempers, as the other, for Infants, and Women with Child, becauſe generally it has very little Effect.

I went firſt to work upon the Grey Sort, with a Deſign to carry on the Operation to the other two. I made an Analyſis of it, by two different Methods; one, by the common Way of Diſtillation by the Retort, in a cloſe and gradual reverberatory Heat; the other, by way of Extraction, with proper and convenient Diſſolvents.

By Diſtillation I obtain'd no more, at firſt, than a Phlegm, and an acid Spirit, with a little Oil: And from the black Maſs which remain'd in the Retort, and was calcin'd by a very violent Fire, I obtained a very ſmall Quantity of fixed Salt.

I gain'd ſo little Knowledge by this Analyſis, that I might be excuſed from entering into a tedious and particular Account of the Proportions and Effects of all the Parts produced from it: And I might juſtify myſelf for omitting it, from a Perſuaſion that it would be of no great Service for acquainting us with the true Nature of the mixed Bodies, and that it only preſents us with the common Subſtance deſtroyed. And yet I thought myſelf obliged to give it, not only becauſe it has been the Cuſtom for a long time, but becauſe it cannot fail to diſcover and demonſtrate to us the Proportions of the ſeparated Parts.

In order, therefore, to make the more ſucceſsful Inquiry into the Conſtitution of this Root, I thought it beſt to proceed by way of Extraction; which might afford me an Abſtract, or, at leaſt, ſome eſſential Part, of the Compound; by which its principal Character, and ſpecific Virtues, might be determin'd.

I began the Extraction with highly rectified Spirit of Wine, and, by that means, obtain'd, from eight Ounces of the Root, ten Drams of ſulphureous or reſinous Parts; the Reſiduum, being entirely depriv'd of its reſinous Parts, and well dried, weigh'd no more than ſix Ounces; from which, however, by the Help of diſtil'd Rain-water, I obtain'd two Ounces of pretty ſolid Extract; which was nothing but the ſaline Parts of the Root, mix'd with ſome earthy Parts, which were inſeparable from them. This Extract had its Parts not very cloſely united, becauſe it had been ſeparated from its reſinous Parts in the preceding Operation.

I thought myſelf oblig'd to uſe this double Extraction, one with Spirit of Wine, and the other with Water, becauſe I was very well aſſur'd, that the Virtue of this Root did not conſiſt in its Reſin only, but alſo in its ſaline Parts, on which the Spirit of Wine could not faſten, and of which Water was the only proper Diſſolvent.

The laſt Reſiduum, or Caput mortuum, being deprived of both its reſinous and ſaline Parts, weigh'd no more than four Ounces.

From theſe two different Extractions it appears, that this Root contains a much greater Quantity of ſaline than reſinous Parts, beſides ſome earthy Parts: Whence I infer, that, without the Help of Spirit of Wine, I could, by Water alone, extract both the ſaline and reſinous Parts of that Root; becauſe the ſaline Parts being predominant over the reſinous, the former are capable of attenuating, diſengaging, fuſing, and diſſolving the others, in order to appropriate them to themſelves, and ſo make of both but one Body, conſiſting of ſaline and reſinous Parts.

This agrees with Experience; for it is the known Property of Salts to diſſolve Sulphur: And the Trial which I made of them on this Occaſion confirms my Inference; ſince, with bare Rain-water, and the like Quantity of the ſame Root, I obtain'd three Ounces and an half of pretty ſolid Extract, with its Parts much more cloſely united than in the preceding Experiment; and from the Reſiduum, which, when well dried, weighed but five Ounces, and would afford no more Extract by Water, by Spirit of Wine I obtain'd no more than one Dram of a kind of Reſin.

All this Labour, and all theſe Obſervations, would deſerve but little Regard, if they were not ſucceeded by ſome Experiments made on the particular Effects of theſe ſeveral Parts. My Deſign is not to ſpeak of thoſe Effects which proceed from the Diſtillation: We have Proofs enough to convince us, that not one of thoſe kinds of Parts which are abuſively call'd *Principles*, retain any of the Virtues of the compound Body from which it was ſeparated. But we are not to paſs the ſame Judgment on thoſe Parts which are afforded by different Extractions; as for theſe, we know, that they contain, as it were, in Abſtract, all the active Principles of the Compound. *Memoires de l'Acad. des Scien.* 1700. *p.* 8.

In another Diſſertation, publiſh'd the ſame Year, M. *Boulduc* gives his Obſervations upon the Brown Ipecacuanha. By Diſtillation, he remarks, that it yielded leſs Oil than the Grey; and that the laſt Portion of Spirit which comes away with its Oil upon the greateſt Violence of Fire, although conſiderably acid, appear'd to him to have more volatile Parts than the ſame Portion of Spirit in the former. He ſays, that, by Trial with Salt of Tartar, the Particles of the Brown eſcap'd with the greater Briſkneſs, and ſtruck the Senſe of Smelling more powerfully. Hence he concluded beforehand, that as the Brown contains leſs oily Parts than the Grey, ſo it contains fewer reſinous: And, in the ſecond Place, that this laſt Portion of Spirit ſeems to contain more volatile Parts, which is the Reaſon it is more violent in its Effects. This Obſervation may countenance the Opinion of ſuch as believe the purgative Virtues of Medicines to be exalted by means of a certain volatile Salt contain'd in them. By Extraction, both by Spirit of Wine, and by Water, that of the Brown weigh'd leſs than that of the Grey. The Proportions are theſe: From eight Ounces of the Grey he had, by Spirit of Wine, ten Drams of a reſinous Extract; but, from the ſame Quantity of the Brown, but ſix Drams. From the Remainder, thus freed of its reſinous Parts, by an aqueous Menſtruum he drew, from the Grey, two Ounces of a ſaline Extract; but, from the Brown, only between five and ſix Drams. The Remainder of the Grey, after it had been thus deprived of its reſinous Parts by the Spirit of Wine, and of its ſaline ones by the Water, weigh'd four Ounces, but that of the Brown weigh'd near ſix Ounces; which ſhews, that the active Principles abound more in the Grey than in the Brown; which is farther confirm'd by the following Way of Extraction. In the former he began with Spirit of Wine, and then uſ'd Water: But here he extracted firſt with Water, and then with Spirit of Wine; and obſerv'd, that eight Ounces of the Brown yielded, by a watry Menſtruum, one Ounce three Drams of an Extract very ſolid and compact; and the Remainder, well dried, yielded, by means of Spirit of Wine, but twenty-four Grains of a reſinous Extract; whereas the like Quantity of Grey afforded, by an aqueous Menſtruum, three Ounces and an half of Extract; and its Remainder, by Spirit of Wine, thirty-ſix Grains of a reſinous Extract. Whence M. *Boulduc* thinks it eaſy to conclude, that the Brown contains leſs of principal Parts, and more of terreſtrial ones, than the Grey. It is, however, certain, that the Brown is more efficacious, which ſeems a ſort of a Paradox: The Reaſon of which is conjectur'd to be, that active Virtues are not to be eſteem'd according to the Meaſure or Weight of their Bodies. Thoſe of

leſs

leſs Bulk have often more Force and Energy: *Vis maxima in minima mole*, is a Maxim which holds good in many Inſtances. It has been taken notice, that the Spirits drawn from the Brown were more piquant, and ſtruck the Senſes more briskly, than thoſe of the Grey: Why then may they not have the ſame Activity in our Bodies, to irritate the interior Parts, and agitate the Humours more violently? The Extracts of the Brown are, indeed, leſs in Quantity, but their Virtues may be more concentrated, and, by Conſequence, more active.

This curious Inquirer, in another Diſcourſe, in the Memoirs for 1701. ſays, he has found means to deprive this Root of its emetic Quality, the Difference between this and other violent Purgatives having encourag'd him in this Search; the other violent Cathartics, as Scammony, and Colocynth, however prepar'd and corrected, leaving too often fatal Marks of their Action; but Ipecacuanha, though it may appear very brisk in its Operation, leaves generally behind it but an Aſtriction of the Part it had before open'd and fatigued. He made a reſinous Extract with Spirit of Wine, and then drew out the ſaline Particles with Rain-water, and found by Experience, that its Violence, as in moſt other Purgatives, was owing to its Reſin. For the Effects of the Reſin were more violent than the Root itſelf, leaving little or no Aſtriction afterwards; but the ſaline Extract was diuretic, purg'd gently without any, or little, Nauſeouſneſs, and, in ſhort, had the ſpecific Quality of the Root, that is, to cure Dyſenteries.

This Root is given from fifteen Grains to half a Dram, and we ought never to exceed a Dram. It never fatigues the Stomach, and is the beſt Succedaneum for the emetic Tartar. It is the beſt Specific in Dyſenteries hitherto known, acting, in ſuch Caſes, not only as an Emetic, but alſo deterging Ulcers in the Inteſtines, by a Mucilage contain'd in it, like that of Marſh-mallows, by which it, in ſome meaſure, ſupplies the villous Coat of the Inteſtines, when corroded and deſtroy'd by the Diſeaſe. It, alſo, powerfully ſhakes and evacuates the Glands of theſe Parts. Its beſt Effects are in old Dyſenteries, after many other Medicines have been tried, and the Body has, by theſe, been ſufficiently prepar'd; then the firſt or ſecond Doſe generally produces viſible good Effects; or, if they ſhould happen to miſs, it ought to be continued every Day, in the Quantity of three or four Grains, acting, in that Caſe, as an Alterative.

This Root has an emplaſtic and deterſive Quality join'd together; and, though it does not appear ſenſibly acrid, it produces, in thoſe who powder it, an Oppreſſion in the Thorax, Difficulty of Breathing, and Spitting of Blood. It is, likewiſe, offenſive to the Eyes, increaſes the Diſcharge of the lachrymal Glands, and, when the Tears do not find a ready Vent, the Eyes ſwell. Theſe Effects are probably owing to the mucilaginous Quality of the Root. The ſame Cautions ought to be obſerv'd in giving Ipecacuanha, as in giving emetic Tartar. It is taken in Subſtance, finely powder'd, either mix'd with a Liquid, or incorporated with a proper Syrup, into an Opiate: It may, likewiſe, be given in Infuſion, or Decoction. *Geoffroy.*

However effectual Ipecacuanha Vomits may be in Dyſenteries, I much queſtion whether they are ſo conducive to the Cure of Fevers as Antimonials.

IPNITES, *ἰπνίτης*. A Species of Bread. See ARTOS.

IPOTERION, *ἱποτήριον*. The Name of a Malagma, invented by *Aſclepiades*, and deſcrib'd by *Galen*, *de Comp. M. S. L. Lib. 9. Cap. 3.*

IPS, *ἶψ*. A Species of Worm. The ſame as INVOLVULUS; which ſee.

IRA. Anger.

Anger is of ſuch a Nature, that it quickly throws the whole nervous Syſtem into preternatural Commotions, by a violent Stricture of the nervous and muſcular Parts; and ſurpriſingly augments not only the Syſtole of the Heart, and its contiguous Veſſels, but alſo the Tone of the fibrous Parts in the whole Body. This impetuous Motion of the Blood and nervous Fluid, in Perſons highly enraged, appears evidently from the Increaſe of the Pulſe, the Quickneſs of Reſpiration, Thirſt, Heat, Inflation and Redneſs of the Face, the greater Pulſation and Swelling of the Arteries of the Head, eſpecially about the Temples, Fierceneſs of the Eyes, Tremor of the external Parts, and a kind of Precipitancy obſervable in the Functions of the Mind. Beſides, we are aſſured, from practical Obſervations, that nothing ſo ſoon excites acute, bilious, intermitting, and inflammatory Fevers, as violent Anger. It is alſo certain, that this Paſſion, by the ſpaſmodic Stricture it produces in the Parts, exerts its Power principally on the Stomach and Inteſtines, which are highly nervous and membranous Parts; whence the Symptoms are more dangerous, in proportion to the greater Conſent of the Stomach and Inteſtines with the other nervous Parts, and almoſt with the whole Body.

The unhappy Influence of Anger, likewiſe, on the biliary and hepatic Ducts, is highly ſurpriſing, ſince, by an intenſe Conſtriction of theſe, the Liver is not only render'd ſcirrhous, but, alſo, Stones are often generated in the Gall-bladder, and biliary Ducts: Theſe Accidents have ſcarce any other Origin, than an Obſtruction of the free Motion and Effux of the Bile, by means of this violent Stricture. But this generally happens from a Suppreſſion of the lawleſs Paſſion, when, for Inſtance, there is no Opportunity of ſatiating the latent Principle of Revenge; or when Sorrow is joined with Fear.

From ſuch a Stricture of theſe Ducts, likewiſe, proceeds the Jaundice, which, in Proceſs of Time, lays a favourable Foundation for calculous Concretions in the Gall-bladder: When the Bile, alſo, is put into a violent Commotion by Anger, and copiouſly diſcharged from the biliary and cyſtic Ducts into the Duodenum and Stomach, it frequently happens, that from its Stagnation, and the Acrimony it has contracted by this long Continuance, there ariſe Nauſeas, Vomitings, Diarrhœas, Cholera's, Cephalalgias, Anxieties, bilious, continual, and intermitting Fevers: Hence ariſes that Symptom peculiar to paſſionate Perſons, which is, that, under the immediate Influence of Anger, they are ſenſible of a certain conſtrictive Pain in the Right Side, below the Pit of the Stomach, and a certain Bitterneſs in the Mouth: Theſe two Symptoms derive their Origin from no other Cauſe than the impetuous Motion of the Bile, and its Effuſion into the Inteſtines, while the biliary Ducts, which are formed of nervous and muſculous Coats, being too much compreſſed with the quick Influx of the ſpirituous Liquid contained in the Nerves, diſcharge a large Quantity of Bile, and pour it into the Duodenum; whence proceed an Inclination to vomit, and a Diarrhœa, which *Hildanus*, *Cent. 7. Obſ.* 18. remarks, when he affirms, that the Body has been render'd as ſoluble by the Influence of Anger, as if Phyſic had been taken. But, if the Bile offends by its Acrimony, and is too copiouſly diſcharged, during a Sally of Anger, Eroſions of the Inteſtines and Stomach, with a ſubſequent ſlow Fever, have been frequently obſerved to be produced by it: And the more acrid the Bile, or the further it recedes from its natural Condition, the more prejudicial is Anger, and attended with the more dangerous Symptoms.

Laſtly, By increaſing the Motion of the Fluid, or the Spaſms of the fibrous Parts, by means of Anger, a larger Quantity of Blood is propelled with an Impetus to certain Parts; whence it happens, that they are too much diſtended, and the Orifices of the Veins diſtributed there opened. It is evident from Experience, that Anger has a great Tendency to excite enormous Hæmorrhages, either from the Noſe, the Aperture of the Pulmonary Artery, the Veins of the Anus, or, in Women, from the Uterus, eſpecially in thoſe previouſly accuſtomed and diſpoſed to ſuch Evacuations. Thus, if any one in his Youth has been ſubject to Hæmorrhages of the Noſe, a violent Sally of Anger ſoon makes his Diſorder recur; for it is well known, that, upon the Approach of this Paſſion, the Countenance immediately becomes red, the Veins of the Head, eſpecially thoſe of the Forehead, are preternaturally tumefied, and the Blood is often, in an Inſtant, diſcharged in great Plenty from the Noſe. I have likewiſe ſeen Women, who, in conſequence of a Sally of Paſſion, have been ſeized with Hæmorrhages of the Uterus, or of the Noſe: And this too is the Reaſon why, in old and plethoric Perſons, a violent Paſſion often produces a ſanguine Apoplexy, which ariſes from a Rupture of the ſmall Arteries of the Plexus Choroides in the Head. But there never readily happens an extraordinary Collection of Blood, and an unbounded Effuſion of it, unleſs from a ſpaſmodic, and that, too, a violent Stricture of the nervous and muſcular Parts.

Having thus conſider'd the Effects of Anger, with the Manner of its operating, we come now to the principal Point propoſed; which was to ſhew, why Cathartics and Emetics are ſo prejudicial in the Paſſion of Anger, that they may, with the ſtricteſt Juſtice, be termed Poiſons. But, before we determine this, our Deſign obliges us to ſay ſomewhat of the Nature of Poiſon, and the Method of its operating, leſt, by a Neglect of this kind, a Foundation ſhould be laid for various Errors and Miſtakes.

By Poiſon, then, in this Place, we mean a cauſtic Matter, furniſhed with a very fine, volatile, and acrid Salt, which, in a ſmall Quantity, by exciting enormous Spaſms in the Stomach and Inteſtines, quickly induces a Train of dreadful Symptoms, perverts and deſtroys the whole Oeconomy of the vital Motions, leaving Signs of a fatal Mortification in the Carcaſe of the Patient. True Poiſons, therefore, have, for the Foundation of their Activity, a certain fine, acrid, and highly cauſtic Salt, which, inſinuating itſelf deeply into the membranous and nervous Fibres of the Stomach and Inteſtines, lacerates, corrodes, inflames, and ſpaſmodically conſtricts them: But Poiſon, when exhibited in a ſmall Quantity, quickly proves mortal; which muſt undoubtedly proceed from the violent and ſpaſmodic Strictures of the nervous and membranous Syſtems in the whole Body, by which the Influx of the nervous Fluid, and thinner Blood, into the Organs of Motion and Senſation, upon the Ceſſation of which all Strength, Tone, and Motion of the Parts, are loſt, is partly intercepted, and partly forced in a greater Quantity to other Places.

The Symptoms excited by Poiſon are highly violent, and entirely owing to the Spaſms, which not only affect the Stomach and Inteſtines, but are, alſo, propagated to other Parts endued with more delicate Senſation and Motion: Hence, from ſwallowing Poiſon, are produced Cephalalgias, Nauſeas, Vomitings, violent Gripes, Diarrhœas, or an obſtinate Coſtiveneſs, Hiccups, violent Strictures of the Thorax, Difficulty of Breathing, and

the utmoſt Uneaſineſs of the Præcordia, a Loſs of Strength, a Syncope, accompanied with Coldneſs of the Extremities, and a cold Sweat; a weak, quick, and plainly intermitting Pulſe, Convulſions, Epilepſies, Inquietudes, and Deliriums: Theſe are the moſt general and uſual Symptoms produced by Poiſons. Upon opening the Bodies of Perſons cut off by Poiſon, there immediately appears a Swelling of the whole Abdomen; and Spots of a purple or blackiſh Colour are diſcover'd in the Stomach, which is corroded, and ſometimes perforated; together with ſome other Phenomena. This much ſhall ſuffice, with reſpect to Poiſon properly ſo called: For a more explicit Account, the Reader may conſult *Hoffman's Pathologia Rationalis, Tom. 2. Part. 2. Cap. 2.* where the Doctrine of Poiſons is expreſly handled.

If, therefore, we duly weigh and conſider the Effects of Emetics taken after a Tranſport of Anger, it will appear very evident, that they exert on the human Body no other Influence than that of real Poiſon; ſince all Emetics, eſpecially thoſe prepared of Antimony, operate by a ſubtile, acrid, cauſtic, inflaming Salt, which, adhering to the membranous and nervous Coats of the Stomach and Duodenum, corrodes and ſpaſmodically conſtricts them. Beſides, when exhibited in a ſomewhat larger Quantity, they quickly prove mortal, when the Stomach is diſorder'd: Inſtances of which frequently occur, in the Writings of practical Phyſicians.

If we examine accurately into the various Symptoms produced by the Exhibition of Emetics, they are found not to be unlike thoſe excited by Poiſon, properly ſo called: For there immediately appear Anxieties, and violent Strictures of the Præcordia, an exquiſite Heat about the Region of the Stomach, vain Efforts to vomit; the extreme Parts grow cold, begin to tremble, and be convulſed; a cold Sweat ſeizes the Head or Breaſt; Reſpiration is perform'd with Difficulty; the Patient is deprived of Sleep, toſſes about, and is very reſtleſs: To theſe Symptoms is added, an uncommon Loſs of Strength; and the Patient is either afflicted with an obſtinate Coſtiveneſs, or an uncommon Flux; the Pulſe is either quick, weak, or plainly intermitting; the Mind becomes deſultory and unhing'd; Convulſions, and other Symptoms of a like Nature, happen. It is certain, that theſe mortal Symptoms proceed from violent Spaſms, which throw almoſt the whole Syſtem of the membranous Parts into violent Exagitations and Convulſions; whence the poiſonous Quality of Emetics, after Anger, is ſufficiently obvious: Beſides, upon opening the Bodies of thoſe cut off by Poiſon, there appear undoubted Marks of a Violence done by ſome Subſtance of a virulent Quality, as is evident from the Diſſection of ſuch Perſons, ſince the Duodenum, and Bottom of the Stomach, are obſerved very much inflam'd, and full of Spots, partly of a rediſh, and partly of a blackiſh Colour.

Violent and ſtrong Cathartics, after the Tranſports of Anger, are equally dangerous; ſince they prove mortal in the ſame manner with Emetics, or even with Poiſon properly ſo called, as they are, in like manner, furniſhed with a ſubtile, cauſtic, and penetrating Salt, and, by exciting Spaſms, create Inflammations in the Stomach and Inteſtines, produce violent Symptoms, quickly deſtroy the Patient, and, after Death, leave Signs of a fatal Mortification in the Stomach and Inteſtines. Since, therefore, Emetics and Cathartics, exhibited after the violent Tranſports of Anger, produce Spaſms, and not only excite, but increaſe the Inflammation; ſince they, alſo, bring on other Symptoms uſually induced by Poiſon; very ſoon put an End to Life; and, after Death, leave in the Body Marks like thoſe common to Perſons cut off by Poiſon; hence we may reaſonably conclude, that both emetic and purgative Medicines may be eſteem'd poiſonous, when given to Perſons after the Tranſports of Anger.

Emetics therefore, and draſtic Purges, after Anger, are highly detrimental, and, for the moſt part, kill the Patient: For, if we recollect from the preceding Obſervations, that Anger throws the Stomach, Duodenum, and hepatic Ducts, into Spaſms, we may hence, without the leaſt Heſitation, infer, that Vomits, in ſuch a Caſe, are by no means proper, ſince they irritate the tender Fibres of the Stomach, but lately diſorder'd by the Influence of Anger, to more terrible Spaſms, and excite a more violent Inflammation, which is hardly curable by the utmoſt Skill and Judgment of the Phyſician. Let Phyſicians then conſider, how improperly, prepoſterouſly, and imprudently, they act, when they diſturb and exaſperate the Stomach, already too much diſorder'd with Anger, by Emetics: For theſe Remedies are, in ſuch a Caſe, ſo far from being ſerviceable, that they rather add to the Acuteneſs of the Pain, and increaſe the Diſeaſe. Let us ſuppoſe, that Nature herſelf ſeems diſpoſed and inclined to Vomiting, and is in a manner urged and ſtimulated to it by a ſtrong Contraction of the Pylorus: Let us, alſo, ſuppoſe, that the Patients very earneſtly deſire this dubious Kind of Remedy, and place great Confidence in it, perſuading themſelves, that, by ejecting and diſcharging this heavy Burden out of the Stomach, they ſhall immediately grow better: Yet theſe very things, which might encourage an unwary Phyſician to give a Vomit, ought rather to convince the prudent, ſagacious, underſtanding Practitioner, that he ſhould, in ſuch a Caſe, by all means reject Emetics, and abſtain from them, as he would from Poiſon.

Anger, by means of the ſubſequent Uſe of Emetics and Cathartics, is moſt of all prejudicial to thoſe who are ſubject to hypochondriac and hyſteric Spaſms, or thoſe who are afflicted with a Cardialgia. The Reaſon of this ſeems very plain, ſince ſuch Patients are weaken'd by the ſpaſmodic Stricture, with which the interior nervous Parts are affected, or have the Stomach, with the annexed Inteſtines, diſpoſed to an Inflammation: If, therefore, ſuch Perſons are ſeized with a Fit of Anger, which makes its Havock by Spaſms, the ſpaſmodic Conſtrictions of the Stomach muſt neceſſarily be increaſed; and their Violence is ſo far from being appeaſed by the Addition of an Emetic or Cathartic, that, by this Method, the Way is rather paved to an invincible Diſorder, and total Deſtruction of the Body. The utmoſt Care then muſt be taken, not to preſcribe ſuch Medicines to Perſons thus debilitated, unleſs we wiſh for a fatal Event.

For the ſame Reaſon Emetics, and other ſtrong Evacuants, are very detrimental, if given about the Paroxyſms of intermitting Fevers, eſpecially when preceded by Anger, becauſe, at that time, the Stomach and Primæ Viæ being agitated by Spaſms, the Patient is ſeized with a Nauſea, and Inclination to vomit. Beſides, Anger, and Medicines of a purgative and cathartic Quality, are noxious to all weak Perſons. Thus have I obſerved, that thoſe, who had before thoroughly purged their Bodies with Laxatives, Purgatives, Baths, and medicinal Waters, and, by that means, contracted a very great Weakneſs of the Stomach, have become very bad by taking Emetics or Cathartics after a Fit of Anger, and, in a very ſhort time, expired under a moſt terrible Train of Symptoms. The Caſe is the ſame in Women after Delivery: For I knew a Woman, who, on the third Day after her Delivery, being in a violent Paſſion, took a Purge of the draſtic Kind; and within two Days, notwithſtanding the Application of all the beſt Remedies, ſhe miſerably periſh'd.

Beſides, Anger, and Emetics, or Cathartics, are extremely prejudicial to Women, about the time of their menſtrual Diſcharge; and likewiſe to Men, who are accuſtomed to hæmorrhoidal Diſcharges, and wait for their Approaches: For, ſince theſe uſual and ſalutary Diſcharges from the Uterus, and hæmorrhoidal Veins, are always accompanied with Spaſms, it is evident, that Emetics and Cathartics are, at that time, very detrimental, eſpecially if given after a Fit of Anger. I have ſeen dreadful Symptoms produced by Emetics, tho' not of a very draſtic Nature, given about the time of the Menſes. In Perſons afflicted with the Hæmorrhoids, a ſtrong Vomit has excited Abſceſſes with a ſlow Fever. When an Accumulation of Blood tends to the Breaſt, a dangerous Hæmoptyſis is often produced by a ſtrong Vomit. Anger, and ſtrong Evacuants, are likewiſe very hurtful to thoſe, who, after drinking plentifully of Wine, have endeavoured to extinguiſh the Heat of their Body by large Draughts of any cold Liquor; for they eaſily produce Spaſms in the Stomach, and its Right Part the Pylorus. In ſuch Caſes Emetics immediately produce intolerable Anxieties, and continual Watchings. Theſe are ſucceeded by an intolerable Loſs of Strength, accompanied with Inquietudes, Toſſings of the Body, and a Coldneſs of the Extremities.

I ſhall now ſubjoin ſome Cautions for preventing the Misfortunes generally ſubſequent to Anger, eſpecially when of the violent Kind. For this Purpoſe, then, the prudent Phyſician ſhould, by all means, aſſwage and ſooth the Spaſms excited in the Stomach and Duodenum, reduce the Blood and Humours to an equable Motion, and correct their Acrimony, if they have any.

For this Purpoſe I recommend, beſides Infuſions of the Herbs *Paul's* Betony, Daiſies, common and *Roman* Chamomile, and Fennel-ſeeds, the bezoardic Powders, and thoſe of the nitrous and cinnabarine Kind, or Nitre mixed with a ſmall Quantity of Camphire, or the following Mixture.

> Take of the Spiritus Nitri dulcis, or the Spiritus Vitrioli dulcis, and of the Eſſence of Caſtor, each one Dram; and of Camphire, three Grains: Of this Mixture, twenty or thirty Drops may be exhibited.

Theſe two Remedies are great Preſervatives againſt Inflammations, from whatever Cauſe they proceed. If, in conſequence of a Fit of Anger, the Bile is convey'd in too large a Quantity to the Inteſtines, then Powder of Rhubarb, mixt with Nitre and Crabs-eyes, is highly beneficial: For by this means the Acrimony of the Bile is not only corrected, but, alſo, gently eliminated. To this may be added the Magneſia alba, which not only greatly corrects, but, alſo, mildly eliminates the acrimonious Humours. To theſe may be added the Eſſence of Orange-peel duly prepared, the Stomachic Elixir of *Michaeli*, or my Stomachic Elixir, mixed with the anodyne mineral Liquor. *Hoffman.*

IRAIBA. The Name of a Species of Palm, which grows in *Braſil. Raii Hiſt. Plant.*

IRINON. See IRIS.

IRIO. A Name for the *Eryſimum, vulgare.*

IRIPA. The Name of a tall Tree, which grows about *Pépolyr*, and in other Parts of *Malabar*; call'd *Malus Indica, pomo cucurbitæformi, monopyreno.*

The Roots of this Tree have a cathartic Virtue. Of the Leaves boiled in Cow's Urine, with an Addition of Honey, is prepared a Potion, which is ſaid to cure the Itch, Leproſy, and other cutaneous Affections. Of the ſame boiled in ſweet Milk, with the Leaves of *Mangos*, they prepare an Apozem, which cures the Jaundice, Aſthma, and the vitiated Fermentation of the Aliments in the Stomach, with the Pain of the Head cauſed thereby: Of the Fruit is prepared an Oil for the Itch, and other cutaneous Affections. *Raii H. P.*

IRIS.

The Characters are;

Under the Flowers are two membranaceous Calyces, ſurrounding one another like Sheaths. The Flower is hexapetalous; three of the Petals are bifid and erect, the other three are reflexed downwards. Upon the under Part of the lower Petals is placed a large Congeries of little Tubes, reſembling a Beard. From the very Bottom ariſes a Male Stamen, carefully defended by an hollow petaloidal Caſe. This Flower grows on the Apex of the Ovary, which produces thoſe Beards and Tube-like Caſes: Thence the Flower ſeems enneapetalous, or conſiſting of nine Petals. The Ovary grows at the End of the Pedicle, and becomes an oblong Fruit, full of Seeds. The Root is fleſhy, oblong, and creeping.

Boerhaave mentions twenty-four Species of this Plant; which are,

1. Iris; hortenſis; latifolia; petalis pendulis purpuro-violaceis, erectis cœruleis.

2. Iris; hortenſis; latifolia; præcox purpurea.

3. Iris; hortenſis; latifolia. *Boerh. Ind. A.* 2. 124. *Iris vulgaris noſtras, hortenſis.* Offic. *Iris vulgaris.* Ger. 46. Emac. 50. Raii Hiſt. 2. 1280. *Iris purpurea ſive vulgaris.* Park. Parad. 181. *Iris vulgaris Germanica ſive ſylveſtris.* C. B. P. 30. Tourn. Inſt. 358. *Iris vulgaris violacea ſive purpurea, hortenſis & ſylveſtris.* J. B. 2. 709. COMMON FLOWER-DE-LUCE.

The Roots of this common Flower-de-luce ſpread themſelves pretty much on the Surface of the Earth, being of a reddiſh-brown Colour on the Outſide, and whitiſh within, round, an Inch and more in Thickneſs, and ſhooting out long Fibres. The Leaves are nervous, broad and flat, thickeſt in the middle, with thin Edges, like a Sword; they grow in thick Clumps together; the Flowers are made of nine Leaves, of a purpliſh-blue Colour. The Seed grows in large triangular Pods, full of flat angular Seed. It grows with us only in Gardens, and flowers in *May* and *June*.

The Juice of the Root, which is the only Part uſed, is a ſtrong Errhine: Being ſnuff'd up the Noſtrils, it purges the Head, and clears the Brain of thin, ſerous, phlegmatic Humours. The ſame, likewiſe, or a ſtrong Decoction of the Root, given inwardly, is a ſtrong Vomit, and accounted good for the Dropſy, Jaundice, and Agues; but, becauſe it very much vellicates or offends the Stomach, it is rarely uſed. *Miller's Bot.*

Externally applied, it cures impetiginous Diſorders, and other Stains of the Skin. *Dale.*

Lemery ſays, the Doſe of the Juice of the Root is from two Drams to an Ounce and an half.

4. Iris; hortenſis; latifolia; petalis repandis ex atro purpureo & albo ſtriatim variis, erectis vero fuſcis obſoletis.

5. Iris; Dalmatia; major. *C. B. P.* 31.

6. Iris, alba; Florentina. *C. B. P.* 31. *Park. Parad.* 180. *Tourn. Inſt.* 358. *Boerh. Ind. A.* 2. 124. *Iris Florentina, Iris Illyrica.* Offic. *Iris Florentina.* Ger. 47. Emac. 52. *Iris flore albo.* J. B. 2. 719. Raii Hiſt. 2. 1180. FLORENTINE ORRIS. *Dale, p.* 247.

This *Iris* has a thick, tuberous, knobbed Root, of a white Colour in the Inſide, ſhooting out Fibres on all Sides; which, when they are pared off, make the dry Root appear full of round Spots. The Leaves are long and flat, like other Flower-de-luces, bearing at the Top of the round, ſmooth Stalks, two or three white Flowers, which are incloſed, before their opening, in thin green Husks. The Flowers are pretty large, and are made of nine Leaves, like the former. They have the like Seed-veſſels. It is found wild about *Florence* in *Italy*; but with us is only nurſed up in Gardens, and flowers in *June*.

The Root only is uſed, being brought dry from *Leghorn*, of a firm Texture, and a pure white Colour, having a pleaſant, ſoft, ſweet Scent, ſomewhat like Raſpberries.

It is attenuant, emollient, and pectoral, good for Diſorders of the Lungs cauſed by ſharp Humours falling on the tender Veſiculæ; it helps Coughs, Hoarſeneſs, and Soreneſs at the Stomach; it is likewiſe commended againſt the Gripes in Children, and to bring down the obſtructed *Menſes*; outwardly it is uſed in Perfumes, ſweet Bags, and Hair Powder: It is an Ingredient in the *Theriacæ Andromachi* and Mithridate. *Miller's Bot. Off.*

It is reckoned proper to attenuate the Lympha, which ſtuffs the Bronchia and Glands of the Inteſtines. It is often joined with Hydragogues in beginning Dropſies, to ſcour the Glands of the Meſentery; and a kind of Ratafia is likewiſe made of it for the ſame Purpoſe. *Geoffroy.*

Externally applied, it is good for Freckles, and Spots of the Skin; and it is eſteemed good for a fetid Breath. *Schroder.*

7. Iris; Suſiana; flore maximo, ex albo nigricante. *C. B. P.* 31.

8. Iris; latifolia; petalis repandis atropurpureis vietis, erectis obſolete purpuraſcentibus fere fuſcis.

9. Iris; folio lato; rugoſo; florum petalis repandis ex purpureo ſordido, pallido, & luteo variis; erectis vero obſolete & ſqualide luteſcentibus.

10. Iris; latifolia; Germanica; odore Sambuci. *C. B. P.* 31.

11. Iris; latifolia; Pannonica; colore multiplici. *C. B. P.* 31.

12. Iris; folio lato; rugoſo; florum petalis repandis obſolete luteis, pallidis; purpureis, ſtriatis, petalis, erectis obſolete luteis.

13. Iris; ſativa; lutea. *C. B. P.* 32.

14. Iris; latifolia; candida; purpureis venis diſtincta. *C. B. P.* 32.

15. Iris; folio lato; rugoſo; petalis repandis purpureis, erectis candidis.

16. Iris; pratenſis; anguſtifolia; non fœtida; altior. *C. B. P.* 32.

17. Iris; anguſtifolia; bicolor. *C. B. P.* 33.

18. Iris; anguſtifolia; flore cœruleo, ſtriato.

19. Iris; anguſtifolia; floſculi petalis repandis ex luteo & purpureo utrimque variis, erectis purpureis.

20. Iris; humilis; flore atropurpureo. *H. L.*

21. Iris; humilis; minor; flore purpureo. *T.* 361.

22. Iris; humilis; minor; flore purpureo flaveſcente. *T.* 362.

23. Iris; humilis; ſegmentis tribus inferioribus ex ochroleuco, albo & viete purpureo variis, ſuperioribus albis.

24. Iris; humilis; ſegmentis tribus inferioribus ex viridi & pallido variis, ſuperioribus albis. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 123.

According to *Dioſcorides*, the beſt Iris grows in *Illyria* and *Macedonia*; and of this the choiceſt is what has a thick Root, appearing as if it were imperfect, difficult to be broken, of a reddiſh Colour, extremely fragrant, of a pretty bitter Taſte, of a freſh Smell, without the leaſt Scent of Mouldineſs, and what excites Sneezing, when bruiſed. The next in Goodneſs and Virtues, is the *African* Iris, which is white, and of a bitter Taſte; the Roots, when old, are ſubject to be Worm-eaten, though, at the ſame time, they are more fragrant.

All the Species of Iris are of an heating and attenuating Quality, and effectual in Coughs, on account of attenuating thoſe Humidities which are difficult to be expectorated. Seven Drams of the Root, taken in Hydromel, are a Purge for groſs and bilious Humours. The Iris has, alſo, an hypnotic Virtue, excites Tears, and cures the Gripes; taken in Vinegar, it cures the Bites of venomous Animals, and is a Remedy for Diſorders of the Spleen, Convulſions, extreme Coldneſs, Rigors, and an involuntary Efflux of the Semen; taken in Wine, it provokes the Menſes. A Decoction of the Roots makes a proper Fomentation in Diſorders incident to Women, as mollifying and opening the Parts about the Region of the Uterus. A Clyſter of the ſame relieves under the Sciatica. The Iris is, alſo, incarning; and fills up Fiſtulas, and other ſinuous Ulcers, with Fleſh. The Roots apply'd with Honey, by way of a Collyrium, or Peſſary, extract the Fœtus; boiled, and apply'd to the Place, they mollify ſtrumous and old ſcirrhous Swellings; being dry'd, and uſed with Honey, they cleanſe and incarn them, and cover bare Bones with Fleſh; made into a Cataplaſm with Vinegar, and Oil of Roſes, they cure the Cephalalgia; apply'd with Hellebore, and double the Quantity of Honey, they abſterge Freckles and Sunburns: They are Ingredients in Peſſaries, Malagmas, and Acopa; and, in ſhort, are uſeful on many Accounts. *Dioſcorides, Lib.* 1. *Cap.* 1.

In *Dioſcorides, Lib.* 1. *Cap.* 66. we have a Deſcription of what he calls a *Stypſis*, [στύψις, *Spiſſamentum*, an Inſpiſſation] of Irinum, or the Oil of Iris; as follows.

> Take of Spatha, [σπάθη, the Involucrum, or Cover of the Fruit of the Palm-tree, while yet in Flower, *Dioſc. Lib.* 1. *Cap.* 150. See PALMA] very well bruiſed, ſix Pounds eight Ounces; and put them into ſeventy-three Pounds five Ounces of Oil, mix'd with five Pints of Water; and boil them together in a Copper-veſſel, till they ſmell of the Spatha; after which, ſtrain them into a Veſſel, whoſe Inſide is rubbed over with Honey. With this Oil, thus impregnated with an Aromatic, is the firſt Irinum tempered, or prepared, the Iris being macerated in the inſpiſſated Oil, in the Manner deſcribed below.

Another Way of preparing the Stypſis of the Irinum is, to boil five Pounds two Ounces of Xylobalſamum, bruiſed as was directed for the Spatha in ſeventy Pounds five Ounces of Oil; after which take out the Xylobalſamum, and put in of Calamus bruiſed, nine Pounds ten Ounces, with a Lump [χόνδρος] of Myrrh, waſhed over with old ſweet-ſcented Wine. This done, take of this inſpiſſated and aromatized Oil, fourteen Pounds, with an equal Weight of bruiſed Iris, to be macerated for two Days and two Nights in the Oil, and then very ſtrongly expreſſed. If you would have it made ſtronger, add the ſame Weight of Iris a ſecond or third time, and macerate and ſtrain as before. Much the beſt of this kind of Preparation is, what ſmells of nothing but

but the Iris; and such is made at *Perga* in *Pamphylia*, and in *Elis* in *Achaia*.

This Syrpsis of Irinum is hearing and emollient, and cleanses crusty, putrid, and foul Ulcers. It is adapted, also, to uterine Affections, such as Inflammations and Stoppages; it expels the Fœtus, opens the Orifices of the Hæmorrhoids, and with Vinegar, Rue, and bitter Almonds, cures the Ringing of the Ears; it is effectual against inveterate Distillations, and the Ozœna, the Nostrils being anointed therewith; the Quantity of a Cyathus, taken inwardly, serves for a Purge; it gives Relief, also, under the Iliac Passion, and provokes Urine. It facilitates Vomiting, being rub'd on the Fingers, or any other Emetery [ἐμετήριον, something thrust into the Mouth to promote Vomiting]. It is used, also, as a Litus for the Quinsey, and, with Hydromel, as a Gargarism for the Roughness of the Aspera Arteria; and it serves as an Antidote for those who have eaten Hemlock, poisonous Mushrooms, or Coriander. *Dioscorides, Lib.* 1. *Cap.* 66.

Aetius, Tertabib. 1. *Serm.* 1. describes another Oil of *Orris*.

Besides the foregoing Species of Iris, *Dale* mentions the two following; which are,

1. *Iris lutea palustris*. See *Acorus adulterinus*.

2. *Chamæiris*. Offic. *Chamæiris tenuifolia*. Ger. 52. Emac. 56. *Chamæiris angustifolia major & minor*. Park. Parad. 187. *Iris angustifolia Prunum redolens, major & minor*. C. B. Pin. 33. Tourn. Inst. 361. *Iris graminea, cui quotannis pereunt folia*. J. B. 2. 727. Raii Hist. 2. 1189. GRASS-LEAV'D FLOWER-DE-LUCE. It is cultivated in Gardens, and flowers in *May*; the Herb is in Use. It agrees in Virtues with the *Iris*; *hortensis*; *latifolia*; or common *Flower-de-luce*.

Iris bulbosa. A Name for several Sorts of *Xiphium*.

Iris Persica. A Name for the *Xiphium*; *Persicum*; *præcox*; *flore variegato*.

Iris tuberosa. A Name for the *Hermodactylus*; *folio quadrangulo*.

Iris fœtida. See XYRIS.

IRIS is, also, according to *Gorræus*, the Name of a Pastil, consisting of Saffron, Myrrh, and Alum.

IRIS is, moreover, the Name of a Species of Crystal.

IRIS, in Anatomy, is a Membrane of the Eye. See OCULUS.

Mr. *Sharp* gives the following Account of an Operation upon this Membrane, which he calls, *Cutting the* IRIS.

There are two Cases, says he, where this Operation may be of some Service, one when the Cataract is from its Adhesion immoveable; and the other when the Pupil of the Eye is totally closed up by a Disorder of the muscular Fibres of the Iris, which, gradually contracting the Orifice, at last leaves the Membrane quite imperforate. This last Distemper has hitherto been deem'd incurable. The Adhesion of the Cataract I have considered as a Species of Blindness not to be relieved: But Mr. *Cheselden* has invented a Method of making an artificial Pupil, by slitting the Iris, which may relieve in both the Instances here stated.

In performing this Operation, the Patient must be placed as for Couching, and the Eye kept open, and fixed by the Speculum Oculi, which is absolutely necessary here, for the very Reason I would discard it in the other, since the Flaccidity of the Membrane from the Issue of the aqueous Humour would take away its proper Resistance to the Knife, and make it, instead of being cut through, tear from the Ligamentum Ciliare; then, introducing the Knife in the same Part of the Conjunctiva you wound in Couching, insinuate it with its Blade held horizontally, and the Back of it towards you, between the Ligamentum Ciliare, and Circumference of the Iris into the anterior Chamber of the Eye; and, after it is advanced into the farther Side of it, make your Incision quite through the Membrane; and, if the Operation succeeds, it will, upon wounding, fly open, and appear a large Orifice; tho' not so wide as it becomes afterwards.

The Place to be opened in the Iris, will be according to the Nature of the Disease: If the Membrane itself be only affected with a Contraction, the middle Part of it, which is the natural Situation of the Pupil, must be cut; but, if there be a Cataract, the Incision must be made above or below the Cataract, though I think it more eligible to make it above.

The contracted Iris, from a paralytic Disorder, is so often complicated with an Affection of the Retina, that the Success is very precarious in this Case. This Operation, by what I have seen, has answered best in Adhesions of the crystalline Humour, though, to speak truly, but very seldom even there. As I would not mislead any one in an Operation not yet much known in the World, I do confess, that either the Danger of the Iris separating from the Ligamentum Ciliare, or of the Wound not enlarging sufficiently, do, upon the Whole, make the Event very doubtful. I once perform'd it with tolerable Success, and, a few Months after, the very Orifice I had made contracted, and brought on Blindness again.

I have not here once used the Word Uvea, but have made mention of the Ligamentum Ciliare; both which Parts are but little understood, for want of proper Explanation; but which must be rightly conceived of, in order to understand what has been said.

The generality of Anatomists call that Membrane, which I have spoke of under the Name of Iris, the Uvea, and its anterior Lamina, the Iris: Others, again, call the Membrane, Uvea; and the Colour of it, Iris: But both one and the other Distinction confound Learners exceedingly, and take their Rise from a Want of proper Attention to the History of Anatomy. The Antients, who have given most of the Names we now employ in the Description of the Eye, were vers'd principally, if not altogether, in the Dissection of Brutes; among which, those of the graminivorous Kind have a party-coloured Choroides, one half of it being dark, and the other of a light shining Green: This last, from its Resemblance to an unripe Grape, was call'd the Uvea; but the succeeding Writers, among the Moderns, applying themselves to human Dissections only, and not duly considering the Difference of the human Choroides, which is nearly of an uniform Colour, and of that above described, have retained the Appellation, tho' we have not the Thing. Hence has arose the great Variety of Misapplication of this Word, which ought no more to be spoke of in the Anatomy of the human Eye, than the Tunica Nictitans, which is proper to certain Beasts and Birds.

The Ligamentum Ciliare is that circular Line on the Globe of the Eye, where the Sclerotis, Choroides, Retina, Cornea, Processus Ciliares, and Iris, terminate and unite together, forming a whitish Ring somewhat denser than any other Part of the Coats; but, since the Institution of this Term, the Description of the Part it implies has been very much neglected, and the Term itself confounded with the Processus Ciliares: Wherefore it was necessary to define it, that the Process of the Operation of the Iris might be better understood. *Sharp*.

IRREPTIO. See EISBOLE.

IRUCAHA. The Name of a large Tree, which grows in the Island of *Maragnan*. It bears a Fruit shaped like a Pear, with a yellowish Rind, and Pulp within of a good Taste, and esteemed very nutritive.

IS, ἶς. A Fibre, the Plural of which is ἶνες, by which, it is pretended that *Hippocrates* meant equally a Fibre and a Nerve. "Some (says *Erotian*) thinks that this Word signifies a Nerve; "others explain it only of the Fibres of which the Nerves are "composed." The *Greek* Authors who have wrote on Plants, have called by this Name the Nerves, or small Threads, which appear on the Back of the Leaves, and the Filaments at the Extremities of the Roots. Those who have treated of the Structure and Composition of animal Bodies, have given the same to the small Threads of the Flesh, and other Parts, which the *Latins* have rendered by the Word *Fibra*. No one can deny that *Hippocrates* hath used the same Word in this Sense; as, for Instance, when he observes, that the Spleen is full of Fibres. He has, also, observed "the Fibres which are in the Blood:" But it is pretended, that by those, also, he meant the Nerves; for which Purpose there is a Passage quoted from *Hippocrates*, in which it is said, (*Lib. de Ossium Natura*) that "The Heart "has Nerves, or Fibres," which "come from every Part of "the Body." In this Passage he makes use of the Word ἰνίας, which is not read elsewhere; but *Foesius* is for having it read ἶνας, which last Word may be as properly translated *Fibre*, as *Nerve*. What might incline one to the second Signification is, what is added as a Proof, or Confirmation, of what is said concerning the Heart, that "the Seat of Sensation is rather "about the Thorax, than any other Part of the Body;" because this has some Relation to the Opinion of those who make the Nerves to come from the Heart. But the Consequence is not just; for they who own the Heart as the Origin of the Nerves, do not, on that Account, look upon the Nerves as the Organs of Sensation. Besides, it is possible, that neither the common Reading, nor that of *Foesius*, may be good, and that we ought rather to read it ἰνίας, *habenas*, changing a Letter, which alters nothing in the antient Pronunciation. The last-nam'd Author translates this Passage thus; "The Heart is "situated, as it were, in the Straights of a Passage, in order to "take hold of the Reins, for the Conduct and Management "of the whole Body. For this Reason the Seat of Sensation is "lodged about the Thorax or Breast, rather than in any other "Part. The Changes of Colour are, also, produced in the "Countenance, according as the Heart constricts or relaxes the "Veins; when it relaxes them, one becomes red, and assumes a "fresh lively Colour; when, on the contrary, it constricts them, "one becomes pale and livid."

ISADA. A Name by which the *Spaniards* and *Portuguese* call the Lapis Nephriticus.

ISALE. The same as IXALE; which see.

ISAROS, ἴσαρος. A Name for the ARUM. *Oribasii Collect. Medicin. Lib.* 11.

ISATIS.

The Characters are;

The Fruit is shap'd like a Tongue, broad, compress'd at the Edges, unicapsular, gaping two Ways, and containing a Seed, which is generally of an oblong Figure.

Boerhaave mentions three Species of this Plant; which are,

1. Isatis; sativa; sive latifolia. *C. B. P.* 113. *Tourn. Inst.* 211. *Boerh. Ind. A.* 2. 3. *Isatis, Glastum*. Offic. *Isatis, sive Glastum*

ſum ſativum. J. B. 2. 909. *Glaſtum ſativum.* Ger. 394. Emac. 491. Park. Theat. 600. Raii Hiſt. 1. 842. Synop. 3. 307. WOAD. *Dale.*

The lower Leaves of Woad are large, long, and ſmooth, broadeſt and round-pointed toward the End, of a blueiſh-green Colour; the Stalks grow to be about a Yard high, thickly beſet with narrow ſharp-pointed Leaves, ſet on without Foot-ſtalks, and, as it were, encompaſſing them with two ſlender Auricles. The Flowers are numerous, growing on the Tops of the Stalks Umbel-faſhion, conſiſting of four ſmall yellow Leaves apiece; the Seed is long, ſlender, and flat, in Shape like the Seed of the Aſh-keys. The Root is thick and woody, ſinking deep in the Earth. It is found wild in divers Places, but is frequently ſown in the Fields for the Uſe of the Dyers, being the principal Ingredient they dye their Blues with. The antient *Britons* us'd to ſtain their Bodies with it, to make themſelves appear terrible.

Woad is reſtringent and drying, and ſometimes us'd to ſtop both inward and outward Bleedings: It is, alſo, applied, with good Succeſs, for Ruptures and Strains, and to ſtrengthen the Joints. It is an Ingredient in the *Emplaſtrum ad Herniam.* *Miller's Bot. Off.*

Hippocrates, Lib. de Ulceribus, adviſes the Application of the bruis'd Leaves of Woad, together with Linſeed, by way of Cataplaſm, to Ulcers, when there is any Danger of an Eryſipelas; or a Cataplaſm of Linſeed, moiſten'd with the Juice of Woad.

It is eſteem'd an excellent Vulnerary.

2. Iſatis; ſylveſtris; vel anguſtifolia. *C. B. P.* 113.

Dr. *Wedel.* Profeſſor of Phyſic in the Univerſity of *Jena*, has obtain'd true volatile Salt from this Plant, only by Fermentation, without the Aſſiſtance of Fire. *Martyn's Tournefort.*

3. Iſatis; Dalmatica. *Bobart. Boerh. Ind. alt. Plant. Vol. 2. p.* 3.

ISATODES, *ἰσατώδης.* Of the Colour of Woad. This is us'd by *Hippocrates*, as an Epithet for Bile, and for Stools; and this Colour is a Sign of an extreme Malignity of the Bile.

ISCA, *ἴσκα.* A ſort of fungous Excreſcence, which adheres to the Oak and Hazel, and was employ'd as a Cautery by the Antients, as the Moderns uſe the Moxa.

ISCHÆMON, from *ἴσχω*, to reſtrain, and *αἷμα*, Blood. A Name for any Medicine which reſtrains or ſtops Bleeding.

ISCHAS. A dry'd Fig.

ISCHIAS, ISCHIADICUS, *ἰσχιὰς, ἰσχιαδικὸς*, have a phyſiological and pathological Signification: In the former Senſe the two crural Veins are call'd the Greater and Leſſer Iſchias. See VENA. Pathologically, *Iſchias*, and *Morbus Iſchiadicus*, ſignify a Diſeaſe, or Pain of the Hip, being a Species of Arthritis, ſeated in the Joint of the Hip. See SCIATICA.

Hence *φθίσις ἰσχιαδικὴ, Tabes Coxaria*, in *Hippocrates, Coac. Prænot.* is a Conſumption, or Waſting, of the Thigh, and Leg, from an Abſceſs, or Flux of Humours, fixed on the Hip.

ISCHIAS, in Botany, is a Name for the *Tithymalus; tuberoſa; pyriformi radice.*

ISCHIUM, *ἰσχίον.* The Name of a Bone, deſcrib'd under the Article INNOMINATA OSSA. But the Ligament which retains the Neck of the Femur in the Acetabulum, was, likewiſe, called *Iſchion*, by the Antients, according to *Heſychius*. And *Hippocrates*, in his Treatiſe *de Articulis*, ſeems to call the entire Articulation at the Hip, or, perhaps, the Head of the Femur, *Iſchion.*

ISCHNOPHONIA, *ἰσχνοφωνία*, from *ἰσχνὸς*, ſlender, and *φωνὴ*, the Voice. An Exility or Shrilneſs of Voice: But more frequently ſignifies a Heſitation of the Speech, or Stammering.

ISCHURETICA, according to *Blancard*, are Medicines which cure a Suppreſſion of Urine.

ISCHURIA, *ἰσχυρία*, from *ἴσχω*, to retain, and *οὖρον*, Urine. An Iſchury, or Suppreſſion of Urine. See the Articles CALCULUS, CATHETERISMUS, and URINA.

Women with Child are often troubled with an entire Suppreſſion of Urine, the moſt general Cauſes of which are Gravel and Stone; an Inflammation of the Neck of the Bladder, owing to violent Pains occaſioned by the Piles, or a Strangulation of the Neck of the Bladder betwixt the Os Pubis and Head of the Child, when it is ſunk down very low.

In the two firſt Caſes, general Remedies, as Bleeding, emollient Clyſters, and gentle Purges with ſoftening Decoctions, are of great Uſe; but nothing gives ſo ſpeedy a Relief as a Catheter. But when the Head of the Child is ſunk very low, and preſſed ſtrongly againſt the Os Pubis, the Catheter will not paſs; and then the Remedy is, to put back the Child's Head, which immediately gives Liberty to the Urine to come away without uſing the Catheter.

La Motte gives an Inſtance of a Woman's being greatly reliev'd in a Suppreſſion of Urine, caus'd by the Piles, by a Semicupium made of Marſhmallows, Mallows, Violet-leaves, and Chamomile, with an Addition of a ſmall Quantity of new Milk: In this the Woman ſat an Hour, Night and Morning, for two or three Days, in a Veſſel, contriv'd in ſuch a manner as her Legs were out of the Bath, whilſt ſhe was immerſed in it, above the lower Part of the Belly: But this was not done till after Bleeding, and ſome emollient Clyſters.

La Motte ſays, that ſuch a Bath hath ſucceeded ſeveral times in the ſame Caſe, and that there is no Danger of a Miſcarriage from its Uſe.

La Motte makes a Diſtinction betwixt a Suppreſſion and Retention of Urine. In a Retention of Urine the Patient has frequent Motions to make Water, without being able to do it. But in a total Suppreſſion of Urine the Patient has ſeldom or never any Inclination to make Water; but, if ſhe has any, does it in a Moment: And this laſt is much the moſt dangerous.

La Motte gives an Inſtance of a Woman, though not in Child-bed, who was ſeventeen Days without making a ſingle Drop of Water, or having any Inclination to it. On the 18th Day in the Morning ſhe diſcharged a great Quantity of Blood by the urinary Paſſages, which became more and more ſerous, till, at laſt, the Diſcharge was of Urine only, which continued three Hours; and after this ſhe ſoon recovered.

The METHOD *of diſcharging the* URINE, *by a* PUNCTURE *of the* BLADDER.

Heiſter ſays, that, by a Puncture of the Peritoneum, we mean a Paracenteſis of the Urethra and Bladder, for the Diſcharge of the Urine when it is ſuppreſſed. But, as this Perforation is made both in the Hypogaſtrium and Perinæum, it might, with more Propriety, be termed, *a Puncture of the Bladder.* An Operation of ſuch Conſequence, that if not ſeaſonably and dextrouſly performed, the Patient muſt inevitably periſh; but it is never undertaken, when Relief can be had from internal Medicines, or the Introduction of the Catheter. Now the Catheter cannot be introduced, 1. When the Neck of the Bladder is greatly inflamed; for that ſometimes contracts the Urethra ſo cloſely, that this Inſtrument cannot poſſibly be paſſed through it; and Violence not only increaſes the Inflammation and Pain, but ſometimes bruiſes the Part, and induces a Sphacelus, with conſequent Death. 2. A Caruncle, Cicatrix, or hard Tubercle, may obſtruct the Paſſage. 3. The Introduction of the Catheter in old Men is ſometimes impracticable, from the Stricture, Shrinking, or Wrinkles of the Urethra. 4. From the Diſtention of its ſpongy Subſtance with Blood. 5. From a Scirrhoſity, or preternatural Tumor of the Proſtate Gland, which Caſe occurred to *Morgagni, Colot*, and once to myſelf, ſays *Heiſter*, in a Man at *Helmſtadt.* Laſtly, From a Stone lodged in the Neck of the Bladder. Upon theſe, and other ſuch Occaſions, immediate recourſe muſt be had to this Operation, or the Patient will certainly periſh.

We will now give a ſuccinct Account of the ſeveral Methods of this Operation. *Launay* adviſes to place the Patient as for Lithotomy; then to introduce a grooved Catheter into the Bladder; and, next, to make an Inciſion in the Perinæum, cutting through the Urethra into the Groove; after which, he paſſes a Gorget through the Groove of the ſame Catheter; and then, he ſays, the Urine will diſcharge itſelf. But *Launay* immediately forgets, that this Paracenteſis is only neceſſary when the Catheter cannot be conveyed into the Bladder.

We will proceed, therefore, to others. The firſt and moſt common Practice, both among the Antients and the Moderns, is to place the Patient on a Bed, or Table, and ſecure him by Aſſiſtants, as in cutting for the Stone; then the Operator makes an Inciſion on the Left Side of the Suture of the Perinæum, into the Bladder, with a ſmall double-edged Knife (ſee *Tab.* XXII. *Let.* I). An Efflux of the Urine will convince him, that he has entered that Receptacle; but he ſhould not draw out his Knife, before he has introduced a Probe by the Side of it; then, extracting his Knife by the Side of that Probe, he muſt convey a Silver Tube, about four Inches long, (ſee *Tab.* XXIII. *Let.* P; or *Tab.* XLV. *Fig.* 3. or *Tab.* LIII. *Fig.* 4.) into the Bladder, which muſt be there ſecured by a flat Bandage carried round the Hips; and, after the Urine is diſcharged, be ſtopt with a Tent, to prevent a continual Efflux. This Tent muſt be taken out when the Patient would make Water, and then inſerted again. This muſt be continued, till the Inflammation, or other Diſorders, are removed. But, indeed, the Method ſeems dangerous and cruel, becauſe by thus unneceſſarily wounding the Neck of the Bladder, and the Urethra, the Inflammation is generally increaſed, and the ſeminal Ducts in the Proſtatæ very much injured.

I would, therefore, recommend an Inciſion in the ſame Part of the Perinæum, and with the ſame Inſtruments as in the Apparatus minor, or the lateral Method, cutting into the Body of the Bladder, without injuring its Neck; after which, a Silver Tube may be introduced. For this neither injures the Sphincter of the Bladder, nor Urethra, nor increaſes the Inflammation, and the Wound heals with more Eaſe and Expedition.

But there is a third Method, preferable to either of the preceding, where the Perforation is made in the ſame Part, as in the ſecond, but with the Trochar and Cannula (*Tab.* L. *Fig.* 3.) inſtead of the Inciſion-knife. When this Inſtrument has been

Paſſed into the Bladder, the Perforator is extracted, but the *Cannula* remains there, for the more ready Diſcharge of the Urine; by which means both the Operation and Cure are greatly facilitated. Nor is it improper to paſs one or two Fingers into the Anus, for the better Direction of the Inſtrument into the Bladder, and the Preſervation of the Rectum. *Garengeot.* affirms, that nobody has wrote any thing concerning this Method; whereas *Riolanus* has propoſed a *Paracenteſis* either in the *Hypogaſtrium*, or *Perinæum*, when the Knife ſhould be forced laterally into the Bladder, till the Urine flowed: By this, he ſays, he has freed many from the moſt imminent Danger. *Thevenin*, likewiſe, propoſed the ſame Puncture, though with a Knife, till the Urine followed. And I myſelf, ſays *Heiſter*, *Dionis*, and *Tolet*, have recommended this Practice; and *Morand*, in the Memoirs of the *Royal Academy of Sciences*, informs us, that *Chirac* preferred this to the ordinary Method.

Denys, a Lithotomiſt of *Leyden*, obſerving, that the Surgeon might thruſt the Perforator too far, and incautiouſly wound the oppoſite Side of the Bladder, for want of knowing exactly when it was perforated, has contrived a Needle of another ſort, (ſee *Tab.* LIII. *Fig.* 3, 4, 5.) incloſed in a ſilver Tube (*Fig.* 3, 4). In the upper Part A A, are three Apertures, one of which is not ſeen in that Poſition; there are as many too in the lower B B, which are conceal'd (in *Fig.* 3.) by the Plate C C; but in *Fig.* 5. which repreſents the *Perforator* out of its *Cannula*, we may obſerve, that it is made like other Perforators, round below the triangular Point; but from D D, to the Beginning of its Handle E E, it is triangular, with three excavated Sides, which Sides of the Triangle D E ſhould correſpond with the Apertures of the Cannula, when the Perforator is thruſt into it. Thus, as ſoon as the Inſtrument enters the Bladder, the Urine flows through the upper Apertures A A, into the lower ones, and gives ſpeedy Intelligence of the Perforation; after which the Perforator is extracted, and the Urine diſcharged through the Tube ſtill remaining there.

Some Authors, as *Tolet* and *Colot*, propoſe another Method of perforating the Bladder, much like that in the *Apparatus major*. Having diſpoſed the Patient properly, they paſs a grooved *Catheter* into the *Urethra*, till it meets with the Obſtacle, which is generally near the Neck of the Bladder; then they make an Inciſion into the *Urethra* through the ſame Part of the *Perinæum*, as in the *Apparatus major*, till the Point of the Knife reaches the Grove of the *Catheter*, but the Wound is not ſo large, as in Lithotomy: Thus of a Male they make a kind of Female Urethra; after which they paſs a Conductor thro' this ſhort Paſſage into the Bladder, and the Urine flows out. When the Urine is diſcharged, they convey a Tube through the Groove of the Conductor, and proceed as before. Both theſe Authors affirm, that this Diviſion of the Urethra ſo near the Sphincter, relaxes that, and the *Proſtatæ*, to ſuch a Degree, that not only a Catheter, but a grooved Conductor, may be introduced; and *Colot* mentions many Patients, whom he has cured by this Practice, of Ulcers and Excreſcencies of the Bladder, as well as a Suppreſſion of Urine. I muſt, however, think the Methods propoſed above more ſafe and eaſy, for the Cure of a ſimple *Iſchury*, becauſe, paſſing Inſtruments through the contracted Neck of the Bladder, muſt occaſion greater Pain, than a Perforation of the Receptacle itſelf.

But, in my Opinion, the moſt ready Method is, to proceed as in the high Operation for the Stone. The Perforator and Cannula is paſſed into the anterior Part of the Bladder, immediately above the Juncture of the Oſſa Pubis; then the former is extracted, and the latter remains, for the Diſcharge of the Urine, ſecured by a Bandage round the Body, that the Patient may, at Pleaſure, retain or diſcharge his Urine, till the Cauſe is removed; then the Tube may be extracted, and the Wound healed by the Application of Balſam of *Capivi*, and over this Lint, and a proper Plaiſter. Though this is ſeldom practiſed, I muſt, when nothing extraordinary forbids it, with *Roſſet*, *Riolanus*, and *Tolet*, recommend it as very neceſſary, ſince it appears from anatomical Experiments, that the Bladder, diſtended with Wind or Water, may be thus ſafely perforated, and that it has been done by *Turbier*, *Meri*, *Douglas*, and *Middleton*.

When the Cauſe cannot be removed, in a Perſon advanced in Years, or when it proceeds from a *Callus* of the Bladder or Urethra, a Scirrhus of the Proſtate, a large Stone, a paralytic Bladder, or ſome other obſtinate Diſorder, the Patient ſhould always wear this Pipe, made to cloſe with a Screw, that the Urine may not come away from him inceſſantly. But when it ariſes only from a Caruncle, or ſmall Cicatrix, after the Operation, the Obſtacle ſhould be removed, and the Wound healed, as in Lithotomy. When it is cauſed by a *Fungus*, or putrid Excreſcences, in the Bladder, they are often removed by ſuppurating and deterging Injections. Laſtly, if the Neck of the Bladder is ſo violently inflamed, as to obſtruct the natural Paſſage of the Urine, it will be proper, after the Operation, to bleed the Patient, and then adminiſter Clyſters, and to apply diſcutient Cataplaſms to the Region of the Bladder, with cooling, internal Medicines, in order to diſperſe the Inflammation and Tumor; and, unleſs this is effected before the third Day, the Patient is ſeldom cured.

A Suppreſſion of Urine is ſometimes accompanied with a violent Inflammation of the *Scrotum*, which frequently turns to a large Abſceſs or Gangrene, as *Colot* obſerves. In theſe Caſes, he practiſes the Puncture of the *Perinæum*, and then a Diviſion of the *Scrotum*, down to the Teſticles, where the Gangrene is, that no Blood may be left there, which may excite a farther Putrefaction; after that, the injured Parts muſt be treated with Digeſtives and Balſamics. During the Cure, he retains a ſilver Cannula in the Urethra, to prevent any Urine from eſcaping, which would increaſe the Diſorder. But where the Urethra is callous, and very much contracted, ſo that a Catheter cannot be introduced, he makes an Inciſion through the *Perinæum*, without it; then paſſes a Probe through the Neck into the Body of the Bladder, lacerates the Callus, forms a large Suppuration, which ſeparates the Callus, and reſtores the Parts to their former State. If any *Fiſtula* remains in the *Perinæum*, he applies the actual Cautery. But if this Method is not proſecuted in time, the Patient will be too weak to leave any Hopes of Succeſs.

ISICOS, ἰσικός. A ſort of Sauſage, deſcribed by *Apicius*, *L.* 2. *C.* 1. It is called ἰσίκιον by *Athenæus*, and ἰσυκὸν by *Trallian*. It is ſaid to have been invented by *Heliogabalus*.

ISER, or IXIR. An *Elixir*.

ISIS. A Goddeſs of the antient *Egyptians*, reported by *Diodorus Siculus*, to have invented many excellent Medicines; and hence, he ſays, after ſhe was received among the Number of the Deities, ſhe was applied to for the Cure of Diſtempers; and frequently indicated Remedies by Dreams. *Galen, de Comp. Medic. p. g. L.* 2. *C.* 18. and *L.* 5. *Cap.* 2. and 3. takes notice of ſome Plaiſters, which bear her Name. See, alſo, *Scribonius Largus*, *Num.* 26. and *Paulus Ægineta. L.* 7. *C.* 17.

ISOCHRYSON, ἰσόχρυσον. A pompous Title of a Collyrium, in *Galen*, *Lib. de Comp. Medic.* 1. *L.* 4. *C.* 7. It imports, worth its Weight in Gold. *Iſochryſon* is, alſo, the Name of a chymical Compoſition mentioned by *Libavius*, conſiſting of equal Parts of Martial Regulus of Antimony, and Quick-ſilver.

ISOCRATES, ἰσοκρατὴς, from ἴσος, equal, and κεράννυμι, to mix. An Epithet of Wine, importing its being mixed with an equal Quantity of Water. *Hippocrates*, *L.* 2. *de Morbis*.

ISOMOERIA, ἰσομοιρία, in *Hippocrates*, *de Aere*, *Locis*, & *Aquis*, ſeems to import an Equability of the Seaſons.

ISOPYRON, according to *Gerard*, is the *Trifolium Paludoſum*; according to *Blancard*, the *Aquilegia*, or the *Flos Conſtantinopolitanus*.

ISORA-MUNE. H. M. The Name of a Tree which grows in *Malabar*. The Juice of the Root is eſteem'd excellent in an *Empyema*, and Diſorders of the Breaſt, even applied externally; and it is accounted good for Eruptions and Whitloes.

ISORRHOPOS, ἰσόῤῥοπος. Equiponderated, or equilibrated; ſpoken when one Part is equal in Weight to another.

ISOSTATHMOS, ἰσόσταθμος. The Name of a Bechic Medicine in *Aetius*, *Tetrabib.* 2. *Serm.* 4.

ISOTHEOS, ἰσόθεος. Divine. A pompous Epithet for many Medicines deſcribed by *Galen*, *Aetius*, and *Paulus Ægineta*.

ISPIDA. The Alcedo.

ISTHMION, ἰσθμιον. This is defin'd, the narrow Paſſage betwixt the Mouth and Gullet. The Fauces.

ISTHMOS, ἰσθμός. The ſame as Isthmion.

ITALICUM *Emplaſtrum*. A Plaiſter deſcribed by *Paulus Ægineta*, *L.* 7. *C.* 17. *Italicus* is, alſo, an Epithet for a nervous Balſam, deſcribed by *La Mort. Pharm. Med. Phyſ. C.* 29.

ITEA. The *Salix*, Willow. *Aetius*, *Tetrab.* 1. *Serm.* 1.

ITHAGENES, ἰθαγενὴς, from ἰθὺς, for εὐθὺς, right, and γένος, Kind. Legitimate, true, or genuine. It is uſed by *Hippocrates*, relative to a Conception, by way of Diſtinction from a falſe Conception, or *Mola*.

ITHYCYPHOS, ἰθύκυφος, from ἰθὺς, for εὐθὺς, right, ſtrait, and κύφος, gibbous, imports a Perverſion from Straitneſs to Gibboſity. Thus ἰθυκύφη ῥάχις, *Hippocr. de Artic.* is the Spine of the Back, elevated from its natural Rectitude into a gibbous Form. *Foeſius*.

ITHYLORDOS, ἰθύλορδος, from ἰθὺς, ſtrait, direct, and λορδὸς, incurvated, inflected, or bent inward, ſignifies perverted in a ſtrait Courſe or Proceſs, and depreſſed inwards to a Figure oppoſite to the gibbous one, expreſſed by the preceding Word. To this Purpoſe *Galen, Com. in Lib. de Articulis*, ſays, that, if the Parts deviate backwards, it is called Cyphosis; if forwards, Lordosis; if ſideways or obliquely, Scoliosis. See thoſe three Articles. *Foeſius*.

ITHYORIA, ἰθυωρία, *Ionice* ἰθυωρίη, from ἰθύω, to go ſtrait forwards, is a Proceſs or Direction in a ſtrait Line, and applied, *Lib. de Fract.* to the Bones.

ITHYSCOLIOS, ἰθυσκόλιος, from ἰθὺς, ſtrait, and σκολιὸς, oblique, imports a Deviation from a ſtrait to an oblique or ſideway Courſe or Proceſs. Thus ἰθυσκόλιος ἡ ῥάχις, in *Hippocrates*, is an oblique and incurvated Spine, that is, as *Galen. Com.* 3. in *Lib. de Artic.* explains it, διαστροφὴ εἰς τοὐπίσω καὶ πρόσω, "a Perverſion to the anterior and poſterior Parts." *Foeſius*.

ITHYTRICHES, ἰθύτριχες, from ἰθὺς for ἐυθὺς, ſtrait, and θρὶξ, Hair, in 6 *Epid. Sect.* 7. *Aph.* 1. are thoſe who have ſtrait Hair, and are oppoſed to the οὐλότριχες, or *Iuli*, or thoſe with criſped or curled Hair, in *Ariſtot. Probl.* It, alſo, ſometimes imports black Hair.

ITINERARIUM. A Staff, uſed in cutting for the Stone, is thus called by *Hildanus*, in his Treatiſe *de Lithotomia, C.* 14, 15.

ITRION, ἴτριον. A ſort of ſweet Cake.

IVA ARTHRITICA. See CHAMÆPITYS.

IVA MOSCHATA. See CHAMÆPITYS.

IVABEBA, Piſon. The Name of an *American* Shrub, call'd, alſo, *Iva Braſilienſibus*. Margrav. *Solanum pomiferum Americanum non ſpinoſum lacteo flore*. The Root is eſteemed a great Deobſtruent, and particularly ſerviceable for abſterging the Kidnies; but, on account of its Bitterneſs, Decoctions of this Root have generally the *American* Liquorice added to them. *Raii Hiſt. Plant.*

IVA-PECANGA. A Name for the *Sarſaparilla*.

IVA-UMBU *Braſilienſibus* Marcgr. called alſo *Prunus Braſilienſis, fructu flavo, nucleo Amygdalæ ſapore.*

A Sort of *American* Plum-tree; the Fruit of which is eatable. *Raii Hiſt. Plant.*

JUBA, in Botany, is a Panicle, ſo called from its Reſemblance to a Horſe's Mane.

JUCAIA ARBOR. Niremberg. The Name of a Tree ſomewhat like the Pomegranate-tree. *Raii Hiſt. Plant.*

JUDÆI *Compoſitio.* The Name of an Eſcharotic deſcrib'd by *Celſus, L.* 5. *C.* 22.

JUDÆI *Emplaſtrum.* The Name of a Plaiſter deſcribed by *Celſus, L.* 5. *C.* 19. and of another deſcribed by *Aetius, Tetrab.* 4. *Serm.* 3. *C.* 14.

JUDAICA ARBOR. See SILIQUASTRUM.

JUDAICUM BITUMEN. See ASPHALTUS.

JUDAICUS LAPIS.

Lapis Judaicus. Offic. Schrod. 352. Calc. Muſ. 298. Kentm. 28. Boet. 408. De Laet. 136. Aldrov. Muſ. Metall. 711. Marth. 1386. Geſn. de Lap. 128. Charlt. Foſſ. 29. *Judaicus Lapis.* Worm. 69. Schw. 382. *Spinos Echini.* Woodw. Att. Tom. 2. P. II. page 19. JEWS STONE.

This is an oblong, roundiſh Stone, of the Figure of an Olive, marked with Streaks and Furrows, running from the Baſis to the Apex, according to its Length, at equal Diſtances from each other. It is of a whitiſh or aſh-colour, and ſhining within. It parts obliquely into thin Laminæ, and is given in Powder to the Quantity of a Dram, in any proper Vehicle. It was called *Lapis Judaicus*, or *Syriacus*, from the Countries where it is found. By others it is named *Euroius*, as being of a diuretic Virtue. This laſt Virtue I very much queſtion; but it is plain from Experience, that this Stone, the *Lapis Lyncis*, Crab's-eyes, and ſeveral other Things ſaid to have a Power of diſſolving the Stone, are really diuretic. But it cannot be concluded, that, becauſe oftentimes Gravel comes away with the Urine, therefore they have any lithontriptic Quality; for the fixed earthy Parts of theſe Stones, being mixed and incorporated with the Salts of the Fluids in the Body, become thereby more fixed, and more unfit to paſs off thro' the Pores of the Skin, but find their Way more eaſily thro' the Strainers of the Kidneys. Therefore the Secretion, by inſenſible Perſpiration, being leſſened, they are excreted in greater Quantities by Urine; and thereby whatever Saburra they find there, they waſh away; and hence the Urine becomes turbid, and is ſometimes mixed with Gravel, ſome Particles of which may be of a conſiderable Size, when the Paſſage is wide enough to tranſmit them. In this manner the diuretic Quality of theſe Stones may be accounted for; but neither Experience nor Reaſon give any Ground for attributing to them a lithontriptic Quality. *Geoffroy.*

Paulus Ægineta, Lib. 7. *Cap.* 11. calls this Stone *Tecolithos*; and hence an Antidote is named, deſcribed by the ſame Author, in the ſame Chapter. See ECHINUS OVARIUS.

JUDICATIO. The ſame as CRISIS; which ſee.

JUGALE OS, or *Zygoma.* The Name of a Bone in the Head. See CAPUT.

JUGALIS SUTURA. The ſagittal Suture is ſometimes thus called. The Suture, alſo, by which the *Os Jugale* is articulated to the Bone of the ſuperior Jaw, is ſo named.

JUGAMENTUM. The ſame as JUGALE Os.

JUGLANS. The Walnut. See NUX.

JUGULARIS *Vena.* The Jugular Vein. See VENA.

JUGULUM. The Throat, or anterior Part of the Neck. In *Celſus, L.* 8. *C.* 8. it ſignifies the Clavicle.

JUJUBA. See ZIZYPHUS.

Jujuba Indica. Raii Hiſt. 2. 155. C. B. P. 446. *Malus Malucenſis nonnihil ſpinoſa.* Ejuſd. 433. *Jujuba Indica, rotundifolia ſpinoſa foliis majoribus, ſubtus lanuginoſis & incanis.* Breyn. Prod. 2. 60. Commel. Flor. Mal. 149. *Zizyphus Indica argentea tota.* Herm. Muſ. Zeyl. 8. 37. *Zizyphus Zeylanica argentea ſpinis carens.* Parad. Bat. Prod. 386. *Ber. Indica fructu Jujubino.* J. B. 1. 44. Chab. 51. *Malus Indica Luſitanis, Ber. & Bor. Acoſtæ.* Park. Theat. 1636. *Periu-Toddali.* Hort. Mal. 4. 85. Tab. 41. *Wælambillæ.* Muſ. Zeyl. 8. *Æmbellæ.* Ejuſd. 37. THE LACCA-TREE.

From this Tree the Gum *Lacca* of the Shops is produced. The Leaves of this Tree are like thoſe of the Apple-tree, but hoary and woolly underneath, having Fruit like a Jujube, growing in Cluſters.

There are three kinds of Gum-lac; Seed-lac, which is in ſmall, bright, rediſh Grains; of this melted is made the Shell-lac, which is in flat, thin, tranſparent Pieces, of a rediſh-brown Colour, and is the beſt Sort; the Stick-lac is what comes upon ſhort Sticks, which are covered over by it, and it is in its native State. *Garzias ab Horto*, and *Bontius*, believed, that Gum-lac was prepared by great winged Ants, which ſuck'd out the Materials from the Branches of this Tree, which they worked as the Bees do Honey; but others, to whom Mr. *Ray* aſſents, rather think, that it is an Exudation of the Sap of the Tree, inſpiſſated by the Sun; and to which the Ants, by their gnawing the Bark, may give the freer Vent.

Geoffroy calls it a kind of Gum Reſin, gather'd by Ants in the *Eaſt Indies* from Flowers, which they afterwards carry to the Branches of Trees to make their Neſts, in which they probably lay their Eggs; becauſe theſe Neſts are diſpoſed in Cells, in ſome of which a ſmall Grain is found, which is red when bruiſed, being the Worm out of which theſe winged Ants are afterwards formed. It is brought chiefly from the *Molucca* Iſlands, and, alſo, from *Madagaſcar*.

Gum-lacca is accounted opening and attenuating, removing Obſtructions of the Liver and Spleen, and good for the Dropſy and Jaundice; it provokes Urine, cauſes Sweat, and purifies the Blood; but it is not much uſed in Medicines, greateſt Part being ſpent in making ſealing Wax, the fineſt of which is made of it.

TINCTURE OF GUM-LAC.

The Chymiſts obſerve, that certain Vegetables diſſolve with Difficulty in Alcohol; yet, being diſſolved therein, ſometimes afford great medicinal Virtues. Such Medicines are Dragon's-blood, Gum-juniper, Gum-lac, and Myrrh, which are found of a very tenacious Hardneſs, that will not eaſily admit a Diſſolution of their Parts; which have, therefore, been attempted various Ways, the moſt commodious of which is the following.

Gum-lac is brought to us from *Aſia*, and is a kind of Roſin, collected from the Trees by the Ants, in great Quantities, in the Iſland of *Ceylon*, whence the beſt is brought, with which they build their Neſts.

Take of this pure Gum, reduce it to fine Powder, and moiſten it with the Oil of Tartar *per Deliquium*, ſo as to make it into a ſoft Paſte, which, being put into a round urinal Glaſs, is to be ſet in a Furnace, with Heat ſufficient to dry the Maſs gradually. Then take out the Urinal, and leave it in the open Air, without Fire, where the alcaline Oil will again reſolve; after which it is to be dried a ſecond time in the Furnace; and thus, by repeating the Liquefaction, and the drying alternately, the glaſſy Tenacity of the Gum will be broke, and reſolved into a Liquor of an elegant purple Colour. Now let it again be gently dried, and carefully taken out of the Glaſs, as being thus prepared for affording a Tincture with *Alcohol*. Put the Matter into a tall chymical Glaſs, and pour upon it pure *Alcohol*, enough to float three or four Inches above it; ſtop the Glaſs with Paper, and ſet it in the ſame Furnace, that it may ſimmer two or three Hours, which may be done without Danger of loſing the *Alcohol*, by reaſon of the long and ſlender Neck of the Glaſs. Let the Liquor cool, and pour off the clear Tincture, by a gentle Inclination of the Veſſel, into another Glaſs, which is to be well ſtopped. The Remainder may be treated in the ſame manner with more *Alcohol*, and the Tincture poured to the former, till the Matter, by boiling, will no longer tinge the *Alcohol*; and then the Matter is exhauſted. The ſeveral Tinctures, being put together, and purified from their Fæces by ſtanding, are to be diſtilled by a very gentle Fire, in a glaſs Body, till one half of the *Alcohol* is come over: The Remainder, being thus thickened, is to be kept for Uſe, under the Title of Tincture of Gum-lac.

REMARKS.

Hence we ſee, that an Alcali, with the Air, and a digeſting Heat, opens a denſe Body, ſo as to make it give out its Virtue to Alcohol; and the Reciprocation of drying by the Fire, and moiſtening by the Air, penetrates to the uttermoſt Parts, though there always remain ſome fixed Parts in theſe Subſtances, incapable of being diſſolved by the Repetition of this Action: Whence the Menſtruum extracts the more active Virtue of ſuch Subſtances, leaving the groſſer, leſs active Matter behind. And hence we have an effectual, expeditious, commodious, and almoſt an univerſal Method, of preparing excellent

excellent Tinctures; the general Virtues of which depend upon the preſiding Spirit, ſecretly lodged in theſe Subſtances, and that often wonderfully contains their peculiar Virtues; again, upon a rich balſamic Part preſiding in the ſame; and, laſtly, upon a corroborating reſinous Part, which they generally hold; and theſe are added to the Virtue of the Menſtruum, or Alcohol. Hence, in general, all theſe Tinctures may be pronounced heating and exciting to the Nerves and Spirits; drying, preſervative, ſtrengthening, and conſtringent to the Veſſels. But the preſent particular Tincture of Gum-lac is of great Virtue in curing the Diſorders of the Gums, Mouth, and Teeth; in the Scurvy, being frequently uſed, by rubbing it on the Parts; and, taken internally, it has the ſame Virtue, and ſafely cures that Diſorder, if not attended with too much Heat: It is, alſo, of great Uſe in the Gout, the Rheumatiſm, and the Scurvy from a ſluggiſh Cauſe, as, alſo, a Leucophlegmatia, Dropſy, or the like: It may be taken, thrice a Day, in *Spaniſh* or *Canary* Wine, after the Stomach has been firſt cleanſed and emptied: It has a grateful Odour and Bitterneſs, with an agreeable Aſtringency, that ſhews its ſtrengthening Virtue, and is therefore highly commended in the Cure of the Fluor albus. *Boerh. Chem.*

JUJUBA SILVESTRIS. See PALIURUS.

JULAP, JULAPIUM, JULÆB, and JULEPUS, all ſignify what is now called, in the Shops, a *Julap*. This is an alterative Medicine, unknown to the antient *Greeks*, and invented by the *Arabians*: It was ſo called becauſe uſually prepared of delicate and ſweet Ingredients, or at leaſt with Sugar, the Word *Julep*, or *Juleb*, in the *Perſian* Language, ſignifying *a ſweet Potion*. In Imitation of the *Arabians*, the *Greeks* of the latter Ages called this Form of Medicine ζυλάπιον, *Zulapium*, others ἰολάβιον, *iolabium*, which Names are ſtill uſed by Phyſicians. We meet with two Sorts of *Julap* in Authors, one aſcribed to the Antients, the other in Uſe among the Moderns.

The Julap of the Antients was very different from that of the Moderns; it was a ſimple Syrup, conſiſting properly of the Juice, diſtilled Water, Infuſion, or Decoction of one Thing only, ſweeten'd with Sugar, and only prepared, for the moſt part, when there was inſtant Occaſion for it: Of this Kind was the *Julap Roſatus*, otherwiſe called *Alexandrinus*, and *Regius*, formerly in great Requeſt, and a very elegant and proper Medicine for allaying Heat and Thirſt.

But *Julap* is, alſo, a Name for what the moſt modern Writers have called *Syrupus*, and *Serapium*, as is uſual among the modern *Italians*; perhaps, becauſe a Syrup is the Baſis of a Julap: At *Montpelier* they ſtill keep to the old Name *Julepus*.

A Julap then is a liquid Medicine, compoſed of ſome proper Liquor, and a Syrup, or ſometimes Sugar, of extemporaneous Preparation, without Decoction, divided into three or four Doſes, and deſigned for the Concoction or Alteration of the Humours, or reſtoring the Strength.

Hence this alterative Medicine may be diſtinguiſhed into two Sorts: The firſt of theſe prepares the Humours, or concocts them, in order to their Evacuation; and this was what the antient *Greeks* called προποτισμὸς, [*Propotiſmus*] a precurſory or preparatory Potion, in order to an univerſal Purgation; and therefore properly called, alſo, a concoctive or digeſtive Potion. The other Sort of *Julap* is deſigned for producing an Alteration in the Humours, Spirits, and other Parts of the Body, without ſerving any cathartic Purpoſe; ſuch are thoſe we call ſtrengthening and cordial Julaps, and the like. *Morelli Formulæ Remediorum.*

IULIA. The ſame as IULIS.

JULIANI ANTIDOTUS. The Name for an Antidote, deſcribed by *Aetius*, *Tetr.* 3. *Serm.* 3. *Cap.* 22.

IULIS. Offic. Salv. de Aquat. 219. Rondel. de Piſc. 1. 180. Aldrov. de Piſc. 37. Geſn. de Aquat. 464. Bellon. de Aquat. 254. Jonſ. de Piſc. 28. Charlt. Piſc. 14. Raii Icht. 324. Ejuſd. Synop. Piſc. 138. THE RAINBOW-FISH.

This Fiſh is frequently found about *Genoa*. The Broth thereof looſens the Belly, and is diuretic. *Pliny*. *Oribaſius*, *Medic. Collect. Lib.* 2. *Cap.* 49. eſteems this Fiſh as good Food.

JULIUS BASSUS. The Name of an antient Phyſician, from whom two Medicines for the Colic are quoted by *Marcellus Empiricus*, *Cap.* 29.

IULUS. Offic. Mouff. Inſect. 201. Charlt. Exer. 51. Jonſ. de Inſect. 128. Aldrov. de Inſect. 633. Mer. Pin. 205. *Iulus quartus*, *glaber*. Raii Inſect. 46. THE GALLY-WORM.

This is a terreſtrial Inſect, furniſh'd with many Annuli, or Rings, and creeping on many Legs, and rolling itſelf up, when touched. It is common in Gardens. *Charlton* recommends it, taken in Wine, againſt the Jaundice and Difficulty of Urine. *Dale.*

IULUS, in Botany, is a Katkin: It is an Aggregate of Summits, hanging down in Form of a Rope, or Cat's Tail; as in the Sallow, Haſel, Birch, and others.

JUMNISUM. Ferment. *Rulandus.*

JUNCAGO. See JUNCUS.

JUNCARIA, J. B. *Juncaria Sa'maticenſis*. Cluſ. Hiſp. *Juncaria*. Tab. *Rubia latifolia aſpera*. C. B. *Smanchicæ Species*. Lugd. ITALIAN RUSHY HORSE-TAIL.

It is eſteem'd vulnerary, deterſive, and aperitive; but is ſeldom uſed in Medicine. *Lemery des Drogues.*

JUNCTURA. A Joint, or Articulation.

JUNCUS. The Ruſh.

There are a great many Species of the Ruſh in Botanical Authors, none of which are uſed in Medicine, except the four following; which are,

1. Juncus; lævis; paniculâ ſparsâ; major. *C. B. P.* 12. *Theat.* 182. *Park. Theat.* 1191. *Boerh. Ind. alt.* 2. 163. *Tourn. Inſt.* 246. *Juncus vulgaris*. Offic. *Juncus lævis*. Ger. Emac. 39. *Juncus lævis vulgaris*, *paniculâ ſparsâ noſtras*. Raii Hiſt. 2. 1304. Synop. 3. 432. *Juncus paniculâ arundinacea*. J. B. 2. 520. COMMON SOFT RUSH.

2. Juncus; acutus capitulis Sorghi. *C. B. P.* 11. *Theat.* 173. *Raii Hiſt. Plant.* 2. 1302. *Synop.* 3. 431. *Tourn. Inſt.* 247. *Boerh. Ind. A.* 2. 163. *Oxyſchœnos*. Offic. *Juncus pungens*, *ſive Juncus acutus capitulis Sorghi*. J. B. 2. 520. *Juncus maritimus capitulis Sorghi*. Park. Theat. 1192. PRICKING LARGE SEA RUSH. It grows in maritime Places. The whole Herb and Seed are uſed, and agrees in Virtues with the *Juncus aquaticus maximus*.

3. Juncus; aquaticus; maximus. *Ger.* 31. *Emac.* 35. *Raii Hiſt. Plant.* 2. 1304. *Boerh. Ind. A.* 2. 64. *Holoſchœnos*. Offic. *Juncus lævis maximus*. Park. Theat. 1191. *Juncus maximus*, *Holoſchœnos*. J. B. 2. 525. *Juncus maximus*, *ſive Scirpus*. C. B. P. 12. Theat. 178. *Scirpus paluſtris altiſſimus*. Tourn. Inſt. 528. BULRUSH.

The Seeds of this and the two preceding, roaſted, ſtop a Diarrhœa, and Floodings in Women. *Dioſcorides* recommends the young Shoots, as a good Topic for rubbing the Wounds made by venomous Spiders.

4. Gramen; junceum; ſpicatum; ſeu Triglochin. *C. B. P.* 6. *Theat.* 85. *Gramen Triglochin*. J. B. 2. 508.

It is deterſive, and operates by Urine; but binds the Belly. *Lemery des Drogues.*

JUNCUS ODORATUS. See SCHOENANTHUS.

JUNIPAPPEEYWA. A Name for the JANIPABA.

JUNIPERINUM VINUM. Wine impregnated with Juniper-berries. *Dioſcorides*, *Lib.* 5. *Cap.* 46.

JUNIPERUS.

The Characters, according to *Miller*, are;

The Leaves are long, narrow, and prickly. The Male Flowers are, in ſome Species, produced at remote Diſtances from the Fruit on the ſame Tree; but, in other Species, they are produc'd on different Trees from the Fruit. The Fruit is a ſoft, pulpy Berry, containing three Seeds in each.

Boerhaave mentions ſix Species of this Plant; which are,

1. Juniperus; vulgaris; fruticoſa. *C. B. P.* 488. *Tourn. Inſt.* 388. *Boerh. Ind. A.* 2. 108. *Juniperus*. Offic. Ger. 1189. Emac. 1372. *Juniperus vulgaris*. Park. Theat. 1028. *Juniperus vulgaris baccis parvis purpureis*. J. B. 1. 293. Raii Hiſt. 2. 1411. Synop. 3. 444. THE JUNIPER-TREE, or BUSH.

This ſeldom grows, with us, to be bigger than a Buſh, or Shrub, though, in ſome foreign Countries, as *Norway* particularly, it grows to a pretty large Tree; the Branches are thick ſet, with narrow, ſtiff Leaves, of a blueiſh-green Colour, ſharp and prickly at the Ends. The Flowers are ſmall, moſſy, and ſtaminous. The Berries are round, green for the firſt Year, and afterwards of a dark-purple, or black Colour, each Berry containing three corner'd Seeds. It grows upon Heaths, in ſeveral Counties in *England*; the Fruit is ripe about *Michaelmas*. The Wood, the Berries, and the Gum, are uſed.

The Wood is hot, dry, and cephalic, good to burn in Times of Peſtilence, and contagious Diſtempers. The Berries are carminative and diuretic, expel Wind, help the Colic, and are very uſeful againſt the Stone, Gravel, and Stoppage of Urine; and are commended, by ſome, in all contagious, peſtilential Fevers, and the Plague itſelf. The Gum, which is the *Sandaracha* of the *Arabians*, is yellowiſh, clear, almoſt pellucid, like Maſtich, but yellower, and in larger Drops, of a leſs grateful Smell; it is uſed to be burnt upon Coals, and the Fume to be received by thoſe who are troubled with Catarrhs, and ſerous Defluxions upon the Noſe and Eyes.

Officinal Preparations are only the diſtil'd Oil. See OLEUM. *Miller's Bot. Off.*

Its Salt has ſome Reſemblance to that called by *Angelus Sala*, *Oxyſal Diaphoreticum*, being a fix'd Salt, loaded with a great deal more Acid than is neceſſary to ſaturate it.

Thus, by the chymical Analyſis, we obtain from Juniper ſeveral acid Liquors, and a fix'd, but no volatile Salt. We muſt obſerve, that the Salt of this Plant is involved in a great Quantity of Sulphur, and ſome terreſtrial Parts: Juniper-wood yields, beſides the ethereal Oil, a great deal of Oil, thicken'd to the Conſiſtence of Syrup: Its Berries yield a great deal more, and its Top a little leſs: To extract all theſe Subſtances from the Juniper, they muſt be carefully ſeparated in the *Analyſis*; otherwiſe

wise their Mixture produces, at first, an ardent and urinous Spirit; after which the Oil forsakes the Fæces: It is no hard Matter to perceive, that all these Principles should render the Juniper good to restore the Functions of the Stomach, to dissipate Wind, and Matters which cause acute Pains, to clear the Lungs, and evacuate that gross Lymph which often occasions Difficulty of Breathing. This Plant is, also, sudorific, cephalic, and antihysteric; it provokes the Menses, takes away Obstructions of the Bowels, restores their Elasticity, and gives a free Passage to the Urine. They make use of the Wood, the Tops, and the Berries. The Decoction of the Wood volatilizes the Blood, and purifies it by insensible Transpiration, much after the manner of Guaiacum. A *Semicupium*, prepar'd with this Wood, gives great Ease to those who are troubled with the Gout; the Wine, in which the Tops of Juniper have been boiled, is very diuretic. *Tragus*, *Matthiolus*, *Hartman*, and *Simon Paulli*, affirm, that they have cured some Persons of the Dropsy by the Use of this Wine. I have seen some very much eased by Pills made with two Parts of Aloes, and one Part of Juniper-berries. They draw from these Berries an ardent Spirit, a Tincture, an Elixir, and an Extract; they prepare with it, also, a Ratifia, and a sort of Honey: The Tincture is made by the Infusion of these Berries in their ardent Spirit: The Infusion of the same Berries in their Spirit, or common Water, and evaporated to the Consistence of Honey, is called the Elixir or Extract of Juniper. The Honey of Juniper is only the Berries boil'd with Honey. It is good in Clysters, for the Dysentery and Tenesmus. The Ratifia is only an Infusion of the Juniper-berries in Brandy or Champaign, with the Addition of a little Sugar, and some Cinnamon. The Pulp of these Berries, cleared from the Seeds, and work'd up with some Sugar, makes a Conserve not inferior to the Preparations just now mentioned. Lastly, they burn the Fruit of this Plant to remove a pestilent Air. It is infused in Vinegar in time of the Plague, to wash Letters, Linen, and the very Utensils, with it. We have no Plant, in *Europe*, that is of greater Use: It is used in the *Elixir Vitæ* of *Fioraventi*, in the *Elixir de Tribus*, in the pestilential Elixir of *Sennertus*, and in that which *Zwelfer* calls the *Asthmatic Elixir*. *Martyn's Tournefort.*

The Whole of the Juniper-tree is possessed of a medicinal Quality, because the Whole of it is balsamic. Its Wood is so far from being inferior to the exotic Woods, *Guaiacum* and *Sassafras*, that it may not only be commodiously used as a Succedaneum to them, but is, in my Opinion, says F. *Hoffman*, preferable to them, in all Disorders arising from an impure State of the Humours. Its Berries, in consequence of the large Quantity of balsamic Oil which they contain, whether used in Substance, reduced to a Rob, or toasted, and used with Water, by way of Coffee, are highly efficacious against all those Diseases which arise from Obstructions of the Viscera, or a thick and viscid Condition of the Blood; for which Reason they are of great Service in Asthmas, Cachexies, the Jaundice, the Colic, the Stone of the Bladder and Kidneys, as, also, in Crudities of the Stomach. Some Physicians, of no inconsiderable Characters, inform us, that large Numbers of dropsical Patients have been cured by a *Lixivium* of the Ashes of this Tree, exhibited in Wine. *Hoffman de Præstantia Remed. Domest.*

2. Juniperus; vulgaris; Arbor. *C. B. P.* 488.

3. Juniperus; Bermudiana. *H. L.* 345.

4. Juniperus; Virginiana. *H. L.* 345.

5. Juniperus; Virginiana; foliis inferioribus Juniperinis, superioribus Sabinam, vel Cypressum, referentibus.

6. Juniperus; Virginiana; Ramis intortis, pendulis, expansis; folio toto Juniperino. *Boerh. Ind. alt. Plant. Vol. 2. p.* 208.

Besides the foregoing Species of *Juniperus*, *Dale* mentions the two following; which are,

1. *Juniperus major.* Offic. *Juniperus major baccâ cæruleâ.* C. B. P. 498. Tourn. Inst. 389. Raii Hist. 2. 1416. *Juniperus maxima.* Ger. 1189. Emac. 1372. *Juniperus maxima Illyrica.* Park. Theat. 1029. J. B. 1. 300. THE BLACK JUNIPER.

It grows in *Greece*; the Wood and Berries are used, and agree in Virtues with the *Juniperus*; *vulgaris*; *fruticosa*. *Dale.*

2. *Juniperus Alpina.* J. B. 1. 301. Raii Hist. 2. 1413. Synop. 444. Park. Theat. 1028. *Juniperus Alpina minor.* Ger. Emac. 1372. *Juniperus minor montana, folio latiore, fructuque longiore.* C. B. P. 489. Tourn. Inst. 389. DWARF JUNIPER, WILD SAVINE.

It grows upon Mountains: The Herb is used: A Decoction of its Tops, or its expressed Juice, are said to be good for destroying that Species of Vermin called *Bots*, which are sometimes lodged in the Stomach and Intestines of Horses. *Dale.*

Miller, besides the foregoing Species of *Juniper*, enumerates six more.

JUNIUS CRISPUS. The Name of a Physician quoted by *Marcellus Empiricus*, *Cap.* 23. as the Author of a Medicine, which he calls *Ambrosia.*

JUNO. The Air.

JUNONIS ROSA. The Lily. *Blancard.*

JUPICAI *Brasilienſibus.* A Species of Grass, which grows in *Brasil.* *Piso* relates, that the Plant, rub'd upon the Part affected, does much Service in an *Impetigo*, and eases the troublesome Itching.

JUPICANGA. A Name for the *China Occidentalis.*

JUPITER.

Stannum. Offic. Mer. Pin. 208. Aldrov. Mus. Metall. 181. Schrod. 394. *Stannum, seu Plumbum candidum.* Calc. Mus. 458. 466. *Stannum Jupiter.* Mont. Exot. 13. *Plumbum candidum, quod & Stannum alias vocatur.* Worm. 124. *Plumbum candidum.* Schw. 387. Kentm. 85. Fabr. 16. TIN. *Dale.*

JUPITER. Tin. The Characters of Tin are;

First, It is the lightest of all Metals.

Secondly, It is the least simple of Metals; being brought by a small Degree of Fire, to emit sulphurous Flames, which are easily separable from the metalline Part, and almost combustible.

Thirdly, It is hence less fixed in the Fire than any of the other Metals.

As it is, of all Metals, the least fixed in the Fire, and affords the greatest Quantity of sulphurous Fumes, it consequently loses most Weight in the Fire. The Fume, thus emitted, seems to be the Sulphur of the Metal, which is pernicious to the Lungs, as appears by those who are employ'd in melting Tin, it usually giving them a pale ghastly Complexion, and throwing them into a *Phthisis.*

Fourthly, It is soft, flexible, malleable, and may be drawn into Wire, but not so well as Iron; neither is it very sonorous or elastic.

But though it be very little sonorous, or the least of any Metals, except Lead, yet, when mixed with other Bodies, it may augment their Sound; as in the Composition of Bell-metal. So, though it be but very little elastic in itself, yet, when mixed with other elastic Bodies, it may increase their Elasticity.

A Body, Mr. *Boyle* observes, by being associated with another, may have new Properties and Uses, and some of them quite different from what it had alone: Thus two or more Materials, being conjoined, may be qualified into a third, by virtue of fresh Properties thence accruing to the Composition. As Tin is flexible, and yields but a dead Sound, who would dream, that one considerable Use of it should be, to make a less yielding and better sounding Metal more strong and sonorous? Yet Bell-metal is principally composed of Tin and Copper.

Fifthly, It melts more easily than any of the other Metals, long before it ignites, and with a Degree of Heat little greater than that of boiling Water: It readily hardens again in the Cold.

Sixthly, When crude, or accompanied with its adhering Sulphur, it dissolves only in *Aqua Regia*; but, when purified of its Sulphur by Calcination, it dissolves even in Vinegar, and requires only a small Proportion of that Solvent.

Acids do not dissolve it without great Difficulty, especially the more powerful ones. The Reason hereof is, apparently, its abounding with Sulphur, which Acids do not touch. It dissolves in *Aqua Regia*, scarcely in *Aqua-fortis*; which is a remarkable Circumstance, considering the near Alliance it has with Silver. The weaker the acid Menstruum is, the sooner and the easier it works its End; and the stronger, the more slowly: Thus sour Apples, and other unripe Fruits, being boiled in Tin Vessels, will grow sweetish; but the strongest Acids, boiled in the same Vessels, make no Solutions at all. But Tin, freed by Calcination from its Sulphur, dissolves in all Acids, and is reducible thereby to vitriolic Crystals. This Solution is little practised, by reason of the Difficulty attending it; for the Tin must be first thoroughly calcin'd, and the Calcination requires a continual Fire for three Days.

Seventhly, It so far endures Lead and Antimony in the Refiner's Test, as hardly to be separable from them, without the Assistance of Copper.

Eighthly, In many of its Properties it approaches to Silver.

If the Sulphur could be perfectly purged out of Tin, 'tis likely it might approach to Silver; for, as it is, the two Metals have several Properties in common. Thus, when dissolved in strong Acids, Tin grows bitter, as well as Silver; and, when it is fused along with Silver, it adheres so obstinately to it, that they can scarcely be separated; and in such Circumstances it resists Lead, almost as much as Silver does. Hence many account it an imperfect Species of Silver.

It may admit of some Doubt, whether Tin bears these Resemblances to Silver, in virtue of its being Tin, or only in virtue of the Particles of Silver mixed with it. 'Tis certain more of these Resemblances, and those in a greater Degree, are found in some Species of Tin than in others. Mr. *Boyle* mentions a Gentleman, who, having procured a good Quantity of the nobler Metals, from some Tin-ore, long digested in lixiviate Liquors, desired Mr. *Boyle* to purchase him a large Quantity of it, in full Expectation of raising an Estate. But, says Mr. *Boyle*, after his first Stock of Ore was spent, the next that he procured, though managed with the same Care as the former, proved wholly unprofitable.

He, in the ſame Place, relates, that having diſſolved ſome Block-tin (that is, pure and unwrought) in a particular Menſtruum, which held it ſuſpended; and, having afterwards evaporated the Solution, and ſet it to ſhoot, he found, to his Surprize, that the Cryſtals it afforded, were not all like its own kind of Vitriol, but broad, flat, and thin, like thoſe of Silver: Upon examining them by the Tongue, they had nothing of the Taſte of Calx of Tin made in Spirit of Vinegar, but that exceſſive Bitterneſs we meet with in the Cryſtals of Silver made with Aqua-fortis; and both of them preſently tinged the Nails and Skin with a Black that would not eaſily waſh off: Whence he might have ſuſpected, that the Menſtruum had exalted the Metal into an Affinity with Silver, had he not afterwards proſecuted the ſame Trial with the ſame Menſtruum, and another Parcel of Block-tin, and found, that though this Metal was bought at the ſame Place, and very ſoon after the other, yet the former Succeſs proceeded from his having procured a Lump of Tin of a peculiar Nature.

Some Authors ſpeak much of the Analogy between Tin and Lead, and will have Tin to be Lead, only under a leſs Degree of Coction: But, if in ſome Circumſtances they correſpond, they differ in others. Lead, for Inſtance, is eaſily reduced to a Calx, and Tin more eaſily ſtill; but the Calx of Lead readily melts, and runs into a browniſh Glaſs, whereas Tin does not vitrify without much Difficulty. Tin and Lead readily mix and unite with each other by a gentle Fire; but, if the Heat be intenſe, there ariſes a Colluctation between them, the Effect of which is, that both fall into a Calx, and that the Lead becomes exceedingly difficult, afterwards, to fuſe and vitrify. The Tin is eaſy to be revivified, but the Lead not without Difficulty; nor is the Reſtoration at all complete, or the new Body in all reſpects like the old.

Tin is found in a very heavy Ore, though itſelf be light; uſually in a brown deep Glebe, inclining to yellow; or in a black ſmooth, ſhining one, which is the richeſt Kind; ſometimes like Iron-ſtone; and ſometimes it is, alſo, in a heavy porous Stone.

The Ore is principally found in *Cornwall* and *Devonſhire*, whence all the reſt of *Europe* is ſupplied with this Metal. It is ſo much the peculiar Product of this Country, that *Camden* ſuppoſes it to have given the Denomination *Britain* to the Iſland. And *Bochart* derives the Name *Britannia* from the *Syriac Barat Anac*, that is, *Fields of Tin*.

The Metal is procured by roaſting, grinding, waſhing, then melting the Ore, and thus ſeparating the Scoria from it.

The Stones from which Tin is wrought, Dr. *Merret* tells us, are uſually found betwixt the two Walls of Iron-coloured Rocks, of little or no Affinity with the Tin, in a Vein, from four to eighteen Inches broad: Though, inſtead of Stones, they ſometimes, alſo, find it mixed with a ſmall gravelly Earth, generally of a red Colour, but ſometimes white. From the Earth the Tin is eaſily ſeparated, by bare Waſhing, which is called *Prian Tin*, and is ſcarcely half the Value of the former.

In the Tin-ore is frequently found an hard, glittering, ſulphurous Subſtance, called *Mundic*, or *Maxy*, which is commonly ſuppoſed to feed the Metal; yet, where the Mundic abounds, they rarely find much Tin. The Mundic is to be carefully ſeparated; for, if the leaſt of it be left, in melting the Tin, it makes it brittle and cruddy, and diminiſhes much of its Ductility.

There alſo occurs a ſort of Spar, of a ſhining whitiſh Subſtance, ſoft and flattiſh at firſt, but ſoon after it becomes harder. It ſeldom grows, but only ſticks to the Metal. Some of the Miners account this the Mother or Nouriſher of the Metal. The beſt Ore is that in Sparks; and next to this, that which has bright Spar in it.

The Ore being dug, they break the greater Stones, and thus carry it to the Stamping or Knocking-mill, where it is pounded with large Lifters, of thirty or forty Pounds apiece; and thus reduced to a ſmall Sand, to be waſhed out by a Stream of Water, diſcharged into it through a Braſs Grate, into a Launder, or Trench dug in the Floor, out of which the Water eſcapes, carrying with it the Parts not metalline, which they call the *Cauſalty*, and leaving the other at the Bottom.

To clear away the Mundic, they dry or burn the Ore, thus ſeparated, in a Kiln, upon Iron Plates, keeping the Matter conſtantly ſtirring, that all the Mundic may, by degrees, get uppermoſt, and ſo be burnt away; which they diſcover by the Flames growing yellow, and the Stench diminiſhing. Then they proceed to grind it again, very fine, in a Crazing-mill; after which they waſh it, then dry it a little, and, at laſt, carry it, thus prepared, to the Furnace, which they call a Blowing-houſe, and there melt, and caſt it.

When it runs out of the Furnace, there ſwims on it a Droſs, or Scum, like that of Iron; which, being melted down with freſh Ore, runs into Metal. The Cauſalty they throw on Heaps upon Banks, which, in ſix or ſeven Years, they fetch over again.

The Ore of Tin is commonly a black, ponderous, ſtony Subſtance, appearing like black Stones; but ſome Tin-ſtones are yellow, and others white; ſome are brittle, and others extremely hard, ſo as to require being broke before Calcination.

Tin is ſeldom uſed in Medicine internally, though its Virtues are highly extolled by ſome, but we fear upon no juſt Grounds; particularly in Diſeaſes of the Head, the Lungs and Uterus, the Falling-ſickneſs, and the Bite of a mad Dog. It has been taken in crude Filings, to the Quantity of twenty Grains, or more, for ſome time, without Harm.

Beſides the Utenſils and Veſſels made of this Metal, it ſerves to preſerve Iron and Copper; being extremely eaſy to melt, and, by means of any unctuous Matter, adhering cloſely to them: It likewiſe ſerves in Solders; amalgamated with Mercury, it ſerves for the Foiling of Looking-glaſſes: By Calcination it makes Putty; which is of great Uſe in the Poliſhing of Gems, and the making of Enamels: It is a principal Ingredient in Pewter, as well as Bell-metal: It mixes well with Zink and Regulus of Antimony, and thus becomes whiter and harder; but too much Regulus makes it brittle.

Being expoſed on a Tile to the Focus of a Burning-glaſs, it ſends off a copious thick groſs Fume, leaving a fine, light, white Calx behind, which, being continued longer in the Focus, turns to thin, tranſparent, glaſſy Strings; which melt no more, without the Addition of an unctuous Subſtance or Charcoal; by this means it returns to Tin. It deflagrates with Nitre: Hence, perhaps, this Metal conſiſts of a copious Sulphur, or particular Bitumen, and a fine vitrifiable Earth, mixed, on account of its poiſonous Quality, with a minute Proportion of an arſenical Salt.

Tin is ſoluble only in Aqua Regia; and a Solution of it tinges a Solution of Gold with a beautiful purple Colour. A Liquor which will perpetually ſmoke, or, as is commonly ſaid, a Spirit fermenting in the Air, may be made from Tin, in this manner.

Take of pure Tin, one Part; of Quickſilver, three Parts: Mix them, and make an Amalgama; to which add four Parts of corroſive Sublimate, and, having mixed them well together in as ſmall a Time as can be, throw them into a Glaſs Retort, to the Neck of which a Receiver is to be fitted, and a Diſh ſet under the Receiver full of cold Water: Then, diſtilling with a Sand-heat, a pellucid Liquor riſes firſt; next, the Spirit, with great Impetuoſity; and, laſt of all, white Flowers ſtick in the Neck, and upper Part of the Retort. Then, removing the Fire, ſeparate the turbid Liquor, and keep it cloſe ſtopt in Glaſs Phials; and, whenever it is expoſed to the open Air, it will break out in thick Fumes.

Tin may be reduced into a Powder by this Method.

Melt half a Pound of Tin in a Crucible, and pour it into a round wooden Box; cover it cloſe, and ſhake it about, till it is cold; ſome part of it will be in a grey Powder: That Part which remains in ſolid Metal, melt again; and, putting it in the Box, ſhake it, as before: Repeat the ſame Operation, till there is as much pulverized as is required.

This, with ſome, is a Secret againſt Worms, and is particularly deſtructive to them: They give half a Dram of it in Conſerve of *Roman* Wormwood, made into a Bolus, after the Uſe of Mercurials, againſt the Joint-worm.

Tin is thus calcin'd.

Put what Quantity you pleaſe of Tin into an Iron Dripping-pan; place it in a reverberating Oven, and make ſuch a Fire as to keep it melting red-hot; every now-and-then ſtirring of it with an Iron Spatula, full of Holes, the better to break the Tin, and forward its Calcination: This you may continue, till you have a ſufficient Quantity for your Uſe.

The principal chymical Preparations of Tin are, *Sal Jovis*, *Antihecticum Poterii*, *Arcanum Joviale*, and *Aurum Moſaicum*.

The *Sal Jovis*, or Salt of Tin, is thus prepared.

Take any Quantity of calcin'd Tin, and put it into a Matraſs, with as much diſtilled Vinegar as will riſe four Fingers-breadth above it: Let it digeſt three or four Days, and ſtir it in that Time often; then pour off the Liquor, and put on more, three or four times. All the Liquors filtrate together, and evaporate about two Thirds: Then let it ſtand in a cool Place, and it will ſhoot into Salt on the Sides of the Veſſel. Evaporate the Liquor again, and continue to repeat the ſame Operation, until all be obtain'd.

This is commended principally as a Coſmetic, in Pomatums; but it is often given inwardly in nervous Caſes, and particularly Convulſions and Epilepſies, from two Grains to eight. *Quincy* affirms, that he has known two or three extraordinary Inſtances, where the Succeſs could be aſcribed to nothing beſides this Medicine.

dicine. In young Children it is ready to occaſion a Puke; but it is never the leſs efficacious: It is not agreeable in Liquids, but is beſt taken in a Bolus.

For the *Antihecticum Poterii*, ſee ANTIHECTICUM.

For *Arcanum Jovialе*, ſee ARCANUM.

For the *Aurum Moſaicum*,

Take of pure Tin, an Ounce; of Mercury, revivified from Cinnabar, ten Drams: Make an Amalgama, which being mixed with ten Drams of common Sulphur, and an Ounce of Sal Ammoniac, let the Whole be well rubbed and mixed together: Then ſublime them with a common Fire for four Hours: A kind of cinnabarine Subſtance will riſe to the upper Part of the Veſſel, and a ſpongy Subſtance of a Gold Colour will remain at the Bottom; which, being waſhed in many Waters, is termed *Aurum Moſaicum*, and uſed both by Painters and Phyſicians.

It is believed to be diaphoretic, and is given from ten to thirty Grains, in hyſteric and hypochondriacal Affections, and in malignant Fevers.

Boerhaave gives us the following Proceſs upon Tin.

Mix with Aqua-fortis, or Spirit of Nitre, a ſixth Part of Sea-ſalt; and thus an *Aqua Regia* is obtained, which diſſolves Gold, and not Silver. If Aqua-fortis, alſo, be drawn off from Sea-ſalt, or Spirit of Salt from Nitre, by Diſtillation; thus, alſo, an *Aqua Regia* is obtain'd. Again, if two Parts of Nitre, three of Vitriol, and five of Sea-ſalt, be diſtil'd together, as in making Aqua-fortis, an excellent *Aqua Regia* is produced; which, therefore, we ſee conſiſts of a Mixture of Nitre and common Salt.

To a Quantity of this Aqua Regia, contained in an Urinal-glaſs, add a little Tin, and a violent Diſſolution ariſes: Continue, till as much Tin is diſſolved as poſſible; and the Solution will appear thick or oily. If the Solution be diluted with twenty times its Quantity of Water, or more, the Tin will be precipitated; which, being perfectly waſhed in Water, and then dried, affords a white Powder or Magiſtery of Tin.

Tin, put into Aqua-fortis, makes a violent Effervеſcence; when the Tin, diſſolving and ſwelling, appears in the Form of a thick Soap, or the White of Eggs.

This is a peculiar Manner of Solution; the Liquor is in ſome meaſure bitter, and therein approaches to Silver. The Calx, thus prepared, is given by many Phyſicians, as a particular Remedy in hypochondriacal and hyſterical Diſeaſes; but I do not admire it, as there are ſafer for the ſame Purpoſe. When duly mixed with Pomatum, it affords a famous Coſmetic for an ulcerated Skin. It is difficult, with the utmoſt Violence of Fire, to reduce it to Tin again. It appears by this Experiment, that Tin, of all the Metals, diſſolves with the leaſt Proportion of Acid. It is ſurpriſing, that Tin, diſſolved in *Aqua Regia*, ſhould not fume: Yet, if mixed with twice its Weight of Mercury ſublimate, and diſtilled in a Retort, it affords a Liquor at firſt that will ſmoke perpetually, and exhale all away. *Boerhaave.*

JURACATIA *Braſilienſibus.* Marcgrav. Piſo. *Arbor peponifera Braſilienſis ſpinoſa, fructu Mamao ſimili, ramoſa.*

The Name of a Tree which grows in *Braſil*, to which I find no medicinal Virtues aſcribed.

JUREPEBA *Braſilienſibus.* Marggrav. *Solanum ſpinoſum Indicum Borraginis flore.* Ico. Roberti Hort. Pariſ. *Solanum foliis & caule ſpinoſis.* Morif. Præl. *Solanum ſpinoſum, maxime tomentoſum.* Bocc.

The Name of a *Braſilian* Tree, deſcrib'd by Mr. *Ray* in his *Hiſtoria Plantarum*, but without any medicinal Virtues.

JURUMU, called, alſo, *Pepo Braſilienſis, Luſitanis Bobora.* Marggr.

The Name of a *Braſilian* Pumpion, ſaid to be agreeable Food, either boil'd, or roaſted under the Embers.

JUS, Broth. We have already deſcrib'd the *Jus Album*, from *Oribaſius*, who took it from *Galen, de Aliment. Facultat. L.* 3. *C.* 30. under the Article ALBUM JUS. See, alſo, *Dioſcorides, L.* 2. *C.* 35. And, under the Article FIBRA, we have conſider'd Broth as a Reſtorative, and directed the Methods of uſing it. I ſhall, in this Caſe, only farther remark, that it is a very great Error to exhibit ſtrong Jelly-broths, by way of Nouriſhment, in weak and worn-out Conſtitutions; becauſe theſe are likely to prove too ſtrong for the Powers of Digeſtion. And the great Secret of reſtoring loſt Strength and Fleſh conſiſts in proportioning juſtly the Aliment, to the Strength of the digeſtive Organs.

JUSQUIAMUS. A barbarous Word, made *Latin* from the *French*, importing Henbane.

JUSSA is explain'd by *Rulandus, Lapis Gypſeus*, Plaiſter of *Paris*.

JUSTICIA.

This Plant was ſo named by the late Dr. *Houſtoun*, in Honour of *James Juſtice*, Eſq; a great Lover and Encourager of Gardening and Botany.

Of this Plant *Miller* mentions two Species; which are,

1. Juſticia annua, hexangulari caule, foliis Circeæ conjugatis, flore miniato. *Houſt.*

2. Juſticia fruteſcens, floribus ſpicatis majoribus, uno verſu diſpoſitis. *Houſt.*

There are no medicinal Virtues attributed to either of theſe Plants at preſent, that I know of.

JUSTUS. The Name of an Oculiſt, mentioned by *Paulus Ægineta, L.* 6. *C.* 20.

JUVANTIA. A Term introduc'd into Medicine, importing whatever relieves under a Diſtemper, whether Aliment, Medicine, or any of the Non-naturals.

JUVENCUS. A Steer. See Bos.

JUWB *Amazonum.* Cluſ. *Arbor exotica foliis alatis.* C. B.

The Name of an exotic Tree, deſcrib'd by *Ray*, but without any medicinal Virtues.

JUXTANGINA. The Name of a Species of Quinſey, the ſame as *Cynance*, or rather *Paraſynance. Caſtellus.* See ANGINA.

IXALE, ἰξάλη, in *Hippocrates. Libr. de Fract.* ſignifies an entire Goat-ſkin, according to *Galen*; or the Skin of any other Animal.

IXIA. A VARIX; which ſee.

IXIA, in Botany, according to the Moderns, is the *Carlina*, or *Chamæleon Albus.*

But the *Ixia*, or *Ixias*, mentioned by *Aetius, Actuarius, Scribonius Largus*, and others, does not ſeem to be the ſame Plant as what we now call by that Name; for it is repreſented as a Poiſon.

Ixias is a Name for the Herb *Chamæleon*, as appears from *Scribonius Largus*, where he treats of Poiſons; and, alſo, from *Heſychius.* It does not, however, mean all Species of *Chamæleon*, but only what yields a viſcous Gum, as does that which grows in *Crete*; and, as *Theophraſtus* writes, produces a Tear: We are told, alſo, by *Dioſcorides*, that the ſame Plant, which he calls the *white Chamæleon*, in ſome Places diſcharges a *Viſcum* at its Roots, which the Women uſe inſtead of Maſtich. This Diſtinction of the *Chamæleon* was obſerv'd by *Nicander*, in his *Alexipharmaca*, where, mentioning the *Ulophonus* [οὐλοφόνον] a poiſonous Plant, which is unanimouſly agreed to be the *Chamæleon*, he adds the Characteriſtic Epithet ἰξώδες, viſcous. But, ſince the Antients have diſtinguiſh'd the *Chamæleon* into two Sorts, and *Dioſcorides* ſeems to make the *Ixias* a Species of the *White*, whereas it is certain, that the *White* may be taken inwardly, but the *Ixias* is a very pernicious Poiſon, it appears, however, from what they ſay of them, that the *Ixias* is of a very different Nature from the *Chamæleon*, which produces no *Viſcus*; for this latter, if of the white Sort, is not poiſonous, but preſcribed by *Dioſcorides, Galen*, and *Pliny*, againſt Worms of the Inteſtines, the Dropſy and Dyſury; but the black *Chamæleon* has a poiſonous and deadly Root, as we are aſſured by *Galen*, who, therefore, adviſes it to be uſed outwardly for the *Scabies, Impetigo*, and *Vitiligo*. But the Poiſon of the *Ixias* has very different Effects from that of the *black Chamæleon*, and requires as different Remedies; as appears from P. *Ægineta*, who treats ſeparately of the *Ixias* and *Chamæleon*, and of the Remedies againſt them. *Dioſcorides*, alſo, in the Preface to his ſixth Book, having divided Poiſons into their proper Claſſes, ranges the *Chamæleon* and *Ixias* ſeparately among the Roots.

This Plant is called *Ixias*, ἀπὸ τοῦ ἰξοῦ, from *Ixos*, [*Viſcum*;] for it abounds with ſo tenacious and pernicious a viſcid Juice, that it ſeems to be mortal only on account of its conglutinating the Inteſtines, agreeably to the Deſcription of its Effects by *Nicander*; in the *Latin* Verſion of which we have ἰξίας render'd by *Viſcum*, from the Example of *Pliny*, who calls it by this Name in many Places; and, tranſlating almoſt every thing from *Greek* Authors, gives us the ſame Remedies for the *Viſcum*, which the *Greeks* had preſcribed againſt the *Ixias*. For, by the Term *Viſcum*, we are not to underſtand what Fowlers uſe in taking of Birds, ſince that was never accounted Poiſon; whereas the *Ixias* has that Character from all who have written of it: But the great Similitude they bear to one another in Effects, was the Cauſe why *Pliny* render'd ἰξίας by *Viſcum*; for, as *Viſcum* is extremely tenacious of whatever it adheres to, ſo the *Ixias*, taken inwardly, glutinates all the Inteſtines, contracting and ſtopping up all the Orifices, thro' which the Excrement ſhould be diſcharged. It is to be wonder'd, however, that *Pliny*, who ſeems to have no Averſion to *Greek* Words, ſhould chuſe to ſay *Viſcum* before *Ixias*; and the more, becauſe *Scribonius Largus*, who writ before him, makes no Scruple to call it *Ixias*.

Some call the *Chamæleon, Ixias.* The white Species, in ſome Places, generates a white *Viſcum* under the *Alæ* of the Leaves, principally about the Riſe of the Dog-ſtar, in the ſame manner as Frankincenſe is ſaid to be produced: Whence it takes the Name of *Ixias. Pliny, Lib.* 22. *Cap.* 18.

The

The *Ixias*, which ſome call *Chamæleon*, ſmells, when taken, like *Ocymum*. Taken inwardly, it cauſes a Swelling of the Tongue, a Delirium, and a Stoppage of all the natural Paſſages. Remedies are Wormwood drank in Wine; or two Drams of Caſtor taken in four Cyathi of Wine. *Scribonius Largus*, N° 192.

The *Ixias*, which is, alſo, called *Ulophonon*, in Taſte and Smell reſembles Ocymum. When taken, it cauſes a violent Inflammation of the Tongue, with Madneſs; obſtructs all the Paſſages for the Diſcharge of the Excrements; excites a great Rumbling in the Inteſtines, and a Fainting attended with an Incapacity of Evacuation. The Cure begins with ſtrong Emetics and Clyſters, after which muſt be exhibited the Cremor of Wormwood in Muſſum, or Vinegar, or Oxymel, or the Seed of wild Rue, or the Root of Silphium, or the Decoction of Tragoriganum in ſome of the before-mentioned, or in Milk; or take of Nard, and Silphium, each half a Scruple, in Wine; or take of Caſtor, Rue, and Turpentine, each one Dram. *Aetius, Tetrab.* 4. *Serm.* 1. *C.* 71.

IXINE. The ſame as Ixias.

IXION, ἰξίον, in *Galen's Exegeſis*, is expounded φύλλον τῆς λευκῆς χαμαιλέοντος, "the Leaf of the white Chamæleon."

IXIR. See Xir.

IXIS, ἴξις, in *Hippocrates*, *Lib. de Rat. Vict. in Morb. acut.* ſignifies a ſtrait or direct Way, or Courſe; as in that Paſſage, where, ſpeaking of Ptiſana duly lubricous, he ſays, ἀδαμοῦ γὰρ παρίσχει, ἀλλὰ μόνον κατὰ τὴν τοῦ διέρχεσθαι ἴξιν "It no-where "adheres nor ſtops in the ſtrait or direct Paſſage of the Thorax" (the Oeſophagus). *Galen*, commenting on this Place, ſays, ἴσμεν δ' ὅτι τὴν ἴξιν ὡς τὸ πολὺ μὲν τὴν εὐθυωρίαν, ἐνίοτε δὲ καὶ αὐτὴν λέγει τὴν φορέαν, &c. "We know, that (*Hippocrates*) by "*Ixis* generally means *Eythyoria* (a ſtrait or direct Courſe), "and ſometimes the Conveyance itſelf. Now it is plain, that "Ptiſana paſſes in a ſtrait Courſe down through the Thorax, "and is, alſo, conveyed into the Ventricle through the Oeſo"phagus; ſo that the Meaning of *Hippocrates*, in the Expreſſion, "is, that nothing ſticks by the Way, as is uſual in many Af"fections of the Thorax and Lungs, where what adheres be"comes dry, and cauſes pertinacious and almoſt inſuperable "Obſtructions." By διέρχεσθαι ἴξις, then, is here meant the Gullet or Oeſophagus, the ſtrait or direct Paſſage, by which the Ptiſana paſſes to the Ventricle or Stomach. *Galen*, in his *Exegeſis*, expounds ἴξις by εὐθυωρία, a ſtrait or direct Way, or by ἄφιξις, an Advent or Acceſs. The ſame Author explains κατ' ἴξιν, in *Hippocrates*, by κατ' εὐθύ, or κατ' εὐθυωρίαν, that is, directly, or in a direct Line; as when, *Lib.* 1. περὶ γυναικ. it is ſaid, that if the Semen proceeding from the Man concur κατ' ἴξιν, directly, ſo as to make one Line with that from the Woman, ſhe will the ſooner conceive. And ἴξις ἕλκους, he expounds by εὐθυωρία, "the ſtrait Courſe or Situation of an Ulcer." *Ixis* is ſometimes uſed with reſpect to the Breadth of the Body, ſometimes to its Length, *Lib. de Fract.* Again, *Hippocrates*, in the ſame Book, adviſes us to be very cautious of applying Splints, κατὰ τῶν ζυρῶν τὴν ἴξιν, "to the Part lying in a direct Line "with the Malleoli." The ſame Author, for reſtoring a Cylloſis, (ſee Cyllos) directs the Bone of the Tibia, on the Outſide, near the Malleolus, to be forced inwardly; but the Os Calcis, τὸ κατ' αὐτὴν ἴξιν, "directly anſwering to it," to be protruded outwards: Where *Galen* expounds ἴξις by εὐθυωρία: that is, a Direction in which the Os Calcis anſwers to the Tibia, when placed on it in its natural Situation. And, in the ſame Book, he ſays, that the inward Part of the Os Femoris is thicker than the outward, as that Part of the Cubit, τὸ κατὰ τὸν τῆς μικρᾶς δακτύλου ἴξιν, "which anſwers directly to the little Finger," is longer, and more ſlender, than the reſt. *Foeſius.*

Κατ' ἴξιν (*Kat' ixin*) is explain'd, in *Galen*, *Com. ad Aph.* 20. *Lib.* 1. by κατ' εὐθυωρίαν, "according to the Direction of a right "Line, or directly forward." And, *Com. ad Aph.* 21. by κατ' εὐθὺ τῆς πεπονθότος μοίρας, "in a direct Line with the Part affected." He gives the ſame Expoſitions of the Phraſe in ſeveral other Places; but, *Lib.* 2. *de Cur. ad Glauc.* he ſays, that by κατ' ἴξιν *Hippocrates* means the very ſame as κατ' ἰσότητα, "according to "Equality." This Expreſſion, κατ' ἴξιν, is often uſed by *Hippocrates*, particularly 6 *Epid. Sect.* 2. *Aph.* 10. and 2 *Epid.* where, in Diſeaſes, and the Motions of Nature, we are adviſed always to regard their Direction, and whether they proceed κατ' ἴξιν, in a direct Courſe. And, 6 *Epid. Sect.* 1. *Aph.* 5. he mentions, among other Symptoms which relieve under a Pain of the Kidneys, attended with Vomitings, and a Numbneſs of the Thigh, τὰ κατ' ἴξιν, which directly anſwered, or was on the ſame Side with the Part affected. Again, 1 *Epid. Ægr.* we are told, that the Patient, on the eighth Day, was afflicted with a Pain in the Groin, and that a Tumor aroſe in the ſame Place, ζπλνὸς κατ' ἴξιν, "directly anſwering to the Spleen." And, 3 *Epid. Ægr.* 3. the Spleen, he ſays, was tumefied, and the Thigh, κατ' ἴξιν, "anſwering it on a direct Line," was ſeized with a Pain. And, 4 *Epid.* he ſays, that the Ear, κατ' ἴξιν τὸ ζπλνὸς καὶ τὸ πλάγιον, "anſwering to, or on the ſame Parts with the Spleen, "and the Side," was ſeized with a Pain. And a little after, in another Caſe, he ſays, a ſmall Quantity of Blood was diſcharged ἐκ τῆς κατ' ἴξιν, that is, "from the (Noſtril) anſwering "in direct Poſition to the diſeaſed Spleen."

Ἴξις is a Word peculiar to *Hippocrates*, and moſt commonly imports Rectitude, or a direct Way and Progreſs. But this Rectitude, ſays *Galen*, *Com.* 3. *in Lib. de Fract.* is to be underſtood not only proceeding with the Length of the Body, but, alſo, with its Breadth, as being no other than the direct and neareſt Courſe of the Ducts, or Paſſages, appointed for the commodious Derivation of the Humours: And theſe Paſſages are not all of one Kind, but various, ſome diſpoſed according to the Length of the Body, others according to its Breadth, and others tending from the anterior to the poſterior Parts.

Beſides the before-mentioned Significations, κατ' ἴξιν imports "perpendicularly," as *Lib. de Fract.* βάλλεσθαι μὲν ἐν χρὴ τὸ ὀθόνιον κατὰ τὴν ἴξιν τοῦ ἕλκεος, "A Bandage muſt, therefore, be ap"plied directly, or in a perpendicular Direction, upon the Ul"cer." In which Place *Hippocrates* blames the Surgeons of his Time, for applying a Bandage ἔνθεν καὶ ἔνθεν, "on this Side "and that Side;" which was a proper Expreſſion, as *Galen* underſtood it, to hint a Reaſon for applying a thin Piece of Lead, not on this or that Side of the Tumor, but κατ' ἴξιν, directly or perpendicularly upon it. *Hippocrates* is always pleaſed when Things take their Courſe κατ' ἴξιν: for then Nature is their Guide, and they are carried τῆς ἐκκρίσεως λόγῳ, "with a "rational View to Excretion;" which is a well-known Maxim, eſtabliſhed by long Obſervation, and approved by *Hippocrates*, who has given it, as it were, the Sanction of a Law, when he talks of Pains of the Sides, Tenſions of the Hypochondria, Tumors of the Spleen, and Hæmorrhages from the Noſtrils, and the like, κατ' ἴξιν. Thus, 2 & 6 *Epid.* for a Pleuriſy, he directs a Vein to be opened κατ' ἴξιν; an Abſceſs ariſes in the Skin κατ' ἴξιν; in a Phlegmon of the Liver, an Hæmorrhage is excited κατ' ἴξιν; an Abſceſs ariſes and breaks κατ' ἴξιν. In 6 *Epid. Herophon* had a Swelling of the Spleen; after that, was afflicted with an Abſceſs of the Groin, and, ſoon after, with another in the Leg, both κατ' ἴξιν the Event of which was the Recovery of the Patient beyond all Expectation. And *Heropythus*, 3 *Epid. Ægr.* 9. had a frequent Viciſſitude of Deafneſs and Pain in the Right Iſchion; and ſuch was the Nature of the Diſorder, that whenever the Pain in the Iſchion ceaſed, the Fever was exaſperated, and the Deafneſs increaſed, but were both mitigated while the Pain of the Iſchion continued. From the Premiſes we may rationally conclude, that all morbific Matters, which take their Courſe from the lower Parts upwards, or the contrary, κατ' ἴξιν, ſeek a Place, where they may ſettle, or be diſcharged, ſince they are under the Direction of Nature, tend to Excretion, and are not hurried by an Orgaſmus. Hence, alſo, we are taught to act in Imitation of Nature; for, ſays our great Maſter, ἀκολουθεῖν χρὴ ἡμῖν ῥέπει the Senſe of which is, "that we "are to lead, where Nature ſhews the Way." And as we have Reaſon to expect a good Event when Things take their Courſe κατ' ἴξιν, ſo the contrary is to be feared from a Direction or Tendency ἀνάπαλιν, "preposterouſly," that is, contrary to the other. See Anapalin. Thus, in *Coac.* it is ſaid τὸ ἀνάπαλιν αἱμορῤῥαγέειν πονηρὸν, "an Hæmorrhage which happens prepo"ſterouſly is pernicious;" for Example, if in a Tumor of the Spleen the Hæmorrhage falls on the Right Side; for Right with Right, and Left with Left, are ὁμόφυλα καὶ ξυγγενέα, "con"ſocial and connatural," ſays *Hippocrates*. Whence Nature contends with more Strength and Vigour againſt Diſeaſes, when Things tend κατ' ἴξιν, which is more to be regarded than the Courſe and Situations of the Veins.

IXODES, ἰξώδης. Viſcous. From ἶξος, Bird-lime, or Gum.

IXOS, ἶξος, is properly the viſcid tenacious Juice, which tranſudes through the Barks of many Trees, and adheres to the Surface. It is tranſlated *Viſcum*, Birdlime. See Viscum.

IXYS, ἰξὺς, or ἰξύη. *Galen* ſays, that the ἰξύαι are underſtood by ſome to mean the Oſſa Ilia; ſome the Part immediately above them; but he thinks, from a Paſſage in *Homer*, *Odyſ.* 5. *ver.* 231. it means thoſe Parts of the Body which are, on each Side, interpoſed betwixt the Bones of the Breaſt and Oſſa Ilia. I ſuppoſe he means the ſpurious Ribs, and the Oſſa Ilia. By ſome it is underſtood of the Loins; by others, of the Flanks.

IYNX. The Name of a Bird, called, in *Latin*, *Torquilla*; in *Engliſh*, the Wry-neck.

K.

K. For the Signification of this Letter in the Chymical Alphabet, ſee ALPHABETUM CHYMICUM.

KAATH. See the fifth Species of ACACIA; where I find the Word printed *Raath*, by Miſtake, inſtead of *Kaath*.

KAAWY. A Sort of Drink uſed by the *Indians*, made of Mays.

KABNOS. A barbarous Word for CAPNOS, Smoke.

KACHIMIA, or KAKIMIA. A barbarous Word for CACOCHYMIA.

KADALI. *Ray*, in *Hiſt. Plant*, takes notice of four Shrubs called by this Name.

The firſt is the

Kadali. H. M. *Baccifera Indica fructu umbilicato quinquecapſulari polyſpermo*.

It grows in the *Eaſt Indies*. The Fruit, when ripe, is eaten by the Inhabitants, and it is uſed for dying Calicoes. Of the tender Leaves, boil'd in Oil, an Ointment is made, which is good for Aphthæ, and Exulcerations of the Mouth and Gums. The Juice of the Leaves, taken in an Infuſion of Rice, is good for the Colic.

The ſecond is the

Ben-Kadali, H. M. *flore albicante, fructu viridi, pulpa albicante*.

The Fruit of this is eaten by the Inhabitants, but is of no Uſe in Medicine.

The third is the

Katou-Kadali, H. M. P. 4. T. 43. p. 91. *floribus minoribus, fructus cortice aſpero*.

The Leaves powder'd, together with the Leaves of Pepper, and taken with Sugar, eaſe a Cough, and cauſe Expectoration.

The fourth is the

Tsjerou-Kadali foliis, floribus & fructibus minoribus.

From the Leaves, Bark, Flowers, and Fruit, boil'd in Oil of Seſamum, an Oil is made, which is a powerful Remedy againſt Aphthæ, Fiſſures of the Tongue, and Puſtules of the Palate and Tongue. It is farther ſaid to cure an Epilepſy, and Cynic Spaſms, if the Head is anointed therewith. *Raii Hiſt. Plant*.

KAIB. *Rulandus* explains this, *Lac Acidum, coagulatum*. Acid and coagulated Milk.

KAIDA. *Ray*, in his *Hiſtoria Plantarum*, takes notice of four Shrubs, which are called by this Name, differing only with reſpect to their Fruits. The firſt is the

Kaida. H. M. The Juice of the Leaves and Roots are uſed by way of Bath for Manias. The Flowers, which are very fragrant, taken internally with Saunders and Cumin, and, at the ſame time, bruiſed and applied to the Hypogaſtrium, are ſaid to increaſe Venereal Vigour. Apozems are prepared of the Root, which are ſaid to be effectual in a Dyſury. Of the Juice of the Root, alſo, by boiling, an Oil is prepared, which is ſaid to be good in the Gout.

The ſecond is the *Kaida-Taddi*. H. M.

The Juice of the tender Leaves, taken with Sugar, cures a Dyſentery.

The Juice of the ripe Fruit, mix'd with Sugar, is recommended againſt Aphthæ.

The third is the *Perin-Kaida-Taddi*.

The fourth is the *Kaida-Tsjerria*.

The Fruits of all theſe are extremely large, and are eaten by Elephants, and ſome of the Inhabitants.

KAIGANG. A Name for the *Ficus*; *Malabarenſis*; *folio cuſpidato*; *Fructu rotundo, parvo, gemino*.

KAKA-MOULLON, or *Kaka-Mullu*. H. M. Call'd, alſo, *Siliquoſa Indica, flore papilionaceo, decapetalo, Siliquis latis monoſpermis*. The Name of a ſiliquoſe Tree, which grows in the *Eaſt Indies*, about *Chenotti, Parou*, and *Warapoli*.

The Bark, boil'd in Milk, is ſaid to cure a Diabetes and Gonorrhœa. *Raii Hiſt. Plant*.

KAKA-NIARA. *H. M.* Call'd, alſo, *Baccifera Indica, fructu oblongo, Calyce inſidente, monopyreno, oſſiculo compreſſo*. An *Eaſt Indian* Tree, which grows in *Porca* and *Montan*.

The Juice expreſs'd from the Leaves, and taken with the milky Liquor of the Cocoa-nut, kills Worms; and expels them, if taken with Brine. *Raii Hiſt. Plant*.

KAKA-TODDALI, otherwiſe call'd, *Frutex baccifer Indicus ſpinoſus, trifolius, floribus ſpicatis, fructu plano, rotundo tricocco*.

A low Shrub, which grows in all Parts of *Malabar*.

An Ointment is prepared of the Root, and green Fruit, fry'd in Oil, which ſome recommend againſt the Gout. Baths are made of the Leaves boil'd in Water, which are ſaid to be ſerviceable in an Anaſarca, Cachexy, œdematous Tumors of the Legs, and other Diſorders of the like Kind, proceeding from a Redundance of Serum.

KAL is explain'd by *Rulandus*, and *Johnſon*, *Sal de Torrente*, but I don't know what they mean.

KALD. Vinegar. *Rulandus*.

KALED. In *Senior Zadith's Tabula Chymica*, this Term occurs, which imports, flying, or volatile.

KALI.

The Characters are ;

The Plant reſembles the Aizoon, and is ſucculent: The Flower is roſaceous, according to *Tournefort*; but apetalous, according to others: The Fruit is globous, and membranaceous, containing one Seed, intorted like the Shell of a Periwinkle, in the Centre of the Calyx.

Boerhaave mentions three Species of this Plant; which are,

1. Kali, majus; cochleato ſemine. *C. B. P.* 289. *Raii Hiſt.* 1. 212. *Ger. Emac.* 535. *Tourn. Inſt.* 247. *Boerh. Ind. A.* 2. 93. *Kali*. Offic. *Kali cochleatum majus*. Park. Theat. 279. *Cali vulgare*. J. B. 3. 702. *Salicarnia altera*. Ger. 428. GLASSWORT.

This Kali, which is only to be found in the warmer Countries, grows to be a Foot or two high, with thick, fat, brittle Stalks like Purſlane, bearing long, roundiſh, fleſhy Leaves, having here-and-there ſmall, yellow, ſtamineous Flowers, which are ſucceeded by Seed-veſſels, twiſted up Snail-faſhion. It grows upon the Coaſts of *Spain, Italy*, and the Southern Parts of *France*.

Of this Plant is made the Sal Alkali, or the Soda, or the true Cineres Clavellati, of which the fineſt Glaſs is made: They burn it in great Heaps, which, by the Vehemence of the Fire, melt, and run into blackiſh Lumps of hard Salt.

The Juice of this Plant is cathartic and diuretic, accounted good to purge phlegmatic watery Humours, and ſerviceable againſt the Dropſy and Jaundice, and Obſtructions of the Liver and Spleen; but it is ſeldom, or never, uſed in *England*. Becauſe a great Quantity of fixed Salt is drawn from the Aſhes of this Plant, the Name of *Alkali* has been given to the fixed Salt of all others. The beſt *Venice* and *Caſtile* Soap is made of the Lixivium of theſe Aſhes. *Miller's Bot. Off.* See ALCALI.

2. Kali; ſpinoſum; foliis longioribus & anguſtioribus. *T.* 247.

3. Kali; Ægyptium; villoſum; flore ſtellato. *Lippii. Boerh. Ind. alt. Plant. Vol.* 2. *p.* 93.

Kali minus. A Name for the *Chenopodium*; *ſedi folio minimo*; *folio Kali ſemine ſplendente*; *annuum*.

Kali fruticoſum. A Name for the *Chenopodium*; *ſedi folio minimo*; *fruteſcens*; *perenne*.

Kali geniculatum. A Name for the *Salicarnia*.

Beſides the foregoing Species of *Kali*, *Dale* mentions the following; which is,

Kali Hiſpanicum, Cod. Med. 63. *Kali Hiſpanicum ſupinum annuum, ſedi foliis brevibus*. Act. Reg. Par. Ann. 1719. p. 93. Fig. p. 98. ALICANT GLASSWORT.

There are ſeveral Species of *Kali* found in many Places about the Sea-coaſt. *Miller* takes notice of eighteen.

KAL-TODDAVADDI, H. M. otherwiſe call'd, *Mimoſa Malabarica, flore pentapetalo, ſiliquis lanuginoſis*.

An Evergreen which grows in *Malabar*, to which I find no medicinal Virtues aſcribed.

KAMAR, or *Camar*. Silver. *Rulandus*.

KAMIR. Ferment. *Rulandus*.

KANDEL. *Ray*, in his *Hiſt. Plant*. takes notice of ſix Shrubs, which are called by this Name. The firſt is the

Kandel, H. M. or *Frutex Indicus ramis demiſſis radices agentibus ſe multiplicans, fructu oblongo, terete corticoſo*.

The Roots are uſed in ſtaining Linen; and the Leaves ſerve for Manure. An Ointment is made of the Bark rub'd with Oil, which is recommended againſt Laſſitude.

The ſecond is the

Karil-Kandel, H. M. or *Kanil-Kandel*. *Candela arbor floribus in eodem pediculo ternis, fructu anguſtiore*.

The Bark, boil'd in Whey, cures Gripes of the Belly, and removes Pains and Flatulences.

The third is the

Pee-Kandel, H. M. or *Candela Indica fructu longiore & craſſiore, flore tetrapetalo*.

It agrees in Virtues with the *Tsjerou-Kandel*.

The fourth is the

Tsjerou-Kandel, H. M. or *Candela Indica humilior flore exalbido pentapetalo, fructu majore*.

The Bark, together with dry'd Ginger, or long Pepper, is call'd *Tripali*, by the Inhabitants of the Country where it grows, which, bruiſed with Roſe-water, is ſaid to cure a Diabetes.

The fifth is the

Pon-Kandel, H. M. or *Candela Indica floribus pentapetalis odoratis. fructu minore incurvo.*

The fixth is the

Kada-Kandel, H. M.

The two laft have no medicinal Virtues aſcrib'd to them.

KANDEN-KARA, H. M. or *Baccifera Indica, floribus racemoſis, fructu plano, rotundo, dipyreno.*

The Name of a Tree, which grows in *Malabar*, to which I find no medicinal Virtues aſcrib'd. *Raii Hiſt. Plant.*

KANFOR. Tin. *Rulandus.*

KANELLI. The Name of two *Eaſt-Indian* Trees. The firſt is the

Pelluta-Kanelli, H. M. or *Baccifera Indica, Fructu umbilicato, racemoſo, candido, monopyreno, rotundo.*

This is an evergreen Tree, of a moderate Size, which always flowers, and bears Fruit. The Leaves dry'd, reduc'd to Powder, and exhibited in Milk, cure a Diarrhœa. Baths are prepar'd of Decoctions of the Leaves, which are ſaid to be ſerviceable in Pains of the Limbs of all kinds.

The ſecond is the

Tsjerou Kannelli, which reſembles the preceding. *Raii Hiſt. Plant.*

KAPA-MARA, H. M. The ſame as ACAJAIBA; which ſee.

KAPRILI. Sulphur. *Rulandus.*

KAR. *Rulandus* explains this, *Gemma lucens ſicut Ignis.*

KARA-ANGOLAM, H. M. or *Arbor Indica, Prunifera, Fructu umbilicato, corticoſo, Perſici ſimile.*

A very large, tall Tree, which grows in many Parts of *Malabar*, always bearing Leaves, Flowers, and Fruit.

A very good vulnerary Ointment is made of the Leaves boil'd in Oil. The Root is cathartic, and purges off ſerous and pituitous Humours. The Fruit is extremely heating, and therefore ſeldom eaten. *Raii Hiſt. Plant.*

KARABE. The ſame as *Carabe*. See AMBRA.

KARABITUS. An *Arabic* Term, importing a *Phrenitis*, or *Delirium.*

KARA-KANDEL. See KANDEL.

KARATAS. *The Penguin, or wild Ananas.*

The Characters are;

It hath a tubulous Bell-ſhap'd Flower, which is divided into three Parts, at the Mouth; from whoſe Calyx ariſes the Pointal, fixed like a Nail in the hinder Part of the Flower; which afterwards becomes a fleſhy, almoſt conical Fruit, which is divided by Membranes into three Cells, which are full of oblong Seeds.

There is but one ſort of this Plant at preſent known; which is,

Karatas foliis altiſſimis, anguſtiſſimis & aculeatis. *Plum. Nov. Gen.*

Father *Plumier* has made a great Miſtake in the Figure and Deſcription of the Characters of this Plant, and the *Caraguata*; for he has joined the Flower of the *Caraguata* to the Fruit of the *Karatas*, and *vice verſa.*

This Plant is very common in the *Weſt-Indies*, where the Juice of its Fruit is often put into Punch, being of a ſharp acid Flavour. There is, alſo, a Wine made of this Fruit, which is very ſtrong; but it will not keep good very long, ſo is only for preſent Uſe. This Wine is very intoxicating, and heats the Blood; therefore ſhould be drank very ſparingly.

In *England* this Plant is preſerved as a Curioſity; for the Fruit ſeldom arrives to any Degree of Perfection in this Country; and if it were to ripen as throughly here, as in its native Country, it would be little valued, on account of its great Auſterity; which will often take the Skin off from the Mouths and Throats of thoſe People who eat it incautiouſly. *Miller's Dictionary, Vol.* 2.

KARENA, in *Paracelſus*, is the twenty-fourth Part of the ſmalleſt Drop.

KARIIL, H. M. or *Prunus Pentaphyllos Malabarica, fructu Calyci inſidente.*

A very large pruniferous Tree, which grows in *Malabar*. Of the Roots, Leaves, Fruits, and other Parts of which, boil'd in Water, Baths are prepar'd, which are eſteem'd excellent againſt all manner of Pains in the Joints.

KARIN-TAGERA, H. M. A ſmall Tree of *Malabar*, ſomewhat reſembling the Hazel, but of the evergreen Kind.

An Oil is prepar'd of the Root, which is ſaid to prevent the Hair from falling off. *Raii Hiſt. Plant.*

KARI-VETTI, H. M. or *Arbor baccifera Indica, racemoſa, Acinis oblongis monopyrenis, Flore tetrapetaloïde.* A Tree of a moderate Size, which grows in *Malabar.*

The expreſſed Juice of the Leaves, exhibited with Whey, is an excellent Emetic, and brings away pituitous and ſerous Humours. *Raii Hiſt. Plant.*

KASAM. Iron. *Rulandus.*

KASJAVA-MARAM, H. M. or *Arbor baccifera Indica racemoſa, tetrapetalo flore, Fructu rotundo monopyreno.*

A Tree which grows in *Malabar*, of a moderate Size. Of the Leaves, boil'd in Oil, together with freſh Turmeric, a Liniment is made, which is recommended againſt watery Puſtules. The Juice of the Leaves, applied behind the Ears, in Linen, cures Lippitude. An Ointment is, alſo, prepar'd of the Root, boil'd in Oil, which is good againſt the Gout and Head-ach.

KATIMIA. A Name for *Cadmia*, *Lapis Calaminaris*, or Tutty. *Rulandus.*

KATK.N. See IULUS.

KATMER-BOUHOUR, *Turcarum.* Cornut. The Name of an oriental Species of *Cyclamen. Raii Hiſt. Plant.*

KATOU-CONNA, H. M. or *Arbor Indica ſiliquoſa, flore pentapetalo, ſiliquis in Spiram contortis, lanuginoſis.*

A tall Tree, which grows in *Malabar*, which is perpetually green, and always bears Flowers and Fruit.

A Decoction of the Leaves preſerves the Hair from growing white, and cures the Leproſy; and the Bark, made into a Paſte, with Sugar, has the ſame Virtues. *Raii Hiſt. Plant.*

KATOU-INDEL, H. M. or *Palma ſylveſtris Malabarica, folio acuto, fructu Prüni facie*, D. Commelin.

A Sort of Palm, which grows in *Malabar.*

The poor People of the Country chew the Fruit of this Tree, like that of the *Faufel*, or *Arëca*, with *Betel*, and calcin'd Oyſter-ſhells. The Leaves, Fruit, and other Parts of this Tree are very powerful Aſtringents, and, therefore, proper for ſtoping any ſort of Fluxes. The Inhabitants make Caps of the Leaves.

KATOU-KALESIAM, H. M. or *Sorbus ſpuria Malabarica Katou-Kaleſiam dicta.*

A ſort of Service-tree, which grows in *Malabar. Raii Hiſt. Plant.*

KATOU-KARVA, H. M. or *Canella ſylveſtris Malabarica.* THE GREAT WILD CINNAMON-TREE OF THE MOUNTAINS.

This is not much unlike the Cinnamon-tree of *Ceylon.* Baths are made of the Leaves of this Tree, boil'd in Water, which are in Eſteem againſt any ſorts of Pains of the Joints. A Drink is prepared of the Bark of the Root, boil'd in Water, together with Cardamoms, and Nutmeg, which is ſaid to be effectual in Gripings of the Belly. *Raii Hiſt. Plant.*

KATOU-NAREGAM, H. M. or *Malus Limonia Malabarica fructu umbilicato.*

A tall Tree of *Malabar*, which bears a ſmall ſort of Lemon. The Juice of the Leaves is eſteem'd an excellent Errhine, for purging the Head. Taken with Pepper, Ginger, and Sugar, it cures Coughs, and other Diſorders of the Lungs excited by a cold Cauſe. Of the Leaves, boil'd in Water, Baths are prepared, which are in Eſteem againſt Laſſitude, and Pains in the Limbs. *Raii Hiſt. Plant.*

KATOU-PATSJOTTI, H. M. or *Frutex baccifer Malabaricus fructu calyce excepto, ſulcato, tripyreno.*

A ſmall Shrub, which grows in *Malabar*, of no Uſe in Medicine. *Raii Hiſt. Plant.*

KATOU-PULCOLLI, H. M. or *Frutex Indicus flore dipetalo, capſula oblonga, binis cellulis bina ſemina continente.*

A Shrub which grows in ſandy and open Places in *Malabar.*

The medicinal Uſes of the Seeds are, in Pains of the Stomach, and internal Inflammations; the external Uſe is in the Itch and Herpes. *Raii Hiſt. Plant.*

KATOU-THEKA, H. M. or *Prunifera Indica fructu umbilicato racemoſo Avellanæ magnitudine.*

It grows in *Malabar*, and the Fruit is uſed inſtead of that of the *Areca*, to chew with *Betel.* The Bark dried, and reduc'd to Powder, reſtrains the exorbitant Heat of the Bile. *Raii Hiſt. Plant.*

KATOU-TSJACA, H. M. or *Arbor Indica fructu aggregato globoſo, Katu Isjaka dicta.*

A tall Tree, which grows in *Malabar*, flowering and bearing Fruit, all the Year round. The Juice, expreſſed from the Fruit, cures Pains of the Belly.

KAUKI, *floribus odoratis. Breyn.* A Tree, which grows in *Java*, bearing very fragrant ſmall Flowers, from which a Water is diſtil'd, poſſeſſed of much the ſame Virtues as Roſe-water.

KAYE-BAKA. The Species of *Nerium*, or *Oleander*, mentioned by *Ray*, in his *Hiſt. Plant.*

KAYL. *Lac Acetoſum*, ſour Milk. *Rulandus.*

KAYSIR. *Spuma Maris.* The Foam of the Sea; properly the Pumice-ſtone. *Rulandus.*

KAZDIR. KASDIR, or KASIR. Tin. *Rulandus.*

KEDANGU, H. M. or *Siliquoſa Malabarica, ſiliquis ſpithamæis, anguſtiſſimis, contortis.*

A Shrub which grows in *Malabar.* Baths prepared of a Decoction of the Leaves are ſaid to diſcuſs all Sorts of Tumors. The Juice of the Flowers is an excellent Remedy for the Epilepſies and *Aphthæ* of Children. *Raii Hiſt. Plant.*

KEIRI. A Name for the *Leucoium*; *luteum*; *vulgare.*

KELP is a fixed Salt, or particular Species of Pot-aſh, procured by burning the Weed called *Kali*, which grows frequent on ſome Shores; and thus reducing it to ſolid Lumps, or Cakes, of Aſhes, that run into a Liquor ſomewhat like Oil of Tartar, *per Deliquium*, by the Moiſture of the Air.

KEMP-

KEMPFERA.

This Plant was ſo named by the late Dr. *Houſtoun*, in Honour of the Memory of Dr. *Kempfer*, a learned Botaniſt.

The Characters are;

It hath an anomalous Flower, conſiſting of one Leaf, and divided at the Brim into five Parts: After the Flower is parted, the Pointal becomes a hard Fruit, which is divided into four Cells, which are full of ſmall Seeds.

We know of but one Sort of this Plant; which is,

Kempfera fruteſcens, Chamædryos folio, floribus ſpicatis cæruleis. *Houſt.*

This Plant is figured and deſcribed in the *Paradiſus Batavus*, under the Title of *Veronicæ ſimilis fruticoſa Curaſſavica, Teucrii foliis, flore galericulato.*

It is very common in *Jamaica*, and ſeveral other Iſlands in the *Weſt Indies*, where it grows to the Height of three or four Feet, and becomes woody. The Flowers are produced in Spikes, at the Extremity of the Branches, which are of a fine blue Colour.

KENKEL. The Name of an Animal, mentioned in the *Turba Philoſophorum, Theatr. Chym. Vol.* 5. *p.* 12. whoſe entire Juice is there ſaid to be of a Tyrian, or Purple-colour.

KENNE. A Name of the Stone generated in the Eye of a Stag.

KERATOPHYTON. The Name of a ſubmarine Plant.

The Characters are;

It is of a viſcid or glewiſh Conſiſtence, pellucid like Horn, and frequently covered with a cretaceous Cruſt; ſometimes of elegant and various Colours. *Boerhaave, Index Plant.*

Boerhaave mentions ſixteen Species of this Plant, none of which have any medicinal Virtues attributed to them at preſent, that I know of, except the ſeventh; for which ſee CORALLIUM NIGRUM.

KERMES. See CHERMES.

KERSYDROS. See CHERSYDROS.

KETMIA.

The Characters are;

The Leaves reſemble thoſe of the Mallows, or Vervain Mallows; the Flower is like that of the Mallow; the Fruit is divided into many Partitions, the Top of which opens when ripe, and diſcloſes a great many Seeds.

Boerhaave mentions twenty-two Species of this Plant; which are,

1. Ketmia; Syrorum quibuſdam. *C. B. P.* 316.
2. Ketmia; Syrorum; flore purpuro-violaceo. *T.* 99.
3. Ketmia; Syrorum; flore albo.
4. Ketmia; Syrorum; floribus ex albo & rubro variis. *T.* 99.
5. Ketmia; Sinenſis; fructu ſubrotundo; flore ſimplici. *T.* 100.
6. Ketmia; Sinenſis; fructu ſubrotundo; flore pleno. *T.* 100.
7. Ketmia; Africana; populi folio. *T.* 100.
8. Ketmia; Africana; populi folio ſubtus incano; & caule vireſcente. *T.* 100.
9. Ketmia; Ægyptiaca; ſemine moſchato. *T.* 100, See ALCEA INDICA.
10. Ketmia; Indica; vitis folio; parvo flore. *T.* 100.
11. Ketmia; Indica; vitis folio; ampliore. *T.* 100.
12. Ketmia; Americana; folio Papayæ; flore magno, flaveſcente, fundo purpureo; fructu erecto, pyramidali, hexagono; ſemine rotundulo; ſapore fatuo. *Prægn.*
13. Ketmia; Indica; Goſſypii folio; Acetoſæ ſapore. *T.* 100.
14. Ketmia; quæ Althæa; magna; folio aceris; cortice cannabino; floribus parvis; ſemina rotatim in ſummitate caulium, ſingula ſingulis cuticulis cooperta ferens. *Baniſter.*
15. Ketmia; Americana; paludoſa; folio ſcabro ulmi acutiore.
16. Ketmia; Braſilienſis; folio Ficus; fructu pyramidato, ſulcato. *T.* 100.
17. Ketmia; veſicaria; vulgaris. *T.* 101.
18. Ketmia; veſicaria; Africana. *T.* 101.
19. Ketmia; Afra; veſicaria; foliis profundius inciſis, vix crenatis.
20. Ketmia; Indica; aculeata; foliis digitatis. *T.* 101.
21. Ketmia; Virginienſis; folio inferiori Ulmi, ſuperiori Aceris.
22. Ketmia; Indica; folio Goſſypii; ſapore fatuo. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 271.

The *Hiſtoria Plantarum*, aſcribed to *Boerhaave*, informs us, that all the Species of this Plant, except thoſe which taſte like Sorrel, agree in Virtues with Mallows. And that the Flowers are poſſeſſed of the ſame Virtues as thoſe of Mallows.

KEYRI. A Name for the *Leucoium*; *luteum*; *vulgare.*

KIBRIC. *Rulandus* defines this, the Parent, and Firſt Matter, of Mercury, and all fuſible and liquifiable Subſtances. The Philoſophers Stone is, alſo, thus called.

KIBRITH. Sulphur. *Rulandus.*

KIBRIUS, or KEBRIC. Arſenic. *Johnſon.*

KIDIBENGI. A Name by which thoſe are call'd who take *Bangue*, as an Exciter to Venery.

KIKI, *xixi.* The Name by which *Dioſcorides* calls the *Ricinus.*

KINA-KINA. A Name for the *Peruvian* Bark. See QUINA-QUINA.

KIRATH. A Weight, equal to four Grains. *Blancard.*

KISES. *Rulandus* explains this, *Sal e Rivo, vel Flavio.*

KISMESEN. See ACACALIS.

KIST. Fourteen Grains. *Paracelſus.*

KNAWEL.

The Characters are;

The Calyx is quinquefid, and expanded in five acute Segments like a Star; the Flowers are ſtamineous, reſting on the Calyx, placed on the Summits, and at the Divarications, of the Branches; each Calyx contains one Seed.

Boerhaave mentions two Species of this Plant; which are,

1. Knawel. *Offic. Boerh. Ind. A.* 2. 93. *Knawel folio & flore viridi.* Buxb. 174. *Polygonum Selenoides ſive Knawel.* Ger. 453. *Emac,* 567. *Polygonum Germanicum ſive Knawel Germanorum,* Park. 447. Raii Hiſt. 1. 213. Synop. 68. *Polygonum* III. *Dodonæi ſive tenuifolium.* J. B. 377. *Polygonum anguſtiſſimo & acuto vel gramineo folio, minus repens.* C. B. 281. *Alchimilla ſupina gramineo folio, minore flore.* Tourn. Inſt. 508. GERMAN KNOT-GRASS.

It grows in ſandy Fields. The Herb is in Uſe, which agrees in Virtues with the *Polygonum Latifolium*, being drying, aſtringent, and vulnerary; and is eſteem'd lithontriptic by ſome.

2. Knawel; folio Alſines, glabro; floſculis plurimis. *Polygoni, vel Linifolia, per terram ſparſa, flore ſcorpicides.* J. B. 3. 379. *Boerh. Ind. alt. Plant. Vol.* 2.

Beſides the foregoing Species of *Knawel*, *Dale* mentions the following; which is the

Polygonum cocciferum. Offic. C. B. P. 281. *Polygonum Poloni-cum cocciferum.* J. B. 3. 378. *Knawel incanum, flore majore perenne.* Raii Hiſt. 1. 213. Synop. 3. 160. *Alchimilla gramineo folio, majore flore.* Tourn. Inſt. 508. POLONIAN KNAWEL. See Coccos.

It is eſteemed drying, aſtringent, and vulnerary.

KOBALTUM. See COBALTUM.

KOLERUS. A dry Ulcer. *Paracelſus.*

KOLTO. A Name for the PLICA POLONICA.

KOPHI. The ſame as CYPHI; which ſee.

KREUPELBOOM. A Name for the *Conocarpodendron*; *folio craſſo, nervoſo, lanuginoſo, ſupra crenato, ibique limbo rubro*; *flore aureo*; *cono facile deciduo.*

KRISSIA BOOM. A Name for the *Palma*; *Guineenſis*; *vinifera.*

KUHUL. Lead-ore, or the Lead of the Philoſophers. *Rulandus.*

KUMEN. *Caſtellus* explains this by *Coadunatio.*

KURIA, KYMIA, or KYMUS. A Maſs. *Rulandus.*

KUTUBUTH is properly the *Arabian* Name for a Water Spider, an Inſect perpetually in Motion. Hence the Name has been transferred to a Species of Melancholy, called by *Sennertus*, *Melancholia Errabunda.* See MELANCHOLIA.

KYMENNA is explained by *Rulandus*, *Ampulla.*

KYMIA. See KURIA. A chymical Cucurbit is, alſo, thus call'd. *Rulandus.*

KYMIT *elevatum.* White ſublim'd Cinnabar. *Rulandus.*

KYMOLEA. The Slime, or Mud, gather'd under a Grinding ſtone, call'd, alſo, *Chymolea. Rulandus.*

KYNA. Opopanax. *Rulandus.*

KYRAM. Snow. *Rulandus.*

L.

FOR the Signification of L in the Chymical Alphabet, ſee ALPHABETUM CHYMICUM.

LABDANUM. See LADANUM.

LABE, λαβὴ, from λαμβάνω, to ſeize. The firſt Acceſs of a Fever; but particularly of a febrile Paroxyſm, in periodical Fevers.

LABELLA LEPORINA. The ſame as LABIA LEPORINA.

LABEO. The ſame as BROCHUS.

LABIA. The Lips.

The Cheeks and Lips form the Sides and Entry of the Cavity of the Mouth. They are formed in general by the Connection of ſeveral fleſhy Portions, of different Breadths, fixed round the convex Sides of the two Jaws, cover'd on the Outſide with the Skin and Fat, and lined on the Inſide by a glandulous Membrane. Beſides this, the Lips ſeem, likewiſe, to have a ſoft ſpongy Subſtance in their Compoſition, which ſwells and ſubſides on certain Occaſions, independently of the Action of the Muſcles belonging to them; and is mixed with Fat.

The Subſtance which forms the red Border of the Lips, is very different from the reſt of the Skin, being a Collection of very fine, long, villous Papillæ, cloſely connected together, and cover'd by a fine Membrane; which ſeems to be both a Continuation of the Epidermis, and of that Pellicle which covers the glandulous Membrane of the Cavity of the Mouth: This Subſtance is extremely ſenſible, and very painful, when the outer Membrane is by any Accident deſtroy'd. The internal Membrane of the upper Lip forms a ſmall middle Frænum above the firſt Dentes inciſorii.

The Gums are that reddiſh Subſtance, like Leather, which covers the two Sides of the whole alveolary Border of both Jaws, inſinuates itſelf between all the Teeth, ſurrounds what I call the Collar of each Tooth in particular, and adheres very ſtrongly to them. Therefore the outer and inner Gums are continuous, and, both together, form juſt as many Openings as there are Teeth.

The Subſtance of the Gums is of a very ſingular Structure, very compact and elaſtic. It is not immediately fixed to the Bones of the Jaws, but by the Intervention of the Perioſteum, with which it is perfectly united; and it is cover'd with a fine, ſtrong, even Membrane, which ſticks very cloſe to the Subſtance of the Gums, and ſeems to be a Continuation of that thin Membrane which goes to the Lips and Cheeks, and of that which goes to the Tongue.

The Arteries which go to the Lips, Cheeks, and Gums, are Ramifications of the external Carotid, and, principally, of the external and internal maxillary Branches. See ARTERIA. The Veins are Ramifications of the external anterior Jugular. See VENA.

The Nerves of theſe Parts come from the Maxillaris ſuperior, and inferior, which are Branches of the Fifth Pair; and, alſo, from the Portio Dura of the Auditory Nerve, or Sympatheticus minimus, the Ramifications of which are ſpread in great Numbers on all theſe Parts, and communicate, in a pretty ſingular manner, with the Nerves of the Fifth Pair in ſeveral Places.

There is ſo much Variety in the Muſcles of the Lips, in different Subjects, that it is not at all ſurpriſing to find Anatomiſts diſagree in the Deſcription of them. In ſome Subjects, Portions of theſe Muſcles are wanting; in ſome they can ſcarcely be diſtinguiſhed, becauſe of the Paleneſs and Attenuation of the Fibres; and in others there are really ſome particular Faſciculi, which are not generally to be found. About fifteen Years ago, I, ſays *Winſlow*, diſſected an old Woman; in which Subject alone I obſerved a great many ſingular Things, which I have not met with in great Numbers of other Subjects more proper for Diſſection: In this Subject the Muſcles of the Face in general were very much multiplied, and very diſtinct.

I have already mentioned the Muſcles of the Lips, under the Article CAPUT; but, as *Winſlow* takes notice of ſeveral Things relative to theſe, which are there omitted, I ſhall inſert his Account of them.

The Muſcles of the Lips are uſually divided into common and proper: The common Muſcles are thoſe which end at the Angles or Commiſſures of the two Lips; and thoſe are proper, which are fixed in one Lip only, which are again ſubdivided into proper Muſcles of the upper Lip, and proper Muſcles of the under Lip. All theſe Muſcles have particular Names; ſome of which are taken from ſomething in the Conformation of the Muſcles; ſome from the Inſertions, or Situation, and ſome from the Uſes attributed to them.

I ſhall here deſcribe thoſe which I am able to ſhew, without mentioning thoſe which I have not hitherto found, though I am in no Doubt about the Accuracy of theſe great Anatomiſts, who have publiſhed Accounts of them, and who have, beſides, given unqueſtionable Proofs of their being faithful and judicious Obſervers. I ſhall lay aſide the Names taken from the ſuppoſed Uſes; becauſe I am ſtill uncertain about ſome of the Uſes attributed to them; and, alſo, to encourage young Anatomiſts, and even Beginners, to endeavour at gueſſing, at which they may, perhaps, ſucceed better than I have done.

The Muſcles, to which I confine myſelf, may be enumerated in the following Order.

Muſculi Communes. Semi-orbiculares, Supra-ſemi-orbiculares, Buccinatores, Zygomatici Majores.

Muſculi proprii Labii ſuperioris. Zygomatici Minores, Canini, Inciſorii Laterales, Inciſorii medii.

Muſculi proprii Labii inferioris. Triangulares, Triangularium Collaterales, Quadratus, Inciſorii inferiores, Cutanei.

The upper Lip is ſometimes moved by the Action of the Muſcles of the Noſe, eſpecially of the Pyramidales; and both Lips, either jointly or ſeparately, are moved by Suction, without the Aſſiſtance of the Muſcles belonging to them.

The *Semi-orbiculares* are commonly looked upon as one Muſcle, ſurrounding both Lips, from whence it is called *Orbicularis*; but, when we examine carefully the Angles of the Lips, we find that the Fibres of the upper Lip interſect thoſe of the under Lip, and we eaſily diſtinguiſh the muſcular Arch of one Lip from that of the other; and for this Reaſon I divide this Muſcle into two, and I call them either by the common Name of *Semi-orbicularis*, or I call one *Semi-orbicularis ſuperior*, and the other *Semi-orbicularis inferior*; but the Name of *Semi-ovales* would be ſtill more proper.

The ſuperior Semi-orbicular Muſcle is oftentimes broader than the inferior; and it has this Peculiarity, alſo, that all its Fibres do not go to the Corner of the Mouth, but terminate by degrees, between the Middle and Extremities of this Arch, nearly like the Semi-oval Fibres of the upper Palpebra. The inferior Semi-orbicular Muſcle is commonly more uniform in the Diſpoſition of its Fibres.

The *Supra-ſemi-orbiculares* are Fibres which increaſe the Breadth of the two lateral Portions of the ſuperior Semi-orbiculares upward; and they appear at firſt Sight to be one continued Arch, like the Muſcle laſt named; but, being narrowly examin'd, they will be found to be ſeparated by a ſmall Interſtice, lying betwixt their contiguous Extremities, which are fixed in the Gums, oppoſite to the Edges of that cutaneous Foſſula that runs down from the Septum Narium to the middle of the Edge of the upper Lip. Their other Extremities are confounded with thoſe of the Semi-orbicularis ſuperior.

The *Buccinatores* are two in Number, each of them ſituated tranſverſely between the poſterior Part of the two Jaws, and the Corner of the Mouth: They are broad backward, and narrower forward, in the Shape of a Triangle, or Trapezium; and they form a conſiderable Portion of the Cheeks. To have a juſt Idea of theſe Muſcles, we muſt be made acquainted with a Ligament on each Side of the Face, which I call the *Ligamentum inter-maxillare*; becauſe it connects the two Jaws, and, alſo, gives Inſertion to the poſterior Fibres of the Buccinator.

This Ligament is ſtrong, and pretty broad: It is fixed by one End to the Outſide of the upper Jaw, above the laſt Dens Molaris, and at the Side of the Apophyſis Pterygoides, where it adheres very cloſely to the Muſculus Pterygoidæus internus. By the other End it is fixed in the poſterior or ſuperior Extremity of the oblique prominent Line, on the Outſide of the lower Jaw, below the laſt Dens Molaris: It ſerves, likewiſe, as a Frænum, to check and limit the Depreſſion of the lower Jaw, in opening the Mouth; and we may feel it ourſelves, with the End of the Finger in the Mouth, eſpecially when it is wide open.

The Buccinator is inſerted poſteriorly in three different Places: The middle Fibres are fixed tranſverſely in the Ligamentum Intermaxillare, and run directly to the Corner of the Mouth: The ſuperior Fibres run down in an oblique graduated manner, from the Alveoli of the upper Jaw to the Corner of the Mouth; and the inferior Fibres run up from the lower Jaw in the ſame manner. All theſe Fibres contract, by degrees, as they approach the Commiſſure of the Lips, where they run in behind the Extremities, and Union of the Semi-orbicularis, by which they are covered, and to which they adhere cloſely. There is a large Hollow between this Muſcle and the Maſſeter, filled with Fat.

The

The *Zygomatici Majores* are two Muſcles ſituated, one on each Side, between the Zygoma, and the Corner of the Mouth: Each Muſcle is thin, long, oblique, and fixed by one Extremity to the lower Edge of that Portion of the Os Malæ, which is connected with the Zygomatic Apophyſis of the Os Temporis: From thence it runs down obliquely, from behind forward; being, in its Paſſage, commonly involved in Fat: It ends at the Commiſſure of the two Lips, adhering ſtrongly to the Buccinator which covers it. This Muſcle is very often complex.

The *Zygomatici Minores* are two ſmall ſlender Muſcles, lying above the great Zygomatici, and almoſt parallel to them: Their ſuperior Extremity ſeems to be a Detachment from the lower Fibres of the Orbicularis Palpebrarum; but they may be always diſtinguiſh'd: Their lower Extremity unites with the neighbouring Inciſorius. Theſe Muſcles are quite buried in Fat, and, for that Reaſon, often diſappear.

Each of the two *Canini* is fixed by a broad Inſertion in the upper Jaw, above the Socket of the Dens Caninus, in a Depreſſion, below the inferior Edge of the Orbit, near the Os Malæ; from thence it runs down obliquely, croſſing the lower Extremity of the Zygomaticus Major, which covers it at this Place; afterwards it terminates at the Extremity of the Arch of the Semi-orbicularis ſuperior, and communicates, by ſome Fibres, with the Triangularis. I formerly looked upon this as a neutral Muſcle, that is, as being neither a proper Muſcle of the upper Lip, nor common to both.

Each of the two Inciſorii Laterales is a ſort of Biceps, its upper Part being divided into two Portions, which unite below. One of theſe ſuperior Portions is larger than the other, and is fix'd in the Os Maxillare, below the middle Tendon of the Orbicularis Palpebrarum, ſeeming to communicate by ſome Fibres with the contiguous Fibres of that Muſcle. From thence it runs down a little obliquely toward the Cheek, along the Apophyſis Naſalis, mixing with the Pyramidalis Naſi, and ſending ſome Fibres to the Nares. Afterwards it paſſes over, and adheres to the Myrtiformis, or Tranſverſales Naſi, and unites with the other Portion.

This other Portion is fixed by a broad Inſertion, immediately below the Edge of the Orbit, in the Os Maxillare, near the Union of this Bone with the Os Malæ; and, likewiſe, a little in the laſt-named Bone, being at this Place covered by the inferior Portion of the Orbicularis Palpebrarum, with which it has ſometimes a kind of Communication. From thence it runs down obliquely towards the Noſe, and unites with the firſt Portion.

The two Portions, thus united, and contracting in Breadth, run behind the Semi-orbicularis ſuperior, and are fixed in it oppoſite to the lateral Dens Inciſorius. Sometimes it ſends a ſmall Faſciculus of Fibres to the Muſculus Caninus, which may be reckoned an Aſſiſtant to that Muſcle, and named Caninus minor.

The Inciſorii Medii are commonly call'd Inciſorii minores Cowperi, or Inciſorii minores ſuperiores. They are two ſmall ſhort Muſcles ſituated near each other, below the Septum Narium. They are fixed by one Extremity in the Os Maxillare, on the Alveoli of the firſt Inciſores, behind the Semi-orbicularis ſuperior, and by their other Extremity in the middle and ſuperior Part of the Subſtance of the upper Lip, near the Nares, in which they likewiſe have an Inſertion; and they ſometimes ſend lateral Fibres to the Semi-orbicularis.

Each of the two Triangulares is fixed by a broad Extremity in the Outſide of the Baſis of the lower Jaw, from the Maſſeter to the Hole near the Chin. From thence it aſcends, contracting in Breadth in a bent triangular Form, runs in between the Extremities of the Buccinator and Zygomaticus major, to both which it adheres very cloſely, and terminates at the Commiſſure of the Lip, partly in the Semi-orbicularis ſuperior, and partly, though not always equally, in the Semi-orbicularis inferior. This Muſcle ſeems ſometimes to be a Continuation of the Caninus major.

The Quadratus forms the thick Part of the Chin below the under Lip. It is a very complex Muſcle, and very difficult to be prepared, becauſe its Fibres are interwoven with a great Quantity of Fat, or a pellicular Texture of the Membrana Adipoſa. It is firſt inſerted in the fore Side of the lower Jaw, where it partly fills the broad Foſſula on each Side of the Symphyſis. Thence it runs up, interſecting, along the Symphyſis, the contiguous Fibres of the Skin, and terminates by a broad Inſertion in the Semi-orbicularis inferior. The Direction of the other Fibres, of which it is compoſed, varies in different Subjects, and it communicates by ſome Fibres with the Cutanei.

The Inciſorii inferiores are two ſmall Muſcles, commonly mentioned with the Addition of M. *Cowper*'s Name. Each of them is fixed by the ſuperior Extremity, on the Alveoli of the lateral Inciſores of the lower Jaw. Thence they run down, approaching each other, and are inſerted together in the lower Part of the Middle of the Semi-orbicularis inferior.

On the Outſide of the ſuperior Inſertion of each of theſe Muſcles, we meet with a Faſciculus of Fibres, which ſeem to be detached from it near the Inciſors. This Faſciculus goes off laterally in form of an Arch, and unites with the Fibres of the Semi-orbicularis inferior, with which it may be eaſily confounded. It may be looked upon as a Muſculus acceſſorius to the Semi-orbicularis inferior, or as a Collateralis to the Inciſorius minor.

The two Muſculi Cutanei form a kind of fleſhy Membrane, which covers the whole fore Side of the Throat and Neck, from the Cheek and Chin, all the Way down below the Clavicula, and adheres very ſtrongly to the membranous or aponeurotic Expanſion. This Expanſion has a particular Adheſion to the anterior Portion of the Baſis of the lower Jaw, of the ſame Kind with that at the lower Part of the Zygoma; and it is ſpread over all the Muſcles that lie round the Neck, and over the upper Portion of the Pectorales majores, Deltoides, and Trapezii.

The Fibres of each cutaneous Muſcle run obliquely upward and forward, and meet, and ſeem to interſect thoſe of the other Muſcle at acute Angles, from the Sternum all the Way to the Chin. They adhere very cloſely to the Skin, by the Intervention of the cellular Subſtance. From the Clavicles, to the upper Part of the Neck, theſe Muſcles are very thin, and from thence increaſe a little in Thickneſs; as they approach the Baſis of the lower Jaw, and eſpecially from the Maſſeter to the Chin.

They adhere ſtrongly to the lower Portion of the Maſſeter, Triangularis, and Quadratus, and on the Maſſeter and Buccinator, their fleſhy Fibres become aponeurotic, but continue longer on the Triangularis, being mixed with the Fibres of that Muſcle all the Way to the Commiſſure of the Lips. They likewiſe advance a little on the neighbouring Portion of the Quadratus.

The Portion of theſe Muſcles, which anſwers to the Baſis of the Triangularis, is in a manner divided into two fleſhy Laminæ, the outermoſt of which is what advances over the Triangularis and Quadratus, the other being inſerted ſeparately in the lower Jaw. I have ſometimes obſerved a Part of the fleſhy Extremity of the Right Side to paſs before the Symphyſis of the Chin over a like Part from the Left Side, the one covering the other.

The common Muſcles of the Lips either draw both Corners of the Mouth at once, or only one at a time, according to the different Direction of their Fibres. The proper Muſcles pull the different Parts of the Lips, in which they are inſerted. The Buccinators, in particular, may ſerve to move the Food in Maſtication. An entire Treatiſe might be written on the almoſt innumerable Combinations of the different Motions of all theſe Muſcles, according to the different Paſſions and Poſtures in which a Man may put his Face. None are more affecting, than thoſe produced by the Cutanei alone, eſpecially in Weeping, which they do by their Adheſions to the Triangulares, *&c.* But, by their Inſertions in the Bone of the lower Jaw, they draw up the lower Part of the Integuments of the Neck, and thoſe of the Breaſt next to theſe; for they cannot move the Jaw. In old People, and in thoſe who are much emaciated, theſe Muſcles may be perceived by the Eye, under the Chin, and on the Neck.

LABIA LEPORINA. Hare-Lips.

In ſome Perſons, the upper Lip is ſo divided or ſlit, as to reſemble the upper Lip of a Hare (ſee *Tab.* XLI. *Fig.* 1.); whence it is called a Hare-Lip. This Diviſion is ſometimes ſmall, and ſometimes ſo large, that a Part ſeems wanting; at other times it is double, like the Letter M, and then is termed the double Hare-Lip. Beſides the Deformity cauſed by this Diſorder, it is attended with an Inconvenience, which hinders Infants from ſucking, and Adults from ſpeaking diſtinctly. Sometimes this Accident happens to the lower Lip, from the ill Treatment of a Wound, and this we call the ſpurious Hare-Lip. In the true Species, which is born with the Infant, the Palate is often divided either in Part, or entirely to the Noſe and Uvula; and ſometimes I have obſerved the Uvula wanting. It is no Wonder, therefore, if, after a complete Cure of the external Diſorder, the internal remains incurable, and renders the Speech ungrateful and difficult, on account of the Fiſſure of the Palate and Noſe. The leſs and more equal the external Fiſſure, the eaſier the Cure; and the more difficult, when it is larger, and more unequal. Sometimes the Lip is ſo mutilated as to admit of no Cure, particularly in Infants, though, in ſome more advanc'd in Years, it may be attempted with greater Hopes of Succeſs. So the double Hare-Lip is often difficult to be remedied from the Largeneſs of the Hiatus, or ſome other Cauſe. Sometimes Part of the Jaw, or a Tooth, projects forwards into the Slit; and, unleſs theſe are removed, the Cure can never be perfected.

When the Hare-Lip is recent, or proceeds from a Wound, it is cured by the knotted Suture; but, when a Part is loſt, the Needles muſt be uſed, as in the true Kind: In this, as Art cannot ſupply what is naturally deficient, it can only unite what is divided; and this is done by cutting and taking off the Edges of the Wound, with great Circumſpection. We ſhall therefore give a ſuccinct, but very plain Account of the Method. A temperate Seaſon, as Spring, Summer, or Autumn, but particularly the firſt, is to be choſen for this Operation; the Patient ſhould be free from any other Diſeaſe, vigorous, and in good Health; but, if he has any Diſorder, let that be firſt removed. Next, he ſhould be prepared by lenient Purges, with a continued Regularity of Diet. The Operation is to be performed in a light Room, and requires the ſubſequent Apparatus; a Pair of Sciſſars, (*Tab.* XXII. *Lett.* C.) ſome Needles (*Tab.* XXV. *Fig.* 21. and 22. or *Tab.* XLI. *Fig.* 2, 3, 4, 5.) made of the ſtiffeſt Sort of Gold, of Silver, or Braſs, with ſharp triangular Points, (*Fig.* 2.) or flat,

(*Fig.* 3, 4, 5.) that they may more eaſily enter the Lip. Steel Needles are not ſo commodious, becauſe they are ſubject to Ruſt; and hence, in extracting, excite Pains, and cauſe Lacerations. Beſides theſe, let there be provided ſome ſtrong Silk Threads, a Veſſel full of warm Water, with a Sponge, Lint, vulnerary Balſam, and a long, narrow Fillet; and, if ſharp Needles are to be left in the Wound, or the Jaw or a Tooth projects into the Diviſion, a Forceps proper for the Removal of them will be convenient. Laſtly, Some *Hungary* Water, or ſomething of the like kind, to revive the Patient, by applying it to his Noſe. When the Operator is provided with theſe Neceſſaries, he muſt ſeat his Patient, if he is an Adult, againſt the Light, and ſecure his Head by an Aſſiſtant: If he is an Infant, which is generally the Caſe, he muſt be laid in a ſtrong Man's Lap, and his Head and Legs muſt be held faſt by two Aſſiſtants, while the Perſon, whoſe Lap he is in, ſecures his Hands; or, if he be very young, they may be tied with a ſtrong Roller. When the Fiſſure is large, and the two Parts cannot be eaſily united, it is proper to divide the *Frænulum* of the upper Lip from the Gums, with a Pair of Sciſſars, but without wounding the Gums, or uncovering the Jaw; then the Surgeon cuts off the Edges of the Fiſſure with his Sciſſars, that they may be every-where bloody, and particularly in the upper Part, which ſometimes requires a peculiar Inciſion; but he carefully avoids taking off too much, or too little; for both Extremes will prevent an Union. He next cleanſes the Lips with a Sponge, and an Aſſiſtant holds them cloſe together, whilſt the Operator paſſes thro' them two or three Needles, according to the Size of the Wound, and Age of the Patient, at about the Diſtance of the Breadth of a Gooſe-quill from the Fiſſure; for, if they were nearer, they would tear out, eſpecially in Infants, who are very ſubject to cry. The Needles are to be entered from the Left towards the Right, beginning at the ſuperior Angle of the Fiſſure, and inſerting them at about a Straw's Breadth from each other; for this will produce an Agglutination. In performing this Operation upon Adults, an Acutenaculum or Handle (*Tab.* 27. *fig.* 2. or 3.) may be found convenient to ſuſtain and depreſs the Needles, tho' it may be done by the Fingers, which is my conſtant Practice.

When the Needles are thus paſſed, and the Lips again cleanſed with a Sponge, let an Aſſiſtant hold them cloſe together, whilſt the Operator faſtens a Piece of ſtrong waxed Thread or Silk about one End of the Needle, and proceeds with it either like the Figure 8, laid ſideways, thus ∞, (as *Tab.* 25. *fig.* 21, 22.) or circularly, (as *Tab.* 41. *fig.* 5.) beginning either at the upper or lower Part; and, having, by this means, drawn the Margins of the Lips together, he faſtens the Thread with a Knot. It is cuſtomary to cut off the Points of the Needles with a ſtrong Pair of Forceps, that they may not project above the Breadth of a Gooſe-quill beyond the Ligature, that they may not prick the Lip, and excite Pain and Inflammation; but, when the Needles are ſhort, or ſecured with Linen or Sponge laid under them, this is not neceſſary; on the contrary, the Cure ſucceeds better without it, there being then no Danger of an Irritation of the Wound.

It is the Practice to dreſs with ſoft Lint, dipt in Honey of Roſes, which is applied between the Gums and Lip, to heal the Wound internally: This, indeed, may be done to Adults; but many Inconveniencies attend it, if the Patient is an Infant; for they, by crying, will eaſily divide the Wound, beſides the Danger of coughing, or being ſuffocated, if the Lint ſhould ſlip down. The external Part of the Wound is dreſſed with Balſam of *Peru*, or ſome other vulnerary Balſam, covered with Lint, and a Compreſs; adding, if it is thought proper, a ſticking Plaiſter, with four Heads, cut in the Form of a Roller, repreſented *Tab.* 23. *d*, two of which are faſtened on the Right Side of the Lip, and two on the Left, the Whole being ſecured with a four-headed Bandage, an Inch broad, or a ſimple two-headed one, whoſe Ends may be faſtened about the Occiput, either by a Knot, or Pins. Some, when the Fiſſure is very large, apply a narrow uniting Bandage (ſee *Tab.* 23. *fig. f*) over the Plaiſter; but this does more Prejudice than Service, by preſſing the Needles too forcibly; and as the only thing requiſite to keep the Dreſſings on the Wound, the firſt-mentioned Bandage is to be preferred. And, in Infants, if I am not miſtaken, the ſticking Plaiſter is very inconvenient; for, during the whole Application of it, they will cry, and, by that means, injure the Lip, but juſt ſown up. *Garengeot* adviſes Bleeding two or three times after the Operation: But this is ſuperfluous, and I have cured many without it.

The Antients thought it unſafe to attempt this Cure upon Infants under two Years of Age; and *Garengeot* would defer it till they are four or five; but Experience teaches us, that many have been freed from this Diſorder at five or ſix, and even at three Months old, when they were well in other reſpects, and the Operation was rightly performed. Beſides, Parents are unwilling to defer it ſo long; and, therefore, when the Fiſſure is but ſmall, there is no neceſſity for the leaſt Delay. Before this Operation, Infants ſhould be kept awake a conſiderable time; and an Anodyne may be given them, that they may ſleep the longer afterwards, and not divide the Lip by crying, but rather let the Wound heal. Further, the Infant, during the Operation, ſhould have his Head rather bent forwards than backwards, to prevent coughing, or the Blood from running down his Throat. And though this is generally attended with a profuſe Hæmorrhage, there is no Danger; for that prevents an Inflammation, and it ceaſes upon the Application of the Suture and Bandage before recommended.

Some Surgeons, for Prevention of the Hæmorrhage, and Convenience of the Operation, provide certain Tenacula, contriv'd on purpoſe, repreſented *Tab.* 41. *fig.* 6, 7. to hold the Lip on each Side of the Fiſſure, before they remove the Skin with the Inciſion-knife, or Sciſſars, which, tho' they ſeem very properly adapted to make a neater Wound and Cicatrix, are very ſeldom uſed. In Infants, as well as Adults, when there is a Fiſſure in the Palate, Part of the upper Jaw, or a Tooth, generally projects forwards, which muſt, therefore, be removed, or extracted, before the Operation is begun.

The Dreſſings ought not to be removed before the third Day, unleſs ſome Accident renders it neceſſary, and then with Caution, that the Parts may not be ſeparated; to prevent which, it may be proper to moiſten the Bandage and Plaiſter with warm Wine; and, if the Thread is relaxed, ſo as not to retain the Lips of the Wound, a new Thread muſt be faſtened round the Needles, and the Wound bound tighter. This ſeldom happens. But, when every thing appears in due Order, the Surgeon ought to anoint the Wound with a Feather, dipt in a vulnerary Balſam, lay freſh Lint between the Gums and Lip of an Adult, and proceed as we directed before. If the Lips of the Wound appear conjoined in three or four Days, he may take out the middle Needle, if there are three, or the upper one, if there are but two, with his Fingers, or a Forceps; but this muſt be done very cautiouſly, firſt applying his Fingers on each Side, to compreſs the Edges of the Wound. The Wound may be thus opened every Day, or every other Day, by which means the Threads will ſeparate ſpontaneouſly, and the Cure be perfected by dreſſing with a vulnerary Balſam, or Honey of Roſes, or Syrup of Violets, with a ſticking Plaiſter, and uniting Bandage. Laſtly, it will contribute greatly to the Cure, if the Patient, being an Adult, is, for ſome time, dieted upon Broths, Emulſions, Milk, Jellies, and Food, which requires no Maſtication; and is forbid talking. In Infants, the lower Part of the Lip ſhould be often moiſten'd with a Feather, dipt in Honey of Roſes, or Syrup of Violets, which will not only heal, but excite the Child to lick that Part, and, by that means, promote the Cure.

Many *German* Quacks and Mountebanks paſs a ſtrong Thread, with a common Needle, thro' the Lips, at the Diſtance obſerved by regular Surgeons, and then tie the Ends of the Thread, as in the knotted Suture. They obſerve the ſame Order in tying the Threads, as others in making the Ligature about the Needles; nor do they vary in their other Dreſſings, and the Remainder of the Cure. At laſt they cut the middle Thread on the third or fourth Day, the uppermoſt on the fifth, and the loweſt on the ſixth or ſeventh, and ſometimes all of them on the fourth or fifth Day; and thus they frequently ſucceed, tho' in an aukward Manner, and with very indifferent Inſtruments, when the Fiſſure is ſmall; for, when it is large, this Method can never be effectual.

We ſhall now ſubjoin ſome neceſſary Cautions and Obſervations relating to this Diſorder. Firſt, When the Skin, in the upper Angle of the Fiſſure, is not taken clean off, that Part will not unite, tho' the lower may; but there will remain an *Hiatus*, to avoid which, none of the Skin ſhould be left behind. Secondly, If, thro' Neglect, ſuch an Aperture is left above, and the inferior Parts are healed, the only Method is to take off the whole Cicatrix by a double Inciſion, and cloſe the Wound afterwards with Needles and Ligature: In this Manner I cured two Girls of ſuch a Foramen, which had been left by Mountebanks. Thirdly, When the Palate is divided, and the Hiatus of the Lip extends to the Noſe, as is repreſented in *Tab.* 41. *fig.* 1. A, the before-mentioned Cautions are ſuperfluous, becauſe the Angle is wanting in the upper Part, though a modern Writer has inſiſted on them without Diſtinction; which proves that he either never met with this Sort, or did not underſtand it. Fourthly, In a double Hare-Lip, the four Sides of the Fiſſure muſt be cut off, and then united by long Needles, and a Ligature, beginning on the Left Side, then proceeding to the middle, and from thence to the Right Side. *Roonhuyſen*, *Palfin*, and others, adviſe to looſen the Threads on the ſecond or third Day, and propoſe many Advantages from it: But, as the Threads generally adhere to each other, and the Wound or Needles, by means of the Blood or Balſam, without any Pain or Injury, and this Removal would make Infants cry, I cannot ſee any Reaſon for ſuch a Procedure; unleſs an Inflammation, or ſome other Accident, require it, eſpecially as they will ſeparate after extracting the Needles. Sixthly, I uſe a kind of Ribband or Fillet, with two or three Hooks, like thoſe repreſented *Tab.* 25. *fig.* 9. which I fix to the Patient's Head, in ſuch a manner, that the Angles may be placed on each Cheek, near the Lips. Next, having encompaſſed the Needles with the Thread, I faſten a ſtrong Lace to one of the Hooks, which I paſs to one of the Hooks on the other Side over the Needles, and

ſo back again, till the whole Lace is taken up, to the other Hooks, which is the beſt Method of ſecuring the Lips of the Wound. Seventhly, Some direct to extend and ſupport the Left Side with the Left Hand, and take off the Skin by Sciſſars, with the Right; then, changing Hands, the Right Side is to be ſupported by the Right Hand, and the Left to perform the Operation; but as this will render the lower Part of the Lip more tenſe than the ſuperior, however cautiouſly it be done, hence, in the Section, more will be taken from the inferior than the ſuperior Part, and, in conſequence of this, the Wound will be too large and unequal; which Inconvenience is ſtill greater in Children, from the Smallneſs of their Lips, to ſay nothing of the changing Hands, and making an Inciſion with the Left; I think it, therefore, better not to touch the Lip with the Fingers, during the Section, but only to take the Margin with the Sciſſars. Eighthly, *Petit* has invented, for this Purpoſe, a Needle, almoſt like the Larding-pin, (ſee *Tab.* XLI. *Fig.* 8.) by whoſe obtuſe End A, which is hollow and ſlit, when he has paſſed it through the Lips of the Wound, he introduces the *Fibula* (*Fig.* 9.) made of Silver, with two Heads; and after extracting the Needle, leaves it in the Wound: Then he involves the Thread round the *Fibula*, to unite the Wound, and this indeed ſeems a very proper Method. But, if I was to uſe theſe *Fibulæ*, they ſhould be made of Silver, either without a Head, or with one only (as *Fig.* 10.); for then the Head need not be cut off, and they might then be extracted with much more Eaſe. Beſides, I think this Needle too thick and large, and would prefer that (*Tab.* XL. *Fig.* 8.) which I recommended for perforating the Ear. Ninthly, If this Operation ſhould be attended with an Inflammation, Fever, or Convulſions, which never occur'd to me, I agree with *Garengeot*, in removing the Suture. Tenthly, If a large Part of the Lip, or any Teeth, are wanting in Adults, ſo that the *Fibulæ* cannot be ſupported, a Leaden Plate ſhould be fixed under the Lip. Laſtly, It is ſurpriſing, that *Hildanus*, out of 600 chirurgical Obſervations, ſhould have nothing upon the Hare-Lip. *Heiſter. Chirurg.*

Sharp ſays, that the callous Edges of the Fiſſure muſt be cut with a thin Pair of ſtrait Sciſſars, the whole Length of it, obſerving the Rule of making the new Wound in ſtrait Lines, becauſe the Sides of it can never be made to correſpond without this Caution. For inſtance, if one Side of the Hare-Lip was indented, the Inciſion of the Edges muſt be continued in direct Lines.

The Pins I employ, ſays he, are made three-fourths of their Lengths of Silver, and the other Part, towards the Point, of Steel; the Silver Pin is not quite ſo offenſive to a Wound, as a Braſs or Steel one; but a Steel Point is neceſſary for its eaſier Perforation, which makes them paſs ſo readily, that there is no need of any Inſtrument to aſſiſt in puſhing them through. *Sharp.*

Beſides the preceding Signification of *Labia*, the Edges, or Lips, of Wounds or Ulcers are thus called. And there is another Part of the Body, which has acquir'd this Appellation, which is the moſt external Part of the *Pudendum Muliebre*.

The LABIA PUDENDORUM are more prominent and thicker above than below, which lie nearer each other below than above. They are principally compoſed of the Skin, cellular Subſtance and Fat. The exterior Skin is a Continuation of that of the *Pubes* and *Inguina*. It is more or leſs even, and furniſhed with a greater Number of glandular Corpuſcles, from which a whitiſh ceruminous Matter may be expreſſed; and after a certain Age it is likewiſe covered in the ſame manner with the *Pubes*.

The inner Sides of the *Labia* are ſomething like the red Portion of the Lips of the Mouth; and it is diſtinguiſhed everywhere, from the external Side, by a kind of Line, in the ſame manner as the red Portion of the Lips from the reſt of the Skin; being likewiſe thinner and ſmoother than the outward Skin. A great Number of Pores are obſervable in it, and, alſo, numerous glandular Corpuſcles, which furniſh a Liquor more or leſs ſebaceous; and the Corpuſcles are larger near the Edges, than in the other Parts. The Places where the *Labia* are joined above and below, are termed Commiſſures; and may likewiſe be called the Extremities or Angles of the Sinus. *Winſlow.*

LABIATE FLOWERS are ſuch as have Lips; or, more properly, a labiated Flower is an irregular monopetalous Flower, divided into two Lips; the upper is called the Creſt, the under the Beard. Sometimes the Creſt is wanting, and then the Style and Chives ſupply its Place; as in the Ground-pine, *Scordium*, *Bugula*, and the like; but the greateſt Part have two Lips: In ſome Species the upper Lip is turned upwards, as in Ground-ivy; but moſt uſually the upper Lip is convex above, and turns the hollow Part down to the lower Lip, and ſo repreſents a kind of Helmet, or Monk's Hood; from whence theſe are call'd Galeate, Cucullate, and Galericulate Flowers, in which Form are moſt of the verticillate Plants. *Miller's Dict.*

LABIS, λαβὶς, from λαμβάνω, to take. A *Forceps.*

LABLAB. A Name for the *Phaſeolus*; *Ægyptiacus*; *nigro Semine.*

LABOR imports either Labour, conſidered as an Exerciſe of the Body, or a Diſeaſe.

LABORATORIUM. A Laboratory.

LABRAX, λάβραξ. The Name of a Fiſh. See LUPUS.

LABRISULCIUM. A Chap in the Lip; or the ſame as CHEILOCACE. This is a ſcrophulous Symptom. See SCROPHULA.

The *Labriſulcium*, or chapt upper Lip, as it is an Attendant on the Strumæ, is beſt cured by the ſame internal Remedies uſually preſcribed to alter and rectify this particular Dyſcraſy of the Blood, and its ſecreted Juices, which, together with mercurial Purgation, oftentimes takes down the Swelling, at leaſt for a time, till by getting of a freſh Cold, or ſome other Treſpaſs in the Non-naturals, a new Fluxion ariſes, and the Part ſwells up again.

The Chap, or Cleft, itſelf, may be anointed with Oil of Almonds, Sperma-ceti, Ointment of Tutty, or *Turner's* Cerate of *Lapis Calaminaris*. Dr. *Bate* has two Remedies, in his Diſpenſatory, the one he calls his *Unguentum ad Fiſſuras*, the other *Oleum Tritici*, being an Oil, ſtrongly expreſſed from Wheat bruis'd, and put between hot iron Plates; which, however they may happen to ſucceed in common Chaps or Clefts in the Skin, from the cold Air, to which many People are ſubject, yet I muſt ſuſpect their Efficacy in our preſent Caſe.

Arnoldus Boot has treated of this Symptom more particularly in his tenth Chapter, under the Title of *Cheilocace*; where, in the firſt Place, he tells you, that, as Children are the uſual Subjects of this Diſeaſe, it is neceſſary the Remedies ſhould be made as palatable as can be. He begins the Cure, therefore, with an opening Apozem of the Decoction of Fumitory, Betony-root, Dock, Succory, and Polypody, rendering the ſame purgative with Sena, Agaric, and Tamarinds, of which the Patient is to take a Draught two or three times in a Day, rendered pleaſant with a little Syrup of Violets, or Succory: Having made a general Evacuation by the Lancet, he bleeds with Leeches behind the Ears, by way of Revulſion, and directs, alſo, Fontanels, or Iſſues.

His Topics for the Lip are Epithems, by way of Fotus, prepared of a Decoction of Chervil, Cinquefoil, Myrrhis, red Roſes, and Sage, in which a little Salt of Vitriol, or white Vitriol, depurated by repeated Solutions and Coagulations, has been diſſolved, whilſt the Chap or Cleft on the Inſide is touch'd frequently with a Mixture of Plantain-water, Sugar of Lead, and Honey of Roſes. *Turner's Surgery.*

The *Unguentum ad Fiſſuras* of *Bates* is made of Myrrh, and Litharge of Silver, each one Ounce; Honey, four Ounces; Wax, two Ounces; Oil of Roſes, ſix Ounces; *Oleum Rhodii*, twelve Drops.

Or, Take of *Armenian* Bole, Myrrh, and Ceruſs, each two Drams; and make into an Ointment, with Duck's Fat.

LABRUM. A Lip. See LABIA.

LABRUM VENERIS. A Name for the *Dipſacus*, *Sylveſtris*, or *Virga Paſtoris major.*

LABRUSCA. A Name for the *Vitis Sylveſtris.*

LABURNUM. A Name for the *Cytiſus Alpinus*; *latifolius*; *flore racemoſo*, *pendulo.*

LABYRINTHUS. The Labyrinth of the Ear. See AURIS.

LAC. Milk.

Milk is a Liquor prepared from the Aliment chewed in the Mouth, digeſted in the Stomach, perfected by the Force and Juices of the Inteſtines, and elaborated by means of the Meſentery, and its Glands, and Juices, and the Juices of the thoracic Duct: It has undergone ſome Actions of the Veins, Arteries, Heart, Lungs and Juices, and began to be aſſimilated; yet may ſtill be had ſeparate, and diſcharged out of the Body.

And thus by their own Milk, prepared from the proper Matter of the Chyle, all the known lactiferous Animals are nouriſhed, both Male and Female: For Milk is always prepared from the Chyle, as well in Men as in Women, in Virgins, and barren Women, in Mothers, and Nurſes. Whence every ſuch Animal conſiſts, is nouriſhed, and lives, on its own proper Milk; and from this alone prepares all the other Parts, both the ſolid and fluid, by means of the vital Actions. It is, alſo, certain, that Men may live for Years, by feeding upon Milk alone, and perform all the Actions of Life, and have all the ſolid and fluid Parts of their Bodies perfectly elaborated. The Serum, therefore, the Blood, the Lymph, the Spirits, Bones, Cartilages, Membranes, and Veſſels, proceed from Milk; and if a Man may live, for many Years, upon Milk alone, Milk muſt contain in itſelf the Matter of all the Parts of the human Body. Milk approaches nearer to an animal Nature than Chyle; the Chyle of the Inteſtines is nearer to a vegetable Nature, and that of the Stomach neareſt. And hence we find the Phenomena of Fermentation and Putrefaction in the Stomach and Inteſtines; ſuch as acid Eructations, fetid Smells, and the like; for this Chyle is a true Emulſion, prepared by the grinding of the Teeth, the Tongue, the Stomach, and the Inteſtines, along with the Saliva, the Liquor of the Stomach, the pancreatic Juice and Bile, in the Inteſtines; and hence proceeds Milk.

If this Milk be good, and ſuffered to reſt in a clean Veſſel, it firſt appears uniformly white, then throws up a white, thick, unctuous Cream to its Surface, and remains ſomewhat bluiſh below. If the Cream be carefully taken off, the remaining Milk produces

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produces more. The ſame thing happens in Emulſions. The Milks of all the known Animals have this Property alike, as likewiſe the Property of Whiteneſs. The human Milk is very ſweet and thin, the next is that of Aſſes, then that of Mares, then of Goats; and, laſtly, of Cows. Whence it is preſcribed, in this Order, to conſumptive Perſons of weak Viſcera. But though Milk reſembles vegetable Emulſions in ſeveral reſpects, yet they differ in others. The Rennet, prepared of the Juice in the Stomach of ſuch Creatures as chew the Cud, being mixed with Milk, coagulates into an uniform Maſs, which may be cut with a Knife, and it thus ſpontaneouſly ſeparates into Whey and Curd; but this does not happen in Emulſions. If long boiled over the Fire, it loſes its more fluid Parts, and condenſes into a butyraceous and cheeſy Maſs; but not into an uniform one, that will cut like the dried Serum of the Blood, or White of Egg. It has a pleaſant Taſte, and no unpleaſant Smell; it is extremely mild, and of a middle Nature between the Blood and the Chyle; and hence proves different according to the Aliment, and the Creature that prepares it.

Neither the Smell, nor Taſte, nor the dropping of new Milk into the Eye, manifeſts any acid, alcaline, or ſaline Matter to be contained in it. If Milk be heated, and ſucceſſively mixed with pure, volatile, and fixed Alcali, there ariſes no Effervescence which ſhews any Acidity; but the Milk grows ſomewhat thick and turbid. To other Parcels of the ſame Milk add the acid Spirit of Vinegar, of Nitre, of Salt, and of Vitriol; and theſe make no Effervescence, ſo as to manifeſt the Milk to be alcaline, but thicken and coagulate it. But, upon mixing Milk, to which Oil of Tartar *per Deliquium* was poured, with ſome Oil of Vitriol, there immediately ariſes a violent Effervescence, and much greater than if the ſame Quantity of Alcali was added to pure Oil of Vitriol. If new Milk be digeſted in a Glaſs Alembic, with a Fire about 160 Degrees, there comes over an aqueous Liquor, without any Signs of an inflammable Spirit; nor does this Liquor give any chymical Sign of being either acid or alcaline, upon mixing with either acid or alcaline Salts. It, alſo, appears not to contain any ſaline Matter, being inodorous, and perfectly inſipid, and cauſing no Pain, if dropt into the Eye. There remains behind a yellow, thick, unctuous Maſs of a ſweet and grateful Taſte, which Maſs gives not the leaſt Appearance of containing any thing acid, alcaline, or ſaline, upon all the Trials made to diſcover it.

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This is the true Nature of Milk, thus variouſly examined: Whence we here find no Signs of a perfect Fermentation, either of the acetous, or vinous Kind; nor of Putrefaction, which produces an alcaline Salt, or fetid Oil; and this though a great Quantity of animal Juices be mixed with the vegetable Matter of the Milk: Whence we muſt form a very different Notion of the Action performed in the making of Chyle and Milk, than Chymiſts uſually ſuppoſe and deliver. And, as Cattle are milked twice a Day, this whole Operation muſt be performed in the Body in the Space of twelve Hours; and, if detained longer, it begins to degenerate, and to corrupt. This Experiment was made upon Cows Milk, becauſe they feed wholly upon Graſs, Hay, and Water. There is ſometimes a Difference found in Womens Milk from the Difference of the Aliment; but, when freſh, there is little Difference to be obſerved. Some have ſuppoſed, that there was here a latent Acid, though it did not appear upon the preceding Experiment; but, if Acids are denominated with reſpect to our Senſes, or their ſenſible Effects, there is no Acid contained in the recent Milk.

Let new Milk boil in ſeveral different Veſſels, with the Addition of a little Water, to prevent its growing too thick in the boiling; pour into one of them a little Vinegar, and one Part of the Milk will preſently coagulate, and leave the other fluid. Into a ſecond pour the Spirit of Nitre; to a third, Spirit of Salt; and to a fourth, the Oil of Vitriol, and the ſame Effect immediately enſues; nor can this Coagulation be prevented by a Heat of 212 Degrees. The ſame Coagulation is made with any other Acid, as the Juice of Sorrel, Barberries, Citron, Currants, Verjuice, Tamarinds, and Tartar; ſo that the Thing which of itſelf was ſo liquid as to paſs through the fineſt Arteries, now has one Part ſeparated into a groſs curdy Matter, and another into a much thinner than the Milk itſelf, called *Whey*. If the Curd be ſtrongly preſſed betwixt thick Linen, it makes Cheeſe, which conſiſts of the Cream of the Milk, and the Curd. This Cheeſe, with Age, becomes ſharp and acrid, not acid, but rather ſomewhat alcaline, of a particular Smell, and ſo penetrating a Taſte, as often to inflame the Mouth. But when the Milk is firſt deprived of its Cream, and afterwards coagulated with Acids, or with Renner, the Cheeſe thence made proves very dry, and hard like a Horn; and, when applied to the Fire, grows tough, ſcorches, fries, burns, and ſmells perfectly like Horn. This is a ſtrange Change of ſo fluid a Matter as Milk, but is, perhaps, the Origin of all the Solids in the Body.

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The Nature of Milk, thus diſcovered, is the ſame in the Receptacles of the Breaſts, where it is lodged; and, therefore, may be there coagulated by a like ſaline or acid Matter; at which time the thin Serum comes out at the Nipples, and the thick Curd remains in the Veſſels, ſo as there to produce Hardneſs, Swellings, Inflammations, Suppurations, Scirrhoſities, and Cancers; and, perhaps, the ſame may happen in the chylous Glands of the Meſentery. But, in all theſe Coagulations with Acids, the Milk retains its white Colour; and hence appears the Reaſon why weak Bodies generate a white Chyle and Milk, but with Difficulty convert it into a red Blood; whence ſuch Conſtitutions as abound with Acid, are troubled with acid Corruptions, their Sweat and Smell being alſo acid, and the whole Body pale: Which Particulars, being conſidered, may lead Phyſicians into a due underſtanding of many Diſeaſes.

Dilute new Cows Milk with a little Water, and boil it in a clean Veſſel, and, by degrees, drop Oil of Tartar *per Deliquium* into it: It will thus begin to turn yellow; the more ſo, as more Alcali is added, and the Boiling the longer continued, ſo as to paſs from a faint yellow into a red Colour. At the ſame time it coagulates more and more, and ſeparates into curdy Maſſes, though not ſo large and firm, nor ſo eaſily hardening, as thoſe produced by Acids. At length, by boiling the Whole long enough, it become a thick, red, coagulated Maſs.

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Milk, therefore, which, mixed with Acid, or its own Rennet, retains its white Colour, even in the Heat, immediately turns yellow with Alcalis in a ſtrong Heat, and, if the Heat be ſufficiently intenſe, almoſt red. When a Woman, that gives Suck, becomes highly feveriſh, the Milk in the Breaſts is corrupted, and, in this Caſe, it becomes yellow, ſaline, thin, and ſanious; the coagulated thick Part, remaining in the Breaſt, now grows ſomewhat fetid, and is abhorred and loathed by the Child. When, therefore, the Milk coagulates in the Body, and grows yellow under a Fever, the Phyſician muſt not ſuppoſe it coagulated by an Acid, but by too much Heat, and rather by an alcaline Tendency: And, perhaps, Phyſicians find the Milk thus coagulated by a Fever an hundred times for once that it is coagulated by an Acid. And in the laſt Contagion among the Cows, while their Meat remain'd in the Stomach, and was neither diſcharged upwards by ruminating, nor expelled downwards, and therefore truly putrefied by the violent Degree of Heat, ſo that the Stomach was almoſt ſcorched, then the Milk grew ſharp, yellow, ſomewhat fetid, and thin in the Dug; and in this Form was either milked out, or dropt ſpontaneouſly. Thus, if, when Milk is coagulated, either by chymical Acids, or by Rennet, and heated, and an Alcali be put to it, we ſhall find this Aſſertion falſe, that Alcalis diſſolve the Coagulation, and recover the former Fluidity. And hence we may underſtand, how Milk will long remain white in the weakeſt and coldeſt Conſtitutions, and not be brought to the natural Redneſs of Blood. Such Perſons are, therefore, continually pale, and their Blood thin, pale, and watry; but, upon the Removal of the Diſorder, the Whiteneſs vaniſhes, and the red Colour returns. So, when the vital Faculties are but moderately ſtrong, they are only able to convert ſome Part of the Milk into Blood, but not to perfect the Whole; then there ariſes a ſomewhat pale yellowiſh, or greeniſh Colour, whence the Green-ſickneſs in Virgins. But where the vital Faculties are robuſt and ſtrong, ſo that they briskly circulate, and heat the Milk, the white Colour is ſoon ſubdued, and converted into a florid Red; whence the Blood will be often ſo intenſely red, as to appear almoſt black. Laſtly, it is manifeſt, that the white Colour of the Milk may remain in the Body, that abounds with Acids; but, if Alcalis preſide in it, it will gradually acquire, firſt, the Colour of Bile, afterwards grow more intenſely yellow, and tend to Redneſs. Dr. *Lower* has ſhewn, that the white Colour diſappears twelve Hours after feeding. *Boerhaave's Chymiſtry.*

The medicinal Virtues of Milk, and the Manner of uſing it, is ſpecified under the Article FIBRA.

A MILK-DIET.

I have given, ſays Dr. *Cheyne*, the Preference in a low Diet, both from Obſervation and Experience, to Milks; ſuch as Aſſes, Mares, Cows, Goats, and Womens; all of them excellent in their Kind, and preferable in this Order: Milk is a Medium between

tween young animal Food and mere Vegetables: Milk is white Blood already made, adjusted to all the Meanders of Circulation, and prepar'd by the Hand of Nature, and intended and signatured by its Author, for the curing, nourishing, and fortifying of weak, tender, and diseased Animals. Asses-milk needs no Concomitant but in extremely bilious Stomachs; and I question whether testaceous Powders, joined with it, do not hurt instead of benefiting the Patient; if it purges, or even curdles, that is of no great Disadvantage to the Patient, if he is not quite gone; for that Curdling shews great Redundancy of Gall, and an inflammatory State in the chyliferous Tube, which requires vomiting, purging, and cooling, which the Asses-milk will do most gently and safely in some; and in a short time these Effects will cease, or may be easily removed by a little Decoctum Fracastorii at Night, or *Spa* or *Pyrmont* Water, or *Bristol*, or any chalky Water, for common Drink, when these Symptoms exceed. But, to be useful in very tender Cases, Asses-milk ought to be esteem'd Food rather than Physic, and taken accordingly; and tender Persons, especially in inflammatory Cases or Diseases, with acute Pains, ought to live on it, and take it in such Quantities as they can bear. All cacochymic, consumptive, thin, atrophous Persons, ought to enter upon it directly, and continue it twice or three times a Day, till they are quite recover'd: For I know nothing in Nature that will so soon recover and plump up the muscular Flesh and Habit, as Asses-milk long continued; for all Chyle that nourishes must first be reduced to the Nature and Consistence of Asses-milk, else it will never kindly pass into the Lacteals. I say nothing of Mares-milk, because it is not much in Use in *England*, though much admired in *Eastern* Countries.

Some Persons have a natural Aversion to Cows-milk; with others it curdles, and either binds too much, or purges, or so inflates and comes off in Phlegm, that they cannot take it without abundance of Pain and Suffering, which is an infinite Loss to them, it being the safest, gentlest, and most certain and universal Antidote in all chronical Distempers, without Exception of one. The only certain Way to make it agree, is first to cleanse the Primæ Viæ by Vomits, or an aloetic Pill now-and-then, mixing the Milk, at first, with *Bristol*, or any soft, but chalky Water, making it into a Gruel or Pudding, with Seeds, as Barley, Oats, Wheat, Sago, Rice, and the like; putting sometimes a Spoonful of White-wine to it; making Bread into Biskets with sweet Cow-milk, without Yeast or Salt, with a quick Firing; taking little at a time, but often; or, lastly, putting a Spoonful of compound Peony-water into a Quart, or a Tea-spoonful of Spirit of Hartshorn to a Pint; and thus, gradually, carrying off the Load, Heaviness, and Flatulence or Tumult it seems to raise, which entirely proceeds from the ill State of the Stomach and Bowels, that, by a Distemper, are loaded with Wind, Choler, and Phlegm, where the concoctive Powers are inflamed greatly, the Glands tumid, the Lacteals obstructed, the Perspiration stopt, the Blood viscid, and all the Functions in a ruinous State; and not from the Nature of Milk, which is the mildest, softest, most nourishing, and salutary of all Foods; and the vulgar Error, of its being phlegmatic, is from its being the best and most effectual of all Balsamics, and all Lambatives: As we see it is formed by the Hand of Nature for the Young, that is, the Weak and Tender; and there is no real Difference between a weak and tender Animal by Nature, and one made so by a Disease, but that the Case is much worse in the last than the first; and, therefore, this natural Antidote is more necessary in it: And I never knew one, who laboured and endeavour'd heartily at it, but at last overcame these Difficulties, to his great Pleasure and Satisfaction, unless the Case was totally gone. Drinking a little green Tea, or tepid Barley, or *Bristol* Water, when it oppresses, will help it off, and relieve. What makes Milk at first so disagreeable, painful, and oppressive, is the inflammatory, bilious, and acrimonious State of the Stomach and Bowels, which presently turns the Milk into a hard cheesy Curd, and sends off the Whey into the Lacteals too thin and too fast: Nothing in Milk, but the sweet white Whey, that is, the Serum, with the lightest and smallest Particles of the Curd, nourishes or can enter the streight and invisible Mouths of the Lacteals; and hence only is the nutritive Virtue of Asses, Womens, and Mares-milk, and Goats-whey. Strong Rennet, or any strong Acid, will turn Milk into a hard cheesy Curd, which will neither come up, nor go down, without much Labour, Struggle, and Oppression, especially in weak or bilious Stomachs. Weak Rennet will make a tender Curd, which will easily slide off: So that the whole Art of making Milk agree with any Stomach, is to prevent its turning into too hard a Curd; which any Alcali will do, Sugar, Crabs-eyes, Chalk, the volatile Spirits, and the like. As the Viscera cool, and the Choler lessens, the Disorders from Milk cease. However, I should advise those, whose Stomachs abound with Bile, and so are in an inflammatory State, to live on Seeds, mealy and soft Roots, and well-dressed Vegetables, for some time; especially those who have bad Livers, and an Overflowing of the Gall; for, as to consumptive, scrophulous, scorbutical, diabetical, and cancerous Cases, Milk and Seeds are the best Antidote, and seldom disagree. I have been told of two Pigs, fed one with the same Quantity of Milk, the other with sweet Cow-whey; the last became the fattest, whitest, and sweetest. But the most infallible Remedy is, for a long time to chew a little good Bark at Noon, and some Rhubarb at Night, constantly; at least till this Difficulty be overcome: The first gives a Tension and Spring to the Coats of the chyliferous Tube; the second does not only the same, but, also, carries off the Load and Superfluity from it, before it accumulates and acidulates too high. Sweet Cow-whey, or Orange-whey, is an admirable Antidote in scorbutic and cacochymic Habits, in bilious Vomitings, and hectic, or low feverish Cases: It is preferable to most, if not all sorts of Diet-drinks, antiscorbutic Juices, or Prisans; and they who would, at least all the Summer-months, drink a Quart of this, more or less, half in the Morning, and half at Night, would go a great Way to prevent autumnal Fevers, violent gouty Paroxysms in Winter, scorbutic and scrophulous Humours and Defedations, and cachectic Juices; especially if some particular Plant, as Scurvy-grass, Ground-ivy, Colts-foot, Baum, Sage, or the like, were infused in it, or a little Milk of Sulphur (in case it is not of itself too purgative) were first taken in a Spoonful of it.

Goats-milk, or rather its Whey, is a wonderful Strengthener and Cleanser. It is surprising to me, that our Countrymen, after they have heard of the many great Cures, in deplorable Cases, perform'd by the drinking of Goats-whey, in *Scotland*, *Ireland*, and *Wales*, with a proper Regimen of Diet, Air, and Exercise, do not more generally apply to it at first, in low, consumptive, wasting, scorbutic, and cachectic Cases; or in all viscid or inflammatory Juices. It was in great Esteem among antient Physicians; and the Goats feeding in a pure Air, and high Places, on the most tender, light, and aromatic Plants, must communicate a Spirit, Balsam, and Sweetness, to the Whey, and, consequently, to those who use it freely and plentifully: And accordingly we find its Efficacy; it gently purges, opens, cleanses, cools, and balmifies; and must surely be a more natural and gentle Diluent than any artificial Diet-drink whatsoever; and in scorbutic, bilious, and inflammatory Cases, is a most sovereign Antidote. But it is common to see the most obvious, natural, and simple, but most beneficial and sanative Things, slighted and overlooked, while new, foreign, costly, and complicated ones, are admired: But Time and Suffering will give Wisdom and Experience, if any thing will.

I should here say something of Womens-milk, which is indeed most natural and homogeneous to human Bodies in very low consumptive Cases, and is found extremely beneficial in them; not only to the Young and Tender, but to the antient Tender, and the Middle-aged, worn out by Diseases: This Milk would be infinitely more beneficial and salutary, were it not for the rank, high, foul Feeding, and common Uncleanliness of Nurses, and such low-condition'd Persons. If Nurses lived on Cows-milk, Seeds, Roots, and Vegetables, well-dressed; and drank nothing but Toast and Water, or Barley-water, or unfermented Liquors, and were kept clean and sweet; their Milk, passing through infinitely more fine and delicate Strainers than those of any brute Animal, would be a real Nectar in Atrophies, paralytic and nervous Cases: But, on the contrary, as Things are now constituted, Nurses are the most humourous, voluptuous, and domineering Persons in a great Family; and if Food and Nutriture can have any Influence on the Body, Humours, and Passions of the Child, I think it as necessary to have an healthy, clean, sober Nurse, as such a Mother, for the Heir of a noble Family; since it is certain, the Child is fed and increased as much, and is longer under the Influence of the Nurse's Juices and Humours, than it is confined in the Mother's Bowels; and, without all Doubt, the Body, Humours, and Passions, partake of the Materials with which Children, and even grown Persons, are fed and nourish'd, as constant Experience and Observation testify; and I should rather confine myself to the innocent and undiseased Nourishment of Water-gruel, Cow-milk, and Seeds, than to the Milk of a foul, rank, luxurious, and vitious Nurse. *Cheyne's Method of Cure, in Diseases of Body and Mind.*

The same Author, in his *English Malady*, further gives his Sentiments of a Milk-diet, in the following manner.

For those whose Constitutions are spoiled, who have bad or corrupted Juices, violent and dangerous Symptoms, great Obstructions, are subject to the great and eminent Degrees of these Disorders, are threaten'd with an Hectic or Consumption, or a Destruction of some of the great Viscera, and who have tried all the other Methods and Medicines that could be suggested, without Success; for those I have found no other Relief than a total Abstinence from animal Foods of all Kinds, and all Sorts of strong and fermented Liquors, keeping only to Milk, with Seeds or Grains, and the different Kinds of vegetable Food, according to the Nature of the Distemper; from which they have never failed to find a present Relief, and a considerable Abatement of the Violence of their Symptoms. Many have been led into this Method, without any Advice or Direction, but merely from their own Feelings, and observing what they were easiest under: And many more have been absolutely cured, and freed from all their Disorders, by it; some even from a very short

time after they enter'd upon it, and others in a longer or shorter time, according to the Obstinacy of their Distemper, if the Disease has not been so far gone, as to be past all possible Relief from natural Means. In these last Cases it has done all that was in the Power of Art, has lessen'd their Miseries, and protracted their Fate, and has given more Ease and Quiet than they could receive from any other Method they could turn to, except Opiates and Anodynes; to which one is never to give himself, till he has given up all Hopes of a total Cure. Where the Nerves and Solids are naturally weak, or the Persons subject to nervous Disorders from their Infancy, there is no Method will absolutely free them from some slight Returns of their former Symptoms; but this Diet I have found to do more than any other Method whatever: However, no one ought to undertake this Regimen, without the Advice of some honest, able, and experienced Physician, who has considered his Case and Constitution, and can direct him aright in the proper Management of it, and the Methods of keeping up the due Tension of his Solids, which such a Diet may probably somewhat relax, while it is purifying the Juices, and cleansing the Habit; and can likewise judge of his Constancy, Firmness, and Resolution to go thro' with it, since, in some deep-rooted and confirmed Distempers of this Kind, tho' the Patient may find a considerable Relief for many Months, yet possibly, when the gross Impurities, the Choler, Phlegm, and Salts stor'd up in the Habit; raising Sickness, Lowness of Spirits, and a Return of all, or many, of the former Disorders; this may blast all his Hopes, and mightily discourage him, and make him condemn the Method, and blame the Physician who advis'd him. But, if he stands this Shock with Firmness and Patience, (which will be readily relieved by proper Evacuations, Volatiles and Astringents) he may be assured of Success, and his perfect Recovery is at hand. But as there are incurable Disorders, which no Method or Medicine will reach, so it frequently happens in this: And, even after the Patient is recovered by this Method, he must resolve to continue in it ever after, at least, not to indulge himself in a much higher Degree of Food, without suffering presently, or hazarding a Return of all his Disorders; for, as *Celsus* observes, in all Disorders of the Stomach, by whatever Methods the Patient is recovered, he must continue in the same, when he is well; for the Disease will return, unless Health be protected by the same Means that restored it.

I would not be understood here (as some have maliciously and artfully misrepresented me, contrary to my most deliberate Intention) to recommend a total Milk and Vegetable Diet, or, indeed, any particular one, to every one that is sick, or out of Order: I never once had such a Dream. I have given the Preference, in my *Essay on the Gout*, to the common Diet of well-chosen Flesh-meat, and good middling ripe Wine, even in that obstinate and painful Distemper, commonly treated by a Milk-diet. And, in my *Essay on Health and long Life*, I have endeavoured, as far as I could, to enable the Patient to the proper Choice of animal Foods fit for his Constitution, and the Disorders he labours under; and have, from considering the Nature of the Distemper, actually ordered some, who were in a Vegetable Diet, to change it for an Animal one. A total Milk and Vegetable Diet, besides its being particular and inconvenient in a Country where animal Food is the common Diet, and affording no sufficient Store of animal or mechanical Strength, (to Persons naturally weak, or who have not been habituated to it from their Cradles) may bring the Patient into such a State, that, without the utmost Risque or Danger, he can never leave it off again. And, while he is under it, by relaxing and softening the Solids, in some Degree, when it is a sweetening the Juices, it brings him under a Necessity of keeping up their Tension with proper, astringent, warm, and cordial Medicines, (which are of the same Nature with a more generous Diet) and incessant Labour and Exercise: And in gross foul Bodies, or those subject to goutish, scorbutic, or other inflammatory Disorders and Paroxysms, it requires the utmost Care and Caution, that the Disease be not thereby, at first, thrown inwards, and so the extreme Degrees of Vapours, Lowness, and other nervous Disorders, ensue, which this Diet is designed to prevent. Indeed, there are some Cases, wherein a Vegetable and Milk-diet seems absolutely necessary, as in severe and habitual Gouts, Rheumatisms, cancerous, leprous, and scrophulous Disorders, extreme nervous Colics, Epilepsies, violent hysteric Fits, Melancholy, Consumptions, and the like, and towards the last Stages of all chronical Distempers: In such Distempers I have seldom seen a Milk-diet fail of a good Effect at last; but in most other chronical Distempers, nervous or humourous, and in all their tolerable Degrees, and first and second Stages, a common middling, plain and moderate Diet is certainly the best and safest; a little animal Food of the youngest, lightest, tendrest, thinnest, and sweetest Kind, and a small Proportion of generous Liquors, to keep up the due Tension of the Solids, under the Regulations I have mentioned; weak Broths, and Soups made of tender young animal Substances, without Fat or Butter, and thickened with a due Proportion of vegetable Seeds or Grains; such as those of Wheat, Barley, Rice, Sage, Oats, Millet, and the like; such a Diet, I say, will, in my Opinion, answer all the Ends of pure Milk and Vegetables; and, as I have found such an one less dangerous, so it is a more easy Regulation, as Things now stand, and wants only a few Months in the same Course, of that Cure which might be gained, perhaps, by going into such a particular Method of Diet. I am never for entering upon extreme or uncommon Means of Diet or Medicines, but in extreme and mortal Cases; for I always think, that common Sense is the best Indication of a sound Mind, and common Life the best Means of temporal Happiness, else they had never been common.

One great Advantage that a Milk and Vegetable Diet has over a Flesh and Animal one, lies principally in this; that one may thereby avoid loading the Juices with too many Salts of any kind, or thickening them with more gross and hard earthy Particles, or such as cannot be broken or comminuted by the natural Force of the weak Solids; and by it Patients will not be so readily led into Errors in the Quantity; Nature not being tempted to receive or retain such unprovoking and impoignant Viands, whereby they avoid the Snare and Temptation that Liquorishness, and high Relish, throws many into. Another Advantage is, that it effectually dilutes and cools too thick or hot Juices, and that a sufficient Quantity of it may be taken to keep the Bowels and Blood-vessels full, and sufficiently turgid, whereby the Circulation, and natural Evacuations and Secretions will be more uniformly carry'd on in such weak Habits, than can possibly be under an animal Diet of so small a Quantity, as must be necessary in such Cases, unless it be extremely diluted with Water, and the farinaceous Vegetables, which bring it to the same State: And, therefore, in greatly depraved Habits, and such deep and dangerous Diseases as I have mentioned, it is the most proper and absolutely necessary Regimen to carry on the natural Functions without Pain and Uneasiness, and to preserve the Sides of the Capillary Vessels from coalescing and growing together, and so preventing irremediable Obstructions; tho', in other more slight Cases, it may be not only not necessary, but even sometimes inconvenient and hurtful: For tho' it will always produce at length Freedom from Pain, and Freedom of Spirits, and a greater Capacity for intellectual Functions; yet it will never beget mechanical Force and Strength, or an hardy, strong Constitution, which, in some Circumstances, Employments, Trades, and Professions, is indispensably necessary; so that such a Course and Regimen is only proper for those who follow intellectual Occupations, and expect chiefly mental Pleasures, Freedom from Pain, Chearfulness, and Length of Days; or, in short, for the Studious and Sedentary.

A total Ass-milk Diet (about two Quarts a Day without any other Meat or Drink) will, in time, cure a Cancer in any Part of the Body, with mere common Dressings, provided the Patient be not quite worn out before it be begun, or too far gone in the common Duration of Life: And even in that Case it will lessen the Pain, lengthen Life, and make Death easier, especially if joined with small interspersed Phlebotomies, Millepedæ, Crabs-eyes prepared, Nitre, and Rhubarb, properly managed: But the Diet, even after the Cure, must be continued; and never after greatly altered, unless it be into Cow-milk, with Seeds.

Any Cancer that can be cut out, contracted and healed up, with common, that is, soft, cool, gently astringent Dressings, and, at last, left as an Issue on the Part, by a Cow-milk and Seed-diet, ever after continued in, may be made as easy to the Patient, and his Life and Health as long preserved, as if, almost, he had never been afflicted with it, especially if under Fifty.

A total Milk and Seed-diet, gentle and frequent Phlebotomies, as Symptoms exasperate, a little Ipecacuanha, or Thumb-vomit, repeated once or twice a Week, chewing Quill-bark in a Morning, and a few Grains of Rhubarb at Night, will totally cure Consumptions, even when attended with Tubercles, an Hæmoptoe, and Hectic, in the first Stage; will greatly relieve, if not cure, in the second Stage, especially if Riding in a warm clear Air, be joined; and make Death easier in the third and last Stage.

A total Cow-milk Diet, about two Quarts a Day, without any other Food, will, at last, totally cure all Kinds of Fits, Epileptic, Hysterical, or Apoplectic, (which are all but Degrees or Symptoms of one general Disease, which I call Scorbutico-nervose, or the plain Scurvy, in its last Stage) if entered upon before Fifty: But the Patient, if near Fifty, must ever after continue in the same Diet, with the Addition only of Seeds; otherwise his Fits will return oftener, and more severely, and at last cut him off.

A total Cow-milk Diet, without any other Food, will bid fairest to cure a Hemiplegia, or even a Dead Palsy, and, consequently, all the lesser Degrees of a partial one, if entered upon before Fifty: And this Distemper I take to be the most obstinate, intractable, and disheartening one that can afflict the human Machine; and is chiefly produced by intemperate Lechery, with its necessary Attendant habitual Luxury. It may be retarded in its Progress by strong Vomits, mercurial and fetid Gum Medicines, Air, Gestation, the Pilulæ Æthiopicæ of the *Edinburgh* Dispensatory of the last Edition, with Water-beverage, and Mineral Water, and cold or hot Bathing in the respective Seasons; but this is never to be eradicated, if the Stroke is deep, or Life far spent, but by Cow-milk only.

A total Milk and Seed-diet, with gentle Vomits before and after the Fits, chewing Bark in a Morning, and Rhubarb at Night,

Night, with Phlebotomy about the Equinoxes, will perfectly cure the Gout in Perſons under Fifty, and greatly relieve thoſe further advanced in Life; even thoſe who have chalky Nodes, and fixed Joints, eſpecially joined with Air and Exerciſe, and ſtrong and conſtant Friction; but muſt be continued ever after, if ſuch deſire to continue well.

Of theſe mentioned Caſes and Cures, I have known or treated Inſtances, ſo that they may, with high Probability, and medical Certainty, be depended on. The following are reaſonable and probable, but not ſo certain, for want of ſufficient Experiments.

A total Milk and Seed-diet, with cool Purges now-and-then, as of Manna and Cream of Tartar, or *Glauber*'s Salt, with a Pill of the Præcipitat. per ſe, or Pills of the Mercurius Alcaliſatus, with Terebinthina cocta, will, in ſix Weeks, or a Month, totally cure and eradicate any Venereal Diſtemper, in its firſt Stage, or while it is only termed a Gonorrhæa virulenta, without other Symptoms, if Bark and Rhubarb are chewed for ſome time after, to conſolidate and conſtringe.

A total Milk and Seed-diet, continued for ſix or eight Months, will totally cure and extirpate Venereal Diſtempers in their ſecond Stage, when they may be called the great Pox, with Bubos, Cancers, and cutaneous Defedations, if Pills of Præcipitat. per ſe, or of Mercurius Alcaliſatus and Gum Guaiac. with Dreſſings of the Unguentum Neapolitanum conſtantly applied, be perſiſted in during that time, which may be done without keeping Houſe, or Interruption of Buſineſs.

In thoſe who, for the laſt Stages of Venereal Diſeaſes, have unſucceſsfully gone thro' a full Salivation, a total Milk and Seed-diet, long and ſtrictly continued in, would certainly cure and eradicate the Diſtemper, if no other hereditary Diſeaſe be complicated with it: Whereas, in the common Management, a total Cure is ſeldom to be obtained, and thereby many are miſerable all their Days.

An habitual Aſthma, if managed with a Milk and Seed-diet, Quickſilver well purified, half an Ounce twice a Day, Squill Vomits about new and full Moon, and after with the Squill Pills of the *Edinburgh* Diſpenſatory, might be totally eradicated, eſpecially if a Southern Climate, and warm clear Air, were joined.

In a painful and dangerous Pleuriſy, after a good Part of the Size of the Blood has been drawn off by large Phlebotomies, and the Diſtemper, by ſaponaceous and oily Emulſions, with volatile Alcalies, is leſſened; if a total Milk and Seed-diet were inſtituted, and duly perſiſted in, the Blood and Juices would, in time, thereby be ſweetened, and a Return, a Phthiſis, and an Empyema, be effectually prevented.

A Milk and Seed-diet, with Vomits of Ipecacuanha, and a few Grains of Tartar emetic, repeated every new and full Moon; in the Intervals Alcaliſatus and Guaiac. Pills continued; and, when the Blood is ſufficiently attenuated, and the Obſtructions opened, if cold Bathing, with vegetable Aſtringents, (Bark eſpecially) were employ'd to finiſh the Cure, and the ſame Regimen ever after continued; this Method, I think, would ſooner, more pleaſantly, and more durably, cure and extirpate all kinds of Manias, Phrenſies, and Madneſſes, (which are ſo ſhamefully frequent in *Britain*) than the common one of treating them with tearing Emetics, and ſcraping Cathartics, under the uſual full ſtrong Diet of Animal Food, which does but add Fewel to the Diſtemper; and generally the Diſtemper returns in a greater or leſſer Degree, to the Party, or his Poſterity.

In any Hæmorrhage, either from the Lungs, Noſe, Anus, or Uterus, how violent ſoever, if, after ſome repeated Phlebotomies, to moderate the Flow, the Uſe of *Eaton*'s Styptic, in *Briſtol* Water, or the Tinctura Roſarum, with Bark in Subſtance, Extract, or Decoctions, were freely adminiſtered, a total Milk and Seed-diet was ordered and duly proſecuted, it would totally cure theſe Symptoms, would at laſt ſweeten and balmify the Blood and Juices, and prevent Returns. For all Hæmorrhages are of the ſame inflammatory and acrid Nature, differing only according to the Part where the Rupture of the Capillary Vein happens; and ſuppoſe a thick Curd, and a ſharp Serum, in the Blood.

A Jaundice, black or yellow, proceeding from a ſpoiled or obſtructed Liver, a viſcous or morbid Bile, or biliary Stones, which prevent the Separation of the Choler, and its Paſſage into the Inteſtines, by which means it is forced back into the Veins, is rarely, and, perhaps, never to be totally cured or eradicated, but by a Milk and Seed-diet, frequent and active Vomits, ſaponaceous Emulſions, with volatile Alcalies, Mercurial Plaiſters on the Region of the Liver, *Bath* Waters, and conſtant Riding. This Method, I know from Experience, will perform a total durable Cure, and otherwiſe I never ſaw it effected.

A total Milk and Seed-diet, with ſole Water-beverage, would, at laſt, cure and extirpate any Degree of the Scurvy, ſcorbutic Ulcers, and impoſtumated Glands, even the Lepra Græcorum and Arabum; or, at leaſt, make them infinitely better, if duly continued; and Æthiops Mineral, Cinnabar of Antimony, or the Aqua Argentea, were joined to it in a long Continuance.

Of all others, a total Aſs-milk-diet is the cooleſt, moſt ſweetening and reſtorative poſſible: Next to it is Cow or Goat-milk Whey, if not too flatulent or purgative: Cow-milk, boiled or raw, for the whole Food, is next in Degree to thoſe.

La Motte affirms, that, in abundance of Experience, he has always obſerv'd that Milk which is thinneſt to be beſt; inſomuch that he ſeldom failed telling the Condition of the Child by ſeeing the Nurſe's Milk. For the Child which ſucks Milk that is clear and thin, is generally plump, freſh, and healthy; on the contrary, when the Milk is thick, the Child is lean, very hot, and ſickly.

He, alſo, remarks, that thoſe Children, which ſuck thick Milk, ſeldom wet their Beds; but thoſe who feed on that which is thin and clear, wet them abundantly.

If Milk, which is clear, has a ſweet agreeable Taſte, as if it was ſugar'd, and ſpins out of the Breaſt with Impetuoſity, when a little preſt, 'tis a Sign the Nurſe has a great Quantity; and then it runs out of the Breaſt ſpontaneouſly, in a very little time after the Child has ſuck'd.

That Milk which is thick, has often a bitter, ſalt, or ſome other diſagreeable Taſte; and drops from the Breaſt, when preſs'd. Mean time the Breaſt is ſoft; a ſure Sign, that it does not fill with Milk.

In order to taſte the Milk, the Mouth muſt be ſeveral times rins'd with Water, and ſome Milk muſt be put upon a Plate, and a few Drops may then be taſted.

Large Breaſts are ſubject to have but little Milk. Breaſts that are moderately large, with a red Nipple, which hangs free, are to be preferred.

'Tis difficult to judge whether a Nurſe is with Child or not, becauſe they ſeldom have the firſt Symptoms of Pregnancy, as Sickneſs, Vomiting, and the like.

When a Nurſe is with Child, the Child which ſucks of her grows ill, the Nurſe becomes thin and lean, and the Milk diminiſhes; but this does not always happen before the Nurſe is far advanced in her Pregnancy.

Nurſes that have the menſtrual Flux, are ſometimes not the worſe for it, provided the Child does not grow ill with their Milk; but they are never to be choſen; for the Child frequently, during the Flux, will not ſuck, and is ill. *La Motte.*

The ſame Author adviſes, inſtead of all the boaſted Applications to the Breaſts, in order to dry up the Milk, to apply a ſoft, warm Napkin to them; and not to let them be cool'd, or touch'd, let the Pain be never ſo violent.

The greater the Violence and Impetuoſity, with which the Milk comes into the Breaſts, the ſooner the Pain ceaſes, eſpecially if it does not run out; for, if it does, the Pain is leſs, but continues longer.

Care muſt be taken, when the Milk runs out, to change the Cloths frequently, for fear the Breaſts ſhould take Cold, and the Milk curdle in them, and cauſe a Tumor.

Great Care muſt, alſo, be taken, that a Woman take no Cold at her Arms, or Hands; ſhe muſt, therefore, wear her Shift very low, and wear Gloves or Mittens; for Cold, taken at the Hands, will cauſe Tumors in the Breaſts. For this Reaſon it would be moſt prudent to keep the Hands conſtantly in Bed, if it can be done without cauſing ſlight Vapours, as it ſometimes does.

Taking Cold at the Feet will, alſo, cauſe a Tumor and Abſceſſes in the Breaſts. *La Motte.*

Of the ſalutary Quality of WHEY.

So great is the Divine Goodneſs and Clemency to Mankind, that we are not only ſupplied with a wonderful Variety of efficacious Remedies, for the Prevention and Cure of as great a Variety of Diſeaſes, from the vegetable, animal, and mineral Kingdoms, but our daily Food is, alſo, endued with Virtues adapted to the Removal of the moſt acute Diſtempers. Milk is an evident Inſtance of this, which, as it is perfectly ſuited to the Nouriſhment and Support of the Body, at every Age, in every Diſpoſition and Temperament, ſo is it beyond all Diſpute intitled to the Superiority among the Safeguards of Health; inſomuch that we hardly find any thing in Nature, either ſo ſafe or efficacious as this Liquor. But, as the moſt excellent Remedy, ill prepared, or imprudently adminiſtred, is prejudicial, ſo may Milk, of any Sort, and the Uſe of it, be attended with ill Conſequences; for the Nature and Diſpoſition of all Food and Medicine is ſuch, that it has both a ſalutary and noxious Principle, and of conſequence, unleſs the latter is skilfully corrected, muſt do Miſchief. It is, therefore, the Part of a prudent Phyſician judiciouſly to diſtinguiſh between them, reject the Pernicious, make Choice of the Beneficial, and, laying aſide the Deſtructive, to make uſe of thoſe only, which may procure Health. In this he will find great Aſſiſtance from Natural Philoſophy, but more eſpecially from Chymiſtry.

Upon this Conſideration, and from an earneſt Deſire of making every thing in Phyſic ſerviceable to Mankind, we ſhall conſider the medicinal Virtues of Milk, and demonſtrate that its more fluid Subſtance, called Whey, is a ſovereign and unparalled Remedy; whilſt the more groſs, heavy, and terreſtrial Part, particularly when ſeparated from the Whey, is always pernicious both in Food and Medicine.

Though nothing is more wholſome, or better accommodated to the Nouriſhment of animal and even human Bodies, inſomuch that it may be juſtly ſtyled the moſt conſiderable of Aliments, yet, amongſt the Variety of Suſtenances we take, nothing is ſo dangerous, nothing occaſions ſo many violent Diſorders, as Milk: For as every Kind of Milk conſiſts of two Subſtances, the one fluid, the other ſolid, and ſince, without an intimate Union and Conjunction of theſe, it is neither ſalutary, nor yields a proper Nouriſhment, ſo, without Doubt, when the caſeous Subſtance is condenſed into a Curd, it aſſumes a different Quality, and proves unfriendly to Health. We ſeldom, however, find any Aliment which admits of ſo eaſy a Diſſolution of its Mixture, and in which the component Parts of the Mixture are ſo ſoon ſeparated from each other; and this ſo entirely, that the Craſis is not only eaſily deſtroyed by an Affuſion of ſome particular Liquids, but the caſeous Part even recedes and coagulates ſpontaneouſly.

Every one knows, that all Milk, when left at Reſt, in Summer, as alſo in Winter, if the Room is warm, much more if it thunders or lightens, will curdle of itſelf very eaſily and ſoon, the caſeous and buttery Subſtance departing from the ſerous, and adhering ſeparately to the Veſſel. It is, alſo, known, that Milk coagulates by the Affuſion of an acid Liquor, or ſuch as has any Acidity latent in it, ſuch as Vinegar, for Inſtance, Juice of Citron, *Rheniſh* Wine, or Malt Liquor; and this happens ſooner, if the Milk be warm. Yet it is ſurpriſing, that a ſtrong and concentrated Acid, ſuch as Oil of Vitriol, is ſo far from condenſing Milk, that it renders it more fluid; perhaps for this Reaſon, that the ethereal Principle, mixt with Oil of Vitriol, ſo attenuates and agitates the Parts adapted to Coagulation, as to prevent their curdling and concreting. It is remarkable, that weak Spirit of Wine, when poured into Milk, produces hardly any Alteration; but when the ſame Spirit, highly rectified, is added to it, eſpecially in a conſiderable Quantity, it converts it into a Milk-curd; which, in my Opinion, may be thus accounted for: This pure Spirit of Wine, abſorbing the humid Part of the Milk, cauſes a Seceſſion of the groſſer Subſtance from the Pores of the more liquid Part, in the ſame manner as it turns ſaturated Spirit of Sal Ammoniac into a Curd.

Theſe things produce a Coagulation of Milk, when out of the human Body: Now let us conſider, what principally deſtroys the Union of the ſerous and caſeous Parts within ourſelves. The Stomach is ſeldom without an Acid, becauſe moſt of our Food both ſolid and fluid contains an Acidity, which remains, eſpecially after the Digeſtion of the Aliments, and, having nothing to check it, adheres firmly to the Coats of the Stomach: But, as this Acid differs in its Quality and Virtues, ſo likewiſe the Coagulation, produced in the Milk, differs; for, in ſome Caſes, the Mixture of the Milk is only diſturbed, the groſſer Parts unite moderately, and ſtill remain ſwimming in the more fluid Part; but in other Caſes the groſſer Parts are converted into an hard, firm, and heavy Curd, which ſubſides, and, firmly adhering to the Coats of the Stomach and Inteſtines, is, with Difficulty, diſſolved, but afterwards, by an Aſſociation with excrementitious Sordes of a worſe Quality, lays the Foundation of dangerous Diſorders. This Conſequence, indeed, rarely follows, though the Acid of the Stomach be conſiderably ſtrong, unleſs the Stomach itſelf be infirm and weak, ſo that the Aliment continues too long in its Cavity, and unleſs it is affected with a preternatural Heat, which deſtroys the due Commixture of the various Parts of the Milk.

From what has been ſaid, we may very plainly diſcover, to what Conſtitutions, and in what Diſorders, Milk, from the Coagulation it undergoes in the Stomach, is hurtful and deſtructive. For, firſt, we obſerve, that the moſt terrible Diſorders of ſucking Infants proceed from coagulated Milk, particularly if their weak Stomachs are overloaded with the groſſer Milk, by giving them the Breaſt too frequently, ſo that they cannot duly digeſt their Contents, which degenerate into a Coagulum, that, by continuing there, becomes very acid and corroſive, and the bilious Juice being added to it in the Duodenum, it ferments, grows green, and corroding the moſt tender and exquiſitely ſenſible nervous Coats of the Stomach by its acute Acrimony, excites ſevere Pains with Inquietude and Anxiety, which are often followed by mortal epileptic Convulſions.

Beſides, Milk, eſpecially that which is replete with a large Quantity of caſeous Subſtance, is very prejudicial to old Men, partly becauſe all Food ſoon grows acid in their Stomachs; and partly becauſe the Milk itſelf, as well as the Curd, remains too long there, through the Laxity and exceſſive Languor of the periſtaltic Motion, whence ariſe anxious Pains of the Præcordia, Gripings, accompanied with a Teneſmus, and Inflation of the Belly: The Fæces, alſo, are diſcharged with Pain, a Corroſion, and Itching of the Inteſtines; the Body, alſo, is wearied, and the Appetite loſt. But there is hardly any Diſorder, in which the Uſe of Milk is ſo detrimental, as that commonly termed the hypochondriac Affection, in which, from an evident Diſturbance of the Buſineſs of Concoction and Excretion by Stool, ariſing from Spaſms, and a copious Increaſe of Flatulences, many acid Crudities are generated in the Stomach, which, as they ſoon coagulate and precipitate the Milk received there, bring on very terrible Symptoms. Nor is it by any means expedient, to feed thoſe with Milk, who are recovered from a violent Diſtemper, becauſe the Stomach cannot digeſt this ſtrong Nutriment, but retains it too long, ſo that by Stagnation it aſſumes a deſtructive Quality, and contributes to the Production of many Diſeaſes.

In what Diſeaſes *Hippocrates* prohibits a Milk-diet, will appear evidently from *Aphor.* 64. *Sect.* 5. which runs thus: "It is "improper to give Milk to Perſons afflicted with Pains in the "Head, to ſuch as are feveriſh, or labour under an Elevation "and Rumbling of the Præcordia. It is, alſo, improper for "thoſe afflicted with Thirſt, for ſuch as have bilious Stools in "acute Fevers, and ſuch as have loſt a great Quantity of Blood." This I take to be the Reaſon, why Milk is prejudicial in Pains of the Head: There is, by means of nervous Membranes, a great Conſent between the Stomach and Head, ſo that, if the Head is tormented with exquiſite Pain, the Stomach is likewiſe affected, and not capable of duly concocting, diſſolving, and expelling the Aliments. Beſides, a Pain of the Head often takes its Riſe from a Diſorder of the Stomach, eſpecially when the latter does not properly perform the Office of Concoction, and is overloaded with acid and viſcid Crudities. In both Caſes drinking Milk is productive of bad Conſequences, ſince it continues long on the Stomach, and is, by that means, form'd into a prejudicial Coagulum.

Beſides, *Hippocrates* forbids the Uſe of Milk in violent Fevers; nor is there any Difficulty in accounting for this. For, firſt, intenſe Heat is a very great Enemy to the homogeneous Mixture of Milk; and we are convinced by daily Experience, that Milk is ſoon condenſed into a kind of Cheeſe, by external Heat. Farther, in all Fevers, the Patient is ſomewhat coſtive, or labours under a total Conſtipation, whence that groſſer, excrementitious Matter of the Milk, which is no way ſuited to a Conjunction with the vital Humours, ſtill remains, and, being added to the Cauſe of the Fever, augments it, ſo that the ſpaſmodic Strictures are, alſo, increaſed. *Hippocrates*, alſo, thinks Milk improper for theſe, who are troubled with bilious Stools or Choler; becauſe this Diſorder derives its Origin from a very acid corroſive Juice, mix'd with the ſulphureous Parts of the Bile, and accommodated to diſſolve the Texture of the Milk. He diſapproves of Milk, likewiſe, for Perſons who have loſt a great Quantity of Blood, which, by too much exhauſting the Heat and Spirit, breaks and debilitates the Strength and Tone of the Stomach and Inteſtines, by the Aſſiſtance of which the Solution of the Food, the Elaboration of the Chyle, and Diſcharge of the Fæces, are performed; ſo that, by this means, Milk, after being drank, grows acid and thick by its Continuance, and terrible Stagnations of the recrementitious Matter happen in the Primæ Viæ.

But if we are not ſatisfy'd with the Reaſons already given, and would have them corroborated by the Teſtimonies of the moſt approved Phyſicians, both antient and modern Authors inſiſt upon the bad Conſequences of coagulated Milk. Thus, *Avicenna*, *L.* 4. *Fen.* 6. *Tr.* 3. *Sect.* 96. ſpeaking of Milk, ſays, "If "Milk becomes acid in the Stomach, from hence ariſes a Ver"tigo, Syncope, and pungent Pain, in the Mouth of the Sto"mach; and ſuch an acid Milk is ſometimes productive of a "mortal choleric Paſſion." And *Dioſcorides*, *Lib.* 2. *Cap.* 64. judiciouſly adviſes bilious and choleric Perſons to abſtain from all Milk, on account of the Coagulum. *Matthiolus*, *Comment. in h. l.* adds this as the Reaſon: "Milk, ſays he, formed into a "Coagulum, produces Difficulty of Breathing, oppreſſes the "Stomach, fills the Head with Vapours, and is concocted with "great Difficulty." Further, *Bellonius*, in *L.* 2. *Epidem. p.* 211. writes thus: "A Man labouring under a Dyſentery, after the "unſucceſsful Uſe of many Medicines, was adviſed by his Phy"ſicians to the Uſe of new Cow's-milk: This coagulating in his "Stomach, it is incredible, what terrible Symptoms, ſuch as "Swoonings, and others of a like Nature, were by that means "produced." *Henr. ab Heer. Obſervat.* 15. likewiſe, gives an Account of one, who by means of coagulated Milk, was ſeized with a cold Sweat, and breathed with ſuch Difficulty, that he dreaded a Suffocation; that he was oppreſſed with a Nauſea; and toſſed himſelf in his Bed, with frequent Deliquiums. The ſame Author, alſo, affirms, that another Patient was, by means of coagulated Milk, thrown into a Cholera. *Amatus Luſitanus*, *Cent.* 6. *Curat.* 5, 6. informs us, "that coagulated "Milk produced a heavy Weight, with Pain about the Præ"cordia; and that the Patient, when he attempted to vomit, was "immediately ſuffocated." He likewiſe, from the Authority of *Aetius*, affirms, that very bad Symptoms have been produced by Milk in Patients afflicted with a Dyſentery. More Inſtances of this Kind are to be met with in *Dodonæus's Annot. C.* 17. and *Foreſtus*, *Lib.* 18. *Obſ.* 13. 'Tis certain, that the beſt Phyſicians, from the ill Conſequences produced by coagulated Milk, have not heſitated to aſſert, that the Coagulum of Milk has a poiſonous Principle in it.

Since, therefore, ſuch imminent Dangers ariſe from Milk coagulated in the Stomach, we ſhall, next, briefly conſider what Remedies are ſuited to the Cure of Diſorders of this Kind. *Sennertus*, *Lib.* 6. *Prax. Part.* 8. *Cap.* 39. and in *Paralip. p.* 17. approves

proves of Emetics; and *Dioſcorides* recommends a Lixivium. But I am of Opinion, that Alkalies, whether lixivial or earthy, given before the Uſe of Milk, beſt prevent its curdling, by abſorbing the peccant Acid; and, when that is ſeaſonably corrected, the uſual Symptoms, produced by its Coagulation, are alſo prevented. But if the Milk is already condenſed and coagulated, and the Patient in a bad Situation, a pretty large Quantity of aqueous Diluters, ſuch as Infuſions of Tea, or *Paul's* Betony, are very ſerviceable for diluting the Coagulum, and diſſolving and waſhing away the viſcid Lentor. And if there is a Nauſea and Diſpoſition to vomit, this is greatly promoted by a ſufficient Draught of warm Water, eſpecially if it is rendered more ſtimulating and efficacious, by diſſolving one or two Grains of emetic Tartar in it. It is proper too, if the Strength will permit, to procure an Evacuation both by Stool, as well as by Vomit; for which Purpoſe, two or three Ounces of Manna, in an aqueous Vehicle, with two Grains of Tartar, will be ſufficient. And theſe are ſerviceable both to Adults and Infants, if the Phyſician preſcribes them with Judgment, and accommodates their Doſes to the different Ages and Degrees of Strength in different Patients.

But great Danger is not only to be dreaded from Milk coagulated in the Stomach; but, alſo, a too frequent Uſe of Milk, which has but little of the ſerous, and much of the groſs Subſtance, diſpoſed to Coagulation, ſuch as Goat's, Cow's, and Sheep's Milk, is not equally convenient for all, but detrimental to many. For Milk is leſs nutritive and ſalutary to Patients of a ſpongy and porous Habit, abounding with ſlender and numerous Veſſels; and, alſo, in Caſes where a large Quantity of inſpiſſated Humours are lodged in thoſe Viſcera, which conſiſt entirely of Blood-veſſels, ſuch as the Liver, Spleen, Kidneys, and Lungs, ſo that theſe Veſſels are full and infarcted with Blood: In this Caſe, the Exhibition of Milk is improper, leſt, by its thicker Parts, theſe Veſſels ſhould be ſtill more infarcted and obſtructed.

This Doctrine is, alſo, confirmed by a memorable Paſſage of *Galen*, quoted by *Marſilius Ficinus de ſalubri Victus Ratione*. "The frequent Uſe, ſays that Author, of Milk, which has little "of the ſerous Humidity, and much of the caſeous Subſtance "in it, is not proper for every body, and eſpecially if the Kid"neys are ſubject to generate the Stone; it excites Obſtructions of "the Liver likewiſe in thoſe ſubject to ſuch a Misfortune, as "thoſe are who have the Extremities of the hepatic Veſſels nar"row." And, for this Reaſon, *Aetius* carefully inculcates this Doctrine, that he who would uſe Milk without any Diſadvantage, ſhould have the Ducts of his Viſcera open, and his Veins large. Beſides, *Hippocrates*, by a Caſe in *Epid. Lib.* 3. affirms the Uſe of Milk to be noxious in Diſorders of the Liver: "*Apollo*"*nius*, ſays he, was a Man of large Viſcera, and had a continual "Pain about his Liver. He then became icteric, flatulent, and "ſomewhat pale; he was, at firſt, gently indiſpoſed, and, at "laſt, confined to his Bed. But, uſing a large Quantity of crude "and boiled Preparations, both of Sheeps and Goats Milk, "and taking, at the ſame time, but little Food, his Symptoms "became very terrible, his Fever was increaſed, he became co"ſtive, and diſcharged a ſmall Quantity of thin Urine." *Dioſcorides* is of the ſame Opinion with *Hippocrates*, and prohibits the Uſe of all Milk to Perſons whoſe Spleen and Liver are affected, to thoſe labouring under Epilepſies, Vertigos, Diſorders of the Nerves, and Head-achs.

Nor is there any Difficulty in aſſigning a Reaſon for this: For ſince the violent and long-continued Pains of the Head, or Abdomen, generally draw their Origin from a Suppreſſion and Interception of the free Progreſs of the Blood and Humours thro' theſe Parts; and ſince this Interception of the Circulation is immediately followed by Stagnations, Obſtructions, and Infarctions; hence, at laſt, ariſe, in the lower Belly, a Cachexy, the yellow and black Jaundice, Dropſies, and the Stone in the Kidneys; in the Head, Madneſs both of the melancholic and furious Kind, Epilepſies, and Pains attended with a Senſe of Weight; in the Loins, polypoſe Concretions, a difficult Reſpiration, Spitting of Blood, and Conſumptions. It is eaſy to perceive, that the Uſe of Milk, eſpecially after it hath ſtood ſome time, by means of the groſſer Subſtance, prone to coagulate, augments the Obſtruction of the very ſmall Canals, and is dangerous, particularly in corpulent Patients, and ſuch as have contracted a bad Habit of Body by too much Eaſe, or a too luxurious Manner of living.

But the more prejudicial, and ſubject to generate many Diſorders, that groſs Subſtance of the Milk prone to Coagulation is, the more ſerviceable in its Turn to human Nature, or the Temperament and vital Motions of the Fluids and Solids, the more ſalutary, and ſuited to prevent and cure Diſeaſes, is that humid Portion termed *Whey*. The moſt antient and learned Phyſicians long ago diſcovered its ſalutary Quality in curing Diſeaſes; and have recommended it, in the ſtrongeſt Terms, to Poſterity. Thus *Dioſcorides*, the oldeſt and beſt Writer on the *Materia Medica*, *Lib.* 2. *Cap.* 64. ſpeaks thus of the excellent Virtue of Whey: "Whey, ſays he, when ſeparated from the groſſer Parts "of the Milk, is a much more effectual Purge, and is given to "thoſe whoſe Bodies we would render ſoluble without the Uſe "of acrimonious Subſtances, as to Perſons labouring under Me"lancholy, the Leproſy, the Elephantiaſis, or Eruptions over the "whole Body." To this *Galen* adds, "That Whey is either drank, "or injected by way of Clyſter, to promote Stools, on account "of its deterſive Qualities; for it cleanſes and deterges the Acri"mony from the Inteſtines without Corroſion." And in another Place he exactly delineates the ſalutary Qualities of Whey in theſe Words: "Simple Whey is particularly proper for tender "Patients, whoſe Bellies and Inteſtines only we would cleanſe "and purge; and for thoſe whoſe Inteſtines are, perhaps, eaſily "ulcerated by any Medicine; thoſe who, in conſequence of a "bilious Temperament, are ſubject to Diſorders of the Abdomen, "or labour under a Teneſmus, and whoſe Reins, Bladder, and "Uterus, are ſubject to Exulcerations; and lean Perſons, who do "not become fleſhy by Aliments, but yet want Purging. To "all theſe Whey ſhould be given, without the Addition of "Salt, or any other Medicine. Whey is, alſo, ſafely exhibited "to Children, Women, and old Perſons, even during the Heat "of a Fever, at which time, eſpecially, all other Medicines "are ſuſpected. The Uſe of Whey is ſingularly effectual on "Patients and Diſeaſes which require extraordinary Aſſiſtance; "eſpecially Eruptions of a long Continuance, livid Spots, and "all Depravations of the Humours tending to the Skin, "ſuch as a Leproſy, and others of a like Nature; inveterate "and malignant Ulcers, Achors of the Head, weeping Eyes, "an Itch of the Eyelids, Blotches in the Face, and continued "Paroxyſms of Fevers; and to thoſe who, in conſequence of a "bad State of Health, are about to fall into a Dropſy."

Others, likewiſe, have obſerved and extolled the excellent Qualities of Whey. And *Celſus*, *Lib.* 1. *Cap.* 12. aſcribes a purgative Quality to Whey and Aſſes Milk. "The Antients, "ſays he, purged by various Medicines; but in all Diſeaſes they "gave Milk, either Aſſes or Goats, and boiled it with the Ad"dition of a little Salt, removing the coagulated Part, and "ordering the remaining Whey to be drank." But the Teſtimony of *Meſue* is ſo full, that it deſerves a Place here. "The "Whey, ſays he, of Goats Milk, is, in itſelf, an innocent Me"dicine; and that Species is beſt, which is made of black Goats "Milk, who feed in good Paſture, and have newly brought "forth. This Whey attenuates, cleanſes, deterges, and, by the "nitrous Quality with which it is furniſhed, gently renders the "Body ſoluble, without any Degree of Acrimony; it alſo carries "off the black Bile produced by the parched Humours; whence "it is wonderfully beneficial to maniac and melancholic Patients. "It is good in Infarctions of the Viſcera, and beneficial in Diſ"eaſes from thence; to ſuch, for Inſtance, as are afflicted with "a Dropſy, Jaundice, or Diſorders of the Spleen. It is effectu"ally preſcribed for thoſe who labour under biliary Fevers, or "Obſtructions of the Viſcera and Veſſels. It is, alſo, proper "for Diſorders of the Skin ariſing from Bile, and parched Hu"mours; for which Reaſon it is of great Service in Lichens, "Vitiligos, Alphi, Pſoras, and Leproſies."

Nor muſt we neglect *Aetius*'s Opinion of the Uſefulneſs of Whey, which he has thus declared: "Drinking Whey, ſays he, "is ſurpriſingly efficacious in Ulcers of the Lungs, Inteſtines, "Kidneys, Bladder, and Uterus; and in Eruptions and other "Aſperities of the Skin; as alſo againſt the Effects produced "by the internal Exhibition of Cantharides."

From theſe Authorities then, without alleging any more, I think it is evident, that the Antients had Whey in very high Eſteem, and preſcribed it in many Diſtempers. In a Word, they almoſt unanimouſly aſſigned to it a purgative Quality, eſpecially when ſaline, acrid, bilious Humours were to be purged off gently, and without Acrimony. Further, they warmly recommended the Uſe of it in Diſeaſes which ariſe from the Acrimony of the Juices corroding the tender nervous Coats, and Fibres, and ſubcutaneous Glands: Of which Kind are, internally, Ulcers of the Lungs, Bladder, and Kidneys; and, externally, Lichens, Impetigos, the Leproſy, the Elephantiaſis, and various other Detedations and Exulcerations of the Skin; as alſo for its ſingular Virtue in correcting the Acrimony of the Serum; and diluting, obtunding, and ſheathing up that of Cantharides. The Antients, alſo, aſcribed uncommon Virtues to Whey, in removing Obſtructions of the Veſſels of the Viſcera, and other Parts, from which ariſe terrible Diſorders, not only in the Head, but, alſo, in the Region of the Abdomen, as we have already obſerved.

This Opinion did the Antients entertain of Whey, and its Uſefulneſs. We ſhall now examine, whether it is founded on Truth and Experience: In order to which, we muſt inquire very accurately into the Elements and Principles of every Sort of Whey, from which, as from their Fountain, all its Qualities flow. Since, therefore, Whey ſecedes, and is obtained from the Milk, it will be proper to conſider, in what Proportion this fluid and ſerous Part is united with, and aſſociated to, the groſſer and leſs diſſoluble Parts, in the various Species of Milk commonly uſed. The Experiments I made for this Purpoſe were principally theſe following. I took a Pint of Cows Milk, put it into a Tin Veſſel, with burning Coals under it, and, continuing the Evaporation, till it was dry, I obtained a yellow grumous Powder, which weigh'd an Ounce and five Drams. In like manner

manner I evaporated some new Goats Milk, which yielded the same Quantity of Powder, except half a Dram. But Asses and Womens Milk shewed a remarkable Difference, and yielded a far less Quantity of the solid Substance; for from a Pound of the former, after an entire Evaporation of the Humidity, I collected hardly an Ounce of white sweetish Powder; and from an equal Quantity of the latter, one Ounce of dry white Matter.

Then I made a farther Experiment upon the Powder of each Milk, and poured twelve Ounces of Rain-water upon the Powder of the Cows Milk remaining after Exhalation, and weighing an Ounce and five Drams. Then I put it upon Coals, that it might boil, and the solid Dregs be again dissolved; after this I strained the Liquor through a Linen Cloth, and again dried the inspissated Matter, left in the Strainer, and still found an Ounce and three Drams and an half; an evident Proof, that one Dram and an half only were united with the Water, and passed with it through the Linen. Then I again evaporated the Water thus strained, which was of a pinguious and sweetish Taste, and of a whitish-yellow Colour; and, keeping it in continual Agitation, that it might not acquire an empyreumatic Taste and Smell, I procured a Dram of a whitish-yellow, earthy, and sweetish Mass from it. I made the same Experiments upon the Goats Milk, and observed in the remaining Matter hardly any Difference, either with regard to the Weight, or Taste, and Colour, only that in the Whey of the Goat's Milk the Taste was somewhat sweeter, and more of a pinguious Matter floated on its Surface, like Drops, as if a little Butter had been mixed with it. But a much wider Difference appeared in the Powder of the Asses Milk remaining after Evaporation; for, when I added the Ounce of this Powder to a Pint of pure Water, and by a gentle Fire brought it to an Ebullition and Dissolution, it was almost all dissolved, so that only one Dram remained in the Strainer, and about seven more were consumed by the Water, and passed the Linen; but the Liquor in which it was dissolv'd, and which was very sweet, after an entire Exhalation of the Humidity, yielded more than six Drams of very dry white Powder, like Sugar. Lastly, the Womens Milk, with the Powder obtained from it by Evaporation, and weighing one Ounce and one Dram, being dissolved and strained in the same manner, left three Drams of thick Sediment in the Strainer; but the Liquor which passed through, being again evaporated, yielded about six Drams of sweetish Powder, of a somewhat browniſh Colour.

Now, if we accurately consider the Nature of Whey, it is evident, that it is a select Part of the Milk, freed from the grosser and caseous Substance; in which, by means of a large Quantity of aqueous Liquor, a most tender and sweet Salt is united with a mucilaginous, pinguious, and subtle Substance. And from these three highly salutary Elements are the most excellent medicinal Virtues of all Kinds of Whey to be derived. The principal Element of Whey, and what exceeds the rest in Quantity, is the fluid and humid Part. The gentle, sweet, and saline Ingredient is the next, which, like essential Salt extracted from the Herbs on which Animals feed, and elaborated by means of various Commixtures, or a sort of natural Chymistry, has a peculiar Faculty of stimulating the Excretories, and especially of promoting the Discharges by Stool and Urine; and, at the same time, blunts and temperates the bilious caustic Acrimony of the Humours. Hence it is, that the greater the Quantity of this sweet Matter, contained in the Milk, is, the more efficacious it is in purging the Body; as is very manifest in Asses Milk, since, when boiled to half the Quantity, the two great Humidity being separated, and the sweet Particles uniting, it exerts its purgative Quality much more powerfully and readily; a Method frequently used by *Hippocrates*. The third Principle of Whey is its mucilaginous, more subtle, and pinguious Part. This is principally to be esteemed for its Quality of moistening, softening, and relaxing the dry crisp Fibres, sheathing up the saline Acrimony of the Humours, and corrosive Juices, and of appeasing and removing the Disorders produced by these means.

These are the Elements of Whey, and these its Virtues; which, from what has been said, appear to be very serviceable and salutary in many Diseases. But, before we enter upon a particular Account of the various Distempers in which Whey is proper, we shall premise some few things necessary to be known, concerning the Preparation of Whey, especially for medicinal Uses, and the Manner of administring it. The most common Method, then, of separating the Serum from the caseous gross Substance is, to dissolve the Union, and cause a Secession by means of Heat, while the Milk is at Rest; or, as we have already observed, to accelerate and produce the same Effect by an Affusion of some acid Liquor. But, since Milk grown sour by Time, or a Separation of the Whey procured by an Addition of Acids, is greatly vitiated, loses that Sweetness, which is most agreeable to Nature, and most desired in Medicine, and rather assumes an acid Quality, which is never salutary and friendly to the Body, I attempted to find a commodious and more wholsome Way of preparing it, by which the Whey may be separated whilst the Milk is yet fresh, the Sweetness entire, and the tender, pinguious, mucous Substance safe.

I imagined the best Method of doing this, as I have already observed, was to evaporate new Milk, and then pour upon the remaining yellow grumous Powder as much pure, light, and wholsome Water as had been carried off from the Milk into the Air in the Form of Exhalations; then to boil this Mixture for some time, that the sweet, saline, pinguious, and tender Part might be absorbed by the Water, and the Liquor, when freed from the gross earthy Substance by straining, kept for Use. And certainly Water of Milk, thus prepared by Decoction, or artificial Whey, has many excellent Qualities above the common Whey, and, from yellow, becomes of a white Colour, has a most agreeable sweet Taste, and is, at the same time, impregnated with a pinguious, oleous, and highly liquid Substance, which may be taken either hot or cold, without any Nausea, and keeps longer without losing either its Texture or Taste.

As for the Method of giving it, let us first examine the Antients, our best Guides in this Affair, both with respect to the Measure and Time. From their Writings it will evidently appear, that they recommended the Use of Whey, not in a small, but sufficiently large Quantity: Its Use was, also, to be persisted in for some time; with this Caution and Difference, however, that, if they intended only to cleanse the Primæ Viæ from Sordes, they prescribed it in a smaller Quantity, and for a few Days; but if they prescribed it in inveterate Disorders, and such as had taken deeper Root in the inmost Recesses of the Viscera, they used it for a longer Time, and in a larger Quantity. *Galen* has laid down these Rules, with respect to the Use of Whey: "A Quantity of Whey, says he, proportioned to the Strength of the "Patient, should be prescribed; and, tho' no great Error would "be committed by exhibiting too much, yet let a certain Measure, about five Heminæ, for Instance, be given." Now an Hemina, according to the Antients, was equal to twelve Ounces.

The Opinion of *Hippocrates* appears from *Lib. 7. Sect. 1. Epid.* where he tells us, that in an hepatic Flux, where there were copious Stools, resembling the Washings of Flesh, proceeding from a Disorder of the Bile, he prescribed Asses Milk, (and certainly Whey must be better) to the Quantity of nine *Attic* Cotylæ; not, indeed, at one, but several times, so that the Whole was taken within the Space of two Days. But when he used it as a Purgative, according to *Martianus's* Remark *in Comment. in Aphor. 64. Sect. 5.* he ordered it in a larger Quantity, and sometimes went as far as a Gallon. And *Valesius, Com. in Epid. Lib. 7.* informs us, that "It was usual with the Antients to give Asses Milk to purge the Bile, as appears from "*Lib. 2. de Natura Victus in Acutis*; which Practice, says he, I "have followed with great Advantage, obliging my Patients to "drink above two Quarts of this Whey, or this Milk, which "is very serous."

As for the Time for which this Medicine is to be persisted in, we must again have recourse to the Antients: And, if the Disorder is inveterate and obstinate, *Hippocrates* order'd Asses-milk or Whey, principally that of Goats, to be drank for several Days; as appears from *Lib. 7. Epidem. Riverius* and *Sylvaticus* affirm, that Whey may be used for a Month, and longer; for these Physicians used Asses-milk and Whey very successfully, in most violent Disorders, for twelve, twenty, and even forty Days; and, for that Reason, bestow very large Encomiums upon them. Further, we read in *Hippocrates, Lib. de internis Affectionibus*, that he, in a Tabes Dorsalis, prescribed Milk for forty-five Days, mixed with a third Part of Hydromel. Nor indeed can it produce the desired Effect, in obstinate and inveterate Diseases, where the Viscera are affected and obstructed; unless, like the Mineral Waters, it is taken in a larger Dose, and for several Days.

For my own Part, I have always observed this Rule, to proportion the Quantity of Whey, to be taken at one Dose, to the Strength of the Patient; giving to those who are tender, or subject to a Nausea, only one Pint; but to those who are stronger, and of a less delicate Constitution, two Pints; and have sometimes order'd them to drink it only in the Morning; and at other times in the Afternoon too, but in a smaller Quantity than in the Morning. As to the Time, during which its Use was to be persisted in, I was, likewise, governed by the greater or less Obstinacy of the Disorder; and some I have known cured in two, but others hardly in four or six Weeks. Lastly, with *Martianus, Comm. in Hippocr. Aphor. p.* 163. I commend the giving Asses-milk, or Whey, at different times; not altogether, and at once; both because, if the Patient is weak, and his Stomach relaxed, he cannot bear so large a Quantity, and because the Whey itself, when taken at several times, renders the Body soluble, with much greater Success and Expedition.

We now come to consider, to what Purposes, and what Diseases, Whey is adapted. Great Regard, then, is due to the Practice of *Hippocrates*, who used Whey and Asses-milk after strong Purges, such as Hellebore and Elaterium, in order to expel the mischievous

miſchievous and deleterious Quality of them: For, in *Lib. de internis Affectionibus*, after the Exhibition of Hellebore, he ſays, he preſcribed two Gallons of boiled Goats-whey; and, in the ſame Part, he adviſes, after Vomiting with black Hellebore, and purging with Juice of Scammony, to give Cows-milk, and its Whey, and boiled Aſſes-milk, for a time. Further, *Lib. 2. de Morbis Mulierum*, he judiciouſly declares, that, after Hellebore, boiled Whey, with a little Salt, ought to be drank for ſeveral Days, ordering, if Whey cannot be had, to boil Aſſes-milk, and exhibit it for four Days. I ſuppoſe the Reaſon why drinking Whey of Goats or Aſſes-milk, after violent Purging by ſtrong Cathartics, is ſalutary, muſt be this: Strong Purges perform their Office by a cauſtic and almoſt virulent Salt, corroding the tender Coats of the Inteſtines; and excite copious Stools, with Gripes, which from an exceſſive Diminution of the Humidity in the Inteſtines, and a violent Contraction and Stricture of their Coats, are followed by an Hardneſs, Tenſion, and Conſtriction of the Abdomen: But Whey, or diluted Milk, taken after theſe, reſtore the Juice and Humidity to the Inteſtines, mollify and relax the tenſe and criſped Fibres, blunt the Spicula of the draſtic Purgative, which ſtill adhere to the highly ſenſible Coats of the Inteſtines, and, by an eaſy, gentle Stimulus, render the Body ſoluble.

I can, alſo, affirm from Experience, that, for preventing an approaching Hypercatharſis, or curing one when preſent, whether excited by a Cathartic or Emetic, I never found a more certain or immediate Remedy than Cows-milk, which is a moſt powerful Remedy againſt the miſchievous Virulence of Arſenic. And I am convinced, from many Inſtances, that violent Vomitings, from too large a Doſe of any ſtrong Emetic, ſuch as Powder of Algarot, or the Pulvis Monchii, unskilfully exhibited, have been checked and removed by taking warm Milk, or Whey. Whence I rationally conclude, that we can hardly find a more convenient Vehicle, to give an Emetic or Cathartic in, than Whey rightly prepared; becauſe, beſides its uſeful Quality of rendering the viſcid Humours moveable, and fit for Evacuation, it does, at the ſame time, greatly temperate and correct the peculiar Virulence of ſuch Purgatives.

Beſides, I have already obſerved, that Whey, by reaſon of its native ſweet Salt, ſtimulates and irritates the Organs ſubſervient to Excretion: But this is principally to be underſtood with reſpect to the Diſcharge of the Excrements. Whey, in conſequence of its mild and gentle Operation, is moſt commodious and beneficial, in Caſes where the Strength of the Patient, and other Circumſtances, prohibit violent Purging; and, eſpecially, in Diſtempers where Purging is dangerous, and in Fevers, and almoſt all preternatural Heats. The Antients indeed generally preſcrib'd Aſſes-milk in theſe Caſes; and *Hippocrates* recommends it in a Quotidian Fever, ariſing from Bile; and in the Fever termed *Febris interficiens*, *Lib. 2. de Morbis*; and in a burning Fever. And in an Eriſypelas, *Lib. 2. de Morbis*, he adviſes to purge the Body with Milk. But, for want of Aſſes-milk, I have found, from repeated Experience, that Whey of Goats-milk, adding a due Quantity of Manna, which partakes very much of the ſame Nature with the eſſential ſweet Salt of Milk, may be ſubſtituted in its room, in the ſame Diſorders and Caſes, and, particularly, that it is given with good Succeſs in an hectic Heat.

Tho' Whey, eſpecially made of Aſſes-milk, drank plentifully, is an effectual Laxative; yet it is often expedient, when the Stomach cannot bear a large Quantity of it, to exhibit it in a ſmaller Doſe, and to increaſe and augment its purgative Quality, by ſome other gentle Laxative. For this Purpoſe, Manna, ſolutive Syrup of Succory with Rhubarb, Cream of Tartar, or the Terra foliata Tartari, are very commodious; a Decoction of it, alſo, with Tamarinds and Root of Polypody, is very proper; adding afterwards Sal polychreſtum, or Arcanum duplicatum, Manna, or even Root of Elder, which, when exhibited in a large Doſe, renders the Body ſoluble. I have often uſed laxative Whey, thus prepared, with unſpeakable Succeſs; particularly where Nature was infirm, as in old Men and Infants, or thoſe debilitated by Sickneſs, or lately recover'd, or even when, in exanthematous Fevers, Small-pox, or Meaſles, a long Coſtiveneſs render'd the State of the Patient dangerous: Beſides, when in Diſorders of the Breaſt, ſuch as a Chin-cough, a Dry-cough, or one of the moiſt or catarrhal Kind, or a ſlow Fever, it is expedient to render the Body ſoluble; this may be done by diſſolving two or three Ounces of Manna, in a Pint of Whey; adding a Dram of Cream of Tartar, or the Terra foliata Tartari, and mixing two or three Drops of the Oil of Cedar, to make it palatable: This Draught ſhould be taken at three different times. Flowers of *Egyptian* Thorn, and Peaches infuſed in warm Goats-whey Milk, augment its laxative Quality; eſpecially with the Addition of ſome digeſtive Salt, or Manna.

If it is neceſſary to preſcribe a laxative Medicine in Spring or Summer, to cleanſe the Primæ Viæ from Fæces, or remove a Cacochymy, certainly a Pint of this Whey, ſo ſtrengthen'd with Laxatives, may be advantageouſly taken every Day, for ſeveral Weeks: And this Method, uſed in the Spring, is much ſafer, and more ſalutary, for weak, exenuated, and more ſenſible Patients, eſpecially thoſe of the younger Sort, than all the common Nodules, Infuſions, or medicated Wines, intended to purge the Patient, and purify his Blood. It is, alſo, expedient, in the Beginning of a Dyſentery, gently to remove the ſharp, cauſtic Humours, which irritate, corrode, and excite Inflammations in the nervous Coats of the Inteſtines; and this Intention is excellently anſwer'd by Aſſes-milk: But, if this ſhould diſappoint you, Whey of Goats-milk, with ſome Grains of Extract of Rhubarb, and an Ounce, or an Ounce and an half of Manna, will produce the deſired Effect. And indeed the Uſe of Whey in a Dyſentery is of a very old Date: Thus *Hippocrates*, in *Lib. Epid. 6.* when *Adrianus*, and the Son of *Ceneus*, had a Pain all round the Belly, and, by Stool, diſcharg'd a large Quantity of ſomewhat bloody Matter, for twenty Days, preſcribed Goats-whey and Aſſes-milk boiled. For *Valeſius* rightly judges this Diſorder to have been dyſenteric; and, in his Comment upon this Paſſage, recommends, in an autumnal Dyſentery, Whey, heated by ignited Flint; and ſays, that, after a Patient had drank Whey and Milk, his bilious bloody Stools, attended with a violent Pain of the Belly, become abundantly more moderate.

If at any time draſtic Medicines are requiſite to carry off a large Quantity of Water, in an Anaſarca, or Leucophlegmatia, ſuch as Extract of Eſula, or black Hellebore, theſe are not only very ſecurely, but very commodiouſly and advantageouſly mixed, and drank with Aſſes-milk or Whey, taking half a Dram of the Purgative to a Pint of Whey, and drinking the Mixture at different times. In like manner, ſince it is very ſalutary, before taking the Mineral Waters, and even after the Cure is compleated, to free and cleanſe the Primæ Viæ from accumulated Fæces, and retained Water, I have found nothing in my Practice ſafer and better than Whey, in which, at leaſt, three Ounces of Manna, with an Ounce and an half of Cream of Tartar, have been diſſolved: For by this I have frequently obſerved, that ſix or eight Stools have been procur'd without any Trouble, and a ſurpriſing Quantity of Water diſcharged. Beſides, when, in conſequence of a Redundance and Induration of the Fæces, it is neceſſary to render the Body ſoluble, nothing is better, or more efficacious, than to take Whey with Manna, adding a ſufficient Quantity of Oil of ſweet Almonds, and to inject the ſame, by way of Clyſter, to lubricate the Inteſtines, and ſoften the Fæces.

But, beſides theſe ineſtimable Qualities of Whey, for purging the Primæ Viæ, it has ſtill other valuable Virtues, which it exerts beyond the Primæ Viæ, and diſplays in thoſe Diſeaſes which increaſe ſlowly, draw their Origin from the affected Viſcera, and continue for a long time; among which the principal is the Scurvy, or a ſcorbutic Cachexy, the Source of ſo many Diſorders, and dangerous Symptoms. If we read with any Attention the Works of thoſe who have wrote profeſſedly on the Scurvy, ſuch as *Eugalenus*, *Brunnerus*, *Brucæus*, *Ronſæus*, *Wierus*, *Albertus*, *Martinus*, and *Drabizius*, they almoſt all candidly confeſs, that they have found more Benefit from a Milk-diet alone, or from a Decoction of Whey with the antiſcorbutic Herbs, taken for a conſiderable time, even in the worſt Symptoms attending the Scurvy, ſuch as acute Pains, Gripings of the Belly, Vomitings, Atrophy, and ſlow Fevers, than from any other Medicines whatſoever; and that thoſe who were gradually becoming weaker by this obſtinate Diſorder, gather'd more Strength from ſuch a Regimen, than from the beſt Corroboratives, and artificial Analeptics. It was the Practice of theſe experienced Phyſicians, to make a Decoction of the antiſcorbutic Herbs, as Scurvy-graſs, Brooklime, Water-creſſes, Leaves of Wormwood, Sorrel, Fumitory, Spleenwort, Dodder of Thyme, Betony, Carduus benedictus, the leſſer Centaury, and Marſh-trefoil, with Milk, and to order a Pint or more of this Decoction to be drank warm every Morning, by thoſe afflicted with the Scurvy; and, by this ſimple Remedy, they overcame the Obſtinacy of the Diſtemper, and ſubdued all its formidable Symptoms.

The moſt celebrated Writers extol Whey, as highly efficacious in the Cure of ſcorbutic Diſorders. Thus *Jo. Wierus*, in *Tract. de Scorbuto*, paſſes this juſt Encomium upon it: "That "the Patients, *ſays he*, with great Succeſs, drink the Milk boil'd "with antiſcorbutic Herbs, and then expreſſed, is rather to be "attributed to the Nature of the Whey than the Milk; ſince the "caſeous Portion, and that which generates the Butter, remains "coagulated in the Sierce; but the Whey, which paſſes through, "and conſiſts of thin Parts, deterges, opens, promotes a Diſ"charge of Urine, and is remarkably conducive to the Cure of "ſcorbutic Diſorders, as *Aetius* and *Galen* affirm." Beſides, *Matth. Martinus*, *Lib. de Scorbutico*, ſpeaks thus of the Uſe of Whey in the Scurvy: "Goats-milk, drank through the whole "Courſe of the Diſtemper, is wonderfully beneficial to the Pa"tient, as it not only renders the Body moderately ſoluble, but "is, alſo, eaſy of Digeſtion, and ſpeedily removes the want of "a due Tone in the Inteſtines by its aſtringent Quality, and is "greatly adapted to the Recovery of the Strength: However, "that it may not inflate the Hypochondria, and coagulate in "weak Stomachs, a ſmall Quantity of Water, Salt, or Su"gar, muſt be added." But this Misfortune is ſcarce to be dreaded, if, in the room of Goats-milk, the Whey of it, or

Aſſes-

Asses-milk, is substituted; especially since *Bald. Ronsæus*, in his Treatise *de Scorbuto*, advises the above-mention'd antiscorbutic Herbs to be boiled, not in Milk, but Whey. Lastly, *Moellenbrock*, in *Lib. de Arthritide vaga & scorbutica*, asserts the great Virtue of Goats-whey, in the Scurvy, affirming, "That "Whey, especially of Goats-milk, is very serviceable in that "Disorder." And the Authors of the *Schola Salernitana* inform us, "That Whey is of an inciding, cleansing, and penetrating Quality, by reason of its aqueous Humidity; dissolves "those Things which are saline, by reason of its Nitre; deterges what adheres to the Sides of the Vessels; renders "the Body gently soluble, without any Corrosion; and refrigerates, by reason of its latent volatile Alkali: Hence the "Boors of *Holland* and *Friseland* preserve and free themselves "from an epidemical Scurvy, by the Use of Whey. But it is "render'd more salutary, if antiscorbutic Herbs are infused or "boiled in it."

And, certainly, in the most obstinate of all chronical Disorders, the Scurvy, there is not a more certain and efficacious Remedy than sweet Whey of Asses or Goats-milk, prepared in the manner already directed; since the Origin of this obstinate Distemper is the utmost Impurity of the vital Humours, arising from the saline, sulphureous, excrementitious Fæces retained in the Body, for want of due Excretions, and more corrupted by the hot intestine Motion, and the various Combination of the Parts with each other, which, by lacerating and corroding the interior and exterior solid Parts, of more acute Sensation, produce not only violent Pains, but, also, Spots and Ulcerations of various Kinds, on the Surface of the Body. For the Removal of these terrible Disorders, there is certainly no more proper and convenient Remedy than Whey, which dilutes and temperates the saline and acrid Humours, opens the small obstructed Vessels of the Emunctories; by cutting the viscid Humours, frees the Viscera from the Stagnation of Serum and Blood; and gently helps and promotes Excretion by Stool, Urine, and Perspiration, without any Prejudice and Disturbance; and is, besides, salutary, and agreeable to the nervous Parts.

But from what has been already said, 'tis obvious, that all these excellent Qualities are in Whey rightly prepared, and may safely be expected from it. For this Reason the Antients, *Hippocrates*, *Galen*, *Dioscorides*, *Pliny*, *Aetius*, and *Mesue*, have prudently recommended the Use of it in Distempers, which derive their Origin from an Impurity of the Humours. But we must observe, that in such long and obstinate Disorders, the drinking of Whey, as is usual in taking the medicinal Waters, should be continued for a Month, and longer, in a convenient Quantity. Besides, though in bilious and warm Constitutions the Whey alone is sufficient, yet if the Humours are thick, and the Habit gross and cold, it is better to boil in it a moderate Quantity of the bitter Herbs, called Antiscorbutic, which, from their volatile Oil, have a Bitterness very salutary in these Disorders.

Whey is no less beneficial in those Diseases, which are accompanied with spasmodic Motions and Strictures of the nervous Parts, and pervert the whole Oeconomy of the vital Motions, both of the secretory and excretory Kind; among which the principal in our Climate is the Hypochondriacal Disorder, in Women termed Hysterical, which is not only very frequent in our Days, but, also, very obstinate, by reason of the preposterous Method commonly used in curing it.

This Disorder affects the nervous and membranous Canal of the Stomach and Intestines, by continual Spasms and Flatulences, by which the whole nervous System is drawn into Consent, so that it is agitated by the same Commotions. Hence the Course of the Blood and Humours becomes unequal, as they are conveyed with Violence from the external to the internal Parts, and especially to the Head and Breast, and there excite very terrible Symptoms. But the principal Cause of this obstinate Disorder is to be sought for in the extreme Weakness of the nervous System, brought on partly by hereditary Disposition, and partly by those things which impair the Strength, and are unfriendly to the Texture and Motion of the nervous Parts. If to these is added a large Quantity of thick Blood, either for want of Motion and Exercise of the Body, or from an irregular Diet, this Blood, stagnating in the intricate Windings of the Intestines from an Obstruction of a free Passage through the Liver, greatly augments and increases the Flatulencies and Spasms. And what is still more, as this Disorder gets firm Possession of the Viscera situated in the Region of the Hypochondria, and affects the whole System of the nervous Parts, it spreads its Mischiefs wider, and injures other Parts of the Body; so that the Head is principally affected by it, and Vertigos, Epilepsies, Palsies, Melancholy, and Madness are produced; but, by the Spasms affecting the internal Parts of the Body, the wholsome Business of natural Excretion is wonderfully disturbed and perverted, by which not only the Discharge of Blood by the Veins of the Anus and Uterus, but, also, the Elimination of the Sordes by Stool, Urine, and Perspiration, is either absolutely suppressed, carried on irregularly, or, sometimes, offends by Excess.

For effectually vanquishing and subduing these dangerous Disorders, there is not, in my Opinion, a more useful, secure, and certain Remedy, than Whey, or Asses Milk, or Goats Milk, mixed with the Mineral Waters; especially if the Cure is undertaken at a due time, a due Quantity exhibited, and with a proper Regimen, such as is usual in drinking the Mineral Waters. So that I can with Justice observe, that more may be performed, in these obstinate Disorders, by this Method of Cure, than by the Mineral Waters alone. For a spasmodic Disease of this Kind requires a Remedy which is moderate and agreeable to Nature, which renders the tenacious viscid Humours fluid, opens the small obstructed Vessels, temperates the saline acrid Humours, and promotes Excretions of all sorts by a gentle Stimulus; all which Properties are found in sweet Whey, insomuch that it excels all others in this Case, if properly administer'd; nor should Patients, though it does not produce an immediate Alteration for the better, abstain from the Use of it, but let other congruous Remedies, according to the Diversity of Constitutions and Symptoms, be mixed with it, or exhibited at proper Intervals.

The celebrated *Italian* Physician, *Benedictus Sylvaticus*, thoroughly perceived these extraordinary Properties of Whey, who expressly affirms, that he used Whey, and Asses Milk, in the most violent and obstinate Disorders. Nor will it be improper here to mention in what Disorders, and what Method, he made use of it. He, therefore, *Consil.* 58. *Cent.* 1. in melancholic and maniac Disorders, recommends Whey of Goats Milk, with Syrup of Polypody, and Seeds of Apples, reduced to an Emulsion. And in *Cons.* 6. in melancholic hypochondriac Affections, he advises taking two Quarts of the same Whey for fifteen Days. Besides, in *Cons.* 65. he says, Goats Whey, very well depurated, and in which Leaves of Wormwood have been infused, should be prescribed for several Days. And, *Consil.* 73. in hypochondriac Melancholy, he orders to drop Chalybs potabilis, with Oil of Citron, into it, and so drink it. Besides, he says, that, in a Palsy of half the Body, Whey of Goats Milk, made more purgative with Cream of Tartar and Rhubarb, and more diuretic with Ceterach, white Maidenhair, Roots of Fennel, and Parsley, adding some Drops of Spirit of Vitriol, is highly beneficial. He cur'd, likewise, an epileptic Syncope with Goats Whey: In this manner he first exhibited the best depurated Whey with Juice of Lemons; but, on the fourth Day, rendered it purgative, by infusing one Dram of Rhubarb, with a proper Quantity of Sena-leaves, in four Ounces of it; after which, three Pints of Whey were to be drank: And, on the three intermediate Days, he ordered one Pint of the same Whey, having first steeped in it Flowers of Piony, Goats-rue, Baum, and Citron-peel, to be drank. He is as lavish in his Encomiums on Whey, in the Hysteric Passion, *Cent.* 2. *Consil.* 68. and in the *Morbus Niger* of *Hippocrates*. *Cons.* 77. in a Vomiting of Blood, *Cons.* 82. and in a Spitting of Blood, *Cons.* 34. and 35. The same great Author says, that he cured a Diarrhœa and Tenesmus, by solutive Syrup of Roses, and Julap of Tamarinds, ordering the Patient to drink after them some distilled Goats Whey. He, likewise, prevented the Progress of a beginning cancerous Tumor in the Breast (*Cent.* 4. *Cons.* 92.) by giving three Ounces of Manna, dissolved in Goats Whey.

I myself can boldly assert, that I have found an inexpressible Benefit from Whey, in many Distempers: As a Confirmation of this, I shall subjoin some Observations, and remarkable Cures, which occurred to me in one Month's time. A Man about Thirty, not very robust, had taken some purging Pills from a Student in Physic, which operated so violently, that though he discharged half of them, at the time of taking, by a Vomit, yet he had, for several Days after, so continual a Flux, that he had an hundred Stools; by which means his Strength was entirely lost, his Appetite impair'd, and his Sleep was restless, and so short, as to be hardly any at all: To these Symptoms was added an erratic intermitting Fever, degenerating at length into one of the slow Kind, which still more effectually destroy'd his Strength. In this desperate Condition he earnestly apply'd to me for Assistance, and, waiting on him, I found he had kept his Bed for several Weeks, and was wasted by nocturnal colliquative Sweats, and a slow Fever, of which a continual quick and weak Pulse was an Indication. I advised him to lay aside all Medicines, and drink several times a Day a Quart of Goats Whey, prepared in the manner I directed him, and, at the same time, to take twelve Drops of the Anodyne Liquor, and often drink thin Water-gruel; which Measures being continued for fourteen Days, his Sleep returned, his Appetite was restored, his Strength so effectually recovered, that he was rendered capable of minding his Business.

There are still other memorable Instances of the Efficacy of Whey: For a Student of Law, being disordered by the baneful Influence of Anger and Sorrow, was seized with a Nausea, and Inclination to vomit. In order to cure this, he sent a Friend, for a Vomit, to an Apothecary; but after taking it, he not only vomited often, but also fell into the utmost Decay of Strength, accompany'd with a burning Heat of the Stomach, perpetual Restlessness, Thirst, and a Loathing of Food. I, being sent for, and fearing an Inflammation of the Stomach, ordered nothing but Whey, prepared in my manner, with some Ounces of an Emulsion of the Four cold Seeds, to be drank, both Night and Day, at

proper Intervals, by which the burning Heat was extinguiſhed, his Pulſe became regular, and his Sleep ſound and natural; ſo that there were great Hopes of his Recovery.

A Girl, of about three Years old, and of a tender Conſtitution, as a Preſervative againſt the Small-pox, which, at that time, was epidemical, by the Advice of a Phyſician, took a Purge of Jalap and Mercurius dulcis; which, indeed, gave her only two or three Stools, but her Appetite was entirely loſt: She paſſed reſtleſs Nights, with Toſſings, and was very much afflicted with Thirſt, an intenſe and a quick Pulſe. I attended her, and preſcribed Whey, prepared after my Method; by the Uſe of which, the Symptoms ſucceſſively ceaſed, and ſhe recovered. Since it is evident, therefore, that Whey has an happy Effect in many Diſeaſes, nothing now remains, but to recommend this moſt noble Medicine to other Phyſicians; and heartily wiſh, that it may reſtore Numbers to Health. *Frederic Hoffman.*

The common Lac Virginale is made by diſſolving a ſmall Quantity of Sugar of Lead in a large Quantity of Water.

Another Sort of Lac Virginale is thus made:

Take of Roch-alum, four Ounces; Spring-water, two Pounds: Boil away a third Part; then take of Litharge, half a Pound; Vinegar, a Pound and an half; and boil to a Pound: Strain both, and ſhake them together, till they incorporate, and look white.

This is intended for a Coſmetic, by driving in Pimples, and checking ſuch Eruptions as deform the Skin, by its cooling reſtringent Properties. But ſuch things are dangerous, becauſe they hinder cutaneous Tranſpiration, and thereby occaſion many Diſorders, not eaſily again removed.

LAC LUNÆ. See MARGA CANDIDA.

LACAPHTHON, λάκαφθον. This is mentioned by *Paulus Æginetа, L. 7. C. 22.* as an Ingredient in the Compoſition of the great *Cyphi*, where it is explain'd the Bark of a certain Tree. It is ſuppoſed to be the *Naſcaphthum*, or *Narcaphthum*, a ſort of Aromatic brought from *India*. *Caſtellus.*

LACCA. See JUJUBA INDICA.

LACCOPEDON, λακκόπεδον. The lax Part of the *Scrotum*, call'd by the *Athenians*, λακκοχέας. *Ruffus Epheſius, L. 1. C. 12.*

LACERTUS. Offic. Schw. 147. *Lacertus vulgaris.* Raii Synop. A. 264. Aldrov. Quad. Ovip. 627. Jonſ. de Quad. 133. Geſn. de Quad. Ovip. 32. Charlt. Exer. 28. *Lacertus terreſtris.* Schrod. 5. 342. THE LIZARD, OR EFT.

It lives in Caverns, and Ruins, and deſolate Places. The large green Lizard is eſteemed above the reſt; but, this being rarely found in theſe Countries, what we ſay is to be underſtood of the common Lizard.

Being cut in Pieces, or bruiſed, eſpecially the Head, and applied with Salt, it extracts Splinters, Pieces of Glaſſes, and the like, out of the Body. The Fleſh, or the Aſhes of it, burnt, made into a Litus, with Fat, cure an Alopecia: It is, alſo, good againſt the Sting of a Scorpion, and the Bite of other venomous Creatures.

LACERTA VIRIDIS. Ind. Med. 64. Raii Synop. A. 264. Aldrov. de Quad. Ovip. 633. Geſn. de Quad. Ovip. 40. Charlt. Exer. 28. Jonſ. de Quad. 134. *Lacertus Hibernicus.* Mer. Pin. 169. THE GREEN LIZARD.

It is larger than the common Lizard, and found in *Ireland*; the Animal itſelf is uſed, and agrees in Virtues with the preceding.

LACERTUS AQUATILIS. See SALAMANDRA AQUATICA.

LACHLACHATUM. The Name of a Stomachic Medicine, deſcribed by *Avicenna.*

LACHRYMA. A Tear. For the Preſages to be drawn from Tears, ſee OCULUS.

The Juices of ſome Plants, which tranſude in the Form of a Tear, are, alſo, call'd *Lachrymæ.*

LACHRYMA JOBI.

The Characters are;

It has the Appearance of the *Arundo*; the Flowers are apetalous, furniſhed with a Calyx, Male, and form'd into a Spike in one Part of the Plant; the Ovary is ſeated in another Part, and furniſhed with a long Tube, and two Horns, and becomes a ſtony Shell, containing one Seed. *Boerhaave, Index alter, Pars 2. p. 166.*

Boerhaave mentions but one Species of this Plant; which is,

Lachryma Jobi. *Offic. Ger.* 82. *Emac.* 88. *Park. Theat.* 430. *Boerh. Ind. A.* 2. 166. *Tourn. Inſt.* 532. *Lachryma Jobi multis, ſive Milium Arundinaceum.* J. B. 2. 449. Raii Hiſt. 2. 1252. *Lithoſpermum Arundinaceum forte Dioſcoridis & Plinii.* C. B. P. 258. JOB's TEARS.

It is cultivated in Gardens, and the Seeds are uſed. *Dale.* It is called *Lachryma Jobi*, becauſe the Seeds are like Tears: Theſe Seeds are detergent and aperitive, and therefore good for the Stone in the Kidneys and Bladder. *Hiſt. Plant. aſcript. Boerhaave.*

It grows ſpontaneouſly, as *Parkinſon* ſays, in *Crete, Rhodes, Syria*, and other Eaſtern Countries, where the Inhabitants dip the ripe Seeds in boiling Water, and then ſtring them up like Beads, by which they ſay their Prayers. *Raii H. P.*

LACHRYMALE PUNCTUM. See FISTULA LACHRYMALIS.

LACHRYMALIS *Ductus.* See FISTULA LACHRYMALIS.

LACINIÆ, in Botany, imports the Inciſures, or Jags, on the Borders of Leaves, or Flowers. Hence they are ſaid to be laciniated.

LACONICUM, λακωνικόν. A Stove, Bagnio, or Sweating-room.

LACTARIA. Aliments prepar'd of Milk, called, alſo, *Lacticinia.*

LACTATIO. Lactation, or giving Suck.

Morton ſays, that if, by reaſon of the want of an Appetite, there is more nutritious Juice ſuck'd out of the Blood thro' the Breaſts for a long time, than is ſupplied to the Maſs of Blood by the new Chyle from the lacteal Veſſels, it is impoſſible but an Impoveriſhment of the Blood ſhould follow, and thereupon an Atrophy of the Body, (ſeeing it is deprived of due Nouriſhment) and conſequently an hectical Heat in the Blood, Spirits, and Habit of Body, which is a kind of original Conſumption, proceeding from the Subtraction of the nutritious Juice.

Yet I muſt ingenuouſly declare, ſays he, that I have ſometimes obſerved a conſumptive Diſpoſition cured by giving Suck; and that not only in my own Wife, but in many other Women: As for Example, Mrs. *Wilſon*, one of my Neighbours, who, at other times, is conſumptive, and goes up and down like a Ghoſt, always grows fat all the time ſhe gives Suck. Mrs. *Thompſon*, upon *Snow-hill*, manifeſtly fell into a fatal Conſumption in the Habit of her Body, and upon that into a Conſumption of her Lungs, from the ſudden Weaning of her Child. But, at the ſame time, it is as obvious, that all ſuch Nurſes as grow fat in this manner, from giving of Suck, have a good Stomach; that, during the time of their giving Suck, their Appetite is very much increaſed, and from thence it is very eaſy to account for this Appearance: For Inſtance, that the Appetite being increaſed by the continual Drawing off of the nutritious Juice by the Child's Sucking, there is room made for a greater Quantity of new and oily Chyle, by which the Blood is every Day enriched, which conduces more to the Cure of a conſumptive Diſpoſition, than all the Medicines in the World. But if the Appetite, during the time of giving Suck, grows languid, and thereupon, by reaſon of the little Food which is taken in, a leſs Quantity of new Juice is ſupplied to the Blood, than is carried off by the Breaſts, an hectical Diſpoſition in the Blood and Spirits muſt inevitably follow; and an Atrophy or Conſumption in the Habit of the Body.

The firſt thing that preſages the Approach of this Conſumption, is a want of Appetite; and therefore I give this Caution to all Nurſes, that, when they find their Appetite to abate for ſome time, they forthwith wean their Children. The ſecond Sign is a Weakneſs and Faintneſs of the Spirits, proceeding from a diſpirited and impoveriſhed State of the Blood. A third Sign is an hypochondriacal Oppreſſion, and frequent hyſteric Fits and Choakings. Which Appearance does not proceed from the Sucking of the Child drawing the Vapours upward, (as is commonly thought) but a too plentiful Subtraction, and too great an Expence, of the nutritious Juice: By which means the Spirits themſelves become, in the ſame manner as the Blood, poor and windy, by reaſon they have loſt their natural and original Vigour; whereupon there follows an Obſtruction, and this inordinate and ungovernable Motion of the Spirits in the Nerves and Fibres of the Muſcles, and upon that, Oppreſſions, and ſuffocative and convulſive Contractions of ſome Parts, commonly called Hyſterical.

Theſe preſaging Symptoms, in the Progreſs of the Diſtemper, have an Atrophy, and an hectical Heat, following them (which is not ſtrange); and often terminate in a Conſumption of the Lungs, together with a Cough, Shortneſs of Breath, and the like. Nevertheleſs this Conſumption is originally in the Habit of the Body, and that from too great an Expence of the nutritious Juice. This Conſumption, when it once comes to the Degree of a Maraſmus, and to terminate in a Conſumption of the Lungs, proves fatal and incurable. But, in the Beginning, it is eaſily cured; firſt, by the ſpeedy Weaning of the Child, whereby the Cauſe, which diſpoſed the Perſon to it, is removed. Secondly, By giving the Patient plentiful Nouriſhment of ſuch Food as affords a good Juice. Thirdly, By exciting and reſtoring the Appetite by Chearfulneſs of Mind, the Enjoyment of a benign and open Air, and by moderate Exerciſe. And, laſtly, if her hectical Diſpoſition requires it, the ſick Woman muſt be put upon the Uſe of a Milk-diet, or of the Chalybeate Waters. But let her abſtain from Wine, and all Evacuations but what are neceſſary. *Morton. Phthiſiologia.*

LACTEA VASA. The Lacteal Veſſels. See CHYLUS.

LACTEA FEBRIS. A Milk Fever, frequent after Delivery. See PUERPERIUM.

LACTICA. The *Arabian* Name for that Species of Fever, which the *Greeks* called TYPHOS, or TYPHODES.

LACTICINIA. Aliments prepared of Milk; which are eſteemed very improper, whenever the Powers of Digeſtion are weak: For, tho' Milk, when freſh drawn from the Animals which afford it, is eaſily digeſted, and, in many Caſes, of excellent Virtues; yet, when boiled, as it generally is in preparing various Sorts of Aliments from it, it acquires a very different Nature, and lays a Foundation for many Diſorders.

LACTIFERUS. Lactiferous Plants are ſuch as abound with a milky Juice, ſuch as the *Tithymalus*, *Sonchus*, and *Lactuca*.

LACTUCA.

The Characters are;

The Root is almoſt conſtantly fibrous, and generally annual; the Leaves are ſmooth, and placed alternately; the Branches terminate in a ſort of an Umbella; the Calyx is ſlender, oblong, and ſquamous; the Seeds are oblong, flattiſh, and acuminated at both Ends. *Boerhaave*, *Index alter*, *Pars* 1. *p.* 81.

Boerhaave mentions fifty-five Species of this Plant, none of which have any particular medicinal Virtues attributed to them, that I know of, except the 1ſt, 4th, 5th, 6th, 9th, and 12th, all which are thus diſtinguiſhed:

The firſt is the

Lactuca, ſylveſtris; Coſta ſpinoſa. *C. B. P.* 123. *Raii Hiſt.* 1. 223. *Synop.* 3. 69. *Tourn. Inſt.* 473. *Boerh. Ind. A.* 81. *Lactuca ſylveſtris laciniata.* Park. Theat. 813. *Lactuca ſylveſtris foliis diſſectis.* Ger. Emac. 309. *Lactuca ſylveſtris, ſeu Endivia multis dicta folio laciniato, dorſo ſpinoſo.* J. B. 2. 1003. JAGGED-LEAVED WILD LETTUCE.

It grows in Hedges, and flowers in *June*; the Herb and Seeds are in Uſe. *Dale.* The Wild-lettuce reſembles the Garden-lettuce, according to *Dioſcorides*; only has a longer Stalk, ſlenderer and rougher Leaves, and a bitter Taſte. Whether what the Antients have told us of the Virtues of the Wild-lettuce in preventing Venereal Dreams, and extinguiſhing amorous Deſires, no leſs effectually than the Garden Kind, belongs, in reality, to the Plant above deſcribed, I am not, ſays *Ray*, entirely convinc'd. That it is narcotic and ſoporiferous, and on that account reſembling the Poppy in Qualities, as we are inform'd by *Pliny* and *Dioſcorides*, is abundantly evident from its ſtrong and rank Smell of Opium; but all Opiates in general ſeem rather to irritate than extinguiſh a Venereal Appetite, at leaſt, if moderately taken, in the ſame manner as Wine, and other generous Liquors, with which, in ſome meaſure, they agree in Virtues. Thus *Ray*, to which he adds, that Dr. *Liſter*, out of Curioſity, receiving the Fume of the lighted Herb up his Noſtrils, was ſuddenly ſeized with a vertiginous Diſorder, after the ſame manner as thoſe who firſt learn to ſmoke Tobacco. *Raii Hiſt. Plant.*

The fourth is the

Lactuca; ſylveſtris; odore viroſo. *C. B. P.* 123. *Tourn. Inſt.* 473. *Boerh. Ind. A.* 81. *Lactuca Sylveſtris.* Offic. *Lactuca ſylveſtris major odore Opii.* Ger. Emac. 309. Raii Hiſt. 1. 221. Synop. 69. *Lactuca ſylveſtris lato folio, ſucco viroſo.* J. B. 2. 1002. *Lactuca ſylveſtris Endiviæ foliis, odore viroſo.* Park. 813. WILD-LETTUCE.

It grows in Hedges, and flowers in *June*; the Herb and Seeds are uſed, and are effectual, according to *Dioſcorides*, for mitigating of Pain.

The fifth is the

Lactuca, ſylveſtris; folio ad latera ſpinoſo.

The ſixth is the

Lactuca; ſativa. *C. B.* 122. *Raii Hiſt.* 1. 200. *Hiſt. Oxon.* 3. 57. *Ger.* 239. *Emac.* 306. *Tourn. Inſt.* 473. *Boerh. Ind. A.* 82. *Lactuca.* Offic. *Lactuca ſativa vulgaris non capitata.* J. B. 2. 997. *Lactuca Hyemalis.* Park. Parad. 498. GARDEN-LETTUCE.

Lettuce is a Plant ſo well known, that it needs very little Deſcription; it has yelloviſh, green, roundiſh Leaves, narroweſt next the Stalk, which is ſmooth; and the Leaves, which grow on it, in ſome meaſure encompaſs it. The Flowers grow on the Tops, and are ſmall and yellow, like thoſe of the Sow-thiſtle, but much leſs, growing on long ſcaly Calyces, and turning into Down, bearing ſhort, flat, whitiſh Seed. The Roots are neither large nor ſpreading, dying after Seed-time. It is ſown in Gardens. The Leaves and Seed are uſed.

Lettuce is much uſed at the Table in the Spring, among Sallads; and is the principal Ingredient in moſt of them, being grateful to the Stomach, allaying Heat, quenching Thirſt, and attempering the Sharpneſs of Humours in the Body; it provokes Urine, increaſes Milk in Nurſes, and is believed to make People ſleepy. The Seed is one of the Four ſmaller cold Seeds. *Miller's Bot. Off.*

In the Decline of Age, which is naturally wakeful, I ſuffer'd very much, ſays *Galen*, by want of Sleep; for which Diſorder I uſed in the Evening to eat a Lettuce, which was my ſovereign and only Remedy. Many boil the tender Herb, before it produces Stalks, in Water, as I myſelf now do, ſays *Galen*, ſince my Teeth begin to fail me.

For a Phrenſy, Delirium, burning Fever, and other like Diſorders, let there be applied to the Temples, the Coronal Suture, and the Wriſts, a double or treble Linen Cloth, well moiſten'd in Water of Lettuce, in which purified and cryſtallized Nitre, or Sal Prunellæ, have been diſſolved, in the Proportion of half an Ounce to a Pint. I prefer this Remedy, ſays *Simon Paulli*, far before Oil of Roſes, mixed with the Juice of Lettuce in ſuch Caſes. *Raii H. P.*

The ninth is the

Lactuca; Romana; longa; dulcis. *J. B.* 2. 998. *Tourn. Inſt.* 473.

The twelfth is the

Lactuca; capitata. *C. B. P.* 123. *Tourn. Inſt.* 473.

Theſe two, ſays *Dale*, are indiſcriminately claſſed with the former.

Lactuca is, alſo, a Name for ſeveral Sorts of CHONDRILLA; which ſee.

The *Hiſtoria Plantarum*, aſcrib'd to *Boerhaave*, informs us, that Lettuce is in very great Eſteem among the *Italians*; that no Herb more powerfully reſolves, and brings away the black Bile; that the Antients eſteemed the fourth and fifth Species poiſonous, to which he ſeems to give Credit, becauſe their Juices approach near the Nature of Opium; and that Lettuces are excellent in acute Diſorders, which ariſe, during the Summer, from exceſſive Heat of the Blood and Bile. *Antonius Muſa* is ſaid to have cured *Auguſtus Cæſar* by Lettuces; and they are ſaid to excite an Appetite.

Lettuces in general are eſteemed emollient, refrigerating, ſaponaceous, reſolvent, diuretic, and ſomewhat laxative; but they are better raw, than boil'd. In the Book above-quoted a Story is related of an *Engliſh* Noblemen, who indulged himſelf very much in eating Lettuces, and during that time had no Children; but upon leaving off Lettuces, as he was adviſed, his Lady, the next Year, brought him a Child. This agrees with what *Dioſcorides* ſays upon the Subject of Lettuces, which is, that they are Enemies to Venereal Inclinations; and he adds, that they are prejudicial to the Eyes.

Athenæus and *Conſtantine Cæſar* ſay, that the *Pythagoreans* called this Plant the *Eunuch*; and the Antients fabled, that, after the Death of *Adonis*, *Venus* lay upon a Bed of Lettuces, in order to repreſs her lewd Inclinations; and for this Reaſon ſome of the *Pagans* made a religious Scruple of eating them.

Four Ounces of the Juice of Lettuce are ſaid, by *Sennertus*, to be a Poiſon.

LACTUCELLA. The Sow-thiſtle. *Blancard.*

LACTUCIMINA. APHTHÆ. *Blancard.*

LACTUMEN. The ſame as ACHOR; which ſee.

LACUNÆ. Certain Glands, or rather excretory Ducts, in the *Vagina*, are thus called. The Glands, alſo, or their excretory Ducts, in the Urethra, have ſometimes this Appellation.

LACUNE. TERRA SIGILLATA. *Rulandus.*

LADANUM.

CISTUS LADANIFERA. Offic. *Ciſtus Ladanifera Cretica vera.* Park. Theat. 666. *Ciſtus Ladanifera Cretica flore purpureo.* Tourn. Cor. 19. Itin. 1. 59. *Ciſtus a qua Ladanum in Creta colligitur.* Bellon. Obſ. lib. 1. cap. 7. *Ciſtus, Ledon Cretenſe.* C. B. Pin. 467. Jonſ. D. *Ciſtus Laurinis foliis.* Wheel. Itin. 219. *Ciſtus Ledon Matthioli.* Ger. 1107. Emac. 1289. *Ladanum Creticum.* Alpin. Exot. 89. THE TRUE LADANIFEROUS SHRUB.

It is a Shrub of two or three Feet high, having pretty large, five-leav'd, roſe-coloured Flowers; and ſeveral Branches about the Thickneſs of a little Finger, hard and brown, divided into leſſer Twigs, of a rediſh Colour, having the Leaves ſet by Pairs, which are thick, and full of Veins, of a dark-green Colour, about an Inch and an half long, and three Quarters of an Inch broad, waved about the Edges, and ſtanding on ſhort Foot-ſtalks.

From this Ciſtus the beſt Ladanum is procur'd in the Iſland of *Candy*, and other Places in the *Archipelago*; they make uſe of a kind of Whip, of two Rows of Leather Straps, with which they bruſh and beat theſe Shrubs; the Gum, which ſweats out from the Leaves, ſticking on the Straps, which they ſcrape off with Knives, when they are ſufficiently loaded.

There are three Kinds of Gum-labdanum in the Shops, the fineſt is of a ſhining black Colour, when broken, ſomewhat hard, but eaſily ſoftening by Heat, of an inflammable Subſtance, having a ſweet pleaſant Smell. The ſecond Sort comes over in Rolls, like the *Spaniſh* Juice of Liquorice; but is tougher, harder, not ſo black, but more droſſy, and of a leſs fragrant Smell. The laſt and coarſeſt Sort is made up in Rolls, twiſted about like the Rolls of a ſmall Wax-candle: This is full of Sand and Droſs, and of a weaker Scent than either of the former.

This Gum is not much uſed inwardly, though ſome commend it for Looſeneſs and Gripes, cauſed by ſharp Humours. The Fume of it comforts the Brain, and ſtops catarrhous Defluxions. Outwardly applied, it ſtrengthens the Stomach, and ſtays Vomiting. *Miller's Bot. Off.*

In the Time of *Dioſcorides* it was gathered from the Hairs of the Goats, which fed among the Trees which produce it; but at preſent, according to M. *Tournefort*, the *Greek* Monks gather it

it from the ſame Trees, with a ſort of Rakes. The *Greek* and *Turkiſh* Ladies carry little Balls of *Ladanum* to ſmell to, as ours do Noſegays, or Oranges. It is an excellent Baſamic in Dyſenteries and Hoarſeneſs; and, being likewiſe aſtringent, it ſtrengthens the Stomach and Inteſtines, and, when applied outwardly in Plaiſters, is uſeful in the ſame Intentions. The *Emplaſtrum Stomachicum* of *Charas*, of which Labdanum is the Baſis, has been ſucceſsfully uſed in habitual Vomitings. It is, alſo, an Ingredient in the *Prior of Cabriere*'s Plaiſter for *Hernias*. *Geoff.*

Dale ſays, it mollifies, digeſts, maturates, and attenuates; and that, externally applied, it ſoftens, and is anodyne, and good for the Tooth-ach, *Alopecia*, Heart-burn, Pains of the Stomach, and hyſteric Fits.

LÆMOS, λαιμός. The Gullet.

LÆTIFICANS. An Epithet for ſeveral Shop Compoſitions, which are deſigned for raiſing the Spirits.

LÆVIGATIO, Levigation, is the Reduction of a hard Subſtance to a Powder, by grinding it on a Porphyry.

LAGANON. A ſort of coarſe Cake, mentioned by *Galen*, *L.* 1. *C.* 4. *de Alimentorum Facultatibus.*

LAGAROS, λαγαρὸς, lax. An Epithet for the Right Ventricle of the Heart.

LAGNEIA, or LAGNEUMA, λαγνεία, or λάγνευμα. Venereal Intercourſe. *Hippocrates.*

LAGOCHEILOS, λαγόχειλος. A Perſon who has a Hare-Lip. *Galen.*

LAGON, λαγὼν. The Flank.

LAGOPHTHALMIA. See ECTROPIUM.

LAGOPUS, in Botany, is a Name for the *Trifolium*; *arvenſe*; *humile*; *ſpicatum.*

LAGOPUS, in Zoology, is the *Perdix Alba*. See PERDIX. It imports Hare-footed.

LAMAC. Gum Arabic. *Rulandus.*

LAMARE. Sulphur. *Rulandus.*

LAMBDACISMUS. A Defect in the Speech, which conſiſts in an Inability to pronouce certain Conſonants.

LAMBDOIDES. The Name of a Suture in the Skull, ſo called from its Reſemblance to the *Greek* Letter Λ, *Lambda.*

LAMBITIVUM. A Linctus, or Eclegma.

LAMINA. Properly, a Plate of Metal, or of any other Subſtance. The Tables of the Skull, in Anatomy, are called the External, and Internal Laminæ.

LAMIUM.

The Characters are;

The Galea is entire and hollow, the Beard bifid, and ſhaped like a Heart: The Calyx is quinquefid, and oblong like a Tube. The Seeds are triangular.

Boerhaave mentions ſeventeen Species of this Plant; which are,

1. Lamium; purpureum; fetidum; folio ſubrotundo; ſive Galeopſis Dioſcoridis. *C. B. P.* 230. *Tourn. Inſt.* 183. *Boerh. Ind. A.* 157. *Lamium rubrum.* Offic. Ger. 568. Emac. 703. Raii Hiſt. 1. 559. Synop. 3. 240. *Lamium vulgare, folio ſubrotundo, flore rubro.* Park. Theat. 604. *Galeopſis, ſive Urtica iners, folio & flore minore.* J. B. 3. 323. RED ARCHANGEL.

This Archangel is much ſmaller than the *Lamium album, non fœtens, folio oblongo*, having little, ſquare, and frequently rediſh Stalks, which have a couple of Leaves growing on them, near the Ground, on long Foot-ſtalks, and uſually no more till towards the Top, where they grow thick together on very ſhort ones: They are much of the Shape of the *Lamium album, non fœtens, folio oblongo*, but a great deal leſs, and rounder pointed. The Flowers grow among the upper Leaves, being almoſt hid by them; they are ſmall, labiated, and galeated leſs than the Flowers of the *Labium album, non fœtens, folio oblongo*; they are of a pale-red Colour. The Root is ſmall and fibrous, dying, after it has ripened its Seed. It grows every-where in Hedges by Highways, and flowers in Summer. The whole Plant has a ſtrong, earthy, unſavoury Smell. The Leaves and Flowers are uſed.

This is accounted good for an Exceſs of the Catamenia, and of Uſe againſt all other Hæmorrhages. Outwardly applied, it is ſerviceable in Wounds and Inflammations. *Miller's Bot. Off.*

The Flowers are recommended for ſtopping a Dyſentery, and Hæmorrhages from Wounds. The Herb, bruiſed and applied, is ſaid to diſcuſs all ſorts of Tumors; and to be of Service to Wounds, putrid Ulcers, and Inflammations. *Dale.*

2. Lamium; purpureum; fetidum; folio ſubrotundo; minus.

3. Lamium; album; fetidum; folio ſubrotundo. *C. B. P.* 231.

4. Lamium; album: fetidum; folio ſubrotundo; minus. *C. B. P.* 231.

5. Lamium; album; non fetens; folio oblongo. *C. B. P.* 231. *Boerh. Ind. A.* 157. *Lamium album, Urtica mortua.* Offic. *Lamium album.* Ger. 568. Emac. 702. Raii Hiſt. 1. 559. Synop. 3. 240. *Lamium vulgare album, ſive Archangelica flore albo.* Park. Theat. 604. Tourn. Inſt. 183. *Galeopſis, ſive Urtica iners, floribus albis.* J. B. 3. 322. WHITE ARCHANGEL.

The Roots of this Archangel are long, ſlender, and creeping along the upper Part of the Earth, and ſending forth ſeveral ſquare hollow Stalks, about a Foot high; the lower Leaves ſtand on long Foot-ſtalks, thoſe towards the Top have ſhorter; they are, in Shape, like the common Stinging-nettle, are hairy, and roundly indented about the Edges; the Flowers grow, towards the Top, at the Joints, with the Leaves encompaſſing the Stalks in thick Whorles; they are large and white, with an hollow Galea; and the Labella cut into two Segments, having three or four black Apices ſtanding in the Middle; the Calyces end in five Points, containing four brown Seeds in each Calyx. It grows every-where by Hedge-ſides, and flowers in *April* and *May*. The Flowers are uſed.

They are accounted a Specific againſt the Fluor Albus, and are uſed in a Conſerve, or Decoction, for that Purpoſe, which is to be continued for ſome time. Some commend the Herb as of great Uſe againſt the King's-evil, and all ſcrophulous Swellings.

The only officinal Preparation is the Conſerve of the Flowers. *Miller's Bot. Off.*

This Plant is emollient, inciding, diuretic, and lithontriptic. It is good againſt hyſteric Fits; and the Root is recommended for the Jaundice. *Dale.*

6. Lamium; purpureum; non fetens; folio oblongo. *C. B. P.* 231.

7. Lamium; Parietariæ facie. *M. H. Blæſ.*

8. Lamium; Parietariæ facie; flore albo.

9. Lamium; maximum; ſylvaticum; rubrum. *Flor.* 2. 68.

10. Lamium; foliis caulem ambientibus; majus. *C. B. P.* 231.

11. Lamium; folio caulem ambiente; minus. *C. B. P.* 232. *M. H.* 3. 386.

12. Lamium; rubrum; minus; foliis profunde inciſis. *Raii Synop.* 129.

13. Lamium; maximum fœtens; purpureum; Galea hormini. See HORMINUM SYLVESTRE.

14. Lamium; alba Linea notatum. *C. B. P.* 231.

15. Lamium; quæ Moldavica, Orientalis; Hederæ terreſtris folio. *T. Cor.* 11.

16. Lamium; Italicum; maximo flore rubro; glabrum.

17. Lamium; perenne; villoſum, folio Catariæ criſpo; flore magno, variegato. *Vail. Boerh. Ind. alt. Plant. Vol.* 1. *p.* 157.

LAMIUM is, alſo, a Name for ſeveral Sorts of GALEOPSIS; which ſee.

LAMIUM MONTANUM. A Name for the *Meliſſa*; *humilis*; *latifolia*; *maximo flore, purpuraſcente.*

LAMIUM PALUDOSUM. A Name for the *Marrubiaſtrum*; *paluſtre*; *fœtidum.*

LAMIUM PEREGRINUM. A Name for the CASSIDA; which ſee.

LAMNEIA, λαμνεία. The ſame as LAMINA. *Caſtellus* from *Moſchion.*

LAMPE, λάμπη. It imports Froth or Foam; or a pinguious Subſtance floating on the Surface of Vinegar, or the Pickle of Olives; or the Bubble on the Surface of Urine, in *Actuarius.*

LAMPETRA. Offic. Rondel. de Piſ. 1. 398. Jonſ. de Piſc. 79. Schonef. Ichth. 40. Charlt. de Piſc. 34. Mer. Pin. 188. *Lampetra Rondeletii.* Raii Ichth. 105. Ejuſd. Synop. Piſc. 35. *Lampetra major.* Aldrov. de Piſc. 539. Salv. de Aquat. 63. *Muſtela, ſive Lampetra.* Bellon. de Aquat. 75. THE LAMPREY, or LAMPREY-EEL.

Lampreys are of two Sorts, the Sea and River Lamprey; and both of them are uſed for Food. Thoſe which are tender, delicate, fat, well-fed, and taken in fine, clear, and running Water, are beſt. They are nouriſhing, and increaſe the ſeminal Juices; the Fat is of a mollifying and diſſolving Nature. Thoſe who have had the Small-pox, anoint the Face and Hands with it, to efface the Marks.

Lampreys are alleged to be pernicious to thoſe who have a Weakneſs in the Nerves, or are ſubject to the Gout and Gravel. It abounds with Oil, volatile Salt, and Phlegm; and agrees, eſpecially in Spring, with young People of an hot and bilious Conſtitution, with ſuch as have good Stomachs, and whoſe Humours are thin. But thoſe who are old, phlegmatic, and abound with groſs Humours, ſhould either abſtain from it, or uſe it moderately.

REMARKS.

The Lamprey is a Fiſh ſhaped like a large Eel. Its Fat hath a delicious Taſte. It antiently was, and ſtill is, much eſteem'd. It lives in ſtony Places, and feeds upon Moſs and Water. It is ſaid, that, ſoon after it has produced its Young, it inſenſibly decays and dies, and all in the Space of two Years.

The Sea Lamprey is of the Number of thoſe Fiſhes that leave the Sea in the Beginning of the Spring, in order to ſpawn in the Rivers; and, after a proper time, return, with their Young, to their former Place.

The River Lamprey continues in freſh Water, and is often found in Brooks, which the Sea-water never reaches. In Shape and

and Taſte it reſembles the Sea Lamprey; but differs from it in Size, being much leſs.

In Spring the Lampreys are tender and delicious Food; but at all other times they are ſaid to be hard, tough, and almoſt taſteleſs. Their oily and balſamic Parts, which eaſily unite with, and repair the Decays of the Solids, make them very nouriſhing; but the dull, viſcous, and groſs Juices, which they alſo contain, render them hard of Digeſtion; but their Digeſtion is ſtill eaſier than that of an Eel.

Lampreys may be boil'd, roaſted, fried, or baked in Pies; they are, alſo, ſalted and dried for keeping, or potted. Some antient Authors have recommended the drowning of the Lamprey in Wine, that it may depoſite in it its malignant Quality. But I am of Opinion, that Wine and Spice are proper for ſeaſoning this Fiſh, not upon account of its imagined malignant Quality, but becauſe they will promote the Digeſtion of the Lamprey, by attenuating its thick and viſcous Juices. *Lemery des Drogues.*

LAMPODES, λαμπώδης. Frothy. See LAMPE.

LAMPROS, λαμπρὸς, in *Hippocrates*, is, Vigorous, or in full Health.

LAMPSANA.

The Characters are;

The Calyx is monophyllous, deeply jagged in many Places, and paſſes into a ſtriated Capſule, full of thin ſharp-pointed Seeds.

Boerhaave mentions two Species of this Plant; which are,

1. Lampſana. *Offic. Ger.* 199. *Emac.* 255. *Raii Synop.* 77. *Tourn. Inſt.* 479. *Boerh. Ind. A.* 93. *Lampſana Dodonæi.* J. B. 2. 1028. Raii Hiſt. 1. 256. *Soncho affinis Lampſana domeſtica.* C. B. P. 124. *Intybus, ſive Endivia erecta lutea Napifolia, Lampſana dicta.* Hiſt. Oxon. 3. 54. NIPPLEWORT.

It is frequent in Gardens and Fields, and flowers in *June* and *July*. It is eſteemed excellent for curing ulcerated Nipples, whence its Name *Nipplewort*. It is ſaid to be drying, detergent, and digeſtive. The Leaves and Stalks may be boiled, and uſed as Food.

It is not eaſy to determine, exactly, what the true Lampſana of *Dioſcorides* is.

2. Lampſana; folio ampliſſimo, criſpo. *Petiver. Hort. Ind.* 2. *Boer. Ind. alt. Plant. Vol.* 1. *p.* 93.

LAMPYRIS, λαμπυρὶς, is a Name for the Glow-worm. See CICENDELA.

LANA. Wool. The εἰρία ῥυπαρὰ, *Lana ſuccida*, ſordid Wool, or that which is greaſy, and impregnated with the Sweat of the Sheep, is frequently recommended by the Antients. Thus *Hippocrates* directs this Sort of Wool, well carded, and impregnated with Oil and Wine, to be bound upon Tumors, *Lib. de Fracturis.* And he mentions it in many other Places. And *Celſus* directs it as a proper Application in many Caſes; and in *Lib.* 4. *Cap.* 5. he recommends ſulphurated Wool as a proper Application to the Stomach, in caſe of an Inflammation.

The εἰρία ἱδρωτικὰ is the ſame as the εἰρία ῥυπαρὰ.

Dioſcorides informs us, that of ſordid ſoft Wool, that about the Neck and Inſide of the Thighs is beſt. Dipt in Vinegar and Oil, or Wine, it is of Service, at firſt, in Wounds, Contuſions, Excoriations, Bruiſes, and Fractures of the Bones: For it imbibes whatever Liquor it is immerſed in; and is emollient, by reaſon of its Oeſypum. It is, likewiſe, beneficial in a Cephalalgia, Pains of the Stomach, and any other Part, if it is applied with Vinegar, and Oil of Roſes. *Lib.* 2. *Cap.* 82.

But burnt Wool is an Eſcharotic, ſuppreſſes Excreſcences of the Fleſh, and cicatrizes Ulcers. Being clean and carded, it is burnt in a crude Earthen Veſſel, like other things. In the ſame manner is Wool, dyed with Sea-purple, burnt. But ſome card it without cleaning; and, moiſtening it with Honey, burn it the ſame way. Others diſpoſe Splints, at a Diſtance from each other, upon an open-mouth'd Earthen Veſſel, and between them lay thin Splinters of the *Tæda* (δᾳδίων): Upon theſe they place the Wool, carded and dipt in Oil, in ſuch a manner that it may not drop; then, laying Splints and Wool again alternately between, they gently ſet Fire to the Wood, and gather the Remains. But if any Fat, or Pitch, flows from the Pine, they collect, and lay it by. This calcined Wool is a good Ophthalmic. After it has been put into an Earthen Veſſel with Water, waſhed, and well ſtirred with the Hands, when the Aſhes ſubſide, that Water is poured off, and freſh put in, and likewiſe ſtirred: This is continued, till, being applied to the Tongue, it has no ſharp Taſte, but, as it were, aſtringes. *Dioſcorides, L.* 2. *Cap.* 83.

OF OESYPUM.

The Fat of ſordid Wool, termed *Oeſypum*, is thus prepared:

Take ſoft ſordid Wool, uncarded, and not cleaned; waſh it in warm Water, and, at the ſame time, expreſs all the Sordes; throw this into a large-mouth'd Veſſel, and, when you have poured the Water to it, take it up in a Ladle, and drop it again from a great Diſtance, till it froths; or ſtir it well with a Stick, till a Quantity of ſordid Scum is collected; then ſprinkle into it ſome Sea-water. And when the Fat, which ſwam at the Top, ſubſides, put it into another Earthen Veſſel, and, having poured Water to it, ſtir it again; then ſprinkle the Froth with Sea-water, and take it out. Continue this, till the Fat is conſumed, and no Froth remains. When you have well preſſed the Oeſypum, if any Impurity is left behind, remove it immediately, and, pouring out the firſt Water, Drop by Drop, add ſome freſh: Stir it with your Hand, till the Oeſypum, applied to the Tongue, hath no ſharp Taſte, but, as it were, aſtringes, and appears fat, pure, and white: Thus prepared, put it into an Earthen Veſſel.

Let this be done in the Summer. Some, ſtraining off the Fat, waſh it in cold Water, and rub it with their Hands, as Women do Cerate; for thus it becomes whiter. Others, after waſhing the Wool, and ſeparating the Sordes, boil it, with Water, in a Pot, over a gentle Fire, collect the riſing Fat, and waſh it in Water, as we have already mentioned; then, ſtraining it off, they put it into an Earthen Pot, with warm Water, cover it with a Linen Cloth, and expoſe it to the Sun, till it becomes ſufficiently thick and white. Some, after two Days, pour away the firſt Water, and put in freſh.

That is beſt which is light, ſmells ſtrongly of ſordid Wool, and grows white while it is rubbed in the Veſſel, and has nothing hard or compact in it, as if it was adulterated with Cerate or Fat. It has a Faculty of warming, cloſing Ulcers, and mollifying; but, principally, of the Fundament, and Vulva, with Melilot and Butter: Applied with Wool, it promotes Delivery, and the Menſes. It is ſerviceable, with Gooſe-fat, in Ulcers of the Ears and Genitals. It is, likewiſe, efficacious in Corroſions, and itchy Eruptions, of the Corners of the Eyes, Calloſities of the Eyelids, and when the Hairs of the Eyelids fall off; but it is burnt in a new Veſſel, till, being calcined, it loſes its Fat. The Smoak of this, collected, is a very good Ophthalmic. *Dioſcorides, Lib.* 2. *Cap.* 84.

LANARIA. A Name for the *Lychnis*; *ſylveſtris*; *quæ Saponaria vulgo.*

LANARIUS. A Species of Hawk.

LANCETTA, or LANCEOLA. A Lancet.

LANGII *Aqua Epileptica. Langius's* Epileptic Water is thus prepared:

Take of the Flowers of the Lilies of the Valley, twelve Handfuls; and infuſe them for five Days, in four Quarts of generous *Spaniſh* Wine. Then diſtil with Glaſs Veſſels, in a Bath of warm Water, till the Flowers are left almoſt dry, in the Bottom of the Retort. Then take of recent Flowers of Lavender moderately dried, one Ounce; Cinnamon, ſix Drams; Nutmegs, Miſelto, Peony-root, and Dittany, recent Flowers of Roſemary moderately dried, and of Stœchas, each half an Ounce; Long-pepper, and Cubebs, of each two Drams: Let all be groſly powdered, and macerated for eight Days, in a Veſſel, cloſely ſtopt, with the diſtilled Water above deſcribed; then diſtil again.

It fortifies the Brain, and refreſhes the vital Spirits; it rarefies and diſſipates thick Phlegm, excites the Appetite, and is particularly uſed in an Epilepſy. The Doſe is from two Drams to an Ounce. *Lemery's Pharm. Univerſ.*

LANGUOR. Faintneſs, or Feebleneſs.

LANIGERA *Arbor.* The Cotton-tree.

LANIGERUS. Lanigerous Trees are ſuch as bear ſuch a wooly or downy Subſtance as is commonly contained in the Catkins of the Willow.

LANIUS. The ſame as LANARIUS.

LANS. *Rulandus* explains this, *Argentum mortuum.*

LANTANA. A Name for the VIBURNUM; which ſee.

LANTOR. The Name of a Species of Palm-tree, which grows in *Java.*

LANUGINOSUS. Lanuginous ſignifies downy, or cover'd with a ſoft Down, as a Quince.

LANUGO, in Botany, is Down, which grows on ſome Plants. See CHNUS.

LANX. A Balance, or Pair of Scales for weighing. *Rulandus* explains *Lanx* by *Amygdalæ Dulces.*

LAONICA *Curatio.* A Method of curing the Gout, by evacuating the arthritic Matter from the Part affected, by Topics. *Caſtellus.*

LAOS. Tin. *Rulandus.*

LAPACTICUS, λαπακτικὸς, imports looſening, or evacuating the Belly.

LAPARA. The Flanks; that is, the Parts which are ſituated betwixt the ſpurious Ribs, and the Hips, or Oſſa Ilia.

LAPAROS, λαπαρὸς, imports ſoft, or empty.

LAPATHUM.

The Characters are;

The Calyx is hexaphyllous, three of the Leaves being larger, and red, the other three leſſer, and green; within theſe Leaves are

are placed six Stamina. The larger Leaves, being come to Maturity, close, and form a triangular Vessel, while the other three wither and fall off; for which Reason some rather take the Leaves for a Flower, and its Calyx. The End of the Pedicle within the Calyx produces a Placenta, on which grows a triangular Ovary, adorned with three Tubes, their Apices elegantly fimbriated, which appear on the Sides without the Segments of the Capsula. The Seed is shining and triangular. *Boerh. Ind. alt. Pars 2. p. 84.*

Boerhaave mentions eighteen Species of this Plant; which are,

1. Lapathum; præstantissimum; Rhabarbarum Officinarum dictum. See RHABARBARUM, and RHAPONTICUM.

2. Lapathum; Alpinum; folio subrotundo. *Hist. Oxon.* 2. 578. *Boerh. Ind. A.* 2. 84. *Hippolapathum.* Offic. *Hippolapathum rotundifolium.* Ger. 313. Emac. 389. *Hippolapathum rotundifolium vulgare.* Park. 154. *Lapathum hortense rotundifolium sive montanum.* C. B. P. 115. *Lapathum folio rotundo Alpinum.* J. B. 2. 987. Tourn. Inst. 504. *An Rhabarbarum rotundifolium fimbriatum.* Munt. Herb. Brit. 194.? BASTARD MONKS RHUBARB.

This is the Rhubarb, which, according to *Dale*, the Herb-women of *London* sell for the true Monks Rhubarb. The Stalk is two or three Cubits high, and the Leaves are very broad, like those of the Burdock, of a pale-green Colour, distinguish'd with numerous Veins, and of a subastringent Taste. The Root is thick, oblong, brown without, and intensely red within. The medicinal Virtues ascribed to it are much the same as those of the true Monks Rhubarb.

3. Lapathum; hortense; folio oblongo; sive secundum Dioscoridis. *C. B. P.* 114. *Tourn. Inst.* 504. *Boerh. Ind. A.* 2. 84. *Lapathum sativum Lapas.* J. B. 2. 985.

This Dock grows frequently to be as tall as a Man, having, at the Bottom, several large, long, and pointed Leaves, growing on reddish Foot-stalks. The Stalk is red, having a few smaller Leaves growing on it; is branched toward the Top, and full of pretty big stamineous Flowers, succeeded by a large triangular Seed. The Root is thick at the Head, and divided into several Branches, of a brown Colour on the Outside, and a deep-yellow or saffron Colour within, full of reddish Veins, of a styptic Taste, and tinging the Spittle of a yellow Colour. It is planted with us in Gardens, but grows wild in divers Parts of *France*, *Italy*, and *Germany*.

This is the *Rhabarbarum Monachorum*, which has been used in *England* many Years, and what *Gerard* and *Parkinson*, and, also, Mr. *Ray*, took to be the true: But if we may credit *John Bauhine*, that is another Species of *Lapathum*, called by him, *Lapathum majus sive Rhabarbarum Monachorum*; and is the *Lapathum hortense latifolium*, *C. B.* and the *Hippolapathum sive Rhabarbarum Monachorum*, *Dodonæi*. But since these two so nearly resemble one another, that Mr. *Ray* did not distinguish them, we may suppose ours will answer all the Intentions which it is used for, as well as the other.

Monks Rhubarb is opening, and a little purgative, being somewhat of the Nature of the true Rhubarb, but not so strong: It is frequently used in Diet-drinks for the Scurvy, and to open Obstructions of the Liver and Spleen, and help the Jaundice.

Tho' this Plant grows easily enough in our Gardens, yet, as Mr. *Dale* observes, our Herb-women generally impose upon us, for it, the Root of the *Lapathum rotundifolium Alpinum*, *C. B.* or, *Hippolapathum rotundifolium vulgare*, *Bastard Rhubarb*, *Park.* which is rather a larger Root of a paler yellow Colour, wanting the reddish Veins, and give a fainter Tincture to the Spittle. *Miller's Bot. Off.*

4. Lapathum; aquaticum; folio cubitali. See BRITANNICA.

5. Lapathum; hortense; latifolium. *C. B. P.* 115. *Boerh. Ind. A.* 2. 85. *Tourn. Inst.* 504. *Rhabarbarum Monachorum.* Offic. *Hippolapathum sativum.* Ger. 313. Emac. 389. Raii Hist. 1. 171. *Lapathum majus sive Rhabarbarum Monachorum.* J. B. 2. 985. *Lapathum sativum sive Patientia.* Park. Theat. 154. *Lapathum sativum Antiquorum aut longifolium sive Patientia.* Munt. Herb. Brit. 198. MONKS RHUBARB.

See *Lapathum, Hortense, folio oblongo.*

This is said to purge off the yellow Bile, and serous Humors, taken in the Quantity of a Dram powder'd, with a Scruple of Ginger, in a Morning fasting, in warm Broth. If substituted for Rhubarb, it must be taken in a double Dose. The Juice of the Root, with Sulphur, used as a Topic, cures the Itch; and with the Meal of Lupines, it cures Pimples, Freckles, the Alphus, and other cutaneous Disorders, according to *Matthiolus*. A Tincture of the Root prepared with Wine, or the dry'd Powder taken in pure Wine, is said to expel the Stone from the urinary Passages; and, taken with the Juice of the Horehound, it is recommended for the Jaundice.

6. Lapathum; ramis procumbentibus; seminis involucro dentato; foliis inferioribus instar fidium. *M. H.* 2. 580.

7. Lapathum; folio acuto, plano. *C. B. P.* 115. *Tourn. Inst.* 504. *Boerh. Ind. A.* 2. 85. *Lapathum acutum, Oxylapathum.* Offic. *Lapathum acutum.* Ger. 311. Emac. 388. Raii Hist. 1. 175. Synop. 56. *Lapathum sylvestre angustifolium.* Schrod. 4. 90. *Lapathum acutum majus.* Park. 1214. *Lapathum acutum sive Oxylapathum.* J. B. 2. 983. Munt. Herb. Brit. 209. SHARP-POINTED DOCK.

Mr. *Ray* mentions this Dock as that in common Use; but 'tis certain, that the Dock which is commonly used in the Shops, and which has, I believe, been always used, is the common Dock, or the *Lapathum sylvestre folio suborotundo*, *C. B.* or the *vulgatius*, or *common Dock*, *Park.* whose Leaves are sometimes sharp-pointed, and sometimes round. As for the *Lapathum acutum* of Mr. *Ray*, it seems to be the *Lapathum acutum minus* of *John Bauhine*, according to his Description; and the *Hydrolapathum minus*, *Park.* and of *Lobel's* Icons, which has a small Root full of small Strings at the Bottom, and is seldom or never used. But the Root of the common Dock is pretty large and thick, running down deep into the Earth, brown on the Outside, and having a thick, deep-yellow, and sometimes a little reddish Bark, with a thick, tough, hard Pith in the Middle, of a paler Colour. The Leaves are pretty large, in some Plants long and sharp-pointed, in others broad and round, growing on long Foot-stalks. It grows to be a Yard or more in Height, much branched, having the Flowers, which are small and stamineous, set about the Branches in Whorles, with here and there a few smaller Leaves growing among them: The Seed is of a bright reddish brown Colour, and a triangular Shape. It grows every-where in moist Places, and among Ruins and Rubbish. The Root and Seed are used.

The Roots of this Dock are aperitive and cooling, and much used to cleanse and purify the Blood, free it from its salt sharp Humours, and they are good for the Scurvy, Rheumatism, and all manner of itchy, scabby Eruptions; for which Purpose they are frequently put in Diet-drinks and Apozems, and used outwardly in Ointments. The Seed is drying and binding, good to stop Spitting of Blood, and Hæmorrhages of all Kinds. *Miller's Bot. Off.*

Willis recommends the Roots of this Dock in a Diet-drink, as a most excellent Antiscorbutic. And they are said by others to be effectual in a Jaundice. The Seeds, taken in Powder, corroborate the Liver, and stop all Sorts of Fluxes.

8. Lapathum; folio acuto, crispo. *C. B. P.* 115. *M. H.* 2. 579. *Lapathum, acutum, crispum* J. B. 2. 988.

Tabernæmontanus's Figure is very good. It is strange, that *Morison* should confound the *Lapathum folio acuto, crispo, C. B. Pin.* with the *Lapathum aquaticum minus*, *J. B.* and that he should not apprehend, that this last Species is the *Pusillum fontilapathum, & Lapathiolum vocatum tenellum*, *Adv. Pena* and *Lobel* affirm; that their Plant has its Leaves more narrow than the *Potamogeton*. *J. Bauhine* relates their Description, which ends thus; *folia angustiora multo quam Potamogetonis*: And adds afterwards, that *Pena* and *Lobel* have called it *Pusillum fontilapathum, & Lapathiolum vocatum tenellum*. *Morison*, on the contrary, to *folia angustiora multo quam Potamogetonis*, adds, *Pusillum fontilapathum, & Lapathum tenellum vocati*, comparing this Plant with itself. *J. Bauhine* is by no means excusable, for having confounded the *Fontilapathum* of *Lobel* with the *Hydrolapathum minus* of the same Author: These two Plants are represented very distinctly in *Lobel*.

The Root of this Plant is very bitter, astringent, pale, yellow, and gives a pretty deep Tincture of red to blue Paper; its Leaves are sourish, and give the same Paper a lively Tincture of Red, which gives Reason to conjecture, that they contain more acid Salt; and that the Root has more acid Salt and Earth. This acid Salt approaches to that of Nitre; for it does not blacken the Tincture of Galls, any more than that of Sorrel. The Root of Dock is generally used at *Paris* in Broths, and aperitive Ptisans. For Example, they scrape two Ounces of it, and boil in lean Broth, in which, having strain'd it, they dissolve half a Dram of chalybeated soluble Tartar; they boil, also, two Ounces of the same Root, and as much of the Enula Campana, in two Quarts of Water; they add to it, at last, a Stick of Liquorice; they strain the Ptisan, and dissolve in it one Dram of vegetable Salt. They give several Glasses of it every Day, to those who have the Itch, Tetters, or other Diseases of the Skin; it is very good for the St. *Antony's* Fire, Heat of the Blood, and for the Small pox. The Root bruised is apply'd to Ulcers on the Legs, and is an Ingredient in the Ointment for the Itch: They boil for that Use in a very little Water, and a good deal of Butter, four Ounces of the Root of this Plant, and as much of that of Enula Campana, minced small; they strain them thro' a Sieve, and mix an Ounce and an half of Flowers of Sulphur, with six Ounces of the strain'd Liquor. *Martyn's Tournefort.*

9. Lapathum; minimum. *C. B. P.* 115. *M. H.* 2. 579. *Lapathum acutum minimum.* J. B. 2. 985.

10. Lapathum; folio longissimo, crispo.

11. Lapathum; folio acuto, rubente. *C. B. P.* 115. *Raii Hist.* 1. 174. *Synop.* 56. *Hist. Oxon.* 9. 579. *Boerh. Ind. A.* 2. 85. *Tourn. Inst.* 504. *Lapathum sanguineum.* Offic. Park. 1226. *Lapathum sativum sanguineum.* Ger 313. Emac. 390. *Lapathum sanguineum sive Sanguis Draconis Herba.* J. B. 2 988. Munt. Herb. Brit. 211. BLOODWORT.

It is cultivated in Gardens, and flowers in *June*. The Leaves and Seeds are used in Medicine. The Leaves, taken in Broth, loosen the Belly; and the Seeds powdered, and taken in any astringent Liquor, are recommended as effectual for stopping too profuse menstrual Discharges, and other uterine Fluxes. *Dale* from *Camerarius*.

12. Lapathum; annuum; acutum; polyſpermum.
13. Lapathum; ſylveſtre; folio ſubrotundo; ſeminis involucris dentatis. *M. H.* 2. 580.
14. Lapathum; anguſtifolium; capſulis verticillatis; pendulis; elegantèr dentatis.
15. Lapathum; folio ſplendente, latiſſimo; ſeminum involucris planis.
16. Lapathum; *Ægyptium*; capſula ſeminis alba & crenata. *Lippii.*
17. Lapathum; Orientale; Frutex humilis; flore pulchro. *T. C.* 38.
18. Lapathum; Africanum; ſpinoſum; latifolium. *H. M.* 102. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 84.

Lapathum is, alſo, a Name for ſeveral Sorts of SPINACHIA; which ſee.

Lapathum unctuoſum, a Name for the *Chenopodium*; *folio triangulo.*

LAPE, λάπη. The *Latin* Interpreters of *Hippocrates* uſually tranſlate this, *Pituita*, Phlegm; ſuch a Fluid as is diſcharg'd from the Mouth by way of Salivation.

LAPIDILLUS. The Name by which *Blaſius* calls a ſort of chirurgical Spoon, with which Stones are taken out of the Bladder, after the Inciſion is made.

LAPILLATIO. A Term in *Paracelſus*, importing the Generation of a Stone.

LAPIS	ADAMAS	See	ADAMAS.
	ÆTITES		ÆTITES.
	ALABASTRITES		ALABASTRUM.
	ALECTORIUS		ALECTORIA.
	AMETHYSTUS		AMETHYSTUS.
	AMIANTHUS		AMIANTUS.
	ARENOSUS		AMMITES.
	ARMENUS		ARMENUS.
	ASIUS		ASSIUS.
	BELEMNITES		BELEMNITES.
	BEZOAR OCCIDENTALIS		BEZOAR.
	BEZOAR ORIENTALIS		BEZOAR.

Lapis Bononienſis, Phoſphorus Bononienſis, Spongia Solis, Lapis Lucidus. Mont. Exot. 14. *Lapis Bononienſis.* De Laet. 206. Charlt. Foſſ. 20. Worm. Muſ. 46. *Lapis illuminabilis.* Aldrov. Muſ. Metall. 688. *Phoſphorus Kircheri quibuſdam. Foſforo o Pietra lucida di Bologna.* Bocc. Obſ. Nat. 224. BONONIAN PHOSPHORUS, LIGHT-CARRIER.

This is a ſmall, grey, ſoft, gloſſy, fibrous, ſulphureous Stone, about the Bigneſs of a large Walnut; when broken, having a kind of cryſtal or ſparry Talc within; found in the Neighbourhood of *Bologna*, or *Bononia*, in *Italy*; and, when duly prepared, making a Species of Phoſphorus.

This Stone is found in divers Parts of that Country; particularly in a River at the Foot of Mount *Palermo*, where a Chymiſt, one *Vincenzo Caſciarlo*, having gather'd ſome Pieces, and carried them home, in hopes, by the Fire, to extract Silver out of them; inſtead of what he expected, found that admirable Phenomenon they exhibit; which conſiſts in this, that having been expoſed to the Light, they retain it; and ſhine, for the Space of ſix or eight Hours, in the Dark.

We are inform'd in the *Philoſophical Tranſactions*, that the true Way of preparing this Stone is loſt.

But we are inform'd in the *Hiſtory of the Royal Academy of Sciences*, for 1715. in M. *Homberg*'s Eloge, that this great Chymiſt recover'd it.

It is eſteem'd cauſtic, eſcharotic, and emetic.

LAPIS	BUFONITES	See	BUFONITES.
	CALAMINARIS		CADMIA.
	CALCARIUS		CALCARIUS.
	CARNEOLUS		CARNEOLUS.
	CERATITES		UNICORNU FOSSILE.
	CHELIDONIUS		CHELIDONIUS.
	CHRYSOLITHUS		CHRYSOLITHUS.
	COLUBRINUS		COBRA DE CAPELLO.
	FULMINARIS		CERAUNIA.
	GALACTITES		GALACTITES.
	GEODES		GEODES.
	GRANATUS		GRANATUS.
	HÆMATITES		HÆMATITIS.
	HELIOTROPIUM		HELIOTROPIUM.
	HIBERNICUS		TEGULA HIBERNICA.
	HYACINTHUS		HYACINTHUS.
	JUDAICUS		JUDAICUS LAPIS.
	LAZULI		LAZULI.
	LYNCIS		BELEMNITES.
	MANATEA		MANATI.
	MELITITES		MELITITES.
	MEMPHITES		MEMPHITES.
	MOLARIS		MOLARES.
	MOROCHTHUS		MOROCHTHUS.
	NEPHRITICUS		NEPHRITICUS.
	OPHITES		OPHITES.
	PETRACORIUS		PETRACORIUS.
	PHRYGIUS		PHRYGIUS.
	PORCINUS		HYSTRIX.
	PUMEX		PUMEX.
	RUBINUS		CARBUNCULUS.
	SAPPHIRUS		SAPPHIRUS.
	SARDUS		CARNEOLUS.
	SCHISTUS		SCHISTUS.
	SELENITIS		SELENITIS.
	SERPENTINUS		COBRA DE CAPELLO.
	SMARAGDUS		SMARAGDUS.
	SPECULARIS		SPECULARIS LAPIS.
	SPONGIÆ		SPONGIÆ LAPIS.
	STELLARIS		ASTROITES.
	THRACIUS		THRACIUS LAPIS.
	THYITES		THYITES.
	TOPASIUS		CHRYSOPASIUS.

Lapis variolatum, Offic. Ind. Med. 95. *Variolites Lucernenſis niger variolis, ſeu puſtulis variolis ſimillimis, partim albeſcentibus, partim verò puniceis, & quaſi jam ad ſiccitatem tendentibus undique inſignitus.* Lang. Hiſt. Lapid. 40. *Variolites Lucernenſis niger.* Ejuſdem Icon. 41. THE SMALL-POX STONE.

This Stone is by ſome recommended to be worn about the Neck, by way of Amulet, in order to promote the Eruption of the Small-pox.

Lapis Umbrarum. See UMBRA.

There are, alſo, many chymical Preparations, which go by the Name of *Lapis*: Thus ſeveral Cauſtics have the Appellation of *Lapis Infernalis*; ſee CAUSTICA: And the *Lapis Prunellæ* is the *Sal Prunellæ*. Beſides many others, mention'd under their reſpective Articles.

Lapis Vini is Tartar.

LAPPA *major, & minor.* See BARDANA.

LAPPAGO, according to *Blancard*, is the ſame as APARINE.

LAPPULA CANARIA. A Name for the *Caucalis; arvenſis; echinata; magno flore*: And for the *Caucalis; arvenſis; echinata; latifolia.*

LAQUEUS, in Surgery, is a Nooſe, and belongs either to Bandages, or Inſtruments for making Extenſion, in Fractures and Luxations. *Oribaſius* has a Book expreſly upon this Subject. A certain malignant Inflammation of the Tonſils, is called *Laqueus Gutturis.*

LARBASON. *Stibium*, or Antimony. *Pliny, Lib.* 33. *Cap.* 6.

LARDUM. Bacon. This appears to be in general an extremely improper and unwholſome Aliment, eſpecially for People who do not uſe the moſt ſtrong Exerciſe; for thoſe who do, may almoſt eat any thing without Injury. Beſides that Swines-fleſh, conſider'd as an Aliment, is none of the beſt, for Reaſons given under the Articles ALCALI, and PORCUS, when harden'd by Salt, and dried by Smoke, it is render'd more indigeſtible, and, in conſequence of that, productive of Obſtructions in a very great Degree. We may add, that the Fat of Bacon frequently becomes rancid and acrimonious, and hence has no ſalutary Effect upon the Stomach, and often even excoriates the Mouth and Throat.

LARIX.

The Characters are;

The Leaves (which are long and narrow) are produced out of little Tubercles, in form of a Painter's Pencil, (as in the Cedar of *Libanus*) but fall off in Winter. The Cones are ſmall and oblong, and (for the moſt part) have a ſmall Branch growing out of the Top; theſe are produced at remote Diſtances from the Male Flowers on the ſame Tree: The Male Flowers are (for the moſt part) produced on the under Side of the Branches, and, at the firſt Appearance, are very like ſmall Cones.

Boerhaave mentions two Species of this Plant; which are,

1. Larix; Orientalis; fructu rotundiori, obtuſo. See CEDRUS.

2. Larix. *Offic. Ger.* 1183. *Emac.* 1385. *Raii Hiſt.* 2. 1405. *Park. Theat.* 1533. *C. B. P.* 493. *Boerh. Ind. alt.* 2. 180. *Larix folio deciduo conifera.* J. B. 1. 265. Tourn. Inſt. 586. THE LARCH-TREE.

This is a Tree as large as the Pine, having its Branches growing in a regular Order like the Fir, with its Leaves in Cluſters, twenty or thirty together, in a round Knot, appearing like the Bruſh of a Pencil, and falling off every Year; the Cones are oval, about as big as a Pigeon's Egg, with broad and ſmooth Scales. This Tree grows in great Plenty in the *Stirian Alps*, and the Mountains of *Tirol* and *Carinthia*. From this Tree, cut into the very Heart, towards the lower Part of the Trunk, according to *Matthiolus*, is gotten the *Venice* Turpentine. See TEREBINTHINA VENETA.

LARVA. A Maſk. Certain Bandages contrived for the Face are thus called. See FASCIA.

LARUS. Offic. *Larus major.* Aldrov. Ornith. 3. 62. *Larus Hybernus.* Balen. *Larus major Aldrovandi.* Will. Ornith. 261. Raii Ornith. 351. Ejusd. Synop. A. 129. *Larus fuscus seu Hybernus.* Ejusd. 130. Will. Ornith. 266. THE CODDY-MOODY.

The Brain, Heart, and Stomach, are used in Medicine. The Brain, dried, cures an Epilepsy, according to *Cælius Aurelianus.* The Heart is said to facilitate Delivery; and the Stomach to help Digestion. *Dale.*

LARYNGOTOMIA. Laryngotomy. The same as *Bronchotomia.* See ANGINA.

LARYNX.

The Larynx forms the Protuberance in the upper and anterior Part of the Neck, called, commonly, *Pomum Adami*: Anatomists term it, the Head of the Trachea Arteria; and it is larger, and more prominent, in Men than in Women.

It is principally made up of five Cartilages, the Names of which are, *Cartilago Thyroides*, which is the anterior and largest; *Cricoides*, the inferior, and Basis of the rest; two *Arytenoides*, the posterior and smallest; and the *Epiglottis*, which is above all the rest: These Cartilages are connected together by Ligaments, and they have, likewise, Muscles, Glands, and Membranes, belonging to them.

The *Cartilago Thyroides* is large and broad, and folded in such a manner as to have a longitudinal Convexity on the fore Side, and two lateral Portions, which may be term'd *Alæ*. The upper Part of its anterior middle Portion is form'd into an angular Notch; the upper Edge of each *Ala* makes an Arch, and, together with the middle Notch, these two Edges resemble the upper Part of an Ace of Hearts, in playing Cards.

The lower Edge of each *Ala* is more even, and the posterior Edges of both are very smooth, being lengthened out both above and below by Apophyses, which I name the *Cornua* of the Thyroide Cartilage. The superior Apophyses are longer than the inferior, and the Extremities of all the four are rounded like small Heads; which, in the inferior Apophyses, have a shining Surface on the Inside, resembling an articular Eminence.

On the Outside of each *Ala*, near the Edge, is a prominent oblique Line, which runs from behind forward. The upper Extremity of this Line is near the superior Apophysis, or Cornu, and both that and the lower Extremity end in a small Tuberosity, the lowest being often the most considerable. These Tuberosities serve for the Insertion of Muscles and Ligaments. The Inside of the *Alæ*, and the convex Side of the anterior Portion, are very uniform; and this Cartilage ossifies gradually in old Age.

The *Cricoide Cartilage* resembles a kind of thick, irregular Ring, very broad on one Side, and narrow on the other; or it may be compared to a small Portion of a thick Tube, cut horizontally at one End, and very obliquely at the other. I distinguish it into a Basis and Top, into an anterior, posterior, and two lateral Sides. The Basis is almost horizontal, when we stand; and to this the *Aspera Arteria* is connected, so that the *Cricoides* may be looked upon as the upper Extremity of the *Trachea*.

The posterior Portion of the *Cricoides* is larger than the rest, and its posterior or convex Side is divided by a longitudinal Eminence, or prominent Line, into two distinct Surfaces, for the Insertion of Muscles. The Top is gently sloped above this prominent Line, and terminates on each Side by a kind of obtuse Angles, formed between it and the oblique Edge of each lateral Portion of this Cartilage. At the upper Part of each of these Angles there is a very smooth articular Surface, gently convex.

The whole posterior Side is distinguished into two lateral Portions, by two prominent Lines, each of which runs down almost in a strait Direction from the articular Surface at the Top, a little below the Middle of this Side, where it terminates in another articular Line, a little concave; and near these four articular Surfaces there are small Tubercles. The two superior Surfaces are for the Articulation of the *Cartilagines Arytenoidææ*, as we shall see presently; and the two inferior, for the Articulation of the inferior Cornua, or Appendices, of the *Cartilago Thyroides*.

The *Cartilagines Arytenoidææ* are two small, equal, and similar Cartilages, which, joined together, resemble the Spout of an Ewer, and they are situated on the Top of the *Cricoides*. In each we may consider the Basis, Cornu, two Sides, one posterior and concave, the other anterior and convex, and two Edges, one internal, the other external, which is very oblique. The Bases are broad and thick, and have each a concave articular Surface, by which they are joined to the *Cricoides*.

The *Cornua* are bent backward, and a little toward each other. In some Subjects they are very loose, appearing like true Appendices, and easily separable from the rest. Between their inner Edges they form a kind of Fissure, and their outer oblique Edges terminate each by a thick prominent Angle.

The *Epiglottis* is an elastic Cartilage, nearly of the Figure of a Purslane-leaf, narrow and thick at the lower Part, thin and slightly rounded at the upper Part, gently convex on the fore Side, and concave on the back Side. It is situated above the anterior or convex Portion of the *Cartilago Thyroides*; and its lower Extremity is tied by a short, pretty broad, and very strong Ligament, to the middle Notch in the upper Edge of that Cartilage. It is perforated by a great Number of Holes, something like those in the Leaves of the *Hypericum*, or *St. John's Wort*, which are hid by the Membranes which cover its two Sides.

The *Cartilago Thyroides* is connected to the *Cricoides*, by several short, strong Ligaments, round the Articulations of the two inferior Cornua with the lateral articular Surfaces of the *Cricoides*. The Apices of the superior Cornua are fixed to the posterior Extremities of the great Cornua of the *Os Hyoides*, by slender round Ligaments, about a Quarter of an Inch in Length.

In the Middle of each of these Ligaments, we often meet with a small Cartilage of an oval Figure, and much thicker than the Ligaments. The *Thyroides* is likewise connected to the *Os Hyoides*, by a short, broad, strong Ligament, one End of which is inserted in the superior Notch of the Cartilage, and the other in the lower Edge of the Basis of the Bone. It has, also, two Ligaments in the middle of the concave Side, which belong to the *Arytenoidææ*.

The *Cricoides* is tied to the lower Part of the *Thyroides*, by a strong Ligament; and by the Ligaments already mentioned, to the inferior Cornua of that Cartilage. Its Basis is fixed to the first cartilaginous Ring of the *Trachea Arteria*, by a Ligament exactly like those by which the other Rings are connected together; and the membranous or posterior Portion of the *Trachea* is, likewise, fixed to the posterior Part of the Basis of the *Cricoides*.

The *Cartilagines Arytenoidææ* are connected to the *Cricoides* by Ligaments, which surround their Articulations with the Top of that Cartilage. Anteriorly, the Basis of each *Arytenoides* is fixed to one End of a ligamentary Cord, which, by its other End, is inserted about the Middle of the concave Side of the anterior Portion of the *Thyroides*. At their Insertions in the *Thyroides*, these two Ligaments touch each other; but a small Space is left behind them, where they are fixed in the two *Arytenoides*; and they seem, likewise, to have a small Adhesion to the Top of the *Cricoides*. This is what is called the *Glottis*.

Under these two ligamentary Cords there are two others, which run, likewise, from behind, forward. The Interstice between the superior and inferior Cords on each Side forms a transverse Fissure, which is the Opening of a small membranous Bag, the Bottom of which is turned outward; that is, toward the *Ala* of the *Thyroides*. These two *Sacculi* are the Ventricles mentioned by the Antients, and restored by M. *Morgagni*, who has given an excellent Description of them. They are principally formed by a Continuation of the internal Membrane of the *Larynx*, and the inner Surface of their Bottom appears sometimes to be glandulous.

On the anterior Surface of the *Arytenoide Cartilages* there is a small Depression between the Basis and the convex upper Part. This Depression is filled by a glandulous Body, which not only covers the anterior Surface of each *Arytenoides*, but is, also, extended forward, from the Basis, over the posterior Extremity of the neighbouring ligamentary Cord. They are larger, and more sensible, in some Subjects than in others; and they are covered by the Membrane which lines the neighbouring Parts. These Glands were discovered by M. *Morgagni*.

I have already described the Ligaments which connect the *Epiglottis* to the Notch of the *Thyroides*, and to the Basis of the *Os Hyoides*. These two Ligaments, and a third, which ties the Basis of the *Os Hyoides* to the Notch of the *Thyroides*, form a triangular Space, filled with a cellular or pinguious Substance, and with small Glands.

The *Epiglottis* has, also, two lateral Ligaments, by which it is connected to the *Arytenoides*, all the Way to their Points or *Cornua*. It has, also, a membranous Ligament, which, running along the Middle of its anterior or concave Side, ties it to the Root or Basis of the Tongue. This Ligament is only a Duplicature of the Membrane which covers the *Epiglottis*, continued to the neighbouring Parts. Lastly, there are two lateral membranous Ligaments belonging to it, fixed near the glandulous Bodies called *Amygdalæ*.

The *Epiglottis* is not only perforated by the regular Holes already mentioned, but has, likewise, a great Number of small irregular Scissures and Breaks, which are so many different *Lacunæ*, situated between its two Membranes, and filled with small Glands, the excretory Orifices of which are principally on the back Side of this Cartilage.

The *Larynx* gives Insertion to a great Number of Muscles, which may be divided into Common, Proper, and Collateral. The Common Muscles, according to the general Acceptation of the Term, are all those which move the whole Body of the *Larynx*, one Extremity of them being inserted in the other Parts; and these are four in Number, two on each Side, and are named

Sterno-thyroidæi,
Thyro-Hyoidæi, or *Hyo-thyroidæi.*

The Proper Muscles are those inserted wholly in the *Larynx*, and which move the Cartilages separately. These have been divided

divided in various Manners, but may all be reduced to the following Pairs;

Crico-thyro-hyoidæi
Crico-arytenoidæi Laterales.
Crico-arytenoidæi Posteriores.
Thyro-arytenoidæi.
Arytenoidæi.
Thyro-epiglottici.
Aryteno-epiglottici.
Hyo-epiglottici.

By the Collateral Muscles, I understand those which are inserted by one Portion in the Larynx, without appearing to contribute any thing to the Motions of it. Of this Kind are the Thyro-pharyngæi and Crico-pharyngæi.

The Larynx may, also, be moved by Muscles which are not immediately inserted in it, but altogether in other Parts: Such are the Mylo-hyoidæi, Genio-hyoidæi, Stylo-hyoidæi, Omo-hyoidæi, Sterno-hyoidæi, and especially the Digastrici of the lower Jaw, by reason of their particular Adhesion to the Os Hyoides. It is, also, probable, that those Muscles of the Pharynx, which are inserted in the Basis Cranii, may, in certain Circumstances, move the Larynx in some small Degree.

The Sterno-thyroidæi are two long, flat, narrow, thin Muscles, like Ribbands, broader above than below, and situated along that Part of the Neck which lies between the thyroide Cartilage and the Sternum. They are covered by the Sterno-hyoidæi; and they cover the thyroide Glands, passing immediately before them.

Each Muscle is fixed, by its lower Extremity, partly in the superior Portion of the inner or back Side of the Sternum, partly in the Ligament and neighbouring Portion of the Clavicula, and partly in the cartilaginous Portion of the first Rib. Sometimes it runs a great Way down on the first Bone of the Sternum, and crosses the Muscle on the other Side. From thence it runs up, on the Aspera Arteria, close by its Fellow; passes before the thyroide Glands, over the cricoide Cartilage; and is inserted, by its upper Extremity, in the lower Part of the lateral Side of the thyroide Cartilage, and partly along that whole Side. I have found this Muscle double, one distinct Portion of it being inserted into the Basis, and the other laterally.

The Thyro-hyoidæi, or Hyo-thyroidæi, are two flat thin Muscles, lying close by each other, between and above the former. Each of them is inserted, by its upper Extremity, partly in the Basis, and partly in the neighbouring Part of the great Cornu of the Os Hyoides, and, by its lower Extremity, in the lower Part of the lateral Side of the Thyroide Cartilage, immediately above the superior Extremity of the Sterno-thyroidæus; and both this superior Extremity of the last-named Muscle, and the lower Extremity of the Thyro-hyoidæus, are, at their Place of Union, confounded a little with the Thyro-pharyngæus inferior.

The Crico-thyroidæi are two small Muscles, situated obliquely at the lower Part of the thyroide Cartilage. They are inserted, by their lower Extremities, in the anterior Portion of the cricoide Cartilage, near each other, and, by their superior Extremities, laterally in the lower Edge of the thyroide Cartilage, at a Distance from each other: By this oblique Situation they represent a *Roman* V.

Each of these small Muscles is, in a manner, double, its upper Extremity inserted in the thyroide Cartilage being, in some Subjects, very broad, and divided into two Portions, one anterior, and the other more lateral, and more oblique. They may, also, be easily separated into two distinct Muscles, whereof one may be called *Crico-thyroidæus anterior, sive Internus*; the other *Lateralis, sive Externus.*

The two Musculi Crico-arytenoidæi posteriores are situated posterioly, at the large or back Portion of the Cricoides, filling almost the two longitudinal Surfaces of that Portion, and distinguished by the prominent Line between these two Surfaces already mentioned. Each of them runs up obliquely, and is inserted, by its upper Extremity, in the posterior Part of the Basis of the arytenoide Cartilage of the same Side near the Angle of that Basis.

The two Crico-arytenoidæi Laterales are small, and situated more laterally than the former. Each Muscle is fixed, by one End, to the Side of the broad Part of the Cricoides, and, by the other, to the lower Part of the Side of the neighbouring Arytenoides.

The two Thyro-arytenoidæi are very broad, each Muscle being situated laterally between the Thyroides and Cricoides. It is fixed, by a broad Insertion, in the Inside of the Ala of the thyroide Cartilage; and the Fibres, contracting from thence, run from before, backward; and from below, upward, towards the neighbouring arytenoide Cartilage, in which they are inserted, from the Glottis to the Angle of the Basis. In some Subjects, these Muscles cover almost both Sides of the Glottis.

The Arytenoidæi are small Muscles, lying on the posterior concave Sides of the arytenoide Cartilages. Dr. *James Douglas*, in the first Edition of his Treatise on the Muscles, divided them into two Kinds, one of which he called *Arytenoidæi majores*, and the other, *Arytenoidæi minores*; and it must be owned, that there is some Variety in different Subjects. I shall here confine myself to what I have most frequently and most distinctly observed; and that is, that there are two Crucial Arytenoidæi, and one Transverse.

The crucial Muscles run each obliquely from the Basis of one arytenoide Cartilage, to the middle and upper Part of the other, the Left Muscle covering the Right, as is observed by M. *Morgagni*, in his first *Adversaria*.

I look upon these Muscles as superior Crico-arytenoidæi; because I have always found them partly inserted in the upper neighbouring Portion of the Cricoides. The Arytenoidæus Transversalis is inserted, more or less directly, by both Extremities, in the two arytenoide Cartilages; and this I look upon as the true Musculus Arytenoidæus.

The two Thyro-epiglottici cross the Thyro-arytenoidæi, being inserted in the inner lateral Part of the Thyroides, and laterally in the Epiglottis.

The Aryteno-epiglottici are small fleshy Fasciculi, each of which is fixed, by one Extremity, in the Head of one of the arytenoide Cartilages, and by the other in the nearest Edge of the Epiglottis.

I never had the Opportunity of examining the Hyo-epiglottici in very muscular Subjects; and, therefore, I am not sure, that the Fibres, which go from the convex Side of the Basis of the Os Hyoides, to the convex Side of the Epiglottis, are really fleshy.

The Larynx serves particularly to admit and let out the Matter of Respiration; and the Solidity of the Pieces, of which it is composed, hinders not only external Objects, but, also, any hard thing, which we swallow, from disordering this Passage. The Glottis, being a narrow Slit, modifies the Air which we breathe, and, as it is very easily dilated and contracted, it forms the different Tones of the Voice, principally by means of the different Muscles inserted in the Cartilagines Arytenoidææ, to which the other Muscles of the Larynx, both proper and common, are Assistants.

The whole Larynx is, likewise, of Use in Deglutition, by means of its Connection with the Os Hyoides, to which the digastric Muscles of the lower Jaw adhere; which Muscles raise the Larynx, together with the Os Hyoides, every time we swallow.

The Facility of varying and changing the Tone of the Voice depends on the Flexibility of the Cartilages of the Larynx, and decreases in proportion as we advance in Age; because these Cartilages gradually harden and ossify, though not equally soon in all Persons; and this Change happens, not only to the Cartilago Thyroides, but also to the Cricoides and Arytenoides.

The Musculi Sterno-thyroidæi serve, in general, to pull down the thyroide Cartilage, and the whole Larynx along with it. They may, also, assist the Sterno-hyoidæi in its Actions, and compress the thyroide Gland. The Thyro-hyoidæi may, as Occasion requires, either draw up the Larynx toward the Os Hyoides; or draw that Bone downward toward the Cartilago Thyroides.

It is difficult to determine the Use of the Crico-thyroidæi, from their Situation. They may either pull the Cricoides obliquely backward, or the Thyroides obliquely forward; and, by this Action, the inferior Cornua of the Thyroides, and small articular Surfaces of the Cricoides, must slide upon each other.

Both the lateral and posterior Crico-arytenoidæi may separate the arytenoide Cartilages, and thereby open or dilate the Glottis; but they do not both perform this Action in the same manner; the lateral Muscles separate these Cartilages obliquely forward, and, at the same time, loosen or relax the Sides of the Glottis; but the posterior Muscles separate them obliquely backward, and, at the same time, stretch or extend the Sides of the Glottis; and, when both Muscles act equally, they separate the Cartilages directly.

The Thyro-arytenoidæi, acting together, draw both the arytenoide Cartilages forward, and, consequently, loosen the Glottis, and render it capable of the smallest Quaverings of the Voice. They may, also, probably compress the lateral Sinuses or Ventricles of the Larynx, and, also, the arytenoide Glands.

The Arytenoidæi bring the arytenoide Cartilages close together, and press them against each other; and, when the Cartilages are in this Situation, they may, at the same time, be inclined either forward by the Thyro-arytenoidæi, or backward by the Crico-arytenoidæi posteriores. By this means the Glottis, when shut, may be either relaxed or tense, and, in this last Case, it is entirely shut, as when we hold in our Breath, in straining.

The general Use of the Epiglottis is to cover the Glottis like a Penthouse, and thereby hinder any thing from falling into it when we eat or drink; and for this Purpose it is depressed. It also serves to hinder the Air, which we inspire, from rushing directly upon the Glottis; but, by splitting it, as it were, obliges it to enter it by the Sides, or in an oblique Course. The Muscles of the Epiglottis do not appear to be absolutely necessary for that Cartilage; for in Deglutition it may be sufficiently depressed by the Basis of the Tongue, and it may raise itself again by its own Elasticity. The Thyro-epiglottici and Aryteno-epiglottici may serve to shut any lateral Openings, that might remain when

the Epiglottis is depreſſed by the Baſis of the Tongue; and the Hyo-epiglottici may pull it a little forward in ſtrong Reſpirations, as in Sighing, or Yawning. *Winſlow's Anatomy.*

LASANON, λάσανον, is a Trivet for culinary Uſes. But *Heſychius* explains it, a ſort of Cloſe-ſtool: And in *Hippocrates*, *Lib. de Superfœtatione*, it ſeems to import a Chair, or Stool, contrived for a Woman in Labour to ſit in, in ſuch a manner, that the Weight of the Child, when born, may help to bring away the Secundines.

LASCIVUS is an Epithet in *Paracelſus* for the *Chorea Sancti Viti*, St. *Vitus*'s Dance.

LASER. The Juice of the LASERPITIUM. See SILPHIUM.

LASERPITIUM.

The Characters are;

The Root is perennial, large, acrid, and lacteſcent; the Leaves are broad, large, and more or leſs lobated; the Petals of the Flowers are ſhaped like an Heart, expanded, narrow below, and broad above; the Top of the Ovary, below the Placenta, ends in Teeth, which ſuſtain, like a ſhort Calyx, a large white Placenta; the Seed is gibbous, furniſhed with four foliaceous Wings in longitudinal Directions, which are either flat or curled.

Boerhaave mentions ſixteen Species of this Plant; which are,

1. Laſerpitium; foliis latioribus, lobatis, nigrioribus; ſemine plano.

2. Laſerpitium; foliis latioribus, lobatis. *Tourn. Inſt.* 324. *Boerh. Ind. A.* 61. *Thapſia Officinarum.* Chom. 64. *Gentiana alba.* Offic. *Libanotis Theophraſti minor.* Ger. 857. Emac. 1010. Park. Theat. 931. Raii Hiſt. 1. 427. *Libanotis latifolia altera, ſive vulgatior.* C. B. P. 157. *Libanotis Theophraſti quorundam, ſive Seſeli Æthiopicum, Matthiolo Cervicaria alba.* J. B. 3. 164. THE LESSER HERB FRANKINCENSE OF THEOPHRASTUS.

It is found on the Mountains of *Switzerland*, and the *Pyrenees*, and flowers in *July*. The Root is ſaid to be alexipharmic, and good in uterine Diſorders. *Dale.*

3. Laſerpitium; majus; Alpinum; foliis rotundioribus. *T.* 324.

4. Laſerpitium; foliis amplioribus; ſemine criſpo. *T.* 324.

5. Laſerpitium; humilius; Paludapii folio; flore albo. *T.* 325.

6. Laſerpitium; humilius; Paludapii folio; flore purpuraſcente. *T.* 325.

7. Laſerpitium; foliis anguſtioribus, ſaturatius virentibus. *M. U.* 28. 64. *Laſerpitium lobis anguſtioribus, ſaturate virentibus & lucentibus, ſemine criſpo.* M. U. Elench. Tab. IV. *Laſerpitium, lobis anguſtioribus ſaturate virentibus.* M. H. 3. Sect. 9. Tab. XIX. No. 8. *Laſerpitium, e regione Maſſiliæ allatum.* J. B. 3. 2. 137. *Laſerpitium Gallicum.* C. B. P. 156. LASER-WORT.

It is cultivated in Gardens, and flowers in the Summer. The Root is uſed, which is heating, and recommended againſt Sugillations, ſtrumous Swellings, Tubercles, iſchiadic Pains, and Excreſcences about the Anus. It is ſaid to repreſs Venereal Inclinations. *Dale.*

8. Laſerpitium; lobis anguſtioribus, dilute virentibus, plurifariam diviſis. *M. U.* 64. 28. *M. Bloeſ.* 278. *M. H.* 3. 321.

9. Laſerpitium; folio anguſto, multifido; flore albo; alis ſeminum planis.

10. Laſerpitium; latifolium; non ſinuatum. *T.* 324.

11. Laſerpitium; anguſtifolium; non ſinuatum, ſemine criſpo.

12. Laſerpitium; ſelinoides; ſemine criſpo. *T.* 324.

13. Laſerpitium; anguſtifolium; umbella contracta & concava. *T.* 324. *Schol. Bot.* 167.

14. Laſerpitium; tenuifolium; lobis obſcure virentibus. *Plukn. Phyt.* 198. *Fig.* 4.

15. Laſerpitium; foliis anguſtis, nigricantibus, multifidis; flore purpuraſcenti, alis ſeminum planis.

16. Laſerpitium; Orientale, folio mei; flore luteo. *T. C.* 23. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 61.

LASION, λάσιον, in *Hippocrates*, *Prædict. Lib.* 2. ſignifies Rough, or Hairy. *Laſion* is expounded, by *Galen*, a Linen Cloth, that is, one which is rough and villous.

LASSITUDO. Laſſitude. See COPOS.

LASTAURUS. One abandoned to Venereal Pleaſures. *Caſtellus* from *Caſp. Rejes.*

LASUR, in *Paracelſus*, is what he calls the tranſplanted Extract from Silver.

LATER. A Brick. Theſe are of ſome Uſe in Medicine, being frequently heated, and applied to various Parts; or they are laid on Cataplaſms, in order to preſerve a perpetual Heat.

The Oil of Bricks, otherwiſe called *Oleum Philoſophorum*, is thus prepared:

Let hot Bricks be quenched in Oil of Olives, until they have imbibed all the Oil; and then let them cool, and the Oil be drawn from them by a Retort, and ſeparated from the Spirit.

LATERA-LICTRO. Quickſilver. *Rulandus.*

LATERALIS MORBUS. The Pleuriſy.

LATERUM. A Lixivium. *Rulandus.*

LATHYRIS. A Name for the *Tithymalus*; *latifolius*, *Cataputia dictus.*

LATHYRUS.

The Characters are;

The Ovary, cover'd with a membranaceous Vagina, becomes a round or compreſſed Pod, with ſometimes a cylindrical, and ſometimes angular Seed. It hath a compreſſed Stalk with a raiſed Rib, and a leafy Border; and has only one Pair of Leaves, which terminates in a Tendril.

Boerhaave mentions nineteen Species of this Plant; which are,

1. Lathyrus latifolius. *C. B. P.* 344. *Tourn. Inſt.* 395. *Boerh. Ind. A.* 2. 41. *Lathyrus.* Offic. *Lathyrus major latifolius.* Ger. Emac. 1229. Raii Hiſt. 1, 894. Synop. 3. 319. *Lathyrus major perennis.* Park. Theat. 1061. *Lathyrus major latifolia, flore majore, purpureo, ſpecioſior.* J. B. 2. 303. *Clymenum Dioſcoridis quibuſdam.* PEAS EVERLASTING, or CHICHLING VETCH.

It grows in Woods and Thickets, and flowers in the Summer. The Juice expreſſed from the whole Plant, together with the Root, is uſed in Medicine. This, when drank, is ſaid to be effectual againſt Vomiting of Blood, and the Cœliac Paſſion, and to reſtrain Hæmorrhages of the Uterus, and from the Noſe. The Leaves and Pods, bruiſed, and applied to Wounds, promote their Cicatrization.

2. Lathyrus; latifolius; minor; flore majore. *Ind.* 158.

3. Lathyrus; major, Narbonenſis; anguſtifolius. *J. B.* 3. 304.

4. Lathyrus; diſtoplatyphyllos; hirſutus; mollis; magno & peramœno, flore odoro.

5. Lathyrus; Tingitanus; ſiliquis Orobi; flore amplo ruberrimo. *M. H.* 2. 55.

6. Lathyrus; arvenſis; repens; tuberoſus. *C. B. P.* 344. *Terræ Glandes.* Dod. p. 550. *Arachidna Theophraſti.* Col. 1. 304, 305. Deſcr. 301. Ic. *Glans Terræ & Pſeudo-apios.* H. Eyſt. Æſt. o. 13. F. 13. Fig. 5. *Chamæbalanus leguminoſa.* J. B. 1. 17. 324.

Fuchſius, being willing to accommodate himſelf to *Dioſcorides*'s Deſcription of the Apios, would have the Leaves of this Plant reſemble thoſe of Rue. I believe *Pena* and *Lobel* have confounded our *Lathyrus* with the *Bulbocaſtanum*; for they ſay not only, that its Roots are aſtringent, and have the Taſte of Cheſnuts, but, alſo, that it is found at *Colmars* in *Provence*. Now I have found only the Bulbocaſtanum about this Town, the Roots of which the People eat raw, or boiled, and call it *Piſſagous. Martyn's Tournefort.*

7. Lathyrus; ſylveſtris & dumetorum flore luteo. *Boerh. Ind. A.* 2. 42. *Lathyrus ſylveſtris, flore luteo.* Park. Theat. 1062. Ger. Emac. 1231. *Lathyrus luteus ſylveſtris dumetorum.* J. B. 2. 304. Raii Hiſt. 1. 894. Synop. 3. 320. *Lathyrus ſylveſtris luteus foliis Viciæ.* C. B. P. 344. Tourn. Inſt. 395. EVERLASTING TARE.

This grows in Woods and Thickets, flowering in *June*. The Herb is uſed as an Aſtringent. *Dale* from *Monti.*

8. Lathyrus; Hiſpanicus flore luteo.

9. Lathyrus; anguſtifolius; lepto-macrolobus; ſemine rotundo; flore rubello. *M. H.* 2. 55.

10. Lathyrus; latifolius; flore gilvo.

11. Lathyrus; anguſtifolius; ſiliqua alata; vexillo cœruleo, alis variegatis. *Ind.* 159.

12. Lathyrus; ſativus; flore & fructu albo. *C. B. P.* 343. Lathyrus, ſive Cicercula. *Dod.* 522.

13. Lathyrus; anguſtifolius; ſemine maculoſo. *C. B. P.* 344.

14. Lathyrus; anguſtifolius; ſemine maculoſo, minori.

15. Lathyrus; folio tenuiore; floribus rubris. *J. B.* 2. 308.

16. Lathyrus; anguſtifolius; ſemine maculoſo, fuſco minore.

17. Lathyrus; ἀμφικάρπος; ſupra & infra terram ſiliquas gerens. See ARACHYDNA.

18. Lathyrus; Orientalis; flore vix conſpicuo.

19. Lathyrus; luteus; latifolius. *Bot. Monſp. Boerh. Ind. alt. Plant. Vol.* 2. *p.* 41.

LATHYRUS, VICIOIDES. A Name for the *Clymenum Hiſpanicum*; *flore vario*; *ſiliqua plana:* And for the *Clymenum*; *Hiſpanicum*; *flore vario*, *ſiliqua articulata.*

LATIBULUM is uſed by *Theodorus Craanen* for the Fomes, or Matter, exciting a Fever.

LATICA. A continual quotidian Fever, without any Intermiſſion.

LATISSIMUS DORSI. This is a broad, thin, and moſtly fleſhy Muſcle, lying between the Axilla, where it is very narrow, and the Back, by which it expands itſelf by radiated Fibres, both in Length and Breadth, from the Middle of the Back, all the Way to the lower Part of the lumbar Region; and from this Situation it has its Name.

Its Inſertions, without reckoning that in the Arm, are partly tendinous, and partly fleſhy. In the firſt Place, it is ſometimes, but not always, fixed in the inferior Coſta of the Scapula, near

the Angle, by a Fasciculus of fleshy Fibres. In the next Place, it is fixed by an Aponeurosis, in the spinal Apophyses of the six, or seven, and, sometimes, eight lowest Vertebræ of the Back, in those of all the Vertebræ of the Loins, in the superior Spines and lateral Parts of the Os Sacrum, and the external Labium of the posterior Part of the Os Ilium.

Besides all this tendinous Course, it is inserted by fleshy Digitations in the last four false Ribs. These Digitations cover those of the Serratus inferior Posticus, and mix with those of the Obliquus externus Abdominis, there being sometimes Fasciculi of Fibres common to both Muscles. It is not always fixed to the lowest false Rib; and sometimes that Insertion is by a particular kind of Aponeurosis, which is pretty strong. I have, also, seen it fixed to the first false Rib by a very small, thin Digitation.

From all these Insertions the Fibres of this Muscle tend in different Directions to the Arm. At the middle of the Back they are almost transverse, and they become more and more oblique, as they descend. Towards the Region of the Loins their Obliquity decreases again, and on the Ribs they are almost longitudinal. As they run up, they contract in Breadth, and under the Axilla they terminate in a flat Tendon, turned almost in the same manner as that of the Pectoralis major, but more simply, and without any Adhesion between the two Planes. The upper Edge of this flat Tendon is turned inward, answering to the lower or lateral Part of the Muscle; and the lower Edge, which hides the other by crossing a little over it, answers to the upper or posterior Part of the Muscle.

The Tendon, thus formed, is fixed in the Os Humeri, a little below the small superior Tuberosity, in the inner Edge of the bony Groove or Chanel, the Cavity of which it also lines, by a transverse smooth Expansion, nearly as is done by the Tendon of the Pectoralis Major from the other Edge; so that these two Tendons, meeting by their Extremities in the Groove, appear, in some measure, to be continued with each other: I say, in some measure; because the Tendon of this Muscle is not so broad as that of the Pectoralis Major.

The Tendon of the Latissimus Dorsi is accompanied by another flat Tendon, belonging to the Teres Major; but it is inserted higher up than that other Tendon, and nearer the Chanel, so that the lower Edge of the Tendon of the Latissimus Dorsi may be said to encroach on the upper Edge of the other Tendon. These two Tendons communicate by some collateral Fibres, and are both strengthened by the same ligamentary Frænum, which runs down from the Insertion of the Subscapularis, below that of the Teres major.

This Muscle is covered by the Trapezius, from the sixth to the last Vertebra of the Back, and covers the Serratus inferior Posticus. Its Aponeurosis is, at first, narrow, but increases in Breadth as it descends between the Vertebræ, and Os Ilium. It adheres strongly to that of the Serratus inferior Posticus, and still more to the Transversalis Sacro-lumbaris and Longissimus Dorsi. This Muscle, together with the Pectoralis Major, forms the Cavity of the Axilla.

The Latissimus Dorsi serves, in general, to bring down the Arm, when raised; and this it does principally by its inferior Portion. By the same Portion, and by the Connection of the Scapula with the Os Humeri, it serves to depress the Shoulder, or to maintain it in that Situation, against any Force that endeavours to raise it; as when we lean upon the Elbow, in Sitting, or walk upon Crutches.

By its dorsal Insertion, by the Passage of its Tendon on the Inside of the Os Humeri, and by its Insertion in the fore Side of that Bone, it may turn the Arm round its Axis, called Rotation, by Anatomists; as it happens, when, having bent the fore Arm, we turn it behind our Back.

By its Insertion in the Crista of the Os Ilium, and in the false Ribs, it becomes necessary to raise the Head laterally on one Side, when we lie on the other: For the Shoulder being then depressed, and brought near the Thorax, the Clavicle becomes the fixed Point of one or two of the Muscles, which raise the Head in this Situation. Any Person may make the Experiment in Bed, by lying at full Length on his Side; for if, when he raises his Head in this Posture, he lay his Hand on the anterior Edge of this Muscle, he will find it considerably stretched, and, also, that this Tension ceases, whenever he ceases to lift his Head.

The Connection of this Muscle with the false Ribs is the Cause of that Uneasiness which we find in breathing, when the Arm is pulled strongly downward, to press upon any thing; as when we seal a Letter, or lean upon a short Cane, the fore Arm being extended.

The small Portion, inserted in the inferior Angle of the Scapula, may be an Assistant to the Teres Major.

This Muscle sustains the Weight of the whole Body, when, with the Arms raised, we hang by the Hands; as when we grasp the Branch of a Tree, in climbing.

It performs the same Office, when we either sit or stand, with the whole Arm more or less extended horizontally, and press the Hand from above downward, against any Resistance; as when we support ourselves in this Situation, by a very long Cane grasped by the Hand; or lay hold of the upper Part of an Halbert, and press the lower End strongly against the Ground.

These last three Uses cannot, however, be well executed by this Muscle alone, without the Assistance of the Pectoralis Major. *Winslow's Anatomy.*

LATON. Brass. It has some other alchemistical Significations, of very little Importance to Medicine.

LATUS PULSUS is a broad Pulse, that is, when the Artery is preternaturally distended at every Pulsation.

LATÆ PUSTULÆ are Pustules, which spread wide at the Base, without rising to a Head.

LAVACRUM. A Bath.

LAVAMENTUM. A Fotus, or Fomentation. *Blancard.*

LAVANDULA.

The Characters are;

The Galea of the Flower is roundish, erect, and generally bifid; the Beard is divided into three almost equal Segments: The Whorles of the Flowers are closely collected into thin slender Spikes at the Tops of the Stalks and Branches: The Plant has a singular fragrant Smell. *Boerh. Ind. alt. Part* 1. *p.* 152.

Boerhaave mentions eight Species of this Plant; which are,

1. Lavandula; latifolia; Indica; subcinerea; Spicâ breviore. *H. R. Par. T.* 198.

2. Lavandula; latifolia. *C. B. P.* 216. *Tourn. Inst.* 198. *Boerh. Ind. alt.* 152. *Lavendula.* Offic. *Lavendula major sive vulgaris.* Park. Theat. 72. Raii Hist. 1: 512. *Lavendula flore cæruleo & albo.* Ger. 467. Emac. 583. *Pseudo-nardus, quæ vulgo Spica.* J. B. 281. *Spica Officinarum German.* GREATER LAVENDER.

This has broader Leaves than the Lavandula; angustifolia; not quite so white or hoary: The Flowers grow upon taller Stalks, and the Spikes are rather larger; but each particular Flower is less. It is planted in Gardens; but is seldom met with in *England.*

It is much of the Nature of the Lavandula; angustifolia; but is never prescribed in the Shops. *Miller's Bot. Offic.*

The Herb and Flowers are in Use, and are of fine Parts, and friendly to the Head and Nerves: It is principally used in Catarrhs, Palsies, Convulsions, the Vertigo, Lethargy, and Trembling of the Limbs; for provoking Urine, and the Menses, and expelling the Fœtus; and for the Gripes, proceeding from Flatulencies: Outwardly it is of Service in Lixivia, for the Head and Members, and in Masticatories. *Dale* from *Schroder.*

3. Lavandula; angustifolia. *C. B. P.* 216. *Tourn. Inst.* 198. *Boerh. Ind. alt.* 152. *Spica Lavandula vulgaris.* Offic. *Lavendula minor sive Spica.* Ger. 468. Emac. 584. Raii Hist. 1. 513. Park. Theat. 73. *Pseudo-nardus quæ Lavendula vulgó.* J. B. 3. 282. COMMON LAVENDER or SPIKE.

The common Lavender is a shrubby Plant, abiding many Years, having a great many woody Branches, thick set with long, hoary, narrow Leaves, two at a Joint, which are round-pointed, and broadest at the End; from among these spring several square Stalks, having but few Leaves upon them, and those narrower than the lower, bearing, at the Tops, long verticillated Spikes, of blue, galeated, and labiated Flowers, set in hoary Calyces: It grows wild in the Southern Parts of *France* and *Spain*; but is cultivated with us only in Gardens, and flowers in *July.* This is the Lavender which grows every-where in our Gardens, and is commonly used, the broad-leaved being to be found only in some Gardens of the Curious; though *Gerard, Parkinson,* and even Mr. *Ray,* took the broad-leaved to be our common Lavender.

Lavender is cordial and cephalic, good for all Diseases of the Head and Nerves; helps Convulsions, the Palsy, and Weakness of the Limbs; is good to expel Wind from the Stomach and Bowels, and prevents the Colic. It is outwardly used in warming and strengthening Fomentations. *Miller's Bot. Offic.*

Spiritus Lavendulæ Compositus.

Compound Spirit of Lavender.

Take Flowers of Lavender, one Gallon; pour upon them four Gallons of *French* Brandy, and thereunto add fresh Flowers of Sage, Rosemary, and Betony, of each one Handful; of Borrage, Bugloss, Lilies of the Valley and Cowslips, of each two Handfuls; of the Leaves of Baum, Feverfew, and of the Orange-tree, fresh-gather'd, or the Flowers of Stœchas, Oranges, and Bay-berries, of each one Ounce: Digest these together, and draw off in Balneo Mariæ, two Gallons and an half: Then add of the outer Bark of Citrons, and of yellow Sanders, of each six Drams; of Cinnamon, Nutmegs, and Mace, of the lesser Cardamom-seeds, and Cubebs, of each half an Ounce; of Aloes-wood, one Dram: Digest these for twenty-four Hours, and filtre the Spirit; then, if it be thought proper, add of Musk, Ambergrise, and Saffron, of each half a Scruple; red Roses dried, and

red

red Sanders, of each half an Ounce. Let the Species be tied up in a thin Bag, and ſuſpended in the Spirit.

The Sweets are here left at Diſcretion, becauſe in many Purpoſes they are diſagreeable to the main End of the Compoſition; proving to ſome particular Conſtitutions the oppoſite to a Cordial, or a Cephalic, which this Medicine is in the higheſt Degree. This has long been celebrated in all nervous Caſes, and is now greatly uſed in the Shops. In the Decays of Age, and convulſive or apoplectic Shocks, ſuch as bring on Palſies, and Loſs of Memory, this is of very good Service, and has been ſo much remarked for ſuch Efficacy, as almoſt univerſally to obtain the Name of Palſy-drops: It may be taken from twenty to one hundred Drops at a time: The beſt way is upon Sugar, and letting it gradually diſſolve in the Mouth; becauſe, by that means, it ſoaks more immediately into the Nerves, and has a much greater Effect on the Spirits, than when it is diluted by any Vehicle, and carried with it into the Stomach.

4. Lavandula; anguſtifolia; flore albo. *C. B. P.* 216.
5. Lavandula; folio diſſecto. *C. B. P.* 216.
6. Lavandula; folio diſſecto; flore albo.
7. Lavandula; folio longiori, tenuius & elegantius diſſecto. *T.* 198. *Commelin. Rar.* 27.
8. Lavandula; maritima; Canarienſis; ſpicâ multiplici, cœruleâ. *Plukn. Alm. Phyt. T.* 303. *Fig.* 5. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 152.

The *Hiſtoria Plantarum*, aſcribed to *Boerhaave*, gives the following Account of Lavender. The Plant takes its Name *a lavando*, from Waſhing or Bathing, becauſe it was uſed in Baths, on account of its Fragrancy; or becauſe all the Species were Ingredients in Lyes, in order to give a ſweet Smell to Linen; or enter'd the Compoſition of the beſt *Lavacra*, or Waſhes for the Face, in order to render it ſhining and fragrant: It is, alſo, called *Spica*, Spike; becauſe, among all the verticillated Plants, this alone bears a Spike: Many call it *Nard*; and, perhaps, this is the true Nard of the Antients, which I ſhall not diſpute, ſince we cannot arrive at any Certainty in the Matter.

It is the chief of all the cephalic Plants, being very comfortable and reviving, under Faintings and Languiſhments of the Brain and Heart; whence it is very proper in Lethargies, Apoplexy, Palſy, and Epilepſy. Preparations of it are a ſimple Water, Spirit, and a precious Oil: It is recommended in Diſorders incident to Virgins. The Conſerve of the Flowers is a moſt noble Remedy againſt cephalic Diſeaſes, raiſing the cold and languiſhing Spirits; but, in hot Diſorders, it is prejudicial. The Plant is an Emmenagogue, and a potent Promoter of the Lochia, after the Birth. To prepare the Conſerve, gather the Flowers in a fair Morning, and bruiſe them with an equal Quantity of dry Sugar, and reſerve the ſame in Gallipots. The Plant being an Evergreen, it is beſt to gather it when freſh; for then it has the greateſt Virtue. All the Lavenders have a moſt fragrant, ſweet, and reviving Smell, but a very bitter and penetrating Taſte. The Oil made of this Plant is called Oil of Spike; but the Shops generally make it with Turpentine, impregnated with the Flowers; and the Turpentine has indeed the Smell, but not all the Virtue, of the Flowers communicated to it; and, therefore, ſhould only be called *Oleum Terebinthinæ Spicatum*: But the true Oil of Spike ſhould be made only of the Flowers with Water. That Lavender is far more potent and penetrating, and of greater Efficacy, in cephalic, uterine, and nervous Diſorders, than the Flowers of Roſemary, appears from the Oil of it diſtilled, and from the Salivation excited by the Leaves and Flowers in chewing; whence it is much commended in ſoporific and catarrhous Diſorders. Lavender, given in a Phrenſy, proceeding from an Inflammation, infallibly deſtroys the Patient; but it is good for vertiginous old Perſons, and Diſtempers owing to Dulneſs, and want of Spirits.

That Sort of Epilepſy, which is cauſed by a diſorder'd Impetus of the nervous Fluid, is cured by the Water of the Flowers of Lavender; but this antiepilectic Virtue is utterly loſt in the Decoction or Extract.

If either a Palſy, Lethargy, or Vertigo, ariſe from a cold languid Cauſe, the eſſential Oil of Lavender is a moſt excellent Remedy.

Lavandula; foliis crenatis. A Name for the *Stœchas*; *folio ſerrato.*

LAVARETUS. A River Fiſh, ſomewhat like a Trout, found in the Rivers about *Lyons*, and the Lakes of *Savoy*. *Lemery* recommends it in Diſorders of the Breaſt, and for a Conſumption.

LAVARONUS. A Sea Fiſh, which is very like the Lavaretus, found in the *Mediterranean Sea*, and called, alſo, *Cabaſſonus Maſſilienſium*, and *Capaſſonus Genuenſium*. *Lemery* informs us, that it is good for the Stomach, reſtorative, and nouriſhing. Certain ſmall Stones are found in the Head, which, taken powder'd, are recommended as aperitive, and good for the Gravel.

LAVATERA takes its Name of the Phyſician *Helveticus Lavaterus*, the Friend of Monſieur *Tournefort*, upon which account *Tournefort* ſo intitled it.

The Characters are;

The Leaf, Flower, Style, and Cup of the Flower, have the Appearance of a Mallow: The Style becomes a Fruit, which is armed in Front with a hollow Shield; the Seeds, which are ſhaped like a Kidney, growing to the inner Part.

The Species are;

1. Lavatera; folio & facie Althææ. *Tourn.*
2. Lavatera; folio & facie Althææ; flore albo.
3. Lavatera; Africana; flore pulcherrimo. *Boerh. Ind. Miller's Dictionary, Vol.* 1.

LAVATIO. Bathing; or a Bath.

LAUCANIA, *λαυκανία*, or *λευκασία*. The Throat, or Oeſophagus.

LAUDANUM. This ſeems to be a barbarous Word, introduced by ſome of the enthuſiaſtical Chymiſts, derived from *Laus*, Praiſe, and importing the Medicine, thus call'd, to be worthy of Praiſe. The Word is generally apply'd to Preparations of Opium, either in a liquid, or ſolid Form. The *Laudanums*, directed in the College Diſpenſatory, are, the *Laudanum*, the *Laudanum liquidum Sydenhami*; and the *Laudanum liquidum Tartarizatum.*

The *Laudanum*, commonly called the *London Laudanum*, is thus prepared.

Take of Theban Opium, extracted with equal Parts of Spring-water, one Ounce; of Saffron, extracted in the ſame manner, one Dram and an half; of Caſtor, one Dram: Let all theſe be diſſolved in a Tincture made with half an Ounce of the Species Diambræ, without the Perfumes, and Spirit of Wine; and put into it ten Drops of the Oil of Nutmegs: Laſtly, evaporate the Whole into a Maſs over a Bath-heat.

It may be given from one to four Grains, either in a Pill, or diſſolved in a Draught. Many prefer this to any liquid Form, becauſe the Doſe cannot ſo eaſily be determined by ſo many Drops, as by ſo much Weight; for Drops may contain more or leſs, according to the Shape of the Phial they are dropt from, and the Slowneſs of their Drain; beſides the Uncertainty of a Menſtruum ſuſtaining juſt ſuch a Quantity of Opium. This Medicine is very ready to grow too dry in the Shops, and, alſo, mouldy; both which may be prevented by a very ſmall Portion of Salt of Tartar in its Compoſition, and proportioning the Doſe ſo much larger accordingly. This is what is almoſt always ordered in the preſent Practice; and, therefore, the Shops are never without it: The *Laudanum liquidum Sydenhami* is deſcribed under the Article DYSENTERIA.

Laudanum liquidum Tartarizatum, tartarized liquid Laudanum, is thus prepared.

Take of Opium, two Ounces; of Saffron, one Ounce; of Cinamon, Cloves, Mace, Nutmegs, and Aloes-wood, each one Dram; Tincture of the Salt of Tartar, two Pints: Digeſt for ſome Days, then ſtrain the Liquor, and evaporate it to half its Quantity.

This is among *Shipton's Additamenta* to the laſt College Diſpenſatory, and is by many eſteemed for the Tartar, which is judged to open the Body of the Opium, ſo that it more freely gives its Tincture, and makes it not ſo adheſive and agglutinating. It, alſo, differs little from what *Wilſon* has in his Courſe of Chymiſtry.

A great Variety of Laudanums are delivered by different Pharmaceutic Writers; and *Quincy*, a good Judge of Compoſitions, gives us the following *Laudanum Balſamicum*, Balſamic Laudanum.

Take of Opium, in Extract, two Ounces; Liver of Sulphur, four Ounces; Extract of Saffron, and Liquorice, of each one Ounce; Flowers of Benjamin, half an Ounce; Balſam of *Peru*, two Drams: Mix them by a very gentle Warmth, ſo as juſt to ſtir in the Flowers of Benjamin, in a clean Panakin. If the Extracts are too ſoft, boil or ſimmer them up a little higher, before the Benjamin and Balſam of *Peru* are put in.

This, ſays *Quincy*, was communicated to me by a Gentleman of great Worth and Ingenuity in the Study of Medicine, tho' he never made it his Practice; upon whoſe Recommendation I firſt try'd it, and have been encouraged by its great Succeſs to uſe it many Years. I have known it give Liberty of Breath to aſthmatic Perſons, who could not be truſted with any other Kind of Opiates; and enabled ſome Perſons to paſs their Winters here in Town with Comfort, who, without it, would have been forced to fly into the Country for Breath. And, beſides the Service it does to the Lungs, further than the Good it infallibly procures as an Opiate, it is very efficacious in raiſing a Diaphoreſis; and by that means breathes out a great deal from the Muſcles, and remote Parts, which would occaſion rheumatic and arthritic Pains, with many

many other bad Symptoms. Its Dose is from one to ten or twelve Grains.

LAUDANUM LIQUIDUM, CUM CAMPHORA: *Liquid* LAUDANUM, *with Camphire.*

Take of the best Opium, four Ounces; put it into a Matrass, and pour upon it, of Water, eight Pounds: Place it in a digesting Furnace, and keep it scalding hot for three Days; run it thro' a Flannel, and press out all the Liquor, which evaporate to two Pounds, and put by in a Bottle.

Put of choice *English* Saffron, into a Matrass, one Ounce; and pour upon it tartarized Spirit of Wine, six Ounces: Digest them in a gentle Heat, till the Saffron looks pale. Into another Matrass put of Cinnamon, one Ounce; of Cloves, two Drams; Pimento and Ginger, of each one Dram: Pour upon them, also, Spirit of Wine tartarized, six Ounces; and digest for two or three Days. Into a fourth Matrass put half an Ounce of Camphire, moisten'd with a little of the tartarized Spirit of Wine; and let them digest, till the Camphire is dissolved: Press the Tinctures of Saffron and Spices thro' a Flannel, and mix them with the Dissolution of Opium; and pour all into the Matrass, with the dissolved Camphire: Let them stand two or three Days in a gentle Heat, and decant for Use.

This is an excellent Diaphoretic, because the Camphire exerts itself that way. Its Dose is from ten to forty Drops.

A pectoral, sudorific, liquid Laudanum is made in the following manner.

Take of Soap of Tartar, four Ounces; Extract of Opium, two Ounces; Saffron, half an Ounce; Ginger, two Drams: Beat them in a Mortar; and add Balsam of Sulphur, anisated, two Ounces: Grind them till they are well united; put them into a Matrass, and pour upon them, of Sal Volatile Oleosum, half a Pound; and of rectified Spirit of Wine, two Pounds: Let them digest forty-eight Hours in a gentle Heat, often shaking the Matrass; then add of strong distil'd Vinegar, four Ounces; shake the Vessel, and they will ferment a little: When that is over, close the Matrass again; and let it stand three Days and Nights, in a gentle Sand-heat, shaking it as before: When settled, decant the Clear, filtre the Sediment, and put them together into a Bottle.

This is the nearest of any liquid Form to the *Laudanum Balsamicum*; and, therefore, may be prescrib'd in all the like Intentions, where the Patient cannot take a Pill or Bolus; but, for want of Acquaintance with it, this is not in Prescription, or made in the Shops. Its Dose is from ten to fifty or sixty Drops.

Laudanum liquidum, cum Sale Volatili Oleoso, liquid Laudanum, with Sal Volatile, may be thus prepared.

Take of Opium, in Extract, four Ounces; put into a Marble Mortar; grind it with Tincture of Tartar, half a Pound, which must be put to it by little at a time; grind them, till the Opium is well mixed with the Tincture of Tartar; then put them into a Matrass, and add to them of Sal Volatile Oleosum, one Pound; upon which drop, of sweet Spirit of Nitre, half a Dram; shake them well together, which will raise a little Fermentation: When that is over, make a circulating Vessel of the Matrass; lute the Juncture well with the Bladder, and set in a gentle Heat of Digestion six Days, shaking it about every Day; then let it settle, and decant into a clean Vessel, which keep well stopt for Use.

This is more carminative than any of the other Laudanums, and is most agreeable, where there is any Doubt of the Efficacy or Success of an Opiate, being admirably guarded against any Inconvenience. It may be taken from ten to thirty or forty Drops.

LAUDANUM LIQUIDUM, CUM SPIRITU NITRI DULCI: *Liquid* LAUDANUM, *with dulcified Spirit of Nitre.*

Take of the best Opium, two Ounces; which slice, and put into a Matrass with Saffron, one Ounce; add to them sweet Spirit of Nitre, one Pound; invert into the Mouth of the Matrass another Glass; lute it, and set it in Digestion five Days, shaking it about every Day; then let it cool, and drop into it, by degrees, of Sal Volatile Oleosum, an Ounce and an half: When the Fermentation is over, stop and lute it up again, and let it stand three Days longer in Digestion; then let it cool; set it inclining to settle; and then gently decant it into a Phial for Use.

If to this be added, of Juniper-berries, two Ounces, it will be yet more carminative. This is preferred by some as a most certain and excellent Anodyne, and great Expeller of Wind; and it seldom or never offends the Stomach or Bowels, as many other Preparations of Opium do. It may be given to thirty Drops in a Dose.

LAUDANUM LIQUIDUM, CUM SUCCO CYDONIORUM: *Liquid* LAUDANUM, *with Juice of Quinces.*

Take of Opium, two Ounces; *English* Saffron, one Ounce; and of the Juice of Quinces, a Pound and an half: Let the Opium be thin sliced, and with the Saffron be put to the Juice of Quinces in a Glass Body; some add Yeast of Ale to ferment it: Set them in a gentle Heat of Sand, to digest till the Fermentation is over, and the Saffron subsides: Then express the Juice, and let it stand to settle; when it is settled, pour it off by gentle Inclination: Put the Liquor into a Matrass; and add to it two Ounces of Cinnamon; of Cloves, one Ounce and an half; and of *Jamaica* Pepper, one Ounce: Let them be bruised, and put into the Liquor to stand in Digestion fourteen Days: Then again express the Juice, gently evaporate it to a due Consistence, and put it up for Use. Its Dose is from ten to forty or fifty Drops.

This very much resembles the Laudanum of *Helmont*, of which Mr. *Boyle* informs us, in the *Philosophical Transactions*, there are two Sorts; the one used by the elder *Helmont*, the other by his Son. The former was a great Secret, communicated to me (says Mr. *Boyle*) by an expert Chymist; which, because I have not Leave to publish, meeting with *F. M. Baron Van Helmont*, Son to the famous *Johannes Baptista*, I obtained from him some Directions about the Laudanum he uses; which, tho' he confessed, and I soon perceived to be differing from his Father's, yet he seemed to think it not inferior, and more parable.

Take of Opium, a quarter of a Pound; the Juice of Quinces, four Pounds at least. The Opium being cut into very thin Slices, and then, as it were, minced to reduce it into smaller Parts, is to be put into, and well mixed with the Liquor, first made lukewarm, and fermented with a moderate Heat for eight or ten Days, rather more than less: Then filtre it, and, having infused in it of Cinamon, Nutmeg, and Cloves, of each an Ounce, or an Ounce and an half, let them stand three or four Days more; if it be a full Week, it may be so much the better: Then filtre the Liquor once more, having let it boil a Walm or two, after the Spices have been put in. This being done, evaporate away the superfluous Water, to the Consistence of an Extract, or to what other Consistence you please. Lastly, incorporate very well with it, two Ounces of the best Saffron reduced to fine Powder, or as much Extract as can be obtained from that Quantity of Saffron.

According to the Consistence you desire to have your Medicine of, you may order it so, as either to make it up into a Mass of Pills, (in which Form I have caused it to be given) or keep it in a liquid Form; but, in this latter Case, the Evaporation must have been made more sparingly, that after the putting in of the Saffron, or its Extract, it may not grow too thick. In this Form the Dose may be from five or six Drops, to ten or fewer, according to Circumstances; and of the Pills, a somewhat less Quantity is required.

LAUDANUM MERCURIALE PARACELSI.

Take any Quantity of Virgin Mercury, or of Mercury well depurated by Trituration with Vinegar and Salt, or with a Lixivium. Pour upon this a sufficient Quantity of rectify'd Spirit of Nitre, to dissolve it; then evaporate the Spirit of Nitre, as in making the red Sublimate of Mercury, with Aqua-fortis. Thus you will obtain a Precipitate of the Colour of red Poppy-flowers: Pour upon this Precipitate a sufficient Quantity of Alcohol, to rise three Fingers-breadth above it; and digest it for forty Days, or a Philosophical Month, and then the Spirit of Wine will become mucilaginous: Upon this Appearance, gently decant the Spirit of Wine, and draw off the most spirituous Part from a Cucurbit fitted with an Head; an oleous Mass will remain in the Bottom of the Vessel, which distil in a Retort; thus a Part of the Mercury will be revived, and a Portion of it will be pass'd over in the Form of Oil.

Take of this Oil, ten Parts; and of Crocus Solis, (Saffron of Gold) one Part: Digest them till the Oil becomes as red as Blood, which then decant, and place it in the Heat of a Philosophical Furnace, inclosed in a Glass Vessel, hermetically sealed, till they unite into a fix'd Tincture.

The Dose is from one Grain, to three at most. *Collect. Chym. Leydens. C.* 276.

LAUDINÆ, in *Poterius*, are Pills, in which Opium is a principal Ingredient.

LAVENDULA. See LAVANDULA.

LAVER. A Name for the *Becabunga*, Brook-lime. *Blancard.*

LAVIGNON. A small Sea Shell-fish, about the Size of the Mussel. The Fish is esteemed aperitive. The Shell is used in the same Intentions as Crabs-eyes.

LAVIPEDIUM. A Bath for the Feet.

LAURAX. The same as LABRAX.

LAUREOLA. A Name for several Species of THYMELÆA.

LAURIFOLIA *Javanensis*. See MAGOSTANS.

LAURO-CERASUS.

The Characters are;

It hath broad, thick, ſhining, evergreen Leaves, ſomewhat like thoſe of the Bay-tree: The Cup of the Flower is hollow and Funnel-ſhap'd, ſpreading open at the Top, and is divided into five Parts: The Flower conſiſts of five Leaves, which expand in form of a Roſe, having many Stamina in the Centre. The Fruit (which are like thoſe of the Cherry-tree) are produced in Bunches, and the Stone is longer and narrower than that of the Cherry.

Boerhaave mentions but one Sort of this Plant; which is the

Lauro-ceraſus. *Offic. Ger. Emac.* 1603. *Raii Hiſt.* 2. 1549. *J. B.* 1. 420. *Tourn. Inſt.* 628. *Boerh. Ind. A.* 2. 228. *Ceraſus folio Laurino. C. B. P.* 410. *Ceraſus Trapezuntina, ſive Lauro-ceraſus.* Park. Theat. 1518. *Padus exotica folio amplo, craſſo, ſempervirenti.* Rupp. Flor. Jen. 108. LAUREL, or CHERRY-BAY.

This is a Plant too well known to require a Deſcription. The Berries are recommended as good Antiſcorbutics.

Dr. *Madden* communicated to the Royal Society the following curious and uſeful Particulars, relative to the Laurel.

A very extraordinary Accident, which happened at *Dublin* ſome Months ago, has diſcovered to us a moſt dangerous Poiſon, which was never before known to be ſo, tho' it has been in frequent Uſe among us: I mean the Simple-water, diſtil'd from the Leaves of the *Lauro-ceraſus*. It is at firſt of a milky white Colour, but the Oil, which comes over the Helm with it, being in a good meaſure ſeparated from the Phlegm, by paſſing it thro' a Flannel-bag, it becomes as clear as common Water.

It has the Smell of the bitter Almond, or Peach-kernel; and has been for many Years in frequent Uſe among our Houſewives and Cooks, to give that agreeable Flavour to their Creams and Puddings. It has alſo been much in Uſe among our Drinkers of Drams, and the Proportion they generally uſe it in, has been one Part of Laurel-water to four of Brandy.

Nor has this Practice, however frequent, ever been attended with any apparent ill Conſequences, till ſome time in *September* 1728. when it happened, that one *Martha Boyſe*, a Servant, who lived with a Perſon that ſold great Quantities of this Water, got a Bottle of it from her Miſtreſs, who gave it to her Mother *Anne Boyſe*, as a very rich Cordial.

Anne Boyſe made a Preſent of it to *Frances Eaton*, her Siſter, who, being a Shop-keeper in the Town, gave about two Ounces of it to a Woman called *Mary Whaley*, who had bought ſome Goods of her.

Mary Whaley drank about two Thirds of what was filled out, and went away. *Frances Eaton* drank the reſt. *Mary Whaley* went to another Shop to buy ſomewhat elſe, and, in about a quarter of an Hour after ſhe had drank the Water, (as I am inform'd) ſhe complained of a violent Diſorder in her Stomach. She was carry'd home, and, from that time, loſt her Speech, and dy'd in about an Hour, without Vomiting, or Purging, or any Convulſion.

The Shop-keeper, *Frances Eaton*, writ Word to her Siſter *Anne Boyſe*, of what had happened, who came to her upon the Meſſage; and affirmed, that it was not poſſible the Cordial (as ſhe called it) could have occaſioned the Death of the Woman; and, to convince her of it, ſhe filled out about three Spoonfuls, and drank it. She continued talking with *Frances Eaton* about two Minutes longer, and was ſo earneſt to perſuade her of the Liquor's being inoffenſive, that ſhe filled out two Spoonfuls more, and drank it off. She was hardly well ſeated in her Chair, when ſhe died without the leaſt Groan or Convulſion.

Frances Eaton, who, as was before obſerved, had drank ſomewhat above a Spoonful, found no Diſorder in her Stomach, or elſewhere; but, to prevent any ill Conſequence, took a Vomit immediately, and has been well ever ſince.

Mary Whaley was bury'd without being examined by any one, that I can find, except the Coroner. I went to ſee *Anne Boyſe*, about twenty-four Hours after her Death, but could not prevail to have her opened. She was about ſixty Years old; her Countenance and Skin appeared well-coloured, and her Features were hardly altered, ſo that ſhe look'd like one aſleep. Her Belly was not ſwelled, nor had ſhe any other external Mark of Poiſon.

This Accident brought into Diſcourſe another of the like Nature, which happened four Years before, in the Town of *Kilkenny*. The Son of Mr. *Evans*, an Alderman of the Town, miſtook a Bottle of this Laurel-water for a Bottle of Piſan. What Quantity he drank, is uncertain; but he dy'd in a few Minutes, complaining of a violent Diſorder in his Stomach. This Affair was not much regarded at that time, becauſe he laboured under a Diſtemper, to which, or to an improper Uſe of Remedies, his Death was attributed by thoſe about him.

To ſatisfy myſelf farther, as to the Effects of this Poiſon, I, with a few Friends, made the following Experiments.

I. *Octob.* 3. 1728. We gave a large Setting-dog three Ounces of Laurel-water by the Mouth: In three Minutes he began to be ſtrongly convulſed. His Convulſions continued about five Minutes; after which I untied him. He then fell into a moſt violent Difficulty of Breathing, which laſted about eight Minutes, and abated gradually; upon which, he endeavoured to raiſe himſelf, but could not. I ty'd him down again, and gave him an Ounce and an half more; upon which he ſunk at once, and without any Return of his Convulſions, or Difficulty of Breathing, expired in two Minutes.

Upon opening the Stomach, I found in it the whole Quantity of Water which he had taken; its Surface was covered with Froth, but it was not otherwiſe altered in its Colour, Conſiſtence, or Smell. The Inſide of the Stomach was not at all inflamed, nor was there any viſible Alteration in the Tunica Villoſa.

The Veins of the Stomach, all the Meſeraic Veins, and, alſo, the Vena Cava, were much diſtended with Blood; the Arteries, on the contrary, were remarkably empty. The Liver and Gall-bladder were no way altered. The Kidneys were unuſually full of Blood, and appeared of a bluiſh Colour, almoſt as deep as that of the violet Plum. Upon making an Inciſion into one of the Kidneys, the Blood flow'd in much greater Plenty, and was more fluid than uſual. In the Heart there appeared nothing preternatural. The Brain was no way altered.

II. *Octob.* 24. We gave an Ounce and an half of the ſame Water to a Bitch of a ſmaller Size. She was immediately let looſe, and in two Minutes loſt the Uſe of her Limbs. She attempted ſeveral times to raiſe herſelf, and walk; but ſhe ſtaggered and reeled about, and then fell down.

She repeated this, without ceaſing, about five or ſix Minutes. At laſt ſhe was violently convulſed, eſpecially in the Muſcles that extend the Head and Spine. About the Space of a Minute ſhe had that ſort of Convulſion called the *Opiſthotonos*, the Back of her Head being drawn almoſt to her Tail.

After this ſhe vomited plentifully, and her Convulſions ceaſed. She then lay ſtill for ſeven or eight Minutes, labouring for Breath, (but not ſo violently as in the former Caſe) and foaming at the Mouth. We gave her an Ounce more of the Water; upon which her Difficulty of Breathing increaſed, and ſhe dy'd in two Minutes.

Upon opening the Abdomen, Thorax, and Head, we found every thing in the ſame State, as in the former Inſtance.

III. *Octob.* 25. We gave two Ounces of the Water to a Dog of the ſame Size with the former, which produced the like Appearances, as in the foregoing Caſe. This Dog was dying half an Hour; for the Doſe was not repeated, becauſe he did not vomit up what he had taken. Upon opening him, we found every thing in the ſame State, as in the former Inſtance.

IV. *Octob.* 26. We gave two Drams and an half of the Water to a Dog of a middle Size, and immediately unty'd him. He then ran about the Room very briskly for about a Minute, and ſeemed to be no way affected with it; yet he ſoon loſt the Uſe of his Limbs. He often attempted to raiſe himſelf and walk, but ſtill fell down again, before he had mov'd two Yards from the Place.

After this, he vomited plentifully, conſidering that he had faſted twenty-four Hours; upon which, he was ſeized with a Convulſion more violent than any of the former Dogs, eſpecially in the Muſcles which extend the Head and Spine. Theſe Convulſions continued about eight or ten Minutes; upon their ceaſing, he lay ſtill, breathing deeply, tho' regularly, and ſeemed to be aſleep. In about ten Minutes he raiſed himſelf, took ſome Food, and walked about tolerably well. We left him, and, returning after three Hours, found him perfectly recovered.

V. *Octob.* 28. We injected an Ounce of the Water into the Inteſtinum Rectum of a ſtrong Spaniel-dog, and let him looſe. In the Space of two Minutes he began to loſe the Uſe of his Limbs, and to ſtagger, as the others had done. He was convulſed more violently than any of the reſt, and principally in the Muſcles of the Neck and Spine. The Muſcles of his Eyes were ſtrongly convulſed, which Appearance was not obſerved in the other Dogs. He foamed at the Mouth, yelled frequently, and breathed with more Difficulty than any of the reſt. His Convulſions continued twenty Minutes: Upon their ceaſing, he lay quiet, as tho' he ſlept, only his Eyes were open. His Limbs were now grown perfectly paralytic.

We raiſed him ſeveral times, and ſet him on his Legs, but he did not attempt to uſe them. He continued in this way about fifteen Minutes longer, and then was ſeized with another violent Convulſion, which, in five Minutes, put an End to his Life.

Upon opening the Abdomen, we found the Veins of the Stomach and Guts very much diſtended with Blood, as in all the former Inſtances. In the Heart, Lungs, and Brain, there was no viſible Alteration.

VI. *Octob.* 30. We injected an Ounce and an half of the Water, diluted with three Ounces of common Water, into the Anus of a ſmall Bitch. Before we could untie her, ſhe was ſeiz'd with Convulſions, and yelled much. She fell as ſoon as ſhe was looſed, and never after endeavoured to riſe. She had Convulſions, and great Difficulty of Breathing, about two Minutes. She then lay ſtill, with her Limbs ſtiff and extended, about three Minutes; during which time her lower Jaw was convulſed, and pulled alternately to and from the upper Jaw, with a very quick Motion. After this her Limbs became paralytic, and ſhe gaſped for Breath about two Minutes longer. She was quite dead, in ſeven or eight Minutes from the Injection of the Cyſter. In the Abdomen, Thorax, and Brain, every thing appeared as uſual,

VII. *Nov.* 2. We injected half an Ounce of the Water, diluted with three Ounces of common Water warmed, into the Anus of a ſmall Bitch. In the Space of four Minutes ſhe began to breathe with Difficulty. We let her looſe, but ſhe was not able to ſtand, or walk without ſtumbling. The Muſcles which extend the Head, were convulſed; and her fore Legs were affected for three or four Minutes with a Tetanus, but had no convulſive Motion. She vomited and purged plentifully. She did not yell, nor ſeem to ſuffer much Pain, nor did ſhe loſe her Senſes all the time. In half an Hour ſhe recovered.

VIII. The next Day we injected a Dram of the Water into the external Jugular of the ſame Bitch. She was ſeized with Convulſions as violent as the former, before we could untie her. They laſted about five Minutes, after which ſhe recovered gradually, and continued well.

IX. *Nov.* 20. We injected four Ounces of the Water, by the Anus, without any Dilution, into a ſtrong Dog of a middle Size. He was ſeized with Convulſions and Difficulty of Breathing, in leſs than two Minutes after the Injection. He fell to the Ground as ſoon as his Convulſions began, and never once attempted to riſe; nor were his Convulſions in any ſort ſo violent, neither did they continue ſo long, as in the former Inſtances. He bled at the Noſe about four Spoonfuls. The Blood was of a very bright florid Colour. His Convulſions laſted about four Minutes; after which, he became entirely paralytic, and died in three Minutes more. We found the Stomach, Inteſtines, Liver, *&c.* in the ſame State as thoſe above-mentioned. Upon cutting about an Inch from the lower Part of one of the Lobes of the Lungs, the Blood flowed from it in great Plenty, and appeared more florid and fluid than uſual.

X. *Dec.* 14. We gave five Ounces of Laurel-water by Clyſter to a Dog, ſomewhat of the Size and Shape of the *Italian* Grey-hound. He ſeemed at firſt to be no way affected by it, but, in about five Minutes, he began to droop, and loſe the Uſe of his Limbs. He did not once yell or ſtruggle, as the others had done, but ſunk gradually, till he became at laſt entirely paralytic. He had not any Convulſion, except a kind of *Spaſmus Cynicus*, a few Minutes before he died, which happened in half an Hour after the Injection of the Clyſter. Upon opening the Abdomen, we found the Veins much diſtended with Blood; as were, alſo, the Veins and Sinuſes of the Brain.

XI. *Dec.* 19. We gave three Ounces of the Water, in the ſame manner, to a Cur of the Lap-dog Size. He died in ſeven Minutes, without any Convulſion, except a Tetanus in the Muſcles which extend the Head.

The *Lauro-ceraſus* being an Ever-green, and abounding with a warm eſſential Oil, we imagined that other Ever-greens might partake of the ſame poiſonous Quality. Accordingly we made Trial of a Water diſtilled in an Alembic from the Leaves of the Yew-tree, ſo much talked of by the Antients; and whoſe very Shade they ſuppoſed to be fatal to thoſe who ſat or ſlept under it.

XII. We gave three Ounces of this Water by Clyſter to a very ſmall Cur-dog; but he was not in the leaſt affected with it.

XIII. We, alſo, gave, by the Mouth, two Ounces of a Water diſtilled from the Leaves of the Bay-tree to a young Spaniel, without any Effect.

XIV. We afterwards made an Experiment with the diſtilled Water of Box-leaves, which had a very ſtrong narcotic Smell. We injected five Ounces of this Water, by the Anus, into a ſmall Cur-dog; but he was no way affected with it, though we kept him twelve Hours after the Operation.

XV. Being deſirous to know whether the Virulency of Laurel-water proceeded from the Fire in Diſtillation, we poured warm Water upon ſome Laurel-leaves bruiſed, and made a ſtrong Infuſion of them. We poured an Ounce of it down a Dog's Throat, half of which was ſuppoſed to enter his Stomach; and, five Minutes after, another Ounce was given in like manner. The Dog ſeemed to be ſomewhat ſick at his Stomach, but was ſoon as lively as ever. A few Minutes after, another Ounce was given to him by the Mouth, of which we ſuppoſe a fourth Part to have been loſt. He ſoon after ſtared and trembled very much. In five Minutes another Ounce was exhibited, upon which he trembled as before; but, in a little time, he appeared eaſy and lively.

Imagining that theſe ſmall Quantities loſt their Power, during the Intervals of giving them, in ten Minutes after his taking the former Doſe, we poured down his Throat two Ounces and an half at once. He immediately tumbled on his Back convulſed, and tumbled over three or four times, but quickly returned to his Feet. He ſtaggered, his Eyes ſtared, and he ſat down like a Dog that is tired. At length he ſhut his Eyes, his Neck became extended, and we apprehended he was falling into Convulſions; but, inſtead thereof, he vomited a vaſt Quantity of indigeſted Chyle, in which appeared a great Portion of the Infuſion; after which he ſeemed to be perfectly recovered.

In about twenty-five Minutes after this, we gave the ſame Dog, by the Mouth, two Ounces of the Juice expreſſed from Laurel-leaves; and, in about ten Minutes more, another Ounce was given him in the ſame manner. In a few Minutes he began to loſe the Uſe of his hinder Legs, but he quickly recovered them. Upon his taking another Ounce ſoon after the former, he fell into a great Difficulty of Breathing, and yelled much. After this he was ſeized with very ſtrong Convulſions, which affected his lower Jaw and hinder Legs moſt remarkably.

In about five Minutes theſe Convulſions were ſucceeded by an entire Reſolution of all the Limbs. He breathed with great Difficulty, and very ſlowly. No Appearance of Expiration. Sometimes we obſerved two Attempts at Inſpiration, without Intermiſſion, or cloſing of the Mouth. At other times there was near a Minute between two Inſpirations.

After this he was ſeized with a Trembling in his Limbs, and, in about three quarters of an Hour from his taking the laſt Ounce, he died without any ſtruggling, with his Tail extended.

Dr. *Rutty* informs us, that Bole, Vinegar, and Milk, were given to a Dog which had ſwallowed ſome of the Laurel-water. The Bole and Vinegar were not obſerved to do much Good, but the Dog which drank the Milk, recover'd without any bad Symptoms; but, at that Diſtance of Time, the Doctor could not recollect the Proportions which were given: He thinks, a Pint of Milk.

There are other Hiſtories of Experiments made with Laurel-water upon Dogs, which are much to the ſame Effect. *Philoſ. Tranſact. Abr. Vol.* 7. *p.* 365.

LAURO-SERRATÆ, *odoratæ*, and the *Laurus, non odorata*, are Names given to the *Euonymo affinis*; *Æthiopica*; *ſempervirens*; *fructu globoſo, ſcabro*; *foliis ſalicis rigidis, ſerratis*.

LAURO-SIMILIS. See LAURUS.

LAURUS.

The Characters are;

It hath a Flower conſiſting of one Leaf, which is ſhaped like a Funnel, and divided into four or five Segments; the Male Flowers, which are produced on ſeparate Trees from the Female, have eight Stamina, which are branched into Arms; the Ovary of the Female Flowers becomes a Berry, incloſing a ſingle Seed within a horny Shell, which is cover'd with a Skin.

Boerhaave mentions twelve Species of this Plant; which are,

1. Laurus; Indica. *Hort. Farneſ. Ald.* 61. *Cinnamomum, ſpurium.* Vulgò.

2. Laurus; latifolia; *πλατύφυλλος*, Dioſcoridis. *C. B. P.* 460. *Tourn. Inſt.* 597. *Boerh. Ind. alt.* 2. 215. *Raii Hiſt.* 2. 1690. *Laurus latifolia.* Offic. *Laurus major ſive latifolia.* Park. Theat. 1488. THE BROADER-LEAVED BAY-TREE.

It agrees in Virtues with the common Bay-tree. *Dale.*

3. Laurus; latifolia; Fœmina.

4. Laurus; vulgaris. *C. B. P.* 460. *Tourn. Inſt.* 597. *Boerh. Ind. alt.* 2. 216. *Laurus.* Offic. Ger. Emac. 1407. Park. Parad. 598. J. B. 1. 405. Raii Hiſt. 2. 1688. *Laurus minor.* Park. Theat. 1488. *Laura mas & fœmina.* Ger. 1222. THE COMMON BAY-TREE.

This grows to be a Tree of a moderate Bigneſs in its native Climate; but here, with us, it is lower, and runs out into many Branches; the leſſer Twigs being uſually of a reddiſh-brown Colour, as are, alſo, the Footſtalks of the Leaves, which are oblong, broadeſt in the Middle, and ſharp-pointed at the End; firm, hard, and ſtiff, of a darker Green above, and paler underneath, of a pleaſant ſtrong Scent: The Flowers grow in Cluſters upon the younger Branches, among the Leaves, each conſiſting of a whitiſh monopetalous Flower, divided into five Segments; theſe are followed by oval Berries, included in a black thin Skin, and parted in two in the Middle. It is planted in our Gardens, but grows wild in *Italy*, *Spain*, and the Southern Parts of *France*, and flowers in *May*; the Berries are ripe in *October*: The Leaves and Berries are uſed.

They are both heating and drying, emollient and reſolving; very good for Wind in the Stomach and Bowels; help the Colic, comfort the Head and Nerves, and are good againſt infectious Diſtempers: They provoke Urine, and the Menſes, and expel the Secundines. Outwardly they are uſed in warming and ſtrengthening Fomentations and Ointments.

Officinal Preparations are the Electuary of Bay-berries, the Plaiſter of Bay-berries, and the Oil of Bays. *Miller's Bot. Off.*

The Laurus has an heating Quality in its Leaves, Bark, and Berries. *Dioſcorides* makes it an Emollient, and *Galen* a Drier. Hence a Decoction of them, eſpecially of the Leaves, is very proper for an Inſeſſion, in Diſeaſes of the Uterus and Bladder: The green Leaves, bruiſed and applied, heal the Stings of Waſps, Bees, and Hornets, and reſiſt the Poiſon of Serpents; particularly, the Seps, Dipſas, and Viper: Boil'd in Oil, they are of Service, as *Pliny* ſays, for promoting the Catamenia; the tender Leaves, bruiſed with Polenta, are effectual for Inflammations of the Eyes; bruiſed with Rue, they mitigate Inflammations of the Teſtes; and with Oil of Roſes, or Oil of Iris, they eaſe the Headach. But *J. B.* thinks, we ought to be cautious of uſing the Leaves in Inflammations; and is, therefore, of Opinion, that, inſtead of *Inflammationes* [Inflammations], we ought to read *Inflationes* [Inflations]. The Leaves bruiſed with Honey are good in Aſthmas; but the Bark of the Root is to be avoided by pregnant Women. The Root taken to the Weight of half a Dram, in ſweet-ſcented Wine, breaks the Stone, and is good for the Liver. The Leaves, taken in a Potion, oppreſs the Stomach,

and

and excite Vomiting. In the *Greek* Text of *Dioſcorides* we read, πραΰνει τὸν στόμαχον, "mitigates the Stomach;" for which *Cornarius* reads βαρύνει, "oppreſſes." That there is an Error in one of the two Members of the Clauſe, is certain, from their Repugnance, [πραΰνει τὸν στόμαχον, καὶ ἐμέτους κινεῖ]; but the Miſtake, in *J. Bauhine*'s Opinion, lies not in the firſt, but in the latter of them: For it is certain, he ſays, as well from Experience, as the Authority of *Galen*, that the Laurus is all aromatic and bitteriſh, with ſomewhat of Aſtringency, and friendly to the Liver; which Qualities are ſo far from ſubverting the Stomach, that they rather corroborate that Part, and correct a Nauſea; for which Reaſon it is grown into a Cuſtom, to boil Bay-leaves with ſome Sorts of Meats, eſpecially Fiſh; and ſo far are theſe Leaves from exciting a Nauſea, that they render the Food the more ſavoury and grateful to the Stomach: Therefore he judges the Word κινεῖ, "excites," to have crept into the Text, and ought to be expunged; and that *Pliny* made uſe of a corrupt Copy. But *Salmaſius* ſays, that *Pliny* is at leaſt cotemporary, if not more antient than *Dioſcorides*; and, therefore, both of them tranſcribed from ſome more antient Author thoſe things which are the ſame in both; and, conſequently, ſince both *Pliny* and *Dioſcorides* agree in aſcribing this emetic Quality to the Laurus, it is not to be doubted, but that the laſt Member of the Clauſe ſtands uncorrupted, and that the firſt is wrong, and ought to be corrected by the Help of the other; as it was rightly done by *Cornarius*. Whether the Leaves have really ſuch an emetic Quality, or whether the contrary, appears from Experience. *Gaſpar Hoffman*, having propoſed the Queſtion, Whether Bay-leaves are ſalutary or noxious to the Stomach? anſwers, that he was induced, by a Multitude of Authorities, to believe the latter. Therefore, ſays *Ray*, I conclude, with *Marcellus Virgilius* and *Cornarius*, that for πραΰνει, in *Dioſcorides*, we ought to read βαρύνει. *Dioſcorides* and *Pliny* proceed as follows.

The Berries are more heating than the Leaves, and provoke the Menſes, if bruiſed, and outwardly applied, or taken inwardly: Bruiſed, and made into an Eclegma, with Honey or Balſam, they are good for a Conſumption, the Orthopnœa, and Defluxions on the Breaſt: Taken in Wine, with their Rind peeled off, they are effectual againſt an inveterate Cough; for they concoct and expectorate Phlegm. Thus *Pliny*. At preſent we make no Uſe of the Berries, in Diſeaſes of the Breaſt and Lungs; but exhibit both Berries and Leaves, in Diſorders of the Stomach, Liver, Spleen, and Bladder; for they heat a cold Stomach, promote a Concoction of cold Humours, excite a languiſhing Appetite, and remove a Loathing, open Obſtructions of the Liver and Spleen, provoke Urine and the Menſes, and expel the Secundines. To facilitate the Birth, ſwallow ſeven Bay-berries before Sleep. *Cheſneau*. The Berries taken in Wine thus, are good againſt the Poiſon of Scorpions, and abſterge the Vitiligo. To this *Pliny* adds, that, made into a Litus with Oil, they cure Epinyctides, the Lentigo, running Ulcers, Ulcers of the Mouth, and ſcald Heads; and that the Juice of the Berries cures Itchings of the Skin, and the Phthiriaſis. The expreſſed Juice of the Berries, with old Wine, and Oil of Roſes, inſtilled into the Ears, eaſes their Pains, and helps Deafneſs. No venomous Creature will approach thoſe who are anointed with it: The Berries, taken in Wine, are a Remedy againſt inward as well as outward Poiſons, and reſiſt the Venom of Serpents, Scorpions, and Poiſons: Made into an Ointment with Oil and Vinegar, they are uſed about the Regions of the Liver and Spleen; and, mixed with Honey, they are of Service in Gangrenes. Some adviſe taking an Acetabulum of the Root, green rather than dry, in Water, as a great Accelerator of the Birth. As a Remedy for the Uvula:

Take a Quarter of a Pound of the Berries, and boil them in three Pints of Water to one Third: Which uſe warm, as a Gargariſm.

The Leaves of the Laurus rubbed, and now-and-then ſmelled to, are a Preſervative againſt the Contagion of the Peſtilence; for which Reaſon the Emperor *Commodus*, as *Herodian* writes, in the Time of the Plague, by the Advice of his Phyſicians, wore the Laurus, and retired to Places abounding with the ſame Plant: For Evergreens, according to the Opinion of *Gremb. Cardilucius*, and other Followers of *Helmont*, are Alexiterials againſt the Peſtilence, reſiſt Corruption, and defend themſelves againſt both Heat and Cold: Whence God has plainly ſignified to us, that theſe perennial Plants are always ready at hand, for the daily Uſe of Mankind; for they contain within them a Balſam, preſervative againſt all Corruption.

For Black Cattle affected with the *Coriago*, that is, when they are hidebound, we are adviſed, by *Columella*, to boil Bay, and foment their Backs with the warm Decoction, and to take up the Skin every-where, and to ſtretch it, which is beſt done in the open Air, and under the fervent Rays of the Sun.

Oil of Bay is often mention'd by the Antients and Moderns; one Sort is expreſſed from the freſh Berries bruiſed, another is prepared of the Berries bruiſed, or entire, and put into boiling-hot Water, and ſuffered to bubble up; the Oil which ſwims on the Water, is afterwards collected into Veſſels. Another Oil is extracted by Diſtillation, in the following manner: Take of Bay-berries, two Pounds; bruiſe them, and pour upon them three or four Pints of warm Water; after they have ſtood for ſome time, diſtil them in an Alembic, or by a Worm, by which means you will obtain an Oil and Water, which are to be ſeparated by the Tritorium: There is alſo an Oil of Bay which is prepared of the Leaves or Berries boiled in *Oleum Omphacinum*, or Oil of unripe Olives.

Oil of Bay is heating, mollifying, opens the Pores, and removes Laſſitudes; it is of Service in all nervous Diſorders, Pains of the Ears, and Diſtillations. It is an excellent Remedy for Diſeaſes of the Kidneys, contracted from Cold, being rubbed on the Parts; and relieves the Patient, if any thing will do it. Its heating Quality cauſes it to be uſed in the Paiſy, Convulſions, Sciatica, Sugillations, inveterate Pains of the Head, Diſtillations, and Diſeaſes of the Ears: The Method is to heat it in the Calyx of a Pomegranate, and then anoint the affected Part with it. In a Pain of the Colon it is of admirable Service, being injected in a Clyſter, as it is, alſo, in the Horror, or ſhaking Fit of a Fever; but in hot and bilious Temperatures, it is to be avoided. It deſtroys Worms, Lice, Nits, and other Vermin: In ſhort, it is effectual in cold Diſtempers, but principally, if uſed outwardly; for, inwardly taken, it excites a Nauſea.

Schroder ſays of the diſtilled Oil, that it is an excellent Diſcuſſer of Flatuſes and Ventoſities, eſpecially in pregnant Women ſubject to convulſive Diſorders, and, alſo, in the Colic; it reſtores the Limbs under apoplectic Fits; being rubbed thereon, and put into the Ears, it eaſes their Pains, and quickens the Hearing. It abſterges the Impetigo, Lentigo, and all manner of Spots in the Face; and cures ichorous Pains of the Head, the Phthiriaſis, and Tinea.

The *Emplaſtrum Laurinum*, or Plaiſter of Bay, is good for the Dropſy; for Pains proceeding from a Flatus, or ſome cold Cauſe; and for the Pain of the Colic: The Electuary of Bay-berries, alſo, diſſipates Flatulences.

If the dry'd Branches of Bay be rubbed very faſt one againſt another, and Powder of Sulphur be caſt thereon, a Flame will ſuddenly burſt forth; which ſeems ſtrange, becauſe the Wood of Bay is of a light and ſpongy Subſtance. But nothing is ſo fit for this Purpoſe, according to *Pliny*, as Ivy to be rubbed, and Bay to rub: Since, however, the Attrition is mutual, it ſeems indifferent, ſays *Ray*, whether the Ivy, or the Bay, rub, or be rubbed. *Raii Hiſt. Plant.*

For the *Electuarium de Baccis Lauri*, ſee ELECTUARIUM.

For the *Emplaſtrum è Baccis Lauri*, ſee EMPLASTRUM.

The *Oleum Laurinum*, or Oil of Bays, is thus ordered to be prepared, in the College Diſpenſatory.

Take of Bay-berries, ripe, and gathered not many Days, any Quantity: After bruiſing them, boil in a ſufficient Quantity of Water, and force out their Oil with a Preſs: Beat again the remaining Fæces, and pour hot Water upon them, as before, and again preſs out all that you can: Then ſeparate the Oil that ſwims upon the Water, for Uſe. *S. A.*

This is ſaid to be an effectual Cure for Aphthæ in Children, if rub'd upon the Crown of the Head.

5. Laurus; vulgaris; folio elegantiſſime variegato aureo.
6. Laurus; vulgaris; Fœmina.
7. Laurus; vulgaris; folio undulato. *H. R. Par.*
8. Laurus; vulgaris; folio undulato, Fœmina.
9. Laurus; tenuifolia. *Maſ. Tab.* 1361.
10. Laurus; tenuifolia, Fœmina.
11. Laurus; Africana, minor; folio Quercus. *H. A.* 2. 161.
12. Lauro ſimilis; folio tenero. *Ind.* 240. *Arbor Braſiliana, Myrti laureæ foliis inodoris.* H. A. 1. 173. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 215.

Laurus Alexandrina. See the Articles BISLINGUA, BRUSCUS, and RUSCUS.

Laurus Sylveſtris. See TINUS.

LAUTISSIMA VINA. Wines impregnated with Myrrh. *Linden.*

LAWANG. A Tree which grows in *Java*. By the Taſte of a Specimen of the Bark, *Ray* thinks it a Species of Saſafras. *Hiſt. Plant.*

LAXA CHIMOLEA, in *Paracelſus*, is a purging Medicine principally recommended in the Venereal Diſeaſe, being the Powder of the Flowers of ſaline Minerals. *Johnſon* ſays, that *Laxa Chimolea* is a Salt growing upon Stones, as the *Anatron*, or *Uſnea Lapidea.*

LAXANTIA MEDICAMENTA. Laxative Medicines, with reſpect to the Belly; or relaxing Medicines, relative to the entire Habit.

LAXATIO. Laxation with reſpect to the Belly, or the entire Habit.

LAXATIVA. The ſame as LAXANTIA. Both imply the ſame as ECCOPROTICA.

LAXITAS. Laxity; that is, a Defect of due Rigidity and Strength, in the Fibres, Veſſels, and Viſcera.

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I intended the Doctrine of Relaxation for this Article, and have accordingly referred to it from many other Articles; but finding, upon Reflection, that it would be more diſtinct and proper, under the Article FIBRA, I have there explained it at large. See, therefore, FIBRA.

LAZARI *Morbus*, or *Malum*. The *Elephantiaſis*, or Leproſy.

LAZULI *Lapis*.

Lapis Lazuli. Offic. Schrod. 352. Calc. Muſ. 467. Geoff. Prælect. 74. Worm. 65. Boet. 273. Charlt. Foſſ. 27. *Cæruleus Lapis*. Matth. 1354. *Lapis Cyanus, ſive Lazuli*. Aldrov. Muſ. Metall. 870. *Cæruleus*. Ejuſd. 349. *Cæruleus nativus*. Theoph. de Lap. Ed. Lugd. Bat. 1647. *Cyanus, ſeu Lapis Lazuli*. De Laet. 90. *Cæruleum nativum*. Schw. 375. Woodw. Act. Tom. 2. P. 1. p. 42.

AZURE STONE.

This is a hard blue Stone, with Gold and Silver-coloured Specks and Veins; and is found of two Kinds, one that can bear the Fire, and the other that cannot. The firſt is brought from *Aſia* and *Africa*, and is called the Oriental Stone; the other is found in ſome Places in *Germany* and *Italy*, being dug out of Gold, Silver, and Copper Mines, and is ſofter than the Oriental. The Oriental produces the Ultramarine Blue, which never changes with Age. But the *German* Ultramarine is eaſily affected by external Cauſes, and in time turns green. The beſt Lapis Lazuli is of a deep-blue Colour, marked with ſome Gold Specks, hard to break, and durable in the Fire.

It purges upwards and downwards, and is recommended by Authors in melancholy Affections, Quartan Agues, Apoplexies, and Epilepſies. They attribute to it a corroding Quality, with ſome Aſtringency; the firſt of which, *Dioſcorides* and *Galen* ſay, may be corrected by waſhing it in Water; but they are miſtaken; for, both waſhed and unwaſhed, it vomits and purges, and what the Water carries off from it differs from what remains, only in the Fineneſs of the Parts. The blue Colour of this Stone ariſes, undoubtedly, from ſome Parts of Copper mixed with it, from which, alſo, its purgative Quality proceeds; but it may very reaſonably be asked, why an acrid and purgative Medicine of this Kind ſhould be uſed in the Confectio Alkermes, deſigned for a ſtrengthening Cordial. To anſwer this, it is to be conſidered, that the antient Phyſicians acknowledged two Virtues in this Stone, one purgative, the other ſtyptic; which, though contrary to each other, were nevertheleſs found in the ſame Subject. The ſtyptic Quality, by which it becomes a Strengthener, they counted natural to it, when it was found in Gold Mines, mixed with ſmall Particles of Gold; the cathartic Quality they conſidered as merely accidental, ariſing from the Mixture of heterogeneous Parts. Therefore, on account of the ſtrengthening Virtue of this Simple, they endeavoured, by various ways, to correct the other, as by repeated Ablutions and Calcinations; but whether they have ſucceeded or not, is with me ſtill a Doubt; though I muſt own, that long Experience has ſhewn, that no bad Accident ever happens from the Confectio Alkermes rightly prepared. Whence it may be conjectured, that by Calcination the purgative Virtue of the Stone is very much leſſened, or entirely deſtroy'd; but I cannot ſay, that it contributes any thing to the cordial Virtues of the Confection. The Antients thought it purged off particularly the Atra Bilis, but, I am afraid, upon no good Grounds; for the black Colour of the Stools, after taking it, is not ſo much owing to the Nature of the Fæces, as to the Tincture which all Steel and Copper Medicines communicate to them.

As there are many Medicines of more certain Efficacy among us, we ſeldom uſe the Lapis Lazuli in any thing but the Confection already mentioned; all the Magiſteries, Tinctures, and Elixirs, which the Chymiſts prepare from it, being laid aſide. *Geoffroy*.

When *Geoffroy* mentions the Lapis Lazuli, as an Ingredient in the Confectio Alkermes, he means a Sort directed in foreign Diſpenſatories; for in ours it has been long omitted.

The Doſe, according to *Schroder*, is a Dram of the Stone reduced to a fine Powder. *Schroder*, alſo, directs a Magiſtery, Elixir, and Extract of this Stone, which the Curious may ſee in his *Pharmacopœa Medico-Chymica*, *L.* 3. *C.* 8.

LAZURIUS. Of an azure Colour. This Colour is, by *Paracelſus*, eſteemed very bad in a Leproſy. The *Lazurium Argenti*, or *Pulvis Lazurius*, is the *Crocus Lunæ*, Saffron of Silver.

LEÆNA. A Lioneſs. *Leænæ Emplaſtrum* is the Name of a Plaiſter mentioned by *Aetius*, *Tetrabib.* 2. *Serm.* 3. *C.* 85. And *Paulus Ægineta* deſcribes two under this Name, *L.* 7. *C.* 17.

LEBERIS, λεβηρὶς, ſignifies the *Exuviæ*, or Sloughs of Serpents. *Hippocrates*, in *Lib.* 2. *de Morbis Mulierum*, recommends the Exuviæ of Vipers as a Cure for Sun-burns on the Face.

LEBIAS, λεβίας. The Name of a Fiſh, the ſame as *Hepatus*.

LECHENEON, λεχηνεῶν. A Name for the *Torcular Herophili*. *Galen*. See LENOS.

LECHIA. The Name of a Fiſh, which ſome take to be the *Centrina*, others the *Anna*, of the Antients. *Caſtellus*.

LECHO, λεχὼ. A Woman in Child-bed. *Moſchion*.

LECISCION, λεκίσκιον. A ſmall *Acetabulum*, relative to the Meaſure thus called. *Hippocrates*.

LECITHOS, λέκιθος, is interpreted a ſort of Puls; according to ſome, a Pea, or wild Vetch (*Aracus*). It is, likewiſe, expounded, a decorticated Lentil, or the Meal of decorticated Lentils. It is ſometimes wrote λέκυθος.

Lecithos, λέκιθος, is, alſo, the Yolk of an Egg. This Homonomy renders it difficult to determine, whether *Hippocrates*, when he applies the Epithet, λεκιθώδης, to the *Hypoſtaſis* of Urine, *Epidem. L.* 4. and to *Pus*, *de Morbis*, *L.* 2. means to compare them to the Meal of Lentils, or to the Yolk of an Egg.

LECTIO. Reading. This is ſaid, by *Celſus*, *L.* 1. *C.* 4. to be bad, eſpecially after Supper, for thoſe whoſe Heads are weak. And in *L.* 1. *C.* 8. he recommends reading with an audible Voice, for ſuch as have weak Stomachs. It is, alſo, directed by *Paulus Ægineta*, as an Exerciſe, *L.* 1. *C.* 19.

LECTUALIS MORBUS. A Diſeaſe which confines a Perſon to his Bed.

LECTUS. A Bed. See ÆORA.

LEDUM. A Name for ſeveral Species of CISTUS.

LEFFA. *Rulandus* explains this *Herbarum Prædeſtinatio*.

LEFFAS. See BUR.

LEGNA, λέγνα, in *Hippocrates*, imports the Margin, or Edges, of the Mouth of the Womb, called *Os Tincæ*, or *Amphideon*.

LEGUANARIA is the ſecond Species of *Ziziphus* in *Boerhaave*.

LEGUMEN is a Species of Plant which are called *Puls*; ſuch as Peas, Beans, and the like; and are ſo call'd, becauſe they may be gather'd by the Hand, without cutting. Mr. *Ray* reckons all thoſe Plants, which have a papilionaceous Flower, among the Legumens.

Legumen, Terræ glandibus ſimile. A Name for the *Lathyrus*; *ſylveſtris, & dumetorum, flore luteo*.

LEIOBATOS, λείβατος. The ſame as LEVIRAIA.

LEIOPODES, λειόποδες. Even-footed. Thoſe are thus called, the Soles of whoſe Feet are without the uſual hollow Part.

LEIPHÆMOI, λείφαιμοι. Thoſe are thus called, who labour under a Deficience of Blood, or who have not a ſufficient Quantity of Blood. From λείπω, to be deficient, and αἷμα, Blood.

LEIPODERMOS, from λείπω, to be deficient, and δέρμα, the Skin. A Perſon is thus call'd, who has loſt his Prepuce, whether by Section, or a Diſeaſe.

LEIPOPSYCHIA, λειποψυχία, from λείπω, to leave; and ψυχὴ, the Soul, or Life. A fainting Fit.

LEIPOTHYMIA, from λείπω, to leave, and θυμὸς, the Mind. The ſame as LEIPOPSYCHIA.

LEIPYRIAS, λειπυρίας, from λείπω, to leave, and πῦρ, Heat, or Fire. A Species of very malignant and dangerous *Cauſus*, or burning Fever, wherein the internal Parts are ſcorch'd, as it were, with Heat, whilſt the external Parts are cold.

LELYTHUS. A Pea, according to *Blancard*.

LEME, λήμη. The *Sordes* of Eyes.

LEMMA, λέμμα, is expounded by *Erotian*, the Huſk, or Hull; and imports whatever is taken off in Decortication.

LEMNIA TERRA. *Dale* mentions two Sorts of this Earth; which are,

1. *Terra Lemnia*. Offic. Aldrov. Muſ. Metall. 262. *Terra Lemnia rubra*. Worm. 10. Charlt. Foſſ. 5. *Lemnia Terra*. Matth. 1360. *Lemnia vel ſigillata vera*. Kentm. 3. *Lemnia terra*. Dougl. Ind. 52. *Terra ſigillata Turcica rubra*. Mont. Exot. 14. EARTH OF LEMNOS.

The *Lemnian* Earth is a fat, viſcid, ſlippery Clay, of a pale-red Colour. It is brought to us in little Cakes or Troches, marked with different Characters, each weighing about four Drams. It has its Name from the Iſland of *Lemnos*, where it is dug; and it is not a little ſurpriſing to find how much this Earth has been celebrated in all Ages. Even in the Time of *Homer* and *Herodotus*, a great many very ſolemn Rites were obſerved in digging it. In the Days of *Dioſcorides*, it was made up with the Blood of a ſhe Goat, newly killed; and the Prieſts of *Venus* ſtamped it with proper Images. In *Galen*'s Time the Goat's Blood was omitted, but many other ſuperſtitious Ceremonies ſtill remained; which, when *Petrus Bellonius* was at *Lemnos*, were laid aſide, and others ſubſtituted in their Place. It is dug, ſays that Author, only on the ſixth Day of *Auguſt*; as much being then taken out, as is ſuppoſed to be ſufficient for a whole Year. When the Vein is opened, the *Greek* Prieſts rehearſe ſome Forms of Prayer, at which all the conſiderable Inhabitants of the Iſland, both *Greeks* and *Turks*, are preſent. The Vein being afterwards cloſed, and covered with common Earth, the Inhabitants are forbid, under the ſevereſt Penalties, to open it any more during that Year. The greateſt Part of this Earth is ſent to *Conſtantinople* to the Grand Signor, with whoſe Seal it is marked; the reſt is ſold to Merchants by the Governor of the Iſland, ſometimes with, and ſometimes without, his Seal upon it. *Bellonius* remarks, that at *Conſtantinople* they have the Art of counterfeiting it ſo dexterouſly, that the falſe Earth can hardly be diſtinguiſhed from the true. That *Lemnian* Earth is reckoned the beſt, which,

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when bruiſed between the Fingers, or held in the Mouth, appears moſt like Fat, and contains leaſt Sand. The Antients have ſaid much about the Virtues of this Earth; but there is ſome Room to think, that the Reputation it had among them, was more owing to the ſuperſtitious Ceremonies obſerved about it, than to its intrinſic Qualities. *Dioſcorides* recommends it as an Antidote againſt Poiſons and Dyſenteries. *Galen* ſays, that, when outwardly applied, it heals all freſh Wounds; and *Fernelius* is of Opinion, that, whether applied outwardly or inwardly, it ſtops all Fluxes of Blood. Some have celebrated its alexipharmic Qualities in all peſtilential and contagious Diſtempers; but many of the Moderns think it to be a mere alcaline Earth, endued with no other Quality but that of abſorbing Acids. This, however, muſt be a Miſtake; becauſe no Earths of this kind raiſe an Effervescence with Acids; and it appears by its Analyſis, not to be altogether deſtitute of the Virtues attributed to it by the Antients. It yields a ſmall Quantity of volatile urinous Salt, and of a bituminous Oil, and of a Salt not much different from Sea-ſalt; whence we may conclude, that this Earth is impregnated with a kind of Sal Ammoniac, mixed with a bituminous Oil, by which the Action of Acids upon it is prevented; and that its Virtues muſt be, in ſome Degree, alexipharmic, diaphoretic, detergent, and vulnerary. This ſealed Earth needs no other Preparation than to be finely powdered, or diſſolved in a proper Liquor. In Dyſenteries, Ulcers of the Inteſtines, and Hæmorrhages, it may be adminiſtered in Draughts or Boluſes, in the following manner.

Take of *Lemnian* Earth, finely powdered, one Dram; of Syrup of Quinces, an Ounce; Plantain-water, and Knot-graſs-water, each three Ounces: Mix them into a Potion, to be taken by Spoonfuls.

Take *Lemnian* Earth, Conſerve of red Roſes, and Hips, of each half an Ounce; of Syrup of Barberries, a ſufficient Quantity to make them into a ſoft Electuary; a Dram of which is to be taken Morning and Evening.

Take of *Lemnian* Earth, half a Dram; Syrup of Clove-gilliflowers, an Ounce; the ſimple Waters of Baum, Viper's-graſs, and *Carduus Benedictus*, each two Ounces; Treacle-water, ſix Drams: Mix and make them into a Potion, to be taken by Spoonfuls ſeveral times in a Day.

In external Applications, this Earth is often joined with Bole.

The *Lemnian* Earth is uſed in *Venice* Treacle, in the Confection of Hyacinth, *Renodæus*'s Bezoardic Powder, in *Hoffman*'s Orvietan, in the antivenereal Pills of *Charas*'s Pharmacopœia regia, and in that Author's Plaiſter for fractured Bones.

The Inconveniencies that may ariſe from uſing this Earth too long, or in too great Quantities, are common to it, with all the other abſorbent Earths. They load the Stomach, by adhering cloſely to, or plaiſtering its inner Surface, which cauſes a very diſagreeable Senſation; and, by cloſing the Orifices of the Glands of the Stomach and Inteſtines, they hinder Digeſtion, and may occaſion the Fluids, which ought to be excreted there, to be carried to other Parts of the Body; from which Cauſes many Diſorders may follow. The Way to prevent Accidents of theſe Kinds is, to give theſe Abſorbents in ſmall Quantities, diluted with much Liquor, and diligently to obſerve the Effects they produce. *Geoffroy.*

2. *Terra Lemnia alba.* Offic. *Terra Lemnia ſigillata alba.* Charl. Foſſ. 5. *Terra ſigillata Lemnia alba.* Worm. 9. *Terra Lemnia vel ſigillata candida.* Kentman. 1. *Terra ſigillata Turcica alba.* Mont. Exot. 14. WHITE EARTH OF LEMNOS.

It is a little tenacious and lubricious from its Fameſs; whence it adheres to the Tongue, but without Mordacity: It is digged in the Iſland of *Lemnos*.

As to its Virtues, it ſtops an Hæmorrhage from the Uterus, and the menſtrual Flux; reſiſts Poiſons, and malignant Diſeaſes; and cures the Bite of a mad Dog. *Dale.*

LEMNISCUS, λήμνισκος, a Tent. In *Celſus*, *L.* 7. *C.* 28. it is a Peſſary made of Linen, rolled up in the Form of a long Tent, which he directs to be introduced into the Vagina, after an Inciſion made for opening the Paſſage into it, when preternaturally cloſed.

LEMPNIAS is the *Terra Sigillata*. *Lempnias Calcis* is the Scales of Braſs, which ſeparate when it is beaten by the Hammer. *Lempnias*, and *Lempnia*, alſo, import *Auripigmentum*. *Caſtellus.*

LENIENS, LENIS, and LENITIVUS, import mild, deſtitute of Acrimony, ſoftening, or laxative.

LENOS, ληνὸς, in *Hippocrates*, is a Chanel, or Excavation, made in ſome Machines for making Extenſion, and reducing fractured Bones.

Herophilus gave the Name of ληνὸς, *Lenos*, to that Place within the Head, where ſeveral Sinuſes of the *Dura Mater* meet, from its Reſemblance to a Part of a Wine-preſs. It is called *Torcular Herophili.* See CAPUT.

LENS.

The Characters are;

The Leaves are conjugated, and grow to one Rib, which terminates in a Tendril. The Pod is ſhort, and full of orbiculated Seeds, convex on both Sides. *Boerhaave, Index alter, Pars* 2. *p.* 44.

Boerhaave mentions three Species of this Plant; which are,

1. Lens; vulgaris. *C. B.* 346. *Boerh. Ind. A.* 2. 44. *Lens.* Offic. J. B. 2. 317. Raii Hiſt. 1. 904. Synop. 3. 323. *Lens minor.* Ger. 1049. Emac. 1224. Park. Theat. 1068. *Lens vulgaris ſemine ſubrufo.* Tourn. Inſt. 390. LENTILS.

This is a ſmall Puls, leſs than a Tare or Vetch, having many long-wing'd Leaves, conſiſting of many narrow ſmall oval *Pinnæ*, ſet oppoſite with Claſpers at the End of the Leaf. The Flowers are ſmall and white, leſs than thoſe of Tares, but like them in Shape, ſtanding, for the moſt part, ſingly, on a long Foot-ſtalk; and are ſucceeded by ſhort flattiſh Pods, containing two round Seeds, leſs than Tares, and flatter. It is ſown in ſome Parts of *England* in the Fields, flowering in *May*, and the Seed is ripe in *July*.

The Antients affirm, that Lentils, eaten with their Skins on, bind the Body, and ſtop a Looſeneſs; and yet, at the ſame time, the Liquor they are boiled in looſens the Belly. They are but rarely uſed in Phyſic, tho' the Flour of them may be uſed outwardly in Cataplaſms, for the ſame Purpoſes as Bean-flour. *Miller's Bot. Off.*

They are ſown in Fields, and the flattiſh, yellowiſh Seeds are in Uſe. Lentils dull the Eye-ſight, are difficult of Digeſtion, incommode the Stomach, and generate Flatulencies, both in that Part, and the Inteſtines: They ſtop a Looſeneſs, and are prejudicial to the Nerves, Lungs, and Head. *Dale* from *Dioſcorides.*

Lentils boiled, and made into a Cataplaſm, with Polenta, mitigate the Pain of the Gout: A Cataplaſm of the ſame, prepar'd with Honey, conglutinates ſinuous Ulcers, cleanſes foul Ulcers, and breaks and abſterges Cruſts round their Margins. A Cataplaſm of Lentils, twice boiled in Vinegar, diſcuſſes Hardneſſes, and ſtrumous Swellings; the ſame, prepared with Melilot or Quinces, with a Mixture of Oil of Roſes, cures Inflammations of the Eyes or Anus: But, in conſiderable Inflammations, and large fiſtulous Cavities of the Part laſt named, they boil Lentils with the Rinds of Pomegranates, or dried Roſes, and mix Honey therewith: They are, alſo, effectual againſt a Nome, or phagedenic Ulcer degenerated into a Gangrene, if prepar'd as before, or with an Addition of Sea-water: The ſame Preparation cures Puſtules, Herpes, Eryſipelas, and Chilblains. A Cataplaſm of Lentils, boiled in Sea-water, relieves Women whoſe Breaſts are diſtended with grumous Milk. *Dioſcorides, Lib.* 2. *Cap.* 129.

The *Hiſtoria Plantarum*, aſcribed to *Boerhaave*, recommends a Decoction of Lentils, for waſhing the Puſtules of the Small-pox, when ſuppurated.

2. Lens; major; vulgaris, ſemine cinereo & nigro variegato.

3. Lens; monanthos. *Boerh. Ind. alt. Plant.*

Lens, paluſtris. A Name for the *Lenticula*; *paluſtris*; *vulgaris.*

LENTA FEBRIS. A ſlow Fever. See HECTICA.

LENTIBULARIA. The Name of two Plants, mentioned by *Tournefort*, and *Ray*, in his *Synopſis.*

1. Lentibularia. *Riv. Irr. Mon. Ic. Millefolium paluſtre galericulatum.* Ger. Emac. 828. *Aquaticum flore luteo galericulato.* J. B. 3. 783. Park. 1258. *Aquaticum lenticulatum.* C. B. P. 141. It is found in the Ditches and Ponds in *Lincolnſhire*, and in the Iſle of *Ely*.

2. Lentibularia minor. *Pet. H. B.* 36. 12. *Millefolium paluſtre galericulatum minus, flore minore.* Syn. 2. 79. 3. Pluk. Alm. 251. T. 99. f. 6. *Aparine aquis innatans Treviſana foliis Percepier, capreolis donata, ſive Aparine fluitans capreolis donata.* Bocc. Muſ. P. II. p. 23. T. 4. Found by Mr. *Dent*, on *Feverſham-Moor* in *Cambridgeſhire*; and in *Yorkſhire*, by Mr. *Dodſworth*.

Both Sorts obſerved, by Mr. *Lawſon*, in the Ditches by the Cauſſey, over the *Moſs* to the *Fell-End*, near *Witherſlack*, *Weſtmorland*: In the River on *Hounſlow-Heath*, by Mr. *Dandridge*.

The Flowers of this are paler than thoſe of the former.

LENTICULA.

The Characters are;

It grows in the Water, and is ſeated on its Superficies; its Appearance is quite ſimple, and foliaceous; and its Roots ſlender, capillaceous and pellucid. *Boerhaave.*

Boerhaave mentions three Species of this Plant; which are,

1. Lenticula; paluſtris; vulgaris. *C. B. P.* 362. *Boerh. Ind. alt.* 19. *Lens paluſtris.* Offic. Ger. 680. Emac. 829. Raii Synop. 3. 129. J. B. 3. 784. Raii Hiſt. 1. 117. *Lens paluſtris ſive aquatica vulgaris.* Park. 1262. *Lenticularia minor monorrhiza foliis ſubrotundis utrinque viridibus.* Mich. Nov. Gen. 16. DUCKS-MEAT.

This is a ſmall Plant, which frequently covers the whole Surface of Ponds and Ditches, conſiſting only of ſmall, round, green Leaves; having neither Flower nor Seed perceivable; only from the Middle of the under Side of each Leaf, ſmall, white, thready Roots.

Ducks-meat is of a cooling mollifying Nature, good to be applied to Inflammations, St. *Antony*'s Fire, or the Shingles; alſo

for the Gout, either applied by itſelf, or mixed with Barley-meal. Six Ounces of a ſtrong Infuſion, made in White-wine, taken for nine Days together, is commended as a Cure for the Jaundice. *Miller's Bot. Off.*

Tragus, *Matthiolus*, and *Dalechampius*, fanſied they obſerved, that this little Plant, taking Root in the Ground, became like ſome Species of Water-creſs; but they ſeem to be miſtaken: This Story is ſomething like that of the Shells producing Sea Ducks.

The Ducks-meat is thought to be very cooling and lenifying. Some apply it as a Cataplaſm to eaſe the Gout and Inflammation of the Parts; but the repelling of the Humours is to be feared in theſe Sorts of Remedies: For which Reaſon, to aſſwage the Pain of the Hæmorrhoides, powder two Handfuls of Ducks-meat with half an Ounce of Myrrh: Put it all in a Linen Bag, and bathe the Piles with the Water which drops through this Bag. *Martyn's Tournefort.*

2. Lenticula; paluſtris; major. *Commel. Ind.* 63.

3. Lenticula; aquatica; triſulca. *C. B. P.* 362. *J. B.* 3. 786. *Hederula aquatica.* Lob. Ic. 2. 36. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 19.

LENTICULA likewiſe implies a Freckle, or ſmall Puſtle on the Skin of the Face and Breaſts; ſee EPHELIS; where the Cure of theſe is directed from *Celſus*, *Lib.* 6. *Cap.* 5. *Lenticularis Febris* is a Species of Fever, attended with numerous Eruptions, about the Size of Lentils. *Lenticulares Glandulæ* are the ſmall Glands of the Inteſtines, thus called on account of their Size.

LENTICULARE. A Lenticular; a chirurgical Inſtrument. See *Tab.* XXVIII. *Fig.* 3, 4, and 5. They are called Rugines.

LENTIGO. A Freckle.

LENTISCINUM VINUM. Wine impregnated with Maſtich.

LENTISCUS.

The Characters are;

The Leaves are pinnated, and grow to one common Rib, without an odd one at laſt. The Male Flower, which grows on one Male Plant, is thus produced: The End of the Pedicle opens into a ſhort, green, quadrifid Calyx, expanded in form of a Star; within which ariſe four, five, or ſix ſhort Stamina, with large red Apices; theſe Flowers are collected into a Tuft. The Ovary, on the other Female Plant, grows cloſe to the Apex, of a long, thick, and ſometimes ramous Pedicle, cloven at the End, as it were, in the Form of a Calyx: This Ovary is furniſhed with a ſtrait thick Tube, whoſe Apex is expanded into three or four very rough reflexed Lips. *Boerh. Ind. alt. Par.* 2.

Boerhaave mentions three Species of this Plant; which are,

1. Lentiſcus; vulgaris. *C. B. P.* 399. *Lentiſcus.* J. B. 1. 285. Dod. p. 871. Lugd. 63. *Fœmina.* COMMON MASTICH-TREE.

The Maſtich-tree, in its native Places, will grow to be a Tree of ſome Bigneſs, having many crooked Branches, cover'd with an Aſh-coloured Bark. The Leaves conſiſt, generally, of four Pair of Pinnæ, without a ſingle one at the End, ſet on a Foot-ſtalk, which has a narrow Film on each Side; they are in Shape like thoſe of Myrtle, but larger, harder, and firmer. The Flowers grow in Cluſters, being ſmall and ſtamineous; and after them follow ſmall blackiſh Berries. The Maſtich-tree grows in the Southern Parts of *France*, and in *Italy*; but it yields the Gum Maſtich only in the Iſland of *Scio*, or *Chios*, in the *Archipelago*. The Gum of the Wood is uſed.

The Gum, which is the Maſtich of the Shops, is procured from the Body, or the greater Branches of the Tree, by cutting them acroſs, in the Beginning of *Auguſt*; the Gum flowing out in Drops from the Wounds. It is an hard, brittle, reſinous Gum, almoſt tranſparent, of a whitiſh Colour, tending to a yellow, but turning white, and clinging together, if chew'd in the Mouth: It comes over in ſmall, yellow, almoſt pellucid Drops, of a pleaſant Smell, of a reſinous, and ſomewhat reſtringent Taſte.

Maſtich is heating and drying; ſtrengthens the Head, and the nervous Syſtem; helps a Cough, and Spitting of Blood; ſtrengthens the Stomach, and ſtays Vomiting: It is very good to preſerve the Gums and Teeth; the Ladies in *Turkey* chew it continually, for that Purpoſe, and to procure a ſweet Breath. It is applied, outwardly, in Plaiſters, for the Head-ach and Tooth-ach. The Wood is drying and binding, good for all kinds of Fluxes. A Tooth-pick made of it is accounted a Preſerver of the Teeth.

Officinal Preparations are, the Emplaſtrum de Maſtiche, and the Unguentum Maſtichinum. *Miller's Bot. Off.*

Maſtich is a Reſin of a tranſparent Gold Colour, and, when burnt, of a very agreeable Smell: It may be chewed like Wax; whereas Sandaracha breaks under the Teeth, and by this theſe two Subſtances may be diſtinguiſhed. It is uſed inwardly, from half a Scruple to a Dram, in Diarrhœas and Hæmorrhages, and is an Ingredient in many purgative Compoſitions, as a Corrector. *Geoffroy.*

Maſtich is recommended in a Prolapſus Ani, or Uteri; it cures a Nome, and provokes Urine. *Dioſcorides.*

It blunts and corrects the Acrimony of Cathartics; ſtrengthens the Head, and the nervous Syſtem; and cures Coughs and Spitting of Blood. *Schroder.*

2. Lentiſcus; vulgaris; foliis minoribus & pallidioribus. *H. L. maſ.*

3. Lentiſcus; vera; ex Inſulâ Chio; cortice & foliis fuſcis. *J. Commel. Cat. Hort. Amſt.* 192. *C. Commel. Plant. Uſu.* 83. *Boerh. Ind. alt.* 2. 174. *Lentiſcus.* Offic. *Lentiſcus ex Chio, ex qua fluit Maſtiche.* Ind. Med. 73. Tourn. Itin. Ed. Angl. 1. 285. THE MASTICH-TREE.

It grows plentifully in the Iſland of *Scio*, and flowers in *March* or *April*. The Parts in Uſe are, firſt, the nodous and brachiated ſmall Branches, which are of the Thickneſs of a Man's Finger, white on the Inſide; but cover'd with an Aſh-colour'd Bark, and of a reſinous Taſte and Smell; the other Part of Uſe in Medicine is the *Reſina Maſtiche Offic.* MASTICH.

Dale ſays, this is the true Maſtich-tree, and differs in Species from the preceding.

LENTISCUS PERUANA. See MOLLE.

LENTOR. A Viſcidity or Sizineſs.

A viſcid or ſizy State of the animal Fluids is productive of many Diſtempers: Thus *Boerhaave* informs us, that a pinguious Viſcidity, from vegetable Aliment, is cauſed,

Firſt, By a Diet of crude and unfermented farinaceous Subſtances, and auſtere immature Vegetables. For the Meal of farinaceous Vegetables, mixed with Water, forms a viſcid kind of Paſte; but Fermentation deſtroys this Viſcidity.

Secondly, By a Defect of good Blood; a ſufficient Quantity of which is neceſſary to the Aſſimilation of the Aliments, and the Converſion of their Juices into good Blood.

Thirdly, By a Debility of the Veſſels and Viſcera, (ſee FIBRA) or a Defect and Inactivity of the Bile; which laſt is very powerful, when in a due State and Quantity, in attenuating Viſcidities of alimentary Subſtances.

Fourthly, By a Diminution of animal Motion; for Motion ſtrengthens the Solids, attenuates the Fluids, and promotes the due Digeſtion and Aſſimilation of the Aliments.

Fifthly, By a Diſſipation of the moſt fluid Parts of the Blood, through the relax'd ſecerning Veſſels; for it is evident, that when the moſt fluid Parts are loſt, what remains muſt become more thick and viſcid. Hence the Error of thoſe is obvious, who prepoſterouſly carry off the fineſt Particles of the Blood by enormous Quantities of Sudorifics and Diuretics.

Sixthly, By the Retention of the thicker Parts of the Fluids, on account of the Debility of the excretory Organs. See FIBRA.

This Viſcidity is originally form'd in the firſt Organs of Digeſtion; from whence it is propagated to the Blood, and the Fluids thence derived: And when any of theſe viſcid Particles paſs the Lacteals, and get into the Blood, their immediate Effects are, principally, manifeſt in the Lungs, where they cauſe a Dyſpnœa, not being able to paſs readily the ſmall Veſſels thereof.

The Effects of ſuch a Viſcidity in the firſt Organs of Digeſtion, are,

An utter Proſtration of Appetite; and of this I have ſeen frequent Inſtances, in thoſe that have deſtroy'd theſe Organs, by drinking Drams: Theſe utterly loſe their Appetite, and, when they vomit, diſcharge a viſcid Subſtance, ſometimes much reſembling Frogs-ſpawn.

A Senſe of Repletion, Nauſea, and Inclination to vomit, becauſe theſe Viſcidities, adhering to the Coats of the Stomach, excite an uneaſy Senſation, in the manner a Feather does, when thruſt down the Throat.

A Crudity of the Aliments taken in, becauſe they cannot be digeſted.

Hence, likewiſe, the Bile is render'd inert and unactive, being, as it were, inviſcated by theſe Viſcidities, and carried along with them through the inteſtinal Tube, and loſt.

Hence, alſo, ariſe pituitous, and, as it were, vitreous Concretions of the Stomach, and inteſtinal Tube, which are productive of exceſſive Pains, when adhering to the Coats of theſe Organs.

Coſtiveneſs, and Tumors of the Belly, are, moreover, excited, for want of a proper Stimulus from the Bile, and a Retention of the groſs viſcid Fæces: This is frequent in Children.

Hence, alſo, a due Preparation, Perfection, and Secretion of the Chyle is prevented.

In the Blood, Sizineſs, Paleneſs, and Immeability, are generated: In the Veſſels, Obſtructions, and Concretions. Hence, alſo, pale and inſipid Urine, viſcid Saliva, and leucophlegmatic Tumors. The due Secretions are, likewiſe, prevented, and the more ſubtle Parts of the Fluids become deficient; whence a Coalition of the ſmalleſt Canals is induced.

It is obvious, that from theſe Cauſes all the Digeſtions, Circulations, Secretions, Excretions, and the vital, natural, and animal Motions muſt be diſturbed; whence a Suffocation of the Circulation, and Death, muſt enſue.

From what has been ſaid above, the Diagnoſtic, Prognoſtic, and Anamneſis, relative to Diſorders proceeding from glutinous Viſcidity, may be collected, and the proper Methods of Cure are indicated.

With reſpect to the Cure; it is to be performed, firſt, By a conſtant Uſe of Aliments and Drink well fermented, and duly ſeaſoned with attenuating Salts, and Aromatics. For Fermentation deſtroys the Viſcidity of all the farinaceous Vegetables. Rice, or Oats, boiled, make a kind of Jelly, or Glue, which is deſtroyed by Fermentation. Beer, well fermented, does not cauſe Phlegm; but Ptiſans will: Therefore, in cold languid Diſeaſes, ſtrong Beer is proper; and in hot inflammatory Diſorders, Ptiſans. *Boerhaave* ſays, that ſtrong Beer is a moſt noble Remedy in theſe cold Diſorders, ariſing from Viſcidity; and affirms, that he has known many Cures performed by the Uſe of *Brunſwick* Mum, and well fermented Biſcuit, only.

Aromatics incide and deſtroy the Viſcidity of the ſizy Humours. The principal of theſe are Cinnamon, Mace, Nutmegs, Orange-peel, Thyme, Origanum, aromatic Cloves, Ginger, Pepper, the leſſer Galangals, Citron-peel, Aniſe, Coriander, Mother of Thyme, and Cardamoms.

Secondly, By Broths made of Animals abounding with exalted volatile Salts; ſuch are thoſe mentioned under the Article ACIDA, as Remedies for Diſorders proceeding from a Redundance of Acid; and theſe Broths muſt be ſeaſoned with ſuch acrid Vegetables as thoſe directed under the ſame Article, for the Cure of Diſeaſes ariſing from an Acid.

Thirdly, By ſtrengthening the Veſſels and Viſcera. See FIBRA.

Fourthly, By Exerciſe and Motion; for, without a due Degree of theſe, nothing can relieve, at leaſt cure. See FIBRA.

Fifthly, By diluting, reſolvent, ſtimulating, bilious, and ſaponaceous Medicines.

Materials proper for diluting and reſolving are ſpecified under the Article FIBRA.

Stimulating Medicines are ſuch as by their Bulk, Denſity, Figure, and Mobility, increaſe the contractile Force of the Fibres, when applied to them. The principal of theſe are,

Firſt, Saline Acids; and theſe are either natural, as the Juices of Citrons, Oranges, Grapes, and other acid Summer-fruits, and the native Salts procured from the preſſed Juices of Vegetables; or produced by Fermentation, as *Rheniſh* and *Moſelle* Wine, Vinegar of Wine and of Beer, Spirit of Vinegar, Tartar, Cream of Tartar, ſour Milk, and ſour Whey; or produced by Fire, as Spirit of Sea-ſalt, of Sal Gem, of Nitre, of Vitriol, and of Sulphur by the Bell.

Secondly, Alcaline Salts, which are either fixed or volatile; fixed alcaline Salts are all thoſe prepared from the Aſhes of Plants, as Salt of Wormwood, of Carduus Benedictus, of Tartar, and Pot-aſh. Volatile Salts are all thoſe diſtilled from putrefied animal Subſtances, as Salt and Spirit of Hartſhorn, of human Blood, of Bones, and of Sal Ammoniac.

Thirdly, Compound Salts, as Sea-ſalt, Sal Gem, native and artificial Sal Ammoniac, Nitre, Borax, Tartarus Tartariſatus, and Tartarus Regeneratus.

Fourthly, Acrid aromatic Oils; as the diſtilled Oils of Wormwood, of Citron-peel, of Orange-peel, of Caſſia Lignea, of Chamomile, of Cinnamon, of aromatic Cloves, of Hyſſop, of the Woods of Guaiacum, Juniper, and Saſafras, of Mace, of Marjoram, of Mint, of Nutmegs, of *Cretan* Origanum, of Peny-royal, of Roſe-wood, of Roſemary, of Rue, of Savine, of Sage, of Lavender, of the Seeds of Aniſe, Dill, Carawaies, and of Fennel, of Amber, of Tanſy, and of Turpentine.

The Oils, by Expreſſion, of bitter Almonds, of Bay-berries, of Mace, and of Nutmegs.

The native Oils; as Balſam of *Gilead*, of *Tolu*, of the Palm, of *Peru*, of *Capivi*, of *Mecca*, and of Turpentine.

The empyreumatic acrid Oils, diſtilled by the Retort; as of Blood, of Bones, of Horns, of Eggs, of Urine, of Woods, and of Bricks.

Fifthly, Inflammable Spirits produced by Fermentation, from farinaceous Vegetables, and the Juices of Summer-fruits.

Sixthly, Acrid aromatic Plants, ſuch as abound with Salt and Oil; as Leaves of Southernwood, Wormwood, Maudlin, Dill, Aniſe, Birthwort, Arum, Betony, Calamint, Motherwort, Germander, the greater Celandine, Scurvy-graſs, Dittany, noble Liverwort, Eryſimum, Hemp Agrimony, Fennel, Ground-ivy, Ivy, Hyſſop, Bays, Lovage, Marjoram, Horehound, Feverfew, Baum, Mint, Creſſes, Nep, Tobacco, Origanum, Dittander, Arſmart, Leeks, Penyroyal, Roſemary, Rue, Savine, Savory, Sage, Water-Germander, Mother of Thyme, Soldanella, Thyme, Tanſy, Paul's Betony, and Nettles.

The Flowers of Maudlin, Oranges, Marigolds, Clove-gilly-flowers, leſſer Centaury, Chamomile, Citrons, Saffron, Eupatorium, Lily of the Valley, Hops, Melilot, Marum Syriacum, Sage, Scabious, Camels Hay, Lavender, *Arabian* Stœchas, Tanſy, and of the Lime-tree.

The Roots of Acorus, Garlick, Angelica, healthful Wolfsbane, Birthwort, wild Radiſh, Carline-thiſtle, Caryophyllus montanus, Onions, the greater Celandine, Contrayerva, Garden and Oriental Coſtmary, Turmeric, Sow-bread, Cyperus, Leopards-bane, Fraxinella, bulbous Fumitory, Galangals, Gentian, Elecampane, Maſterwort, Orris, Loveage, Spignel, Ginſeng, Reſtharrow, Butter-bur, Parſley, Sow-fennel, Peony, Leeks, Sneezwort, Pellitory of *Spain*, Radiſh, Madder, Butchers-broom, Satyrion, Figwort, Seſeli, Squills, Valerian, Ramſons, Swallow-wort, Zedoary, and Ginger.

The Seeds of Dill, Aniſe, Smallage, Columbines, Carawaies, Celeri, Coriander, Cumin, Carrot, Rocket, Eryſimum, Fenugreek, Lovage, Navew, Creſſes, Fennel-flower, Parſnep, Parſley, Leeks, Radiſh, Wormwood, Seſeli, Muſtard, Treacle-muſtard, Anacardium, Cardamoms, Burdock, the Grains of Chermes, and the Seed of Cubebs, Juniper, Bays, Nutmegs, and Peach-kernels.

The Barks of Guaiacum, Saſafras, Juniper, Oranges, Citrons, Lemons, and Cinnamon.

Aromatic Juices; as Aſafetida, Gum Ammoniac, Anime, Bdellium, Benzoin, Gum Elemi, Galbanum, Gum Lac, Labdanum, Maſtich, Sagapenum, Juniper, Tacamahaca, Ambergriſe, liquid Amber, Aloe, Myrrh, Storax, and Frankincenſe.

Seventhly, Inſects; as Millepedes, Ants, May-worms, and Cantharides. And, alſo, the Parts of ſome Animals; as Caſtor, Civet, Musk, Urine, and the Dung of Birds which drink but little.

Eighthly, Decoctions, Extracts, Conſerves, Preſerves, Tinctures, Spirits, Waters, volatile, oleous, and ſpirituous Salts, Pills, and Powders prepared from theſe Materials.

Bilious Medicines are the Galls of Quadrupeds, and Fiſhes, eſpecially of the Lupus marinus, and Eel.

Take, for Example, of the Gall of a Bull, and of the Lupus marinus, each four Drams; let them exhale over a gentle Fire, till they acquire the Conſiſtence of Honey; then mix them with a ſufficient Quantity of the powder'd Root of Arum, and make the Whole into Pills, of three Grains in Weight each. Take one every Morning, Noon, and Night, an Hour before Meals.

To this Claſs belong the Lapis Hyſtricis, or Pedra del Porco, an Infuſion of which in the Water of Carduus Benedictus, or *Rheniſh* Wine, is exhibited in the Quantity of two or three Ounces. And the Preparation, recommended by *Helmont*, of the Gall and Liver of an Eel, roaſted by a gentle Fire, and given in the Quantity of a Dram, with three Ounces of *Rheniſh* Wine.

Among ſaponaceous Medicines, none is more recommended in theſe Caſes, than *Venice* Soap, made into Pills, with the Addition of a ſmall Quantity of Bile; for theſe not only diſſolve Viſcidities, but ſupply, in ſome Degree, the Defect of the Bile.

Sixthly, Frictions; Heat, excited by Exerciſe; Baths, prepar'd with aromatic Vegetables; or dry Baths, as they are called; or Stoves and Veſicatories, either of ſtimulating Vegetables, or Cantharides, contribute to the Cure of theſe Diſorders.

But, in the Cure of theſe Diſorders, great Care muſt be taken not to miſtake, for a morbid Viſcidity, that uſeful, natural, and glutinous Juice, which anoints, lubricates, and defends, many Parts of the Body; and is particularly remarkable in the Eyes, Eyelids, Noſe, Mouth, Fauces, Oeſophagus, Stomach, Inteſtines, Pelvis, Ureters, Bladder, Urethra, the mucilaginous Vaginæ of the Tendons, the Commiſſures of the Joints, the Larynx, Aſpera Arteria, and Bronchia of the Lungs. For in theſe it is natural and neceſſary for defending the Parts from the Effects of Acrimony, to which they would otherwiſe be expoſed. Unskilful Practitioners, who look upon every thing that is thick and tenacious, to be morbid, and treat it accordingly, on this Occaſion frequently fall into fatal Errors, to the great Prejudice of their Patients.

This Species of Viſcidity I have now been treating of, is directly the Reverſe to an inflammatory Spiſſitude; and thoſe Subſtances, which are medicinal in this, are poiſonous in the other; and *vice verſa*. See INFLAMMATIO.

LEO is a Name for a Species of Inſect called the Lion-piſmire, for a Sea Animal, for a Shell-fiſh of the Lobſter kind, for the Serpent called *Cenchrites*, for the Leproſy, and is a Term given by the Spagiriſts to ſome of their Preparations; all figuratively denominated from

LEO. Offic. Aldrov. de Quad. Digit. 2. Geſn. de Quad. Digit. 572. Jonſ. de Quad. 78. Chart. Exer. 14. Schw. Quad. 101. Raii Synop. a. 162. THE LION.

The Fat only is in Uſe; which, waſhed according to the Directions given by *Dioſcorides*, (for which ſee the Article ADEPS) and put into the Ears, eaſes the Pains thereof; and is ſucceſsfully uſed to anoint Limbs benumbed with Cold: Some uſe it for ſcirrhous Tumors, and Chilblains.

LEO FEROX. Ger. *Acarnæ affinis Leo ferox.* J. B. *Acarna minor caule non folioſo.* C. B. *Acarna minor caule non folioſo, ſive Leo & Carduus ferox.* Park.

This is a Species of Acarna, or Fiſh-thiſtle, mentioned by *Ray*; but of no Uſe in Medicine.

LEONTIASIS, λεοντίασις, LEONTION, λεόντιον, and LEONINA LEPRA, are Names for the ELEPHANTIASIS. See LEPRA.

LEONTOPETALON.

The Characters are;

roſe has a thick, tuberous, perennial Root. The Flower is wſaceous, pentapetalous, or hexapetalous, naked, and furniſhed with

with five Stamina. The End of the Pedicle of the Flower forms an orbicular Placenta, ſeated within the Flower, on which Placenta grows the Ovary, furniſhed with its Tube, or Pointal, which becomes an angulous, ſimple, acuminated Bladder, from the Centre of whoſe Bottom ariſes a ſtrait Axis, ſurrounded by globulous Seeds growing to it.

Boerhaave mentions but one Species of this Plant; which is,

Leontopetalon. *Offic. Ger.* 182. *Emac.* 236. *C. B. P.* 324. *Boerh. Ind. A.* 208. *Raii Hiſt.* 2. 1326. *Park. Theat.* 632. *Leontopetalon quorundam.* J. B. 3. 489. *Leontopetalon foliis Coſtæ ramoſæ innaſcentibus.* Tourn. Corol. 49. BLACK TURNEP.

It grows in *Apulia* in *Italy*, and flowers pretty late in the Year. The Root is in Uſe; which, according to *Dioſcorides*, cures the Bites of Serpents. *Galen* aſcribes to it a digeſtive, heating, and drying Quality. *Dale.*

LEONTOPODIUM. Offic. *Leontopodium majus.* Park. 684. (*quoad deſcript.*) *Gnaphalium Alpinum.* Germ. 517. Emac. 641. *Gnaphalium Alpinum magno flore, folio oblongo.* C. B. 264. *Gnaphalium Alpinum pulchrum.* J. B. 3. 161. Raii Hiſt. 1. 296. *Filago Alpina capite folioſo.* Tourn. Inſt. 454. LIONS-FOOT.

It grows on hilly Places, and flowers in *July*. The Root, worn as an Amulet, is ſaid to perform the Effects of a Philtre, and to diſcuſs Tubercles. The Herb, bruiſed and boiled in Oil, is ſucceſsfully uſed by the common Sort of People for Lividneſs, Bruiſes, Concuſſions, Contuſions, and other ill Effects of Blows and Strokes. *Lob. Buxb.*

Leontopodium, Creticum. A Name for the *Plantago; Cretica; minima; tomentoſa; caule adunco.*

LEONURUS. *Lions-tail.*

The Characters are;

The Calyx is long, tubulated, and incloſes the Seeds; the Galea is imbricated, and much longer than the Beard, which is divided into three Parts. The Flowers are diſpoſed in very cloſe Whorles.

Boerhaave mentions three Species of this Plant; which are,

1. Leonurus; perennis; Africanus; ſideritis folio; flore phœniceo, majore. *Breyn. Prodr.* 2.

2. Leonurus; minor; Capitis Bonæ Spei vulgo.

3. Leonurus; annuus; Americanus vulgo. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 180.

There are no medicinal Virtues attributed to either of theſe Plants at preſent, that I know of.

LEOPARDUS. See PARDUS.

LEPAS. A kind of Shell-fiſh, adhering to Rocks. *Galen. Exeg.*

LEPHANTEUS, or LEPHANTE. The firſt Species of Tartar, of a middle Nature betwixt Stone and Mud, and admits of being cut. *Rulandus.*

LEPIDIUM.

The Characters are;

The Fruit is like the Head of a Spear, and full of Seeds, which are, for the moſt part, of an oblong Figure.

Boerhaave mentions four Species of this Plant; which are,

1. Lepidium; latifolium ſerratum. *Boerh. Ind. A.* 2. 9. *Lepidium, Piperitis.* Offic. *Lepidium latifolium.* C. B. P. 97. Raii Hiſt. 1. 828. Synop. 3. 304. Tourn. Inſt. 216. *Lepidium Pauli.* J. B. 2. 940. *Lepidium Pauli & Plinii Piperitis.* Chab. 296. *Lepidium Æginetæ.* Mer. Pin. 71. *Piperitis ſive Lepidium vulgare.* Park. Theat. 855. *Raphanus ſylveſtris Officinarum, Lepidium Æginetæ Lobelio.* Ger. 187. Emac. 241. DITTANDER.

The common Dittander has a ſmall, white, ſlender, creeping Root, hard to be got out of a Garden, where it has been once planted. The lower Leaves grow on long Foot-ſtalks, are ſmooth, oblong, ſharp-pointed, and ſerrated, four or five Inches long. The Stalks grow to be half a Yard high, ſmooth, and having leſſer and narrower Leaves growing alternately; ſometimes indented about the Edges, and ſometimes not. The Flowers that grow on the Top of the Stalks are ſmall, white, and four-leav'd, and the Seed-veſſels ſmall and round. It grows in moiſt Places near Rivers, and flowers in *June* and *July*. The whole Plant has a hot and biting Taſte, like Pepper.

The Leaves of Dittander, bruiſed and mixed with Hog's-lard, and apply'd as a Cataplaſm to the Hip, help the Sciatica; chew'd, they cauſe a great Flux of Rheum to run out of the Mouth, and by that means are ſaid to help ſcrophulous Tumors in the Throat. The Women, in *Suffolk*, give them boiled in Ale, to haſten the Birth. *Miller's Bot. Off.*

This Plant gives a deep-red Colour to blue Paper; it is acrid, aromatic, and taſtes like Pepper and Muſtard. The Salt of the Dittander ſeems to reſemble the *Terra foliata Tartari Mulleri*, but is united with a little oily volatile Salt.

Thus this Plant is antiſcorbutic, ſtomachic, and good for hypochondriac Diſorders; a Tincture is drawn from it with Spirit of Wine, or it may be drank in a Piſan: The Root is bruiſed with freſh Butter, and apply'd to the Parts affected with the Gout. *Martyn's Tournefort.*

2. Lepidium; glaſtifolium. *C. B. P.* 97. *Lepidium non repens.* J. B. 2. 941. *Cochlearia, altiſſimo folio. T.* 215.

3. Lepidium; gramineo folio; ſive Iberis. *Tourn. Inſt.* 216. *Boerh. Ind. A.* 2. 9. *Iberis.* Offic. J. B. 2. 948. *Iberis latiore folio.* C. B. P. 97. Park. Theat. 853. *Iberis Cardamantica.* Germ. 197. Emac. 253. *Lepidium anguſtifolium Tournefortii, Iberis Officinarum S. Dale.* Rupp. Flor. Jen. 67. SCIATICA CRESSES.

The lower Leaves of this Creſs are two or three Inches long, and about half an Inch broad, indented pretty deeply about the Edges, and growing on long Foot-ſtalks. The upper Leaves are long and narrow, not cut in, and ſet on without Foot-ſtalks; it ariſes to be a Foot high, or more, branch'd, and bearing on the Top Spikes of ſmall, white, four-leav'd Flowers, ſucceeded by round Seed-veſſels, containing ſmall rediſh Seed. It grows wild in the warmer Countries, but with us, only in Gardens, and flowers in *June*.

The Leaves and Roots are commended by the Antients againſt the Sciatica, being beaten in a Cataplaſm with Hog's-lard, and apply'd to the Part affected, and kept on four Hours to a Man, and two to a Woman, the Place afterwards being waſhed with Oil and Wine; but, at preſent, it is but rarely us'd. *Miller's Bot. Off.*

They reſemble Naſturtium in Smell, Taſte, and Virtues, only they are leſs drying. *Galen.*

4. Lepidium; humile; minus; incanum; Alepicum. *T.* 216. *Draba, Chalepenſis, repens, foliis minus cinereis & quaſi viridibus.* M. H. 2. 314. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 9.

LEPIDIUM is alſo a Name for the *Plumbago quorumdam.*

The *Lepidium* is alſo a Name for the *Draba.* Offic. *Draba Dioſcoridis.* Ger. Emac. 274. *Draba vulgaris.* Park. Theat. 849. Raii Hiſt. 1. 821. *Draba umbellata, vel Draba major capitulis donata.* C. B. P. 109. *Draba ſive Arabis.* Chab. 295. *Draba multis flore albo.* J. B. 2. 939. *Draba, Lepidium humile incanum arvenſe.* Tourn. Inſt. 216. *Thlaſpi Draba dictum.* Buxb. 318. ARABIAN MUSTARD, or TURKEY CRESSES. *Dale.*

It is cultivated in Gardens, and flowers in *June*; the Herb and Seed are uſed. The Herb is boiled with Piſan, eſpecially in *Cappadocia*; and the dry Seed ſerves inſtead of Pepper for Seaſoning of Meats. *Dioſcorides.*

LEPIDOCARPODENDRON, from λεπὶς, Scales; καρπὸς, Fruit; and δένδρον, a Tree.

The Characters are;

The Leaves are entire, and generally diſpoſed in a diſorderly Manner. The Calyx conſiſts of a Multitude of Leaves, placed one upon another, after the Manner of Scales, in different ſucceſſive Orders; when mature, it is contracted into the Shape of a ſquamous Veſſel, which cloſes itſelf. The Flowers, which are numerous, are compoſed of a Multitude of Floſcules, fill the Bottom of the Calyx, and are apetalous, anomalous, capillaceous, and hermaphrodite. From the Middle of the Flower proceeds the Ovary, furniſhed with one or more long Tubes, and growing in an oblong Caſe, which ends in two long Filaments. The Seed is adorned with a long Filament, having a ſmall Feather on its Apex.

Boerhaave mentions twelve Species of this Plant; which are,

1. Lepidocarpodendron; folio ſaligno lato; caule purpuraſcente.

This grows near the Cape of *Good Hope.*

The Bark of it is recommended in a Diarrhœa.

2. Lepidocarpodendron; folio ſubrotundo, rigido; in pedunculo longo, craſſo; flore maximo, purpureo.

3. Lepidocarpodendron; folio oblongo, viridi; limbo rubro ornato; ſquamarum apice; & margine, lanuginoſis.

4. Lepidocarpodendron; foliis anguſtis, longis, ſalignis, nervo rubro; florum plumis violaceo-purpureis.

5. Lepidocarpodendron; foliis anguſtis, brevioribus, ſalignis; calycis ſquamis elegantiſſime ex roſeo, aureo albo, atro rubro variegatis; florum plumis albis.

The Flower abounds with a ſweet and wholſome Liquor, which the Inhabitants of the Country where it grows are very fond of.

6. Lepidocarpodendron; foliis anguſtis, longioribus ſalignis; calycis ſquamis elegantiſſime ex flavo, fuſco, albo, nigro variegatis; florum plumulis, atropurpureis.

7. Lepidocarpodendron; folio ſaligno viridi; nervo & margine flavo; cono longo, ſuperiori parte maxime clauſo.

8. Lepidocarpodendron; foliis longiſſimis, anguſtiſſimis, fructum elegantiſſime ex rubro, flavo, & albo, variegatum, inſtar Coronæ ſuccingentibus; radice repente.

9. Lepidocarpodendron; acaulon; foliis paucis, latis, nervo & marginibus, rubris ornatis; fructu parvo.

10. Lepidocarpodendron; acaulon; ramis numeroſis e terra excreſcens; calyce floris immaturo extus, ex rubro & flavo, variegato, intus flavo.

11. Lepidocarpodendron; foliis anguſtiſſimis, gramineis; cancellato; ſemine coronato.

12. Lepidocarpodendron; foliis ſericeis, brevibus, confertiſſime natis; fructu gracili, longo. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 183.

LEPIDOIDES SUTURA. From λεπὶς, a Scale, and εἶδος, Form. A Name for the ſquamous Suture of the Skull.

LEPIDOSARCOMA. A Name given by *Marcus Aurelius Severinus*, to an uncommon Tumor, found in the Mouth, which was a *Sarcoma*, full of irregular Scales.

LEPIS, λεπὶς. A Scale, as of Metal; or the Husk, or Hull of Seeds.

LEPORINA LABRA. Hare-Lips. *Roſtrum Leporinum* is a Piece of Fleſh appearing betwixt the Diviſions of the Hare-Lip.

LEPRA. The Leproſy.

In treating of puſtulous and pruriginous cutaneous Diſorders, which being accompanied with Itching, Pain, Heat, Inflammation, Exulceration, and various Symptoms, ariſe from an impure, acrid Serum, ſtagnating between the exhaling Veſſels and the nervous and tendinous ſmall Fibres of the Skin, and corroding them; it will not be improper to premiſe, that each of theſe Diſorders of the Skin have very different Denominations, according to the different Acrimony of the peccant Humour, and the Degree of the ſubcutaneous Diſorder. Thus they are called the Itch, moiſt and dry, virulent, malignant, and venereal, a Pſora, a Serpigo, a Leproſy, an Impetigo, and Elephantiaſis, an Herpes miliaris, or Exedens, the Tinea Capitis, and Gutta Roſacea, all which we ſhall briefly and accurately explain.

The moſt gentle Degree of theſe Diſorders is a benign Itch, whether moiſt or dry; which, appearing in the Joints principally, at the Beginning, inſenſibly and gradually ſpreads through the remaining Parts of the Body, except the Head only. In the moiſt Kind, indeed, which ſeizes Infants principally, and Children, who are ſanguine, phlegmatic, and of a ſpongy Habit of Body, the Puſtules are turgid with a ſanious, purulent Humour, and it is attended with a greater Inflammation, which, from a rediſh Circle about its Edges, degenerates to a Suppuration. To this Claſs we ought, alſo, to refer the ſmall running Ulcers in the Heads of Infants, called ACHORS. But in the dry Kind, to which lean, old Perſons, and thoſe of a melancholy, choleric Temperament, are moſt ſubject, the Puſtules are of a ſmaller Size, and replete with a little ſerous Ichor, which, by irritating the highly tender Fibres of the Nerves under the Cuticula, bring on an almoſt intolerable Heat and Itching.

When the dry Itch is ſcaly and cruſty, and, after the Abraſion of the Cuticle or Eſchar, leaves bloody Spots under the Skin, it, upon the Approach of Heat, produces a painful and almoſt intolerable Itching, and is cured with very great Difficulty, or, being cured, returns very readily. This Diſorder is called Impetigo, a Tetter, or a virulent Itch, and is moſt familiar to ſcorbutic Perſons, and thoſe afflicted with a ſerous Cacochymy; and, if it is in a great Degree, it is termed a leprous Pſora. The Curious may conſult *Barbette* in his *Chirurgia*, *Lib.* 1. *Cap.* 8. and *Wepfer*, *Obſerv.* 214. and in the worſt Kind of this Diſeaſe the Head is very often affected, and a Cruſt grows all over the Body, without excepting even the Face, Lips, and Hands. Beſides, the whole Skin, becoming ulcerous, diſcharges a ſerous, corroſive Sanies, and the Cuticula is ſoon after ſeparated, ſo that dry Scales may be eaſily taken off, whilſt the ſubjacent Skin, which is of a dark-red Colour, diſcharges an acrid Moiſture. Hence a fetid Smell is produced, and the Patients, having a keen Appetite, complain of an inſatiable Thirſt.

But if this Species of the Itch, ſucceeding a Gonorrhœa, Buboes, and other Diſorders of the Genitals, not only ſeizes the whole Body, but particularly the Face, and is attended with Nodes and Tophi, of various Parts; and if the Pains, which accompany it, being corroding, penetrating, intenſe and pungent, increaſe in the Night; the Diſorder is called venereal, and malignant.

As the Herpes miliaris propagates itſelf, as it were, by creeping, it is, by ſome, termed a Serpigo, and, poſſeſſing only the Surface of the Body in certain Places, ſuch as the Legs, Thighs, Hands, Scrotum, and Perinæum, excites many ſmall Eminences in the Skin, or little pruriginous Puſtules, without Moiſture, and as large as a Millet-ſeed, which, when the Scales come off, diſappear indeed, but return, at certain Periods of Time, in the ſame Places. Sometimes the Head itſelf, likewiſe, is infeſted with ſuch an Herpes; as *Helwigius*, in *Obſerv. Phyſico-mediciis*, *Obſ.* 38. affirms. To this Claſs we may, alſo, refer that Species of Scurf, which is principally familiar to old Men, affects the Skin with an almoſt intolerable Itching, without Puſtules and Papulæ, and requires a perpetual Scratching with the Nails: Sometimes, alſo, it attacks the Pubes and Scrotum ſeparately, and ſometimes the End of the Inteſtinum Rectum, eſpecially when the Hæmorrhoids begin to ceaſe through an Exceſs of Age, or any other Misfortune.

The Herpes exedens, which *Hippocrates* only calls an Herpes, and *Celſus*, *Lib.* 5. *Cap.* 18. *Sacer Ignis*, and which is not unlike an ulcerous Eryſipelas, corrodes the whole Skin, to the ſubjacent Fleſh, with an Ulcer, and ſeparates it into Scales, ſometimes thick, and ſometimes thin, eſpecially about the hairy Parts of the Head; and, when it diſappears, it leaves hard Tumors on the Part affected.

But when an Herpes of the malignant Kind ſeizes the Breaſt and Præcordia, and is accompanied with a Cardialgia, preternatural Heat, Itching, Inflammation of the Skin, painful Exulceration, and ſmall and lucid Puſtules, like a Belt diſperſed on the Breaſt for a Hand's Breadth, the Diſorder is termed *Zona Ignea*, or the Shingles. See *Marcus Aurel. Severini*, *Lib.* 4. *de Abſceſſibus*, *Cap.* 9. *Nicol. Tulpius*, *Lib.* 3. *Schulzius*, *Ann.* 3. *Ephem. Obſ.* 4. who obſerv'd it prove fatal, and *Jo. Langius*, who obſerved it to have ariſen from an Ulcer of the Leg, prepoſterouſly and unſeaſonably conſolidated.

The cruſty and ſcaly Itch, which principally invades the Legs, as far up as the Knees, is, by ſome, diſtinguiſhed by the Title of Elephantiaſis, while the Legs are tumefied like Bags, upon which pretty large Cruſts appear, and theſe Cruſts, being abraded, leave rediſh Spots uneaſy to the Patient by their Itching, and great Vellication; and diſcharge a thick Humour, which is ſoon condenſed into freſh Scales and Cruſts. But the true Lepra of the *Arabians*, or Elephantiaſis of the *Greeks*, is a much more loathſome Diſeaſe, which *Aretæus* has given us the beſt Deſcription of, *Lib.* 4. *Cap.* 13. and *Celſus*, *Lib.* 3. *Cap.* 25. in this manner: "Almoſt unknown in *Italy*, but very frequent in ſome Countries, is that Diſeaſe, which the *Greeks* term ἐλεφαντίασις, and "which is reckoned among the chronical Diſorders. By it the "whole Body is ſo diſordered, that the Bones are ſaid to be "vitiated. The Surface of the Body is covered pretty "thick with Spots and Tumors, the Redneſs of which is, by "degrees, converted into a black Colour. The external Skin "becomes unequally thick, thin, hard, and ſoft; and is, in a "manner, render'd rough by certain Scales; the Body grows "lean; the Face, Legs, and Feet, ſwell. When the Diſeaſe is "of long ſtanding, the Fingers and Toes are concealed under "a Tumor, and a ſlight Fever ariſes, which eaſily deſtroys the "Patient labouring under ſo many Diſorders."

There is a wide Difference between the Itch and Leproſy, and that ulcerous Diſorder, in which white ſordid Ulcers, ſeizing principally the muſcular Parts, ſuch as the Back, Arms, Thighs, Legs, and Loins, diſcharge a putrid Sanies, and ſometimes appearing in one Limb, and ſometimes in another, often continue for many Years. And this Kind of Diſorder is moſt incident to common People, Beggars, and Perſons of mean Stations, who live upon impure and ſordid Aliments. Many of our Phyſicians, alſo, aſſert, that *Lazarus* was afflicted with this Diſeaſe. Large Quantities of Worms are, alſo, ſometimes found lodged within theſe Ulcers, ſo that they can hardly be extirpated by any Remedies.

All theſe ſubcutaneous puſtulous Diſorders principally ſpread themſelves, and infect by Contagion; for which Reaſon they are eaſily propagated by lying together; by uſing Beds, or Clothes, tainted with a foul pinguious Sweat; but above all by the Skins of Animals, and the Clothes made of their Wool: For Wool is the fitteſt Medium for conveying this Diſorder, ſince, by its lax and porous Sponginеſs, it abſorbs thoſe impure exhaling Particles, and retains them longer, ſo that they will not be immediately diſperſed into the Air. For as Odours, diffuſed from any fragrant Subſtance whatever, continue a long time in Linen, Gloves, and Clothes, ſo likewiſe in contagious Diſeaſes, as the Plague, Small-pox, Meaſles, and petechial Diſorders, the putrid Effluvia, which are the Fomes of the Diſeaſe, by inſinuating themſelves deeply into thoſe porous Subſtances, eſpecially when made of Wool, often lie latent for a long time before they exert their Power of Infection.

That the Seat of theſe Diſeaſes, already enumerated, is the Compages of the Skin, which is tubulous, framed of various Fibres, and the univerſal Emunctory of the Body, our very Senſes ſufficiently demonſtrate. But, indeed, to ſpeak my Sentiments freely, I am fully perſuaded, that the Membrana Pinguedinoſa of the Skin is the principal Seat and Place where the Fomes of the impure and corrupt Matter primarily reſides, which, whilſt it cannot tranſpire freely through the Pores and exhaling Tubes of the Skin, continues there a long time, and by this long Continuance being rendered more acrid, does, by corroding, irritating, and inflaming the nervous Fibres of the Skin, generates various Puſtules and Papulæ. For, in the whole Body, there is no Part either ſolid or fluid, which, preſerving its proper Craſis, can, for a more conſiderable time, retain and conceal a fetid and vapid Humour, before, by a fermentative Motion from ſome peccant Temperament of the Air, it protrudes and expels it from the moſt latent Places in which it is lodg'd, than the Fat itſelf, in which, according to my Opinion, the Seeds of the Small-pox and Meaſles, the Purple Fever, the *Lues Venerea*, and other Diſorders of a like Nature, lie concealed for a long time. Beſides, as is certain from Experience, Bodies very replete with Fat are not only longer and more grievouſly afflicted with theſe Diſeaſes of the Skin, but, alſo, after a Cure, more eaſily relapſe into their former Diſorder, a plain Indication that the Fewel of the Diſtemper is concealed in the Fat.

But, if we conſider the Patients moſt ſubject to theſe Diſorders of the Skin, who are principally Infants and Children; as they are obnoxious to the Small-pox, Meaſles, Aches of the Head, and Defedations of the Skin of all Kinds, ſo they are principally ſubject to ſcabious and puſtulous Diſeaſes, not only from the ſoft and ſpongy Subſtance of their ſolid Parts, and their weak Tranſpiration, but, above all, for this Reaſon, becauſe, through the ſedentary Life of pregnant Women, and the Weakneſs of their Digeſtion, the Juices, by which the Infants are nouriſhed while in the Womb, are not temperate, but impure:

pure: Hence it is no Wonder, that the tender Bodies of Infants, alſo, are contaminated with Sordes, and full of ſuperfluous and peccant Humours; which, when, ſome time after, by a bad Conſtitution of the Air, the Energy of the contagious Fomes, or any other Cauſes, they are put into a fermentative Motion, excite innumerable Diſorders, and particularly deform the external Parts of the Body with various Eruptions.

'Tis a common Tradition, that Achors, a Tinea Capitis, and the Itch, preſerve Infants and Children from the Small-pox and Meaſles, or at leaſt have Efficacy enough to make them of a milder Sort: But, if it was neceſſary, I could produce many contrary Inſtances of Children, afflicted as well with the Itch, as other ulcerous Diſorders of the Skin, who, ſoon after they were cured of theſe troubleſome Diſtempers, fell into a confluent Small-pox, and Meaſles of the malignant Sort: From which we may reaſonably conclude, that each of theſe puſtulous Diſtempers has a peccant and corrupted Matter of a peculiar, and, as it were, ſpecific Quality, lodged in the Fat, for its reſpective Cauſe.

We now come to give ſome Reaſons, why theſe Diſorders of the Skin are ſo different in different Patients; and this, as far as I can comprehend, is to be aſſigned principally to the Difference of their Ages: For, ſince the Texture of the Skin is greatly changed with the Age, and differs very much in Children and young Perſons, from what it is in Adults, and thoſe advanced in Years; hence it happens, that thoſe puſtulous Diſeaſes, which differently affect the Skin, aſſume different Natures and Geniuſes, and exert themſelves in different Manners. For it is certain, from Phyſiology, that in the Bodies of Children, and young Perſons, there are more ſmall Canals in the Skin, a greater Number of Pores, and open Orifices, in its Surface, than in Adults, and Perſons farther advanced in Years, where the Veſſels are rendered narrower, coaleſce, and become ſolid. Thus in old Men the cellular Interſtices of the Membranes of the whole Body, and particularly thoſe between the Skin, and ſubjacent Parts, are leſs replete with a pinguious Humour, in conſequence of which Wrinkles are formed. Hence, through a Defect of Fat, the exhaling Veſſels and Pores of the Skin are contorted, incurvated, and compreſſed. From what has been ſaid, it will be no difficult Task to aſſign a Reaſon, why, in Old-age, the dry Itch, a Serpigo accompanied with an intolerable Itching, and an Herpes miliaris, are moſt common; whereas, on the contrary, in Infants and Children of ſanguine, phlegmatic, and pinguious Habits, ſuch Diſorders are rather produced, as, in conſequence of a large Quantity of Fat and Serum, diſcharge much Sanies. To this we may add, that in Children, and young Perſons, eſpecially of a ſanguine Temperament, the Blood is intimately mixed with the pinguious, chylous, and nutritive Parts; and for this Reaſon affords a larger Quantity of Matter and Aliment, not only to ſound Bodies, but, alſo, to ſuch as are, in ſome meaſure, decayed and corrupted, than in ſcorbutic and cacochymic old Men, whoſe Blood is generally replete with ſaline, ſulphureous, and viſcid unactive Particles.

Farther, that we may know for what Reaſons certain Eruptions appear in certain Places, and in ſome poſſeſs the ſuperior, and in others the Trunk, and inferior Parts, I think it muſt not be omitted, that as ſeveral other Diſeaſes, ſo, likewiſe, the Diſorders of the Skin, generally at ſtated times, invade certain Parts, according to the different Ages of the Patients. Thus we obſerve, in Infants and Children, Favi, Achors, a Tinea Capitis, Epiphoras, purulent Inflammations of the Eyes, and Serpigos appearing frequently on the Forehead and Chin. In young and adult Perſons, the Itch, Herpes, and other Diſorders, ſeize principally the Hands, Arms, and Back; and, laſtly, in the Decline of Life, or when Old-age comes on, Itchings are perceived in the Anus, Scrotum, and Perinæum; and a Pſora, Leproſy, Elephantiaſis, and Eryſipelas, ulcerate the Feet.

It is alſo expedient to inquire, why, in different Patients, the peccant Humour, which ſupports the puſtulous and pruriginous Diſeaſes of the Skin, differs ſo ſurpriſingly in its Acrimony, Viſcidity, Conſiſtence, and other Qualities. And this, in my Opinion, depends upon the different Temperament and Tone of the Skin. Hence, when the State of the Skin is ſpongy, ſoft, and thin, as it is in ſanguine Perſons, a greater Quantity of Ichor, Sanies, and purulent Matter, is found collected in the Veſicles; which, being dried, is changed into Scales and Cruſts. For two kinds of Humours are contained in the Skin, and ſecreted from it; the one mucous, which is incloſed in the ſpongy Cells of the Corpus reticulare, lying immediately under the Skin; and the other ſebaceous, which is inſenſibly diſcharged from the cutaneous Veſſels and Lacunæ: When, therefore, the nervous Fibres, by which the Cuticle is united to the Cutis, are lacerated and corroded by an acrid Humour, the relaxed Epidermis is raiſed into ſmall Veſſels full of ſaline Serum; which afterwards open into ſmall Ulcers. But it is otherwiſe in choleric Patients, thoſe of a more compact Habit of Body, and old Perſons, who are rather affected with a dry Itch, and other Puſtules and Pimples, filled with none, or but little Moiſture: And theſe Diſorders are brought on by a copious Generation of viſcid Humours, and the Narrowneſs of the Tubes of the Skin, induced by a Loſs of the natural Strength; which diſcovers itſelf ſufficiently, not only by the languid State of all the Functions, but, eſpecially, by the Slowneſs and Weakneſs of the Pulſe, which ſhews the Circulation of the Blood and Humours to be faint and languid.

Having ſaid thus much in general of the Diſeaſes of the Skin, we now come to conſider their true and genuine Cauſes, in a more particular manner. Now the genuine, proximate, and immediate Cauſe of theſe Diſorders is no other than an impure, viſcid, and acrid Serum, which, by ſtagnating in the ſmall Tubes of the Skin, lacerating the nervous Fibres, and producing there a ſlight Inflammation, produces various Corroſions, Puſtules, and Exulcerations; and, conſequently, excites all the cutaneous Diſeaſes with the Symptoms already enumerated. But of how peccant and virulent a Nature this corrupted Matter, ſtagnating under the Skin, is, appears ſufficiently from this, that almoſt all dangerous and mortal Diſeaſes, whether acute or chronical, and eſpecially thoſe rooted in the nervous Syſtem, may be relieved by forcing this virulent Matter to the Surface of the Body externally; and, on the contrary, augmented by repelling it to the internal Parts.

The Truth of this is confirmed by Experience; for we have numberleſs Obſervations made by Authors of Veracity, who inform us, that ſpaſmodic Aſthmas, arthritic Pains, Gout, and many other Diſtempers, have been removed by the Itch alone, and recurred upon a Suppreſſion of it. Thus *Sennertus, in Paralipom.* tells us, that a continual Fever, Blindneſs, and Epilepſy, were produced by this means. And *Sebizius* remarked a Woman, afflicted with the Itch, who, upon the Application of a Mercurial Girdle, had her Tongue ſwelled to ſo enormous a Bulk, that, hanging out of her Mouth, not without Danger of a Gangrene, it could hardly be reduced to its natural Size. *Hagendornius, Cent. 1. Hiſt. 9. & M. N. B. dec. 1. ann. 2. Obſ.* 313. aſſure us, that Suffocation followed a repelled Itch: And, in *Cent.* 2. we have an Account of a ſcorbutic Itch, treated with a Mercurial Ointment, which terminated in a Gout; and, at another time, proved the Cauſe of a Gutta ſerena. *Amatus Luſitanus, Curat. Med. Cent. 2. Curat.* 33. mentions a young Man, who, when afflicted with the Itch all over his Body, anointed himſelf with an Ointment, in which Arſenic was mixed, and in the Morning was found dead in his Bed, by his Servants. He, alſo, tells us, that he knew another, who, by anointing himſelf in the ſame manner, was ſeized with Madneſs: And in another, he ſays, ſome Tubercles aroſe, which were very difficult to cure Nor muſt we omit what *Hoechſtetterus, Dec. 8. Obſervat.* tells us: "A young Taylor, ſays he, having the Itch, uſed a Mercu-"rial Ointment, without purging his Body; by which the Diſ-"temper being thrown to the internal Parts of his Body, both "his Legs, from the Coxendix, became weak and motionleſs, "like as if they had been paralytic. His Body was rendered "ſoluble; and things calculated for preparing and eliminating "the peccant Humours were given; but, finding no Relief "from them, he was ſeized with Convulſions, and died." And the ſame Author, *Dec. 1. Caſu* 2. ſays, that ſpurious and malignant Fevers have been produced by a raſh and prepoſterous Cure of puſtulous Diſorders.

And I myſelf have obſerved, in delicate Patients, that a perverſe Uſe of drying Topics, in cutaneous Diſorders, has produced a Difficulty of Breathing, a Phthiſis, Loſs of Appetite, and the utmoſt Anxieties of the Præcordia. I have, alſo, known an Anaſarca, and Tumors of the Scrotum, ariſe from the ſame Cauſe. And beſides, this Opinion of mine, concerning the viſcid and acrid Quality of the peccant Manner, is ſtill more confirmed by opening a Vein in theſe Diſorders, when the Blood is found ſo viſcid, and, as it were, condenſed into a Coagulum, that it can hardly be ſeparated. The ſame is very plainly proved by a remarkable Obſervation on the noxious Effect of a repulſed Itch, which *Schulzius* has inſerted in *Vol. 1. A. N. C.* 'A certain Man, having led a ſedentary Life for many Years, and being violently and for a long time afflicted with a moiſt Itch, he was altogether, and at once, freed from it by the Uſe of external Remedies; upon which he was immediately ſeized with Deliquiums; and afterwards, when the Itch could not be recalled by any means, he became hemiplectic, convulſive, and lethargic. Upon opening his Body, the Peritonæum appeared very thick, adhering to the Omentum, full of unſeemly, black, green, and livid Streaks, and diffuſing a moſt fetid Smell. His Inteſtines were diſtended with Flatulences, and full of green Eruptions; and his Stomach, Liver, Spleen, the Inteſtinum Colon, and Duodenum, were ſo united into one Maſs, that no Part of them could be ſeparated without a Knife, or Dilaceration. The Spleen was preternaturally thick and hard, and the Gall-bladder thick, and replete with a viſcid Humour reſembling a ſaturated Solution of Gamboge.

'Tis not, therefore, to be doubted, but in cutaneous Diſorders there is a large Quantity of glutinous and tenacious, impure and corrupt Serum. But, if we accurately examine into the mediate and remote Cauſes contributing to the Production of this Serum, the firſt, which occurs, is the Strength of the Solids, impaired and rendered inſufficient for a due and brisk Contraction: Which being diminiſhed, the Circulation of the Blood,

and the Secretion and Excretion of the ſuperfluous Humours depending on it, decreaſe; the fluid Parts are not ſufficiently attenuated, and intermixed with the ſolid, but, in Proceſs of Time, greatly degenerated from their former ſalutary Temperature. Beſides, under ſuch a diminiſhed Motion of the Blood, the Structure of the Organs and Viſcera, deſtined as well for Sanguification, as the Secretion of the laudable Juices, ſuch as the Liver and Spleen, is depraved in a wonderful manner: Hence the Veſſels and Paſſages being rendered more narrow, and the acrid, ſaline, and viſcid Particles not properly ſeparated, enter this Mixture of the Blood, and infect, contaminate, and corrupt it with an impure Taint, or Fomes, which ſupplies large Matter for theſe Diſeaſes. Hence it is, that we find hypochondriac, ſcorbutic, and cachectic Perſons, who are afflicted with ſuch a State of the Blood and Viſcera, are ſubject to ſeveral cutaneous Diſorders. Since, therefore, the Blood and Viſcera cannot be eaſily corrected, and reſtored to their former Condition, the Reaſon is evident, why it is not only difficult entirely to remove Diſorders of this Kind, if they have taken deep Root, and are become inveterate, but, alſo, why, after being once cured, they eaſily recur with their former Virulence.

But to this ſo dangerous and noxious a Depravation of the ſolid Parts, and of the Viſcera themſelves, many Cauſes concur in ſome Patients; the principal of which are, in Men, a Suppreſſion of the hæmorrhoidal Diſcharge; in Women, a Suppreſſion of the Menſes; in young Perſons, a Suppreſſion of Hæmorrhages from the Noſe; and, in plethoric Patients, the Omiſſion of accuſtomed Veneſection. For, ſince in ſuch a State of Things, eſpecially if a luxurious Manner of living is uſed, the Redundance of the Blood and Humours cauſes a ſlower Circulation, and an impeded Depuration of the vital Juices, the Blood cannot but be inſenſibly, and by degrees, impregnated with various Impurities. This happens more frequently, when the ſalutary Buſineſs of Tranſpiration is retarded by an Air, cold, moiſt, vapid, and replete with noxious Vapours: For this Reaſon, alſo, Perſons dwelling in low and moiſt Houſes, inhabiting Marſhes, and Places obnoxious to Inundations of Water, or confined in Priſons, or People living in cold and moiſt northerly Countries, are, above all others, afflicted ſo frequently with the Itch, and other cutaneous Diſtempers. Nor is any thing, but the moiſt and unequal Temperament of the Air, in the Spring and Autumn, to be blamed, for the Appearance or Return of theſe Diſorders, at thoſe Seaſons eſpecially, and for their exciting a greater Itching and Heat at ſome times, than at others; and in *M. N. C. Dec.* 3. *Ann.* I. *Obſ.* 205. we are informed, that ſuch a thing happened at the Increaſe of the Moon. For the Atmoſphere, or circumambient Air, has a ſurpriſing Influence on the Tone of the Skin, and the Succeſs of Tranſpiration depending either on its Conſtriction or Relaxation; and as a good, pure, and elaſtic Air preſerves a due Craſis of laudable Blood, ſo an impure and vapid Air has an Effect directly oppoſite; as *Lucretius*, *Lib.* 6. *Verſ.* 1110. has obſerved, in the following Lines.

Eſt Elephas morbus, qui propter flumina Nili
Gignitur Ægypto in media, neque præterea uſquam.

Nothing likewiſe is more common, than for ſudden Changes of Air, and Journeys from a pure and light, to a thick and denſe Atmoſphere, to bring on various cutaneous Diſorders; though it is not to be denied, that a Change of Food, Water, and Liquors, which, by changing the Diſpoſition of the Blood, generates new Particles, and thoſe perhaps, not correſponding to the Diameters of the Emunctories, contributes, alſo, to the Production of ſuch Diſorders. Hence I know ſeveral, who, coming from *France*, and Countries ſituated on the other Side of the *Rhine*, and other Places, which produce Wines, to *Germany*, where they met with a more rigid and inclement Atmoſphere, have, after ſome Months, been ſeized with the Itch. *Lucretius* therefore, in the Place already quoted, very juſtly derives the Origin of many Diſeaſes from a Change of Air, in theſe Words:

——Inde aliis alius locus eſt inimicus,
Partibus ac membris varius concinnat id aer.
Proinde, ubi ſe cœlum, quod nobis forte alienum
Commovet, atque aer inimicus ſerpere cæpit,
Ut nebula ac nubes paulatim repit, & omne
Qua graditur, conturbat, & immutare coactat.

Beſides theſe we ought to reckon, among the more remote Cauſes, a bad Digeſtion of the Aliments, which happens, either when proper Food is devoured in an exceſſive Quantity, or when incongruous Aliments are uſed, ſuch as Fleſhes ſmok'd, or overſalted Bacon and Pork, too pinguious Subſtances, ſweet Things, crude Summer Fruits, Peas, and Beans, generally are. To which likewiſe belong ſeveral Sorts of Drinks, ſuch as acid Wine, acid Malt-liquors, and impure Waters. For, by means of theſe, many viſcid, ſaline, and acrid Crudities muſt neceſſarily be accumulated in the Primæ Viæ; which, being conveyed into the Blood, are not intimately enough mixed and digeſted, nor ſufficiently depurated through the Strainers, particularly through the Emunctories of the Skin; whence the Blood, in conſequence of a difficult Circulation, is rendered cacochymic. And this happens the rather, if, beſides the Paſſions of the Mind, ſuch as Sorrow and Uneaſineſs of Temper, which have great Efficacy in retarding and inſpiſſating the Blood, an idle and ſedentary Life is likewiſe added. For this Reaſon, alſo, Weavers and Taylors more frequently labour under a loathſome Itch of the Hands, and even a cruſty one of the Legs and Shins, with a pale Face, and a ſomewhat tumid State of the Body, in conſequence of their coarſe Method of Living, and Omiſſion of Exerciſe.

The Prognoſtic which we now come briefly to explain, varies according to the Variety of the Diſorders: And, firſt, it is to be obſerved, that an Itch, communicated by Contagion, is more eaſily cured, ſince, adhering only ſuperficially, it has not taken deep Root in the Skin, than that, which draws its Origin from a native Dyſcraſy of the Blood and Humours. The moiſt Itch, likewiſe, and particularly when it is not very much ſpread, is generally more mild and ſlight than one of the dry, pruriginous Kind: For the latter fatigues the Patients Night and Day with an almoſt intolerable Itching, and by interrupting Sleep impairs the Strength. Patience, therefore, muſt be injoined, becauſe ſo great an Impurity of ſerous, acrid, and lixivial Juice cannot be ſuddenly temperated, diluted, corrected, and gently diſcharged. Beſides, all cutaneous Diſorders, when recent, are more eaſily cured, than thoſe which are become inveterate, and confirmed by Length of Time, or a Want of due Care: And theſe, again, are more eaſily cured in young Perſons, by reaſon of their free Tranſpiration, than in thoſe more advanced in Years; ſince the latter, according to *Celſus*, are very ſubject to chronical Diſeaſes. The Diſorders of the Skin, which proceed from an internal Fault of the Viſcera, are not only removed with more Difficulty, and indeed not at all, unleſs the Corruption of the Viſcera is firſt taken away, but they are, alſo, eaſily renewed, and return afreſh; and ſometimes degenerate into an Hectic and Dropſy. From hence we may eaſily judge, in what manner we ought to form a Prognoſtic, if ſuch Diſorders invade after intermitting Fevers, the Small-pox, the Meaſles, and the *Lues Venerea*. Beſides, all ſubcutaneous Diſorders are more obſtinate, if there are obſerved, in the muſculous and pinguedinous Parts of the Back and Arm, ſmall Nodes in the Shape of Glands, externally inviſible, but internally palpable, like Vetches, Beans, and Peas; a manifeſt Indication, that not the indurated Glands of the Skin, but the viſcid Humour, ſtagnating in the Membranes and pinguedinous Cells, is the Cauſe. But eſpecially with reſpect to the Elephantiaſis, which is commonly the higheſt Degree of cutaneous Diſeaſes, *Aretæus*, *Lib.* 8. *Cap.* 13. forms the following Prognoſtic: "Medicines, "a proper Regimen, Inſtruments, and Fire, ſhould concur to"gether at the ſame time, for the Cure of cutaneous Diſorders. "And, if you apply theſe to a recent and growing Diſorder, there "are ſome Hopes of Recovery. But if it is arrived at the laſt "Stage, fixed in the Viſcera, and, beſides, invades the Face, then "all Hope of the Patients Health is entirely deſtroy'd." When the Small-pox or Meaſles follow an Herpes Miliaris, infeſting the Head with Tooth-achs, Head-ach, Catarrhs, and Defluxions, the Caſe is not without Danger: And ſometimes, after the Death of ſuch Patients, I have known a morbid, black, and ſphacelated Space found in the Crown of the Head. The Leproſy was at all times eſteemed very contagious; and therefore have Phyſicians thought it proper, that leprous Perſons ſhould be ſeparated from the Society of Men, and baniſhed out of Cities into ſolitary Places; tho' I have often, and but lately, ſeen a Man of Learning, who, labouring under the true Symptoms of a Leproſy, has been converſant with his Domeſtics, for a Year and more, without any Prejudice to them. But it is otherwiſe in *Greece*, where this Kind of Diſeaſe is much more contagious.

As to the proper and ſecure Method of curing theſe Diſorders, we muſt obſerve, that the Antients were very well ſkilled both in diſcovering and curing moſt Diſeaſes of the Skin; and the more ſo, becauſe the two principal of them, the Leproſy and Elephantiaſis, which conſtitute, as it were, the higheſt Degree of cutaneous Diſeaſes, were very frequent in their Countries, and afforded them a convenient Opportunity not only of knowing thoroughly the particular Characters of theſe Diſtempers, but, alſo, of diſcovering better the true Efficacy of the Remedies adapted to their Cure; ſo that it is now eaſy for us to adapt our Meaſures to the leſs Degrees, and ſlighter Species of the Skin. But above all the reſt, as the moſt ſerviceable to our preſent Purpoſe, I prefer that moſt accurate Obſerver *Aretæus*, who, in his Deſcription of the Elephantiaſis, *Lib.* 4. *Cap.* 13. ſo naturally, and, as it were, to the Life, paints the Diſpoſition and Progreſs of this horrid Misfortune, that it evidently appears, that the whole Maſs of Blood and Humours is entirely viſcid, tenacious, and almoſt coagulated, and the ſpirituous Principle of the vital Juices abſolutely depreſſed; ſo that by this means the ſalutary Secretions and Excretions being ſuppreſſed, the whole Body abounds with tenacious, acrid, and corrupt Humours. And, for the Removal of theſe Cauſes, he propoſes this excellent Method of Cure.

After

After Bleeding, he prescribes Milk mixt with a fifth Part of Water to be given for Drink, to render the Body soluble; and Veratrum, by which he means white Hellebore, to be taken every other Day in Spring and Autumn. He also thinks the Shavings of Elephants Teeth an excellent Medicine, given with Wine, and the Flesh of Vipers, either reduced to Troches, or boiled with Squills and Broths; and, for this Purpose, he greatly extols all Medicines prepared from Vipers. Among Externals, he advises those things, which deterge and resolve Tumors; and orders the Sordes to be washed off with Soap in a Bath. He also prescribes a Bath, in which have been boiled the sharp-pointed Dock and Sulphur, as a very great Detergent. For removing the Tumors, he orders the Fat of a Lion and Bear, mixt in equal Portions with alkaline Salt; but for mitigating the sharp Fluxions, and appeasing the Exulcerations, he proposes a Decoction of Fenugreek, Barley, and Oil of Roses, both for the sake of deterging and moistening; and, if the Flesh is livid, he first orders a Scarification to be made, that the Part may be render'd succulent: For Food, which ought to be plain, of a laudable Juice, and easy of Concoction, he strongly recommends a Decoction of Cabbage, with a Solution of Cumin: For Supper, the *Staphylinus*, Carrot; among Sea-substances, Oysters and Rock-fishes; among Birds, Partridges and Pigeons; among Fruits, Summer-fruits and sweet Wines. Nor does he think less Regard should be had to Sleep, Watchings, and Places chosen for Habitations, as well as to the Exercises of the Body, which he orders to be carried on by Running, Talking, and various Contorsions of the Body; and to be continued properly without Lassitude. *Aretæus*, also, greatly extols the Efficacy of white Hellebore in this Disease; for he calls it the most efficacious of all Purgatives, free from every peccant Quality, which, in a small Quantity, and moderate Dose, was the only Remedy for all inveterate Diseases, that had taken deep Root, and which render'd a difficult Respiration easy, and a pale Complexion gay and florid.

Celsus, *Lib.* 3. *Cap.* 25. proposes a Cure, not unlike this, for the Elephantiasis. "Immediately at the Beginning of the Disorder, Blood should be taken away, for two Days, or the Body be render'd soluble with black Hellebore: Abstinence then, as far as it can be supported, must be used; then the Strength a little repaired, and the Body render'd soluble: After this, when the Body is eased, Exercise is necessary, and, especially, Running: Sweat must, also, be provoked, first, by Exercise of the Body, and, then, by a dry Heat. Friction should be used, and Care taken, in the mean time, that the Strength be preserved; and Bathing seldom used. The Aliment ought neither to be pinguious, glutinous, nor flatulent. Wine, besides, is properly given on the first Days. Plantane triturated, and used by way of Ointment, seems to preserve the Body best."

From a due Consideration of all these Things, we may conclude, that the whole Method of Cure, and all the Powers of the Remedies, ought to aim at, and, as it were, conspire together to discharge out of the Body the Mass of corrupt, glutinous, and acrid Humours, by sufficient Bleeding and Abstinence, by Purges, both gentle, as Milk is; and drastic, as Hellebore: Then, that by congruous Aliments, and a proper Regimen of Diet, Juices of a laudable Quality, and agreeable to Nature, may be generated; and, lastly, that by external, detersive, consolidating, and drying Remedies, the Parts may be freed from Pains, Tumors, Itching, and Ulcers. And indeed these Intentions of Cure, as well as the Medicines proposed for answering them, are very proper and expedient. We shall therefore, from the Antients, take our Methods of Cure; not only for the Elephantiasis, but, also, for more gentle Diseases of the Skin, such as the Itch, Herpes, and Gutta Rosacea. But, since all these exanthematous, ulcerous, and pruriginous Disorders, differ widely from each other, in respect to Places, Patients, and Temperaments, and, likewise, in regard to the Habit of Body, and Manner of Life, and since, in this learned Age, the healing Art is supplied with efficacious Remedies, we shall act most judiciously, if we confine the Method of the Antients within certain Bounds, and pursue it, in our Climate, with some proper Cautions.

And, first, as to diminishing the depraved Humours by various Bleedings, it must be observed, that the Quantity of Blood, to be evacuated by opening a Vein, should be estimated from the different Redundancy of it, according to Age, Strength, and Custom. Nor are old Persons, who have been accustomed to artificial or natural Evacuations of the Blood, to be entirely dissuaded from such Diminutions: For I have known Instances of old Persons, both Men and Women, after the Age of Fourscore, whose Veins have been open'd, in several Diseases of the Skin, with remarkable Advantage; or in whom natural Excretions of the Blood have been revived by an hæmorrhoidal Flux, with Relief: But if the Patients are fat, and of a spongy Habit of Body, where there is generally found a large Quantity of Veins, and a Smallness of them, I have observed it to be a more speedy and secure Method of Relief, to diminish the Mass of Blood and Humours by Scarifications, made at a convenient Season, especially when the Strength, impaired by the Length of the Disorder, and want of Appetite, has required only a moderate Depletion: Nor is this kind of Remedy always sufficient, when hypochondriac Persons, and those afflicted with hæmorrhoidal Disorders, fall into such Distempers. But then it is more expedient to attempt and contrive a due Evacuation of Blood, by Leeches applied to the Anus.

It sometimes happens, that some Patients, in which a Plethora rather of a serous than of a sanguine Kind offends, bear a copious Discharge of Blood very ill. In this Case, therefore, other Measures should be taken; and if a voracious Appetite, as it frequently happens, gives Rise to the Distemper, Abstinence, in Conjunction with proper Cautions, should be recommended for the Cure: But this salutary Method principally consists in this, that the Patients abstain from all pinguious, boiled, and glutinous Fleshes, such as Pork and Beef are; from Milk-meats, and all Things which inflate, and afford much Nourishment; and rather use Fleshes well roasted, and light, such as those of Birds, Partridges, Chickens, and Pigeons; and sometimes Biscuit; interposing, to preserve a Solubility of the Body, Raisins, boiled Damascene-plumbs, laxative Apples, and other lubricating Substances of this Kind. But, since a sudden Change of Food is often prejudicial, this Remedy of Abstinence should be enter'd upon in such a manner, that the Patients, not altogether, and at once, but rather insensibly, and, as it were, by degrees, descending from a plentiful to a more scanty Diet, may accustom themselves to it imperceptibly, without Damage, and continue it, according to their Circumstances, for several Days or Weeks. This Caution is equally necessary after the Cure, that we may not suddenly ascend again to a plentiful Diet.

Besides these, under the whole Progress of this Cure, drinking Malt-liquors, at other times customary, ought to be prohibited, substituting in its Room large Quantities of Decoctions, prepared of such Ingredients as contribute to purify and sweeten the Juices, dry up the superfluous Humours, and corroborate the solid Parts; such as the mild and frequently used Roots of China, Sarsaparilla, sharp-pointed Dock, Vipers-grass, Succory, Liquorice, and Polypodium; the Barks of Sassafras, Cascarilla, Cinnamon, Misselto; the Shavings of Sassafras, and red Sanders, and others of the same Kind; which, according to the various Intentions proposed, may be variously mixed with each other, and so boiled in pure Water, two Pints, or a *Measure*, of which may be allowed for each Ounce of the Ingredients.

But it is likewise proper, for the Progress and Completion of this Cure, to free the Primæ Viæ from the Colluvies of vitiated Humours, by gentle Purgatives; which should be repeated often, as well during the Cure, as after it is finished. This Design may best be answered by Remedies gently evacuating; among which we justly reckon Infusions of Manna, Rhubarb, Sena-leaves, Cream of Tartar, the bitter purging Salts, Cassia, the Herbs Fumitory and Dodder of Thyme; together with the Roots of Succory and Polypodium, prepared with Water and Wine.

But if the growing and refractory State of the Disease raises a Suspicion of Malignity, or, in some, seems not to yield to Abstinence, it is expedient to use more powerful and efficacious Remedies, as well from the Class of Purgatives, as of Diaphoretics, and Cleansers of the Blood, that the tenacious and viscid Humours, by which the Passages of the Viscera are infarcted, and a continual Pabulum supplied to the Distemper, may the better and sooner be discharged, both by Stool, and all the Emunctories of the Body. Now the most antient Fathers of Physic, *Hippocrates*, *Aretæus*, *Galen*, and others, have, for this Purpose, greatly recommended the most drastic Purgatives, especially Hellebore, both white and black, Coloquintida, and Scammony. But since, in our Days, we are acquainted with more efficacious and safer Remedies, we justly reject these, and use the Root or Resin of Jalap, the Extract of black Hellebore, Elaterium mixed with Mercurius dulcis, or Æthiops Mineral, and Gum Ammoniac; and, among compound Remedies, the Extractum Panchymagogum Crollii, in the Form of Pills: Or, if a Powder is more agreeable, it may be prepared of a few Grains of the Resin of Jalap, mixed with equal Quantities of sweet Almonds, and Mercurius dulcis; to which a Drop or two of the Oil of Mace, or of the Oil of Sassafras, may be commodiously added.

Among those Things, which, by stimulating the solid Parts to an excretory Motion, somewhat more powerfully colliquate the tenacious Humours, the Wood Guaiacum, with its Bark, is to be preferred above all others, which as, by a proper Use, it is very often, alone, sufficient entirely to eradicate the Lues Venerea, so, likewise, is it no despicable Remedy, in destroying subcutaneous Disorders, which are of a Nature still more mild. Besides this, we may, in a particular manner, refer to this Class, Medicines obtain'd from the mineral Kingdom; among which the most considerable are, the tartarized and acrid Tincture of Antimony, medicinal Regulus of Antimony, Sulphur of Antimony, corrected in *Glauber*'s Method, Preparations of Cinnabar, and, if a Venereal Taint is suspected, a Decoction of crude Antimony: Which Medicines, given in a convenient Dose, and in the Morning, with purifying Decoctions, to be drank in Bed, or added to other Diaphoretics, afford very great Relief, since, by moving the Lymph, they open the Obstructions

of the glandular Tubes, and, conſequently, very efficaciouſly depurate the Blood and Lymph.

Though theſe Remedies already propoſed to depurate the Maſs of Blood and Humours are of great Efficacy; yet there are Caſes, ſuch as the Elephantiaſis, and Venereal Itch, where the Cauſe of the venomous Taint being more deeply fixed, little Benefit and Advantage is procured from them, but ſtronger Remedies are ſtill required; than which, if the Patient's Strength permits, none are more powerful in ſubduing and deſtroying the moſt obſtinate Diſeaſes of the cutaneous Kind, than Mercury, and its Preparations, the ſubtile Particles of which, by entering and penetrating into the inmoſt Receſſes of the Veſſels, correct, extricate, and diſſolve the viſcous Humours impacted in them, and, by increaſing the ſyſtaltic Force of the Fibres in the whole Body, expels them through the Emunctories of every kind, by Stool, Sweat, and eſpecially through the ſalival Glands and Ducts, by means of a copious Diſcharge of Saliva. And by this ſtated, and, as it were, univerſal Evacuation, it generally happens, that all the impure Sordes are quickly, though with ſome Trouble, eliminated, and the whole Body, by that means, purged, and, as it were, reſtored to a new State and Condition.

But there are various Methods, propoſed by Phyſicians, for giving Mercury, which we will briefly examine. Thus, there are ſome who make an Unguent of live Mercury, thoroughly extinguiſhed with Pomatum, adding Flowers of Sulphur and Camphire, with which the Joints, Ancles, Knees, Elbows, and Soles of the Feet, are to be well rubbed, in order to promote a Salivation. But others chuſe a better and ſafer Method of uſing Mercury, internally; whilſt, by a previous Preparation of the Body, by means of Alteratives, Correctors, and Evacuants, Mercurius dulcis, duly prepared, and mixed with double the Quantity of Crabs-eyes, and diaphoretic Antimony, is duly exhibited; riſing gradually from three or four Grains to one Scruple. By this means a ſufficiently large Diſcharge of Saliva is excited, and muſt be carried on, under a due Regimen, and with proper Cautions, ſometimes interpoſing Decoctions, for depurating the Blood, for one or two Weeks. This Intention is, alſo, anſwered by alterative and diaphoretic Preparations of Mercury, ſuch as the Mercurius Solaris, and Jovialis, of which a few Grains, mixed with Conſerve of Roſes, may, for ſome Weeks, with great Advantage, be exhibited every Morning, drinking, in Bed, after it, under a diaphoretic Regimen, about a Pint of ſome proper Decoction. But it muſt be obſerved, that each of theſe Methods of Cure require an Air very temperate, a ſpare, thin Diet, and a careful Abſtinence from the Uſe of pinguious or boiled Fleſh, and Acids.

But it often happens, that we muſt proceed in a Method much more mild and gentle, when neither Purgatives, nor copious Bleedings, nor Decoctions with a drying Diet, nor Mercurials themſelves, can ſafely be admitted. For, if the Patient is either an Infant, or too old, the Vigour of the Body and Strength impaired, the nervous Syſtem highly delicate; if the Body is found rather dry and lean, than pinguious and lax; or if the Acrimony and Mordacity, rather than the Thickneſs and viſcid Tenacity of the Humours offends; then muſt we enter upon a Method quite different: And, in this State of the Diſorder, not only the Antients, but, likewiſe, the moſt judicious of the Moderns, have greatly extolled Preparations of Milk, and eſpecially Aſſes Milk, the Whey of Cows and Goats Milk, and Milk mixed with Water. Thus, beſides *Hippocrates*, *Celſus*, and *Aretæus*, who, in their Writings, attribute an extraordinary Virtue to Milk, *Dioſcorides*, particularly, *Lib.* 2. *Cap.* 7. thinks a Cure with Milk, properly managed, highly beneficial in an Itching on the Surface of the Body, in Spots, and a Depoſition of peccant Humours on the Skin. But in the Book already cited he recommends Whey for cutaneous Affections, in theſe Words: "Whey is properly given to thoſe whom we intend to purge "gently againſt the Leproſy, Elephantiaſis, and Efferveſcences "breaking out through the whole Habit of the Body." And indeed the Power of this dietetic Remedy is very great, as it not only dilutes, and renders fluid, the thick, viſcid, and almoſt coagulated Humours, opens the obſtructed Paſſages of the Viſcera, and, by temperating the acrid Saltneſs of the Humours, moiſtens the dry Parts, and relaxes thoſe which are conſtricted, but, alſo, gently eliminates, expels, and evacuates the noxious Humours, both by Stool and Urine.

Since it is of no ſmall Conſequence to determine both the Quantity and proper Time of drinking Milk and Whey, we ſhall be in the leaſt Danger of erring, if we take the Antients for our Guides in theſe reſpects. Among theſe, then, *Hippocrates*, *in Lib. Epid.* 7. adviſes to drink Aſſes Milk, or Whey, eſpecially that of Goats Milk, for ſeveral Days. And, *Lib.* 9. *de Intern. Affect.* he ſays, he preſcribed Milk, with an Addition of a third Part of Hydromel, for forty-five Days. That Whey may be taken for ſome Months, and longer, both *Sylvaticus* and *Riverius* affirm, who uſed it in very violent Diſorders of the Skin, for twelve, twenty, and forty Days, with good Succeſs; for which Reaſon they beſtow great Encomiums upon it. Of the ſame Opinion is *Hugenius*, *Epiſt. & Conſultat. Medic. Tom.* 2. *Lib.* 1. who thus recommends drinking of Whey in a large Quantity, for a conſiderable and inveterate Itching of the whole Body: "They, ſays he, who drink a ſmall Quantity of "it, are diſappointed in the Deſign of Alteration or Expurga-"tion. Let the Quantity, therefore, be eight Pints, or more, "a Day." And, *Lib. citat. Tom.* 1. *Lib.* 12. *Epid.* 1. he aſſerts, that he uſed to give this Whey, in the ſame manner the medicinal Waters are uſually exhibited. Thus, for Inſtance, the firſt Day he exhibits ſix Pints, with three Ounces of the ſolutive Syrup of Roſes. The next Day he gives only ſimply Whey; continuing, for twenty Days ſucceſſively, to raiſe the Quantity gradually to nine or ten Pints.

Whenever theſe exanthematous Diſorders are maintained and ſupported by a ſcorbutic Lues, or hypochondriac Affection, which frequently happens, a much greater Advantage will be procured, when the above-mentioned Courſe of Milk is ſo managed, as to be calculated and adapted to alleviate the other Diſorders with which they are complicated. For which Purpoſe we can hardly find a better Method of Relief, than the due Uſe of medicinal Waters, eſpecially thoſe of a temperate Kind, impregnated with a ſaline and ſpirituous Principle, ſuch as the *Selteran* Springs, or thoſe of *Toenſtein*, *Wildungen*, or *Egra*, mix'd with an half or a third Part of Milk, uſed under a due Regimen; as alſo after the previous Uſe of Evacuants, and other Medicines, which are alſo to be interpoſed.

But if theſe Waters cannot be had, the End will be beſt anſwer'd by a Decoction of ſuch Herbs as depurate the Blood, and are particularly deſtined to theſe Diſorders, with Milk or Whey, both ſweet, and ſomewhat ſour. The moſt conſiderable of theſe Herbs are Fumitory, Dodder of Thyme, common Dodder, Baum, Spleenwort, Marſh-trefoil, Brooklime, Dandelion, Borrage, Endive, Succory with its Root, together with many others; which partly, being furniſhed with a penetrating volatile Salt, incide and diſſolve the viſcid Humours, depurate the impure Juices, and reſtore a proper Balſam, *i.e.* Quality, to the Blood; and partly, by aſſiſting the languid Digeſtion of the Stomach with their bitter balſamic Principle, conduce greatly to a Regeneration of laudable Blood. Nor are thoſe, therefore, fruſtrated, who, after having prepared their Body, take of the Juice of the before-mentioned Herbs, freſh and contuſed, an Ounce, or more, with Whey, for ſeveral Weeks.

Laſtly, Among the beſt Remedies for violent Diſorders of the Skin, we may, alſo, reckon the Uſe of Vipers, which is very highly eſteemed both among the Antients and Moderns, and, therefore, not to be omitted. In *Hippocrates*, indeed, there is no one Paſſage, that I know of, which injoins the Uſe of Vipers. But *Aretæus*, *Galen*, *Aetius*, and, among the *Arabians*, *Rhaſes* and *Avicenna*, not only highly extol the Virtues of theſe Animals in the Cure of the Leproſy, Elephantiaſis, and all Diſorders of the Skin ariſing from a malignant Impurity, but, alſo, promiſe a wonderful Renovation of the whole Body by their means. *Andromachus*, firſt Phyſician to *Nero*, made Troches of Vipers the principal Ingredient of his *Theriaca*, or grand Alexiterial Medicine. And the beſt Phyſicians of *Italy*, *France*, and *Germany*, *Mercurialis*, *Quercetan*, *Solenander*, *Ballonius*, and others following theſe, have, likewiſe, beſtowed great Commendations on Vipers; till *Julius Palmarius*, a Phyſician at *Paris*, *Lib. de Morb. Contagiis*, *Cap.* 9. ſharply reprehended the Promiſes and weak Credulity of the Antients in this reſpect, enforcing his Opinion by the Teſtimony of *Joannes Fernelius*, who aſſerted that Medicines prepared from Vipers, and exhibited to Perſons afflicted with an Elephantiaſis, had never produced any ſalutary Effect, ſince neither the Conſtitution of the Viſcera was made better, nor the verrucous Blotches, nor the increaſing Deformity of the Skin amended; but all the Symptoms rather exaſperated. Nevertheleſs, there have been, and ſtill are, many amongſt the Moderns, who, giving Credit to the Antients, and long Tradition, perſuade themſelves, that there is a peculiar, and, as it were, ſpecific Virtue in Vipers, and Decoctions or Broths prepared from them, againſt cutaneous Diſorders; and, therefore, preſcribe Vipers, procured from *Italy*, often at a great Expence, in different Forms, ſuch as Powders, Troches, or Broths, or even in the Form of a volatile Salt, chymically extracted, with Hopes of the deſired Effect.

But to declare my Opinion freely and ingenuouſly in this Affair; I am fully perſuaded, from many Obſervations, confirm'd by ſatisfactory Reaſons, that no Benefit, ſufficient to encourage the Uſe of viperine Medicines, can be expected from them, in correcting the Impurities of the Blood. Nor does any accurate complete Obſervation occur in the Writings of the Antients or Moderns, from which any one can certainly know and affirm, that the Qualities of Vipers are ſpecific, and directly oppoſite to theſe Diſeaſes; eſpecially as other Remedies were, for the moſt part, mixed with them, or uſed at the ſame time, which render the Effect very doubtful. Thus have I known ſeveral Inſtances, where in an Atrophy, Phthiſis, leprous Pſora, Itch, Tinea Capitis, and other Diſorders of this kind, various Medicines made up of Vipers have either done no Good, or, if they have, it ought rather to be referred to the other Ingredients mixed, and exhibited in Conjunction with them. If any ſalutary Effect, therefore, ariſes from Vipers, it is certainly no other

than may be expected from all other dried Parts of Animals, endued with a certain gelatinous, gently ſulphureous, and volatile Juice; and conſequently theſe extravagant Encomiums on Vipers are of little Value, as they are founded on the Prejudice of Authority only. The remarkable Obſervations of *Zwelffer* on the *Pharmacopœa Auguſtana*, *p.* 211. relating to Viperine Medicines, are worthy the Peruſal of the Curious.

Since the Cauſes of theſe Diſorders are different, the Cure ſhould likewiſe differ. That we may not, therefore, be led into an Error, we ſhall accurately inquire into and diſtinguiſh between the Cauſes, which bring the particular cutaneous Diſorders on. Thus, if through exceſſive Eating, and a ſedentary Life, the Redundance of the Humours lays a Foundation for the Diſeaſe; Abſtinence and Exerciſe are above all things neceſſary: If crude, viſcid Humours, in Conjunction with an highly phlegmatic Temperament, are the Cauſe, ſuch Medicines as evacuate by Stool, infuſed in Wine, will be ſerviceable, adding, at the ſame time, thoſe things which gently promote Tranſpiration: If the Body is plethoric, and theſe Aſperities and Exulcerations of the Skin ariſe from an Omiſſion of Bleeding, or a Suppreſſion of a critical Diſcharge of Blood, the Cure ought to begin with Bleeding, either by opening a Vein, or by means of Cupping-glaſſes, with the Addition of ſuch Remedies as are adapted to recover theſe ſalutary Excretions: If the Patient is young, lean, and of a choleric Habit, the greateſt Benefit will, all other Circumſtances being alike, be found from diluting Medicines, which correct the Acrimony, and cool the waſting Heat of the Humours, ſuch as Whey, Mineral Waters with Milk, nitrous Preparations, and Doſes of Manna, to promote Evacuation by Stool: If the Weakneſs of the Viſcera and Stomach is obſerved to favour the Generation of impure Juices, Strengtheners of the Stomach, which aſſiſt Digeſtion, will prove very beneficial: But if a Suppreſſion of inſenſible Tranſpiration through the Pores, and an Obſtruction of the cutaneous Ducts is the principal Cauſe, the Phyſician ought to open the obſtructed Orifices of the Pores, by gently diaphoretic Infuſions, and Frictions.

Since chronical and dangerous Diſtempers are terminated by the Itch, and various Eruptions of the Skin, as by their Criſis, great Care muſt be taken not to evacuate by Stool, Urine, or even Bleeding, leſt the virulent Matter ſhould be retracted from the Surface to the internal Parts of the Body. *Joann. Langius*, *Epiſt.* 16. *Tom.* 1. has a remarkable Paſſage to this Purpoſe: "I have "more than an hundred times, ſays he, ſeen an Itch and œdematous Tumors of the Feet, which aroſe after the Criſis of "different Fevers, but eſpecially of a Quartan, ſpontaneouſly "diſappear, without any Aſſiſtance of Medicines. But if Phlebotomy had been then uſed, or any Medicine exhibited, there "would have been great Danger of retracting the Matter of "the Diſorder entirely into the Viſcera, through thoſe Veſſels, "by which it had been expel'd."

This Caution is likewiſe neceſſary, when Nature in a ſalutary manner endeavours to propel Eruptions, and is not of herſelf ſufficient to execute her Deſign: For if, at that time, a Phyſician ſhould adminiſter ſuch Remedies, as retain and repel the Impurities to be removed to the Skin, ſuch as plentiful Bleeding, any Purgatives, Aſtringents, and, in weak Patients, Refrigerants, and eſpecially nitrous Medicines, given in large and frequently repeated Doſes, he will greatly prejudice the Patient, and, by his bold Attempt, convert the benign into a malignant Diſeaſe. At this time the Strength of Nature ſhould rather be aſſiſted in expelling the Impurities by gentle Diaphoretics, which, by a certain active ſulphureous Principle, augmenting the ſyſtaltic Motion of the Fibres and nervous Parts, render the Circulation of the Blood more quick, and determine its Courſe to the Surface of the Body, ſo that by this means the excrementitious Sordes are eliminated by cuticular Exhalation. And Nature herſelf, whom we ought to take for our Guide in Practice, chooſes this Way; as we may conclude, not only from ſpontaneous Sweats, and ſuch as often flow in large Quantities, but, alſo, from many Inſtances, in which the Itch, and other Diſorders of the Skin, eſpecially if they took their Riſe from Contagion, or the Relicts of another preceding Diſeaſe, ſuch as intermitting and continual Fevers, Gout, convulſive Colic, and Aſthmas, have been removed by Sweats ariſing ſpontaneouſly, or excited by Art.

The beſt and moſt proper Medicines for promoting a Diaphoreſis, and rendering the Blood and Humours more fluid, are Infuſions of the Herbs Scordium, Paul's Betony, Scabious, Fumitory, and Carduus Benedictus; the Flowers of Elder, and the Roots of Burnet, and the ſharp-pointed Dock. Theſe Decoctions, if liberally drank contribute very powerfully to the Expulſion of the peccant Matter. To this Claſs, ſays *Hoffman*, alſo, belong, and may be mixed, or interpoſed, with the above-mentioned Infuſions, the Mixtura Simplex, my anodyne mineral Liquor, mix'd with a third Part of the Spiritus Bezoardicus Buſſii, or the ſuccinated Spirit of Hartſhorn. Or, alſo, the diaphoretic Powders, prepar'd of diaphoretic Antimony, Ceruſs of Antimony, and what is analogous to it, the *Materia Krugneri Perlata*, with an Addition of a ſmall Quantity of crude Antimony, medicinal Regulus of Antimony, diſtil'd Sulphur, and its Flowers; Cinnabar, Æthiops Mineral, and other Subſtances of a like Nature already mentioned in the Method of Cure. And theſe Powders may, in the Evening, as ſpirituous Liquors are in the Morning, be exhibited in a Vehicle of the Waters obtained from the Flowers of Elder, Carduus Benedictus, Fumitory, or Scabious.

Though diaphoretic Medicines ſhould be aſſociated with others, and duly interpoſed, yet by themſelves, they are not ſufficient for producing a Cure; and a Treatment abſolutely diaphoretic, eſpecially in dry Patients, is ſo far from conducing to Health, that it rather augments the Diſeaſe, and, from a ſimple Itch, produces a puſtulous Diſorder with an Increaſe of Itching. Since this is the Caſe, it ſeems abſolutely neceſſary to order not only proper Drinks in choleric Perſons, for Inſtance, weak Decoctions, and Preparations of Milk, and, in Patients of lax and phlegmatic Habits, more ſtrong and ſaturated Decoctions, to be drank in a ſufficient Quantity; but likewiſe to preſcribe Remedies, which evacuate the Sordes of the Primæ Viæ; and, at the ſame time, diminiſh the Viſcidity of the Serum and Lymph, ſuch as Pills render'd efficacious by a due Quantity of Mercurius dulcis, or, in weak Patients, gentle laxative Infuſions, which are to be repeated every ſix or eight Days. But for Infants and Children afflicted with the Itch, I muſt particularly recommend the following Purge.

> Take of the Pulvis Cornachini, one Scruple; of Mercurius dulcis, eight Grains; of the Syrup of Succory, with Rhubarb, two Drams; and of Fumitory-water, half an Ounce: Make into a Draught; which however is to be proportioned to the Age of the Patient.

An Itching, eſpecially if Decoctions of the Woods and Sudorifics are uſed, is often increaſed to a Fainting, becauſe the ichorous Exhalations, and highly ſubtle acrid Salts, are, by means of theſe, propel'd in greater Quantity to the Surface of the Body. When this happens, we muſt abſtain from every thing which throws the Humours into Commotions, and rather exhibit Milk, mixed with the Waters of antiſcorbutic Herbs, ſuch as Watercreſſes and Fumitory, Whey, either alone, or impregnated with the Virtues of alterative Herbs, nitrous Preparations, Emulſions, and Baths of ſweet Water.

The Itch, and other Defedations of the Skin, if they recede before their Time, or are treated with external ſulphureous, mercurial, refrigerating Remedies, are immediately attended with a Complication of the worſt Symptoms. In which Caſe, beſides what we have already recommended to expel them, Mercurius dulcis is very efficacious, exhibited rather as an Alterative, than a Laxative; as alſo eight or ten Grains of the Flowers of Sulphur, given with ſome Abſorbent; only we muſt omit the Sulphur, while the Mercury is taking; but we muſt refrain from both, if the Diſorder is accompanied with any Degree of a Fever, which frequently happens.

Tho' Mercury, as it were, ſpecifically deſtroys the malignant Nature of cutaneous Diſorders; and tho' Relief is often hoped for in vain from other Remedies, if it cannot be obtained from Mercurials internally exhibited; yet a Salivation is very cautiouſly to be undertaken and entered upon in theſe exanthematous Diſorders, eſpecially if the Patients are cachectic and ſcorbutic. For, unleſs the Humours are previouſly corrected and prepared, the Diſcharge of the Saliva is not only ſlowly made, and attended with an Inflammation of the Fauces, a falling out and blackening of the Teeth; but Vomitings, Gripes, Cardialgias, Diarrhœas, Dyſpnœas, and many other Diſorders, are alſo produced. But ſince a Swelling of the Tonſils and Fauces, a Relaxation of the Gums, and Difficulty of Swallowing, are almoſt inſeparable from this Method of Cure, the Fauces muſt be treated with Gargariſms, which are lenient, and proper to preſerve the Tone of the Parts; the Body is to be preſerved in a perpetual Diaphoreſis; all hot and acrid Diuretics are to be avoided; and laſtly, with reſpect to the Regimen, the Acceſs of the cold Air, cold Drinks, all acid, ſaline, and crude Aliments, are, as much as poſſible, to be avoided. Beſides, a very exact Judgment is required, that the Cure may not be protracted ſo long as to deſtroy the Strength of the Perſon to be ſalivated; nor the Effect, either thro' the Fault of the Phyſician, or the Patient, prove inſufficient, and the Fomes remain, which may ſupply a new Pabulum for the Diſorder. That we may, therefore, proceed ſecurely in both Caſes, we ought to conſider the Bulk and Conſtitution of the Patient, the Duration of the Diſeaſe, the Quantity of morbid Matter, and the Violence of the Symptoms.

To Infants, indeed, fixed, abſorbent, laxative, and depurating Medicines are more ſafely exhibited, becauſe in them the nervous Syſtem is too weak to bear Mercurials without being injur'd; yet if theſe gentle Remedies do no Service, and the Itch is of the malignant Kind, I have known Mercurials given without Prejudice, provided the Doſe is duly proportioned to the Age, and a proper Regimen ſtrictly obſerved.

In every Species of the Herpes, which ſeizes the Præcordia like a Girdle, and often happens in hypochondriac and arthritic Patients, Diaphoretics, eſpecially of a fixed Nature, and Waters of the ſame Virtues, are an excellent Preſervative; not omitting, however,

however, other Remedies. These are, also, to be used in obstinate Ulcers, and internal Abscesses; since, by their means, the viscid and acrid Humours are commodiously altered, corrected, and gently eliminated.

Nor are Topics to be omitted, the proper Use of which is very advantageous in perfectly curing Deedations and Ulcerations of the Skin. But, since different cutaneous Disorders require different Remedies, I shall briefly and distinctly enumerate the principal of them. When moist Pustules, and running Ulcers, require drying, and when, from an excessive Relaxation of the cutaneous Ducts, a gentle Constriction is requisite, for this Purpose a small Quantity of Flowers of Sulphur, used externally by way of Ointment, by contracting the Skin, hinders the further Discharge of the Matter, and has therefore been esteemed from the Times of *Aetius*, *Aretæus*, and *Oribasius*. This Medicine is to be dissolved in Linseed-oil, and reduced to the Consistence of an Ointment, by the Addition of a due Quantity of Cerus and Tutty. The Unguentum de Alabastro, mixed with Tutty, is, also, no less efficacious in destroying superfluous Moisture. If Pain, Redness, Heat, and Itching, are joined, the Unguentum de Cerussa, prepared of a Solution of Litharge in austere Vinegar, Cerus and Hog's-lard, seems preferable to all other Remedies, especially if, in order to render it more agreeable, Flowers of Sulphur, and a few Drops of the Oleum Rhodii, are added to it. To mollify and mitigate a dry and painful Itch, a Mucilage of the middle Rind of the Lime-tree, extracted with Rose-water, or with Linseed-oil, Cerus, and a little Saffron, reduced to the Form of a Plaister, is of singular Service.

But, if deep Ulcers are to be purified and consolidated, distilled Oil of Juniper and Bays, or Balsam of Sulphur, mixed with the same Oil and Æthiops Mineral, may be used. Lastly, we must not neglect the cosmetic Ointments, very useful in all Disorders of the Skin, after the Cure, the Method of preparing which we have laid down before. Besides these, some Remedies of the Antients are very proper, and especially that of *Hippocrates*, who, *Lib. Epidem.* 2. recommends Lime-water for an Impetigo and Leprosy, which, according to the Advice of *Sponius*, ought to be so corrected, as to retain nothing of an ulcerating Quality. And the Method of *Sylvaticus*, *Cent.* 1. *Consult.* 22, 23. is equally good, who, after exhibiting two Pints of Goats Whey, mixed with Citron-juice, for fifteen Days, greatly extols the external Use of an Ointment prepared of Sulphur, Nitre, Mercury, and Oil of Sweet-almonds.

As to the particular Cure of a Tinea Capitis by external Applications, having first used all Remedies proper for a Cacochymy, the following Ointment is very efficacious:

> Take of the Oil of Yolks of Eggs, one Ounce; of Gunpowder, Tobacco and Flowers of Sulphur, each two Drams; of the Essence of *Benjamin* and *Peruvian* Balsam, each half an Ounce: Make into an Ointment.

After the Use of this Ointment for some Days, the Head is to be washed with a Decoction prepared of equal Quantities of Wine, and a Lixivium boiled with Scordium, round Birthwort, Club-mos, Flowers of Lavender and Myrrh: When these prove ineffectual, some exhibit Preparations of Mercury internally and externally; apply over the Head a Cap, prepared of common Pitch, and Balsam of Capivi; by which means they take off all the Hair, and procure a Consolidation by means of the Oil of Yolks of Eggs. However, I must leave it to others to determine when this violent Method is proper, with this Caution only, that this desperate Remedy should never be applied but in desperate Cases.

Among external Remedies we may, also, reckon Baths, both natural and artificial; which last are commodiously prepared of pure Water boiled with the Roots of Elecampane, and those of the Dock, together with the Herbs Fumitory, Scabious, and Soapwort; and are very successfully used in a leprous Psora and Elephantiasis, after the Use of Internals to purify the Blood, both for strengthening the Tone of the Skin, and washing off the impure and scaly Sordes. Nor do we find less Advantage from Baths prepared with the Scoriæ of Iron or Copper; one of which partakes of the terrestrial, saline, sulphureous Substance of *Mars*; whilst the other is impregnated with a large Quantity of Sulphur, and vitriolic Salt, and consequently very efficacious in strengthening the Tone of the fibrous Parts. And for this Reason Baths of this Kind have proved very serviceable in cutaneous Diseases, arising from an excessive Thickness and Corruption of the serous and lymphatic Humours; such as the Itch, Serpigo, Herpes, and Achors. To this Class of Remedies we may, also, refer Baths of sweet River-water, boiled with Bran, and corrected with a due Mixture of new Milk, which afford great Relief, especially in a dry Itch, and all Disorders accompanied with an extreme Roughness of the Skin, and particularly in the troublesome Itching of old Men.

Since no Medicine at all, unless properly used, is of any Service, and since it is of great Moment to the due performing of every Cure, in what Order, and what Time, Remedies are administred, it will not be improper to add the genuine Method of using these Topics, already proposed with due Caution and Circumspection. I must therefore observe, that external Remedies should always be the last, and never us'd, till the whole viscid, acrid, and corrupt Mass of the Blood and Humours has been reduced to a mild Temperament, by proper internal Correctors and Cleansers. Nor, during the Use of external Applications, should we entirely neglect Internals, especially Diaphoretics, which should rather be continued, that the Impurities, which may accidentally remain within, may be expelled. But if these Cautions are not observed, there arise a thousand Symptoms, much worse than the former, and often attended with the Hazard of the Patient's Life. Thus have I frequently observed, that an Itch seizing some particular Part, the Hands, for Instance, the Legs, the Nape of the Neck or Face, or when suppressed in a preposterous manner, by consolidating Liniments, has excited violent Disorders of the nervous System, as Cramps and epileptic Spasms, Iliac Passion, inflammatory Fevers with Deliriums, Cardialgias, Asthmas, and dropsical Tumors, which are hardly to be cured, but by a Return of the former Distemper. The Curious, says *Hoffman*, may consult my *Medicina Consultatoria*; where, *Cent.* 1. *Case* 28. I have shewn, that a Spitting of Blood, and an Epilepsy, arose from an ill-cured Itch. In the Reflection upon *Case* 9. *Cent.* 1. I have shewn, that it contributed to a Vertigo. But mercurial Ointments are generally used with almost unavoidable ill Consequences. After anointing some Days, the Eruptions, which appeared in a few tendinous and nervous Parts, vanish surprisingly, because, without doubt, the fibrous and nervous Parts of the Skin suffer some Stricture from this active Medicine, by which the Particles of the peccant Humour are partly expelled from the subcutaneous Tubes, and partly repelled to the internal Parts. But certainly, if the Body is not before sufficiently cleansed from impure Sordes, Transpiration is diminished, and the Force of the morbific Matter impetuously determined to the internal Parts, especially those of the nervous and tendinous Kind. Whence, besides other Disorders, I have known fixed arthritic Pains produced.

There is still another cutaneous Disorder, call'd a *Gutta Rosacea*, which is nothing but an unseemly rediish Colour of the Face, attended with little Scales, and sometimes with Pustules and unequal Tubercles, and arising from a more or less impure Serum carry'd to the capillary Vessels of the Face in a large Quantity. But there are several Species of the *Gutta Rosacea*, the most inconsiderable of which is, when a more than natural Redness appears about the Nose, in the Forehead, or certain Parts of the Face. The Disorder is still worse, if it is attended with Scales; and worst of all, if the Face is covered with Pustules and Tubercles. And these different Degrees depend on different Causes in various Patients: For every Gutta Rosacea does not proceed from depraved and impure Juices, which Nature advantageously propels to the Surface of the Body, and Skin of the Face; but is rather, in some, produced by a Turgescence and Distention of the small capillary, or even the lateral Vessels, which at other times convey no coloured Lymph. But it is otherwise, when the Cause of this Eruption is to be sought in the subtle, active, acrid Matter, which, the more volatile it is, the more it penetrates into the Texture of the nervous Membranes, and does far greater Mischief in those Bodies, which are afflicted with a Weakness of the nervous System, and a scorbutic Disposition of the Blood.

The slighter Stage of this Distemper in sound, robust Patients, and those infected with no noxious Taint or Impurity, requires a gentler and less troublesome Treatment; but, arising in such generally from a violent Ebullition of the Blood to the superior Parts, is often happily removed by cooling, diluting and deriving Remedies only. But it is more obstinate in scorbutic Bodies, in which it is never mitigated without such Remedies, as purify the Blood. In such Cases, therefore, I have with very good Success ordered the following Potion to be taken for several Weeks.

> Take of the Waters of Fumitory, Brooklime, Water-cresses, and Sorrel, each one Pint; of Goat's-whey, three Pints; of the Arcanum Duplicatum, three Drams; and of depurated Nitre, one Dram: Make up into a Potion, of which one Pint is to be drank in the Morning, and another in the Afternoon, if it agrees with the Stomach.

For others, with an Intention to depurate the Blood, I have prescribed in the following manner:

> Take of the Herbs Fumitory, Spleenwort, and Scabious, each one Handful; of the Roots of Succory, one Ounce; and of Caper-bark, half an Ounce: Of these, when mixt, boil one Ounce in two Pints of Goat-whey; and, when the Liquor is strained, let the Patient drink as much as he pleases.

In order to promote a due Evacuation, I; once or twice a Week, order an Infusion of two Drams of the following Ingredients, with the last-mentioned Medicines.

Take

Take of Polypodium, half an Ounce; of the beſt Rhubarb, two Drams; of the Troches of Agaric, and white Mechoacan, each one Dram; of pure Nitre, the Arcanum duplicatum, and Fennel-ſeeds, each half a Dram.

Beſides theſe, eſpecially in more ſucculent Patients, we ſhould not omit Scarifications in the Nape of the Neck, Scapulæ and Back, nor lenient Baths for the Feet, prepared of River-water and Bran, uſing for Drink a cooling Ptiſan, or only Spring-water depurated with calcin'd Hartſhorn; or with Wheat-flour, made palatable with Sugar, and Bark of Citron. Having previouſly taken theſe Meaſures, and other Circumſtances not contraindicating, I apply the following Epithem, which I have found of all others the moſt efficacious.

Take of Frogs Spawn-water, and of the Waters of Elder and Bean-flowers, each two Ounces; of the Aqua ſclopetaria, one Ounce; of the Magiſtery of Lead, two Drams; of the Sugar of Lead, two Scruples; and Vitriol of Copper, eight Grains: Mix, and apply.

But the utmoſt Caution is requiſite in the Application of all Topics. For Experience has fatally taught us, that the worſt Symptoms have followed a prepoſterous Uſe of them in Patients of impure and delicate Habits. Thus I have known Inflammations of the Eyes and Cardialgias produced by them; and I had once an Opportunity of obſerving an Hemicrania produced only by an Epithem prepared of Frogs Spawn-water, a Mucilage of Quince-ſeeds, Citron-juice, and Flowers of Sulphur.

Dr. *Towne* ſays, that the *Elephantiaſis*, which is no rare Diſeaſe among the Negroes, bears a great Affinity to the beſt Accounts we have of the *Lepra* of the *Arabians*.

Thoſe Blacks are the moſt ſubject to it, who, after ſevere acute Fevers, long-continued Intermittents, or other tedious Illneſſes, are either much expoſed to the Inclemency of rainy Seaſons, and the cold penetrating Dew of the Evenings, or are conſtrained to ſubſiſt upon bad Diet, and undigeſtible unwholſome Food.

In the Beginning, the Perſon is weak, cachectical, and emaciated, till the Glut of vitiated Humours ſubſide into the Legs and Feet, which are the Seat of this Diſtemper, and at this time begin to appear œdematous, and puffed up with watry Tumors, as in an Anaſarca; but the Swelling does not retain the Mark of any Preſſure in the ſame Degree, or ſo long, as in that Diſtemper.

By degrees, the Leg becomes more and more tumefied, and the Veins are much diſtended with varicoſe Swellings, which are very apparent from the Knee down to the Extremities of the Toes. Then the Skin begins to grow rugged and unequal; its vaſcular and glandulous Compages are enlarged, and a ſcaly Subſtance, with a ſort of Chops and Fiſſures in the Interſtices, appears upon its Surface. Theſe ſeeming Scales do not dry up, and fall off; but are daily protruded forward, and ſtretched in their Dimenſions, till the Leg is enlarged to an enormous Bulk, ſo that in Size, Shape, and all other external Appearance, it minutely repreſents the Leg of an Elephant, whence the Diſeaſe receives its Denomination.

But, notwithſtanding that this ſcaly Coat appears to be harſh, callous, and inſenſible; yet, if it be touched ever ſo ſuperficially with a Lancet, the Blood will freely ouſe out; and if the Epidermis, which affords this monſtrous Appearance, be pared off to the Thickneſs of the Scarf-skin in thoſe Parts, an Infinity of Orifices of the Blood-veſſels will preſent themſelves to the Eye, when aſſiſted with a Microſcope.

Tho' the Limb continues to proceed to this inordinate Magnitude, yet the Appetite of the Negro remains good, his Digeſtion ſtrong, and his Secretions regular; nor is he ſenſible of any other Inconveniency, than the Burden of carrying ſuch a Load of Leg along with him.

In this Condition, ſeveral have been known to live twenty Years, and even to a longer Period, and have performed chearfully all the Duties of their Servitude, which were conſiſtent with ſuch diſproportionate Limbs.

This Addition of Bulk is generally confined to one Leg at a time; but there have been ſeveral Inſtances, where it has invaded both together.

Amputation of the diſeaſed Leg has been performed many times, but has always failed of a Cure; for the Diſtemper conſtantly takes Poſſeſſion of the remaining Leg.

Sometimes White People, whoſe unhappy Circumſtances have reduced them to Hardſhips but little inferior to what the Blacks are obliged to undergo, have given us Proof, that this Diſeaſe is not limited to one Colour, any more than to one Climate.

The ſame Author, ſpeaking of another cutaneous Diſorder, which he calls the *Joint Evil*, ſays, that many of the Negroes of the *Leeward Iſlands*, as well Natives as thoſe imported from *Guinea*, are ſubject to this Malady, which is equally remarkable in its Appearances, as it is fatal in its Conſequences, being of ſo virulent a Nature, that it eludes the Force of the moſt powerful Remedies hitherto diſcovered.

The Deſcription of it is as follows: It firſt appears in ſuperficial Spots of a brown copper Colour, diſpers'd over ſeveral Parts of the Face, but eſpecially on the Noſe, without Uneveneſs, or Senſe of Pain in the Beginning. Theſe Spots ſpread by ſlow Degrees, till a great Part of the Body is covered with them. Then the Nails curl inwards, and the Extremities of the Fingers and Toes begin to ulcerate. Theſe Ulcers, which never digeſt, but generally look dry, without much Foulneſs or Fetor, gradually creep from Joint to Joint, till they have corroded all the Fingers and Toes. The next Attack this unconquerable Enemy makes, is upon the Trunk of the Body, where it ſpreads in Patches; and at this time the Diſtemper becomes infectious. Theſe Defedations of the Skin never penetrate very deep into the muſcular Fleſh, but extend themſelves in Circumference, and diſcharge a thin Ichor, which inſenſibly dries up, and emaciates the Patient, ſometimes in a few Years; though there have been ſome Negroes under theſe Circumſtances, who have protracted a miſerable loathſome Life for the Space of ten, twelve Years, or longer.

Among the numerous Attempts which I have known made to reſiſt this ſtubborn Diſeaſe, antimonial Preparations afford the greateſt Relief; but I never heard, that they perfected a Cure: On the other hand, all Preparations of Mercury aggravate the Diſtemper, exaſperate the Ulcers, and make them ſpread the faſter. This is conſtantly true, in whatever Form, or with whatever Intention, Mercury be given, whether as alterative, purgative, or to raiſe a Salivation, either internally exhibited, or externally applied.

The Negroes, who are great Pretenders to the Knowledge of ſpecific Virtues in Simples, apply ſeveral Kinds of Plants on theſe Occaſions; but I could never obſerve the leaſt beneficial Effect produced by them.

This being a Diſeaſe not taken notice of (as far as I know) by any Author, I hope I ſhall be excus'd for giving the Deſcription of it; though I am forced to leave it to future Induſtry, and greater Sagacity than my own, to inveſtigate the Cure.

LEPRAS. The Name of a Sea-fiſh, about a Foot long. *Lemery* ſays, it is eſteem'd aperitive.

LEPTOMERES, λεπτομερὲς, from λεπτὸς, ſubtile, ſmall, minute, and μέρος, a Part. This Term is explain'd in that Part of the Preface, where the Medicine of *Aſclepiades* is treated of, who introduced this Word.

LEPTUNON, λεπτύνων. Attenuating.

LEPTYSMOS, λεπτυσμὸς. Extenuation, or Attenuation.

LEPUS. Offic. Schrod. 5. 299. Schw. Quad. 103. Mer. Pin. 168. Raii Synop. A. 204. Aldrov. de Quad. Digit. 247. Jonſ. de Quad. 109. Geſn. de Quad. Digit. 605. Charlt. Exer. 23. THE HARE.

However delicious the Hare may be eſteem'd among the modern *Britons*, our Anceſtors thought it a Crime to taſte it, as we learn from *Cæſar*; and in this they agreed with the *Jews*. Tho' the Hare lives on Vegetables and Water only, yet the habitual Exerciſe of this Animal exalts its Salts, and renders it ſomewhat alcaleſcent; and this Tendency is much increas'd, if it is kill'd immediately after being heated by ſtrong Exerciſe.

The Aſhes, Head, Eye, Blood, Lungs, Brain, Heart, Liver, Gall, Kidneys, Teſticles, Uterus, Coagulum, Fat, Dung, Hair, and the Bone called *Aſtragalus*, are uſed in Medicine.

The Aſhes of the entire Hare burnt to a Blackneſs, or of the whole Skin, are recommended in the Stone, an Alopecia, and Chilblains, apply'd externally in the two laſt. The Head cures an Alopecia, and whitens the Teeth. The Eyes are eſteem'd effectual for promoting Delivery, and for expelling the Secundines, and a Mole. The Blood cures Freckles, and Pimples of the Face; and is ſaid to be good in a Dyſentery, the Cœliac Paſſion, and the Stone. The Lungs are good for an Aſthma, Epilepſy, and for Chilblains, as a Topic. The Brain, rub'd on the Gums of Children, facilitates Dentition, and is good for Tremors of the Limbs. The Heart cures the Epilepſy, Pains of the Uterus, and a Quartan. The Liver moderates a Diarrhœa, and hepatic Flux. The Gall is good for an Ophthalmia, and the Tooth-ach. The Kidneys and Teſticles are given for the Stone, to promote Conception, for Incontinence of Urine, and Diſorders of the Bladder. The Uterus, alſo, promotes Conception. The Coagulum, or Rennet, diſcuſſes concreted Blood, promotes Conception, and cures the Epilepſy. The Aſtragalus is recommended againſt the Gravel, Colic, Epilepſy, and for promoting Delivery. The Fat, eſpecially if old, apply'd externally, is ſaid to draw Thorns and Splinters out of the Fleſh, to break Abſceſſes, and to cure Pains of the Teeth. The Dung is recommended for the Stone and Dyſentery, and is eſteemed a good Application to Burns. And the Hairs ſtop Hæmorrhages. *Dale* from *Schroder*.

LEPUS MARINUS. Offic. Charlt. Exer. 51. Rondel. 1. 520. Bellon. Aquat. 437. Geſn. Aquat. 475. *Lepus marinus primus*. Aldrov. Exang. 78. Jonſ. Exang. 9. THE SEA-HARE.

It is taken in the Sea, and, according to the Deſcription of *Dioſcorides*, reſembles a ſmall Loligo, or Cuttle-fiſh. Bruiſed either by itſelf, or with the *Urtica Marina*, (a ſort of Shell-fiſh) and the Part anointed therewith, it extirpates the Hair. *Dioſcor.*

LEPYRION, λεπύριον. The Shell of an Egg; or the Bark of Plants. *Hippocrates*.

LEROS, λῆρος. A ſlight Delirium. *Hippocrates*.

LESEOLUS. *Paracelſus*, in his Book *de tribus primis Eſſentiis*, calls the Jaundice *Morbus Leſeoli*, and informs us, that the *Leſeolus* will cure the Jaundice, and nothing elſe; but I don't find, that he explains it farther.

LESMIN. A Name for the *Jaſminum*; *ſive Sambach Arabum*. Alpini.

LETA. A red Heat. *Rulandus*.

LETCHI. The Name of a delicious Fruit, which grows in *Canton*, and other Parts of *China*, much admir'd by the Inhabitants. It is eſteemed heating, when eat in large Quantities. *Lemery des Drogues*.

LETHARGUS, from λήθη, Oblivion, and ἀργὸς, lazy, ſlothful.

Sleepy Diſeaſes are related to apoplectic and paralytic Diſorders, and often accompany them: The Account of them is ſo confuſed and intricate in moſt Writers, that Readers are entirely at a Loſs, whom to credit: Hence ſome Phyſicians, as *Hollerus* and *Rondelitius*, have made many Complaints of that Confuſion; and *Hartman*, *Riverius*, and *Paulus Barbette*, to avoid this Error, choſe rather to treat of theſe Diſeaſes in general, than any particular Species of them: But, as my Intention is to explain the various Cauſes and Cures of them, I thought it proper to be explicit in the Deſcription of the various Signs: And whatever a diligent and long Experience has taught me, in this Affair, upon reading lately the *Pathologia Cerebri* of *Bartholomew de Moor*, I found exactly agreeable to the Obſervations of that great Man, *Cap. 7. de Affectibus ſoporoſis*. I ſhall, therefore, purſue his Method, and retain thoſe Names which he has given to each Species of Somnolency.

By ſleepy Affections I mean, a preternatural Propenſity to Sleep; and that, for the moſt part, an invincible Drowſineſs, ſometimes without, ſometimes attended with, a Fever; ariſing from an Impediment of a ſufficient Influx of the nervous Fluid unto the Medulla Oblongata of the Brain, and the Nerves themſelves deſtined to Senſe and Motion. There are ſeveral Species of theſe Diſorders, the principal of which are, the Coma Vigil, Coma Somnolentum, Carus, and a Lethargy. All agree in this, that there is a preternatural Propenſity to ſleep: They differ, however, with regard to the Degree, Cauſes, and Cure; ſo that it cannot be amiſs to examine accurately the Nature of each Species.

A Coma Vigil manifeſts itſelf by theſe Signs: The Patients complain of a burning and extenſive Pain in the Head, attended with a Senſe of Ebullition within the Head; they are very much inclined to ſleep, and anxiouſly deſire it: They, however, either do not ſleep at all, or, if they do fall aſleep, they awake immediately, but little relieved; but, as yet, free from any Delirium. Nor have long-protracted Watchings preceded this Affection: Whence, thoſe who, after long Watchings, cannot refrain from Sleep, are not to be thought afflicted with this Coma. This Coma, likewiſe, differs from an obſtinate Watching [*Pervigilium*], which is frequent in acute Fevers; for in this there is not any Propenſity to ſleep, which, however, is very troubleſome to Perſons afflicted with a Coma. This Diſorder is always ſymptomatic; for it is often a Symptom in acute, burning, and malignant Fevers, and an Inflammation of the Dura Mater, and, in theſe, often precedes a Phrenſy: And I have known, in ſome Inſtances, the ſame Symptom ſometimes attend an Hemiplegia.

Theſe are the uſual Signs of the Coma Somnolentum: The Patients are languid, altogether free from any febrile Heat, nor have they, commonly, any other Complaints, than a conſtant Drowſineſs; they always ſleep involuntarily, and are often overcome with Sleep at their Meals, in Converſation with their Friends, or in the midſt of their Buſineſs: They awake at Intervals, but, being drowſy again, ſoon after fall aſleep. This Diſorder principally ſeizes old Men, who live luxuriouſly, and neglect Bleeding; nor does it ſpare the Young, when adequate Cauſes concur: It is, likewiſe, always idiopathic, and in this, too, diſtinguiſhes itſelf from a Coma Vigil, in which they who deſire Sleep, cannot procure it; which they, who are afflicted with a Coma Somnolentum, enjoy in abundance.

A Carus is a moſt profound Sleep, out of which the Patients cannot be rouſed by Clamours, Agitations, or even Prickings with a Needle; or, though they ſeem ſenſible of the Stimulus of the Needle, yet either do not ſpeak, or immediately relapſe into their former Sleep. This Diſorder is either idiopathic, or ſymptomatic, and often attended with a Fever: But of this, as *Bartholomæus de Moor* judiciouſly obſerves, *Cap. 7. Pap.* 198. there are three Species. The firſt is, that which accompanies acute Fevers, about their Beginning, or their Increaſe, to which ſometimes Convulſions and Hiccups ſucceed, which ſoon prove fatal. The ſecond is, When the Patients, after having laboured under violent acute Fevers, on account of a very great Weakneſs, fall into a profound Sleep, and continue in it for ſeveral Days; being awaked, they anſwer Queſtions, but fall aſleep again immediately, and at length awaking, recover, without remembering any one thing they ſpoke during that Sleep. Such a Sleep, likewiſe, happens in acute Fevers, eſpecially eruptive, about the critical Days; and then, if attended with a Sweat, is a very good Preſage. The third Species of a Carus occurs in Perſons at the Point of Death from a Fever; for, a Day or two before Death, the Patients, exhauſted of all their Strength by the Violence of the Fever, lie deprived of Senſe and Motion, and oppreſſed with a profound Sleep, and under that expire.

Laſtly, the Lethargy, ſo called, ἀπὸ τῆς λήθης, from Oblivion, is an heavy and perpetual Sleep, with ſcarce any Intervals of Waking.

Being awaked, they anſwer; but like thoſe who are prematurely raiſed from a deep and quiet Sleep; but, ignorant of what they ſay, and forgetful, they immediately relapſe into their former Drowſineſs: Some call for the Chamber-pot, take it into their Hands, but, falling aſleep again immediately, forget to make Water; or, gaping, forget to ſhut their Mouths. Thus appears the Difference between that and a Coma Somnolentum. But a Lethargy is accompanied with a Fever, which becomes a Symptom thereof, and is mild, and principally manifeſts itſelf by a Frequency of the Pulſe, and a leſs frequent and febrile Reſpiration: Hence it differs from a Carus, which is often a Symptom, or the Conſequence, of a Fever, and is, likewiſe, attended with an Inſenſibility. It differs, alſo, from an Apoplexy, which invades ſuddenly, with an Abolition of all Senſe and voluntary Motion, and a Stertor; and kills ſooner than a Lethargy, as it is ſeldom continued longer than the ſeventh Day.

Having premiſed thus much, we ſhall add ſome anatomical Diſſections of Perſons who have died of theſe Diſorders, and then enter into an accurate Examination of the Cauſes. The learned *Bonetus*, in his *Sepulchretum Anatomicum*, *Lib.* 1. furniſhes us with Diſſections of Perſons, who have expired in ſleepy Affections. It would be too tedious to recount all the Inſtances he produces; it ſhall therefore ſuffice, to quote the principal Heads of them: Thus he found, in many, a copious Serum diffuſed through the Subſtance of the Brain, yet in ſuch a manner, that the exterior or cortical Part of it, with the Meninges, was principally overflowed with Water: And he likewiſe remarks, that in ſome he found the interior Parts and Ventricles of the Brain, the Cortex being entire, replete with extravaſated Serum; but theſe Subjects were never, through the whole Courſe of their Lives, afflicted with a ſleepy Affection. The more this Inundation of the Brain penetrated into the Medulla thereof, the greater Degree of Sleepineſs he obſerved to have continued during Life. Farther, in ſome, who died of Drowſineſs, he found Abſceſſes, Scirrhoſities, and Tumors, in the Brain; but thoſe, alſo, poſſeſſed only the anterior and cortical Region of it. And, laſtly, in ſome, the Brain being dry, and free from a ſerous Colluvies, he obſerved the Veſſels of the Pia Mater particularly very much diſtended with thick Blood, and in a manner varicoſe. In Lethargics eſpecially, *Joannes Faber Lyncius*, as *Harendez*, *Lib.* 4. *Cap.* 18. teſtifies, obſerved the Membranes of the Brain inflamed.

For the Illuſtration of the Nature of theſe Affections, we will add ſome Obſervations relative to them. *Wepfer* and *Peyer* have taught us how to procure Sleep, by Art, in Dogs, by a greater or leſs Compreſſion of the Brain, when deprived of the Cranium: And there is a very remarkable Inſtance of a Beggar at *Paris*, who, by ſome Accident, had loſt Part of his Skull, ſo that his Brain was laid bare: He, from a ſlight Compreſſure of the Brain, ſuffer'd a Dimneſs of Sight; from one a little more violent, a Ringing in his Ears; from one ſtill more violent, a Vertigo, and Sleepineſs; and, when the Preſſure ceaſed, he was again freed from theſe Symptoms. This Obſervation is greatly illuſtrated by the common Practice of Trepaning; by which, in Subjects affected with a Sleepineſs, from an Extravaſation of the Blood, made between the Cranium and the Brain, and the conſequent Preſſure, the ſtagnating Humour being diſcharged by the Help of the Trepan, we are aſſured, from Obſervations of undoubted Credit, that the Senſes immediately return, and all Drowſineſs is removed. From hence we certainly conclude, that the material Cauſe of ſleepy Affections is primarily and originally contained within the cortical Subſtance of the Brain.

Now, from Phyſiology, we learn, that natural Sleep depends upon a more diminiſhed, and more languid Influx of the nervous Fluid into the Nerves deſtined to Senſation, and voluntary Motions; and that this languid Influx is partly owing to the Relaxation of the Nerves themſelves, partly to a Want of nervous Fluid, partly to the ſlow Circulation of the Blood through the Veſſels of the Brain, and Membranes. Upon comparing this with what has been ſaid in the preceding Paragraphs, it follows, that the immediate Cauſe of ſleepy Affections is a very languid and diminiſhed Influx of the nervous Fluid, from the cortical Subſtance of the Brain, into its Medulla; and from thence into the Nerves deſtined to Senſe and Motion. The Cauſes of the preternatural Impediment of this Influx ſeem principally three; firſt, either a too great Want of the Fluid itſelf; or, ſecondly, a Laxity of the Tubes which convey it; or, laſtly, a Preſſure upon the cortical Subſtance of the Brain; and this ariſes either from the Blood paſſing ſlowly through the Brain, and the Meninges thereof, or abſolutely ſtagnating, or ſome foreign Matter incumbent on the ſaid cortical Subſtance, by which the Medulla, everywhere joined to the Cortex, is preſſed together, and, conſequently, cannot receive a ſufficient Quantity of the Fluid.

But, since there are several Species of sleepy Affections, let us inquire into each of them more accurately. A Coma Vigil is an intermediate Disease between a Pervigilium, and sleepy Affections. Where there is an insatiable Desire of Sleep, though it cannot be obtained, it is a Symptom either of an Hemiplegia, or acute Fevers, especially when attended with an Inflammation of the Dura Mater, and often precedes a Phrensy. Any one will easily perceive, that the Cause of this must be mixed, by which the Influx of the nervous Fluid into one Part of the Brain is more languid, into another more increased. Let us, therefore, consider, whether such a Cause can take place in these Disorders. As to acute Fevers, we argue thus: If in them a Coma Vigil generally precedes a Phrensy, which proceeds from an Inflammation of the Membranes of the Brain, and, in our Country, very often symptomatically attends malignant eruptive Fevers; if, likewise, it is joined with an hot and fervent Pain, it seems very probable, that a Coma Vigil in those Fevers is caused by a Beginning Inflammation in one Part of the Membranes surrounding the Brain: But as the Inflammation supposes an increased Collection of Blood in a certain Place, and a Stagnation, it necessarily follows, that some of the cortical Part of the Brain is compressed thereby, and consequently that the Influx of the Fluid into the Medulla is diminished, with the subsequent Effect of Somnolency. While this happens in one Part of the Brain, yet in another, from the Blood being quickly agitated by a febrile Motion, an uninterrupted Secretion of the nervous Fluid continues; which, the more copious it is, the more does it bring on Watchings; nor does it suffer the present Inclination to sleep to be put in Execution. Whatever, therefore, in acute Fevers can increase the Orgasm of the Blood, and assist its more copious Progress to the Head, that contributes remotely to bring on a Coma Vigil, as spirituous, hot, alexipharmic Medicines, a Regimen too hot, and Refrigeration of the Extremities in the Small-pox.

There is no Difficulty in accounting for the Method, by which a Coma Vigil may be joined with an Hemiplegy: For if we consider, that in this Affection the Beginning of the Nerves is compressed only on one Side, and so the Influx of the moveable Fluid into one Side only impeded, while the other is free, we shall soon understand, likewise, that the Cause of the Watching may exist in one Place, or Side, and of the Somnolency in another, of which the Coma Vigil consists; because the nervous Juice, the Secretion being prevented on one Side, is carried in greater Plenty to the other; which is proved, among other things, by the convulsive Agitations of the sound Side. But why are not all Persons afflicted with an Hemiplegy, seized with a Coma? Read what we have collected above from *Bonetus*, and you will find, that a Compressure on the Beginning of the Nerves only, is not always attended with Somnolency, unless the cortical Substance of the Brain be at the same time vitiated.

A Coma Somnolentum, an Affection more frequent than a Lethargy, and always without a Fever, ought to have such a Cause as is capable of stopping the Passage of the nervous Fluid from the cortical Substance to the Medulla, not only in one Part, but throughout the whole Brain. 1. Such is the too great Relaxation of the Canals conveying the Blood thro' the Brain, on account of which the Blood can neither circulate briskly, nor can a sufficient Quantity of nervous Fluid be secreted; as it commonly happens in plethoric old Men. 2. A difficult Circulation of the Blood, especially when thick and impure, thro' the Head, and from thence a Compression of the Brain. Hence plethoric Persons are sleepy; hence scorbutic and hypochondriac Persons frequently fall into this Drowsiness, and the more when the Humours are compelled more plentifully to the Head by Spasms of the lower Belly. And from hence too we must derive the Origin of that Species of Coma Somnolentum, which, according to *Riverius*, sometimes happens to Children afflicted with the Worms in the Intestines; for in this Case the vital Juices are forced to the superior Parts by Spasms of the Abdomen. Hence very plethoric Persons, upon the Access of any Cause moving and expanding the Blood excessively, as Drunkenness, are often plunged into a profound Sleep, and absolutely destroyed by it. 3. An excessive Collection of Serum in the Brain, and its Membranes, and an Extravasation thereof; whence injudicious Suppressions and Exsiccations of Runnings of the Ears, a Coryza, and Ulcers, contribute to this kind of Disorder; nor is it uncommon for a Coma Somnolentum instantly to follow an Ischury, or entire Suppression of the Urine, which, the Flux of Urine being restored, immediately ceases.

The first Species of a Carus, which seldom, and only in very plethoric Persons, occurs in the Beginning or Vigour of acute Fevers, principally those of the continual Kind, depends upon the excessive Abundance and Ebullition of the Blood, by which the Vessels of the Brain, and its Membranes, are so expanded, that they compress the soft Substance of the Brain, and impede the Entrance of the nervous Juices into the medullary Part, throughout the whole Head: Hence that Juice is the more copiously forced through the Cerebellum into the Parts which have the Conduct of the vital Functions, and renders the Systole of the Heart more vehement. Hence it is evident, that all heating and powerful Remedies applied in those Fevers, a Neglect of Venesection, and an imprudent Exhibition of Narcotics in order to procure Sleep in Fevers, must necessarily contribute to produce a Carus.

Many Causes conspire to the Generation of the other Species of a Carus, which follows after the Cure of acute Fevers: For it is to be observed, that the fluid, as well as the solid Parts are surprisingly altered by a febrile Heat; the Solids are deprived of their natural Vigour and Tone; the Fluids, by the Violence of a continual Attrition, are resolved, and acquire a Consistence not over-agreeable to the vital Oeconomy. For the more humid and generous Part of the vital Juices, no Nutriment being added, is dissipated, and conveyed through various Parts out of the Body; and hence results a Deficience of the nervous Fluid, a vapid, and, as it were, gelatinous Consistence of the Lymph and Serum, and a Coagulation of the Blood itself. By a Concurrence, therefore, 1. Of the Weakness of the Vessels. 2. Of a Want of nervous Juices. 3. Of a Compressure of the Brain, made by the Blood passing through it with Difficulty, it must necessarily follow, that a preternatural Drowsiness, with a Diminution of the Senses, will arise: Which happens more easily, if, during the Fever, powerful Remedies, which weaken the Solids, or absolute Narcotics, have been administred. And if these Defects of the Fluids and Solids are increased, as is common in the third Species of a Carus, the coagulated and unactive Juices at length stagnate in the debilitated Vessels, are extravasated, and thus bring on unavoidable Death.

The Causes of a Lethargy are the same which we have assigned for a Coma Somnolentum, except that they are more violent, and penetrate deeper into the cortical Substance of the Brain, so that they not only induce a Sleepiness, but the external and internal Senses, likewise, become languid. The Whole turns upon this, that in a Coma, as well as a Carus, there is, as yet, no Extravasation of Blood, or Serum; but this is, at length, produced as an Effect, and found in Subjects opened after Death. There is in these Species of sleepy Affections a difficult and debilitated Circulation of the Blood through the Vessels of the Meninges and Brain, and a greater or less Degree of Stagnation of the serous Parts. But in a Lethargy there is either a Separation of the thin Serum made thro' the Pores of the Arteries, or an absolute Extravasation.

But a Lethargy is distinguished from a Carus in this; that the Patients, being roused in the former, answer; in the latter, they do not. There is, likewise, a Difference between an Apoplexy and Somnolency; for in an Apoplexy the Respiration is difficult, and it terminates in a Palsy, which does not happen in a Carus. It differs, likewise, from a Syncope, in which the Pulse is small, or very obscure and languid, and the Face cadaverous; in carotic Patients the Pulse is large and strong, and the Colour of the Face appears rather florid: Nor does it differ less from an hysteric Fit, because such Patients are without all Respiration, and afterwards understand and remember: But in a Carus they neither understand, nor remember in the Fit; they have their Eyes always shut, or, if they are open'd, they close them immediately.

As from the Premises, the special and immediate Causes of sleepy Affections are very evident; so, in general, it ought to be known, that all those things conduce to the Production of them, which promote a difficult Circulation of the Humours through the Vessels of the Brain and Meninges, and a Stagnation thereof, and impair the elastic Force of the Vessels and Membranes. Among the remote Causes may be reckoned cacochymic, cachectic, scorbutic Indispositions of the Body; a Debility, occasioned by too much Grief, Sorrow, or a Disease of long Continuance, or enormous Profusion of Blood; an Abuse of inebriating Liquors, Spirit of Wine, Beer too spirituous and full of Hops; frequent Surfeits; inhabiting a moist Apartment, where the Air is dense and vapid; and a humid and cloudy Constitution of the Air; Winds blowing long from the West; the Winter Season; and an Abuse of Tobacco.

Besides, it may be frequently observed in Practice, that a Coma Somnolentum, or even a Lethargy, is excited in sanguineo-phlegmatic Subjects of a gross Habit, and full of Blood, from a Suppression of the Hæmorrhoids, Menses, or any usual and critical Hæmorrhage whatsoever. Nor is it uncommon for the same Affections to be generated by checking habitual Morning-swears, or those which are critical; and, also, by a Suppression of any serous Excretions, or by a sudden Extenuation of œdematous Legs and Feet. Not to mention, that in those whose Brains are weak, if too large Quantities of spirituous Liquors are taken, or if the Body is much refrigerated whilst heated with such Liquors, a profound Sleep, with a Stupor, may be produced; which, however, ceases in a short time, without any Danger. Comatous and lethargic Affections are, also, excited by a Cessation of arthritic or podagric Pain, which before returned once or twice in a Year: And I have seen a Lethargy, accompanied with a convulsive Asthma, immediately cease, together with the Asthma, upon the Return of the Pain to the Joints. Among the Causes of these Disorders we may, likewise, number the excessive and unseasonable Use of vaporous Substances; for in weak Subjects I have often observed heavy and more or less dan-

dangerous Somnolences produced by Wormwood and Opiates, given in large Quantities, by Narcotics, Smoak of Sulphur, and the Vapour of burning Coals, confined in too narrow a Space. The exceſſive Uſe of fragrant Things, likewiſe, is prejudicial. *Strabo*, *Lib.* 16. tells us, that the Inhabitants of *Sabæa* fall into this Diſorder, from the Odour and Fragrancy of the Flowers and Fruits produced in that Country. I have known Inſtances, where the Smell has been entirely loſt, by a continued Uſe of ſweet-ſcented Subſtances, becauſe theſe ſeem to induce a Relaxation of the Membranes of the Brain, and nervous Membranes of the Noſe. To the Cauſes of ſleepy Affections, alſo, belong Violences done to the Head: Thus *Galen*, *Lib. de Inſtr. Odor. Cap.* 6. enumerates among theſe, the Compreſſure of the Brain made by the Surgeon, who perforated the Cranium, and Membrane inveſting the Brain: And I, ſays *Mercurialis*, *in Prælect. Batav. p.* 22. once ſaw a Perſon, injured by a Surgeon with an unſeaſonable Perforation of the Cranium, become immediately carotic.

The Prognoſtic of theſe Affections is not always of the happy Kind; but more or leſs fatal, according to the Violence of the Cauſes: And indeed, a Coma Vigil often preſages a Phrenſy, and Convulſions; and, in malignant Fevers, often changes into a mortal Sleep: But a ſound Sleep, as *Hippocrates* remarks, in *Coac. Prænot.* ſometimes, in Fevers, preſages a certain and firm Criſis, and is not bad. When Pains attend a Carus, according to the ſame *Hippocrates*, they portend a Convulſion: The older, more weak, and more impregnated with impure Juices, the Bodies are, the more Danger does a Coma portend; and eaſily, as *Mercatus* ſays, *Lib.* 1. *Cap.* 12. terminates in a fatal Lethargy. A Carus is the more dangerous, the more violent the attending Fever is, and the worſe its Symptoms are, and the more crude the Urine. However, the firſt and ſecond Species are often cured; the third is always mortal. A Lethargy is never without Danger; but that is worſt, which is accompanied by a Tremor of the Limbs, and a cold Sweat of the Face.

The Cure.

A Phyſician, in the Cure of ſleepy Diſeaſes, ſhould regard theſe three Intentions; firſt, to rouſe the Patient from his Sleep; next, to remove the Difficulty of Circulation, the Stagnation or Extravaſation of the Blood in the Head; and, thirdly, to reſtore the loſt Strength of the Membranes, and Veſſels of the Brain.

For ſhaking off Drowſineſs, and awaking the Patient, thoſe Remedies are efficacious, which act upon the nervous Parts, by agitating them, vellicating and inducing a tremulous and oſcillatory Motion, through the whole nervous Syſtem: Such are, 1. Powerful Acids; and, of theſe, the Preference muſt be given to the Spirit of Verdegriſe, (which is no-thing but a moſt concentred Spirit of Vinegar) mixed with Eſſence of Caſtor: This, applied to the Noſe, in ſtimulating and penetrating, is ſuperior to all others 2. Volatile Salts, as urinous Spirit of Sal Ammoniac, prepared with Quick-lime; which being applied to the Verter, or, what is ſtill better, put into the Noſe, excites Sternutation, and greatly ſhakes off the Torpor and Drowſineſs. 3. Fetid things, as Galbanum, Partridge-feathers, and others, burnt; ſo that the ſtrong Scent may affect the Noſe. 4. Cold Water ſuddenly poured all over the Head, which, by ſtrengthening, at the ſame time, the Membranes of the Brain, readily diſpels Sleep. 5. Cataplaſms prepared of ſtrong Vinegar, Rue, Bay-leaves, Tops of Savory, Muſtard-ſeed, Caſtor, and Camphire, applied to the Head, when ſhaved, the Forehead, and the Temples.

The Efficacy of theſe is promoted, and, at the ſame time, the ſerous Colluvies, if it is offenſive, is derived from the Head, 1. By Sternutatories; the beſt of which is Salt of white Vitriol, if ten Grains of it are diſſolved in half an Ounce of Marjoram-water, and drawn up the Noſe. 2. By Veſicatories of Cantharides, ſomewhat large, and laid on the Feet and Neck; for theſe both give Motion to the ſolid nervous Parts, and make a Revulſion of the ſerous Humours. 3. By Cupping-glaſſes, either with or without Scarification. 4. By ſtrong Frictions of the inferior Parts. 5. By acrid Clyſters. 6. Acrid and ſtimulating Clyſters are, in ſuch Caſes, of very great Service, to which Sal Gemmæ, common Salt, or the Root of Squills, are added, with a View of increaſing the Stimulation.

The Patient, by the Help of theſe, being rouſed from his Drowſineſs, it remains, that an equal Circulation of the Humours through the whole Body be reſtored, and then the debilitated Parts ſtrengthen'd. The firſt End is anſwered by frequent Bleeding, whilſt the Sleepineſs laſts, if the Veſſels are turgid with Blood; and much more ſhould it be perform'd, when the Sleepineſs is conquer'd, in order to prevent a Relapſe: Then, likewiſe, if the firſt Paſſages are loaded with Excrements, or ſeized with Spaſms, the Body ought to be open'd with a gentle Laxative. Nervous, mixed with diaphoretic, Medicines, contribute to diſperſe the Stagnations of the Humours, and, alſo, to ſtrengthen the infirm Parts: Among theſe, the Eſſence of Aloes-wood and Amber, with the Spirit of Lilies of the Valley, of Sal Ammoniac, and acrid Tincture of Antimony, are of great Efficacy. And Salt of Hartſhorn, with Salt of Amber, Cinnabar of Antimony, and Bezoardic Mineral, in the Form of a Powder, have very great and ſalutary Effects.

Laſtly, Relapſes into ſleepy Diſorders may be prevented, partly by a Removal of the Cauſes producing them: And ſince a Suppreſſion of the ſanguine Excretions, or habitual arthritic Paroxyſms, contribute very much to the Generation of theſe Diſorders, he will not do amiſs who endeavours to recal theſe Fluxes and Pains, and preſerve a regular Succeſſion of them. In Diet; Idleneſs, Drunkenneſs, Meats difficult of Digeſtion, and ſpirituous Things, muſt be avoided. Let the Body be exerciſed carefully: All Repletion is to be avoided; and Faſting, and eating ſparingly, is of Uſe: The Patient muſt entirely abſtain from Fiſh, Milk, and Cheeſe; and, amongſt Fruits, all that are watery muſt be abſtained from: He muſt eat more roaſted than boiled Fleſh. Bread muſt be entirely cleanſed of the Darnel, with which it is often intermixed. Let old infirm Men uſe Wine, as their Milk: Let them not protract their Sleep too long; let them be cautious of Affections of the Mind; let them frequently enjoy the Converſation of their Friends; let them pleaſe themſelves with convenient Journeys; let them take care to preſerve the Excretions, as well by Stool, as by the Pores of the Skin; and let them not forget the uſual Bleeding, at their ſtated Times.

Practical Cautions.

As the Cauſes of ſleepy Diſorders, and the Species of them, are very different, ſo the Method of Cure is various: Let us therefore conſider, what may be proper for each Species. A Coma Vigil, as it ariſes commonly, in acute Fevers, from an exceſſive Quantity of Blood, whilſt an Inflammation of the Membranes of the Brain is approaching, ſo it abſolutely requires ſuch Remedies as may not be prejudicial to the Fever: And, for this End, there ſhould be a large Quantity of Blood taken away; if the Fever has not continued beyond the third or fourth Day, as *Gabelchoverus*, *Lib.* 1. *&* 8. and *Foreſtus*, *Lib.* 10. *Obſ.* 34. affirm. After Bleeding, the Body, if it is obſtructed, ſhould be open'd with Clyſters, which muſt not be very acrid; and then Remedies ſhould be given, which, by diluting and cooling the Humours, check the Heat thereof: For this Purpoſe, the abſorbent Powders, gently nitrous Medicines, in a Draught with diaphoretic Antimony, and diapnoic and analeptic Waters, wild Emulſions of Poppies, and acidulated Remedies, are of great Uſe in malignant Fevers. I, alſo, approve very much of the Medicine recommended by *Lotichius*, which conſiſts of Rob of Currants, three Ounces, diſſolved in two Pints of Spring-water, and render'd gratefully acid, by an Addition of Spirit of Vitriol.

Sweet Spirit of Nitre, by its cooling and gently anodyne Quality, is of great Uſe: Nor are external Applications to be neglected; as Cataplaſms prepared with Vinegar, or the Unguentum Alabaſtrinum, applied to the Temples; live Animals diſſected, and laid on the Head: Not neglecting a quiet and mild Regimen.

As a Coma Vigil, familiar in an Hemiplegy, is of longer Continuance, ſo it is more difficult to be cured. He will perform but little, who attempts the Symptom only, and neglects the principal Diſorder: Nothing remains, but to cure the Hemiplegia by proper Methods; for then natural Sleep will ſpontaneouſly follow.

A Carus, particularly the firſt Species of it, requires plentiful Bleeding, if the proper Opportunity is not ſuffer'd to elapſe; then the Patient muſt be rouſed by Clyſters, render'd ſtimulating by Squills; by Veſicatories; by putting diſtilled Vinegar into the Noſtrils; and then, internally, the Orgaſm of the Humours muſt be compoſed by cooling fixed Diaphoretics, and Acids. The ſecond Species of the Carus, as it is often critical, demands ſcarce any Aſſiſtance from Medicine; but, being left to itſelf, terminates in Health. The third, and moſt dangerous, ſcarce admits of a Cure; yet it is proper to try, whether the Patient can be moved by Veſicatories, and then to have recourſe to Diluters and Analeptics.

A Coma Somnolentum is very properly divided into ſerous and ſanguine. The firſt requires either the natural ſerous Excretions to be reſtored; or artificial ones to be ſubſtituted in their room. A Suppreſſion of Urine is to be removed by proper Remedies: Gouty Fits are to be invited by Frictions of the Feet, Veſicatories, relaxing Applications, and warm Baths. Of great Uſe, likewiſe, are Sternutatories, by diſcharging the Serum through the Noſe, and ſtimulating the Nerves to Motion. When a viſcid Phlegm offends the Stomach, an artificial Vomit is ſerviceable; for which Purpoſe, half a Scruple, or a whole Scruple, of powder'd Squills, or a few Grains, two, for Example, of emetic Tartar, may be given ſucceſsfully, mixed with ſome laxative Potion.

On the contrary, a Coma Somnolentum, which deduces its Origin from an hot Cauſe, that is, a difficult Paſſage of the Blood through the Head, or a Stagnation, as commonly happens in hypochondriac and ſcorbutic Perſons, requires greater Circumſpection: For all hot and ſpirituous Remedies are to be avoided,

avoided, as Poiſons; and, inſtead of theſe Cyſters, Bleeding, gentle Laxatives, cooling and nervous Powders, and others of that Kind, ſhould be ſubſtituted: And all theſe are proper for a Lethargy; only that often requires more efficacious exciting Remedies.

Whatever ſleepy Affections proceed from an Extravaſation of the Blood or Serum within the Meninges and Cranium, produced by external Violence, cannot be cured, before the extravaſated Humour is diſcharged by trepanning: Though, before this Operation, Bleeding, if the Quantity of Blood is redundant, is highly proper.

A red Face, Eyes turgid with Blood, tumid Veins, and ſtrong Pulſations of the Arteries, indicate Bleeding to be very proper in ſleepy Affections: After this, if the florid Colour of the Countenance, and Strength of the Pulſe, continue, there is Hope of a Recovery; but at the ſame time it will be neceſſary once more to open a Vein, becauſe inſufficient Bleeding is capable of doing Miſchief. The thicker the Blood is ſuppoſed to be, the larger Inciſion ſhould be made in the Vein, that there may be a more extenſive Outlet for it.

After Bleeding, the Body muſt be opened, either by a Laxative given internally, or a Clyſter; nor indeed, without theſe previous Evacuations, ought any other Kind of Remedies, as Strengtheners, Diaphoretics, or Sternutatories, to be adminiſtred, becauſe, by them, a greater Motion and Impetus of the Humours to the Head is excited.

In every ſleepy Diſorder it is proper to avoid warm Baths, vaporous Subſtances, and ſuch as incline, by their fragrant and ſtrong Smell, to Sleep. Much more abſurd is it to uſe Narcotics, ſulphureous Remedies, Opiates, or Medicines in which Saffron or Poppies are Ingredients. To this Claſs belong theriacal Medicines, which the Antients uſed to preſcribe in theſe Affections; for this is adding Fuel to the Fire.

External Volatiles, generally applied to the Noſe, ſhould never be uſed unleſs in Somnolencies proceeding from a cold ſerous Cauſe; and, therefore, we muſt abſtain from theſe in all Sleepineſs attending a Fever, or which ariſes from an eryſipelatous, purpurine, or eruptive Matter conveyed to the Brain; for, in theſe Caſes, fix'd, but, at the ſame time, penetrating Acids are uſed with more Succeſs. Of this Kind is the Oxyrrhodium, which *Avicenna* and *Rhaſis* long ago recommended; to which Marjoram and Rue may be added.

Though the drinking of hot Mineral Waters, and much more the Acidulæ, ſhould not be abſolutely adviſed in idiopathic Diſeaſes of the Head; yet in Somnolencies which affect hypochondriac Perſons, from a ſuppreſſed Flux of the Hæmorrhoids, or a Receſs of the Gout, I have found a ſurpriſing Quality in the *Caroline* Springs, thoſe particularly which break out near the Mill, in reſtoring the gouty Paroxyſms, and diſpelling Drowſineſs.

We muſt, above all things, take care not to uſe Sternutatories in the Beginning of this Diſorder, to rouſe the Patient from Sleep, eſpecially in plethoric Perſons; becauſe, by an unſeaſonable Remedy of this Kind, a greater Afflux of Humours to the Head is cauſed, and from thence there is great Danger of an Apoplexy. *Frederic Hoffman.*

A Carus is a ſlight Apoplexy, but an highly profound Sleep, accompanied with a Fever, ariſing principally from ſuch Cauſes as compreſs the Brain, as yet uninjured; or ſuch as obſtruct it, but are, at the ſame time, more eaſily removed than in an Apoplexy. In a Carus there is ſome, though a fleeting and tranſitory, Perception; and ſome, though a ſmall Degree of, Senſation.

Hence, upon the Removal of a Carus, the Patient has his Health reſtored, unleſs, perhaps, a kind of Shaking of the Head ſhould remain for ſome time.

The Cure may be collected from the Article APOPLEXIA. The Coma Vigil, the Coma Somnolentum, and the Cataphora, ſeem to be only ſlight and gentle Species of a Carus.

But a Lethargy is a ſlight Species of Apoplexy, ariſing from a cold, viſcid, and aqueous Cauſe; for which Reaſon the Knowledge and Cure of it is to be gathered under the Article APOPLEXIA and PARALYSIS. *Boerhaave Aphor.*

LETHE, λήθη. Forgetfulneſs. This, when it occurs in Fevers, is, by *Hippocrates*, eſteemed of very bad Preſage.

LEVATOR *Scapulæ proprius*, by *Winſlow* called *Angularis*.

This is a long and pretty thick Muſcle, about two Fingers in Breadth, lying above the ſuperior Angle of the Scapula, along the poſterior lateral Part of the Neck of that Bone.

It is inſerted above, in the Extremities of the tranſverſe Apophyſes of the four firſt Vertebræ of the Neck, by four fleſhy Branches ending in ſhort Tendons. Sometimes the ſecond, ſometimes the third, or both, and ſometimes the fourth of theſe Branches are wanting; theſe Defects being made up by the Largeneſs of the reſt.

From thence theſe Branches run down a little obliquely, and then, uniting together, they are inſerted into the ſuperior Angle of the Scapula, and in the Edge of its Baſis, from thence to the ſmall triangular Space, being there covered a little by the Rhomboides.

This Muſcle is eaſily divided into two, through its whole Length. It is covered by the Trapezius; and its Inſertions in the Neck are ſometimes mixed with thoſe of the neighbouring Muſcles.

The Angularis, by its Inſertion in the ſuperior Angle of the Scapula, moderates the Deſcent of that Angle, while the Trapezius and Serratus major raiſe the Acromium. Afterwards, when theſe two Muſcles ceaſe to act, the Angularis raiſes the ſuperior Angle, and, by that means, depreſſes the Acromium.

Hence we ſee, that this Muſcle is improperly called *Levator Scapulæ proprius*, ſince it does not raiſe, but depreſſes the Scapula. That Name would agree better to the Serratus major. Whether this Muſcle can have any Share in moving the Neck, the Scapula, in which it is inſerted, being kept immoveable by other Muſcles, I cannot at preſent determine. *Winſlow's Anatomy.*

LEVATORES ANI. Theſe Muſcles riſe fleſhy from each Side of the Oſſa Pubis, internally within the Pelvis, as alſo from Part of the Os Iſchium and Sacrum: From theſe Places, like Lines drawn from a Circumference towards a Centre, its Fibres deſcend over the Muſculi Marſupiales, to their Implantation at the lower End of the Inteſtinum Rectum in the Anus. The Uſe of theſe Muſcles is principally to ſuſpend and draw the Anus upwards, leſt the Fæces ſhould be burdenſome to the Sphincter. In their Deſcent on each Side forwards, from the Oſſa Pubis, they paſs cloſe over the Glandulæ proſtatæ, in a manner embracing them; by which Mechaniſm they are rendered capable of compreſſing them; and, by a Retraction of the Anus, at the ſame time act on the Veſiculæ ſeminales, in order to promote the Emiſſion of the ſeminal Juices, in Coition. *Couper.*

LEUCACANTHA. A Name for the *Carlina*; *caulescens*; *flore magno albicante.*

LEUCADENDROS, *Africana, arbor tota argentea, fericea, foliis integris.* A Name for the *Conocarpodendron*; *foliis argenteis, fericeis, latissimis.*

LEUCADENDROS, *Africana. Arbor argentea, ſummo folio crenato.* A Name for the *Conocarpodendron*; *folio craſſo, nervoſo, lanuginoſo, ſupracrenato, ibique limbo rubro*; *flore aureo*; *cono facile deciduo.*

LEUCADENDROS, *Africana, ſive Scolymocephalos, folio anguſtiori, apicibus tridentatis.* A Name for the *Conocarpodendron*; *folio rigido, anguſto, apice tridentato, rubro*; *flore aureo.*

LEUCADENDROS *ſimilis Africana arbor, argentea, folio ſummo crenaturis florida.* A Name for the *Hypophyllocarpodendron*; *foliis lanuginoſis*; *in apice trifido, rubro, quaſi floreſcens.*

LEUCANIA. The ſame as LAUCANIA.

LEUCANTHEMUM.

The Characters are;

It agrees in every thing with the Chryſanthemum, except in the white Colour of its Semiflorets.

Boerhaave mentions eleven Species of this Plant; which are,

1. Leucanthemum; radice repente; foliis latioribus, ſerratis. *T.* 492.

2. Leucanthemum; vulgare. See BELLIS MAIOR.

3. Leucanthemum; vulgare; caule villis caneſcente, *T.* 492.

4. Leucanthemum; quæ Bellis ſylveſtris; barbulis fiſtuloſis. *Ind.* 35.

5. Leucanthemum; Canarienſe; ſapore Pyrethri. *H. C. Leucanthemum*; *Canarienſe, foliis Chryſanthemi, ſapore Pyrethri.* T. 666. *Chamæmelum, Canarienſe, ceratophyllum, fruticoſius, glauco folio craſſiore, ſapore fervido, Magola ab incolis dictum.* M. H. 3. 35. 7.

The Root, Leaves, Flowers, or Wood, chewed in the Mouth, are of ſo penetrating a Taſte, as to cauſe an Inundation of Lymph in the Mouth, as if it proceeded from a Fountain; for which Reaſon they are of excellent Service in the Tooth-ach: The freſh Leaves, in particular, are properly applied to a pained Tooth; for I take this Plant to be both reſolvent and aperitive. It is taken for Pyrethrum, or Pellitory of *Spain*, and not without Reaſon: This, however, is not the Pyrethrum of the Shops, but may ſerve inſtead of it in dry Diſeaſes of the Viſcera and Inteſtines. *Cæſalpinus* highly commends an Ointment of this Plant for the Itch. *Hiſtoria Plantarum*, aſcrib'd to *Boerhaave.*

6. Leucanthemum; folio Abſinthii breviore; Alpinum. *Juſſ.*

7. Leucanthemum; folio Abſinthii; Alpinum. *Ciaſſi.*

8. Leucanthemum; Luſitanicum; Chamæmeli folio craſſiore.

9. Leucanthemum; montanum; foliis Chryſanthemi. *T.* 492.

10. Leucanthemum; Tanaceti folio; flore majore. *Tanacetum, inodorum, flore majore.* C. B. P. 132. *Matricaria, tanacetifolia: flore majore, ſemine umbilicato.* T. 493.

11. Leucanthemum; Bellidis facie; umbelliferum; ſemine pappoſo. *Bellis, major, ramoſa, umbellifera, Americana.* Park. Theat. 528. *Aſter, annuus, ramoſus, albus, latifolius, Canadenſis.* M. H. 3. 122. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 108.

LEUCAS *Montana.* A Name for the *Galeopſis*; *ſive Urtica inera, flore luteo.*

LEUCE, λεύκη. A Species of Leproſy. See LEPRA.

LEUCELECTRUM. White Amber. *Blancard.*

LEUCISCOS, λεύκισκος. The Name of a Fiſh of the Mullet-kind. *Galen, de Aliment. Facultat. Lib.* 3. *Cap.* 25.

LEUCOCHRUS, λευκόχρως, according to *Gorræus*, is a ſort of Wine, made of dried Raiſins, firſt trodden, then macerated in Sea-water, and afterwards caſt into white Muſt.

LEUCOGRAPHIS, λευκογραφὶς, is the Name of a Stone, otherwiſe called *Maroxus* and *Galaxia*. It is found in *Egypt*, and being of a ſoft Contexture, and eaſy to be diſſolved, is uſed by the Whitſters, in bleaching their Linen. It is ſuppoſed to be of an emplaſtic Quality, and to be good for ſuch as are troubled with Spitting of Blood, the Coeliac Paſſion, or Pains in the Bladder, being taken in Water; alſo for Women labouring under a Flooding, if taken as before, or applied in a Peſſary. It is an Ingredient, alſo, in ophthalmic Medicines of a ſoft Compoſition, for it fills up the hollow Ulcers of the Eyes [κοιλώματα, ſee COELOMA] and repreſſes Defluxions; and, made into a Cerate, it cicatrizes Ulcers in the tender Parts of the Body. *Dioſcorides, Lib.* 5. *Cap.* 152.

LEUCOIUM.

The Characters are;

It has a long, flat, bicapſular Pod, which is full of ſmooth, flat, orbiculated Seeds, which are generally marginated, or bordered round the Edges; the Flowers are beautiful and ſweet-ſcented.

Boerhaave mentions thirty-one Species of the Plant, none of which have any medicinal Virtues attributed to them at preſent, that I know of, except the firſt and twenty-ſecond.

The firſt is the

Leucoium; incanum; majus. *C. B. P.* 200. *Raii Hiſt.* 1. 779. *Boerh. Ind. A.* 217. *Tourn. Inſt.* 220. *Leucoium album.* Offic. Ger. 372. *Leucoium ſimplex ſativum.* Park. Theat. 258. *Leucoium hyemale & diu durans album.* J. B. 2 874. STOCK-GILLY-FLOWER.

This is a Plant which grows almoſt in every Garden, and, therefore, is ſo well known, that it needs little to be ſaid about it. It has long, narrow, hoary, or whitiſh Leaves, ſet alternately on the Stalks. The Flowers are large, of four Leaves a piece, ſometimes white, ſometimes red, and frequently ſtriped, of a pleaſant ſweet Scent. The Seed is flat and round, growing in long hoary Pods, divided in two in the Middle, by a long Partition. It grows only in Gardens, and flowers a great Part of the Summer.

The Flowers are uſed, though very rarely. *Dioſcorides* commends them for Ulcers, and Chaps in the Fundament, and Inflammations of the Matrix. *Galen* affirms, that they help the Infirmities of the Liver and Spleen, and provoke the Menſes, and haſten the Birth.

The twenty-ſecond is the

Leucoium; luteum; vulgare. *C. B. P.* 202. *Tourn. Inſt.* 221. *Boerh. Ind. A.* 2. 18. *Cheri, Leucoium luteum.* Offic. *Leucoium luteum, vulgo Cheiri flore ſimplici.* J. B. 2. 872. Raii Hiſt. 1. 872. Synop. 3. 291. *Keiri, ſive Leucoium vulgare luteum.* Park. Theat. 625. Parad. 256. *Viola lutea.* Ger. 371. Emac. 456. WALL-FLOWER.

Wall-flowers have a thick, woody, crooked Root, of a whitiſh Colour, from which ſpring many woody brittle Stalks, beſet with ſmall, oblong, ſharp-pointed Leaves; and having on their Tops ſeveral pretty large yellow four-leaved Flowers, of a pleaſant ſweet Scent: They are followed by long ſlender Pods, or Seed-veſſels, containing ſmall, rediſh, flat Seed: It grows upon old Walls and Buildings, and flowers in *April.*

The Flowers, which are the only Part uſed, are cordial and cephalic, and ſtrengthen the Nerves, help the Apoplexy and Palſy, cure the Green-ſickneſs, and procure the Menſes.

Officinal Preparations are only the Oil, by Infuſion of the Flowers, which is warming and comforting, and good for Pains in the Limbs. *Miller's Bot. Off.*

It is bitter, of a ſaltiſh herby Taſte, and reddens the blue Paper pretty much. By the chymical Analyſis, it yields, beſides ſeveral acid Liquors, ſome concreted volatile Salt, and a good deal of Oil and Earth: Thus this Plant is filled with Sal Ammoniac, Sulphur, and terreſtrial Parts.

The Flowers are principally uſed to provoke the Urine, and open the Bowels. The Infuſion of them cures the Green-ſickneſs, provokes the Menſes, and relieves the Palſy. The Oil of the Flowers, made by Infuſion, is reſolving, and good for the Rheumatiſm. *Martyn's Tournefort.*

The Flowers are of fine Parts, diſcuſs, exterge, are anodyne, expel the Fœtus and Secundines, on which Account they are reckoned, by *Galen, 7 Simpl.* among thoſe Medicines which the *Greeks* call φθόεια [*Phthoria*, from φθόος, a uſual Word in *Hippocrates*, for Abortion], or ſuch as deſtroy the Fœtus, and procure Abortion. Preparations in Uſe are a Conſerve of the Flowers, a diſtilled Water, and the Oil of the Flowers by Infuſion, which is a Preſervative againſt the Apoplexy, gives Relief under the Palſy, and is an excellent Anodyne in Wounds and Inflammations of the nervous Parts, and internal Diſtempers of the Uterus. A Biſhop of *Trent* made uſe of a Conſerve of the Flowers, taken in Water of the ſame, with very good Succeſs, as a Preſervative againſt the Apoplexy and Palſy. *Raii Hiſt. Plant.*

Of the Flowers is prepared a cephalic and cordial Syrup, which is more to be commended for its Smell than Virtues. The Wall-flower is recommended for provoking the Menſes and Lochia. In *Italy* they anoint the Region of the Pubes with the Oil of the Flowers, in order to facilitate the Birth. *Hiſt. Plant. aſcript. Boerhaave.*

For provoking the Menſes, or expelling the dead Fœtus and Secundines, or for opening Obſtructions of the Liver, even in an inveterate Jaundice, there is ſcarce a more effectual Remedy than the Flowers of Cheiri, taken twice every Day, in warm Beer. *Hoffman, de Præſt. Remed. domeſtic.*

LEUCOIUM is, alſo, a Name for ſeveral Sorts of ALYSSOIDES, ALYSSUM, LUNARIA, THLASPIDIUM, and HESPERIS.

LEUCOIUM BULBOSUM. A Name for ſeveral Sorts of NARCISSO-LEUCOIUM.

LEUCOLACHANON, according to *Blancard*, is the wild Valerian.

LEUCOMA, λεύκωμα, from λευκὸς, white. A Diſorder of the Eye; the ſame as Albugo. See ALBUGO, and OCULUS.

LEUCONYMPHÆA.

The Characters are;

The End of the Pedicle opens into a large, herbaceous, tetraphyllous Calyx, which expands in form of a radiated Star. The Flower has twenty or more white large Petals, beautifully expanded like a Roſe; within theſe are ſeated great Numbers of petaloidal Stamina, furniſhed with incurvated Teſticuli. The Ovary grows on a Placenta latent within the Calyx, and is divided into twenty Capſules, or Cells, by the like Number of perpendicular Incloſures, which Cells are ſtuffed with Multitudes of Seeds: This Ovary is, alſo, ſurrounded with twenty Tubes, in the Middle of which is an obtuſe Apex. The reſt of the Characters are thoſe of the Nymphæa.

Boerhaave mentions two Species of this Plant; which are,

1. Leuconymphæa; Nymphæa; alba major. *C. B. P.* 193. *Tourn. Inſt.* 260. *Boerh. Ind. A.* 281. *Nymphæa alba.* Offic. Ger. 672. Emac. 819. Raii Hiſt. 2. 1320. Synop. 3. 368. J. B. 3. 770. *Nymphæa alba major vulgaris.* Park. Theat. 1251. *Nenuphar.* Chab. 561. *Aguape Braſilienſibus.* Marcgr. 21. *Aguape.* Piſon. (1648.) 91. *Aguape ſive Nymphæa.* Ejuſd. (1658.) 219. WHITE WATER-LILY.

The white Water-lily has many large, round, thick Leaves, lying on the Top of the Water; not at all indented about the Edges, ſtanding on long thick Foot-ſtalks; they ſpring from a large white Root, ſending forth many Fibres, and ſticking faſt in the Earth, at the Bottom of the Water. The Flowers grow, likewiſe, on long round Stalks, that ariſe immediately from the Root; they are large, in Shape like a Tulip before it opens, conſiſting of ſeveral Rows of Leaves, the outermoſt being greeniſh, but the reſt of a pure white Colour, with yellow Stamina in the Middle; they are followed by large round Heads, full of broad, flat, ſhining Seed: It grows, in Rivers and large Lakes, and flowers in *June.* The Root and Flowers, and ſometimes the Leaves, are uſed.

They are cooling and drying, and accounted good to ſtay all kinds of Fluxes and Looſeneſſes, the Gonorrhœa, and nocturnal Pollutions, by their ſoftening cooling Qualities allaying the Acrimony of the Seed, and thereby rendering Perſons leſs diſpoſed to Venery. The Leaves are good to be applied to hot Tumors and Inflammations. *Miller's Bot. Off.*

The Root is a little glutinous, bitter, and gives a deep-red Tincture to the blue Paper.

By the chymical Analyſis it yields a good deal of Acid, and very little concreted volatile Salt; ſo that it is no Wonder it ſhould be ſweetening. The Flowers are diſtilled, and a Syrup, and a Conſerve, are made of them. The Roots are frequently uſed in the cooling Piſan, for the Heat of Urine, and Inflammation of the Kidneys, and other Bowels. The Syrup is a little narcotic; its Dole is an Ounce. *Martyn's Tournefort.*

Many are very cautious of uſing this Plant, for fear of extinguiſhing all amorous Deſires, and rendering themſelves impotent; for it is found by Experience, they ſay, that the Uſe of the Seed, and the Root, renders Perſons very cold and dull as to Venereal Inclinations. *Pliny, Lib.* 25. *Cap.* 7. writes, that they who take it twelve Days ſucceſſively, find themſelves deprived both of the ſeminal Fluid, and the Power of Coition. The Root of Leuconymphæa, boiled in black Wine, and drank, ſtops the immoderate Flux of the Menſes, even when the Diſorder has been regarded as deſperate. *Trag.* The *Turks*, they ſay, macerate the Flowers in Water for a Night; and think that, if they rub their Noſtrils with the ſame Water, or drink of it, they ſhall be preſerved from many ſevere Diſtempers. We prepare a Conſerve and Syrup of the white Flowers, which procure Sleep, but more ſlowly than the Poppy. *Simon Paul.*

The Water of Nenuphar, with Camphire, has been found effectual in an Excoriation of the Palate or Uvula, and Tongue,

from an hot adust Humour. *Ex Obſ. Marc. Cumani a Velſchio editis. Raii Hiſt. Plant.*

2. Lenconymphæa; minor. *Nymphæa alba, minor.* J. B. 3. 773.

LEUCOPHAGIUM. The Name of a ſort of Aliment, ſaid to be good in a Conſumption. It is prepared of ſweet Almonds macerated in Roſe water, and the Fleſh of a Capon, or or a Partridge, boiled, contuſed, and paſſed through a Sierce. *Caſtellus.*

LEUCOPHLEGMATICA, from λευκὸς, white, and φλέγμα, Phlegm An univerſal, or partial, white flabby Tumor of the Body. See HYDROPS. and FIBRA.

LEUCOPHYLLON, λευκόφυλλον. The Name of a Compoſition deſcribed by *Aetius, Tetrab. 4. Serm. 4. C.* 113. and recommended as a good Application to the Neck and Arm-pits; I ſuppoſe, as a Perfume. It is compounded of one Pound of Earth of *Samos*, with Styrax, *Indian* Leaf, and Opobalſamum, of each two Ounces: Pound and work together the Styrax and Opobalſamum, and triturate and ſift the Leaf; then mix them thoroughly together in the Mortar, and add thereto a ſufficient Quantity of Juice of Roſes; and ſo uſe it.

LEUCOPYRON, λευκόπυρον. The Name of a Malagma, *Galen, Lib. 1. Cap. 7. de Conyc. M. per Gen.*

LEUCORRHOEA, from λευκὸς, white, and ῥέω, to flow. The Fluor Albus.

LEVIATHAN PENIS. The Penis of a Whale. It is recommended againſt the Fluor Albus, and Dyſentery.

LEVIRAIA. That Species of Thornback which is furniſhed with Prickles only on the Tail.

LEVISTICUM. A Name for the *Liguſticum; vulgare; foliis Apii.*

LEXIPHARMACON, λεξιφάρμακον, imports the ſame as ANTIDOTUS. From λήγω, to ceaſe, and φάρμακον, a Poiſon.

LEXIPYRETOS, λεξιπύρετος, from λήγω, to ceaſe, and πυρετὸς, a Fever. Febrifuge, cauſing a Fever to ceaſe.

LIBANION, λιβάνιον. The Name of a Collyrium, in *Paulus Ægineta, Lib.* 3. *Cap.* 22. and *Lib.* 7. *Cap.* 16.

LIBANOS. The ſame as LIBANOTOS.

LIBANOTIS. Offic. *Libanotis Ferulæ folio, ſemine anguloſo.* C. B. P. 158. *Libanotis Cachryophorus quibuſdam floribus luteis.* J. B. 3. 40. Raii Hiſt. 1. 424. *Libanotis Galeni Cachrys verior.* Ger. 858. (quoad deſcript.) Emac. 1010. *Libanotis Ferulæ folio, ſive Cachryfera, ſive Cachrys vera.* Park. Theat. 881. *Cachrys ſemine fungoſo ſulcato, plano majore, foliis Peucedani anguſtis.* Tourn. Inſt. 325. FENNEL-HERB, FRANKINCENSE.

It grows on the Mountains of *Italy* and *Sicily*, and flowers in *May*. The Root and Seed are uſed in Medicine. The Seed is called CACHRY, the Virtues of which ſee under that Word. As to the Root, I find nothing ſingular relating to its Uſe.

LIBANOTIS is, alſo, a Name for ſeveral Sorts of LASERTITIUM.

LIBANOTIS ALPESTRIS. A Name for the *Ferula*; *Alpeſtris*; *foliis Seſelios Maſſilienſis.*

LIBANOTIS ALSATICA. A Name for the *Oreoſelinum*; *Apii folio*; *majus.*

LIBANOTIS LATIFOLIA. A Name for the *Siler*; *foliis Aquilegiæ.*

LIBANOTOS, λιβανωτὸς. Frankincenſe. See THUS.

LIBELLA. The Name of a Fiſh of the cetaceous kind, repreſented, by *Galen, Lib.* 3. *C.* 31. *de Aliment. Facultat.* as hard, unſavoury, and mucoſe.

LIBIDO. The Itch is ſometimes thus called.

LIBOS, λίβος. Any thing inſtilled into the Eyes. *Galen's Exegeſis.*

LIBRA. A *Roman* Weight, divided into twelve *Unciæ*, or Ounces; in Imitation of which the later *Greeks* had their *Litra*, which they divided after the ſame manner: This appears from *Voluſianus Metius, Galen*, and others. The Value of the *Roman Libra* is determined from the Value of the DENARIUS; which ſee.

The *Libra Auri*, or *Pondo*, of the *Romans*, and *Mna* of the *Greeks*, when it is nummary, or put for a Sum of Money, always ſignifies an hundred *Drachmæ*. *Arbuthnot.* See DRACHMA.

The modern Pounds are various, in different Countries; but the common Apothecaries Pound is twelve Ounces. A Pound in Pharmacy is, likewiſe, a Meaſure for Liquids: and then it is underſtood to conſiſt of ſixteen Ounces. See PONDUS.

LIBURNUM. See VIBURNUM.

LIBYANON, λιβύανον. An Epithet of ſeveral Collyria deſcribed by *Galen, Lib.* 4. *Cap.* 7. *de C. M. S. L.* And by *Aetius, Tetrab.* 2. *Serm.* 3. *Gorræus* thinks λιβάνιον, in *Paulus Ægineta*, is wrote, by Miſtake, for λιβυανὸν.

LICHANOS, λιχανὸς, is the fore Finger.

LICHAS, λιχὰς. A Meaſure of Length, equal to ten; the Breadth of fourteen Fingers.

LICHEN.

The Characters are;

It is of a thin, coriaceous, membranous, and ſometimes of an horny ſort of Contexture; ſometimes it expands itſelf into chartaceous ramous Lamellæ; ſometimes ſhoots forth into round and ſmooth Branches. The ſeminal Veſſels are very copious; they are of the Figure of a Sawcer, and filled with Plenty of duſty Seed. See a fuller Deſcription of Lichen under the Article BOTANY, in the Explanation of botanic Terms.

Boerhaave mentions thirty-eight Species of this Plant; which are,

1. Lichen; Dioſcoridis & Plinii ſecundus; colore cinereo. *Col.* 1. 331.

2. Lichen; Dioſcoridis & Plinii ſecundus; colore viridante. *Col.* 1. 331.

3. Lichen; Dioſcoridis & Plinii ſecundus; colore flaveſcente. *Col.* 1. 331.

4. Lichen; Cruſtæ modo arboribus adcreſcens; pullus. *Tourn. Inſt.* 548. *Boerh. Ind. A.* 16. *Lichen arboreus pullus.* Offic. *Lichenoides cruſta folioſa ſcutellata pullus.* Raii Synop. 3. 72. *Muſcus cruſtæ, aut Lichenis modo arboribus adnaſcens.* Ejuſd. Synop. L. 14. Il. 23. Hiſt. 1. 16. TREE-LIVERWORT.

This Lichen grows to Trees, and is uſed inſtead of the *Lichen; arboreus; ſive Pulmonaria; arborea.*

5. Lichen; Cruſtæ modo arboribus adnaſcens; tenuiter diviſus. *T.* 548.

6. Lichen; Cruſtæ modo aſſeribus adnaſcens; latior; mollior; vix vaſculoſus; cinereus.

7. Lichen; Cruſtæ modo aſſeribus adnaſcens; latior; mollior; vix vaſculoſus; roſeus.

8. Lichen; Cruſtæ modo aſſeribus adnaſcens; latior; mollior; vix vaſculoſus; eleganter variegatus ex roſeo, albo, nigreſcente.

9. Lichen; Cruſtæ modo ſaxis adnaſcens; verrucoſus; cinereus; & veluti exuſtus. *T.* 549.

10. Lichen; maritimus. *Boerh. Ind. A.* 16. *Lichen cinereus.* Offic. *Lichen cinereus terreſtris.* Raii Cat. Angl. 185. Hiſt. 1. 117. Synop. 3. 23. *Lichen pulmonarius, ſaxatilis, ruſeſcens, ſuperne planus, inferne reticulatus.* Tourn. Inſt. 549. *Lichenoides peltatum terreſtre cinereum majus foliis diviſis.* Raii Synop. 3. 76. GROUND LIVERWORT. *Dale.*

This is a Plant conſiſting only of thick, crumpled, hollow Leaves, of an Aſh-colour on the upper Side; but underneath, where it is faſtened to the Earth by ſmall Fibres, it is ſomewhat whiter. It bears no Flowers, nor perfect Seed; but is found upon dry barren Places all the Year long.

This Plant is but lately come into Requeſt, being accounted a Specific againſt the Bite of a mad Dog, and other enraged Animals. For which Reaſon the College have now given a Powder, in which that is the principal Ingredient, under the Title of *Pulvis Antilyſſus. Miller's Bot. Off.* See HYDROPHOBIA.

11. Lichen; primus. *Boerh. Ind. A.* 17. *Hepatica ſtellata.* Offic. *Hepatica terreſtris.* Ger. 1375. Emac. 1565. Item, *Hepatica altera.* Ger. ib. *Hepatica ſtellata.* Ger. Emac. ib. Item, *Hepatica petræa.* Ger. 1576. Emac. ib. *Lichen, ſive Hepatica fontana.* J. B. 3. 758. *Lichen petræus latifolius, ſive Hepatica fontana.* C. B. 362. *Lichen petræus ſtellatus.* Ejuſd. Raii Hiſt. 1. 125. Synop. 40. *Lichen, ſive Hepatica vulgaris.* Park. 1314. *Lichen, ſeu Hepatica minor vulgaris.* Ejuſd. STAR LIVERWORT.

It grows in moiſt and ſhady Places. The whole Plant is uſed, and agrees in Virtues with the *Lichen; petræus; cauliculo pileolum ſuſtinente.* This is more in Uſe among the common People than among the Phyſicians. *Dale.*

12. Lichen; ſecundus. *Lob. Ic.* 2. 246.

13. Lichen; tertius. *Lob. Ic.* 2. 246.

14. Lichen; caulifer; petræus; cauliculo calceato. *M. H.* 3. 623.

15. Lichen; Petræus; cauliculo pileolum ſuſtinente. *C. B. P.* 362. *Dill. Cat.* 210. *Buxb.* 185. *Boerh. Ind. A.* 17. *Hepatica vulgaris Lichen.* Offic. *Lichen, ſive Hepatica vulgaris.* Raii Hiſt. 1. 124. Synop. 40. *Lichen petræus pileatus.* Park. 1315. LIVERWORT.

It grows in moiſt and ſhady Places, by the Banks of Rivers; and the entire Plant is in Uſe. This Herb is an extraordinary Hepatic, and is principally uſed in Obſtructions of the Liver and Bladder, whoſe Signatures it bears in its Leaves; whence it becomes of Service in hectic Diſorders, the Jaundice, the Itch, Lichen, Gonorrhœa, and Fevers; outwardly applied, it ſtops Hæmorrhages in Wounds. *Schroder.*

Liverwort has an aqueous Taſte, with ſomething of Bitterneſs and Aſtringency. *Cæſalpinus* obſerved it to be a gentle Purger of groſs and adust Humours, if taken in great Quantities, for Inſtance, two Pints of the Decoction; by which Remedy, repeated for many Days together, he ſaw many cured of a malignant Scabies, and phagedenic Ulcers. But every Day there muſt be a freſh Decoction, in which Whey is to be principally uſed, becauſe it ſoon loſes its Virtue. *C. Hoffman* believes, that it has no more of a peculiar purgative Virtue belonging to it than Whey; but Whey itſelf, taken in large Quantities, is often cathartic. *Raii Hiſt. Plant.*

16. Lichen; ſeu Hepatica lunulata, ἡπατικὴ λιχαρπος. *D. Dale, Raii Synop.* 41.

17. Lichen;

17. Lichen; verrucoſus. *D. Doody, Raii Synop.* 41.

18. Lichen; qui Muſco-fungus; terreſtris; minor; criſpus; foliis ſupernè ê flavo-vireſcentibus, infernè albicantibus. *M. H.* 3. 632. *Sect.* 15. *T.* 7. 3.

19. Lichen; qui Muſco-fungus; terreſtris; minor; fuſcus; foliis ê latitudine crenatis; Muſco-innaſcens. *M. H.* 3. 632. *Sect.* 15. *T.* 7. 4.

20. Lichen; qui Muſco-fungus; Lichenoides; arborum; Hibernicus; ſcutellatus. *M. H.* 3. 633. *Sect.* 15. *T.* 7. 3.

21. Lichen; qui Muſco-fungus; arboreus; cinereus; ſcutellatus; marginibus piloſis. *M. H.* 3. 634. *Sect.* 15. *T.* 7. 6.

22. Lichen; arboreus; ſive Pulmonaria arborea. *J. B.* 3. 759. *Tourn. Inſt.* 549. *Boerh. Ind. A.* 17. *Muſcus Pulmonarius.* Offic. C. B. 361. *Muſcus arboreus pulmonarius.* Raii Hiſt. 1. 116. Synop. 22. *Muſcus pulmonarius ſive Lichen arborum.* Park. 1313. *Lichen arborum.* Ger. 1377. Emac. 1566. *Lichen arboreus ſive Impetigo morbus, & Mentagra quædam, atque Pulmonaria arborea fungoſa.* Aldrov. Dendr. 176. *Lichenoides peltatum arboreum maximum platyphyllum.* Raii Synop. 3. 76. TREE LUNGWORT, OAK-LUNGS.

This Moſs, or Lichen, is made up of flat, wrinkled, tough Leaves, greeniſh above, and aſh-coloured underneath, having ſeveral round, rediſh-brown Spots on the Superficies, in which the Seed is ſuppoſed to lie. It is of a bitteriſh reſtringent Taſte.

It is accounted drying and binding, good to ſtop inward Bleeding, and the too great Flux of the Menſes: The common People make great Uſe of this Lung-wort, eſteeming it to be good for the Lungs, to help Coughs, Conſumptions, and other Diſorders of the Breaſt, boiling it in Pectoral Drinks, and making Syrups of it. It is commended in the *German Ephemerides, Anno* 3. *Obſ.* 290. as an extraordinary Remedy againſt the yellow Jaundice. *Miller's Bot. Off.*

It grows to Trees, eſpecially the Oak; and is ſaid to heal recent Wounds.

23. Lichen; arboreus; varius magnitudine, ramis, foliis, colore; ex variis arboribus lectus Hyeme ſæviſſima.

24. Lichen; cinereus; cornua damæ referens. *T.* 549.

25. Lichen; latifolius; ramoſus; minor; hirſutus. *T.* 551. 325.

26. Lichen; qui Muſco-fungus; arboreus; anguſtior; ſcutellatus; & peltatus. *M. H.* 3. 634. *Sect.* 15. *T.* 7. 3.

27. Lichen; pulmonarius; cinereus; mollior; in amplas lacinias diviſus. *T.* 549. 325.

28. Lichen; cinereus; latifolius; ramoſus. *T.* 550.

29. Lichen; cinereus; arboreus; marginibus fimbriatis. *T.* 550.

30. Lichen; pyxidatus; major. *Tourn. Inſt.* 549. *Boerh. Ind. A.* 18. *Muſcus pyxidatus.* Offic. Ger. 1371. Emac. 1560. Park. 1308. J. B. 3. 767. Raii Hiſt. 1. 113. *Muſcus pyxoides.* C. B. 361. *Lichenoides tubuloſum pyxidatum cinereum.* Raii Synop. 3. 69. CUP MOSS.

This Moſs, or Lichen, has many hoary whitiſh-green ſmall Leaves, ſpread on the Surface of the Earth; among which ariſe little, whitiſh, duſky, hollow Cups, a quarter of an Inch high, ſhewing neither Flower nor Seed; they grow upon dry barren Ground, and hilly Banks.

This Moſs is reckoned a Specific againſt the Whooping or Chin-cough in Children; being given them in a Decoction ſweeten'd with Sugar, or ſome pectoral Syrup.

31. Lichen; pyxidatus; minor. *T.* 549.

32. Lichen; pyxidatus; minimus.

33. Lichen; pyxidatus; teres; acetabulis minoribus, repandis. *T.* 549.

34. Lichen; pyxidatus; non ramoſus; acetabulis fimbriatis. *T.* 549.

35. Lichen; pyxidatus; prolifer. *T.* 549.

36. Lichen; pyxidatus; prolifer; acetabulorum; fimbriis tumentibus, coccineis.

37. Lichen; pyxidatus; acetabulorum oris fuſcis & tumentibus. *T.* 549.

38. Lichen; pyxidatus; acetabulorum oris nigerrimis & tumentibus. *Boerh. Ind. alt. Plant. Vol.* 1.

All the Plants under the Name of *Lichen*, are endued with an heating, ſtrengthening, and ſomewhat aſtringent Virtue: Hence, where Corroboratives are required, theſe are uſually preſcribed: They are effectual, alſo, in Hæmorrhages; and are ſaid to be a very good Remedy for the Aſthma, and an inveterate Cough. *Hiſt. Plant. aſcript. Boerhaave.*

LICHEN, in Phyſiology, is a ſort of Leproſy.

LICHEN, alſo, ſignifies certain callous Subſtances, or Warts, which grow on the Legs of Horſes. See EQUUS.

LICHEN MARINUS. A Name for the *Opuntioides marina; quæ Coralina latifolia; & Opuntia marina.*

LICHENASTRUM. See the Explication of Botanical Terms under the Article BOTANY.

LICHENOIDES. See the Explication of Botanical Terms under the Article BOTANY.

LICHI, LICI, or LUMYEN. The ſame as LETCHI.

LICINIA. Tents.

LIEN.

The Spleen is a bluiſh Maſs, ſomething inclined to red, and of a long oval Figure, being about ſeven or eight Fingers-breadth in Length, and four or five in Breadth. It of a ſoftiſh Subſtance, and is ſituated in the Left Hypochondrium, between the great Extremity of the Stomach, and the neighbouring falſe Ribs, under the Edge of the Diaphragm, and above the Left Kidney.

It may be naturally divided into Sides, Edges, and Extremities. Its Sides are two; one external and ſomewhat convex; the other internal, and irregularly concave. It has two Extremities; one poſterior, which is pretty large; and one anterior, which is ſmaller, and more depreſſed; two Edges, one ſuperior, and one inferior; on both which there are, in ſome Subjects, ſeveral Inequalities.

The inner or concave Side is divided by a longitudinal Groove, or Sciſſure, into two Planes, or half Sides, one upper, the other lower; and by this Groove the Veſſels or Nerves enter in human Subjects. The ſuperior half Side is broader, and more concave, than the inferior, being proportioned to the Convexity of the great Extremity of the Stomach. The inferior half Side lies backward on the Left Kidney, and forward on the Colon; and ſometimes this Side of the Spleen appears to have two ſuperficial Cavities, one anſwering to the Convexity of the Stomach, the other to that of the Colon. The convex Side of the Spleen is turned towards the Left Ribs.

It is connected to the Stomach by the Veſſels called Vaſa Brevia, to the Extremity of the Pancreas by Ramifications of the ſplenic Artery and Vein, and to the Omentum by Ramifications, which the ſame Artery and Vein ſend to the Spleen, and which run in the longitudinal Groove.

It is connected to the Edge of the Diaphragm, by a particular membraneous Ligament of different Breadths in different Subjects, fixed in its convex Side, ſometimes near the upper Edge, and ſometimes near the lower. This Ligament is ſituated tranſverſly with reſpect to the whole Body, and longitudinally with reſpect to the Size of the Spleen. In ſome Subjects it is connected by other Ligaments to the Stomach and Colon, but in all this there are conſiderable Varieties.

The Figure of the Spleen is not always regular, and is as various as the Size. Sometimes it has conſiderable Sciſſures both in the Sides and Edges, and ſometimes it has Appendices. I have ſometimes found a kind of ſmall diſtinct Spleens, more or leſs round, and connected ſeparately to the Omentum, at ſome Diſtance from the anterior Extremity of the ordinary Spleen.

The Structure of the Spleen is not eaſy to be unfolded in Man, and is very different from that of the Spleens of Brutes, upon which both public and private Lectures are commonly read.

Its Coverings adhere to it ſo cloſely in Man, that it is difficult to diſtinguiſh the common from the proper Coat; whereas in ſome Brutes, ſuch as Oxen and Sheep, nothing is more eaſy; for in ſuch Animals we find two Coats ſeparated by a cellular Subſtance. This Covering ſeems to be no otherwiſe a Continuation of the Peritonæum, than by the Intervention of the Omentum and Meſocolon; and even in Man the two Coats may be diſtinguiſhed, where the Veſſels enter by the longitudinal Sciſſure. In Man, the Subſtance of the Spleen is almoſt wholly vaſcular, that is, compoſed of the Ramifications of all kinds of Veſſels. In Oxen, the Subſtance of the Spleen is chiefly reticular, and in Sheep it is cellular. In Oxen and Sheep, there are no venous Ramifications; but inſtead of them, only open Sinuſes, diſpoſed like Branches, except a ſmall Portion of a venous Trunk perforated on all Sides, at the Extremity of the Spleen.

In the human Spleen we ſee ſomething like glandular Corpuſcles, as in thoſe of other Animals; and there are numerous venous Ramifications through its whole Extent. Between theſe Ramifications we every-where obſerve an Appearance of extravaſated Blood, lying in a kind of filamentary, tranſparent, and very delicate Subſtance expanded through the whole Spleen.

This filamentary Subſtance having ſurrounded all the Ramifications, terminates in almoſt imperceptible Cells, which communicate with each other, ſo that if we blow through a ſmall Hole made in the membranous Covering, the whole Spleen will immediately be inflated.

The Surface of the Spleen of Oxen and Calves is viſibly full of a great Number of lymphatic Veſſels, which may, at any time, be eaſily demonſtrated; but in Man it is a very difficult Matter either to diſcover or demonſtrate them.

The Spleen Artery, which is one of the principal Branches of the Cœliaca, runs along the lower Side of the Pancreas, and paſſes from thence in a winding Courſe to the Spleen. The ſplenic Vein, which is larger than the Artery, is but little inflected in this Part of its Courſe.

This Artery and Vein having got beyond the Extremity of the Pancreas, ſend out ſeveral Rami together, which immediately afterwards divaricate in the ſame Plane, run in the membranous Duplicature of the neighbouring Portion of the Omentum, and, laſtly, interſect each other in their common Plane, all the Way to the Sciſſure of the inner or concave Side of the Spleen.

Theſe arterial and venous Rami enter the Subſtance of the Spleen together by the ſame Sciſſure; being accompanied by the cellular Subſtance, belonging to the membranous Duplicature of the Omentum. We may likewiſe obſerve, that, at this Place, the

Coat

Coat of the Spleen ſends, from its concave Side, a Portion of a Lamina, which is incurvated in the Sciſſure, and penetrates into the Subſtance of the Spleen.

The Nerves of the Spleen are very numerous, and come from the Plexus ſplenicus already deſcribed. Theſe Nerves ſend out, at different Diſtances round, all the arterial Ramifications of the Subſtance of the Spleen, a great Number of Filaments, in form of an irregular Net-work.

The Arteries, Veins, and Nerves, having entered the Spleen, are there divided and ſubdivided into a great Number of Ramifications, and accompany each other to the very laſt Extremities of their Diviſion. They are contained in a kind of common cellular Capſula or Vagina, which firſt ſurrounds all the three, and then ſends off particular Septa between them. This Capſula ſeems to be formed by a Continuation of the cellular Subſtance of the Omentum, and of that particular Lamina of the Coat of the Spleen above-mentioned.

The capillary Extremities of all theſe vaſcular Ramifications, both arterial and venous, end in the filamentary Cells already mentioned. *Malpighi* conſidered them as diſtinct Capſulæ or Folliculi, containing the ſame Number of ſmall Glands. They all communicate together, ſo that where-ever we pierce the Coat of the Spleen, we may, through that Hole, inflate the whole Viſcus.

In Oxen and Sheep there are no venous Ramifications, as I have ſaid. The Vena Splenica having entered the great Extremity of theſe Spleens, runs, firſt of all, for about half an Inch, or an Inch, and afterwards, inſtead of an ordinary Vein, we find a Canal perforated on all Sides. The Beginning of this Canal has ſtill ſome Remains of the Coats of a Vein; but the Form of it is ſoon loſt, and then we find nothing but Sinuſes or Sulci in the reticular Subſtance in Oxen, and in the cellular Subſtance in Sheep.

The ſplenic Artery and Nerves are there ramified in a particular Vagina, as in Men; and the Extremities of theſe particular Ramifications ſeem to ſwim or float in the Cells, and to fill their filamentary Subſtance with Blood. At the Ends of ſeveral of theſe Capillaries, I have obſerved ſmall Corpuſcles diſpoſed like Bunches of Grapes; and I have ſeen two ſmall Tubes going out from each Corpuſcle, one long and open, the other ſmall and ſhort, which was loſt in the Sides of the Spleen.

I imagine, that the long Tube, the Extremity of which I was not able to find, may be the Origin of a lymphatic Veſſel, eſpecially becauſe theſe Veſſels are ſo very numerous and viſible in an Ox's Spleen, as has been already ſaid. Theſe ſmall Corpuſcles may eaſily be diſcovered in an Ox's Spleen, when boiled by a particular Method. They are, indeed, much larger before than after boiling, but they are not ſo ſolid, and ſubſide more eaſily when cut. The ſame ſort of Corpuſcles may be diſcover'd in the human Spleen, but they are ſo extremely ſmall as not to be viſible without a Microſcope.

For the Uſes of the Spleen, ſee HEPAR. *Winſlow's Anatomy.*

DISORDERS OF THE SPLEEN.

When the Spleen is affected, the Part ſwells, together with the Left adjacent Region, which becomes hard, and renitent to the Touch; there is a Tenſeneſs, alſo, of the Belly, and ſomewhat of a Tumor of the Legs. Ulcers are either incurable, or, at leaſt very difficult to be healed; the Patient cannot walk faſt, or run, without a Pain, and ſome Difficulty.

This Diſeaſe is increaſed by Reſt, and, therefore, Labour and Exerciſe are neceſſary, due Care being taken, that their Exceſs does not excite a Fever. Unctions, Frictions, and Sweating are, alſo, neceſſary. All ſweet things are hurtful, and ſo are Milk, and Cheeſe, but Acids are extremely proper. It will be convenient, therefore, to drink ſtrong Vinegar by itſelf, or what is better, impregnated with Squills: Salt Meats are, alſo, to be eaten, and Olives harden'd in Pickle. Lettuces dipt in Vinegar, or Endive, and Beets, in the ſame, together with Muſtard, wild Radiſh, and Parſnip, are proper vegetable Diet; and for Fleſh-meats, the Hoofs and Noſes of Beaſts, lean Birds, with whatever Hunting ſupplies of the ſame Kind, are to be choſen. Fomentations to be uſed are, in the Morning, faſting, a Decoction of Wormwood, after Food, Water from the Smith's Forge, in which red-hot Iron has been quenched, which is of principal Efficacy for repreſſing the Spleen, as is obſerved from the ſmall Spleens of thoſe Animals which are bred by the Smiths. Thin, auſtere Wine may be drank, and, in general, all Meats and Drinks, which have a Virtue of provoking Urine, are to be uſed, ſome of the principal of which are the Seed of Trefoil, Cumin, Apium, wild Thyme, Cytiſus, Thyme, Hyſſop, and Savory; for theſe Simples ſeem beſt qualify'd for expelling the Humor. The Spleen of an Ox is proper to be eaten, and, among Herbs, Rockets and Creſſes, which have a peculiar Virtue of extenuating the Spleen.

Outward Applications, for alleviating the Diſorder, are the *Glandes Unguentariæ*, which the *Greeks* call μυροβάλανοι, or an Epithem may be prepared of Linſeed, and the Seeds of Naſturtium, mixed with Oil and Wine; or of green Cypreſs and Caricæ; or of Muſtard, with an Addition of the Fat of a Male Goat's Kidneys, to the Weight of a fourth Part, bruiſed together in the Sun, and immediately applied. Capers may be many ways adapted to this Diſorder, for they may be conveniently taken, or their Pickle may be drank with Vinegar; or for outward Application, the bruiſed Root, or its Bark, or the Capers themſelves bruiſed with Honey, may be uſed. Malagmas, alſo, are adapted to this Purpoſe. *Celſus, Lib. 4. Cap. 9.*

WOUNDS OF THE SPLEEN.

When the Spleen is wounded, there is an Eruption of black Blood from the Left Side; the Hypochondria, with the Stomach on the ſame Side, become hard; the Patient is ſeized with a great Thirſt, and a Pain reaching to the Clavicle, as in Wounds of the Liver. *Celſus, Lib. 5. Cap. 26.* See VULNUS.

INFLAMMATION OF THE SPLEEN.

An Inflammation of the Spleen, which, indeed, but rarely happens, is attended with an hard and throbbing Tumor, a Pain of the Left Hypochondrium, and a continual and violent Fever. There is, alſo, an extreme Heat and Thirſt, and the Tongue is covered with a blackiſh Mucus; there is an utter Loſs of Appetite, with a difficult, and, as it were, imperfect Reſpiration, like that of Children, when they fall a ſobbing through Anger. If the Part be affected with an Abſceſs, or an Ulcer, it may be diſcovered by much the ſame Symptoms, as when the Liver is thus affected. *Lomm. Med. Obſ.*

LARGE SPLEENS.

They who have large Spleens are affected with a Putrefaction of the Gums, and fetid Breath; but a large Spleen, not attended with a fetid Breath, nor an Hæmorrhage, ſubjects the Patient to malignant Ulcers, and black Cicatrices, in the Legs. But if there be, alſo, a manifeſt Abſceſs in the Face, with a grave or deep Tone of Voice, or a Pain of the Teeth, we muſt expect an Hæmorrhage from the Noſe. They who have the Parts under their Eyes very much elevated, are found to have great Spleens, and if they are beſides affected with Swellings in the Feet, a Dropſy is to be ſuſpected; but we are to examine, alſo, the Belly and Loins. *Hippocr. Prædict. Lib. 2. p. 111.*

The principal Action of the Spleen ſeems to be,

1. That the pure arterial Blood, abounding with Lymph, may, in the moſt minute Glands, prepare a highly ſubtle Lymph, ſecrete it, and through proper Emunctories diſcharge it into the Cellulæ of the Spleen, and, perhaps, partly, alſo, into the ſplenic Vein.

2. The Spleen ſeems to return the Blood, remaining after this Action, by minute Veins, which convey it to the common ſplenic Vein.

3. The Number of ſmall Arteries which line the Sides of theſe Cellulæ, perhaps, diſcharge a Blood attenuated by their arterial Structure, and full of Lymph, into the open Cavities of theſe Cellulæ, as is obſerved to happen in the Cellulæ of the human Penis.

4. The nervous Fluid is thought to be copiouſly and perpetually convey'd to this Organ, to be there depoſited, and mixed with the Blood.

5. 'Tis probable, that all theſe Humours, thus prepared, blended and becoming ſtagnant for a Moment, are compreſs'd, mix'd, and attenuated, as in the Lungs, by the Force of the arterial Blood, by the Impetus of the nervous Fluid, by the Contraction of the two proper Membranes, and the Vagina of the Spleen, by the Conſtriction of the Fibres, which, in this Part, are very numerous, and by the Agitation of the Diaphragm, and abdominal Muſcles, Veſſels and Viſcera.

By theſe Cauſes, the Blood is in the Spleen fluid, diſſolved, full of Spirits, abounding with Lymph, with Difficulty form'd into Concretions, intimately mix'd, not eaſily ſeparated into heterogeneous Parts, and of a purple or reddiſh Colour: Such is the Blood convey'd from the Spleen, thro' the large ſplenic Vein.

This, therefore, is the Effect of the Spleen; for which Reaſon it has not, like the other Viſcera, an Emiſſary for diſcharging the particular Humour generated in its Fabric, but diſcharges all, mix'd together.

'Tis highly obvious, that the Effects of this Action are produced in the Spleen, tho' they are by no means ſubſervient to it. But ſince all the Humours, thus prepared, are convey'd into the Vena Porta and Liver, 'tis obvious, that the Spleen muſt be ſubſervient to the Liver, and conſequently, that its Uſe cannot be explained till the Effects and Office of the Liver are previouſly known. See BILES and HEPAR.

It is remarkable that an Animal, whoſe Spleen is cut out, deſtroy'd, or greatly obſtructed, is much more ſalacious than uſual for ſome time; and makes Water much more frequently; becauſe the Blood conveyed otherwiſe to the Spleen, is then carried to the Organs of Generation and Kidneys. It is farther obſervable, that ſuch an Animal is more voracious; and, in Mankind, very ſubject to violent Fits of Laughter. The firſt Circumſtance is occaſion'd by a greater Afflux of Blood and Spirits to

the Stomach; the ſecond, by a greater Quantity of Spirits derived to the Diaphragm, by the Phrenic Nerves.

LIENTERIA.

This is a Diſorder proceeding from a preternatural Smoothneſs of the Inteſtines, in conſequence of which what is diſcharged by Stool, greatly reſembles the Aliments, both in Colour and Subſtance. The Cauſe of it, according to *Fernelius*, is not an obſtructed or hinder'd Diſtribution of the Aliments, but a Weakneſs of the firſt Concoction, in conſequence of which the Aliments paſs thro' the Inteſtines unchanged.

Bontius, in his Treatiſe *de Medicina Indorum*, *L.* 3. *Cap.* 12. tells us, that in the *Indies* this Diſorder often conſumes the Patient without any manifeſt Cauſe, without any Fever, or at leaſt with a very ſlow one, and without any violent Senſe of Pain, ſince a kind of Weight is only perceived about the Navel and Hypochondria. This Diſorder, ſays the ſame Author, beſides the Obſtruction of the Viſcera, has, alſo, another latent Cauſe in the Meſeraic Veins, or in the Subſtance of the Meſentery itſelf; in which large Abſceſſes often happen, as I myſelf have often ſeen, in diſſecting the Carcaſes of thoſe who have died of this Diſorder. Nay, ſays he, I have often found the whole Meſentery conſumed, whilſt the Inteſtines cohered, or rather were confounded, in an irregular Manner, with each other, by means of ſlender membranaceous Pellicules. 'Tis, alſo, obſervable, ſays he, that a Lientery is generally accompanied with a Bulimy or Fames canina; for which Reaſon the Aliments are diſcharged by Stool, little, or not at all, changed or concocted.

Franciſcus Sylvius, in his *Praxis*, *Lib.* 1. *Cap.* 16. tells us, that the Chyle, ſecreted from the Fæces by the periſtaltic Motion of the Inteſtines, is not only propel'd downwards, but, alſo, by the ſame Force, expreſs'd and ſtrained thro' their fleſhy and ſpongious Cruſt, into the lacteal Veſſels. This Percolation of the Chyle is injur'd, and more or leſs obſtructed or diminiſhed in a Diſcharge of chylous Excrements, or a Lientery; firſt, when the Orifices of the lacteal Veſſels are block'd up, or obſtructed, by a pituitous or viſcid Humour; or, ſecondly, when here and there the fleſhy Cruſt of the Inteſtines is abraded, and the ſubjacent Part of the Inteſtine covered with a Cicatrix; by which means the Pores conveying the Chyle to the lacteal Veſſels are clos'd up, as ſometimes happens after violent Dyſenteries, eſpecially thoſe affecting the ſmall Inteſtines, as I have often obſerved in diſſecting the Bodies of thoſe who died of this Diſorder. A Lientery is generally ſucceeded by a kind of remarkable Leanneſs, or Extenuation of the whole Body, which continues to the End of the Patient's Life, and from which the moſt corpulent are not exempted.

Fernelius, in his *Pathologia*, *Lib.* 6. *Cap.* 10. tells us, that a Lientery is produced by a Conſent of other Parts affecting the Stomach. Thus Phlegm diſcharged from the Brain, becauſe it is of a refrigerating and ſoftening Nature, and Bile diſcharged from the Liver, and irritating the Stomach, may precipitate the Aliments as yet crude and inſufficiently concocted, into the Inteſtines. Thus, alſo, ſays that Author, I have frequently obſerved a violent Lientery, like that which happens in thoſe who, by a long Diſorder, are brought near to Death, produced by large Abſceſſes of the Abdomen, a Vomica of the Lungs, and a Suppuration of the Breaſt and Kidneys, with a Diffuſion of a fetid and malignant Nidor into the Heart and Stomach.

Lommius, in his *Medicinal Obſervat.* tells us, that that Species of Flux is not without Danger, in which, as in a Diarrhœa, concocted Humours are not diſcharged, but rather the Aliments and Drinks taken, evacuated without Pain, crude, unequal, and ſo ſoon as ſcarcely to loſe any thing of their original Form; ſince they have no Admixture either of Blood or Bile. The *Greeks* call this Diſorder λειτεία, the *Latins Lævitas Inteſtinorum*, and we a Lientery. In this Diſeaſe the Patient reaps no Advantage from his Aliments, and falls into a bad Habit of Body. The whole Hypochondria are preternaturally hot, and the Patient labours under a violent Loathing of Aliments. A Lientery ſometimes proceeds ſlowly, and ſometimes quickly. It is more eaſily removed from young, than from old Perſons, eſpecially if a copious Diſcharge of Urine is excited, and the Body begins to be nouriſhed by the Aliments. But it is with the greateſt Difficulty removed from old Patients, eſpecially when it ſucceeds long-protracted Gripes. In a Lientery the Danger is ſtill greater, if the Patient goes to Stool ſo often, both in the Day and Night, as to be incapable of ſleeping on that Account. Beſides, if the Matter diſcharged is entirely crude, or black, or ſmooth and fetid like Ox's Dung; if the Appetite is loſt, and the Deſire of Drinking augmented; if the Diſcharge of the Patient's Urine is not proportioned to the Quantity of the Liquor drank; if his Mouth is exulcerated; if his Face is red, and diverſified with Spots of a great Variety of Colours; and if his Abdomen is ſoft, ſordid, and corrugated, certain Death is not far off, if the Patient is old, and has labour'd under the Diſorder for a conſiderable Time. In a long-protracted Lientery, acid Eructations happening, are accounted a good Sign; and there are ſome Hopes of the Patient's Recovery to be entertained, when the Diſcharge of the Urine begins to correſpond to the Quantity of the Liquor drank; and the Body to be nouriſhed, whilſt, at the ſame time, the Patient is without a Fever, and free from Spots. As in all Fluxes, ſo alſo in a Lientery, the Diſorder is thought to be at an End, when there is no longer any Rumbling of the Inteſtines, and when the Stools are ſucceeded by a kind of Diſcharge of Flatulences. The Patient, who, being for a long time afflicted with a Lientery, diſcharges certain Animals by Stool, with violent Gripes and Pains, becomes tumid, when theſe ceaſe. If, in a Lientery, a Pain of the Side, and a Difficulty of Breathing, come on, a ſubſequent Conſumption is to be dreaded. This Diſorder is often epidemical in a corrupted State of the Atmoſphere, and frequently cuts off thoſe who are ſpent by long Sickneſs. A Lientery, alſo, ſometimes ſucceeds a Vomica of the Lungs, an Abſceſs of the Abdomen, or a Suppuration of the Breaſt or Kidneys, in which Caſes it never fails to prove mortal.

According to *Ettmuller*, the principal Intention of Cure in a Lientery is to ſtrengthen and corroborate the Stomach, which End is moſt effectually obtained by Rhubarb, Preparations of Coral and Quinces. All the Medicines recommended againſt Vomiting are, alſo, proper in this Diſorder. *Waldſchmidius* informs us, that the moſt ſimple and eaſily prepared Stomachics are more beneficial in a Lientery, than thoſe of the compound Kind. The moſt proper Stomachics are, according to that Author, preſerv'd Nutmeg, preſerv'd Ginger, the White of an Egg boiled with Vinegar, and Wormwood-wine prepar'd with Maſtich. See COELIACA PASSIO.

LIGAMENTUM.

A Ligament is a white, fibrous, cloſe, compact Subſtance, more flexible than a Cartilage, not eaſily ruptured or torn, and which does not yield, or at leaſt very little, when pull'd.

It is made up of very ſmall, and very ſtrong Fibres, which, by their different Texture and Diſpoſition, form narrow Cords, broad Bands, or thin Webs; and theſe ſerve to bind, contain, limit, and defend the other Parts, both hard and ſoft.

Of the Ligaments which belong to the Bones and Cartilages alone, we may eſtabliſh two general Claſſes; the firſt containing thoſe Ligaments which are of Uſe only to the Bones in which they are inſerted; the other containing thoſe which ſerve for other Parts, beſides the Bones in which they are fixed, and principally for the Muſcles. If we have regard to the Bones only, theſe laſt are improperly termed Ligaments, as not doing the Office of ſuch, and, conſequently, reſembling the true Ligaments only in Texture.

Of thoſe Ligaments which are fixed in Bones or Cartilages alone, and are not employ'd about the other Parts; ſome belong wholly to the Articulations or moveable Bones; and others have nothing to do with the Articulations.

The Ligaments, which belong particularly to the moveable Articulations, and may therefore be called articular Ligaments, are of ſeveral Kinds.

Some are deſigned only to fix and ſtrengthen the Joints, and to ſecure the Bones, in their different Motions, from parting from each other, as it happens in Luxations. Theſe Ligaments are like Ropes, more or leſs flat; or like Bands, ſometimes narrow, and ſometimes of a conſiderable Breadth: And tho' ſome of them are thin, they are all very ſtrong, and yield but little. The Ligaments of the Articulations by Ginglymus, and thoſe which tie the Bodies of the Vertebræ together, are of this Kind.

Some contain a very fluid mucilaginous Liquor, commonly called Synovia, which continually moiſtens the Articulations. Theſe are not ſo properly Ligaments as Ligamentary Webs, bound immediately round the Articulations, and fixed to the Extremities of the articulated Bones, and thus forming Capſulæ or Bags to contain that Liquor, and hinder it from running out.

Theſe may very well be named capſular Ligaments. They lie within the former Sort, being cloſely united to their internal Surface, and are to be met with in all the moveable Joints, as in that of the Ulna with the Os Humeri, and thoſe of the Bones of the Carpus with each other. But they are more like Membranes, than Ligaments properly ſo called.

Some perform both the former Offices, that of a Band to keep the Bones together, and of a Capſula to hold the Mucilage. Theſe ſurround the orbicular Articulations, as that of the Os Humeri with the Scapula, and of the Os Femoris with the Os Innominatum.

All the Parts of theſe Ligaments are not of equal Thickneſs, ſo that they appear to be made up of two kinds of Ligaments, inſeparably united or glew'd together; one capſular, which ſurrounds the whole Articulation; and ſeveral true Ligaments, extended at different Diſtances over the other, and cloſely united to it. The Name of orbicular Ligaments is not general enough, becauſe it does not agree to the Bones of the Tarſus, Carpus, and others.

I do not think it proper to rank among theſe the membranous Vagina, belonging to the Chanel or Groove in the upper Part of the Os Humeri.

Some are hid by the Joints themſelves, and by the capſular Ligaments, as that belonging to the Head of the Os Femoris, called improperly Ligamentum Teres, and the crucial Ligaments of the Tibia.

The Ligaments, which ſerve to connect Cartilages with Bones, might be reckoned another Species of articular Ligaments; and of theſe ſome are proper, as thoſe belonging to the ſemilunar Cartilages of the Knee, and to the cartilaginous Trochlea of the Orbit. Others are common, as all thoſe to which the inter-articular Cartilages are faſtened by their Circumferences.

The other Ligaments of the firſt Claſs, or thoſe fixed to Bones, without any Relation to the Articulations, are of two kinds.

Some of them are looſe, and ſerve only to ſet Bounds to the Motions of Bones; ſuch as thoſe that tie the Clavicles to the coracoide Apophyſes; thoſe that go from one Clavicle to the other; and thoſe between the ſpinal Apophyſes of the Vertebræ.

Some of them are tight, and ſtretched either between the Parts of the ſame Bone, as the Ligaments between the Acromium and coracoide Apophyſis, or between ſeveral Bones united together without Motion, as thoſe that are fixed by one Extremity to the Os Sacrum, and by the other to the Os Iſchium.

The Ligaments of the ſecond general Claſs, or thoſe which, being fixed to Bones or Cartilages, are, likewiſe, of Uſe to other Parts, are two Kinds. Some of them are fixed to Bones or Cartilages only; and ſome are, likewiſe, fixed to other Parts, or other Parts are fixed to them.

Thoſe of the firſt Kind ſerve principally to incloſe, check, limit, and ſtrengthen the Muſcles and Tendons, and ſometimes to change their Directions.

The annular Ligaments are of this Kind, and they antiently had their Name, not ſo much from their Figure as from their Uſe, which is much the ſame with that of the Rings through which the Reins of Horſes paſs; for it is after the ſame manner that theſe Ligaments bridle the Tendons of many Muſcles, and thus hinder them from ſtarting from their Places, in violent Motions; and, in ſome Circumſtances, change their Directions.

The annular Ligaments are either particular and ſimple, or common, and made up of ſeveral ſingle ones; as we ſhall ſee in thoſe of the Carpus and Thumb: Some of them are like Vaginæ, or Sheaths; as thoſe on the internal and flat Side of the firſt and ſecond Phalanges of the Fingers.

Some of them are only ſemi-annular; as that of the ſuperciliary Notch of the Orbit, when there is a Ligament there; and that of the Notch of the ſuperior Coſta of the Scapula.

To theſe might be referred the Ligaments between the Acromium and coracoide Apophyſis of the Scapula, and between the Os Sacrum and Os Iſchium, which have been already mentioned in the firſt Claſs.

Thoſe of the other Kind, which come under this ſecond Claſs, comprehend the Ligaments fixed to other Parts, as well as to the Bones; and theſe again are of two Sorts.

Some of them are fixed to one or more Bones, with different Degrees of Tenſion; and ſerve on each Side for the Inſertion of Muſcles, ſupplying, in that reſpect, the Place of Bones.

Of this Kind are the interoſſeous Ligaments of the fore Arm and Leg, the Obturator Ligament, the Ligament extended on each Side of the Os Humeri, from the Neck to the Condyles, the poſterior and lateral Ligaments of the Neck, and the ligamentary Membranes of the poſterior Foramina of the Os Sacrum.

To theſe may be added, the Ligaments commonly termed Aponeuroſis; ſuch as thoſe of the Temples, Scapula, Os Humeri, Ulna, Palm of the Hand, Thigh, Leg, and Sole of the Foot: All theſe may, in general, be termed Aponeurotic Ligaments, Ligamentary Aponeuroſes, Ligamentary Septa, or Ligamentary Vaginæ: But they ought to be carefully diſtinguiſhed from the Aponeuroſes of the Muſcles and Tendons. The Ligamentum Suſpenſorium of the Muſculus Styloglooſſus belongs to this Place.

Other Differences of Ligaments may be deduced from their Conſiſtence, Solidity, Thickneſs, Situation, and Figure: Some Ligaments are almoſt cartilaginous; as thoſe which ſurround the Head of the Radius, and the ſmall Head of the Ulna, a Portion of the orbicular Ligament of the Head of the Os Femoris, and the annular Vaginæ of the Fingers.

Some of them have a particular Elaſticity, by which they are capable of being drawn out by a ſufficient Force, and of contracting again, when left to themſelves. This Elaſticity differs from that of Cartilages; which laſt is hardly perceivable, but by compreſſing or bending them to a certain Degree. It differs likewiſe from that of the other Ligaments, in that it is not only very conſiderable in living Bodies, but remains ſuch after Death.

Of this Kind are the Supercilium of the Cotyloide Quality, the Ligaments which tie the Os Hyoides to the Styloide Apophyſes, the poſterior Cervical Ligament; the Ligaments which connect the ſharp Edges of the ſpinal Proceſſes of the Vertebræ to one another, and thoſe ſeated at the Baſes of theſe Apophyſes, next the great Canal of the Vertebræ, eſpecially in thoſe of the Loins. *Winſlow's Anatomy.*

LIGATIO. A Bandage or Ligature, or the Stiffneſs of a Joint; ſee ANCYLE: Or it imports an Impotence, whimſically ſuppoſed to be induced by Magic.

LIGATURA. The ſame as LIGATIO.

LIGNIPERDA. An aquatic Inſect, found incloſed in a Straw, or ſome ſuch Subſtance. The Fiſhermen eſteem it as a good Bait for a Trout. It is recommended as an Amulet for a Quartan, if hung about the Neck, by the Superſtitious.

LIGNUM { ALOES, AQUILÆ, ASPALATHUM } See { AGALLOCHUM. AGALLOCHUM. ASPALATHUS, and AGALLOCHUM.

LIGNUM CAMPESCANUM. Offic. *Lignum Campechianum, Species quædam Braſil.* Sloan. Hiſt. 2. 183. Raii Dendr. 132. *Lignum Braſilio ſimile cæruleo tingens.* J. B. 1. 492. Jonſ. Dendr. 458. *Ligno Braſiliano ſimile.* C. B. P. 393. *Tſiam pangam.* Hort. Mal. 6. 3. Tab. 2. *Pataghi, Patanghi, Acacia Zeylanica major tinctoria Panſapan.* Herm. Muſ. Zeyl. 42. *Lignum Japan vulgo. An Jacaranda.* Piſan. 11? LOG-WOOD.

It grows in the *Eaſt* and *Weſt-Indies*; and the Wood is uſed in Dying, but rarely in Medicine. *Dale.*

It is eſteem'd aſtringent, and good to fortify the Stomach.

Its Leaves are cephalic and ſtomachic, and good to reſiſt the Malignity of the Humours.

The Fruit fortifies the Brain and Stomach; it helps Digeſtion, promotes the Tranſpiration of Humours, and diſpels Wind. *Lemery des Drogues.*

LIGNUM CARABACCIUM. Bagliv. de Fibra Motric. Ed. Lond. p. 202.

This Wood has the Taſte of Cloves, but very mild, and quite grateful, and is of a Colour very much reſembling that of Caphe or Cinnamon: It is imported from *India*, but is as yet unknown in our Shops.

Baglivi, as he ſays himſelf, in his Treatiſe *de Fibra Motrice*, very ſucceſsfully preſcribed a warm Potion of the Decoction for correcting the Acrimony, and ſcorbutic Diſſolution, of the Lymph.

LIGNUM { CEDRINUM, COLUBRINUM } ſo { JUNIPERUS. COLUBRINUM LIGNUM.

LIGNUM FLAVUM. Offic. *Lignum noſtratibus.* FUSTIC-WOOD *dictum.* Raii Hiſt. 2. 1810. *Arbor baccifera Braſilienſis, fructu tuberculis inæquali, Mori æmulo.* Ejuſd. 1639. *Morus fructu viridi, Ligno ſulphureo tinctorio.* Sloan. Cat. Jam. 128. Hiſt. 2. 8. Tab. 158. Fig. 1. Raii Hiſt. 111. Dendr. 14. *Tatai-ibi.* Jonſ. Dendr. 64. *Xanthoxylum aculeatum Carpini. foliis Americanum, cortice cinereo.* Pluk. Almag. 396. FUSTIC-TREE. Park. Theat. 1671. FUSTIC-WOOD.

It grows plentifully in the open champagne Country of *Jamaica*; the Wood is uſeful to the Dyers for giving a yellow Colour, but never preſcribed in Medicine. *Dale.*

LIGNUM { GUAIACUM, JUNIPERINUM, LENTISCINUM } See { GUAIACUM. JUNIPERUS. LENTISCUS.

LIGNUM LITERATUM. *Lignum Sinenſe.* LETTER'D WOOD.

This Wood, brought from *China*, is ſometimes marked with Letters, whence it has its Name; but it is very little uſed in Phyſic. *Geoffroy.*

LIGNUM MOLUCCENSE ET GRANA TIGLIA. Offic. *Lignum Moluccenſe, foliis Malvæ, fructu Avellanæ minore, cortice molliore & nigricante, Pavana incolis.* C. B. 393. *Lignum Moluccenſe Pavana dictum, fructu Avellanæ.* J. B. 1. 342. *Lignum Moluccenſe.* Park. 1664. *Pavana Moluccenſis.* Jonſ. Dendr. 458. *Guajapala, Nepalam, Waijapali, Ricinus arbor Indica cauſtica purgans.* Herm. Muſ. Zeyl. 15. *Pinus Indica nucleo purgante.* C. B. 492. *Pinei nuclei Maluccanni ſive Purgatorii.* J. B. 1. 322. *Nuclei Maluccani.* Park. 1641. *Quauhayohautli* III. *ſeu femina arboris Cucurbitinæ, Nuclei Pinus forma purgante.* Hernand. 87. *Ricinus arbor fructu glabro, Grana Tiglia Officinis dicto.* C. B. P. 370. *Palma Chriſti Indica.* Tourn. Mat. Med. 75. *Cadel Avanacu.* Raii Hiſt. 2. 1855. PURGING NUTS. *Dale.*

This Tree is cultivated in *Malabar*, and other Countries: The Parts uſed in Medicine are, firſt, the Wood, which is of a ſpongy, light, rare Subſtance, of a pale Colour, cover'd with a thin Aſh-colour'd Bark, of an acrid, biting, cauſtic, and nauſeous Taſte, and no Smell. Secondly, The Fruit, which is of an oblong oval Figure, of the Size of an ordinary Ricinus, or *Mexico*-ſeed, gibbous on one Side, and compreſſed on the other, of a blackiſh Colour, and of an acrid, burning, and nauſeous Taſte. Both the Wood and the Fruit are of an heating, inciding, attenuating, and cauſtic Quality, and therefore rarely to be met with in the Shops. See the Article CADEL AVANACU.

LIGNUM { NEPHRITICUM, RHODIUM } ſo { BALANUS MYREPSICA. ASPALATHUM.

LIGNUM RUBRUM. Offic. *Braſilio ſimile Lignum Vernimbock Germanis dictum.* J. B. 1. 492. Raii Hiſt. 2. 1737. RED-WOOD.

It grows in *Braſil*, and the Wood is of Uſe in Dying; but I find no medicinal Virtues aſcribed to any Part of this Plant.

LIGNUM { SANCTUM, SASSAFRAS } See { GUAIACUM. SASSAFRAS.

LIGNUODES, λιγνώδης, from λιγνὺς, Soot. Sooty. This is an Epithet in *Hippocrates* for the Tongue, in ſome acute Diſorders; importing its being brown, or black: And for the Spit, in Diſorders of the Lungs, which is black.

LIGULA, in Anatomy, is the Clavicle, or the Glottis: Or it is a Meaſure of Capacity, of Things liquid or dry; being a Quarter of a Cyathus, equal to one forty-eighth of a Pint. *Arbuthnot.*

Rhodius, in his Notes to *Scribonius Largus*, ſays, that a *Ligula* is half an Ounce, within two Scruples.

Ligula, alſo, is ſometimes uſed to expreſs a ſmall Ligature.

LIGURINUS. The Name of a ſmall Bird. See SPINUS.

LIGUSTICUM.

The Characters are;

The Leaves are lobated, with Inciſions about their Edges, like thoſe of Parſley. The Seeds are like thoſe of the Siler, or Oſier.

Boerhaave mentions three Species of this Plant; which are,

1. Liguſticum; Scoticum; Apii folio. *T.* 324. *Liguſticum humilius, Scoticum a maritimis, ſeu Apium maritimum, dulce Scoticum.* Plukn. Phyt. 96. 2. *Seſeli maritimum, Scoticum.* Par. Bat. *Imperatoriæ affinis, umbellifera, maritima Scotica.* H. Edinb. App. *Siler montanum, Hippoſelini foliis humilius.* M. H. 3. 176.

2. Liguſticum; Græcum; foliis Apii. *T. C.* 13.

3. Liguſticum; vulgare; foliis Apii. *J. B.* 2. 122. *Boerh. Ind. A.* 52. *Leviſticum.* Offic. *Leviſticum, vulgare.* Ger. 855. Emac. 1008. Park. Theat. 936. Raii Hiſt. 1. 437. *Liguſticum vulgare.* C. B. P. 157. *Angelica montana perennis Paludapii folio.* Tourn. Inſt. 313.

The Roots of Lovage are thick, large, and much divided, with many Fibres of a brown Colour on the Outſide, of an hot, ſtrong, aromatic Smell and Taſte. The Leaves are large, and winged, parted into ſeveral Diviſions, but ſomewhat like Smallage, but larger, and of a darker-green Colour. The Stalks are thick, tall, and ſtriated, or chaneled; on the Top of which grow Umbels of five-leav'd, ſmall, yellow Flowers, which are ſucceeded by oblong, ſtriated, brown Seed, two join'd together, as in other umbelliferous Plants. It is cultivated in Gardens, and flowers in *June* or *July*.

The Roots, Leaves, and Seed of Lovage are heating and drying; they warm and comfort the Stomach, expel Wind, provoke Urine and the Menſes, and are uſeful in peſtilential Diſtempers, and all kinds of Agues; but they are ſeldom uſed in the Shops. *Miller's Bot. Off.*

It is cultivated in Gardens, and flowers in *June*; and, in every reſpect, agrees, as to Virtues, with Angelica and Imperatoria. It is alexipharmic, diuretic, and vulnerary. *Dale.*

The Root is oblong, an Inch in Thickneſs, brown on the Outſide, and pale within, of an acrid, aromatic, penetrating, and ſweetiſh Taſte, and of a pleaſant and fragrant Smell, but to ſome ſtrong and offenſive. The Plant is native of *Scotland*, where it grows in the mountainous Parts, and is gathered among other Herbs by the Country-people, and apply'd to medicinal Uſes. They commend this Herb for a purulent and ſanguineous Aſthma, and for all Diſeaſes proceeding from Viſcidity, on account of its attenuating Quality: It is recommended, alſo, as a Pectoral, and for an Aſthma proceeding from Phlegm; for it opens and ſtrengthens the Lungs: For theſe Purpoſes, it is uſual to exhibit a Decoction of the Leaves, ſweeten'd with Liquorice. This Plant is alſo ſuppos'd to be an Alexipharmac, and is well-known to be ſudorific and diuretic. The Root cures all inflammatory and pituitous Diſeaſes, which is no Contradiction, if we conſider, that it has an emollient and reſolvent Virtue, heating, yet not inflaming; and, therefore, may be ſerviceable in both Caſes. The Root boiled and taken, provokes Spitting in a Peripneumony, which is a good Symptom; but, if it be boiled too much, it loſes its Virtue: It is alſo an Ariſtolochic, or Provoker of the Menſes and Lochia, generates Milk in Nurſes, and is reckoned among the Aphrodiſiaca, or Promoters of Venereal Vigour. It increaſes the Semen in Men, as well as Milk in Women; and the Midwives give the Juice hereof as a great Secret for promoting the Lochia, and expelling the Fœtus and Secundines; it is excellent in Hyſterics, and a Suppreſſion of the Menſes; half an Ounce of the Seed, taken in Water, is a Sudorific. It is alſo a potent Carminative, and yields a Spirit, which they call *Lovage-water*, in *Dutch*, *Lavas*; which is much abuſed by our Countrymen [the *Dutch*]. Of the Seeds, which are reckoned among Carminatives, is prepared an heating Oil, free from exceſſive Acrimony. The Juice, taken every Day, is an excellent Nephritic; for it cleanſes the Kidneys of Sand, and putrid Matter. Of the Seeds are prepared a Water and Spirit, which are effectual in Hyſterics; and with the Spirit I myſelf have, in a ſurpriſing manner, relieved hyſteric Women, when under the deplorable Symptom of Spaſms of the Inteſtines. I have exhibited the ſame to melancholy Perſons under the Power of their depraved Imaginations, and with good Succeſs; for they have been greatly exhilarated thereby: But I took care to give it by another Name; for if the Patients ſhould once come to know, that it was Spirit of Lovage that made them ſo chearful, they would always deſire to be in the ſame Humour, and debauch themſelves with it; for it is an agreeable Liquor, and one accuſtomed to it will never be able to forbear it. Lovage is reckoned a Specific in the Jaundice, either by its Sweetneſs, mitigating the Acrimony of the Bile, or by attenuating it, and ſo promoting its Expulſion from the Inteſtines; it is, alſo, diaphoretic, heats, and relieves under Colds. Outwardly, it is much uſed in Baths, and in Cataplaſms appropriated to the Uterus, and Diſorders of that Part. In a Word, it is a Plant of excellent Service in Caſes where a balſamic Stimulus is required; and is reckoned, alſo, among Antiſcorbutics. *Hiſt. Plant. aſcript. Boerhaave.*

LIGUSTRUM.

The Characters are;

The Leaves are conjugated and caducous; the Flower is monopetalous, funnel-ſhaped, tetrapetaloidal, and pentapetaloidal, and ſeated upon a minute Calyx. The Ovary, in the Bottom of the Calyx, becomes a globular ſoft Fruit, full of Juice, and containing four Seeds, which are gibbous on one Side, and flat on the other.

Boerhaave mentions four Species of this Plant; which are,

1. Liguſtrum. *Offic. Ger.* 1208. *Emac.* 1394. *Raii Hiſt.* 2. 1603. *Synop.* 3. 465. *Tourn. Inſt.* 596. *Boerh. Ind. A.* 2. 215. *J. B.* 1. 528. *Liguſtrum vulgare.* Park. Theat. 1446. *Liguſtrum Germanicum.* C. B. P. 475. PRIVET.

Privet is a Buſh or Shrub, which grows not to any great Bigneſs, having many ſmooth, tough, pliant Branches, cloath'd with ſmall, oblong Leaves, broadeſt in the Middle, and ſharp-pointed at the Ends, ſmooth, and without Indentings about the Edges, two at each Joint. The Flowers grow in thick Spikes at the End of the Branches, of a white Colour, each being monopetalous, and divided into four Segments: They are ſucceeded by Cluſters of black Berries. It grows in Hedges, and flowers in *May* and *June*. The Berries are ripe in *September*.

The Leaves and Flowers are cooling, drying, and reſtringent, good for Ulcers and Inflammations of the Mouth and Throat, Bleeding of the Gums, and Relaxation of the Uvula. *Miller's Bot. Off.*

The Leaves of the Privet are aſtringent, bitter, and give a faint Tincture of Red to the blue Paper; the Flowers and Fruit give it a much deeper. We may conjecture by this, and the chymical Analyſis, that there is an aluminous Salt involved in a great deal of Sulphur, in the Leaves of this Plant; but that this Salt is very much diſengaged from it in the Flowers and Fruits. This does not hinder but there may be ſomething urinous in the whole Plant; for, beſide the great Quantity of Oil, and acid Liquors which it yields by Diſtillation, there is, alſo, a little urinous Spirit extracted from it. All theſe Principles, mix'd together, render the Privet very deterſive. The Gargariſms made with the Juice, or diſtilled Water, of this Plant, are good for the Diſeaſes of the Throat; they dry away Ulcers, aſſwage the Inflammations of the Eyes, cure Scalds, ſtop the Spitting of Blood, and Hæmorrhages. *Martyn's Tournefort.*

2. Liguſtrum; foliis è luteo variegatis. *H. R. Par.*

3. Liguſtrum; foliis argentatis. *Breyn. Prodr.* 41.

4. Liguſtro ſimilis arbor; Africana. *Slangenboom, vulgo Batavis. Boerh. Ind. alt. Plant. Vol.* 2. *p.* 215.

LIGUSTRUM INDICUM. See ALCANNA.

LIGUSTRUM NIGRUM. A Name for the *Lilac*; *laciniato folio.*

LIGUSMA, λιγύσμα. A Contorſion of a Joint, not amounting to a perfect Luxation. *Galen, Lib.* 2. *Cap.* 19. *de Comp. M. P. G.*

LILAC. The Pipe-tree.

The Characters are;

The Calyx is monophyllous, tubulous, ſhort, and quadrifid. The Flowers are monopetalous, funnel-ſhaped, quadripartite, or quinquefid, collected into Tufts, and furniſhed with two or three Stamina. In the Centre of the indented Calyx is ſeated the Ovary, which becomes a compreſſed Fruit, ſhaped like a Tongue, and divided into two Cells by an Incloſure, which burſts aſunder when the Fruit is ripe; the two Cells are full of compreſſed marginated Seeds.

Boerhaave mentions five Species of this Plant; which are,

1. Lilac. *Matth.* 1237. *Syringa cærulea.* C. B. P. 398.

2. Lilac; flore albo. *T.* 601. *Syringa; flore lacto.* H. Æyſt. 6. 1. F. 1. Fig. 3.

3. Lilac; flore ſaturate purpureo. *T.* 602.

4. Lilac; folio liguſtri. *T.* 602. *Syringa, Perſica, foliis integris.* H. L. *Jaſminum, Perſicum, foliis non laciniatis.* Suth. 328.

5. Lilac; laciniato folio. *T.* 602. *Syringa, Perſica, foliis laciniatis Liguſtri.* H. L. *Jaſminum, Perſicum, foliis laciniatis.* H. E. Suth. 328. *Liguſtrum nigrum.* Alpin. Exot. 179. *Liguſtrum, foliis laciniatis,* C. B. P. 476. Prodr. 158.

This is an *Arabic* Name; though ſome derive it from the Lily, becauſe its Flowers bear ſome Reſemblance to the Lily: It is, alſo, called by the *Greeks* Σύριγξ, and by the *Latins Syringa*, becauſe, when the Pith is taken out of its thick Branches, they are made into Pipes.

LILI. The Name of one of *Paracelſus*'s Arcana, the Baſis of which is ſuppoſed to be Antimony. See LILIUM.

LILIAGO. A Name for the *Liliaſtrum*; *Alpinum*; *minus*.

LILIASTRUM.

The Characters are;

The Flower is hexapetalous, naked, furniſhed with ſix Stamina, and embracing an oblong Ovary, full of angulous Seeds. The Root is like that of the Aſphodel.

Boerhaave mentions but one Sort of this Plant; which is the

Liliaſtrum; Alpinum; minus. *Tourn. Inſt.* 369. *Boerh. Ind. A.* 2. 134. *Phalangium.* Offic. *Antiquorum.* Ger. Emac. 48. *Phalangium magno flore.* C. B. P. 29. *Phalangium folio Lilii.* J. B. 2. 636. Raii Hiſt. 2. 1192. *Phalangium Allobrogicum.* Park. Parad. 150. SPIDERWORT.

It is cultivated, with us, in Gardens, and flowers in *June*. The Parts in Uſe are the Flowers, and Seeds, which, according to *Dioſcorides*, being taken in Wine, are an Antidote againſt the Poiſon of the Scorpion, and the Phalangium (a venomous ſort of Spider); and cure the Gripes.

LILIO-ASPHODELUS.

The Characters are;

The Root is like that of the Aſphodel, ſhaped like that of the Navew. The Flower is like a Lily, but monopetalous, deeply jagged, with its under Part tubulated. The Fruit is generally oval, and contains roundiſh Seeds.

Boerhaave mentions two Species of this Plant; which are,

1. Lilio-aſphodelus; luteus. *Park. Parad.* 148. *Lilium, luteum, radice Aſphodeli.* C. B. P. 80. M. H. 2. 412.

2. Lilio-aſphodelus; puniceus. *Park. Parad.* 148. *Cluſ. H.* 137. *Lilium, rubrum, Aſphodeli radice.* C. B. P. 80. M. H. 2. 412. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 110.

The Plant is called *Lilio-aſphodelus*, becauſe is partakes of the Nature of both the Lily and the Aſphodel; but I find no Virtues aſcribed to it.

LILIO-FRITILLARIA.

The Characters are;

The Root is bulbous, like that of the Lily, which it reſembles, alſo, in its Leaves and Stalks. The Flower is hexapetalous, bell-ſhaped, pendulous, and embracing an Ovary, which is like that of the Fritillaria.

Boerhaave mentions but one Species of this Plant; which is,

Lilio-fritillaria; quod Lilium Perſicum *H. Eyſt. Vern.* o. 5. *F.* 4. *Fig.* 1. *Dod. p.* 220. *C. B. P.* 79. *M. H.* 2. 406. *Lilium Suſianum.* Cluſ. H. 129, 130. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 141.

LILIO-HYACINTHUS. The Lily-hyacinth.

The Characters are;

It has the Leaves and the ſquamous Root of the Lily; the Stalk is naked, and the Flower hexapetalous, nearly reſembling that of the Hyacinth; and embracing an Ovary, which becomes a Fruit, declining from a globous to an acuminated triangular Figure, conſiſting of three Cells, full of Seeds, which are almoſt of a globular Form.

Boerhaave mentions two Species of this Plant; which are,

1. Lilio-Hyacinthus; vulgaris; flore cœruleo. *T.* 372. *Hyacinthus ſtellaris, foliis & radice Lilii.* C. B. P. 46. M. H. 2. 376.

2. Lilio-hyacinthus; vulgaris; flore niveo. *T.* 372. *Hyacinthus ſtellaris, foliis & radice Lilii, flore niveo.* C. B. P. 46. M. H. 2. 376. *Boer. Ind. alt. Plant. Vol.* 1. *p.* 136.

They are cultivated in Gardens; and they contain a great deal of Oil and Phlegm, and a little eſſential Salt.

Their Roots are ſoftening, digeſtive, and reſolutive. *Lemery des Drogues.*

LILIO-NARCISSUS. Lily-daffodil.

Boerhaave mentions nine Species of this Plant; none of which have any medicinal Virtues attributed to them, at preſent, that I know of.

LILIO-ORNITHOGALUM. A Name, according to *Tournefort*, for the LILIO-NARCISSUS.

LILIUM.

The Characters are;

The Root is bulbous, conſiſting of fleſhy Scales, which are placed one upon another, on the Outſide, almoſt in a circular Order. The Stalks are ſurrounded with numerous Leaves. The End of the Pedicle ſupports a Placenta, to which, circularly diſpoſed, grow ſix Petals, which are reflexed outwards, either moderately, as in the Lily, ſo called, or quite convolved outwards, as in the Martagon. Within theſe Petals, from the ſame Original, ariſe ſix Stamina cloſely united, ſurrounding a Tube, and furniſhed with long Heads. The Ovary grows on the Placenta within the Flower, is of a triangular Shape, ſurrounded within the Petals and the Stamina, by a double Row of marginated Seeds; and ſhoots forth a long Tube from the Centre of the Apex.

Boerhaave mentions nineteen Species of this Plant, none of which have any medicinal Virtues aſcribed to them, at preſent, that I know of, except the firſt, fifth, and ſeventh.

The firſt is the

Lilium; album; flore erecto & vulgare. *C. B. P.* 76. *Boerh. Ind. A.* 2. 135. *Lilium album.* Offic. Ger. 146. Emac. 490. Raii Hiſt. 2. 1109. *Lilium album vulgare.* J. B. 685. Park. Parad. 39. Tourn. Inſt. 369. WHITE LILY.

This is a Flower which grows in every Garden, having a round ſcaly Root, and a Stalk three or four Feet high, with long, narrow, thick Leaves, and on the Top ſeveral large, ſweet, white Flowers, with ſeveral yellow Apices in the middle, flowering in *June*.

The Flowers and Roots are uſed, and that chiefly in external Applications; they are emollient, ſuppling, and anodyne, good to diſſolve and ripen hard Tumors and Swellings, and to break Impoſtumations.

The only officinal Preparation is the *Oleum Liliorum*. *Miller's Bot. Off.*

The diſtil'd Water of Lilies, with an Addition of Saffron and Caſſia, are, by *Matthiolus*, recommended for promoting Delivery, and the Expulſion of the Secundines; but *Camerarius* thinks the Saffron and Caſſia ſuperfluous. It is, alſo, recommended in Faintings, and Diſorders of the Lungs, as the Aſthma and Coughs; and *Simon Paulli* ſpeaks of it as a Coſmetic, with the Addition of a little Camphire, and Oil of Tartar per Deliquium.

There is prepared, by Inſolation, an Oil of the Flowers; but the Leaves muſt not be left fifteen Days in the old Oil; for the whole Plant abounding with a mucilaginous Juice, the Leaves eaſily putrefy, and the Oil will no longer ſmell of the Lilies, which is the principal Mark of its Goodneſs, but will have a rank and fetid Smell. Three Days therefore will be ſufficient, after which we muſt put in freſh Leaves, and repeat the ſame the third time, which will be ſufficient for the Preparation.

The Oil is of extraordinary Efficacy in all Pains and Affections proceeding from Cold; it relaxes Parts which are too tenſe, ſoftens thoſe which are too hard, and mitigates Pains; for which Reaſons it is of ſervice in the Colic, and nephritic Diſorders, the Pleuriſy, and the like; it is, alſo, of ſingular Uſe in indurated Nerves, in a Scirrhus of the Uterus, and a conſequent Suppreſſion of the Menſes. *C. Hoffman.*

The Root is ſeldom uſed internally, but frequently applied for ſoftening and ripening of Tumors, for removing Corns of the Feet, being mixed with old Lard, for mollifying the Pudenda in Labour, and for Burns, and the like Caſes. The Seeds are exhibited in Water of Vervain, or the like, in order to facilitate the Birth. *Schroder.*

Godorus, Serjeant-ſurgeon to Queen *Elizabeth*, cured many of the Dropſy, as we are inform'd by *Gerard*, with the Juice of the Root mixed with Barley-flower, and baked in Cakes, and ſo eaten ordinarily for a Month or ſix Weeks together with Meat; but no other Bread was uſed during that Time. The ſame Surgeon found by Experience, that the expreſſed Juice of the bruiſed Root, given for two or three Days together in Wine, expels the Poiſon of the Peſtilence, and cauſes it to break out in Puſtules and Bliſters on the Skin. *Raii H. P. p.* 1109.

The fifth is the

Lilium; purpureo-croceum, majus. *C. B. P.* 76. *Tourn. Inſt.* 369. *Boerh. Ind. A.* 2. 137. *Hemerocallis.* Offic. *Hemerocallis, Lilium rubrum.* Mont. Ind. 44. *Lilium aureum.* Ger. 148. Emac. 192. Park. Parad. 38. *Lilium rubens croceum majus.* J. B. 2. 688. Raii Hiſt. 2. 1110. RED LILY.

It is cultivated in Gardens, and flowers in *June* and *July*; the Parts in Uſe are the Root and the Leaves. The Root drank, or made into a Peſſary with Honey and Wool, expels Water and Blood. The Leaves bruiſed mitigate Inflammations of the Breaſts contracted after Childbirth, and Inflammations of the Eyes. The Root and Leaves are very ſucceſsfully applied by way of Cataplaſm to Burns. *Dioſcorides.* The Root is aperitive. *Mont. Ind.*

The ſeventh is the

Lilium; floribus reflexis; montanum. *C. B. P.* 77. *Raii Hiſt.* 2. 1112. *Boerh. Ind. A.* 2. 135. *Martagon.* Offic. *Martagon montanum ſive ſylveſtre minus.* Park. Parad. 31. *Lilium montanum minus.* Ger. 150. Emac. 196. *Lilium flore nutante ferrugineo minus.* J. B. 2. 692. MARTAGON, or TURKS CAP. *Dale, p.* 241.

It is cultivated in Gardens, and flowers in *June*. The Root, which is uſed, is ſubſtituted, in our Shops, in the room of the yellow Aſphodel. *Buxb.* The common People hang it about the Necks of Infants, to facilitate Dentition. *Rupp.*

LILIUM is, alſo, a Name for ſeveral Sorts of *Corona Imperialis*.

LILIUM CONVALLIUM.

The Characters are;

The End of the Pedicle runs into a monopetalous, bell-ſhaped, pendulous, ſpiked Flower, divided at the Top into ſix Segments. The Ovary grows on the Apex of the Pedicle within the Flower, and becomes a ſoft, globular Berry, full of ſmall round Seeds, cloſely compacted; the Leaves reſemble thoſe of Plantane, or the Lily.

Boerhaave

Boerhaave mentions three Species of this Plant; which are,

1. Lilium Convallium; album. *C. B. P* 304. *Tourn. Inst.* 77. *Boerh. Ind. A.* 2. 64. *Lilium Convallium.* Offic. Ger. 331. Emac. 49. Raii Hist. 1669. Synop. 3. 264. *Lilium convallium flore albo.* Park. Parad. 349. *Lilium Convallium vulgo.* J. B. 3. 531. LILY OF THE VALLEY.

The Lily of the Valley, or *May* Lily, has a slender creeping Root, that runs upon the Surface of the Earth, shooting out two or three Leaves oblong, round, and full of Nerves, five or six Inches long, from the middle of which rises a Stalk, about a Span high, angular and slender, bearing six or seven Flowers in a Spike, one above another, and looking all one Way; they are small, hollow, and round, of one Leaf cut into five Parts, of a pleasant, grateful Scent, which are succeeded by small round Berries.

Lilies of the Valley are of great Service in all Disorders of the Head and Nerves, as Apoplexy, Epilepsy, Palsy, Convulsions of all Kinds, Vertigo, Swimming in the Head; and are frequently used in Errhines, and cephalic Snuff; a large Quantity of them are put in the *Aqua Peoniæ composita*, and in the *Spiritus Lavendulæ compositus. Miller's Bot. Off.*

The Flowers, being analysed, after a long Maceration, yield several acid Liquors, a good deal of concreted volatile Salt, and a great Quantity of Oil: Thus we may believe they contain a good deal of Sal Ammoniac and Sulphur, allayed with a little Earth.

These Flowers are aperitive, good for the Palsy, Epilepsy, and Vertigo; a Conserve is made of them, and they are distilled. *Tragus* macerated them in Wine, before he distilled them. *Camerarius* put them in a Pot, well stopt, and buried them in an Ant-hill. About a Month afterwards he gathered an oily Liquor, which he much esteemed for the Gout and the Sciatica. The Spirit of the Flowers, drawn with Spirit of Wine, is excellent to make the Tincture of Ambergrise. Every body knows, that the Root and Flowers, being powdered, cause one to sneeze. *Martyn's Tournefort.*

In *Germany* they make a Wine of the Flowers, by drying them in the Summer, and, in the Time of Vintage, mixing them with their Grapes when pressed: This Wine is prescribed in cephalic Disorders; and, also, as a Cordial in the cardiac Passion, and Lipothymy. Some distil the fresh Flowers in old generous Wine, either by themselves, or with the Flowers of Lavender and Rosemary, *in Balneo Mariæ.* They who would have it stronger than ordinary, repeat the Infusion, and distil it over again: The Water thus prepared is called by *Matthiolus Aqua aurea*, "Golden "Water," being reserved in Gold and Silver Vessels, against all dangerous Disorders. The Flowers, as well as the Root, dried and pulverized, are a celebrated Pharmic. *Raii Hist. Plant.*

2. Lilium convallium; flore rubente. *C. B. P.* 304. *J. B.* 3. 533.

3. Lilium convallium; latifolium; flore pleno variegato. *Dilac. T.* 77. *Boerh. Ind. alt. Plant. Vol. 2. p.* 65.

LILIUM LUTEUM. A Name for the *Lilio-asphodelus*; *luteus.*

LILIUM RUBRUM ASPHODELI RADICE. A Name for the *Lilio-asphodelus*; *puniceus.*

LILIUM SUSIANUM. A Name for the *Lilio-fritillaria*; *quod Lilium Persicum.*

LILIUM ZEYLANICUM. A Name for the *Methonica*; *Malabarorum.*

The LILIUM PARACELSI is thus directed in the *Collectanea Chymica Leidensia.*

Take of the Regulus of *Mars*, rightly prepar'd; dissolve it in equal Parts of *Aqua-fortis*, and Spirit of Salt. Pour into this Solution the Sulphur procur'd from the Regulus of Antimony, by boiling, till a Precipitation is made; the Precipitate will be of a yellowish Red, which edulcorate, and reserve for Use. The Dose is from four to six Grains.

If this Powder operates too violently, it may be mitigated, and fix'd thus:

Take of the *Lilium Paracelsi*, prepar'd as above, one Part; of common decrepitated Salt, two Parts. Let them be rubbed together, and calcin'd over a gentle Fire, for an Hour, so as not to melt: Then let it be edulcorated, and dried.

It is given in the Venereal Disease; in obstinate Itches; in Fevers, Dropsies, and deep-rooted Obstructions, mixed with Mithridate, or Diascordium.

In order to check its emetic Quality, it should be given with Sudorifics.

LIMA. A File, or Rasp, used in Pharmacy, to reduce hard Substances to fine Particles; whose Consistences will not admit of powdering.

LIMANCHIA, from λιμὸς, Famine, and ἄγχω, to kill, or strangulate. Excessive Abstinence from Aliment.

LIMATURÆ. Filings, or Raspings.

LIMAX TERRESTRIS. The Shell-snail.

LIMAX ATER. Offic. List. Animal. Angl. 131. Ejusd. Hist. Conch. 1. N. 102. *Limax tertia tota nigra.* Aldrov. de Insect. 702. Jonst. Hist. Insect. 38. *Limax.* Mer. Pin. 207. THE BLACK SNAIL.

Bruised, and applied to Ulcers, they have a lenient Effect in an extraordinary Measure, according to *Enzelius. Dale.*

LIMAX RUBER. Offic. Schrod. 5. 284. *Limax quartus subrufus, montanus.* List. Hist. Animal. Angl. App. 6. *Limax subrufus.* Ejusd. H. Conch. 1. N. 103. *Limax magna Germanis colore rufa.* Aldrov. de Insect. 702. Jonst. de Insect. 138. THE RED SNAIL.

It is found in the Fields. The Liquor of Snails, which is what is used in Medicine, is prepared by cutting the Snails in small Pieces, then mixing them with an equal Quantity of Salt, and afterwards putting them into *Hippocrates's* Sleeve, and leaving them in a Cellar, or cool Place, where they dissolve, and pass off in a Liquor. This Liquor is used to anoint the Parts affected with the Gout, and to extirpate Warts, being first scraped with a Penknife; it also cures a Prolapsus or Falling down of the Anus. *Dale.*

LIMBUS, in *Paracelsus*, seems to mean the Universe.

LIMNITIS. This is, according to *Paulus Ægineta, L.* 7. *C.* 19. the same as ADARCES. But *Oribasius, de Loc. Affect.* makes it somewhat different.

LIMNOPEUCE. A Name for the *Equisetum*; *palustre*; *brevioribus foliis, polyspermum.*

LIMOCTONIA, from λιμὸς, Hunger, or Famine; and κτείνω, to kill. Excessive Abstinence, sufficient to destroy a Patient.

LIMODORUM. A Name for the *Orobanche*; *major*; *Garyophyllum olens.*

LIMON.

The Characters are;

The Leaves, Flowers, and Fruit, are like those of the Citron; only the Fruit is less, and its Pulp of a much thinner Substance.

Boerhaave mentions ten Species of this Plant; which are,

1. Limon; vulgaris. *Ferr. Hisp.* 193. *Tourn. Inst.* 621. *Boerh. Ind. A.* 2. 240. *Malus Limonia.* Offic. Ger. 1278. Emac. 1462. Park. Theat. 1507. Raii Hist. 2. 1656. J. B. 1. 96. *Malus Limonia acida.* C. B. P. 436. *Limon.* Aldrov. Dendr. 491. THE LEMON-TREE.

The Lemon-tree pretty much resembles the Orange in its manner of growing, having several sharp Thorns in the Branches, which are cloathed with perennial green Leaves, larger and rounder than those of Oranges, and want that Heart-like Foot-stalk which they have. The Flowers are white, and in Colour and Shape like them; but the principal Distinction is in the Fruit, which is of a paler yellow, and an oval Shape, with a Nipple-like Process at the End, of a very grateful Smell, and full of pleasant, very sour Juice.

Lemons are cooling and grateful to the Stomach, quenching Thirst, and increasing an Appetite, useful in Fevers, as well common as malignant and pestilential; they provoke Urine. The Juice, mixed with Salt of Wormwood, is an excellent Medicine to stop Vomiting, and to strengthen the Stomach. The Peel is of the Nature of Citron-peel, but of less Virtue, and therefore not so much used.

The only officinal Preparation is the Syrup of the Juice. *Miller's Bot. Off.*

Lemons have a more acid Taste than Oranges or Citrons, and therefore, probably, have a more cooling Juice. They are useful for the same Purpose as Citrons; but, as they are of less Efficacy against Poisons, so they are esteemed more effectual against hot Distempers. Lemons, as *J. Bauhine* says, are not eaten entire, but deprived of their Peel, and then cut into Slices, and well sprinkled with Sugar; thus prepared, they are extremely palatable, potently extinguish Thirst, and allay feverish Heats. The Juice of Lemons is very effectual in dissolving the Stone, and deterging the Parts, as we are assured by *Herman Grube, Crato*, and other celebrated Physicians. Syrup of the Juice of Lemons is reckoned an excellent Remedy against the Stone, and Obstructions of the Kidneys, and, also, against Thirst and Heat in burning Fevers; it strengthens the Heart and Stomach, and allays the Effervescence of the Bile; on which Accounts it is exhibited with good Success in Weaknesses, Lipothymies, Faintings, Vomitings, and the Hickups, Symptoms commonly attendant on burning Fevers. For nephritic Disorders,

Take Shavings of Wood of Oak, one Ounce; Spring-water, six Pints; Juice of Lemons, four Ounces: Infuse them all, for twenty-four Hours, over hot Ashes; and boil them afterwards to the Consumption of a third Part, and strain off the Liquor. The Dose is half a Pint.

It is very good for a hot Distemperature of the Liver, for Ulcers of the Kidneys, and Heat of Urine, but principally for evacuating salt and viscid Phlegm from the Kidneys, which is the Cause of the Dysury and Strangury. *Raii H. P.*

Of late Years, the Juice of Lemons, perfectly neutralized with Salt of Wormwood, has been very much given in Fevers, and with

with very good Effect, in the Quantity of about half an Ounce, repeated at due Intervals.

2. Limon; dulci Medulla; vulgaris. *Ferr. Hisp.* 229.

3. Limon; acris. *Ferr. Hisp.* 331.

4. Limon; dulcis. *Ferr. Hisp.* 331.

5. Limon; folio anguſtiori; ſpinoſo. *Ind.* 264.

6. Limon?

7. Limon; folio anguſtiſſimo; folio & fructu variegatis.

8. Limon; folio Ceraſi.

9. Limon; fructu Aurantii. *Pomum Adami.* Ferr. Hiſp. 313. *Malus Adami.* C. B. P.

This Fruit agrees in Figure, Colour, and Medicinal Virtues, with the Orange.

10. Limon; flore pleno. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 240.

LIMONADA. Limonade.

LIMONIA MALUS. The Lemon. See LIMON.

LIMONIUM. Sea Lavender.

The Characters are;

The Root is fibrous; the Stalks naked and ramous; the Calyx long, tubulous, and expanded at the Top, into a kind of pentagonal Flower; within which are again incloſed other Flowers, like Clove-gilliflowers; or elſe monopetalous, Funnel-ſhaped, multifid, furniſh'd with five Stamina, generally united two together, often prolific, and joined near the Stalks. The Ovary lies concealed after a very artificial Manner, in the very Bottom of the Calyx; and at laſt becomes an oblong Seed, involved in a ſquamous Calyx, as in a Capſule. The Calyx, Flower, and Ovary, in theſe Plants, are of ſo perplexed and amazing a Structure, that they are not as yet perfectly diſcover'd by the moſt diligent Inquirer.

Boerhaave mentions fourteen Species of this Plant, none of which have any medicinal Virtues attributed to them, except the firſt; which is,

Limonium; maritimum; majus. See BEHEN RUBRUM. *Boerh. Ind. alt. Plant.*

LIMONIUM MAJUS. A Name for the *Statice.*

LIMONIUM MINIMUM. A Name for the *Statice*; *montana*; *minima.*

LINAGROSTIS. The Name of a Plant, of which *Tournefort* mentions three Species; which are,

1. Linagroſtis panicula ampliore. *Inſt.* 664. *Linagroſtis.* Tabern. Hiſt. 559. *Gramen tomentarium, Linum pratenſe.* Tabern. Icon. 230. *Gnaphalium Tragi ſive Funcus bombycinus.* J. B. 2. 514. COTTON-GRASS. Common on boggy Places.

2. Linagroſtis panicula minore. *Inſt.* 664.

3. Linagroſtis Spica ſingulari, Alopecuroides. *Funcus capitulo lanuginoſo, ſive Schœnolaguros.* C. B. P. 12. Juſſ. 2. 426. Vaill. 117. HARES-TAIL RUSH.

On *Elſemere-Meers* in *Shropſhire*, and *Pillinmoſs* in *Lancaſhire*; on the great Bog beyond *Joan Cote*'s, towards *Croydon*, in great Plenty. Mr. *J. Sherard. Syn. Ed.* 3. 436.

LINAMENTUM. Scraped Lint.

LINARIA.

The Characters are;

The Leaves grow alternately, or three together, and are of an oblong Figure: The Calyx is monophyllous, and divided into five long acute Segments: The Flower is tubulated in the lower Part; and, running out into a long Spur, which is extended beyond the Tube contained within the Calyx, has its upper or fore Part perſonated, and bilabiated, the upper Lip being cut, and the lower diſpoſed in a grinning Form, and divided into three Parts. From the Bottom of the interior Part of the Tube of the Flower ariſe four Stamina. The Ovary, which grows to the Placenta in the Bottom of the Calyx within the Flower, produces a long Tube, and becomes a round Fruit, divided by an Interciſure into two Cells, which open in various Manners, and contain Seeds, which are either compreſſed and marginated, or angulated and roundiſh.

Boerhaave mentions twenty-two Species of this Plant, none of which have any particular medicinal Virtues aſcribed to them, except the 6th, 17th, and 19th.

The 6th is the

Linaria; vulgaris; lutea; flore majore. *C. B. P.* 212. *Tourn. Inſt.* 170. *Boerh. Ind. alt.* 231. *Linaria lutea vulgaris.* Ger. Emac. 550. Raii Hiſt. 1. 752. Synop. 3. 281. J. B. 3. 456. *Linaria vulgaris noſtras.* Park. Theat. 458. TOAD-FLAX.

Toad-flax has a white, ſlender, creeping Root; from which ariſe ſeveral Stalks, a Foot or more in Height, covered all over with long, narrow, ſharp-pointed Leaves, of a bluiſh-green Colour; on the Tops of the Stalks grow ſeveral pretty, large, yellow Flowers, of a ſingle Leaf, the fore Part having the Figure of a gaping Mouth, and the hinder Part, a Heel or Spur; the under Lip is largeſt, downy or hairy in the Middle, and of a Saffron-colour: The Seed is ſmall, black, and flattiſh, growing in a round bicapſular Seed-veſſel. It grows every-where upon Banks and Hedges; and flowers in *July.*

The whole Herb is uſed, and is of an aperitive and diuretic Nature; opening Obſtructions of the Liver and Spleen, helping the Dropſy and Jaundice, which it carries off by Urine. The Ointment, made with Hogs-lard, and a good Quantity of this Herb, is accounted excellent for the Piles, applied to the Part; being mixed with ſome of the Yolk of an Egg at the Time of uſing it.

The only officinal Preparation is the Unguentum Linariæ. *Miller's Bot. Offic.*

The Toad-flax has an herby ſaltiſh Taſte; being rubbed, it ſmells like Elder: Its Leaves give no Tincture of Red to the blue Paper, but the Flowers give it a pretty deep one; which makes us believe, that its Leaves contain an acid Salt, approaching to that which is natural in the Earth, but mixed in this Plant with a conſiderable Quantity of fetid Oil: The Flowers, alſo, have a diſagreeable Smell; but the Sal Ammoniac is more diſengaged there, which is the Reaſon that they ſtain the blue Paper.

This Plant, applied outwardly, is very lenitive and reſolvent, Qualities inſeparable from the fetid Oil of Tartar, Vipers, Harts-horn, and ſuch-like. I don't know any better Remedy to aſſwage the Pain of a Cancer, than to anoint it with freſh Butter, mixed with ſome Oil of this Plant, which has been drawn by the Retort. The Toad-flax then reſolves the Blood, or Matter, extravaſated in the porous Parts of the Fleſh; and, at the ſame time, relaxes the Fibres, whoſe extraordinary Tenſion cauſes inſupportable Pains. The Ointment of Toad-flax is excellent to abate the Inflammation of the Hæmorrhoids, and is thus prepared:

> Boil the Leaves in Oil, in which Beetles or Woodlice have been infuſed; then ſtrain the Oil through a Linen Cloth; and add to it the Yolk of an hard Egg, and as much new Wax as will give it the Conſiſtence of an Ointment.

Others boil the Toad-flax with Lard, till it becomes of a fine green Colour, and add to it the Yolk of an Egg, when they would make uſe of it. *Horſtius* relates, that a Landgrave of *Heſſe* gave *John Valſius*, his Phyſician, a fat Ox every Year, for diſcovering this Secret to him. Some fill little Bags with dried Chamomile and Toad-flax, boil them in Milk, and apply them to the Piles. The Juice, and the diſtilled Water, of this Plant are good for Inflammations of the Eyes. *Cæſalpinus* commends it for the Cancer, and for the St. *Antony*'s Fire; *Tragus*, for the Cancer and Fiſtula: He affirms, that it is diuretic; and that its diſtilled Water is laxative, and aperitive, good for the Jaundice, and Obſtructions of the Liver. *Martyn's Tournefort.*

The common yellow Toad-flax diſturbs the Belly, as *Tragus* obſerves; it is a very potent Diuretic. A ſmall Glaſs of the Water, with a Dram of the pulverized Bark of the Dwarf-elder, provokes Urine in an extraordinary manner; for which Reaſon this Medicine is to be given only to hydropic Perſons. The ſame Water, being drank, looſens the Belly, and cures the Jaundice: The Decoction of the Herb in Wine is very effectual in the ſame Diſorder; and opens Obſtructions of the Liver. The ſame Water, or the Juice, inſtilled into the Eyes, removes an Inflammation, or Redneſs; which *Tragus* ſays he had obſerved by long Experience. Linen Cloths, moiſten'd in the ſame Water, are very proper to waſh and cleanſe all Sorts of Ulcers, and the Juice removes Spots, and all cutaneous Blemiſhes of the Face. *Trag.* It is not only a moſt ſpeedy and effectual Remedy in a recent Jaundice, but for all ſuch as are diſpoſed to a Dropſy. Some, as *Lobel* obſerves, apply the Herb to the Bottoms of their Feet, within their Shoes, in order to expel a Quartan. *Raii Hiſt. Plant.*

The 17th is the

Linaria; hirſuto folio; ſubrotundo; flore ex herbido flaveſcente. *Hiſt. Oxon.* 2. 503. *Boerh. Ind. alt.* 232. *Elatine, Veronica fœmina.* Offic. *Elatine folio ſubrotundo.* C. B. P. 252. Park. Theat. 553. *Elatine mas folio ſubrotundo.* J. B. 3. 372. *Veronica fœmina Fuchſii ſive Elatine.* Ger. 501. Emac. 625. *Linaria ſegetum, Nummulariæ folio villoſo.* Tourn. Inſt. 169. *Linaria Elatine dicta folio ſubrotundo.* Raii Hiſt. 1. 759. Synop. 3. 282. FEMALE FLUELLIN.

This is a ſmall low Plant, creeping upon the Ground, with ſlender hairy Branches, ſeldom exceeding a Span in Length, on which grow alternately many ſoftiſh and hairy Leaves, roundiſh, but yet a little pointed at the Ends, on ſhort Foot-ſtalks: At the ſetting on of the Leaves ſpring ſmall Flowers, on long, ſlender, hairy Footſtalks, in Shape like the Flowers of Toad-flax, the upper Lip being yellow, and the lower purple, with a Heel in the hinder Part; theſe are ſucceeded by bicapſular Seed-veſſels, containing ſmall black Seed. The Root is ſmall and fibrous, periſhing every Year; it grows in Corn-fields, ſeldom flowering till the Corn is cut down.

Tho' *Moriſon*, *Ammanus*, Mr. *Ray*, and others, make this a Species of Linaria; yet *Rivinus* will not allow it to be one, becauſe the Seed-veſſel, when ripe, opens in a different manner from the Linaria; but his Diſtinction ſeems to be too nice.

Fluellin is a vulnerary Plant, and accounted good for old Ulcers, and ſpreading cancerous Sores, and uſeful in Fluxes and Hæmorrhages of all Sorts, and for Inflammations of the Eyes. *Miller's Bot. Off.*

The Flowers of this Plant are no-where well repreſented; its Leaves are very bitter, a little ſtyptic, and have a Smell a little oily; they hardly give any Tincture of Red to the blue Paper: Whence we may conjecture, their Salt very much reſembles the natural Salt in the Earth, being joined with a great deal of Sulphur, and terreſtrial Parts: This Plant is vulnerary, ſweetening, and deterſive; it cleanſes the Blood, and is reſtorative: *Cæſalpinus* eſteem'd it for ſcrophulous Tumors, and the Leproſy. *Pena* and *Lobel* relate, that a Barber cured by it a carcinomatous Ulcer in the Noſe of a certain Perſon, ſo eat away, that ſeveral Phyſicians adviſed to cut it off. Three Ounces of the Juice, or ſix Ounces of the Water, of this Plant, diſtilled in Balneo Mariæ, drank twice a Day, is good for the Cancer, Gout, Tetters, Leproſy, and Dropſy. There may be a Tincture drawn from it with Spirit of Wine; and an Extract of it prepared, the Doſe of which is a Dram.

The following Ointment is good for Ulcers, the Piles, the King's-evil, and for all the Diſeaſes of the Skin.

Macerate the Leaves of this Plant for twenty-four Hours, in as much White-wine as is ſufficient to cover them: Squeeze out the Juice, and boil it to the Conſumption of one Third, and add as much Lard as will give it the Conſiſtence of an Ointment. *Martyn's Tournefort.*

The 19th is the

Linaria; folio glabro, ſubrotundo; Hederæ folio Clematitis. *Hiſt. Oxon.* 2. 503. *Boerh. Ind. alt.* 232. *Cymbalaria.* Offic. C. B. P. 306. *Cymbalaria Italica.* Ger. Emac. 529. *Cymbalaria Italica hederacea.* Park. Theat. 681. *Cymbalaria floſculis purpuraſcentibus.* J. B. 3. 685. *Linaria Cymbalaria dicta.* Raii Hiſt. 1. 759. *Linaria hederaceo folio glabro ſeu Cymbalaria vulgaris.* Tourn. Inſt. 169. Raii Synop. 3. 232. IVY-LEAVED TOAD-FLAX.

It grows at *Baſil*, in *Switzerland*, on the very Walls of the City; and nothing is more frequent on moiſt Walls, looſe Piles of Stone, and Rocks, in *Italy*. The Plant is of a cold and humid Quality, mixed with ſomewhat of Aſtringency; and it is certain from Experience, that this Herb has the ſame Virtues as the common Navelwort. Some, as *Matthiolus* informs us, preſcribe the Herb to be eaten in Sallads, for the Fluor albus; but for thoſe of our Country, where Sallads are not ſo commonly eaten, *Parkinſon* recommends a Conſerve of the Leaves. *Raii Hiſt. Plant.*

LINARIA AUREA. A Name for the *Coma aurea; Germanica.*

LINARIA SCOPARIA. A Name for the *Chenopodium; Lini folio villoſo.*

LINARIA, in Zoology, is a Linnet; which is thus diſtinguiſhed:

Linaria. Offic. Aldrov. 2. 824. Geſn. de Avib. 530. Charlt. Exer. 88. Jonſ. de Avib. 69. Mer. Pin. 176. *Linaria vulgaris.* Raii Ornith. 258. Ejuſd. Synop. A. 90. *Linota.* Bellon. des Oyſe. 356. THE COMMON LINNET.

The Fleſh is recommended by ſome as an Analeptic, or Reſtorative; it, alſo, expels Stones from the Kidneys and Bladder.

LINCTUARIUM. A Linctus.

LINCTUS. A Linctus is a Medicine of a Form ſomewhat more thin than an Electuary, and thicker than a Syrup: It is called *Eclegma, Ecleictos*, and ſometimes *Lohoc*, or *Loch:* It is generally order'd to be lick'd from a Stick of Liquorice, (whence its Name) or to be taken out of a Spoon; and is principally directed in Diſorders of the Mouth, Fauces, Oeſophagus, Larynx, Aſpera Arteria, and Lungs; and is uſually prepared of emollient and demulcent, but ſometimes of aſtringent, Ingredients, Electuaries, Syrups, Oils, Conſerves, Pulps, Powders, and other Subſtances, which are of an agreeable Taſte.

LINEA ALBA.

The Linea alba is a white Line, which runs from the Cartilago Enſiformis to the Os Pubis, dividing the Abdomen exactly in the Middle; and is formed out of the Tendons of the oblique and tranſverſe Muſcles.

LINGUA. The Tongue. A previous Knowledge of the Os Hyoides is neceſſary, in order to underſtand the Anatomy of the Tongue.

The Os Hyoides, or Bone of the Tongue, is ſituated in the middle Space between the Angles of the lower Jaw. It is a little Bone, and reſembles, in ſome meaſure, the Baſis of the lower Jaw, or a ſmall Bow. The antient *Greeks* compared it to one of the Vowels in their Language, and from thence came the Name of *Os Hyoides, Yoides*, or *Ypſiloides.*

It is diſtinguiſhed into the Baſis, which is the anterior Part; two large Cornua, which are the lateral Parts; and two ſmall Cornua, or Appendices, which are the ſuperior Parts; to the upper End of which other Appendices are frequently joined.

The Baſis is the broadeſt and thickeſt Part. It is ſituated tranſverſly, and two Sides may be diſtinguiſhed in it, one anterior unequally convex, and one poſterior unequally concave: It has, likewiſe, two Edges, one ſuperior, and one inferior; and two Extremities, one to the Right, and one to the Left: The Angles might, likewiſe, be diſtinguiſhed.

In the Middle of the fore Side is a perpendicular Eminence, which divides it into Right and Left Portions, and which terminates above in a ſmall pointed Tubercle, with a ſmall hollow Impreſſion on each Side. At the lower End of this Eminence there are, alſo, two ſuch Impreſſions, but much larger. Near each Extremity we find Inequalities, which end in Angles of the Baſis. The back Side, as has been already ſaid, is hollow. The large Cornua are joined to the Extremities of the Baſis, by cartilaginous Symphyſes; which, in Adults, become long. In each Cornu we diſtinguiſh the Root or anterior Extremity, the Point or poſterior Extremity, and the middle Portion. The Length of each Cornu is near double that of the Baſis. The Roots are thick and broad, and by them the Cornua are joined to the Baſis. The lower Part of the middle Portion is a little crooked, and, alſo, broader than the reſt. The Points end in a little cartilaginous Head; and, in the natural State, a ſhort Ligament, with a little round Bone, or Cartilage, runs down from each of theſe Heads.

The ſmall Cornua are placed on the Symphyſes of the large ones, almoſt perpendicularly, being only inclined a little outward and backward. They are joined by a cartilaginous Symphyſis peculiar to them; and are themſelves Cartilages in young People; but they afterwards oſſify, though not always at the ſame Age, and at laſt their Symphyſis is loſt. The Length of theſe Cornua varies pretty much; and, at the upper Extremity of each of them, we ſometimes meet with one or more additional Portions, in the Shape of little oblong Pearls, or of little Pillars, ſet upon one another, and held together by a kind of Ligament, more or leſs cartilaginous. The Subſtance of theſe Appendices is different in different Ages, in the ſame manner as that of the Cornua themſelves.

The Os Hyoides is connected, by a ligamentary Symphyſis, with the Styloide Apophyſis, the Cartilago Thyroides of the Trachea Arteria, and the Epiglottis. It is, alſo, connected by Muſcles with other Parts.

The principal Uſe of this Bone is to be the Baſis and Support of the Tongue. The Pliableneſs of the ſmall Cornua is likewiſe believed to contribute to the Perfection of Singing.

Every one knows, that the Tongue is a ſoft fleſhy Body, which fills all that Part of the Cavity of the Mouth, that is ſurrounded by the alveolary Border and Teeth of the lower Jaw, and extends ſtill farther back. All this Space is, therefore, in a manner, the Mould and Meaſure of the Length and Breadth of the Tongue, as well as of its Thickneſs and Figure.

The Tongue is divided into the Baſis and Point, the upper and under Sides, and the lateral Portions or Edges. The Baſis is the poſterior, or thicker Part; the Point, the anterior and thinneſt Part. The upper Side is not quite flat, but a little convex, and divided into two lateral Halves, by a ſhallow depreſſed Line, called Linea Linguæ Mediana. The Edges are thinner than the other Parts, and a little rounded as well as the Point. The lower Side reaches only from the middle of the Length of the Tongue to the Point.

The Tongue is principally compoſed of very ſoft fleſhy Fibres, intermixed with a particular medullary Subſtance, and diſpoſed in various Manners. Many of theſe Fibres are confined to the Tongue, without going any farther; the reſt form ſeparate Muſcles, which go out from it in different Ways, and are inſerted in other Parts. All the upper Side of the Tongue is covered by a thick Membrane of a papillary Texture; upon which lies another very fine Membrane, like a kind of Epidermis, which is likewiſe continued over the lower Side, but without Papillæ.

Three Sorts of Papillæ may be diſtinguiſhed in the upper Side of the Tongue; Capitatæ, Semi-lenticulares, and Villoſæ: Thoſe of the firſt Kind are the largeſt, reſembling little Muſhrooms with ſhort Stems, or Buttons without a Neck: They lie on the Baſis of the Tongue, in ſmall ſuperficial Foſſulæ.

They reſemble ſmall conglomerate Glands, ſeated on a very narrow Baſis, and each of them has ſometimes a ſmall Depreſſion in the middle of their upper or convex Side: They occupy the whole Surface of the Baſis of the Tongue; and they are ſituated near each other, in ſuch a manner, as that the moſt anterior form an Angle: They are glandular Papillæ, or ſmall ſalival or mucilaginous Glands, of the ſame kind with thoſe which are to be deſcribed hereafter.

We often obſerve, about the Middle of this Part of the Tongue, a particular Hole of different Depths; the inner Surface of which is entirely glandular, and filled with ſmall Papillæ, like thoſe of the firſt Kind. It is called Foramen cæcum *Morgagnii*, as being firſt deſcribed by that Author: Since that time, *Vaterus* has diſcover'd a kind of ſalival Ducts belonging to it; and *Heiſter* found two of theſe Ducts very diſtinctly, the Orifices of which were in the Bottom of the Foramen Cæcum, near each other: He obſerved the Ducts to run backward, divaricating a little from each other; and that one of them terminated in a ſmall oblong Veſicle, ſituated on the Side of the ſmall Cornu of the Os Hyoides.

The Papillæ of the ſecond Kind, or Semi-lenticularis, are ſmall orbicular Eminencies, only a little convex, their circular

Edge not being ſeparate from the Surface of the Tongue. When we examine them in a ſound Tongue, with a good Microſcope, we find their convex Sides full of ſmall Holes or Pores, like the End of a Thimble.

They lie chiefly in the middle and anterior Portions of the Tongue, and are ſometimes moſt viſible on the Edges, where they appear to be very ſmooth and poliſhed, even to the naked Eye, and ſometimes in living Subjects. They ſoon loſe their Conſiſtence after Death, ſo that, by rubbing them ſeveral times, they may be drawn out in Form of ſmall ſoft Pyramids, inclined to one Side.

The Papillæ of the third Kind, or Villoſæ, are the ſmalleſt, and moſt numerous. They fill the whole Surface of the upper Side of the Tongue, and even the Interſtices between the other Papillæ. They would be more properly named Papillæ Conicæ, than Villoſæ, from the Figure which they appear to have, when examined thro' a Microſcope, in clear Water. They are naturally ſoftiſh, but they become extremely flaccid after Death; ſo that, by handling them, they may be made ſhort and thick, whereas they are naturally long and ſmall.

The fleſhy Fibres, of which the Tongue is compoſed, and which go no further than the Tongue, may be termed Muſculi Linguæ Interiores, or the intrinſic Muſcles; and they are the ſame which *Spigelius* named Muſculi Linguales. The Fibres theſe Muſcles conſiſt of, are of three general Kinds, longitudinal, tranſverſe, and vertical; and each of theſe Situations admits of different Degrees of Obliquity. The longitudinal Fibres point to the Baſis and Apex of the Tongue, and ſeem partly to be Expanſions of the Muſculi Stylo-gloſſi, Hyo-gloſſi, and Genio-gloſſi. The vertical Fibres ſeem likewiſe to be in Part produced by the ſame Genio-gloſſi, and the tranſverſe by the Mylo-gloſſi.

Beſides theſe mixed Productions, there is a diſtinct Plane of longitudinal Fibres, which run near the Surface of the upper Side of the Tongue, and a diſtinct tranſverſe Plane under them. All theſe Fibres are partly interwoven, one Portion of them terminating at the two Edges of the Tongue, and the other at the Baſis and Point, without going to any other Part; and they lie immediately above thoſe which belong to the Genio-gloſſi. To diſcover all theſe different Fibres, and their different Degrees of Direction, we need only cut the Tongue longitudinally, after it has been boiled, or long macerated in ſtrong Vinegar.

The extrinſic Muſcles, or Muſculi exteriores, are thoſe which, by one Extremity, make a Part of the Body of the Tongue, and are fixed by the other in ſome Part, without the Tongue. Of theſe we commonly reckon four Pairs; Mylo-gloſſi, Stylo-gloſſi, Hyo-gloſſi, and Genio-gloſſi.

The Muſcles which move the Os Hyoides belong, alſo, to the Tongue, and are the principal Directors of its Motion. Their Names are, Mylo-hyoidæi, Genio-hyoidæi, Stylo-hyoidæi, Omo, or commonly Coraco-hyoidæi, and Sterno-hyoidæi; the Deſcription of which may be ſeen in their proper Places.

The Mylo-gloſſi are ſmall fleſhy Planes ſituated tranſverſely; one on each Side, between the Ramus of the lower Jaw, and the Baſis of the Tongue. Their Inſertion in the Jaw is immediately above the poſterior Half of the Mylo-hyoidæus between the prominent oblique Line on the Inſide of the Bone, and the Dentes Molares. Thence they run toward the Baſis of the Tongue, and are loſt there on one Side of the Gloſſo-pharyngæi. Theſe Muſcles are often wanting.

The Stylo-gloſſi are two long ſmall Muſcles, which run down from the Styloide Apophyſes, or Epiphyſes, and form two Portions of the lateral Parts of the Tongue. Each Muſcle is fixed in the Outſide of the Apophyſis Styloides, by a long Tendon, being the uppermoſt of the three Muſcles fixed in that Apophyſis; which, at *Paris*, go by the Name of *Riolan's* Noſegay. The Stylo-hyoidæus is the loweſt, and the Stylo-pharyngæus is in the Middle, but more backward.

As it runs down almoſt oppoſite to the Inſide of the Angle of the lower Jaw, it ſends off a pretty broad and ſhort lateral aponeurotic Ligament; which, being fixed in that Angle, ſerves for a Frænum, or Ligamentum Suſpenſorium, to the Muſcle in this Part of its Courſe. From thence it paſſes on to the Side of the Baſis of the Tongue, where it firſt of all adheres cloſely to the lateral Portion of the Hyo-gloſſus, and then forms, together with that Muſcle, a large Portion of the Side of the Tongue.

The Hyo-gloſſi are each inſerted in three Parts of the Os Hyoides, that lie near each other; in the Baſis, in the Root of the great Cornu, and in the Symphyſis between theſe two; and on this Account the Hyo-gloſſus has been divided by ſome into two or three diſtinct Muſcles, called Baſio-gloſſus, Cerato-gloſſus, and Chondro-gloſſus. In ſome Subjects they may eaſily be ſeparated, the three Portions being ſimply contiguous to each other; but it is needleſs to burden the Memory with ſo many uſeleſs Names, and therefore I deſcribe them all as one Muſcle, by the Name of the Hyo-gloſſus.

It is ſituated on the Inſide, and a little lower than the Stylo-gloſſus, with which it forms the lateral Part of the Tongue. The Portion inſerted in the Baſis of the Os Hyoides lies more anteriorly, and is larger than the other two; that which is inſerted in the Symphyſis, is the leaſt; and that inſerted in the great Cornu, the moſt poſterior.

This Muſcle is partly ſuſtained by the Mylo-hyoidæus, or by a Girth; and the anterior Portion is diſtinguiſhed from the reſt, by the Paſſage of the Nerves of the Fifth Pair, and of the Arteries which accompany them.

The Genio-gloſſi are ſituated cloſe to each other on the lower Side of the Tongue. Each Muſcle is inſerted in the inner, or back Side of the Symphyſis of the lower Jaw, immediately above the Genio-hyoidæus. Thence it runs backward toward the Os Hyoides, to which the loweſt Fibres are connected by a ligamentary Membrane; and in this Courſe, its Fibres are ſpread through the Subſtance of the Tongue, in a very ſingular manner.

Of theſe Fibres ſome run directly to the Os Hyoides, all the Way to the Baſis of the Tongue; ſome are inflected forward, and go to the Point of the Tongue; and the reſt are diſtributed in a radiated Manner, forward, upward, and backward, in the Subſtance of the Tongue; and the middle Fibres expand laterally, towards the Edges of the Tongue.

The two Genio-gloſſi run cloſe to each other, as if they formed but one Maſs; but they are evidently divided by a very thin cellular Membrane, or middle Septum, which penetrates a good way between the two lateral, or Right and Left Halves of the Tongue, lying in the ſame Plane with the Linea Mediana of the upper Side of the Tongue.

When we ſeparate theſe two Muſcles from the Chin, they preſently contract ſo much, that their anterior Extremities, which lie under the Point of the Tongue, are as far back as the Middle of it. It is in this preternatural Situation that we ſee theſe Muſcles repreſented in Figures, given by very great Anatomiſts, and drawn and engraved by very good Artiſts, in which Figures the whole Beauty of their true Mechaniſm is loſt.

Theſe two Muſcles, by their poſterior ſtrait Fibres, which go to the Baſis, can draw the Tongue out of the Mouth, and bring it back again, by their anterior bent Fibres, which go to the Point. They can either ſucceſſively, or all at once, make the Tongue longitudinally hollow, or like a Groove; and they can, at the ſame time, contract it, by the lateral Expanſion of their middle Fibres. I paſs over many other Motions, which theſe Muſcles are capable of performing; whence I formerly uſed to call them Muſculi polychreſti.

When either of the Stylo-gloſſi acts, it turns the Tongue toward the Cheek, and forces the Aliment between the upper and lower Molares. When they act jointly with the lateral Portions of the ſuperior fleſhy Plane of the Tongue, they turn the Tongue obliquely upward to the Teeth of the upper Jaw, and near the Cheeks; as when we bring down any Part of the Food that hath ſtuck there after Maſtication. When they act jointly with the lateral Portions of the Hyo-gloſſi, they turn the Tongue downward between the lower Teeth and the Cheek.

When all the Parts of the Hyo-gloſſi act together, they ſhorten the Tongue. They likewiſe turn the Point of the Tongue between the Teeth and the under Lip, and make it paſs over that Lip. The ſuperior fleſhy Plane of the Body of the Tongue bends it upward toward the Palate, and makes it paſs along, or lick the upper Lip. The Mylo-gloſſi ſerve as a Frænum to one Side of the Baſis, while the Point is turned to the other Side. The Ligamenta Suſpenſoria of the Stylo-gloſſi may anſwer the ſame Purpoſe, and even ſupply the Want of the Mylo-gloſſi.

Beſides the Membranes of the Tongue already deſcribed, it is cuſtomary to mention another, called Membrana Reticularis, which is commonly demonſtrated from the boiled Tongues of Oxen or Sheep; and ſome pretend to have ſhewn it in the human Tongue, which I own I have never been able to do. Long ago, I ſhew'd what they take from the Tongues of Oxen and Sheep, to be not a true Membrane, but a kind of a clear mucilaginous Subſtance, which lies between the papillary and external Membranes, and which, by boiling, becomes white, and acquires Solidity enough to be taken out in large Portions; and that the Holes found in it are owing to the ſmall pyramidal Papillæ.

The Tongue is fixed in the Mouth, not only by Muſcles, but alſo by Ligaments, which are for the moſt part membranous. The principal Ligament is that called the Frænum, which is the prominent Fold that appears firſt under the Tongue, when we raiſe it, with the Mouth opened; and is no more than a Continuation, or looſe Duplicature, of that Membrane, which covers the inferior Cavity of the Mouth. It covers the Curvature of the anterior Portion of the Genio-gloſſi from the Point of the Tongue, almoſt as high as the middle Interſtice between the lower Dentes Inciſorii.

The other Ligaments of the Tongue are the ſmall membranous Fold which runs along the Middle of the convex Side of the Epiglottis to the Baſis of the Tongue; and the membranous Folds which cover the inferior half Arches of the Septum Palati. Theſe three Folds are Continuations of the Membrane which covers the neighbouring Parts. The aponeurotic Ligaments of the Stylo-gloſſus may be looked upon as true lateral Ligaments of the Tongue; and they adhere a little to the lower Part of the Muſculus Pterygoidæus Internus, or anterior.

The principal Blood-veſſels of the Tongue are thoſe which appear ſo plainly on its lower Surface, on each Side of the Frænum; and they conſiſt of one Artery, and one Vein, which accompany

company each other, and are called Arteriæ & Venæ Sublinguales, or Raninæ. The Veins lie next the Frænum, and the Arteries on the other Side of the Veins. The Arteries are Ramifications of the ſecond internal, or anterior Branch of the external Carotid on each Side, and communicate with the firſt external, or poſterior Branch of the ſame Carotid. The Veins are commonly Ramifications of a Branch of the external and anterior Jugular Vein.

We obſerve four nervous Ropes to go very diſtinctly to the Baſis of the Tongue, and to continue their Courſe through its whole Subſtance, all the Way to the Point. Two of theſe Ropes are Ramifications of the inferior maxillary Nerves, or of the third Branch of the Fifth Pair, from the Medulla oblongata. The other two are the Nerves of the Ninth Pair. The two firſt I name Linguales, or Hypogloſſi minores, and the other two Linguales, or Hypogloſſi majores. The Majores are inferior and internal; the Minores, ſuperior and external, or lateral. The ſmall Portions, or firſt Branch of the Nervus ſympatheticus Medius, or of the eighth Pair, ſend, alſo, a Nerve on each Side of the Tongue.

The great lingual Nerve, on each Side, runs forward between the Muſculus Mylo-hyoidæus and Hyo-gloſſus, under the Genio-gloſſus, and is diſtributed to the fleſhy Fibres, all the Way to the Point of the Tongue, communicating by ſeveral ſmall Filaments with the Lingualis minor, and with the Nerve from the Eighth Pair.

The ſmall lingual Nerve, on each Side, goes from the Maxillaris inferior, ſometimes at, and ſometimes before its Paſſage between the Pterygoide Muſcles. Afterwards, ſeparating more and more from the Trunk, it paſſes under the lateral Part of the Tongue, over the ſublingual Gland. It ſupplies the neareſt Parts of the Tongue as it paſſes, and then, entering its Subſtance, terminates at the Point, having ſent a great Number of Filaments to the papillary Membrane. It communicates, as has been ſaid, with the Lingualis major, and with the Nerve from the Eighth Pair.

This lingual Nerve, a little after it leaves the Maxillaris inferior, is accompanied by a ſmall diſtinct Nerve, which runs upward and backward, towards the Articulation of the lower Jaw, in Company with the lateral Muſcle of the Malleus; paſſes through the Tympanum, between the Handle of the Malleus, and the long Leg of the Incus, by the Name of Chorda Tympani; and afterwards, perforating the back Side of the Tympanum, unites with the Portio Dura of the auditory Nerve. This ſmall nervous Rope has been looked upon by Anatomiſts as a kind of ſmall Recurrent of the Nervus lingualis; but as in ſome Subjects it appears to make ſimply an acute Angle with the lingual Nerve, and as this lingual Nerve is ſomething larger after this Angle, it ought rather to be believed to come from the Tympanum, and to unite with the lingual Nerve, than to ariſe, from this Nerve, and run up to the Tympanum. In ſome Subjects the Union of this Nerve with the Lingualis is, in a manner, plexiform, and very difficult to be unfolded.

The lingual Nerve of the Eighth Pair, which is its firſt Branch, runs firſt on the Inſide of the digaſtric Muſcle of the lower Jaw, and ſupplies the Genio-hyoidæi, the neighbouring Muſcles of the Baſis of the Tongue, and thoſe of the Pharynx. Afterwards it ſends out the Ramifications, and forms the Communications deſcribed under the Article NERVUS; and, laſtly, goes to the lower Part of the Tongue, where it communicates with the lingual Branch of the Fifth Pair, and with the lingual Branch of the Ninth.

The Tongue is the Organ of the Senſe called Taſte, by means of the Papillæ, eſpecially the Villoſæ, or Pyramidales. It is not as yet diſcovered in what manner the Papillæ Semilenticulares contribute to the Taſte; and the Capitatæ ought to be looked upon as ſalival Glands.

The Tongue is, likewiſe, one of the principal Inſtruments of Speech, and of the Articulation of the Voice. *Riolan*, in his *Anthropographia*, mentions a Child, of five Years of Age, who, though he had loſt his Tongue by the Small-pox, but not the Uvula, continued ſtill to ſpeak almoſt as diſtinctly as before. Probably the Baſis of the Tongue ſtill remained. M. *de Juſſieu* has publiſhed an Obſervation in the Memoirs of the *Royal Academy*, concerning a little Girl, who could ſpeak, though ſhe was born without a Tongue, in room of which there was only a kind of ſmall Tubercle.

The Tongue ſerves, alſo, to collect all the Morſels, which we chew, to turn them in different manners, and to different Parts of the Mouth, and to rub off whatever ſticks to the Palate; and it is uſeful in ſpitting and ſucking. It bears a great Part in Deglutition, being aſſiſted by the digaſtric Muſcles, which by contracting, at the ſame time that the other Muſcles preſs the lower Jaw againſt the upper, raiſe the Os Hyoides, and fix it at a convenient Height, that the Stylo-gloſſi, and Hyo-gloſſi, may make the Baſis of the Tongue bear back upon the Morſel, which is to be ſwallowed, and ſo force it into the Pharynx, the Portions of which, that are, at that time, immediately above the Morſel, do inſtantly contract, and puſh it into the Oeſophagus.

Of the Disorders of the Tongue, which require Chirurgical Operations.

The Method of Depressing the Tongue.

Diſorders of the Mouth and Palate, Inflammations of the Tonſillæ and Uvula, a Polypus and Abſceſs of the Mouth, a ſmall Bone, or the Bone of a Fiſh, ſticking in the Fauces, and the like, frequently require a Depreſſion of the Tongue, before they can be remedied. For this Purpoſe an Inſtrument has been contrived, called *Specillum Linguæ* (See *Tab.* XXII. Fig. P). But Patients of greater Delicacy prefer the flat Handle of a clean Spoon, which is both neater, and more convenient. But in uſing this Inſtrument Care muſt be taken to move it gently, to prevent increaſing the Pain and Inflammation. If Injections are neceſſary, the Syringe is to be conveyed into the Mouth, over the Handle of the Specillum or Spoon. But if an Ulcer of the Mouth, a Diſorder of the Tonſils, or a Polypus in the Noſe, happen, but without Inflammation or Convulſions, in which the Mouth cannot be ſufficiently opened, the Speculum Oris may be cautiouſly applied. See *Tab.* XLI. *Fig.* 12. or 13.

The Method of cutting the Frenulum of the Tongue.

Sometimes, in Infants, the Tongue is ſo firmly connected, by the Frenulum, with the Bottom of the Mouth, that they cannot ſufficiently move or put out the Tongue in ſucking. This Tying, or Shortneſs of the Tongue, is, likewiſe, obſerved ſometimes in Adults, who cannot, upon that account, ſpeak articulately. This Diſorder is far from being ſo frequent as is generally imagined, not one Infant of a thouſand being affected with it, and is not near ſo common as the Hare-lip. When the Child can put his Tongue out of his Mouth, the Frenulum requires no Operation; for the Child will ſoon learn both to ſuck and ſpeak, when there is no other Impedient. But if the Child can ſcarcely move the Tongue, or extend it beyond his Teeth, it may then be neceſſary to free it by Inciſion. But this Operation, if raſhly performed, is ſometimes productive of very bad Conſequences, and even of Death itſelf.

Take hold of the End of the Tongue with a Linen Cloth between it and the Fingers, leſt it ſhould ſlip, as in *Tab.* XLII. *Fig.* 1. or the Tongue may be elevated by the Left Hand, with a ſmall Fork, made for the Purpoſe (See *Fig.* 2. 3. and *Tab.* XXII. O. P.) Then as much of the Frenulum of the Tongue, running between the ranular Veins, and the lower ſalival Glands, may be divided with an obtuſe-pointed Pair of Sciſſars, (*Tab.* XXII. C.) or a Knife, as appears to be ſufficient for freely permitting Suction, or Speech; but great Care muſt be taken in the Operation, to avoid wounding the ſalival Ducts, the ranular Veins, or the Nerves of the Tongue; for ſuch Wounds may be attended with very fatal Conſequences: Thus *Dionis*, in his Surgery, gives an Inſtance of an Infant which died after the Operation, by the Effuſion of Blood from the wounded ranular Veins. If a Vein ſhould be accidentally cut, which in a ſhort thick Frenulum may readily happen, a Compreſs, dipt in Vinegar, muſt be applied to the Tongue, till the Hæmorrhage be ſtopt. If, by the firſt Inciſion, the Tongue is not ſufficiently freed, after ſome Days, or even Weeks, the Remainder of the Frenulum muſt be cut, but with the greateſt Caution. After the Operation anoint the Wound with Honey of Roſes, or Syrup of Violets, applied by the Fingers, and repeat this frequently, in order to hinder the divided Parts from reuniting.

Hence it not only appears, that Caſes of this kind are uncommon, but that the Cure is dangerous. How wretchedly, then, are thoſe Midwives deceived, who, with the greateſt Ignorance, aſſert, that almoſt all Infants are born with this Diſorder! Upon this Suppoſition, therefore, they thruſt their Fingers into the Mouth of the new-born Infant, and, with their Nails, cruelly lacerate the Frenulum. Such raſh, and ſuch rude Treatment can ſcarcely fail to induce Inflammations of that Part, Convulſions, and even Death itſelf, on the moſt tender Infants. *Hildanus*, in *Cent.* 3. *Obſ.* 28. has given an accurate Account of the Nature and Cure of this Diſorder, and of the many bad Conſequences which attend the raſh or unskilful Performance of the Operation.

Of a Ranula, or Tumor, and a Stone under the Tongue.

A Ranula is a Tumor, or Abſceſs, under the Tongue, near the ranular Veins, either on the Right Side, Left Side, or Middle. The contained Matter is of different Sorts; ſometimes it reſembles a tough mucilaginous Lymph, ſometimes it is thicker, ſometimes it is purulent, and inclinable to Denſity, and ſometimes it is of a ſtony Conſiſtence. Sometimes the Tumor grows ſuddenly, and not only impedes Speech and Deglutition, but likewiſe excites very acute Pains. Sometimes hard fleſhy Tubercles are produced in this Part, which, the more

Pain they excite, are the more dangerous, and I have ſometimes ſeen them degenerate into a Cancer. Tumors under the Tongue are more frequent in Children than in Adults; nor can they be eaſily reſolved, as Medicines for that Purpoſe cannot be conveniently applied to them. The ſame Reaſon makes it equally difficult to bring them to a Suppuration; ſo that no Relief can be expected, except from chirurgical Operations.

As theſe Tumors are nearly of the ſame Nature with the encyſted Kind, they ought to be treated in the ſame manner, which is by far the readieſt, were it not attended in this Caſe with very great Difficulties. For the Bag is not only extremely thin, but the Crying of the Child extremely expoſes the Nerves, Blood-veſſels, or ſalival Ducts, to dangerous Wounds; whence may ariſe intenſe Pain, Spaſms, Inflammations, or violent Hæmorrhages. It will, therefore, be ſafer to turn the Tongue upward with one Hand, and, with a Knife, make a tranſverſe Inciſion in the Tumor, carefully avoiding the Nerves, Veſſels, and Ducts already mentioned; thus may the morbid Matter, whether it be viſcid, inſpiſſated, or purulent, be diſcharged; but, if it be very thick, it muſt be expreſſed by the Fingers. In order to prevent the remaining Bag from generating a new Tumor, which frequently happens, apply, to the very Bottom of the Wound, Lint dipt in Honey of Roſes, conſiderably acidulated with Spirit of Vitriol; thus deterging the Wound daily, till the Bag be entirely conſumed. Then may the Wound be ſafely healed, by applying Oil and Sugar, Honey of Roſes alone, or Oil of Myrrh *per Deliquium*. Sometimes the Tumor burſts ſpontaneouſly; and then the Ulcer muſt be deterged and healed as is above directed. Sometimes the ſmall Glands, under the Tongue, appear ſwelled with Pain and Inflammation. When this happens, the Patient ſhould often keep warm Milk in his Mouth, frequently applying a half-roaſted Fig to the Part affected, and under the Chin emollient Cataplaſms and Plaiſters, till the Tumor be either diſcuſſed or ripened. If it ripens, it ought to be laid open, deterged, and healed, like an Abſceſs of the Gums. But when, as I have ſometimes obſerved, the Tumor is ſituated under in the Middle of the Tongue, or where the ſalival Ducts terminate in the Mouth, Inciſion muſt never be attempted, becauſe of the Danger of wounding theſe Ducts, with the Nerves and Blood-veſſels. It is ſafer, therefore, to wait till Nature opens the Ulcer, which may then be treated as before. When a Tumor of this kind inclines towards a Cancer, it will ſubmit to none of the Methods here propoſed. If a Stone appears in this Part of the Tongue, the Part muſt be laid open; and, if the Stone does not fall out ſpontaneouſly, it muſt be extracted with a Probe, or Forceps, and the Wound may be treated as we have already adviſed.

Of a Scirrhus, Ulcer, and Cancer in the Tongue.

If Part of the Tongue is ſeized with an Hardneſs, and ſwells without Pain, it is ſaid to be affected with a Scirrhus. But, as ſoon as it becomes painful, and emits a purulent Matter, or fetid Sanies, it gradually degenerates into a Cancer. This Tumor is at firſt ſmall, not unlike a Pea, or a Philbert; ſometimes it a little enlarges itſelf, and ſometimes overſpreads the greateſt Part of the Tongue. Sometimes it is moveable, and ſometimes entirely fixed. Sometimes it is covered and occult, and ſometimes open and ulcerated, emitting, like other Cancers, a moſt fetid putrid Humour, and gradually conſuming the Tongue. Sometimes this miſerable Diſorder ariſes ſpontaneouſly, without any manifeſt Cauſe; but more frequently from the pricking Wounds of a ſharp, rough, broken Tooth; from which Cauſe I have ſometimes ſeen one Side, and ſometimes the Point of the Tongue corroded and deſtroy'd.

When, therefore, this Diſorder is thus occaſioned by a Tooth, it ought either to be drawn immediately, or at leaſt the pricking Point or Roughneſs ſhould be carefully abraded with a proper Raſp, like that in *Tab.* XLI. *fig.* 22. for, till this be effected, no Remedy can be expected. Then the morbid Part of the Tongue muſt be plentifully anointed with Oil of Myrrh per Deliquium, or with Honey of Roſes mixed with *Peruvian* Balſam, or Balſam of Mecca. If the Diſorder proceeds from internal Cauſes, internal Medicines, proper for a Scirrhus or Cancer, ſhould be exhibited; but if theſe, and other Remedies, have little Effect, the morbid Part muſt, with all Expedition, be removed by Inciſion, leſt, by Delay, the Diſorder ſhould increaſe, and the Operation become dangerous. It is, however, to be obſerved, that ſometimes ſmall Tubercles ariſe in the Tongue like Peas, or larger, which not only retain the ſame Size, but continue without Pain or Inconvenience many Years, even to the End of Life. The Cure of theſe Tubercles ought never to be attempted; for the more they are treated with Medicine, the more they are irritated, and even degenerate into an open Cancer, and bring the Patient to a miſerable Death. If the Tumor increaſes, excites Pain, and is moveable, an Inciſion muſt be made with the Knife, ſo as to ſeparate the morbid Parts from the ſound. But if it be fixed, and not very large, the neareſt ſound Parts ought to be removed with it. But, when the Tumor is greatly increaſed, and ſo ſituated in the Roots of the Tongue, that it is impoſſible to cut it entirely out, it is better to abſtain from the Operation, than to torment the Patient to no Purpoſe, or perhaps kill him: For, unleſs the Whole can be extirpated, it becomes worſe by the Inciſion. For the more convenient Performance of the Operation, it will be neceſſary to have an Aſſiſtant at the Back of the Patient for holding his Head; and another on one Side, to extend or hold faſt the Tongue, with his Fingers covered with a Piece of fine Linen, or with Forceps, or ſuch Inſtrument as is repreſented in *Tab.* XL. *Fig.* 9, 10. The Scirrhus or Cancer being thus extirpated, the Wound may be healed with Honey of Roſes, and a little of the Balſam above recommended; or with the Oil of Myrrh, or Oil of Olives; or with a Liniment made of Sugar, and the Oil of Sweet Almonds. After the Cure is completed, the Patient muſt be ſtrictly injoined to lead a regular Life, and to uſe a proper Regimen, and Medicines ever after, otherwiſe he will be in danger of a Relapſe *Ruyſch*, in his *Obſervat.* 76. relates a remarkable Caſe of this kind, in which, after having removed the ulcerated Tumor by Inciſion, he cured the Patient by applying the actual Cautery; which, without Cauterization, could not be effected, though the Tumor had been before ſeveral times extirpated.

Of Prognostics in acute Diseases taken from the Tongue.

The Inſpection of the Tongue, in acute Diſeaſes, is ſometimes of no ſmall Moment for predicting the Fate of the Patient. *Hippocrates*, 6 *Epid. Sect.* 5. *Aph.* 13, 15. ſays, that "that the "Tongue is of the ſame Colour with the predominant Humour," which he explains in the following Words. "The Tongue in-"dicates the Urine [either properly ſo called, or the ſerous Part "of the Humours. *Galen.*] a paliſh-yellow Tongue [χλωρὰς "γλῶσσαι] proceeds from Bile, which is the Effect of a pin-"guious Matter; a red Tongue from Blood; a black Tongue "from black Bile; a very dry Tongue from a fuliginous, aduſt "Matter; and a white Tongue from Phlegm." Hence it appears, that it is eaſy to know the predominant noxious Humour; for the Colour of the Tongue denotes the particular Humour, which cauſes the Diſorder. But we are to diſtinguiſh here, and conſider whether ſuch an Alteration of the Tongue proceeds from a Vapour or Humour, or from Meat or Drink, or Medicine, or a Diſtillation from the Head; for it may be owing to any one of theſe Cauſes. It will be neceſſary, therefore, to be well aſſured, that ſuch a Colour is not the Effect of any of the Cauſes abovementioned, but proceeds from Vapours or Humours convey'd from the Veins and Arteries to the Tongue, which is the more eaſily ſuſceptible of any Colour, becauſe it conſiſts of a flaccid, lax, and ſoft Subſtance, furniſhed with large Veins. *Galen*, on this Subject, ſays very well in his Comment on the Place above quoted: "For the Tongue, being furniſhed with large Veins, "and conſiſting of a looſe ſpongy Subſtance, is more adapted "than hard and denſe Bodies for the Admiſſion of ſerous Hu-"mours, and for the Reception of any Colour from them after "the Manner of Wool." Thus much being premiſed, we come to conſider the Prognoſtics, which may be drawn from the Tongue.

In all acute Diſeaſes, it is beſt to have the Tongue like that of a Perſon in Health, provided it does not appear ſo from ſome external Cauſe, as Meat, Drink, Medicine, or a Defluxion from the Head. When the Body is in a due Temperament, the Tongue is moderately red, ſoft, of a well-proportioned Magnitude, and void of all Defects, both with reſpect to Taſte and Speech. In acute Diſorders therefore, and eſpecially in burning Fevers, and a Synochus, for the Tongue to appear after that Manner, is a good Sign; for its reddiſh Colour indicates the noxious and morbific Humour to be neither much in Quantity, nor very putrid and inflammatory; for, in either of theſe Caſes, the Tongue, of neceſſity, would be either yellow, or Saffron-colour'd, or black, or intenſely red; ſince, as we have obſerv'd from *Hippocrates*, the Tongue cannot but be ting'd and ſtained with the Vapours and Exhalations of the Humours, which are moſt predominant in the Body, whether they are bilious, aduſt, or pituitous. A ſoft Tongue, if its Softneſs be not immediately owing to Meat, Drink, Medicine, or ſome Diſtillation from the Head, ſignifies that the Viſcera are not much affected with an Exceſs of Heat; for which Reaſon, alſo, the Patient is not very thirſty. A Softneſs of the Tongue, proceeding from a pituitous Diſtillation from the Head upon the Fauces, is known and diſtinguiſhed by proper Signs; the principal whereof are the immoderate Sleepineſs of the Patient, attended with an extraordinary Degree of Heat. A Diſtillation of this Kind, by irrigating the Tongue and Fauces, not only prevents the Tongue from being dry, but even mitigates its Thirſt. For this Reaſon it is ſaid by *Hippocrates*, 4 *Aph.* 54. that they who are affected with a Cough, are not very thirſty, and for the ſame Cauſe they ſpeak readily and freely. Thus you have the Deſcription of a Tongue not bad in acute Diſeaſes.

Sometimes the Alteration of the Tongue, from its natural State, is an Indication of a good Criſis; as, for Inſtance, in a ſevere Quinſey, when it appears highly inflamed, and very much ſwelled, by the Tranſlation of the Humours upon the Fauces and Tongue, or when it is affected with Convulſions and Tremblings on the ſame account. But ſuch Alterations are to be judged by proper critical Signs, which ought to precede them: And ſo much for a good Tongue; we come now to ſpeak of a bad one.

A Tongue any way changed and vitiated, in Colour, Bigneſs, or Subſtance, is bad. In acute Diſeaſes that Tongue is bad with reſpect to Colour, which is white, groſs, and feculent: Theſe Symptoms of the Tongue, ſays *P. Alpinus*, I obſerv'd in an epidemic Fever, which raged at *Genoa* ſome time ago, and they were a good Proof to me of a Redundance of pituitous and groſs Humours, and alſo of a great Heat in the Viſcera; nothing, however, with reſpect to Life or Death, could, with Certainty, be predicted from this Appearance. Wherefore, tho' this be no good Sign, as indicating the Diſeaſe to be fomented by a Redundance of groſs and pituitous, mixed with bilious and putrid Humours, yet, from this alone, without any other bad Symptoms, we can by no means prognoſticate the Death of the Patient.

The next bad Tongue, with reſpect to Colour, is the yellowiſh Tongue, which *Hippocrates* calls χλωρὰ, *Chlora* [See CHLOROS]. This indicates the Diſeaſe to proceed from a Redundance of Bile, and that putrefied, and by ſo much the more dangerous.

But this is not ſo dangerous as the black Tongue, which indicates an Abundance of aduſt Blood, which is more difficult to be corrected by Nature, than other Humours. Such a Tongue as this is proper to igneous and burning Fevers, attended with the higheſt Squalidneſs; and is always to be dreaded, but moſt of all when in Conjunction with other pernicious Signs: It is, alſo, a Symptom of peſtilent burning Fevers. Wherefore it is juſtly eſteemed a Symptom proper to acute Diſeaſes, as may very well be gather'd from *Coac.* 229. where it is ſaid, "that an extraordinary Blackneſs of the Tongue indicates a Criſis in fourteen "Days." It is added, "The moſt dangerous is the black and chlo-"rous or yellowiſh Tongue." Perhaps he means the chlorous inclining to black, and for good Reaſons, ſince it indicates, that the Bile, which before uſurped the Place of Blood, and tinged the Tongue with a yellow Colour, is, by an Increaſe of the Inflammation, now become black, and the Blood aduſt, which is the worſt State of all.

Again, a black Tongue attended with a Trembling, is condemned by the Author of the *Coac.* 233. where he ſays, that "Tremblings of the Tongue, in ſome Patients, are Cauſes of "a Looſeneſs; but, if the Tongue, alſo, becomes black, it "prognoſticates ſpeedy Death."

But a Tongue of a livid Colour is the moſt mortal Prognoſtic of all, becauſe ſuch a Colour is cauſed by an Alteration from a yellow, or red, to a black, on account of an high Inflammation of ſome Bowel, and an Exceſs of extraneous Heat, attended with a Deficiency or Extinction of the innate natural Heat.

A great Redneſs of the Tongue is, alſo, obſerved by Phyſicians to be ſometimes a very bad Sign in Quinſeys and Peripneumonies, but its Malignity is increaſed and confirmed by other bad Signs. Such was the Tongue of the Woman labouring under a Quinſey, who lived with *Ariſtion*, 3 *Epid. Sect.* 1. *Ægr.* 7. and died on the fifth Day of her Illneſs; and ſuch was, alſo the Caſe of the Son of *Balis*, 7 *Epid. Text.* 19. who died on the ninth Day.

In a Quinſey, the Tongue ſometimes increaſes in Bulk to ſuch a Degree, as hardly to be contained in the Mouth; but the Patient, in ſuch a Caſe, by a right Method of Treatment, has been often cured, though not a few have been ſuffocated. Many, on the contrary, have had their Tongues very conſiderably diminiſhed, their Moiſture being almoſt totally exhauſted by an exceſſive Heat; which ſhews the Fever to be very intenſe, and the Caſe very dangerous: But, to make a right Judgment, other Signs muſt, alſo, be conſidered.

A great and black Tongue is mortal, as indicating an Extinction of the natural Heat. This was the Caſe of the young Woman, 5 *Epid. Text.* 53. who, in the twentieth Year of her Age, took a Medicine to procure Abortion, and died on the fourth Day.

As to the Subſtance of the Tongue, ſome are remarkably ſoft, from imbibing much Humidity; others are very dry, rough, uneven, rugged, chapt, ulcerated; ſome appear with ſmall Tumors, ſome are hot, others cold to the Touch; ſome appear in a State anſwerable to the Meaſure of Thirſt, others are accompanied by no Thirſt at all.

The Tongue is dry and parched in all Fevers, but moſt of all in burning Fevers, and no leſs in ſuch as are accompanied with a Phrenſy. A dry and rough Tongue ſeems proper to burning Fevers, as *Galen* obſerves, *Com. in Prorrhet.* and a Tongue vehemently dry is a Sign of an intenſe Heat. In ſuch Caſes the Tongue firſt becomes dry and parched, then rough and uneven, ſoon after hard and rugged, and, at laſt, by the Violence of the Heat, chapt and ulcerated, in the ſame manner as the Earth is affected with Chaps and Fiſſures, when immoderately dried by the vehement Heat of the Sun.

An hard and rugged Tongue is very bad, and proper to a Phrenſy, as it contracts a vehement Degree of Drineſs from the Vicinity of the Inflammation. Hence the Author of the *Prorrhet. Lib.* 1. *T.* 3. calls denſe, or hard, and dry Tongues, phrenitic; and of ſuch we read in *Coac.* 229. where it is ſaid, "that a "Tongue, which in the Beginning grows rugged, but maintains "its Colour, but, in the Progreſs of the Diſeaſe, becomes "rough, livid, and chapt, is mortal." A Drineſs of the Tongue, however, without the Concurrence of other Signs, is of no importance towards prognoſticating the Death of the Patient; for many who have had ſuch Tongues, when labouring under ſevere Diſtempers, have yet recovered. Inſtances of this we have in 1 *Epid. Sect.* 7. *Ægr.* 14. in the Virgin of *Lariſſa*.

If the Tongue be black, as well as dry, it is a more pernicious Sign: But we muſt not preſume from hence to predict the Death of the Patient without the Concurrence of other Signs; of which Nature were thoſe obſerved in conjunction with a Blackneſs of the Tongue, by *Hippocrates*, in the Wife of *Dromeades*, 1 *Epid. Sect.* 3. *Ægr.* 11. and in him, who, being ſomewhat feveriſh, went to Supper, and drank freely afterwards, *Ægr.* 12. and in *Hermocrates*, 3 *Epid. Sect.* 1. *Ægr.* 2. and in many others. To have the Tongue thus dried in a Quinſey in a very bad Sign, as it indicates the Greatneſs of the internal Inflammation, which is what ſuffocates the Patient. Thus did the Tongue of the Woman, who died of a Quinſey on the fifth Day, appear to *Hippocrates*, 3 *Epid. Ægr.* 7.

The Tongue appearing with Chaps and Ulcerations is an Indication of a more pernicious and malignant Inflammation. I have obſerved, ſays *P. Alpinus*, in malignant Fevers, a ſqualid, chapt, and puſtulous Tongue, but the Patient did not always die; tho' *Rhaſis*, *Lib.* 10. *Cap.* 3. writes, "When Puſtules appear on the Tongue, "of the Bigneſs of Chichês, and the Fever is violent and acute, "the Patient will die on the Beginning of the next Day." We may conclude, therefore, that a dry, hard, and very black Tongue, appearing with other bad Signs, is a fatal Preſage; and, moſt certainly, when the Patient, at the ſame time that his Tongue is thus dried and exaſperated, is inſenſible of Thirſt; for this, in burning Fevers, is a moſt pernicious Sign, as indicating, according to *Galen, in* 1 *Epid.* either a Delirium, or an Extinction of the Faculty.

Whenever, then, we obſerve a dry and aduſt Tongue, without Thirſt, we may venture to predict a Delirium, or Death; and the laſt of theſe, if ſuch a Tongue be attended with pernicious Signs, of ſuch a Nature as thoſe which were obſerved by *Hippocrates*, in the Perſon who ſupped when he was feveriſh, and in *Hermocrates*, before-mentioned, who both died. Of the firſt of theſe, he ſays, "A certain Perſon, being ſomewhat feveriſh, "went to Supper, and drank pretty freely; in the Night he "vomited up every thing, had an high Fever, attended with a "Pain of the Right Hypochondrium, and a ſlight [ὑπολάπα-ρος] "Inflammation of the internal Parts; he was very reſtleſs "all the Night; his Urine, at firſt, was thick, red, and depo-"ſited no Sediment; his Tongue was very dry, but he had no "great Thirſt." As to the Caſe of *Hermocrates*, after he had told us, that his Tongue, in the Beginning, was very much parch'd, was deaf, ſleepleſs, but not very thirſty, and that his Urine was thick, and turbid, he adds afterwards, "On the twentieth Day, "he had another Criſis [ſpoken with relation to the imperfect Criſes on the eleventh and fourteenth Days], "was free from a "Fever, and had no Sweat, was averſe to Food all the time, "and in his perfect Senſes, but could not ſpeak; his Tongue "was very dry, but he had no Thirſt; and he was ſleepy, and "ſomewhat affected with a Coma. About the twenty-fourth "Day the Fever returned; he had a Looſeneſs upon him, and "voided Abundance of thin Matter by Stool; he had an high "Fever the following Days, his Tongue was extremely parch'd, "and on the twenty-ſeventh Day he died." That the dry and aduſt Tongue of this Patient, unattended with Thirſt, was one of thoſe Symptoms, which indicate an Extinction of the Faculty, was demonſtrated by thoſe other ill Signs which attended it, as a perpetual Loathing of Food, and the reſt. An aduſt, or extremely parched Tongue, therefore, in acute Diſeaſes, portends, as we ſaid, either a Delirium or Death. We, ought however, to be cautious in paſſing our Judgment on the Life of the Patient from theſe two Signs alone, ſince, as we before hinted, the Tongue may appear very dry and aduſt, and the Patient not be thirſty; and yet no Delirium, nor Extinction of the Faculty, be obſervable. This is owing to a Diſtillation of pituitous Humours from the Head, by which the Fauces are irrigated, and the Thirſt extinguiſhed. And we are certain, that this is the Cauſe, if there were no other Reaſon for it, than that the whole Tongue, in ſuch Caſes, is not dry; for, when in a Diſtillation of pituitous Humour, the whole Subſtance of the Tongue is not dried, but only the Part next the Root, and the Tongue, after an Ablution with Humour, ſoon grows ſoft. To this may be added, that the Sick, in ſuch Caſes, are not perpetually wakeful, but have the Conveniency of Sleep; becauſe the ſuperior Parts of the Body abound with Humidity. Some-

times

fies the Diſtillation upon the Fauces plainly diſcovers itſelf by the Patients frequent hauking and ſpitting, which are occaſioned by the copious Humour deſcending from the Head. To conclude, therefore, upon the Whole, when the Tongue, in a burning Fever, where there is no Diſtillation of Humour from the Head, appears dry, rough, and aduſt, and theſe Symptoms are unattended with Thirſt, we may ſafely venture to predict a Delirium, or an Extinction of the Faculty.

A dry Tongue feels ſometimes hot, ſometimes cold, to the Touch; the latter is a mortal Sign, becauſe it never happens but in violent Inflammations. A Tongue which feels hot and rough, is not ſo dangerous; but moſt threatening when it happens in the Beginning, as it did in the Caſe of *Hermocrates* before-mentioned.

A tremulous or trembling Tongue is, alſo, a Symptom in acute Diſorders; and if it be conſequent upon a moſt intenſe Drineſs of the ſame Part, is mortal in the laſt Degree. A Trembling of the Tongue is an uſual Symptom in mortal Phrenſies, agreeably to the Author of the *Prorrhet. Lib.* 1. *T.* 20. who ſays, that "a trembling Tongue is a Sign of a diſturbed Reaſon." For when the Brain labours under a Phrenſy, which is an hot Affection, the Tongue cannot be at Reſt; on which account it frequently happens, that the Sick ſtammer, and are not able to ſpeak out their Words, a little before their Death: And theſe two Symptoms, I mean Tremblings and Convulſions of the Tongue, are uſually obſerved by Phyſicians in pernicious Phrenſies. Convulſions of the Tongue are a Conſequence of the Drineſs of the Muſcles of that Part, which are affected together with thoſe of the Head; as a Trembling of the Voice is owing to a Weakneſs contracted from a Diſtemperature of the Humours; and all thoſe before-mentioned Symptoms, which proceed from an intenſe Drineſs of the Brain, indicate a diſordered Mind. When this Trembling and Stammering of the Tongue proceeds from an univerſal Induration of the Muſcles, it is the more pernicious, as being cauſed by the immoderate Drineſs of the Brain.

But here again, that we may not be miſtaken in our Prognoſtics, we are to make a Diſtinction between the Cauſes of thoſe Tremblings and Convulſions of the Tongue; for, if they proceed, as was obſerved, from an immoderate Drineſs of the Muſcles, and their Heads, and of the Nerves, it is certainly mortal; but, if the Tongue trembles, and ſuffers Convulſions, when the muſcular and nervous Parts are replete with ſome Humour, it is no fatal Sign: For ſuch a Repletion is frequently the Cauſe of thoſe Tremblings and convulſive Motions of the Tongue, which happen in the Beginnings of Diſeaſes, and muſt be aſcrib'd to the Redundance of Humours, as it happen'd in the Caſe of *Pythion*, in the Beginning of the third Book of the Epidemics; and as it is ſometimes obſerved before a Criſis, in which Circumſtance they are juſtly reckon'd among critical Signs. A Diſtinction, therefore, is to be made, with reſpect to our Prognoſtication, between thoſe Tremblings and Convulſions of the Tongue, which proceed from Drineſs, and are always fatal; and thoſe very Symptoms, when cauſed by a Repletion; for thoſe latter happen in the Beginnings of Diſtempers, or are attended with other critical Signs; but the other are only conſequent upon a very hot and dry Diſorder. *Proſper Alpinus de Præſag. Vit. & Morb.*

LINGUA AVIS. A Name for the *Doria*; *quæ Jacobæa*; *foliis integris & mucronatis.*

LINGUA CERVINA.

The Characters are;

The Seed-veſſels are in the under Face of the Leaf, diſpoſed in a vermicular Series, or like the Track of a Worm, and cover'd with a thin Membrane, which is pierced by the Fruit when ripe. Theſe Veſſels conſiſt of a thin, hollow, orbicular, lenticular Pellicle, ſurrounded with an elaſtic Ring, which, breaking the mature Fruit, cauſes an Exploſion of very thin Seeds. The Leaves are ſimple, long, entire, or jagged, and in exotic Kinds ſometimes, tho' very rarely, branched.

Boerhaave mentions fifteen Species of this Plant; which are,

1. Lingua Cervina; Officinarum. *C. B. P.* 353. *Tourn. Inſt.* 544. *Boerh. Ind. A.* 143. *Lingua Cervina & Phyllitis.* Offic. *Phyllitis.* Ger. 976. Emac. 1138. Raii Hiſt. 1. 134. Synop. 44. *Phyllitis ſive Lingua Cervina vulgi.* J. B. 3. 756. *Phyllitis ſive Lingua Cervina vulgaris.* Park. 1046. HART'S-TONGUE.

The Hart's-tongue is ſmall, blackiſh, and ſtringy; from which ſpring long, narrow, ſmooth Leaves, ending in a ſharp Point, near a Foot long, and about two Inches broad; that Part next the Stalk, terminating in two round-pointed Auricles. The Seed grows in broad oblique Lines on each Side of the Stalk, on the under Part of the Leaves, being ſmall and duſty, like the Seed of other capillary Plants. It grows in ſhady Lanes, and on old Stone Buildings, being green all the Year.

Hart's-tongue is principally uſed for Diſorders of the Liver and Spleen, being good to diſſolve hard, ſcirrhous Tumors in either; it is alſo ſerviceable for the Rickets in Children, and for Spitting of Blood, and the Bloody-flux. *Dioſcorides* commends it againſt the Bitings of Serpents; and Mr. *Ray* praiſes it either given in Powder, or a Conſerve of the green Leaves, as particularly uſeful for hyſteric and convulſive Fits, and the Palpitation of the Heart. *Miller's Bot. Off.*

Externally apply'd, it cleanſes Wounds, and Ulcers. *Schroder.* Boiled in Wine, it is good againſt the Bite of a mad Dog, and Obſtructions of the Viſcera. *Dioſcorides.*

Boerhaave looks upon all this Plant to be reſolvent and aperient.

2. Lingua Cervina; anguſtifolia; lucida; folio ſerrato. Phyllitis criſpa. *J. B.* 3. 757.

3. Lingua Cervina; majore folio, in duas treſve lacinias & profundius diſſecto.

4. Lingua Cervina; maxima; folio auriculato, parum undulato, in duas treſve lacinias ſecto.

5. Lingua Cervina; maxima; undulato folio, auriculato per baſin. *M. H.* 3. 557. *Phyllitis, ſeu Lingua Cervina, maxima undulato folio, auriculato per baſin.* Plukn. Phyt. 248.

6. Lingua Cervina; minima; folio undulato.

7. Lingua Cervina; folii magni, criſpi, nervo exterius aculeato.

8. Lingua Cervina; medio folii nervo in aculeum abeunte. *M. H.* 3. 557.

9. Lingua Cervina; medio folii fimbriati nervo in aculeum abeunte. *Vaill.*

10. Lingua Cervina; multifido folio. *C. B. P.* 253. *M. H.* 3. 557. *Sect.* 14. *T.* 1. *Phyllitis, Polyſchides.* J. B. 3. 757.

11. Lingua Cervina; quæ Phyllitis; major ex uno pedunculo quandoque bifolia. *M. H.* 3. 557.

12. Lingua Cervina; minor ex uno pedunculo quandoque trifolia.

13. Lingua Cervina; ramoſa; folio per ſummum in orbem convoluto.

14. Lingua Cervina; ramoſa; major; foliis multifidis & criſpis.

15. Lingua Cervina; folio maximo, infra auriculato, ſupra in amplas lacinias foliaceas explicato. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 23.

LINGUA MAJOR. A Name for the *Doria*; *quæ Jacobæa*; *foliis integris & mucronatis.*

LINGUALIS MUSCULUS. *Douglas* takes notice of a Muſcle of the Tongue, which he calls by this Name. It ariſes, ſays he, pretty large and fleſhy from the Baſis of the Tongue laterally, and runs ſtrait forwards between the Cerato and Genioglоſſus, to its Tip, where it is hard to determine whether it ends there, or if it returns circularly after the ſame manner on the other Side to the Root of the Tongue again.

Its Uſe is to contract or narrow the Subſtance of the Tongue, and at the ſame time to bring it backwards and downwards.

LINGULA. The ſame as LIGULA.

LINIMENTUM. Oils, Unguents, and the Fats of Animals, or whatever any Part is anointed with, are comprehended under this Name. But a Liniment, in Pharmacy, is a Compoſition of a Conſiſtence ſomewhat thinner than an Unguent, and thicker than an Oil, us'd for anointing different Parts of the Body, in various Intentions. There are many Sorts of Liniments directed in Pharmaceutical Writers; but the College have thought fit to direct only one in their Diſpenſatory, which is the *Linimentum Arcei*; for a Deſcription of which, ſee ELEMI.

The Materials proper for the Compoſition of a Liniment, are Oils, Fats, Balſams, and whatever enters the Compoſition of Unguents and Plaiſters. The beſt way of uſing Liniments, is to apply them after the Pores have been opened by Frictions, or Fomentations.

LINOSYRIS. A Name for the *Coma aurea*; *Germanica.*

LINOZOSTIS, λινόζωστις. The Name by which *Hippocrates* calls Mercury, a Decoction of which he frequently directs to procure Stools. It is the BONUS HENRICUS; which ſee.

LINTEUM. Linen. In Surgery it comprehends Lint, Tents, Compreſſes, and Rollers.

LINUM.

The Characters are;

The Leaves are generally alternate; the Calyx is monophyllous, tubulated and quinquefid. The Flower is like a Clove-gilly-flower, pentapetalous, and furniſhed with five Stamina. The Ovary, which is ſeated in the Bottom of the Calyx, is of an oblong Figure, covered with a thin Membrane, ſhoots forth five long Tubes, and becomes a globular, acuminated Fruit, conſiſting of many Capſulas, five or ſix perhaps, which are full of a flat Seed, of a Figure almoſt oval, being acute at one End, and obtuſe on the other.

Boerhaave mentions eight Species of this Plant; which are,

1. Linum; ſarvenſe. *C. B. P.* 214. *M. H.* 2. 573.

2. Linum; ſativum. *C. B. P.* 214. *Ger.* 444. *Emac.* 556. *Raii Hiſt.* 2. 1072. *Tourn. Inſt.* 339. *Park. Theat.* 1335. *Boerh. Ind. A.* 284. *Linum.* Offic. J. B. 3. 450. Raii Synop. 3. 362. FLAX.

Flax has round ſlender unbranched Stalks, a Yard or more high, cloathed with many long, narrow, ſharp-pointed, glaucous Leaves; on the Tops of the Stalks grow a great many ſmall, five-leav'd, blue Flowers, ſoon falling off; and are follow'd by round Heads, or Seed-veſſels, each divided into about ten Partitions, containing as many oblong, flatiſh, ſhining, brown Seed. The Root is ſmall and woody, as ſoon as the Seed is ripe. Of the Bark of the Stalks of this Plant, which is tough, and made up of

a great

a great many ſlender Filaments, is made Linen Cloth. It is ſown in Fields, and flowers in *June*. The Seed only is uſed.

This Seed, which is uſually called Linſeed, is emolliient, digeſting, and ripening, of great Uſe againſt Inflammations, Tumors, and Impoſtumes, and is frequently put into Fomentations and Cataplaſms, for thoſe Purpoſes. Cold-drawn Linſeed-oil is of great Service in all Diſeaſes of the Breaſt and Lungs, as Pleuriſies, Peripneumonies, Coughs, Aſthmas, and Conſumption. It likewiſe helps the Colic and Stone, both taken at the Mouth, and given in Clyſters.

The Oil, by Expreſſion, is the only officinal Preparation. *Miller's Bot. Off.*

In pleuritic Pains, ſays *Raygerus*, *Ephem. Germ. An. 6. & 7.* I have often experienced Linſeed-oil to be the moſt ſucceſsful Medicine I could preſcribe; for it immediately facilitated Reſpiration, and promoted Spitting. In an Hæmoptoe, alſo, I exhibit the ſame Oil, with the deſired Succeſs; for, by its balſamic and emplaſtic Virtue, it conſolidates the affected Parts.

Linſeed-oil is of ſo ſubtile Parts, as not to be kept in earthen Veſſels, without Tranſudation. *Meyerus de Luſu ſerio.* Tumors of the Belly are very happily cured by the Uſe of Linſeed-oil. *Ephem. Germ. An.* 3.

This Plant has a more oily Taſte than the Mallow, and is the chief of the emollient Tribe. The Seeds afford an excellent Medicine, ſince from them is expreſſed an Oil, which is anodyne, demulcent, and extremely adapted to all manner of Aſperities; it relaxes, and involves Acridities, whence it is of extraordinary Service in the moſt deſperate Colics. The ſtiff and rigid Limbs, being anointed with this Oil, are relaxed and rendered flexible. This Oil, when freſh-drawn, and taken at the Mouth, is very good in a Pleuriſy, and a Cough, to help Expectoration; and, injected in Clyſters, is very proper in the Hæmorrhoids, and indurated Fæces, whence proceeds the Colic; mixed with ſealed and Japan Earth, it is a great Arcanum in the Dyſentery. An Emulſion of the Seeds is of Service in the Pleuriſy and Peripneumony; the Oil is a very good Remedy againſt the Stone: The Seeds reduced to a Meal, and boiled and prepared in the Form of a Cataplaſm, are apply'd to Tumors and Abſceſſes, in order to mollify and ripen them. The Seed, boiled in Water, makes a *mild oily Decoction*, preſcribed to be drank as an Anodyne in Inflammations of the ſmall Inteſtines, the Diarrhœa, the Dyſentery, nephritic Pains, and Retention of Urine. The Oil, boiled with Honey, clears the Face and Skin of Spots, and all cutaneous Blemiſhes. The Leaves are emollient, and the Smell of the Flowers is not poiſonous, as ſome Authors have written. To cloſe all, we ſhall obſerve, that whereas Cotton can never be uſed about Wounds, on account of its denticulated Parts, which diſpoſe to Inflammations; Linen, the manufactured Produce of this Plant, is, by its extraordinary Softneſs, Smoothneſs, and Flexibility, of all other Things, the beſt adapted to ſuch Purpoſes. *Hiſt. Plant. aſcript. Boerhaave.*

Flax has one Quality, which I do not find taken notice of by botanical Writers, which is, that the Herb infuſed in Water, as Ponds or Rivers, as it is practiſed in order to rot the Stem, and procure the Bark for mechanical Uſes, communicates to the Water a very poiſonous Nature, inſomuch that Cattle, which drink of it, die; and the Fiſh, in ſuch Waters, are poiſon'd. And I am inform'd, that there is an Act of Parliament now in Force, which forbids the Steeping of Flax in Ponds or Rivers, where it can have this Effect.

3. Linum; ſativum; humilius; flore majore. *Bobart.*

4. Linum; ſativum; latifolium; Africanum; fructu majore. *T.* 339.

5. Linum; perenne; majus; cœruleum; capitulo majore. *M. H.* 2. 573.

6. Linum; perenne; majus; cœruleum; capitulo minore. *M. H.* 2. 573.

7. Linum; maritimum; luteum. *C. B. P.* 214. *M. H.* 574. *Linum ſylveſtre.* Dod. p. 534.

8. Linum; Africanum; luteum; foliis conjugatis. *Ind.* 120. *Boerh. Ind. alt. Plant. Vol.* 1. *p.*284. See ÆGYPTIUM LINUM.

LINUM MINIMUM. A Name for the *Lyſimachia*; *annua*; *minima*; *Polygoni folio.*

LINUM UMBILICATUM. A Name for the *Omphalodes*; *Luſitanica*; *Lini folio.*

Beſides the foregoing Species of *Linum*, *Dale* mentions the following.

LINUM CATHARTICUM. Offic. *Linum ſylveſtre Catharticum.* Ger. Emac. 560. Raii Hiſt. 2. 1076. Synop. 362. *Linum prateuſe floſculis exiguis.* C. B. P. 214. Tourn. Inſt. 340. *Chamælinum Cluſii flore albo, ſive Linum ſylveſtre Catharticum.* Park. Theat. 1336. *Alſine verna glabra floſculis albis vel potius Linum minimum.* J. B. 3. 455. PURGING FLAX, or MILL MOUNTAIN.

This is but a little Plant, ſeldom growing above a Span high, with ſlender round Stalks, having two ſmall oblong Leaves at each Joint; the Tops of the Stalks are much branched, bearing ſeveral ſmall, five-leav'd, white Flowers, which are ſucceeded by Seed-veſſels, in Shape of the common Flax, but a great deal leſs, including very little Seed. The Root is ſmall and fibrous, periſhing every Year. It grows frequently upon dry hilly Places, flowering in *June* and *July*.

This Herb is grown of late in great Requeſt among the Vulgar; a Handful of it, boiled in Wine or Ale, and the Decoction drank, purges ſtrongly; and is much commended againſt rheumatic Pains in the Lambs; as alſo for tertian and quartan Agues, and the Dropſy. *Miller's Bot. Off.*

This Plant is very bitter, and gives a faint-red Colour to the blue Paper: It is purgative, and a Febrifuge. *Martyn's Tournefort.*

The entire Plant, with the Stalks and Heads, infuſed at Night in White-wine, over hot Aſhes, purges ſerous Humors with ſufficient Strength.

The Herb may be taken, either bruiſed, or dried, and pulverized with a ſmall Quantity of Cream of Tartar, and Aniſeeds; and, thus prepared, it purges without Perturbation. *Raii H. P.*

I once knew an Inſtance of a Man, who took a Purge from a Quack, of an Infuſion of this Plant; which, in a few Hours, ſwell'd him to ſuch a Degree, that his ordinary Cloaths were not by much ſufficient to cover him; and it was with ſome Difficulty, that he was recovered by more gentle Evacuations.

LIOBATOS. The ſame as LEVIRAIA.

LIPA, λίπα. This Word is frequently uſed by *Hippocrates*, ſometimes join'd with ἔλαιον, and ſometimes alone, to expreſs Fat, or Oil. Fat Stools are, by this Author, eſteem'd a Sign of Colliquation; and fat Subſtances, ſwimming in the Urine, in the form of a Spider's-Web, are condemn'd as Preſages of a Conſumption.

LIPARIS, λιπαεὶς. The Name of a Fiſh, ſo pinguious, that it appears to conſiſt of ſcarce any thing but Fat.

LIPODERMOS. The ſame as LEIPODERMOS.

LIPOPSYCHIA, λειποψυχία, from λείπω, to leave, and ψυχὴ, Life. A fainting Fit. See SYNCOPE.

LIPOTHYMIA, from λείπω, to leave, and θυμὸς, the Mind. The ſame as LIPOPSYCHIA.

LIPPA. The Sordes of the Eyes.

LIPPIA. This Plant was ſo named by the late Dr. *William Houſtoun*, who diſcovered it at *La Vera Cruz*, in Honour to Dr. *Auguſtus Lippi*, a famous Botaniſt, who travelled to *Egypt*, and diſcovered many new Plants.

The Characters are;

It hath an anomalous Flower, conſiſting of one Leaf, which is divided into four Parts, and reſts on the Embryo, which afterwards becomes the Fruit, having two Seeds, which are incloſed in a ſmall Covering.

We know but one Species of this Plant at preſent;

LIPPIA *arboreſcens, follis conjugatis, oblongis, Capitulis ſquamoſis & rotundis. Houſt.* Tree Lippia, with oblong Leaves, growing by Pairs, and having round ſcaly Heads.

This Plant, in the Country of its native Growth, commonly riſes to the Height of eighteen or twenty Feet, and has a rough Bark: The Branches come out by Pairs oppoſite, as alſo the Leaves, which are oblong, pointed, and a little ſawed in the Edges. From the Wings of the Leaves come out the Foot-ſtalks, which ſuſtain many round, ſcaly Heads, about the Size of a large Grey-pea, in which are many ſmall yellow Flowers appearing between the Scales, which are ſucceeded by the Seed-veſſels.

LIPPITUDO. Lippitude. *Celſus* means by this an Ophthalmy, or Inflammation of the Eyes. See OPHTHALMIA.

LIPYRIA. A Species of Fever, in which the external Parts are cold, whilſt the internal Parts ſeem exceſſively hot.

LIQUAMEN. The ſame as GARUM.

LIQUAMUMIA. Human Fat. *Rulandus.*

LIQUIDAMBRA. See the laſt Part of the Article AMBRA.

LIQUIRITIA. The ſame as GLYCYRRHIZA.

LIQUOR MINERALIS ANODYNUS. *Frederic Hoffman* frequently recommends this Liquor of his own Invention, which is very much celebrated in ſome Parts of *Germany*. I don't know, that he ever diſcover'd his Method of preparing it; but *Burggrave*, in his *Lexicon*, ſuppoſes it to be thus made:

Take of the beſt Oil of Vitriol, and *Indian* Nitre, each four Ounces: Diſtil the Spirit from a Retort by a Fire, gradually rais'd to a great Briskneſs, about the End of the Proceſs: Pour two Ounces of this Spirit cautiouſly and ſucceſſively into fifteen Ounces of highly rectified Spirit of Wine; then, by a careful Diſtillation, we obtain a highly fragrant and aromatic Spirit. But, in this Proceſs, great Care is to be taken, that we neither fall ſhort, nor exceed, in extracting the ſulphurous Spirit, but endeavour to obtain the Whole of it as pure and genuine, as we poſſibly can; for, as ſoon as the Phlegm is about to riſe with the crude acid Spirit, the Receiver is to be chang'd with all Expedition. But, as this ſulphurous Spirit is not yielded entirely pure, and free from a Mixture of the crude and acid Spirit, it is to be rectified with an equal Quantity of Water, and duly ſhaken; by which means the acid Principle will ſubſide in the Water, and the ſulphurous Spirit be diſtil'd pure and unadulterated. When

all this Spirit is obtained, and the Phlegm juſt ready to come over, the former is to be immediately removed, and kept in a Veſſel carefully clos'd. The mild and ſoporiferous Virtue of this Spirit may be ſtill heighten'd, if, before the Rectification with Water, we add to it ſome Quantity of the Oil of Cloves, which is to be duly mixed with it, by ſhaking both together in a glaſs Veſſel, cloſed with a glaſs Stopper; for, by this means, the Acrimony of the Oil of Cloves is deſtroyed, eſpecially if afterwards both are mixed with Water, and duly incorporated by ſhaking; for thus the gentle, mild, and ethereal Quality is intimately united with this Spirit. 'Tis a matter of no Importance, whether this Compoſition is the genuine, anodyne, mineral Liquor of *Hoffman*, ſince the former is equally efficacious with the latter, in its gently ſtimulating, carminative, antiſeptic, diaphoretic, and anodyne Virtues.

LIRION, λείριον. The Lily.

LITE, λιτή. The Name of a Plaiſter in *Galen, L. 2. C. 2. de Comp. M. per G.* conſiſting of Verdegriſe, Wax, and Roſin.

LITHAGOGUS, from λίθος, a Stone; and ἄγω, to bring away. An Epithet for Medicines which expel the Stone.

LITHANTHRAX. A foſſile Coal. See CARBO.

LITHARGIRITES ACETUM. Vinegar of Litharge. See ACETUM.

LITHARGYRUS. Offic. Schrod. 459. Worm. 135. Charlt. 55. Aldrov. Muſ. Metall. 18. *Lithargyrium.* Schw. 383.

LITHARGE.

Litharge, Lithargyrus, ſive Spuma Argenti Officinalis, was of two Kinds among the *Greeks*, differing only in Colour. One was yellow, called *Chryſitis*, or *Lithargyrus Auri*; the other white, called *Argyritis*, or *Lithargyrus Argenti*; and the ſame Diſtinction is ſtill kept up. It is commonly made in thoſe Furnaces in which Lead is ſeparated from Silver, or where Silver is refined by Lead from the other Metals mixed with it.

When the Workmen deſign to ſeparate Silver from the Lead or Copper contained in the ſame Ore with it, they firſt make a kind of Trough of Bone-aſhes, in which they melt a great Quantity of Lead; and into this melted Lead they throw the Silver Ore to be purified, and continue to blow with Bellows, till all the Lead, mixed with the Copper or Lead contained in the Silver, ſwims on the melting pure Silver like Oil. Then they gradually blow this Lead toward the Sides of the Trough, and afterwards, cutting the Sides, the vitrified Lead runs down to the Ground; and there becomes Litharge, ſometimes of a Gold, and ſometimes of a Silver Colour; whence the Dealers in theſe Commodities have given out, that the one was made from Silver, the other from Gold; whereas the Difference conſiſts only in having been more or leſs expoſed to the Fire, or in having a greater or leſs Mixture of Copper.

Litharge is therefore nothing but vitrified Lead, either alone, or mixed with Copper: it is frequently uſed in Phyſic in outward Applications, being mixed with oily Subſtances to make the Baſis of moſt Plaiſters, by reaſon of the emplaſtic Conſiſtence, which this and other Recrements of Lead acquire, by being mixed and diſſolved in Oils. It is of a drying, detergent, and gently aſtringent Quality; and for this Reaſon is uſed in incarning and cicatrizing Ulcers. It is prepared by being well levigated in a Mortar with clear Water, till all the Lead, which is not perfectly calcined, or other metallic Fæces, fall to the Bottom, leaving the finer Parts incorporated with the Water, which, ſubſiding by Reſt, are ſeparated from the Water, and dried. This pure Litharge is uſed in the *Unguentum Nutritum, Deſiccativum, Rubrum*, and *Apoſtolorum*; in the *Emplaſtrum Palmeum, Diachylon ſimplex & compoſitum*; *Polychreſtum* of *Charas*; and in Plaiſters and Ointments of many other Diſpenſatories. *Geoffroy.*

LITHIASIS, λιθίασις. The Stone. It, alſo, ſignifies a Diſeaſe of the Eye. See CHALAZA.

LITHOBRYON. A Name for the *Coralloides*; *Cornua Cervi referens*; *corniculis brevioribus.*

LITHOCOLLA. Offic. Matth. 1390. THE STONE-GLUER.

Lithocolla, λιθόκολλα, from λίθος, a Stone, and κόλλη, Glue, Stone-gluer, is a Mixture of Marble, or *Parian* Stone, with Bulls-glue. It is of Service, being applied with a heated Probe, in laying hold of the Hairs which incommode the Eye [τείχας ἀναχολλᾶν τὰς ἐν ὀφθαλμοῖς]. *Dioſcorides, L. 5. C. 164.*

LITHOCOLUM. This ſhould ſeem to imply the Method of making the Stone paſs through the urinary Paſſage; or the Diſſolution of it in theſe Parts.

LITHODENDROM. A Name for Coral.

LITHOEIDES, λιθοειδές. An Epithet for that Bone of the Skull called *Os Petroſum.*

LITHOLABON, λιθόλαβον, from λίθος, a Stone, and λαμβάνω, to lay hold of. A Name for the Forceps uſed in Lithotomy, for extracting the Stone.

LITHONTRIPTICUS, from λίθος, a Stone, and θρύπτω, to break. Lithontriptic. An Epithet for Medicines, which either have, or are ſuppoſed to have, the Virtue of breaking Stones in the Urinary Paſſages.

LITHOPÆDION ſeems to import an Infant-ſtone; that is, a recent calculous Concretion.

LITHOPHYTON. See the Explication of Terms under the Article BOTANY. White Coralline is called *Lithophytum, marinum, albicans.*

LITHOREOLEUCOIUM *minimum, ſupinum Valvenſium.* A Name, in *Ray*, for the *Leucoium ſaxatile, Thymi folio, hirſutum, cæruleo-purpureum.*

LITHOSPERMUM.

The Characters are;

The Calyx is quinquefid, being cut to the very Baſe, into five long and narrow Segments. The Flowers are ſmall, monopetalous, Funnel-ſhaped, multifid, with wide Margins. The Seeds are very hard, ſmooth, poliſhed, ſhining, and of a roundiſh Figure.

Boerhaave mentions two Species of this Plant; which are,

1. Lithoſpermum; majus; erectum. *C. B. P.* 258. *Tourn. Inſt.* 137. *Boerh. Ind. A.* 190. *Lithoſpermum, ſive milium Solis.* Offic. J. B. 3. 550. Raii Hiſt. 1. 503. Synop. 3. 228. *Lithoſpermum minus.* Ger. 486. Emac. 609. *Lithoſpermum vulgare minus.* Park. Theat. 432. GROMWELL.

The common Gromwell has a thick woody Root, ſhooting forth rough hairy Stalks, divided into ſeveral Branches, bearing rough, oblong, ſharp-pointed Leaves; and among theſe a great many ſmall monopetalous white Flowers, cut into five Segments, as are, alſo, the rough Calyces they are ſet in, in which, when the Flowers are fallen, grow four hard, ſhining, white Seeds. It grows in dry Fields and Hedges, and flowers in *May*. The Seed only is uſed.

Gromwell-ſeed is accounted a powerful Diuretic, and a Cleanſer of the Reins and Ureters, being boiled in Wine or Water; and is of great Service againſt the Stone, Gravel, or Stoppage of Urine; as, alſo, againſt the Heat of it, and a Gonorrhœa. *Matthiolus* commends two Drams of the Powder to be given in Womens Milk, as a ſpeedy Help in hard Labour. *Miller's Bot. Off.*

This Plant gives hardly any Tincture of Red to the blue Paper; it is aſtringent and glutinous; the Fruit ſtains it a little.

The Leaves of Gromwell, by chymical Analyſis, yield no volatile concrete Salt; but an urinous Spirit very much loaded with it, and a great deal of Oil and Earth: All that is obtained from the Seeds is alkaline; they yield ſome volatile concrete Salt, and a great deal of Oil and Earth; they are very diuretic: Emulſions are made of it with Dog's-graſs Water; infuſe half an Ounce of the Seeds, bruiſed, a whole Night, in a Glaſs of White-wine, and give it to drink in a Morning faſting. *Martyn's Tournefort.*

2. Lithoſpermum; minus; repens; latifolium. *C. B. P.* 258.

LITHOSPERMUM, ARVENSE. A Name for the *Heliotropium; minus; anguſtifolium; arvenſe; ſeu hirſutum.*

LITHOSPERMUM, PALUSTRE. A Name for the *Heliotropium; minus; anguſtifolium; paluſtre, ſeu glabrum.*

LITHOSPERMUM ARUNDINACEUM. A Name for the *Lachryma Jobi*; which ſee.

LITHOTHLASPI. A Name for the *Thlaſpi; parvum; ſaxatile; flore rubente.*

LITHOTOMIA, λιθοτομία, from λίθος, a Stone, and τέμνω, to cut. Lithotomy, that is, Cutting for the Stone. See CALCULUS, CATHETER, and CATHETERISMUS.

Mr. *Sharp* lays down the following Method of ſearching for the Stone: The Patient being laid on an horizontal Table, with his Thighs elevated, and a little extended, paſs the Sound with the concave Part towards you, till it meets with ſome Reſiſtance *in Perinæo*, a little above the Anus; then, turning it without much Force, puſh it gently on into the Bladder; and, if it meets with an Obſtruction at the Neck, raiſe its Extremity upwards, by inclining the Handle of it towards you; or, if it does not then ſlip in, withdraw it a Quarter of an Inch, and, introducing your fore Finger into the Rectum, lift it up, and it will ſeldom fail to enter: There is ſome Art in turning the Sound in the proper Place of the Urethra, which Surgeons, not verſ'd in this Operation, cannot ſo well execute, therefore they paſs the Inſtrument, with the concave Side always to the Abdomen of the Patient, obſerving the ſame Rule at the Entrance into the Bladder, as in the other Method. The Cauſe of this Obſtacle is frequently a ſmall Projection of the Orifice of the Bladder, like that of the *Os Tincæ* in the *Vagina*, which occaſions the End of the Sound to ſlip a little beyond it.

'Tis not to be ſuppoſed, that, by ſearching, one can poſitively judge of the Size and Form of a Stone; and indeed the Frequency of the Fits, and Violence of the Symptoms, are a better Rule to go by; though whoever ſhall think himſelf capable of diſtinguiſhing, abſolutely, the Difference of Stones, even by theſe Circumſtances, will ſometimes be miſtaken; ſince the Frequency and Violence of the Pain depend not always merely upon their Magnitude or Shape; and there are ſome Inſtances where a Stone of

of ſix Grains Weight has, for ſeveral Months, given more Pain in one Perſon, than a much larger has in another, though, no doubt, *cæteris paribus*, a large or a rough Stone is worſe than a ſmall or a ſmooth one.

Though, upon ſearching, we are aſſured of a Stone in the Bladder, we are not, without farther Inquiry, to operate immediately, ſince there are ſometimes Obſtacles that forbid the Operation, either abſolutely, or only for a certain time: Among theſe that of greateſt Conſequence is the Gravel, or Stone in the Kidneys, which is known by the Pain in the Loins, Vomitings, Retractions of the Teſticles, Numbneſs of the Thighs, and often by Matter which the Inflammation produces in the Kidneys. The Objections of leſs Weight, and which frequently are removed, are a Fit of the Stone, a Cough, a Hectic, and being emaciated by long Pain; exceſſive hot or cold Weather are likewiſe Hindrances; but, in Extremity of Danger, theſe laſt Conſiderations may be diſregarded, though no doubt very hot Weather is more inconvenient and dangerous than cold, as lying in Bed is more troubleſome, and the Urine much ſalter.

Difference of Age makes an extreme Difference in Danger, Infants and young People almoſt always recovering; but ſtill the Operation is adviſeable in thoſe advanced in Years, though it is not attended with near the ſame Succeſs.

Before the Operation is performed, it will be proper to prepare the Patient with a gentle Purge the preceding Day, and a Clyſter early in the Morning, which will be of great Service in cooling the Body, and making the Operation leſs dangerous, where the Rectum is liable to be wounded, when full. *Sharp.*

The ſeveral Methods of Lithotomy.

With reſpect to the ſeveral Methods of performing Lithotomy for the Stone in the Bladder, they are four. The firſt and moſt antient, is the *Apparatus minor*, called likewiſe the *Celſian* or *Guidonian* Method. The ſecond the *Apparatus magnus*, or *Marianus*'s Method. The latter is likewiſe termed the New, and the former the Old Method. The third is the *Apparatus altus*, or *Sectio Hypogaſtrica*, or *Franconica*: By this the Inciſion is made at the lower Part of the Abdomen, in the anterior Side of the Bladder, immediately above the *Os Pubis*, whereas, in the reſt, it is made in the *Perinæum*, between the *Anus* and *Scrotum*. The fourth, and moſt modern, was invented towards the End of the laſt Century, and is termed the lateral Operation, Frere *Jaques*'s, or, ſometimes, *Rau*'s Method. We ſhall treat more particularly of each in its proper Place.

The moſt convenient Seaſon for the Performance of this Operation is Spring, or Autumn; though when the Patient is in exquiſite Torment, and, perhaps, his Life in Danger, a prudent Surgeon will embrace the preſent Opportunity.

The Patient ſhould obſerve a regular Courſe of Diet for ſome time; and, if an Adult, of a full Habit, be bled, which is unneceſſary in Boys; though the Body ſhould be kept open in both. The Adminiſtration of a Clyſter the Evening before, or on the ſame Morning, will prevent any Impedient from a Diſcharge of the Fæces. A weak Patient ſhould be ſupported by proper Medicines, and a nouriſhing Diet. Three or four Hours before the Operation, he may have a Couple of new-laid Eggs, poached ſoft, with ſome Wine, but one is ſufficient for a Boy. Laſtly, if there are any Hairs on the Perinæum, they muſt be ſhaved off.

Of the Apparatus.

The *Apparatus minor* requires a Knife, (*Tab.* XLVIII. *Fig.* 8.) or Razor, an Hook, (*Fig.* 10.) or Forceps, the T Bandage, a thick ſquare Compreſs, about four Fingers broad, ſome Lint, and ſtyptic Powder, or rather highly rectified Spirit of Wine, to ſuppreſs an Hæmorrhage, and a crooked Needle and Thread.

The Poſture of an Adult, in this Method, is repreſented *Tab.* L. *Fig.* 5. If a Child, therefore, is to be cut after this Method, he is to be ſecured in that manner, or held by two Aſſiſtants; the ſtrongeſt muſt be ſeated on an high Chair, holding on his Knees a Pillow, covered with a Linen Cloth, three or four times double, and hanging down to his Feet. The Boy muſt be placed on this Pillow, and ſecured, as we have repreſented at *Tab.* XLIX. *Fig.* 1. from *Tolet*: If he is ſtrong, another Aſſiſtant may hold his Arms, to prevent his moving. If tall, or near Fourteen, let him be placed as at *Tab.* L. *Fig.* 5.

The Patient being thus diſpoſed, the Surgeon dips the middle and fore Finger of his Left Hand in Oil; then introduces them into the Anus, thruſting it upwards, whilſt, with his Right Hand, he preſſes on the Region of the Pubes, and, having found the Stone, protrudes it to the Left Side of the Perinæum, near the Anus, and there holds it, in ſuch a manner as to form by it a Tumor in the Perinæum (ſee *Tab.* L. *Fig.* 5. A). He then makes an Inciſion into the moſt prominent Part, with his Knife, dividing the Integuments and Bladder, ſufficiently for the Extraction of the Stone: But Care muſt be taken, to leave none of the intermediate Parts cohering, that the Stone may have a free Paſſage, and the Patient not be unneceſſarily tormented, nor an Inflammation or Convulſions excited, from a Contuſion and Laceration of the Parts. The Bladder being thus divided, a ſmall Stone may be thruſt out by the Fingers in the Anus; a large or rough one, partly by them, and partly by the Hook B, *Fig.* 6. applied to the upper Part. If it ſlips back, or ſticks in the Wound, it may be extracted by the Forceps.

When the Stone is thus extracted, a Finger, Catheter, or Probe, ſhould be introduced into the Bladder, (*Tab.* XLVIII. *Fig.* 11.) to ſearch whether any Fragments remain there; for this will often happen, when the extracted Stone appears to be ſmooth, or is broken in the Operation. If any thing is left, it muſt be extracted by the Fingers, an Hook, Forceps, or the Extractor: If all is found clear, the Patient is put to Bed. For the ſubſequent Treatment, the Reader may find Directions under the *Apparatus magnus.*

Heister's Opinion of this Method.

This Method is now entirely laid aſide, though, in my Opinion, it is practicable on Boys under Fourteen, the Time limited by *Celſus* and *Aloucaſis*; becauſe in them the Stone may be brought to the Perinæum: Beſides, the Simplicity of it, with its Succeſs, is to me a Recommendation; for it has many Advantages over the Apparatus major, and lateral Operation, as it may be always performed with fewer Inſtruments, and often with the Knife only; and then the Urethra is not injured by the Catheter, nor the Bladder vellicated by the Forceps; and the Stone is more eaſily found and extracted; whereas, in the others, the moſt experienced Lithotomiſts ſometimes cannot find it: And, laſtly, it gave Birth to the lateral Operation. For *Celſus* directs the Inciſion to be made in the Integuments, near the Anus; and *Albucaſis* ſays, the Stone muſt be protruded to the Root of the Coxa, and the Inciſion muſt be afterwards made there. In theſe Caſes, therefore, I ſtill practiſe it on Children; and *Marinus* recommends it: It may, alſo, be performed on Adults, when the Urine is ſuppreſſed by an Adheſion of a Stone in the Neck of the Bladder, or in the Perinæum, which cannot be removed, either by internal Medicines, or the Catheter: Otherwiſe it is dangerous, in Adults.

Mr. *Sharp*'s Opinion.

This Way of Cutting was attended with many Difficulties, for want of proper Inſtruments to direct the Inciſion, and extract the Stone, when it lay beyond the Reach of the Fingers, which in a large Bladder was frequently the Caſe; ſo that it is ſtrange *Celſus* confin'd the Operation to the Age between Nine and Fourteen, ſince it is much eaſier to be performed in Infancy than at thoſe Years; and it plainly appears, from his Account of it, that many died from the Violence done to the Bladder, in endeavouring to bring the Stone forwards, though the Operators failed in their Attempt, and the Patients were not cut.

The Wound of the Bladder in this Operation is made in the ſame Place as is now practiſed in the lateral Method; but its being impracticable on ſome Subjects, and uncertain in all others, has made it univerſally exploded; ſo that nobody now makes an Inciſion without the Direction of a Staff, unleſs a Stone entirely prevents the Introduction of it, by preſſing againſt, and ſtopping up the Neck of the Bladder; and in this Caſe, when we cut directly upon the Stone, it is much ſafer to puſh it back farther into the Bladder, and lay hold of it with the Forceps, than to endeavour with the Scoop, or Fingers, to force it outwards; which Circumſtance alone makes it different from *Celſus*'s Method. It muſt be diſtinguiſhed, however, when I ſpeak of puſhing the Stone back, that I ſuppoſe it in the Neck of the Bladder; for it frequently happens, that it lies at the Extremity of the Urethra, on the Outſide of the Bladder; in which Caſe the Wound of the Urethra may be made large enough to turn it out with the Fingers, or the End of ſome ſlender Inſtrument.

Of Nephrotomy.

The Generality of Writers on this Subject ſeem to think Nephrotomy impracticable, and therefore abſolutely reject it, though we have many Inſtances of Perſons who have been cured of Wounds of the Back, penetrating to the Kidneys. I ſhall only mention one, of a Man wounded in his Back, on the Region of the Right Kidney, in the Year 1735. who for ſeveral Days voided Blood, and bloody Urine, through the Wound and Urethra: When he came afterwards under my Care, I cured him in four Weeks. Wounds, therefore, of the Kidneys, eſpecially thoſe inflicted on the Back, without penetrating into the Cavity of the Abdomen, are often curable: And tho' *Hippocrates* prohibits his Pupils from practiſing Lithotomy; yet, in treating of Diſorders in the Kidneys, in his Work *de intern. Affect.* he directs to make an Inciſion near the Kidney, when it is tumefied and elevated; and, after extracting the Pus, to diſcharge the Gravel by Diuretics; for this Opening may preſerve the Patient, who muſt otherwiſe die: And again he ſays, when the Kidney, being ſuppurated, tumefies near the Spine, a deep Inciſion ſhould be

be made upon the Tumor near the Kidney, or into the Kidney itſelf: Hence it is manifeſt, that a Wound in theſe Parts did not appear ſo formidable to him. *Rouſet*, *Riolanus*, and others, think Nephrotomy may be practiſed with Succeſs, if the Opening is made, where the Stone is perceptible, and neither the emulgent Artery, Vein, nor Ureter, wounded, nor the Cavity of the Abdomen penetrated: But, beyond all Diſpute, it muſt be reaſonable, when Nature points out the Place by a Tumor, or Abſceſs in the Loins, proceeding from a Stone in the Kidneys. We are farther ſupported in this Opinion by *Schenchius*, *Wedelius*, *Meekren*, and *Lavaterus*; the laſt of whom ſays, "I "perform Nephrotomy, when Nature dictates, by an Abſceſs." I, therefore, recommend it in theſe Caſes, as it preſerves Life, and prevents exceſſive Pains ariſing from the Stone, which may be extracted by the Fingers, an Hook, or Forceps. See *Fontan. Exemp.* 42. *Fol.* 117. *Hildan. Cent.* 6. *Obſ.* 44. *Tulpius*, *Lib.* 4. *Obſ.* 28. *Heiſter.*

It is plain from what *Serapion* and *Avicenna* ſay of Nephrotomy, that it was practiſed by ſome in their Times, tho' they both think the Operation extremely hazardous, and moſt likely to end in Death. And whatever has been ſaid, concerning the Fatality of thoſe Wounds, which penetrate the Pelvis of the Kidney, we find it clearly contradicted by the late learned Mr. *Bernard*, in the Caſe he gives us of Conſul *Hobſon*, who had a Stone cut out of his Kidney, by the famous *Dominico Marchetti*, at *Padua*, and lived many Years after in perfect Health. The Caſe is very accurately deſcribed, and the Reflections upon it worth peruſing: The ſame Account informs us, that the *Arabians* mention indeed ſuch an Operation; but think it the Attempt of a Madman, or a Mountebank, and that *Rouſet* was the firſt who ever ſeriouſly adviſed it. However, beſides the Inſtance alleged, there is one more to be met with of this Operation of Nephrotomy being actually performed; and that is in *Mezeray*'s Hiſtory of *France*, where the Fact is related thus:

"The Doctors of the Faculty of Phyſic at *Paris*, knowing "that an Archer of *Bagnolet*, who had been very much afflicted "with the Stone, lay under Sentence of Death, begged of the "King, that he might be put into their Hands, to make an Ex"periment, whether they could open the Kidney, and take out "the Stone. The Operation ſucceeded ſo well, that the Man "lived many Years after in good Health."

This was done in the Reign of *Charles* the Eighth, who died in 1498. near 100 Years before *Rouſet* wrote, and when the *French* Surgery was juſt in its Dawn. *Tulpius* is of Opinion, that the Advice of *Rouſet* was founded upon what has been obſerved ſometimes, of a Stone's making an Abſceſs in the Kidney, and working its Way out, as, in the Caſe he deſcribes, it did in the Loins; and which indeed *Hippocrates* takes notice of. But it is as probable, he might have taken his Notion from this Matter of Fact, which, no doubt, had made a Noiſe in his own Country; and which *Rouſet* himſelf relates, though he tells the Story (from the Supplement to *Monſtrelet*) otherwiſe, in one or two Particulars. Tho' theſe two Inſtances (which, perhaps, are the only two upon Record) will ſcarce recommend the Practice; yet thus much at leaſt may be concluded from them, that the Operation, tho' dangerous, may poſſibly ſucceed, and is allowable, at leaſt, in Caſes otherwiſe deſperate, where the Way is pointed out by an Abſceſs. The Arguments drawn from Analogy, by *Rouſet*, are worth peruſing. *Freind.*

Of the Apparatus major.

The preceding Method is practicable on Infants only, but attended with great Danger and Difficulty, when attempted on Adults: For an unequal and rough Stone, protruded to the Side of the Perinæum, puts the Patient to exquiſite Torture; and frequently cauſes a violent Inflammation, with a ſubſequent Gangrene; and, by making the Wound uneven, renders the Extraction difficult. Beſides, the Operator may perforate the Rectum, or hurt his own Fingers, and be thereby diſabled from feeling the Stone, and cutting upon it. Again, if the Patient is corpulent, the Size of the Bladder, and its Diſtance from the Anus, will make the Protruſion of the Stone to the Perinæum a very great Difficulty, eſpecially if it ſlides back; and the Retention of it there (conſidering the Lubricity of the Bladder and Rectum) for a proper time will not be an eaſy Task. Theſe Inconveniences, to omit the Poſſibility of wounding the ſeminal Veſſels on the Left Side, induced the Surgeons, about the Year 1520. to invent another Method, with new Inſtruments, which has been practiſed with ſuch Succeſs, that it is generally preferred, unleſs the Stone is lodged in the Perinæum, or in the Neck of the Bladder, or poſterior Part of the Urethra, and can neither be repelled, nor diſcharged forward. This Invention is aſcribed to a celebrated *Italian* Phyſician of *Cremona*, *Franciſcus de Romanis*, or *Romano*, and improved by *Marianus*, in a Treatiſe *de Lapide Veſicæ per Inciſionem extrahendo*, *Venet.* 8vo. 1532. and *Paris*, 4to. 1540. From him it is called *Marianus*'s Method, and, from the Number of Inſtruments, the *Apparatus magnus*; but it is now ſometimes termed the *vulgar* or *old Method.*

The Cauſe of this Invention may be aſcribed to an Obſervation, how eaſily large Stones are voided by Women, either naturally, or by Art: For *Romanus*, conſidering the Shortneſs and Dilatibility of the Urethra in them, imagined, that, by an Opening made in the Urethra of Men, near the Bladder, it might be dilated, and the Stone extracted with equal Eaſe; for at that time, from the Authority of *Hippocrates*, it was eſteemed mortal, and, therefore, criminal, to cut into the Bladder. See *Aph.* 18. *Lib.* 6. and *Celſus*, *Lib.* 6. *Cap.* 26. Tho' *Falconet*, a Phyſician of *Paris*, thinks it was not the Author's Intention to cut into the Urethra, but into the Neck and Bladder itſelf. This Operation, with regard to the Urethra, converts the Male Subject into a Female, and he is treated as ſuch: For a longitudinal Inciſion is made into the Perinæum, from the Scrotum to the Anus, reſembling, as it were, the Entrance of the Vagina, or, at leaſt, ſerving inſtead of it. A Paſſage for the Urine is then opened in the Perinæum, from D to F, or I, *Tab.* L. *Fig.* 1. ſo that there remains but a ſhort Part, I L, entire, between the Lips of the Wound and the Bladder, as in Women; which Part being ſufficiently dilated with proper Inſtruments, the Stone may be extracted out of the Bladder by convenient Hooks, or Forceps. It was neceſſary, therefore, to contrive a Set of Inſtruments for the dextrous Performance of this Operation: Accordingly the Author invented the groov'd Catheters, to make the Inciſion ſafe; then Conductors, and dilating Inſtruments, to make way into the Bladder; and a Forceps, for the Extraction of the Stone. All which, as appears from *Marianus*, and is uſual in the Beginning of moſt Inventions, were but indifferently fitted for their Offices; but, from many ſubſequent Improvements, they ſeem to have acquired a great Degree of Perfection: Though ſome of the Inſtruments employed in the Apparatus minor may be uſed in this Method.

In the Apparatus major the following Inſtruments are principally neceſſary; Copper or Silver Catheters of various Sizes and Diameters, according to the different Age and Make of the Patient, to ſearch for the Stone (ſee Catheterismus, and the Explanation of *Tab.* XLVIII. *Fig.* 2, 3, 4, 5.): But there are, alſo, required grooved Catheters made of Steel of various Sizes, (*Tab.* XLVIII. *Fig.* 12, 13, 14, 15.) and a particular ſort of Knife, (*Fig.* 8.) for the Inciſion, which ſhould be wrapped up in Linen, (as at *Fig.* 9.) leaving its Point only uncovered, and two enſiform Conductors (*Tab.* XLIX. *Fig.* 2, 3.): One has a Beak A, and is called the Male; the other is divided at one End B, and termed the Female; each has two Handles C C. Some prefer the ſimple-groov'd Conductor of *Hildanus*, called a *Gorget* (*Fig.* 4.). There is, likewiſe, wanting a particular kind of Forceps, (*Fig.* 5. 6, 7.) of different Sizes and Figures; ſome ſtrait at the Mouth, (*Fig.* 5.) others crooked (*Fig.* 6.); and an Hook, (ſee *Tab.* XLVIII. *Fig.* 10.) ſmooth externally, but internally rough, which is to intercept the Stone: To theſe muſt be added an oblong Spoon, *Fig.* 11 A A) with a Button B, inſtead of a Probe; ſome call this *Lapidillum*, but *Marianus*, *Verriculum*; becauſe it cleanſes the Bladder from any ſmall Fragments. Laſtly, When the Stone is large, ſome will uſe a Dilatator; but as this is not very common, out of the various Kinds I have only delineated one (at *Tab.* XLIX. *Fig.* 8.): Some put all theſe Inſtruments into a Pouch, and tie it round their Waiſt (*Tab.* L. *Fig.* 9. H.): Others place them in a Diſh, full of warm Water, in the moſt convenient Order, or only dip them into it before they uſe them: A Sponge likewiſe is neceſſary, for clearing away the Blood from the Wound; with an Apron and Sleeves, to keep the Operator clean. The Dreſſings may be the ſame as we directed for the Apparatus minor: Laſtly, There ſhould be at hand a Cup with Olive-oil to lubricate ſome of the Inſtruments, that they may paſs with more Eaſe into the Bladder.

In moſt Hoſpitals there is a particular kind of Table for this Operation (*Tab.* XLIX. *Fig.* 9). The Manner of placing the Patient is repreſented from *Alghiſi*, an *Italian* Author, *Tab.* L. *Fig.* 9. Sometimes a proper Chair, one or two of which are repreſented by *Tolet*, is uſed inſtead of the Table: But, if neither of theſe is at hand, a common oval or ſquare Table, about four Feet long, and three broad, will anſwer the End; upon this ſhould be placed a kind of inverted Chair, with the Back thereof depreſſed, and the Legs elevated, and not only the Edge of the Table B, (*Tab.* XLIX. *Fig.* 9.) but the whole inclined Part C, ſhould be covered with Pillows and Linen, for the Patient's Eaſe: He is to be ſeated on the Edge B, which I make ſemilunar, whilſt the inclined Part C ſupports his Back: Then his Legs are to be bent in ſuch a Poſture, that his Heels may reach his Buttocks A A, and his Hands tied, either to his Ankles, or after *Rau*'s Method, to the Outſide of his Knees (ſee *Tab.* L. *Fig.* 9. 10.).

Four ſtrong Aſſiſtants are neceſſary for this Operation, two of whom C C are to ſecure and open the Legs, each holding a Foot in one Hand, and a Knee in the other; the third is to confine his Shoulders cloſe to the Table; and the fourth to be ſo ſituated on his Right Side, that he may hold up the Scrotum with one Hand, and the Catheter in the other: A fifth may ſtand on the Right Hand of the Surgeon, to give and receive the Inſtruments. Sometimes three are ſufficient, (*Tab.* L. *Fig.* 9.)

two to hold the Legs, and a third to elevate the Scrotum, and extend the Skin of the Perinæum.

There ſhould be a Veſſel to receive the Blood and Fæces; near that a Cup of Oil, with a Pan of hot Water, to lubricate, warm, and waſh the Inſtruments; and a Sponge to cleanſe the Wound.

Mr. *Sharp*'s Directions for the Situation of Patients are thus: Having laid the Patient on a ſquare horizontal Table, three Feet four Inches high, with a Pillow under his Head, let his Legs and Thighs be bent, and his Heels made to approach his Buttocks, by tying his Hands to the Bottom of his Feet, with a couple of ſtrong Ligatures about two Yards long; and, to ſecure him more effectually from ſtruggling, paſs a double Ligature under one of his Hams, and carry the four Strings round his Neck to the other Ham; then, paſſing the Loop underneath it, make a Knot, by threading one of the ſingle Ends thro' the Loop: After this the Thighs are to be widen'd from each other, and firmly ſupported by proper Perſons. *Sharp.*

The Operator dipping the Beak of a ſizeable, ſteel, grooved Catheter in Oil, he conveys it through the Urethra into the Bladder; and, being aſſured there is a Stone, turns the crooked Part of the Catheter in the Bladder and Urethra, towards the Left Side of the Perinæum, but the Handle and Penis, which contains it, towards the Right Inguen; then delivers it to the Aſſiſtant, who holds up the Scrotum in the other Hand; for the crooked Part of the Catheter, thus elevated in the Perinæum, renders that Part of the Urethra, which is to be divided, ſufficiently perceptible to the Sight and Touch. He next lays hold of the Integuments of the Perinæum with the Fingers of his Left Hand, holding in his Right the Knife, wrapped in Linen (*Tab.* XLVIII. *Fig.* 9.) as you would a Pen for Writing: With this he makes a longitudinal Inciſion downwards, about the Middle of the Left Side of the Perinæum, near the Suture, thro' the Fat; then he again feels for the Catheter with his Finger, and then he divides the Urethra in a direct Line downwards, ſo that the End of the Knife may paſs into the Groove of the Catheter; for thus there will be no Danger of injuring any Part beſides the Urethra; for the Neck of the Bladder muſt not, in this Method, be injured. Some make their Inciſion from the Middle of the Perinæum downwards, and others proceed in the contrary Direction; but this ſeems indifferent. The external Orifice ſhould be proportion'd to the Patient's Habit, and the Size of the Stone; tho' it is generally about two Inches long in Children, and three or four in Adults. The Opening in the Urethra is continued (*Tab.* L. *Fig.* 1.) from D thro' the Bulb E to the Beginning of the Neck of the Bladder F or I. When this inferior Part of the Urethra is to be divided, not only the Hand and Knife muſt be moved, but the Catheter, which had hitherto been preſſed downwards, muſt, according to *Cheſelden* and *Le Dran*, be elevated, and the Beak preſſed ſtrongly againſt the Juncture of the Oſſa Pubis; for this ſeparates the Urethra, as much as poſſible, from the Rectum, which might otherwiſe be wounded. Care muſt be taken, that the Point of the Knife does not ſlip out of the Groove of the Catheter. Some hold the Catheter in their Left Hand themſelves, while the Aſſiſtant, who draws up the Scrotum, extends the Integuments of the Perinæum. But this is left to Diſcretion.

After a proper Inciſion, the Surgeon parts with his Knife, inſerting in the Groove of the Catheter, if an Aſſiſtant holds it, the Nail of his Left fore Finger or Thumb; then he takes a Male-conductor, dips it in warm Oil, and, having paſſed it through the Groove of the Catheter, and Neck of the Bladder, into the Bladder itſelf, extracts the Catheter. Some leave the End of the Knife in the Groove, till they have directed the Conductor thither; for in corpulent Perſons the Catheter may be buried in Fat. The Male-conductor being thus paſſed, a Female-conductor is introduced upon it in ſuch a manner, that the latter receives the prominent Back of the former in its Groove B, (*Tab.* XLIX. *Fig.* 2, 3.) and conveys it ſafely into the Bladder thro' its Neck. After this, the two Conductors are gently ſeparated by their Handles C C, which dilate the Neck of the Bladder; then a ſtrait Forceps warm, dipt in Oil, and ſhut very cloſe, is carefully conveyed into the Bladder between the Conductors: This, in ſome meaſure, dilates the Neck again. But I introduce my Right fore Finger dipt in Oil, before the Forceps, and gently enlarge the Neck of the Bladder, which facilitates the Admiſſion of them. If the Forceps will open eaſily, it is a certain Indication, that they are in the Bladder. Some, before the Introduction of the Female-conductor, paſs their Right fore Finger into the Bladder upon the Male, turning it with the flat Side upwards, and prominent Side downwards; and by that means endeavour to dilate it. But *Le Dran* juſtly obſerves, that the precipitate Method of doing this, which ſome, thro' an Affectation of Dexterity, are drawn into, frequently lacerates the Part, already filled with the Conductor. Others proceed in a different manner, uſing only the grooved Conductor (*Tab.* XLIX. *Fig.* 4.): Theſe paſs the Beak of that Inſtrument thro' the Groove of the Catheter, into the Bladder, as we directed for the Male-conductor; only ſome aſſiſt it with their Finger. If the Inſtrument is paſſed into the Bladder, what Urine there is, will diſcharge itſelf thro' its Cavity. Upon this Diſcharge, the Catheter is extracted out of the Urethra, and the Operator, moving the Inſtrument gently in all Directions, gradually dilates the Neck of the Bladder; then he takes the Handle B B in his Left Hand, and with his Right carefully conveys the cloſed Forceps thro' the Groove C C.

Le Dran, who prefers the grooved Conductor, having paſſed it into the Bladder, gently thruſts his Right fore Finger through the Wound and Neck into its Groove, and with that gradually dilates the Neck, for the more commodious Paſſage of the clos'd Forceps, which he afterwards introduces, as I had before recommended; though, perhaps, he might be the firſt who obſerved, in his Diſſections, that the whole Neck of the Bladder was not only expanded, but conſtantly ſlit and lacerated in the Apparatus major; which yet was attended with no ill Conſequences, when done gently and cautiouſly, as it opens a freer Paſſage for the Admiſſion of the Forceps, and Extraction of the Stone*. And this Laceration is leſs to be feared, ſince we are convinced by opening dead Bodies, that either by the Introduction of the Forceps, or the Expanſion of the Parts, or the Extraction of the Stone, there is a more violent and dangerous Laceration of the Neck, and Proſtate Gland.

The Forceps, after it is introduced, and the Conductors withdrawn, muſt be opened ſeveral times to dilate the Wound, and then ſhut again to ſearch for the Stone: During which Search, they muſt be kept cloſe, leſt they injure the Bladder; for which Reaſon they muſt not meet at the End (*Tab.* LII. *Fig.* 12.). When the Stone is found, they muſt be opened with both Hands, in ſuch a manner, that one Jaw, if poſſible, may lay hold under the Stone, and the other above it. When the Stone is thus intercepted, the Forceps, by a gentle Motion from Side to Side, muſt be brought towards the Rectum, and the Stone extracted downwards, becauſe the Parts dilate and yield more eaſily that way, while upwards they meet with a Reſiſtance from the Oſſa Pubis. This is no Difficulty, when the Stone is neither large, nor unequal. But if it lies conceal'd in any Pit of the Bladder, and cannot be laid hold of by the Forceps, the Operator muſt paſs the two firſt Fingers of his Left Hand into the Anus, elevate the Stone, and force it into them. If it is ſituated in the upper Part of the Bladder, behind the Oſſa Pubis, the inferior Part of the Abdomen muſt be preſſed down by the Hand, that it may be commodiouſly taken hold of, and drawn out by the ſtrait or crooked Forceps. But if it is lodged on either Side, the crooked Inſtrument (ſee *Tab.* XLIX. *Fig.* 6.) is moſt convenient. Since it is always beſt to extract the Stone whole, if poſſible, the Surgeon, by putting his Fingers between the Handles, may prevent too violent a Compreſſion of the Forceps. When *Le Dran* cannot immediately find the Stone with the Inſtrument, he withdraws that, and introduces his Finger; then, having found it, places it at the Mouth of the Urethra, and, paſſing his Forceps, extracts it.

If the Handles of the Forceps D D, after intercepting the Stone, open too wide, it cannot be extracted without imminent Danger of lacerating the Bladder, particularly its Neck, and the Proſtate Gland. The Surgeon muſt then introduce his Finger, and, if that is not ſufficient, the Probe, with a Button (*Tab.* XLVIII. *Fig.* 11. B); and examine between the Jaws of the Forceps, whether the Stone is oblong or oval, and whether the Inſtrument takes hold tranſverſely, or longitudinally. If it is intercepted tranſverſely, it ſhould be let looſe, and, after moving it with the Finger or Probe, taken hold of in its leaſt Diameter, and extracted: If the Inſtrument ſtill opens too wide, he muſt take the Handles D D in his Right Hand, and the Part next the Wound in his Left; then, by a gentle Motion downwards, as thoſe Parts dilate more eaſily, endeavour to extract the Stone. When it is too large to be extracted whole, it muſt be broken by a Forceps with Teeth, (*Tab.* XLIX. *Fig.* 7.) which may be as large again as the Figure, and the Fragments may be drawn out one after another. Laſtly, if the Stone is too large, and too hard to be either extracted or broken, a prudent Surgeon will deſiſt, and heal the Wound, or leave a Fiſtula for the Diſcharge of the Urine. Some few, but with very little Succeſs, uſe the Dilatator (*Tab.* XLIX. *Fig.* 8.) or ſome ſuch Inſtrument, tho' the Moderns reject it as uſeleſs and dangerous: For the Dilatation made by it muſt neceſſarily, by lacerating and confuſing thoſe nervous Parts, augment the Pain, which is already exceſſive, and cauſe an Inflammation, Gangrene, Cancer, or ſome other malignant Symptoms. Sometimes the Stone lodges too near the Joint of the Forceps, (*Tab.* XLIX. *Fig.* 5.) ſo that the Jaws cannot ſufficiently approach each other; in this Caſe the Operator muſt introduce the Button-end of the Scoop (*Tab.* XLVIII. *Fig.* 11.) or his Finger, and thruſt it back near the End of the Jaws: But this may be pre-

* It is not agreed, what Parts are to be divided in the Apparatus major. *Tolet*, and the Generality of Lithotomiſts, are for dividing the Urethra only, without cutting the Bladder, or its Neck. *Falconet* ſays, the Authors of this Method deſigned the Neck, and even the Bladder itſelf, ſhould be cut. *Noelas* expreſly tells us, that the Neck of the Bladder is the Part, where the Inciſion is conſtantly made in this Operation; and that *Frere Jaques*'s Method differs from the Apparatus major only in the Parts externally divided. *Roſa* orders the Sphincter that is, the Neck of the Bladder, to be cut; and *Schoeffer*, not only the Neck, but part of the Bladder itſelf.

vented, by making the Inſtrument ſmooth in that Part, with Teeth only at the End (ſee *Tab.* XLIX. *Fig.* 5, 6. A B); for then the Stone will ſpontaneouſly recede from the Hinge, and ſtick betwixt the Extremities.

Francus de Franckeneau, mentions a Machine uſed by a Lithotomiſt at the *Hague*, inſtead of the Forceps, which was made of Whale-bone and an Ox's Bladder; but he neither deſcribes the Size, Structure, nor Manner of uſing it.

The Stone being thus extracted, the Surgeon muſt, eſpecially if it is a ſmooth one, ſearch with his Finger, or the Probe-end of the Scoop, whether another, or any Fragments ſtill remain, which he could not determine before the Operation. If there is any Remainder, he muſt repeat the former Proceſs, till the Bladder is entirely cleanſed. If there remain only ſome Gravel, or ſmall Pieces of the Stone, they may be extracted by the Scoop, (*Tab.* XLVIII. *Fig.* 11.) or in a weak Patient, the Expulſion of them may be left to Nature, for the Urine will generally diſcharge and waſh them out. When the Bladder is cleared, ſome inſert into the Wound a large Tube (ſee *Tab.* XXIII. *Fig.* P) either flexible or inflexible; others a Tent, applying a Plaiſter, Compreſs, and the T Bandage, by which they imagine the Bladder will be more effectually cleanſed from the Sand and other Fæces. But this appears to *Frere Jaques*, *Rau*, and myſelf, quite unneceſſary; for theſe things retain what the Urine would waſh away, and often produce a Fiſtula, with other bad Symptoms. In extracting the Stone, it ſometimes ſlips out of the Forceps, and lodges in the Wound: The Lithotomiſt ſhould then endeavour to lay hold of it again, without extracting the Forceps; but, if they are out, he muſt immediately introduce his two fore Fingers, dipt in Oil, into the Anus, to preſs it towards the Wound, and then extract it with the Forceps, or an Hook.

Manner of Dreſſing.

When the Wound is cleaſed with a Sponge, and the Ligatures unty'd, the Patient muſt be put into a Bed covered with an Oil-cloth, or one that has been waxed; over this may be laid a Linen Sheet folded together directly under the Patient, to keep the Bed from being ſpoiled by the Blood or Urine from the Wound, which is now to be dreſſed with ſome Doſſils of ſcraped Lint. If the Patient is ſtrong, and his Wound bleeds, *Celſus* adviſes not to ſuppreſs it for ſome Days, as it may prevent an Inflammation; but, if the Hæmorrhage is too profuſe, it may be ſtopt by Pledgets of Lint dipt in the beſt rectified Spirits of Wine, or ſome other ſtyptic Liquor; or the Wound may be ſprinkled with a ſtyptic Powder, and the Arteries compreſſed with the Fingers, till it abates: Theſe muſt be covered with a Linen Bolſter, and large ſquare Compreſs, without a Plaiſter, ſecuring the Whole by the T Bandage, (*Tab.* XXIII. *Fig. b*) or that with four Heads (*Fig. d*). If they are ineffectual, the Artery may be ty'd up with a crooked Needle and Thread*. Nor is the Practice of the *French* improper, who anoint at Intervals the Scrotum, Perinæum, and Abdomen, for the firſt four Days, with Oil of Roſes, covering the Parts with Linen dipt in Oxycrate; before the Application of the Bandage ſome only apply Oxycrate, with a large Compreſs to the Abdomen. Many make a ſtrict Bandage at the firſt Dreſſing, tho' there is no Hæmorrhage, for this, ſay they, promotes the Agglutination of the Wound; others leave it ſlack for two or three Days, that the Gravel, Fragments, and Blood, may have a free Paſſage; and others, for the ſame Reaſon, uſe no Bandage, unleſs too great an Hæmorrhage renders it neceſſary. They who follow the firſt Method, bind the Patient's Legs together at his Knees, at firſt. But they who follow the laſt, and, in my Opinion, the beſt Method, apply ſuch a Ligature the ſecond or third Day, for fear any Gravel, or ſmall Stone, ſhould be prevented from being diſcharged, which might lay a Foundation for the Generation of another Stone, if retained in the Bladder.

After Dreſſing, the Patient ſhould be ſupplied with Plenty of Ptiſan, Barley-water, or a ſtrengthening and gently compoſing Emulſion, not only to compoſe him to Sleep, and recover his Strength, but to cleanſe the Bladder of all the Relicks. His Diet ſhould be the ſame as for People in Fevers, or after great Wounds, as of Ptiſan, or Barley-water, made pleaſant with ſome cooling Syrup, for his ordinary Drink; afterwards, if there is no Fever, or the Fever is abated, he may be allowed ſmall Beer, or Wine and Water, forbearing every thing ſharp, or ſalt, ſpicy, or too heating. The Air of his Chamber ſhould be very temperate. If he complains of an unuſual Heat, or a Fever, he ſhould be bled, a Clyſter ſhould be adminiſtred, and cooling Medicines taken inwardly. Theſe Difficulties being ſurmounted, the Patient is judged in a fair Way. On the contrary, if a cold Chillneſs and Horror ſeize him on the third, fourth, or fifth Day, followed by an intenſe Fever, Hiccoughs, Nauſea, Vomiting, and convulſive Motions, or the Wound does not ſuppurate, but becomes dry, Death generally enſues. At firſt, the Wound may be dreſſed once or twice in a Day with Lint, and a digeſtive Ointment, over which ſhould be apply'd a Compreſs dipt in warm Spirit of Wine, Oxycrate, or ſome other Fomentation, to prevent an Inflammation; theſe are to be ſecured with a Bandage. After the third or fourth Day, the Bandage, in my Opinion, may be tighten'd; and this may be continued every ſubſequent Dreſſing. When there is a proper Suppuration, and Union of the Parts, inſtead of the digeſtive Ointment, the Wound may be dreſſed with a vulnerary Balſam, as Balſam of *Capivi*, or *Linimentum Arcei*; and the Whole ſecur'd by a ſticking Plaiſter, and Compreſſes on each Side. This muſt be repeated twice daily, till the Wound unites; then dry Lint with a Plaiſter will form a ſtrong Cicatrix. The Agglutination will be promoted, likewiſe, by the Patient's lying on his Right Side, and keeping his Thighs cloſe, tho' he may, in ſome time, change his Poſture, but not open his Legs: It is therefore proper to tie them together, eſpecially if he is a Child, and order him to keep ſtill in his Bed; nor ſhould he be permitted to riſe and walk, till the Urine diſcharges itſelf thro' the natural Paſſage, and the greateſt Part of the Wound is healed. This is ſometimes performed within eight Days in Children, and where the Stone was ſmall and ſmooth. Afterwards, Walking will promote the Diſcharge of the Urine by the common Paſſage, and the Union of the Wound; nor will it be improper for the Surgeon, about the ſixth or ſeventh Day, to compreſs the Wound with his Hand, to ſee if the Urine will flow by the proper Paſſage, if it does not take that Courſe ſpontaneouſly. When the Linen is foul, it muſt be changed, to prevent an Ulceration.

If the Stone cannot be found after a long Search, or, when found, cannot be extracted, and the Patient is weak, the Operator muſt deſiſt, till he has recovered his Strength, and give him corroborating Medicines. But when he is very weak, and a Delirium, or Convulſions, come upon him, he muſt be put to Bed for a Day or two, or longer, till the Wound ſuppurates; nor ſhould the Surgeon proceed, till he recovers his Strength, and the Stone may be felt by the Probe, according to the Advice of *Albucaſis*, *Francus*, *Hildanus*, *Colot*, *Saviard*, and others; for, if he is continued too long on the Table, he may periſh under the Operation. Sometimes a corrupt, ſpongy Subſtance is extracted with the Stone, which is a Sign, that ſome Abſceſs, Caruncle, or fleſhy Excreſcence, is formed in the Bladder, which is attended with Danger, or at leaſt a Fiſtula in the Perinæum is likely to enſue. If the Catheter cannot be paſſed into the Bladder of an Adult, either from an Inflammation, or Stone in its Neck, a Caruncle, or violent Phymoſis, an Inciſion muſt be made by the Apparatus minor; or, according to *Franco*, above the Oſſa Pubis, as we ſhall direct hereafter more at large. If Straining, from the violent Pain, cauſes an inconſiderable Deſcent of the Anus, or Rectum, at the Beginning, it may be reſtored by the Finger, after the Operation; but if it is great, the Inteſtine muſt be immediately reſtored, and ſuſtained by an Aſſiſtant; when it happens in the Middle, or towards the End, it may be deferred till the Operation is finiſhed; for, upon the Ceſſation of Pain, it generally recovers itſelf, or may be aſſiſted with the Fingers. If the Inciſion is to be made on one who has been cut before, it muſt be made in the Cicatrix. Nor ſhould the external Wound ever be too ſmall, ſince a large one heals as ſoon as a ſmaller; but, if the Stone is impeded by the Smallneſs, the Wound muſt be enlarged in the moſt convenient Part, by the Knife, or Sciſſars; and, if the Stone proves ſtill too large, it is better to deſiſt than kill the Patient. When the crooked Forceps are neceſſary, they ſhould be introduced with the End pointing upwards, and the Handle given to an Aſſiſtant, though the ſtrait are generally ſufficient. Inſtead of the common Knife, (*Tab.* XLVIII.) thoſe may be uſed repreſented at *Tab.* LII. *Fig.* 8. 18. The Time of the Wound's healing varies according to the Patient's Habit, and for other Reaſons; being ſometimes fifteen or twenty Days, ſometimes four or five Weeks, or longer. When the Forceps is introduced, it ſhould be guided by the Finger, the Director, or the Handle of the Scoop, that it may not miſs the Way, and wound the adjacent Parts. If the Stone is flat or broad, it ſhould be laid hold of, not laterally, but on its upper and lower Part. Laſtly, if the Patient, after the Operation, is afflicted with violent Pains in his Bladder, it will be proper to inject ſome warm Milk, or other Decoction, by a Syringe; but if the Stone, from its Roughneſs or Largeneſs, has injured the Bladder, it may be filled with Barley-water, or a Decoction of vulnerary Herbs, warm, and mixed with Honey of Roſes, or *French* Wine, with Myrrh boiled in it, and an Addition of Honey of Roſes. For the reſt conſult *Tolet*, *Greenfield*, and *Alghiſi*. For the Conveniency of this Method, above any other, ſee *Le Dran's Parallelle des Methodes*. On the contrary *Garengeot*, *Dionis*, *Douglas*, *Cheſelden*, and *Morand*, have rejected it.

Mr. *Sharp* gives the following ſhort Account of the Method of performing this Operation in our Hoſpitals.

Introduce the Staff, having firſt dipt it in Oil, which muſt be held by your Aſſiſtant, a little leaning on the Left Side of the Seam in Perinæo; and, beginning the external Wound juſt below the Scrotum; (which muſt be held out of the way) you continue it downwards, to within two Fingers-breadth of the

* *Colot* ſtopt an obſtinate Hæmorrhage of this Kind by Phlebotomy, three or four times repeated in twenty-four Hours. He adviſes the Continuance of it *ad Deliquium Animi*.

Anus; then, leaving that Direction, you ſlip the Knife forwards in the Groove, pretty far into the bulbous Part of the Urethra; or, as there is ſome Danger of wounding the Rectum, in the Continuation of the Inciſion, you may turn the Knife, with the Back towards it, and make this Part of the Inciſion from within, outwards. Should a very large Veſſel be cut, it will be adviſeable to tie it, before you proceed any farther in the Operation. When the Wound is made, ſlide the Gorget along the Groove of the Staff, into the Bladder; and, to do it with more Safety, when the Beak of it is received in the Groove, it will be proper to take the Staff yourſelf, in your Left Hand; for if the Aſſiſtant ſhould unwarily either incline the Handle of it too much towards you, or not reſiſt enough to the Force of the Gorget, it is very ready to ſlip out of the Groove between the Rectum and the Bladder, which Accident is not only inconvenient to the Operator for the preſent, but is attended, for the moſt part, with very bad Conſequences. The Gorget being paſſed, dilate the Urethra and Neck of the Bladder with your fore Finger, and introduce the Forceps into the Bladder, keeping them ſhut till you touch the Stone, when you muſt graſp it with a moderate Force, and extract it by pulling downwards towards the Rectum.

The High Operation.

Beſides the two preceding Methods of Lithotomy, there is a third, aſcribed to *Pierre Franco*, a *French* Surgeon, as its firſt Inventor, and after him called *Methodus Franconica*; and from the Place of the Inciſion, which is the Middle of the Hypogaſtrium, it is likewiſe termed the Hypogaſtric Section, and commonly the *Apparatus altus*, becauſe the Operation it performed above the Oſſa Pubis, in the ſuperior and anterior Part of the Bladder; whereas in the *Apparatus major*, *minor*, and the lateral Operation, the Inciſion is made below the Scrotum in the Perinæum. However, this new Method was ſcarce ever once performed by its Author, ſoon rejected by the Surgeons, and never mentioned but with a Deſign to explode it. For though *Franco* met with Succeſs upon a Child of two Years old, at *Lauſanne*, in the Year 1560. he only undertook it, becauſe the Stone, being as big as an Hen's Egg, was too large to be extracted at the Perinæum, and the Parents inſiſted upon it; and he is ſo far from recommending it, that he attributes his Succeſs to Accident, rather than Art, and pronounces it dangerous to the Patient, and raſh in the Surgeon. This was inſiſted upon the more, becauſe a Wound in the upper or membranous Part of the Bladder was always judged by the Antients, after *Hippocrates*, to be mortal. But ſince that time ſeveral Phyſicians and Surgeons have thought, from the anatomical Structure of the Parts, and Experience, that an Inciſion above the Oſſa Pubis might be expeditious, eaſy, and ſafe, to one acquainted with the true Situation of the Bladder, without-ſide of the Peritoneum, and its Conformation and Connection with the adjacent Parts, and the Method of cutting into it, without injuring its Fundus. The Poſſibility of this appeared, becauſe its accidental Inventor actually performed it. *Tolet*, alſo, tells us, that *Bonet*, a Surgeon, at *Paris*, performed it ſucceſsfully. He deſcribes it almoſt in the ſame manner, as *Franco* propoſed it, which is this: An Aſſiſtant ſhould introduce his two fore Fingers into the Anus, to protrude the Stone forward towards the upper Part of the Bladder, and retain it there; then the Operator makes an Inciſion into the Skin, Fat, Muſcles, and Bladder itſelf, near the Bottom of the Linea Alba, above the Juncture of the Oſſa Pubis; and afterwards, dilating the Aperture with a proper Inſtrument, he extracts the Stone with the Forceps, healing the Wound with a vulnerary Balſam, as in other Wounds of the Abdomen. *Tolet* makes no mention of filling the Bladder with Water, or ſome other Liquor, though *Roſſet* propoſed it long before. To *Franco* and *Bonet* we muſt add *Greenfield* as a Performer of the High Operation; for, he ſays, he was obliged to extract a Stone, by making an Inciſion above the Oſſa Pubis, which ſucceeded; but we are left in the Dark for the Reaſon of this Neceſſity, though probably it was the Largeneſs of the Stone. And *Hildanus*, who, at firſt, diſſuades from this Operation, afterwards declares, if the Stone ſhould be of an exceeding great Size, that he prefers the Method of *Franco* before the *Apparatus major*; for if, by its Largeneſs, it be preſſed towards the Inguen, (he would, or ought to have ſaid, the Pubes) I am convinced, ſays he, it may be extracted with leſs Pain and Danger at the Pubes, than by forcing it through the Neck of the Bladder: If this holds true of a large Stone, certainly a ſmall one may be extracted with more Eaſe, leſs Pain and Danger. It is, alſo, much recommended by *Petræus*; and *Riolanus* evidently proves it practicable from the Situation and Structure of the Bladder, and ſays, it was performed within his Knowledge.

Dionis, an eminent *French* Surgeon, is of the ſame Opinion; and ſays, that if the Bladder is filled with warm Liquor, he ſhould prefer it to the Apparatus major and minor, provided it would anſwer upon Experience: He aſſerts, too, that *Fagon*, then firſt Phyſician to the King of *France*, had the ſame Sentiments. Hence it is plain, that many of the *French* wrote and contended for it. There is, likewiſe, a remarkable Inſtance in the *Philoſophical Tranſactions* for the Year 1700. where a Surgeon, whoſe Name was *Proby*, extracted a Stone from a Maid, by the High Operation. But of this more particularly, when I treat of the Methods for extracting the Stone from Women. I am ſurpriſed, that none of the *Engliſh* ſhould mention this in their Writings, and am therefore inclined to think it was unknown to them, tho' publiſhed in the Tranſactions, and the ſecond *German* Edition of my (*Heiſter*'s) Surgery, *Ann.* 1724. and *Falconet* is the only *French* Author, who has taken any Notice of it. It is very extraordinary, that ſo many *French* Surgeons ſhould reject this Operation, ſince it has been ſeveral times performed with Succeſs, and appears, on many Accounts, more eaſy, ſimple, and liable to fewer Inconveniencies, than the others, as there is no Danger of wounding the Parts of Generation, the Sphincter of the Bladder, the Ureter, Urethra, Rectum, or any of the larger Blood-veſſels, or of a Fiſtula in the Perinæum, or Incontinence of Urine, or Impotence, or an Hæmorrhage. Which Advantages, and many more, are proved by *Roſſet*, in his Treatiſe *de partu Cæſareo*, where he recommends the High Operation, and demonſtrates, that if the Inciſion does not communicate with the Cavity of the Abdomen, ſo as to tranſmit the Urine thither, it is not mortal.

Dr. *James Douglas* revived this Method, after it had been long buried in Oblivion; for he, partly by reaſoning on the Situation, Structure, and Connection of the Bladder, and partly from the Authorities of others, in a Meeting of the Royal Society, *Anno* 1718. demonſtrated, that the Stone may be ſafely extracted by cutting into the ſuperior and anterior Part of the Body of the Bladder, when the Inciſion is skilfully performed; and accordingly his Brother, *John Douglas*, in the Year 1719. performed this Operation on a Man troubled with the Stone; and, in the Year following, publiſhed a Treatiſe, intitled *Lithotomia Douglaſiana*, wherein he confirms the Reaſonableneſs of this Practice from Anatomy, relates the ſuperior Advantages of it, and corroborates the Whole by an Inſtance of his own Succeſs upon a Lad of ſixteen Years of Age, which was done at the very time he firſt publicly propoſed this Method. Soon after this *Cheſelden*, *Douglas*, and ſeveral *Engliſh* Surgeons, frequently practiſed it with Succeſs.

Mr. *Cheſelden* ſays, that ſoon after Mr. *Douglas* had perform'd this Operation, a Surgeon of *St. Thomas*'s Hoſpital cut two, who both recovered; but the ſame Gentleman afterwards cutting two more, who miſcarried by the cutting or burſting the Peritonæum, ſo that the Guts appear'd, this Way immediately became as much decried, as it was before commended; upon which the Surgeons of *St. Bartholomew*'s Hoſpital, who had prepared to perform this Operation, altered their Reſolution, and went on the old Way. The next Seaſon, ſays he, it was my turn in *St. Thomas*'s Hoſpital, I reſumed the High Way; and, cutting nine with Succeſs, it came again in Vogue; after that, every Lithotomiſt, of both Hoſpitals, practiſed it; but the *Peritonæum* was often cut or burſt, twice in my Practice, though ſome of theſe recovered, and ſometimes the Bladder itſelf was burſt, from injecting too much Water, which generally proved fatal in a Day or two. Another Inconvenience attended every Operation of this Kind, which was, that the Urine's lying continually in the Wound, retarded the Cure; but then it was never followed with an Incontinence of Urine. What the Succeſs of the ſeveral Operators was, I will not take the Liberty to publiſh; but, for my own, excluſive of the two before-mentioned, I loſt no more than one in ſeven, which is more than any one elſe that I know of could ſay; whereas in the old Way, even at *Paris*, from a fair Calculation of above 800 Patients, it appears that near two in five died. And, though this Operation came into univerſal Diſcredit, I muſt declare it my Opinion, that it is much better than the old Way, to which they all returned, ſays *Cheſelden*, except myſelf, who would not have left the High Operation, but for the Hopes I had of a better, being well aſſured, that it might hereafter be practiſed with greater Succeſs; theſe fatal Accidents having pretty well ſhewn how much Water might be injected, and how large the Wound might ſafely be made.

For my own Part, ſays *Heiſter*, as I thought this new Method ſupported both by anatomical Reaſons, and Experience, I performed the High Operation without any Fear, *April* 17. *Ann.* 1723. upon a Man above thirty Years of Age, when I could not extract a large Piece of the Stone by the Wound in the Perinæum, according to the Method of *Rau*; for it could not be laid hold of, and conſequently not extracted, by the Forceps, becauſe, perhaps, it was concealed in ſome Cavity of the Bladder, ſuch as Lithotomiſts have ſometimes obſerved. This I did in the Preſence of many Surgeons and Students in Phyſic, the Day after I had performed the other Operation without Succeſs; nor did I inject any Liquor into the Bladder, for the Wound in the *Perinæum* prevented that; but making an Inciſion into the Body of the Bladder, purſuant to the Directions of *Roſſet* and *Douglas*, above the *Oſſa Pubis*, I enlarged it upward and downward by the crooked Knife, armed with a Button at the Point (ſee *Tab.* XXVI. *Fig.* 5.); and, introducing my Fingers, extracted the Stone with great Eaſe and Expedition. For the Pa-

tient preferred the Hazard attending this, to the intenſe Pains he ſuffered. He continued, during the firſt Days, very well; but, about the fifth or ſixth Day, he was ſeized with a Shivering, followed by a feverish Heat: Theſe I mitigated; but he was ſtill afflicted with Pains in his Back and Loins, attended with a Nauſea and Faintneſs, as before the Operation. The Wounds were free from Pain, but the ſuperior, in particular, could not be brought to ſuppurate and unite, though I applied ſticking Plaiſters, and the broad uniting Bandage, (*Tab.* XXVI. *Fig.* 8.) as in other Wounds of the Abdomen, a good vulnerary Balſam, and long thick Compreſſes on each Side, which did not prevent the Urine from eſcaping thereby, though very little paſſed through the Wound in the Perinæum, and none through the Urethra. In about a Month, being exhauſted by Weakneſs and Reachings, he died. Upon opening him, the inferior Wound was found partly in the Neck, and partly in the Body of the Bladder; but the ſuperior was right in all reſpects; for there was no Diviſion of the Abdomen or Peritonæum, nor any Injury of the Inteſtines; nor was any Blood or Urine found in the Cavity of the Abdomen, but the Kidneys were greatly diſtended with Ulcers, and a purulent Matter, which was the true Cauſe of the Pains in his Back and Loins, with the other Symptoms, and indeed of his Death.

But this Method ſeems to me attended with more Difficulties, than one would imagine from *Roſſet* and *Douglas*, particularly with regard to healing the Wound, which, for many good Reaſons, can never prove a very eaſy Task: For, as Anatomy demonſtrates, that the inferior Part, or Neck of the Bladder, is armed with a ſtrong Sphincter, and as the Urine does not ſpontaneouſly flow out, but is expreſſed by the contractile Force of the muſcular Coat, it is no Wonder that the Bladder, irritated by the collected Urine, ſhould contract itſelf, and expel that Excrement with more Eaſe through the divided contracted Part above, than the natural narrow Paſſage, which is always contracted by a Sphincter; and this muſt hinder the Agglutination. To this we may add, that the external Wound of the Abdomen is no leſs difficult to heal and unite, becauſe the Lips are conſtantly drawn from each other, by the oblique and tranſverſe abdominal Muſcles, ſo that they perpetually recede from the *Linea alba*, towards the *Vertebræ* and *Oſſa Ilei*.

Beſides the Difficulty ariſing from the continual Diſtraction of the Lips, the Dreſſings, alſo, are immediately ſpoiled, and rendered ineffectual, by the conſtant Efflux of the Urine: For though I took all poſſible Care to renew them, and brought the Lips of the Wound, two or three times in a Day, very cloſe to each other, treating it with a good vulnerary Balſam, and long ſticking Plaiſters, almoſt ſufficient to cover the whole Abdomen, and then applied long, thick Compreſſes on each Side of the Wound, ſecuring the Whole by a very long and ſtrong uniting Bandage, yet it proved inſufficient; for the Plaiſters, Compreſſes, and Bandage, were ſoon wetted and looſened by the Urine, ſo that I was obliged to repeat the Dreſſings many times in a Day, and nevertheleſs the Union of the Wound was not in the leaſt forwarded. But, to prevent the Imputation of Neglect, I muſt obſerve, there is no better Courſe propoſed than what I followed; for *Douglas* and *Greenfield* do not mention a Word about the means of healing the Wonnd, but only, in general, tell us, that they cured their Patients in four Weeks.

From what has been ſaid, it is manifeſt, how much they are miſtaken who prefer this Method, becauſe, as they ſay, the Wound is more eaſily and expeditiouſly healed: For, as to what they aſſert, that, by the Laws of Fluids, the Urine will paſs much more eaſily through the Aperture in the lower Part of the Bladder, than that above, and, conſequently, the Fiſtula in the *Perinæum*, ſo frequently cauſed by a conſtant Flux of Urine thro' the Wound, will not be ſo likely to happen, this cannot influence Men of Judgment: For, as the Urine is expelled out of the Bladder, not by its own Weight, but by a proper Contraction of that Receptacle, aſſiſted by the Diaphragm, it muſt neceſſarily follow, that it will more eaſily diſcharge itſelf through a Wound in the upper Part, than through the Neck, which is contracted by a ſtrong Sphincter. And this ſeems to me the Reaſon why ſo many neglected it, though it had met with ſome Succeſs; and the antient Writers upon this Subject might deſignedly omit the Mention of Difficulties attending the Agglutination of the Wound, leſt the World ſhould attribute their want of Succeſs to their want of Skill. For very few, like *Hippocrates*, publiſh their good and bad Succeſs indifferently, though it may be of Service to Poſterity; but fear, with ſome Reaſon, that the Patient's Death may be imputed to their Ignorance, though the Diſorder was abſolutely incurable. *Tolet* tells us, but it is from the Relation of others only, that *Bonet* performed the High Operation on ſeveral, though neither he, nor *Bonet*, ſay one Word of the Method of healing the Wound. And, as we are aſſured from Experience and Hiſtory, that *Bonet*, and the greater Part of the *French* Surgeons, ſtill continue the Apparatus major, we may reaſonably ſuppoſe he never performed the other, but, when the Stone could not be extracted by that; and it might, perhaps, ſeem a Reflection on his Character, that he could not, without Difficulty, if at all, cure a Wound, which ſeemed ſlight to others. Now what could induce theſe great Men to reject the High Operation, but the Difficulty that occurred in healing the Wound? eſpecially when they allowed it many Advantages over the other Methods. Becauſe *Douglas* ſucceeded on a ſtout young Subject, muſt we, therefore, conclude, that there is a Neceſſity for performing this Operation on Patients advanced in Years, and of a bad Habit? I muſt then declare this not to be the beſt Method, till more ſpeedy and effectual Means are diſcovered for uniting the Wound, and till ſuch Methods are confirmed by repeated Inſtances of Succeſs. As for *Tolet's* Opinion, that it may be cured as eaſily as other Wounds of the Abdomen; this ſeems founded only on Conjecture. Nor am I convinced, that Gaſtroraphy, recommended by *Roſſet* and *Solingen*, may be ſucceſsfully practiſed, ſince the Puncturation of the Bladder induces bad Symptoms, and ſeveral expert Surgeons have tried it without any Advantage.

Thus I judged in the Year 1724. and will now declare my preſent Opinion: After having conſidered the Nature and Performance of the Operation, with the Inſtances of Succeſs from *Douglas*, *Cheſelden*, *Thornhill*, *Smith*, *Pye*, *Macgil*, *Morand*, myſelf, and others, I rather aſcribed the Difficulty of healing the Wound to an ill Habit, ſince it is not ſo in young Subjects, eſpecially Children, when a proper Bandage is uſed with a digeſtive Ointment, and vulnerary Balſam, as Balſam of *Capivi*, or *Linimentum Arcei*, and a regular Diet is obſerved. And I am the more confirmed in this Opinion, by many living Inſtances, who have been cured by *Douglas*, *Cheſelden*, myſelf, and others. Upon the Whole, therefore, I muſt recommend the High Operation, in Boys and young Men, who are otherwiſe of a good Habit of Body, as none of theſe have died under it, and eſpecially when the Stone is lodged ſo high in the Bladder, or is ſo rough and ſharp-pointed, that it cannot be extracted by the Apparatus minor, though I prefer the latter, as more certain and ſafe, in Infants who are ſubject to cry violently, ſo that their Bladder cannot be filled with Liquor, if the Stone is not rough, and can be forced to the Perinæum.

I am ſenſible many have died under this Operation, (nor have all eſcaped under the other Methods) but that was rather owing to a bad Habit or Weakneſs; for ſeveral, upon opening them after Death, have been found to have Ulcers in their Bladder and Kidneys; and, therefore, I do not recommend this for Perſons upwards of Thirty, as they, for the generality, have been long afflicted with the Stone; for in ſuch I ſeldom met with Succeſs, nor do *Douglas* and *Morand* encourage it; for they obſerve, that ſome have periſhed from the preceding Diſorders; others from an Abſceſs in the cellular Membrane covering the Bladder; and others from a Cancer in the Bladder; conſequently the High Operation ſhould not be performed upon Perſons advanced in Years, unleſs there is ſome urgent Neceſſity, as, particularly, when the Stone cannot be extracted through the Perinæum. Care ſhould be therefore taken, not unjuſtly to attribute the Patient's Death to this Operation; though, to vindicate this innocent Method from ſuch falſe Aſperſions, the Surgeon ſhould never perform it but on Boys, and young Men, amongſt whom I have never met with one Miſcarriage, and very few have been loſt under the Hands of others, but ſuch as were above Thirty, and reduced by other Diſeaſes. Laſtly, as *Douglas* obſerves, it is a bad Preſage, and an infallible Forerunner of Death, when the Wound can neither be ſuppurated nor cleanſed, whereas the contrary leaves no Room to doubt of a certain Cure.

Thus much for the Operation itſelf: We ſhall now proceed to the Method of performing it, eſpecially my own Practice; but it will be neceſſary, for the ſake of young Beginners, to deſcribe the Diſpoſition, Situation, Connection, and Structure of the Bladder, as an accurate Knowledge hereof is highly neceſſary. Upon opening the dead Body of a Male Subject, the Bladder, being empty, and collapſed, lies concealed under the Oſſa Pubis and Inteſtines, ſo that ſcarce any Part of it can be ſeen; but if it is inflated, or Water injected into it, by a gradual Extenſion it expands itſelf conſiderably above the Oſſa Pubis, towards the Navel, ſo that the large and ſuperior Part, call'd the Body and Fundus, may be plainly viewed. To make this more intelligible, I have (in *Tab.* LI.) exhibited ſeveral Figures from *Cheſelden*. *Fig.* 1. repreſents a dead Subject in an oblique Poſture, a little inclined to the Right, principally to ſhew the Abdomen, in which the common Integuments, and abdominal Muſcles, being laid aſide, we have a View of the Peritonæum, including the Inteſtines, and of a large Part of the Bladder A, which ſhews its Body and Fundus filled with ten Ounces of Water; B the Urachus, which connects the Bladder to the Navel; C C the umbilical Arteries, D D the Oſſa Pubis cover'd with the Integuments turned down to ſhew that Part of the diſtended Bladder, which riſes up into the Abdomen, above the Oſſa Pubis.

Fig. 2. is the Abdomen entirely open, the Peritonæum being removed, or cut off, which ſhews the Bladder filled with twenty Ounces of Water; but here the internal Lamina of the Peritonæum A A A A is left adhering to the Bladder, while the exterior,

terior, near the abdominal Muſcles, is removed. BB ſhew the Part of the Bladder next the Muſculi pyramidales and Recti of the Abdomen, the exterior Lamina being removed, ſo that the muſcular Fibres may be ſeen. CCCCC repreſent the Margin of the internal Lamina of the Peritonæum, which covers principally the Fundus of the Bladder, where the Inteſti es touch it, and where it is excluded from the Cavity of the Abdomen*: D D the Oſſa Pubis, E E the Inteſtines, B B the Middle of the Body of the Bladder, which is divided in the High Operation. *Fig.* 3. repreſents the Right Half of the Abdomen, opened in an erect Situation, the Inteſtines and Integuments being removed: A A the upper Part of the Bladder, properly termed the *Fundus*, inveſted with the Peritonæum, which lies next the Abdomen, and which touches the Inteſtines, whoſe Limits in the diſtended Bladder are *a a a a*. B B B the Body of the Bladder on the Right Side, greatly diſtended, joined to the abdominal Muſcles, which does not communicate with the Cavity of the Abdomen, but is ſeparated from it by the Limits of the Peritonæum *a a a a*; ſo that, if the Bladder is divided within the Bounds *a a a a*, the Urine cannot enter into the Cavity of the Abdomen, but runs without the Body, and over the Oſſa Pubis, in the High Operation, where *b b* denote the Part of the Bladder divided, in which Part Wounds are not mortal. CCC the Right umbilical Artery; D D the Urachus; E the Os Pubis, covered with Part of the Integuments; F the broad Ligament of the Liver; G Part of the Liver; H Part of the Right Kidney; I Part of the Right Ureter; K the Membrana adipoſa; L the Left pyramidal Muſcle; M M the Left Rectus Muſcle. *Fig.* 4. repreſents the Abdomen opened, and the Bladder but moderately diſtended. A A A A A the Body of the Bladder, inveſted with the Peritonæum, the wounding of which is fatal; B B B the Part of the Bladder without the Peritonæum, the Bounds of which, being terminated by the Line C C C, and the Oſſa Pubis D D, take in but a ſmall Compaſs; which ſhews how cautiouſly the Lithotomiſt ſhould proceed in the High Operation, when the Bladder is but little diſtended, and that he ſhould make the Inciſion with a ſmall narrow Knife. For if the Bladder is wounded in the upper Part, which is covered with the Peritonæum, ſo that the Urine may paſs into the Cavity of the Abdomen, as at A A A, *Fig.* 2, 3, and 4. the Wound is incurable. The Bladder, therefore, ſhould be only ſeparated, where it is uncovered with the Peritonæum B B B. E E the Inteſtines.

Having premiſed this, we ſhall proceed to deſcribe the Operation itſelf: The Patient, being duly prepared, is to be laid on a Table, or Bed, in ſuch a Poſture, that his Buttocks may be ſomewhat higher than his Head; his Hands, Arms, Legs, Breaſt, and Head, muſt be ſecured by ſtrong Aſſiſtants, not uſing Ligatures, on account of the Terror they ſtrike into ſome Men; for this Reaſon the Bed is often preferred to the Table. A Pillow ſhould be placed under his Head, that his Back may be a little bended, and the abdominal Muſcles in ſome meaſure relaxed. Then an hollow Silver Catheter, with a flexible Leathern Tube at one End, (ſee *Tab.* LI. *Fig.* 5. A A, D D D) is to be gradually and ſlowly introduced into the Bladder. Inſtead of which Tube, according to *Douglas*, the Wind-pipe of an *Indian* Cock may be uſed; or, according to *Cheſelden*, the Ureter of an Ox. To this the Tube C muſt be faſtened, and afterwards fitted with a large Syringe; by which means ſo much warm Water, Barley-water, or Milk, muſt be injected into the Bladder, as the Patient can bear without Pain or Uneaſineſs, or rather till the Bladder is full, and ſufficiently diſtended†. When this is done, the Catheter is extracted from the Bladder, and the Penis, with the Urethra, held tight by an Aſſiſtant, or depreſſed to the Perinæum, or tied with a broad Tape. Then, ſtanding on the Right Side of the Patient, I order a prudent Aſſiſtant to introduce his two fore Fingers into the Anus, to elevate the Stone and Bladder: In the mean time I make an Inciſion with the ſmall Knife, (ſee *Tab.* XXXIII. *Fig.* 14.) or one like it, wrapped in a Piece of Linen, firſt through the Skin and Fat, and then, by degrees, through the abdominal Muſcles, in a right Line, immediately above the Oſſa Pubis, or near the Bottom of the Linea alba, or in the Linea alba itſelf ‡ (ſee *Tab.* LI. *Fig.* 3. *b b*, or *Fig.* 4. B, C). The external Wound ſhould be three Fingers-breadth long in Children, and four in Adults. Then, introducing the Fingers of either Hand into the Wound, particularly the Left Index, I feel for the Liquor which diſtends the Bladder above the Margin of the Oſſa Pubis, at their Junćture; which is not eaſily to be diſcovered, when the Bladder is not much diſtended, either by reaſon of Convulſions of the wounded Parts, the unuſual Hardneſs of the Bladder, or ſome other Cauſe. I then make an Inciſion with the ſame, or an hooked ſharp Knife, into the Bladder immediately above the Junćture of the Oſſa Pubis; or elſe, as I once practiſed ſucceſsfully, make an Aperture in that Part, with the Trocar, without the Cannula (*Tab.* XLV. *Fig.* 2.). But where the Bladder is but moderately diſtended, this ſhould be done with Caution, for fear of wounding the Fundus; and, therefore, I introduce my Left Index into the Perforation, and gently ſeparate the Peritonæum from the Oſſa Pubis, on which it lies, to avoid injuring either that, or the Fundus. I then paſs a ſmall Knife, or the Trocar, obliquely behind the Oſſa Pubis, into the Body of the Bladder (but not the Fundus) towards its Neck, ſo as to make a ſmall Wound with the Point only. After this, Part of the injected Liquor, or the Urine contained in the Bladder, immediately flows through the Wound. Through this Aperture I paſs a crooked or ſtrait Knife, armed with a Button at its Point (ſee *Tab.* XXVI. *Fig.* 3, 4, 5.); and, elevating the Button towards the Fundus, I enlarge the Wound upwards, for the Breadth of one or two Fingers, according to the Size of the Patient: By this the Peritonæum, and Fundus of the Bladder, can ſcarcely be injured, and only the Body of it, (ſee *Tab.* LI. *Fig.* 2. B B) about the Middle, and near its Neck, is opened; but the Peritonæum A A A, *Fig.* 2, 3, 4. remains entire. Some condemn this Method, which I took from *Roſſet* and *Douglas*; and direct the Inciſion to be made from the upper Part of the Bladder, a little below the Urachus, and to be continued to the Os Pubis, at one Section. They ſay, that the greateſt Danger of the Operation conſiſts in this Inciſion; which I readily grant. But ſince we are generally uncertain how far the Bladder is diſtended, and what Part under the Urachus they would have divided, I muſt give the Preference to the Method here propoſed, eſpecially when the Inciſion is prudently made, with a blunt-pointed Knife, which ſome of them reject. By this means, even where the Bladder had little or no Diſtention, I never wounded the Peritonæum, whereas they, by their Inciſion downwards, generally do, though the Bladder is properly diſtended; and thus the Patient dies. This Method ſucceeds with or without a Diſtention, but theirs is only practicable with a very great one; and, therefore, as we are informed by *Winſlow* and *Morand*, mine was preferred by *Thibaut*. When I have perforated the Bladder enough to admit my Finger by the Side of the Knife, I introduce my Left Index, and, bending it in the Form of an Hook towards its Fundus, gently draw the upper Part of the Bladder towards the Navel, and then enlarge the Wound downwards, by directing the Inſtrument towards the Oſſa Pubis, and Neck of the Bladder; this makes the Aperture ſufficiently large. Immediately after, I introduce the fore Finger of my other Hand into the Bladder, and examine the Size and Situation of the Stone, and whether a larger Wound is requiſite: If the laſt is required, leaving my Finger in the Bladder, I elevate and enlarge the Wound, either upward, or downward, or both, till I think it ſufficient for the Extraction of the Stone, without injuring its Fundus, which may be ſecurely performed with the obtuſe-pointed Knife. But, if the Inciſion is large enough, I lay aſide the Inſtrument, and deſire the Aſſiſtant, whoſe fore Fingers are in the Patient's Anus, to preſs the Stone forwards, as much as poſſible, during which time I endeavour to extract it with my Fingers, when it is ſmall: If they are inſufficient, I introduce the Hook, (*Tab.* XLVIII. *Fig.* 10.) or the Forceps, as I judge proper. To ſome Patients, who dreaded the Introduction of the Catheter, and the Injection, I preſcribed large Quantities of Tea, keeping a Stricture upon the Urethra, by the Inſtrument (*Tab.* XLVII. *Fig.* 9.), that the Bladder might be ſomewhat diſtended; and thus have I made a proper Inciſion, and extracted the Stone, though ſome deny it to be poſſible‖. When I could not extract the Stone through the Perinæum, which has happened twice to me, and when the inferior Wound prevented a Diſtention of the Bladder, either by Injection, or retaining the Urine, (which occurred to *Greenfield*, and, perhaps, *Franco*) having carefully divided the Skin and Fat from the Muſculi recti of the Abdomen, I introduce my Left Index between the Os Pu-

* *Garengeot* ſays, the Bladder is without the Abdomen; which, in my Opinion, is a Miſtake. The Bladder, indeed, when collapſed, is without the Peritonæum, but not without the Abdomen; becauſe it is ſituated in the Pelvis, which is the lower Cavity of the Abdomen, formed by the Oſſa Innominata and Sacrum, which, by general Conſent is allowed to be Part of the Abdomen; and, therefore, any Part ſituated in the Pelvis, is ſituated in the Abdomen.

† Some Surgeons, and particularly *Garengeot*, aſſert, that the Bladder ſhould be diſtended, till there is a viſible Tumor above the Oſſa Pubis. This may be right in dead Subjects; but I have found, by Experience upon the Living, it can ſcarcely be perceived by reaſon of Spaſms and Pains. And *Cheſelden* gives an Inſtance, where the Bladder was burſt, by injecting too much Water. The Diſtention of the Bladder, by blowing in Wind with a Pair of Bellows, as *Solingen* adviſes, is rejected by *Roſet*, as uſeleſs and pernicious.

‡ Some Surgeons, particularly *Garengeot*, ſay, it is dangerous to make an Inciſion in the Linea alba; and, therefore, to be avoided. But my own Experience, with the Teſtimony of many others, convinces me, that the Inciſion will heal in this Part as well as the muſcular. *Winſlow* pronounces it an uſeleſs and vain Caution.

‖ *Roſſet* propoſed filling the Bladder, particularly by drinking Spaw-water, or ſome other Diuretic; but I know none, either among the *Engliſh* or *French*, who have followed his Advice. But, that it will ſucceed, appears, not only from my own Practice, but from *Protbiſch*, who cured a Lad of twelve Years old by this Method; though he wounded the Peritonæum to ſuch a degree, that the Inteſtines fell down. But *Winſlow* adviſes the Patient to retain his Urine, after plentifully drinking for ſeveral Days before the Operation; and by that means to cauſe a gradual Extenſion of the Bladder.

bis and Membrane of the Peritonæum (ſee *Tab.* LI. *Fig.* 4. B B; and *Bedlow's Tab.* XLI.) and thruſt it gently back from the Oſſa Pubis, that I may firſt make a ſmall Inciſion, and then a larger, into the Body of the Bladder, and extract the Stone, without wounding its Fundus, or the Peritonæum. The performing the High Operation, without diſtending the Bladder, is taken notice of by no one, that I know of; though it may be uſeful, and even neceſſary in ſome Caſes. Repletion of the Bladder, therefore, is not always requiſite; yet it muſt be owned, that without it more Caution and Diligence is required.

Some ſay that the Fundus of the Bladder is to be divided in this Operation, and the Stone extracted that way, among whom is *Garengeot*; but this muſt proceed from an imperfect Knowledge of the Parts; nor does he in his *Splanchnologia*, when he treats of the Bladder, ſay one Word of its Parts, and the Manner of dividing it, tho' it is of the laſt Importance to Beginners, in every Operation where that is concerned, and particularly in the ſeveral Methods of Lithotomy. Others improperly divide the Bladder into two Parts only, its Neck and Fundus; and theſe, in deſcribing the hypogaſtric Section, tell us it is to be ſeparated in its Fundus; whereas a Wound in that Part is fatal, becauſe the Urine then flows into the Cavity of the Abdomen, there putrefies, and deſtroys the Patient. The Bladder, therefore, ſhould be divided into its Neck, Body, and Fundus, conſidering it as a Pitcher, (for to this *Riolanus*, and others, have juſtly compared it) in which there is the Neck, the Body, and the Bottom; but it would be abſurd to call the Body of the Pitcher, which follows the Neck, the Bottom of it, ſince by that Name we underſtand the loweſt Part, oppoſite to its Neck: In the ſame manner, we may reaſon on the Bladder, though it repreſents a Pitcher inverted, (ſee *Tab.* L. *Fig.* 8. or *Tab.* LIII. *Fig.* 1, 2.). A A, therefore, (in *Tab.* L. *Fig.* 8.) denote the Neck of the Bladder; B B the Body, or Bladder itſelf; C the Fundus, though that Part, when we ſtand erect, is uppermoſt; D D the Proſtate Gland; E E part of the ſeminal Veſſels in a Boy. But, if we conſider the Bladder out of the Body, that Part where the Butcher inflates it is the Neck; that oppoſed to it, the Fundus; and the intermediate Part, the Bladder itſelf; which, as *Roſſet* obſerves, is to be cut, and not the Fundus. As, in the High Operation, the Bladder is divided in the middle and lower Part of its anterior Surface, (ſee *Tab.* L. *Fig.* 8. B B; and *Tab.* LI. *Fig.* 2. B B) ſo, in the *Celſian* and Lateral Operation, is it divided in the lateral lower Part, which ſome not improperly call the Baſis (ſee *Tab.* L. *Fig.* 1.). But in no Method is the Fundus ſeparated: For, as this would open a Paſſage for the Urine into the Abdomen, the Wound muſt prove incurable. We muſt not, therefore, pay any Regard to thoſe who eſpouſe this Method, tho' they falſely aſcribe their Opinion to *Roſſet*. It is ſurpriſing, ſince *Roſſet* has diſtinguiſhed ſo accurately between the Parts of the Bladder, that the modern *French* Surgeons ſhould raſhly declare, as a Matter of no Conſequence, that the Fundus may be divided: On the contrary, moſt of the *Engliſh*, with *Roſſet*, and myſelf, adviſe the Inciſion to be made in the Body, as appears from *Middleton*, when he ſays, "If the Inciſion in the Body of the Bladder is ſufficiently large," *&c.*

When the Stone is extracted, according to the Directions given above, the Operator introduces his Fingers into the Bladder, to ſearch if any thing remains which ought to be extracted; which may be done better this way than any other. If nothing is left, the Wound being covered with a Linen Cloth, or a Compreſs, the Patient is put to Bed, and ſome dry Linen Cloths laid on that Cloth, for Lint might ſlip into the Bladder; the Whole is then ſecured with a Compreſs, and a large folded Napkin brought round the Abdomen, as in other Wounds of that Part. Some few Hours after, the Wound ſhould be dreſſed with Lint ſpread with digeſtive Ointment, over which ſhould be laid a Plaiſter, and thick Compreſs, moiſten'd with warm Lime-water; to which add Spirits of Wine and Camphire, with a little of the medicinal Stone, or Sal Armoniac, or Oxycrate, or a Decoction of ſome of the vulnerary Herbs in Red-wine, which ſhould be often applied round the greater Part of the Abdomen, and ſecured by a Napkin faſten'd tight about the Body. A Continuation of this for four or five Days will prevent an Inflammation; and it may be ſometimes laid on the Abdomen, whilſt the Wound is uncover'd, that any noxious Contents may diſcharge themſelves. By this means, in young Men and Boys, and ſometimes in old Men of a good Habit, the Wound will ſuppurate, and be perfectly cleanſed, in ſeven, nine, ten, or twelve Days: Then it ſhould be dreſſed once or twice every Day with Balſam of Capivi, or, what is better, Linimentum Arcei; and the Lips muſt be approximated, and held together by a narrow ſticking Plaiſter, as in the dry Suture; for a more early Uſe of theſe Plaiſters is even pernicious, as they impede the Cleanſing of the Wound, and Bladder. Over the Plaiſter it will be proper to apply an uniting Bandage, or to tie the Napkin, before in Uſe, tighter round the Abdomen; this is to be repeated, till there is a perfect Agglutination, and the Urine diſcharges itſelf entirely through the natural Paſſage. The Wound heals ſooner or later, according to the Patient's Conſtitution; in ſome in three Weeks, in others a Month, and ſometimes longer.

Further Observations.

When the Patient is able to riſe, ſit, and walk, and ſeemingly deſirous of it, I indulge him; or, if he chooſes to lie on his Side, I do not poſitively confine him to his Back, as ſome do, to his great Uneaſineſs. I am encouraged in this by a Patient of mine, about thirteen Years old, who left his Bed the ſeventh Day after the Operation, and walked about, without my Conſent: This was of no ill Conſequence; for the Wound was completely healed the fourth Week. Sometimes the natural Paſſage of the Urine is obſtructed by a ſandy mucous Matter: The Patient ſhould then be laid on one Side, and ſome warm Water ſhould be injected through the Urethra into the Bladder, by which the Matter may be expelled through the Wound; or it may, by the Introduction of a Pipe into the Urethra, be blow'd into the Bladder, and ſo ejected through the Wound. By either of theſe Methods, the Urine paſſes afterwards in its proper Courſe. This *Rungius*, a Surgeon of *Bremen*, practiſed after me. If the Stone breaks in the Extraction, the Fragments may be taken out with the Fingers; but, when they are inſufficient, *Roſſet* has contrived a convenient Inſtrument, like a narrow Spoon, and curved in a particular manner, which will extract both the Pieces and Sand, if there are any. For promoting the Agglutination, *Roſſet* adviſes the Introduction of a Catheter through the Urethra into the Bladder, that the Urine may diſcharge itſelf there, without paſſing through the Wound. *Morand*, in Imitation of this, uſed a ſhort Catheter, and from that found great Advantages.

That this Method may not be thought an unneceſſary Invention, I ſhall briefly conſider its principal Advantages above the preceding: And firſt, as in this Operation neither the Sphincter, or Neck of the Bladder, Urethra, nor Proſtate Gland, are wounded by the Knife, Forceps, or any Inſtrument, nor injur'd by the Extraction of the Stone, there is no room to fear an Incontinence of Urine, or a Fiſtula in the Perinæum or Urethra, which are the uſual Conſequences of the Apparatus major, and even the Lateral Operation. 2. When the Stone is large, rough, angular, or prickly, in either of them the Neck of the Bladder, and Proſtate Gland, are violently lacerated and wounded, which is followed by intenſe Pains, Inflammation, Gangrene of the Bladder, Convulſions, and Death; whereas in this, ſince the Inciſion is made in the anterior Part of the Body of the Bladder, immediately above the Oſſa Pubis, no ſuch Symptoms in the Neck and Urethra are to be apprehended. 3. For the ſame Reaſon, the Parts of Generation, as the Muſcles of the Penis, the Proſtate Gland, and the ſeminal Veſſels, with their excretory Ducts, are not injured; whereas a Wound in thoſe Parts by the Apparatus major, or in the Lateral Operation, frequently renders a Man impotent, or, at leaſt, not ſo capable of Procreation. 4. Since there are only a few ſmall Blood-veſſels diſtributed in the upper Part of the Bladder, and the Rectum with the Ureters are at a Diſtance from the Wound, neither they, nor the large Blood-veſſels, can be injured, as they frequently are in the other Methods; whence a dangerous Hæmorrhage, and other bad Symptoms, are induced. 5. If the Stone is rough, or ſharp-pointed, (which may be known by the violent Pains, and frequent Diſcharge of bloody Urine, as well as by the Touch of the Finger in the Anus) the Extraction is ſcarcely practicable by the Apparatus major, minor, or Lateral Operation; but in this Method it is very eaſy, as the Wound may be enlarged to any Degree neceſſary. 6. This is performed with fewer Inſtruments than the Apparatus major, or Lateral Operation; and the Stone may be often extracted with the Fingers only; but ſimple Methods are always preferable to complex and difficult ones. 7. Neither the Bladder nor Urethra are moleſted or irritated by Catheters, which *Tolet*, and others ſay, produce an Inflammation. 8. If the Male or Female Conductor be thruſt into the Bladder too violently or deeply, in the Apparatus major, or the Lateral Operation, it is frequently wounded, or entirely perforated; which, according to *Garengeot*, is mortal: But theſe Inſtruments are not uſed in the High Operation. 9. It is not neceſſary to bind the Patient in ſo formidable a Poſition, as the Apparatus major requires, which has almoſt deſtroyed ſome weak Perſons before the Operation. 10. By this Method we can paſs our Fingers further, and with more Eaſe, into the Bladder, than by any other; and, conſequently, judge better of the Size, Figure, or Number of the Stones, with the moſt convenient Manner of extracting them, and whether the Bladder is thoroughly cleanſed. *Denys*, the greateſt Advocate for *Rau*'s Method, confeſſes, that it is difficult by that to find the ſmall Stones; and this, ſays he, is common to the reſt: But the High Operation is not liable to that Defect, as we are aſſured from Experience, and as he himſelf acknowledges. If the Stone is ſo ſmall, that it cannot be taken hold of by the Forceps, in the Lateral Operation, he adviſes the Surgeon to deſiſt; whereas he might eaſily extract it by the High Operation. Nor have we any one Inſtance, where it could not be extracted this way, and the Operator was obliged to relinquiſh his Work. And therefore it is preferable to the Apparatus major, or Lateral Method. 11. If the Stone adheres or grows to the Bladder, which *Roſſet*, *Douglas*, and others, deny, tho' it is confirmed by the Experience of *Middleton*,

dleton, *Thornhill*, and myſelf, it may be often ſeparated by the Fingers: And, when it is too large to be extracted, we do not torture the Patient to Death, as in other Methods; but prudently deſiſt in time. 12. The Stone is not ſo ſubject to break in the Extraction, as in the Apparatus major, becauſe the Aperture is large, and capable of being further enlarged, as the Bladder is more dilatable in its Body, than its Neck: And, if it ſhould break, the Pieces may be eaſily extracted by the Fingers, Scoops, or ſome proper Inſtruments. 13. Longitudinal Stones, ſituated tranſverſly in the Bladder, cannot, without Danger and Pain, if at all, be extracted by the other Ways; whereas, in this, there is neither Difficulty nor Hazard; for they may be ſecurely laid hold of, in their leaſt Diameters. 14. If the Stone cannot be found or extracted in the Apparatus major, or lateral Operation, either from a Concealment in ſome Fold of the Bladder, as *Riolanus* has obſerved, or any other Cauſe; or if the grooved Catheter cannot be paſſed into the Bladder, on account of an Inflammation or Tumor in its Neck, or at the Proſtate Gland, or the exquiſite Pain, or a Cicatrix, Hardneſs, Tubercle, or Stone in the Urethra, or Neck of the Bladder, or a Phymoſis, or an Averſion in the Patient to the Catheter, Inſtances of which are not uncommon, in all theſe Caſes the High Operation is the only Method of Relief; and, therefore, preferred by *Cheſelden*, *Greenfield*, *Morand*, and others; though the Apparatus minor will anſwer all theſe Purpoſes in Boys, and Adults of a low Stature. 15. One of the principal Advantages, according to *Pietrus* and *Roſſet*, is, that any young Beginner may undertake it, becauſe the Inciſion is of no great Depth, and directly down through the Integuments and Muſcles into the Bladder, without regarding the Windings of the Urethra. This perhaps is true, when the Bladder is previouſly diſtended with a convenient Liquor: But, when this cannot be done, it is not ſo eaſy, and becomes dangerous, from the ſmall Space between the Oſſa Pubis and Peritonæum, where the Inciſion is to be made; for the leaſt Slip will wound the Fundus of the Bladder, which is fatal, eſpecially if the Inciſion is made from above downwards, as ſome adviſe; this therefore would require a skilful Anatomiſt and Surgeon: For which Reaſon, from *Roſſet's* Time, we have been adviſed to diſtend the Bladder. And for the ſame Reaſon, *Tolet* adviſes a frequent Performance of this Operation on dead Subjects, before we undertake it on the living, and eſpecially (which is worth notice) after a Diſcharge of the Urine.

Before we finiſh this Head, it may not be amiſs to obviate ſome of the principal Objections againſt this Method. *Denys*, a ſtrenuous Defender of *Rau's* Method, tells us, that the High Operation is, in many Caſes, impracticable upon many Accounts; and that thoſe who could not be cured by that, might by the lateral Operation. But, as he has produced no one of theſe many Caſes, nor mentioned a ſingle Inſtance where his Method effected a Cure, which the High Operation could not, and as my own Experience convinces me to the contrary, I ſhall not, upon his bare Aſſertion, ſubſcribe to that Opinion. He relates indeed a Caſe, where *Rau* could not extract the Stone by the High Operation; and another, which happened to *Bertelius*, whom I have often ſeen practiſe this very Method dexterouſly. He allows, indeed, that it will cure ſome young Children, (and, of conſequence, does not abſolutely diſapprove of it) but not all. Here again I could wiſh he had ſpecified ſome particular Inſtances, ſince the Advocates for the contrary Opinion are armed with ſo many.

His ſecond Objection is, that it is longer in the Performance than the Lateral Method: But this is falſe, if we except the previous Diſtention of the Bladder, which is not the Operation, but only one of the preparatory Requiſites; and *Denys* himſelf owns there are many Obſtacles in *Rau's* Method, and the Apparatus major, which prolong the Operation, particularly that *Rau* himſelf was once three Quarters of an Hour in ſearching for and extracting the Stone. I will, therefore, boldly aſſert, that the High Operation is, in many Caſes, more expeditious than the Lateral; as when the Stone lies concealed in ſome Cavity, or on either Side of the Bladder, or under the Oſſa Pubis, or when it is ſmall; for, by this Method, there is Room enough to ſearch every Part of the Bladder with the Fingers, which are the beſt Inſtruments both for ſearching and extracting; eſpecially if an Aſſiſtant protrudes the Bladder and Stone forwards with his Finger in the *Anus*. So that in this Way the Stone may be often extracted by the Fingers only; or, if it is large, by them, with the Aſſiſtance of a Forceps, or Hook; while, in the Lateral Method, the Operator is often a long time ſearching for it in the Dark with his Forceps, and longer in extracting it.

The third Objection is, that it is more painful. But this is not certain; for I have ſeen Children, who, upon other Occaſions, cry violently, make but little Noiſe from the Pain of this Operation. I muſt confeſs, that a large, rough Stone gives exquiſite Torment, and this Inconvenience is common to all the Methods; but the High Operation is leaſt ſubject to it.

Further, *Denys* objects, that it cannot be performed on all Subjects, eſpecially Children and Infants, from the Smallneſs of their Bladders. But this is ſo far from being true, that *Douglas*, *Cheſelden*, *Middleton*, *Morand*, and others, have practiſed it upon Children of three or four Years old; and it generally ſucceeds beſt at that Age under a judicious Hand. He objects too (from *Pag.* 59. to 105.) with *Garengeot*, and ſome others, that the Bladder muſt neceſſarily be diſtended with Water to ſuch a Degree, that it may aſcend a good Way above the Oſſa Pubis; but this is impracticable in ſmall and thick Bladders, and therefore it does not ſucceed with all. I own the Operation may be performed with more Expedition and Safety, when the Bladder is greatly diſtended; but muſt deny the abſolute Neceſſity of this Diſtention, ſince a skilful Surgeon may perform it, even when the Bladder is entirely collapſed. This Inconvenience, therefore, ſhould not be imputed to the Operation, but the Operator. And the Reader may remember, there was no Diſtention, where *Franco* and *Roſſet* could not extract the Stone by the Wound firſt made in the Perinæum; and yet they took it from the collapſed Bladder, without wounding its *Fundus*, or the *Peritonæum*. Thus *Proebiſch*, and myſelf, performed it, by a ſlight Compreſſion of the Urethra, and a Retention of the Urine, after drinking Tea plentifully, without any Injection; to omit the Inſtances given by *Berriere*, deſcribed by *Morand*, and other Inſtances where the Clamours of Children rendered the Repletion impoſſible.

He objects (*pag.* 101.) that, when the Bladder has been filled, the *Penis* muſt be ſtrongly compreſſed by the Finger, or a Ligature, leſt the Water ſhould return, before the Inciſion is made into the Bladder, which cauſes Tumors, an Inflammation, and other dangerous Symptoms. Theſe never occurred to me; nor can I conceive it poſſible they ſhould; for a very ſlight Compreſſure will retain the Liquor, and it may be performed by the Inſtrument (*Tab.* XLVII. *Fig.* 9.) which I recommend for an Incontinence of Urine. *Winſlow* has, likewiſe, propoſed an Inſtrument for the ſame Uſe, which *Nuck* has exhibited in his *Operat. Chir. Fig.* 11. and may be ſeen (in *Tab.* XLVII. *Fig.* 10.). The next Objection is, that the Patient is obliged to lie conſtantly on his Back. This is not true; for he may lie on his Side or Belly, if he pleaſes, which *Douglas*, *Winſlow*, *Morand*, and others, adviſe after Suppuration, as it promotes the uniting of the Wound. Laſtly, he objects, (*pag.* 108. and 116.) that the Fragments and Sand may be more eaſily extracted by the Lateral Method. Now, as I have already proved, the principal Advantage of the High Operation is, that the Bladder may be more perfectly cleanſed by that, than any other Way. For *Denys* himſelf acknowledges the Difficulty of it in the *Apparatus major*, and Lateral Operation; whereas in this, when the inferior Part of the Bladder is elevated by an Aſſiſtant, they may be eaſily found and extracted by the Fingers, or proper Inſtruments. *Denys* aſſerts, that this Method of Cure produces an Incontinence of Urine; but this is overthrown by common Experience. In a Word, all the Advantages which he aſcribes to *Rau's* Method (*pag.* 119.) may be juſtly attributed to the High Operation. And *Le Dran* and *Cheſelden*, on many Accounts, prefer it to the *Apparatus major*.

But to obviate the Imputation of approving the High Operation only, and deſpiſing all other Methods, I ſhall briefly enumerate the Caſes, in which it is leſs convenient. And, firſt, it is unſucceſsful in old Men, and even after the thirtieth Year of Life; for, according to *Middleton* and *Douglas*, ſuch Subjects generally die; and *Smith* ſays, that all above thirty or forty Years old, on whom he performed this Operation, have died, except one. And I myſelf have cut four, who exceeded that Age, and not one recovered. Further, it ſeldom ſucceeds, when the Patient is afflicted with other Diſeaſes, eſpecially an Ulcer in the Kidneys, or Bladder; or is debilitated by a Conſumption, or has a ſchirrous Bladder; for, in theſe Caſes, all Writers prefer the Section in the *Perinæum*, becauſe the Bladder may be more eaſily cleanſed, and the Wound better healed by it, which is confirmed by Experience. Laſtly, the High Operation is more difficult in ſmall Bladders, which may be known partly from the ſmall Quantity of Urine they are capable of containing, and partly from the Difficulty of moving the Catheter in them. And here I would adviſe the Surgeon, unexperienced in performing this Operation on collapſed Bladders, to chooſe any other Method, for fear of wounding the *Peritonæum* and *Fundus* of the Bladder, though it is not abſolutely impracticable, even in ſmall Bladders. From hence it is manifeſt, that a prudent Surgeon will ſometimes prefer one Method, ſometimes another, according to the different Conſtitution of the Patient, the State of the Bladder, the Stone, and other Circumſtances. If the Reader would know more, let him conſult *Douglas*, *Middleton*, *Cheſelden*, *Roſſet*, *Morand*, *Le Dran*, and *Garengeot*; to which he may add *Heiſter's Diſſertation de Apparatu alto*, publiſhed at *Helmſtadt*, in the Year 1728.

The Lateral Operation.

About the End of the laſt Century, there was a famous *French* Lithotomiſt, named *Frere Jaques*, whoſe unuſual Method of cutting for the Stone attracted the Eyes of every body on him; and even to this Day he is ſo much talk'd of, that we think ourſelves obliged to ſay ſomething of him, and his Method. About the Year 1697. this obſcure Monk came to *Paris*, from ſome of the remote Parts of *France*, deſtitute of Clothes, Money, and Victuals;

Victuals; but of an open Temper and Simplicity of Mind. He produced Teſtimonies of his Succeſs in ſeveral Provinces, by his new and unknown Way of Lithotomy. He aſked no more Reward, than would repair his Inſtruments, and mend his Shoes. At length, addreſſing himſelf to the King's Phyſicians, and the principal Surgeons at *Paris*, he beg'd he might be permitted to cut and cure ſuch Patients as were afflicted with the Stone in that City, and the Hoſpitals, aſſuring them, that he came thither only to teach them a better Method. This they at firſt looked upon as a Piece of Inſolence; but, being taken with the Novelty of the thing, and partly out of Curioſity, gave him leave to make an Experiment on a dead Subject, which had a Stone conveyed into the Bladder. It is ſaid that *Jaques*'s Name was *Beaulieu*, and that he came either from *Beſançon*, or *Beaufort*.

The dead Subject being ready, he began his Operation in the Preſence of ſeveral Surgeons and Phyſicians. Firſt, when the Body was laid, and ſecured, in the uſual Poſture, upon the Table, he introduced a round, not grooved, Catheter into the Bladder in the uſual Method, and with that preſſed the Bladder to the Left Part of the Perinæum; then he made an Inciſion near the Perinæum, but a little different from the common Practice, with a Knife ſomewhat longer, too, than the common Knife. He directed this upwards from the Anus, and divided the Parts almoſt in a right Line, on the Left Side of the Perinæum, about two Fingers-breadth from its Suture, the Inciſion aſcending upwards, to about the Middle of the Perinæum; by which he cut whatever was between the Skin and Catheter, with the Neck of the Bladder, and the Bladder itſelf, leaving the reſt of Urethra entire. Next, paſſing his Finger through the Wound into the Bladder, he ſearched for the Seat of the Stone; having done this, he introduced an Inſtrument, like a Spoon, which ſerved for a Conductor; and, by the Help of that, introduced the common Forceps; then he drew out the Conductor, laid hold of the Stone with his Forceps, and extracted it very dextrouſly, to the great Surprize of the Spectators, though it was as big as an Hen's Egg.

Upon Examination, the Surgeons found he had firſt cut thro' the common Integuments of the Perinæum, about the Length of two Fingers-breadth; that the Wound paſſed between the Accelerator Urinæ and Erector Muſcle of the Penis, on the Left Side of the Perinæum, without wounding either of them, till it penetrated the Neck of the Bladder, and the Bladder itſelf, in a right Line, for about an Inch; and that he had extracted the Stone through this Aperture. Having duly conſidered theſe Particulars, ſeveral of them, and eſpecially *Mery*, preferred this Method to the Apparatus major, as attended with leſs Danger: For, in that, it is not only neceſſary to divide the Urethra, but the narrow Neck of the Bladder, and its Sphincter, with the Proſtate Gland, muſt be forcibly dilated, and, if the Stone is large, receive further Injury by the Violence uſed in the Extraction: However, as the Majority are not fond of introducing new Methods, it is no Wonder he was prohibited to perform his Operation on a living Subject.

Upon this cold Reception, *Jaques* applies to the King's Surgeons and Phyſicians at *Fontainebleau*; to them he ſhews his Letters of Recommendation, and Teſtimonials of Cures, begging Leave to perform his new Method of Lithotomy on a young Man, a Taylor. His Requeſt was immediately granted. He performed it in the preceding Manner, before the King's Phyſicians and Surgeons, with ſuch Succeſs, that the Patient was about the Streets in three Weeks time, without one of the uſual bad Symptoms attending the common Method.

This procured him the Reſpect of every body, not excepting the King himſelf; and the *Pariſians* thought him ſent from Heaven for the Relief of the Diſtreſſed. In the following Spring, *Anno* 1698. he returns, with the King's Licence, to *Paris*; and performs on a great Number of Patients, amidſt ſuch a Crowd of Spectators, that it became neceſſary, at laſt, to diſperſe them by Soldiers.

It is to be obſerved, that he never prepared his Patient by Bleeding, Purging, or Diet; nor did he uſe any Ligatures, as in the other Methods: For, when he was laid on the Table, his Legs were bent upwards, and he was only ſecured by ſtrong Aſſiſtants. In his Extraction of the Stone, he was, by the Report of *Dionis*, and others, ſo cruel, that the moſt intrepid Surgeons were ſtruck with Horror, and lamented the Misfortune of thoſe unhappy Wretches who fell under his Hands. And he was no leſs unconcerned afterwards, either about dreſſing the Wound, or ordering the Patient a proper Regimen; for, if he deſired his Care in thoſe Reſpects, his Anſwer was, It is ſufficient, that I have extracted the Stone; God will cure you. He treated Men and Women indiſcriminately; but generally wounded the Vagina, ſaying, that Wound was of no Conſequence.

But, to form a true Judgment of his whole Proceedings, we muſt conſider the ultimate Event of them; and this, in general, will appear with no very good Aſpect: For, if we may credit what *Mery* ſays, in his Diſſertation, publiſhed at *Paris*, 1710. out of ſixty Patients whom he cut in the Spring of that Year, twenty-five died, thirteen only were cured, and the reſt were troubled with a Fiſtula, or an Incontinence of Urine. And *Dionis*, ſeven Years after, in his Surgery, aſſures us, that above half *Jaques*'s Patients died of the various ſupervening Symptoms; and that it was wonderful any one ſhould ſurvive the Cruelty and Imprudence of his Method: In Confirmation of which, he alleges the Taylor of *Fontainebleau*, by whoſe means he acquired his Reputation, who was not only ever afterwards troubled with a Fiſtula in the Perinæum, but found a continual Decay of Conſtitution; and, within two Years, exchanged a miſerable Life for Death. On the contrary, he affirms, that out of twenty-two Patients, cut in the ſame Spring by others, three only died, and almoſt all the reſt were reſtored to perfect Health.

Upon inſpecting his dead Patients, theſe reputable Authors frequently found the Bladder cut quite off from the Urethra; in others they found a Cancer or Sphacelus in the Bladder, or Inteſtines. In others the Muſcles of the Penis, Nerves, and Blood-veſſels, were often divided by the Knife. In ſome, the Elevator of the Anus, with the hypogaſtric Veſſels, were ſeparated. And, again, in ſome, the Part of the Bladder towards the Cavity of the Abdomen was obſerved to be perforated three or four times; in others the Wound of the Bladder appeared very unequal, and in ſome Places lacerated and diſtorted. They ſometimes found the Rectum cut, and conſequently the Fæces were diſcharged through the Wound; and in ſeveral Women, beſides the Injury of the Rectum, be wounded, together with the Bladder, the Vagina, which muſt make a Paſſage for the Fæces through the latter. And laſtly, by wounding ſome of the large Blood-veſſels, there followed ſuch an Hæmorrhage, that the Patient died under the Operation, or ſoon after it.

Nor was he conſtant in making his Inciſion in the ſame Place; for at one time he would divide the Perinæum an Inch higher, or lower, than at another; thro' which Inconſtancy and Negligence ſometimes one Part, ſometimes another, muſt be wounded. Beſides, he was often ſo unprovided with Inſtruments, that he uſed a common Razor inſtead of the proper Inciſion-knife. And I myſelf, in *Holland*, have heard the *Dutch* aſſert, that for want of his own Inſtrument he has often uſed a common blunt Knife, which muſt expoſe his Patients to the greateſt Dangers. While he was in *Paris*, he obſtinately cut a Lad near the Anus, though the Stone was fixed in the Urethra, behind the Scrotum, in the Perinæum, though it would have been more prudent to have done it in that Part where the Stone ſhewed itſelf. This Behaviour is the leſs to be wonder'd at, becauſe he was utterly ignorant of Anatomy and Surgery, unleſs that he would, upon every Occaſion, undertake the Cure of Ruptures by the Knife. But as in that Operation he deprived even a Child of its Teſticle, without any Neceſſity, it is more than probable, that he was the Diſciple of ſome Mountebank, eſpecially as he never would own where he learnt his Art.

By this inconſiderate and unſucceſsful Treatment of his Patients, and the Danger of Death, that threatened the *Marſhal de Lorge*, the Day after he was cut, though *Fagon* preſerved him, the Reputation of our new Lithotomiſt began to decline, and at *Paris* they pronounced him an ignorant, impudent Operator. He, therefore, ſhifted his Quarters, travelled through moſt Parts of *France*, and came at laſt to *Holland*; from thence he went thro' moſt of the principal Cities in *Germany*, performing his Operation in all of them, but generally with his uſual ill Succeſs: So that, for the firſt Years, he gained no Character in thoſe Countries. However, it is worth obſerving, though known to few, what *Saleman*, a celebrated Phyſician and Surgeon of *Straſburg*, tells me, in a Letter, that *Jaques* had improved upon his old Method of Lithotomy, and in the Year 1712. and the Beginning of 1713. had ſucceſsfully cut ſixteen Patients in that City, uſing a grooved Catheter; adding, that he ingenuouſly confeſſed to him, that he had abſtained from his former raſh Method for about a Year, and now treated his Patients in a more judicious manner. I mention this Circumſtance, as it is taken no notice of by others, to complete the Hiſtory of this Man. Agreeable to this is the Account *Febrius* gives of him, when he ſays, that out of ſixteen, lately cut by *Jaques* at *Strasburg*, one only died, who was an old Man, and this he predicted. In the laſt-quoted Author we have a very exact Deſcription of *Rau*'s Method, long before it was publiſhed by *Albinus*, as he ſays he had often ſeen him perform it. *Schaffer* gives us pretty near the ſame Account of *Jaques*. And *Weisbach* ſays, that, out of twenty, ſcarce one miſcarried, and that they were all cured without any Fiſtula; but he neither mentions the Time, or Place, where he ſaw this, though I ſuppoſe it was at *Strasburg*, as that was his Place of Reſidence.

But, however raſh or imprudent this Method was in itſelf, it certainly ſupply'd more expert Surgeons and Phyſicians with an Hint for the Improvement of their Practice: For by this, as *Dionis* obſerves, are we improved in the Puncture of the Perinæum for the Cure of a Suppreſſion of Urine. For the Bladder may be more ſafely and commodiouſly perforated by the Trocar, than its Neck, as the Practice was before *Jaques* perforated that Part. And further, he ſays, this very Method might be followed by an able Surgeon well-skilled in Anatomy, though it ſucceeded ſo ill in the Hands of an ignorant Operator. But he gives us no Directions for avoiding the Errors of *Jaques*.

Mery

Mery thought it worth while to publiſh a Treatiſe, wherein he perſuaded the Surgeons to come into this Practice, though he ſoon after uſed his utmoſt Endeavours to diſſuade them from it again. But, inſtead of the cylindrical, he recommended the grooved Catheter. This, ſays he, being paſſed into the Bladder, and then held in the Left Hand, muſt be thruſt towards the Left Side of the Perinæum, as *Jaques* did. The Operator muſt then, by the Direction of the Cathether, cut thro' the Perinæum, with a proper Inciſion-knife, ſuch as is uſed in the Apparatus major, ſo as to divide the Neck of the Bladder, and the Part which lies next it, continuing the Inciſion, with Caution, obliquely downwards towards the Left Os Iſchii, till the Aperture is large enough for the Extraction of the Stone. Through this Wound, an hollow Conductor, as in the Apparatus major, muſt be introduced into the Bladder, and the Stone extracted by a convenient Forceps. But though we here allow *Mery* to be the firſt and real Improver of Frere *Jaques's* Method, yet he never tried it on any living Subject, but rather exclaimed againſt it very ſoon after, and gave the Preference to the Apparatus major. However, after this Improvement, *Mareſchal* cut with Succeſs at *Paris*, as *Liſter*, after his Return home, was informed by *Proby*, who ſtill continued there, and ſaw Frere *Jaques* cut for the Stone, in the Year 1698. *Auguſt* 2. The Surgeons of *Paris*, ſays he, in his Letter, decry Frere *Jaques*, though they follow his Method; for *Mareſchal*, from that time, differed from him in nothing but uſing the grooved Catheter. *Le Rue* at the ſame time cut in the old Way, but his Succeſs was far ſhort of *Mareſchal's*; for all, who were cut by the latter, were alive and well, while *Le Rue* loſt one or two, and the Survivers did not recover ſo ſoon as thoſe cut by *Mareſchal*. . .

Rau's Method.

This Method was afterwards corrected and practiſed in *Holland*, by *Rau*, whoſe Character the Phyſical World can be no Stranger to. He had not only ſeen Frere *Jaques* perform it in *Holland*, as *Albinus* the Father and Son inform us, with *Ruyſch*, and many others, at *Amſterdam*, but probably was acquainted with the Improvements of *Mery*, and *Mareſchal's* Succeſs. He with a chirurgical Boldneſs, and great Skill in Anatomy, like Frere *Jaques*, and the Antients, cut firſt through the Perinæum, then the Neck of the Bladder (*a*), and Bladder itſelf, which *Mery* aſſures us, was Frere *Jaques's* conſtant Practice, and what I have frequently ſeen him do at *Amſterdam* (*b*). *Rau* uſed the grooved Catheter, recommended by *Mery*; but, like Frere *Jaques*, had it ſomewhat thicker than common (*c*). Then inſtead of the grooved he uſed two enſiform Conductors, Male and Female (*Tab.* XLIX. *Fig.* 2, 3.); but his Knife and Forceps were the ſame, as in the common Method. He laid his Patients on their Backs, almoſt in the ſame manner as Frere *Jaques*, with their Buttocks elevated; but he faſtened them with a Ligature different from the common, and leſs terrible. Inſtead of the two long Bandages, which others put about the Neck and Limbs, in ſo ſhocking a manner, *Rau* applied two ſhort, flat Bandages made of Woollen (but they may be of Linen or Silk) each about four Feet long. Having made a Nooſe, he faſtens the Right Wriſt to the Right Knee with one of them (ſee *Tab.* L. *Fig.* 10. A); and with the other ſecures the Left Wriſt in the ſame manner.

This Method of Lithotomy was ſo peculiar to *Rau*, that he, and not *Mery* or *Mareſchal*, has been eſteemed the Author of it, and from him it has been generally called *Rau's* Method of Lithotomy. But from the Year 1726. when Dr. *James Douglas* publiſhed his Treatiſe on the Lateral Operation, and *Cheſelden* improved it farther, it has been called the Lateral Operation, becauſe the Inciſion is made rather on one Side of the Perinæum and Bladder, whereas, in the Apparatus major, it is only in the Urethra.

In the Year 1709. I, ſays *Heiſter*, performed this Operation on a Boy of about Fifteen, in the Preſence of *De Quavre*, and others, extracting a Stone that weighed two Ounces. In 1712. I cut another of ſeven Years old, and both with Succeſs. From whence, I think, it appears, ſays he, that I performed it firſt after *Rau*.

In the Year 1694. *Rau* went from *France* to *Leyden*, there took his Doctor's Degree regularly, and, ſettling at *Amſterdam*, read private Lectures on Phyſic and Anatomy. Soon after Frere *Jaques's* Departure he applied himſelf more cloſely to Lithotomy, and, meeting with extraordinary Succeſs, was honoured with the Title of The States Lithotomiſt.

Cheſelden improved upon *Rau*, though before him *Bamber* had made one Improvement, by filling the Bladder with Water. But *Douglas*, who gives us this Account, does not mention, how the Water, which was undoubtedly conveyed through the common Catheter, was retained in the Bladder, between the Extraction of that, and the Introduction of the grooved Catheter; for at that time it is probable it would flow out, and conſequently the Diſtention could be of little or no Service. *Cheſelden*, however, varied from *Rau*, in ſeveral Points, and proceeded in the following manner.

Cheselden's Method.

He uſed a ſquare Table, higher at that End where the Patient's Buttocks are placed than at the other (*e*); and, laying him on his Back, puts a Pillow under his Head, and another under his Hips, ſo that his Abdomen is lower than either of them: He, next, draws his Buttocks a little over the Edge of the Table, divaricates his Knees, and bends them in a convenient Poſture; then ties his Wriſts to his Ankles: In this Poſition two Aſſiſtants ſecure his Legs and Feet, while a third holds down his Shoulders, to prevent his moving. *Cheſelden* then paſſes a Steel grooved and cannulated Catheter (*f*) through the Urethra into the Bladder, and thereby conveys as much Water into it as the Patient can bear without an Exceſs of Pain. But, to prevent a Reflux, he compreſſes the Penis with a Woollen Ligature, the Catheter ſtill remaining in the Bladder (*g*). The Handle of this Catheter he gives to an Aſſiſtant, who retains it there. After this, *Cheſelden* ſeats himſelf in a Chair, of a proper Height, and performs the Operation. He firſt makes an Inciſion with a Knife having a convex Edge, beginning an Inch above the Anus, on the Left Side of the Suture of the Perinæum, between the Accelerator Urinæ, and the Erector Penis; and, deſcending obliquely to the Outſide of the Sphincter of the Anus, he divides the Skin, Fat, and Part of the Levator of the Anus, by one Inciſion, (contrary to *Rau*) of two, three, or more Inches, according to the different Age and Size of the Patient. When this is done, he introduces the fore Finger of his Left Hand into the Wound, and thruſts the Rectum aſide, that it may not be injured by the Inſtrument: Then he takes a crooked Knife, and with his Right Hand paſſes the Point (directed upwards) near his Left fore Finger into the Bladder, betwixt the ſeminal Veſſel and the Os Iſchium; then, preſſing down his Right Hand, he continues a ſecond Inciſion upwards, till the Point comes out again at the upper Part of the Wound. The Bladder being thus open'd, he introduces the fore Finger of his Left Hand into its Cavity: With that he feels, and fixes the Stone, then paſſing a Forceps, without any other Conductor, over his Finger, he endeavours to lay hold of the Stone with them; which being done, he draws out his Finger, and, graſping the Forceps with both Hands, extracts it with more or leſs Violence, in proportion to the Bulk and Shape of the Stone, and the Size of the Wound. If there are more Stones, he again introduces his fore Finger, and the Forceps, proceeding as before. During this whole Operation the Catheter remains in the Bladder, and the Aſſiſtant's Employment, who holds it, is only to prevent its ſlipping; and in this manner *Cheſelden* thinks the Bladder ſufficiently depreſſed for the Introduction of the Forceps over his Finger, without any Conductor; and, as it is previouſly diſtended with Water, he judges it impoſſible and unneceſſary to cut into the Groove of the Catheter; and that there is no Danger of laying hold of the Catheter with the Forceps, if the leaſt Care is taken. In this Method only one or two Ramifications of the Arteries, from whence there can be any Danger of an Hæmorrhage, are divided, and that very ſeldom. But if, after the Wound is cleanſed with a wet Sponge, a Profuſion of Blood continues, he ties up the Arteries with a crooked Needle and Thread (ſee *Tab.* LII. *Fig.* 14.); then, dreſſing the Wound with Lint, either dry, or ſpread, over with a reſolvent Ointment, and ſecured with proper Bandages, he puts the Patient to Bed.

By this Method, if he meets with no extraordinary Impediment, the whole Operation, from the firſt Inciſion to the Extraction of the Stone, is completed in one Minute.

(*a*) As *Albinus* the Father ſays, though the Son and *Dionis* will have it, that he divided only the Bladder itſelf.

(*b*) When I, at that time, and afterwards, performed the Operation on dead Subjects, I always found both the Neck, and Bladder itſelf, cut through; which I imputed to my own Ignorance in the Art of dividing the Bladder only.

(*c*) The Reaſon, as he told me, was, that the Knife might paſs more readily into its Groove, and not eaſily ſlip out again. It is repreſented in *Tab.* LII. *Fig.* 1. and, notwithſtanding what *Albinus* the younger ſays, I do not find it more incurvated than the common Catheter; for the Apparatus major requires a very crooked Catheter.

(*d*) The Poſture in which *Rau* placed his Patients is, perhaps, beſt deſcribed by *Erndelius*, in his *Iter Anglic.* and *Batav. p.* 119. He ſometimes laid the Patient on a little Cheſt, which I myſelf have ſeen, for Want of a Table. *Garengeot*, therefore, is miſtaken, when he ſays, he placed and bound his Patients, as in the Apparatus major.

(*e*) This Table was three Feet and an half long, two and an half broad, and three high.

(*f*) It were to be wiſhed *Douglas* had delineated this Catheter; for it is not eaſy to conceive, by this ſhort Deſcription, how it could be hollow and cannulated at the ſame time.

(*g*) But *Douglas* has not told us, how he ſtopt the Reflux of the Water through the Catheter; which muſt certainly be cloſed by the Aſſiſtant's Finger, or ſome proper Ligature.

Cheſelden is ſometimes obliged to vary his Method: Firſt, When he finds by a ſtrong Reſiſtance, or any other Token, that the Stone is very large, leſt he ſhould torture the Patient, or lacerate the Parts, he enlarges the Wound by a ſecond Inciſion upwards with Sciſſars, or downwards with his Knife. Secondly, If, after this Inciſion, upon paſſing his Finger into the Bladder, he finds the Catheter has ſlipt into the Wound, he draws back his Finger, and introduces the Gorget into the Groove of the Catheter, over which he paſſes the Forceps in the uſual manner; and, upon account of this Accident only, he gives the Preference to the grooved Catheter. Thirdly, If the Aſſiſtant, who holds the Catheter, finds the Forceps has laid hold of it, either with or without the Stone, which *Cheſelden* affirms to be very uncommon, he immediately orders the Catheter to be drawn out, endeavouring to lay hold of, and extract the Stone, without the Advantage, which that might afford him, by depreſſing the Bladder, and facilitating the Introduction of the Forceps over the Finger, or by a Conductor, when there is, on account of ſome Accident, Occaſion to repeat this more than once. Fourthly, When from the Smallneſs or Situation of the Stone he judges it more eaſy and ſecure, he introduces his Fingers into the Patient's Anus, preſſes the Stone towards the Wound, and extracts it, as in the Apparatus minor, with his other Hand. Fifthly, When he perceives an Impediment, either from the Ureter, or the Membranes and unuſual Folds of the Bladder, he paſſes his Fingers into the Anus, endeavours to protrude that Part to the Mouth of the Wound; then divides the Membranes, or whatever obſtructed the Paſſage, and extracts the Stone. Theſe are the Improvements *Cheſelden* has made on *Rau*'s Method of Lithotomy: However, *Douglas*, on ſome Occaſions, prefers a Forceps ſomewhat incurvated; for, ſays he, I have often obſerved, that the Stone is extracted with more Eaſe, when it lies near the Wound, than when it is on the oppoſite Side; eſpecially if there is a preternatural Sinus in that Part: In theſe laſt Caſes he thinks the crooked Forceps will perform the Work better than the ſtrait ones.

Another Method of *Cheſelden*'s.

But, however advantageous this Method appeared at firſt, *Cheſelden* ſoon rejected it; becauſe the Urine, lying in the cellular Membrane near the Rectum, often produced a fetid Ulcer. In the room of it he ſubſtitutes the following: He ſecures the Patient, as in the Apparatus major; but lays him upon an horizontal Table, three Feet high, and cover'd with ſeveral Cloths, in ſuch a manner that his Head only is a little elevated: After this, he makes an Inciſion of a proper Length, beginning where they end in the Apparatus major, and continuing it downwards between the Accelerator Urinæ, and the Erector Penis, on the Left Side of the Inteſtinum Rectum; next, he ſearches for the Catheter in the Wound, and, having found it, divides the Proſtate Gland in a direct Line towards the Bladder, depreſſing the Rectum with a Finger of his Left Hand, that the Knife may not wound it: The Remainder is perform'd after the manner of the Apparatus major; with this only Difference, that, if any Blood-veſſels are ſeparated, he ſecures them with a crooked Needle and Thread.

Douglas has given us a more particular Deſcription of this Method, than *Cheſelden* himſelf. Firſt, he ſeats the Patient on a Table, and ſecures him with Ligatures; then he introduces his Catheter, (*Tab.* LII. *Fig.* 5.) ſomewhat different from the common Sort, into the Bladder. When the external Wound is ſufficiently large, he directs the Point of his Knife, of a peculiar Size and Figure, (ſee *Tab.* LII. *Fig.* 8.) towards the Catheter, furniſhed with a Groove, as is repreſented *Fig.* 4. and 7. which is ſtill in the Bladder, in ſuch a manner, that he makes a rectilinear Inciſion through the poſterior Part of the Urethra, immediately behind the Bulb, the Neck of the Bladder, and Proſtate Gland, and Part of the Bladder itſelf: This is done on one Side (ſee *Tab.* L. *Fig.* 1. I K L). After this, he riſes from his Seat, and gradually dilates the Wound with the fore Finger of his Left Hand; then calls for the Gorget (*Tab.* LII. *Fig.* 9.) with a crooked Handle A A; the Beak C he paſſes through the Groove of the Catheter into the Bladder, to feel for the Stone; then takes the Handle in his Left Hand, and, after extracting the Catheter, introduces his Forceps, (*Fig.* 12.) whoſe Handles A A vary from the common ones; he paſſes theſe cautiouſly, with the plain Side upwards, through the Groove of the Gorget, into the Bladder; then, having drawn out the Gorget, he takes the Handle in both Hands, and, keeping them ſhut, ſearches for the Stone; which being found, he opens them, and endeavours to take Hold of the Bottom of it with the lower Jaw: When he has hold of it, he applies his Left Hand to the Middle, and his Right to the End of the Handle; then moves them gently in various Directions to expand the Parts, and facilitate the Extraction of the Stone, taking particular Care, that it does not ſlip out; but, if this happens, he endeavours to lay hold of it again, without drawing out the Forceps. If the Stone is large and ſmooth, lying near the Wound, he extracts it without the leaſt Difficulty; but if it is ſmall, or in an inconvenient Situation, he draws out the Forceps, paſſes his Fingers into the Bladder, and endeavours to diſengage it from the Folds; then he introduces his Gorget once more over his Finger, and, withdrawing that, turns the concave Part of the Gorget upwards, through which he again paſſes the Forceps, ſearches for the Stone, and extracts it very cautiouſly and ſlowly. Laſtly, To prevent the Stone from breaking, he puts one or two of his Fingers between the Cheeks of the Forceps, that they may not compreſs it too violently: But if it does break, or there are more Stones than one, he extracts them, by repeating the former Operation; and aſſures us, there is no Danger, if it is performed with Caution. He makes his external Inciſion almoſt in the ſame Part as *Jaques* and *Rau*; but continues it both upwards and downwards; by which means he paſſes the Inſtruments, and extracts large Stones, with more Eaſe; and internally he makes an Inciſion in the End of the Urethra, the whole Neck of the Bladder, and that Part of the Body neareſt to it; by which he avoids wounding the Rectum, and promotes the Extraction of the Stone. If an exterior ſmall Artery bleeds too profuſely, he ties it; but, if it is too deeply ſituated for a Ligature, he applies a Styptic. Having extracted the Stone, he dreſſes the Wound with a digeſtive Ointment, and proper Bandage; then puts the Patient to Bed. This is generally ſaid to be partly compoſed of the *Ravian* Method, and partly of the Apparatus major, though, in my Opinion, it is entirely the former.

Cheſelden ſtill made farther Improvements, particularly with reſpect to the internal Inciſion: After the external Inciſion, he firſt directs his Knife to the poſterior Part of the Catheter, through the inferior and lateral Part of the Bladder, behind the Proſtate Gland, and above the ſeminal Veſicles (ſee *Tab.* L. *Fig.* 1. L); then he continues it forwards through the Sphincter of the Bladder, and the Left Side of the Proſtate Gland, into the membranous Part of the Urethra, even to its Bulb, K I F, which preſerves the Rectum better than the *Ravian* or Lateral Method. Beſides, he affirms, that the Bulb of the Urethra hinders the Groove of the Catheter from being found, more in the other Method of Cutting than in this. Laſtly, Among *Cheſelden*'s Emendations, *Douglas* enumerates theſe: 1. If he finds the Patient's Pulſe low after the Operation, he applies Bliſters to his Arms, which effectually raiſe his Spirits. 2. If the Wound grows callous, he lays on a Piece of Bliſter-plaiſter to erode it; by which new and ſound Fleſh pullulates, and the Wound unites. 3. If the Wound is putrid, he mixes a little Verdegriſe with ſome digeſtive Ointment.

LeDran, after an accurate Examination of the various Methods of Lithotomy, prefers one to the other, according to the different Circumſtances of the Caſe; though he ſeems to think the Apparatus major beſt on many Accounts, if performed with Judgment: Particularly if the Neck of the Bladder is gently dilated and divided as far as its Body, with the fore Finger and a Conductor; for here the Finger, with more Security, and leſs Pain, performs the Office of the Knife in the Lateral Method, though a precipitate Introduction of the Finger will lacerate the Parts, cauſe exquiſite Torment, and ſometimes ſeparate the Neck of the Bladder from the Urethra; which neceſſarily induces an Inflammation, Gangrene, Convulſions, and perhaps Death: He therefore condemns thoſe, who, out of an Affectation of Dexterity, perform with an uncommon Expedition.

He does not, however, diſapprove of the High or the Lateral Operation; but only ſhews, that in the latter the Proſtate and the Neck of the Bladder is divided by the Knife, which in the Apparatus major is done gently by the Finger; and, conſequently, the Difference between them is of no Importance. He prefers the High Operation, where the Bladder is large, and can be ſufficiently dilated; and this, he ſays, we may be ſure of, when the Patient has not been afflicted with the Stone for any conſiderable time, and can retain a large Quantity of Urine: But he rejects it, when the Bladder is ſmall, or callous, and cannot be ſufficiently diſtended. He gives the Preference to the Method of *Rau* and *Cheſelden*, when the Stone is very large; as they make their Inciſion in the Body of the Bladder, and dilate it diſcretionally: He objects, however, againſt *Rau*'s Catheter, (which he has indeed repreſented much ſhorter, and very different from that delineated by *Albinus*) and ſays it is unfit for the Operation, as it will ſo eaſily, and ſo often, ſlip out; he therefore exhibits one, (ſee *Tab.* LII. *Fig.* 17.) in his Opinion, better adapted to the Purpoſe: This is ſulcated to *e e*, by means of which the Bladder may be divided near its Neck, and through this Aperture, by the Aſſiſtance of the grooved Conductor, may the Forceps be introduced, and the Stone extracted. He exhibits, likewiſe, a Knife ſharper-pointed than the common ones, which he recommends in the Apparatus major, and the Method of *Rau* and *Cheſelden*. See *Tab.* LII. *Fig.* 16.

He condemns the Apparatus minor, as unworthy of being ranked among the Methods of Lithotomy, and abſolutely pernicious, unleſs for extracting the Stone out of the Urethra, or the Neck of the Bladder. But if we conſider, 1. That the Wound is made through the Neck and Body of the Bladder, as in the Lateral Operation; and that theſe two Methods differ only in the Inſtruments; we ſhall find the Apparatus minor to be an advantageous Improvement upon the Antients. 2. That it was the only Method practiſed for above ſixteen Centuries, and is

ſtill continued, though the Apparatus major is ſo well known. 3. Experience convinces us, that it is ſucceſsfully performed, even at this Day, upon Children and Infants. 4. Nor is there any material Objection, except a poſſible Roughneſs of the Stone, againſt practiſing it on Boys under Fourteen, and Men of a low Stature. 5. It requires the feweſt Inſtruments; for the Knife alone is frequently ſufficient. I therefore recommend it for its Simplicity, and, with *Paulus Ægineta* and *Albucaſis*, adviſe the Improvement of it, eſpecially if the Inciſion is made in the ſame Parts as in the Lateral Operation. In Adults, and tall Men, it is attended with various Inconveniences: Wherefore *Celſus* judges it ſuitable only for Boys under Fourteen; tho' *Morand* ſays, it is ſometimes ſucceſsful in Adults.

Garengeot attributes the Honour of inventing and improving the Lateral Operation to his own Country; though it is abſolutely certain, that many eminent Men of ſeveral Nations may juſtly claim a Share in the Improvement of this Method; and that *Rau* was really the firſt, after the *French* had rejected it, who reviv'd and practiſed it on living Subjects, which he continued with Improvements, as long as he lived. After him, myſelf, then *Denys*, and, at length, the *Engliſh*, embraced and improved it; otherwiſe it might have been buried in perpetual Oblivion. In about thirty Years, the *French* were induced to receive it; and *Morand*, with a Condeſcenſion not very common to his Countrymen, came to *London* to ſee it performed by *Cheſelden*; and, upon his Return to *Paris*, practiſed it on ſeveral Patients, with Succeſs. During his Abſence, the *French* tried it on dead Subjects; and *Perchet*, as we are informed by *Garengeot*, having qualified himſelf ſufficiently, attempted it in the following Manner, on living Subjects.

An Hour or two before the Operation, he orders a Clyſter; then places the Patient oppoſite to the Light, on a Table about two Feet and an half high, which is firſt covered with Linen ſeveral times double; and, putting one Pillow under his Head, with another under his Buttocks, he binds him as in the Apparatus major. His Legs are then ſecured by two Aſſiſtants, whilſt a third, and ſometimes a fourth, confines his Shoulders cloſe to the Table. Next, a dextrous Perſon is placed on the Left Side, after the manner of *Cheſelden*, to hold up the Scrotum, and retain the grooved Catheter, (which *Rau* did himſelf) that the Operator may have both his Hands diſengaged. After this, he introduces into the Bladder a very crooked Steel Catheter, dipt in Oil, with a deep Groove, long Beak, and large Handle: When he perceives it is entered, he gently moves the Handle with his Left Hand towards his Right Inguen, and ſearches between the Suture of the Perinæum, and the Tubercle of the Iſchium, with the fore Finger of his Right Hand, for the Beak, taking care that it does not come to the Iſchium: He then gives the Handle to an Aſſiſtant, who fixes his Right Thumb upon the anterior Part, and his Fingers upon the poſterior, holding it very ſteady, while he elevates the Scrotum with his Left Hand, and inclines it towards the Right Side, which extends the Skin of the Perinæum. Then the Surgeon protrudes the Suture of the Perinæum obliquely towards the Right Thigh, with his Left fore Finger, and with his Right Hand makes the firſt Inciſion obliquely through the Integuments, beginning about a Finger's-breadth from the Suture of the Perinæum, and a Line above the moſt prominent Part of the Beak of the Catheter, deſcending obliquely to the Tubercle of the Iſchium, after *Rau*; for *Jaques* made his Inciſion in the oppoſite Direction. This Operation may be performed at once on lean Subjects; but, if they are corpulent, two or three Inciſions may be requiſite, tho' that depends on the Dexterity of the Surgeon. After this, the Operator paſſes his Left fore Finger into the Wound to ſearch for the Groove of the Catheter, (not to put aſide the Inteſtinum Rectum, as *Cheſelden* directs) that, if it happens to be moved, he may replace it in a proper Situation. He then makes an Inciſion, having firſt ordered his Aſſiſtants to ſecure the Patient, into the Urethra, directing his Knife into the Groove, by the Nail of his Left fore Finger, then into the Neck of the Bladder laterally; and, laſtly, by elevating his Hand, ſo that the Back of the Point may lie in the Groove of the Catheter, and the Edge towards the Bladder, he divides its Body, about a Finger's-breadth or more; for in this the principal Advantage conſiſts; but the fore Finger ſhould always follow the Knife, to keep it in the Groove. When the Inciſion is made ſufficiently large, that is, when he finds the Groove of the Catheter bare, about two Fingers-breadth, he withdraws the Knife, ſtill leaving the Finger in it, and with his Right Hand paſſes the Beak of a Conductor over the Nail of the Left fore Finger into the Groove of the Catheter; he, next, draws out his Finger, and with that Hand graſps the Handle of the Catheter, which hitherto an Aſſiſtant held, and, inclining it ſomewhat towards himſelf, at the ſame time conveys the Conductor into the Bladder; which, if duly performed, is followed by an Efflux of Urine out of the Wound. When this is done, he moves the Catheter gently from Side to Side, and extracts it; then he takes the Handle of the Conductor in his Left Hand, and paſſes his Right fore Finger through its Cavity into the Bladder, dilates the Wound, and opens a Paſſage for the Forceps, which he introduces with his Right Hand through the Conductor into the Bladder; then, with his Left, extracts the Conductor, and opens the Forceps to dilate the Wound, which he cloſes again to ſearch for the Stone, and, having laid hold of it, extracts it. After this, he introduces his fore Finger once more into the Bladder, to ſearch if any thing remains; and, if there is any Remainder, he introduces the Catheter over his Finger, or a Conductor with a Button at the End; he extracts it. Thus you have *Garengeot*'s Directions for performing this Operation; though we muſt obſerve, that the Bladder alone cannot be divided by this Method, but that there muſt be a Separation of its Neck, and the Proſtate Gland, laterally, and only of a ſmall Part of its Body, as *Morand* obſerves: He, alſo, repreſents a ſmall Knife for this Purpoſe, (ſee *Tab.* LII. *Fig.* 18.) from *Cheſelden*; though *Albucaſis*, long ago, recommended the Uſe of ſuch a Knife.

SENFFIUS's Method of performing the Lateral Operation.

Senffius, a Surgeon of *Berlin*, who was as equally well ſkilled in all chirurgical Operations as in Lithotomy, preferred the Lateral Method, and performed it in the following manner. The Patient is placed upon a Table, of ſuch an Height, that the Surgeon, when upon his Knees, may reach up to his Navel. Upon this he lays two Pillows, one under his Head, and another under his Buttocks; then fixes him upon the Edge oppoſite to the Light, bends his Legs to his Hips, and ſecures them by two Aſſiſtants, and a Cord (he omits the Ligature in Children); a third holds down his Shoulders, a fourth kneels over him, (as *Tab.* L. *Fig.* 9.) holding up his Genitals with his Right Hand, and with his two fore Fingers extending the Skin of the Perinæum, that the Inciſion may be more accurate, and the Catheter more perceptible in the Perinæum: He had, alſo, a fifth, to give and receive the Inſtruments. After theſe Preparations, he introduced into the Bladder a Silver grooved Catheter, more ſlender and incurvated than uſual, (ſee *Tab.* XLVIII. *Fig.* 15. *a a a*) dipt in Oil; with this he ſearches for the Stone, till he convinces both himſelf, and the Spectators, that there is one. He then kneels down upon his Right Knee, like *Rau*; and, with his Left Hand, turns the Handle of the Catheter towards the Right Inguen, and its Beak towards the Tubercle of the Iſchium, holding it himſelf; he next cuts through the Integuments, betwixt the Anus, and this Tubercle, with a Knife broader than common, and involved half Way in Linen. After this, he puts the Knife in his Mouth, and, with his Right fore Finger, ſearches in the Wound for the Catheter: When he has found it, he cuts into its Groove, as *Rau* did, and, retaining the Knife there, moves the Handle of the Catheter with his Left Hand towards himſelf; and, holding the Knife in his Right, follows the Beak of the Catheter as it moves inward; and thus dilates the Wound of the Bladder. He then gives the fourth Aſſiſtant the Catheter to hold in this Poſition, while he himſelf, with his Left Hand, introduces a male Conductor, near the Knife, into the Bladder; then extracts the Knife, and paſſes a female Conductor (made of Silver as well as the other) over that; and, withdrawing the Catheter, he, after *Rau*'s Method, conveys a Forceps between the Conductors, with which, after the Extraction of the Conductors, he ſearches for the Stone, and extracts it ſo dextrouſly, that the Whole is completed in two or three Minutes. His Reaſon for uſing this ſlender Catheter, was becauſe it paſſed more eaſily into the Bladder; and he made it of Silver for Neatneſs. An Inſtrument ſo much inflected muſt thruſt the Urethra, and Neck of the Bladder, more towards the Perinæum; which induces me to think, that he divided not only the Bladder, but its Neck too.

MORAND's Sentiments of Lithotomy.

Morand reaſons very juſtly on the ſeveral Methods of Lithotomy, and concludes, that the Multiplicity of them is ſo far from being an Incumbrance, that it is a real Advantage, as different Circumſtances will require a different Practice; aſſuring us, that he had examined and performed each of them. In his Treatiſe on the High Operation, he promiſes another on the Lateral; but, as he had heard of *Cheſelden*'s extraordinary Succeſs, he came to *London*, that he might be an Eye-witneſs of his Practice, and converſe with him on the Subject. He informs us, likewiſe, that *Cheſelden*'s ſole View in relinquiſhing the High Operation was to endeavour at an Improvement upon *Rau*, and, if poſſible, to render his Method preferable to the other. He then enumerates many Experiments, which *Cheſelden* had made, partly after *Rau*'s Method, as deſcribed by *Albinus*, and partly by a previous Diſtention of the Bladder with Water; but ſays, that the Urine always inſinuated itſelf into the cellular Subſtance, which inveſts the Rectum; and cauſed foul, putrid Ulcers, of which ſeveral dy'd. He, alſo, forbids the Aſſiſtant, who holds the Catheter, to protrude it forward, as this may eaſily divide the whole Sphincter; nor ſhould the Wound in the Membrana Adipoſa, near the Rectum, be too deep (perhaps, leſt the Urine ſhould lodge and putrefy there). He further tells us, that an ulcerated Bladder may be better cleanſed this way, than any other; and laſtly, which he eſteems the greateſt Recommendation, that, by dilating the Wound

Wound after his Method, *Cheſelden* extracted a large Stone, which another Surgeon could not by *Marianus*'s. This Method, he ſays, was attended with ſuch Succeſs at *Paris*, in the Year 1730. that out of ſixteen Patients, eight of whom *Perchet* cut, and the reſt himſelf, one only miſcarry'd, when, out of twelve, who were cut at the ſame time by the Apparatus major, five dy'd. He eſteems it more eaſy and effectual, than *Marianus*'s, as the fore Finger is the beſt Conductor; and that the Operation is more ſhort, and leſs painful, as large Stones may be more eaſily extracted. Laſtly, he pronounces *Rau*'s Method too intricate and difficult; and therefore doubts with *Douglas*, *Garengeot*, and *Falconet*, whether he did really perform it in the manner which *Albinus* has deſcribed.

As I have been a long time deſirous, that the Hiſtory of this Method, and particularly of *Jaques*, as the firſt-known Author of it, might be fairly ſtated, I muſt beg Leave to make ſome Obſervations on *Morand*'s Account of him. *Morand*, contrary to the received Opinion, endeavours to prove, that, after the Emendations made by *Mery*, *Fagon*, and *Felix*, *Jaques* always cut his Patients ſucceſsfully in *Cheſelden*'s Method. And this, ſays he, is manifeſt from the ſixty he cut at *Aix la Chapelle*, in the Year 1699. the greateſt Part of whom recovered; the thirty at *Verſailles*, in 1701. who were all cured; and the twenty-three at *Paris*, in 1703. amongſt whom the Marſhal *de Lorge* only miſcarried. But, for my own Part, I muſt confeſs, I have ſeveral Scruples about all theſe Accounts; and more particularly the firſt, as it is ſupported by no Teſtimonies; ſo far from it, that we are aſſured by *Mery*, *Jaques* was ſent for to *Aix la Chapelle*, to cut a certain Patient, that is, one. Beſides, it is notorious to all, who are in the leaſt acquainted with *Germany*, that the Stone in the Bladder is a very uncommon Diſtemper; and, conſequently, that one City could never afford him ſo many Subjects. As for his Performances in *France*, they ſtand upon the ſame Foot of Probability with me; ſince *Saviard* and *Dionis*, his Cotemporaries, rather mention him as a raſh, imprudent Operator; the latter of whom could not certainly have the Confidence to publiſh a falſe Aſſertion in a Book approved by the Cenſors, and dedicated to the King, while *Jaques*'s Exploits were in the Mouth of every body, and *Fagon*, the very Perſon he appealed to, ſtill alive. He cites, alſo, a Manuſcript of one *Hanold*, dedicated to *Fagon*, in which the Author defends *Jaques* againſt *Mery*; but, ſince *Fagon* was ſo great an Encourager of medicinal Knowledge, and, being afflicted with the Stone, applied to *Mareſchal* for Relief, rather than *Jaques*, I muſt call the Truth of this in queſtion. On the contrary, I am convinced by *Launeau*'s Diſſertation, that he looked upon *Jaques* as an imprudent, raſh Operator, and commended *Fagon* for oppoſing him, and putting an End to his Impoſtures; which is agreeable to what *Mery*, *Saviard*, *Dionis*, *Colet*, and common Fame, have all declared. He, further, ſays, it is a Misfortune, that this Method has been examined only by *Mery*: Which is another Miſtake; for *Baſſiere*, *Liſter*, *Saviard*, *Launeau*, and *Dionis*, who were all, at that time, reſident at *Paris*, and Eye-witneſſes of his Performances, have, alſo, conſidered it. It is, therefore, plain, that all the Writers of that Time unanimouſly agree in condemning this Method.

As to his Succeſs in *Amſterdam* in 1703. which *Morand* extols ſo greatly, and ſays he was rewarded by the Magiſtrates with a Golden Medal, inſcribed, PRO CIVIBVS SERVATIS; during my whole Reſidence in that City, in 1706. I could never get the leaſt Information either of his Succeſs, or the Preſent. I could, therefore, have wiſhed, that *Morand* had informed us where he picked up this Intelligence. On the contrary, in *Albinus*'s funeral Oration on *Rau*, we are aſſured, that he had no better Succeſs than at *Paris*, in the Year 1698. and ſtill continued in his Errors. By a private Letter, which I received from a *Dutch* Phyſician in 1737. I find his Repuration was but ſhort-lived, and that he was really preſented with a Medal relating to his Profeſſion, with this Inſcription, OB CIVES SERVATOS. From thence he went to *Leyden*, where he reigned, too, for a ſhort time; but *Rau* ſoon drove him thence. However, the Populace ſtill adored him, partly for his Eccleſiaſtical Habit, and partly for his Generoſity, in performing Cures *gratis*, as a Perſon ſent from Heaven; ſo that the Magiſtrates, to prevent any Tumult, which *Rau*'s Repreſentations might cauſe, made him this Preſent.

Verduin, in a Letter to me, ſays, that *Jaques Beaulieu* was born of mean Parents, and never learned Surgery, but was Servant to an itinerant Mountebank, who uſed to cut for the Stone, and for Ruptures, whom he attended in ſeveral Campaigns; which gave him an Opportunity (as he himſelf confeſſed to *Verduin*) of frequent Experiments upon dead Subjects. After his Succeſs in *France*, and at *Aix la Chapelle*, he was invited, by a Perſon of Diſtinction, to *Zutphen*, in order to cure him of a Sarcocele. He, from thence, went to *Amſterdam*, where, upon Examination, *Guerelle*, and ſeveral other judicious Men, found his Catheter to be without a Groove. Afterwards he performed his Operation on a Boy, with ſo much Dexterity, that *Bernargius*, and the principal Phyſicians of the City and Hoſpital, recommended him to the Senate, at whoſe Expence he was ſupported.

About this time he procured ſome grooved Catheters; and, travelling through the Southern Parts of *Holland*, performed ſeveral Operations for the Stone, and for Ruptures. After his Return to *Amſterdam*, his Stay was very ſhort; and *Verduin* attended him in his Journey from thence to *Paris*, as far as *Boiſleduc*, where he continued three Weeks, and cut ſeveral for the Stone. At this Place, ſays *Verduin*, the Senate of *Amſterdam* preſented him with a Golden Extractor, engraved on the Back with the Arms of the City, and a Crown adorned with Oak-leaves, over which were theſe Words, OB CIVES SERVATOS.

At *Verduin*'s Return, he found *Jaques*'s firſt Patient, who had procured him ſo great Reputation, not perfectly cured; ſeveral were dead; ſome had a Fiſtula in the Perinæum, others an Incontinence of Urine, and ſome other bad Symptoms. From one Patient he extracted three Stones, but left two behind. In others, the Fæces were diſcharged through the Wound and Perinæum. But, what was ſtill worſe, upon ſearching, he found a Stone in a Perſon of Diſtinction, at the *Hague*; and, after Ten the ſame Night, proceeded to his Operation, but then could find none; though, upon opening this Nobleman, ſome few Days after, there proved to be ten large Stones in his Bladder. Thus far *Verduin*.

Saltzmannus informed me, that at *Strasburgh Jaques* uſed a Knife like a common Table-knife, and a very crooked groov'd Catheter, with a cannulated Conductor, different from the common one, only in having a Button at the End, inſtead of a Beak; and a Ring, inſtead of a cruciform Handle. When he had paſſed his Right fore Finger into the Bladder, he conveyed this Inſtrument over it; then withdrew his Catheter, and introduced the Forceps by it. When he had examined the Situation, Figure, and Size of the Stone, he choſe a Forceps ſuitable to the Patient, flatter than the common Inſtrument, with a large Ridge internally near the Edge, and without Teeth, that they might not intercept or hurt the Bladder. Dr. *Trew* ſent me the Figure of the Conductor and Forceps.

Another Error of *Morand*'s, who ſays, that *Jaques* retired to his native Place *Beſancon* in the Year 1712. and died there in 1714. is confuted by *Saltzmannus*, who ſaw him perform his Operation at *Strasburg* in 1715. which is confirmed by *Le Maire*, who ſays, that he lived a long time after this at *Beſancon*, even till he was ſeventy Years of Age.

Authors differ very much about the Time of *Jaques*'s being in *Holland*; but I am aſſured by an eminent *Dutch* Phyſician, and *Verduin*, that he came firſt into *Holland* in the Year 1699. Since we are ſo ignorant of the Life of this great Man, who gave Birth to ſo remarkable an Operation, it is to be wiſhed, that the *French*, who muſt be furniſhed with the beſt Materials for it, as he was a Native of that Country, reſided moſt Part of his Days, and ended them there, would oblige the World with a more particular Account.

INCONVENIENCES OF THE LATERAL METHOD.

Though the Lateral Operation has acquired ſo great a Name, it is not without its Inconveniences and Difficulties, any more than the Apparatus major: For, firſt, it is ſubject to produce a Fiſtula in the Perinæum. Secondly, The tranſverſe Situation of an oblong large Stone, which cannot be known before the Operation, expoſes the Patient to violent Pains, and the Danger of Death without extracting it, which may be effectually done by the High Operation. Thirdly, The Situation of the Stone above the Os Pubis, being fixed there in the Form of an Hook, may render the Extraction both difficult and dangerous; a fatal Example of which *Sermes* gives in his Tranſlation of *Douglas*'s Lithotomy. Fourthly, When the Stone is lodged in ſome Fold of the Bladder, or is very ſmall, or broke to Pieces, the Apparatus major is preferable: *Rau* often met with this Difficulty in that Operation, according to *Sermes*. Fifthly, This Method cannot be performed, unleſs the Catheter can be paſſed into the Bladder. Sixthly, The Bladder is liable to be perforated, pinched, and lacerated, by the Inſtruments. Seventhly, This Operation can ſcarcely be performed on Women, eſpecially Adults, without perforating the Vagina; and we are furniſhed but with one Inſtance to the contrary, which *Rau* mentions.

Upon the Whole, then, Lithotomy appears to be a dangerous and precarious Operation; nor can we depend upon one Method alone, but the Surgeon muſt be determined in his Choice by the particular Circumſtances of the Caſe.

The Apparatus minor is improper, when the Stone is rough and ragged, or too large to be held by the Fingers, or the Patient is tall, becauſe in ſuch an one the Diſtance of the Bladder from the Anus prevents the Stone from being felt and protruded to the Perinæum. I, in this Caſe, prefer the Lateral Method, or the High Operation. But in Boys, and Adults of a ſmall Stature, when the Stone is ſmall and ſmooth, and can be forced to the Neck of the Bladder, and particularly when it is lodged in the Neck of the Bladder, the Apparatus minor is eligible. In old weak Perſons, or where the Bladder is ulcerated, the High Operation is dangerous; but in Children, and young Men, it may be performed

formed with great Safety, though the Stone is large; or when it is too ſmall to be found by other Methods, or brittle, or where there are ſeveral, they may all be extracted this way: But great Care is required not to wound the Fundus of the Bladder. Though the Inciſion in the Apparatus major is leſs dangerous than that in the High or Lateral Operation, becauſe in that the Urethra only is wounded; yet I would not recommend it when the Stone is large, ragged, or unequal, becauſe it may probably be attended with a violent Extenſion, Laceration, or Contuſion of the Neck of the Bladder; but, in an ulcerated Bladder, where the Stone is ſmall and ſmooth, this Operation is proper, as the Bladder may be better cleanſed downwards. The Lateral Method, as it is now improved, excels the Apparatus major, becauſe it is performed more readily, and larger Stones may be extracted by it; but the Wound is certainly more dangerous and difficult, ſince it is deeper than in the other, where the Urethra only is divided in the Perinæum; whereas in this the Inciſion muſt be made through the Parts which inveſt the Bladder, and, of conſequence, in fat Subjects particularly, the Rectum, with the ſeminal Veſſels, may be injured by the Knife ſlipping out of the Catheter, or the Bladder itſelf may be perforated on both Sides, as it often happened in *Jaques's* Operations.

The Apparatus major is hazardous and difficult, becauſe a Stone of a moderate Size, eſpecially if ſomewhat rough, cannot be extracted by it, without a violent Extenſion, or total Laceration of the Bladder, which is uſually followed by a profuſe Hæmorrhage, Inflammation, Gangrene, Cancer of the Bladder, and Danger of Death; or, at leaſt, Incontinence of Urine, in a Fiſtula in the Perinæum, and many other bad Symptoms. From what has been ſaid, it appears, that each Method is proper in its Turn; and, therefore, the Surgeon ought to be acquainted with them all, and chuſe that which is adapted to the particular Circumſtances of his preſent Patient. In *Marianus's* Method, the Urethra only is divided; in all the reſt, the Inciſion is made in the Bladder, and even in its Body: In the High Operation, the inferior and anterior Part of it is divided; in the Apparatus minor, and Lateral Operation, the inferior and lateral Part; ſo that the Difference between theſe three; conſiſts more in the Inſtruments, than the Place of Inciſion into the Bladder.

Laſtly, Patients, who have been happily cured of the Stone, are liable to a Return, which ſhould not be raſhly imputed to the Ignorance of the Operator. For if the original Cauſe continues, as a vitiated Bladder or Kidneys, it muſt neceſſarily produce the ſame Effect: Nor is it in the Power of the ableſt Phyſician to enſure a Perſon from a Relapſe.

The Method of extracting the Stone out of the Bladder of Women.

Women are leſs ſubject to the Stone in the Bladder, than Men: For they are more regular in their Diet, and their urinary Paſſages are more ſhort and lax; ſo that, in general, the Stone, being but ſmall, diſcharges itſelf with the Urine, and, when it does happen to lodge and increaſe in the Bladder, we have many Inſtances of its coming away ſpontaneouſly, without the Danger of an Operation. For this Reaſon, it is generally obſerved, that fifty Men are cut, to one Woman; and *Molineau* ſays, an hundred. *Heiſter.*

I was once Witneſs of a remarkable Caſe, where a large Stone was expel'd ſpontaneouſly. A Gentlewoman, about five Months gone with Child, ſent for me to conſult me about a Complaint, which I judg'd to be the Stone, and adviſ'd her to take only ſome ſoftening mucilaginous Medicines, till ſuch time as ſhe ſhould be deliver'd. I heard no more of her, till ſhe was in Labour; when I was call'd again, and found a Man-midwife with her, who told me, the Stone was ſo unluckily ſituated, that it was impoſſible to deliver her, every Pain bringing the Stone into the Paſſage; and was of Opinion, that the Stone ſhould be taken away immediately, before ſhe could be delivered. This, however, I oppoſed, and the Patient was delivered by proper Management. Upon ſearching her, about two Months afterwards, I found the Stone ſituated partly in the Urethra; ſo that, by drawing the Edges of the urinary Paſſage aſide, I could ſee it. Upon this, ſhe conſented to have the Stone taken away, and a Day was appointed for the Operation; but the Morning it was to be perform'd, her Courage failed, and ſhe determined not to undergo it. About ſix Weeks after, I was call'd again, and found ſhe had parted with the Stone ſpontaneouſly, without much Pain; and afterwards ſhe was, for ſome few Months, troubled with an Incontinence of Urine, which gradually went off, and ſhe recovered perfectly.

Theſe natural Advantages do not always exempt Females from the Neceſſity of Extraction: For the Stone is ſometimes retained in the Bladder by the Narrowneſs of its Neck, and increaſes to ſuch a Size, that all lithontriptic Medicines prove ineffectual.

Women labouring under the Stone are generally more happy than Men afflicted with the ſame Misfortune, becauſe they are often relieved without the Uſe of the Knife, or any dangerous Inciſion, only by the Dilatation of the Urethra, and Neck of the Bladder. And this Attempt is the rather to be made, becauſe we know from Experience, that the Neck of the Bladder in Women may, without any ſubſequent Damage, be almoſt incredibly diſtended. This is ſufficiently proved not only by the Inſtances of large Stones ſpontaneouſly diſcharged by Women; but, alſo, by the Teſtimonies of many celebrated Phyſicians, Surgeons, and Lithotomiſts; ſuch as *Hildanus*, *Tolet*, *Greenfield*, *Alghiſi*, and ſome others. Of this we have a memorable Inſtance, in *Miſcell. Nat. Curioſ. Obſ. Decad.* 2. *An.* 10. where we are told, that a certain Woman was happily freed from a Stone ſituated in the Neck of the Bladder, and weighing five Ounces and an half, only by the Dilatation of the Urethra. In the *Philoſophical Tranſactions*, N° 202. 236. and elſewhere, we have remarkable Inſtances, where the juſt-now ſpecify'd Method has ſucceeded happily in many Women, both young and old, tho' the Attempts have been generally more ſucceſsful in the former, than in the latter.

For this Reaſon, a far ſmaller Apparatus of Inſtruments is requiſite for the Cure of the Stone in Women, than in Men: There are, however, various and even more Methods invented of extracting the Stone from Women, than thoſe we have deſcribed for freeing Men from the ſame Misfortune. But, for the ſake of Diſtinctneſs, the general Method of extracting the Stone from Women, as well as from Men, may be divided into thoſe performed by *the ſmaller*, *the greater*, *the high*, and the *lateral Apparatus*. Each of theſe may again be performed in different Manners. We ſhall now treat of the firſt of theſe, which is to be performed in different Manners, according to the Variety of Circumſtances and Symptoms. But, ſince there are various Ways of performing this Operation, we ought carefully to deliberate which of them is moſt ſafe and commodious. The moſt antient is that deſcribed by *Celſus*, and generally known by the Name of the *leſſer Apparatus*.

Celſus ſays, when the Stone is ſmall, the Knife is unneceſſary, becauſe the Urine generally forces it into the Neck of the Bladder; and, if it lodges there, it may be ſafely extracted with an Hook. When it is large, the Surgeon ſhould introduce his Fingers into the Anus of a Virgin, or the Vagina of a Woman, and make his Inciſion at the Bottom of the Left Side of the Perinæum, and extract the Stone, as in Males. *Albucaſis* adviſes to paſs two Fingers into the Anus or Vagina, to ſearch for the Stone, and then protrude it gradually towards the Perinæum, and, as much as poſſible, downwards, towards the Left Side of the Anus, or Tubercle of the Iſchium, till it is perceptible to the Touch; then an Inciſion may be made down to the Stone, without wounding the Bladder, till the Stone becomes viſible, when it ſhould be expelled by the Fingers in the Anus, or extracted, as in Men. *Meekren* too, when the Stone ſticks in the Urethra, orders it, by introducing two Fingers into the Vagina, to be protruded forward, and extracted with an Hook. Theſe have been the common Methods, except that ſome firſt dilate the Urethra with proper Inſtruments; others, when it is requiſite, divide it; and then extract the Stone with an Hook or Forceps, if the Fingers will not accompliſh it. But this Operation ſhould be referred rather to the Apparatus major. *Jo. Douglas* has propoſed a new Way, by dilating the Urethra gradually with Tents made of Gentian-root, or prepared Sponge, till a free Paſſage is opened for the Admiſſion of the Forceps, and Extraction of the Stone. We may be aſſured there is a Stone, as well by the common Symptoms attending that Diſorder, as by paſſing the Catheter and Fingers. The Woman is to be placed in the ſame Poſture, as a Male Patient, the Labia Pudendi, and Nymphæ, are to be held aſunder by the Aſſiſtant, who ſhould hold up the Scrotum in a Man, that the whole urinary Paſſage below the Clitoris may be viſible to the Operator (ſee *Tab.* L. *Fig.* 2. D); then he may proceed in the Method he judges moſt proper. When the Stone is extracted, he muſt ſearch for more, and the Remainder muſt be extracted in the ſame manner. It is ſeldom neceſſary to tie the Patient; and the Operation may be in the ſame manner performed, while the Patient lies croſs a Bed.

The Apparatus major requires more Inſtruments; and in this, as well as the former, the Methods are various, tho' the general Practice among the Moderns is, to place the Woman on a Table, ſecuring her by proper Aſſiſtants, one of whom is to hold open the Labia Pudendi, and Nymphæ, while the Surgeon introduces a male Conductor, (ſee *Tab.* XLIX. *Fig.* 2.) and then a female (*Fig.* 3.) through the ſhort Urethra into the Bladder: Theſe he opens gradually to dilate the Urethra with the Neck of the Bladder (*Tab.* L. *Fig.* 2. B C); and between them he conveys a Forceps, (ſee *Tab.* XLIX. *Fig.* 5.) with which he gently enlarges the Dilatation, till the Paſſage is ſufficiently opened for the Extraction of the Stone. No Difficulties occur, when the Stone is ſmooth, ſmall, or of a moderate Size; but, when it is large, the Taſk is not quite ſo eaſy, tho' he muſt then dilate the Urethra gradually, till the Stone follows. When the Stone cannot be laid hold of with the Forceps, two Fingers ſhould be paſs'd into the Vagina of a Woman, and one into the Anus of a Girl, to preſs it into the Inſtrument. When it is too large to be extracted this Way, the Surgeon muſt endeavour to break it with a ſtrong Forceps with large Teeth, (ſee *Tab.* XLIX. *Fig.* 7.) that he may extract it in Pieces: If it cannot be broke, or he is willing to extract it whole, he muſt divide the Urethra, on one or both Sides;

Sides; and, in my Opinion, he need not ſcruple to make an Inciſion thro' the whole Neck of the Bladder into part of its Body, ſince this is done in Men without the leaſt Danger. And *Paré* ſeems to approve of this Practice, as he has recommended and delineated a grooved Catheter for dividing the Urethra of Women, when there is Occaſion; which *Colot*, likewiſe, commends, and we have repreſented (*Tab.* LIII. *Fig.* 7.). Some paſs the Forceps thro' a narrow cannulated Conductor. As too great an Extenſion of the Neck of the Bladder may produce an Incontinence of Urine, it is proper to apply a ſtrengthening Fomentation for a few Days. But old Women are more ſubject to this, than young. When the Parts are wounded, vulnerary Medicines will be ſerviceable.

Marianus adviſes to leave the Expulſion of ſmall Stones to Nature, as the Urethra in Women is ſhort and lax: A large one, he thinks, ſhould be extracted, as in Men. But the proper Place for the Inciſion, he ſays, is between the Os Femoris, and Urethra. When, therefore, he has introduced a grooved Catheter into the Bladder, an Aſſiſtant draws the Labrum Pudendi on that Side, where the Wound is to be made, till the Operator has a diſtinct View of the Part: He then makes an Inciſion about a Finger's-breadth from the Os Femoris, and proceeds as in Men: Nor ſhould the Surgeon be terrify'd at a profuſe Hæmorrhage. Tho' *Marianus* has not diſtinctly pointed out the Part, I am inclined to think, he made his Inciſion in the ſame Place with Frere *Jaques*, and *Rau*. Some paſs a Dilatator between the Conductors, to diſtend the Neck of the Bladder; and then extract the Stone with a Forceps. For my own Part, I never uſe that formidable Inſtrument, but introduce my fore Finger, inſtead of it. Others recommend a Diviſion of the Urethra, and even of the Body of the Bladder, as leſs dangerous than a violent Dilatation: Others oppoſe this; and, in favour of their Opinion, allege the many Inſtances of large Stones diſcharged ſpontaneouſly, by the Aſſiſtance of Nature alone, or by the Help of Diſtention: Which Opinion is countenanced by *Molineau*, and confirmed by Caſes, which he enumerates; but we muſt obſerve, that all thoſe Stones were ſmall, the largeſt ſcarce bigger than a Pigeon's Egg: Theſe, indeed, and larger, may be extracted without the Knife; but certainly all cannot. We may therefore conclude, that the Method of extracting the Stone from Women ſhould be varied according to its different Size. Some introduce a grooved Catheter before the male Conductor (ſee *Tab.* LIII. *Fig.* 7.); and then paſs that, with the other Inſtruments, through its Groove.

Frere *Jaques* uſually cut Women in the ſame Manner as Men: But he has been followed only by *Rau*; for the Generality of Lithotomiſts have preferred the preceding Method, though, in my Opinion, when the Stone is too large to be extracted through the Urethra, without injuring the Neck of the Bladder, and the Bladder itſelf, this will be ſerviceable to the Patient; nor is there any Danger of weakening the Neck of the Bladder, but very particular Care is required to avoid the raſh Practice of *Frere Jaques*, who wounded the *Vagina*, or *Rectum*; which Accident Women, who have born Children, are very ſubject to. *Falconet* ſays this Method of Lithotomy in Women requires more Caution than any other, and therefore recommends the High Operation, when the Stone is large; or adviſes to cut the Vagina, Bladder, and its Neck upon the Catheter, which *Buſſiere* would have done upon the Stone itſelf, brought to the Neck of the Bladder. *Mery*, in order to avoid a Laceration, and Incontinence of Urine, propoſes to paſs a grooved Catheter into the Bladder, and cut thro' its Neck, with Part of the Vagina, as in Males; which is leſs hazardous than a violent Diſtention or Laceration: For, even in the Time of *Celſus*, it was a received Axiom, that Inciſions are leſs dangerous, and more eaſily cured, than Contuſions or Lacerations. And, therefore, it is no Wonder, that *Hildanus*, by cutting almoſt in the ſame Method, through the Bladder, and Part of the Vagina, and dilating the Wound partly with his Finger, and partly with a Knife, to the Neck of the Bladder, ſhould extract a Stone as big as a Hen's Egg. He likewiſe produces a Caſe, where ſeveral Stones eſcaped through an Ulcer of the Parts, which was afterwards healed; and, conſequently, ſuch Wounds are not incurable.

Douglas propoſes to extract a ſmall Stone, by dilating the Urethra with a Tent of Gentian-root, or prepared Sponge. But, when the Stone is large, he approves of the High Operation, diſtending the Bladder with warm Water, and compreſſing the Urethra by an Aſſiſtant's Finger in the Vagina, and then making an Inciſion into the Bladder, immediately above the Os Pubis. This is a very proper Method, when the Stone is very large, and the Patient young and healthy, as there is no Danger of wounding or weakening the Sphincter of the Bladder, ſo as to cauſe an Incontinence of Urine; but, with *Morand*, when the Stone is ſmall, I muſt prefer the Apparatus major, or minor.

It is to be obſerved, that Stones are ſometimes formed in the Bladders of Women, by an Incruſtation on large Needles, Hairbodkins, or ſome ſuch Bodies ſlipping into it: For, when there are foreign Bodies in the Bladder, the earthly Parts of the Urine will adhere to their Surface, and in time form a very large Stone. And we are furniſhed with numberleſs Inſtances of this Kind, but the moſt ſurpriſing of all is that in the *Philoſophical Tranſactions*, N° 260. of a Girl about twenty Years old, from whom *Proby* extracted a Stone by the High Operation, without a previous Diſtention of the Bladder; the Baſis of which Stone was a Hair-pin, about ſix Finger's-breadth long, and of a proportionable Thickneſs. *Heiſter's Surgery.*

LITHOTOMUS. A Lithotomiſt, or Surgeon who cuts for the Stone.

LITIM. A Thread ſeveral times doubled. *Rulandus.*

LITOS, λιτὸς, ſimple, not very compound. Some Preparations are thus called, as the *Diamoron*, and *Diacodium*, by *Galen.*

LITRA, λίτρα. The ſame as LIBRA.

LITRON, λίτρον, in the Attic Dialect, is the ſame as *νίτρον*, Nitre.

LITTERISTUM. An obſcure Word in *Paracelſus*, which ſeems to import a kind of magical Cure, or Charm, for a particular Fever.

LITUS. A Liniment.

LIVIDUS *Muſculus.* The PECTINÆUS; which ſee.

LIXIVIUM. A Lye, that is, Water impregnated with the Salts of burnt Vegetables.

LIXIVUM. An Epithet for Oil, which flows ſpontaneouſly without Preſſure; or for Muſt, which runs in the ſame Manner.

LOBELIA.

The Characters are;

It hath a tubulous anomalous Flower, conſiſting of one Leaf, which is divided into many Parts, each being ſhaped ſomewhat like a Tongue, and are ſpread open like an Hand; this is incloſed in the Cup, which, afterwards, becomes a ſoft oval Fruit, which is full of Juice, and ſurrounds a Nut of the ſame Shape, which has a hard Shell.

Miller mentions but one Sort of this Plant; which is,

Lobelia fruteſcens, portulacæ folio. *Plum. Nov. Gen.*

This Plant was named by Father *Plumier*, who diſcovered it in *America*, in Honour to *Lobel*, a learned Botaniſt.

LOBELLUS, or LOBULUS. A ſmall Lobe. Thus the Cells of Fat are called *Lobuli Adipoſi*; and the Extremities of the *Bronchia*, which end in little Knobs, are call'd *Lobuli Pulmonum*. *Winſlow* calls the ſmall Lobe of the Ear, *Lobulus.*

LOBUS, λοβὸς, in Botany, ſignifies a Pod; and ſometimes the *Ungues*, or white Part of the Leaves of Roſes.

In Anatomy, the Diviſions of the Liver, and Lungs, are call'd Lobes; and the Tip of the Ear is named its Lobe.

LOBUS ECHINATUS.

The Characters are;

The Leaves are equally pinnated; the Flower conſiſts of one Leaf, which is cut into many deep Segments, and is almoſt of an anomalous Figure: From the Cup ariſes the Piſtillum, which becomes a rough, prickly Pod, in which are contained one or two hard roundiſh Seeds.

Miller mentions two Species of this Plant; which are,

1. Lobus Echinatus; fructu flavo, foliis rotundioribus. H. L. The yellow Nicker-tree.

2. Lobus Echinatus; fructu cæſio, foliis longioribus. See BONDUCH.

Theſe two Plants are very common in *Jamaica*, *Barbadoes*, and all the *Caribbee Iſlands*, where they climb upon the Shrubs and Trees which grow near them. The Leaves, Branches, Stems, and every Part of them, are greatly beſet with Prickles; which renders it very troubleſome to paſs between them, where they grow pretty cloſe.

LOCALIA *Medicamenta* are Medicines deſtin'd to operate upon particular Parts; or, more frequently, external Applications. *Localis Membrana* is the *Pia Mater.*

LOCH. The ſame as LINCTUS.

LOCHIA, λόχια, or λόχεια. The Purgations of the *Uterus* after Childbirth. Theſe conſiſt, generally for the two firſt Days, of a kind of bloody Seroſity, and gradually become more white, and leſs in Quantity; which, during the whole Time, cannot be determin'd, ſome Women having more, others leſs: Nor can the Duration of this Flux be limited to any particular Time; for, in ſome, it continues fifteen or twenty Days only; in others, forty.

In general, however, the *Lochia* may be eſteemed to flow regularly, when the Colour gradually changes from reddiſh to white; when the Flux is equal as to its Conſiſtence, and at laſt becomes ſomewhat viſcid; when it has no ill Smell; and when it gradually decreaſes in Quantity.

The *Lochia* ſometimes flow in too large Quantities, either on account of ſomething retain'd in the *Uterus*, which prevents it from contracting duly; or a too great Fluidity or Agitation of the Blood. In this Caſe, the Patient is frequently ſeized with fainting Fits, and Convulſions; and an extraordinary Paleneſs, Weakneſs, and Swelling of the Legs, ſhew that the *Lochia* are redundant. If, therefore, it proceeds from a Retention of ſomething in the Uterus, this muſt, if poſſible, be brought away by the Hand. But, if it proceeds from a too great Fluidity or Agitation of the Blood, temperating Decoctions of Barley, Jellies, Emulſions, Opiates, and Aſtringents, are to be adminiſter'd.

But a Deficience in the *Lochia*, or their utter Suppreſſion, occurs more frequently, being generally brought on by taking Cold, a Stricture of the uterine Veſſels from any Cauſe whatever, a Diarrhœa, Depreſſion of the Mind, Hyſterics, or an imprudent Uſe of Opiates or Aſtringents.

The Conſequences of ſuch a Suppreſſion are, a Phrenitis, Pleuriſy, Peripneumony, Paraphrenitis; an Inflammation of the Breaſts, Liver, Stomach, Omentum, Meſentery, Spleen, Kidneys, and Inteſtines; a Dyſentery, Colic, Iliac Paſſion, Apoplexy, or Palſy; Difficulty of Breathing, Palpitation of the Heart, Faintings, and Convulſions; which are not eaſily cur'd, unleſs the Flux of the Lochia can be reſtor'd; but ceaſe ſpontaneouſly, if this returns. The Phyſician, therefore, muſt always have a View to the *Lochia*, and, by all poſſible means, endeavour to procure this ſalutary Diſcharge. For this Purpoſe, mild Anti-acids are to be exhibited, in order to correct the Tendency of the Serum to Acidity, ſuch as the *Teſtacea* mentioned under the Article ACIDA; and mild Diluters are to be given, as Decoctions of Barley, Oats, and Almonds, and ſmall Broths: To theſe may be added mild Aperients, which are eſteemed ſpecifically to promote the *Lochia*, and conſiſt of moderately cardiac and uterine Ingredients. But great Streſs is to be laid on aperient and relaxing Topics, Clyſters, Fomentations, Plaiſters, Liniments, Cupping-glaſſes applied to the inferior Parts, Peſſaries, and Suppoſitories, which much contribute to relax the uterine Veſſels, and invite a Return of the *Lochia*.

Boerhaave adviſes not to bleed in the above-mentioned Diſorders, proceeding from a Suppreſſion of the *Lochia*, without the utmoſt Neceſſity; and cautions againſt treating the Symptoms, as original Diſtempers proceeding from other Cauſes.

La Motte ſays, that, upon a Suppreſſion of the *Lochia*, there is generally a Fever, and the Belly becomes hard, diſtended, ſwell'd and painful; and to theſe are join'd Anxieties, and hyſteric Symptoms.

The Method of Cure, recommended by the ſame Author, is to give an emollient Clyſter without Cathartics; to bleed in the Arm, not in the Foot, for fear of loading the Uterus, and Parts adjacent, more, and to repeat Bleeding occaſionally.

He recommends a Cataplaſm, which is to be renew'd as it grows cold, made in the following Manner:

> Take of the Leaves of Mallows, Marſhmallows, Violets, and Groundſel, of the Flowers of Chamomile and Melilot, of Linſeed and Fenugreek-ſeed, and of Wheaten-flour, of each one Handful: Boil them in Water.

He, alſo, adviſes a Clyſter, or rather a half Clyſter, of this Decoction, four times a Day.

He, farther, adviſes gentle Purges towards the laſt.

In caſe of a violent Looſeneſs attending, which ſometimes happens, the ſame Author directs Bleeding, repeated according to the Exigencies; a Decoction made with the Roots of Couch-graſs, and wild Succory, with an Ounce of the Shavings of Hartſhorn and Ivory, with a little Cinnamon; and two half Clyſters a Day, made of a Sheep's-head Broth, boil'd with the Wool on; and with a Handful of Mullein, Flowers of Chamomile and Melilot, and as much Wheat-flour.

He ſays this Method always ſucceeded very well.

In this Caſe, the Diet he directs is Broths of Beef, or Fowl, with a little of the Shavings of Hartſhorn and Ivory boiled in it.

Neither the Quantity of the *Lochia*, nor the Time of their Duration, can be determin'd, being both different, according to the Differences of Age and Conſtitution in the Women. *La Motte* knew two Women, in whom they ceaſed the very Day after their Delivery, without being followed with any Swelling of the Belly, or Pain, or any other Accident. The ſame Author knew two, who were left as dry the fifth Day after their Delivery, as before it; but, as there was neither Fever, Tenſion of the Belly, nor Pain, he told them they had no ill Conſequences to fear from it.

In others the *Lochia* continued five, ſix, or ſeven Weeks, and always red.

But, whether their Duration is ſhort or long, 'tis of no Conſequence, provided it is the Work of Nature, and no Accidents enſue.

A Suppreſſion of the *Lochia* is often cauſed by exceſſive Anger, Joy, Fear, or other Paſſions; and ſometimes by a ſingle Word, ſpoke by ſomebody in the Room inadvertently, and of no Importance; by the Smell of a Flower, a very little Cold, a ſlight Fear, or a ſudden Noiſe: The Conſequence of ſuch a Suppreſſion is a Fever, great Tenſion and Pain in the Belly, Delirium, and often Death; inſomuch that the Woman is very happy, if ſhe comes off for a very large Abſceſs in ſome Part or other.

La Motte, *Obſ.* 409. gives the Hiſtory of a Lady's Caſe, who, upon taking Cold, about eight Days after Delivery, was ſeized with a Shivering, which was ſucceeded by a Fever, and an entire Suppreſſion of the *Lochia*, with a Pain in the Left Groin; where, two Days after, there appeared a Tumor, with Redneſs, Heat, Tenſion, and Pulſation.

He firſt endeavoured to divert the Fluxion, and diminiſh the Fever, by Bleeding in the Arm, Clyſters, and a proper Regimen; and then tried to eaſe the Pain by anodyne Cataplaſms of the Crums of white Bread, freſh Milk, the Yolk of an Egg, Saffron, and Oil of Chamomile; which were ſucceeded by emollient and maturative ones, as the Pulp of Mallows, Marſhmallows, Linſeed, Rye-meal, Flowers of Chamomile and Melilot, Ointment of Marſhmallows, and Oil of Lilies and Chamomile; but, as the Symptoms increaſed, inſomuch that nothing was to be expected but Suppuration, he changed theſe Cataplaſms for others, as old Leaven, Onions roaſted under the Aſhes, Pigeons-dung, Ointment of Marſhmallows, and the Suppurative, by which laſt I ſuppoſe he means the Baſilicon: By the Uſe of theſe Remedies good Pus was form'd in the Tumor in eight Days; which, being let out by Inciſion, the Wound was incarn'd and cicatriz'd in a Fortnight after.

La Motte utterly diſapproves Bleeding in the Foot in theſe Caſes; and gives a very good Reaſon for his Opinion, that it muſt neceſſarily increaſe the Flux of Humours, already too large, upon the Uterus, and the adjacent Parts.

The ſame Author, *Obſ.* 412. gives another Hiſtory of a Lady, who had a great Diſcharge of the *Lochia* for the three firſt Days; which, afterwards, diminiſhed by little and little, till the fifth Day, when they entirely ceaſed, without any manifeſt Cauſe: He found her on the ſixth Day in a violent Fever, with her Belly hard, diſtended, and ſo painful, that ſhe could not bear her Shift upon it, attended with a violent Looſeneſs. He began the Cure by giving her a Clyſter of Whey, without any Addition; and, two Hours after, let her Blood at the Arm; then he applied ſoft Napkins to her Belly, dipt in the following Decoction, as hot as ſhe could bear it, which were conſtantly chang'd for others, as they grew cold. The Decoction was made with the Leaves of Mallows, Marſhmallows, Violets, Groundſel, Flowers of Chamomile, and Linſeed: Strain it, and then add one third Part of new Milk.

Of this Decoction, alſo, he gave her Clyſters in half the uſual Quantity, that ſhe might retain them the longer. Twelve Hours after he took away ſome more Blood, and ſtill continued theſe Fomentations and Clyſters; and, twelve Hours after, repeated Bleeding again. By theſe means the Fever left her, her Belly become ſoft and eaſy, the *Lochia* return'd, and ſhe recovered in eight Days.

Her Regimen, during this Courſe, was of Veal and Chicken-broths, and Water, impregnated a little with Cinnamon, with a ſmall Quantity of Wine.

La Motte accounts for the good Effects of this Method very rationally, from its relaxing and moiſtening both the Solids and Fluids.

The ſame Author, *Obſ.* 413. gives an Inſtance of a Woman, who contracted a Diſorder much like the former, by getting out of Bed in a violent Fright, after ſhe had lain-in five Days: He tried the Method recommended above; her Pains diminiſhed, but, however, continued for more than forty Days; mean time her Belly grew larger, than it was before ſhe was deliver'd; after this ſhe was ſuddenly ſeized with an exceſſive Pain in the Belly; and, in a few Hours, a vaſt Quantity of Matter was diſcharged from an Aperture, which opened itſelf about four Fingers-breadth on one Side of the Navel. He dreſſed with a Tent of Lint, armed with a common Suppurative; and cured the Wound perfectly in about eighteen Days.

In caſe of a Tumor, which will not yield to reſolvent Fomentations, *La Motte* adviſes Cataplaſms made of the ſame Ingredients as the above-mentioned Fomentation, with an Addition of Flowers of Melilot, Fenugreek-ſeed, and Marſhmallow-roots, with which he orders Bags to be filled, and applied to the Part. As ſoon as he perceives any Signs of Suppuration, he applies the Mucilage and Melilot-plaiſter; and, when Matter is perfectly form'd, he lets it out with a Lancet at the moſt depending Part.

Obſ. 416. This Author gives an Inſtance of a very large Tumor happening after Delivery, attended with but very little Pain, without any manifeſt Cauſe; there having been no Suppreſſion of the *Lochia*, or any other bad Accident: This he brought to Suppuration by the above-mentioned Cataplaſms and Plaiſters, and cur'd her in about two Months.

LOCULAMENTA. Loculaments are little diſtinct Cells, or Partitions, within the Seed-veſſels of Plants.

LOCUS. A Name for the *Pſeudo-acacia*; *ſiliquis glabris*.

LOCUSTA. A Name for the *Valerianella*; *arvenſis*; *præcox*; *humilior*; *ſemine depreſſo*.

LOCUSTA ALTERA. A Name for the *Valerianella*; *arvenſis*; *præcox*, *humilis*, *foliis ſerratis*.

LOCUSTA. Offic. Jonſ. de Inſect. 62. Schrod. 5. 543. Mer. Pin. 200. Aldrov. 404. Mouff. Inſect. 117. Charlt. Exer. 44. *Locuſta Anglica minor*, *vulgatiſſima*. Raii Inſect. 60. THE GRASSHOPPER.

It is a winged Inſect, of a green Colour, living in the open Fields. Locuſts in a Suffumigation relieve under a Dyſury, eſpecially ſuch as is incident to the Female Sex. The *Locuſta*, called *Aſiracus*, or *Onos*, has no Wings, but large Members, while recent. This dried, and taken in Wine, is a very good Antidote

againſt

againſt the Poiſon of the Scorpion. The *Africans*, who inhabit about *Leptis*, feed plentifully on this Kind of Locuſts. *Dioſcorides, Lib. 2. Cap. 57.*

LOCUSTA MARINA is a Shell-fiſh, of the Lobſter Kind.

LOEMOS, λοιμὸς, the Plague. See PESTIS.

LOGAPORUM *Oleum*. An Oil prepar'd of *Lizards*.

LOGAS. The White of the Eye. *Gorræus*.

LOLIGO. The Name of a Sea-fiſh, of which there are two Sorts, the greater, and the leſs.

LOLIUM.

The Characters are;

The Seed is almoſt naked, being ſlightly covered only with two glumaceous or huſky Leaves. The Spike is compreſſed, thin, without a Beard, conſiſting of ſmall Collections of Grains and Huſks, growing alternately to the Stalk between them, defended by a carinated Leaf, and lying in the ſame Plane.

Boerhaave mentions five Species of this Plant; which are,

1. Lolium; verum; Geſneri; Lolium album. See AIRA.

2. Gramen; Loliaceum; folio & ſpica anguſtiore. *Tourn. Inſt.* 516. *Boerh. Ind. A.* 2. 157. *Raii Hiſt.* 2. 1263. *Synop.* 3. 395. *Phœnix.* Offic. *Lolio ſimilis.* J. B. 2. 436. *Lolium rubrum.* Ger. 71. Emac. 78. *Lolium rubrum ſive Phœnix.* Park. Theat. 1145. *Gramen Loliaceum anguſtiore folio & ſpica. Phœnix Dioſcoridis.* C. B. P. 9. Theat. 128. RAY-GRASS, DARNEL-GRASS.

It grows in Paſtures, and by the Sides of Paths; it is drying and aſtringent; ſtops a Looſeneſs, and the Menſes; and reſtrains the Urine: In ſome Places they ſow it as Food for Cattle.

3. Gramen; Loliaceum; ſupinum. *C. B P. 9. Theat.* 130.

4. Gramen; Loliaceum; minus; Ulielandicum. *H. L.* 303. *Commel. Ind.* 53.

5. Gramen; paluſtre; locuſtis Erucæformibus. *Barr.* 105. *deſcr. Ic.* 2. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 157.

LOLIUS. The ſame as LOLIGO.

LOMENTUM. Properly the Meal of Beans, according to *Rhodius*, in his Notes upon *Scribonius Largus*, or Bread made of the Meal of Beans. Alſo a kind of Chalk made uſe of by the Fullers.

LONAN CAMBODIA. See ESULA *Indica Bontii.*

LONCHITIS.

The Characters are;

The Leaves reſemble thoſe of Fern, but the Pinnulæ are ear'd at the Baſe; the Fruit is like that of Fern.

Boerhaave mentions but one Species of this Plant; which is,

Lonchitis; aculeata; major. *T.* 538. *Filix aculeata, major.* C. B. P. 358. *Filix mas, aculeata, major.* C. B. Prodr. 151. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 25.

It is called *Lonchitis* from λόγχη (*Lonche*) a Lance, becauſe its Leaves are ſharp-pointed, reſembling the Head of that Weapon. The Root is aperient and diuretic. *Hiſt. Plant. aſcript. Boerhaave, p.* 41.

LONCHITIS MINOR. A Name for the *Polypodium*; *anguſtifolium*; *folio vario.*

LONCHITIS PRIMA. A Name for the *Hermodactylus*; *folio quadrangulo.*

LONCHOTON. The beſt Species of Vitriol. *Oribaſius, Collect. Medic. L.* 13.

LONGANON, and LONGAON. Names for the *Inteſtinum Rectum.*

LONGISSIMUS DORSI. This is a very complex, long, and narrow Muſcle, ſomething like the *ſacro-lumbaris*, but more fleſhy, and thicker, ſituated between the ſpinal Apophyſes, and the Muſcle juſt mentioned, from which it is divided by a ſmall, fatty, or cellular Line; but, at the lower Part, they are confounded together. It covers the *Semi-ſpinalis*, or *Tranſverſo-ſpinalis Dorſi*, and the *Semi-ſpinalis Lumborum.* Its upper Part lies between the *Sacro-lumbaris*, and *Tranſverſalis Colli.*

Its inferior Inſertions are partly by diſtinct tendinous Portions, and by a broad Aponeuroſis common to it with the *Sacro-lumbaris*, and partly by large Faſciculi of fleſhy Fibres, which, at firſt Sight, ſeem to compoſe one uniform Maſs. It is fixed by the long, flat, tendinous Portions of different Breadths, to the laſt ſpinal Apophyſis of the Back, to all thoſe of the Loins, and to one or two of the ſuperior Spines of the *Os Sacrum.* Theſe Portions lie at different Diſtances from each other, but are all connected by a thin Aponeuroſis fixed to their Edges.

Thence they run up obliquely, diverging from the Apophyſes, and beginning to be fleſhy at their inner or anterior Sides; they terminate above in ſmall roundiſh Tendons, inſerted in the Extremities of the ſeven upper tranſverſe Apophyſes of the Back, and in the neighbouring Ligaments of all the true Ribs. Sometimes one Inſertion in the Vertebræ of the Back is wanting, and ſometimes there is one in the tranſverſe Apophyſes of the laſt Vertebra of the Neck.

The other inferior Inſertion, wholly fleſhy, is partly in the inner or fore Side of the Aponeuroſis of the *Sacro-lumbaris*, and partly in the upper Portion of the *Os Sacrum*, being from thence continued to the great Tuberoſity of the *Os Ilium*; ſo that the Aponeuroſis of the *Sacro-lumbaris* ſeems to afford a third Inſertion to the *Longiſſimus Dorſi.*

Thence this uniform Maſs of fleſhy Fibres runs up in a Courſe almoſt direct, croſſing the tendinous Portions which are more oblique; and join the inferior Fibres of the *Sacro-lumbaris* by large Faſciculi, inſerted in the tranſverſe and oblique Apophyſes of the Vertebræ of the Loins. The Fibres of this Portion go afterwards to the Ribs, being inſerted by Planes, more or leſs fleſhy, in the lower convex Edge of all the falſe Ribs, between the Condyles, or Tuberoſities, and the Angles.

At the ſixth or ſeventh Vertebra of the Back, one or more of the tendinous Portions often communicate with ſome Faſciculi of the Semi-ſpinalis or Tranſverſo-ſpinalis Dorſi. By this Deſcription we ſee, that the Longiſſimus Dorſi is in part a great Semi-ſpinalis Divergens or Spino-tranſverſalis, much in the ſame manner as the inferior Portion of the Splenius.

In examining the dorſal Inſertions of this Muſcle, we meet with ſeveral muſcular Faſciculi, which croſs the tendinous Portions near the Spine; but without adhering ſo ſtrongly to them as thoſe already mentioned do to the Sacro-lumbaris, which they reſemble in every other Circumſtance: Theſe Faſciculi are fixed above, to the tranſverſe Apophyſes of the three or four firſt Vertebræ of the Back, and below to thoſe of the ſixth and ſeventh.

I have obſerved other ſuch Faſciculi fixed in the tranſverſe Apophyſes of the Back, from the firſt to the ninth incluſively, and ſituated between the Extremities of the Tranſverſalis major Colli, and of the Longiſſimus Dorſi, with which they communicate at the third Vertebra, or thereabouts.

Theſe Faſciculi might be reckoned a Muſculus acceſſorius Longiſſimi Dorſi, or a Tranſverſalis Dorſi, in the ſame manner as that of the Sacro-lumbaris.

Some Anatomiſts imagine, that the Longiſſimus Dorſi is continued all the way to the Apophyſis Maſtoidæa of the Cranium, taking the Complexus minor, or Maſtoidæus lateralis, to be a Portion of this Muſcle.

This Muſcle, and the Sacro-lumbaris, are common to the Back and Loins.

The Longiſſimus Dorſi is an Aſſiſtant to the Sacro-lumbaris, eſpecially to the vertebral Portion of that Muſcle, which it helps very powerfully, both by the Multiplicity and Inſertions of its Fibres, in ſuſtaining the Vertebræ of the Back and Loins while extended, whether in Sitting or Standing; and in preventing their ſinking under the Weight of the Body, or of any additional Burden: It aſſiſts in performing, or in counterbalancing, all the Motions and Inflections, of which theſe Vertebræ, eſpecially thoſe of the Loins, are capable in all Poſtures of the Body; and in this it bears, alſo, ſome Reſemblance to the inferior or vertebral Portion of the Splenius; and it muſt here be remember'd, that theſe two Muſcles on each Side, and the Sacro-lumbares, are of the Number of thoſe called *Vertebrales obliqui divergentes. Winſlow's Anatomy.*

LONGITUDINALIS. Longitudinal.

Longitudinal Veſſels, in Plants, are ſuch as are extended in Length through the woody Parts of Trees and Plants, into which the Air is ſuppoſed to enter, and mix with the Juices of the Plant, and thereby augment its Bulk.

LONGURIUS. A Piece of Iron, which, when heated, is put into an Æſtuarium, or Stove, and thus applied to various Parts of the Body, in order to convey Heat. *Paré.*

LONGUS COLLI. The Name of a Muſcle of the Neck.

This vertebral Muſcle is made up of ſeveral others, ſituated laterally along the fore Side of all the Vertebræ of the Neck, and ſome of the upper Vertebræ of the Back.

It may be divided into two Portions; one ſuperior, conſiſting of oblique converging Muſcles; and one inferior, compoſed of oblique diverging Muſcles.

The ſuperior Portion is cover'd by the Rectus anticus Longus of the Head: The Muſcles, of which it conſiſts, are fixed below, to all the tranſverſe Apophyſes that lie between the firſt Vertebra and the laſt: Thence they run up obliquely, and are inſerted in the anterior Eminence of the firſt Vertebra, and in the Bodies of the three following. The Inſertion in the Eminence is ſo cloſely united to the Ligament which goes to the Os Occipitis, that it can hardly be diſtinguiſhed from it.

The inferior Portion appears almoſt ſtrait; and yet all the Muſcles, which compoſe it, are diverging, or directed obliquely outward: They are fixed below, to the anterior lateral Part of the Body of the laſt Vertebra of the Neck, and of the firſt three of the Back; and ſometimes of more: From thence they run upward, and a little obliquely outward; and are inſerted near the tranſverſe Apophyſes of all the Vertebræ of the Neck, except the firſt and laſt.

Though theſe two Portions ſeem to be confounded with each other; they may, nevertheleſs, be eaſily diſtinguiſhed by an oblique Line, which runs between them, from the tranſverſe Apophyſis of the ſecond Vertebra to the Body of the ſixth. All the Inſertions of this Muſcle are more or leſs tendinous.

The Longi Colli bring the Neck forward by the lower Part of their inferior Portions. When one of them acts alone, or acts more than the other, this Motion is more or leſs oblique.

The

The remaining Part of these Muscles are not concerned in these Motions, which seem to be peculiar to the last Vertebræ of the Neck, or the first of the Back.

By the upper and greatest Part of the lower Portion, they counterbalance the posterior Muscles of these Vertebræ, and hinder the Neck from bending backwards, by the Contraction of the Sterno-mastoidæi, when, lying on the Back, we raise the Head.

It must here be remember'd, that the natural Situation of the Bones of the Neck is oblique on the fore Part; and that the Neck is bent in such a manner, as that the convex Side of the Curvature lies forward, and the concave Side backward. Therefore, when we would hold the Neck streight, and bridle it, as it is called, this Curvature must be destroy'd: This is done by these two Muscles, which in this Case make an Extension, in a manner, in opposite Directions; and fix all the Vertebræ of the Neck close to each other, as if they were but one Bone.

The Longus Colli of one Side performs these Motions obliquely, and may likewise co-operate in the lateral Inflexions of the Neck, with the Scaleni, and other Muscles, which perform these Motions. *Winslow's Anatomy.*

LONKET. Spirit of Turpentine.

LOPA. A Scale, or Scoria, of any Metal.

LOPADES, in *Oribasius*, *Collect. Medic. Lib.* 2. *Cap.* 58. imports a Sort of Shell-fish, which, he says, are generally small; but that in some Places, as *India*, they are produced large, not unlike Oysters.

LOPHADIA, or LOPHIA, λοφαδία, or λοφία. A Name for the first Vertebræ of the Back. Lophia, also, sometimes signifies the upper Part of the Back of the Neck.

LOPOS, λοπὸς. Bark, or Scale. In *Hippocrates's* Treatise, intitled *Mochlicus*, it signifies a thin Piece of Leather; *Galen* says, the hard external Part of it.

LOPPA. The metallic Mass, which results from a cementatory Calcination, either with or without Regulus.

LORA. Secundary Wine, made by macerating the Husks of Grapes, after the Juice is pressed out, in Water, and expressing them again. *Dioscorides*, *Lib.* 5. *Cap.* 13. and *Galen*, *de Aliment. Facultat. Lib.* 2. *Cap.* 9. give Directions for making this Wine.

LORDOSIS, λόρδωσις, from λορδὸς, bowed or bent inward, (in Opposition to ὔβδος and κυφὸς, gibbous, as *Galen* writes, *Com. Aph.* 46. *Lib.* 6.) is an Affection of the Spine, in which it is incurvated, or bent inwards, towards the anterior Parts, mentioned by *Galen*, in the Place above-quoted, and *Com. ad Aph.* 35. *Lib.* 4. and *Com.* 3. *in Lib. de Art.* where he defines a Lordosis to be εἰς τὰ πρόσω τῆς ῥάχεως διαστροφὴν, "A Distortion of "the Spine towards the anterior Parts:" And says, it is occasioned, εἰς τὰ πρόσω ἰόντων τῶν σφονδύλων, "By an Inclination "of the Vertebræ towards the anterior Parts." *Hippocrates* uses indifferently λόρδωσις (*Lordosis*) and λόρδωμα (*Lordoma*), as he uses ὔβωσις (*Hybosis*) and ὔβωμα (*Hyboma*), κύφωμα (*Cyphoma*) and κύφωσις (*Cyphosis*), to signify the contrary Affection, Gibbosity. *Lib. de Artic. & in Mochlico.* See HYBOMA and CYPHOMA.

LORICA. A kind of Lute for coating Glass Retorts, made of Glass, and broken Retorts powder'd, worked with Potters-clay, and then moisten'd a little with warm Water. The Glass Vessel is to be cover'd with this about a Finger's-breadth thick, and then is suffer'd to dry gradually, that it may not crack; but, if it should, the Cracks are to be filled up with fresh Lute of the same Kind. *Collect. Chym. Leidens. Cap.* 229.

LORINDE, in *Paracelsus*, is the Sound and Agitation of stagnant Lakes.

LORIND *Matricis*, is an Epilepsy, or convulsive Disorder, proceeding from the Uterus.

LORUM. A Strap, or Thong, of frequent Use in Surgery. The *Lorum Hildani* is described under the Article FRACTURA, and represented *Tab.* XXIX. *Fig.* 17. *Lorum Vomitorium* is a Thong of Leather, impregnated with the Juice of some nauseous Vegetable, which the Antients directed to be thrust down the Fauces, with a View of exciting Efforts to vomit. *Scribonius Largus*, N° 180. advises this Method, in order to discharge Opium from the Stomach, when it has been taken in too large Quantities.

LORUS. Mercury. *Rulandus.*

LOT. Urine. *Rulandus.*

LOTA. See MOTELLA.

LOTIO, or LAVATIO. Lotion, or Washing. This Word is used to express either universal or particular Baths, or Bathing. Lotion is, also, sometimes applied to Medicines, which require Washing.

LOTIUM. Urine.

LOTO AFFINIS. A Name for the *Medicago*; *vulnerariæ facie*; *Hispanica*; and for the *Vulneraria rustica.*

LOTURA. The same as PLYMA; which see.

LOTUS.

The Characters are;

The Ovary becomes a Pod, which is sometimes divided by transverse Partitions, as it were into Cells, full of Seeds, which are for the most part of a roundish Figure. The Leaves grow by Threes, and, at the Origin of the Pedicle, have two Wings like little Leaves at their Sides.

Boerhaave mentions sixteen Species of this Plant; which are,

1. Lotus; polyceratos; frutescens; incana; alba; major; latifolia; siliquis curtis, tenuibus erectis. *M. H.* 2. 177.

2. Lotus; polyceratos; frutescens; incana; alba; siliquis curtis; crassioribus, brevioribus, erectis. *Boerh. Ind. alt.* 2. 37. *Trifolium Hæmorrhoidale.* Offic. *Trifolium rectum album hirsutum valde.* J. B. 2. 360. *Lotus Hæmorrhoidalis major sive Trifolium Hæmorrhoidale majus.* Park. Theat. 1100. *Lotus pentaphyllos siliquosus villosus.* C. B. P. 332. Raii Hist. 1. 968. Tourn. Inst. 403. *Lotus incana sive Oxytriphyllum Scribonii Largi.* Ger. 1022. Emac. 1191. PILE TREFOIL.

It grows spontaneously in *Sicily*, *France*, and other Countries: The Seed is in Use, which is commended, by *Riverius*, in the Hæmorrhoids.

3. Lotus; πολυκέρατος; frutescens; Cretica; argentea; siliquis longissimis, propendentibus, rectis. *M. H.* 2. 177.

4. Lotus; pratensis; siliquosus; luteus; minor; & mollior. *C. B. P.* 332.

5. Lotus; ruber; siliquâ angulosâ. *C. B. P.* 332.

6. Lotus; ruber; siliquâ angulosâ folio variegato.

7. Lotus; luteus; siliquâ angulosâ.

8. Lotus; pentaphyllus; flore majore; luteo; splendente. *C. B. P.* 332. *Trifolium corniculatum, tertium.* Dod. p. 570.

9. Lotus; pentaphyllos; angustioribus foliis; luteus; minor; fruticosior. *Raii Synop.* 150.

10. Lotus; siliquis Ornithopodii. *C. B. P.* 332. *J. B.* 2. 358.

11. Lotus; pentaphyllos; minor; hirsutus; siliquâ angustissimâ. *C. B. P.* 332.

12. Lotus; pentaphyllos; siliquâ cornutâ. *C. B. P.* 332. *Trifolium, sive Lotus Hierazune, edulis, siliquosa.* J. B. 2. 365. *Trifolium, corniculatum, Creticum.* Prosp. Alpin. Exot. 268.

13. Lotus; latifolia; atroviridis; hirsuta; siliquâ crassâ; carinatâ.

14. Lotus; angustifolius; flore luteo purpureo; ex Insula Sancti Jacobi. *H. A.* 2. 165.

15. Lotus; siliquis geminis; peregrina. *Ind.* 156.

16. Lotus; hæmorrhoidalis; humilior; & candidior. *T.* 403. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 37.

These Plants are commended against the Hæmorrhoids; the Leaves being bruised and applied; for they are emollient and relaxing: On which account they are used by our Surgeons for the Intentions of mollifying, relaxing, and maturating, in the room of the Mallow. The first and second Species produce a Pea, which is excellent Food. *Hist. Plant. ascript. Boerhaave.*

LOTUS AFRICANA. A Name for the *Guaiacana*; *angustiore folio.*

LOTUS ARBOR. See CELTIS.

LOTUS ENNEAPHYLLOS. A Name for the *Coronilla*; *minima.*

LOTUS PENTAPHYLLOS. A Name for the *Vulneraria*; *pentaphyllos.*

LOTUS POLYCERATOS. A Name for the *Dorycnium*; *Monspelienſium.*

Besides the foregoing Species of Lotus, *Dale* mentions the following; which is,

Lotus corniculata glabra minor. *J. B.* 2. 356. *Raii Hist.* 1. 967. *Synop.* 3. 334. *Lotus sive Melilotus pentaphyllos minor glabra.* C. B. P. 332. Tourn. Inst. 402. *Trifolium siliquosum minus.* Ger. 1022. Emac. 1190. BIRDS-FOOT TREFOIL.

It grows every-where in Pastures, and flowers in *June*. The Herb is in Use, and, as *Monti* says, is anodyne, emollient, maturating, and good for Burns.

LOXIA, λοξία. The Name of a Bird, called, also, *Curvirostra.*

The Water wherein this Bird has drank, and its Dung, are said to be good against an Epilepsy.

LOZANGA. A Lozenge.

LUBAN. Olibanum.

LUCANUS. The Stag-fly. See SCARABÆUS CORNUTUS.

LUCATELLI BALSAMUM. *Lucatellus's* Balsam. See BALSAMUM.

LUCERNA. The Name of a Fish, called, also, *Hirundo.*

LUCIUS. Offic. Aldrov. de Pisc. 630. Bellon. de Aquat. 297. Schonf. Ichth. 44. Charlt. de Pisc. 42. Gesn. de Aquat. 500. Jonst. de Pisc. 109. Mer. Pin. 190. Raii Ichth. 236. Ejusd. Synop. Pisc. 112. Rondel. de Pisc. 188. Salv. de Aquat. 95. Schrod. 5. 329. THE PIKE or PICKEREL.

It is common in Rivers, and the Parts in Use are the Mandible, or lower Jaw, and the Fat: This latter is a common Remedy, and used to anoint the Soles of the Feet, and the Breasts of Infants, in order to make a Revulsion of a Catarrh, or to mitigate a Cough. The Mandible is drying and abstergent, for which Reason it is prescribed as a Specific in a Pleurisy: It is of Service, also, as well as the other Bones of the Head, in the Stone, the Fluor albus, and difficult Childbirth. The Ashes,

uſed outwardly, ſtop a Diſcharge of Ichor, cleanſe old Wounds, and dry the Hæmorrhoids. A Water, diſtilled from the Gall, is eſteem'd in Diſorders of the Eyes. *Schroder.*

The Gall of a Pike is much recommended for cold Diſorders, attended with an Inactivity of the Bile. See BILIS. It is, alſo, reckon'd good for Agues, if taken upon the Approach of the Fit; the Doſe is ſeven or eight Drops, in a proper Vehicle. It is, likewiſe, ſaid, that the Heart produces the ſame Effect.

Small Stones are found in a Pike's Head, which are looked upon as ſerviceable for helping Women in Labour; for purifying the Blood, forwarding the Menſes, and provoking Urine; for expelling the Stone from the Kidneys and Bladder; and for the Falling-ſickneſs. The Doſe is from twenty-five Grains to a Dram.

Such as are large, fat, and well-fed, having their Fleſh white, firm, and ſhort, are the beſt; and thoſe catched in Rivers are preferable to thoſe in Ponds, and muddy Places.

The Pike is good and nouriſhing Food, and agrees at all Times, but eſpecially in Winter, with any Age and Conſtitution. Some Authors pretend, that it is hard of Digeſtion, heavy in the Stomach, and always affords bad Juice; but theſe Qualities are only applicable to ſuch as live in Ponds, and marſhy Places, and feed upon Slime and Mud. *Jovius* thinks the Pike has but an ordinary Taſte, and *Auſonius* does not eſteem it; but its Taſte differs according to the Country in which it is bred. The Roe provokes Vomiting, and ſometimes purges violently. The Pike contains much Oil, and volatile Salt. *Lemery.*

LUCUMORIANA DORMITIO. A preternatural Sleep, protracted for ſeveral Days.

LUDUS PARACELSI. Offic. Charlt. Foſſ. 17. *Silex ille, quem Helmont Ludum Paracelſi vocat.* Worm. 39. *Ludus Helmontii.* Grew. Muſ. R. S. 311. WAREN VEIN.

It is a Stone of the Colour of yellow Amber, but more opaque, of different Sizes, diſtinguiſhed by tranſcurrent Lines of a dark Aſh-colour like Veins. It is frequently found in maritime rocky Places; and is recommended by *Paracelſus* for a Lithontriptic. Doctor *Grew* thinks it a good Diuretic, and may be of Uſe for expelling Gravel.

LUES VENEREA.

That the Diſorder called the *Lues Venerea*, which is endemial in the *Weſt Indies*, was not only brought into *Europe*, but alſo propagated thro' the ſeveral Parts of it, when *Chriſtopher Columbus*, in the Year 1492. diſcovered the Iſland of *Hiſpaniola*, is the Opinion of moſt Authors who have treated of this terrible Diſtemper; ſuch as *Rodoricus Diacius Hiſpalenſis*, in his Book *de Morbo Venereo*; and *Nicolaus Monardes*, in his Treatiſe *de Simpl. Med. ex novo Orbe allatis.* Tho' 'tis certain from Experience, that this formidable Diſorder was firſt in *Spain*, then in *Italy* and *France*, and afterwards in *Germany*, propagated by Contagion, in conſequence of Copulation with impure Women, yet there are ſome Authors, and among the reſt, *Menadous*, in his Treatiſe *de Virulentia Venerea*, Cap. 24. *Nicolaus de Blegny*, in his Work, intituled, *L'Art de guerir la Maladie Venerienne*, and *Johannes Baptiſta Symbaldus*, in his Book *de Geneanthropia*, *Lib.* 9. *Tract.* 2. who think, that this Diſorder may, in the Female Sex, be produced without any virulent Contagion, when, for Inſtance, a Woman admits of the Embraces of many Men promiſcuouſly, for which Reaſon they aſſert, that the Diſtemper has always raged among Perſons uncommonly addicted to profuſe Venery, ſince, from the Stagnation and virulent Corruption of the various Seeds, Humours of an offenſive Quality are produced, which infect firſt the Woman, then the Man, whoſe Embraces ſhe admits, and, in Proceſs of Time, the Perſons who lie in Bed with them. Tho' we do not abſolutely reject this probable Opinion, but rather allow, that from this Cauſe a Diſorder, not unlike the *American Lues*, may proceed, yet it cannot be denied, that the Species of the Diſorder brought from *America* by Contagion, is attended with more terrible Symptoms, and is far more violent and malignant, than that produced by promiſcuous Venery; ſo that the Diſorder may be communicated not only by Copulation, but alſo by Contact; by the Hands, for Inſtance, when moiſt with Sweat; by Kiſſes, and, in ſucking Children, by the cloſe Application of the Mouth to the Breaſt and Nipple of the Mother or Nurſe: And ſo virulent and contagious is this Diſorder, that it may, alſo, be communicated to others, by drinking out of the ſame Cup, or wearing the ſame Clothes uſed by an infected Perſon; and the Infection is ſometimes lodged in the Body for ſeveral Years before it diſcovers itſelf, or produces any terrible Effects.

The *Lues Venerea* may be defined, A malignant and putredinous Dyſcraſy of all the Humours, but eſpecially of the Serum and Lymph, ariſing from a Venereal Taint, received into the Body. Its Signs and Progreſs, are as follows: Thoſe who, from impure Venery, have contracted the Diſorder, perceive the Force of the Contagion firſt, and moſt conſiderably, in their Pudenda, which become affected with Inflammations, Tumors, Pains, preternatural Heats, Exulcerations, and Diſcharges of Humours. Then the Virulence of the Poiſon is diffuſed firſt to the moſt adjacent and contiguous Parts, and, in Proceſs of Time, to thoſe which are more diſtant and remote; for as ſoon as the malignant Taint, which gradually acquires freſh Strength, is convey'd to the vital Juices, the Lymph and Blood, all the Parts, both fluid and ſolid, are affected by the Corruption brought on. Thus a preternatura Languor and Wearineſs ſeize the whole Body; the Strength is greatly impair'd; the Countenance, and eſpecially the Forehead, is ſtrangely diſfigured with Spots and Puſtules, which are ſometimes larger, and ſometimes ſmaller. Tubercles of various Kinds, dry and moiſt, furfuraceous, or ſcaly, but of different Colours and Bulks, according to the different Parts they poſſeſs, break out here and there all over the Surface of the Body. All the Parts of the Body, being deprived of their due Nouriſhment, waſte away and decay. In the more lax Parts, conſiſting of Fleſh and Fat, malignant Ulcers, which penetrate to the very Bones, are formed. About the Articulations, racking Pains, reſembling thoſe of the arthritic Kind, are felt; in the intermediate Parts, alſo, between the Articulations, intolerable Pains, which rage with greateſt Violence in the Night, are perceived, not only about the Perioſteum, but, alſo, in the Mediullium of the Bones: Tophi and Gummata, Abſceſſes and Caries, are, alſo, frequently formed in the Bones, and ſo affect their Subſtance, and the Texture of their conſtituent Laminæ, that in deſtroying their Coheſion they are corroded, and fall aſunder. Beſides theſe Symptoms, it ſometimes happens, that the Hairs fall off; and the inguinal and axillary Glands, together with thoſe of the Neck, in conſequence of the Stagnation of the contaminated Lymph, contract Tumors, which, if neglected, degenerate either into Ulcers, or a Scirrhus. And theſe Symptoms lay a Foundation for a ſtill greater Number of Misfortunes; ſo that the Lues Venerea, inſtead of being called one Diſtemper, may juſtly be pronounced a fatal Combination of an almoſt incredible Number of Diſorders.

But in no Part of the Body are the Effects of this virulent Infection more conſpicuous than in the Head; for, beſides the intolerable nocturnal Pains with which this Part is afflicted, the Hairs fall off from the Cheeks and Eye-brows; in the Lips, Mouth, and Palate, Puſtules and Tubercles are formed, which degenerate into malignant Ulcers. The Gums are covered with Aphthæ and Ulcers, which not only render the Teeth looſe and carious, but alſo make them drop from their Sockets. The Uvula, the Tonſils, and all the Membranes covering the Fauces, are affected with intenſe Heat, Pain, Inflammation, and Exulceration. The ſpongious Bones of the Noſe, becoming carious, are conſumed; and, being deprived of the Palate, which ſupported them, the Noſe falls; after which, the Patient's Breath is not only putrid and diſagreeable, but his Speech in a great meaſure viriated, and an incurable Hoarſeneſs brought on. Neither do the Ears and Eyes eſcape the Fury of this Diſorder, ſince, by its means, the latter are externally affected with Pain, Redneſs, Itching, and Lippitude, and internally, being loaded with Humours, their Sight is deſtroy'd, and ſometimes a Suppuration is brought on. The Ears are afflicted with a violent Ringing and Pain, whilſt their internal Subſtance is exulcerated, and rendered carious. The Bones of the Cranium are, alſo, frequently corroded, and deformed with Tophs and Gummata. Thus *Rhodius*, in *Cent.* 1. *Obſ.* 33. gives us an Account of a Countryman labouring under a Lues Venerea, in whoſe Dura Mater he obſerv'd three white Gummata.

Theſe are the principal Symptoms, with which this terrible Diſorder is attended; and how much they are capable of injuring, diminiſhing, and, at laſt, totally aboliſhing the whole Fabric of the human Body, and the various Functions of its Parts, is ſufficiently obvious from what has been ſaid. *Sydenham*, in his Epiſtle *de Lue Venerea*, has given a full and accurate Hiſtory of this Diſeaſe, when beginning, when arrived at its greateſt Height, and when in its Decline; and taught us in what manner it firſt diſcovers itſelf, and afterwards, inſinuating itſelf deeper, and diffuſing its Influence wider, how it affects, weakens, and diſorders the remote Parts. But, in order to prevent Miſtakes, it muſt be obſerved, that all the Symptoms already enumerated are not found in all Patients labouring under this Diſorder; for ſome of them are only to be obſerved in ſome, and others of them in others. Nor are we raſhly, from ſome of the Symptoms, but rather from a conſiderable Number of them, to determine, with reſpect to the Preſence of this Diſeaſe; nor ought we, when at firſt Tumors, Exulcerations, and other Diſorders of the Pudenda, appear, to take the Diſeaſe for a confirmed, but rather a beginning Lues, ſince theſe Symptoms, when duly treated, and ſeaſonably cured, never terminate in a Lues.

Though I am of Opinion, that the Lues Venerea may be eaſily known by the above-mention'd Signs, yet I ſhall ſpecify ſome Diſeaſes, with which it ſeems to have ſome Agreement and Analogy. Of theſe the moſt conſiderable is, the Scurvy; which, as well as the Lues Venerea, is accompanied with a Languor and Torpor of the Body, wandering as well as fixed Pains, which are increaſed in the Night-time, Contractions of the Nerves, Puſtules, hard Tumors, and various Exulcerations both of the Mouth and Penis, as *Eugalenus*, in his Treatiſe *de Scorbuto*, informs us. So that 'tis not to be wonder'd at, that *Charleton*, in *Lib.* 1. *de Scorbuto*, *Cap.* 4. affirm'd, there was ſo great an Analogy between the Lues Venerea and the Scurvy, that there were ſome Symptoms ſo common to both Diſorders, that they could not be diſtinguiſhed by the moſt skilful Phyſician, eſpecially in the maritime

maritime Coasts of the more Northerly Climates, such as *Denmark*, *Sweden*, and *Holland*. If, therefore, these two Diseases should happen to rage in one and the same Place, great Diligence is requisite to form a right Judgment of each Disease; for there are certain and infallible Marks, by which the skilful Physician is enabled to distinguish Venereal Pustules, Serpigines, and Ulcers, seemingly of a cancerous Nature, from scorbutic Impurities. But these Marks are more easily learned from Practice and Experience, than taught by Precept and Instruction. *Eugalenus*, however, establishes this Difference, that in Venereal Eruptions, when laid open with a Cautery, the Matter is pinguious, and resembles smoked Bacon; whereas the Matter of scorbutic Eruptions has no such Appearance. Besides, the scorbutic Spots rarely appear till after the Gums are exulcerated, and the Legs become livid, or black; whereas 'tis quite otherwise with the Venereal Eruptions. The Whole of scorbutic Ulcers are, also, generally livid, whereas those of the Venereal Kind are red about the Edges, whilst their Cavities are of a whitish cineritious Colour. As for scorbutic Exulcerations of the Mouth, they first affect the Gums, and afterwards, tho' gradually and slowly, the Fauces and Tonsils; whereas Venereal Exulcerations generally first affect the Fauces, and its Parts, and then the Gums.

We are not, in like manner, to be too forward and precipitant in pronouncing an Herpes, an Impetigo, or other inconsiderable cutaneous Ulcers, a Lues Venerea; but ought rather first to inquire, whether the other Signs concur to give the Disorder that Denomination. But these cutaneous Diseases differ principally from those of the Venereal Kind in this respect, that the former, after the Eruption, are not attended with Inquietudes and Wearinesss of the Body; are by no means accompanied with such intense Pain; and are not in the Night-time so augmented by the Heat of the Bed, tho' by that means their Itching is increased. The same Caution is to be used with respect to Tophs, Nodes, and Ganglions, which may not only proceed from a Venereal Taint, but, also, from any violent Tension and Vellication of the nervous Parts, as we sometimes observe after genuine arthritic Pains. Unless, therefore, there are some other concurring Symptoms to determine our Judgments, we are never too rashly to suspect a Lues Venerea. Nor are we indiscriminately to account all Tumors of the Glands Venereal, since these are frequently seen in various Parts of the Body, in Cases where there is no Reason to suspect any Venereal Taint, as is sufficiently obvious in strumous Cases. But, in judging of the several Diseases which bear an Analogy to the Lues Venerea, the Physician ought, above all things, to consider the former Life of the Patient, which, if it has been luxurious, and spent among lewd and profligate Women, often affords a pretty satisfactory Proof of a latent Venereal Taint, especially when the other Signs concur to prove the same. The Patients, also, where there is a Suspicion of a Lues Venerea, are to be strictly examin'd whether they know the particular Manner in which the Contagion was communicated to them; and to be exhorted in a friendly manner to discover their own Suspicions to the Physician, though most Persons, either through a Principle of Modesty, or Fear, conceal the Origin and Progress of the Disease, and are unwilling, when arriv'd at the Years of Maturity, to confess themselves guilty of the Follies of Youth. But if any one confesses, that, in consequence of Copulation, he had before contracted a Gonorrhœa, Exulcerations, and other Disorders of the Genitals, we are carefully to inquire how these Disorders came to be removed, since from this Circumstance a Judgment of the Disease may be the more easily form'd.

We now come to consider the Cause of the Lues Venerea; and as in *Europe* this Disorder is only to be ascribed to Contagion, and a morbific Taint, communicated from those who are infected to those who are sound, we shall here briefly examine by what means this destructive and highly subtle Poison exerts its Violence on the human Body. Now Authors agree, that the Venereal Taint is principally communicated in the following manner, when, for Instance, either by Friction or Contact, in sucking, kissing, or suckling, the Poison insinuates itself into the Pores; or when, exhaling in form of Vapours, it enters the adjacent Parts; or, which most commonly happens, when it is communicated by impure Copulation to either of the Parties. Though in these Circumstances Physicians are sufficiently agreed, yet they widely differ with respect to the specific Nature and Manner of acting of this Poison, since some derive its Virulence from an acrid, corroding, and coagulating Acrimony; others from an alcaline corrosive Salt; and others from a certain specific Acrimony. But all this is absurd Jargon, since each of these Hypotheses takes the Effects produced by this Poison for the Cause producing them. But, in my Opinion, an over-curious Investigation of this Matter is not absolutely necessary, since there are in Nature many Substances of so fine and subtile a Contexture, that their intimate Nature and Crasis, and consequently their surprising Method of acting, entirely surpass our Comprehensions. This is sufficiently obvious in the Plague, the Small-pox, the Leprosy, malignant Itches, the Bite of a mad Dog, and others of a like Nature, in which no one has hitherto been able to explain the Nature and Quality of the Poison. But 'tis sufficient for all the Purposes of Medicine, by resisting the pernicious Effects of the Poison, to prevent its operating on the human Body; especially since, in Matters of an abstruse Nature, 'tis more expedient to confess our Ignorance, than to advance things which cannot be proved.

Fernelius, in a distinct and accurate manner, delivers his Sentiments of this Disease, in the following Words: "In the Ve-" nereal Disease, and others of a venomous Nature, many Phy-" sicians are grosly deceived, because, when they observe these " Disorders discover themselves by a Peccancy, an Acidity, for " Instance, or Acrimony, of any of the Juices, they conclude " that the Disorders are produced by this Acidity or Acrimony " alone, without inquiring whether there is in the Humours any " other Principle which excites the Disorder. And though, " without doubt, such a Principle cannot be subjected to the " Senses, yet it may still be rationally conceived to exist; " otherwise we must remain in profound Ignorance with re-" spect to these Disorders." Besides, if we refer the abstruse and specific Energy of this spreading Contagion to manifest Qualities, such as an acid, a saline, or alcaline Acrimony, we must certainly commit egregious Blunders in Practice, since it would not be difficult to remove the Acrimony of any Humour by proper Medicines, which however cannot be easily done in a Lues Venerea. For which Reason, those, in my Opinion, seem to be in a great Mistake, who think, that Quick-silver, the most powerful Antidote against this Disorder, operates by means of a highly penetrating Principle of an alcaline Nature, which subdues and corrects the peccant Acid.

But, that I may not be thought to pass over in Silence every thing relating to the Nature of these subtle and active Poisons, I shall deliver my Sentiments concerning them. Supported then by a long Course of Experience, I affirm, that the Nature of the contagious and Venereal Poison consists in an highly subtle sulphureous Fluid, or in a phlogistic, ethereal, and fermentative Principle, which, diffusing itself, contaminates the other Juices of the human Body. And there are various Circumstances from which this Property of the Venereal Poison may be deduced; for 'tis well known both to Philosophers and Physicians, that a Sulphureo-ethereal, or oleous, or any other Fluid, may be surprisingly divided, dissipated, and multiplied, as is obvious in Substances furnished with such a Fluid as Civet, Musk, and the Fume of Sulphur, the smallest Molecules of which are capable of being so diffused, as to communicate the same Smell to an incredible Number of other Bodies. Now, if we consider the Venereal Poison, it is of such a Nature, that it may for many Months, or even many Years, lie concealed in the Body, before it produces any terrible Effects; which certainly could not happen, if it was of another Nature, and, at the same time, lodg'd in the Blood and Lymph; because, by the continual Circulation of these, it would be brought into Action; so that the Venereal Poison may be justly defin'd, A Ferment of a sulphureous and oleous Nature, which, being sheath'd up in a pinguious Substance, is, with Difficulty, unfolded, and not easily mix'd with the other Juices. This Opinion is confirmed by the Propagation of the Contagion; for whether the Venereal Taint is, through the Pores, communicated to a sound Person, it is only, at first, mix'd with the pinguious Fluid lodg'd under the Cuticula; or whether it is convey'd by impure Copulation, it is in like manner, at first, only insinuated into the pinguious Membranes of the Pudenda, or the seminal Lymph, which, also, consists of oleous Parts, till, at last, by means of these Juices, as a pinguious Vehicle, it is conveyed to the Lymph and Blood, and infects, contaminates, and vitiates, the whole Mass of Humours.

This Opinion is still more effectually confirmed, if we reflect on other Diseases communicated by means of Contagion; such as the Plague, the Small-pox, the Measles, and petechial Eruptions; the Matter of which is, also, of a putrid sulphureous Nature, and may, for a long time, lie latent, and wrapt up in a pinguious Viscidity, till, being freed and disengag'd, it is by other Causes put into a multiplicative Ferment, and conveys the same Taint to the vital Juices. And the terrible Effects of the Venereal Poison, which discover themselves by a putredinous Corruption of the Humours, are to be ascribed to a Principle of a sulphureous Nature, since 'tis certain from Experience, that pinguious Bodies are far sooner brought into a State of Putrefaction than others. Thus I have known some wounded in the Belly, whose Omentum, being very fat, and protuberating from the Wound, soon became so putrid, that the By-standers could not bear the fetid Smell. The celebrated *Boerhaave* is much of the same Opinion, and delivers his Sentiments in the following manner: "The " Venereal Poison is first lodged in that pinguious Humour of the " human Body, which in sound Persons fills what the Antients call'd " the Panniculus adiposus, and the Moderns Membrana cellulosa, " so that the Contagion, entering the Pores of the Epidermis, " passes through the Skin to the Cellulæ of the Membrana " adiposa, where, mixing itself with the pinguious Liquor lodg'd " there, it is, by the continual Heat, Motion, and Continuance, " more and more heighten'd in its Quality, corrodes and cor-

" rupts

" rupts the ſuperincumbent Skin and Cuticula, whilſt, in the " mean time, it contaminates the adjacent oleous Cellulæ all " around. Hence the Diſorder is farther ſpread in the Panni- " culus adipoſus, than in the ſuperincumbent Skin, which is " deſtroyed and corroded."

What has been advanced by *Boerhaave*, ſufficiently proves, that the Membrana adipoſa is not only the principal Receptacle of the Venereal Poiſon, but, alſo, that it is principally affected, when the Blood is already tainted, and the Diſeaſe pretty far advanced, as is ſufficiently obvious from the various external Corroſions, and phagedenic Ulcers. But the Truth of this is ſtill more effectually evinced by what the ſame celebrated Author, a little after, advances: For, ſays he, " The Membrana adipoſa, " as it were, ſuppurating, the denudated Muſcles appear beauti- " ful and ſeemly. The Ulcers only prey upon the Tunica adi- " poſa, without affecting the Skin; unleſs it ſhould be deſtroy'd " in conſequence of a Conſumption of the ſubjacent Veſſels." For this Membrane is ſoft, of a lax Contexture, and continually lubricated with a pinguious Juice, which circulates ſlowly, and remains long in that Part. Hence, if the Membrana adipoſa is in any manner corrupted, it is eaſily ſuſceptible of the quick and wide-ſpreading Taint, whilſt, at the ſame time, the ſubjacent Muſcles, and ſuperincumbent Skin, are unaffected; perhaps, becauſe theſe Parts are of a firmer Contexture, and, conſequently, more capable of reſiſting the Corruption.

But as nothing contributes more to ſink the Reputation of a Phyſician, than a wrong Prognoſtic; ſo great Judgment and Circumſpection is requiſite in forming it, leſt we ſhould ſhamefully tread in the Steps of Empirics, who, where there is the ſlighteſt Beginning of a Lues, pretend there is great Danger, and, for that Reaſon, ſubject the Patient to harſh and cruel Medicines; or, when the Infection is great, and the Caſe full of Danger, promiſe an eaſy Cure by their Arcana. The Violence of a Lues Venerea, and the more or leſs dangerous Events depending upon it, ought to be principally eſtimated from the following Circumſtances. Firſt, then, If the Patient is young, or arriv'd at the Years of Maturity, and is of a ſanguine and healthy Conſtitution, he will more eaſily ſupport the Diſorder, than thoſe who are choleric, piruitous, or leſs robuſt, ſuch as Infants, Children, and old Perſons. But this Rule does not hold with reſpect to Women, who, tho' weaker than Men, yet generally ſtand the Shock of this Diſorder better than they, ſo long as their Menſes continue. The Cure of this Diſorder, alſo, ſucceeds better in the Spring and Summer, than in the Autumn and Winter; and better in hot and Southerly Climates, than in moiſt and Northerly Countries, where there are large and frequent Falls of Rain: For this Reaſon, many, who go from *Germany* to *France*, are, by that means, more eaſily freed from this Diſorder: Not becauſe in *France* the beſt Phyſicians are to be found; but, principally, becauſe the mild and temperate State of the Air greatly favours the Cure of this Diſorder. It is, alſo, obvious, that a beginning Lues is more eaſily cured, than one which, being long continued, has taken deep Root. Nor are we, for this Reaſon, ever to deſpair, or deſert the Patients labouring under this Diſorder; but, when milder Medicines prove ineffectual, we are to have recourſe to thoſe of a more draſtic Nature; and, on the contrary, we are ſometimes to deſiſt from ſtrong Medicines, and uſe thoſe of a more mild and benign Nature, according to the State and Conſtitution of the Patient; by which means, Patients, in a deſperate Situation, have been often reſtored to perfect Health: A memorable Inſtance of which is given by *Fernelius*, in *Cap.* 17.

But that the Phyſician may not be deceived, with reſpect to the Event of the Diſeaſe, he is to have a due Regard to the different Stages of the Diſeaſe, or the Violence of its concomitant Symptoms. It is, therefore, to be obſerved, that they, who, in the firſt Stage of the Diſeaſe, are only afflicted with a virulent Gonorrhœa, a Diſcharge of malignant white Matter, Bubos, and Swellings of the Teſticles, nocturnal Pains of the Head and Joints, conſequent thereto, and have the peccant Matter only lodged in their Fluids, are eaſily recovered. In the ſecond Stage, where there are Ulcers of the Penis and Fauces, together with Puſtules and Boils diffuſed all over the Body, which they call the *Great Pox*, and which comprehends other external Ulcers, and where the ſolid Parts are already, in ſome meaſure affected, the Cure is far more difficult, but ſtill poſſible; except other Circumſtances, ſuch as the Patient's Method of Life, his Strength, and the concomitant Diſorders, prevent it. The third and higheſt Stage, which is accompanied with a Caries of the Bones, a profound Exulceration of the Palate, Bones of the Noſe, and Lungs, is ſo highly dangerous, that all Hopes of Recovery are loſt; for the more noble the Parts corrupted are, and the more neceſſary for the Functions of Life, the greater the Danger ariſing from a Lues Venerea is; which, alſo, holds true with reſpect to any other Parts, which, being, in a great meaſure, out of the Reach of Medicines, cannot be extirpated, if there ſhould be a Neceſſity for it. In like manner, if the Patient's Body is impure, and full of ſcorbutic Humours, or if any of the moſt conſiderable Viſcera, ſuch as the Lungs, Spleen, Liver, or Uterus, are corrupted, the Patient's Condition is, in a great meaſure, deſperate; becauſe, in ſuch a Situation, a Salivation can hardly be uſed with Safety. Hence it is, that this Diſeaſe, which, of itſelf, is not always mortal, frequently deſtroys the Patient, in conſequence of various unlucky Circumſtances; for ſome, who labour at once under a Scurvy, and Corruption of the Viſcera of the lower Belly, die of a Dropſy. Some, whoſe Lungs are ulcerated, die of a Phthiſis, or Hectic. Others, whoſe Bones are rendered carious, and corroded by a poiſonous Ichor, fall the unhappy Victims of intolerable Pain; whilſt others die of a Sphacelus, or a Cancer of the Palate and Uterus; and in theſe Caſes the Carcaſe is ſo mangled and putrid, as even to be diſagreeable Food to the Worms.

The Cure.

As, in this terrible and obſtinate Diſorder, the whole Maſs of Blood and Lymph, in conſequence of the malignant Taint, aſſumes a putrid, vapid, and viſcid Craſis, highly unfriendly to Nature, from which alone all the Symptoms of this Diſorder ariſe; ſo, in order to remove this principal Cauſe, no more proper Intention can be purſued, than through all the Emunctories to expel from the Body, and its ſmalleſt Veſſels and Receſſes, the whole Maſs of corrupted Humours; for, by this means, the moſt violent Symptoms, ſuch as Obſtructions of the ſecretory and excretory Glands, together with Inflammations, and Exulcerations of the Bones, and all the ſolid Parts, ſpontaneouſly ceaſe, when their productive Cauſe is removed. But, hitherto, there are only two Methods known of expelling from the Receſſes of the ſolid Parts the whole Maſs of peccant and tainted Humours; the one by a liberal and long-protracted Diſcharge of Sweat, and the other by a Salivation, continued for a ſufficient time.

As for the former of theſe Methods, by means of Sudorifics, we muſt here obſerve, that all Sudorifics are not equally proper for this Intention, but only ſuch as not only open the excretory Ducts of the Skin; dilute, reſolve, and digeſt, the viſcid Humours; but, alſo, and more eſpecially, ſuch, as, by increaſing and augmenting the ſyſtaltic Motion of the Veſſels of the Heart and Glands, put the viſcid and corrupted Humours, lodged there, in Motion, and expel them from the moſt latent Receſſes of the Parts. For this Purpoſe the moſt celebrated Medicines are the Wood and Bark of Guaiacum, the Roots of *China* and Sarſaparilla, together with the Wood and Bark of Saſafras, prepared in Decoctions, which are to be drank in order to excite Sweat. But among theſe the moſt powerful is Guaiacum, and its Bark, with which the *Americans* themſelves happily cure a Lues Venerea; becauſe this Wood is furniſhed with a certain acrid and reſinous Principle, abſolutely neceſſary for irritating the ſolid Parts. Thus, from this Wood, by means of highly rectified Spirit of Wine, a reſinous Eſſence is prepared, which, when mixed with half the Quantity of Spirit of Tartar, and exhibited in a warm Vehicle, effectually promotes Sweat. But it is both ſafer, and more cuſtomary, to uſe a Decoction of this Wood and Bark, prepared by boiling an Ounce of them in three Pints of Water, for an Hour; by which means the ſubtle reſinous and balſamic Part only is extracted, and the groſſer Subſtance of the Reſin left; for the ſame Decoction, when gently evaporated to Dryneſs, leaves a Powder of a browniſh Colour, of a Taſte and Smell reſembling that of the Opobalſamum, and poſſeſſed of ſo penetrating an Acrimony, that half a Grain of it, ſnuffed up the Noſtrils, by exciting a violent Sneezing, powerfully, and without any Diſadvantage, expels the Mucus from the Sinuſes of the Noſe.

From theſe Effects we may juſtly conclude, that Decoctions of Guaiacum, exhibited in due Quantities, and at proper Seaſons, by their acrid, ſubtle, and balſamic Principle, ſtimulate the nervous Fibres and Coats of the Glands and Veſſels, to briſker Motions; and, by increaſing the ſyſtaltic Motion of the Veſſels, excellently promote the Circulation of the Lymph and Humours. Such a Decoction may, according to the Circumſtances of the Patient, be commodiouſly exhibited warm in the Morning, for one, two, or three Months, the Patient, in the mean time, waiting for a gentle Sweat in Bed. By this Medicine alone I have known skilful Phyſicians cure ſeveral Perſons of phlegmatic and ſpongious Habits of Body. Some, alſo, in order more effectually to reſolve the Viſcidity of the Humours, order this Decoction to be uſed with a Laconic Bath, prepared of kindled Spirit of Wine. Nor is this Piece of Practice to be condemn'd, provided it is only uſed with due Caution and Circumſpection.

But, in tender, lean, and delicate Patients, this Decoction of Guaiacum is not always proper for removing a Lues Venerea, becauſe it excites a too violent Motion and Ebullition of the Humours. For Patients of this Kind, Decoctions of more temperate Woods and Roots are far more proper, ſuch as the Roots of Sarſaparilla and China, Saſafras and Juniper-wood, the Roots of Succory, Soapwort, Burdock, Liquorice, and others, which may, for the ſake of a better Extraction, be cover'd with Oil of Tartar *per Deliquium*; the Salt contained in which is highly efficacious in opening the firm, reſinous, and viſcid Texture of theſe Ingredients. But ſuch Decoctions become far more

powerful in removing a Lues Venerea, if crude Antimony, tied up in a Bag, or, which is the Practice of ſome, Quickſilver, is added to them in the boiling. Strong Decoctions of theſe Ingredients may be drank in the Morning; but, for ordinary Drink, if ſuch a Courſe is intended, the Ingredients muſt be boiled in three times the Quantity of Water, adding Currants, according to the State of the Patient, and a little Cinnamon, in order to render the Decoction more palatable.

The following may ſerve as Specimens of the Decoctions to be uſed for ſuch Intentions:

Take of the Shavings of Guaiacum-wood, four Ounces; of the Bark of Guaiacum, one Ounce; of *China* Root, and the Roots of Sarſaparilla, each half a Pound; of the Roots of Succory, and Liquorice, each two Ounces; and of Salt of Tartar, half an Ounce.

An Ounce and an half of theſe Ingredients, together with two Drams of crude Antimony, tied up in a Bag, are to be boiled in three Quarts of Water; and, when the Liquor is ſtrained, the Patient is to drink the third Part of a Quart, in order to promote Sweat. To the Ingredients, left after boiling, add two or three Ounces of Currants, and three Quarts of pure Water; boil all together; and, after ſtraining, let the Patient uſe the Liquor for ordinary Drink. But, if a weaker Decoction is deſired;

Take of the Roots of Sarſaparilla, half a Pound; of *China* Root, and the Roots of Vipers-graſs, each four Ounces; of the Roots of Succory, and Liquorice, each two Ounces; of the Bark of Saſafras, one Ounce; and of Salt of Tartar, three Drams. Let the Quantity of the Ingredients and Water be the ſame as in the former Decoction.

In the Beginning of a Lues Venerea, great Relief is afforded by a due and proper Uſe of theſe Decoctions. Yet, when the Diſorder is deep-rooted and inveterate, and a terrible Train of Symptoms appearing in conſequence of the Infection already conveyed both to the fluid and ſolid Parts, theſe Decoctions do not always anſwer the Expectation of the Phyſicians; and the Violence of the Diſorder, eſpecially in cold and northerly Countries, requires, that their diſcutient and reſolvent Qualities ſhould be increaſed by the Addition of ſome more efficacious Medicines; which Purpoſe I have found, from Experience, to be beſt anſwer'd by exhibiting, in Conjunction with ſuch Decoctions, a proper Doſe of ſome antimonial or mercurial Preparation, the moſt conſiderable of which are Æthiops Mineral, or the Golden Sulphur of Antimony precipitated from a Lixivium of the Scoriæ of Regulus of Antimony, with a Solution of Gold. Three or four Grains of this Preparation are highly efficacious in removing out of the Blood Impurities of every Kind. This Intention is, alſo, anſwered by the Tinctura Antimonii acris, or the ſulphurous Salt of Antimony, prepared from the Scoriæ of ſimple Antimony; or by Powders prepared of two Parts of the Ceruſs of Antimony, and one Part of the Cinnabar of Antimony; all of which, if duly exhibited with theſe Decoctions, in Conjunction with a proper ſudorific Regimen, powerfully reſolve and colliquate the viſcid Humours fixed in the ſmall Veſſels, and copiouſly evacuate them, not only by Urine, but, alſo, by Sweat.

But, that this Cure by Sudorifics may terminate the better, I am of Opinion, that the Body ought to be previouſly prepared for bearing it without any Diſadvantages: For this Purpoſe, when there is a Plethora, a proper Quantity of Blood is to be taken away; then, by proper Purgatives, the Sordes of the Primæ Viæ, and the whole Body, are to be carried off by Stool. But ſince this Intention is not to be promiſcuouſly anſwered by all Medicines of a purgative and laxative Quality, but only ſuch as by their Natures are adapted to this End, we ſhall enumerate the moſt proper, which are reſinous Gums, ſuch as Gum Ammoniac, Sagapenum, Opopanax, and Galbanum, which, when render'd ſtronger by the Extracts of Rhubarb, or black Hellebore, or by Mercurius dulcis, may, by means of the Eſſence of Guaiacum-wood, or *Peruvian* Balſam, be reduced to the Form of Pills; half a Dram of which may be taken for a Doſe: When the Patient is purged, by means of theſe Pills, three or four times exhibited about every other Day, the Cure by Sudorifics is to be begun, and a proper Regimen uſed; which principally conſiſts in the Patient's uſing light and ſlender Food, ſuch as Biſcuits, a ſmall Quantity of roaſted Fleſh, with ſton'd Raiſins, weak Broths of Veal, or Fowls boiled with Lettice, Endive, Aſparagus, and Celeri: They muſt, alſo, as much as poſſible, abſtain from pinguious Subſtances, boiled Fleſh, Fiſh, Preparations of Milk, and farinaceous Subſtances.

The Method of curing the Lues Venerea by Salivation becomes proper, when the Diſorder is deeply rooted, and can neither be remov'd by a ſtrict Regimen, nor the Force of Sudorifics, in which Caſe more efficacious and Herculean Medicines are to be uſed; ſuch as Preparations of Quickſilver, which are the moſt powerful Antidotes in this obſtinate Diſorder; becauſe, for this Purpoſe, there is not in Nature a more infallible and efficacious Medicine than Mercury; ſince, in conſequence of the Subtilty of its Parts, by penetrating into the moſt remote Receſſes of the Body, it not only powerfully reſolves the viſcid, tenacious, and, as it were, coagulated Humours; but, alſo, eliminates them by the Glands of the Palate and Fauces.

There are various Methods of exhibiting Mercury, in order to excite a Salivation. Thus the Antients endeavour'd to cure the Lues Venerea by Suffumigations of Mercury, reſolved into Vapours. But this Method is attended with conſiderable Diſadvantages; becauſe the groſs and thick Fumes of the Mercury are prejudicial and unfriendly to the nervous Syſtem: But Mercury is at once more frequently and ſafely uſed, when killed by proper Ointments, and in that Form applied to the proper Parts of the Body. This Method greatly prevails in *France*, where the Surgeons, in order to excite a Salivation, intimately mix an Ounce of Quickſilver, extinguiſhed in a ſufficient Quantity of Turpentine, with Ointment of Roſes and Pomatum, each an Ounce; adding about ten Drops of Oil of Lavender, and half a Dram of *Peruvian* Balſam. With this Ointment the Ancles, and, if it is neceſſary, the Knees, alſo, are to be anointed in the Morning, with an empty Stomach, before a warm Fire, for three or four Days, till a Diſcharge of the Saliva is excited; not omitting, at the ſame time, the Uſe of a temperate Decoction of the Woods.

But, when the Lues Venerea is very obſtinate, ſome Phyſicians and Surgeons think it more ſafe to excite a Diſcharge of the Saliva, by Preparations of Mercury internally exhibited: For this Purpoſe they exhibit four or five Grains of duly prepared Mercurius dulcis, reduced to a Powder, with the ſame Quantity of diaphoretic Antimony, and Crabs-eyes, with Conſerve of Roſes, either in Water-gruel, or ſome proper Infuſion; increaſing every other Day the Doſe of the Mercury, by an Addition of two or three Grains; and thus gradually aſcending till the Doſe is half a Dram, and a Diſcharge of the Saliva is excited; which in ſome, eſpecially thoſe of tender Conſtitutions, happens on the ſeventh, and, in others, on the ninth or eleventh Day. But if in Patients of languid, torpid, and phlegmatic Conſtitutions, the Mercury ſhould not operate duly, then Mercurial Unctions are for ſome Days to be uſed externally; by which means two or three Quarts of Saliva are often diſcharg'd: Then we are totally to abſtain from the Uſe of Mercurials, whether internal or external; and by no means to repeat their Uſe ſo long as the Salivation proceeds duly; but are rather to be careful to preſerve the Patient from Cold, and keep him moderately warm, a Circumſtance which greatly contributes to the Cure of the Lues Venerea: For which Reaſon we find, that the equable and temperate Heat of the Spring greatly favours the Cure of this Diſeaſe. The Patients muſt, alſo, abſtain from Summer-fruits, leſt a Diarrhœa ſhould be excited: Neither muſt they ever drink cold Liquors, Ale, and much leſs ſpirituous Liquors; but rather, in their ſtead, Decoctions of *China* Root, and the Roots of Vipers-graſs and Liquorice, with an Addition of Raiſins. And this Salivation is to be continued for a Week, two, three, or more, till the Saliva is diſcharged clear and limpid, and there is no longer a fetid Smell of the Mouth obſerved.

But ſince, in order to cure a Lues Venerea by Salivation, it is of great Importance to have the Body duly prepared, we are for this Purpoſe, in plethoric Patients, to take away a ſufficient Quantity of Blood; and the Impurity of the Humours is to be removed by proper Correctors. This Intention is anſwer'd, not only by temperate and diluting Decoctions, and abſorbent Powders, of a gently diaphoretic Quality, but, alſo, and more eſpecially, by the Laxatives above preſcribed, which eliminate the ſuperfluous and ſerous Sordes from the Body.

Practical Cautions.

In order to the due and judicious Cure of every Lues Venerea, the Phyſician is always to have a due Regard to the Condition of the Patient, ſo that by accurately diſtinguiſhing Perſons of weak Conſtitutions, Children, and pregnant Women, from Patients of hardy and robuſt Habits, he may diſcover what Methods of Cure will beſt ſuit their reſpective States and Conditions. It is, alſo, neceſſary, he ſhould carefully diſtinguiſh a recent Lues from one of the inveterate Kind, accompanied with a large Train of violent Symptoms: For different Stages of the Diſorder require different Treatments, either by means of milder or more draſtic Medicines: And, unleſs theſe Cautions are duly and carefully obſerved, we run a riſque, either of diſmiſſing our Patients irreparably miſerable, or of throwing them into ſome more terrible Diſorder.

As a Salivation, unleſs duly managed, is productive of very terrible Effects, ſo there are many Cautions to be obſerv'd, both before it is excited, and under it. When cacochymic and ſcorbutic Patients are infected with a Lues, we muſt be very cautious and circumſpect, before we excite a Salivation; for when we exhibit Mercurials to Patients of ſuch impure Habits, and attempt to excite a Salivation by that means, far more formidable Symptoms are produced; becauſe the Mercury, aſſociating with the Salts contain'd in their Humours, acquire an highly

corroſive Quality. It will in ſuch Caſes, therefore, be more proper to proceed in the following Manner: After having firſt cleanſed the Primæ Viæ by a laxative Preparation of Manna and Rhubarb, the Patient is for a Month to drink ſweet Whey, impregnated with the Juice of antiſcorbutic Herbs; ſuch as Scurvygraſs, Fumitory, Brooklime, and Water-creſſes; or a temperate Decoction of the Woods, mixed with Milk: After which Meaſures, Decoctions of the Woods, or, if it is neceſſary, Preparations of Mercury, may be ſafely uſed. The like Caution is to be uſed in exciting a Salivation in Men ſubject to ſpaſmodic and hypochondriac Diſorders, and in Women diſpoſed to thoſe of the hyſteric Kind; as, alſo, in thoſe of both Sexes, who are ſubject to Congeſtions of Blood, or Evacuations of it through the Noſe, the Lungs, or the hæmorrhoidal Veins. As for all ſuch Perſons a Salivation is improper, ſo it is ſtill leſs to be excited in thoſe whoſe Viſcera labour under any Diſorder, leſt, their Obſtructions being by that means augmented, the Patient ſhould be deſtroy'd.

Beſides, it is generally obſervable, that Patients of dry and lean Habits do not bear Mercurials ſo well as others; ſo that, before a Salivation is excited in ſuch Patients, it is highly expedient we ſhould previouſly render the Humours ſufficiently fluid, and relax the rigid Fibres, which are greatly diſpoſed to ſpaſmodic Conſtrictions. This Intention is moſt commodiouſly and effectually anſwer'd, by uſing temperate Baths of ſweet Water, in Conjunction with mild Decoctions, for two or three Weeks before the Salivation is attempted; by which means we often obſerve the Mercurials to operate in a mild, and, at the ſame time, a ſucceſsful Manner.

A Salivation is ſometimes accompanied with a very terrible Train of Symptoms; ſuch as a Looſeneſs of the Teeth, now of a blackiſh Colour, in conſequence of a too great Relaxation of the Gums; a Swelling of the Tongue and Fauces, accompanied with a Difficulty of Maſtication and Deglutition; a Loſs of Appetite; an Interruption of Sleep by the immoderate Diſcharge of the Saliva, which, alſo, continues in the Night-time; and a very conſiderable Loſs of Strength: All which Symptoms proceed partly from the violent Effuſion of the Saliva, and the ſtrong Impulſe of the Serum, convey'd from the Extremities and inferior Parts to the Fauces; and partly from a Diminution of the Diſcharges by Stool and Urine. For this Reaſon, if the Diſcharge of the Saliva is immoderate, and too much impairs the Strength, it is expedient to derive the Motion of the Humours to the inferior Parts, by bathing the Feet, by Clyſters, and by Laxatives prepared of Manna and Rhubarb; or, if theſe are not ſufficient, by means of the balſamic Pills, heighten'd in their Quality with the Extractum Panchymagogum Crollii; or by means of the Powder of Rhubarb, heighten'd by ſulphurated Diagrydium, and with the Syrup of Succory with Rhubarb, reduced into the Form of an Electuary; which, at the ſame time, greatly corroborates the Gums. Infuſions, alſo, of Paul's-betony, Scabious, Elder-flowers, and Sage, when frequently drank, are of conſiderable Service; becauſe, by their means, the Courſe of the Humours is directed to the external Parts of the Body, and Tranſpiration excellently promoted.

Beſides theſe internal Medicines for procuring a Derivation of the Humours to other Parts, in Diſorders which, under a Salivation, happen in the Mouth and Fauces, Gargariſms may commodiouſly be uſed, prepared of purifying and gently aſtringent Ingredients; the moſt conſiderable of which are, the Berries and Leaves of Myrtle, the Flowers of Balauſtines and red Roſes, the Herbs Mint and Baum; the Bark of Caſcarilla, and Maſtich, which, when boiled in the Waters of Elder-flowers or Plantain, or in Red-wine, may be frequently injected, by means of a Syringe, in order to waſh the Mouth the better: In order to guard againſt the too great Relaxation of the Gums, and prevent the Loſs of the Teeth, nothing is more proper than the Eſſence of the Terra Japonica, the Tinctura Laccæ Myrſichti, or the Balſam of Life, mixed with the Syrup of Pomgranats, or of Oranges; all which, when frequently applied to the Gums, are of ſingular Service.

It ſometimes happens, that Mercurials, exhibited in order to excite a Salivation, produce violent Pains of the Inteſtines, in which Caſe Preparations of the Theriaca are forthwith to be exhibited; ſuch as a few Grains of the Theriaca cœleſtis, with an Emulſion of ſweet Almonds, and half an Ounce of the Syrup of Diacodium. Theſe Emulſions, alſo, prepared with antiſpaſmodic Waters, and edulcorated with Syrup of white Poppies, are commodiouſly exhibited, when the Patient is afflicted with preternatural and continual Watching, becauſe, in ſuch a Caſe, ſtronger Hypnotics are never ſafe.

A Salivation may, ſometimes, be protracted for thirty-ſix Days, and longer; after which the Patients ought, in many Caſes, to take a proper Doſe of Mercurius dulcis every Week; and, for a conſiderable time, abſtain from acrid and pinguious Aliments. And though, after a Salivation, moſt Perſons have keen Appetites, and are ready to devour every thing that comes in their Way, yet they ought to avoid eating too liberally, becauſe they are to be treated like Children; for, as moſt of the old Blood was carried off by the Salivation, ſo benign Blood and Juices are now to be generated; which End is beſt obtained by a ſmall Quantity of laudable Aliments, duly concocted: By this means, alſo, a Relapſe is prevented. After the Salivation is finiſhed, the Patient ought, alſo, to change his Garments, becauſe, frequently, the Venereal Fomes, not entirely extinguiſh'd, lies latent, and is afterwards capable of producing new Diſorders; Inſtances of which are to be ſeen in *Hildanus, Cent.* 5. *Obſervat.* 115. where that Author, among other excellent Cautions neceſſary to be obſerved in a Salivation, adviſes, that, before it is attempted, the Tophs of the Bones are to be previouſly ſoftened, their Caries removed, and the Ulcers, as effectually as poſſible, are cleanſed.

The Venereal Poiſon eaſily affects the ſpongious Bones of the Noſe; and, firmly adhering to the Bones of the Palate, violently corrodes theſe tender Parts; and, by its putrefying Quality, reduces them to Fragments, or ſmall Portions. In which Caſe, a Mercurial Salivation alone is of little Service; but Injections ought rather to be made into the Noſtrils, with a Syringe of ſuch Liquors as reſiſt Putrefaction. And theſe may be compounded of the Aqua Sclopetaria, the Eſſences of Amber and Myrrh, *Peruvian* Balſam, and a few Drops of the Oil of Cloves: Which Preparation generally affords ſingular Relief to theſe corroded Parts; for, when this loathſome Putrefaction is not ſufficiently ſoon ſtopt, the Bones of the Palate are exulcerated, and rendered ſo carious, that Holes are form'd in them, through which every thing taken into the Mouth, eſpecially Liquors, regurgitate thro' the Noſtrils.

Exoſtoſes, and a Caries of the Bones, are not always infallibly cur'd by Mercury; but often more effectually by drinking ſome Quarts of a Decoction of Guaiacum every Day. That this Method may, at the ſame time, be ſeconded by external Remedies, the carious and black Parts of the Bones are firſt to be abraded, and the Parts affected ſprinkled with the Powder of Euphorbium; or, in its ſtead, Cotton, dipt in a few Drops of the Oil of Guaiacum, Cloves, or genuine Oil of Cinnamon, is to be applied. But, in a latent Caries, 'tis expedient, either by the Knife or Cauſtics, to divide the putrefying Fleſh, which covers the carious Bone, that, by this means, it may not only be expoſed to the Eye, but, alſo, have proper Medicines applied to it.

It frequently happens, that the Texture of the Bones, and eſpecially thoſe of the Legs, are, by the virulent Venereal Humour lodged within them, raiſed into Tumors, which degenerate into hard Tubercles, productive of intolerable Pain; becauſe, by their means, the highly delicate and ſenſible Periоſteum is ruptur'd. In this Caſe, the Relief of the Patient is, alſo, to be attempted by external Medicines, the moſt powerful of which are the Emplaſtrum Vigonis cum Mercurio, or the Emplaſtrum Manus Dei, call'd, alſo, Miraculoſum, heighten'd in their Virtues by the Addition of a proper Quantity of Quickſilver, and terebinthinated Balſam of Sulphur, or Balſam of Juniper. The ſame Intention is, alſo, anſwered by the emollient Plaiſter of *Agricola*, deſcribed in his *Chirurgia Parva*.

Tho' to ſome it may ſeem ſurpriſing, that the Bones, which are without Senſation, and ſo firm, that they can ſcarcely be divided by a Knife, ſhould, in this Diſorder, be ſubjected to ſo many Misfortunes, ſuch as Tumors, Inflammations, Apoſtems, and intolerable Pains: Yet, becauſe they are nouriſhed, and grow gradually larger, the fine lymphatic and nutritious Juice muſt neceſſarily enter them; ſo that it is not to be wonder'd at, if they are ſubject to Putrefaction and Apoſtems: For, whenever an acrid Ichor is accumulated in the Pores of the Bones, it, by its Acrimony, corrodes them in the ſame manner that Species of Worm, called the Teredo, perforates Wood. This ulcerous State of the Bones *Avicenna* called a Ventoſity of the Spine, and ſaid it was produced, when the groſſer Part of the putrid Ichor, accumulated in the Cavities of the Bones, became concreted into Tophs and Tubercles, whilſt the other more ſubtle Part of this Ichor, by its Acrimony, corrodes and diſtends the Bones and their Membranes; and 'tis by means of theſe Membranes, that the Bones are ſubjected to ſo violent Pains, and ſeem, as it were, to be perforated with a Piercer. The Pains accompanying this Diſorder are increaſed in the Night-time, becauſe, when the Sun is ſet, the Humours of the Body become more viſcid and tenacious. But, by the Heat of the Bed, the acrid, corroſive, and ſubtile Parts are put into a briſker Motion, ſo as to vellicate the Membranes, Tendons, and Nerves, and to diſtend them with a kind of vaporous Flatulency.

Venereal Puſtules appearing on the Forehead and Chin, and diſcharging a Sanies, or a putrid and acrid Ichor, are not, without great Difficulty, removed and conſolidated, unleſs the Venereal Poiſon is previouſly ſubdued, and the Violence of all the Symptoms abated: Nor do they always yield to Liniments, Ointments, and Plaiſters. I have, however, ſeen excellent Effects produced by the Application of a digeſtive Ointment, prepared of the Yolk of an Egg, Myrrh, and *Venice* Turpentine, mixed with an equal Quantity of the Balſam of Life.

A virulent Gonorrhœa, or a Fluor albus in Women, are not ſtopt by Mercurials. Theſe Diſorders, therefore, beſides the

Medicines recommended under the Article GONORRHOEA, are greatly relieved by Injections into the Uterus and Urethra. Injections of this Kind may be prepared of a ſecondary Quick-lime-water, made with Roſe or Elder-water, and mixed with the Aqua Sclopetaria; to which Preparation, in a Gonorrhœa, a ſmall Quantity of the Sugar of Lead may be added. Nor are Tumors of the Teſticles eaſily cured by a Salivation, unleſs the Deſign is, at the ſame time, promoted by external Medicines; the moſt common and conſiderable of which are Fomentations and Vapours of emollient Herbs and Flowers, boiled in Milk, and admitted to the Part affected; as alſo the Emplaſtrum Vigonis cum Mercurio.

But there is ſtill another internal Method of Cure, which, when neither mercurial nor ſudorific Medicines prove effectual, is of ſingular Service, not only in curing theſe Diſorders of the Genitals, but, alſo, in removing other Symptoms of this Diſeaſe, ſuch as a putrid Corruption of the ſquamous Bones, and a Polypus or Ozena, which diſcharges a malignant Sanies; for theſe Diſorders are ſo obſtinate, that they require a particular Method of Cure, which is to be perfected by Mercurials, in my manner, highly corrected and exalted ſo as to poſſeſs a diaphoretic Quality, which are to be continued for ſome Weeks, and do not excite an immoderate Salivation. In *Hoffman's Diſſertatio de Morbis rebellibus Chronicis ſine Salivatione curandis*, a Method is delivered for rendering Mercury diaphoretic, by an intimate Mixture of Gold or Tin; for theſe two Metals are, in a peculiar Manner, ſuited and adapted to correct and temperate the penetrating and volatile Nature of Mercury, and that Quality, by which it proves injurious to the nervous Parts, in ſuch a manner that the ſubtile Particles of the Mercury do not penetrate into the internal Compages of the Membranes, but only, by increaſing the ſyſtaltic Motion of the Veſſels, accelerate the Circulation of the Blood and Lymph; by which means the peccant Humours are conveyed to the Surface of the Body, and eliminated by the Pores of the Skin.

As for the Preparation of diaphoretic Mercury, one Species of it is prepared of an Amalgama of Mercury and Tin, in ſuch a manner, that, after drawing the Aqua-fortis off from it, it may be edulcorated with Water. The other is prepared of a Mixture of Mercury with Gold, and an equal Portion of the Regulus of Antimony; which, after an Abſtraction of the Aqua Regia, is to be edulcorated, in the ſame manner with the former. And with this diaphoretic Mercury, eſpecially that prepared with Gold, the Cure of a Lues Venerea is moſt ſucceſsfully carried on in this manner. Firſt, the Body is to be rendered ſoluble by the Mercurial Pills above preſcribed; then, moiſtening the Body for ſome Days with a Bath of River-water, prepared with Bran, let one Scruple of this Mercury be Morning and Evening exhibited, for ſome Days, in Conjunction with diaphoretic Antimony, either in Conſerve of Roſes, or in the Form of Pills, drinking next Morning a temperate Decoction of the Woods, and uſing, at the ſame time, a diaphoretic Regimen. But this Method is ſafer, if, after the Digeſtion of the Aliments, about Five or Six o'Clock in the Afternoon, the Patient uſes the Bath for a Month; and, at Bed-time, takes this Medicine in the Manner already directed. When theſe Meaſures are taken, the diaphoretic Mercury often produces ſo ſalutary Effects, that there is no Neceſſity for other internal Medicines, in order to carry off the Venereal Poiſon from the Body, provided only the Patient uſes a proper Regimen, and drinks a pretty large Quantity of temperate Liquors. *F. Hoffman.*

This Diſeaſe is very often contracted by mere external Contact. And the Contagion firſt affects the Part which was touch'd, whether that Part be covered with the Skin, or only with the Cuticula. Hence, when the Diſeaſe is communicated by Kiſſing, Sucking, or the like, it breaks out upon the Lips or Nipples in ſmall Ulcers; and by the Commerce of an impure Tongue, or infected Saliva, the Gums, Tongue, Palate, Uvula, Tonſillæ, and Fauces, are ſeized with horrible Abſceſſes. If the Infection has been received by the genital Parts, there too it produces Ulcers. But here, in this firſt Stage of the Infection, there is one obſervable Difference; which is, that if the Part firſt affected with the Diſeaſe be covered with the Skin, ſuppoſe the Back of the Penis, an Ulcer formed there will prove very malignant, very difficult of Cure, and, for the moſt part, there is great Reaſon to dread the Propagation of ſuch a Contagion thro' the whole Habit, ſince that Poiſon which can penetrate and corrode the ſolid Skin, ſhould ſeem to poſſeſs a very powerful Virulence; whereas, when the Diſeaſe makes its firſt Appearance in thoſe Parts, which are not defended with the Skin, ſuch as the internal Parts of the Pudenda in Women, the Glans Penis, or the internal Surface of the Prepuce, in Men, the Caſe is (*cæt. par.*) leſs formidable, becauſe here the Venereal Venom had its Way to make only through a very thin Cuticle.

As often as the Eye can judge of the State of the Part firſt infected, a red Spot appears, which nearly reſembles the firſt Eruption of the Small-pox, or Meaſles, or the Bite of a Flea. Here the Patient feels a ſlight Itching, a troubleſome Heat, but ſcarce any Pain. This Spot riſes into a Puſtule, which puſhing outwards, the ſcaly Texture of the Epidermis forms a ſmall Bliſter, which, if it is filled only with a thin tranſparent Lymph, after burſting, is generally ſoon healed, without any farther Miſchief. For what deſerves our particular Notice is, that in this Caſe the infecting Corpuſcle, mixed with the lymphatic Moiſture, as ſoon as its containing Membrane burſts, is waſhed out, and often does not leave the leaſt Taint behind it. Hence the Reaſon appears, why thoſe Bliſters, which in the common Chirurgical Language are called Cryſtallines, are ſo happily brought to a perfect Cure, without requiring Remedies of any great Moment: For, if we may draw Concluſions from the known Structure of the human Body, it ſhould appear, that, in this Caſe, the Contagion drunk up by the abſorbent Veſſels is convey'd by a mere lymphatic Vein into the Cavity of one of the ſmalleſt ſubcutaneous Follicles; where it taints the contained Lymph, and raiſes a Tubercle, which, upon burſting, entirely diſcharges a Poiſon that had no tenacious Matter to lodge in. See CELLULOSA MEMBRANA, and CHANCRE.

As often as the Marrow of the Bones is affected with the Contagion, all this oily Fluid becomes in a ſhort time corrupted, and changed into one rancid virulent Maſs of Putrefaction. And as here the acrid Poiſon has no way to diſcharge itſelf, as the Veſſels here are extremely tender, and all the Fluids merely oleous, it is plain, that, in a ſhort time, whatever is contained within the Bones muſt be reſolved into a cadaverous Putrefaction; and, becauſe of the torpid Motion of the Fluids here, muſt remain almoſt in a State of perfect Stagnation. Hence it is ſcarce in the Power of Medicine to ſtop the Progreſs of a Corruption begun here, or to expel or ſeparate the already putrid Maſs; for now thoſe Veſſels, diſtributed upon the Perioſteum, whoſe Office it was to convey the vital Fluids into the Cavities of the Bones, are deſtroy'd, and an entire Stop is put to the Introduction of freſh Liquids, and the Secretion of new Oil; while thoſe Veſſels, by which the Oil from the medullary Maſs uſed to be poured into the Interſtices of the bony Laminæ, or returned into the Bones of the Perioſteum, are, alſo, conſumed; and nothing now but a very fetid rancid Moiſture, which ſpreads a ſwift Corruption and Contagion all around, ſweats through the gaping Pores of the Veins. Hence the riſing Lamellæ depart from one another's Contact, and the Subſtance of the Bones becomes carious. Hence the Perioſteum, which in a natural State very cloſely embraces the Bone, becomes diſtended, eroded, and the Part is affected with a very acute Pain, eſpecially from Evening till Midnight, in a Gumma, Toph, or Exoſtoſis. And hence the like Deſtruction is propagated through all the Parts which ſurround the infected Bone; through which it makes its Progreſs principally by the means of the Adipoſe Membrane, whoſe whole Congeries of Cells are now inflated all the Way to the Cutis, become fungous, degenerate from their ſound State, and melt away into fiſtulous, fetid, ichorous, incurable Ulcers. No Medicine or Management in the World can ſucceed againſt this Evil, after it has once reached ſuch a Height. But whenever it happens in any Part of a particular Bone, ſo that any Quantity of infected medullary Oil lies concealed between the Lamellæ, there the Bone becomes corrupted; and always at this Place the oſſeous Layers, receding from each other, raiſe a bony Tumor, which increaſes by degrees: Whence that Part of the Perioſteum, which receives any Veſſels from this affected Part of the Bone, is inflamed, ſtretched, and racked with Pain; and from theſe Cauſes, likewiſe, the Corruption ſpreads, and Abſceſſes are ſcattered thro' the continuous Mazes of the Panniculus adipoſus. Sometimes, when theſe Tumors are opened, and the Bone is laid bare, the ſound Veſſels lying under the affected Lamellæ puſh off, and ſeparate the corrupted Part of the Bone, and afterwards, weaving a new Perioſteum, the Part is perfectly cured. A Cure is, likewiſe, performed in the ſame Manner, if the affected Part be ſeparated from the ſound, by ſcraping, by the actual or potential Cautery. This Evil is not to be cured by any other Art yet known. From what has been ſaid, we may be able clearly to judge, when, and in what Manner, this Contagion, when it has ſeized on the Bones, may be removed; when, and why, in other Caſes, it admits of no Remedy.

You will poſſibly be ſurpriſed to find a Diſeaſe, which is accounted ſo intricate and complex, reduced to ſo great a Simplicity. This is owing, ſays *Boerhaave*, to the ſevere Attention, with which I have improved ſo many Opportunities of examining its Events, both ſucceſsful and unhappy. I ſay then, that the only Hope of healing a Bone thus affected depends upon theſe Conditions, that the Marrow depoſited under the Lamellæ be laudable; and that the arterial Veſſels be ſound, and ſtrong enough to throw off the corrupted Part, in form of a Leaf or Fragment, while the Surface of the Bone is laid bare. In the mean time, all that Art can contribute to the Cure is, by laying the Bone bare, and increaſing the Force of the ſound Veſſels to aſſiſt in carrying on the Exfoliation; or to ſeparate, by manual Aid, the periſhed Laminæ from the ſound ones.

And here I muſt add another Obſervation of the laſt Importance; which is, that, as often as the Venereal Acrimony has deſtroyed the Perioſteum of a thin, lamellated Bone, void of Marrow, and whoſe Veſſels are very few and weak, neither Art nor Nature

Nature can ſave ſuch a Bone; but the ſpreading Caries will proceed to the Sutures, by which it is joined to the neighbouring Bones; and the corrupted Bone will drop out either altogether, or in Pieces. For as theſe Bones receive all their Veſſels, and their whole Nouriſhment, immediately from the Periоſteum, and as there is ſcarce a Circulation of Liquids performed thro' their own proper Structure, when the Membrane that wrapt them up, is deſtroy'd, their ſlender Texture muſt of Neceſſity wither, the Oil in their Cells muſt become putrid, rancid, and melt down into Caries their oſſeous Subſtance. Of this kind are Bones of the Palate, Noſe, Vomer, the Ethmoide Bone, the Oſſa Spongioſa of the Noſe, the Os Unguis, Planum, and the other Bones which compoſe the Orbit; as alſo the Laminæ of the hollow Bone of the ſuperior Maxilla, the ſlender Apophyſes of the Sphenoide Bone, its Cells under the Ephippium, and the inferior Laminæ of the frontal Sinus. It ſtrikes me with inexpreſſible Grief, ſays *Boerhaave*, to remember what lamentable Misfortunes of this Kind have happened, even to ſuch as had been managed by the moſt eminent Phyſicians of ſeveral different Nations, before they put themſelves, now beyond the Poſſibility of being cured, into my Hands. I was well enough acquainted with all the boaſted Remedies againſt theſe Diſeaſes of the Bones, Salivation, Sweating, Fumigation with Mercury, or Cinnabar, and Mercurial Errhines. I knew, and have adminiſtered, every one of them with all the Pains in the World, but to no manner of Purpoſe: For, when once the inveterate Diſeaſe has taken deep Root in the Membrana Scheideri, which lines the Mouth, Noſe, and Larynx, and has deſtroy'd it where it inveſts thoſe ſlender Bones, not the leaſt Proſpect of any favourable Event remains, except by good Luck the bare Bone happens to drop out, leaving the reſt ſound; but, in the mean time, the utmoſt Endeavours muſt be uſed to keep entire the reſt of the Membrane, which is no eaſy Task, conſidering the tenacious, mucous, oily Liquor, with which this Membrane is beſmeared and filled, the innumerable Rugæ and Sinuſes, into which it is folded, together with its being conſtantly expoſed to the external Air. Let ſuch, therefore, as would not willingly boaſt, what it is not in the Power of Art to perform, be very ſparing of their Promiſes, when they ſee a plentiful Diſcharge from the Noſe of a filthy, putrid, rancid Ichor; or the back Part of the Fauces, the Uvula, the Tonſils, or the thick Membrane at the anterior Part of the Palate, waſting with Ulcers, which have the Appearance of Bacon. But he who is diligent in the Application of all proper Means, who neglects nothing that can be done, who ſtill, when one Remedy fails, has recourſe to another, who exerts his utmoſt Art to procure a favourable Iſſue, while, at the ſame time, he is very wary in his Prognoſis, acquits himſelf to his Patient, keeps himſelf ſafe, and may laugh at thoſe loud Boaſters, who run themſelves aground by their vain Promiſes.

Let us now conſider the Method of curing this Diſeaſe, when it is ſcatter'd thro' the Fat, and when, inviſcated in the oily Maſs, the prolific Poiſon propagates its Malignity thro' the Habit. We diſcover this to be the Caſe, when, after ſuſpected Embraces, often repeated Gonorrhœas, but more particularly after external Ulcers of the Pudenda, which have been neglected in the Cure, or eſpecially after a ſeeming Cure has too haſtily been performed by the Production of a ſudden Cruſt, by deſiccative or eſcharotic Applications; when after all, or ſome of theſe, Spots break out on the Skin, reſembling the Small-pox; when ſmall Ulcers break out upon the Lips, Gums, Tongue, Palate, the Uvula, Tonſils, Root of the Tongue, Larynx, Pharynx, or Cavity of the Noſe; then it plainly appears, that the Habit is affected with a Pox, and there is not now the leaſt Time to be loſt. But when the Middle of the Bones of the Cranium, or of the large round Bones of the Extremities, are ſeized with ſuch violent Pains, as if their plated Texture were rent aſunder, or were about to ſplit; if theſe Pains begin their Attack after Sunſet, proceeding by ſlow Degrees, till about Midnight they become ſo intolerable, as to oblige the tortured Patient to quit his Bed, but, towards the Morning, abate ſpontaneouſly; then we may be ſure the Diſeaſe has taken Root in the very Marrow of the Bones. Of this we have the more Certainty, if, afterwards, Tumors, whether ſoft, ſlow, obſtinate, or tophoide, or oſſeous, ariſe upon the middle Parts of the Bones; and more ſtill, if the ſoft Parts, which cover theſe Bones, are ſo affected with malignant Ulcers, as plainly to diſcover, that the Meditullium is deſtroy'd; or if the whole Body is here-and-there affected with thoſe frightful, ulcerous Breaches above deſcribed.

The Affections of the Marrow in this Diſeaſe have been already related; only it muſt be here obſerved, that the Diploe of the Bones of the Cranium performs the ſame Office, and is ſubject to the ſame Diſeaſes with the Marrow of the other Bones. Let us, therefore, now conſider wherein the genuine Cure of this Diſeaſe, when it is arrived at the Stages now deſcribed, conſiſts. If I have any Judgment in the Affair, it depends upon this alone, that all the Poiſon, which lies wrapt up in the Oils of the Body, be expelled even to the ſmalleſt Atom; for the leaſt Particle cannot be retained without endangering a Relapſe. But here we have two great Difficulties to encounter: For, firſt, it is no eaſy Matter to diſengage the virulent Particles from the Embraces of this tenacious, oily Lentor. And, in the ſecond Place, it is equally difficult to drive theſe Oils out of their Cells, to lead them back into the common Stream, and to drain them out of the Habit. And if all the Oils in the Body are not thoroughly diſſolved, and after that entirely diſcharged, together with the venomous Particles with which they have long been impregnated, it is impoſſible to root out the inveterate Diſeaſe; and, tho' you may ſeem to have cured it never ſo often, it will frequently break out again. We muſt, therefore, look out for a Method, by which all the Fat, Marrow, and every other tenacious Subſtance, wherein the Poiſon has found a Nidus, may be reſolved into mere Water, ſo thin and penetrable, as eaſily to make its Exit by the ſmalleſt Excretories. But where ſhall we find an Inſtrument ſufficient to perform this? We are provided with one in Mercury; for this mineral Fluid, as its ſpecific Gravity is to that of the Blood as 13 to 1, by whatever Ways it be carry'd into the Circulation, will, from the Motion it receives from the Heart and Arteries, act upon the Maſs of Blood with a Force proportion'd to its Weight; by which means the Texture of the Blood will be quite deſtroy'd, the red Spherules reſolved, the yellow ſerous ones comminuted, and every other Series of Globules daſhed into their ſmall conſtituent ones, till the whole Maſs is changed into a ſubtile, putrid, fugitive Lymph. Beſides, it is well known, how incredibly minute the Elements of Quickſilver are, and how much more ſubtile than the ſerous Globules of the Blood; for its being capable of entering the Pores of the Skin, without ſuffering any Alteration as to its Virtues, plainly demonſtrates, that it is a great deal more penetrating than the larger Particles of the Blood. And if we conſider with how much Eaſe it pervades the moſt denſe of all Bodies, Gold, we may reaſonably conclude, that, perhaps, the leaſt Particles of elementary Water itſelf are not ſo ſmall as thoſe of this Mineral, though, at the ſame time, from the Principle of Attraction, with which its Parts are endued, its Globules run into one another's Embraces, and adhere together with a certain Degree of Tenacity. Beſides theſe Properties of this Mineral, it is very little ſuſceptible of Change; and, perhaps, of all known Bodies, is the moſt void of Acrimony.

Now, all theſe Qualities judiciouſly conſidered, the true mechanical Power appears, by which Mercury is alone effectual, alone ſufficient againſt this Diſeaſe. Its Virtues here conſiſt in its melting down all the Fluids into a ſubtile Water, and dividing the tenacious Oils, ſo that the whole Maſs is ſo attenuated, as to run off in the Form of Saliva, or a ſerous Flux by the Inteſtines, or a violent Diſcharge by Urine or Sweat. By theſe means the old Liquids are totally expelled, and if the Loſs is not reaſonably repaired, by throwing in new Supplies, the Patient, in a ſhort time, dies of a Maraſmus. And in managing this Diſeaſe, when it is become inveterate, we muſt not truſt to the Power of Mercury, unleſs, by its means, every Drop of Oil in the Blood has been reduced to Water, diſcharged, and the Venereal Poiſon entirely waſhed out of the Habit, along with the reſolved Humours: For, if the leaſt Particle be left behind, no ſooner will the Veſſels be filled with new Juices, which in thoſe Caſes are always more oily than the old ones, then the Diſeaſe will break out again. Whence we may conclude, that the Diſeaſe is not perfectly cured, unleſs the Patient be reduced to a Death-like Paleneſs, and his Habit be quite emaciated; unleſs, during the Cure, his Food be as void of Fat as poſſible, and the Courſe protracted, till all the old Humours have been quite expelled. In ſhort, it is not every one who can manage this Remedy with Succeſs: For if you do not faithfully obſerve theſe Rules, and keep your Patient conſtantly warm, and in a conſiderable Degree of Heat too; and if, for a Month or two after the Cure, you do not take care, that he abſtain from all ſuch Food as is oily, and prone to Putrefaction, you will find, to your ſad Experience, that you have in vain fatigued him with the Hardſhips of a cruel Remedy; ſince there will almoſt infallibly remain ſome Taint to rouſe the Diſeaſe again, and give it new Vigour. A great many Things might be brought to illuſtrate what I have ſaid, but that is not my preſent Purpoſe: Only, I ſhall ſubjoin one Obſervation, the Truth of which I have too much Reaſon to know. It is this: That Mercury cures only as it is actuated by the Vis Vitæ, and expels the Venereal Poiſon no other way, than as itſelf is put into Motion, ſo that its medicinal Virtue is not able to correct this Virulence, when poſſeſs'd of a Place that lies in a manner beyond the Reach of the vital Impulſe. Hence a Caries of the Diploe of the Cranium is not to be cured by Mercury, which in ſuch Caſes runs out into the bony Cells now emptied of their Oil, and lies there an inactive Maſs. Hence too, it is, that it can ſcarcely correct the Marrow of the Bones infected with this Poiſon; nor ever cures ſuch a Gonorrhœa, as has its Seat only in the cellular Subſtance of the Penis, upon whoſe Veſſels the circulating Fluids have hardly any Momentum, tho' at the ſame time, if a Pox has got into the Habit, it will entirely remove it. Neither, as I have already ſaid, can Mercury ſave from Deſtruction thoſe tender Bones which have no other Covering, than a ſubtile Membrane. I have ſeen all thoſe miſerable Caſes, and have found how little Help Mercury affords againſt them,

them. But it proves a perfect Remedy for thoſe Venereal Diſorders that reſide in Parts where the red Blood, Serum, Lymph, and other Fluids, are hurry'd thro' their proper Veſſels, with a ſufficient Velocity, where thoſe Veſſels are at the ſame time wide enough to admit the Particles of this Mineral, and ſtrong enough to continue its Action with a due Force. Hence the Phyſician may learn when to be confident of his Art, when to diſtruſt it with Reaſon.

But when ſuch a Part is affected, as Mercury cannot operate upon, muſt we reſign the Patient to his ill Fate? By no means. And is there a Medicine from which we may hope Succeſs, when Mercury fails? There is. If the Poiſon is never ſo intimately blended with our Fluids, it may be waſhed out by the acrid Lixivium of Guaiacum. This Medicine performs that Task, by reſolving all the unctuous Particles, whether incorporated in the common Maſs of Blood, or accumulated in their proper Repoſitories, and by emaciating the Habit ſo exquiſitely, that not the leaſt Drop of Oil remains in it. Hence this has acquired the Name of the *Deſiccative Method of Cure*. In order to the right Adminiſtration of which, the Patient muſt be ſhut up in a Room ſo warm, as, by its mere Heat, to incline him to ſweating. He muſt, during the whole Courſe, abſtain from all Food, and Drink which has the leaſt Oilineſs in its Nature; taſting no other Food than Biſcuit and Raiſins, nor Drink, except a ſomewhat weaker Decoction of Guaiacum. In the mean while, let him, four times a Day, drink as much as he is able, of a very ſtrong Decoction of this Wood. I would have him, at every Draught, ſwallow down at leaſt eight Ounces; if he takes more, ſo much the better. After he has thus continued drinking for ſome Days, and his Habit is now ſo ſaturated with this Liquor, that it is almoſt bloated into a Dropſy, you muſt now conſider the Body as quite turgid with a Liquor of ſuch a penetrating Acrimony, and acute balſamic Virtue, as diſſolves all the pituitous, dilutes all the oily, attenuates all the tenacious Fluids, and preſerves from further Corruption, whatever is grown putrid. Beſides, by this time, the depraved Humours have been gently macerated in this medicated Liquor. And now it remains, that it be put into a violent Motion, and hurry'd through the whole vaſcular Syſtem with ſo much Velocity, as to waſh, deterge, and cleanſe, the inmoſt Receſſes of the Body, that the tainted Oils may be entirely thrown out, and, conſequently, by the continued Diſcharge, the Fomes of the Diſeaſe may be expelled. For this Purpoſe, let the Patient now, every Morning faſting, ſwallow down as much of this Decoction as his Stomach can hold; then let him place himſelf in an erect Poſture in a Sweating-box, or if he lies in Bed, let a Stove be put under it. In either of theſe Places, he muſt receive upon his naked Body the Steams of kindled Spirit of Wine, and there let him ſweat as long, and as plentifully, as his Strength will allow. After he has ſuffered this Heat for half an Hour, which is almoſt the utmoſt Space to which this Proceſs ought to be protracted, let the Flame be extinguiſhed, and the Patient ſweat in his Bed for about an Hour longer. After which, let him take eight or ten Ounces of hot Veal Broth, boiled with a ſmall Quantity of Rice, but void of all Fat: His Body muſt now be carefully wiped with warm dry Flannel Cloths; which done, let him riſe, and drink of his Decoction, as formerly, throughout the Day. In this manner, to every Article, muſt this Proceſs be repeated both Morning and Evening, for fourteen Days ſucceſſively: After this, let it be repeated in the Morning only, for fourteen Days more. In the mean time, whilſt the Sweating is thus violently promoted, if there is any particular Part of a Bone touched with the Diſeaſe, it muſt be wrapt up in Cloths dipt in a very ſtrong Decoction of Guaiacum, and apply'd very warm; and, while the Sweating proceeds, the Steams of the Spirits muſt be ſo directed, as to ſtrike principally upon that Part. By this Method, the moſt intimate Receſſes of the Bones, and all the moſt inacceſſible Parts, even thoſe which the Power of Mercury could not reach, are thoroughly rinſed. I remember, I once ſaw a young Gentleman deeply affected to the very Bones with this Diſeaſe, who by this Management ſweat ſo violently, that in the Height of the Diſcharge the Sweat, tinged by the Decoction with a greeniſh Caſt, heaved up, and ſeparated the looſen'd Eſchars of the Ulcers. I reflect with Pleaſure on the Succeſs with which I uſed this Method upon that Patient, whoſe Bones were in ſome Places ſo much corrupted, that an entire Joint of one of his Fingers dropt off; and one of his Shin-bones appeared carious in ſeveral Places. By this Method exactly purſued, the ſmall Bones of the Noſe, and Pieces of the Palate-bones, were ſeparated, and left the reſt entire. In ſhort, he was perfectly cured, and lives to this Day a very ſound Perſon, and the Father of a Family.

But as Salivation, and theſe Decoctions, are the uſual Refuges in ſuch Extremities, I have conſtantly found, as often as I have had an Opportunity to make the Obſervation, that the ſweating Method may be very happily purſued after a Salivation; but that, if, after the Maſs of Fluids has, by means of this Liquor, been ſo thoroughly diſſolved, as is requiſite to a Cure, you attempt a Salivation, it is always to very little Purpoſe. In this Caſe, in whatever Manner, and to whatever Quantity, you adminiſter Mercury, you will not be able to procure a Salivation. After frequent Trials of this, I am at laſt convinced, that as Quickſilver, according to what I have already obſerved, is a Body entirely void of Acrimony, it does not at all act upon the Humours, after they are attenuated to ſo great a Degree, but ſlips off without having done any Service, and almoſt without having made the leaſt Impreſſion upon the Blood. *Boerhaave's* Preface to the APHRODISIACA.

Some Years ago, Mr. *Chicoyneau*, a Phyſician at that time reſiding at *Montpelier*, propoſed a Method of curing the Venereal Diſeaſe by Mercurial Unctions, apply'd at Intervals, in ſuch a manner as not to excite a Salivation; and gave ſeveral Inſtances of the Succeſs with which this Method was attended. This Attempt, however laudable, attracted the ill Will of moſt of thoſe who found their Account in a tedious and expenſive Salivation, and were more ſolicitous about their own private Intereſts, than the Welfare and Convenience of their Patients. Accordingly, he was attack'd by ſome, with a Shew of Gravity; whilſt others aſſum'd the *faux Plaiſant*, and expos'd their bad Hearts, or weak Underſtandings, by a Buffoonry, always unſeaſonable, when ſubſtituted for Reaſons, and the Evidence of Facts.

Mr. *Pierre Deſault*, a Phyſician of *Bourdeaux*, afterwards made ſome Improvements on the Method recommended by Mr. *Chicoyneau*. And the late Mr. *John Douglas* adopted *Deſault's* Practice, and purſu'd it for many Years with great Succeſs.

As I can affirm, on my own Knowledge, that it ſucceeds at leaſt as well as a Salivation, in moſt Caſes, I think myſelf obliged to take notice of what *Deſault* informs us on this Subject.

DESAULT's METHOD OF CURING A GONORRHOEA.

From the firſt Day that I am ſent for, I make the Patients rub the Yard, and principally the Canal of the Urethra, the Groin, and neighbouring Parts, or the Pudenda of Women, with an Ointment of one Part Mercury, and three of Axungia. I make them uſe two or three Drams of this Ointment, rubbing themſelves from the Anus, all along the Canal to the Glans and Prepuce. The following Day I purge the Patient vigorouſly with Jalap, from two Scruples to a Dram, according to his Conſtitution. I make him uſe for his Diet-drink, Spring-water, in which has been boiled Mercury revived from Cinnabar. This Method I continue ſeveral Days; but, if the Patient finds himſelf too much fatigued, I interpoſe a Day or two, with reſpect to the Purges; but I continue the Mercurial Friction every Night, with the aforeſaid Apozem for his conſtant Drink.

Though the Patient be afflicted with a Cordee, can make no Water without exquiſite Pain, and be cruelly tormented by nocturnal Erections; yet the firſt Friction relieves him conſiderably, the ſecond yet more, and the third commonly removes the Pain; and I have met with none, whom the fourth or fifth Friction has not entirely eaſed. By this Method, alſo, the Quantity of the Diſcharge is leſſened, the Matter changes Colour, and becomes more fluid, oily, clear, and ropy, which are all very favourable Symptoms; and thus the Running either ceaſes ſpontaneouſly, or by the Continuance of theſe Remedies, ſo that Injections and Aſtringents, which are often dangerous, become here unneceſſary.

Sometimes, indeed, the Patient is flattered, that the ſmall Running, which continues long, and appears like a Pearl in the Morning, upon ſqueezing the Canal of the Urethra, is only a Weakneſs of the ſeminal Veſſels; and that nothing is required to ſtop it, but Aſtringents. I have obſerved, after *Syденham*, that this is a Remainder of the Diſorder not quite cured; and, after ſtopping it with Aſtringents, Tetters, and Venereal Ulcers, have appeared in ſeveral Parts of the Body.

Such ought to obſerve a ſtrict Regimen, and abſtain from Wine, Salt, Spices, and whatever is high-ſeaſoned; above all, they ought to avoid the Company of the Fair Sex, either for Venereal Intercourſe, or private Converſation; it being of the laſt Importance to leave the diſeaſed Parts at Reſt, and not to injure them by exciting Motions repugnant to the Cure.

The Running being entirely ſtopped, and all the Symptoms removed, I make them commonly take, for ſome Days, a Baſon of Milk every Morning, to reſtore that Balſam, which the Blood may have loſt by frequent purging.

The Venereal Buboes in the Groin, which are often accompany'd with a Gonorrhœa, Phymoſis, and Paraphymoſis, are cur'd the ſame way, provided there is no Pus formed in the Swellings; for, in that Caſe, it is impoſſible to avoid opening them.

I order the Patients to ſhave off the Hair, and increaſe the Quantity of the Ointment to half an Ounce; I make them rub the Groin, and the Teſticles, and, alſo, the Pudenda of either Sex. I purge every Day, making uſe of the Mercurial Water; and take great Care to repeat every Night thoſe Frictions, and to extend them to the neighbouring Parts, continuing them, and the Purges, a long time. By theſe three Remedies, I find the Buboes diſcuſs; the Phymoſis, Paraphymoſis, and Chancres, diſappear; and the Patients recover their former Health.

This Method is a thouſand times preferable to repeated Applications of Cupping-glaſſes upon Buboes, inducing painful Inciſions for laying them open, and a copious Suppuration, which has been reckoned a Criſis of the Pox.

By this Method, alſo, the Deſtruction of the inguinal Glands is prevented; for either they are deſtroy'd by Suppuration, or deprived of their Uſe by deep Scars remaining after their Opening.

When the Tumors in the Groin are much inflamed, or when the Tumor is ſituated in one or both Teſticles, attended with Pain and Pulſation, and threatening Suppuration, I bleed the Patient copiouſly, and repeat it according to the Age of the Perſon, till the Inflammation begins to recede; and I have ſpeedy recourſe to Frictions.

The Doſe of the Ointment ought to be proportioned to the Number and Greatneſs of the Complaints. I am not ſatisfy'd with applying it only to the Parts affected; I rub it in upon the neighbouring Places, and inner Parts of the Thighs, in proportion to the Degree of the Diſorder; and I preſcribe from ſix Drams to an Ounce of the Ointment.

DESAULT's Method of curing the Pox.

When the Patients have a Pox of long Continuance, and the Venereal Poiſon is diſperſed all over the Body, they ſhould be prepared by bathing, and drinking Whey. But, in a recent Pox, when the Patients are full of Juice, the Bath is not neceſſary, or, at leaſt, need not be uſed long, becauſe the Blood is ſufficiently diluted. If the Patient is reduced to great Weakneſs, and is unable to undergo theſe preliminary Preparations, we are oblig'd to have immediate recourſe to the Frictions.

After this, inſtead of raiſing a Salivation, I bring on a Flux of the Belly, changing nothing of the antient Method, but the Place of Evacuation; and, inſtead of a painful fetid Flux of the Mouth, ſubſtitute Purging, without any Fatigue, Pain, or Danger.

The whole Secret conſiſts in keeping the Patient's Body open by Clyſters of Decoction of Sena, and the Pulp of Caſſia, before the Frictions are adminiſtered. By this Precaution it happens, that the Mercury finding the inteſtinal Glands relaxed, and the Body open, its Evacuation tends that way more readily, as the Place where it finds the leaſt Reſiſtance. When I find the Looſeneſs does not anſwer the Number of the Frictions, nor the Quantity of Mercury I employ'd, I purge the Patient with Powder of Jalap, and procure copious Stools, which ſecure the Mouth. While the Looſeneſs is going on, a Friction does the Office of a Purge; and in proportion, as they are reiterated, ſo the Flux of the Belly revives; and, when it ſlackens or ſtops, I have recourſe to Clyſters, and Purges of Jalap. In this Method I proceed, till by the Ceſſation of the Symptoms, by the Quantity of Mercury I have employ'd, and the Abundance of the Evacuations, I am thoroughly perſuaded, that the Venereal Taint is entirely drain'd off, and that the Serum of the Blood is chang'd, and has made room for new Juices.

Why this Method is more safe and convenient than the old one.

1. By urging a Salivation, the Pain has often brought Patients to the laſt Extremity; the Swelling of the ſalival Glands, of the Tongue, Muſcles of the Fauces, and their Inflammation ſometimes communicated to the Larynx, have rendered the Patient incapable of Deglutition, or Breathing, ſo that by Loſs of Strength, Want of Suſtenance, and Obſtruction of Reſpiration, many have periſhed. But in carrying off the Evacuations by Stool, the Inteſtines being appropriated to receive and expel the Impurities of them, and capable of containing them in a capacious Canal, always open, they give leſs Uneaſineſs than at the Mouth, which was not deſigned for any ſuch Evacuation, or to ſerve for a common Drain.

2. Is it not, therefore, more eligible to remove by five or ſix copious Stools in an Hour, and without Pain, that which could not have been evacuated by the ſalival Glands in leſs than a Day, and with exquiſite Torment? I have often reflected, that the violent Pain ſeemed to be a convincing Proof, that the Diſcharge by Salivation was a Violence done to Nature.

3. By the Flux of the Belly, not only the Patient's Safety and Eaſe are continued, but the Teeth are preſerved; which, by Salivation, ſometimes fall out, are looſened, and almoſt always grow black, and the Gums wear away.

4. By this Method, the deep Scars, ſucceeding the Ulcers occaſioned by Salivation, are avoided; theſe Scars ſometimes form ſtrong Seams, hindering the Opening of the Mouth, and muſt ſometimes be cut after the Courſe.

5. There is no Danger of leaving a perpetual Salivation, which is occaſioned by tearing aſunder the excretory Canals of the ſalival Glands, and is ſometimes incurable.

6. The Patient needs not be confined to his Chamber above twenty-five or thirty Days, and may even go abroad in fair Weather: Beſides his Mouth being ſound, he may eat as he pleaſes, and recruit his Spirits. But, after Salivation, a long Time is required to cure the Senſibility of the Mouth and Tongue.

7. The Expences of this Method are leſs, nothing but common Food being required, and no Linen ſpoiled.

8. The Reputation of the Patient is ſaved; for he may do Buſineſs, and receive Viſits, in his own Houſe, without raiſing any Suſpicion.

Proofs that there is more Aſſurance of a perfect Cure in this Method than the other.

1. Almoſt all Authors agree, that Patients have been cured of the Pox, without Salivation, by a Diarrhœa only, occaſion'd by the Frictions; although all Remedies to ſtop the Diarrhœa, and raiſe the Salivation, have been in vain. If, then, we can be certain of a Cure, when the Evacuation happens by Stool, why ſhould we not invite them that Way, as we have already proved it more convenient than the other?

2. The ſalival and inteſtinal Glands are of the ſame Structure, and muſt therefore have the ſame Uſe, ſeparate the ſame ſort of Lymph, and, conſequently, it muſt be equal, in this reſpect, whether the Evacuation be made upwards or downwards. Beſides, in a Salivation, the Broth, or Piſan, ſwallowed by the Patient, mixes with Part of the Venom filtred through the ſalival Glands; and thus the Venom is returned into the Blood.

3. What invincibly proves, that the Lymph coming from the ſalival Glands is of the ſame Nature with that of the Inteſtines, is, that, as ſoon as the Looſeneſs ceaſes, the ſalival Glands ſwell; and, when the Looſeneſs returns, the ſalival Glands decreaſe: Since, therefore, theſe Evacuations increaſe and diminiſh at the Expence of each other, they muſt undoubtedly be ſupplied with the ſame Matter; and therefore it is not material, with regard to the Efficacy of the Cure, which Way the Evacuation be made.

4. But we may conclude, that the Evacuation by Stool is more efficacious, becauſe the inteſtinal Glands are vaſtly more numerous than the ſalival. Beſides, only two ſmall Ramifications of an Artery belong to the ſalival Glands; but the arterial Branches, which ſupply the Inteſtines, are of ſo conſiderable a Size, and convey a Quantity of Blood, which ſeems too copious for the Nouriſhment of the thin and fine Subſtance of the Inteſtines. Nature muſt, therefore, have deſigned, that this Blood ſhould receive ſome Depuration in the numerous Glands of the Inteſtines; an Intention which cannot be ſuppoſed to appertain to the ſmall Arteries of the ſalival Glands. When, therefore, a general Depuration is deſigned, the ſmall arterial Ramifications of the ſalival Glands cannot reaſonably be preferred to the conſiderable Tubes in the Inteſtines; eſpecially as Nature herſelf indicates, by the abundant Stools after the firſt Frictions, her Tendency to that ſort of Evacuation.

5. Thoſe who endeavour to ſtop the Diarrhœa after the firſt Frictions, and to force the Evacuation upwards, directly oppoſe the Advice of *Hippocrates*, who adviſes, "To act agreeably to "the Inclinations of Nature, and to chuſe thoſe Emunctories "which ſeem moſt commodious to her." Now what Paſſage can be more convenient, than a large Canal always open, placed in the Middle of the Body, like a Sewer, for the Reception of all Impurities; a Paſſage which occaſions no Uneaſineſs nor Danger, nor interrupts Maſtication, Deglutition, and Digeſtion; Functions which are overthrown by Salivation?

6. This Method of purging is much more efficacious in Poxes accompanied with habitual Gonorrhœas, than that of Salivation: For by the Diarrhœa I at once carry off both the Pox, and Gonorrhœa; but *Sydenham* obſerves, and his Obſervation is confirmed by Experience, that no Degree of Salivation can cure a Gonorrhœa, in which, as the ſame Author aſſures us, Purging does every thing.

7. When the Patient is extremely emaciated, the Diarrhœa is much ſafer, than a Salivation; becauſe, during the Purging, he can take Nouriſhment, ſleep, and recruit his Strength; the Purging, alſo, can be more eaſily moderated, than the Salivation.

8. When the Palate, Throat, Uvula, and the neighbouring Parts, are ulcerated, many bad Conſequences may be produced by forcing the Humours to the Parts affected; and the Patient may even be ſuffocated, or much diſfigured.

9. Some eminent Authors aſſure us, that the Effects of Purging are ſafe and ſalutary, in almoſt all Diſeaſes. Nor can it be ſuppoſed to fail in the Pox only, ſince the Advantages of it in the Gonorrhœa are manifeſt, which differs from the Pox only in Degree.

Objections to this Method answered.

1. It is to be feared, that the Venereal Poiſon, joined with the Mercury, and brought to the Inteſtines, will exulcerate them, as it does the Mouth; and occaſion griping and bloody Stools, which might prove mortal.

But this Objection is groundleſs: 1. Becauſe the internal Surface of the Inteſtines is lined with a Mucus, which defends them againſt the Acrimony of the Bile, and other Humours, and facilitates the Deſcent of the Excrements: This Mucus, alſo, ſecures them againſt the Impreſſions, either of the Mercury, or of the Virulence it brings along with it; and the Want of this Mucus in the Mouth ſuffers the Mercury to produce thoſe violent Exulcerations there. 2. The Canal of the Inteſtines is long, wide, and always open, and their Contents paſs quickly through them; but, in the Mouth, Diſcharges go off gently, and laſting and violent Impreſſions are made. 3. Experience proves, that this Caſe never happens in the Method by Purging.

2. *Sydenham*

2. *Sydenham* regards the Looſeneſs which happens after the firſt Frictions, as an Obſtacle to the Cure, and adviſes to ſtop it. *Sydenham* indeed perceived, that a Looſeneſs was an abſolute Hindrance to a Salivation, which, he imagined, was the only Remedy for the Pox. But if this celebrated Author had been convinced, that this Diſtemper could have been effectually cured by a Diarrhœa, it may be believed, from his known Integrity, that he would have altered his Opinion.

3. By throwing the Mercury off by Stool it is render'd uſeleſs, becauſe no Time is allowed it to circulate with the Maſs of Blood.

This Objection is equally ſtrong againſt Salivation, by which, alſo, the Mercury runs off. By the Method of Purging we may throw in as much Mercury as we pleaſe, and abundantly replace what is diſcharged by Stool with a freſh Supply: Thus I have uſed twenty-four Ounces of Ointment in twenty-four Frictions; a Quantity which muſt by no means be uſed in a Salivation, it being limited by *Lemery* to five.

4. Some prefer the Method of making Mercury act by Extinction, by adminiſtring Frictions at ſuch Intervals as may prevent a Salivation, and produce no kind of Evacuation.

But Experience convinces us, that Mercury, exhibited in this manner, does not always ſucceed, tho' I have ſeen good Effects produced by it.

LUFFA *Arabum*. A Name for the *Cucumis*; *Ægyptius*; *reticulatus*.

The reticular Subſtance which contains the Pulp, is uſed at the public Baths in *Egypt*, for rubbing the Skin, when affected with Morphew, or leprous Diſorders. *Proſp. Alpin. de Plant. Ægypt. Cap.* 34.

LUJULA. See ACETOSELLA.

LUMBAGO. A violent Pain in the Loins, which affects the Patient in ſuch a manner, that he can ſcarcely move. It is generally ſaid to be a ſcorbutic Symptom. See SCORBUTUS. But it is frequently excited by the Gout, or Rheumatiſm. See RHEUMATISMUS.

LUMBARIS INTERNUS. A Name for the Muſcle more commonly call'd PSOAS; which ſee.

LUMBI. The Loins. See ABDOMEN.

LUMBRICALES MUSCULI.

The Name of ſome Muſcles which move the Fingers, and of others which move the Toes.

Thoſe which move the Fingers, are alſo called *Flexores primi Internodii Digitorum manus*.

They are four very ſmall ſlender Muſcles, lying in the Hollow of the Hand, in the ſame Direction with the *Perforatus*, or *Perforans*.

They are fixed by their fleſhy Bodies to the Tendons of the Perforatus, on the Side next the Thumb, near the large annular Ligament of the Carpus. Near the Heads of the metacarpal Bones, they become very thin Tendons, which accompany thoſe of the Perforans through the Furcæ of the Aponeuroſis Palmaris. Then they paſs on to the ſame Sides of the firſt Phalanges, and join the Tendons of the Extenſor communis, each of them being connected with the neareſt Portion thereof, at the Articulation of the firſt Phalanx with the ſecond.

Theſe Tendons are alſo united to ſome of the Interoſſei, and their Inſertions ſeem to vary in different Subjects; for tho' they lie generally on that Side of the Fingers, which is next the Thumb, yet, if I am not miſtaken, I have obſerved the firſt inſerted in the Index on the Side next the Thumb, the ſecond and third on each Side the middle Finger, and the fourth in that Side of the Ring Finger, which is fartheſt from the Thumb.

The Lumbricales, by the Union of their Tendons with thoſe of the Interoſſei, are Coadjutors to theſe Muſcles, not only in the lateral Motions of the four Fingers, but alſo in bending and extending them. In the lateral Motions, they co-operate according to their Situation in each Subject; and it is poſſible, that the Variety of their Inſertions anſwers to that of the Interoſſei, ſo that the reciprocal Co-operation continues ſtill to be equal.

They aſſiſt the great common Flexor to which they are fixed, only in bending the firſt Phalanges; which Motion that Muſcle principally performs, by means of the ligamentary Vaginæ, eſpecially that Portion of them which is next the Metacarpus.

They may aſſiſt the Extenſor communis, in extending the third Phalanges, together with the Interoſſei, by the Concurrence of their Tendons. But here the Variety of their Inſertions is alſo to be regarded; and, in ſome Subjects, the want of them in that Side of the Index next the Thumb, and Side of the little Finger, fartheſt from the Thumb, may be ſupply'd by the proper Extenſors of theſe Fingers.

Thoſe which move the Toes, are alſo called, Flexores primi Internodii Digitorum Pedis.

They are four ſmall Muſcles, ſituated more or leſs longitudinally under the Sole of the Foot.

They are fixed by their fleſhy Extremities to the four Tendons of the Flexor Digitorum longus, near the Inſertion of the Flexor acceſſorius. The firſt Muſcle is fixed to the Inſide of the firſt Tendon; the ſecond, to the tendinous Fork formed by the two firſt Tendons; the third, to the tendinous Fork made by the ſecond and third Tendons; and the fourth, in the ſame manner, to the third and fourth Tendons, but commonly moſt to the third.

From thence theſe four Muſcles run to the Toes, and there terminate in the ſame Number of ſmall Tendons which are inſerted in the firſt Phalanges of the Toes, much after the ſame manner as in the Hand. They are termed Lumbricales, or Vermiculares, becauſe of the Reſemblance they bear to Worms. *Winſlow's Anatomy*.

The Lumbricales have nearly the ſame Functions in the Foot, as in the Hand; and they are partly aſſiſted, and partly directed, by the Flexor acceſſorius. *Winſlow's Anatomy*.

LUMBRICUS TERRESTRIS, *Vermis terreſtris*. Offic. *Lumbricus terreſtris*. Jonſ. Inſect. 137. Ind. Med. 69. Aldrov. de Inſect. 693. Charlt. Exer. 59. Mouff. Inſect. 278. Raii Hiſt. Inſect. 1. *Lumbricus terrenus*. Schrod. 5. 343. *Vermes terreſtres majores*. Mer. Pin. 206. THE EARTH-WORM.

It is an hermaphroditic, long Animal, without Legs, of the Thickneſs of a Gooſe-quill, ſoft, carnous, and annulated, of a faint Blood-colour, with a red Neck, living under Ground, of an earthy Taſte, and no Smell.

Earth-worms are remarkably diuretic, diaphoretic, and anodyne; they diſcuſs, mollify, open Obſtructions, increaſe Milk, and conglutinate Wounds, and divided Nerves. They are principally uſed in Apoplexies, Convulſions, and other Affections of the Nerves and Muſcles, in the Jaundice, Dropſy, and Colic, and have a ſpecific Virtue againſt the ſcorbutic Gout: They mitigate Pains of the Gout, and their Aſhes are ſaid to cure the Tooth-ach. *Schroder*.

Earth-worms are often uſed in Compoſitions for cooling and cleanſing the Viſcera. They are accounted much of the ſame Nature as Snails; but they ſeem to have more of an earthy or nitrous Salt, which makes them afford Parts more penetrating and deterſive. They are good in Inflammations and Tubercles of the Lungs; and are particularly uſeful in ſuch Affections of the Reins, and urinary Paſſages, which they cool and cleanſe very much. The compound Water, which has its Name from them in the Shops, is a very good Medicine in the above-mentioned Caſes. They are ſeldom omitted in the occaſional Preſcriptions of Snail-waters, and make a very good Ingredient therein, having much more in them, that will riſe in the Still, than Snails. There is, alſo, an Oil made of them in the Shops, which retains as much of the Virtue as any ſuch Preparations are capable of; yet it does not anſwer the Pretenſions of many in arthritic Pains, and is not much in Uſe. It is prepared in the following manner:

Take of Earth-worms, half a Pound: Firſt, waſh them in ſeveral Waters, and then in White-wine, wherein let them ſtand an Hour; then, pouring off the Wine, put them into a double Veſſel; and add to them two Pounds of Oil, and half a Pint of White-wine. Boil to the Conſumption of all the Wine, and ſtrain the Oil through a Linen Cloth, for Uſe. See VERMES.

LUNA. See ARGENTUM.

LUNARIA.

The Characters are;

The Fruit is flat, of a reaſonable Bigneſs, and divided by an Interclosure, parallel to membranaceous Valves, as it were, into two Cells, full of Seeds, which are generally kidney-ſhaped, and, as it were, marginated.

Boerhaave mentions eleven Species of this Plant; which are,

1. Lunaria; major; ſiliqua longiore. *J. B.* 882. *Tourn. Inſt.* 218. *Boerh. Ind. A.* 2. 5. *Viola Lunaria*. Offic. *Viola Lunaria longioribus ſiliquis*. Ger. 378. Emac. 464. Raii Hiſt. 1. 788. *Viola lunaris altera, ſive peregrina*. Park. Parad. 265. *Viola Lunaria major ſiliqua oblonga*. C. B. P. 203. SATTIN-FLOWER WITH LONGER PODS.

It grows on the Mountains of *Saleva* and *Jura*, near *Geneva*, and flowers in *May*. A certain *Swiſs* Surgeon, as *Camerarius* ſays, prepared a good vulnerary Ointment of the bruiſed Leaves of this Herb, and Sanicle: *Raii Hiſt. Plant.*

2. Lunaria, major; ſiliqua rotundiore. See BULBONACH.

3. Lunaria; major, perennis; ſiliqua rotundiori; flore albo. *T.* 218. *Viola Lunaria, major, altera*. C. B. P. 203.

4. Lunaria; major; ſiliqua longiore; flore purpureo. *T.* 218. *Viola lunaris*. Il. Tabern. Ic. 314.

5. Lunaria; Leucoii folio; ſiliqua oblonga, majori. *T.* 218. *Leucoium, Alyſſoides, clypeatum majus*. C. B. P. 201. *Alyſſon ſiliqua lata, aſpera, quibuſdam Lunaria, flore luteo*. J. B. 2. 934.

6. Lunaria; ſiliqua; oblonga, intorta. *T.* 219.

7. Lunaria; Orientalis; Leucoii folio incano; lutea patula. *Juſſ.*

8. Lunaria; folio Leucoii; ſiliqua oblonga, minori. *T.* 218. *Leucoium, Alyſſoides, clypeatum minus*. C. B. P. 201.

9. Lunaria; annua; minima; Hiſpanica; folio Leucoii maritimi. *Juſſieu*.

10. Lunaria;

ſtruthium. *Honorius Bellas*, in his ſecond Epiſtle to *Cluſius*, determines the *Luteola* to be the *Struthium*; with whoſe Opinion, ſays *Dale*, I agree, and conſequently have joined them under one Article.

It is called *Luteola*, *a Colore luteo*, from a yellow Colour, becauſe the Root, boiled with Salt, dyes Wool of a very fine yellow or gold Colour. It is of an opening Quality, and the bruiſed Root is applied to the Hands in feveriſh Diſorders: It agrees in all Things with the *Rubia*. *Hiſt. Plant. aſcript. Boerhaav.*

LUTRA. Offic. Bellon. Aquat. 31. Aldrov. de Quad. Digit. 294. Jonſ. de Quad. 104. Charlt. Exer. 18. Schw. Quad. 107. Geſn. de Quad. Digit. 683. Mer. Pin. 167. Raii Synop. A. 186. Schonef. Icht. 46. THE OTTER.

It is found in large Rivers, and the Fat is uſed; which, being mixed and boiled up with digeſtive Medicines, is very ſerviceable in removing Diſeaſes of the Joints. *Holler*. The Liver, dried, powdered, and taken in the Quantity of a Scruple, or a Dram, is recommended for a Dyſentery. The Teſticles, likewiſe, dried, powder'd, and taken in the like Doſe, are ſaid to cure an Epilepſy.

LUTRON, λυτρὸν. A Bath. It is, likewiſe, the Name of an Ophthalmic Medicine in *Galen*, *de Comp. M. S. L. 4. C. 7.*

LUTUM. A Lute. By the Name of Lute, or Luting, Chymiſts underſtand a mixed, tenacious, ductile Subſtance, which grows ſolid with drying; and, being applied to the Junctures of Veſſels, ſtops them up, ſo as to prevent the Air from getting either in or out: But theſe Lutings are of principal Uſe in confining the Particles raiſed by the Fire in Diſtillation, ſo as to prevent their eſcaping out of the Veſſel; whence it appears, that different Lutings are required, according to the Difference of the Subjects to be diſtilled.

When the Subject is merely aqueous, Linſeed-meal, ground to fine Powder, and well mixed, or worked up into a ſtiff Paſte, with the White of Egg, makes a proper Luting; for, being applied to the Junctures of diſtilling Veſſels, it grows hard with Heat; and, if it happens to crack, it is eaſily repaired by a freſh Application, which ſoon grows ſolid. But a Paſte made of the ſame Meal, well worked up with cold Water, very well anſwers the End in the Diſtillation of all fermented inflammable Spirits, and all volatile alcaline Salts. This Paſte will not anſwer in the Diſtillation of mild Acids, or acetous Liquors, which ſoften and diſſolve it, ſo as to let the Fumes eſcape: In theſe Caſes, therefore, a Bladder, ſteep'd in Water, till it grow ſlimy, makes an excellent Luting, by being applied and preſſed wet upon the Junctures of the diſtilling Veſſels.

A Luting that acquires a ſtony Hardneſs, is neceſſary in the Diſtillation of the foſſil Acids, as thoſe of Vitriol, Sea-ſalt, and the like; which is called the Philoſophical Luting, and may be prepared from the Calx of Copperas and Quick-lime, by boiling the Caput Mortuum in Vitriol, in ſeveral Parcels of Water, till it be thus thoroughly waſhed from its ſaline Parts, then drying the Powder, and preſerving it in a cloſe Veſſel. This Powder is to be rubbed with an equal Quantity of ſtrong Quick-lime, and wrought into a Paſte with the White of Eggs, firſt beat thin; and this Luting is immediately to be applied to the Junctures of the Veſſels; the Veſſels being firſt a little heated. If it be not applied quick, it preſently dries to a ſtony Hardneſs, ſo as to be untractable; but, when properly uſed, it confines all the ſaline Spirits, like Glaſs itſelf. I prepare a Luting for the ſame Purpoſe, without much Trouble, in this Manner: I beat pure Sand and Potter's Clay together, in ſuch Proportion, with Water, till the Matter no longer ſticks to the Fingers; then add one fourth Part of common Lime, ſo as to make the Paſte ſufficiently ſtrong; and the drier this is applied, the better for the Purpoſe, provided it be left ductile; for thus it hardens into an excellent Cement, and the Cracks, if any ſhould happen, are eaſily ſtopped up by the ſame. This Cement is the more parable or commodious, as the beſt Quick-lime is not often to be had.

It is a great Inconvenience in the ſtronger Diſtillations with a naked Fire, that, when the Veſſels are violently heated, they are ſubject to crack, and fly to Pieces, upon opening the Door of the Furnace, and letting in the cold Air, or throwing in freſh Fuel; whence it is highly proper here to defend the Veſſels by a Coating, from this ſudden Impulſe of Cold; and this is frequently neceſſary, alſo, when the Operation is performed in Glaſs Veſſels, and a Sand-heat, if the Fire be ſo ſtrong as to endanger the Melting of the Glaſs. The beſt Luting that I know of for this Purpoſe, is made by beating fat Potters Earth, and powdered Sand, with Water, into a well-wrought Paſte, which will not ſtick to the Fingers; adding thereto a little common Lime at the laſt, and beating them well together. Then the Veſſel to be coated, being warmed and expoſed to the Vapour of hot Water, that its whole Surface may become dewy, let this Cement be ſpread all over it equably with the Hand; afterwards ſprinkle the Surface of the Coating with hot and dry Sand, and ſet the Veſſel in a cool Place, that the Coating may dry ſlowly; with Care to fill up the Cracks in the ſame Manner, if any ſhould happen in the Drying. If thus the Coating be thoroughly dried, the Veſſel will ſuſtain the Action of a violent Fire unhurt.

There is another Kind of Cement made uſe of by ſome Chymiſts of *London*, to anſwer the ſame End; conſiſting of ſifted Wood-aſhes, beat up to a due Conſiſtence with the White of Eggs, and a little Gum-water. The ſame Service may be had in a more excellent Manner, as well for cracked Glaſſes as broken China, or the like, from what the Painters call drying Oil; or a Mixture of Linſeed-oil and Ceruſe, made by Inſolation, or Decoction, into a perfectly white Balſam, and afterwards ground upon a Marble with freſh Ceruſs, till the Whole is perfectly fine, and become of the Conſiſtence of an Unguent. This dries ſlowly indeed, but is very effectual.

LUXATIO. A Luxation.

A Luxation is a Receſs or Removal of the moveable Extremity of a Bone from the Hollow or Socket in which it naturally moved, accompanied with an Impediment or Hindrance of Motion.

A Luxation, which is, alſo, called a Diſlocation, and, by *Cœlius Aurelianus*, *in Cap. 1. Lib. 2. Morb. Chronic. Delocatio*, denotes a Removal of the Bone from that Part which it naturally poſſeſſed; and in this Senſe it imports every Change of the natural Situation of the Bones. Cuſtom, however, the Standard of Words, has reſtrain'd, it to a Receſs or Removal of the articulated Bones from the Place they naturally poſſeſſed.

Since, therefore, a Luxation, properly ſo called, can only happen in the articulated Bones, the Definition here given will be found highly accurate; for in every Articulation two Things are to be conſidered, the receiving Bone, and Bone received. *Gorræus*, in his *Definit.* informs us, that the *Greeks* called the Hollow of the receiving Bone, which received the Head of the other Bone, κοτύλη· and the Part of the received Bone lodged in this Cavity, ἄρθρον· or, ſimply, a Joint. We have an excellent Definition of a Luxation in the third Chapter of the ſixth Book of *Paulus Ægineta*, who tells us, that "It is a Remo-"val of the Bone received, from its proper Cavity to another; "by means of which, voluntary Motion is hindered." For, unleſs there be an Impediment or Hindrance of Motion, it cannot be properly called a Luxation, though the Extremity of the moveable Bone ſhould recede from the Cavity in which it naturally moves; for in the ſurpriſing Articulation of the inferior Jaw-bone, the Head of which is lodged in a pretty deep Sinus in the inferior Part of the Os ſquamoſum, near the Proceſſus zygomaticus, yet, by means of an interpoſed cartilaginous and elaſtic Lamina, the Head of the inferior Jaw-bone may be removed from its Cavity, and again return into it, without any Impediment of Motion. Beſides, for the Performance of various Motions of the inferior Jaw-bone, it is requiſite, that its Head ſhould be thus capable of being removed from its Cavity.

This Removal of the articulated Bone from its Cavity is either total, or partial; the former is a Luxation, and the latter a Diſtortion.

It is eaſy to conceive, that the Head of an articulated Bone may either totally ſlip from the Cavity in which it is naturally contained, or be ſo removed from its natural Situation, as to remain partly within, and partly without, its Cavity. *Hippocrates*, however, in his Treatiſe *de Articulis*, denies that this can happen in all Articulations: For as the Heads of the Os Humeri and Os Femoris are entirely round, and received into ſimilar Cavities, he concluded, that there could not be a partial Removal of them from their Cavities; but that it was neceſſary either they ſhould be totally removed, or that, being partially removed, they would again ſlip into their Cavities. But it is ſufficiently obvious, that this may happen in other Articulations. Hence *Paulus Ægineta*, in the third Chapter of his ſixth Book, tells us, that, in the Definition of Luxations, "There is no other "Diſtinction to be made, but that of Greater or Leſs; for, "when the Head of the Bone is entirely removed from its Ca-"vity, it is called by the common Name of ἔκπτωμα· whereas "when it is only ſlightly removed, or brought to the Lips of "its Cavity, it is called ὑπέκπτωμα." For the Propoſition ὑπὲκ, prefixed to any Name of a Diſorder, denotes its Slightneſs: Thus the antient Phyſicians uſed *Parapoplexia* for a ſlight Apoplexy, and *Paraſynanche* for a gentle Quinſey. Hence *Veſalius*, *in Chirurg. Magn.* ſeems to have uſed theſe Words improperly, when he affirmed, that Luxations ariſing from an Influx of Humours upon the Joint were called ὑπεκπτώματα· and thoſe ariſing from an Impulſe of the Humours into the Articulation, ἐκπτώματα. But it will be ſufficiently obvious, from what follows, that true and genuine Luxations may be produced by Humours falling into the Cavity of the Articulation. But a Luxation, in which the Head of the Bone is only partially removed from its Cavity, is called a Subluxation, or a Diſtortion; which laſt Word, however, alſo, denotes a Change of the Situation of Muſcles, or Tendons, by ſome external Force; as, alſo, a Diſtraction of the Ligaments produced by the ſame Cauſe, or, as

it were, by a kind of Intorſion: Hence ſuch an imperfect Luxation is leſs ambiguouſly called a Subluxation, than a Diſtortion.

The worſt Luxation of all is that produced by a Solution or Separation of the Epiphyſis from the Body of the Bone.

In the larger Bones, join'd to each other by a moveable Articulation, ſuch as the Oſſa Femoris, it is obſervable, that both Extremities are diſtinct from the reſt of the Bone; which may be moſt palpably ſeen in the Bones of new-born Children and Abortives; for theſe Bones were once totally cartilaginous, and, in their middle Point from both Extremities, there firſt begins to appear a ſmall bony Portion, which diffuſing itſelf both Ways, or to each Extremity, gradually converts the Cartilage into a Bone. See *Albini Icones Oſſium Fœtus humani.* But both Extremities long remain cartilaginous, and in theſe, alſo, the Cartilage begins internally to be form'd into a Bone, which gradually diffuſes itſelf almoſt thro' their whole Subſtance. But there long remains between the Os Femoris, and both its Extremities, ſomething of a cartilaginous Nature; by which, as by a kind of Glue, the Extremities of the Bone ſeem fixed, and, as it were, agglutinated to its Body, till at laſt this cartilaginous Subſtance becoming bony, the Extremities, according to the laſt quoted Author, are concreted into one continued Body with the reſt of the Bone; but in ſuch a manner, however, that externally there remains for ſome time a certain Mark of Diviſion, which is at laſt aboliſh'd, as *Albinus*, in the Work above quoted, intimates. Theſe Extremities of the Os Femoris, diſtinguiſh'd from the reſt of its Body by this intermediate Cartilage, or Mark of Diviſion, are called Epiphyſes. In young Animals theſe Epiphyſes are, by a very gentle Force, ſeparated from the reſt of the Bone, as we daily obſerve at Tables. But in thoſe Parts where the Epiphyſes are join'd to the reſt of the Bone, ariſe Ligaments which every-where ſurround and ſecure the Articulations. And *Columbus*, in his Treatiſe *de re Anatomica*, *Lib.* 1. *Cap.* 2. thinks, that the principal Uſe of the Epiphyſes was, that, from their Conjunction with the Bone, Ligaments might ariſe, which are obſerved to be continued to no other Part, but here emerge from the Bone itſelf. *Clopton Havers*, alſo, in his *Oſteologia Nova*, has obſerved, that, in thoſe Parts where the Ligaments ariſe, the Periofteum, ſurrounding all the reſt of the Bones, is there ſeparated from them, and, creeping over the external Surface of the Ligaments, is conveyed to another Bone.

If, therefore, the Epiphyſis is ſeparated from the reſt of the Bone, 'tis ſufficiently obvious, that the Motion of ſuch a Joint muſt be diſturb'd. But this cannot be properly and ſtrictly called a Luxation, becauſe the Extremity of the moveable Bone remains in the Cavity in which it naturally moves. But, in the Definition already given, ſuch a Removal of the Extremity of the moving Bone from its Cavity conſtitutes a Luxation; for which Reaſon this Diſorder may, perhaps, be more properly referred to Fractures. *Galen*, in his *Method. Medend. Lib.* 6. *Cap.* 5. ſeems to claſs it among the Species of Fractures, ſince he calls it ἄπαγμα, whereas he calls other Fractures by the general Name of κάταγμα, and tells us, that the Word ἄπαγμα was uſed only by Phyſicians, but not generally by other Perſons. It ſignifies that Species of Fracture, in which the Extremity of the Bone, eſpecially where it is articulated with the other Bone, is broken; and, becauſe ſuch a Species of Fracture is often taken for a Luxation, the former is generally referred to the latter. But this is principally obſerved to happen in Luxations of the Os Femoris, the Epiphyſes of which are often ſeparated from the reſt of the Bone; or the Neck of the Bone itſelf, which is highly tender, is fractur'd; for *Ruyſch*, in *Theſaur. Anatom.* 8. N° 103. informs us, that a celebrated Surgeon eight times opened the Carcaſes of lame old Women, and always found the Neck of the Os Femoris broken, but never obſerv'd any Luxation. But, ſince in young Patients the Epiphyſes are moſt eaſily ſeparated from the reſt of the Bones, this Diſorder is therefore moſt incident to them; and eſpecially when Infants, carried in a Perſon's Arms, ſuddenly throw their Bodies backwards, there is great Danger, leſt the Epiphyſis of the Os Femoris ſhould be ſeparated, or the Neck of that Bone be broken; in conſequence of which they remain lame during their whole Lives, becauſe the Body of the Bone, now ſeparated from its articulated Head, is drawn upwards by the Force and Action of the Muſcles: But, in Caſes of this kind, ſurpriſing Efforts of Nature, to ſupply this Defect, are ſometimes obſerved; for *Ruyſch*, in his *Theſaur. Anatom.* 9. N° 74. informs us, that in the Body of an old Woman, who, during her Life, had labour'd under ſuch a Misfortune, he found the Neck of the Os Femoris totally wanting, in the room of which Nature had ſubſtituted various hard, thick, and round Ligaments, by means of which the Head of the Bone was united, and joined to the other Parts of it. 'Tis ſufficiently obvious, that the Cure of this Misfortune is more difficult, than that of a Luxation properly ſo called; for luxated Bones, reduced to their natural Situation, are eaſily retain'd, provided the Part is kept in a State of Reſt; but, when the Epiphyſis is ſeparated from the reſt of the Bone, the Muſcles inſerted in the Bone will, by their natural Contraction, remove it from its proper Situation; by which means the Limb is almoſt always ſhortened, and the Motion of the Part deſtroy'd.

The Cauſe of a Luxation may be an external Force, extending, intorting, or expelling the Head of a Bone from its Cavity.

There can be no Luxation without an external Force, if the Articulations, and the Ligaments ſecuring them, are in their natural Condition; and, in Adults eſpecially, thoſe of a ſtrong and robuſt Make, a very conſiderable Force is requir'd to diſlocate an Articulation, as is ſufficiently obvious from the Strength of the Ligaments which ſecure the Joints. But an external Force may act in the three manners here ſpecified, that is, by Extenſion, Intorſion, or Expulſion.

A Luxation may, alſo, proceed from an internal Cauſe, form'd in the Cavity of the Articulation, and forcing the Head of the Bone received, out of its Socket.

The Ligaments connecting the articulated Bones, and ariſing from thoſe Parts where the Epiphyſes are join'd to the reſt of the Bone, ſurround the whole Articulation, like a kind of hollow Capſula; and form a kind of Incloſure, from which nothing can be diſcharged, and to which nothing has Acceſs. In the internal Cavity of every Articulation are contained the two Extremities of the receiving and received Bone, every way ſurrounded by a Cartilage; and, in the large Articulations, there are very conſiderable Glands, which receive their Name from *Havers*, their firſt Inventor. There is one ſuch large Gland in the Articulation of the ſuperior Part of the Os Femoris, and four or five ſmaller Glands in the Articulation of the Knee, as we are inform'd in *Clopton Havers's Oſteologia Nova:* Beſides, many ſmall Follicules are found on the internal Surface of the Ligament which ſurrounds the Articulation. The ſame Author, in the Part already quoted, informs us, that from theſe Glands, which by anatomical Injections are known to conſiſt of numberleſs Veſſels, there is a certain Mucus, like the White of an Egg, and of a ſaline Taſte, ſecreted. The cartilaginous Extremities of the Bones contained in the Cavity of the Articulation, and which, ſo far as we know, are covered with no Perichondrium, ſeem to diſcharge a thin medullary Oil; a large Quantity of which is lodged in the cavernous Parts of the Bones, near the Articulations. *Clopton Havers*, in his *Oſteologia Nova*, informs us, that in large Horſes Bones he, with his naked Eye, could perceive thoſe Pores, thro' which the medullary Oil was diſcharged into the Cavities of the Articulation. This Doctrine is confirm'd by various Experiments; for, as that Author informs us, if the Articulations of a Carcaſe are preſerved entire, till the mucilaginous Subſtance gradually diſappears, or is perhaps reſorb'd, there is found in their Cavities a pure pinguious Oil, which he ſays he has ſometimes obſerved in the Articulations of the Fingers. Animals, kill'd ſoon after violent and long-protracted Labour, have but a ſmall Quantity of Marrow in the Cavities of the larger Bones, whereas in the Bones of Animals duly fed, and kept in a State of Reſt, there is a far larger Quantity of Marrow. From all which Conſiderations it ſeems to be ſufficiently obvious, that the Marrow of the Bones diſcharged thro' the Extremities of the articulated Bones is mixed with the Mucilage ſecreted from the Glands; and that, by an Union and Mixture of theſe, that Liniment is form'd, which anoints the Extremities of the articulated Bones, and ſo lubricates them, that they can move without any Attrition upon each other. For this Reaſon, when the pinguious Oil of the Body is conſumed by hard Labour, old Age, or Diſorders of any kind, a Crackling of the Joints ariſes, becauſe there is an Attrition of the too dry Extremities of the Bones upon each other. Beſides, from the ſmalleſt exhaling Arteries, that ſubtile Dew which we know to be lodg'd in all the Cavities of the Body, large as well as ſmall, tranſudes into the Cavities of the Articulations.

There are, therefore, three different Humours in the Cavities of the Joints; that is, the univerſal perſpiring Fluid, the medullary Oil, and the Mucilage ſecreted from the Glands lodg'd there; from a Mixture of which is form'd that lubricating Matter, which, being attenuated by the Heat and mutual Attrition of the Bones, will be again abſorb'd in the ſame Quantity it was accumulated. But if, by any Cauſe, the Abſorption of the Matter thus diſcharged ſhould be defective, or diminiſh'd, and the ſecreting and expelling Cauſes ſhould, at the ſame time, continue to diſcharge it, it will be accumulated, and, by that means, diſtend and weaken the Capſula form'd by the Ligaments. Hence a Receſs or Removal of the articulated Bone from its Cavity may eaſily ariſe from this Cauſe. 'Tis ſufficiently certain, from various practical Obſervations, that large Tumors are often produced about the Joints by this Cauſe: And *Havers*, in his *Oſteologia Nova*, informs us, that the medullary Oil, diſcharg'd from the cellular Subſtance of the Bone, thro' the Pores of their cartilaginous Extremities, into the Cavities of the Articulations, has a ſtrong Tendency to Concretion, if it is not attenuated by the Motion, and mutual Attrition, of the articulated Bones; for he ſays, that in

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fed Animals, which generally have but little Exercise, he has often found concreted Fat lodg'd in the Pores, thro' which it used to be discharged, and which he at first took for some small Gland, tho' he afterwards found, that it was nothing but concreted Oil.

We are, farther, to consider, that an Inflammation may arise here, since it is certain from anatomical Observatitons, that numberless small Arteries are distributed through the Ligaments and Glands of the Joints; and that a Suppuration may ensue, as, also, an Accumulation of Pus in the Cavity of the Articulation; and, consequently, that, by this means, the like Misfortunes may be produced with those arising from the natural Humours of the Joints, collected here, and not absorbed again. Mr. *Petit*, in *Mem. de l'Acad. des Scientes*, informs us, that Luxations are frequently produced by this Cause; and ingenuously confesses, that he discover'd this by the Errors he himself committed; for when, by a Fall, for Instance, a violent Force acts upon the great Trochanter of the Os Femoris, it is sufficiently obvious, that the Head of this Bone must be strongly applied to the Cavity in which it is contained: Hence the Glands seated there, and the round Ligament, may be so violently contused, as often to produce an Inflammation, a Suppuration, and an Accumulation of Pus, or of the Mucilage. The Ligaments, thus distracted and weaken'd, will no longer retain the Head of the Os Femoris in its Situation; but it will be gradually expelled from its Cavity, and the Muscles affixed to the Os Femoris will, by their Contractility, draw it upwards, and produce an incurable Lameness. This Disorder is with Difficulty discovered in the Beginning, since the Luxation is not produced till a great while after. If it is known, that such a Cause has preceded, and if there is a violent Pain in the Articulation, Venesection, a slender Diet, and antiphlogistic Remedies, are necessary to prevent the Inflammation, or remove it, if present. Keeping the Part affected in a State of Rest, and applying proper Fomentations to it, will, also, be of singular Service. Thus a Luxation arising from this Cause may be prevented; but, if it is already made, it seems incurable.

These Causes last-mentioned are assisted, in producing their Effects, by an Extension, Relaxation, or Rupture of the Ligaments, whether by an external or an internal Cause.

The Cohesion of the Ligaments is the only Cause why the articulated Bones remain in their due Situation. In the Ligaments, therefore, a certain Flexibility is requisite, that they may yield to all the various Motions of the Joint; but they must, at the same time, be so tenacious, as not easily to be stretched or lengthen'd too far. Under the Article FIBRA it is shewn, that too great a Distraction is justly reckon'd among those Causes, which weaken the solid Parts of the Body: Hence too great an Extension of the Ligaments, though it does not immediately produce a Luxation, yet it may so dispose the Joints, as afterwards to render them easily capable of a Luxation. The same will, also, hold true, if, in consequence of too great a Relaxation of all the Solids of the Body, or a particular Weakness of the Ligaments, they should not be able sufficiently to resist the distracting Causes. *Celsus*, in the eleventh Chapter of his eighth Book, describing the general Causes of all Luxations, speaks in the following manner: "Since all the Articulations are secured by strong Ligaments, they are luxated, either by Force, or when the Ligaments are ruptured, or weaken'd by any Cause; they are, also, luxated more easily in Children and young Persons, than in robust and full-grown People." It is well known, that in young Persons all the solid Parts are soft, and easily distracted: But in some Persons, tho' full-grown, and sufficiently robust, a surprising Relaxation of the Ligaments is observable in almost all the Articulations; for sometimes Impostors have exposed themselves to public Shew; who, by the sole Force of the Muscles, could luxate, and again reduce, almost all the Articulations of the Body, so as to bend it like a Piece of Wax into various Postures: Hence *Hippocrates*, in his Treatise *de Fracturis*, justly informs us, "That, in the Reduction of Luxations, one Constitution is widely different from another, and one Cavity from another; since, in some, the Task is easy; and, in others, highly difficult. The Ligaments are, also, widely different; since, in some, they are lax; in others, tense. But there are many of so moist and succulent a Habit of Body, that they can, when they have a mind, without any Pain, luxate and reduce their Articulations." He afterwards adds, that "Luxations do not easily happen in corpulent Patients; but that, when they do happen, they are with Difficulty reduced; whereas the contrary holds true in lean Persons." Then he confirms this Doctrine by the Example of Oxen, which, in the latter End of Winter becoming greatly emaciated, have the Os Femoris more easily luxated, than at other times.

But if, by external Force, the Ligaments are ruptured, or their Cohesion destroyed by a Suppuration, or Corrosion, it is sufficiently obvious, that, in such a Case, a Luxation must be easily produced.

Luxations produce a Change of Figure in the Part, Tumor, Hollowness, a Shortening, and sometimes an Elongation, of the Member, Immobility, Distraction of the Muscles, Torpor of the subjacent Parts, a Palsey, a Compression of the adjacent Vessels, Pain, Watchings, an Inflammation, an Oedema, an Anchylosis, Convulsions, Extenuation, the Mortification of the Part, or the Death of the Patient.

In this Paragraph are enumerated the Phenomena, which generally accompany or succeed a Luxation.

As for Change of Figure, Tumor, and Hollowness; these are common Signs, which, accompany every Luxation. *Celsus*, in the eleventh Chapter of his eighth Book, says, "There is always a Tumor in that Part in which the Bone becomes prominent, and a Cavity in that Part from which it is removed." But such an unusual and preternatural Tumor and Cavity principally appear, if the luxated Joints are covered with a small Quantity of Integuments; as in the Shoulder and Elbow, for Instance; for, in the Articulation of the superior Extremity of the Os Femoris, this Tumor and Cavity are more difficultly discover'd, on account of the large Quantity of Fat, and the Number of surrounding Muscles. But, that we may be certain, whether the Articulation is luxated, or not, *Hippocrates*, in his Treatise *de Articulis*, justly advises us to compare the injured with the corresponding sound Part: "For, *says he*, we must judge of the affected Member by the corresponding sound one, and not by looking at the Articulations of another Person; since the Joints of some are more prominent than those of others." In the same Treatise he, also, informs us, that the Change of Figure alone is not sufficient to determine, whether a Joint is luxated, or not: "For, *says he*, in many Patients, the Joints, whether through intense Pain, or any other Cause, have a different Figure from those of sound Persons, though they are not really luxated." And even tho' a preternatural Cavity appear about the Articulation, yet, unless there is an unusual Tumor in the opposite Part, formed by the Head of the luxated Bone, a shameful Error may be committed, especially about the Articulation of the Humerus. *Hippocrates*, in the same Treatise, informs us, that he knew some Physicians of Note, who imagined that the Articulation of the Humerus was luxated, when, in consequence of a Separation of the Acromion, the superior Commissure of the Humerus appeared depressed and hollow. And *Galen*, in his Comment on the same Passage, informs us, that this Accident happen'd to himself; for, when, in a certain Place of Exercise, his Acromion was separated, the Master, seeing the preternatural Cavity, imagined that the Head of the Humerus had slipt down into the Arm-pit; for which Reason he extended the Arm strongly, and endeavour'd to reduce the luxated Articulation, but in vain: And, when, by the Assistance of others, a very strong Extension was made, *Galen* himself, by putting his Fingers into the Arm-pit of the affected Side, endeavour'd to reduce the luxated Joint; but, when he found nothing preternatural in the Cavity of the Arm-pit, he advised them to abstain from any farther Extension: However, imagining that the intense Pain had induced *Galen* to give this Advice, they continued the Extension, and would have certainly torn the Muscles, if a Person of Skill had not seasonably come to the Relief of *Galen*, who, by this prepostrous Treatment, perceived himself ready to fall into Convulsions, which could only be prevented by continually anointing the Part with warm Oil. Hence it is obvious, what great Caution is necessary in determining whether an Articulation is luxated, or not; since the most skilful have sometimes err'd in this Affair. *Vanswieten* informs us, that he saw a poor Countryman, whose whole Arm, as far as the Humerus was become gangrenous, because, the Cubit being only tumid with a true Phlegmon, an impudent Quack imagined it to be luxated; and, for that Reason, rack'd the Patient with several violent Extensions thereof.

As for an Elongation or Shortening of the Member; when the Head of the articulated Bone slips out of the Cavity in which it is naturally contain'd, the Muscles affixed to the Bone, by their proper Contraction, draw it upwards. For this Reason a luxated Member generally becomes shorter, in the same manner as fractured Bones. See FRACTURA. In some Cases, however, though rarely, the luxated Member becomes longer; if, for Instance, the Head of the luxated Bone is so situated, that it cannot be drawn by the Muscles: Thus, as *Celsus*, in *Lib.* 8. *Cap.* 12. informs us, "If both Heads of the inferior Jaw are luxated, the whole Chin hangs down, and protuberates forwards; the inferior Teeth stick farther out than the superior, and the Temporal Muscles appear tense and stretch'd;" for the prolapsed Heads of the inferior Jaw-bone cannot by the affixed Muscles be retracted beyond the Tubercles placed before the Cavities of the Articulation: For which Reason, in such a Case, the inferior Jaw-bone always protuberates beyond the superior. And *Hippocrates*, in his Treatise *de Articulis*, when treating of Luxations, among the Signs which inform us, that the Os Femoris is slipt to the internal Parts, reckons this one, that the Thigh affected is longer than the other, when compared with it: "For, *says he*, the Head of the Os Femoris is lodged on that Bone, which rises upwards from the Coxa to the Pecten, and its Neck is sustain'd

" ſuſtain'd in the Cavity of the Articulation." For theſe two Reaſons, *Hippocrates* would have a luxated Thigh to be longer than its correſponding Member. But a Shortening of luxated Members happens more frequently, though they are, alſo, ſome times render'd longer: But it ſtill more rarely happens, that a luxated Part retains the ſame Length with its ſound correſponding Member. *Hippocrates*, however, informs us, that this happens, when the Head of the luxated Os Femoris ſlips to the anterior Parts; but adds, at the ſame time, that ſuch a Luxation rarely happens.

As for Immobility; all thoſe Motions which require a due and natural Diſpoſition of the luxated Joint, either cannot be performed at all, or, at leaſt, not without the greateſt Difficulty; and certainly, in a true Luxation, all thoſe Motions can never be exerciſed, which were perform'd when the Joint was ſound: Thus, for Inſtance, when the Articulation of the Humerus is in its natural State, a Perſon can with his extended Arm deſcribe numberleſs Cones, whoſe Vertexes may be conceived in the Cavity of the Articulation, and whoſe Baſes are deſcribed by the Extremities of the Fingers. But, if the Head of the Os Humeri is ſlipt out of the Cavity of the Scapula, this can never be done. The ſame holds true in the other Articulations. However, all the Motions of the Joints are not always deſtroyed by Luxations; for ſome of them often remain, as *Hippocrates*, in his Treatiſe *de Articulis*, juſtly obſerves; for, after having ſpoken concerning thoſe Perſons, who, from their Birth, have ſhort Shoulders, whether from a Luxation in the Uterus, or any other Cauſe, he tells us, " That in full-grown Perſons, when the Humerus is " luxated, and not reduced, the Top of the Shoulder becomes " extenuated, and more ſtript of its former Fleſh; but, when " the Patients are freed from Pain, they cannot equally well per- " form all thoſe Motions, which require that the Cubit, being " removed from the Breaſt, ſhould be raiſed high: But they can " perform all thoſe Motions, which require that the Humerus " ſhould be moved forwards or backwards; for they are capable " of uſing an Augre, a Saw, or an Ax, provided it is not ne- " ceſſary to raiſe the Cubit very high." In various other Parts of the ſame Book, *Hippocrates*, when treating of the Luxations of the ſame Articulation, tells us, what Motions are deſtroyed, and what remain: Hence, under this Limitation, Immobility is claſſed among the Effects of a Luxation.

As for a Diſtraction of the Muſcles; the Head of the luxated Articulation, ſituated in an improper Place, will neceſſarily preſs the adjacent Muſcles, and diſtract them. Beſides, the Muſcles affix'd to the luxated Bone will neceſſarily change their Situation. Hence, ſome of theſe Muſcles muſt be lengthened and ſtretch'd, whilſt others are relaxed. When Mr. *Petit*, in *Mem. de l'Acad. des Sciences, An.* 1722 enumerates the Signs, by which 'tis known, that the Head of the Os Femoris is ſlipt out of its Cavity to the poſterior Parts, he informs us, that the Glutæi Muſcles are relaxed, whereas the Muſculus Triceps appears highly tenſe, like a Cord from the Region of the Pubes, to the Middle of the Os Femoris. When the Head of the inferior Jaw-bone is luxated, it is ſufficiently obvious, from an anatomical Knowledge of the Parts, how much the Temporal Muſcles muſt be diſtracted. Hence Convulſions are often produced, and ſometimes the Death of the Patient.

As for a Torpor of the ſubjacent Parts, and a Palſey; theſe, for Inſtance, will be produced, if the luxated Articulation compreſſes any large Nerves; or if, as it happens in a Luxation of the Vertebræ, the ſpinal Marrow is compreſs'd. When *Hippocrates*, in his Book *de Articulis*, treats of a Luxation of the Spine, he informs us, that, when the ſuperior Part of the Spine is luxated inwards, the whole Bodies of the Patients become paralytic and torpid [παραλελυμένοι]. Now, if the Head of the Os Humeri, falling into the Cavity of the Axilla, compreſſes the large Trunks of Nerves diſtributed there, it is ſufficiently obvious, that the ſame Misfortunes may happen in the ſubjacent Parts. When the Head of the Os Femoris is luxated to the anterior Parts, among the other Signs of this Diſorder, *Hippocrates*, in his Treatiſe *de Articulis*, reckons a Suppreſſion of Urine, becauſe, in this Caſe, the Head of the Bone is adjacent to very conſiderable Nerves. But it ſhould ſeem, that a Compreſſion of the Nerves ſhould rather excite an involuntary Excretion, than a Suppreſſion of Urine. But *Hippocrates*, in his Treatiſe *de Locis affectis*, *Lib.* 2. *Cap.* 4. informs us, that, if the Medulla Spinalis is injured by any Cauſe whatever, neither the Fæces, nor the Urine, are at firſt evacuated; but, as the Diſorder becomes older, that they are involuntarily diſcharged. Hence it is obvious, that a Compreſſion of the Nerves may ſometimes produce a Suppreſſion of Urine. If, therefore, the Nerves ſubſervient to Senſation and Motion are entirely compreſs'd, a Palſey, accompany'd with perfect Inſenſibility, will be produced; and, if the Compreſſion be but ſlight, it will, indeed, diminiſh, tho' not abſolutely deſtroy, the Function of the Nerves. In this Caſe, the ſubjacent Parts will be ſeiz'd with a Torpor; which, as *Galen*, in his Treatiſe *de Locis affectis*, beautifully expreſſes it, is a kind of intermediate Diſorder between a Palſey and perfect Health.

As for the Compreſſion of the adjacent Veſſels; as the Head of the Os Humeri, ſlipt from its Cavity towards the Axilla, often preſſes upon the large adjacent Trunks of Nerves, ſo it may alſo compreſs the large Blood-veſſels ſituated there; and conſequently, ſo long as it remains in that Poſition, hinder the free Influx and Efflux of the Blood in the ſubjacent Parts. Hence a Gangrene, or Atrophy, will enſue.

As for Pain; ſuch a Diſpoſition of the nervous Fibres ariſing from the Brain, as threatens a Solution of Continuity, excites the Idea of Pain in the Mind. But an Articulation cannot ſlip from its Cavity without a ſtrong Diſtention of the Ligaments which ſurround it; and, ſo long as the luxated Bone remains in this preternatural Poſition, the Ligaments are more diſtracted, than in a natural State. Hence a pretty acute Pain accompanies a very recent Luxation, which, however, generally ceaſes, or, at leaſt, is greatly diminiſhed, when the luxated Bones are reduced to their due and natural Situation. For this Reaſon Luxations are juſtly claſs'd among the Cauſes of Pain. Now, if we conſider, that the Perioſteum, in that Part where the Ligaments of the Joints ariſe, is ſeparated from the Bone, and runs along the Ligaments, as is obſerved under the Article FRACTURA, it will be ſufficiently obvious, that the Ligaments cannot be diſtracted, without, at the ſame time, affecting the incumbent Perioſteum, which is poſſeſs'd of an intenſe and quick Senſation. Hence another Cauſe of Pain ariſes. Beſides, the Head of the luxated Bone, by preſſing the adjacent Parts, may diſtract the nervous Fibres diſpers'd thro' theſe Parts, and, compreſſing their Veſſels, produce Obſtructions and Inflammations, which is ſtill a freſh Source of Pain. But when the luxated Bone is not reduced, the Fibres of the Ligaments are, by their long Diſtraction, as is obſerved under the Article FIBRA, ſo weakened, as to become capable of a more eaſy Yielding and Elongation, without Danger of Rupture. Hence the Pain is gradually diminiſhed, till at laſt it ceaſes. But the adjacent Parts, being preſſed and acted upon by the Head of the luxated Bone, become callous, and loſe their Power of Senſation. We have already obſerved, when treating of the Immobility ſubſequent to Luxations, that thoſe Patients are, in Proceſs of Time, freed from Pain, whoſe luxated Articulations are not reduced; and that they can ſtill commodiouſly perform a conſiderable Number of Motions. When *Hippocrates*, in his Treatiſe *de Articulis*, ſpeaks of a Luxation of the Os Femoris towards the exterior Parts, he ſays, " That when the Fleſh, into " which the Head of the articulated Bone is ſlipt, becomes cal- " lous and tough, the Pain ceaſes for a time; and, when ſuch " Patients are free from Pain, they can, if they have a mind, " walk without a Staff, and ſupport their Bodies on the affected " Leg." For *Gorræus*, in *Definit. Med.* obſerves, that the Word γλίσχρον, in Fluids, denotes a greater Viſcidity, and, in Solids, an increaſed Tenacity or Toughneſs.

As for Watchings; theſe are juſtly claſſed among the Effects of Pain: Since, therefore, it has been juſt now prov'd, that Pain accompanies Luxations, it follows of courſe, that the Patient muſt be afflicted with Watchings ſo long as intenſe Pain continues.

As for Inflammation; an Inflammation is preſent, when the Fluid ſtagnating in the Veſſels is preſſed and acted upon by the ſucceeding Liquid, which is thrown into a brisk Motion by the Fever. In Inflammations, therefore, an Obſtruction and a brisk Circulation of the Humours are ſuppoſed. But every Force which compreſſes, or lengthens, the flexile Veſſels, leſſens their Cavities, and may, conſequently, prove the Cauſe of an Obſtruction. Now, by a Luxation, the Ligaments, Muſcles, and Tendons, affixed to the Bones, are lengthened, and the Bones removed from their natural Situations compreſs the adjacent Parts. Hence an Obſtruction proceeds from a Luxation, as the Effect does from its Cauſe, and a Fever is claſs'd among the Effects of Pain. Hence it is obvious, that in Luxations the two Circumſtances ſufficient to produce an Inflammation concur; that is, an Obſtruction, and a brisk Circulation, of the Blood, produced by the Fever ariſing from the Pain accompanying every Luxation. But what violent Fevers, accompanied with Inflammation, are often ſubſequent to Luxations, *Hippocrates* informs us, in his Treatiſe *de Fracturis*: " For, " ſays he, unleſs the Os Humeri, luxated at the Cubit to the " anterior Parts, is forthwith reduced, violent Inflammations " enſue; but, if it is luxated to the poſterior Parts, it excites an " intenſe Pain, and violent continual Fevers, accompany'd with " an Evacuation of unmix'd Bile, and which in a few Days prove " mortal." This he, alſo, confirms in his Treatiſe *de Articulis*, when ſpeaking of the Luxation of the Cubit; and, when treating of the Luxation of the Jaw-bone, he adviſes it to be reduced with all Expedition, becauſe, otherwiſe, the Patient's Life will be endangered, on account of the continual Fevers ariſing from that Neglect: And he afterwards adds, that, in ſuch a Caſe, the Patient generally diſcharges by Stool a ſmall Quantity of unmix'd Bile; and, if he vomits, the Matter thrown up is of the ſame kind.

As for an Oedema; 'tis obſerved under the Article INFLAMMATIO, that at firſt all preternatural Tumors were comprehended under this Name, but that it was afterwards confined to ſoft Tumors, which were free from Pain, and yielded to the Preſſure of the Finger. Such a Tumor is, for the moſt part, only form'd in the Membrana Celluloſa, by the Lymph accumulated and becoming

coming ſtagnant in the Cellulæ of that Membrane. But ſuch a Tumor principally accompanies Luxations, when the luxated Bone compreſſes large Veins; for by that means the Motion of the Fluids in the Veins is hindered. Hence the ſubtile Dew, diſcharged from the Arteries into the Cavities of the Membrana Celluloſa, cannot be commodiouſly abſorb'd by the Veins; in conſequence of which, being accumulated, it becomes ſtagnant, and is converted into Water, or what *Hippocrates* calls *Ichor*.

As for an Anchyloſis; *Celſus*, in *Lib.* 5. *Cap.* 18. informs us, that Articulations, contracted by a recent Cicatrix, are by the *Greeks* called ἀγκύλη. But *Ægineta*, in *Lib.* 4. *Cap.* 55. informs us, that an Immobility of the Humours, or any Contraction of Joints [τῶν ἀρθρων κατοχὴ] produced by an Infarction of the Humours, or any Contraction of the Nerves, is called ἀγκύλη, and ἀγκύλωσις. An Anchyloſis, therefore, ſignifies a deſtroy'd or loſt Flexibility of the Joints, which is often accompany'd by a preternatural Tumor. But, that the Joints may remain moveable, a due Figure and Adaptation of the Extremities of the articulated Bones, the greateſt Lubricity in conſequence of the cartilaginous, and highly ſmooth Surfaces of the Extremities of the Bones, and the mucilaginous Liquor, and, laſtly, a due Flexibility of the Ligaments ſurrounding the Joints, are requiſite. But, by a Luxation, all theſe Circumſtances are ſometimes deſtroy'd, or at leaſt conſiderably changed; for the Ligaments, when an Articulation ſlips from its Cavity, being either ruptur'd, or violently diſtracted, become inflam'd. The ſame Effect may be, alſo, produced by the Force uſed in order to reduce the Luxation. This Inflammation may be ſucceeded by a Suppuration, or a Gangrene. Hence the Ligaments will afterwards remain contracted and rigid. Beſides, when the Ligaments are thus affected, there will not be ſuch a Secretion of the Mucilage deſtin'd for lubricating the Joints, as there generally is in a natural State. By this means the Motion of the Joint will be hindered. And ſince, when the Ligaments are inflam'd, an intenſe Pain is excited by the ſmalleſt Motion of the Joint, the Part remaining at Reſt, the Mucilage of the Joints is not ſufficiently attenuated and reſorb'd; which, therefore, being accumulated, and its finer Parts diſſipated, will become concreted into an irreſolvable Maſs, and totally deſtroy the Motion of the Joint. If, whilſt the Head of a Bone ſlips out of its Cavity, or whilſt it is reducing, the cartilaginous Surface, on the Margin of the Cavity, is injured, or in any manner deprav'd, this will prove another Source of an Anchyloſis.

As for Convulſions; an intenſe Pain, which diſorders the whole Common Senſory, is frequently ſucceeded by Convulſions; for which Reaſon Convulſions may ſucceed a Luxation. Beſides, a Luxation is frequently accompanied with ſuch a violent Diſtortion of the Muſcles, and Diſtraction of the Tendons, as are ſufficient to produce Convulſions; for we know from daily Experience, when the Tendons of the Muſcles ſubſervient to the Motion of the Hands and Feet ſtart from their natural Situation, what intolerable Pain and Convulſions, generally called the *Cramp*, ſuch Muſcles are ſeized with. *Hippocrates*, in his Treatiſe *de Articulis*, tells us, that when the Bones of the Legs are luxated, and the Diſorder accompanied with a Wound, the Bones at the Ancles, whether luxated internally, or externally, are not to be reduced, becauſe, if they are reduced, the Patients live but a few Days, and die of Convulſions. In the ſame Work he tells us, that the like Misfortune is to be expected, if the Bones of the Cubit are ſo luxated about the Carpus, as to ſtick out of the Wound. And he afterwards affirms, that, if Convulſions ſhould ſucceed the Reduction of the Luxation, the reduced Part ought forthwith to be forced out of its Cavity, and bathed with ſome proper warm Liquor.

As for Extenuation; when by any Cauſe the larger Arteries, or the Nerves diſtributed to any Part, are hindered from conveying the vital Humours neceſſary for the Life and Nouriſhment of that Part, a true Maraſmus is produced, becauſe the former Fluids being gradually diſſipated, and freſh ones not ſupplied, all the Veſſels become contracted. Under the Article VULNUS there is a memorable Inſtance of this, in which the axillary Artery being entirely cut, the whole Arm afterwards wither'd away like a Mummy. When, therefore, the Head of the Os Humeri, for Inſtance, being luxated, has for a long time compreſſed the large axillary Veſſels, it is ſufficiently obvious, that the like Misfortune is juſtly to be dreaded.

But *Hippocrates*, in his Treatiſe *de Articulis*, mentions another Cauſe of Extenuation; that is, when the luxated Bones are not reduced: For, when treating of a Luxation of the Thigh, he ſays, that if it happens to thoſe who have not arrived at their full Growth, and is not reduced, the Thigh, Leg, and Foot, are by that means rendered ſhorter. "Nor, ſays he, in like manner, "are the Bones lengthened, but rather rendered ſhorter, eſpe- "cially the Os Femoris. The whole Leg, alſo, loſing its Fleſh "and Muſcles, becomes extenuated and ſmall, partly becauſe "the Bone is moved from its natural Situation, and partly be- "cauſe it cannot perform the Offices it could in a natural "State; for Exerciſe ſtrengthens that which is weak, and reſolves "ſome Part of that which hinders the Increaſe of the Member "in Length. But thoſe Patients are moſt injured who have "this Articulation luxated in the Uterus: Thoſe who ſuſtain "the next greateſt Injury, are ſuch as have it luxated in their "Infancy and Youth: But adult and robuſt Perſons ſuſtain "the leaſt Damage by ſuch a Misfortune." But *Hippocrates*, in the ſame Work, obſerves, that this Extenuation is principally obſervable in the Parts moſt contiguous to the luxated Articulation; which he proves by the Example of thoſe whoſe Shoulders have been luxated before their Birth, or, at leaſt, before they have arrived at their full Growth; for in ſuch Perſons the Os Humeri is ſhorter, and the Cubit and Hand ſomewhat leſs, than in ſound Perſons: He adds, that they can do moſt things with the affected as well as with the ſound Arm: And he ſays, that the Fleſh of the Thigh and Leg is diminiſh'd, when the Head of the Os Femoris, articulated with the Coxa, ſlips towards the internal Parts, becauſe the Patients cannot uſe that Leg. Hence the Extenuation ſucceeding an unreduced Luxation is not always to be aſcribed to a Compreſſion of the large Veſſels, but often depends on a Defect of muſcular Motion in the Part affected. For this Reaſon *Hippocrates*, in his Treatiſe *de Articulis*, obſerves, that in Adults, when the Os Femoris ſlips from its Cavity, to the external Parts, and is not reduced, the Bulk of the Member is not much diminiſhed, becauſe the Uſe of the Member is not deſtroyed; for the Fleſh, in which the Head of the Bone is lodged, being rendered firm by the Attrition, they can walk without a Staff. But afterwards, from various Obſervations concerning this Extenuation, he deduces a general Axiom: "If, ſays he, the Parts of the Body "deſtined for any particular Purpoſe are moderately uſed and "exerciſed in that for which they were deſigned, they continue "ſound, and are increaſed; but, if they are not uſed, they become "morbid, are not increaſed, and ſoon become, as it were, old: "This happens principally to the Nerves and Joints, unleſs they "are duly uſed." How efficacious muſcular Motion is in reſtoring, by means of the Aliments, what, by the neceſſary Effect of Life and Health, is daily loſt, not only from the whole Body, but, alſo, from each of its Parts, is ſhewn under the Article FIBRA. Now, if we conſider, that the Muſcles, Tendons, and Ligaments, when left to themſelves, are, by their ſpontaneous Contraction, ſhortened, and become rigid; and that, when the diſtending Cauſes are removed, the Veſſels of the human Body are, by their proper Contractility, rendered narrower; the Reaſon will be obvious, why, after a Luxation, by which the Motion of the Member is hindered, an Extenuation enſues. Beſides, this Doctrine is ſufficiently confirmed by the Obſervations of the beſt and moſt skilful Surgeons.

As for the Mortification of the Part, or the Death of the Patient; among the Effects of Pain, we may juſtly reckon a Gangrene, which is ſuch a Diſorder of a ſoft Part, as, after the Abolition of the vital Influx of the Fluids into the Arteries, and its Efflux by the Veins, tends to a Mortification. The ſame Misfortune, alſo, often ſucceeds the violent Inflammation, which ſo frequently accompanies Luxations. *Hippocrates*, in his Treatiſe *de Articulis*, when the Bones of the Leg are luxated about the Ancle, tells us, that, if a Reduction of them is attempted, the Foot and Leg are ſeized with a Gangrene. If, therefore, the large Veſſels are ſo compreſſed, or injured by a Luxation, that the Influx and Efflux of the vital Humours is hindered, the Mortification of the Part is immediately approaching. The ſame will, alſo, happen, if, when a violent Inflammation is already preſent, a Reduction of the luxated Bone is attempted: For, in order to ſuch a Reduction, a ſtrong Extenſion, and rough Handling, are often neceſſary; by which means the Inflammation quickly degenerates into a Gangrene. That the Death of the Patient may, alſo, ſometimes be produced by Luxations, is ſufficiently obvious from what has been already ſaid; for we have obſerved, that a Luxation of the Jaw-bone produces violent Convulſions, and Death. And *Hippocrates* informs us, that ſevere continual Fevers, which in a few Days prove mortal, follow Luxations of the Cubit. When the larger Articulations are luxated with a Wound, ſo that the Bones ſtick out of the Wound, Convulſions and Death immediately ſucceed, if they are reduced; and, when they are left in their luxated Condition, the Patient's Life is ſtill dubious.

From what has been ſaid the evident Signs of a Luxation may be drawn.

That we may be certain of the Luxation of any Joint, we muſt firſt inquire, whether there has been any previous Cauſe, whether external or internal, whoſe Force was capable of removing the Head of the Bone from its Cavity. We ought, alſo, carefully to attend whether the Ligaments ſecuring the Articulation are, by any previous external Force, too much diſtracted, or ruptured, or by whatever Cauſe ſo relaxed, that they cannot ſufficiently ſecure the Joint, as is already obſerved. After, from theſe Circumſtances, a Luxation is juſtly ſuſpected, we are carefully to inquire, whether thoſe Signs are preſent, which inform us, that a Luxation is already made. The moſt conſiderable of theſe are, a preternatural Tumor made by the Head of the Bone lodg'd in a wrong Place, and an unuſual Cavity in that Part which the Head of the Bone naturally poſſeſs'd. But, that

that the Diagnoſtic may be the more certain and infallible, both theſe Circumſtances muſt be preſent, ſince any one of them often proves fallacious. This Diagnoſtic is ſtill ſurer, if the natural Motion of the Member is either totally deſtroy'd, or at leaſt, much diſordered and impaired. If, at the ſame time, upon comparing the affected with the ſound Part, a conſiderable Difference appears in their Figure and Length, there ſeems to be no longer any Doubt, but a Luxation is preſent.

It may, however, ſometimes happen, that the Diagnoſtic of a Luxation is very difficult; for if, by a violent Contuſion or Diſtortion, an Inflammation has rendered the Joint tumid, it is neither eaſy to diſcover the preternatural Cavity in the Articulation, nor the unuſual adjacent Tumor, whilſt, at the ſame time, the Motion of the Joint is totally hindered by the Intenſeneſs of the Pain. Hence, in ſuch a Caſe, we are carefully to attend, whether the preceding Cauſes are ſuch as we may reaſonably expect ſhould produce a Luxation. Nor, in a dubious Caſe, will it be improper to ſuſpend our Judgments, becauſe, when a violent Inflammation ariſes, it would be by no means ſafe to reduce the luxated Members. For this Reaſon, after the Inflammation is removed by proper Remedies, the affected Part may be examined. The great Caution neceſſary in diſtinguiſhing Luxations is ſufficiently evinced by a memorable Caſe related by *Galen*, in *Comment. prim. in Libr. Hippocrat. de Officina Medici.*

After we are convinced of the Preſence of a Luxation, it is ſtill requiſite we ſhould determine whether the Head of the luxated Bone has ſlipt to the exterior, or interior, the ſuperior, or inferior Parts; for many things neceſſary to the Prognoſtic and Cure depend upon the Knowledge of this Circumſtance. Anatomy, which teaches the various Union of Bones in different Articulations, and a Conſideration of theſe Motions, which depend upon the natural Condition of the Joint, are of ſingular Service in the Prognoſtic and Cure of Diſlocations. But this may be principally known from the Part in which the Head of the luxated Bone is lodged. For this Reaſon *Hippocrates*, and after him ſome other Phyſicians and Surgeons, have collected all the Signs, by which the various Luxations of the ſame Joint may be diſtinguiſh'd. Thus, in his Treatiſe *de Articulis*, he tells us, that the Patient, whoſe Cubit is luxated towards the poſterior Parts, cannot extend his Arm: And, on the contrary, that, when the ſame Articulation is luxated to the anterior Parts, the Elbow cannot be bended. And, when treating of the various Luxations of the Os Femoris, he accurately deſcribes the Signs accompanying each.

After a mature Conſideration of the Bulk, Figure, Situation, the Parts compreſſed and intercepted, the Time of the Duration, the Concretion of the luxated Parts, the Pain, the Inflammation, and other Symptoms, the Thinneſs, or Thickneſs, of the ſurrounding Parts, the Ligaments deſtroy'd or lengthen'd, the affixed Muſcles, and the like, we are to form a Prognoſtic, which teaches us whether the Cure will be entire or imperfect, quick or ſlow, eaſy or difficult.

After by the diagnoſtic Signs 'tis certain, that there is a Luxation, we ought to conſider all the Circumſtances enumerated in this Paragraph, that we may form a ſure Prognoſtic of what is either to be dreaded from the Luxation itſelf, or from the Force neceſſary to be uſed for its Reduction. All theſe things are to be ſuggeſted, if not to the Patient himſelf, yet, at leaſt, to his Friends, leſt any future Misfortunes, unavoidable by the moſt skilful, ſhould rather be aſcribed to the Negligence of the Surgeon, than the Violence of the Diſorder. But in forming a Prognoſtic we are principally to conſider, whether 'tis to be expected, that all the Motions, uſually performed by the Joint when ſound, can be reſtor'd; or whether only ſome Uſes of the luxated Member are to remain, though it is not entirely ſuch as it was before the Luxation; for thus an entire and imperfect Cure are diſtinguiſhed. Beſides, it ought to be determined whether the Cure can be ſoon perform'd, or whether it requires a long Time before a due Firmneſs can be reſtor'd to the Joint. Thus, for Inſtance, if a Luxation happens in conſequence of a violent Diſtraction, or a previous Relaxation, the Ligaments are ſo weakened, that a ſpeedy Cure cannot be expected. But a Cure is ſaid to be eaſy, when only a ſlight Extenſion is neceſſary to the Reduction, and no violent Symptoms are preſent. But where the contrary happens, a difficult Cure may be expected, which requires a ſtrong Extenſion, and many Efforts for its Reduction. Though, to uſe the Language of *Celſus*, in the 26th Chapter of *Lib.* 5. "'Tis the Part of a Quack to heighten every ſmall Circumſtance, that he may ſeem to have performed the more "ſurpriſing a Cure;" yet there is no Harm in making a pretty difficult Prognoſtic; for, by this means, if any Misfortune ſhould happen, it will appear, that the Surgeon foreſaw it; if, on the contrary, every thing ſhould ſucceed well, he will reap the Praiſe of ſo lucky an Event. What Misfortunes are to be dreaded, will be ſufficiently obvious from the following Circumſtances.

The Largeneſs. The Largeneſs of a Luxation is eſtimated by the Diſtance between that Place, which the Head of the luxated Bone poſſeſſes, and the Cavity of the Articulation. But 'tis ſufficiently obvious, that the more the luxated Bone has receded from its Cavity, ſo much the more the Ligaments ſurrounding the Joint muſt be diſtracted, and ſometimes broken; by which means the adjacent Muſcles and Tendons will ſuffer the greater Violence. Hence an intolerable Pain and Inflammation will be produced. 'Tis, at the ſame time, evident, that the nearer the luxated Bone is lodged to the Cavity of the Articulation, the more eaſily the Luxation is reduced. Hence *Celſus*, in *Lib.* 8. *Cap.* 15. informs us, that the Os Humeri is far more eaſily reduced when it ſlips forwards, than when it falls down into the Arm-pit.

As for the Figure; we have already obſerved, that there is a Change of Figure in a luxated Member. Upon comparing it, therefore, with the correſponding ſound Part, the greater the Diverſity of Figure is, the greater is the Change of Situation in all the adjacent Parts, and conſequently their Diſtortion or Diſtraction the ſtronger; all which Circumſtances, as is ſufficiently obvious, render the Cure proportionably more difficult. The Figure, alſo, of the luxated Bone creates a very conſiderable Difference in this Affair. Thus, for Inſtance, when the Os Humeri is luxated, and a due Extenſion made, if its Head is ſituated before the hollow Sinus of the Scapula upon a Remiſſion of the extended Parts, it eaſily returns into its Situation. But in the Os Femoris it is quite otherwiſe; for its Head and Neck form an obtuſe Angle, with the reſt of the Bone ſituated below. Hence other Meaſures are neceſſary for its Reduction; for though, by means of a ſtrong Extenſion, the luxated Bone ſhould be brought oppoſite to its Cavity, it may very eaſily ſlip upwards; and, at the ſame time, miſs its Cavity, which lies to one Side: Hence *Hippocrates*, in his *Treatiſe de Articulis*, when ſpeaking of the Reduction of the Os Femoris luxated to the interior Parts, ſo orders the whole Apparatus, that, when the Extenſion is made, an Aſſiſtant is to move the Bone from Side to Side, till it returns to its natural Situation.

As for the Situation; if we conſider the beautiful Obſervations made by *Hippocrates*, in his *Treatiſe de Articulis*, concerning the various Situations of the Os Femoris, when luxated, it will be ſufficiently obvious what different Effects of Luxations muſt ariſe from this Cauſe alone; for if the Os Femoris ſlips to the internal Parts, and cannot be reduced, which frequently happens, the Fleſh ſurrounding the luxated Bone decays, and the Uſe of the Part will remain very much depraved: But a far leſs terrible Misfortune will enſue, when the ſame Bone is luxated towards the external Parts. For which Reaſon *Hippocrates*, in the ſame Work, laid down this general Concluſion: "About the Coxæ "there is a great Difference whether the Head of the Os Fe- "moris is luxated towards the internal or the external Parts; there "is, alſo, a Difference, though a leſs conſiderable one, when "it is luxated at the Knee." There is a peculiar kind of Lameneſs proper to each of theſe Caſes: For they, in whom it is luxated to the external Parts, have their Leg crooked, and ſtand leſs ſtreight than thoſe in whom it is luxated to the internal Parts. The like happens when the Bone at the Ancle is luxated; for, if it is luxated to the external Part, the Leg is bow'd towards the internal Part, but can ſtand; but, if it is luxated to the internal Part, the Leg is bow'd outwards, but the Patient cannot ſtand ſo well.

As for the Parts preſſed and intercepted; what Misfortunes may happen when luxated Bones preſs the adjacent Parts, never appears more palpably than in Luxations of the Vertebræ; for, in this Caſe, the ſpinal Marrow included in their Cavities is preſs'd, contuſed, and ſometimes lacerated; and the higher ſuch a Luxation is, the more terrible Conſequences it produces. Hence *Celſus*, in *Lib.* 8. *Cap.* 13. juſtly pronounces Luxations of the Head, in which the Proceſſes uniting the ſuperior Vertebræ are luxated backwards, to be abſolutely mortal: "For, ſays he, the "Tendons lying under the Occiput are diſtended; the Chin "hangs down upon the Breaſt; the Patient can neither drink, "nor ſpeak, and, ſometimes, diſcharges his Semen involunta- "rily. This Situation is ſoon ſucceeded by Death." He afterwards informs us, that the ſame Fate attends thoſe who have the Vertebræ of the Spine luxated, and that they die within three Days, though not ſo ſoon as thoſe whoſe Heads are luxated. He, alſo, there enumerates the Diſorders ſubſequent to Luxations of the Vertebræ; for, if they are totally removed from their Place, he affirms, that the ſpinal Marrow, Membranes, and Nerves, muſt neceſſarily be broken. But, if they were only luxated to the external Parts, he propoſed a Method of Cure from *Hippocrates*. But we have already conſidered this, when treating of the Torpor and Palſey of the Parts below the luxated Articulation. But if, whilſt the luxated Bone is reducing, the Nerves, the Veſſels, or any Parts of the Muſcles, or Tendons, are intercepted, and lodged between them, it is ſufficiently obvious what intolerable Pains and Convulſions muſt be produced by that means. But ſuch an Interception will not readily happen, if a due Extenſion is made before the Reduction.

As for the Time of the Duration; *Hippocrates*, in his Treatiſe *de Articulis*, laid down a general Rule in reducing Luxations, which was, to do it with all Expedition: For, ſays he, the Reduction is moſt eaſily made, and the Patient ſubjected to leaſt Pain, if the Luxation is reduced before the Joint becomes tumid. The moſt celebrated Surgeons, in Luxations complicated with a Fracture, firſt take proper Meaſures for retaining the fractur'd

Bones

Bones in a proper Situation; and then proceed to the Reduction of the Luxation. But in Cases of this kind they always reduce the Luxation, before they attempt the Cure of the Fracture, partly on account of what has been said, and partly because the Extremities of the fractured Bone, reduced to their natural Situation, will easily recede from each other, by the Force requisite to the Reduction of the Luxation. But, if the luxated Bone has remained for some time in that Situation, the Part affected will soon become tumid, inflamed, and immensely painful. Hence a Gangrene is to be dreaded, if it is roughly handled. Besides, the Ligaments, when long distracted, lose their Strength. Hence the reduced Bone will afterwards easily slip out. But the considerable Glands, situated in the larger Articulations, when freed from the Pressure of the Head of the Bone, or when they are inflamed, may become so tumid as to diminish the Cavity of the Articulation. Hence the Reduction will be difficult, and the Retention of the reduced Bone still more so. Besides, the Mucilage of the Joints before attenuated and dissipated by the Motion of the Joint will be now accumulated, and inspissated into a Mass afterwards not to be resolved by all the Efforts of Art, and which frequently so fills the Cavity of the Articulation, that there no longer remains any Place for the Head of the luxated Bone. Now, if we consider, that a Luxation, unless soon reduced, is always succeeded by an Inflammation, by which a long-protracted and deep-seated Suppuration may be produced, as *Hippocrates*, in his *Treatise de Articulis*, observes, when speaking of a Luxation of the Femur, the Reason will be sufficiently obvious, why, in forming a due Prognostic, many Misfortunes must be foreseen, if the Luxation has continued for a considerable time without Reduction.

As for the Concretion of the luxated Parts; 'tis well-known, that all the Parts of the Body, adjoining and contiguous to each other, are hinder'd from Concretion, by an intermediate Liquor, as subtile as Dew, and which is lodged in all the Cavities of the Body, whether large or small. But, as soon as this subtile Liquor proves defective, the Parts, before separate, soon become concreted; but, when an Inflammation seizes any Part, the larger Vessels infarcted and distended compress the small exhaling Ducts. Hence a Dryness arises in inflamed Parts, and, for this Reason, an easy Concretion with their contiguous Parts. Thus, after violent Pleurisies and Peripneumonies, the Lungs are almost always found adherent to the Pleura. The Head of the luxated Bone, deprived of its natural Mucilage, adjoining to Parts inflamed by a violent Distraction or Compression, is easily concreted with them, if it remains long in that Situation. Hence 'tis obvious, that a Reduction is then impossible; but we immediately see the Cavity of the Articulation filled with luxuriant Glands, or the inspissated Mucilage. Perhaps, also, the Cavity, when the Bone remains long out of it, becomes gradually less. When the Teeth are pulled out, the Laminæ of the Jaw-bone, which, when separate, constituted the Socket, gradually approach nearer to each other, till, at last, they are so united as to leave no Mark of a Socket.

As for the Pain; a recent Luxation is always accompanied with Pain, as we have already observed: But, if this Pain is highly intense, the worst Consequences are justly to be dreaded; because it indicates, that the pained Parts are in such a Condition, as tends to a total Solution of Continuity. Besides, the worst Effects of intense Pain are to be expected, because, in order to the Reduction, a strong Extension of the Parts already so pained is requisite. Hence Convulsions, Deliriums, and Gangrenes, are to be dreaded.

As for an Inflammation; why an Inflammation succeeds a Luxation, we have already observ'd: But it generally accompanies it, unless the luxated Part is quickly reduced; and, where a violent Inflammation seizes a luxated Part, there is the greatest Danger; for, unless the luxated Member is forthwith reduced, it cannot be so afterwards without the greatest Difficulty; and, if inflamed Parts are rudely handled, a Gangrene will soon ensue. But in such a Case, as well as in all others, of two Evils the least is to be chosen; and 'tis better to leave the Parts in their luxated Condition, till the Inflammation is, by proper Medicines, asswaged. This was, also, the Opinion of *Hippocrates*; for, in his Treatise *de Articulis*, when speaking of the most dangerous Luxations, he says, "That they are to be reduced on the same or next "Day, but not at all on the third or fourth. When, therefore, "they are not forthwith reduced, we are to pass over these Days; "for, when they are reduced within ten Days, they are generally "retained." And elsewhere, when treating of a Luxation, he lays this down as a general Rule, "That it is improper to reduce any "luxated Bone, when a Fever is present, and especially that of the "Cubit." But a Fever is the Sign and Concomitant of a violent Inflammation accompanying a Luxation. Thus, also, *Celsus*, in the eleventh Chapter of his eighth Book, informs us, "That every "luxated Member is to be reduced, before an Inflammation comes "on." But, if an Inflammation is present, we are to wait till it is asswag'd; and, when the Inflammation is over, the Reduction may be attempted. In such Cases, therefore, the Reduction is to be defer'd, and the Patient and his Friends to be told, that the worst Disorders are to be dreaded, if the Reduction is attempted; that the Cure will afterwards be difficult, and perhaps not entire; lest the subsequent Misfortunes of the Patient should be rashly imputed to the Surgeon or Physician: For tho' Luxations are to be reduced with all possible Expedition, if no Circumstance contraindicate it, yet practical Observations sufficiently evince, that we are not to despair, tho' the Bone has, for a considerable time, remained luxated; for *La Motte*, in his *Traité complet de Chirurg. Tom.* 4. gives us an Instance of a luxated Humerus with a violent Inflammation, which could not be reduced till two Months after; and yet the Disorder was at last totally cured. *Hildanus*, in *Centur.* 2. *Obs.* 90. has sufficiently, by various Instances, demonstrated the terrible Misfortunes, which often succeed the Extension of inflam'd Parts.

As for Convulsions, and the other Symptoms; we have already observed, that Convulsions sometimes succeed Luxations, especially on account of the Violence of the Pain, and the strong Distortion or Distraction of the Muscles or Tendons; and what terrible Misfortunes succeed Convulsions, is sufficiently obvious from Experience. Now 'tis certain, the Reduction of a luxated Member cannot be attempted when Convulsions are present, because the Pain and Distraction of all the Parts being increased, the Causes of the Convulsions would of course be augmented. The antient Physicians, and especially *Hippocrates*, were greatly afraid of Convulsions in this Case; and *Celsus*, in *Lib.* 8. *Cap.* 25. tells us, "That if, after the Reduction, the Nerves are distended, "the Member is forthwith to be luxated again." *Hippocrates*, also, in his *Coacæ Prænot.* N° 361. seems for this Reason to have affirm'd, that, in a Tetanus and Opisthotonus, a Luxation of the Jaw-bone is mortal; for such a Luxation cannot be reduced, by reason of the Tetanus; and, unless it is speedily reduced, the Life of the Patient is in the most imminent Danger, as we have already observed.

If, besides the Symptoms already enumerated, there are a violent Fever, Deliquiums, and a Hiccup, 'tis sufficiently obvious, that the Reduction of a Luxation cannot be safely attempted, and consequently that the Prognostic must be highly difficult.

As for the Slenderness or Thickness of the surrounding Parts; we have already observed from *Hippocrates*, that the Joints surrounded with a large Quantity of Flesh are luxated with Difficulty, and require proportionable Pains for their Reduction. Hence the most dangerous Luxations are those of the larger Joints, surrounded by strong Muscles and Ligaments; for such Articulations cannot, without violent Causes, be expel'd from their natural Situations: Hence the most dangerous Symptoms frequently ensue. For this Reason *Celsus*, in *Lib.* 8. *Cap.* 25. when treating of Luxations accompanied with a Wound, says, "That in "this Case there is great Danger, which is still increased in pro-"portion to the Largeness of the Member, and the Strength of "the surrounding Ligaments and Muscles. For this Reason, "when the Os Humeri, or the Os Femoris, are luxated, the "Death of the Patient is to be dreaded; for, when these Bones "are reduced, there is no Hope; and, if they are not, there is still "some Danger." And, when treating of Luxations of the Femur, he says, "They are attended with great Danger, since they are "either reduced with Difficulty, or slip out again; because, "when the Muscles and Ligaments are very strong, they hardly "admit of Reduction; or, when they are weak, do not re-"tain the reduced Bone." Hence 'tis obvious, that, in making a Prognostic, we ought to advert to these Circumstances.

As for the Destruction or Elongation of the Ligaments; if, in consequence of a Luxation, the Ligaments surrounding a Joint are so distracted, tho' without a Rupture, as to suffer the Bone to slip out of its Seat; when the Bone is reduced, they may be so contracted, as again to acquire their former Strength. But, if they are ruptur'd, there is great Danger, lest their crude Lips should adhere to the Bone, or other adjacent Parts; or, lest the Cicatrix of the Wound, when cur'd, should render the Ligaments less flexible: Hence the easy Motion of the Joint will afterwards be hindered. Thus, for Instance, a sudden Luxation of the Os Femoris can hardly be conceiv'd, but, at the same time, the round Ligament arising in the Cavity of the Coxa, and inserted in the Head of the Os Femoris, must be ruptur'd; for 'tis certain, that a Luxation may be produced by Causes lodged in the Cavity of the Joints, and gradually weakening or stretching the Ligaments. Hence the Difficulty of the Cure is, in such a Case, sufficiently obvious; for the retracted Extremities of this Ligament are rarely ever join'd again; in consequence of which the reduced Bone will afterwards more easily slip out of its Cavity. But, when the Ligaments are totally destroy'd, and the luxated Bones stick thro' the Wound of the Integuments, the Cure is so highly difficult, that *Hippocrates*, in his Treatise *de Articulis*, absolutely despairs of the Reduction of such a Luxation: "For, says he, in "Cases where the Bones about the Ancles are totally luxated, "whether to the internal or external Parts, with a Wound, such "Luxations are not to be reduced; for, if they are reduced, so "violent Convulsions are brought on, as in a few Days destroy "the Patient; and, in this Case, few survive the seventh Day." He affirms, that the only Hope of the Patient's Safety consists in

not reducing Bones thus luxated, tho', at the ſame time, an unſeemly Lameneſs continues during the whole Remainder of the Patient's Life. He informs us, that there is the ſame Danger, when the Bones of the Arm are luxated with a Wound; and aſſerts, that Luxations of this kind are, of all others, the moſt dangerous, when they happen to the large Bones. Hence, if the Os Femoris, luxated at the Knee, produces a Wound, the Reduction of it will ſooner prove mortal, than in other Caſes; and, tho' it is not reduced, yet it is far more dangerous, than other Luxations. When the Bones of the Toes and Fingers were luxated, ſo as to produce a Wound, he indeed order'd an Attempt to reduce them, tho' with the utmoſt Caution; for he tells us, that even in theſe Caſes the reduced Bones are generally eaſily luxated again; for which Reaſon he ſeems to think, that even in theſe Caſes the Reduction ought not to be attempted, except with a View to hinder the Surgeon from being branded with want of Skill by the ignorant Multitude. But *La Motte*, in his *Traité complet de Chirurgie*, *Tom.* 4. gives us a memorable Inſtance, which proves that we ought not always to deſpair, when ſuch a Luxation, with a Diſtraction of the Ligaments, happens, eſpecially about the lower Joints. Luxations of this Kind muſt however, in the very Nature of the Thing, be highly dangerous, and difficult to be cured.

As for the Muſcles affixed to the Bone; if there are ſtrong Muſcles about the luxated Articulation, the Luxation muſt have been produced by violent Cauſes; in conſequence of which the Muſcles may be ſo diſtracted, as afterwards not at all, or at leaſt not entirely, to recover their former Strength; for which Reaſon there will always after remain a Defect of Motion in the luxated Part. Thus, for Inſtance, it is certain from Anatomy, that one of the Heads of the Biceps Muſcle of the Arm, ariſing from the ſuperior and exterior Part of the Sinus of the Scapula, in which the Head of the Os Humeri is lodg'd, is ſituated in the Capſula of the Articulation, and proceeds over the Head of the Os Humeri to the Sinus ſituated there; after which it emerges from the Capſula of the Articulation, ſwells into a fleſhy Belly, and is at laſt united to the other Head of the ſame Muſcle. Now, if the Head of the Os Humeri is luxated to the anterior Parts, 'tis ſufficiently obvious, that a conſiderable Violence muſt be done to the Tendon of the Biceps Muſcle. Hence, perhaps, a Defect of Motion will remain in the Member.

Having thus conſider'd the principal Circumſtances from which the Prognoſtic of Luxations is to be deduced, we now come to treat of their Cure.

To the Cure, then, of a Luxation two Things are neceſſary: Firſt, A Reduction of the luxated Parts; and, ſecondly, A Retention of them in their natural Situation, in order to a Cure.

If, after a mature Conſideration of Circumſtances, there are no Symptoms found, which render the Reduction either uſeleſs or impoſſible, it is to be attempted: We have already obſerved, that Luxations of long ſtanding cannot be reduced, becauſe the Cavity of the Articulation is generally filled with concreted Humours, or other Parts, which become luxuriant, when freed from the Preſſure of the Bone. We have, alſo, obſerved, that the Reduction cannot be attempted, when there is a violent Inflammation, a conſiderable Tumor, or Convulſions: Nor is the Reduction to be undertaken, when we foreſee, that theſe will ſoon happen; for in theſe Caſes a proper Delay is more prudent. But to a perfect Cure the two following Things are requiſite: Firſt, A Reduction of the luxated Parts: This is of itſelf ſufficiently obvious. And, ſecondly, A Retention of the Parts in their natural Situation; for the Ligaments, which unite the articulated Bones, are the principal Strength of the Articulation. But a Luxation cannot happen, unleſs thoſe Ligaments are either ruptured, or ſo lengthen'd, as to ſuffer the Head of the articulated Bone to ſlip out of its natural Seat. We have, alſo, obſerved, that by a violent Diſtraction the ſolid Parts of the Body may be ſo weaken'd, as to loſe a great deal of their Strength: Hence, though the luxated Members are reduced, yet the Ligaments have not their former Strength; for which Reaſon the Head of the Bone would again eaſily ſlip out, unleſs that Misfortune was prevented by proper Meaſures. How eaſily a Luxation happens after a Reduction, we learn from *La Motte*, in his *Traité complet de Chirurgie*, *Tom.* 4. where he ingenuouſly confeſſes, that, when he had reduced a luxated Humerus, and did not take ſufficient Care to keep the Patient from elevating his Arm, the Bone was forthwith luxated again, though he took care to reduce it afreſh ſo quickly, that neither the Patient, nor the Aſſiſtants, were ſenſible of the Error. It is, therefore, requiſite to the Cure of a Luxation, that the reduced Bones be retained in their Situation, till a due Strength is reſtored to the Ligaments; ſo that the Motions uſual in a ſound State may be performed without any Danger of a ſecond Luxation; for this is the principal Intention to be purſued. But the Time requiſite for reſtoring the due Strength of the Ligaments is not exactly limited by Authors: It is, however, certain, that it varies according to the Largeneſs of the Luxation, and the Joint; as, alſo, according to the Variety of Conſtitutions, and the more or leſs terrible Symptoms, with which the Luxation is accompanied. The Largeneſs of the Luxation, as we have already obſerved, is eſtimated by the Diſtance of the luxated Bone from the Cavity in which it ought naturally to be contained: And it is ſufficiently obvious, that the greater Violence is done to the Ligaments, and other adjacent Parts, the more the luxated Bone is diſtant from its natural Situation; and, conſequently, that the longer Time muſt be requiſite for a perfect Cure. The greater Weight an Articulation ſuſtains in a ſound State, the Cure of a Luxation in it will be protracted proportionably the longer. Thus *Celſus*, in *Lib.* 8. *Cap.* 10. informs us, that Luxations of the Os Femoris and Talus require a long State of Reſt, before the Cure is completed. But *Hippocrates*, in his Treatiſe *de Articulis*, affirms, that a luxated Finger may be cured in fourteen Days time. How great a Difference is produced in Caſes of this Nature, by the Diverſity of Conſtitutions, *Celſus*, in *Lib.* 8. *Cap.* 11. informs us, in the following manner. "If the Body is ſlender and moiſt, and the Nerves weak, the "Bone is more eaſily reduced; but is more eaſily luxated again, "and leſs faithfully retained. In Patients of an oppoſite Con"dition, the Bones are more firmly retained; but, when luxated, "more difficultly reduced." *Hippocrates*, in his Treatiſe *de Articulis*, has the ſame Sentiments. But it is ſufficiently obvious, that the Number and Vehemence of the Symptoms protract the Cure. *Hippocrates*, however, informs us, that a gentle Inflammation, after the Reduction of a Luxation, is rather beneficial than hurtful, ſince, in this Caſe, the Pain prevents the Motion of the Member; and the Ligaments, render'd tenſe by the Inflammation, retain the Head of the Bone more firmly in its Cavity: For, in his Treatiſe *de Articulis*, he ſays, "Thoſe who have "the Humerus reduced without any Inflammation of the ſur"rounding Parts, can forthwith uſe their Arm without any Pain, "and think that no future Caution is neceſſary to be obſerved "by them. But it is the Duty of the Phyſician to put them "on their Guard, ſince, in this Caſe, the Member is again "more eaſily luxated, than where there is an Inflammation." It is always expedient to be careful for a conſiderable time, not to ſubject the Member luxated to violent Motions; but we muſt, at the ſame time, take care, that by too long-protracted a State of Reſt, the Articulation may not become rigid.

We are, alſo, during the Courſe of the Cure, by proper Remedies, and a due Regimen, to mitigate thoſe Symptoms, which, in ſuch Caſes, are generally moſt troubleſome, and to prevent future Symptoms: The principal of theſe are Pain and Inflammation, together with all their Conſequences. But it is ſufficiently obvious, that the more numerous and violent Symptoms are to be expected, the larger the luxated Bone is; becauſe ſuch Articulations are not without violent Cauſes luxated, and, alſo, require a ſtrong Extenſion, in order to their Reduction. Hence, *Hippocrates*, in his Treatiſe *de Articulis*, informs us, that in the Reduction of all large Articulations, and ſuch as are with Difficulty reduced, the greateſt Abſtinence is to be injoined; but a ſmaller Degree, where the Articulation is ſmall, and eaſily reduced.

The Reduction is made, firſt, By ſecuring the Body of the Patient. Secondly, By moving the luxated Member, ſo as to make its Head correſpond to its Cavity. And, thirdly, By introducing its Head into its Cavity, by Intorſion, Thruſting, or Pulſation.

Firſt, Since a greater or leſs Extenſion is requiſite to the Reduction of a Luxation, and ſince an Extenſion cannot be made without Pain, it is ſufficiently obvious, that the Body of the Patient muſt be ſecured, leſt he ſhould diſturb the Operator in performing his Office. Beſides, it is neceſſary, leſt his whole Body ſhould follow, whilſt the Part affected is drawn.

Secondly, *Galen*, in *Comment. in Hippocrat. de Articulis*, when treating of the general Cure of all Luxations, tells us, that a luxated Bone muſt be reduced by the ſame Road through which it paſſed. After conſidering, therefore, in every Luxation, whence the Head of the Bone began to be expelled, which Way it went, and where it ſtopped, we muſt make the End of the Luxation the Beginning of the Reduction, and proceed to the Beginning of the Luxation. Then he illuſtrates this by an Inſtance of the Os Humeri luxated to the anterior Parts. How uſeful this Caution is for the ſucceſsful Reduction of luxated Bones, is ſufficiently obvious; for the luxated Bone made a Way for itſelf, by removing the adjacent Parts: It can, therefore, return moſt eaſily through a Way already made, but not through any other; eſpecially, if the Luxation is accompanied with a Rupture of the Ligaments; for in this Caſe, unleſs the Head of the luxated Bone is directed in the ſame Courſe through which it paſſed, it cannot at all be reduced. Now, that this may be done, a more or leſs ſtrong Extenſion is requiſite, according as the luxated Member is larger or ſmaller. It is, alſo, neceſſary, the Extenſion ſhould be ſo ſtrong, as to prevent the Interception of the adjacent Parts, whilſt the luxated Head of the Bone is returning into its Cavity. In Luxations of the ſmaller Joints, a ſufficient Extenſion may be generally made with the Hands; as, alſo, in

the larger Articulations in young Perſons, and thoſe of lax Conſtitutions. But, if a more conſiderable Force is requiſite, Cords and Machines often become neceſſary. Many beautiful Things concerning the Uſe and Structure of theſe are found in *Hippocrates de Articulis*.

Thirdly, When the luxated Member is by a due Extenſion, and a proper Motion, ſo diſpoſed as to correſpond to its Cavity, the remaining Part of the Operation is eaſily performed: Hence *Hippocrates*, in his Treatiſe *de Articulis*, when ſpeaking of a Luxation of the Os Femoris to the internal Parts, tells us: "That, if the Extenſion "is duly made, the Head of the Femur is ſo raiſed, as to correſpond "to its natural Cavity; and, when it is thus raiſed, any Impulſe "or Direction is ſufficient to convey it into that Cavity: But, "if the Extenſion is defective, the Reduction will be proportionably more difficult." For the Elaſticity of the Ligaments, and the Strength of the Muſcles, are, in ſuch a Caſe, often ſufficient for the Reduction. But a Knowledge of the Structure of the luxated Articulation eaſily teaches the ſkilful Surgeon what is to be done, when, after a due Extenſion, the luxated Member, placed directly oppoſite to its Cavity, does not return to its natural Seat; for, in this Caſe, the Reduction muſt be made by a gentle Introrſion, Intruſion, or Application of the one to the other. And, in the Reduction of many Luxations, the Extenſion and Reduction, are, by ſkilful Surgeons, made almoſt at one and the ſame time. Thus *Celſus*, in *Lib.* 8. *Cap.* 12. treating of the Luxation of the Jaw-bone, after he has given Directions with reſpect to diſpoſing and ſecuring the Body of the Patient, tells us, that, "If, when the Jaw-bone is ſecurely laid hold of, "provided one Side only is luxated, the Chin is to be ſhaked, and "brought towards the Throat; whilſt, at the ſame time, the Head "being ſecured, the Chin is to be raiſed, and the Head of the "Jaw-bone forced into its Cavity, in ſuch a manner as that all "theſe may be performed almoſt in one Moment." When Surgeons attempt to reduce a luxated Humerus, by hanging the Patient by the affected Arm, over the Top of a Door, or a Ladder, the Luxation is often forthwith reduced, by ſtrongly pulling the affected Member; but, in difficult Caſes, it is of the laſt Importance for the Surgeon to have ſkilful Aſſiſtants.

That the luxated Bone is reduced to its natural Seat, may be known by a certain Sound, or Noiſe, made at the very Moment the Reduction happens. But *Celſus*, in *Lib.* 8. *Cap.* 15. informs us, that a Reduction of the Humerus happens ſometimes with, and ſometimes without, a Noiſe: But almoſt all Surgeons obſerve ſuch an obſcure Noiſe. But *Hieronymus Fabricius ab Aquapendente, in Chirurg. Univerſ. Lib.* 5. *Cap.* 1. ſeems to dread a conſiderable Misfortune from ſuch a Noiſe, which he thought was produced when the Head of the Bone ſtruck upon the Lips of the Cavity: Hence he imagined theſe might be broken, and lodged in the Cavity of the Articulation, before the Head of the Bone entered it; in conſequence of which, an entire Reduction could not be obtained: Or he imagined, that this Noiſe was produced by the Head of the Bone ſtriking upon the Cavity; a Circumſtance from which he afterwards dreaded terrible Misfortunes. But daily Experience, and the Obſervations of the moſt ſkilful Surgeons, ſufficiently evince, that this Fear is entirely groundleſs; ſince, for the moſt part, ſuch a Noiſe is heard, whilſt, at the ſame time, none of the Misfortunes aſcrib'd to theſe Cauſes enſue. We have already obſerved, that the principal diagnoſtic Signs of a Luxation are, the depraved Figure of the Part, a Cavity about the Articulation, and a Tumor in the oppoſite Part: It is therefore obvious, that, when luxated Bones are duly reduced, all theſe Signs ought to diſappear. Pain, alſo, always accompanies a recent Luxation, on account of the violent Diſtraction of the Ligaments, and other ſurrounding Parts: But, immediately upon the Reduction, this Pain either totally ceaſes, or, at leaſt, is conſiderably diminiſhed. There ſometimes, alſo, remains ſome Degree of Pain, though the Reduction is duly made, on account of the Violence the ſurrounding Parts have ſuffered by the luxated Bone, and the Extenſion, which muſt ſometimes be pretty ſtrong, before the Reduction can be made.

The reduced Members are retained in their Situation by Reſt, proper Bandages, and by keeping the Parts in their natural Situation.

After luxated Bones are reduced into their Cavities, the other Part of the Cure conſiſts in retaining them there; and this is obtained

By Reſt. In every Luxation, the Ligaments ſecuring the Joints are either ruptur'd, or at leaſt violently ſtretch'd. Unleſs, therefore, Reſt is injoin'd, the reduced Bone is eaſily luxated again. Beſides, 'tis ſhewn under the Article FIBRA, that the ſolid Parts of the Body are weakened by too ſtrong a Diſtraction. And under the ſame Article 'tis ſhewn, that the Strength of the Coheſion of the ſolid Parts is increaſed, if they remain long in the ſame Contact; and that, in conſequence of this, they often acquire too great a Degree of Strength. Reſt, therefore, is neceſſary, that a due Strength may be reſtored to the diſtracted Ligaments, or that they may be united, if they are ruptured. But we are to take care, leſt, by too-long-continued Reſt, the Ligaments ſhould become rigid, or an Anchyloſis be produced by an Accumulation and Impiſſation of the Mucilage of the Joints. Hence, a few Days after the Reduction, when there is no Fear of an Inflammation, and the Pain is totally ceas'd, it is expedient, gently to move the Joint, and rub it ſoftly, as *Hippocrates*, in his Treatiſe *de Articulis*, when ſpeaking of a Luxation of the Humerus, warmly recommends. And *Celſus*, in *Lib.* 8. *Cap.* 16. orders this Caution to be principally obſerv'd in Luxations of the Cubit: "For, ſays he, it is to be quickly and frequently mov'd, "fomented with warm Water, and long rub'd with Oil, Nitre, "and Salt; for, in the Cubit, whether it has remain'd luxated, "or is reduced, a Callus is ſooner form'd, than in any other "Articulation: If, therefore, by means of Reſt, this Callus is "produced, it will afterwards prevent the Bending of that Articulation."

Beſides, the Pain, or Inflammation, which, in conſequence of the Violence done to the adjacent Parts, often remain after the Reduction of a Luxation, require Reſt.

As for Bandage; unleſs the Ligaments are entirely ruptur'd, or violently diſtracted, the reduced Bone is eaſily retained, provided the Part affected is kept in a State of Reſt. Hence Bandages are not always neceſſary. Thus *La Motte*, in his *Traité complet de Chirurgie, Tom.* 4. tells us, that, when he reduced a luxated Jaw-bone, he apply'd no Bandages; notwithſtanding which, the Cure ſucceeded happily. But if there is any Dread, leſt the reduced Bone ſhould again ſlip out, it is expedient to ſecure it by proper Bandage, eſpecially if by means of Compreſſes the Preſſure of the Bandage is principally determined to that Part towards which the Bone was luxated. This is beautifully adverted to by *Hippocrates*, in his Treatiſe *de Articulis*, when treating of the Cure of Luxations of the Os Humeri. "Theſe, ſays he, muſt "be cured by a Cerecloth, Compreſſes, and the Application of "various Bandages. Soft Wool, wrapt up, muſt, alſo, be put "under the Axilla, in order to fill up its Cavity, and ſupport "the Joint." For, by this means, the Head of the Os Humeri will be hindered from ſlipping from its own Cavity, into that of the Axilla; for *Hippocrates* ſays, he knew of no other Species of Luxations of the Os Humeri; for which Reaſon he did not treat of them.

But 'tis ſufficiently obvious, that in any Luxation, when the Way thro' which the Bone has ſlipt out, is known, it may, by a proper Bandage, be hindered from ſlipping out again. But, when the Part is thus ſecured, the Bandage ought rarely to be loos'd, unleſs an Inflammation comes on; in which Caſe, *Hippocrates* ordered the Apparatus to be frequently renewed in all Luxations.

As for the natural Situation of the Part; the Part affected muſt remain long in a State of Reſt: But that this may be obtained, ſuch a Poſition of the Part is requiſite, as we obſerve in a ſleeping Perſon, when no Muſcles act by the Direction of the Will, but the Flexor Muſcles of the Joints, by their proper Contractility, overcome the Extenſor Muſcles. Hence all the Joints, almoſt, appear gently bended; ſee the Article FRACTURA. For this Reaſon *Hippocrates* laid it down as a general Rule in all Luxations, that the affected Part ſhould always be kept at Reſt, and in a proper Poſture. Then he deſcribes the Poſtures moſt expedient in different Luxations. Thus, for Inſtance, when treating of the Cure of Luxations of the Cubitus, he ſays, the Part ought to be ſo diſpos'd, as that the Hand may be ſomewhat higher than the Elbow, and the Arm placed by the Side; for, when it is thus ſuſpended, it is borne with the greateſt Eaſe.

If theſe Meaſures are duly taken, a ſucceſsful Cure may be expected, if the Luxation is produced by an external Force; but, when the Luxation proceeds from too great a Laxity of the Ligaments, the Cure is far more difficult. *Celſus*, in *Lib.* 8. *Cap.* 11. informs us, that Luxations proceeding from a Weakneſs of the Ligaments, tho' reduced, yet happen again. The Reduction of ſuch Luxations is, indeed, eaſy; but the Retention of them in their proper Situation, highly difficult, and ſometimes abſolutely impoſſible. The only Hope of reſtoring due Strength to the relaxed Ligaments, conſiſts in keeping the Part affected long in a State of Reſt, and applying corroborating Fomentations. In Caſes of this Kind, Mr. *Petit* tells us, that he knew excellent Effects produced by thick Compreſſes wet in aromatic Spirit of Wine, mix'd with Alum-powder, and the Whites of Eggs, apply'd to a reduced Femur, and ſecured by proper Bandage: And, without removing the Dreſſings, he frequently each Day moiſten'd the Compreſſes and Bandage with the ſame Liquor. *Galen*, in *Comment.* 4. in *Hippocrat. de Artic.* tells us, that he twice cured a Luxation of the Femur produced by this Cauſe; but ſays, that the Joint muſt be long covered with drying Medicines, in order to remove the exceſſive Humidity of the Ligaments. *Hippocrates* thought the Cure of ſuch Luxations ſo difficult, that he had recourſe to the actual Cautery for that Purpoſe: As he ſaw many diſabled by Luxations of the Humerus, and knew none who had a proper Method of curing them, he at large deſcribes one, which, tho' by him confined to Luxations of the Humerus, into the Cavity of the Arm-pit, yet may be attempted in other Luxations of that Articulation.

The whole Method of Cure ſeems to conſiſt in cauterizing the Skin, and Membrana adipoſa, in that Part to which the Head of the Bone ſlipt, that, by means of the Cicatrices of the healed Ulcers, the Integuments may be ſo corrugated and hardened, as not to be eaſily extended afterwards; by which the Head of the Bone will be kept from ſlipping that way. Elevating the Arm a little, (for, unleſs it was rais'd, Acceſs could not be had to the Arm-pit; and, if it was too much elevated, the tenſe Skin could not be laid hold on) he orders the lax Skin, and Membrana adipoſa, to be ſo raiſed with the Fingers, that the Integuments may be ſeparated as much as poſſible from the Glands, Nerves, and large Blood-veſſels.

Then he orders an Iron, not too thick or large, but oblong, to be paſſed thro' the Skin, thus rais'd, as quickly as poſſible; for which Purpoſe he adviſes the Iron to be ignited ſo, as to become pellucid [χρῆ δὲ διαφάνεσι καίειν]. Then, whilſt the Skin is yet elevated, he orders a ſmall Spatula [σπαλεστρεῶ] to be paſſed thro' the Perforation, and the Skin to be let go. Then, in the Middle, between the two Perforations, a ſmall red-hot Iron is to be paſs'd through the Integuments, till it reaches the ſubjacent Spatula: By this means three different Parts may be cauteriz'd, without any Danger of injuring the Parts lying under the Integuments: But, in the Cure, the Eſchars will be ſeparated, and the Integuments again united. But, in conſequence of the Loſs of Subſtance produced by the Cautery, 'tis obvious, that the Cicatrices will be corrugated and hard. For this Reaſon he ordered, that through the whole Courſe of the Cure the Arm ſhould be litted no higher, than the Cure of the Ulcers rendered neceſſary; for, ſince by this means the Integuments are not diſtended, the Margins of the Ulcers will grow more firmly to each other. And, after the Ulcers were cured, he ordered the Arm, for a long time, to be ty'd to the Side, with a View to render the Cicatrices more firm, and to contract that Space into which the Head of the Humerus uſed to fall down. He alſo ſpecify'd two other Parts, in which the Uſe of the actual Cautery might be beneficial in this Caſe; that is, upon both Sides of the Head of the Os Humeri, between this and the Tendons of the pectoral Muſcle, and the Latiſſimus Dorſi, which are the Cords, on each Side, that form the Cavity of the Axilla.

Doctor *Vanſweiten* informs us, that he knew this Method of cauterizing try'd by a Quack, for the Cure of Hernias, after the Reduction of the Viſcera, becauſe he imagin'd, that the Integuments contracted by a profound Cicatrix would not be afterwards eaſily extended. *Van Swieten in Boerh. Aph.*

When a Bone is removed, in ſuch a manner, out of its natural Articulation, as to have its Function and Uſe deſtroy'd, that Bone is ſaid to be luxated or diſlocated. Thus, when the Head of the Humerus ſlips, or is by any external Violence forced, out of the Glenoide Cavity of the Scapula, or the Os Femoris out of the Acetabulum, it is term'd a Luxation, or Diſlocation. This Accident, therefore, can properly happen only to Bones which have moveable Joints or Articulations; though, in a leſs accurate Manner of ſpeaking, it is called a Luxation, when the Bones of the Noſe, or the Epiphyſes in Children, ſeparate, and thence loſe their natural Uſes.

Thoſe who would be well verſed in the Knowledge and Cure of Diſlocations, ſhould have a very diſtinct Idea of the Figure of all the Articulations, with their Ligaments and Muſcles: And this may be acquired by an Intimacy with Books of Anaromy, but much better by a frequent and diligent Inſpection into Skeletons, and recent Bodies; for the latter will furniſh us with the Ligaments and Cartilages in their natural Situations, which are not to be found in Skeletons.

Luxations are divided into Perfect and Imperfect. In the Imperfect, the Bones are removed in Part only, yet diſqualified for performing their proper Office: Some call this a Subluxation, or Diſtortion. But, in the perfect Luxation, the moveable Bones are entirely diſplaced from their Juncture with each other, as when the Humerus, or Femur, are removed quite out of their reſpective Sinuſes. In either of theſe the Bone may ſlip out, either internally or externally, behind or before, upwards or downwards. Another Diviſion of Luxations is, into ſimple and compound: The latter is attended with a Wound, Fracture, Weakneſs, and Reſolution of the Ligaments, Contuſion, or violent Inflammation; the former is free from any of theſe Symptoms. Laſtly, they are Recent, or of long Standing. It is to be obſerved, that the more free and moveable the Articulation, the more eaſy it is to be diſlocated.

So much for the Diſorder in general. We ſhall now deſcribe each particular Kind, beginning with the Head, which is ſuppoſed to be luxated, 1. When the Bones of the Noſe are ſeparated. 2. When the lower Jaw is protruded forwards; for the Prominence of the Os Petroſum prevents it from being forced backward. 3. When the Head, with the ſuperior Vertebræ of the Neck, is diſtorted. Laſtly, and which has frequently occurred to Phyſicians, when the Bones of the Cranium are divided from each other by Pain, a Fever, or an Hydrocephalus.

The Vertebræ which compoſe the Spine, are ſeldom perfectly luxated. But the Vertebræ of the Neck, being ſmall, and very moveable, are more ſubject to Luxation, than thoſe of the Breaſt or Back, which are larger, and more ſtrongly connected together; whilſt thoſe of the Loins are, again, more ſubject to be luxated than thoſe of the Back, becauſe they are more moveable and ſmooth, are deſtitute of thoſe Sinuſes with which the Vertebræ of the Back are furniſh'd, and have a thicker Cartilage interpoſed betwixt each. Laſtly, the Os Coccygis is ſometimes protruded outwards by a difficult Birth, and ſometimes repreſſed inwards by a Fall: By which means it compreſſes the Rectum, and excites many troubleſome Complaints.

As the Bones of the Breaſt are various, they may be variouſly luxated. Thus the Ribs may, by a violent Fall or Blow, be diſplaced, and forced into the Thorax, to the great Prejudice of the Motion of the Breaſt and Lungs. Sometimes the Xyphoide Cartilage may be depreſſed by Violence, and injure the Stomach. The Clavicles, alſo, may be removed out of the Sinus of the Scapula; or, what is more common, out of the Sternum: By which Accident the Arm is looſened, and its Motion obſtructed.

The Os Humeri is the moſt ſubject to Diſlocation, of any Bone, partly from the Shallowneſs of the Glenoide Cavity, and partly from the Freedom of its Motion. It may ſlip out either before, behind, or downwards, but never upwards, unleſs the Acromion is fractured; for that keeps down its Head very firmly.

Though the Cubit is ſubject to different Luxations, it ſeldom undergoes any without extraordinary Violence; and then it is generally imperfect, becauſe it is defended, both externally and internally, by a large Articulation, and ſhort Ligaments, while the Proceſs of the Olecranium prevents it from being diſlocated forwards. However, it eaſily and frequently ſlips out backwards.

The Wriſt is very ſeldom removed from the Bones of the Cubit, and, when it is, the Diſlocation is generally imperfect, from the Shortneſs and Strength of its Ligaments. But, if this Accident happens, it is rather anteriorly or poſteriorly, than internally or externally; for there is a bony Protuberance on each Side of the Carpus, where it is articulated to the Radius and Ulna, which defends it from a lateral Diſlocation. The Bones of the Wriſt are ſometimes ſubluxated, or diſtorted from each other, which uſually produces a Diſtortion and Stiffneſs of the Hand: So may the Bones of the Fingers be diſplaced, but they are more readily reduced and cured.

In the lower Extremities, we will firſt conſider the Luxation of the Thigh. This may be upwards, downwards, forwards, or backwards; and each of theſe Ways may be diſtinguiſhed from the reſt, by the different Figure about the Articulation, and the Length of the Limb. We muſt obſerve once more, that the Head of this Bone is not ſo often forced out of the Acetabulum by external Violence, as the Generality of Surgeons have imagined. For the Moderns, contrary to the Opinion of their Predeceſſors, generally find the Neck of the Thigh-bone fractured; which is not to be wondered at, ſince the Head is received into ſo deep a Cavity, and ſecured by ſuch ſtrong Ligaments, that it cannot be diſplaced in a dead Subject, by the moſt robuſt Man; and the Neck of this Bone is, at the ſame time, very ſlender and brittle, ſo that a much leſs Force is required to break it, than to diſplace the Head. Probably the Thickneſs of the Muſcles about this Articulation, as it prevented a Fracture of the Neck from being diſtinguiſhed from a Luxation of the Head of the Thigh-bone, gave Riſe to the Miſtake of former Surgeons, relative to this Subject.

From hence we may plainly find the Reaſon of the ill Succeſs attending the Antients, in their Reduction of this imaginary Luxation; nor can we be at a Loſs to know, why they invented ſo many Machines for the Extenſion of this Limb, by the Uſe of which, as it was no Diſlocation, but a Fracture, they excited violent Pains, Convulſions, Inflammations, Abſceſſes, and other dangerous Symptoms; whilſt nothing is more certain, than that this Bone is very rarely luxated by any external Force; for it is ſcarce poſſible the Head ſhould ſlip out of the Acetabulum, unleſs the Ligaments are previouſly relaxed by a Collection of noxious Humours near the Joint, which Children are more ſubject to than Adults.

Ignorant Surgeons very frequently miſtake a Diſlocation of the Patella for that of the Joint at the Knee, and, conſequently, torment the Patient with ſuperfluous Extenſions; whereas, to one ſkilled in Anatomy, both the Sight and Touch will be ſufficient Guides: For the Patella is always luxated, either internally or externally; but the Knee itſelf, tho' it may be forced either Way, ſeldom ſuffers a perfect Luxation, becauſe the Articulation is deep, and the Ligaments ſtrong.

The Foot may be thruſt out of the Sinus of the Tibia, either before or behind; but it is defended laterally by the Ancles, and cannot be diſplaced there, unleſs they are fractured at the ſame time. We read in ſome Authors, that the Fibula may be ſeparated from the Tibia by ſome extraordinary Violence, and the Foot at the ſame time turned outwards. The Bones of the Tarſus are connected by very firm Ligaments, and cannot be eaſily diſlocated; but, when they are, it is followed with exquiſite Pains, Convulſions, Inflammations, and Sphacelus, unleſs timely relieved. Laſtly, The Toes are ſeldom luxated; but when they are, they muſt be treated like the Fingers.

The Cauſes of Luxations are either external, as Falls, Blows, Leaps, Strugglings, and Diſtentions; or internal, as preternatural

Collections

Collections of morbid Humours in the Joints, which relax the Ligaments to that Degree, that the Heads of the Bones slip out spontaneously; or from a very inconsiderable Violence, as rising up, walking, or leaping. The weakest Men are most subject to this; for which Reason the Bones of Infants are very easily distorted, and divided from their Epiphyses by a Fall, or rough Handling. It is remarkable, that *Zwinger* knew a lame Woman, who bore three lame Sons. *Theat. Pract. P. 2. pag.* 109.

The Signs of Luxations are many and various: 1. A Deprivation of Motion in the Joint. 2. A Change of the Figure, and natural Position. 3. Unusual Cavities and Tumors; for there will always be a Tumor on that Side where the Bone is forced; and an Hollowness on that from whence it was forced. 4. A different Length of the Limb, which is shorter, when the Bone is protruded upwards; and longer, when it is pushed downwards. Lastly, The Pains arising from a violent Distension of the Ligaments; for, unless the Luxation is immediately reduced, there must necessarily follow Convulsions, Inflammations, Sphacelus, and Death itself; though, when it proceeds from internal Causes, scarce any Uneasiness attends it. In the mean time, to make a more ready Discovery of Dislocations, it will be proper to observe this Rule, that, when the Head of any Bone is removed out of its Place, the other End will be distorted in an opposite Direction; for, when the superior Extremity of a Bone is forced outwards, the inferior will incline inwards; and, when the superior Part is forced inwards, the inferior will be distorted outwards.

Tho' these general Signs of Luxations may be sufficient for an able Surgeon, yet we ought not to be ignorant of those peculiar to some only: Thus, in a Dislocation of the lower Jaw, the Mouth cannot be shut. When a Vertebra is displaced, the Parts below it are deprived of Motion and Sense; for, by every such Luxation, the Spinal Marrow, which is transmitted through their Middle, is compressed or wounded, and the Course of the Spirits through that, and its Nerves, to the lower Parts, disturbed, or absolutely intercepted. In a Luxation of a Rib, the Breath is drawn with Difficulty, and other bad Symptoms appear. But each particular Disorder may be deduced from the Action of each particular Part.

In an imperfect Luxation from external Violence, the Patient feels most acute Pains, and the Limb becomes immoveable, without any great Change in its Figure or Position; though, upon a more accurate Examination, there may be generally found some little Inequality of the Articulation or Limb.

Luxations from internal Causes may be known by these Signs: 1. The Limb is so relaxed, that it may be easily turned about in any Direction. 2. There is a Cavity about the Joint, and an Hollowness between the Bones, which may be felt with the Fingers. 3. The dislocated Bone may be easily replaced, but soon slips out again spontaneously, because of the Weakness of the Ligaments and Muscles. 4. It is longer than the sound Limb. 5. No Pain, Inflammation, or Convulsion, attends a Luxation of this Kind. Lastly, This generally happens to the upper Part of the Femur or Humerus, and sometimes in the Articulation of the Foot with the Tibia.

The Surgeon, who would be well versed in the Prognostics relative to Luxations, should make himself perfectly acquainted with the Structure of the Part affected, and the Causes and other Circumstances of the Disorder: For Luxations which are imperfect and simple, are cured with much more Ease than those which are perfect, or complicated with Wounds, Inflammations, Fractures, and Convulsions; and the more the Bones are removed from each other, and the worse the Accidents attending, so much the more difficult is the Cure; so that they cannot sometimes be reduced, by reason of a violent Inflammation and Fracture; nor, after Reduction, be retained in their proper Place, by reason of a Weakness in the Ligaments: The last is most usual in Luxations from internal Causes; and, when it happens in young Subjects, the lower Part of the Limb generally wastes, and becomes flaccid and weak. Recent Luxations are more easily cured than those of long Standing; for, in the latter, Tumors, Inflammations, and a copious Collection of Humours, weaken the Ligaments, and fill up the Cavity of the Articulation, so that the Head cannot be replaced in its Socket, but sometimes lodges in a new external Part of its Sinus; as when the Head of the Thigh-bone adheres and grows to the external Part of the Os Coxæ, or of the Acetabulum, the Cavity itself being filled up with some preternatural tenacious Juice.

If a Bone is dislocated in Infants, or an Epiphysis is separated from it, the Case is very dangerous: For, 1. The tender, cartilaginous Head of the Bone is so distorted, that its natural Figure can seldom, if ever, be restored. 2. The Accident is too often concealed by Servants and Nurses; and, consequently, the Cure is not attempted, till it is too late. 3. The Surgeon, not apprised of the true Cause, may treat it as a Defluxion of Humours on the Joint, whilst the tender and cartilaginous Parts grow distorted, and in a very unnatural Position. Lastly, The Ignorance of the Surgeon himself may mislead him in the Reduction; for a violent Distention of those soft Bones, and their Epiphyses, will add Misfortune to Misfortune.

The Cure of Luxations.

The Method of treating Luxations is very near the same with that of Fractures; for in both the whole Design is, 1. To replace the Bone by Extension and Reduction. 2. To retain it in its natural Position. 3. To prevent the consequent Symptoms. The Reduction should be performed, when the Patient is placed on a Stool, Table, Bed, or the Ground, as the Surgeon shall judge most convenient; tho' Luxations of the Jaw, Clavicle, Cubit, or Hand, should be reduced on a Chair; those of the Vertebræ or Thigh, on a Table; those of the Legs or Feet, on a Bed; and, lastly, those of the Humeri, or Vertebræ of the Neck, on a Floor.

The Extension is perform'd much after the same manner, as in Fractures: An Assistant must distend the inferior Part of the Bone, till its Head corresponds with its Sinus. If this cannot be accomplished by the Hands, a Napkin will generally be sufficient to make a due Extension: The Machines, therefore, represented by *Oribasius*, *Paré*, *Scultetus*, and others, are very seldom necessary, but only terrify and discourage the Patient.

When the Limb is sufficiently distended, the Surgeon must compress the Articulation gently with his Fingers or Hands, till he finds the luxated Bone replaced.

It is an Indication of an accurate Reduction, if any Noise or Cracking is heard; if the affected Limb is of an equal Length with the sound; if the Pains abate; or, lastly, if it is restored to its former Motion.

Luxations cannot always be immediately reduced; for, when they are attended with Inflammations, Hæmorrhages, or Tumors, these Impediments must be removed by proper Remedies; and if the Limb be at the same time fractured, before the Extension is attempted, the Fracture ought to be united with a strong Callus; that is, if the Fracture happens to be so near the Joint, that the Reduction cannot be made without disturbing of it; but, if you have room to fix a Laque between the Fracture and the Joint, when the Inflammation or Tumor subsides, it would be proper to attempt the Reduction.

When the dislocated Bones are properly reduced, the Surgeon's next Care is to retain them in their proper Situation; and this may be compassed with less Difficulty than in fractured Bones; for Luxations seldom require any strict Bandage, or long Rest: Thus Luxations of the upper Extremities are generally held firm enough, after Reduction, by their own proper Ligaments and Muscles; and Inactivity is so far from being requisite, that the Limb ought sometimes to be gently moved and inflected, to prevent a Stiffness: But, when this happens in the lower Extremities, the Patient should rest some Days in his Bed, and not move the Limb, or attempt to rise and walk, till the Joint has recovered its usual Strength; and then it may be gently moved at first, and afterwards the Patient may rise and walk.

In a Luxation of long Standing, likewise, a Bandage and Rest are altogether necessary, till the former Vigour of the Ligaments is restored; though here, without a gentle Motion and Flexion, there will be Danger of a Stiffness and Concretion of the Joint. In the mean time, it will be proper to bathe the Bandages plentifully with Spirits of Wine, Hungary-water, or Spiritus Matricalis, or some other warm strengthening Spirit, which will render the Ligaments very firm and strong. The Bandages should be neither too tight, nor too lax. The Application of Plaisters, mean time, is rather pernicious than serviceable.

The Treatment of the Symptoms attending Dislocations, as Inflammations, Tumors, Pains, Convulsions, and Hæmorrhages, is the same as that directed under the same Circumstances, in Fractures and Wounds; but, after Reduction, they generally disappear insensibly. When the Ligaments are very much debilitated, it is extremely serviceable, after having rubbed the Part well with warm Linen, to foment it with burnt rectified Spirit of Wine, and, after that, a Quantity of some strengthening Spirit, as directed in Fractures, applying a proper Bandage. A Continuance of Pain, after replacing the Luxation, gives some Reason to dread a concomitant Fracture; and if, upon Examination, this proves to be the Case, the Surgeon must reduce it. A slight Fever may be cured by Bleeding, cooling Medicines, and a thin Diet. A Gangrene must be treated not only with the Medicines already recommended, but, also, with Fomentations, and resolvent Cataplasms, securing them with the Eighteen-headed Bandage. For the Cure of other Symptoms, proceed as directed for these under the Article Fractura. If a Luxation is attended with a Wound, the Eighteen-headed Bandage is proper. An Abscess should be opened, as soon as it is ripe; for otherwise the Matter will corrode the Articulation or Bone, and produce a dangerous Fistula, which can be remedied only by Amputation. When the Bones are separated with such Violence, that the adjacent Ligaments, Tendons, and Skin, are broken and destroyed, the Case is then, according to *Hippocrates*, absolutely incurable; and they will be so far from uniting firmly, that an Attempt to reduce them will excite Convulsions, and a Gangrene: For the Preservation of Life, therefore, the Limb should be immediately amputated. When a Luxation is attended with

a Fracture

a Fracture, the Luxation ſhould be reduced firſt, if this is poſſible, and afterwards the Fracture; but, if this cannot be done, proceed as directed under the Article FRACTURA. Laſtly, When any Limb becomes rigid, it muſt be treated in the manner mentioned under the laſt quoted Article.

Of Luxations in particular.

Luxations in the Head.

A Separation of the Bones of the Cranium, either from an Hydrocephalus in Infants, or the Head-ach and Fevers in Adults, is by ſome termed a Luxation of the Head. For the Treatment of the firſt, ſee the Article HYDROCEPHALUS; and, as the other very ſeldom happens, it ſeems only curable by Compreſſion and Bandage.

Luxations of the Noſe.

A Luxation of the Noſe is diſcoverable, 1. By the Eye, when we ſee the Figure of the Noſe deformed: 2. By the Touch: Or, 3. By the Ear, when we hear the Patient draw his Breath with Difficulty. But this is an uncommon Accident; for the Bones of the Noſe are ſo firmly connected to the Os Frontis, and other Bones, that they will ſooner break, than ſeparate.

With reſpect to the Cure, the Patient muſt be ſeated immediately on an high Stool, and an Aſſiſtant behind him muſt hold his Head firm, whilſt the Surgeon with one Hand introduces a Probe, Gooſe-quill, or proper Piece of Stick, to raiſe up the ſeparated Parts; and with the other directs them to their proper Places. After this, a ſticking Plaiſter will complete the Cure. If it is attended with a Wound, it muſt be managed according to our Directions for a Fracture of the Noſe, under the Article FRACTURA.

Of a Luxation of the lower Jaw.

The lower Jaw is very ſeldom luxated, becauſe of the Strength of its Ligaments and Muſcles, which retain it in the Sinus of the inferior Part of the Cranium; but, when it does happen, it may be on one Side, or both. The moſt uſual Cauſe is too great Oſcitation, tho' it ſometimes proceeds from a violent Fall or Blow. If the Diſlocation is on both Sides, the Chin inclines downward, and the Jaw is forced forward; if on one, the Chin inclines to the oppoſite Side; but the Proceſſes of the Bones of the Cranium will not ſuffer it to be luxated backwards.

A Diſtortion of the Chin towards one Side ſhews, that the lower Jaw is luxated on the oppoſite Side; for the Part to which the Chin inclines, is ſound; but that from whence it recedes, is diſlocated: The latter, too, gapes wider, and diſables the Patient from ſhutting his Mouth, and chewing with his Teeth, as the lower Range of them projects beyond the upper. When the Luxation is on both Sides, the Mouth not only gapes wide, but the Chin is preſſed forwards; and, of conſequence, the Patient can neither ſhut his Mouth, ſpeak diſtinctly, nor ſwallow eaſily.

A Luxation on one Side may be remedied without any great Difficulty; but, when both are diſlocated, and not immediately replaced, dangerous Symptoms, as Pains, Inflammations, Convulſions, Fevers, Vomitings, and, at laſt, according to *Hippocrates*, Death itſelf, enſue; and this Danger is in proportion to the Violence of the Extenſion of the Nerves, Tendons, and Ligaments; tho' the timely Aſſiſtance of an expert Surgeon will overcome all theſe Difficulties.

The Patient muſt be ſeated on a low Chair, and an Aſſiſtant hold back his Head firm againſt his own Breaſt; then the Surgeon muſt put both his Thumbs, wrapped in Linen, that they may not ſlip, or be hurt, as far as he can, into his Mouth, and apply the reſt of his Fingers externally. When he has faſt Hold of the Jaw, he ſhould preſs it, firſt, downwards; then, backwards; and laſtly, upwards: All this, performed in an Inſtant, will complete the Reduction. Let him always withdraw his Fingers out with the utmoſt Expedition, leſt they ſhould be compreſſed, bit, or bruiſed.

If the Jaw is diſlocated on one Side, he muſt proceed in the ſame manner; only the affected Part muſt be preſſed more ſtrongly downwards, and backwards, than the other. Some are for performing this Cure by a ſevere Blow on the oppoſite Cheek. Bandages ſeem abſolutely unneceſſary, except the Luxation is of long Standing; and then the Four-headed Bandage, with ſome ſtrengthening Spirit, may be applied for ſeveral Days, and laid aſide, whilſt the Patient eats.

Luxations of the Vertebræ.

Luxations of the Spina Dorſi, or Vertebræ, from their Structure and Articulation, muſt be imperfect, unleſs attended with a Fracture, and an Hurt or Laceration of the Spinal Marrow, which threatens inſtant Death. And indeed the imperfect Luxations themſelves are extremely dangerous, and happen either between the two ſuperior Vertebræ of the Neck and the Head, or between the other Vertebræ.

A Luxation between the Head and ſuperior Vertebra is immediate Death: For the tender Medulla, which is in the Spine, and connected to the Brain, the Brain itſelf, and Nerves under the Occiput, are too much diſtended, compreſſed, or lacerated. The Proceſſes of the Head generally ſlip out of their two Sinuſes, when a Perſon falls headlong from an high Place, a Ladder, or an Horſe, or when he receives a violent Blow upon his Neck; and he is vulgarly ſaid to have broke his Neck, though it is ſeldom any more than a Luxation: Yet there may be a real Fracture of the Vertebræ of the Neck. If a Man has any Life remaining after ſuch a Luxation, which ſeldom happens, his Head is diſtorted, and his Chin fixed to his Breaſt, which prevents his ſwallowing, ſpeaking, or moving the Parts below his Neck. The Compreſſure or Hurt of the Medulla, therefore, without ſpeedy Help, cauſes preſent Death.

The Patient muſt be immediately laid on the Ground or Floor, in ſuch a manner as the Surgeon may put his Knees on the Patient's Shoulders, and then make a proper Extenſion, gently turning the Head from Side to Side, till a Noiſe, or the natural Poſition of the Neck, or a Remiſſion of the Symptoms, convince him that the Luxation is reduced. Here the Knees hold the Patient firm, while the Hands perform the Extenſion and Reduction. Theſe are *Heiſter*'s Directions; but I ſhould think the beſt Way is to lay the Patient flat, and the Surgeon to ſit down, and place his Feet on the Patient's Shoulders, and ſo extend.

The Patient may be ſeated on the Ground, and an Aſſiſtant keep down his Shoulders firmly, while the Surgeon takes Hold under his Ears; pulls up his Head ſtrongly, but cautiouſly, inclining it to each Side, till the above-mentioned Symptoms ſhew it to be replaced. The other Vertebræ of the Neck may be treated in the ſame manner.

Petit has contrived another Method, though he does not ſay he ever practiſed it: He forms two Strings, with a large Aperture about their Middle, (ſee *Tab.* XXXI. *Fig.* 1, 2.), one of which (*Fig.* 1.) he throws over the Patient, as he lies on his Back, in ſuch a manner that his Head is tranſmitted through the Opening A B, the Part A comes under his Chin, B under his Occiput, the two Extremities C C are extended over his Ears, and the Extenſion is perform'd by D E. The other (*Fig.* 2.) he recommends to keep the Patient firm; through the Aperture F he tranſmits the Head, G comes down the Back, H over the Breaſt, and the two Ends I I are joined between the Thighs, which prevents the Body from yielding to the Extenſion of the former. When the Head and Neck are ſufficiently extended by the oppoſite Direction of theſe Slings, the Surgeon endeavours to reſtore the Luxation. But, to confeſs the Truth, I muſt prefer the foregoing Methods; partly, becauſe they are more ſimple; and partly, becauſe they are more expeditious; for while this Machinery is fetching, and adapting, the Patient may be dead. *Petit* propoſes no other Method through his whole Book, nor does he ſubſtitute any thing in the room of theſe, when they may be wanting, though, I think, Napkins or Pieces of Linen, two or three Hands broad, perforated in the ſame manner, will anſwer the ſame Purpoſe.

After Reduction, the diſtended Ligaments may be reſtored to their former Strength, and a Tumor prevented, by bathing with Hungary-water and Camphire, Opodeldoc, Aqua Anhaltina, or ſome other ſtrengthening Spirit, applied warm, by means of Compreſſes impregnated therewith. Reſt is proper, till the Neck becomes ſufficiently ſtrong. The only Uſe of Bandages is to retain the Compreſſes.

The Vertebræ of the Back are ſeldom removed quite out of their Places, without a Fracture, but generally adhere to thoſe next them. Theſe Luxations, therefore, are, for the moſt part imperfect; for only their upper and lower Apophyſes, and ſometimes only one of them, are diſplaced; ſometimes only one Vertebra, ſometimes more, are luxated; though the intermediate Vertebræ, betwixt two that are luxated, are reckon'd in the Number of thoſe luxated, tho' they are really in their proper Situations. Thus, when the uppermoſt Vertebra of the Loins is divided from the loweſt of the Back, and the loweſt Vertebræ of the Loins from the Os Sacrum, we commonly ſay, that five Vertebræ are diſlocated, when, ſtrictly ſpeaking, the two exterior only are out of their Places.

The Vertebræ of the Spine cannot be luxated without a very extraordinary Violence; for they are not only united cloſely by their Apophyſes, but very firmly connected by exceeding ſtrong Ligaments and Cartilages: For this Reaſon, neither a violent Flexure of the Back, nor a Fall or Blow on it, will remove them, unleſs the Cartilages or Ligaments are broken; but rather join them more ſtrongly; though, when this happens, it lacerates the Vertebræ, and ſpinal Marrow, and quickly kills the Patient. When a Vertebra, therefore, is luxated without a Fracture, the Body muſt incline much forwards, or to one Side; for, upon theſe Occaſions, the ſuperior Proceſſes recede from the inferior, and, conſequently, they may be removed with more Eaſe from each other: When the Left Side is affected, the Patient bends towards the Right, and *vice verſâ*.

The common Signs of Luxations in the Spina of the Back are the following: The Back is crooked and unequal; the Patient can neither ſtand nor walk; and his whole Body ſeems paralytic. All the Parts below the Luxation are inſenſible and immoveable; the Excrements and Urine cannot be diſcharged, or ſometimes they are emitted involuntarily; the lower Parts die gradually, and, at length, Death itſelf enſues. But theſe Symptoms are proportionable to the Violence of the Diſorder.

The Number of the luxated Vertebræ is diſcoverable by the preternatural Incurvation; for, when one only is diſplaced, the Incurvation forms a kind of Angle. If the Apophyſes of the Vertebræ are moved forward, the Spina Dorſi will incline the ſame Way, and the Patient ſuffer exquiſite Pain, by bending his Body, which will be leſs, when he lies on his Back: If the Vertebra is forced to the Right Side, the Body will incline towards the Left, and be eaſier bent towards the Right, than the Left Side; and the contrary, if the Vertebræ are forced towards the Left Side.

As to the Prognoſtic in theſe Luxations, they are all extremely dangerous, both on the Account of the Injury the ſpinal Marrow may have received, and, alſo, becauſe of the Difficulty of reducing the Vertebræ; and the more the latter are ſeparated, the more will the former be injured, the conſequent Symptoms worſe, and the Patient's Death more certain. The Danger, likewiſe, is greater, the nearer the diſlocated Vertebræ are to the Head; for a Wound of the ſpinal Marrow in thoſe Parts is both ſooneſt inflicted, and attended with the worſt Conſequences. Luxations, therefore, in the Neck, are more pernicious than thoſe in the Back; and thoſe in the Back more dangerous than thoſe in the Loins. And, what may ſeem wonderful, the Symptoms are milder, where ſeveral Vertebræ are luxated, than where one alone is out of its Place; and the Caſe is leſs dangerous, when both the Apophyſes are diſplaced; for, when this happens only to one, the ſpinal Marrow is more injured; but, in ſlight Luxations, the Vertebræ may be more eaſily reduced, and the Danger is not ſo great.

Since the Inſtruments uſed by the Antients appear to have been rather injurious than ſerviceable, the following ſeems the moſt ſuitable Method for reducing theſe Luxations. When both the Apophyſes of the Vertebræ are diſlocated, the Patient muſt be laid on his Belly croſs a Tub, Drum, or ſome other gibbous Body; then two Aſſiſtants are to depreſs both Ends of the luxated Spine, on each Side, which elevates, and gradually extends, the Vertebræ, the Spina Dorſi being thus bent in form of an Arch: After this the Surgeon preſſes down the inferior diſlocated and prominent Vertebra, and, at the ſame Inſtant, expeditiouſly puſhes the ſuperior Part of the Body upwards. If the firſt Attempt fails, it ſhould be repeated two or three times. *Petit* lays a thick Cloth rolled cylindrically acroſs the Bed, and, placing the Patient over it, treats him in the preceding Manner. When the Left *Apophyſis* only is diſplaced, after the Patient is laid in the ſame Poſture, one Aſſiſtant may depreſs the Left Coxa, and the other the Right Humerus, provided the *Apophyſis* on the Left Side is luxated; but the Reverſe, if the Injury is on the other Side. This certainly is the propereſt Method, if there is really any, for reducing the Luxations of the ſpinal Vertebræ. For the reſt, Compreſſes, moiſtened with Spirit of Wine, or Spirit of Wine camphorated and warm, ſhould be applied, with the Napkin and Scapulary: The Patient muſt be laid in a ſoft, even Bed: Bleeding, and bathing the weak Parts with warm ſtrengthening Spirits, will be of Service; the Bandage muſt be ſeldom removed, and the uſual Symptoms muſt be palliated, till the Cure is completed.

Luxations of the Os Coccygis.

The Os Coccygis may be forced internally by a violent Fall or Blow, and externally by a difficult Birth: This Accident is accompanied with acute Pains in the lower Part of the Spine, Inflammations, and Suppurations of the Rectum, and a Suppreſſion of the Fæces. Theſe Symptoms, with the Sight and Touch, will diſcover this Luxation, which may be eaſily reduced by an expert Surgeon; for the Thumb alone, by Preſſure, will replace an external Diſlocation. After this may be applied Compreſſes, dipt in warm Wine, or its Spirit, narrow below, and broad above, to fill up the Sinus of the Podex: Theſe are to be ſecured by the T Bandage (*Tab.* XXIII. *Fig. b*): But the Part between the Thighs ſhould be ſlit, and ſo faſtened, that the Patient may go to Stool, without looſening it; and thus a Relapſe may be prevented.

For an internal Luxation of the Os Coccygis, the fore Finger, being dipt in Oil, after paring the Nail, ſhould be introduced, as high as poſſible, into the Anus, to thruſt outwards the depreſſed Bone; whilſt the other Fingers, applied externally, guide it to its proper Place. The Patient ſhould reſt for ſome time on his Bed, and, when he riſes, ſit in a Chair, with a Hole in the Bottom, that the affected Part may not be compreſſed or diſturbed.

Luxations of the Ribs.

The Ribs are ſeldom diſlocated; but an external Violence will ſometimes remove them downwards, upwards, or inwards; for the Proceſſes of the Vertebræ, with the thick, ſtrong, adjacent Muſcles, prevent a Luxation outwards. If the Ribs are forced inwards, both the Pleura, and the internal Parts of the Breaſt, are injured; from whence proceed excruciating Pains, Inflammations, Difficulty of Breathing, Coughs, Ulcers, Immobility of the Body, and other ſuch dangerous Symptoms. Theſe, with the external Form and Poſition of the Side, evidently diſcover this Misfortune.

The Reduction ſhould be undertaken immediately; and, when the Diſlocation is upwards or downwards, the Patient muſt be laid prone on a Table, and the Rib replaced by the Hands; or the Arm of the affected Side may be ſuſpended over a Door or Ladder; and, while the Ribs are thus diſtended, the luxated Heads may be reduced.

Internal Luxations of the Ribs are not eaſily reducible, becauſe neither the Hands, nor any other Inſtrument, can be applied to elevate them; though I do not think them abſolutely incurable: For, by laying the Patient on his Belly, either upon a Table, or over ſome gibbous or cylindric Body, moving the anterior Part of the Rib towards the Back, and ſhaking it ſometimes, the Head may probably recover its former Situation. If this fails, and ſpeedy Aſſiſtance is neceſſary, recourſe muſt be had to the ſevere Method propoſed for fractured Ribs under the Article Fractura. In the mean time, where the Symptoms are not very bad, nor the Heads of the Ribs much removed from their proper Situations, we may forbear the Inciſion of the Fleſh, and a violent Compulſion of the Ribs, as luxated Ribs have often remained ſo without any Danger. The Part muſt be dreſſed with Compreſſes dipt in warm Spirit of Wine, or Spirit of Wine camphorated; and theſe muſt be ſecured by the Napkin and Scapulary.

For Luxations of the Clavicles, ſee Clavicula.

Luxations of the Humerus.

The Humerus is the moſt ſubject of any Bone to a Diſlocation; becauſe its Ligaments are lax, its Motion large, and the Glenoide Cavity of the Scapula but ſhallow. This Bone ſometimes ſlips out under the Axilla, forwards and backwards, even under the very Scapulæ; but very ſeldom directly downwards, and never upwards, unleſs the Acromion and Coracoide Proceſſes are fractured at the ſame time; for whilſt theſe, with the ſtrong Deltoide and Biceps Muſcles, remain entire, they keep down the Humerus, and ſtrongly reſiſt a Luxation upwards.

When the Humerus is luxated downwards, 1. There is a Cavity in the ſuperior Part, perceptible to the Finger, and a Tumor under the Arm-pit, becauſe the Head of the Bone is lodged there. 2. The Acromion, on account of the adjacent Sinus, is more prominent than ordinary. 3. That Arm is longer than the other; and, when it can be moved or extended, gives exquiſite Pain in lifting it up to the Mouth. When it is luxated forwards as well as downwards, there is the ſame Cavity under the Acromion; but the Head projects towards the Breaſt under the Axilla, and the Arm cannot be moved without acute Pains. Laſtly, when it is luxated backwards, the Cubit approaches the Præcordia, and the Head of the Bone is prominent on the Outſide of the Shoulder. The Arm cannot be extended, or even moved from the Breaſt, without great Agony. A Diſlocation forwards or inwards is the moſt dangerous, becauſe the luxated Head of the Humerus injures the great Arteries and Nerves of the Arm.

Recent Luxations of this Kind may be eaſily reduced, eſpecially if they are perpendicularly downward or backward, or the Arm retains its natural Length; but, if they happen inward, under the pectoral Muſcle, or the Arm is ſhorter, or the Diſorder of long Standing, or attended with Tumors, Inflammations, or a Fracture of the Acromion, the Limb cannot be reſtored to its former Vigour without great Difficulty. But, when the Head of the Humerus grows to the adjacent Parts, particularly under the Arm, it is reducible by no means whatever. The Reduction, likewiſe, is more difficult in ſtrong and fat Subjects, than in thoſe who are lean and weak.

As ſoon as the Luxation is diſcovered, the Patient ſhould be ſeated on the Floor, or a low Stool (ſee *Tab.* XXXI. *Fig.* 3.); one ſtrong Aſſiſtant B is to hold his Body firm, that he may not yield to the Extenſion; and another C to fix both his Hands a little above the Cubit, extending it ſtrongly and gradually: But, before the Extenſion, the Surgeon D ſhould ſuſpend a large Napkin, of a ſufficient Length, and tied in a Knot about his own Neck, in ſuch a manner, that the Knot may hang behind, and the Part E over his Breaſt; through this he ſhould tranſmit the Arm up to the Axilla, and, taking the Humerus in his Hands, order the Aſſiſtant to extend the Limb, while he elevates the Head of it with the Napkin, and directs it with his Hands into the Sinus of the Scapula. I would adviſe him to move the Humerus diſcretionally, in different Directions, according to the manner of the Luxation; for, by this means alone, I reduced three Diſlocations in one Month.

Though the preceding Method ſeems the moſt ready and commodious, it is not always ſufficient, eſpecially when the Patient is robuſt, or the Diſorder of long Standing: In theſe Caſes, therefore, it will be proper to ſubſtitute more Hands, applying a long Napkin, or the Belt of *Hildanus*, (ſee *Tab.* XXIX. *Fig.* 17.) to the Os Humeri, a little above the Cubit; and ordering

as many Perſons as are neceſſary, to extend the Limb. The Reſiſtance ought to be proportionably greater than the Extenſion. The Patient, therefore, ſhould be retained by two Aſſiſtants; and, when they are inſufficient, the Humerus ſhould be put through a perforated Piece of Linen up to the Scapula, one half coming over the Patient's Breaſt, the other behind the Back, and the Ends tied in a Knot. This is to be held by ſome Aſſiſtants, or faſtened to a Beam, or any other fixed Point, to ſecure the Patient from giving way. While this is doing, the Surgeon muſt very accurately elevate, agitate, and reſtore, the luxated Limb. When this will not make a ſufficient Extenſion, the Pulley (*Tab.* XXIX. *Fig.* 15.) will be proper to extend the Arm, as in a Fracture. See FRACTURA.

For the Method of reducing this Luxation by the Ambe, ſee AMBE.

There are many other Contrivances, both antient and modern, for this Purpoſe: The former are deſcribed and delineated by *Oribaſius*, *Paré*, *Gerſdorfius*, *Brunſwigius*, *Sculletus*, and others: The latter are publiſhed in the *Act. Erudit. Junken*, *Purman*, and *Petit*. And, though each Inventor prefers his own, there are *French* Surgeons, who pronounce them all unneceſſary, or more improper than the Ambe of *Hippocrates*. Others, with *Gouey*, eſteem all Machines, except the Hands, Napkins, or Slings, abſolutely unneceſſary.

However, ſince *Petit* has acquired ſo great a Character in his Profeſſion, it will not be amiſs to give a brief Deſcription of his Machine (ſee *Tab.* XXXI. *Fig.* 6.). *Petit* contrived a Machine to make an Extenſion, and a Reſiſtance, at the ſame time: With this View he made a Supporter or ſtrong Linen, or Fuſtian, a Foot long, and lined with Leather (ſee *Tab.* XXXI. *Fig.* 7.). He puts the Arm through the Aperture A, ſo that one End B comes over the Breaſt, the other C over the Back. He lets the Horns of the other Machine (*Fig.* 6. *a a*) into the Holes D D; and the other Extreme of *Fig.* 6. B is lodged upon the Ground. In this Machine there are ſeveral little Pullies C C, as in the Polyſpaſton, with the Rope *d d*; there is, beſides, a moveable Handle, by which the Pullies and Cords are ſtretched, and the Arm extended. To promote this Extenſion, he faſtens a peculiar Sling, (A A *Fig.* 8.) made of double and ſoft Leather, a little above the Cubit, having firſt pulled the Skin upwards: This he ſecures by a Silk Cord, three quarters of an Ell long, *b b*, ſew'd in a peculiar manner to the Leather, and faſtened with a Knot. To this Silk Cord he faſtens another *c d e*, by two moveable Loops *f f*, to which is joined the Cord *d d*, *Fig.* 6. which paſſes round the Pullies (*Fig.* 6.). After this Apparatus, he orders the Aſſiſtant to wind up the Rope by the Handle E, (*Fig.* 6.) which extends the Arm; and, at the ſame Inſtant, the Surgeon directs the Head of the Bone to its former Place, if it does not ſpontaneouſly recover it.

But, to ſpeak impartially, I think the Hands and Napkin, with ſtrong and prudent Aſſiſtants, are generally ſufficient, tho', if any one will uſe other Methods, let him chuſe that which extends the Limb ſufficiently, and ſtretches the Muſcles equally. Upon this Principle we may the better judge, whether the Ambe of *Hippocrates* be proper; or the more precarious Way of pulling and extending the Arm over a Door, Ladder, or Beam laid croſs the Shoulders of two ſtrong tall Aſſiſtants; or whether we ſhould order a Perſon to ſit down, and raiſe himſelf up expeditiouſly, taking the Patient's Arm over his own Shoulder; or, placing the Patient on the Ground, put a Foot, or Ancle, under his Humerus, and pull it up with Violence. But here the utmoſt Care is required to prevent a Contuſion or Rupture of the Muſcles, Nerves, Veins, and Arteries, by a too violent Extenſion and Reduction; for that ſuch Accidents are frequent, *Paré* and others teſtify. The Surgeon's Buſineſs, therefore, is, to order a ſtrong, but equable, Extenſion.

LUXATIONS OF THE CUBIT.

The Cubit conſiſts of two Bones, the Radius and Ulna, which are articulated by a Ginglymus. Theſe Bones are ſo connected, that the Ulna, or Cubit, being the largeſt Bone, and ſeated in the lower Part of the Arm, performs the whole Action of Flexion and Extenſion, but not without the Radius; ſo that the Radius always follows the Motion of the extended and inflected Ulna. On the contrary, the Radius will move internally or externally, with the Hand, without any Motion or Flexion of the Ulna. Both theſe Bones are ſo connected to the Os Humeri, that large Proceſſes are received into deep Cavities, and ſecured with very ſtrong Ligaments. Though the Cubit, therefore, may be luxated outward, inward, forward, or backward, it is ſeldom perfectly diſlocated, unleſs the Olecranon is fractured, or the Ligaments weakened by ſome extraordinary Violence.

If the Cubit is luxated backwards, which is moſt frequent, the Arm becomes crooked, and ſhorter, and cannot be extended; in the internal Part of the Flexure, the Humerus will be prominent; in the external, the Olecranon, with a large Cavity between both Bones. On the contrary, the Size of the Olecranon will ſcarcely admit of a Luxation of the Cubit forwards, unleſs that be fractured at the ſame time; but, when this is the Caſe, the Os Humeri will ſtick out behind, and the Ulna before, with a Sinus proportionable to the Degree of the Luxation. When the Luxation is external, the Tumor is ſo too, and *vice verſâ*. In a Word, unleſs the Ligaments and Muſcles of the Cubit are entirely broken, that Bone is incapable of ſuffering a perfect Diſlocation. But either of thoſe Accidents are diſcoverable to the Sight and Touch.

Since in violent Luxations of the Cubit the Ligaments and Tendons muſt be greatly ſtrained, the neceſſary Conſequence, without timely Relief, will be acute Pains, Tumors, Inflammations, Convulſions, Vomiting, Fevers, Gangrene, and Death itſelf, as *Paré* obſerves. And, to confeſs the Truth, in a violent Diſorder of this Kind, or one of long Standing, the Bone cannot be replaced without great Difficulty, by reaſon of the ſtrong Ligaments, and various Proceſſes. The ſlighter, however, the Luxation is, and the more recent, the leſs Difficulty there is in reducing it.

The Patient muſt be ſeated in a Chair, and two ſtrong Aſſiſtants muſt extend the Humerus and Cubit, till the Muſcles are ſufficiently diſtended, and there appears a free Space between the Bones: Then the Surgeon muſt reduce the Bone with his Hands alone, or with them aſſiſted by Bandages; and immediately bend the Elbow, that the Proceſſes may return to their Cavities. But, if the Tendons and Ligaments cannot be ſufficiently extended, he ſhould apply emollient Oils, Ointments, or the Fat of Animals, or relaxing Fomentations and Cataplaſms. When the bare Hands are inſufficient for the Extenſion, he may uſe the Machines and Methods propoſed in caſe of Fractures.

After Reduction, the Bone ſhould be ſecured with a Bandage, and the Arm ſuſpended in a Sling about the Neck. But *Hippocrates* adviſes neither to retain the Bandage too long, nor keep the Arm entirely without Motion; for, by an Inſpiſſation of its Mucilage, the Joint would become rigid and immoveable: The Bandage, therefore, ought to be looſened every Day, or every other Day, and the Cubit gently inflected different Ways; after which, hot Compreſſes, dipt in burnt Wine, may be applied, and ſecured with Bandages, till the Ligaments and Articulation recover their former Vigour.

LUXATIONS OF THE HAND.

Though the Hand is very accurately connected to the Bones of the Cubit, particularly to the Radius, by the Carpus, and ſtrong Ligaments; yet it is liable to a Luxation in all the four Directions. But this uſually happens forward or backward, becauſe the great Proceſſes of the Ulna and Radius defend it on each Side. The Hand is ſaid to be luxated forwards, when it inclines towards the Flexor Muſcles of the Fingers; backwards, when it tends towards the Extenſor Muſcles; outwards, when there is a Tumor near the Thumb, and a Cavity near the little Finger; and inwards, when the Reverſe happens. From theſe Obſervations we may eaſily diſcover a Luxation of the Hand.

This Diſorder, from the violent Diſtortion of the ſtrong Ligaments, muſt be attended with exquiſite Pains, and a Rigidity of the Fingers, which can neither be bent nor extended, by reaſon of the Compreſſion of their Tendons. From hence will follow an Inflammation, Tumor, Abſceſs, Gangrene, Sphacelus, and Caries of the ſpongy Bones of the Carpus, which are ſeldom curable but by Amputation. In a recent inconſiderable Luxation, a milder Practice will complete the Cure.

This Diſlocation, therefore, ſhould be ſpeedily reduced, 1. By ordering one Aſſiſtant to hold the Hand, and another the Arm, and ſo pull in different Directions. 2. By placing the Sinus of the extended Hand on a Table, or ſome other flat Body, that the Tumor may be depreſſed. This will be effectual, in whatever Part the Hand is luxated.

LUXATION OF THE CARPAL BONES.

One or two of the carpal Bones are ſometimes removed from their proper Place, which is diſcovered by a Tumor in one Part, and a Cavity in another, perceptible to the Touch: It is likewiſe accompanied with violent Pains. This Luxation, if recent, is to be treated as a Luxation of the Hand.

LUXATION OF THE METACARPUS.

The four Bones of the Metacarpus may, by external Violence, be ſeparated from the Carpus, to which their ſuperior Parts are connected. But this cannot happen in all the Directions; for the two middle Bones cannot be forced to either Side, nor the two external ones thruſt inward, though each of them may be luxated forward or backward. This may be diſcovered by the Sight and Touch, and muſt be cured in the ſame manner as Luxations of the carpal Bones.

LUXATIONS OF THE FINGERS.

Laſtly, the Fingers and Thumbs may be diſlocated in every Joint, and every Direction. But this may be ſoon diſcovered and remedied: For, as the Ligaments are not very ſtrong, the Fat and Muſcles thin, and the Sinuſes of the Articulation ſhallow, the Surgeon

Surgeon need only extend the Finger with one Hand, and reduce it with the other. As for the proper Bandage, see the Article FASCIÆ.

LUXATIONS OF THE FEMUR.

We have already observed, under the Article FRACTURA, how very uncommon a Luxation of the Thigh is, and that the Antients often mistook a Fracture for it. The Reasons are very plain: For, 1. the Articulation is in a very deep Sinus, formerly called *Sinus Coxæ*, now *Acetabulum*. 2. The whole Head is almost covered with a broad, concave Cartilage. 3. The Ligaments are very strong. 4. It is guarded by very stout, thick Muscles. 5. The Neck of this Bone is the most brittle Part of it; consequently that is more subject to a Fracture, than the Head to a Luxation; though, whenever this happens, as it sometimes may, it proceeds rather from an internal, than external Cause. For the Head will spontaneously slip out of its *Acetabulum*, when the Ligaments are relaxed by a Collection of Humours, so that the Femur is sometimes luxated without the least external Violence, when the Patient lies quiet in his Bed, and, upon his rising, one Leg appears longer or shorter than the other, and seems, as it were, unhinged.

Robust Adults are not so subject to this, as tender Infants.

This Luxation is generally perfect, because the exact Roundness of the Head, the Narrowness of the *Acetabulum*, and the Strength of the adjacent Muscles, will not admit of a small Separation: For the very Instant the Head is forced to the Edge of the *Acetabulum*, it must either slip quite out, or return to its natural Place; though some will affirm, that there may be an imperfect Luxation.

The Thigh may be dislocated four Ways, inwards, outwards, upwards, and downwards, but it generally happens inwards and downwards, towards the large Foramen of the Os Pubis: For the cartilaginous Defence in that Part of the *Acetabulum* is less, and more depressed; and the Ligamentum Rotundum gives way more easily than in any other Part; and the adjacent Muscles are there of less Force to prevent the Head from sliping out. Besides there are certain Eminences of the Os Pubis, and *Acetabulum*, which retain the Head, when once slipt out downwards. When the Thigh is luxated outwards, it generally slips upwards at the same time; for the strong Muscles of the Thigh, meeting with no Resistance, will draw it in that Direction.

If the Thigh is luxated inwards, and, as it commonly happens, downwards, the Leg is longer and more bowed than the other, and the Knee and Foot turn outwards: The Head of the Bone is thrust near the lower Part of the Inguen, and the Foramen of the Os Pubis. Sometimes the Compressure of a Nerve, which communicates with the Bladder, causes a Suppression of Urine. This Dislocation produces a Sinus in the Buttock, because of the Absence of the great Trochanter, and the rest of the Bone; and, without timely Assistance, the whole Limb withers. For this Reason the Patient cannot stand upon that Leg, but is obliged to lay the whole Stress of his Body upon the other, and in walking to move it semicircularly, whilst the Body itself must be supported either by other Men, or Crutches under his Arms, or, at least, by Sticks; though I have seen Instances, where the Head has grown so firmly to the adjacent Parts, without the Acetabulum, that it has supported the Body without Crutches or Sticks, but the Patient always halted.

When the Thigh is luxated backward, it is usually drawn upward. Hence appears a Cavity below the Inguen, and a Tumor in that Part of the Buttock where the Bone, and Head of the Trochanter, are lodged. The Fold in the Buttock being forced upwards, the rest of the Limb will become shorter than the other, the Foot bend inwards, the Heel not touch the Ground, but the Patient will seem to stand on his Toes. Lastly, the dislocated Limb may be more easily inflected than extended. And the Body is more firmly supported by this Limb, when luxated outwards, than inwards, because, in the last Case, the Feet are separated farther from each other.

Many, therefore, without Reduction, stand and walk strongly, by the Help only of a higher Heel to their Shoe. But there is generally some slight Decay of the Limb, from a Compression of the Nerves. If there should ever happen an internal or external Luxation, without a Protuberance above or below, it may be discovered from what we have said, and a due Consideration of the Structure of the Part.

Since it is universally agreed, that there is a great Difficulty in distinguishing between a Luxation and a Fracture of the Femur, I will venture to recommend the following Signs. We may judge it to the former, 1. When the Os Femoris is luxated by a Flux of Humours, without any external Violence, but only by walking or rising up. 2. When it is unattended with Pain, Tumor, or Inflammation. And, 3. When the whole Limb may be bent and turned about at the Acetabulum without any Noise, which is usually heard in Fractures. The contrary Signs indicate a Fracture.

The Cure of a luxated Thigh is very difficult. For, 1. The Strength and Thickness of the adjacent Muscles, particularly in robust Men, prevent a sufficient Extension. 2. On the same Account the Head of the Femur is, with Difficulty, returned into the Acetabulum; and it is not easy to be certain when it is replaced.

3. When the Bone is duly replaced, it may slip out again, from the Lubricity and Weakness of the Ligaments. To this may be added, 4. That those very Ligaments are sometimes broken or lacerated by the external Violence. And, 5. The Inspissation of the Mucilage in the Acetabulum often prevents the Reduction, or forces the Bone out again, when it is replaced. So that no Reduction at all, or a late one, must produce Lameness.

When the Thigh is luxated forwards and downwards, the Patient must be laid upon his Back, on a Table; then a strong Napkin, or Linen Sling, is to be passed over the Groin, near the Part affected, one End of which is to come over the Belly, and the other over the Buttocks and Back; and both are to be tied with a Knot, on the Crest of the Ileum, and then held firm by Assistants, or rather fastened to a Hook or Ring, fixed to some Place, especially if we use the Polyspaston, to keep the Body from yielding to the Extension. Immediately above the Knee must another Napkin, Sling, or the Belt of *Hildanus*, (see *Tab.* XXIX. *Fig.* 17.) be fastened with a Compress under it; both Slings being drawn tight, the Thigh must be extended enough to draw it out of its Sinus, and replace it in its Acetabulum, without great Violence, by the Surgeon's Hands, one of which is to press the Head outward, and the other to guide the Knee inward. Or it may be done by a Napkin, in the Form of a Sling, fastened round the Extremities of the Thigh, as in a luxated Humerus, especially if the Knee is forced inwards by the Hand. When these Methods are insufficient for the Extension, the Polyspaston (see *Tab.* XXIX. *Fig.* 15.) must be used. When the Limb is properly extended, the Surgeon must place himself near the Table, on the injured Side, and with his Hands restore the Bone, from the Os Pubis, to its former Situation.

When the Thigh is dislocated backward, the Patient must be laid with his Face downwards on a Table, the Thigh extended in the same manner, but with more Violence than we just now proposed, and the Surgeon must perform the Reduction with his Hands or Knee, an Assistant in the mean time extending and turning the whole Limb inwards. For the proper Bandages, see the Article FASCIÆ. The Patient should be confined to his Bed for three Weeks, or a Month.

In whatever Direction this Bone is luxated, *Petit* recommends his Machine, because the strong Muscles generally render the Hands, and all other Instruments ineffectual. But the Stay (*Tab.* XXXI. *Fig.* 7.) may be less, and without the Aperture A; for the Thigh is not to be put through it, but the Middle of this Stay is applied to the Tubercle of the Ischium, and one End is brought before, the other behind. The Patient is placed on his sound Side, that the dislocated Thigh may lie upwards; but the Machine is put between the Thighs, the Knee of the distorted Side being a little bent. The Sling, (*Fig.* 8. *Tab.* XXXI.) after the Skin is drawn up, is fastened strongly a little above the Knee, and then to the Rope, which passes round the Pullies. (*Fig.* 6. *d d*). The Horns of the Machine, *a a*, are put through the Stay, (*Fig.* 7. *d d*;) and, by winding up the Rope by the Handle E, (*Fig.* 6.) the Limb is cautiously and gradually extended, till the Surgeon judges it sufficient. After this, he proceeds as directed above.

When the Reduction is rendered more difficult by the Luxation being forward and downward, and the Adhesion of the Bone to the Foramen of the Os Pubis, *Petit*, instead of the Horns *a a*, (*Fig.* 6.) has substituted the others (at *Fig.* 9.), which, at the Ends, have transverse and lunar Prominencies: One of these A he puts upon the Os Ilei, the other B on the Middle of the Thigh; he afterwards ties the Napkin about the Inguen, which he fastens to the Rope about the Pullies; and then makes an Extension by turning the Handle, so that the Machine exerts its Force in three different Places. The Part A keeps the Patient firm, and resists the Os Ilei, as an immoveable Fulcrum; B, when the Rope is drawn tight, forces the lower Part of the Thigh inwards; and the Napkin, by the Assistance of the Rope and Pullies, draws the upper Part outwards, all which Motions are necessary in this Operation. But too strong an Extension will be very prejudicial, as the Limb is already too long, so that it should be continued only till the Surgeon can replace the Bone; otherwise it would prove useless, and must be repeated.

If the Luxation should be imperfect, and the Head of the Bone stick upon the internal Edge of the Acetabulum, the superior Part of the Thigh must be pushed outwards, and the inferior inwards: But, if it is lodged upon the external Edge of the Acetabulum, the superior Part of the Femur is to be pressed with one Hand inwards, whilst, with the other Hand, the inferior Part is directed outwards.

LUXATIONS OF THE PATELLA AND KNEE.

OF A LUXATED PATELLA.

The Patella is generally luxated externally or internally, tho' some assert, that it may be displaced upwards or downwards: This Accident is a necessary Attendant upon a perfect Luxation of

of the Knee, as it is ſo ſtrongly connected to the Femur and Tibia. Many ignorant Surgeons treat it as a Diſlocation of the Knee itſelf, and do the Patient much Injury by extending the Limb, and preſſing the Part: But any one of Judgment, by comparing the affected and ſound Limb, may readily determine whether the Patella is luxated, and towards what Part, and, of conſequence, what Method is proper for the Cure.

The Patella is to be reduced by laying the Patient flat on his Back upon a Table, Bed, or the Floor, ſo that an Aſſiſtant may pull his Leg ſtrait; or he may ſtand erect: Then the Surgeon muſt take firm Hold of the Patella with his Fingers, and force it into its proper Place. After this, nothing more is required, but a Bandage and Reſt, with a gentle Motion of the Limb at Intervals, till it has recovered its former Vigour.

A proper Luxation of the Knee is when the Tibia recedes from the Femur, which happens outward, inward, and backward; ſeldom or never forward, without very extraordinary Violence, becauſe the Patella, being connected to the Articulation by thoſe exceedingly ſtrong Tendons which extend the Leg, oppoſes a Diſlocation that Way. Nor do the Bones of the Leg eaſily ſuffer a perfect Luxation, becauſe the Sockets are very deep, and the Ligaments exceedingly ſtrong, unleſs thoſe very Ligaments are broken at the ſame time; from whence it muſt neceſſarily follow, that the Patient will be tortured with ſuch exquiſite Pain and Convulſions, that, if he eſcapes with Life, there will remain a Rigidity and Lameneſs in the Joint. On the contrary, a ſlight Luxation, or rather a Subluxation, is very eaſily remedied. Luxations of this Joint are eaſily diſcovered, becauſe the conſequent Cavities and Tumors are evident, the Part being but very little covered with Fleſh: But they are very ſeldom cur'd without leaving an Anchyloſis; for by this Accident the Ligaments and Glandules of the Articulation muſt be broken, or violently bruiſed and lacerated; from whence will proceed an Inſpiſſation of their nutritious Juices; which prevents the natural Motion of the Limb.

In a ſlight Luxation the Patient muſt be ſeated on a Bed, Bench, or Table, one Aſſiſtant taking hold of his Thigh above the Knee, and another extending his Leg, while the Surgeon reduces the Bone with his Hands or Knee. When the Hands and Slings are inſufficient, recourſe ſhould be had to the Inſtruments deſcribed under the Article FRACTURA; as the Belt of *Hildanus*, and the Polyſpaſton (*Tab.* XXIX. *Fig.* 15. 17.). The Extenſion muſt not be ſo violent as to ſeparate the Epiphyſes from the Bones, in Children and young Perſons; for that will induce a worſe Diſorder, and perpetual Lameneſs. As for the reſt, it muſt be properly bound up, put in a Straw-caſe, and treated as a luxated Patella.

The Fibula may, by external Violence, be diſunited from the Tibia, either at the ſuperior or inferior Part. When it happens in the inferior Part, it generally proceeds from a Luxation of the Foot externally. This Bone, therefore, muſt be reduced, bound up, and the reſt of the Treatment muſt be agreeable to our Directions given above for Luxations of the Patella and Knee. Laſtly, the Patient muſt be forbid to lay any great Streſs upon the diſordered Limb too ſoon, as that will be attended with an incurable Lameneſs.

Luxations of the Foot and Ancle.

The Ancle may, by leaping, running, or walking, be luxated in all four Directions; and the Direction may be diſcovered by the particular Poſture of the Joint: For, when the Luxation is internal, the Bottom of the Foot bends outward; and the Reverſe when external; but the latter is the more common Accident. When it is luxated forward, the Heel becomes ſhorter, and the Foot longer, than uſual; the contrary Direction is attended with contrary Symptoms. Laſtly, the Ancle can ſcarce ever be diſlocated outward, unleſs the Fibula is removed from the Tibia, or entirely broken where it forms the external Malleolus.

A Luxation of the Ancle, from any extraordinary Violence, is generally attended with dangerous Symptoms; for the Diſtortion of the Foot muſt ſtrain the Ligaments, Tendons, and Nerves, which will produce extreme Pains; or the Veins and Arteries may be burſt, and a Gangrene excited by a large Extravaſation of Blood.

But every Diſorder of the Foot from leaping or turning on one Side is not a Luxation of the Ancle; for it may be only a Contuſion or Laceration of the Parts, and yet the Patient be afflicted with moſt acute Pains, livid Tumors, and Stiffneſs; ſo that he can neither ſtand nor walk, but is confined to his Bed for ſome time. Extenſion and Reduction, therefore, are improper.

The Difficulty of reducing the Ancle is proportionable to the Violence of the Cauſe. But the beſt Method is, to place the Patient on a Bed, Table, or Seat, and order two Aſſiſtants to extend the Leg and Foot in oppoſite Directions, whilſt the Surgeon replaces the Bone with his Hands and Fingers. After Reduction, the Part ſhould be bathed with Salt and Oxycrate, and then bound up. The Patient muſt keep his Bed till the Symptoms leave him, and his Ancle is capable of ſupporting his Body without Danger.

In a Contuſion of the Ancle, the Part ſhould be immediately dipt in cold Water; and this ſhould be repeated for ſeveral Days. But, if this ſeems diſagreeable, I would recommend Compreſſes impregnated with Salt and Oxycrate; theſe are to be bound on, and renewed often. *Dionis*, in his Surgery, follows almoſt the very ſame Method of Cure; for he prepares what the Surgeons call a Defenſative Ointment, of the Whites of Eggs, Oil of Roſes, and Alum duly triturated, which he ſpreads on Lint, and firmly ſecures on the Ancle: On the third Day after this Application he boils Wine with aromatic and aſtringent Ingredients, ſuch as Roſes, Wormwood, Roſemary, Pomgranate-bark, Alum, and Salt; with that Decoction he carefully toments the Ancle. Then he applies a Compreſs wet in this Wine, and ſecures it by a tighter Bandage than before. When he has continued this for twelve Days, he applies a ſtrengthening Plaiſter till the Pains entirely ceaſe.

Some Contuſions are only curable by Time; and we have Inſtances, where Patients have been unable to walk on rough Ground, or go up and down Stairs, for a whole Year, without great Trouble. For the Prevention of this, the ſame Methods are to be purſued, as we have directed for Luxations of the Ancle after Reduction. For Bandages, ſee the Article FASCIA.

Luxations of the Calcaneus.

Sometimes the Calcaneus is luxated inwards or outwards. This is diſcoverable by a Cavity on one Side, and a Tumor on the other: It is attended with ſevere Pains, and is to be cured by the Method already directed, keeping the Limb quiet for ſome time.

Luxations of the other Bones of the Foot.

Laſtly, If any other Bone of the Foot be diſlocated, the adjacent Ligaments, with the Nerves and Tendons, are generally ſo much injured, that acute Pains, violent Inflammations, Convulſions, and, according to ſome, Death, enſue, without ſpeedy Aſſiſtance. They ſhould be reduced, therefore, as we directed for the Bones of the Hand; and the Toes muſt be treated in the ſame manner as the Fingers. The Patient muſt keep his Bed for ſome time.

LUXUS, in *Scribonius Largus*, is, luxated.

LUX. See ALBADARA.

LYCANCHE. A Species of Quinſey.

LYCANTHROPIA, from λύκος, a Wolf, and ἄνθρωπος, a Man. Lycanthropy, a Species of Madneſs; of which *Oribaſius* gives the following Deſcription: The Patients leave their Houſes in the Night-time, and, in every thing imitating Wolves, wander about the Tombs till Break of Day [*Actuarius* adds, that they return home then, and come to their Senſes]. You may know them by the following Symptoms: Their Looks are pale, their Eyes dull, hollow, fixed, and dry, without the Moiſture of a Tear. Their Tongue is quite dry, there being no Spittle in their Mouths, and they are ready to periſh with Thirſt; their Legs, from the Bruiſes they receive in the Night, [among Stones and Thorns, *Actuar.* and from the Bites of Dogs, *Aetius*] are full of incurable Sores and Ulcers. Theſe are the Characters of the Lycanthropy, which is a Species of Melancholy; and in the Time of the Fit ought to be treated with Phlebotomy, the Blood being ſuffered to run till the Patient faints. Meats of good Juice, with Baths of ſweet Water, are to be preſcribed. Whey is to be drank for three Days together, and a Purge of *Hiera of Colocynthis* is to be twice or thrice adminiſter'd. After purging, *Theriaca* muſt be exhibited, together with other things, proper for the Cure of Melancholy. At the Approach of the Fit uſe Irrigation of the Head, with ſuch things as are proper to procure Sleep; and, when he falls aſleep, his Ears and Noſtrils muſt be rubbed with Opium. *Oribaſ. Synopſ. Lib.* 9. *Cap.* 10.

Aetius, *Tetrabib.* 2. *Serm.* 2. *C.* 11. gives the ſame Deſcription and Cure; only calls the Diſeaſe κυνανθρωπία, Cynanthropy, as well as λυκανθρωπία, Lycanthropy; and obſerves it prevails moſt in *February*.

P. Ægineta, *L.* 3. *C.* 16. intitles his Chapter upon this Subject, περὶ λυκάνθ ἢ λυκανθρώπε. Upon this Dr. *Freind*, in his Hiſtory of Phyſic, remarks, that "*Lambecius* ſeems to give us a very right "Explanation, how this Blunder of λυκάνθ aroſe from miſtak"ing the Abbreviation uſed in the Manuſcripts." But if we reflect, that, according to the antient Fable, *Lycaon* was turned into a Wolf by *Jupiter*, we may, perhaps, have Reaſon to believe this Blunder only imaginary; for *Lycaon* is no improper Name for a Perſon affected with this Madneſs. The Title of his Chapter, then, may run thus, in *Engliſh*, of a *Lycaon*, or a Perſon affected with a Lycanthopy, λυκανθρώπε.

Aetius informs us, that his Chapter, upon this Subject, was taken from *Marcellus*. Now *Marcellus Sidites* lived in the Time of *Marcus Antoninus*, and wrote forty-two Books about Phyſic, in heroic Verſe, one of which treated of the *Lycanthropia*, as we learn from *Suidas*. *Suidas* ſays, περὶ λυκάνε, which ſeems to be a Fault.

It is remarkable, that the Demoniac in Scripture, who was poſſeſſed of this Sort of Madneſs, is ſaid to have had his Dwell-

ing among the Tombs. If we may believe the Reports of Travellers, this Diſtemper has not been uncommon in ſome Countries, as *Livonia* and *Ireland*. *Donatus ab Altomari* ſays he has ſeen two Inſtances of it himſelf; and *Foreſtus* relates an Hiſtory which agrees exactly with the Deſcription given by *Oribaſius*.

LYCAON, λυκάων. See LYCANTHROPIA.

LYCHNION, λυχνίον. The Name of a Medicine for anointing the Eyes, deſcribed by *Galen, de Comp. M. S. L. Lib. 4. Cap. 7.*

LYCHNIS.

The Characters are;

The Leaves are entire and conjugated; the Calyx is entire, ſwelling, tubulated, generally ſtriated, not caducous, ſometimes diſtended like a Bottle, with a narrow Margin. The Flower is like a Clove-gilly-flower, pentapetalous, (the Petals being placed circularly, and generally Heart-ſhaped) often adorned with two or three ſmall Leaves repreſenting a Crown, and furniſhed with Stamina, to the Number of five, or upwards, as far as ten. The Fruit is conical, involv'd in the Calyx, opening at the Apex, and furniſhed with three or more Tubes. The Seeds are numerous, roundiſh, and angulated, or Kidney-ſhap'd.

Boerhaave mentions eighty-one Species of this Plant, none of which have any particular Medicinal Virtues aſcribed to them, that I know of, except the 1ſt, 6th, 14th, 20th, 27th, 35th, 39th, 46th, and 73d.

The 1ſt is the

Lychnis; coronaria; Dioſcoridis; ſativa; flore dilute rubente. *C. B. P.* 203. *Tourn. Inſt.* 334. *Boerh. Ind. A.* 210. *Lychnis Coronaria.* Offic. *Lychnis coronaria vulgo.* J. B. 3. 340. Raii Hiſt. 2. 993. *Lychnis Coronaria vulgaris.* Park. Theat. 629. *Lychnis coronaria rubra ſimplex.* Parad. 252. *Lychnis Coronaria rubra.* Ger. 381. Emac. 467. ROSE CAMPION.

It is cultivated in Gardens, and flowers in *June*; the Seed is uſed, which, according to *Dioſcorides*, purges Bile by Stool, and heals the Sting of the Scorpion.

The ſixth is the

Lychnis; ſegetum; major. *C. B. P.* 204. *Raii Hiſt.* 2. 998. *Synop.* 3. 338. *Tourn. Inſt.* 3. 335. *Boerh. Ind. A.* 210. *Nigellaſtrum.* Offic. *Lychnoides ſegetum ſive Nigellaſtrum.* Park. Theat. 632. *Pſeudomelanthium.* Ger. 226. Emac. 1087. J. B. 3. 341. COCKLE.

A Dram of the Powder of the Seed of this Plant, given to drink in Broth, or Water, for three Mornings, is excellent for the Vapours. *Simon Pauli* affirms, that *Sennertus*, and himſelf, uſed the Root of this Plant ſucceſsfully, to ſtop Hæmorrhages, even thoſe which happen in continued Fevers. They put it under the Tongue of the Patient, and left it there for ſome time. *Martyn's Tournefort.*

It grows among Corn, and flowers in *June* and *July*. The Seed is uſed, which is of a hot and dry Quality, and, being applied in a Peſſary, with Honey, provokes the Menſes. *Hippocrat.* It is extol'd, by ſome, as vulnerary. DALE.

The Fourteenth is the

Lychnis; ſylveſtris; alba; ſimplex. *C. B. P.* 204. *Tourn. Inſt.* 334. *Boerh. Ind. A.* 211. *Ocymoides.* Offic. *Ocymoides album multis.* J. B. 3. 342. *Lychnis ſylveſtris flore albo.* Ger. Emac. 468. Park. Theat. 630. Raii Hiſt. 2. 994. Synop. 3. 339. WILD WHITE CAMPION.

This wild Campion has a long whitiſh creeping Root, and round hairy Stalks, a Foot high, or more, having two oval ſharp-pointed hairy Leaves at every Joint; the Flowers grow on the Tops of the Branches, three or four together, on long Foot-ſtalks, conſiſting of five white, round, pointed Leaves, ſtanding in looſe hairy Calyces; the Seed-veſſel is large, and open at the Top, having a dentated Crown, including a ſmall, greyiſh, round Seed. It grows in Hedges and Borders of Fields, and flowers in *May*.

Parkinſon ſays, that the white Flowers of this Plant have been uſed, with Succeſs, againſt the Fluor Albus, and are good to ſtop inward and outward Bleeding. *Dioſcorides* recommends the Seed againſt the Bites of all venomous Creatures. *Miller's Bot. Off.*

This Plant has an herby Taſte, very inſipid, a little glutinous, and gives no Tincture of Red to blue Paper. *Martyn's Tournefort.*

The Seed is uſed, which is drying, and of fine Parts; *Dioſcorides* commends it for the Sciatica. The Herb boiled in Poſſet is an excellent Remedy for Convulſions in Children. *Raii Hiſt. Plant.*

The twentieth is the

Lychnis; ſylveſtris; ſive aquatica, purpurea ſimplex. *C. B. P.* 204. *Tourn. Inſt.* 335. *Boerh. Ind. A.* 2. 111. *Lychnis ſylveſtris.* Offic. *Lychnis ſylveſtris rubello flore.* Ger. Emac. 469. Raii Hiſt. 2. 994. Synop. 3. 339. *Lychnis ſylveſtris flore rubro.* Park. Theat. 631. *Ocymoides purpureum multis.* J. B. 3. 343. RED WILD CAMPION.

It grows by Hedges, and flowers in Summer: The Seed, which is the Part uſed, agrees in Virtues with that of the *Roſe Campion.*

The twenty-ſeventh is the

Lychnis; ſylveſtris; quæ Been album vulgo. See BEHEN ALBUM.

The thirty-fifth is the

Lychnis; ſylveſtris; quæ Saponaria vulgò. *Tourn. Inſt.* 336. *Boerh. Ind. A.* 212. *Saponaria.* Offic. Ger. 360. Emac. 414. Raii Hiſt. 2. 999. *Saponaria major lævis.* C. B. P. 206. *Saponaria vulgaris.* Park. Theat. 641. J. B. 3. 346. *Lychnis ſaponaria dicta.* Raii Synop. 3. 339. SOPEWORT.

Sopewort has many creeping Roots, ariſing from a thick woody Head; it ſends forth rediſh Stalks, about a Foot high, full of Knots, which are encompaſſed by the broad Foot-ſtalks of the Leaves: Theſe are ſmooth, of a pale-green Colour, broad and ſharp-pointed, about two Inches long, having three pretty high Veins on their back Part. The Flowers grow on the Tops of the Stalks, being large, of a pale-purple Colour, each made of five large, round-pointed Leaves, ſet in a ſmooth, long Calyx: The Seed is ſmall and round, growing in long roundiſh Seed-veſſels. It grows in watery Places, and near Rivers, and flowers in *June*. The Leaves are uſed.

It is called Saponaria, or Sopewort, becauſe its Juice will get greaſy Spots out of Cloaths. It is accounted opening and attenuating, and ſomewhat ſudorific, and is by ſome commended againſt the Lues Venerea. Outwardly applied, it helps hard Tumors and Whitloes, and provokes Sneezing; but it is ſeldom uſed. *Miller's Bot. Off.*

The Decoction of this Plant cures the Itch, and Tetters; and *J. Bauhine* affirms, that it takes Spots out of Cloaths. *Schroder* ſays, that its Roots are aperitive and reſolvent; that it is good for the Venereal Diſeaſe, to prevent the Aſthma, and provoke the Terms: It is uſed in the Oil of Euphorbium, according to the Deſcription of the *London* Diſpenſatory. The Sopewort is very bitter, and gives hardly any Tincture of Red to blue Paper, which ſhews, that the bitter natural Salt of the Earth is mixed with it, without any conſiderable Alteration, unleſs it be accompanied with a great deal of Sulphur. *Martyn's Tournefort.*

The thirty-ninth is the

Lychnis; ſegetum; rubra; foliis perfoliatæ. *C. B. P.* 204. *Raii Hiſt.* 2. 999. *Tourn. Inſt.* 335. *Boerh. Ind. A.* 212. *Vaccaria.* Offic. Ger. 395. Emac. 492. J. B. 3. 357. *Lychnis ſegetum, Vaccaria rubra dicta.* Park. Theat. 633. COW-BASIL.

It grows among Corn, and flowers in *June* and *July*. The Seed, which is uſed, is hot and dry, and provokes Urine.

The forty-ſixth is the

Lychnis; pratenſis; flore laciniato, ſimplici. See ARMERIA.

The ſeventy-third is the

Lychnis; arvenſis; glabra; flore majore. See GRAMEN LEUCANTHEMON, under the Article ALSINE.

Amongſt the Species of *Lychnis*, *Ray* mentions one which grows in *Braſil*, called *Camera Flore albo Braſilienſis. Marggr.* But I don't know that any particular Medicinal Virtues are aſcribed to it.

LYCHNIS INCANA. A Name for the *Myoſotis*; *incana*; *repens.*

LYCHNIS INDICA. A Name for the *Plumbago*; *Ceylanenſis*; *folio ſplendente Ocymaſtri*; *flore lacteo.*

LYCHNIS, SEGETUM, MINOR. A Name for the *Myoſotis*; *Hiſpanica*, *ſegetum.*

Beſides the foregoing Species of *Lychnis*, *Dale* mentions the following; which is,

MUSCIPULA. Offic. *Muſcipula viſcaria ſive Lychnidis Species.* J. B. 3. 349. *Viſcaria.* Ger. 481. *Viſcaria ſive Muſcipula.* Ger. Emac. 601. *Lychnis viſcoſa, rubra altera ſylveſtris.* C. B. P. 205. Raii Hiſt. 2. 1001. Tourn. Inſt. 337. *Lychnis ſylveſtris rubra minor.* Park. Theat. 632. CATCH-FLY.

It grows ſpontaneouſly among Corn, and flowers in *June* and *July*; the Seed is in Uſe, and has the ſame Virtues attributed to it, as the other Species of *Lychnis.*

LYCHNI-SCABIOSA.

The Characters are;

The Calyx is oblong, tubulous, cylindrical, multifid, deeply jagged, and ſimple. The five outer Flowers are monopetalous, tubulous beneath, and quadrifid above, the upper Segment being the largeſt, the two lateral ones leſs, and the loweſt the leaſt and ſhorteſt. The middle Flowers are tubulous and quadrifid, and produce each four Stamina, which ariſe from their Inſide. The Diſk of the Calyx is not globular, but contains oblong Ova, whoſe Apices are adorned with the Crown of the Scabious; within this Crown it contains a little Flower, and produces a long Tube.

Boerhaave mentions but one Sort of this Plant; which is,

Lychni-ſcabioſa; flore rubro; annua. *Scabioſa Orientalis, flore Caryophylli quorumdam. Boerh. Ind. alt. Plant. Vol. 1. p.* 131.

There are no Medicinal Virtues aſcribed to this Plant at preſent that I know of.

LYCHNITES. A precious ſhining Stone, which is ſaid to grow in the Rocks in *Thrace*, and in the neighbouring Countries.

LYCIUM. Offic. Schrod. 4. 198. *Lycium Baxi foliis.* C. B. P. 478. *Lycium ſive Pyracantha.* Ger. 1151. Emac. 1322. *Lycium vulgatius.* Park. Theat. 1009. *Lycium Italicum.* J. B. 1. 59. Raii

Hiſt.

Hiſt. 2. 1627. *Lycium Buxi foliis rotundioribus Syriacum vel Perſicum.* Breyn. Prod. 2. 64. BOX-THORN.

It grows in hot Countries. What is uſed of it in Medicine is the Rob, or concreted Juice of the Leaves and Branches, the Preparation of which is thus deſcribed by *Dioſcorides*: The Branches with the ſmall Roots are bruiſed, and, being firſt macerated for many Days, are boiled; then the Wood being thrown away, the Liquor is again boiled to the Conſiſtence of Honey. *Lycium* is adulterated by putting *Amurca*, or the Juice of Wormwood, or Ox-gall, into the boiling Liquor. In the ſame manner is *Lycium* prepared of the expreſſed and inſolated Seed. The beſt *Lycium* is what will burn, and, when quenched, ſhews a red Spume; is black on the Outſide, but, when broken, red within, which has nothing of a rank Smell, but a bitteriſh aſtringent Taſte, and is of the Colour of Saffron.

It is of an aſtringent Quality, and deterges whatever darkens the Pupil of the Eye; and cures the Ulcerations, Itchings, and inveterate Rheums, affecting the Eyelids. It is effectual, alſo, in Purulencies of the Ears, in Exulcerations of the Gums and Tonſils, Fiſſures of the Lips, or Rhagades of the Anus, and Abraſions, the affected Parts being anointed therewith. Exhibited either in Potion, or by way of Clyſter, it is very proper for the Cœliac Paſſion, and the Dyſentery. For an *Hæmoptoe*, or Cough, it is given in Water; and to thoſe who are bit by a mad Dog, it is preſcribed to be ſwallowed in Pills, or drank in Water. It renders the Hair yellow, cures a Paronychia, Herpes, and putrid Ulcers; applied in a Peſſary, it ſtops the menſtrual Flux; and drank in Milk, or taken in Pills, it relieves thoſe who are bitten by mad Animals. *Dioſcorides.*

There are two Species of *Lycium* mentioned by *Dioſcorides*; one is produced from a Plant growing in *Greece*, which is our preſent Subject, and is called ſimply *Lycium*; the other is prepared of an *Indian* Plant, of which we have ſpoken under the Article ACACIA, where it paſſes under the Name *Cate*. But, ſince the *Lycium* is unknown to the Moderns, there are different Opinions about it. The Shops, as *Schroder* writes, commonly make their *Lycium* of the Berries of the *Periclymenum*, or Honeyſuckles; others of the Fruit of the *Liguſtrum*, or Privet; and others of wild Plums. But they might have provided a better Succedaneum, as *C. B.* on *Matthiolus* obſerves, from the Oxyacantha, or the *Rhamnus*.

LYCIUM is, alſo, a Name for ſeveral Sorts of *Rhamnus*; which ſee.

LYCIUM INDICUM. See ACACIA.

LYCOCTONUM. See ACONITUM PONTICUM.

LYCOIDES, λυκοειδὴς, from λύκος, a Wolf, and εἶδος, Form. This is, by Authors, explain'd a ſort of Madneſs, or a Quinſey, cauſed by a Retention of the Seed; but I believe it imports the ſame as LYCANTHROPIA.

LYCOPERDON.

The Characters are;

It is ſimple, and ſhaped like a Sponge; within, it is replete with very fine Seeds, which, at the ſlighteſt Motion, when ripe, are diſploded like Smoke.

Boerhaave mentions eleven Species of this Plant; which are,

1. Lycoperdon; vulgare. *Tourn. Inſt.* 563. *Boerh. Ind. a.* 15. *Crepitus Lupi.* Offic. *Lupi Crepitus, ſive Fungus ovatus.* Park. 1323. *Fungus rotundus Orbicularis.* C. B. P. 374. *Fungus orbicularis, ſeu Lupi Crepitus.* Ger. 1385. Emac. 1582. *Fungus pulverulentus dictus Crepitus Lupi.* J. B. 3. 848. Raii Hiſt. 1. 104. Synop. 16. *Boviſta Officinarum.* Dill. Cat. 196. PUFF-BALLS, BULL-FISTS, MOLLI-PUFFS.

You meet with them in Paſture-grounds almoſt every-where in Autumn. The whole Plant is in Uſe, and is of a drying and aſtringent Quality; whence the Powder of it, ſprinkled on Wounds, ſtops their Bleeding: It, alſo, dries up inveterate Ulcers, and reſtrains the Flux of the Hæmorrhoids; but it is reckon'd hurtful to the Eyes. *Raii H. P. p.* 105. The Powder is a ſovereign Remedy againſt an Hæmorrhage. *Boerh.*

2. Lycoperdon; minus; & multiplex; ſphæricum. *T.* 563.

3. Lycoperdon; minus; & multiplex; ovarum. *T.* 563.

Each of theſe two laſt Species is white within, fleſhy, aſh-coloured without; it afterwards inclines to a Lemon-colour, and at laſt grows ſoft, dries up, burſts, and emits a tawny-coloured Duſt; and this Duſt is mixed with Whites of Eggs, to ſtop the Blood in all ſorts of Hæmorrhages. *Martyn's Tournefort.*

4. Lycoperdon; Alpinum; maximum; cortice lacero. *Tourn. Inſt.* 563. *Boerh. Ind. a.* 15. *Lycoperdon maximum.* Offic. *Fungus maximus rotundus, pulverulentus dictus, Germanis.* PFO-FIST. J. B. 3. 848. Raii Hiſt. 1. 105. Synop. 16. *Fungi rotundi orbicularis ſecundum genus.* C. B. P. 375. *Boviſta maxima alba.* Dill. Cat. 196. GREAT DUSTY MUSHROOM.

It is found in fat Paſtures, and by Dunghils. The whole Plant, which is ſometimes as big as a Man's Head, is in Uſe, and is recommended for ſtopping the moſt dangerous Hæmorrhages; for which Purpoſe *Cluſius* ſays, that the Barbers, in many Places of *Germany*, keep it by them.

5. Lycoperdon; ſemi-orbiculare. *T.* 563.

6. Lycoperdon; Pariſienſe; minimum; pediculo donatum. *T.* 563. 331. *Fig. E. E.*

7. Lycoperdon; oblongum; utrinque introrſum emarginatum. *T.* 563.

8. Lycoperdon; qui fungus globoſus, lævis, pallidus Ducis Poli & Rom. *Bocc. Muſ.* 1. 303.

9. Lycoperdon; parvum; mortarii bellici forma.

10. Lycoperdon; ingens; conoides; pilearum; plerumque gemellum.

11. Lycoperdon; Sphæricum; cortice tenaci caſtaneo. *Boerh. Ind. alt. Plant. Vol.* I. *p.* 15.

All theſe Plants conſiſt of innumerable Veſicles, which contain a lacteous Humour, which becomes a Powder flying away like Smoke; this Powder, view'd in a Microſcope, appears to be Seed; the Plant inverted reſembles a Cap.

Lycoperdon, λυκόπερδον, from λύκος, a Wolf, and πέρδω, Crepitus, is the ſame as *Crepitus Lupi* in *Latin*, and was the Name given by the Antients to this Plant, becauſe they imagin'd the Dung of the Wolf became ſuch a kind of Fungus. All the Species are poiſonous, and very pernicious, if received into the Lungs or Stomach; but the great *Lycoperdon*, divided in the Middle, affords a Powder which is of excellent Uſe for ſtopping an Hæmorrhage. *Hiſt. Plant. aſcript. Boerhaav.*

LYCOPERSICON.

The Characters are;

The Flower reſembles that of the Nightſhade; the Fruit is carnous, ſoft, of a roundiſh Figure, and divided into ſeveral Cells containing Seeds.

Boerhaave mentions ſix Species of this Plant; which are,

1. Lycoperſicon; fructu albo. *T.* 150. *Solanum pomiferum, fructu rotundo, ſtriato, molli, albo.* C. B. P. 167.

2. Lycoperſicon; fructu Ceraſi rubro. *T.* 150. *Solanum, racemoſum, Ceraſorum forma.* C. B. P. 167.

3. Lycoperſicon; fructu; Ceraſi luteo. *T.* 150.

4. Lycoperſicon; Galeni. See AMORIS POMA.

5. Lycoperſicon; Galeni; fructu rubro. *Poma amoris, fructu rubro.* H. Eyſt. Aut. o. 1. F. 2. Fig. 1.

6. Lycoperſicon; fructu ſtriato; duro. *T.* 150. *Solanum, pomiferum fructu rotundo, ſtriato, duro.* C. B. P. 167. J. B. 3. 620. *Mala Æthiopica.* Dod. p. 459. *Boerh. Ind. alt. Plant. V.* 2.

It is called *Lycoperſicon*, λυκοπερσικὸν, from λύκος, a Wolf, and περσικὸν, a Peach, that is to ſay, in *Engliſh*, Wolf's Peach.

As to its Virtues, there has been a Diſpute, and Authors are not yet agreed about them; but to me it ſeems more proper to be rank'd among poiſonous than medicinal Plants; for the Seeds, taken inwardly, ſubvert the Stomach, and induce a Faintneſs, with a kind of apoplectic Diſorder. *Hiſt. Plant. aſcript. Boerhaav.*

LYCOPODIOIDES. See the Explication of Terms under the Article BOTANY.

LYCOPODIUM. Offic. *Muſcus clavatus ſive Lycopodium.* Ger. 1374. Emac. 1562. Park. 1307. Raii Hiſt. 1. 120. Synop. 25. *Muſcus ſquamoſus vulgaris repens, clavatus.* T. Inſt. 553. *Muſcus terreſtris repens ſive Clavatus.* C. B. P. 360. *Muſcus terreſtris a Tragopictus.* J. B. 3. 766. *Plicaria & Cingularia.* Polonis. CLUB-MOSS. See the Explication of Terms under the Article BOTANY.

It grows on Heaths, and hilly Places; and flowers in *July* and *Auguſt*. The whole Plant is in Uſe, and the Flower or yellow Powder of the Clubs.

Lycopodium refrigerates and dries; its principal Uſe is in expeling the Stone, and in Fluxes of the Belly. Outwardly it is of Service in faſtening looſe Teeth, and in drying and conſolidating Wounds, *Schrod.* in extirpating the *Plica*, *Ephem. Ger. Anno* 2. The Flower is very ſerviceable in the Epilepſy of Children, and in the Heartburn, and flatulent Gripes, with which they may be affected, *R. Synop.* It is recommended in pulmonary Diſorders, *Buxb.*

Bruiſed, or boiled in Wine, it has the Virtue of mitigating any Pain or Inflammation, and is therefore good to be applied warm to the Gout. A Dram of the Powder, taken in red Wine, cures Fluxes, and the Dyſentery.

The *Polanders*, but eſpecially the *Ruſſians* and *Lithuanians*, on account of its frequent Uſe in curing the *Plica*, a Diſtemper familiar and epidemic among them, call it *Plicaria* and *Cingularia*. They take this Plant, or Moſs, after dividing it with a Knife from the Bottom upwards, and infuſe it in a Decoction of Brankurſine, firſt very well heated; and, after one or two very gentle Ebullitions, add ſome Ferment of white Bread, and ſet it aſide near the Furnace for Fermentation. Of this Decoction, either by itſelf, or with new-laid Eggs, in form of a Broth, they eat and drink every Day, waſhing the Head with the Decoction firſt well warmed, and ſometimes, for the greater Virtue, boiled over again with new Moſs, to a Lixivium of a dark-red Colour; after waſhing they uſe no Comb.

An Ointment for the PLICA.

Take of Plicaria, and the Roots of Bryony, equal Parts; of the Fat of the Hedghog, a ſufficient Quantity: Mix them well

well together, and ſet them in a Glaſs Veſſel well ſtopped *in Balneo Mariæ*, for an Hour; make them into an Ointment, with which anoint the Roots of the complicated Head of Hair, twice in a Day.

The Country-women in the *Ukraine*, when labouring under an exceſſive Flux of the Menſes, with Pains and Strangulations of the Uterus, prepare a Girdle of it, which they wear next their Skin; and bind it about their Heads as a Diadem, to repreſs an Hæmorrhage from the Noſtrils. *Ephem. Germ. An.* 2. The Seed of the Plant, given from twelve Grains to a Scruple, has had immediate Succeſs in an Epilepſy complicated with an Iſchury. *Ex Obſ. Wedelii, Ephem. Germ. An.* 3.

Gathered in the Months of *Auguſt* and *September*, it yields a very ſubtle yellow Powder, of great Virtue in the Epilepſy, Cardialgia, and Gripes: As much of it as will lie on the Point of a Knife, being taken, is an excellent Remedy to facilitate the Paſſage of the Urine. *Ephem. Germ. An.* 1 *Raii Hiſt. Plant.*

LYCOPSIS. A Name for the *Echium*; *Ægyptiacum*; *ferox*; *flore albo*.

LYCOPUS.

The Characters are;

The Calyx is ſhort, and divided into ſix acute Segments; the Flower is generally bell-ſhaped, and divided into four or five roundiſh Segments; the Whorles of the Flowers are pretty cloſely compacted, and are diſpoſed at a good Diſtance one from the other.

Boerhaave mentions two Species of this Plant; which are,

1. Lycopus; paluſtris; glaber. *Tourn. Inſt.* 191. *Boerh. Ind. A.* 186. *Raii Synop.* 3. 236. *Lycopus.* Offic. *Marrubium aquaticum.* Ger. 765. Emac. 700. Raii Hiſt. 1. 535. *Marrubium aquaticum vulgare.* Park. Theat. 1230. *Marrubium aquaticum quorundam.* J. B. 3. 318. *Marrubium paluſtre glabrum.* C. B. P. 230. WATER-HOREHOUND.

It grows by the Side of Brooks, and in watry Places; and flowers in *July*. The Herb is the Part uſed. The Plant is ranked, by *Monti*, in the Claſs of Aſtringents.

Lycopus, λυκόπες, is compounded of λύκος, a Wolf, and πῦς, a Foot, that is to ſay, Wolf's-foot; becauſe the Antients imagined its Leaves to reſemble the Foot of a Wolf. Many things are related by the Antients concerning the Lycopus; but whether it be the ſame with what now goes by that Name, is not certain. The Antients called all vulnerary Herbs by this Name; but, as to any Virtue of this Plant in particular, we have nothing certain. *Hiſt. Plant. aſcript. Boerhaav.*

2. Lycopus; foliis in profundas lacinias diſſectis. *J.* 191. *Marrubium paluſtre, foliis profundiſſime diſſectis.* Flor. 1. 80.

LYGISMOS, λυγισμὸς, from λυγίζω, to bend, or diſtort. This Word occurs in *Dioſcorides, Lib.* 4. *Cap.* 107. and imports Contorſions, that is, of the Limbs.

LYGMOS, or LYNX, λυσμὸς, λύγξ. An Hiccough. See SINGULTUS.

LYMA, λῦμα, from λέω, to waſh. The Sordes, or Filth, of the Body; which comes off by waſhing; or the Excrements of the Belly.

LYME, λύμη, in *Hippocrates*, implies an Injury or Damage.

LYMPHA. The Lymph. A fine Fluid ſeparated in the Body from the Maſs of Blood, and contained in peculiar Veſſels.

Dr. *Keil* ſays, that, if you examine the Lymph chymically, you will find, that it contains a great deal of volatile, but no fixed Salt, ſome Phlegm, ſome Sulphur, and a little Earth.

The Uſe of this Lymph may be gathered from the Conſideration of the Parts into which it diſcharges itſelf. That which comes from the Head, Neck, and Arms, is thrown into the Jugular and Subclavian Veins. All the Lympheducts which the Parts in the Cavity of the Thorax ſend out, empty themſelves into the Thoracic Duct; and the Lymph from all the reſt of the Body flows to the Receptacle of the Chyle: So that there can be no Doubt, but that its chief Uſe is to dilute and perfect the Chyle, before it mixes with the Blood. Now the whole Lymph, which is ſeparated from the Blood, being requiſite for this Uſe, it is plain, that there could be no Glands in the Abdomen appropriated for the Separation of the whole Lymph, but what muſt have had a very great Share of the Blood which paſſes through the Aorta, in order to ſeparate ſo great a Quantity of Lymph. But the Liver and Kidneys requiring, likewiſe, a great Quantity of Blood, and which could not be avoided, Nature choſe to ſeparate the Lymph from the Blood which goes to all the Parts of the Body, rather than appoint particular Glands for it in the Abdomen, which would have been more at hand, but which would have robbed the other Parts of a large Quantity of Blood, and occaſioned a very unequal Diſtribution of it. *Keil.* See PAROTIS.

Below the Parotides, toward the Maſtoide Apophyſis, is fixed a ſmall Gland. It is round, and of an even Surface, without Tubercles, and it is the uppermoſt of a great Number of Glands of the ſame kind, which lie partly below the Interſtice between the parotid and maxillary Glands, and, at different Diſtances along the internal Jugular Vein, all the Way to the lower Part of the Neck. We obſerve among theſe Glands, and upon this Vein, a great Number of tranſparent Veſſels, with an Appearance of numerous Valves. The Fluid which they contain is tranſparent, a little mucilaginous, and is called *Lymph*.

The Veſſels are, likewiſe, termed *lymphatic Veſſels*, and the Glands, *lymphatic Glands*. Theſe Glands are not all equally large, nor equally round, ſome being oblong, thick, flat, and ſmall. The lymphatic Veſſels go out alternately by one Extremity from one Gland, and enter by the other Extremity ſome other Gland, near the former; and both as they go out, and as they enter, theſe Extremities are very much ramified. The Trunk is commonly ſingle, and the Valves are ſo diſpoſed as that the Fluid contained in the Veſſel can only run toward the Thorax, but cannot return to the Head.

Theſe Glands and Veſſels are to be found in many other Parts of the Body; we meet with them not only in ſeveral Parts of the Head, but, alſo, in many outward and inward Parts of the Thorax, Abdomen, and both Extremities. They accompany the maxillary ſalival Glands, as well as the Parotides; and there are ſeveral ſpread on the lateral and back Sides of the Neck, in the Membrana adipoſa, near the Muſcles.

In the Cavity of the Thorax the lymphatic Glands are ſituated at different Diſtances on one Side, and behind the Oeſophagus, eſpecially at the Place which is even with the fifth Vertebra of the Back. I have found ſome on the anterior Portion of the Diaphragm on one Side of the Mediaſtinum; and there are others round the Baſis of the Heart, in the Fat which lies there. They are to be met with, likewiſe, in the Subſtance of the Membrana adipoſa, which covers the Thorax, near the inner Surface, eſpecially about the Clavicles; and in the cellular Interſtices of the Muſcles which lie on the Thorax.

In the Cavity of the Abdomen theſe Glands are very numerous, and particularly round the ſuperior Orifice, and on the two Curvatures of the Stomach; on the Capſula of the Sinus of the Vena Portæ, on the cellular Ligament of the Gall-bladder, near the Beginning of the Ductus cyſticus; at the Adheſions of the Omentum to the Spleen, and to the Colon; through the whole Extent of the Meſentery; at the Adheſions of the Meſocolon; behind the Adheſions of theſe two Membranes to the Vertebræ of the Loins; near the Bifurcation of the Aorta; and along the Iliac Veſſels. There are, likewiſe, other ſuch Glands on the Outſide of the Abdomen, in the Subſtance, and toward the Inſide, of the Membrana adipoſa.

In the ſuperior Extremities of the Body, theſe Glands lie principally under the Articulation of the Os Humeri, with the Scapula, and in the Hollow of the Axilla. The moſt conſiderable lymphatic Glands in the lower Extremity are toward the lower Part of the Inguina, commonly called the Inguinal Glands, to which the Faſcia lata, or crural Aponeuroſis, gives a kind of double Capſula, which makes ſome of them lie very near the Skin, and the reſt at a greater Diſtance from it.

As all theſe lymphatic Glands differ more in Situation than in Size and Figure, they are commonly enumerated and denominated from the Places already mentioned, where they lie in the following Order:

Glandulæ Parotides Lymphaticæ, Glandulæ Maxillares Lymphaticæ, Glandulæ Jugulares, Glandulæ Cervicales, Glandulæ Occipitales, Glandulæ Claviculares, Glandulæ Axillares, Glandulæ Thoracicæ, Glandulæ Oeſophagææ, Glandulæ Mediaſtinæ, Glandulæ Cardiacæ, Glandulæ Ventrales externæ, & internæ, Glandulæ Stomachicæ, Glandulæ Hepaticæ, Glandulæ Cyſticæ, Glandulæ Epiploicæ, Glandulæ Meſentericæ, Glandulæ Lumbares, Glandulæ Iliacæ, Glandulæ Inguinales, Glandulæ Crurales, &c.

There are three Sorts of Veſſels, which now go by the Name of Lymphatics; whereas, formerly, that Word was uſed only to ſignify the tranſparent Veſſels already mentioned, which accompany the lymphatic Glands. The original Sources of theſe Veſſels are very difficult to be found out; and even their Diſtribution thro' the Body has not been ſufficiently traced to enable us to deſcribe them particularly. As to their Termination, we are ſure, that, for the moſt part, they end in the Thoracic Duct.

Beſides theſe Veſſels, which accompany the Glands, there are others of the ſame Structure, found on the ſeveral Viſcera, where no lymphatic Glands have hitherto been diſcovered. We meet with them in very great Numbers in the external Membrane of the Liver, and in the Duplicature of the ſuperior membranous Ligament of this Organ. Several Diſcoveries have been made about theſe Veſſels in Brutes.

The third Sort of Veſſels, termed Lymphatics, are the ſmall Arteries and Veins, which, in their natural State, tranſmit only the ſerous Part of the Blood. Theſe Veſſels differ from thoſe of the firſt, in the Smallneſs of their Diameter, and in their Structure and Situation. All theſe little Arteries and Veins are uniform, extremely narrow; and, tho' their Sides are not thinner than thoſe of the valvular Lymphatics, yet their Diameters are generally leſs. The other Lymphatics are full of Valves, and very thin, but they are not narrow in proportion. The arterial and venous Lymphatics are found on the Parts which are naturally white, as on the Skin, and the White of the Eye; and their Origins are eaſily diſcoverable; but the valvular Lymphatics are confined to the internal Parts of the Body, and are found

found on Parts of all Colours that are in the Body; and we cannot eaſily trace them to their original Sources. *Winſlow's Anatomy.* See CHYLUS.

LYMPHÆDUCTUS, or LYMPHATICA VASA. The lymphatic Veſſels. See LYMPHA.

LYNCEUS, λυγκεύς. The Name of a Collyrium mentioned by *Galen, de C. M. S. L. Lib.* 4. *Cap.* 7. and by *Paulus Ægineta, Lib.* 7. *Cap.* 16. It is recommended for wearing off callous Exceſcences, and ſharpening the Sight.

LYNCIS LAPIS. See BELEMNITES.

LYNCOURION, from λύγξ, a Lynx, and οὖρον, Urine, becauſe fabled to be produced by the concreted Urine of that Animal. *Dioſcorides, Lib.* 2. *Cap.* 100. makes it a Species of Amber, to which he adds the Epithet πλειυσοφόρον and ſays it is good for the Stomach, and in a Diarrhœa. Some will have it the ſame as the Lapis Lyncis, and I belive it is only another Name for that Stone.

LYNX. Offic. Schrod. 5. 301. Raii Synop. A. 166. Aldrov. de Quad. Digit. 90. Jonſ. de Quad. 82. Charlt. Exer. 14. *Lupus cervarius.* Geſn. de Quad. Digit. 677. *Unica.* Caius de Animal. 42. THE OUNCE.

The Parts in Uſe are the Fat, and the Claws; the Fat is proper for Reſolutions, Strains and Luxations of the Joints; the Claw is ſet in Gold and Silver, and worn as an Amulet againſt the Epilepſy and Convulſions. *Dale* from *Schroder.*

LYRA. A large Sea Fiſh, which is not uſed by way of Aliment; but, dried, and taken in Powder, in the Quantity of a Dram, it is ſaid to be aperitive. *Lemery des Drogues.*

LYSIMACHIA.

The Characters are;

The Leaves are oblong, entire, and grow two, three, or four together at each Joint of the Stalk. The Flower is monopetalous, expanded circularly, multifid, and ſcattered on the Tops of the Branches. The Fruit is a Shell, almoſt globular, and gaping at the Top.

Boerhaave mentions ſix Species of this Plant; which are,

1. Lyſimachia; lutea; major; quæ Dioſcoridis. *C. B. P.* 245. *Tourn. Inſt.* 141. *Boerh. Ind. A.* 262. *Lyſimachia.* Offic. *Lyſimachia lutea.* Ger. 386. Emac. 474. J. B. 2. 901. Raii Hiſt. 2. 1021. Synop. 3. 282. *Lyſimachia lutea major vulgaris.* Park. Theat. 544. *Nummularia erecta Rivini.* Rupp. Flor. Jen. 14. YELLOW WILLOW-HERB.

This Looſe-ſtrife has ſeveral brown hairy Stalks, two Foot high or more, having ſometimes three or four, but oftener only two Leaves at a Joint, which are of a yellowiſh-green Colour, and hairy underneath, and darker, about three Inches long, and an Inch broad in the Middle, growing narrower at both Ends. The Flowers ſtand ſeveral together on the Tops of the Branches, conſiſting of a ſingle Leaf divided into five Parts, with ſeveral Stamina in the Middle, of a yellow Colour, ſomewhat like St. John's-wort. The Seed-veſſels are round, and parted in two, containing very ſmall Seed. The Root is long and ſlender, and creeps upon the Surface of the Earth. It grows in watry Places, and by River-ſides.

The Antients commend this Plant for a great Aſtringent, and good for all kinds of Fluxes from any Part of the Body, as, alſo, to conſolidate the Lips of freſh Wounds, prevent their Bleeding, and heal them in a ſhort time. It is not often uſed. *Miller's Bot. Offic.*

This Plant is called *Lyſimachia* from *Lyſimachus* the Son of a King of *Sicily*, who is ſaid to be the firſt who diſcovered it. It delights in moiſt Places, but has no Virtues; for thoſe which *Dioſcorides* aſcribes to the Lyſimachia, ſeem not to agree to this, but to belong to ſome other Plant. *Hiſt. Plant. adſcript. Boerhaav.*

2. Lyſimachia; bifolia; flore luteo, globoſo. *C. B. P.* 245.

3. Lyſimachia; ſempervirens; ſpicata; Ephemerum dicta; flore Blattariæ. *H. L.*

4. Lyſimachia; Orientalis; anguſtifolia; flore purpureo. *T. Cor.* 7.

5. Lyſimachia; annua; minima; polygoni folio. *T.* 142. *Linum, minimum, ſtellatum.* C. B. P. 214. Prodr. 107. This is ſaid to be poiſonous.

6. Lyſimachia; Canadenſis; lutea; folio Jalappæ. *Sarazen. Boerhaave, Index alt. Vol.* 1. *p.* 101.

LYSIMACHIA is, alſo, a Name for ſeveral Sorts of SALICARIA.

LYSIMACHIA *cæruleo flore.* A Name for the *Veronica*; *ſpicata*; *longifolia.*

LYSIMACHIA *galericulata.* A Name for the *Galeopſis*; *paluſtris*; *folio Betonicæ*; *flore variegato:* And for the *Caſſida*; *paluſtris*; *vulgatior*; *flore cæruleo.*

LYSIMACHIA *humifuſa.* A Name for the *Nummularia*; *lutea*; *major*; and, alſo, for the *Nummularia rubra.*

LYSIPONION, λυσιπόνιον. The Name of an Acopon deſcribed by *Paulus Ægineta, Lib.* 7. *Cap.* 19. In *Myrepſus, S.* 1. there is an Antidote, intituled *Luſiponos*, quoted from *Galen.*

LYSIS, λύσις. Solution. It is uſed relative to Luxations; to the Termination of Diſeaſes; to an Evacuation by Stool; to the menſtrual Flux; to Bandages; and to all kinds of Weakneſs.

LYSSA, λύσσα, λύπη. That Species of Madneſs, which is ſaid to be peculiar to Dogs and Wolves. But it is, alſo, uſed to expreſs the Madneſs in Man, excited by the Bite of a mad Animal. See HYDROPHOBIA.

LYSSODECTOS, λυσσόδηκτος, from the preceding Word, and δήκω, to bite. A Perſon bitten by a mad Animal; or one labouring under the Diſtemper thereby excited.

LYTERIOS, λυτήριος. An Epithet for thoſe Signs which precede the Solution of Diſeaſes.

LYTHRON, λύθρον. Duſt mixed with Sweat and Blood. *Heſychius.* In *Hippocrates's* Epiſtle to *Damagetus*, it ſignifies the excrementitious menſtruous Blood.

M.

M. For the Signification of this Letter in the chymical Alphabet, ſee ALPHABETUM CHYMICUM.

In Preſcriptions it imports *Miſce*, Mix; or *Manipulus*, an Handful.

MABOUJA. A very hard Root of a Tree, of which the ſavage *Americans* make themſelves Clubs. We are told by *Lemery*, that *Mabouja*, in the Language of theſe Savages, ſignifies the Devil; and that they give the Name to this Root, becauſe, when armed therewith, they look upon themſelves to be very terrible.

MACALEB *Geſneri.* See *Mahaleb*, under the Article CERASUS.

MACALEB *Serapionis.* A Name for the *Phillyrea*; *latifolia*; *lævis.*

MACANDON. The Name of a coniferous Tree, mentioned by *Bontius*, which grows in *Malabar*, called, alſo, *Cada Palava.* H. M.

Bontius writes, that the Fruit is exactly like the Pine-nut; only it ends not in ſo acute a Cone, nor is of ſo ſtony an Hardneſs, but quite ſoft, and of a faint, or rather inſipid Taſte. The Flowers he compares to thoſe of the Honeyſuckle.

The *Malayans* roaſt the Fruit under the Aſhes, and eat it for the Dyſentery, and to mitigate the Violence of the Cholera Morbus. They ſay, alſo, that it is good in pectoral Diſorders, the Aſthma, Phthiſis, and Pleuriſy, on account of the emplaſtic Virtue of its mucous Parts.

Bontius thinks it ought to be called the *Indian Tree Comfrey*, or *Tree Conſolida*, becauſe he more than once experienced the conſolidating Virtue of the Fruit, in an Hoſpital, for a Spitting of Blood. The Leaves, alſo, he ſays, are incarning; and are excellently qualified for generating Fleſh in Wounds and Ulcers, and inducing a Cicatrix. For the ſame Purpoſe a Salt may be extracted from the Leaves by Chymiſtry; which Salt, beſides its conſolidating Quality, has, alſo, a mundificant Virtue in cleanſing inveterate and malignant Ulcers. The expreſſed Juice, boiled with the Oil of the Leaves of the Fig-tree, is good to anoint Parts affected with the Gout. *Raii Hiſt. Plant.*

MACEDONICUS. An Epithet for a Plaiſter deſcribed by *Aetius*, and by *Paulus Ægineta, Lib.* 7. *Cap.* 17.

MACEDONISIUM SEMEN. This Seed is directed by *Nicolaus Myrepſus, Sect.* 1. *Cap.* 1. as an Ingredient in the *Antidotus aurea Alexandri. Fuchſius* informs us it is the Seed of the *Hippoſelinum*, Alexanders.

MACER. Oec. Theoph. *Macer veterum.* C. B. P. 408. *Macer Græcorum.* Park. Theat. *Macer Dioscoridis & Græcorum.* J. B. 1. 262. *Ulmo affinis, vasculis membranaceis & semine intus incluso compositio.* Raii Hist. 2. 1779. THE GRECIAN MACER.

It is brought from *Barbary*, and the Part in Use is the thick yellow Bark, which has a very astringent Taste, and is said by *Dioscorides* to be good for Spitting of Blood, the Dysentery, and Fluxes.

The recent Bark of the Root, mixed with Oxygala, or sour Milk, is used by all the Physicians of *Malabar*, and other Parts of the *East-Indies*, with very good Success, in curing all sorts of Dysenteries, and Fluxes of the Belly. Some macerate half an Ounce of the Powder of the dried Root in four Ounces of Whey, and give it twice in a Day, Morning and Evening; after which they exhibit boiled Rice, without Salt or Butter; and immediately after that, Chickens bruised, macerated, and boiled in a Decoction of Rice: Sometimes, if Necessity requires, they mix Opium with it. The *Arabians*, also, use the same, mixed with Nutmeg, in the Cure of all kinds of Fluxes of the Belly. The Root used with Water of Mint, and Powder of Mastich, is believed to be salutary and effectual in restraining Vomitings, and corroborating the Stomach. The *Indian Jogues* assure us, that a little Bit of this Tree is of more Effect in stopping Vomitings and Loosenesses, than a great Quantity of the Bark of Myrobalans or Areza; and that it excels the *Malabarian Coru:* Moreover, that the Fruit *Macre* destroys all sorts of Worms in the human Body, and breaks the Stone in the Kidneys, and secures those who eat it every Day in the Morning from the Stone and the Colic, and from Inebriation. The Similitude of the Name, *Macer* and *Macre*, and their Agreement in Virtues, prove this Bark to be the *Macer* of *Dioscorides*. *Raii Hist. Plant.*

Mr. *Jussieu*, in the Memoirs of the Royal Academy of Sciences, for 1729. seems to think the Macer of the Antients the same as the SIMAROUBA; which see.

MACERATIO. Maceration. This is an Infusion, or soaking Ingredients in Water, or any other Fluid, in order either to soften them, or get out their Virtues. *Lemery* defines Maceration to be a sort of Digestion, confined to thick Substances. Thus, says he, when Rose-leaves are put into Fat, in order to make Oil of Roses; this Mixture is exposed for some Days to the Sun, in order to macerate, that the Quality of the Roses may be the better convey'd to the Fat. *Pharm. Univers.*

MACHA, in *Paracelsus*, signifies a Beetle.

MACHÆRIA. Peach-kernels. *Galen, Lib. 5. de Comp. M.S. Loc. Cap. 9.*

MACHÆRION, μαχαιριον. MACHÆRIS, μαχαιρις. A Chirurgical Incision, or Amputation-knife. A Part of the Liver of Animals was thus called by the *Aruspices*, according to *Ruffus Ephesius*; but, he says, in Man it is scarcely discoverable. *Lib. 1. Cap. 28. de Appellat. Partium Corporis.*

MACHAL, imports fixed. *Rulandus.*

MACHA-MONA. A kind of *African* Calebash. It is the Fruit of a very large Tree, which grows in *Africa*, and the *American* Islands. When this Fruit is ripe, the Pulp has a sourish Taste, with a little Astringency; it is delicious in hot Countries, and they prepare a Liquor of it, which they use instead of Lemonade to cool and refresh themselves; and give it to sick Persons under a Looseness. The Pulp, dried, tastes as well as the spiced Bread of *Rheims*. The Slaves make a kind of thick Gruel with this Pulp and Water; it is of an absorbent Quality. The *African* Women use the Pulp instead of Rennet, for curdling their Milk.

The Seeds of this Fruit are as big as small Pine-apple Kernels, kidney-shaped, of a Chesnut-colour, and including an Almond far more delicious than our sweet Almonds. *Lemery des Drogues.*

MACHAON, the Son of *Æsculapius*, and Brother of *Podalirius:* He was the elder Brother, as may be inferred from what *Podalirius*, in *Q. Calaber*, speaks concerning his Death. "This "dear Brother of mine, *he says*, educated me as if I was his "own Son, after our Father was received into Heaven, and "taught me to cure Diseases." Tho' *Homer* always mentions *Podalirius* first, it appears to be only for adjusting his Verse; and what he says of *Machaon* in other respects, plainly shews that he was the most esteem'd of the two; and that he was sent for, preferably to his Brother, to attend the greatest Officers in the Army. It was *Machaon*, who had the Treatment of *Menelaus*, when he was wounded by *Pandarus*; he it was who cured *Philoctetes*, when lame of a Wound in one of his Feet, by the careless letting fall of an Arrow, dipt in the Blood of the Hydra. This Cure proves *Machaon* to be more skilful in his Art, than *Chiron* the Centaur, who could not cure himself of a Wound of this Nature.

As to other respects, the two Brothers were both Soldiers, as well as Physicians; and *Machaon* seems to have been the bravest of the two: He was of the Number of those who enter'd into the Wooden Horse, and once was wounded in the Shoulder, in a Sally made by the *Trojans*; at last he was killed in a Duel by *Nireus*, or, as others say, by *Eurypylus*, the Son of *Telephus*, leaving, by his Wife *Anticlea*, two Sons, *Nicomachus* and *Gorgasus*, who lived at *Pheræ*, and possessed their Grandfather's Kingdom, till they were expelled by the *Heraclidæ*, on their Return from the *Trojan* War. *Pausanias* mentions three other Sons of *Machaon*, *Sphyrus*, *Alexanor*, and *Polemocrates:* Some of the Sons seem to have been Physicians; and, perhaps, they all followed their Father's Profession, which was preserved in the Family with great Care. It is not certain whether *Machaon* was a King in his own Right, or acquired it by his Wife; but *Homer*, in two or three Places, calls him *Pastor of the People*; a Title which he gives to *Agamemnon*, and the other Kings. *Pausanias* relates further, that *Machaon* was buried at *Messene*, whither his Bones were carried from the Camp before *Troy*, by the Care of *Nestor*.

Podalirius, in his Return from the *Trojan* War, was cast by a Tempest on the Coasts of *Caria*, where a Shepherd, who had entertained him, having discover'd that he was a Physician, conducted him to the King *Damæthus*, whose Daughter had fallen from the Top of an House. *Podalirius* cured her, by Bleeding in both Arms; which so pleased the King, that he gave her to him in Marriage, with the *Chersonesus*, where *Podalirius* built two Cities; one called *Syrnum*, from *Syrna*, the Name of his Wife; and the other *Bybassus*, which was the Name of the Shepherd, who had relieved and entertained him after his Shipwreck. *Podalirius*, besides other Children, had one called *Hippolochus*, from whom *Hippocrates* was said to be descended.

This is the first Instance we have upon Record of Phlebotomy, and is related by *Stephanus Byzantinus*.

MACHINA, μηχανη, μηχανημα, a Machine, in Medicine, signifies in a general Sense, the larger kinds of Chirurgical Instruments; particularly such as are contrived for the Reduction of Luxations: Of these *Oribasius* has left a particular Tract. Sometimes it is to be understood particularly of the *Scamnum Hippocratis*; as in *Galen, Lib. 4. de Artic.*

MACHIS, a Term bestow'd by *Paracelsus* on all Beetles, and other Insects, which are not generated of Dung. *Paragraphor. Lib. 2. Sat. 5.*

MACIS. Mace. See NUX MOSCHATA.

MACOCKI *Virginiani sive Pepo Virginianus.* Ger. Emac. *Pepo Virginianus.* C. B. The *Virginian* Macock, or Pumpion. *Raii Hist. Plant.*

MACOCQUER, *Fructus orbicularis, Granis Cordis Effigie.* C. B. An orbicular Fruit, four Inches in Diameter, with an Heart-shaped Kernel. It is taken by *Ray* for a Species of the preceding. *Raii Hist. Plant.*

MACOUNA. A Species of Phaseolus, or Kidney-bean, growing in *Brasil. Raii Hist. Plant.*

MACAXOCOTLIFERA *Arbor Nieremberg.* A Tree in the *West-Indies*, about the Size of an ordinary Plum-tree: The Fruit is called *Macaxocotl*, and is red, and of a long Figure, of the Size of a moderate Walnut, with large Stones, and a scanty, soft, and juicy Pulp, yellow on the Inside like the Stone. This Fruit is eaten, and well-esteem'd, by *Europeans*, who are accustom'd to them; for they loosen the Belly, and by their sweet Taste, mixed with a kind of Sharpness, are pleasing to the Palate. The second Species is the *Atoyaxacotl*, which is much less than the former, of a yellow Colour, orbicular Shape, of a finer Smell; has a smaller round Stone, and a more pleasant Taste. The third is the *Coztieczocotl*, as the *Mexicans* call it, which is esteem'd by many a Species of Myrobalans. This Sort is pale, large, spotted, and of a more grateful Pulp than the rest. The fourth is the *Atoyaxocotl Chichiltic*, which is the least of all, of a scarlet Colour, and of a sweeter Smell than the rest. The last is the *Chichiaxocotl*, which signifies *running down with Sweat*; this Species is of the Size of a Walnut, of the Colour of a Raisin, of a more plentiful Pulp, and smaller Stone, than the others. These Trees grow in hot open Countries, which are well cultivated and water'd. The Decoction of the Bark of the Trees cures the Itch, and Swellings in the Legs, and the Powder thereof heals Ulcers. It is common to all these Trees to produce their Fruit, which adheres to the Trunk and Branches, before their Leaves; which is a Property belonging to very few Trees. Of the Leaves are prepared acid Brines and Pickles, which are opening and loosening to the Belly. The Fruit affords no very grateful or wholsome Aliment. The Ashes of the Wood are used by the young Women to colour their Hair yellow. *Raii Hist. Plant.*

MACRAUCHEN, μακραυχην, from μακρος, long, and αυχην, a Neck, long-necked. *Galen, Com. 1. in 6. Epid. T. 3.*

MACROCEPHALUS, μακροκεφαλος, from μακρος, long, and κεφαλη, a Head. Long-headed. A Property or Affection endemic to some People of *Asia*, called therefore, by *Hippocrates*, *de Aëre, Aq. & Loc. Macrocephali*, Longheads.

MACROCOSMUS, the great, external, and extended World, with respect to Man, the *Microcosmos*, or little World. In adorning, displaying, and comparing these two Worlds, the Followers of *Paracelsus* and *Helmont* have exerted their Wits upon all Occasions. *Castellus.*

MACROPHYSOCEPHALUS, μακροφυσοκεφαλος, from μακρος, long, φυσα, a Flatus, and κεφαλη, a Head, is one who

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has his Head diſtended beyond its juſt Dimenſions, by ſome flatulent Affection. *Caſtellus.*

MACROPIPER. See PIPER LONGUM.

MACROPNUS, *μακρόπνους*, from *μακρὸς*, long, and *πνέω*, to breathe, is one who fetches his Breath at long Intervals. *Hippocrates, Lib. 2. & 6 Epid.* Macropnus is oppoſed to Brachypnus. See BRACHYPNOEA.

MACULA, *ἐξάνθημα, στίλβη, κηλὶς*, in Medicine, is a cutaneous Efflorescence, which changes the Colour of the Cuticle. There are *Maculæ Peſtilentes*, peſtilential Spots, or Efflorescences. *Maculæ Hepaticæ*, hepatic Spots, or Efflorescences, proceeding from a Ichoreſcence of the Blood, attended with a ſort of Coagulation. *Maculæ Volaticæ*, volatic, or ſoon vaniſhing Spots, familiar to Children, from a Fermentation of the ſanguineous Ichor. *Maculæ* is, alſo, a Name for the *Nævi materni*, or native Spots and Blemiſhes, or for any morboſe Mark or Character impreſſed on the Fœtus. *Macula Oculi*, in *Rulandus* and *Johnſon*, is a Cataract or Suffuſion. *Caſtellus. Maculæ albæ*, white Spots, are thoſe Affections of the Cornea Tunica of the Eye, which are comprehended under the Names of *Albugo, Leucoma, Nebula*, and *Nubecula. Heiſter.*

MADAROS, *μαδαρὸς*, from *μαδάω*, to diſſolve and melt away through an Exceſs of Moiſture; ſmooth, bald; *μαδάρωσις, μάδησις*, (*Madrotes, Madiſis*) a Defluxion, or Falling off of the Hair, Baldneſs.

MADAROSIS, *μαδάρωσις*, in a ſpecial Senſe, is the ſame as *Milphoſis, μίλφωσις*, or a Falling off of the Hairs of the Eyelids. See DEPLUMATIO. This kind of Affection belongs, and is aſcribed, alſo, to very humid and foul Ulcers. *Hippocr. de Humor.* and *6 Aph. 4.* where we read, *τὰ ~εμμάδαρα ἕλκεα κακοήθεα*, "Ulcers, with a bald Circumference, are malignant."

MADEFACTIO, *ὑγρανσις*. The ſame as HUMECTATIO; which ſee. *Madefactibilia*, Madefactibles, are ſuch Things as admit adventitious Moiſture into their innermoſt Subſtance, as Wool, and a Sponge. *Caſtellus.*

MADELCON, *μάδελκον*. A Name in *Dioſcorides* for *Bdellium.*

MADIC. Butter-milk. *Rulandus.*

MADICUM. A Collyrium in *Oribaſius, Synopſ. Lib. 3.* ſo called, becauſe the Ingredients are levigated and moiſtened with Water.

MADISTERION, *μαδιςήριον*, an Inſtrument for rendering the Skin ſmooth, by taking away the Hairs.

MADOR, *ϖλάδος*, ſuperfluous or adventitious Moiſture. *Cocta* (Things boiled) were called by the Antients *madida*, (moiſt); for *madere* with them meant the ſame as *coqui*, as is obſerved by *Rhodius ad Scribon.* N° 41. for, by Boiling, Things are moiſten'd and ſoften'd. In the ſame Senſe it is uſed by *Helmont, Tr. Aſthma & Tuſſis*, N° 75. where he denies, that *madida* (that is, *decocta*) dry up the Humours. In a preternatural State, the Sweat which ariſes under a Syncope, or Fainting, whether it be cold or hot, is not really *Sudor* (Sweat); but may, more properly, be called *Mador.*

MADREPORA, a petrifying Plant, growing in the Sea, and diſtinguiſhed from Coral only by ſeveral Perforations in its Branches, which are pretty frequently diſpoſed in the Form of a Star. It is commonly white, ſometimes grey, ſometimes red marked with white: There are many Species of it mentioned by *Imperatus, C. Bauhine*, and *Tournefort. Boerhaave* enumerates twenty-four.

Though the Madrepora has really its Origin and Growth in the Sea, it is ſometimes found on the Land, and even in Places which are elevated, and at a good Diſtance from any Water. M. *Juſſieu* preſented one to the Royal Academy of Sciences, in *November* 1709. which was found on the Mountain of *Chaumont* in *Normandy*. This Madrepora was porous, light, of a white Colour, and in all reſpects like the common Madrepora, reſembling white Coral.

It is ſurpriſing, that a Subſtance, which, probably, had its Origine no-where but in the Sea, ſhould be found in Places ſo far diſtant, and even on Mountains, as in its proper Matrice. But the Madrepora is not the only Production of the Sea, which we meet with on the Land, where we ſee Mountains, and other Places, abounding with a great Variety of petrefied Shells, which ſeem calcin'd by their long Continuance in that Situation. We find alſo Teeth of Fiſhes, and ſeveral other Parts of Sea-animals, which could never be carried thither, but by extraordinary Tempeſts and Inundations; and we might even go as far back as the Deluge to account for them.

All theſe petrefied Plants are alcaline and aſtringent: Levigated, and taken inwardly, they produce the Effects of Coral. The Doſe is from half a Scruple to two Scruples, for a Diarrhœa and Hæmorrhages. *Lemery des Drogues.*

MÆMACYLON, (*Oribaſ.*) MEMACYLON, (*Dioſcorides*). the Fruit of the ARBUTUS; which ſee.

MÆNA. Offic. Rondel. de Piſc. 1. 138. Bellon. de Aquat. 125. Geſn. de Piſc. 519. Aldrov. de Aquat. 223. Raii Ichth. 318. Ejuſd. Synop. Piſc. 135. Charlt. Piſc. 25. Jonſ. de Piſc. 54. THE CACKEREL.

It is taken in the *Mediterranean* Sea. The Head, burnt to Aſhes, and ſprinkled on the Part, cures callous Fiſſures of the Anus. The Garum, prepared of the Fiſh is good to waſh putrid Ulcers in the Mouth. *Dioſcorides, Lib. 2. Cap.* 32.

MAGALAIZE, *Maganaize, Magneſe, Magne*, is a ſhining Mineral, much like Antimony, but more tender and brittle: There are two Sorts, the grey and the black; the firſt is very ſcarce; they are both found in the Quarries of *Piedmont.* It ſerves to purify and whiten, and is uſed by the Potters, Enamellers, and Glaſs-makers. *Lemery de Drogues.* See MAGNESIA.

MAGDALEONES. Maſſes of Plaiſters, or other Compoſitions reduced to a cylindrical Form; they are, alſo, called *Cylindri, κύλινδροι.*

MAGDALIÆ. The ſame with the preceding.

MAGDALIDES, in *Scribonius Largus*, N° 201. are the ſame as MAGDALEONES.

MAGIS, *μαγὶς*, in general, ſignifies a Maſs or Quantity of any thing, ſufficient to fill the Hand; much the ſame as MAGMA. *Galen, Exeg.* In *Hippocrates, Lib. 1. de Morb. Mul. & de Steril.* it ſignifies, in a ſpecial Senſe, a Compoſition of Heads of Garlick, ſtrong Cheeſe, and Polenta, beaten up together, and made into a ſort of Pudding. *Magis*, in *Pollux*, ſignifies a Kneading-trough.

MAGISTERIUM, Magiſtery, is a Term differently uſe; for, firſt, it is aſcribed to Powders prepared by Solution and Precipitation, as Magiſtery of Hartſhorn, and of Corals: Secondly, it is beſtowed on Reſins, or reſinous Extracts, as Magiſtery of Scammony, of Jalap, and the like; though, accurately ſpeaking, the true Magiſtery, they ſay, exiſts only when ſomewhat of a Menſtruum remains united with the extracted Eſſence. *Schroder.*

Magiſtery is a Name which the antient Chymiſts gave to certain white and very light Precipitates: By this Term they would have us underſtand a very ſubtile and exquiſite Preparation. *Lemery, Cours de Chymie.*

The Word Magiſtery is commonly uſed for a Powder, generally white, prepared of ſome certain Subſtances by Precipitation. Theſe Subſtances are either of the mineral kind, as Earth and Stones; or Vegetables, as Herbs, and the like; or Animals, as Bones, Horns, and cruſtaceous Parts. The Method of preparing it is after the following manner: Take the Subſtance from which you deſign to prepare the Magiſtery, and bruiſe or break it groſly; then pour thereon a proper Liquor, an Acid or the like, in order to its Solution or Extraction. The Solution is precipitated by an Affuſion of the Liquor, or by the Matter by whoſe Force that of the Solvent is blunted: The precipitated Powder may be waſhed, if neceſſary, with common Water, and afterwards gently dried. *Schroder, Lib. 2. Cap. 67.*

MAGISTRALIS. An Epithet beſtowed on ſuch Medicines, eſpecially compound ones, as are prepared for preſent Uſe, and not to be found in the Shops, being the ſame with what are otherwiſe called *Medicamenta extemporanea*, extemporaneous Medicines. *Caſtellus.*

MAGISTRANTIA. The *Imperatoria*, Maſterwort, is ſometimes ſo called.

MAGMA, *μάγμα*, in a large Senſe, ſignifies any thick Ointment, which is made up with but a ſmall Quantity of Liquids, in order to prevent its running abroad. In a ſtricter Senſe it means the Recrement of an Ointment, or the Fæces which are left after the Expreſſion of the more liquid Parts. *Galen* reſtrains the Word *Magma* to the Fæces of Myrobalans, *Lib. 7. de C. M. P. G.*

MAGNA ARTERIA. The ſame as AORTA.

MAGNALE, *μεγαλεῖον*. The Work of God. *Rulandus. Linden.* In *Paracelſus*, and his Followers, it ſignifies ſome occult and divine Virtue. *Helmont* deſcribes the *Magnale magnum* to be a kind of Spirit, who adminiſters to Sympathy and Antipathy, is the Prompter and Promoter of Actions, and by virtue of which Magnetiſm is conveyed, as by a Vehicle, to a diſtant Object, *Tr. de Magnet. vuln.* Again, Magnale, he ſays, in mixt things, is the Æther, which is thinner than Air, and of an ambiguous Subſtance between Body and No Body, receiving only the external Conſtellations of its native Soil. *Paradox 2.* N° 12. and elſewhere. Magnale, as it has nothing like itſelf among created Beings, ſo it will admit of no Manifeſtation by Reſemblance. The Magnale is not Light, but a ſort of conjugal Form aſſiſting the Air. *Tr. Vacuum Naturæ.*

MAGNES. Offic. Mer. Pin. 212. Schw. 384. Calceol. 257. Boerh. 438. Aldrov. Muſ. Metall. 553. Worm. 62. Charlt. Foſſ. 62. *Lapis Magnes.* Matth. 1384. THE LOAD-STONE.

The Load-ſtone of the Shops, Ἡρακλεωτικὸς λίθος and Ἡρακλειωτὶς of the *Greeks, Lapis Heraclius*, from *Heraclea* a Town in *Lydia*; Μαγνήτης, from *Magneſia*, another Town in *Lydia*; Σιδηρίτης, from its attracting Iron; *Magnates* of *Avicenna*, and *Calamita* of *Rhaſes*; is a ferruginous, denſe, foſſile Subſtance, of a blackiſh, bluiſh, or rediſh Colour, attracting Iron, or another Magnet, or repelling them; and directing its Poles always to thoſe of the World, when it is at Liberty to move. This Subſtance

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is not to be confounded with the Magnes of *Theophraſtus*, which, he ſays, was white, and ſhining like Silver; not hard, but eaſily made into Veſſels by the Turners Art; neither did it attract Iron. It was, however, named from the ſame *Magneſia* in *Lydia*. Another Name of the Load-ſtone is *Lapis Lydius*, which is, alſo, applied to what we call the Touch-ſtone, by which the Truth of Gold and Silver are tried. Theſe two Significations of *Lapis Lydius* are, therefore, carefully to be diſtinguiſhed, becauſe they are very different.

Some of the antient *Greeks*, having obſerved the Virtue of the Magnet in repelling Iron, believed there were two Kinds of it, different from each other, one which attracted Iron, the other which repelled it.

The Load-ſtone is found in many Parts of *Europe*, and for the moſt part in Iron Mines; but the beſt are thoſe which come from the *Eaſt Indies*, and *Ethiopia*. It is, undoubtedly, a kind of Iron Ore: and, in ſome Places in *Germany*, they actually extract the Iron it contains: When expoſed in the Focus of a great Burning-glaſs, it, likewiſe, manifeſtly diſcovers Iron. The Virtues of the Magnet in attracting and repelling Iron, and in turning its own Poles to thoſe of the World, are very wonderful; and eſpecially its being able to communicate theſe Virtues to the Iron which it touches.

The Load-ſtone is not uſed inwardly in Phyſic; though *Galen* ſays it has the ſame Virtues as the Blood-ſtone; and, alſo, mentions its purgative Virtue, and recommends it, on that account, in Dropſies. *Dioſcorides* propoſes, that it be given in the Quantity of three Oboli, to evacuate groſs melancholy Humours. Some think it poſſeſſed of a deleterious Quality, which is denied by others; but I imagine the poiſonous Quality is to be underſtood of that kind of Magnes mentioned by *Theophraſtus*, which I take to be a kind of native Litharge.

The true Load-ſtone, externally uſed, is drying, aſtringent, and conſolidating. It is an Ingredient in the *Emplaſtrum Manus Dei*, *Emplaſtrum divinum*, *Emplaſtrum nigrum*, and *Emplaſtrum ſtypticum* of *Charas*. *Geoffroy*.

It is of an aſtringent Quality, and ſtops Bleeding; being burnt, it expels groſs and atrabilious Humours, but it is ſeldom uſed. *Schroder*. It is preſcribed in Hernias. *Hoffman*. *Paracelſus* makes it an Ingredient in a Plaiſter prepared, not only for extracting the Head of an Arrow from the human Body, but all manner of Dirt and Filth whatever. *Dale*.

MAGNES ALBUS. Mont. Exot. 13. *Magnes candidus*. Kentm. 14. THE WHITE LOAD-STONE. *Dale*.

This Load-ſtone is called, by the *Italians*, *Calamita alba*, and *Magnes carneus*; becauſe, as the true Load-ſtone draws Iron, this is ſuppoſed to draw Fleſh. It is a white Stone, marked with black Spots, which, if laid on the Tongue, ſticks very cloſely to it; and is no other than a kind of rocky Marl, found ſometimes in the ſame Mines with the Load-ſtone. It is fooliſhly and fictitiouſly ſaid to be of wonderful Efficacy in Love Affairs. *Geoffroy*.

According to *Monti*, it abſterges with an Aſtringency, and is to be reckoned among Antarthritics, Antiſcorbutics, and Aperitives. *Dale*.

MAGNESIA is commonly the ſame as *Marcaſita*, a Marcaſite; but, as a Term of Art, ſignifies melted Tin, into which Mercury being caſt, is thoroughly mixed and incorporated with it into a brittle Subſtance, and white Maſs. It is, alſo, *Argenti cum Mercurio Mixtura*, a Mixture of Silver and Mercury, and a very fuſile Metal, diſſoluble as Wax, and of a moſt ſurpriſing Whiteneſs, called the *Magneſia Philoſophorum*, the Philoſophers Magneſia. Again, it is taken for the Matter of the Philoſophers Stone, and for Sulphur. *Rulandus*, *Johnſon*. Synonymous Terms for this Arcanum or grand Secret of the Philoſophers in the Magiſtery of the Stone (*in Magiſterio Lapidis*) are *Lac Maris*, *Cœagalum*, *Aphroſelinum Orientis*, *Magneſia Lydiæ*, *Italicum Stibium*, *Pyrites Achaiæ*. *Theat. Chym. Vol.* 1. *p.* 778. Antimony is, alſo, called *Magneſia Saturni*. *Schroder*, *Lib.* 3. *Cap.* 17. *Caſtellus*.

MAGNESIA. Offic. Geoff. Laet. Ed. Angl. 178. *Manganeſe*. Mer. Pin. 212. Schwench. Not. in Boerh. Chym. 140. *Sapo vitri*. Mer. Ars Vit. SOAP OF GLASS.

Magneſia, or Maganeſia, is a foſſil, metallic, ferruginous Subſtance, reſembling Antimony in its ſhining Colour, and very brittle. *Pomet* mentions two Kinds of it, one Aſh-coloured, which is not eaſy to be got, and, therefore, little uſed; the other black, which is very common. It is uſed in making and purifying of Glaſs; for, by mixing a ſmall Quantity of it with the Glaſs, whilſt in Fuſion, it clears it from any green or bluiſh Colours, and makes it more tranſparent and bright: On that account *Merret* termed it *Sapo Vitri*. If too great a Quantity be put in, it gives the Glaſs a purple Colour. It is uſed by Potters in colouring their Veſſels black, as the Zaffara is for blue. *Merret*, alſo, ſays, the beſt Manganeſe is that which is hard, heavy, ſparkling, and blackiſh, and which, being reduced to Powder, turns Lead black. It is dug in *Germany*, *Italy*, *Piedmont*, and in *England* near the *Mendip* Hills in *Somerſetſhire*, famous for Lead Mines: And accordingly *Merret* tells us, that where-ever the Miners find Maaganeſe, they conclude, that there is Lead Ore under it; but whether it contains any Lead, or not, has not hitherto been diſcovered. It is not uſed in Phyſic. *Geoffroy*.

MAGNESIA ALBA.

How prejudicial and virulent a Quality draſtic Purgatives are poſſeſſed of, is ſufficiently known to the Skiiful in the Healing Art. For this Reaſon a Medicine capable of ſafely and efficaciouſly eliminating the Contents of the Inteſtines has been long ſought after. And, ſince moſt Purgatives, in conſequence of their acrid ſalino-ſulphureous Principle, are neither grateful to the Smell nor Taſte, but create a certain Nauſea, Phyſicians have long eagerly wiſhed for a Purgative, which was both grateful to the Palate, and fragrant to the Smell. For this Reaſon *Helmont*, obſerving that ungrateful and draſtic Purgatives were only to be obtained from the Vegetable Kingdom, earneſtly wiſhed, that an efficacious one of oppoſite Qualities might be found in the Mineral Kingdom.

But ſuch a Medicine was long and in vain ſought for, till, at laſt, there appeared at *Rome* a highly white Powder, without either Taſte or Smell, of an highly light and tender Subſtance; one Dram of which not only procured ſeveral Stools, without any Diſadvantage or Loſs of Strength, but, alſo, purged hypochondriac Patients, and thoſe whoſe Primæ Viæ were loaded with acid Juices, incapable of being eaſily carried off by other Purgatives, whilſt it at once deſtroyed and eliminated the offending Acid. This Powder appeared under the Name of *Magneſia alba*; but its firſt and genuine Inventor is not certainly known. At *Rome* it bore the Name of the Count of *Palma*, though many are of Opinion, that the Preparation was carried from *Germany* to *Italy*.

What I myſelf know of this Powder, I ſhall, without any Reſerve, communicate to the Public. Upwards of fourteen Years ago, *Johannes Siboldus*, an able Chymiſt, and an Acquaintance of *Helwigius*, Author of the *Phyſica inſtaurata inaudita*, was at *Magdeburg*: Theſe two Gentlemen, according to *Katſchius*, a Phyſician at *Halle*, and formerly Amanuenſis to *Siboldus*, were in Queſt of a Spirit, or univerſal Menſtruum, extracted from nitrous Earth. With this View they not only diſtilled by an open Fire, from a Retort, thoſe Earths from which Nitre is extracted, after having long expoſed them to the Sun, by which means they obtained a volatile urinous Spirit; but they, alſo, waſhed theſe Earths with Water, boiled the Lixivium prepared from it, and diſtilled the remaining Maſs from a Retort. By this means a rediſh Spirit was obtained; and, by a ſtronger Degree of Fire, a Caput mortuum was left, of an highly white Colour, inſipid, light, and to which they gave the Name of the *Magneſia of Nitre*. But of its Virtues, or purgative Quality, nothing was at this time known.

From what has been ſaid, it is ſufficiently obvious, that the Origins and Natures of this Magneſia, and of the Powder prepared from the Lixivium of Nitre, are pretty much the ſame: For this general Account ſufficiently ſhews, that both the Preparation and Name of this Powder were known in *Germany* much ſooner than in any other Country. And it is probable, that *Helwigius*, who afterwards travelled through the Provinces of the *Indies*, and *Italy*, together with other Medicines, communicated this, alſo, to the *Italians*.

But, that we may form a right Judgment of the Nature and Efficacy of this Medicine, we muſt obſerve, that this Powder is entirely inſipid, of a white Colour, and of an highly alcaline Quality, ſince it not only produces a violent Effervеſcence with every Acid, but becauſe an Acid, alſo, diſſolves that Earth. The Solution made by this means, which is of an highly bitter, ſaline, and acrid Taſte, ſufficiently ſhews, that the Powder is of an alcaline, earthy, diſſolvable, and, at the ſame time, a ſulphureous Nature, becauſe the Solution is highly bitter. On the contrary, other alcaline Subſtances, ſuch as Crabs-eyes, Egg-ſhells, and prepared Shells, by an Affuſion of Spirit of Vitriol, produce a ſtrong Ebullition; but their Solution is ſo far from being bitter, or exceſſively ſalt, that it is only gently ſo, or rather entirely inſipid. The Powder of Quick-lime, though generally accounted an alcaline Earth, neither produces an Effervеſcence upon an Affuſion of the Spirit of Vitriol, which theſe Subſtances do, nor is a palpably ſaline Taſte produced; but, though there is a large Quantity of the Powder of Quick-lime added, the Spirit of Vitriol ſtill continues acid, its corroſive Quality being only a little mitigated.

It is certain, that, in ſome Patients, one or two Drams of the Magneſia purge pretty briskly, by procuring five or ſix Stools; whereas, in others, the ſame Doſe produces no more than Efforts to an Evacuation of the Fæces. The Reaſon of this Diverſity of Effects is ſufficiently obvious from what has been ſaid; for it is certain, that this earthy Powder by no means contains a cathartic Principle, which can only conſiſt in the ſaline, penetrating, and acrid Quality of any Subſtance; but that its purgative Virtue reſults from the particular Diſpoſition of the Humours lodged in the Body; becauſe, if it meets with acid Humours in the Cavities of the Stomach and Inteſtines, it is converted into a neutral Salt, of an acrid ſaline Taſte, and of a ſtimulating Quality, ſince we obſerve, that an highly acrid

Salt

Salt is produced, when this Medicine is mixed with Spirit of Vitriol. Now we know from Experience, that large Doſes of bitteriſh neutral Salts procure ſeveral Stools, as *Hoffman* has ſhewn, in his *Diſſert. de Salium mediorum excellente & purgante Natura.* It is not, therefore, ſurpriſing, that this Powder ſhould be ſometimes deſtitute of a purgative Virtue; when, for Inſtance, the Primæ Viæ do not abound with Acids, but with a viſcid Phlegm, which hinders it from being diſſolved, and converted into a ſtimulating Salt.

But I am not ignorant, that ſome Objection may be made to this Opinion; ſince other earthy Subſtances, which quickly reſolve and abſorb the Acid lodged in the Primæ Viæ, by no means prove laxative. But to this it may be anſwer'd, that ſometimes the Body is render'd ſoluble by the abſorbent or bezoardic Powders, if there is a large Quantity of Acid lodged in the Primæ Viæ. But the purgative Virtue of theſe is not ſo great as that of the Magneſia; becauſe their Solutions with acid Liquors are not ſo conſiderably ſaline and acrid, as the Solutions of the Magneſia with the ſame acid Liquors; ſince the former are only poſſeſſed of a moderately ſaline Taſte. Hence it appears, that, beſides the earthy, there is, alſo, another Principle in the Magneſia, which, upon the Admixture of an Acid, is converted into a ſtimulating and purgative Subſtance.

But that we may more effectually inveſtigate the Cauſes and Reaſons of this purgative Quality in the Magneſia, it is neceſſary we ſhould make an accurate Inquiry into the Matter of which it is made. This, therefore, is nothing but a Lixivium, remaining after the Cryſtallization of Nitre, called by the Nitre-makers, *Mother-water of Nitre*; becauſe, without the Addition of it, there can be no Coagulation of the Nitre into Cryſtals, though, from this alone, no Nitre in a cryſtalline Form can be procured.

This Lixivium, upon inveſtigating its Nature, is,

1. Highly heavy and ponderous; for one medicinal Pint of it is more than five Ounces heavier than an equal Quantity of Water; and the Proportion of its Weight, to that of Oil of Vitriol is as ten to eighteen: For one medicinal Pint of Oil of Vitriol, is eighteen half Ounces heavier than the ſame Quantity of Water; one medicinal Pint, therefore, of this Lixivium contains five Ounces of ſolid Matter.

2. This Lixivium is of an highly bitter and ſaline Taſte, and, upon Evaporation, cannot be dried; but is immediately diſſolved by the Air.

3. This Lixivium does not produce an Effervеſcence with any gentle Acid, ſuch as Spirit of Vitriol; but with Oil of Vitriol it produces a ſtrong Ebullition; and, with both, a Powder of a white Colour is precipitated to the Bottom: And what is to be carefully obſerved, is, that the Oil of Vitriol, when poured upon it, not only produces a Noiſe, but, alſo, ſends forth a rediſh Smoke; which is a ſufficient Proof, that ſome Portion of the Spirit of Nitre is as yet lodged in it. The Smell, alſo, diſcovers that ſome Portion of the Spirit of Salt is lodged in it; nor is it to be doubted, but that, from this Lixivium, an excellent Aqua Regia might be prepared; ſuch as that commonly obtained from the Acid of Salt and Nitre: It is, alſo, ſufficiently obvious, that the Particles of Nitre, and common Salt, are in this Lixivium contained under the Form of pingueous and ſulphureous Particles.

4. Tho' Oil of Vitriol, or any ſtrong Acid, mixed with this Lixivium, produces a violent Effervеſcence; it is yet ſurpriſing, that the fuming Spirit of Nitre, which is a ſtrong Acid, does not give the ſmalleſt Sign of an Effervеſcence, when mixed with it: A Phenomenon which, among others, ſurpriſingly proves the different Natures and Virtues of Acids.

5. This Lixivium, when mixed with an alcaline Liquor, whether of a volatile or fixed Nature, ſuch as urinous Spirit of Sal Ammoniac, prepared with Water, or Oil of Tartar per Deliquium, produces no Ebullition; but there enſues a very conſiderable Precipitation of an earthy whitiſh Powder.

6. This Lixivium, when mixed with an equal Quantity of highly rectified Spirit of Wine, is intimately incorporated with it; only a certain earthy Matter remains in the Bottom of the Veſſel.

7. This Lixivium, when coagulated by means of the Fire, and put into an ignited Crucible, produces a ſtrong Ebullition and Froth: Then, upon increaſing the Fire, a Spirit like Aqua Fortis, of a fetid Smell, and which ſome preſerve, is yielded under the Form of a red Smoke. Afterwards, upon raiſing the Fire ſtill higher, the Powder called the Magneſia remains; and this is the moſt common Method of preparing this Medicine.

8. A more compendious Method of preparing this Powder is by a Precipitation of the Lixivium, either with the Acid of Vitriol, a Lixivium of Pot-aſh, or Oil of Tartar per Deliquium: Then this Earth is to be waſhed with River-water, and dried.

But, that the genuine Nature of the ſeveral Ingredients contained in this Lixivium may be the more accurately diſcover'd, it is neceſſary, carefully to inveſtigate how, and of what Matter, the inflammable Nitre is prepar'd. Now, in order to the Elaboration of Nitre, putrefied Earths, obtained from the Excrements of Animals; old Earths, obtained from Walls, and burnt Buildings, which have been long expoſed to the Influence of the Sun and Winds, and by that means render'd very fine; as, alſo, the Aſhes of Wood, together with Quick-lime, are abſolutely neceſſary: And from all theſe, in Conjunction with Water, is prepared the Lixivium of Nitre, which is formed into a cryſtalline Salt; and the remaining Part is the Lixivium called *the Mother-water.*

From what has been ſaid, it is ſufficiently obvious, that, ſince neither a ſulphureous, nor an earthy Principle, contribute to Cryſtallization, theſe Principles are principally contained in the Lixivium of Nitre, prepared of the above-mentioned Ingredients; and that the other Principles remain in the Mother Lixivium. This Lixivium conſiſts of a certain Salt, approaching to the Nature of an acid and common Salt, and which, when mixed with ſubtile, earthy, alcaline, ſulphureous, and pinguious Parts, conſtitutes a Lixivium of a ſaline and bitteriſh Taſte, from which the above-mentioned Effects and Phenomena proceed: And to me this Lixivium appears highly ſimilar to that generally prepar'd of Quick-lime and Sal Ammoniac; for when the Caput Mortuum of the Spirit of Sal Ammoniac, prepared with Quicklime, is diſſolved in Water, by this means, a bitteriſh acrid Lixivium is obtained, which when inſpiſſated with Spirit of Sal Ammoniac, or Oil of Tartar per Deliquium, without any Effervеſcence a Precipitate falls to the Bottom, in the Form of an earthy Powder. This, alſo, happens with Oil of Vitriol; but with no other Acid, whether mild or ſtrong, ſuch as Spiritus Nitri fumans, does it produce any Noiſe or Ebullition, though, at the ſame time, it is precipitated by the Affuſion of every Acid.

Having thus traced the Origin of the Magneſia, we need not heſitate to affirm, that it conſiſts of the more ſubtile Earth of Quick-lime, and the other Ingredients of Nitre, variouſly obtain'd from the Lixivium by a Separation of the ſaline Parts: This ſubtle Earth, however, differs from crude and unprepared Quick-lime.

For, tho' Quick-lime is an earthy Alcali of an highly acrid Taſte, yet it neither produces an Effervеſcence with an acrid Liquor, nor is coagulated into a Sal ſalſum, which is produced by an Admixture of the Magneſia with any acid Spirit, ſuch as that of Vitriol. This Alcali is, therefore, far more tender and ſubtile than burnt Quick-lime: Nor is it a Remedy deſtitute of uncommon Efficacy, provided it is exhibited according to the different States and Circumſtances of Patients; for it is not only abſorbent and cathartic, when acid Sordes are lodged in the Primæ Viæ; but, alſo, when exhibited in a ſmall Doſe, fifteen or twenty Grains, for Inſtance, I have often found it prove both diaphoretic and diuretic.

Nor muſt we forget to mention a Diſadvantage, with which I have ſeen the too frequent Uſe of the Magneſia attended; which is, that it leaves Flatulences, and gnawing Pains, in the lower Part of the Abdomen, and has a Tendency to generate corroſive Juices in the Primæ Viæ, as generally happens in hypochondriac Patients. The moſt commodious Vehicle in which it can be exhibited, is Almond-milk, which has a Tendency to correct the Acrimony of the Humours ſtagnating in the Stomach. *Hoffman, Obſerv. Phyſ. Chym. Lib.* 4. *Obſ.* 2.

MAGNESIA OPALINA.

In making the Liver of Antimony, ſome add, to the Antimony and Nitre, decrepitated Sal Ammoniac; and thus make what is called the Opalin, or Ruby-colour'd *Magneſia* of Antimony, from its red Colour, which is a much weaker Emetic than the Liver of Antimony; and does not cauſe Vomiting in Horſes, and other Quadrupeds, but only makes them ſweat, or increaſes Perſpiration. It is given to ſuch Brutes, from one to three Ounces every Day, for ſeveral Weeks together, to fatten them, and cure their cutaneous Diſeaſes, or other Indiſpoſitions. *Geoffroy.*

Lemery directs the Magneſia Opalina to be made of equal Parts of Antimony, Nitre, and decrepitated Sea-ſalt.

MAGNETICUS. An Epithet of ſome Medicines, particularly Plaiſters, not only in a proper Senſe, on account of their containing Particles of the Loadſtone in their Compoſition, but in a tropical Signification; becauſe they are ſuppoſed to act by an occult attractive Force, in manner of the Loadſtone. Such is the Emplaſtrum magneticum, in *Schroder, Lib.* 2. *Cap.* 53. and that of *Cnæfelius*, prepared of Amber and a dried Toad. *Caſtellus.*

MAGNETINUS, an Epithet of Tartar. *Magnetinus Tartarus*, in *Paracelſus, Lib.* 1. *de Tartar.* is a very hard and ſpongy Stone.

MAGNOLIA. The Laurel-leaved Tulip-tree.

The Characters are;

It hath a roſaceous Flower, conſiſting of ſeveral Leaves, which are placed in a circular Order, from out of whoſe Cup ariſes the Pointal, which afterwards becomes an hard conical Fruit, with many Tubes or Riſings, in each of which is contained one hard Nut, which, when emitted, hangs by a long String. *Miller* mentions three Species of this Plant; which are,

1. Magnolia Lauri folio ſubtus albicante. *Catesb. The leſſer Laurel-leaved Tulip-tree, or ſweet-flowering Bay.*

2. Magnolia altiſſima, Laurocerаſi folio ampliſſimo, flore ingenti candido. *Catesb. Commonly called the Laurel-leaved Tulip-tree, or Carolina Laurel.*

3. Magnolia ampliſſimo flore albo; fructu coeruleo. *Plum Nov. Gen.* American *Laurel, with very large Leaves, a white Flower, and blue Fruit.*

MAGNUS, *μέγας*, great, is applied to various Subjects in Medicine, both natural and preternatural: Thus we read of the great Artery, a great Pulſe, a great Fever; the Epilepſy, in particular, is called by *Hippocrates*, *6 Epid.* the great Diſeaſe.

MAJOR, *μείζων*, greater, the Comparative, is aſcribed to the ultimate Perfection of the Philoſophers Stone, which is called the *Majus perfectum*, conſiſting of four Colours, and endued with a Power of multiplying its Species. *Theat. Chym. Vol.* 1.

MAXIMUS, *μέγιστος*, the greateſt, is applied by *Paracelſus*, *de Morbis Amentium*, *Tr.* 2. *Cap.* 4. to a peculiar Remedy of his againſt Madneſs, and the Suffocation, as he calls it, of the Underſtanding. *Caſtellus.*

MAGORINA. A Word coin'd by *Paracelſus*, out of Spite to the Univerſities, to ſignify the *Idolum Academicum*, as he calls it, which diſturbs and confounds all Speculations. *Fragment. de Morb. Gallic. & de Apoſtem. C.* 2.

MAGORREUM, the characteriſtic Cure of Wounds, ſo called by *Paracelſus*, *Lib.* 2. *de Vit. long. Cap.* 24.

MAGOS, *μάγος*, the Name of a Plaiſter deſcribed by *Aetius*, *Tetrab.* 3. *Serm.* 2. *Cap.* 25. recommended for drying and conglutinating ſinuous and fiſtulous Ulcers, and for the Dropſy, and watery Hernias. It is, alſo, called *Hephæſtias.*

MAGRA, Red Earth; alſo the Cornelian. *Rulandus.*

MAGUDARIS. A Name in *Dioſcorides*, for the *Silphium.*

MAGUEI. A Name which the *Americans* give to ſome Species of the Aloe. *Ray.*

MAGUS. See MAGOS.

MAHALEB. *Raii.* See CERASUS.

——— *Serapionis.* A Name for the *Phyllyrea*; *latifolia*; *lævis.*

MAIA, *Mæa*, *μαῖα*, the largeſt Species of Sea-crabs.

MAIL ANSCHI. A Species of Rhamnus, growing in *Malabar.*

A Decoction of the Root is effectual in the Gout; a Decoction of the Leaves, with Sugar, is good for the Jaundice; and ſo are the Leaves ſimply taken in Milk. The expreſſed Juice of the Leaves taken in Cows-milk, with Sugar, is good for thoſe who evacuate a white and purulent Urine. *Raii Hiſt. Plant.*

MAIL ELOU. *Arbor baccifera trifolia Malabarica ſimplici Oſſiculo cum pluribus Nucleis.* H. M. *Luſitanis* Carilla. This is a tall Tree, fifty Feet in Height, growing in many Parts of *Malabar*; is an Evergreen, and flowers and bears Fruit once, and ſometimes twice in a Year.

Of the Leaves and Bark, bruiſed, and boiled in an Infuſion of Rice, is prepared an Apozem, which is an effectual Remedy in Pains after Child-birth, expelling the Secundines, and promoting the Diſcharge of the Lochia. The ſame is preſcribed as ordinary Drink for Men or Women, of an exceſſively groſs and fat Habit of Body, in order to their gradual Extenuation. The Juice of the green Bark, taken with the Milk of the ripe Cocoa-nut, cures the Diarrhœa, and removes the Pain of the Colic. Of the tender Branches of this Tree, and of the *Paal-valli*, bruiſed and boiled together in Water, they prepare a Bath againſt inveterate Fevers, the Gout, and all manner of Pains in the Joints. *Raii Hiſt. Plant. p.* 1557.

MAIL ELOU KATOU. *Arbor baccifera Malabarica, folio pinnato, floribus umbellatis ſimplici Oſſiculo cum pluribus Nucleis.* H. M. It is a vaſt Tree, taller than the *Mail Elou*, and growing in the hilly and rocky Parts of *Malabar*; is an Evergreen, flowers and bears Fruit once every Year, and lives above two hundred Years.

The Wood, beſides its Uſefulneſs to the Joiner and Carpenter, is extolled for its Efficacy in the Diarrhœa, Dyſentery, and Teneſmus. The Leaves, boiled with Pepper, and the Seed of *Coddapalæ*, in an Infuſion of Rice, are an Antidote againſt the Bites and Stings of Serpents, Scorpions, and other venomous Creatures. Of the Bark, bruiſed and boiled, is prepared a Medicine to diſſolve Blood coagulated in the Body by means of a Fall. *Raii Hiſt. Plant. p.* 1558.

MAIL OMBI *Malabarenſibus. Baccifera Indica racemoſa Fructu umbilicato rotundo monopyreno.* H. M. Is a Tree of the Bigneſs of an ordinary Apple-tree, growing in many Places of *Malabar*, always green, and bearing Fruit twice in a Year, that is, in *April* and *September*. As to its Virtues, we have no certain Account. *Raii Hiſt. Plant. p.* 1500.

MAJORANA.

The Characters are;

The Galea is erect, roundiſh and bifid; the Beard is tripartite, and appears almoſt like a quinquefid Flower. The Flowers are collected into round, cloſe, ſhort Heads, compoſed of four Orders of ſmall Leaves lying one upon another in the nature of Scales.

Boerhaave mentions three Species of this Plant; which are,

1. Majorana; vulgaris. See AMARACUS.

2. Majorana; rotundifolia; ſcutellata; exotica. *H. R. Par.* 114. *Origano cognata, Zatarendi.* C. B. P. 223. *Zatarhendi Herba.* J. B. 3. 2. 256.

3. Majorana; Cretica; Origani foliis; villoſa; Satureiæ odore; corymbis majoribus, albis. *T. Cor.* 13. *Origanum Smyrnium.* Wheler. Itin. 243. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 178.

MAJORANA SYRIACA. A Name for the *Marum*; *Syriacum*, *vel Creticum.*

Beſides the foregoing Species of *Marjoram*, *Dale* mentions the two following; which are,

1. *Majorana tenuifolia.* C. B. P. 224. Raii Hiſt. 1. 538. Ger. 539. Emac. 664. Park. Theat. 11. Tourn. Inſt. 200. *Majorana tenuior & lignoſior.* J. B. 3. 241. MARJORAM GENTLE, or PERENNIAL.

It is cultivated in Gardens, and the Herb is in Uſe, which agrees in Virtues with the *Amaracus. Dale.*

2. *Majorana Oleracea.* Offic. *Majorana major, Anglica.* Ger. 538. Emac. 664. Raii Hiſt. 1. 539. *Majorana latifolia ſive major, Anglica.* Park. Theat. 12. *Origanum Onites.* C. B. P. 223. Raii Synop. 3. 296. Tourn. Inſt. 199. POT MARJORAM.

It is cultivated in Gardens among other culinary Herbs, and agrees in Virtues with the *Origanum ſylveſtre, Cunila bubula Plinii. Dale.*

MALA { ÆTHIOPICA, ARMENIACA, AURANTIA, CITRIA, CYDONIA, GRANATA, INSANA, LIMONIA, } See { LYCOPERSICON; FRUCTU STRIATO; DURO. ARMENIACA MALUS. AURANTIA. CITRUM. CYDONIA. PUNICA. MELONGENA; FRUCTU OBLONGO; VIOLACEO. LIMON. }

MALABATHRINUM, *μαλαβάθρινον* [*μύρον*] Ointment of *Malabathrum*, is inſpiſſated with the ſame Ingredients, as the *Unguentum nardinum*, or Ointment of Spikenard [ſee NARDUS]; only more Myrrh is added to it, which renders it of a heating Quality; in Virtues it agrees with the *Crocinum* and *Amaracinum.* See AMARACUS and CROCINUM. *Dioſcorides*, *Lib.* 1. *Cap.* 76.

MALABATHRINUM *Vinum*, *μαλαβάθρου οἶνος*, Wine of *Malabathrum*, is prepared, by putting half a Pound of *Malabathrum* into two Congii of Muſt, and ſtraining it off after two Months; the Doſe is one *Cyathus*, mix'd with three *Cyathi* of Water. This Wine is effectual in Diſeaſes of the Kidneys and Liver, for the Jaundice and Dyſury, for thoſe who have loſt their Colour, or are diſorder'd in their Stomach. Some add an Ounce or two of Acorns, or three Ounces of celtic Nard to a Ceramium [about nine Gallons] of Muſt. *Dioſcorides*, *Lib.* 5. *Cap.* 67.

MALABATHRUM.

Folium Indum ſeu Malabathrum. Park. Theat. 1584. *Folium Indum Malabatrum.* Mont. Exot. 8. *Malabatrum ſive Folium Indum.* Chab. 33. *Malabathrum & Folium Indum Officinarum.* J. B. 1. 430. *Tamalapatra.* Ger. 1315. Emac. 1534. *Tamalapatrum ſive Folium.* C. B. P. 409. *Canella ſylveſtris Malabarica.* Raii Hiſt. 2. 1502. Comm. Flor. Mal. 68. *Canella arbor ſylveſtris.* Munting. 120. *Canella ſive Cinnamomum vulgare craſſiore cortice.* J. B. 451. Chab. 34. *Katou Karva.* Hort. Mal. 5. 105. Tab. 53. *Pſeudo-caſſia Dioſcoridis.* Jonſ. Dendr. 162. *Pſeudo-caſſia ſive Cinnamomum vulgare craſſiore cortice.* J. B. 1. 451. *Canella ſeu Cinnamomum vulgare craſſiore cortice.* Chab. 34. Raii Hiſt. 2. 1562. *Cinnamomum ſeu Caſſia craſſior, Pſeudo-caſſia.* C. B. P. 409. *Cinnamomum craſſiore cortice.* Ejuſd. INDIAN LEAVES. *Dale.*

Theſe are pretty large Leaves, of a thick, firm Texture, of a yelloviſh Colour, in Shape of a large Bay-leaf, but ſharper-pointed, and ſmoother, having three remarkable Nerves or Ribs, running through all the whole Length of the Leaf, of a pleaſant, hot, ſpicy Smell and Taſte. They are generally believed to be the Leaves of the Caſſia-lignea, or Cinnamon-tree, or both; for, upon comparing them with the Leaves of the true Cinnamon, I can find very little Difference either in Shape or Colour, Smell or Taſte. How far the Leaves of the Canella Malabarica, which are eſteemed to be the true Folia Inda, differ from theſe, is uncertain, ſince they are never brought to us, theſe ſupplying their Place; and I queſtion not, but to as good Purpoſe. They are ſeldom uſed now, Mace being appointed in our Diſpenſatories in their ſtead. *Miller's Bot. Off.*

This is the Leaf of a kind of wild Cinnamon-tree, brought us from *Malabar*, and other Places of the *Eaſt Indies.* Theſe Leaves are diſtinguiſh'd from the true Cinnamon-leaves, by their being leſs aromatic. Their Virtues are cordial and alexipharmic. *Geoffroy.*

The *Folium Indum*, or *Tamalapatra*, according to the Obſervation of the very curious *Fab. Columna*, agrees in all reſpects with the Leaf of the *Canella*, excepting the Taſte. *Dioſcorides* writes, that this Leaf ſwims on the Waters, after the manner of the *Lens paluſtris*, ſupported by no Root. The Antients, ſays *Scaliger*, dreamed; for we, who have carry'd our Diſcoveries to the uttermoſt Parts of the *Arabias* and *Indias*, could never meet with this wonderful Leaf. *Garcias* alſo aſſures us, that the *Greeks* were miſtaken in this Matter; for the *Indian* Leaf, he ſays, does not ſwim on the Waters, but grows on an high Tree, remote from the Waters, in *Cambaya*, and many other Places. The Natives call it *Tamalapatra*; which Word the *Greeks* corrupted into *Malabathrum.*

The

The *Malabathrum* is ſaid to agree in Virtues with Spikenard, particularly in powerfully provoking Urine, correcting a Fœtor of the Mouth, and preſerving Garments from Eroſions by Worms. *Raii Hiſt. Plant.*

MALACHE, μαλαχὴ, from μαλάσσω, to mollify, is either a looſening Medicine for the Belly, or one to ripen hard Tumors. *Blancard.*

MALACHITES. Offic. Charlt. Foſſ. 33. Calc. Muſ. 218. Aldrov. Muſ. Metall. 900. Worm. 95. *Malachites. vel Molochites.* 263. De Lapid. 87. THE MALACHITE.

It may be taken for a Species of the Jaſper, or Praſius. It is opaque, and of a Mallow-green, whence it has its Name, μαλάχη, *Malache*, in *Greek*, ſignifying a Mallow. It is found in *Cyprus*, *Meiſſen*, and the Country *Tirol*, and is exhibited as a Febrifuge.

MALACIA, μαλακία, νόσος. See PICA.

MALACION, μαλάκιον, from μαλακὸς, ſoft, is a Term for a Fiſh which has no Scales, ſuch as the Sepia, or Cattle-fiſh. Sea-hare, and Urtica or Sea-blubber. Thoſe kind of Fiſh were ſuppoſed by the Antients to be void of Blood and Bowels: They are now ranged under the Head of *Exanguia Mollia, ſive Molluſca. Caſtellus. Dale.*

MALACODERMOS, μαλακόδερμος, from μαλακὸς, ſoft, and δέρμα, the Skin, is an Epithet of ſuch Animals as have a ſoft Skin; by way of Diſtinction from the *Oſtracodermi*, ὀστρακόδερμοι, teſtaceous Animals.

MALACOIDES.

The Characters are;

It has the Flower and Appearance of the Mallow, and a dry Fruit like that of the Rubus, conſiſting of a Multitude of Capſules collected into an Head, like a Cluſter of Grapes, and full of Kidney-ſhaped Seeds.

Boerhaave mentions but one Sort of this Plant; which is,

Malacoides; Betonicæ folio. *T.* 98. *Malva; Betonicæ folio.* Boc. Ic. 15. & Deſcr. Zanon. H. 130. M. H. 2. 522. *Boerh. Ind. alt. Plant. V.* 1. *p.* 271.

The Name is derived from μαλάχη, the Mallow, and εἶδος, the Form or Reſemblance, that is to ſay, having the Form or Appearance of the Mallow; which it, alſo, reſembles in Virtues. *Hiſt. Plant. aſcript. Boerhaav.*

MALACOS, μαλακὸς, μαλθάκος, Soft, is oppoſed to Hard. A thing is ſaid to be ſoft when it yields to the Touch without changing Place; others deſcribe it as a Medium between Hard and Liquid, which eaſily gives way if preſſed, without ſurrounding the preſſing Organ; of which Nature are Wax, Clay, and the like. The Epithet is applied to various Subſtances, as to the Skin, the Pulſe, and to Wines, which are ſaid to be ſoft when they are ſweet, mild, and delicate, in Oppoſition to auſtere, generous, hard. Soft is ſometimes uſed for Humid, as in *Hippocrates, Lib. de Salub. Diæt.* Sometimes it is applied to Diſeaſes in a moderate or remiſs State, as 1 *Aph.* 7. and by *Scribonius Largus*, N. 201. to recent Ulcers.

MALACTICOS, μαλακτικὸς, from μαλάσσω, to ſoften. The ſame as EMOLLIENS. See EMOLLIENTIA.

MALA-ELENGI, *baccifera Indica, flore compoſito.* H. M. Is a Tree of a moderate Bigneſs, and about twenty Foot high, growing in *Malabar*, ever green, and bearing Fruit once a Year.

Of the Leaves boiled with Pepper, and Calamus Aromaticus in Oil of Seſamum, is prepared a Liniment for the Head, which is very much commended for the Vertigo, Epilepſy, and the like cephalic Affections. Of the Bark, with Frankincenſe and Orpiment, is prepared an Ointment, which is ſaid to be a potent Remedy for Affections of the Liver, the Region of that Part being anointed therewith. The Kernels of the Fruit are tied up in a Bag with Pepper, and worn about the Neck as an Amulet and Preſervative againſt the Epilepſy. *Raii Hiſt. Plant.*

MALAGMA, μάλαγμα, from μαλάσσω, to mollify, is the ſame as CATAPLASMA, though it bears, alſo, a ſtricter Senſe, as it ſignifies particularly ſuch Cataplaſms as are of an emollient Quality. *Galen, Lib. 7. de C. M. P. G.*

A Malagma was the Form of a Topic, not very different from a Plaiſter. At firſt it ſeems to be applied principally to Emollients, by its Name; but afterwards was applied to Aſtringents, or any other Topics of the ſame Form. It conſiſted principally of Gums, Aromatics, and other ſtimulating Ingredients, as Salts and the like. Sometimes a very little Quantity of Oils or Axungias, entered into three Compoſitions, and a little Wax. Sometimes there was little beſides Gums, diſſolved in Wine or Vinegar, and Reſins, which hardened to a Conſiſtence of themſelves. Theſe were reduced to Powder, and moiſtened with ſome Liquor, when applied to any Part.

MALAKKA-PELA. A Name for the *Guajava; rubra; acida; fructu rotundiori.*

MALAGRETA. A *Spaniſh* Word for the greater Cardamoms, or Grains of Paradiſe, as *Fuchſius* obſerves in his Notes on *Myrepſus, Antid. Cap.* 22. at the Word *Menegetæ*, a barbarous Term of the ſame Import.

MALANDRIA. A Diſeaſe in Horſes, called the *Malanders*, being an ulcerous kind of Fiſſure under the Ham. It is, alſo, a Species of Elephantiaſis, or Lepra: Whence the Patients labouring under it are called by *Marcellus Empiricus, Malandroſi.*

MALAVISCUS. The Althæa, or Marſhmallow, is ſometimes called by this Name.

MALAZISSATUS. One who has his Teſticles concealed in the inward Parts; he is otherwiſe called *Emaſculatus*, and *Mulieratus.*

MALE, μάλη, for μασχάλη, the Armpit, is no *Greek* Word, as *Rufus Epheſius* ſays, *Cap.* 10. Or, according to *Pollux*, is a Term ἰδιωτικὴ, in Uſe among the Vulgar; though it be common to ſay ὑπὸ μάλης ἔχειν, to have, or conceal, ſomething under the Armpit.

MALER. Salr. *Rulandus.*

MALICORIUM. The Peel of the Pomgranate. See PUNICA MALUS.

MALIGNITAS. Malignity. *Sydenham* is of Opinion, that the Symptoms excited by a prepoſterous Method of Treatment, are frequently aſcrib'd to Malignity, of which he thus delivers his Opinion.

I conceive that all the Malignity, which appears in Epidemics, whatever its ſpecific Nature be, conſiſts and centers in very hot and ſpirituous Particles, that are more or leſs oppoſite to the Nature of the Juices contained in the Body; becauſe only ſuch Particles are capable of producing ſo ſudden an Alteration of the Juices, as is frequently obſerved in malignant Diſeaſes. And I judge that theſe hot and ſpirituous Particles, chiefly act by way of Aſſimilation; for, by the Law of Nature, every Principle endeavours to produce its Like, and to reduce and mould whatever oppoſes it to its own Nature. Thus Fire generates Fire, and a Perſon ſeized with a malignant Diſeaſe, infects another by an Emiſſion of Spirits, which ſoon aſſimilate the Juices to themſelves, and change them into their own Nature.

From theſe Conſiderations, it ſeems to follow, that it is beſt to expel theſe Particles by Sweat, ſince by this Procedure the Diſeaſe would be immediately eradicated. But Experience contradicts this, and ſhews that every Species of Malignity will not admit of this Remedy. For tho' in the Plague, the peſtilential Particles, as well on account of their exceeding Subtility, as likewiſe, becauſe they reſide in the moſt ſpirituous Parts of the Blood, are diſſipable, and may be expelled by an uninterrupted Sweat; yet in other Fevers, where the aſſimilating Particles are leſs ſubtile, and mixed with groſſer Humours, the malignant Humour can, not only not be expelled by Sweat; but is frequently increaſed by the Diaphoretics given to promote it. For the more active thoſe hot and ſpirituous Particles are rendered by the uſe of heating Medicines; the more is their power of aſſimilating increaſed; and the more likewiſe thoſe Juices are heated, whereon they act, ſo much the more readily are they aſſimilated, and yield to the Impreſſions thereof. Whereas, contrariwiſe, it is reaſonable to think, that Medicines of an oppoſite Nature, do not only reſtrain the Action of the hot and acrid Particles; but likewiſe thicken and ſtrengthen the Juices, ſo as to enable them to undergo, or even to conquer, the Force of the Morbific Spirits. And here I may appeal to Experience, which has taught me, that the Purple Spots in Fevers, and the black Eruptions of the Small-Pox, increaſe more readily in Proportion as the Patient is heated; and that, according to the Coolneſs of the Regimen employ'd, which is very ſuitable in theſe Diſeaſes, they are uſed to decreaſe and be diminiſhed.

Now, were it to be inquired, whence it happens, ſince Malignity conſiſts in ſuch hot and ſpirituous Particles, that ſo few Signs of a Fever, are frequently found in the moſt malignant Diſeaſe; it might be anſwered, that in the Plague, the moſt remarkable Inſtance of Malignity, the morbific Particles are ſo very ſubtle, eſpecially in the Beginning, that they paſs through the Blood like Lightening, and (the Spirits being as it were fixed and congealed) raiſe no Ebullition therein: Whence the Patient dies without a Fever.

But in other Epidemics, accompanied with a leſs Degree of Malignity, the febrile Symptoms are ſometimes ſo ſlight, from the Diſturbance raiſed in the Blood by the morbific Particles contained in the Maſs, that Nature, being in a manner oppreſſed, is rendered unable to produce the more regular Symptoms, that are ſuitable to the Diſeaſe; and almoſt all the Phenomena that happen, are irregular, by reaſon of the entire Subverſion of the animal Oeconomy; in which Caſe the Fever is often depreſs'd, which of its own Nature, would be very high. Sometimes, alſo, fewer Signs of a Fever appear, than the Nature of the Diſeaſe requires, from the Tranſlation of the malignant Cauſe, either to the nervous Syſtem, to ſome of the ſolid Parts, or to ſome of the Juices lying out of the Road of the Circulation, while the morbific Matter is yet turgid.

But which way ſoever it may be, I am not able even to conjecture, what other Method of Cure ought to be uſed to conquer the Malignity, beſides, that which is ſuitable to the Epidemic, wherewith it is joined: So that whether the Epidemic be of the ſame Nature with thoſe, wherein the febrile Matter is firſt concocted, and then properly expelled by Sweat;

of the Nature of thoſe that are terminated by ſome Eruption; or of thoſe that require the Aſſiſtance of Art, to make way for them; in all theſe Kinds, the Malignity, which is the Concomitant of the Diſeaſe, will riſe and ſink, remain and go off, with the original Diſeaſe; and conſequently, whatever Evacuation agrees in general with the Fever, agrees likewiſe with the Malignity, how much ſoever theſe Evacuations may be of a contrary Nature to each other. Hence the Malignity, that accompanies autumnal Intermittents, and alſo the continued Fever, which is of the ſame Nature, will yield to a Sweat, which follows Concoction as its Effect. And the ſeaſonable Suppuration of the Puſtules in the Small-Pox, will take off the Malignity attending that Diſeaſe, and ſo of the reſt: In all which the peculiar Species of Malignity is beſt overcome by thoſe Methods, which prove moſt ſucceſsful in the Cure of thoſe Diſeaſes whereto it belongs, whether by this, or any other Procedure. This appears evident to me, from Reaſon, and it is likewiſe univerſally confirmed by Experience.

MALINATHALIA, a Name in *Blancard* for the *Cyperus*.

MALLAM TODDALI. H. M. *Baccifera Indica racemoſa, Florum Staminulis binis, Acinis monopyrenis*. A Tree of a moderate Bigneſs, growing in *Malabar*, whoſe Root, Bark, Leaves, and Fruit, are eſteemed a ſpecific Remedy againſt the Epilepſy, Phrenſy, and the like Diſtempers of the Brain. *Raii H. P.*

MALLEABILITAS is defin'd by the Spagiriſts, to be that natural or artificial Diſpoſition of Metals, which renders them tractable or ductile under the Hammer, in Oppoſition to Brittleneſs, or Friability.

MALLEAMOTHE, *ſeu Pavetta*, H. M. *Pavate*. Park. Acoſtæ. *Pavate Arbor Foliis Mali Aureæ*. J. B. *Arbor Malabarenſium Fructu Lentiſci*. C. B. It is a low Tree, or rather Shrub, three Feet high, but, according to *Acoſta*, eight or nine Feet, growing in *Malabar*.

Of the Roots are made Hafts for Knives, the Leaves ſerve to dreſs the Ground, and, being fry'd in Oil of Palm, furniſh a Liniment for removing the *Impetigo*, and drying the Puſtules of the Small-Pox: A Decoction of the ſame, in common Water, is uſed as a Fomentation, to mitigate the Pains of the Hemorrhoids. The Root pulverized with Ginger and Saffron, and exhibited in an Infuſion of Rice, cures the Dropſy, by powerfully promoting a Diſcharge of ſuperfluous Serofities, by the urinary Paſſages. *Acoſta* commends the Shrub principally for two Effects; firſt, againſt Fluxes of the Belly, for which Purpoſe, however, it is of leſs Efficacy, than many other Medicines; ſecondly, for curing all kinds of Eryſipelas, eſpecially ſuch as proceed from mere Bile. They macerate the whole Root or Trunk, bruiſed in a Decoction of Rice; and ſuffer them to remain there for ſome Hours, that the Water may contract an Acidity; after which they anoint the Eryſipelas therewith, and order the Patient to drink a ſufficient Quantity of the ſame twice a Day, the Stomach being firſt purged. They give the ſame Water to thoſe who labour under an Inflammation of the Liver, and the burning Heat of a Fever; and uſe it mix'd with a ſmall Quantity of the Juice of the Leaves of Tamarind, to anoint the Lips of the Wounds, in order to prevent an Inflammation. *Raii H. P.*

MALLEOLUS, πέρας, by ſome is inaccurately taken for the ſame as *Talus*, σφυρὸν, the Anclebone, where it means the interior Extremities of the Tibia and Fibula. *Galen de Oſſibus, Cap.* 22. See CRUS.

MALLEUS, σφύρα, a Surgeon's Inſtrument called the *Mallet*; alſo a Bone in the Ear, for which ſee AURIS.

MALPIGHIA.

The Characters are;

The Calyx is ſmall, monophyllous, quinquefid, with bifid Segments. The Flower is roſaceous, pentapetalous, with the Stamina growing together, in form of a Tube. The Ovary, which is ſeated in the Bottom of the Calyx, becomes a carnous, globular, ſoft, unicapſular Fruit, containin three winged Stones, each fill'd with Kernels.

Boerhaave mentions but one Sort of this Plant; which is,

Malpighia; Mali Punici facie. *Plan. N. G. A.* 46. *Ceraſus Americana, Myrti foliis conjugatis, fructu acerbo, tetrapyreno*. Pluk. Ph. 158. 4. *Ceraſus Jamaicenſis, fructu tetrapyreno*. H. A. 1. 145. H. Prægn. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 244.

There are no medicinal Virtues aſcribed to it.

MALTA, βύτη. Malt. See BYNE.

MALTHA, μάλθη, ſignifies Wax, eſpecially the ſofter kind thereof, *Galen*.

MALTHACODES, μαλθακώδης, ſoftening, is an Epithet of mollient topical Remedies prepared with Oil, and mention'd by *Hippocrates, Lib. de Ulcer*. They are forbidden to be uſed in Ulcers by *Galen, Lib.* 4. *de C. M. D. G. Cap.* 1. *ad Fin.*

MALTHACOS, μαλθακὸς, the ſame as MALACOS; which ſee.

Cœlius Aurelianus, among the Number of Diſeaſes reckons that infamous and deteſtable Diſpoſition of thoſe, whom the *Greeks* called μαλθακοὶ, (*Malthaci*) and the *Latins Molles* and *Subacti*, and whom he oppoſes to the Women called *Tribades*. And tho' he acknowledges, that thoſe abominable Inclinations were rather Vices or Diſeaſes of the Mind, than the Body, and the Fruits of a Corruption of Manners, he was yet of Opinion, that the Birth of thoſe unhappy Perſons, or the Manner in which they had been conceived, contributed ſomething towards it; and he entertains us, with the Conjectures of the Philoſopher *Parmenides*, on that Subject. The Poets alſo ſpeak of thoſe enormous Vices, as if they were Diſeaſes: Thus *Hiſpo ſubit juvenes, & Morbo pallet utroque*: Juvenal. *Campanum in* Morbum, *in Faciem permulta jocatus*. Hor.

MALTHACTICOS μαλθακτικὸς, the ſame as MALACTICOS.

MALTHAXIS, μάλθαξις, the ſame as *Malaxis*, an Emollition.

MALTHEORUM, Sal Gem. *Rulandus*.

MALTHODES, μαλθώδης. Emollient.

MALVA.

The Characters are;

The Root is fibrous; the Leaves are ſomewhat jagged and round, or angulous; and more or leſs hairy. The firſt Calyx, at the End of the Pedicle, is monophyllous, multifid, and contains a ſecond Calyx, which is larger (the former, or exterior one, is ſhorter, and often triphyllous, and the interior quinquefid). The Flower is monopetalous, Bell-ſhaped, expanded, pentapetaloidal, and cut almoſt to the Unguis. The Unguis of the Flower, being raiſed, ſupplies the aſcending Tube of the Ovary with an external Covering, and ſurrounds it on the Outſide. This Involucrum, or Covering, produces on every ſide Male Stamina, which bear the Teſticuli, in ſuch a manner as to make them appear growing on all Sides to the pyramidal Tube. In the Centre of the Calyx is ſeated the Placenta, whence proceeds a long Tube, concealed within the ſtaminiferous Tube before deſcribed, and producing from its Apex a multitude of Tubes, opening into the very Centre of the Male Stamina. To the Placenta grow little Pods round about, and compacted into the Form of a Cheeſe. Theſe Pods, for the moſt part, contain Multitudes of Seeds, placed one upon another in an orderly Series, and often Kidney-ſhaped.

Boerhaave mentions fifteen Species of this Plant; which are,

1. Malva; arvenſis; erecta; lucida; flore majore. *T.* 95.

2. Malva; vulgaris; flore minore; folio rotundo. *J. B.* 2. 949. *Tourn. Inſt.* 95. *Boerh. Ind. A.* 267. *Malva minor*. Offic. *Malva ſylveſtris minor*. Theat. 299. Raii Hiſt. 1. 599. Synop. 3. 251. *Malva ſylveſtris pumila*. Ger. 785. Emac. 930. *Malva ſylveſtris folio rotundo*. C. B. P. 314. SMALL WILD or DWARF MALLOW.

It flowers in *June*, and the Leaves are in Uſe, which agree in Virtues with thoſe of the ſixth Species, or the common Mallow. *Dale*.

3. Malva; procerior; flore minore. *Flor.* 2. 10.

4. Malva; Syriaca; pumila; floſculis albidis, cauliculis adhæreſcentibus. *Bob.*

5. Malva; Sinenſis; erecta; floſculis albis, minimis.

6. Malva; vulgaris; flore majore; folio ſinuato. *J. B.* 2. 949. *Tourn. Inſt.* 95. *Boerh. Ind. A.* 268. *Malva vulgaris*, Park. Theat. 299. Raii Hiſt. 1. 599. Synop. 3. 251. *Malva ſylveſtris*, Ger. 785. Emac. 930. *Malva ſylveſtris folio ſinuato*. C. B. P. 314. COMMON MALLOWS.

The common Mallow has a thick whitiſh Root, running down deep into the Ground, with ſeveral Branches and Fibres. The lower Leaves have very long hairy Foot-ſtalks, being of a round Form, but divided into five blunt indented Sections; the Stalk is large, two or three Feet high, ſomewhat hairy, beſet with Leaves, which are leſs round, and having the indented Sections more conſpicuous; the Flowers grow among theſe, ſeveral together, being large and monopetalous, but cut into five Segments, of a bright-red Colour, with a pretty many deep-coloured Veins interſperſed; they grow in a double Calyx, the outer conſiſting of three, and the inner of five Parts. The Seeds, as they lie together, are flatiſh and round, repreſenting a Cheeſe. It grows every where by the Way-ſides, and flowers in *May* and *June*. The Leaves, Flowers, Root, and Seed are uſed.

Mallows is one of the five emollient Herbs, being looſening, cooling, and mollifying. A Decoction of the Leaves is good to keep the Body ſoluble, to aſſwage cholerick Humours, and to allay the Heat and Sharpneſs of Urine, ſweetened with Syrup of Violets, and drank now and then to the Quantity of a Quarter of a Pint. It likewiſe provokes Urine, and is good for the Stone and Gravel; and where Marſhmallows are not to be had, this may very well ſupply its Place. A Cataplaſm of the Leaves, applied to the Place ſtung by Bees or Waſps, eaſes the Smart.

Officinal Preparations are only a Conſerve of the Tops. *Miller's Bot. Offic.*

From the *Analyſis* of the common Mallow, its manner of acting may be diſcovered. From five Pounds of the Leaves and Roots, are obtained four Pounds of Phlegm, two Ounces of urinous Liquor, about forty-eight Grains of concrete urinous Salt; four Ounces of Oil, partly fluid, and partly thick; ſix Drams of fixed Salt, and an Ounce of Earth. Whence it appears, that this Plant contains an ammoniacal Salt, joined with Earth;

Earth; and that the large Quantity of Oil is, by its Union with the acid Phlegm, converted into a Mucilage; which, tho' it be deſtroy'd by the Fire, is, in the Plant itſelf, the Cauſe of its emollient and lenient Effects. Oil, long beat up with Water, and fine Earth, turns to a Mucilage; eſpecially if a ſmall Quantity of any acid Spirit be thrown into the Mixture. The Juice of this Plant, taken either inwardly, or by Clyſter, is laxative; both as it moiſtens and ſoftens the hard Excrements, and as it relaxes the Fibres of the Inteſtines, dried by Heat, and ſo become too tenſe and rigid for their natural Actions. *Geoffry.*

The Mallow is uſed outwardly in Cataplaſms for maturating Tumors, and mitigating Pains; and inwardly in Clyſters for mollifying the Belly, and eaſing nephritic Pains. The Viſcidity of its Juice renders it a proper Remedy, in a Syrup or Conſerve, for the Pain of the Stone; and the ſmall Degree of Heat with which it is endu'd, qualifies it, when fry'd in Butter, as a Medicine againſt the Colic, in Infants. Of this, ſays *C. Hoffman de Medic. Offic.* I have had Experience in my own Children; *S. Pauli* writes the ſame. Three Ounces of the Decoction, or diſtilled Water, of the Leaves of Mallows, with half an Ounce of Syrup of Violets, mitigates the Heat and Acrimony of Urine immediately at the firſt Doſe. *Grulingius*, in his *Praxis*, ſays, that he knew not a more preſent Remedy under that Diſtemper, to whoſe Opinion, ſays Dr. *Hulſe*, I can ſubſcribe from my own Experience. For a Dyſury take a Decoction of Mallows with Violets. With this Medicine, *Foreſtus* ſays, he cured himſelf of that Diſtemper. *Raii H. P. p.* 599.

7. Malva; ſylveſtris; folio ſinuato; flore albo. *Sutherl.*

8. Malva; ſylveſtris; folio ſinuato; flore pallidè rubello, venis purpuraſcentibus, picto.

9. Malva; rotundifolia; Italica; flore amplo, purpuraſcente. *T.* 96.

10. Malva; orientalis; erectior; flore incano ſuaverubente. *T. Cor.* 2.

11. Malva; folio vario. *C. B. P.* 315. *Prodr.* 137.

12. Malva; humifuſa; minima. *Sher.*

13. Malva; foliis criſpis. *C. B. P.* 315. *Tourn. Inſt.* 95. *Boerh. Ind. A.* 268. *Malva criſpa.* Offic. J. B. 2. 952. Ger. 785. Emac. 831. Park. Parad. 495. Raii Hiſt. 1. 597. FRENCH MALLOWS.

It is cultivated in Gardens, and flowers in *June*; as to its Virtues, it agrees with the other Mallows. *Dale.*

14. Malva; ſylveſtris; foliis ſinuatis minoribus; floſculis minimis Anglica. *Rand.*

15. Malva; Americana; ulmifolia; floribus conglobatis ad foliorum alas. *Plum. T.* 95. *Boer. Ind. alt. Plant. Vol.* 1. *p.* 267.

The Name *Malva* is from the Greeks μαλάχη, of μαλάσσω, to mollify. The Roots, Leaves, Stalks, Flowers, and Seeds, conſiſt of a mucilaginous Subſtance, which is very mollifying. The Antients reckon'd it among eſculent Plants, as appears from a noted Verſe of *Heſiod.* The Herb is a proper Remedy, firſt, where exceſſive Acrimony requires Demulcents; ſecondly, where too great a Sirictare requires Relaxation; thirdly, where Pains are to be mitigated; fourthly, under an exceſſive Glutinoſity. Hence it is effectual for dry and rigid Fibres; for rendering the hard Inteſtines lubricous; and for the Vertigo in thoſe who labour under hypochondriacal Diſorders. The Surgeons alſo make great uſe of this Plant, and there is ſcarce a Cataplaſm deſign'd for maturating, but has Mallows for an Ingredient: It is of Efficacy in Affections of the Lungs and Inteſtines, a Phthiſis, Hoarſeneſs, and Cough. The Flowers are good for Inflammations of the Gums and Uvula; a Cataplaſm of the Herb is commended for the Eryſipelas, and an Infuſion of the Leaves after the manner of Tea cures an inveterate Heat of Urine. *Hiſt. Plant. aſcript. Boerhaav.*

MALVA is alſo a Name for the ALCEA and ALTHEA; which ſee.

MALVA, BETONICÆ FOLIO. A Name for the *Malacoides*; *Betonicæ folio.*

MALVA ROSEA.

The Characters are;

The Flower is fully expanded, larger than that of the common Mallow, cloſely adhering to the Stalk, and in full-grown Plants bearing copious Petals, inſtead of a Style, as in the common Mallow: In ſhort, all things are larger, rougher, and more ſhrubby, in this Plant than in the other.

Boerhaave mentions thirteen Species of this Plant, none of which have any medicinal Virtues aſcrib'd to them, except the firſt which is.

Malva; roſea; folio ſubrotundo. *C. B. P.* 315. *Tourn. Inſt.* 94. *Boerh. Ind. A.* 269. *Malva arborea.* Offic. *Malva hortenſis.* Ger. 782. Emac. 928. *Malva roſea.* Offic. *Malva roſea five hortenſis.* J. B. 2. 951. Raii Hiſt. 1. 600. *Malva hortenſis roſea.* Park. Parad. 369. HOLLYHOCKS.

This is a large tall Plant, ſix or ſeven Feet high, with thick round Stalks, and very large hairy round Leaves, a great deal bigger than the common Mallow, but much of its Shape; the Flowers grow upon the Stalk, coming forth with the Leaves, being very large, of one Leaf cut into five Segments, of a pale red Colour, having a ſpiked Umbo in the middle, full of duſty Apices. The Roots are white, large, and branched. It grows only in Gardens, flowering in *July* and *Auguſt.*

This Species of Mallows is much of the Nature of the common Mallow, but leſs mollifying: It is moſtly uſed in Gargles, for the Swelling of the Tonſils, and the Relaxation of the Uvula; but it is not often met with in Preſcriptions. *Miller's Bot. Off.*

Hollyhocks have the ſame Virtues with the common Mallow. The Flowers boiled in old Wine cure the Scurf; they are alſo uſed for the Eryſipelas, eſpecially the red, or what appears like a Roſe, in Conformity to the Colour. I uſe the Decoction of the Flowers, ſays *J. Bauhine*, with good Succeſs, in Heat and Dryneſs of the Tongue and Fauces. Take of the Roots and Seeds of this Plant, each an equal and ſufficient Quantity; and boil them in Water with Barley-meal, and mix therewith Oil of Olive or Oil of Roſes, and make the Whole into a Plaiſter, which is very proper to be apply'd to Tumors of the Liver, Spleen, and Matrix, as being qualified for reſolving, diſcuſſing, and mollifying hot Abſceſſes. The ſame Plaiſter is effectual in the Eryſipelas, and other Inflammations of that kind, and extracts Splinters fixed in the Body. *Tragus.* This Plaiſter, ſays Dr. *Tancred Robinſon*, is of frequent Uſe in the Hoſpitals of *Italy*, for mitigating and reſtraining Inflammations, and violent hot Tumors. I have known, ſays *Ray*, a ſimple Ointment prepared of the Leaves of the *Malva Hortenſis*, boiled in unſalted May-butter and ſtrained, apply'd to an Eryſipelas, and *Ignes ſacri*, with extraordinary Succeſs, ſo as very rarely to fail of a perfect Cure after the ſecond or third Inunction. *Raii H. P. p.* 600.

It is called *Malva roſea*, becauſe its Flowers reſemble expanded Roſes; the Flowers are emollient and moiſtening, and are proper in Hæmorrhages, Dryneſs and Heat of the Fauces, and the Eryſipelas.

Beſides all the foregoing Species of *Malva*, *Dale* mentions the following; which is the

Malva arborea maritima. Offic. *Malva arborea marina noſtras.* Park. Theat. 301. Raii Hiſt. 1. 601. Synop. 252. *Althæa arborea maritima Gallica.* Tourn. Inſt. 97. SEA MALLOW-TREE.

It is common in Gardens, flowers in *June*, and the Leaves are in Uſe, which agree in Virtues with thoſe of the other Mallows.

MALVASIA, *Malmſey*, a generous ſort of Wine, prepared after the antient manner, of Grapes left to wither in the Sun, or dry'd by twiſting the Pedicles, and taking off the Leaves, or by placing them upon ſuſpended Hurdles, and ſprinkling them, for ſeven Days together, with a very thin ſort of Lime or Gypſum. Others call this Wine *Malviſium*, and *Marviſium*, and ſuppoſe it to be the *Arviſium* of the Iſland of *Scio.*

MALVAVISCUM, a Name in *Blancard* for the ALTHÆA.

MALUM, an ambiguous Term, ſignifying an Apple, and a Diſeaſe. *Malum mortuum* is a very malignant Species of Lepra or Scabies, ſo called, becauſe it renders the Body black and livid, and, as it were, mortify'd with black, foul, cruſty Ulcers, void of Sanies, Senſe, or Pain, eſpecially in the Hips and Legs, proceeding from a very high Corruption of the Blood, and nutritious Juices. *Malum*, in a ſtrict Senſe, ſignifies the Diſeaſe called the *Procidentia Oculi*, when the Eye exceeds the Bounds of the Eyelids.

MALUS.

The Characters are;

The End of the Pedicle becomes an Ovary, whoſe ſuperior Margin is expanded into a Crown, like a monophyllous Calyx, which unfolds itſelf into five large expanded Segments. The Flower is roſaceous, pentapetalous, growing on the Ovary within the Crown, with its Petals proceeding from the Interſtices of the Segments, and furniſhed with many Stamina, which ariſe from the internal Circumference of the Calyx. When the Ovary is increaſed, the Petals fallen off, and the Stamina vaniſhed, the five long Tubes, produced from the Centre of the Ovary, alſo wither; the Calyx is contracted, and paſſes into an umbilicated quinquecapſular, carnous Fruit, called an Apple.

Boerhaave mentions two Species of this Plant; which are,

1. Malus; flore pleno. *C. B. P.* 433. *Poma flore multiplici.* H. Eyſt. o. 1. F. 5. Fig. 1.

2. Malus; five Pomum. *C. B. P.* 433. *Boerh. Ind. A.* 2. 249. *Malus.* Offic. J. B. 1. 1. Tourn. Inſt. 634. Ger. 1272. Emac. 1459. *Malus ſativa.* Raii Hiſt. 2. 1445. Synop. 3. 451. *Malus vulgaris.* Park. Theat. 1502. THE APPLE-TREE.

This is a Tree ſo well known, that it would be ſuperfluous to give any Deſcription of it. Among the numerous Variety of Apples, thoſe which are accounted beſt for medicinal Uſe, are the Pearmain and Pippin, being the Poma fragrantia of the Shops, yielding a pleaſant vinous Juice, with a little Sharpneſs.

They are cordial, comforting the Heart, chearing the Spirits, and driving away Melancholy; and are very grateful and ſtrengthening to the Stomach. Of the Juice of theſe are made Syrup of Apples; and it is an Ingredient in the Confectio Alkermes. *Gerard* ſays, that the Pulp of four or five roaſted Apples, mixed well with a Quart of fair Water, and all drank within the Space of an Hour, is a moſt certain Relief for a Stoppage of Urine,

or Strangury; as alſo for a Gonorrhœa, and Heat of Urine. The Ointment called *Pomatum* ought to be made of a large green juicy Apple, called a *Pomewater*; but the Pomatum now in Uſe is made after another Manner. *Miller's Bot. Off.*

Malum, with the firſt Syllable long, comes from the *Doric* and *Æoliс* μᾶλον; for μῆλον, which ſignifies not only a Sheep and a Breaſt, but alſo a kind of Apple. The Tree is called *Malus*, in *Greek* μηλέα. *Voſſius.*

The Word *Pomum* has a larger Signification than *Malum*; for ſome, under the former, comprehend, alſo, the *Nux*, or Nut, which the *Greeks* call ἀκρόδρυον (*Acrodryon*). Some diſtinguiſh the *Nux* from the *Pomum*, in that the latter has all its eatable Part on the Outſide, incloſing what is hard; whereas the *Nux*, on the contrary, includes what is eſculent within a hard Shell; but the Genus is commonly taken for the Species. *Julius Scaliger* thinks the Word *Pomum* derived from πόμα, or rather πῶμα, which latter we, alſo, meet with [πόμα, or πῶμα (*Poma*) from πίνω (*Pino*) to drink]; becauſe *Poma* (Apples) remove a Thirſt, and are both Meat and Drink at once.

The *Malus* is a Tree, ſo well known in all Parts of *Europe*, as to need no Deſcription. Of the *Malum* I acknowledge but one Species; for what are commonly taken for Species, are only Varieties, differing from one another by ſome Accidents, as Size, Figure, Colour, Taſte, and Time of Maturity. Now I think theſe Varieties make no Difference of Species, becauſe they owe their Original to Sowing, and are infinite without any certain or determinate Number, ſince new ones continually ariſe from ſowing the Seed. Both the *Bauhines* aſſert the Variety of Apples to proceed chiefly from the Variety of Inſition; but we think it is to be aſcribed to the Seed ſown, ſince, in Inſitions, the Fruit almoſt perpetually follows the Nature of the Graff, or Bud: We grant, however, that the Fruit may be improved by Inſition, in the Alteration of its Juice from tart and acid, to mild and pleaſant.

The Virtues of Apples are various, according to their different Taſtes; the acid, harſh, and auſtere, are aſtringent, and therefore bind the Belly; but, boiled with Butter, are a proper Food in feveriſh Diſorders, according to *Schroder*. Sweet Apples are of an hotter Nature, and have a looſening Quality: The fouriſh, or vinous, are of a mix'd Nature, and agreeable to the Stomach and Heart. *J. Bauhine* approves the Judgment of *Ariſtotle*, that Apples ſhould be eaten before Food; for, in that Caſe, ſays he, they are very eaſy of Paſſage, and looſen the Belly; but, taken after Food, they only generate Inflations, and diſturb the Stomach, as we know, he ſays, by Experience. We find, ſays *Ray*, upon Trial, that the moſt convenient Time for eating of Apples is not in the Morning before Dinner, upon an empty Stomach, becauſe of Crudities and Acidity; nor before Supper, for the ſame Reaſon. Neither are Apples proper to be eaten immediately after Dinner or Supper; but two, three, or four Hours after either Meal, when the Stomach is not wholly exhauſted, nor too full. Apples are indeed fungous and ſpongy, ſo as to ſwim in Water, whereas Pears ſink therein; whence Apples are difficult of Concoction. Pears, whether crude or depreſſed, agree better with me, ſays *J. Bauhine*, and are more eaſily digeſted, than Apples. Tho' Apples may, perhaps, be hurtful to a cold and humid Stomach, they are, however, very agreeable to a hot and bilious one, and render the Body ſoluble. Almoſt all Apples have a Property in common; that, if their expreſſed Juice be drank with a little Saffron, it becomes an Antidote againſt Poiſons, and expels Worms, or other Animals, from the Belly. For pungent Pains in the Sides *Camerarius* adviſes a Cataplaſm prepared of a ſweet Apple roaſted with ſome pounded Frankincenſe in it. The ſame Author, for an Ambuſtion by Gunpowder, preſcribes boiling a ſweet Apple in Water of the broad-leaved Plantane till it be exhauſted; and then making it with Milk into a Cataplaſm, to be applied to the Wound.

There is a Medicine, which very often comes in our Practice, and which we highly value; it is prepared of Apples boiled in Water, and applied in form of a Poultice to an Inflammation of the Eye. The Apples may, alſo, be boiled in Milk of Goats or Women, or in Roſe-water, Water of Eyebright, or any other cooling Water; but I have frequently tried this Medicine without Milk, and with good Succeſs. *J. Bauhine*. It is common, in our Country, to apply a putrid Apple to all Sorts of Tumors and Inflammations of the Eyes. We have a memorable Experiment to this Purpoſe related by *Simon Paulus*. I remember, ſays he, that a Gentlewoman of a very good Family once told me, that ſhe was cured of a Gangrene in her Thigh, by following the Advice of a certain Lithotomiſt of *Stralſund*, in applying to the Part a Cataplaſm of putrid Apples bruiſed, and boiled without an Affuſion of any Liquor; and that the Cure was completed by two Applications. *Geſner*, with good Succeſs, adviſed eating a roaſted Apple hollowed, and filled with a Dram of Frankincenſe for a Dyſpnœa, and other Diſorders of the Lungs. *Raii H. P.*

MALUS { ARMENIACA, AURANTIA, CYDONIA, LIMONIA, MEDICA, } See { ARMENIACA MALUS. AURANTIA. CYDONIA. LIMON. MEDICA.

MALUS { PERSICA, PUNICA, SYLVESTRIS, } See { PERSICA. PUNICA. AGRIOMELA.

MAMANGA *Frutex*. Piſon. An arboreſcent Shrub in *Braſil*, called by the *Portugueſe* LAVAPRATAS. The Leaves are like thoſe of the Citron-tree, but ſomewhat longer and ſofter, and uſed by the Surgeons in the Cure of Wounds and Ulcers. The expreſſed oily Juice of the Pods is reſerved for the Maturation of Abſceſſes. *Raii Index.*

MAMAY *Arbor*. Park. The ſame as MAMEI; which ſee.

MAMBU, a Name for the *Arundo Tabaxifera*.

MAMEI. The Mammæ, Momin, or Toddy-tree. A very beautiful Tree in the *Weſt-Indies*, tall and green, like a large Walnut-tree, with a lofty and broad Top, but ſomewhat pyramidical, like the Cypreſs. The Fruit is the ſweeteſt that grows on the Iſland of *Hiſpaniola*, ſometimes perfectly, ſometimes imperfectly round, and of the Bigneſs of two Fiſts. From Inciſions made in the Branches of this Tree diſtils a copious pellucid Liquor, which the Natives receive in Gourds hung under the Wound. They call this Liquor *Momin* or *Toddy* Wine, but it muſt be drank ſparingly, and not above a Glaſs at a time; for it is an extraordinary Diuretic, eaſily penetrates and incides, and is an effectual Preſervative againſt the Stone, as well as Diſſolvent of it when generated. There are two Species of this Tree, which are diſtinguiſhed by the different Size of their Fruit. *Raii H. P.* 1665.

MAMIRA. The Name of an Ingredient in what *Myrepſus*, and others of the Antients, call the Antidote of the Doctor and Prophet *Eſdras*. *Actuarius*, according to the Verſion of *Ruellius*, reads the Word *Mamera*. *Mamiras*, or *Mamira*, is deſcribed by *P. Ægineta*, *Lib.* 7. to be a ſmall Root of an Herb, very full of Knots and Joints, and ſuppoſed to be effectual in attenuating Cicatrices and Albugines in the Eye, becauſe it is endued with a deterſive Virtue. This Deſcription of *Paulus* ſeems to agree to the Root, now called in the Shops *Doronicum*; for this is a ſlender Root, diſtinguiſhed by very frequent Nodes or Extuberances, like Joints. If the Palate be conſulted, it has a ſweet Taſte, which is immediately ſucceeded by a ſlight and tranſient Bitterneſs: Hence it is manifeſt by the Taſte, that it is of Service for exterging Cicatrices and Albugines. *Aetius* and *Paulus*, in their Deſcription of the Antidote of *Eſdras*, make no mention of the *Mamira*. *Fuchſius Not. in Myrepſ. Antid* 138.

MAMMÆ. The Breaſts.

The Name of *Mammæ*, or Breaſts, is given to two Eminences, more or leſs round, ſituated in the anterior, and a little toward the lateral Parts of the Thorax; their Centre, or middle Part, lying almoſt oppoſite to the bony Extremity of the ſixth true Rib on each Side. Their Size and Figure vary in the different Sexes, and different Ages.

In Children of both Sexes, and in Males of all Ages, they are commonly no more than cutaneous Tubercles, or ſoft Verrucæ of a rediſh Colour, called *Papillæ*, or Nipples; each of them being ſurrounded by a ſmall, thin, and pretty broad Circle or Diſk, more or leſs of a browniſh Colour, and an uneven Surface, termed *Areola*.

In Females, come to the Age of Puberty, which is ſometimes ſooner, ſometimes later, a third Part is joined to the two former, which is a convex Protuberance, more or leſs round, of about five or ſix Fingers in Breadth; the *Papilla* and *Areola* being ſituated near the middle of the convex Surface. This is what is properly termed *Mamma*, and it may be termed the Body of the Breaſt, when compared with the other two Parts. It increaſes with Age, and is very large in Women with Child, and in thoſe that give Suck. In old Age it decreaſes and becomes flabby, loſing its natural Conſiſtence and Solidity.

The Body of the *Mammæ* is partly glandular, and partly made up of Fat; or it is a glandular Subſtance, mixed with Portions of the *Membrana Adipoſa*, the cellulous Pellicles of which ſupport a great many Blood-veſſels, Lymphatics, and ſerous or lactiferous Ducts, together with ſmall glandular Moleculæ, which depend on the former; all of them being cloſely ſurrounded by two Membranes, continued from the Pelliculæ.

The innermoſt of theſe two Membranes, which is, in a manner, the Baſis of the Body of the Mamma, is thick, and almoſt flat, adhering to the Muſculus Pectoralis major. The ſecond or external Membrane is thinner, forming a particular Integument for the Body of the Mamma, more or leſs convex, and adhering cloſely to the Skin.

The Corpus Adipoſum of the Mamma in particular is a ſpongy Cluſter, more or leſs interlarded with Fat, or a Collection of membranous Pelliculæ, which, by the particular Diſpoſition of their outer Sides, form a kind of Membrane in Shape of a Bag, in which all the reſt of the Corpus Adipoſum is contained. The anterior or outer Portion of this Bag, or that which touches the Skin, is very thin; but that Side next the Pectoralis major is thick.

DUCTUS LACTIFERI.

The glandular Body contains a white Maſs, which is merely a Collection of membranous Ducts, narrow at their Origin, broad in the middle, and which contract again as they approach the Papillæ,

Papillæ, near which they form a kind of Circle of Communication. They are named Ductus Lactiferi.

Areola.

The coloured Circle, or Disk, already mentioned, is formed by the Skin; the inner Surface of which sustains a great Number of small glandular Moleculæ, of that kind which *Morgagni* calls *Glandulæ Sebaceæ*. They appear very plainly all over the *Areola*, even on the Outside, where they form little flat Heights or Eminences, at different Distances, quite round the Circle.

These Tubercles are perforated by small Holes, through which a kind of sebaceous or cheesy Matter, more or less liquid, may be squeezed out. Sometimes this is a serous Liquor, sometimes a milky Serum, and sometimes pure Milk, especially in Nurses; and I have seen both serous and milky Drops come out at the same time.

From thence I am inclined to think, that these Holes communicate with the lactiferous Ducts, and that the Tubercles are a kind of auxiliary Papillæ added to the true ones. The different Matters, or Liquors, that may be squeezed from the same glandular Body, give, also, room to think, that the Holes in them communicate by their Extremities with several other smaller Holes.

Papilla.

The Tubercle, which lies in the Centre of the Areola, is term'd *Papilla*, or the Nipple: It is of different Sizes in different Ages and Constitutions, and in the different Conditions of Females in particular. In Women with Child, or who give Suck, it is pretty large, and generally longer and higher than it is thick or broad; and, when it happens to be short, it causes great Uneasiness to the Child.

The Texture of the Nipple is spongy, elastic, and liable to divers Changes of Consistence, being sometimes harder, sometimes more flaccid: It seems to be made up, principally, of ligamentary Fasciculi, the Extremities of which form the Basis and Apex of the Nipple: These Fasciculi appear to be gently folded or curled, during their whole Length; and if, by drawing the Fibres out, these Folds be destroy'd, they return again as soon as that Action ceases.

Between these spongy and elastic Fasciculi lie seven or eight particular Tubes, at small Distances from each other, and all in the same Direction: These Tubes end at the Basis of the Papilla, in the irregular Circle of Communication of the lactiferous Ducts, and at the Apex, in the same Number of almost imperceptible Holes or Orifices; and, as they are closely united to the elastic Fasciculi, they are folded in the same manner with them.

The Body of the Papilla is cover'd by a thin cutaneous Production, and by the Epidermis; its outer Surface is uneven, being full of small Tubercles and Wrinkles; among which those near the Circumference of the Nipple seem to have a transverse or annular Disposition, which, however, is not uniform.

This Disposition or Direction seems to be owing to the elastic Folds already mentioned; and, from this simple Structure, it is easy to explain how Infants in sucking the Nipple, and Women in drawing the Teats of Cows, bring out the Milk: For the excretory Tubes, being wrinkled in the same manner as the Fasciculi, do, by these Wrinkles or Folds, as by so many Valves, hinder the Milk contained in the Ducts from flowing out; but when the Nipple is drawn and elongated, the Tubes lose their Folds, and the Passage becomes strait. Besides this, when they are drawn with a considerable Force, the whole Body of the Mamma is increased in Length, and contracted in Breadth, and thereby the Milk is pressed into the open Tubes; and thus, by barely pressing the Body of the Breast, the Milk may be forced toward the Nipple, and even through the Tubes.

The Arteries and Veins distributed through the Mammæ, are Ramifications of the Arteriæ and Venæ Mammariæ; of which one kind comes from the Subclaviæ, and are named *Mammariæ Internæ*; the other from the Axillares, called *Mammariæ Externæ*.

These Vessels communicate with each other, with those near them, and with the Vasa Epigastrica. The Nerves come principally from the Costales, and, by means of these, communicate with the great Nervi Sympathetici.

The Use of the Mammæ in the Nourishment of Children is known to all the World: But it is not certainly known what the Papillæ and Areolæ in Men can be designed for. Milk has been observed in them in Children of both Sexes; and this happen'd to one of my own Brothers, when he was about two Years of Age. *Winslow's Anatomy.*

The Breasts are subject to various Imperfections and Disorders.

Thus some young Women, after being deliver'd of their first Child, have their Nipples so small, and sunk into the Breasts, that the new-born Child cannot take them in its Mouth, in order to obtain the Milk: It may, therefore, be necessary, to procure an older and stronger Child, or an adult Person used to suck, who, by Strength of Suction, may make the Nipple protuberate, and extract the Milk. But if this Experiment cannot be conveniently tried, or proves unsuccessful,

1. Take a Glass, like that represented in *Tab.* XLII. *Fig.* 18. and apply the larger Part, marked A, like a Cupping-glass, upon the Nipple; and at the Tube B B let it be sucked by the Patient: This Operation must be repeated, till the Nipple is sufficiently extended for the Child.

2. If no such Glass is at hand, a Tobacco-pipe may be used in the same manner.

3. Others apply a small Cucurbit (Cupping-glass) of Ivory or Alabaster, in the Form of an Hat, as in *Fig.* 19. which they suck strongly with their Mouth.

I have, says *Heister*, another sort of Glass, which may be called a Sucking-glass, represented in *Fig.* 20. which being heated in warm Water, or before the Fire, in order to rarefy and expel the Air, and having its Mouth A applied to the Nipple, it will not only be protruded, but the Milk will be extracted, and Inflammations of the Breast will be thereby abated. When the Suction of the Glass diminishes, the Milk may be let out at the Aperture B, which was before closed with Wax. The Glass being again heated, as in Cupping, and the Whole stopped with Wax, the Application may be repeated till the Intention is answer'd.

Lastly, Young Whelps, before they have Teeth, have been successfully used for this Purpose.

Fissures and Exulcerations of the Nipple.

Women in Child-bed, who suckle their own Children, are frequently afflicted with very painful Fissures and Ulcerations in their Breasts: In these Cases, a Mucilage of Quince-seed may be very beneficial; or anoint the Nipples with the Oil of Eggs, mixed with a little of the Oil of Wax; or the Oil of Myrrh per Deliquium may advantageously be used in the same manner; or, lastly, a fine Powder of Gum Tragacanth may be sprinkled on them through a Piece of Muslin. The Child should be suffered to suck as seldom as possible, as the Suction must impede the Cure; and the Shift of the Patient must be carefully kept from adhering to the Nipple, which, after the Child has done Sucking, should be washed with a Solution of a small Quantity of the Sugar of Lead, in Plantane-water, and then covered with a Cap of Ivory, Marble, or white Wax, like that in *Tab.* XLII. *Fig.* 19.

Inflammations of the Breast.

Inflammations of the Breasts frequently happen to Child-bearing Women, and generally a few Days after their Delivery. If the Milk should be impelled into the Breast with too much Force, or in too great a Quantity, which, at such times, is often the Case, and if the Woman should be attacked with a Cold, or have her Mind disturbed by Fear, Anger, or Grief, or drink cold Liquors, the sanguiferous and lactiferous Vessels being by these means obstructed, the Breasts must consequently become tumefied, and be affected with great Heat, Redness, Hardness, and violent Pain. These Tumors sometimes proceed from the same Causes in Women who give Suck, even a considerable Time after their Delivery, and sometimes in those who have no Milk. I have even observed, says *Heister*, the same Case in a Man, which was occasioned by a great Fright; one Breast was prodigiously tumefied, and had degenerated into an Abscess, from which I extracted, at the first Opening, above two Pounds of Matter, to the great Surprize of the Patient and By-standers. This kind of Inflammation is usually accompanied with a Fever, or great Heat over all the Body, with a quick Pulse, Thirst, Head-ach, and difficult Respiration; and it is generally preceded by a Shivering.

Tho' these Inflammations most frequently happen to Women who have been lately deliver'd, and do not suckle the Child, yet they may often arise from the Causes above-mentioned, in those who have left off giving Suck, or from a Blow, Contusion, or other external Injury.

These Inflammations are not always equally violent. Sometimes the whole Breast, sometimes one Side of it, and sometimes but a small Portion of it, is affected: Sometimes the Inflammation is near the Skin, and at other times deeply seated: Sometimes the Symptoms, such as the Redness, Heat, Tension, and Pain, are more intense; and sometimes of a milder Nature.

The smaller the Tumor, and the slighter the Inflammation and Fever, the less is the Danger; because it may then be dispersed, without being brought to a Suppuration: On the contrary, the more violent the Symptoms, the greater is like to be the Suppuration; which sometimes degenerates into a Scirrhus, and a Scirrhus is almost always succeeded by a Cancer.

This Disorder may be easily prevented, in those who will not, or cannot, suckle their Children, by spreading Sperma Ceti Plaister upon Linen, with a Perforation in the Middle, to transmit the Nipple, and applying it warm to the Breast, soon after Delivery, fastening it with a Bandage somewhat tight, in order to prevent the Accession of the Milk. It may, also, be proper

to hang the Galactites, or Milk-ſtone, or ſome Quickſilver, in a Nut-ſhell from the Neck, down the Back of the Patient, and to apply between the Scapulæ a Plaiſter of Frog-ſpawn mixed with Sugar of Lead, and Oil of Henbane. The moſt efficacious internal Medicines are thoſe which promote the Lochia, if their Flux be not already ſufficient; ſuch as the Eſſences of Myrrh, Amber, and Saffron, or the Elixir Proprietatis. The Diet muſt, at the ſame time, be very low, till the Afflux of Milk to the Breaſts is much diminiſhed; for which Purpoſe Broths, Tea, and the like thin watry Aliments, ſhould be continued ſome Days. But, if the Mother is deſirous to ſuckle her own Child, the beſt Means to prevent an Inflammation of the Breaſt is to keep free from Colds, and carefully to avoid all violent Affections of the Mind; letting the Child ſuck often, to prevent the Stagnation of the Milk. The Diet ſhould principally conſiſt of Broths, and thin Fluids, for the firſt Week, in order to leſſen the Quantity of Milk, and hinder its being inſpiſſated in the Veſſels: But when a Tumor and Inflammation begin to diſcover themſelves in the Breaſts, let Diſcutients be applied, both externally and internally, without Delay; by which means a Suppuration or Scirrhus may be prevented, which often leave unſeemly Cicatrices behind them.

La Motte's Method of treating thoſe Caſes, as appears by *Obſ.* 134. *p.* 668. is to endeavour firſt to reſolve the Tumor, by Bleeding, emollient Clyſters, and a low Regimen, by Applications of warm Milk and Brandy, and an Ointment of Oil of Roſes, Lilies, and Chamomile.

Heiſter affirms, that the moſt powerful Diſcutient which he has experienced on theſe Occaſions, is the Sperma Ceti Plaiſter. Over the Plaiſter may be laid a digeſtive Bag, made warm, and ſtuffed with Bran and Salt, or with the Flowers of Elder, Chamomile, Melilot, and Lavender; and the Seeds of Fennel, Cumin, and Aniſe. Some, inſtead of theſe Bags, put Lamb-ſkin over the Plaiſter, which not only defends the Breaſt from the external Cold, but is a proper Diſcutient on theſe Occaſions. Another ſucceſsful digeſtive Application for theſe Tumors, is a Calf's Bladder, filled with a warm Decoction of the Flowers of Elder and Chamomile, which ſhould be often laid to the tumefied Breaſt, having its Heat renewed when neceſſary. Of the ſame Virtue is the Plaiſter of ſimple Diachylon, either alone, or mixed with Sperma Ceti. The Rob of Elder, or *Venice* Treacle, mixed with the Salt of Wormwood, being ſpread upon Linen, and applied warm by way of Liniment, have excellent Effects in diſpelling theſe Tumors, eſpecially if covered with warm digeſtive Bags: But theſe Applications are to ſome diſagreeable, as they daub the Skin, Linen, and Bed-clothes. To theſe we may add Vinegar of Litharge, Vinegar in which Cumin has been boiled, and Lime-water, which may be applied by means of Linen Compreſſes impregnated with the hot Liquors, and often repeated. Many eſteem the Expreſſion of the Milk upon burning Coals, an excellent Remedy; but, however idle and ſuperſtitious it may appear, it ought not to be entirely rejected, as it may operate ſucceſsfully, by ſtrongly influencing the Imagination of a ſuperſtitious Woman. If the Breaſts are greatly diſtended with Milk, let it be ſucked out by a Child, an old Woman, or a Puppy, or by the Application of the Glaſs Inſtrument already deſcribed, till the Tumor ſubſides, and the Pain ceaſes.

But if the Inflammation will not yield in four or five Days, or if, as is often the Caſe, the Surgeon is conſulted too late, the ſafeſt Method is to haſten the Suppuration with all Expedition, rather than hazard its degenerating into a Scirrhus or Cancer by Delay. For this Purpoſe the Diachylon-plaiſter, with the Gums, or Plaiſter of Henbane, ſhould be ſpeedily applied. But the following Cataplaſms, or ſome of thoſe deſcribed under the Article ABSCESSUS, for the Maturation of Abſceſſes, will be more effectual:

Take of Ryemeal, half an Ounce, or an Ounce; of Honey a ſufficient Quantity to form a Cataplaſm: Then add a ſmall Quantity of Milk and Saffron, and let it be ſpread warm upon Linen, applied to the Breaſts, and often renewed. Or,

Take of Ryemeal, four Ounces; of Galbanum diſſolved in the Yolk of an Egg, one Ounce; Vinegar, three Ounces; Water, a ſufficient Quantity for boiling theſe Ingredients into a Cataplaſm. Or,

Take of Leaven, two Ounces; Honey, half an Ounce; *Venice* Soap ſliced, and Oil of Chamomile, each two Ounces: Let theſe be mixed together in a Pot, over the Fire, into the Form of a Cataplaſm.

Theſe Cataplaſms are to be applied hot, and very often, to the Breaſts, keeping them on by Linen Compreſſes, or Bolſters, to retain the Heat, till the Tumor burſts of itſelf, which it often does from the Thinneſs of the Skin in this Part; or otherwiſe it may be conveniently opened by the Knife. If Neceſſity will permit, the Inciſion ſhould always be made in the lower Part of the Breaſt, to conceal the Cicatrix from View. Some Surgeons uſe the Cautery in opening theſe Suppurations; but as they uſually leave unſeemly Cicatrices, the Knife ought to be preferred.

After the Pus has been diſcharged, the Treatment muſt proceed as directed under the Articles ABSCESSUS and VULNUS. Let the Ulcer be firſt mundified with ſome digeſtive Ointment, and then apply ſome healing Balſam, as that of *Peru*, with the Oil of Eggs, and of Wax. But when the Suppuration has penetrated deep, inject into the Wound the cleanſing Decoction of Sanicle and Ladies-mantle, mixed with Honey of Roſes; and, to prevent the Lips of the Wound from cloſing before the Bottom is incarned, introduce a ſoft Tent, or ſcraped Lint, which, as the new Fleſh riſes from the Bottom, may be gradually leſſened, and at laſt removed.

Sometimes theſe Tumors will neither yield to Diſcuſſion nor Suppuration, but will continue for Months, and even Years. In young and healthy People, this Sort is not very troubleſome, nor is there much Danger of their growing ſcirrhous or cancerous, or that they ſhould always remain. In ſuch Caſes, let the Patient be kept always chearful, and let the Sperma Ceti Plaiſter be kept conſtantly applied to the Tumor, which muſt be carefully defended from the external Cold. By this Method Tumors of long Duration have gradually diminiſhed, and, at laſt, diſappeared. But in Women advanced in Years, and of a melancholy ſorrowful Diſpoſition, ſuch inveterate Tumors are ſubject to degenerate into a Scirrhus, or Cancer. *Heiſter Chirurg.* See CANCER, and AMPUTATIO.

MAMMARIA VASA. The Mammary Veſſels; that is, the Veins and Arteries of the Breaſts.

MAMMIFORMES PROCESSUS. The Mammiform or Maſtoide Proceſſes of the Temporal Bone. See CAPUT. Theſe Proceſſes are, likewiſe, called *Mammillares*.

MAMMOERA MAS. A Name for the PAPAYA MAS.

MAMMOERA FOEMINA. A Name for the *Papaya*; *Fructus Melopeponis effigie*.

MANACA. *Marcgr. Piſon.* A *Braſilian* bacciferous Shrub, with an umbilicated Fruit, like that of the Juniper; containing three elliptical Seeds, of the Size of Lentils. The Part uſed in Medicine is the Root, which is great, ſolid, and whitiſh; its medullary Subſtance, reduced to Powder, has very conſiderable Effects; but becauſe it works too violently, both upwards and downwards, in the ſame manner as Scammony, or the Eſula, it is uſually given only to very robuſt Perſons, and then with Correctives, and in a juſt Doſe. It has ſomewhat of a Bitterneſs and Acor. The Root, macerated in Water, makes a Fomentation, or Bath, for thoſe who are afflicted with wandering Pains of the Joints, eſpecially ſuch as are contracted by Cold. The Plant is uſed as a Vulnerary by the *Braſilians*. *Raii Hiſt. Plant.*

MANATI. Offic. Schrod. 5. 327. Hern. 323. Charlt. de Piſc. 49. *Manati Indorum*. Aldrov. de Piſc. 728. Jonſ. de Piſc. 156. Rondel. de Piſc. 1. 490. *Manati Phocæ genus*. Cluſ. Exot. 132. *Manati, ſeu Vacca marina*. Raii Synop. A. 193. Sloan. Jam. 2. 329. THE SEA-COW.

The Part of this Animal, which is in Uſe, is the Os Petroſum of the Head, which is cruſtaceous, white, and like Ivory, of various Forms. It is much recommended for wearing away the Stone in the Kidneys and Bladder, and for eaſing nephritic and colic Pains. *Schroder. Geoffroy* ſays, that it has the Reputation of preventing an Hæmorrhage, if worn about the Neck. *Fred. Hoffman* recommends it in the Epilepſy.

This Animal is ſaid to be very fond of Mankind.

MANBRUX. Silver. *Rulandus.*

MANCANILLA. The Manchineel-tree.

The Characters are;

It has male Flowers, or Catkins, which are produced at remote Diſtances from the Embryos on the ſame Tree; the Embryo becomes a round fleſhy Fruit, in which is contained a rough woody Nut, incloſing four or five flat Seeds.

Miller mentions three Species of this Tree; which are,

1. Mancanilla Pyri facie. *Plum. Nov. Gen.* 50. THE MANCHINEAL, WITH THE FACE OF A PEAR-TREE.

2. Mancanilla aquefolii foliis. *Plum. Nov. Gen.* 50. THE MANCHINEEL, WITH LEAVES LIKE HOLLY.

3. Mancanilla Lauri foliis oblongis. *Plum. Nov. Gen.* 50. THE MANCHINEEL, WITH OBLONG LAUREL-LEAVES.

The Manchineel, is a Native of the *Weſt Indies*, where it grows on low ſandy Ground, or near Gullies where Water runs. The three Sorts here mentioned are diſtinguiſhed by Botaniſts; but I believe their Difference is not remarked by the Natives. They grow to be very large Trees equal to the Size of an Oak, and are much eſteemed for their Wood, which is ſawn out into Planks, and brought over to *England*. It is uſed for Cabinets, Book-caſes, *&c.* and will poliſh very well, is of a beautiful Grain, and will laſt a long time. In cutting down theſe Trees they are very careful to burn out the Juice of the Bark, before they begin; otherwiſe they are in Danger of loſing their Eyes, by ſome of the Sap getting into them, which is of a milky Colour, and ſo very cauſtic, that it will raiſe Bliſters on the Skin, and burn Holes in Linen. The Fruit of the Tree, when ripe, is of the Colour

and

and Size of a Golden-pippin, for which many of the *Europeans* have taken it; and ſome, by eating it, loſt their Lives, and others have greatly ſuffered. The Fleſh is not much thicker than a Crown Piece, and not very diſagreeable to the Taſte, but will corrode the Mouth and the Throat. The Leaves of theſe Trees abound, alſo, with a milky Juice, which is of the ſame Nature, ſo that it is dangerous being under their Drip. The Cattle in *America* never ſhelter themſelves under them; and ſcarcely will any Vegetable grow under their Shade; yet the Goats eat this Fruit without any manifeſt Injury to themſelves, or their Milk. *Miller's Bot. Off.*

The Remedy for the Affections, or Diſorders, induced by the Juice or Dew of this Tree, which mitigates and repreſſes the Inflammation and Inflations, is a clear Water found within the Shell of a Snail, called the *Soldier*, or the Oil extracted from the ſame Inſect, without the Help of Fire. *Raii Hiſt. Plant.*

MANCORON. *Oribaſius, in Collect. Med. L.* 11. thus deſcribes the Mancoron: It is, ſays he, a Sort of concreted Honey, contained in Canes, of the Conſiſtence of Salt, found in *Arabia Felix* and *India*, and breaking under the Teeth like Salt. By this Deſcription it ſhould ſeem to be a Sort of Sugar.

MANCURANA, *μαγκυράνα*. Marjoram. *N. Myrepſus, Sect.* 1. *Cap.* 21.

MANDARU, or THE POD-BEARING MALABARIAN TREE, WITH BIFID LEAVES. This Tree, in *Jacob. Zanoni Hiſt.* is deſcribed under the Name of *Aſſitra*, or *Arbor S. Thomæ*. A Branch of this Tree, under the Name of *Arbor S. Thomæ*, was, ſent by Dr. *Herman* to Dr. *Syen*, from the Iſland of *Zeylon*, with this Obſervation, that ſtriated Marks of Blood appeared in the Flowers, from their being ſprinkled with the Blood of St. *Thomas*, who is believed to have preached the Goſpel in *Malabar* and *Zeylon*. *Ray* mentions four Species of this Tree.

The firſt is the *Chovanna Mandaru prima*. S. M. *Arbor S. Thomæ*. D. Herman. *Arbor ſiliquoſa, Malabarica. foliis bifidis, flore purpuraſcente ſtriato*. D. Syen.

The Flowers of this Species, boiled with Sugar, are ſucceſsfully uſed, inſtead of Sugar of Roſes, as a gentle Purgative.

The ſecond Species is the *Chovanna Mandaru ſecunda*. H. M. *Arbor ſiliquoſa Malabarica foliis bifidis majoribus, flore intenſius purpuraſcente*.

The Root chewed is good for Pains of the Head and Teeth; bruiſed with dry Ginger, and applied to the Part, it mitigates the Pain of the Gout. The Vapour of a Decoction of the Leaves eaſes Pains in the Body, being received by the affected Part. The Flowers ſimply eaten are purgative; the Bark, Flowers, and Fruit bruiſed together, and mixed with Water, in which Rice has been macerated, are effectual for maturating and breaking Abſceſſes.

The third is the *Volutta Mandaru* H. M. *Arbor ſiliquoſa Malab. foliis bifidis minor, flore candido, ſtriato*. D. Syen. It agrees in Virtues with the others.

The laſt is the *Canſchena pou*. H. M. *Arbor ſiliquoſa Malab. foliis bifidis minoribus flore albo flaveſcente ſtriato*. D. Syen. *Mandaru quarta Species, Flos Divi Thomæ*.

The Right Rev. Dr. *Compton*, Biſhop of *London*, had one of this Species growing in his Garden in the Year 1687. *Raii H. P. p.* 1751.

MANDIBULÆ LUCII PISCIS. Theſe are abſorbent, and paſs with ſome for a good Sudorific, being taken in the Quantity of a Dram in Carduus-water. They are by others recommended in Pleuriſies. *Geoffroy.* See LUCIUS.

MANDIHOCA. See MANIHOT.

MANDOBI. See ARACHYDNA.

MANDRAGORA.

The Characters are;

The Flower is monopetalous, bell-ſhaped, and multifid; the Fruit is ſoft, globular, and contains Seeds, which are for the moſt part kidney-ſhaped.

Boerhaave mentions three Species of this Plant; which are,

1. Mandragora; flore ſubcœruleo purpuraſcente. *C. B. P.* 169. *M. H.* 531. *Mandragora fœmina*. J. B. 618.

2. Mandragora; fructu rotundo. *C. B. P.* 169. *Raii Hiſt.* 1. 668. *Tourn. Inſt.* 76. *Boerh. Ind. A.* 2. 70. *Mandragora*. Offic. *Mandragoras mas*. Ger. 281. Emac. 352. Park. Parad. 377. J. B. 3. 617. *Mandragoras mas vulgatior*. Park. Theat. 343. MANDRAKE.

The Mandrake has a large browniſh Root, ſometimes ſingle, and ſometimes divided into two or three Parts, growing deep in the Earth, from which ſpring ſeveral large dark-green Leaves, a Foot and more in Length, and four or five Inches broad, ſharp-pointed at the Ends, of a fetid Smell; from among theſe ſpring the Flowers, each on a ſeparate Foot-ſtalk, about the Height and Bigneſs of a Primroſe, of a whitiſh Colour, of one bell-faſhioned Leaf, cut into five Segments, ſtanding in a large five-corner'd Calyx; and are ſucceeded by ſmooth round Fruit, about as big as a ſmall Apple, of a deep-yellow Colour when ripe, and of a very ſtrong Smell. It grows wild in *Spain*, *Italy*, and *Turkey*, but in cold Countries only in Gardens. The Leaves and Roots are uſed.

This Plant is rarely uſed inwardly, many eſteeming it to be a Narcotic, and of a poiſonous Nature; though others deny it, and ſay, that the Fruit may be eaten without any ill Effects Outwardly, it is uſeful in all kinds of Inflammations, hot Tumors, and ſcrophulous Swellings: The Juice, dropt into the Eyes, is good to take away their Heat and Redneſs. It is ſeldom to be met with; and, though an Ingredient in the *Unguentum Populeon*, its Place is generally either ſupplied by Henbane, or *Engliſh* Tobacco. *Miller's Bot. Off.*

The Mandrake is commonly reckoned among Narcotics and Hypnotics; whether this be true of the Bark of the Root, which is the Part uſed in the Shops, I am not certain; but the Fruit is without doubt unjuſtly ſuſpected. *Caſp. Hoffman* confeſſes himſelf unable to determine, whether the Apple, either with or without the Rind, may be eaten with Safety or not. *Aetius* ſeems to aſcribe all the Maligoity to the Seeds, as if the Pulp without them was harmleſs, unleſs eaten in an exceſſive Quantity. That the Pulp, however, may be eaten together with the Seeds, without Injury, appears from the Example of *J. Faber Lynceus* Profeſſor of Botany at *Rome*, who, as we are aſſured by *J. Terrent.* in his Notes on *Hernandez de Plantis Mexic.* before his Auditors eat up a large Mandrake-apple, Seed and all, in the Morning faſting, without any conſequent Sleeping, or any the leaſt ill Symptom. And, that the Experiment might be the ſurer, he continued, he ſays, without taking any thing elſe till Dinner-time, which was ſome Hours. The ſaid *J. Terrentius* ſays, he has very often tried the ſame Experiment.

Since, therefore, Mandrake-apples are both eſculent and ſweet-ſcented, we need ſearch for no other Interpretation of the *Hebrew* Word *Dudaim*, which *Reuben* brought to his Mother *Leah*; and ſince, as the Antients aſſure us, the Seed of the Mandrake, taken inwardly, purges the Uterus, it is probable, that *Rachel*, being acquainted with this Property of the Seed, might be very deſirous of theſe Apples, that, after cleanſing, by their means, the Uterus, ſhe might be the better diſpoſed to conceive. *J. Bauhine.*

The Bark of the Root, which is imported from other Countries, chiefly from *Italy*, is narcotic, ſays *Schroder*, and ſoporiferous, and ſeldom uſed internally; outwardly, it is of Service in Redneſs and Pains of the Eyes, Eryſipelas, hard Tumors, Strumæ, and the like. It is uſual with ſtrolling Quacks and Mountebanks to expoſe and ſell to ignorant Perſons for Mandrakes, certain Images formed out of the freſh Roots of ſome other Plants, as of the Althæa and Arundo, but principally of the Bryony. *Raii Hiſt. Plant.*

3. Mandragora; flore cœruleo; foliis undulatis, non aſperis; fructu ovato. *Boerhaave Index alter Plant. Vol.* 1. *p.* 70.

The Plant, brought into a Chamber, or cloſed Room, procures Sleep to thoſe who want it. The Root works violently, both upwards and downwards, the Conſequence of which is a Loſs of Strength, and ſometimes Convulſions. The Leaves, boiled in Milk, and reduced to the Form of a Cataplaſm, are effectual in all ſcrophulous and ſcirrhous Tumors. *Hiſt. Plant. aſcript. Boerhaav.*

MANDRAGORAS. The ſame as MANDRAGORA.

MANDRAGORITES, *μανδραγορίτης*, Mandrake-wine, is thus prepared:

> Take of the Bark of the Root of Mandrake, half a Pound: Cut it into thin Slices, ſtring them, and let them down into nine Gallons of Wine, there to hang for three Months; after which, draw off the Liquor into another Veſſel.

The ordinary Doſe is a quarter of a Pint, in double the Quantity of Paſſum. They ſay, that half a Pint of this Liquor, mixed in ſix Pints of Wine, induces Sleep and a Carus; but that a Cyathus (the twelfth Part of a Pint) in a Pint of Wine, proves mortal. The moderate Uſe of it takes away the Senſe of Pain, and thickens Rheums. It works the ſame Effects, if ſmelled to, or injected in Clyſters. *Dioſcorides, Lib.* 5. *Cap.* 81.

MANDSJADI. *H. M.* Is an *Indian* ſiliquous or Pod-bearing Tree, with a ſpiked pentapetalous Flower, and long Pods, containing nodous ſcarlet-coloured Beans. The Tree is one of the talleſt in the Kingdom of *Malabar*, bears Fruit the twentieth Year after planting, and lives two hundred Years.

The Wood is of common Uſe for various Purpoſes, on account of its Solidity. The Leaves, reduced to Powder, are uſed in the Pagan religious Rites. The Seeds, which are not ungrateful to the Taſte, are eaten by the common People, either boil'd whole, or ground to a Meal; and are, beſides, of great Uſe to Goldſmiths and Jewellers, who, on account of their exact Equality, employ them inſtead of Grains in weighing their Wares; for each *Matjelina*, as they call them, weighs four Grains, ſuch as are in Uſe among the Goldſmiths, who, alſo, of the bruiſed Seeds, moiſtened with Water, and Borax, prepare a Glue for conglutinating the finer Sort of Veſſels, when broken. Of the bruiſed Leaves the Phyſicians prepare a Potion for mitigating Pains in the Loins. *Raii Hiſt. Plant.*

MANGA. Offic. *Manga Indica fructu magno reniformi.* Raii Hiſt. 2. 1550. Commel. Flo. Mal. 1. 170. *Mangas*. Park. Theat. 1631. *Mangas, ſive Amba*. J. B. 1. 173. *Amygdalam referens fructus birſutus*. Ejuſd. 1. 173. *Mangas & Amba Linſchotani.*

botani. Chab. 12. *Mangas Domeſtica, Plutr. Almeg.* 141. Par. Bat. Prod. 351. *Perſicæ ſimilis putamine villoſo.* C. B. Pin. 440. *Manga, Amba, Ambo, & Ambe.* Camel. Syllog. *Arbor Mangifera.* Bont. 95. Jons. Dendr. 72. *Conchifolia Indiæ Orientalis comantibus floribus & fere corymboſis.* Plutr. Phytog. Tab. 142. Fig. 1. *Mao ſive Mau.* Hort. Mal. 4. 1. Tab. 1. 2. *Amba Perſica Indica fructu villoſo.* Herm. Muſ. Zeyl. 54.

The MANGO TREE.

It is a vaſt Tree, forty Foot in Height, and eighteen in Thickneſs, and ſpreads its numerous Branches all around at a great Diſtance, being always green, and bearing Fruit once or twice every Year, from ſix or ſeven Years old to an hundred. It is propagated by Inſition, or ſowing the Seed, in *Malabar*, *Goa*, *Bengall*, *Pegu*, and many other Countries of the *Eaſt Indies*.

The Fruit is of a round oblong Figure, flat, ſlightly ſinuated, or hollow'd at the Sides, and ſhaped much like a Kidney, bigger than a Gooſe Egg, ſmooth, ſhining, firſt green, ſpeckled with white, then inclining to yellow, and at laſt of a Gold-Colour; it has a yellowiſh and ſucculent Pulp, not unlike that of a Peach; or rather a Plumb, firſt acid, then acido-dulcid, and pleaſant to the Taſte. Within the Pulp is contained an oblong, compreſſed and lanuginous Stone, thin, yet very hard and tenacious, and including a calous, oblong Kernel, very like an oblong Almond, and of the ſame Bigneſs, and of a bitteriſh, though not unpleaſant Taſte.

There are various Sorts of this Fruit, as there are of our Apples and Pears, which are very different, according to the Countries where they grow: That Species, which is without a Stone, and is very grateful to the Palate, ſeems to us only a Variety, or a degenerated Fruit. The Fruit is cut into Slices, and eaten either without Wine, or macerated in Wine; it is alſo candy'd, in order to its Preſervation. Sometimes they open it with a Knife, and fill up the Middle with freſh Ginger, Garlick, Muſtard and Salt, with Oil or Vinegar, that they may eat it with Rice, or after the Manner of pickled Olive.

As to its Temperament; this Fruit is cold and moiſt, though the *Indian* Phyſicians affirm the contrary. We make uſe of pickled Mangoes, which are imported to us, as we do of pickled Cucumbers, for Sauce to roaſted Meat. The Stones roaſted are ſaid to cure a Looſeneſs, which *Garcias* found to be true. The Wood of the Tree, with Cinders, is uſed for burning the Carcaſes of the Pagans, as being conſecrated to this Rite; whence it ſerves alſo for Coffins, in which they repoſit their Dead; but it is but of a ſoft Subſtance, and of ſhort Duration.

The Stalks ſupply the Place of *Arequa*, or *Caunga*, in the chewing of Betel; the ſame calcined and reduced to Powder, take away Warts. Of the tender Leaves, with the Bark of the *Avanacoe*, that is, the *Ricinus*, the Seed of Cummin, and *Parpadagam*, is made a Decoction, which is highly beneficial in the Cough, Aſthma, and other Affections of the Thorax. The Bark of the Tree pulverized, and taken in Chicken-broth, is an excellent Diſſolvent of extravaſated and coagulated Blood, occaſioned by a Fall, in any Part of the Body. The Juice of the Bark, with the White of an Egg, and a very little Opium, taken inwardly, is a preſent Remedy againſt the Diarrhæa, Dyſentery and Teneſmus. Of the Gum of the Tree, and the Flowers of Rice, with the Addition of a ſmall Quantity of Opium and Pepper, are prepared Pills, which alſo cure all ſorts of Fluxes of the Belly. Of the Flower of the dry'd Kernels, the Natives have the Art of preparing various kinds of Food.

MANGAIBA, *Marcgr. & Piſon.* is a pruniferous or Plumb-bearing Tree of *Braſil*, with an oval Fruit, containing many Seeds. It is a beautiful Tree, of the Bigneſs and Shape of our acid Cherry-tree; the Fruit is of the Size of a Plumb, or a Hen's Egg, roundiſh or oval, and of a Gold-Colour, ſpeckled with red. The Seeds are yellow, flat, and from ſix or ſeven, to twelve or more in Number; and containing, under a thin Skin, like that of ſweet Almonds, but viſcid, a very white Kernel, of a ſweet Taſte; for which Reaſon the Seeds are ſwallow'd entire in eating the Fruit. The Fruit is not eatable before it falls off ſpontaneouſly; for while it continues on the Tree, it is full of a tart and bitter Milk, ſo that the Cattle will hardly meddle with it before it is ripe; but as ſoon as it falls to the Ground, it acquires a Maturity. Great Quantities are daily gathered under the Trees, and ſuch as are not throughly ſoft, are ſet aſide for a Night, that they may ſoften. When it is duly ripe, it is eaſy of Digeſtion, qualifies the burning Heats of the Viſcera, and refreſhes thoſe who labour under Fevers. In ſhort, the Fruit is not ſubject to injure the Stomach, though very freely eaten by a Perſon faſting, except that, being of a cold, humid and diſſipable Nature, it excites Flatulencies, and cauſes a Stool.

At the End of Winter, that is, in *Auguſt*, the Tree begins to flower, and for above nine Months is loaded with Plumbs. *Raii Hiſt. Plant. p.* 1644.

MANGANESE. *See* MAGNESIA.

MANGARATIA. *See* ZINGIBER.

MANGAS, *The ſame as* MANGA.

MANGIER-BLANCE, a Species of *Anona*; the ſame with the Cuſtard-Apple. *See* ANONA.

MANGLE, the Mangrove Tree. *See* GUAPARAIBA.

MANGO, a Slave-Merchant. Theſe People, as *Galen* informs us, were verſed in the Art of ſetting off their Slaves to the beſt Advantage, by employing Unctions, Pication, and ſtriking emaciated Parts gently with proper Inſtruments, in order to render them plump and beautiful.

MANGOSTANS, *Bontii*, is an *Indian* Fruit, of the Size of a ſmall Orange; it is cardiac and ſtomachic, and its Rind or Peel is aſtringent. *Lemery des Drogues.*

MANGOUSTE, MANGOUSE, an *Indian* Quadruped, much like our Weaſels, only a little longer and thicker. The *Indians* aſcribe ſeveral Virtues to its Parts: The Liver, they ſay, is good for the Epilepſy; the Fleſh pulverized and applied, cures the Bites of venomous Beaſts; the Gall is good for Diſeaſes of the Eyes; the Fat is an excellent Remedy for cold Humours, Rheumatiſms, and the Pains of the Gout. *Lemery des Drogues.*

MANGUE, *The ſame as* MANGLE. *See* GUAPARAIBA.

MANHEB. Scoria. *Rulandus.*

MANIA, Madneſs.

There is an abſolute Neceſſity for reducing Melancholy and Madneſs to one Species of Diſorder, and conſequently of conſidering them in one joint View, ſince, from daily Obſervation and Experience, we find, that they both ariſe from the ſame common Cauſe and Origin, that is, an exceſſive Congeſtion of the Blood in the Brain, which is a weak and tender Part of the Body; and that they only differ in Degrees, and with reſpect to the Time of Invaſion; ſo that Melancholy may be juſtly taken for the primary Diſorder, and Madneſs for an Augmentation, or an accidental Effect of it. This was the Opinion of the ancient Phyſicians. Thus *Alexander Trallian*, in *Lib.* 1. *Cap.* 16. informs us, that Madneſs is nothing but Melancholy arrived at a higher Degree, and that the Connection between theſe two Diſorders is ſo great, that a Tranſition from the one to the other eaſily happens. *Aretæus* alſo, in *Lib.* 3. *Cap.* 5. tells us, that Melancholy is the Beginning and Origin of Madneſs, which is brought on rather by the Increaſe of Melancholy than by any other Cauſe. This Doctrine is confirm'd by daily Experience and accurate Obſervation, ſince we find that melancholic Patients, eſpecially if their Diſorder is inveterate, eaſily fall into Madneſs, which, when removed, the Melancholy again diſcovers itſelf, though the Madneſs afterwards returns at certain Periods: Nor are the Meaſures to be taken for the Cure of theſe two Diſorders greatly different from each other, ſince the Phyſician, who knows how to remove or leſſen the immediate Cauſe of Melancholy, is by this very Means qualified either for preventing or curing Madneſs.

But before we conſider the Nature, Generation and Difference of theſe Diſorders, we ſhall, from the Antients, and eſpecially the *Greeks*, among whom various Species of Deliriums were very common, give an Account of the ſeveral Phenomena, Signs and Marks, by which Melancholy and Madneſs diſcover themſelves. But none has given a more juſt and accurate Hiſtory of theſe Diſorders than *Aretæus*, who, in *Lib.* 3. gives us the following Marks of Melancholic Patients. Thoſe, ſays he, who are afflicted with Melancholy, are ſad, dejected and dull, without any apparent Cauſe. They tremble for Fear, are deſtitute of Courage, afflicted with Watchings, and fond of Solitude. They are prone to Anger, changeable in their Temper, and ask a Reaſon for the moſt trifling and inconſiderable Occurrences. They are at ſome Seaſons ſo covetous, that they will part with nothing, but ſoon after become ſilly and prodigal. They are generally coſtive, ſometimes diſcharge no Fœces at all, and at other Times their Excrements are dry, round, and covered with a black and bilious Humour. They diſcharge a ſmall Quantity of Urine, which is acrid and bilious. A large Quantity of Flatulences is lodged in their Præcordia. Putrid and fetid Eructations are diſcharged from their Mouths: Sometimes alſo they vomit a certain acrid Humour with the Bile. Their Countenances become pale: Their Pulſe is ſlow. They are lazy and weak, but diſcover a preternatural Voracity in eating their Aliments.

The Signs of Madneſs are alſo given by the ſame Author, who tells us, that Maniacal Patients, when provok'd to Anger, become raging mad. Some, ſays he, wander far from home: Some cry out in a hideous manner: Some ſhun the Sight of Men, betake

betake themſelves to Solitude, and only converſe with themſelves. Others tear and mangle their Bodies. In the higheſt Degree of the Diſorder, they perceive red Images before their Eyes, ſo that they in a manner think themſelves ſtruck with Lightening. They are immoderately inclined to Venery, ſo that they careſs publickly without either Dread or Shame. But when the Diſeaſe is in the Decline they become Stupid, Calm and Mournful, and coming to the Knowledge of their Misfortune, they are dejected on account of their calamitous and miſerable Situation. Theſe are the Signs of Madneſs in its Beginning, Progreſs, and Declenſion. I ſhall therefore enumerate ſome of its antecedent Signs, which I have obſerved in the Courſe of my Practice: the moſt conſiderable of theſe, are a Redneſs and Suffuſion of the Eyes with Blood; a tremulous and inconſtant Vibration of the Eye-lids; a Change of Diſpoſition and Behaviour; a Pride diſcovering itſelf in the Countenance, the Voice, and the Geſtures, a Grinding of the Teeth; an uncommon Hatred to particular Perſons. Little Sleep, a violent Cephalalgia, a Quickneſs of Hearing, a Ringing and Kind of muſical Sounding of the Ears. Among theſe Signs we may alſo reckon the incredible Strength, and the ſurpriſing Capacity of bearing Cold, obſervable in maniac Patients; and in Women an accumulation of Blood in the Breaſts in the Increaſe of the Diſorder.

But as theſe Signs of Madneſs frequently accompany an acute Delirium, commonly called a Phrenitis, we muſt be careful to deſtinguiſh theſe two Diſorders. When therefore a Delirium happens in the Beginning of an acute Fever, or comes on when it is at its Height, but is removed when the Fever is alleviated, the Diſorder is in this Caſe generally called a Phrenitis, nor does it call for any other Remedies than thoſe, which are proper for the Cure of the Fever. But if the Diſorder is long continued, unaccompanied with a Fever, and ſucceeds a melancholic State, it is univerſally called Madneſs. There is alſo a certain Privation of Reaſon, which cannot be properly called either Melancholy, Madneſs, or a Phrenitis; that Diſorder, for Inſtance which is excied in a ſound Perſon, by the Uſe of certain Narcoties, ſuch as the Solanum Furioſum, or its Berries, the Lolium Temulentum, Hen-bane and its Seeds, and Thorn-apple. But this Species of Diſorder is ſoon and totally removed by proper Medicines.

But that we may the more accurately inveſtigate the true and immediate Cauſes of Melancholy and Madneſs, to the Removal of which the principal Intention of Cure ought to be directed, we ſhall give an Account of what has been obſerved in diſſecting Perſons who have died of theſe Diſorders. In the *Miſcell. Nat. Curioſ. Dec. 2. an. 6.* we are told, that on diſſecting a maniac Perſon, many Ramifications of the caroted and vertebral Veſſels were obſerved twiſted together like a Net in the Baſe of the Brain. After taking out the Brain, almoſt ſix Ounces of bloody Serum were left in the Cranium. Then raiſing the Medulla-oblongata at the Baſe of the Brain, with the Fingers, and diſcovering the Ventricles ſituated on each Side the Plexus-Choroides was found to be preternaturally large, on both Sides diſtributed over all the internal Surface, of the Ventricles, and conſiſting of a great Number of conſiderable Blood-veſſels. This Plexus was every where full of lived Veſſels as large as a Pea, which when opened with a Lancet, diſcharged a gelatinous Serum. Thus alſo *Henricus ab Heer, in Obſ. 3.* tells us, that upon diſſecting a maniac Perſon, the Brain was found highly dry, hard, and its ſuperior Part friable upon the Application of the Fingers. Its Subſtance alſo was, for a Fingers-length, every where tinged with a yellow Colour reſembling that of a Citron. It was preternaturally moiſt and ſoft about the Ventricles, and the Origins of the Nerves appeared dry.

In the *Miſcell. Nat. curioſ. Dec. 2. an. 4. Obſ.* 162. we have an Account of the Diſſection of a phrenitic Patient, in whom the Gall-bladder was full of a Bile, which reſembled Tar; and the Sinus Falciformis contained a Kind of Polypous Subſtance. The *Pia Mater*, which was turgid with many Blood-veſſels, could be accurately ſeparated from the Brain; it was alſo far thicker, and furniſhed with larger Veſſels than the *Dura Mater*. A ſimilar Caſe occurred to me more than thirty Years ago in a Gentleman of Diſtinction, of a ſtudious and melancholic Turn, who died of a Delirium in the Height of the ſmall-Pox: In diſſecting his Body, all the Muſcles were found highly denſe, compact, robuſt, and covered with no Fat, for the *Membrana Adipoſa* was almoſt entirely wanting. The Gall-bladder was full of a Bile, which was thick, and as black as Pitch. The Pancreas was large, thick and hard. The Veſſels of the *Dura* and *Pia Mater* were turgid with a thick Blood, and in the latter appeared varicoſe. From the *Sinus Falciformis*, a Concretion of Blood formed into a polypous Maſs was extracted, and in the Ventricles of the Brain there was a lived Serum.

A due Conſideration of theſe Circumſtances will lead us to the immediate Cauſes of theſe Diſorders, and enable us to give a more accurate Account of them than otherwiſe we could have done. Melancholy, then, is a ſtrong and lively working of the Fancy, dwelling intently on certain Objects, accompanied with Alienation of Mind, long continued Dejection, Dread and Sadneſs without any manifeſt Cauſe, and ariſing from a difficult Circulation of the Blood thro' the Veſſels of the Brain, where it is too copiouſly congeſted and becomes ſtagnant. A *Mania* is a violent Madneſs accompanied with Temerity and a preternatural Strength, ariſing from a violent Conveyance of a thick copious and melancholic Blood thro' the Veſſels of the Brain. Whereas a *Phrenitis* is a Madneſs accompanied with a Fever, and ariſing from an inflammatory Stagnation of the Blood in the Veſſels of the Brain.

That the Brain, therefore, is the Seat of all Diſorders of this Kind, is ſufficiently Obvious; and *Hippocrates*, in his Book *de Morbo Sacro*, tells us, "That it is by Means of the Brain that "we reaſon, underſtand, ſee, hear, and diſtinguiſh between "Good and Evil. By its Means it, alſo, is that we become "Mad." For the Brain is the moſt noble Part of the Body, which, tho' in a manner inconceivable by us, the wiſe and bountiful Parent of Mankind Species has made the common Receptacle or Repoſitory of the Soul, the Genius, the Fancy, the Memory, and the external Senſes. But though the Nature and Eſſence of this intelligent and ſenſible Principle, whence its Effects and Faculties proceed, are ſo abſtruſe as not to be comprehended by the human Mind, yet Phyſicians, from careful and accurate Obſervation, have learned, that according to the different Nature and Condition of the Blood, and its Motion through the Veſſels of the Brain, both the rational and ſenſitive Powers are ſo ſurpriſingly changed and altered, that the Difference of moral Characters, Inclinations and Appetites, is to be accounted for from theſe Circumſtances.

The Antients, who were Strangers to the Circulation of the Blood, aſſigned various, though abſurd and unſatisfactory proximate Cauſes of Deliriums. Thus ſome of them accounted for them from an Exſudation of the black Bile, and its Conveyance to the Head; as alſo from a preternatural Dryneſs of the Brain. Other later Phyſicians, as the Cauſe of Melancholy, have accuſed the dry Nature of the animal Spirits, by which they in ſome Meaſure partake of the Quality of Aqua Fortis. Whereas they aſſign the Inflammatory and ſulphureous Nature of the animal Spirits as the Cauſe of Madneſs. But at preſent we are capable of accounting far more accurately, not only for the Diſeaſes of the Body, but alſo thoſe of the Mind, from the State and Condition of the Blood. *Hippocrates* alſo ſeems to have been of this Opinion; for in his Book *de Flatibus*, he tells us, "That the Blood contributes ſo greatly "to Prudence that this is changed, and other Notions and "Sentiments poſſeſs the Mind, if the Motion of the Blood is "diſturbed and irregular." And in the ſame Place he ſays, "if the Condition of the Blood is good, Prudence takes Place; "but when the former is changed the latter fails with it."

And certainly it is evinced by Obſervation and Experience, that all the Functions of the Mind, ſuch as Reaſon, Genius, Fancy, and Inclination, are in their due and natural State, if Blood of a laudable Quality is in a due Quantity conveyed to the Brain, and carried thro' its Veſſels in a free uninterrupted and equable manner; ſo that, in Conſequence of this, the external Senſes, unleſs there is ſome fault in the Organs of Senſation, are preſerved in their natural and proper Condition. But all theſe noble Functions are changed or depraved, diminiſhed, or totally deſtroyed, when the Blood and Humours receding from their natural Temperature and Quantity, are not conveyed to the Brain in a moderate and equable manner, but with a difficult, ſlow and langued Motion, or with too briſk and violent an Impetus.

Hence we may reaſonable affirm, that the immediate Cauſe of Melancholy conſiſts in a preternatural Congeſtion, Stagnation, and difficult Motion of a thick Blood in the Brain, which is a weak Part of the Body; whereas the Origin and Foundation of Madneſs, conſiſts in a violent and impetuous Motion of a thick and melancholic Blood, thro' the Veſſels and ſmall Fibres of the Brain. The Truth of this will be afterwards evinced, when we ſhew the Connection between the antecedent and remote Cauſes of theſe Diſorders.

Since we have already obſerved, that in diſſecting Perſons cut off by a Delirium, the Motion of the Blood thro' the Head, was found to be changed and perverted, whilſt the Veſſels were not only ſo infarcted with a Redundance of Blood, and ſo varicoſe, that in Conſequence of the Stagnation, a large

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Quantity of extravaſated Serum was found in the Baſe of the Brain, but alſo, that the Medullary and cortical Subſtances of the Brain appeared affected, it can no longer be doubted but the Cauſe of theſe Diſorders, and of Death, conſiſts in this preternatural State and Condition.

Having ſpecified the immediate Cauſes of theſe Diſorders, we now come to inveſtigate and trace thoſe more remote and ſecondary Cauſes, which contribute to this perverſe and diſorderly Circulation of the Blood thro' the Veſſels of the Head and Brain: Among theſe, a certain Weakneſs of the Brain may juſtly be eſteemed the mediate Cauſe of Diliriums; ſince, without the Pre-exiſtence of ſuch a Weakneſs, ſuch a faulty Motion of the Blood could not be produced in the Brain. But ſuch a Weakneſs is principally produced by violent Diſorders of Mind, eſpecially long continued Grief, Sadneſs, Dread, Uneaſineſs and Terror; all which have an unhappy Influence on all the Parts, and greatly contribute to impair the Strength of the Brain, and weaken the ſyſtaltic Force of the Veſſels. The ſame Effect is, alſo, produced by intenſe Application of Mind, or too long protracted Lucubrations; by which means, in Conſequence of a Diſſipation of the animal Spirits, the moving, and ſenſitive Force of the Stamina lodged in the Brain, and *Medulla Oblongata* are greatly impaired. Hence the Reaſon is Obvious, why the Literati, and Men of a ſtudious Turn, are more Subject to Alienations of Mind than the common People.

But among the Cauſes which diſpoſe to the moſt violent Delirium, and, by weakening the Tone of the Membranes and Stamina, deſtroy the Force both of the Mind and Body, none is more powerful than an Exceſs of Love. Inſtances of which are found in *Foreſtus, Lib.* 10. *Obſ.* 29. and 30. *Barthol. Cent.* 2. *Hiſt.* 69. and *Valeriola, Lib.* 2. *Obſ.* 7. But in Women fit for Marriage, and as yet ſtrangers to the Matrimonial State, that Species of Love is principally injurious, which proceeds from a long Continuance and Corruption of the genital Fluid, which eſpecially, in a State of Idleneſs and Luxury, is copiouſly ſecreted in the vaginal Glands. Of this there are Inſtances found in *Platerus, Lib.* 1. *Prax. Cap.* 3. *Geor. Horſt. T.* 2. *Op. Lib.* 2. *Obſ.* 68. And *Ephemerid, Nat. Curioſ. Obſ.* 126. *Decad.* 2. *An.* 10. for in Conſequence of the mutual Union between the Soul and the Body, together with the Motion of the Fluid and ſolid Parts, venereal Ideas are, by a Congeſtion and Stagnation of the Juices in the ſpermatic Organs, excited in the Fancy, which often dwelling intently upon theſe Ideas, depraves and perverts Reaſon in a ſurpriſing manner. Nor is it abſurd to ſuppoſe, that the ſpirituous ſeminal Fluid, corrupted by its Continuance, returns thro' the lymphatic Veſſels to the Blood, and as it were, by Sympathy, contaminates that Fluid in the Blood, which is conveyed to the Brain and Nerves, for the ſeveral Purpoſes of Senſation and Motion, ſo that in Conſequence of this, a great Dejection of Strength is produced.

Beſides, it is certain, from medicinal Obſervations, that an exceſſive Evacuation of Semen, whether voluntary or involuntary, has proved the Cauſe and Origin not only of Melancholy, but alſo of Madneſs. Thus *Henricus ab Heer, in Obſ.* 60. gives us an Inſtance of a Man of ſixty Years of Age, who, in Conſequence of an exceſſive Evacuation of Semen, during the Dog-days, became Melancholy. And *Foreſtus in Obſ. Lib.* 10. *Obſ.* 25. gives us an Inſtance of a young Man, who marrying a young wife about the Middle of Summer, became mad by an exceſſive Uſe of Venery; for it is well known that the Semen is the moſt fine and active Part of the Blood; and that it partakes almoſt of the ſame Nature with the nervous Fluid. Hence we obſerve that immoderate Evacuations of the Semen not only weaken the Functions of the Senſes, and the Force of the Genius, but alſo produce other Diſorders ariſing from a Weakneſs of the Brain.

It is, alſo, carefully to be obſerved, that long protracted Diliriums are very common to certain Families; and may therefore be juſtly claſſed among the Number of Hereditary diſorders. The Reaſon of this, in my Opinion, is, that the morbid and weak Nature and Texture of the ſolid and moving Parts, is propagated from the Parents to the Children; eſpecially if the former, in the Generation of the latter, were affected with theſe Diſorders.

But nothing ſo ſuddenly, unexpectedly, and even without any proceeding Cauſe, throws a Perſon, otherwiſe Sound, into Madneſs, as Narcotic and ſtupefactive Medicines, ignorantly taken. Thus it is certain, from Experience, that the Seeds of the Thorn-apple, and Henbane, as alſo the Berries of the deadly Night-ſhade, are capable of inducing a perfect Madneſs, ſoon after they are exhibited. Thoſe who are curious to enquire into the pernicious Energy of ſuch hurtful Subſtances, may conſult *Miſcell. Nat. Curioſ. Decad.* 3. *an* 3. *Obſ.* 170. *Willis de anim. Brut. Cap.* 12. *Matthiol in Dioſcorid. Lobelius in Novis Sterpium adverſariis. Borelli. Cent.* 4. *Obſ.* 45. and *Helmont*, in his *Demens Idea*. Beſides, it is well known to ſkilful and attentive Phyſicians, that Medicines, in which Opium is an ingredient, when prepoſterouſly exhibited in a Delirium, are ſo far from alleviating it, that they rather increaſe and render it more obſtinate. It will not be hard to aſſign a Reaſon for this, if we conſider that theſe Remedies abound with a certain volatile and fetid Sulphur, highly unfriendly to Nature; and which, when reſolved by the Heat of the Body, aſſumes the Form of Exhalations, which inſinuating themſelves deeply into the minute Pores of the Brain and Nerves, weaken the moving Force of the pure Fluid there contained, and impair the Elaſticity of the nervous Fibres, ſo that a remarkable Diminution and Depravation of all the Powers of Senſation and Motion ſucceed.

Previous Diſeaſes, and eſpecially acute Fevers, alſo contribute greatly to deſtroy the natural Tone and Tenſion of the Veſſels and Stamina of the Brain. Hence nothing is more frequent than to obſerve, firſt, a Phrenitis, and, after that, a Species of chronical Delirium, produced after burning Fevers, eſpecially when long protracted, after the *Hungarian* Fever, that Species of Fever called a putred Synoche, a choleric Fever or *Cauſus*, and ſometimes after a variolous Fever. The Reaſon of this is Obvious; becauſe, under ſo intenſe a febrile Heat, which is generally accompanied with continual Watchings, the nervous Fluid, which is in a particular manner ſubſervient to Senſation and Motion, is diſſipated. By this means, alſo, the fibrous Texture and Structure of the Brain is conſiderably injured; in Conſequence of which the Secretion of the animal Fluids can not be duely carried on.

The Brain is alſo greatly weakened, and the Nature of the nervous Fluid exhaled by Drunkenneſs, and an immoderate Uſe of Spirituous Liquors; for which Reaſon *Seneca*, in *Epiſt.* 83. no leſs juſtly than beautifully affirms Drunkenneſs to be Madneſs; for ſays he, "Cruelty follows Drunkenneſs; for by its means, the "Reaſon and Soundneſs of the Mind is violated and vanquiſhed.

We now come to conſider thoſe Cauſes, by which the Blood is impetuouſly conveyed from the inferior Parts to the Head. And among theſe, we find none capable of ſooner converting Melancholy into Madneſs, or of exciting freſh Paroxyſms of theſe Diſorders, than violent Anger, *Galen, in Lib.* 6. *Aph.* 23. declares himſelf of the ſame Opinion, eſpecially if Pride Haughtineſs, Hatred, or an inſatiable Deſire of Revenge, reign in the Patients Breaſt. It is true, melancholic Perſons are not naturally prove to Anger; but when their Mind is once ruffled by that Paſſion, they rage ſo furiouſly, that the Diſorder is not eaſily allayed. But Anger is principally injurious to melancholic Patients, becauſe their Blood, which is thick and compact, being thrown into a violent Motion, not only greatly injures the fine and tender Texture of the Brain, but alſo may be eaſily ſtopt in its Courſe.

To this Claſs of Cauſes alſo belongs external Cold admitted to the Body, and eſpecially to its inferior Parts. That this contributes greatly to create theſe Diſorders, is ſufficiently obvious from the Paroxyſms and Fits of melancholic Patients, which we always obſerve to be preceded by Horripilation and a Senſe of Cold in the external Parts. Nor will it be difficult, from a careful Conſideration of theſe Circumſtances, to account, in a rational manner, for the numerous terrible Symptoms with which Melancholy is accompanied; for ſince, under ſuch a Horror and Senſe of Cold, the external Parts are, as it were, ſpaſmodically conſtricted; the Blood, in Conſequence of the Diminution of the Space it poſſeſſed, and the leſſening the Cavities of the Veſſels, is, with a greater Force and Impetus, conveyed to the internal Parts; after which becoming ſtagnant in the greater Veſſels, eſpecially the Lungs, Heart and Brain, it creates various Diſorders, according to the Variety of theſe Parts. Thus oppreſſive Anxieties, Sighs and Shortneſs of Breathing, about the Præcordia, Tremors and Palpitations of the Heart, Vertigo's, and a Senſation of Weight in the Head, Fierceneſs of the Eyes, long Watchings, and various Workings of the Fancy, intenſely dwelling upon one Object, are produced by this Means.

To this Claſs of Cauſes, we may alſo juſtly refer the Diminution or Suppreſſion of the Excretions of Blood, whether natural or artificial in both Sexes. Thus it is certain from Experience, that Melancholy has been produced by an Omiſſion of accuſtomed Veneſection in plethoric Patients; by an irregular Diſcharge of the Hæmorrhoids or Menſes, or an imprudent Obſtruction of them, and by prepoſterouſly ſtopping Hæmorrhages of the Noſe. The ſame Effect is alſo produced, if, after Labour, the Lochia are too ſcantily evacuated or totally ſuppreſſed; or,

if about the Years of Puberty the Eruption of the Menſes ſhould prove difficult; for that both Melancholy and Madneſs have been produced by theſe Circumſtances, is obvious from numberleſs Obſervations, which occur in the beſt practical Authors. Thus *Hippocrates*, in his Book *de Superfœtat.* informs us, that, from long Experience, he found that the Interception of an uſual Evacuation of Blood produced Madneſs. *Foreſtus* alſo, *in Lib.* 10. *Obſ.* 23. and 24. and *Binningerus*, in *Cent.* 1. *Obſ.* 37. give us Inſtances of Madneſs produced by a Suppreſſion of the Menſes. And *Zacutus Luſitanus*, *Lib.* 1. *Prax. Admirand. Obſ.* 37. and 57. informs us, that both Melancholy and Madneſs may be produced by a Suppreſſion of the hæmorrhoidal Diſcharge. For by the Blood too copiouſly congeſted, and becoming ſtagnant about the Inteſtines, their nervous Coats being compreſſed, are ſtimulated to ſpaſmodic Motions, by the Force of which the Blood there accumulated is tranſlated to the ſuperior Parts, and eſpecially to the Head. See HÆMORRHOIDES. *Hippocrates*, in his Treatiſe *de Virgin. Morb.* has a beautiful Paſſage relating to this inverted Motion of the redundant Blood. "Young "Women, ſays he, fit for Marriage, are afflicted with a Spe- "cies of Delirium, in which they think they ſee certain De- "mons, about the firſt Appearance of the Menſes, tho' free "from ſuch Diſorders before; for after the Blood is accumu- "lated in the Uterus, as if it was ready to be diſcharged, if "the Mouth of the Uterus is not open, and the Blood is at "the ſame time increaſed by the Aliments and Growth of "the Body, then the Blood, not finding a free Paſſage, in "conſequence of its large Quantity, recoils to the Heart and "Diaphragm. And, when theſe are filled, the Patient be- "comes fooliſh, then torpid, and laſtly delirious."

From what has been ſaid, we may eaſily aſſign a Reaſon why Melancholy is a Symptom very frequently attending hyſteric and hypochondriac Diſorders; for it is certain, that a want of a due Tone of the Viſcera, and a ſlow Circulation of a thick and redundant Blood thro' them, produce in the Abdomen Spaſms and Flatulences, from which all the Symptoms accompanying hypochondriacal and hyſterical Diſorder, may be derived and accounted for.

We now come to inveſtigate thoſe Cauſes, which contribute to the Generation of a thick Blood, and its Stagnation in theſe Parts. Among theſe, the moſt conſiderable is Idleneſs and Eaſe, which powerfully generates not only hypochondriacal and hyſterical Diſorders, but alſo the Deliriums generally ſubſequent to them; for as due Exerciſe procures Strength to the ſolid Parts, and not only renders the Humours more fluid, but, alſo, puts them in a briſker Motion, ſo we find it confirmed, from daily Experience, that, in conſequence of a want of due Exerciſe, the Strength of the Body is weakened, all its Functions impaired, the ſalutary and uſual Excretions diminiſhed, and the Humours rendered thick, viſcid, and ſtagnant. All theſe Misfortunes are ſtill heightened by Solitude, during which various deluſory and gloomy Ideas preſent themſelves to the Mind of the Patient, and deſtroy his Happineſs.

Nor are we to ſeclude Aliments and Drink from the Number of Cauſes, which, in a remote and ſecondary manner, produce Melancholy and Madneſs; for if, in conſequence of an exceſſive Collection of acid Humours in the Stomach, Perſons become voracious, acquire too large an Appetite, or eat Aliments of a groſs Texture, ſuch as are hard, flatulent, or leſs ſoluble, without, at the ſame Time, uſing a ſufficient Quantity of Drink, crude and compact Humours, which ſupply Matter and Nouriſhment to Melancholy and Madneſs, are generated; and when theſe Humours are conveyed to the Blood, they render the Stamina and fleſhy Fibres more rigid, hard, and, conſequently, leſs fit and proper for performing their reſpective Motions.

But that we may be the better enabled to explain the Nature of Melancholy and Madneſs, we muſt obſerve, that the Blood of Perſons labouring under theſe Diſorders, when taken from the Veins, is black, and hotter than in a natural State, as we are told by *Etmuller*, *in Colleg. Pract.* And *Lindanus* obſerves, that the Blood of ſuch Patients depoſites its Serum more ſlowly, and in a ſmaller Quantity, than in a natural State; that, when weighed, it is found heavier, evaporates more ſlowly, and leaves a larger Quantity of a thick Magma, than the Blood of ſound Perſons. As for the Excrements of melancholic and maniac Patients, they are generally diſcharged in a ſmall Quantity, hard, of a dark red, and ſome Times of a greyiſh Colour. The Urine, alſo, diſcharged by them under the Paroxyſm, is light and thin.

As for the Perſons moſt ſubject to Melancholy and Madneſs, we muſt obſerve, that not only dull, ſtupid, and forgetful Perſons, but alſo, and that more frequently, ingenious Men, Poets, Philoſophers, and thoſe charmed with the more deep and abſtruſe Parts of Mathematics and Algebra, are ſubject to Melancholy. And we find, from Experience, that Perſons of melancholico-choleric Temperaments, lean Habits of Body, rigid and tenſe Fibres, and a quick Pulſe, as alſo thoſe who, being prone to Anger, are daily and eaſily provoked by Family Altercations, eſpecially at Meals, are above all others ſubject to Madneſs. Nor are thoſe who are naturally languid, weak, timorous, or whoſe Fleſh is moiſt and lax, totally exempt from theſe Diſorders; as is obvious from this, that when the Menſes in young Women, or the Lochia in Child-bed Women, are not duly evacuated, ſuch Women are ſubject to Diſorders, accompanied with Alienation of Mind. *Hippocrates* alſo, *in Lib.* 2. *Epidem.* 6. *Sect.* 3. and *Galen* alſo, *Lib.* 3. *de Locis affectis*, *Cap.* 6. juſtly obſerve, that Perſons of ſanguine Habits are ſubject to melancholic and hypochondriac Diſorders; and this is alſo confirmed by Experience.

But ſince, in order to know the particular Nature and Genius of Diſeaſes of the Mind, and form a right Judgment with reſpect to their Events and Cure, it is of great Importance to be well acquainted with the various Circumſtances capable of producing them; we are, for this Reaſon, carefully to conſider, whether the Diſorder proceeds from a moral Cauſe in the Mind, or one of a phyſical Nature in the Body; for in the Courſe of Practice, nothing more frequently happens, than that, upon inquiring into the firſt Cauſe of the Diſorder, we are told, that ſome quick and ſudden Commotion of Mind, Anger, Terror, long Grief, and Uneaſineſs, or an Exceſs of Love, laid the firſt Foundation for it. To which Circumſtances if an hereditary Weakneſs of the Brain, and internal Senſes, or a remarkable Error in Regimen, ſuch as Drunkenneſs, exceſſive Refrigeration of the Body, or immoderate Venery, are joined, it is uſual for Men, otherwiſe ſound and vigorous, without any manifeſt Sign of any chronical Diſorder, to fall into ſuch Diſeaſes of the Mind, which are removed but ſlowly and with Difficulty. And when this happens, the Diſeaſe is to be eſteemed of the idiopathic and primary Kind; in conſequence of which, it will more remarkably affect the Mind.

But more juſt and rational Hopes of Recovery may be entertained, if the melancholic Delirium is of the ſymptomatic Kind; and in Men accompanies the hypochondriac, and in Women the hyſteric Diſorder; which may be known, when the *Primæ Viæ* are affected with Spaſms, Flatulences, Rumblings, and Eructations; when the Diaphragm is compreſſed and uneaſy; when the Excrements are hard; and when there are violent Tenſions of the Hypochondria, accompanied with a kind of Twitchings; to all which, lacerating Pains of the Head, Vertigos, Ringing of the Ears, and Watchings, are frequently joined. There is the ſame Hope of an eaſy Cure, if the Madneſs ariſes from an ill-cured intermittent Fever, a Suppreſſion of the Menſes, the Lochia, or hæmorrhoidal Diſcharge, or from Narcotics; for a Madneſs of this Kind is greatly alleviated, or totally removed, by proper Medicines, and a Return of theſe natural Excretions.

Beſides, as all the Diſeaſes of the Brain, and animal Spirits, have their Degrees of Intenſion, and Remiſſion, and ſtated Periods, at which they return; ſo this is alſo obſervable in all the Species of Madneſs. When therefore the Paroxyſms are ſlight, and, as it were, beginning, the Cure is not very difficult. But if the Diſorder is inveterate, and has taken deep Roots, or if it has but ſhort Remiſſion, it is certain, that it is almoſt incurable; for in Proceſs of Time, the Brain, which is the Seat of the Mind, and nervous Fluid, has its Texture ſo ſurpriſingly depraved, that the greateſt Skill and Judgment are neceſſary to repair the Misfortune. That mad Perſons are ſo rarely cured, is, in my Opinion, owing to this, that they reject their Phyſicians, and dread their Medicines as Poiſon; whereas melancholic, and eſpecially hypochondriac Patients, indulge themſelves too much in Medicines, which they daily demand from their Phyſicians, whom they often change; by which means their Condition is rendered ſtill worſe. But it is a very bad Sign, and denotes an increaſed and deſperate Degree of Madneſs, when the Patients, after profound Sleep, are continually delirious, and inſenſible of the Force of Cold, Efficacy of ſtrong and draſtic Medicines, whether of the emetic or purgative Kind. And if, in conſequence of a want of Sleep, and long Abſtinence, a great Loſs of Strength is brought on, or if the Patient becomes epileptic, convulſive, or lethargic, we may juſtly conclude, that Death is not far off.

The skilful Phyſician alſo knows, that the Diſeaſes of the Mind are of ſuch a particular Nature and Genius, and ſo different from other Diſorders, that ſome times they remit for a long time; ſo that the Patients are thought entirely ſound

and well, but return at certain Periods, especially about the Solstices and Equinoxes, the Times at which they first appeared. If the Disorder is of this kind, the Recovery of the Patient is not to be despaired of, if the Physician endeavours totally to remove the Misfortune, and the Patient observes due Caution and Regularity. *Aretæus*, in *Lib.* 3. speaks in the following manner: "Madness both remits, and is capable of being totally removed by sufficient Care. But the Intermission is not of "the genuine Kind, when the Madness terminates spontaneously, "when it is not properly removed by Medicines, or cured "by the Clemency of the Season of the Year; for some, who "have appeared quite free from the Disorder, have again become mad, either in the Spring, or by an Error in Regimen, "or by Anger excited by any means."

It is, also, worth our Observation, that, in maniac Patients, Nature often excellently performs both the natural and vital Functions; so that such Persons are rarely seized with any other Disorders, though many external disposing Causes should concur to produce them. Hence it is, that mad Persons are seldom subject to epidemical Disorders. Nor are there Instances wanting, of Persons, who, under these violent and afflicting Diseases of the Mind, have lived seventy Years and more.

A salutary Solution of these Diseases sometimes happens by the Force of Nature, without any Assistance from Medicines or Physicians, by critical Excretions of Blood, whether from the Nose, the Uterus, or the Anus. And such a Solution happens the more certainly, if the Disorder derived its Origin from a Suppression of these Evacuations. And *Hippocrates* justly observes, in *Aph.* 21. *Sect.* 6. that Madness is terminated by Varices and the Hæmorrhoids. I myself know Instances of Persons, who, in their Youth being afflicted with a violent hypochondriac Melancholy, have at a more advanced Age been freed from that Disorder, by the hæmorrhoidal Discharge. Hence it also happens, that Fluxes and Dysenteries terminate these Disorders, as *Hippocrates* justly observes in *Aphor.* 9. *Sect.* 7. And I lately knew Madness brought on in a young Man by a Fright, happily terminated by a Diarrhœa. We must also carefully advert to an Observation made by *Hippocrates*, in *Aphor.* 65. *Sect.* 5. where he tells us, "that when Tumors appear upon Ulcers, the Patients seldom go mad; but, when these are suddenly dissipated, "Madness is excited." This Doctrine is confirm'd by other Observations, which evince, that Melancholy has been terminated by Pustules, and the Itch appearing on the Skin. Thus *Forestus*, in *Lib.* 10. *Obs.* 24. informs us, that a mad Girl was cur'd of her Disorder by Ulcers arising in her Legs. And *Amatus Lusitanus*, in *Cent.* 2. *Obs.* 47. informs us, that Melancholy was produc'd by stopping an Ulcer.

The Cure.

As the Method of curing every Disorder consists in checking and removing its Causes, and as from a Knowledge of these Causes curatory Intentions ought to be form'd, and proper Remedies selected, so I think we ought to proceed in the same manner with the Diseases of the Mind. Now we have already demonstrated, that the proximate and immediate Cause of a Delirium, whether of the low and timid, or of the bold and furious Kind, consists in an impetuous Motion of the Blood and Humours to the Head, and their languid, or too much accelerated Circulation thro' the Vessels of the Brain; a Circumstance immediately succeeded by the various Effects of a disturb'd and irregular Fancy; hence the principal Intentions, to be pursued both in preventing, and alleviating these Disorders, are,

1. To derive the Blood too copiously collected in the Brain to the inferior Parts; and to procure its free and equable Circulation thro' the Head and the whole Body.

2. To remove the material and occasional Causes which pervert the natural Temperature of the Blood, and occasion its Translation to the Head; and to restore the usual, natural, and salutary Excretions to their due and proper Condition.

3. To restore the natural systaltic Force to the Vessels and Membranes of the Brain.

But it must be observ'd, that the Antients, and especially the *Greeks*, were far more dexterous, not only in distinguishing, but, also, in curing these Disorders, than the Moderns; not only because, in consequence of the Variety and Abundance of Deliriums raging in their Country, they could acquire greater Experience, but, also, because they had a better Opportunity of investigating the Force and Virtues of their Remedies. This is sufficiently certain from the Instance of *Hippocrates* alone, who, in his Book *de Insania*, gives the true Cause of Deliriums: "After, says he, "the Brain is suddenly heated by the Effervescence of the Blood "in the Veins, the Patients have frightful Dreams, the Face and "Eyes become red, and the Mind meditates some Mischief; but "when the Blood is again dispers'd to the Veins, these Symptoms "cease." For the Cure of the Disorder, he afterwards orders Venesection, drinking of Water, and a Potion of white Hellebore: Nor do the other antient Physicians recede from this highly simple Method of Cure; for, if we carefully look into their Works, we find them prescribing, with great Success, the most simple Remedies for the Removal of these terrible Disorders; such as Venesection, Baths prepared of sweet Water, the drinking of pure Water, and mineral Springs, Milk and Whey, and gentle or strong Evacuations, according as the State of the Patient required.

But among all the Remedies by the Antients recommended in such Cases, none is more celebrated than Venesection; concerning the Use and Advantage of which, there is a celebrated Passage in *Axand. Trall. Lib.* 1. *Cap.* 16. "Melancholy, says that Author, is generated by a Redundance of Blood: If the Patients "are of a lean Habit of Body; if they are in the Vigour of their "Age; or if the menstrual, or hæmorrhoidal Discharges are suppress'd; if the Face is much more red, and the Veins more "turgid, than in a natural State; in this Case, liberal Venesection "is, with all Expedition, and above all things, to be instituted, if "the Patient's Strength admits of it: But, if the Patient's Strength "does not admit of a large Evacuation, a sufficient Quantity is "to be taken away, at two or more different times. But if the "Blood is, as it were, impacted in the Brain, we are boldly to "open the frontal Vein." But he subjoins a necessary Caution, that this should not be done without a previous Evacuation of the Body: "For, says he, if any Attempt is made upon the Head, "before the whole Body is purged from its recrementitious Humours, more Injury than Good is done; since by this means "a greater Quantity of Matter is attracted to the Head."

Aretæus, also, highly extols Venesection in the Cure of Melancholy, and lays down useful Cautions, with respect to its Institution: "If, *says he*, the Blood is thick, bilious, and black, "a Vein is to be open'd, and the Operation repeated, not on "the same, but on the subsequent Days, till a sufficient Quantity "of Blood is taken away. But the Quantity of Blood to be taken "away in one Day is to be determined by the Strength of the "Patient. In the mean time the Body is to be liberally nourished, "that the Patient may be able to bear a future Evacuation. If "the Patient is lean, and deficient in Blood, a small Quantity is "only to be evacuated, that the Strength may be sensible of the "Evacuation, but not injured by it: Hence, if too large a Quantity of Blood is evacuated, Nature, for want of a due Supply, "will be weaken'd." Nor is there any Species of Remedy more efficacious and necessary, for removing the most obstinate Disorders of the Mind, according to *Cœlius Aurelianus*, in *Lib.* 1. *Cap.* 5. where, besides Phlebotomy, he, at the same time, highly extols Scarification, and the Application of Leeches, in the following manner: "When the Disorder is in its Height, the Head "is to be shaved, and Cupping, with Scarification, used." *Galen*, also, recommends Venesection, in that Species of Melancholy which has its Seat in the Veins, and affects the whole Body; whereas, on the contrary, the *Arabians*, in curing it, recommend Venesection in particular Veins, such as the Jugular, Frontal, or Temporal Veins; or use Cupping with Scarification between the Shoulders; or open the hæmorrhoidal Veins, by means of Leeches.

Some celebrated Physicians of the last Age, as *Fernelius*, *Riverius*, *Hieronymus Mercurialis*, *Hornius*, *Sylvaticus*, *Joannes Fortis*, and *Ballonius*, after having used the same Remedy, not only for preventing but, also, for removing these Disorders, unanimously affirm, that it is of all others the most efficacious; and from my own Experience I can affirm, that Venesection is justly to be reckon'd among the most valuable Remedies for these Disorders; only with this Caution, that, where there is a Redundance of thick and grumous Blood, a Vein is first to be opened in the Foot; and, a few Days after, in the Arm; then in the Head, or in the Neck, let the Jugular Vein be cautiously open'd, or with a Straw let the Nostrils be irritated to a Discharge of Blood. And, last of all, it is expedient to open the Frontal Vein with a blunt Lancet, for fear of injuring the Pericranium, after having applied a Ligature about the Neck, in such a manner as to render the Veins of the Face tumid.

But there were other Remedies highly extolled by the Antients for their singular Efficacy, both in Melancholy and Madness, the most considerable of which were Baths of warm Water, in which the Patient was either wholly, or only as far as the Præcordia, immersed; and Semicupiums, and Baths for the Feet: Thus *Alexander Trallian*, in *Lib.* 1. informs us, "That Baths "of sweet Water are, above all other things, beneficial to melancholic Patients: But the Patients must remain long in the "hot Bath, and even sit for a long time in it, if it is in the "Summer." *Aretæus*, also, in *Lib.* 7. orders melancholic Patients often to use Baths naturally hot, "For, *says he*, a Softness and Relaxation of the Flesh greatly contribute to the "Remission of the Disorder; for the Flesh of melancholic Patients is dry and tense." Among the Methodic Sect, *Prosper Alpinus*, in *Med. Ægypt.* informs us, that melancholic Patients have been perfectly cured by warm Baths dropping on all the Parts of the Body, but especially on the Sutures of the Head. The Antients, in like manner, prescribed Baths for the Cure of Madness, as we find from *Cœlius Aurelianus*; who, to maniac Patients, greatly recommends the Use of mineral Waters, such as those of the nitrous Kind, especially if they have not a fetid Smell, capable of injuring the Membranes of the Head. *Galen*, also,

alſo, in his Book *de Locis affectis*, *Cap.* 9. informs us, that he cured many melancholic and mad Patients, by Baths of tepid Water.

But, that Baths are highly efficacious in the Cure of theſe Diſorders, is ſufficiently obvious, if we but attentively conſider their Method of acting. The Paroxyſms of Madneſs, which, at certain times, ſeize Perſons of atrabilarious Conſtitutions, are hardly owing to any other Reaſon, than that, by the violent Conſtriction of the fibrous and nervous Parts in the Surface and Extremities of the Body, the Blood is impetuouſly carried to the ſuperior Parts. Hence *Hippocrates*, in *Sect.* 1. *Aph.* 56. informs us, that, in atrabilarious Diſorders, Tranſlations of the Humours from one Part to another are dangerous, ſince they either prognoſticate a Palſy, Convulſions, or Madneſs. Now, as moderately warm Water, by ſoftening and relaxing the hard and conſtricted Parts, eſpecially in the Extremities, not only diminiſhes and averts the Impetus of the Blood from the Head, but, alſo, by enlarging the Veſſels, derives the Humours from the Head to the inferior Parts, ſo that an equable Circulation of the Humours through the whole Body, and eſpecially through its Extremities, being reſtored, the Body becomes perſpirable, it is not to be doubted, but, in Melancholy and Madneſs, great Relief is to be expected from warm Baths.

As for the beſt Method of preparing Baths, it is obvious from what has been ſaid, that light and ſubtile Waters, ſuch as Rain and River-waters, are far more proper for anſwering the abovementioned Intention, than hard and fountain Waters; and this ſeems to be the Reaſon why the hot mineral Waters, which, beſides their Fineneſs, contain a ſubtile alcaline Mineral, ſuch as theſe of *Embſen* and *Teunacen*, both internally and externally uſed, are found far more effectual for removing theſe Diſorders of the Head, than any others. But, if light Waters cannot be had for Baths of this kind, the hard and fountain Waters are to be corrected with Wheat, and its Bran, Barley, Mallows, Linſeed, and Marſhmallow-roots, tied up in a Bag. Some, for the ſame Purpoſe, mix Milk with the Water, or add a ſufficient Quantity of Pot-aſh.

Theſe Baths are by no means to be uſed too hot, but only tepid, or moderately warm. But that the Energy of theſe Baths for removing ſuch Diſorders may be the more certain and infallible, and that the Blood ſtagnating in the Veins of the Head may be the more effectually derived to the inferior Parts, it is expedient, that, before the Patient enters the Bath, his Head ſhould have cold Water poured upon it, or be cover'd with a Cloth dipt in cold Water. That this Method was known to *Celſus*, we find in *Lib.* 6. *Cap.* 18. where, before the Patient's Body is immerſed in the Bath, or in Oil, he orders cold Water to be pour'd upon his Head. And in *Lib.* 1. *Cap.* 4. he tells us, that "Nothing is "ſo beneficial for ſtrengthening the Head, as cold Water, which "is to be longer poured upon the Head, than upon the other "Parts; or the Head is to be daily plunged in a large Veſſel full "of cold Water." *Aretæus* was of the ſame Opinion, who tells us, if the Patients are mad, he orders cold Water to be poured upon the Head. The Reaſon of this Practice is obvious; ſince ſuch is the Force and Energy of Cold, that, by penetrating to the Membranes and Veſſels of the Brain, dilated and weakened by the ſtagnant Blood, it ſo conſtricts and corroborates them, as to promote a more free and eaſy Diſcuſſion of the Humours ſtagnating in them.

Having conſider'd Baths, we now come to take a View of other Remedies; none of the leaſt conſiderable of which are Purgatives, which, by the Antients as well as the Moderns, were always highly eſteemed, for removing theſe Diſorders of the Mind. But as Purgatives operate in various manners, ſince ſome are mild, and others draſtic, it is expedient to ſpecify ſuch of them as beſt contribute to the Removal both of Madneſs and Melancholy: But it is agreed upon among ſkilful Phyſicians, that the mild and gentle Purgatives, ſuch as Manna, Caſſia, Rhubarb, Agaric, Sena-leaves, Polypody of the Oak, Cream of Tartar, vitriolated Tartar, and the neutral Salts of mineral Waters, uſed in various Forms in Madneſs and Melancholy, eſpecially when ariſing from the hypochondriac Diſorder, and a Stagnation of Blood in the Inteſtines, and Ramifications of the Vena Portæ, are preferable to thoſe of a more acrid and draſtic Kind, on account of their more ſafe, gentle, and leſs tumultuary Operation, eſpecially when they are taken in Decoctions or Infuſions, not all at once, but at repeated Intervals, ſo as to operate in an alterative manner.

Indeed, if we look into the Writings of Phyſicians, and eſpecially of the Antients, we find them recommending both white and black Hellebore, tho' poſſeſſed of a ſubtile and virulent Acrimony, as the moſt powerful Specifics for removing Melancholy and Madneſs. Thus *Hippocrates*, in his Book *de Inſomniis*, in order to prevent Madneſs, preſcribes Purging with white Hellebore, and afterwards a fit and proper Regimen. And in his firſt Book *de Diæta*, he thinks Purging with white Hellebore highly beneficial in melancholic, timid, and dejected Patients. Of the ſame Opinion is *Celſus*, who in *Lib.* 3. *Cap.* 18. informs us, that Melancholy is greatly alleviated by purging with white Hellebore; and if this Medicine once exhibited does not prove effectual, he orders it to be repeated at proper Intervals. But tho' the Antients almoſt always uſed Hellebore, Elaterium, and other draſtic Purgatives, yet it is probable, they were induced to this Practice by a want of more mild and gentle Medicines. Beſides, it is probable, as *Galen*, in his Book *de Articulis*, inſinuates, that they ſo frequently uſed draſtic Purgatives, becauſe they were acquainted with ſafe Preparations thereof. But it is to be lamented, that Time has deſtroy'd a great many of their Works: Of this *Hippocrates*'s Book *de Helleboro* is a ſufficient Proof; ſince only the Beginning of that Work is preſerved.

Beſides, if we carefully conſider thoſe Paſſages of *Hippocrates*, and the other Founders of Phyſic, where, in theſe Diſorders, Purging by Hellebore is recommended, we find that they only exhibited this Medicine in ſuch a manner, with ſuch a Vehicle, and in Conjunction with ſuch other Medicines, as corrected and obtunded its Acrimony, ſo as to render its Operation not ſtrong and draſtic, but mild and gentle: Thus, according to *Dioſcorides*, in *Lib.* 4. *Philonides*, a Native of *Enna* in *Sicily*, deſcribed a particular Preparation and Regimen, as previouſly neceſſary to the Exhibition of Hellebore; but that Work has not reached our Hands. Various Inſtances confirming this may be found in the Works of *Hippocrates*, who, in his Book *de Diæta*, orders Purging by white Hellebore, after the Uſe of Fomentations, and the Obſervation of a proper Regimen. In his Book *de Veratro*, he informs us, that, before the Uſe of white Hellebore, the Body is to be moiſten'd by copious Aliments, and Reſt. And in *Lib.* 6. *Epid.* he orders the Body to be prepared for its Exhibition by Baths and Aliments. For the ſame Purpoſe he, alſo, order'd a ſufficient Quantity of Aſſes Milk to be drank, both before and after the Uſe of draſtic Purgatives.

But ſince it is well-known, that not only draſtic Purgatives, but, alſo, arſenical Poiſons, may, without any Prejudice to Health, be exhibited, if the Body is previouſly render'd ſufficiently moiſt, and prepar'd by demulcent, nutritive, and oleous Aliments, and Preparations of Milk, or if ſuch Subſtances are taken after the Exhibition of ſuch Poiſons, we may eaſily be convinc'd, that the Antients were not faulty in exhibiting draſtic Purgatives; ſince, by correcting and obtunding their Force, they reduced them to a mild and gentle Quality. This Method was known to *Alexander Trallian*: "For, ſays he, in Melancholy, gentle "Purging, a moiſtening Diet, and the Interpoſition of the "Bath, are neceſſary; for thoſe who preſcribe hot Anti"dotes and Purgatives, eſpecially Hiera, render their Patients "more furious and mad; ſince, by that means, the Blood be"comes more dry and acrid. After purging, therefore, with "ſuch ſimple Medicines as do not heat the whole Body, it is "expedient to uſe a moiſtening Diet; and I have often cured "Patients labouring under Melancholy, rather by Diet and Re"gimen, than by Medicines."

Reaſon, alſo, confirms the Truth of this; for in Madneſs, where all the Parts of the Conſtitution are in a preternatural Tumult and Commotion, there is no manner of Indication for an additional Irritation of the nervous Syſtem. Nor do the atrabilarious, or melancholic, glutinous, thick, acid, and ſaline Humours, lodged in the Veſſels, call for acrid Purgatives; but when they are diluted, corrected, and rendered fit for an Evacuation, they are eaſily ſtimulated to an Excretion. And, certainly, greater Caution is not neceſſary in the Exhibition of any Medicine, than of Purgatives; for, as *Joannes Heurnius*, *in Lib.* 3. has juſtly obſerved, Temerity is highly culpable in the Uſe of important Medicines; ſince, by an Overſight, we may do an irreparable Injury, inſtead of a grateful Service. Hence *Plato* wiſely obſerved, that chronical Diſeaſes, among which he claſſes Melancholy, had certain Periods, before they arrived at which, they were rendered worſe, if they were irritated by Medicines. *Hippocrates* has, by his own Conduct, taught us the Neceſſity of Caution in the Exhibition of Purgatives; ſince, in attempting the Cure of *Democritus*, he would not allow him to uſe Hellebore, except in his own Preſence.

Since, as we have already obſerved, the Antients had a ſafe and innocent Method of exhibiting Hellebore, to us unknown, it is expedient to ſay ſomething upon this Subject. Among the later Phyſicians, there were various ſkilful and ingenious Authors, who ſpent much Time and Labour in finding out this Method of the Antients; and, among the reſt, *Lindenius*, who, *in Coll. MS. ad Praxim Chym.* where he commends a Preparation of Hellebore, has given us a particular Method of correcting that Medicine; and aſſerts, that by this means he has cured, not only a beginning, but, alſo, a confirmed Madneſs. For this Purpoſe, that Author took between half a Dram and a Dram of white Hellebore; this he boiled in Wine, till it became ſoft; when thus boiled, he took it out, and, throwing away the Wine of the firſt Decoction, he added new Wine to it, and left it for a Night in a warm Place. Then he expreſſed the Wine of the Infuſion, ſometimes gently, and ſometimes ſtrongly, according as he intended the Medicine ſhould be ſtrong or weak; and of this expreſſed Wine he exhibited one Dram, which, he ſays, operated ſufficiently well.

My Opinion of this Correction of Hellebore is, that Phyſicians ought rather to abſtain from draſtic Medicines, by whatever means corrected, and deprived of their acrid cauſtic Quality; ſince they may expect far happier Effects from a judicious Uſe of the gentle Evacuants before enumerated. But, if any one is reſolved to uſe Hellebore, he is not to be diſſuaded from it, provided it is duly prepared; for 'tis certain, that the deleterious Quality of draſtic Purgatives, which conſiſt in their highly ſubtle acrid Salt, may, by means of long boiling, be totally deſtroyed: And when, by boiling with Water or Wine, the ſubtile Acrimony of the Hellebore is extracted, 'tis certain that it is deprived of its draſtic Quality.

Having thus conſider'd Purgatives, we now come to conſider mineral Waters, or pure Spring-waters, which are highly efficacious in Melancholy and Madneſs; for ſince Madneſs generally draws its Origin from Melancholy, and Melancholy from the hypochondriac Diſorder, and the hypochondriac Diſorder from impure and peccant Fluids, ſlowly circulating thro' the Inteſtines and Viſcera of the lower Abdomen; ſince, in order to remove Obſtructions of the Viſcera, the Circulation of the Blood ought to be rendered free and eaſy; and ſince both antient and modern Phyſicians have repoſed great Confidence in the cautious Uſe of mineral Waters, whether of the hot or cold kind, 'tis obvious that great Relief is to be expected from theſe, in removing Melancholy and Madneſs. And I myſelf frankly declare, that I would not chooſe to be a Phyſician, if I was ignorant of the Virtues of mineral Waters; for, as the Buſineſs of the skilful Phyſician, in a great meaſure, conſiſts in preventing and curing chronical Diſorders, ſo nothing effectual can be done in theſe without a prudent internal and external Uſe of mineral Waters: For which Reaſon it is neceſſary, that the Phyſician ſhould be well acquainted with the Virtues and Ingredients of theſe Waters.

If, therefore, we carefully inveſtigate the Nature of theſe Waters, we cannot help admiring their peculiar Virtue, in anſwering various Intentions in almoſt all Diſeaſes; for being impregnated withan highly pure, alcaline, neutral, and mineral Salt, if they are exhibited in a due Quantity, they not only change the peccant Humours, incide ſuch as are thick, render ſuch as are glutinous fluid, and remove the Obſtructions of the Veſſels, but, alſo, exert their happy Influence on the Solids, ſince they relax and ſoften the hard and tenſe Fibres, corroborate ſuch as are weak and tender, ſtimulate the Emunctories whoſe due Tone is loſt, and, conſequently, promote all the ſalutary Excretions, whether by Stool, Urine, Perſpiration, the Menſes, or the Hæmorrhoids.

Of ſimilar and almoſt equal Virtues with mineral Waters are Aſſes Milk, and Whey of Cows and Goats Milk, duly prepared; The Virtues and Efficacy of theſe, in removing chronical Diſorders, were not only extolled by *Hippocrates*, and the Antients, but, alſo, by the more modern Phyſicians; ſuch as *Hieronymus Mercurialis*, *Riverius*, *Raymund*, *Joannes a Fortis*, *Baglivi*, and the celebrated *Boerhaave*. This I can, from Experience, affirm to be true, ſince chronical Diſorders, which ariſe from a ſubtile and virulent Acrimony of the Humours, and which have their Seat in the weak and faulty nervous Syſtem, are rarely well cured, without a due and proper Uſe of Milk and Whey.

But, among all the various Claſſes of Medicines, I know none better calculated for removing the Cauſes of theſe Diſorders, than Nitre depurated from its heterogeneous Parts; for its Uſe is ſo univerſal, as to extend to all Diſorders, provided it be duly exhibited: But it is in a ſurpriſing manner beneficial in that Species of Madneſs which inclines to Melancholy; nor does it fail to produce a ſalutary Effect in Madneſs itſelf, ſince it not only corrects the bilious Acrimony of the Humours, but, alſo, ſtops the tumultuous Motions of the Solids, by allaying the preternatural Heat. 'Tis, therefore, to be lamented, not only that this Medicine was entirely unknown to the Antients, but, alſo, that its ſingular Efficacy, in the Cure of Diſorders, is neither ſufficiently known nor eſteemed by the Moderns. But, among the Moderns, *Sennertus* and *Riverius* affirm, that Nitre, in Conjunction with a little Camphire, is a Specific in Madneſs.

Having thus enumerated the beſt and moſt general Medicines, approved of by the Phyſicians of all Ages, for the Removal of Melancholy and Madneſs, I ſhall now, from my own Experience, give my Opinion concerning ſome particular and ſpecific Medicines, by ſome highly extolled for the Cure of theſe Diſorders. Now, among vegetable Subſtances, the Herbs Baum, Betony, Vervain, Brook-lime, Sage, Wormwood, Flowers of St. John's-wort, and the Lime-tree, and Camphire; among animal Subſtances, Aſſes Blood dried, and exhibited in Drink; and, among mineral Subſtances, Preparations of Steel, Cinnabar, Sugar of Lead, together with the Calx and Tincture of Silver. But, tho' theſe Medicines are not to be totally rejected, but the Uſe of ſome of them accurately inveſtigated, yet I ſhall not heſitate to affirm, that little Good is to be expected from them alone, unleſs both the remote and proximate Cauſes of theſe Diſorders are previouſly corrected or ſubdued by the general Remedies before-mentioned.

Beſides theſe Simples, there are, alſo, various compound Medicines highly extolled; to which belongs that, ſo much recommended againſt Madneſs by *Riverius*, who looked upon it as an Arcanum of Importance. It is thus prepared:

Take of Baum-leaves, one Handful, cut them down into four Ounces of Spirit of Wine; then add half a Dram of prepared Pearls: Mix all together, and let two Spoonfuls be exhibited for a Doſe.

This Medicine is not, in my Opinion, to be altogether condemned; and tho' I myſelf had never an Opportunity of making a Trial of its Efficacy, yet it deſerves due Encomiums; ſince, by its means, I know many mad Perſons cured by a Shepherd, who frequently preſcribed it for that Purpoſe.

'Tis, alſo, to be obſerved, that a certain celebrated Phyſician of *Brunſwick*, in Melancholy and Madneſs, ſucceſsfully uſed a certain black Decoction, prepar'd, as I was told by an Apothecary, of Aſſes Blood, boiled with Baum-water and Wine-vinegar. Nor can I think this Medicine deſtitute of its proper Uſes, ſince, beſides the ſedative Quality poſſeſſed by the Aſſes Blood, the Wine-vinegar is a conſiderable Diſcutient and Reſolvent.

The Decoction of *Michaeli*, and his Eſſence of red male Pimpernel, are highly extolled againſt theſe Diſorders; and that Author affirms, that he has a thouſand times experienced the ſingular Efficacy of theſe two Remedies in Melancholy and Madneſs; but of the Truth of this Aſſertion I am not ſufficiently convinced: But, in my Opinion, the Powder by Mr. *Charas*, deſcrib'd in his *Pharmacop.* recommended againſt the Madneſs ariſing from the Bite of a mad Dog, and prepared of Baum, Vervain, Wormwood, Mugwort, Plantane, and Rue, is productive of happy Effects, both becauſe it diſcuſſes the ſtagnant Humours, and corroborates the ſolid Parts.

Among chymical Preparations, to this Claſs belong Flowers of Antimony; the Uſe of which ſome Phyſicians highly extol, and appeal to Experience for the Support of their Aſſertion. Nor have I found this repugnant to my own Experience; for if tenacious, viſcid, and bilious Humours, lodged in the Duodenum, are to be evacuated by Vomit, theſe Flowers, which, beyond the other Preparations of Antimony, contain a certain mild Sulphur, of an anodyne Virtue, produce happy Effects. As for the Medicines in which Opium is an Ingredient, we ſhall afterwards conſider them.

But whether for preventing or curing theſe Diſorders, no Remedy more juſtly deſerves the Name of a Specific, than Motion and Exerciſe, duly adjuſted and proportioned to the Strength of the Body; for, provided a due Degree of Moiſture is not wanting in the Blood, Exerciſe, by reſolving the viſcid Humours, and promoting the free and eaſy Circulation of the Blood thro' all the Veſſels, increaſes Perſpiration; and, by that means, frees the Body from Sordes, and removes Obſtructions; in conſequence of which 'tis far preferable to all other kinds of Remedies.

Since 'tis both ſafer and eaſier to prevent Diſorders, or guard againſt their returning Paroxyſms, than to remove them when preſent, it is of great Importance both to the Phyſician and Patient, to be well acquainted with the moſt proper Meaſures of preventing theſe Diſorders: For which Purpoſe 'tis, therefore, abſolutely neceſſary, that we have a due Regard to the Redundance of the Blood, which is to be leſſened by ſeaſonable Veneſection, eſpecially about the Solſtices and Æquinoxes, or by increaſing the hæmorrhoidal or menſtrual Diſcharges, or recalling them, if they are totally ſuppreſſed. But before Veneſection, it is expedient, by ſome gentle Medicine, to purge off the Sordes of the Primæ Viæ; for, by this means, after the Vein is opened, the Diſtribution of the Blood thro' all the Parts of the Body will be the quicker, in conſequence of which it will be the better depurated by Perſpiration.

Nothing, alſo, is a more powerful Preſervative againſt Melancholy and Madneſs, than a due Moderation and Subjection of the Paſſions; which will be eaſily obtained, if we take care not to indulge ourſelves too far. Vain Deſires, therefore, capable of diſturbing the Mind, or laying a Foundation for Speculations or anxious Fears, are carefully to be ſuppreſſed. Profound Thoughts, intenſely fixed upon one Object, and abſtruſe and long-protracted Speculations, are, alſo, to be carefully avoided. Venery muſt, alſo, be very moderately uſed, Solitude muſt be ſhun'd, and the Mind be diverted with grateful and agreeable Company.

Nor is it ſafe liberally to uſe every Species of Aliment, but only ſuch as is of eaſy Digeſtion, and not offenſive to the Stomach by its Bulk. Hence Patients ſubject to Melancholy or Madneſs ought carefully to abſtain from ſmoked Fleſhes, whether Pork or Beef; from Shell-fiſh; from Fiſh of an heavy and noxious Quality; from vaporous Subſtances, and Aliments prepared with Onions and Garlick; for all theſe, by loading the Stomach, and generating a thick Blood, prove highly injurious. But, above all, the Patient is to take care to eat no more than is ſufficient for the Support of Nature, tho' not the Satisfaction of Appetite; for we generally obſerve, that thro' preternatural Voracity, to which melancholic Patients are highly ſubject, on account of the Redundance of acid Humours in the Primæ Viæ, very unhappy Effects are produced.

The Drink muſt, alſo, be duly choſen, ſince every Liquor is not found beneficial to every Patient. It is, however, to be obſerved, that the lighteſt, ſuch as ſmall Beer, or pure cold Water, is to be made Choice of. Among Wines, a ſmall Quantity of rough White-wine, ſuch as the *Moſelle* Wine, is to be allowed at Meals, to melancholic Patients, ſince, by refreſhing their Bodies and Minds, it has a Tendency to render them chearful. But I have always obſerved, that ſweet and ſtrong Wines, ſuch as the *Hungarian*, *Italian*, and *French* Sacks, are highly prejudicial, both to melancholic and mad Patients. Nothing, alſo, is more injurious, or contributes more effectually to the Generation of Madneſs, than the Uſe of ſuch ſpirituous Liquors, or of large Quantities of cold Liquors, after a violent Sally of Paſſion; for which Reaſon thoſe who regard their Intereſt, ought, at ſuch times, to abſtain from ſuch Liquors.

As the exceſſive Smoking of Tobacco is unfriendly to Digeſtion, and not only generates thick Humours, but, alſo, throws them into preternatural and tumultuous Commotions, it is highly prejudicial to melancholic and maniac Patients; but a moderate Uſe of it may, in my Opinion, be allowed, in order to preſerve the Body ſoluble.

Changes of Air, and travelling from Climates exceſſively cold or hot, to thoſe of a more temperate Air, are excellent Preſervatives againſt theſe Diſorders; ſince they not only correct erroneous and perverſe Ideas; but, alſo, in conſequence of the Exerciſe to be uſed, prevent Obſtructions of the Viſcera, and by that means preſerve an equable Circulation of the Blood thro' the whole Body.

Practical Cautions and Obſervations.

Since I have frequently ſeen Madneſs produced by a prepoſterous Cure of acute Fevers, eſpecially of the bilious Kind, accompanied with a Phrenitis, by means of Opiates, and too refrigerating Medicines, I think it is the Duty of every good and skilful Phyſician, not only to treat theſe choleric Fevers in a prudent and rational manner, but, alſo, in their Decline, to preſcribe an exact Regimen, and a due Moderation of the Paſſions; otherwiſe a Phrenitis eaſily degenerates into a chronical Madneſs. Obſtinate intermitting Fevers require the ſame Caution; for, when theſe are ill treated by reiterated Veneſections, or often repeated acrid Purgatives, or when they are too ſoon checked by Aſtringents or Opiates, it is certain from Experience, that Melancholy, the hypochondriac Diſorder, and Madneſs, have ſucceeded. Phyſicians ought, therefore, to abſtain from ſuch, leſt they ſhould, by their Management, bring on theſe terrible Diſorders.

Tho', in Deliriums, Veneſection is highly uſeful, yet it ought to be varied according to the different States of Patients, both with reſpect to the Place, the Quantity, and the Time. Thus, when Madneſs ſeizes plethoric, and choleric Patients in the Vigour their Youth, reiterated Veneſections, interpoſing, at the ſame time, frequent Purges of corrected Hellebore, are not prejudicial, eſpecially if after them we repair and recruit the Strength by cardiac, corroborating, and anodyne Sedatives. When, on the contrary, by long Abſtinence, protracted Watchings, and continual Evacuations, the Strength and temperate Humours of mad Patients have been exhauſted, they are more weakened by Veneſection; for which Reaſon, their Situation rather calls for nutritive Subſtances, and gentle Analeptics.

As for Veneſection in the Forehead, it is to be obſerved, that it is never uſeful in the Payoxyſm, when, by reaſon of the ſpaſmodic Stricture of the inferior Parts, the Impetus of the Blood is directed to the Head; but rather prejudicial, by attracting a greater Quantity of Humours thither. But Veneſection is more advantageouſly and ſafely uſed, either when the Primæ Viæ are duly purged from Sordes, or when, after the Ceſſation of the Spaſms, there is a conſiderable Remiſſion of the Diſorder. This uſeful Caution I learned from attempting the Cure of an Hemicrania by the ſame Method; ſince, without any Succeſs, I have known the frontal Vein opened more than ten times. Of this Opinion, among the antient Phyſicians, was *Celſus*, who, when treating of the Cure of Deliriums, has this remarkable Obſervation: "To exhibit Medicines, ſays he, when the Patient "is in the Height of Madneſs, is an injurious Practice, becauſe "by that means the Fever is, at the ſame time, increaſed. In "this Caſe, therefore, the Patient is only to be kept temperate; "but, when his Situation admits of it, we are, with all Expedi- "tion, to attempt his Relief. *Aſclepiades* affirmed, that bleed- "ing mad Patients was, in a manner, equivalent to killing them, "becauſe all Madneſs was accompanied with an intenſe Fever, "and Blood could not be taken with Advantage from them, "except in the Intermiſſion of that Fever."

Since, according to *Hippocrates*, *in Sect.* 6. *Aph.* 56. melancholic Patients are ſubject to dangerous Tranſlations of the Humours to the Brain, which are ſometimes ſucceeded by Apoplexies, Epilepſies, Blindneſs, or Madneſs, diligent Care is to be taken not to procure ſuch fatal Tranſlations and Congeſtions of the Blood to the Head, which are principally brought on by violent Perturbations of Mind, an immoderate Uſe of ſtrong Wine during the Dog-days, or by every Medicine, which, by throwing the Fluids of the Body into too violent Commotions, is capable of impairing the Strength.

But ſuch Tranſlations are moſt powerfully occaſioned by draſtic Purgatives, which, by ſtimulating the Inteſtines to violent Spaſms, propel the Blood to the ſuperior Parts. Hence, in the Exhibition of Purgatives, we are to obſerve the Rule of *Meſue*, which runs thus: "In melancholic Diſorders, we are not once, or "twice, but at repeated Intervals, to make ſo ſmall an Evacu- "ation, that Nature may govern the Evacuation, and not the "Evacuation Nature. But it is expedient to keep the Body al- "ways ſoluble; and, if it is not ſo, it is to be rendered ſo by "a Clyſter, or every Week a gentle Evacuant."

In Virgins arrived at Maturity, and rendered mad by Love, Marriage is the moſt efficacious Remedy; the incomparable Virtues of which, in curing this Species of Madneſs, are not only confirmed by Reaſon, but, alſo, adverted to by *Hippocrates*, who, for that Reaſon, ordered ſuch Patients to be married as ſoon as poſſible; for, ſays he, if they conceive, their Madneſs is removed; which, I believe, is ſufficiently agreeable to Experience.

In Madneſs produced by the Bite of a mad Perſon, or Dog, we are not to confide in the external Specifics, ſo much extol'd by *Galen*, *Aetius* and *Rieſſus*; ſuch as burnt Crabs, or their Aſhes mix'd with Theriaca, and the Root of the *Cynosbatos*, the Aſh-colour'd Liverwort, or the Liver of the mad Dog, applied externally; but, after a deep Scarification of the Part affected, we are to apply a large Cupping-glaſs; or, having cauteriz'd the Part affected pretty deeply with an ignited Iron, we are to promote a Suppuration.

Since 'tis certain from Experience, that maniac Patients have been greatly reliev'd by an Itch ſo loathſome as to reſemble an Elephantiaſis, and that a Madneſs ariſing from the Cure of Ulcers in the inferior Parts, has been remov'd by Trepanning, I think it would, in ſuch Caſes, be highly expedient to make Fontanels and Ulcers, with a potential Cautery about the Spine of the Back.

Veſicatories are ſo far from being beneficial in the Cure of Madneſs, that they rather augment the Diſorder; for the cauſtic Salts of the Cantharides, convey'd to the Blood thro' the Pores, by proving an additional Stimulus to the nervous Membranes, and the Dura Mater, by their ſpaſmodic Stricture, increaſe the Motion of the groſs and bilious Blood thro' the Head, and all the other Parts of the Body; whereas ſuch Medicines ought rather to be us'd, as, by their mild anodyne and antiſpaſmodic Virtues, ſooth the intenſe Conſtrictions of the nervous Parts, and check the tumultuous Motions of the Humours.

But tho' theſe ſedative and anodyne Medicines are of great Importance and Efficacy in removing Madneſs, yet we are not to refer to this Claſs Opiates and Narcotics, and for that Reaſon exhibit them, ſince theſe, by ſtupefying the nervous Fibres and Membranes, and eſpecially thoſe of the Brain, leſſen the Paroxyſms of the Madneſs, and bring on another Extreme, which is unaccountable Stupidity and Folly. But, if any Relief is to be expected from Anodynes, ſuch of this Claſs are to be choſen, as are beneficial in an Epilepſy, the immediate Cauſe of which conſiſts in a ſpaſmodic Stricture of the Dura Mater: Of this kind the moſt conſiderable are Caſtor, the Shavings of Elk's Hoof, of the human Scull, and Hartshorn philoſophically prepar'd, the Roots and Seeds of Piony, the antiepileptic Powder, Valerian-root, the anodyne mineral Liquor, the Waters prepar'd from the Flowers of Lily of the Valley, the Lime-tree, and Cowſlips, all which may be confided in, as ſafe and approved Medicines.

In *Poland*, upon cutting of the Plicæ of the Hairs, in a Diſeaſe well known in that Country, I have known not only violent Diſorders of the Head; but, alſo, Madneſs, produc'd. In this Caſe, Waſhing the Head twice a Day with a Decoction of the Club-moſs, is highly recommended, becauſe by this means 'tis ſaid the Eruption of the peecant Matter will again appear. A Liniment of Clubmoſs, highly uſeful for this Purpoſe, is deſcrib'd in *Miſcell. Nat. curioſ. Decad.* 1. *an.* 2. *Obſ.* 54.

In a Phrenitis, which is, as it were, a particular Fever of the Dura Mater, in which its increaſed Elaſticity and ſyſtaltic Force produce a preternaturally briſk and tumultuous Motion of the Blood, and nervous Fluid, beſides Preparations of Nitre exhibited internally, mild and anodyne Animals, ſuch as Hens and Pigeons, cut up alive, are found to produce happy Effects, if applied to the ſhaved Head, ſince their mild Exhalations, by relaxing the too much conſtricted Fibres, greatly contribute to reſtore their natural Tone and Motions. *Frederic Hoffman.*

Melancholia.

Melancholy is by Phyſicians call'd that Diſorder, in which the Patient is long and obſtinately delirious, without any concomitant Fever, and with his Mind almoſt perpetually and intenſely fix'd upon one Object.

This Diſorder ariſes from that Malignity of the Blood and Humours, which the Antients call'd black Bile; and, on the contrary, the ſame Diſeaſe beginning in the Mind ſoon generates black Bile in the ſoundeſt Body.

'Tis, therefore, neceſſary briefly to deſcribe the Nature of this Diſorder, the Accounts of which are eſteem'd ſo obſcure, as to lay a Foundation for a groundleſs and unjuſt Charge againſt the Antients, for their Neglect in a Diſeaſe of ſuch Importance.

If in the whole Maſs of Blood the more fluid and moveable Parts being diſſipated, they leave the more immoveable Parts united, then the Blood will be thick, black, pinguious, and terreſtrial. Blood of this Quality and Condition we ſhall call an *Atrabiliarious Humour*, or *Melancholic Juice*.

The Cauſes of ſuch a State and Condition of the Blood are, every thing which expels the more moveable and fluid, and fixes the other Parts of the Blood; violent Exerciſe of the Mind employ'd almoſt Day and Night on one and the ſame Object; obſtinate Watchings; violent Commotions of Mind, whether in the way of Mirth, or Sorrow; painful and laborious Exerciſes of Body often repeated, eſpecially in a highly dry and warm Air; immoderate Venery; auſtere, hard, dry, and terreſtrial Aliments, us'd in Conjunction with a State of Reſt and Lazineſs; Liquors of a ſimilar Nature. Of this kind are the Parts eſpecially of hard and old Animals indurated either by Smoke, the Air, or Salt; unripe Fruits; farinaceous Subſtances, not fermented; aſtringent, coagulating, fixing and refrigerating Medicines; ſlow Poiſons; and other Things of a like Nature; ſuch burning Fevers as continue long, recur often, and are remov'd without a laudable Criſis, and without the Uſe of Diluents.

When this Diſorder, produc'd by the Cauſes already enumerated, equally infects the whole Maſs of the circulating Fluids, it will forthwith produce ſome ſufficiently conſpicuous Phenomena, which are generally theſe following: The Colour of the external and internal Parts becomes firſt pale, then yellow, then dark brown, then livid, and, laſt of all, black, with Spots of a ſimilar Colour. The Pulſe becomes ſlow, the Patient is intenſely cold; the Reſpiration is languid; the Circulation in the large Blood-veſſels is good and laudable; but that in the lateral Veſſels is languid and peccant. Hence all the Humours being inſpiſſated, their Secretion and Excretion are leſs and ſlower, and their Conſumption and Diſſipation leſs conſiderable; the Patient's Appetite is impair'd, he becomes extenuated, dejected, fond of Solitude, and ſubject to obſtinate and violent Commotions of Mind; in other reſpects he is in an indifferent Condition; he is averſe to Motion, but perſeveres with Reſolution in his Purſuit of any Study or Acquiſition.

This Diſorder has, for its material Cauſe, the Earth, and the inſpiſſated Oil, of the Blood, united and compacted together, which the more they are depriv'd of the liquid, mild and diluting Parts, and the more they are condenſed, and tenaciouſly mix'd, or the longer they have continued in this State, the more terrible the Effects of the Diſorder will be, and its Cure the more difficulty obtained.

Hence 'tis obvious, what the diagnoſtic and prognoſtic Signs of this Diſeaſe are; hence, alſo, the moſt rational Method of Cure is to be deduced.

For as ſoon as the Diſorder diſcovers itſelf by its firſt Beginnings, its Cauſe, or any of its Effects, a continually varied Series of Objects is to be laid before the Patient's Mind, without letting him know for what Reaſon. But ſuch Objects are to be choſen, as excite Diſpoſitions directly oppoſite to that which predominates and reigns in the Patient: Sleep is to be procured by diluting, demulcent, paregoric, and narcotic Medicines, and by keeping the Patient in a State of Reſt. Perſons labouring under Melancholy ought, alſo, to live in a moderately warm moiſt Air; the Aliments they uſe ſhould be light; the Liquors they drink, ſhould, like the ſound and laudable Humours of the Body, be recent, mild, and laxative, by their gently ſaponaceous Quality; and the Uſe of theſe is to be perſiſted in for a long time. Such Medicines as dilute, correct Acrimony, reſolve the oleous and terreſtrial Parts of the Blood, relax the Veſſels, and, by their gently ſtimulating Quality, expel the peccant Matter, are to be exhibited; ſuch as the Juices of ſufficiently ripe Summer Fruits, Preparations of Honey, Pot-herbs, and Broths prepared of them, and mineral Waters. The moſt proper Drink is Ptiſan, gently edulcorated with Honey. Such Things as produce the Diſorder, are carefully to be abſtained from.

But if the Matter of the Diſorder is, by the Cauſes already enumerated, rendered more denſe, tenacious, and incapable of Motion, it will neceſſarily be forced into the hypochondriac Veſſels, as is obvious from the Nature of this Humour, the Situation and Condition of theſe Veſſels, and the known Laws of Hydraulics. Hence it will gradually remain, be accumulated, and become ſtagnant there. In this Caſe the Indiſpoſition is called the *Hypochondriac Diſorder*, and affects the Spleen, Stomach, Pancreas, Omentum, and Meſentery.

Hence it there produces a continual Senſe of Weight, Uneaſineſs, and Repletion, eſpecially after Eating and Drinking; a Difficulty of Reſpiration, in conſequence of the Oppreſſion of the abdominal Viſcera; an Hindrance to the cyſtic and hepatic Bile, as, alſo, to the pancreatic, ſtomachic, inteſtinal, and meſeraic Juices, in their Generation, Secretion, Mixture, and Action on the Aliments. Hence the firſt Digeſtion becomes totally peccant, and the Aliments are corrupted into a crude Acid, if they are Vegetables; but the Corruption is of the putrid alcaline Kind, if Animals, and of a rancid or oleous Nature. Hence ariſe Eructations, Flatulences, Spaſms, Coſtiveneſs, Induration of the Fæces, a Jaundice more violent in Degree, than that before-mentioned: And, in this caſe, all the Symptoms are augmented, and rendered more terrible.

When the Diſorder is thus inveterate, and diſcovers itſelf by the Symptoms laſt enumerated, both Expedition and Care are neceſſary in the Cure; otherwiſe the Diſorder quickly aſſumes a malignant Nature; and this perplexing Circumſtance is, if poſſible, to be avoided: If the Diſeaſe continues, it becomes incurable, and often mortal, as will afterwards appear; if, on the contrary, the laudable and eaſily moveable Humours are evacuated by Purgatives, the peccant viſcid Juices remain in the Body, by which means the Diſorder is rendered worſe. If, alſo, the Diſorder is treated with draſtic, ſtimulating, and reſolvent Medicines, the ſuddenly reſolved Matter often becomes acrid, and, ruſhing impetuouſly into the tender hepatic Veſſels, deſtroys them, and by that means produces various, and thoſe incurable Diſorders. Hence,

1. The Matter is to be rendered gradually moveable, inveſtigating the Nature of its predominant Acrimony, and then exhibiting ſaponaceous Medicines poſſeſſed of an Acrimony, oppoſite to that of the Humour to be corrected. And the Uſe of theſe is to be perſiſted in, till the Weakneſs and Inequality of the Pulſe, the Nauſea, or Teneſmus, the Uneaſineſs and ſlight Fever, are Proofs that the Matter is moved. Then,

2. When the Matter is thus mov'd, it is forthwith to be expelled by a gentle laxative Purge, a Clyſter of the ſame Nature, Whey, mineral Waters, or other Things of a like Nature.

But if this Matter, already fixed and compacted, has remained long there, it begins by means of its Stagnation, the Motion of the Viſcera, and the Heat of the adjacent Parts to aſſume an acrid and corroſive Quality; freſh Matter is continually accumulated, becauſe an Obſtruction is already formed, and the ſame Cauſes continue to act. Hence, in conſequence of its increaſed Quantity, its acrimonious Quality, and its continual Motion, it diſtends, corrodes and corrupts the Veſſels. Hence a ſimilar Deſtruction of the Spleen, Stomach, Pancreas, Omentum, Meſentery, Inteſtines, and Liver, will happen. This conſequently greatly increaſes all the beforementioned Symptoms; but, principally, in conſequence of the continual Reception of a putrefy'd Vapour into the Veins, it diſturbs and diſorders all the Functions, and eſpecially thoſe of the Brain. In this caſe, the Diſorder is called *Atra Bilis*.

When this is diſcovered by the Signs already enumerated, the Matter is not, without the greateſt Art and Caution, to be attenuated, mov'd and eliminated, on account of perplexing Circumſtances of the laſt Importance, and the Eaſineſs of bringing on ſo acrimonious a Condition of the Matter as can hardly be corrected or ſubdued. For this Reaſon let the Patient's Aliments be oppoſite to the particular Acrimony of the predominant Humour. His Food ought, alſo, to be always gently reſolvent, ſtimulating, purgative, and ſuch as after Digeſtion leaves few Fæces. Let his Drink be Ptiſan, edulcorated with Honey, the Juices of ripe Fruits, or Whey. Let his Exerciſe be gentle, but as continual as poſſibly may be. Let him be kept in a very moderate Heat, and take much Sleep. Baths, alſo, Fomentations, Clyſters, and Drinks, are, for the Cure of this Diſorder, often prepared of ſuch Things, as, without any acrimonious Quality, by diluting, reſolving, and abſterging, attenuate the Matter, and ſlowly and gently eliminate it thro' thoſe very Emunctories and Paſſages previouſly pointed out by Nature. But we are always to have a due Regard to the particular Nature and Quality of the Acrimony.

But when this Matter has already acquired an high Degree of Acrimony, and the Viſcera are conſiderably corrupted, if, during the Action of the Cauſes before enumerated, it is mov'd, either by muſcular Motion, the Heat of the Sun or Fire, acrid, and too copious Aliments, acrid and draſtic Medicines, which produce an Effervеſcence with the Acrimony of the Humours, Poiſons which operate in a ſimilar manner, or ſome violent Diſeaſes, then the Acrimony being rendered greater, more moveable, and active; it breaks, corrupts, putrifies, and reſolves its Veſſels; and, in Conjunction with the black Bile, converts them into putrid Impoſtumations. This is call'd *Bilis Atra Turgens*, or a Redundance of the black Bile. If this Species of Humour is attenuated in its Veſſels, convey'd towards the Liver, diſtributed to the corroded Ramifications of the Vena Cava, and introduced into the Heart, it produces highly terrible Diſorders; for, if it partakes of an acid coagulating Nature, it produces Polypuſes of the Heart, Lungs, Aorta, and the Carotids, and even Death. If it proceeds to the Brain, it gives Riſe to Apoplexies, Palſeys, Catalepſies, Epilepſies, Deliriums, and Madneſs of ſuch bad kinds, as to be almoſt incurable. It produces ſurpriſing Changes in the nervous Syſtem, and brings on violent Fevers, which ſoon putrify all the Parts. If, on the other hand, it partakes of an alcaline putrifying Quality, it produces Gangrenes, which ſuddenly prove mortal, in thoſe Parts to which it is convey'd. Hence, unleſs this Fomes, or Matter is extinguiſh'd and deſtroy'd, an infinite Number of

incurable

incurable Diſorders will be produced in the whole Body, and in particular Parts of it. But if, in conſequence of a Rupture of the Veſſels of the Viſcera, the diſcharged Matter is lodg'd in the Cavities of the Peritonæum, a ſurpriſing and inſuperable Weakneſs ariſes; the acrid diſcharged Matter is putrefied and accumulated. Then a gangrenous Corroſion of all the abdominal Viſcera happens, by which means ſurpriſing Phenomena are produc'd; ſuch as a Tympanitis, and Death, attended with an inſupportable Stench: But if, after it is mov'd, it is convey'd to the Liver, and thence thro' the corroded and weaken'd biliary Ducts to the Gall-bladder, and thro' the Ductus hepaticus and Ductus communis to the Inteſtines, it excites Vomitings, nauſeas, and atrabilarious Dyſenteries, accompanied with Uneaſineſs, impetuous Efforts, Pains, and intolerable Corroſions. Hence ariſe Inflammations, Exulcerations and Putrefactions of the Inteſtines, Stomach, Oeſophagus, Fauces, and Mouth. Hence are produced terrible Convulſions, and at laſt generally a gentle Death, which for the moſt part happens in a Gangrene, and conſequently in an Indolence of all the Parts.

The Matter, thus mov'd and render'd active, is, together with its uncommon, and almoſt Pitch-like Tenaciouſneſs, poſſeſs'd of an intenſely acid Acrimony, which corrodes Metals, and ferments with Earth; or elſe of an Acrimony of an alcaline and ſaline, and highly corroſive, or which is worſt of all, of an oleous and putrefactive kind; and 'tis neceſſary the Phyſician ſhould know whence theſe various Species of Acrimony ariſe, how they may be known, and by what means they may be corrected and remov'd.

He who diligently adverts to what has been ſaid, and carefully conſiders the Situation, Structure of, and Circulation in the Viſcera, in which this malignant Humour is lodg'd, muſt eaſily perceive, that the *Turgens Atra Bilis*, or a Redundance of Melancholy, is a Diſorder not to be cur'd without the greateſt Difficulty. The principal Medicines capable of alleviating it are Diluters in Conjunction with Opium, and acrid Subſtances oppoſite to the predominating Acrimony.

Hence we may eaſily underſtand the Nature of Melancholy, and the hypochondriac diſorder; for 'tis obvious, that, by a long protracted previous Dejection of Mind, the conſtricted Veſſels of the abdominal Viſcera muſt produce a Stagnation, a Change and an Accumulation of the *Atra Bilis*, which gradually increaſe, tho' the Body was but a little before perfectly ſound; and that, on the other hand, this *Atra Bilis*, or Melancholy produc'd by phyſical Cauſes, produces a Delirium.

The Cauſes then evidently productive of Melancholy are obſerved to be,

1. All Things which fix, exhauſt, or diſturb, the nervous Fluid of the Brain; ſuch as violent and ſudden Frights, intenſe Thinking upon any Object, exceſſive Love, Watchings, Solitude, Fear, and hyſteric Diſorders.

2. Such Things as hinder and diſturb the Generation, Reparation, Circulation, and various Secretions and Excretions of the Blood, eſpecially in the Spleen, Stomach, Omentum, Pancreas, Meſentery, Inteſtines, Liver, Uterus, and hæmorrhoidal Veſſels: So that, of conſequence, Melancholy may be produc'd by the hypochondriacal Diſorder; by acute Diſeaſes ill cur'd, and eſpecially a Phrenitis, and burning Fever; by an Exceſs of all the Secretions and Excretions; by ſuch Aliments and Drinks as are cold, tenacious, terreſtrial, tart, and aſtringent; by violent Heat long protracted and parching the Blood; as alſo by a ſtagnant, moiſt and cloudy Air.

3. A naturally black, hairy, dry, ſlender, and robuſt Conſtitution of Body; a middle Age, a quick, penetrating, and diſcerning Genius.

If this Diſorder continues long, it produces Stupidity, Epilepſies, Apoplexies, Madneſs, Convulſions, Blindneſs, ſurpriſing Fancies, Laughter, Weeping, Singing, Sighs, Eructations, Flatulences, Anxieties; an Urine ſometimes copious and limpid like Water, and at others highly thick; a Retention, Accumulation of the excrementitious Blood in the Veſſels of the abdominal Viſcera, and often a ſudden Excretion of it; obſtinate Coſtiveneſs; frequent Spitting of a thin Matter; and an incredible Ability of enduring Watchings, Hunger, and Cold.

This Diſorder has often been cur'd by a ſupervening unſeemly Itch, ſometimes reſembling an Elephantiaſis; by numerous and large Varices; by a copious Diſcharge from the turgid hæmorrhoidal Veins; and an Evacuation of the black Bile by Vomit and Stool.

Patients labouring under this Diſorder are generally greatly injur'd by all Medicines which impair the Strength, and evacuate too forcibly; as alſo by thoſe which throw the Humours into too violent Commotions, whether Cordials, or Medicines of whatever other Denomination.

Hence the beſt Method of curing this Diſorder is, after a due Obſervation of the firſt Cauſe, and the Variety of Patients Conſtitutions, to accommodate various Medicines to theſe Cauſes, and various Conſtitutions.

The ſeveral Intentions of Cure to be purſued, therefore, are.

1. To rouſe, augment and regulate the Fluids of the Brain and Nerves; which is done, firſt, by diverting the Mind from its uſual Object to others of an oppoſite Nature: Secondly, by inducing cautiouſly another Diſpoſition, or Affection of Mind, oppoſite to Melancholy: Thirdly, by humouring the perverſe and falſe Turn of the Imagination: Or, fourthly, by frequently oppoſing it with great Vigour.

2. To remove thoſe Obſtructions which are either the Cauſe, or the Effect, of a perverted Imagination, by ſoftening, inciding, and ſtimulating the obſtructing Matter, by means of Mineral Waters, Whey, viſceral, hepatic, and antihypochondriac Decoctions, Waters invigorated with lixivial or compound Salts, laxative Preparations of Mercury, Emetics, Motion, Exerciſe, Riding, Sailing, uterine Medicines, and ſuch as promote the *Lochia*, Remedies which procure hæmorrhoidal Diſcharges, Baths, Liniments, and Plaiſters.

3. To alleviate the Symptoms by Veneſection, Immerſion in cold Water, and the Uſe of Carminatives and Opiates.

4. After due Evacuations, to exhibit ſuch Things as are from Experience known to exhilarate the Mind, and corroborate all the Parts of the Body.

From what has been ſaid, 'tis obvious that the perfect Cure of this Diſorder, as well as of a great many others falſly accounted incurable, conſiſts in the Correction of the Bilis Atra, or melancholic Humour.

When Melancholy increaſes ſo far as to bring on an Agitation of the Fluids of the Brain, capable of driving the Patient into a raging Fury, the Diſorder is call'd *Madneſs*.

This only differs in Degree from a dejected Melancholy, is its Offspring, ariſes from the ſame Cauſes, and is generally to be cured by the ſame Medicines.

In Madneſs the Muſcles are generally ſurpriſingly ſtrong, the Patient is afflicted with Watchings, incredibly capable of enduring Hunger and Cold, diſtracted by terrible Imaginations, and ſubject to thoſe Diſorders call'd LYCANTHROPIA and CYNANTHROPIA; which ſee.

'Tis obſervable, that, upon diſſecting thoſe who have died of Madneſs, the Brain has been found dry, hard, and friable, with its cortical Subſtance of a yellow Colour, and its Veſſels turgid, varicoſe, and diſtended with black and viſcid Blood.

'Tis alſo obſervable, that, during this Diſorder, all the Excretions have, in like manner, almoſt ceas'd.

Unexpected Precipitation into the Sea, and a Submerſion in it, continued as long as poſſible, conſtitute the principal Remedy for it.

Madneſſes obſtinate againſt all Remedies have often been remov'd upon the approach of Varices, hæmorrhoidal Diſcharges, Dyſenteries, Dropſies, copious ſpontaneous Hemorrhages, Tertain and Quartan Fevers.

Such a ſort of Madneſs ſometimes ariſes after the Body is by an autumnal, violent and long-continued intermittent Fever, weaken'd and exhauſted, both by the Force of the Diſeaſe, and repeated Veneſections and Purgings. The Madneſs is alſo generally brought on again by theſe very Means.

This Species of the Diſorder is only to be cur'd by the Uſe of Reſtoratives, Cardiacs, and Corroboratives, long perſiſted in: But, if it is treated with Evacuation, it brings on an Atrophy, a Weakneſs, and an unſurmountable Fooliſhneſs.

But a Madneſs ariſing in robuſt vigorous Perſons in the Flower of their Age, or of hot and plethoric Habits, is to be cur'd by repeated Veneſections, interpoſing a briſk Purge between each; and, when the Diſorder is alleviated, it is to be treated with Opiates and Cardiacs. *Boerhaav. Aphoriſms.*

MANJAPUMERAM. H. M. *An Arbor triſtis* Garciæ & Acoſtæ? This is a large Tree growing in the *Weſt Indies*. The Flowers, which are of a watry White, and ſmell like the beſt Honey, are of a bitteriſh Taſte, and believ'd by the Inhabitants to comfort the Heart, and the Pagan Phyſicians reckon the Seed among Cardiacs. The diſtilled Water of the Flowers is ſuppoſed to be good for the Eyes, if a Linen Cloth be dipped in the ſame, and apply'd to the Part; for which Purpoſe, and for the Fragrancy of their Smell, the Flowers are carefully gather'd by the Inhabitants. *Raii H. P. p.* 1698.

MANICA Properly a Sleeve; but, in Pharmacy, the *Manica Hippocratis*, is a Bag in the Shape of an inverted Cone, thro' which Things were ſtrain'd: It is now generally made of Flannel; but the Antients us'd a *Manica Hippocratis*, made of Ruſhes, or Wicker, as we learn from *Rhodius*'s Notes to *Scribonius Largus*.

Hildanus calls by this Name a particular ſort of Purſe open at both Ends, which he deſcribes in his Treatiſe *de Gangræna & Sphacelo*, and gives a Figure thereof. This he directs to be put about a Limb, juſt above the Place of Amputation, before the Operation is perform'd.

MANIHOT, *Indorum, ſive Yucca Foliis Cannabinis.* C. B. *Manihot Theveti, Yucca & Caſſavi.* J. B. *Hiucca ſive Mandioca ex qua Caſſavi fit.* Park. *Maniiba & Mandiiba Braſilienſibus, cujus Radix Mandiboca.* Piſon. Margr.

Many Countries of the *Indies* have been deſtitute of frumentaceous Grain to theſe Times, inſtead of which the bountiful Hand of Nature has ſupply'd them with a Plant, the Root of which, called by the Barbarians *Mandioca*, being reduced into Flour,

Flour, is made into Bread, which may be compared with the beſt Bread made of Wheat.

The Inhabitants of *Hiſpaniola*, and other Iſlands, are not deſtitute of this Plant; the Root of which they call *Yuca*, but the other *Mexicans*, *Quanhcamotli*; and, after it is prepared and reduced to a Flour, *Caſſavi*, as we are aſſured by *Monardes*. All the other People of *America*, from *Florida*, even to the Streights of *Magellan*, make their Bread of it, tho' they are not deſtitute of the frumentaceous Grain called *Mayz**.

The Manihot, which is natural to *Braſil*, and there moſt carefully cultivated, is a ſhrubby Plant, which grows from five to eight Feet in Height, with a woody, twiſted, nodous, brittle Stalk, containing a Pith like that of Elder; the Leaves are digitated, like thoſe of the Lupine, or black Hellebore, the Flowers pentapetalous, and of a pale-yellow Colour; the Seed like that of the Ricinus, but of no Uſe. The Root is not unlike a Parſnip, and turgid with a lacteous Juice; after it is taken out of the Ground, it is put into an Hand-mill, with Iron Teeth, turned by two Men, and ground to a Meal, which is afterwards ſubjected to a Preſs, by which all the ſuperfluous and noxious Humour is evacuated, and the Maſs left quite dry: This done, they paſs it through a Sieve, called *Urupeba*; then ſet it over the Fire in a flat-bottom'd Veſſel of Earth or Copper, and ſtir it about till it is duly dreſſed. What is half-dreſſed, is ſtill moiſt and eſculent, and they call it *Farinha relada*, that is, Meal dreſſed, but not dried. What remains, and is intended to be reſerved, they keep ſtirring over the Fire, till it is perfectly dried; for the drier and better dreſſed, the more durable it becomes.

The Plant, being preſſed, yields a Liquor, called by the Natives *Manipuera*, which, poured into a Veſſel, after two Hours, ſticks to the Bottom: Hence is produced another Sort of Meal, better than the former, and yielding more Flour; this they call Cream of *Tipioca*. Of the Water of this Meal, what ſubſides to the Bottom, ſerves to make a ſort of Comfit, called *Tipioceto*, of an excellent Taſte: There is, alſo, a ſort of Gum, or rather Amylum, which ſerves for the ſame Uſe. This Liquor Manipuera is moſt greedily coveted by all ſorts of Animals, for its pleaſant and ſweet Taſte, but is preſent Death to them; yet, what is ſtrange and remarkable, while it remains unpreſſed in the Root, nouriſhes every Animal, except Man: Beſides the former Preparations of the Root, dried in the Sun, there is made another Sort of Meal, and a whitiſh Flour, which make fine white Bread, and Biſcuits, as good as thoſe made of Wheat, and very much reſembling them. The Root reſerved entire, without grinding, ſerves to feed Cattle, and Beaſts of Burden. The Plant is miſerably infeſted by Worms and whole Swarms of Ants and not only the Stalks and Leaves, but the very Roots, are greedily devoured by wild Beaſts, as well as domeſtic Animals. The Natives of *Braſil*, the *Negroes*, and many *Europeans*, are ſo great Lovers of the Leaves, that they bruiſe them, boil them, and pickle them, and eat them inſtead of Lettuces, forming them into Maſſes, which the *Braſilians* call *Manicoba*. The Root macerated four or five Days in Water, and render'd ſoft, is called *Mandiopiba*, which, being fried, is greedily eaten, by the vulgar ſort of *Indians* and Savages: Of the Sediment of this Conſiſtence is made a ſoft and finer Sort of Meal, which the *Braſilians* call *Vipeba*, and the *Portugueſe Farinha freſca*. Of the *Mandiboca* bruiſed, and prepared with Butter and Sugar, are made excellent Sweetmeats; there is, alſo, a kind of Pudding prepared of the Mandiopela, which they call *Mingan petinga*. The ſoft Mandiboca, which they call *Puba*, being dried over the Fire, is called *Carima*; of this the Negroes make a ſort of Bread, which is very much eſteem'd, and called by them *Muſam*, or *Angu*, and ſometimes *Enfonde*: But they make a moſt excellent ſort of Pudding of the ſame, which they call *Mingau de Carima*, ſeaſoning it with *Braſilian* Pepper inſtead of Spice, and the Flowers of *Nhambs*; this kind of Food being very grateful to the Palate, as well as conducive to Health, they ſeldom make a Dinner without it, and never think they fare well, if this Aliment be wanting. Of the ſame Carima they prepare Emulſions and Ptiſans, which are eſteemed very wholſome, and proper for ſick as well as healthy Perſons; for the Tipioca and Carima being drank, or taken in the Form of a Syrup, with Water of Orange-flowers, with a little Sugar, generally ſerves for an Antidote. The Tipioca, being defecated by many Waſhings, then dried, and carefully preſerved from all Humidity, cures conſumptive Perſons, and thoſe who labour under a Dyſentery; reſtores ſuch as are feveriſh, labouring under Faintings, or infected with Poiſon: Beſides, the ſimple Ptiſan, prepared of it, recovers thoſe who have their Strength exhauſted by violent Exerciſe, and repreſſes immoderate Sweat; taken inwardly, or applied outwardly, it puts a Stop to all ſorts of Hæmorrhages, and eſpecially ſuch as proceed from Wounds.

Of the Species of Manihot, called *Macaxera*, they make a very good Sort of Wine, which taſtes like Whey. The Shavings of the Mandiboca, applied to Wounds, and old Ulcers, cleanſes and reduces them to a juſt Temperament. The Manipuera, boiled, thickens into a Pudding, and becomes good Aliment; and if you add thereto Rice and Sugar, with diſtilled Water of Orange-flowers, it acquires the Form of a moſt grateful Conſerve, and, changing its Name, is called *Marmelada de Mandioca*. The Macaxera, beſides ſupplying the room of the Meal before ſpoken of, being fried over the Fire, is eaten without any other Preparation, and called *Macapera*.

From the Roots of the other Species you muſt abſtain, becauſe they are preſent Poiſon; and there are even ſome, which you may ſooner burn than deprive of their Poiſon, and render them fit to eat; and the Natives of the Country themſelves, who were not ſo well exerciſed in ſeparating the Eſculent from the Poiſonous, have ſometimes loſt their Lives through their Ignorance; but they are now better inſtructed to chuſe the wholſome Kinds, which are not only the principal Support of their own Lives, but of all the *Europeans* who live in *America*, who ſcruple not to prefer the Bread made thereof to wheaten Bread, tho' it is eſteem'd to afford leſs Nutriment.

The Negroes and *Braſilians*, in their Eating, throw whole Handfuls of the Meal into their Mouths, with ſuch Dexterity as not to loſe a Bit, though they keep their Hands remote from their Mouth: They ſeldom or never drink in eating it, becauſe it imbibes Water exceſſively, and ſo cauſes Inflations in the Stomach.

We have been the fuller in our Account of this Plant, becauſe it is of ſuch univerſal Uſe, that it feeds many of the human Race; for moſt of the Inhabitants of that vaſt Part of the World called *America* live principally upon it.

Piſo ſpeaks of another wild Sort of Mandiboca, and has given us a Figure of it; he calls it an arboreſcent Shrub, but it is very like the cultivated Kind, in Stalk and Leaves, tho' far inferior to it in Value.

All who have written of the Mandiboca, aſſure us, that the expreſſed Juice of the Root is preſent Poiſon to all Animals; but that, after it has ſtood four-and-twenty Hours, it loſes its malignant and pernicious Quality. *Raii Hiſt. Plant.*

MANIODES, *μανιώδης*. Maniacal. An Epithet in *Galen* for a violent kind of Delirium.

MANIPULUS. An Handful; that is, as much as can be contain'd at once in the Hand. It is a Meaſure frequently mentioned in Pharmacy, relative to Flowers, Herbs, and other things; and is expreſſed in Abbreviation by M.

MANNA. This has various different Significations: Thus *Manna Thuris* is a Species of Frankincenſe, in ſmall Grains; ſee THUS: And *Manna Guaiacana* is an Extract of Guaiacum. *Libavius* mentions a *Manna Magnetis*. *Manna Cœleſtis*, in *Quercetan's Pharmacop. Reſtit.* is explain'd by *Schroder*, Bees-wax, tho' ſome take it to be purify'd Sugar. The *Manna Solaris*, or *Unicornu Solare*, is a Preparation of Gold, deſcribed by *Schroder*, *Lib.* 3. *Cap.* 9. The *Manna Martis*, is a Tincture of Iron, deſcribed by the ſame Author, *Lib.* 3. *Cap.* 11. And, in *Cap.* 13. of the ſame Book, he directs a Tincture of Lead, with Spirit of Wine, under the Title of *Manna Saturni*. *Manna Vomitoriorum* is Salt of Vitriol. *Caſtellus* from *Rolfincius*. *Rulandus* ſays, the Name of *Manna* is applied to all ſweet Subſtances, from whatever extracted.

But what is commonly known by the Name of *Manna*, is a common cathartic Drug, of which *Frederick Hoffman* gives a much better Account than the celebrated *Salmaſius*.

As in many Diſorders Purgatives are the beſt of Medicines, ſo Manna may, on many Accounts, be ſaid to be the beſt of Purgatives; for which Reaſon we ſhall firſt conſider its Origin, Name, and Hiſtory; and then take a View of its ſingular Uſe and Efficacy in Medicine. But, ſince various Subſtances are comprehended under the general and extenſive Word *Manna*, it is therefore expedient, previouſly, to aſcertain the preciſe Idea we affix to it. The Word *Manna* is, therefore, properly, of an *Hebraico-Syriac* Extract, and, ſtrictly taken, ſignifies a Gift gratuitouſly conferred, without any Obligation thereto on the Donor's Part: From this Signification the Word *Man* was firſt, by the inſpired Writers, transferred to that Species of Aliment, with which bountiful Heaven ſupplied the *Iſraelites* for forty Years in the Wilderneſs. And ſince this Species of Aliment fell early in the Morning, in the Form of Dew on the Earth, and was poſſeſſed of a ſweetiſh Taſte, the *Greek* and *Latin* Writers afterwards by the Word *Manna* underſtood, a Dew reſembling Honey, which fell in the Morning, as *Celſus*, in *Lib.* 13. *Cap.* 46. obſerves. But, at laſt, the Denomination of *Manna* was, by the Antients, confined to a certain Medicine, which they believed

* There are ſeveral Species of the *Mandiboca*, which, tho' at firſt Sight they may ſeem not to differ, are yet diſtinguiſhed by experienced Planters, with reſpect to their Worth, their Stalks, and Bark. The firſt Species is called by the *Braſilians*, who live near the Sea, *Mandiibabuara*; this has whitiſh Stalks and Roots. The Mandiibparata, Mandiipeba, Mandiipuca, Mandiibumana, Aipi, (which is ſubdivided into ſeveral Species, whoſe Names may be found in *Marcgrave*) Tapecima, Aipipoca, Mandijupeba, and Aipimacoxera, are all diſtinguiſhed by red Stalks, and Roots which abound with a lacteous Humour. The Roots and Stalks of all theſe Species paſs under the common Name *Mandibaca*.

to be, as it were, the Offspring and Product of Dew; ſo that, among Phyſicians, the Word *Manna* ſignifies no more than a grumous Subſtance, of a white and ſomewhat yellowiſh Colour, of a ſweetiſh Taſte, ſomewhat acrid, pinguious, and poſſeſſed of a laxative Virtue: Of this Species of Manna we intend to treat. But, beſides this, there is another Manna, generally called the Manna of Frankincenſe, which is no more than ſmall Portions of that Commodity, broken off by the Concuſſion in Carriage, according to *Pliny*, and *Galen*, in *Lib.* 4. *de Compoſit. Medicam.* and theſe broken Portions were, perhaps, called *Manna*, on account of their Colour and Figure. The Name of *Manna* is, alſo, given to *Ruſſia* Seeds, which being not unlike the Seeds of Gromwell, are produced in the Confines of *Sileſia* and *Poland*, and are called *Manna*, becauſe, in the Opinion of the Vulgar, they in a miraculous manner fall from Heaven.

Having premiſed theſe Things, we now come to trace the Origin of this medicinal Manna: When, therefore, we carefully look into the Works of thoſe who have wrote on this Subject, we find that Phyſicians generally run into three different Opinions, with reſpect to the Generation of Manna; for *Chriſtophorus a Vega* affirmed, that the Manna was diſcharged in a liquid Form, Drop by Drop, from Graſhoppers, and ſmall Bees; and that, being depoſited on Leaves, it was indurated by the Heat of the Sun. But as this Opinion is abſolutely inconſiſtent with Truth, *Frederic Hoffman* the elder has, in his *Clavis Schroederiana*, exploded it as falſe and imaginary.

Another, and indeed an almoſt generally received, Opinion among the Antients, is, that Manna deſcended from the Air, and conſiſted of ſweet and ſulphureous Exhalations, previouſly raiſed from the Earth and Waters by the Heat of the Sun in warm and dry Days; after which theſe Vapours, being condenſed by the Cold of the ſubſequent Night, fell down early in the Morning, in the Form of Dew, on the Earth and Trees. Thus *Pliny*, in his *Natural Hiſtory*, *Lib.* 11. *Cap.* 12. informs us, that Manna deſcends from the Air, eſpecially early in the Morning; and leaves it undetermined whether it is what he calls a Sweat of the Heavens, a certain Saliva of the Stars, or the Juice of the Air purifying itſelf. And *Galen*, in his Treatiſe *de Aliment. Facult. Lib.* 3. *Cap.* 39. calls Manna, aerial Honey; and tells us that, according to the moſt skilful Naturaliſts, the Exhalations ariſing from the Earth and Waters, being attenuated and concocted by the Heat of the Sun, were by the Cold of the ſucceeding Night condenſed into the Subſtance called *Manna*. Of the ſame Opinion are *Zacutus Luſitanus*, in *Med. Princ. Hiſt. Fuchſius de Comp. Med. Lib.* 1. *C.* 76. *Schroder*, in *Pharmac. Medico-chym.* and ſome others, but more eſpecially *Matthiolus*, in *Comment.* in *Lib.* 1. *Dioſcorid.*

But beſides the Circumſtances diſcovered by thoſe who have travelled into the Countries where Manna is produced, there are many important Reaſons concurring, to demonſtrate that it is neither Dew, nor the Produce of Dew. *Pallopius*, *Op. Tom.* 1. calls the Truth of this Opinion into Queſtion; and other Authors, juſtly celebrated for their Learning, have ſhewn it to be abſolutely falſe. For if Manna was either Dew, or the Produce of Dew, it would, without Doubt, be colliquated and exhaled by Heat; or it would be found on all Herbs, Trees, Rocks, or the whole Ground of the Countries where it is produced. But 'tis certain, that Manna is rather condenſed by the Heat of the Sun, and is only found on certain Trees, which afford more or leſs of it, according as they abound more or leſs with Juice.

The third Opinion, which is indeed moſt agreeable to Truth, is, that Manna is the nutritious Juice ſpontaneouſly dropping, or artificially obtained, from Trees, eſpecially from the Fraxinus, and the Ornus; for, as we are in general to obſerve, that the honey-like Dews, ſaid to fall from the Heavens on Trees, and eſpecially on frumentaceous Plants, have no Exiſtence in Nature, becauſe they are found concreted not ſo much on the ſuperior, as on the inferior Parts of the Leaves, and are only got on certain Species of Vegetables in the ſame Countries; ſo it muſt of courſe follow, that this roſcid, ſweetiſh, and ſomewhat pinguious Subſtance, which, after a Series of hot Weather, eſpecially about the Summer Solſtice, is, immediately after a ſmall Shower of Rain, found on frumentaceous Plants, eſpecially on Wheat and Rye, is nothing but the nutritious Juice contained in the Tubes of the Plants, rendered ſweet, and maturated, by the Heat of the Sun. And a Rain happening, this Juice, being diſſolved in theſe Tubes, is carried to their Extremities, where it breaks out. Beſides, this Juice, and eſpecially that produced by Rye, is poſſeſſed of a laxative Quality, which diſcovers itſelf, if the Stalks, abounding with it, are chewed; in the ſame manner as the Juice of the tender Blades of Corn, expreſſed, or obtained by Infuſion with hot Water, proves an excellent Purgative. This Opinion is efficaciouſly confirmed by that ſweetiſh nutritious Juice, which, in the Beginning of the Spring, is obtained from an Inciſion made in the Bark of a Birch-tree; for this Juice, if inſpiſſated by means of a gentle Evaporation, is concreted like Honey, and is, alſo, poſſeſſed of a laxative Quality.

It is, therefore, certain, that Manna is the nutritious Juice of Trees, of the Fraxinus and Ornus, for Inſtance, in *Calabria*, *Apulia*, and *Sicily*; rendered ſweet, and maturated, by the intenſe Heat of the Sun in theſe warm Climates. Then, by the nocturnal Dew, which frequently falls in theſe Countries, and which eaſily penetrates into theſe Trees, the Juice is melted, and protruded to the Stamina of the Leaves; or it is diſcharged from an Inciſion made in the Trunk, and, at laſt, inſpiſſated by the Heat of the Sun. This Opinion is confirmed by the Experience and Obſervation of Mr. *Ray*, who, when travelling in *Italy*, found that the Manna was produced by the Tree called *Fraxinus*, even when covered in ſuch a manner, that the Dew could have no Acceſs to it. The ſame Author affirms, that others have wrapt up ſome Branches of theſe Trees in Linen Cloths; or, cutting them off, have lodged them, in the Night-time, in Cheſts, notwithſtanding which Precautions, the Manna was found concreted on them.

Manna is therefore a nutritious Juice, ſpontaneouſly dropping, or artificially obtained, from the Leaves or Barks of Trees. As this Juice is yielded in different Countries, ſo there are various Species of Manna. Thus there is a liquid Manna, which, by ſome, is thought to be the Mel Cedrinum of *Hippocrates*. Of this Species *Linſchotus* informs us there is a large Quantity produced about Mount *Sinai*. According to *Rauwolfius*, in his *Itinerarium*, there is another Species of Manna produced in *Perſia* from a thorny Shrub, by the *Arabians* called *Algul* and *Alhagi*. This Species is of the Shape of Coriander-ſeeds, and as large as common Grains. There is, alſo, a Species of Manna brought from *Syria*, which was principally known to the Antients; who diſtinguiſhed it into the *Manna Maſtichina*, which was the beſt; and the *Manna Bombycina*, which was leſs valuable. Of this Species *Matthiolus*, in *Lib.* 1. *Dioſcorid.* gives us a full Deſcription. There is, alſo, a Species of Manna brought from *Calabria*, in Pieces as large as one's Fiſt, and of a browniſh Colour. But Manna is moſt copiouſly produced in *Sicily*, *Apulia*, and *Calabria*; from which laſt Country it is called *Calabrian Manna*. Since, therefore, this *Calabrian* Manna is moſt generally uſed in the Shops, omitting the other Species, we ſhall confine ourſelves to the Conſideration of this.

But that we may, with the greater Accuracy, execute this Deſign, we ſhall, from Mr. *Charas*, who, in his *Pharmac. Reg.* has collected the Opinions of *Ray*, and ſome others, give the Method of obtaining and gathering the *Calabrian* Manna. This Author, then, affirms, that Manna is a Juice flowing from the common Aſh, called *Fraxinus*, or the wild Aſh, called *Ornus*, when the Sun enters the Sign *Cancer*: That this Juice is every Year collected in hot and dry Weather, about or a little before, the Dog-days, and the *Auguſt* Rains, becauſe, when rainy Weather begins, it ceaſes to flow: That there are three Kinds of this *Calabrian* Manna, one by the *Italians* called *Manna di Corpo*, which is the moſt elegant of all the others, is either ſpontaneouſly diſcharged from the Trunk, and larger Branches of the Tree, in form of a cryſtalline Liquor, and becomes concreted into Grains, ſome larger, and ſome ſmaller, which are, the ſucceeding Day, carefully gathered, leſt they ſhould be again melted by the Rains, or the Fogs; or that about the Riſing of the Sun the Bark of the Tree is divided with a Knife, the diſcharged Liquor received in Veſſels, put upon Paper, and expoſed to the Sun, in order to be dried: That the ſecond Species, by them called *Forcata*, which is obtained by Art, is, by the ſame Trees, after they ceaſe to drop ſpontaneouſly, yielded in the Month of *Auguſt*, from Inciſions made in the Bark to the Wood. That, from theſe Inciſions, the Manna flows copiouſly from Noon till Ten o'Clock at Night, and is next Day expoſed to the Sun in order to be dried; but that this Species is leſs eſteemed, on account of its Impurity and yellow Colour: That the third Species is called *Manna di Frondi*, and is ſpontaneouſly, by way of Sweat, diſcharged from the Leaves of the Trees, on which the Drops are indurated; but, that this laſt Species is not very carefully collected, becauſe it is not, without the greateſt Difficulty, to be ſeparated from the Leaves.

Tho' *Hippocrates* ſeems to have been unacquainted with Manna, yet it was a Medicine known to many of the antient Phyſicians and Naturaliſts; for we have already obſerved, that *Pliny* and *Galen* make mention of its Origin. And *Matthiolus*, *Lib.* 3. *Cap.* 9. *de Plantarum Hiſtoria*, informs us, that long before the Days of theſe Authors, *Theophraſtus* had made mention of it. But, becauſe none of theſe mention the Uſe and purgative Quality of Manna, 'tis probable theſe were unknown to them, and that they were at laſt diſcovered by the *Arabians*; for, as the *Arabian* Phyſicians, ſuch as *Avicenna*, *Meſues*, *Serapion*, and *Averroes*, lived in a Country where large Quantities of Manna were produced, they not only every-where make mention of it, under the Names *Tereniabin*, *Siracoſt*, and *Mel. de Cuſuram*, but were, alſo, the firſt who deſcribed its various Uſes, and ſurpriſing Virtues; aſſerting that it was ſymmetrical in its Temperament, with reſpect to Activity hot in the firſt Degree, and temperate with reſpect to Paſſiveneſs.

Theſe were, afterwards, followed by the *Italian* Phyſicians; eſpecially *Braſſavolus*, *Ruellius*, *Fernandus*, and others; who, with ſingular Succeſs, made uſe of Manna, in a Nation whoſe Inhabitants, in conſequence of their tender and delicate nervous Syſtems, cannot bear highly acrid and draſtic Medicines. But in

Germany, and the adjacent temperate Climates, the Uſe of Manna was later introduced; for Phyſicians were of Opinion, that ſo mild and gentle a Medicine would prove but ineffectual, when exhibited to a Set of Men of Habits ſo vigorous and robuſt as the *Germans*. But this Perſuaſion has from Experience been found to be entirely falſe and groundleſs.

Having thus traced the Origin and moſt antient Uſe of Manna, we now come to examine by what Elements or Principles it operates, and what Effects it principally produces. Upon a ſtrict Inquiry we, therefore, find, that in Manna there is a certain ſubtile and volatile Acrimony, which is ſoon diſſipated and exhal'd; in conſequence of which it not only loſes its Virtue by Length of Time, and is diveſted of a great Part of its Efficacy by long boiling, but, alſo, becomes nauſeous and ungrateful to the Taſte. Now ſince it is certain, that frequent Stools are produced by the increaſed and accelerated periſtaltic Motion of the Inteſtines, and that this increaſed Motion is principally excited by thoſe Things, whoſe penetrating and ſubtile Acrimony intimately inſinuates itſelf into the ſlender nervous Fibres of the inteſtinal Coats, which it ſtimulates to quicker and ſtronger ſyſtaltic Contractions; ſo 'tis ſufficiently obvious, that it is by means of this acrid, ſubtile, volatile, and ſalino-ſulphureous Principle, that Manna proves purgative.

But as that Acrimony, by means of which Purgatives operate, is of various Kinds, not only according to their more or leſs cauſtic, fixed, or volatile Natures, but, alſo, according as they are more or leſs united and mixed with ſulphureous, mucilaginous, earthy, or bitter Particles; ſo they produce various Effects, both in evacuating and changing the State of the Fluids. Hence it is, that one Purgative is better, ſafer, and more efficacious, than another. Now, if we conſider that mucilaginous, temperate, ſweet, earthly, and oleous Subſtance, which commodiouſly ſheaths up the acrid and ſtimulating Principle in Manna, we may readily conclude, that the mild and gentle purgative Quality of this Medicine is, in a great meaſure, derived from the former; for 'tis certain, that all mucilaginous and earthy Subſtances are highly efficacious, not only in moiſtening and ſoftening hard Parts, but, alſo, by their mucilaginous Contexture, in covering and correcting ſaline, acid, bilious, and other acrid volatile Particles; and thus, by removing what retarded the Evacuation of the Fæces, they facilitate and promote the ſame; ſo that it is not to be doubted, but that this mucilaginous Subſtance of Manna, by correcting the acrid and noxious Quality of the Humours, and paving a Way for their free Diſcharge, excellently contributes to the Purpoſes of Evacuation.

Now that the ſweetiſh and mucilaginous Juices of Vegetables are poſſeſſed of an highly correcting, emollient, and laxative Quality, is not only obvious, from what has been ſaid concerning the expreſſed Juice of the tender Leaves of growing Corn, and that diſcharged from the Birch-tree; but, alſo, from Inſtances of other Juices, eſpecially when mixed with Sugar. Remarkable Inſtances of this are found in the Juices of Peas, red Chiches, ſweet Apples, whether recent or putrid; as, alſo, in the Syrup of putrid Apples, the Juice of Prunes, of Apricots, of Peach-flowers, of the *Egyptian* Thorn, and of Roſes; the Syrups prepared from all theſe; the Robs of Raiſins, Currants, and Elder; the Juices of Liquorice, Polypody of the Oak, and Buckthorn; Honey; the Pulps of Caſſia and Tamarinds, Damask Prunes, and other Vegetables full of a ſweetiſh Juice.

Since, therefore, Manna is not only purgative, but, alſo, poſſeſſed of a correcting and temperating Quality, it is juſtly to be accounted a Medicine of all others the moſt mild, ſafe, and friendly to Nature; for though, eſpecially when exhibited in large Doſes, it powerfully purges the Primæ Viæ from all Sordes and, in ſome Patients, procures, perhaps, twenty Stools, when three or more Ounces of it are taken; yet ſo wonderful and ſalutary are its Virtues, that it expeditiouſly produces its Effects without bringing on violent Pain, Loſs of Strength, Ebullition of the Blood, an Augmentation of the Thirſt and Pulſe, or a preternatural Heat. We may, therefore, in general, affirm of Manna, that its Uſe is more extenſive, and its Nature better accommodated to moſt Perſons, than that of any other lenitive or purgative Medicine, ſo that it is poſſeſſed of ſome peculiar Virtues, which are not to be found in other Purgatives.

Such is the Nature of Manna, that it expeditiouſly diſcharges from the Body all kinds of Humours, whether ſerous, bilious, or acid; it corrects and ſheaths up the Acrimony of the bilious Humours; and, which generally happens with other Purgatives, it is neither entangled, nor its Force impaired, by acid Humours, but, by correcting and ſubduing them, rather facilitates their Evacuation by the Anus. Beſides, the Uſe of Manna is ſuited and adapted to all thoſe, who, in conſequence either of their Weakneſs, or the Delicacy of their nervous Syſtems, cannot bear acrid Medicines, though, at the ſame time, their Primæ Viæ are to be freed from the Sordes lodged in them. This Medicine is calculated for Perſons of all Ages, Sexes, Conſtitutions, and Countries. For which Reaſon, *Zacutus Luſitanus*, in *Medic. Princ. Inſt. Lib.* 6. *Hiſt.* 8. gives a compendious, but juſt Account of the Virtues of Manna, in the following Words: "Manna may be exhibited to Perſons of all Conſtitutions; for it purges the whole Body from excrementitious Humours, and eſpecially from Bile. It cleanſes the Breaſt, is of a lenitive Nature, and, together with the thin, expels the viſcid Humours from the Thorax, without doing any Injury to the Head, or nervous Syſtem. It ſtrengthens the Viſcera, corroborates the Stomach, purifies the Blood, exhilarates the Heart, renders the Breathing free, allays Thirſt, and excites the Appetite: In a Word, every Part of the Body receives ſingular Benefit and Advantage from it."

It is found from Experience, that Manna is, in a principal manner, beneficial to Children; for it often happens, that the Milk, ſtagnating in the Stomach, is coagulated, and, fermenting with the Bile, aſſumes, not only an acrimonious, but even a corroſive Quality; in which State, being conveyed to the highly ſenſible nervous Coats of the Inteſtines, it excites intolerable Gripes, accompanied with Reſtleſſneſs, Convulſions, and Epilepſies, which frequently prove mortal. In this Caſe the principal Intention of the Phyſician ought to be to correct the ſuperfluous and corroding Acrimony, and to eliminate the corrupted Humours. But, in order to obtain this End, acrid Purgatives and Evacuants are by no means proper; ſince, tho' they purge efficaciouſly, they are nevertheleſs rather hurtful than beneficial; becauſe, in conſequence of the highly tender and nervous Texture of the Stomach and Inteſtines, they ſhock the whole nervous Syſtem, and induce Symptoms of a more formidable Nature than thoſe they were deſigned to remove. In Caſes of this Nature, the moſt efficacious Medicine of all others is Manna, which, on account of its mild Nature, induces no violent Symptom; but, correcting the Acrimony of the peccant Humours, quickly eliminates them, to the great Relief of the Patient. For anſwering this Intention, the Syrup of Manna is of ſingular Service, either by itſelf, in Conjunction with Rhubarb, or in the Form of Mixtures and Potions, which may be variouſly prepared according to the various Ingredients added to them. But from Experience I can recommend the following Mixture, as efficacious in an uncommon Degree:

> Take of the Waters of the Flowers of the *Egyptian* Thorn, of black Cherries, and of Lime-flowers, each an Ounce; of Crabs-eyes, one Dram; of the Extract of Rhubarb, twelve Grains; of the Syrup of Manna, half an Ounce; and of the aniſated Spirit of Sal Ammoniac, ten Drops: Make into a Mixture, of which the Doſe is from one to two Spoonfuls.

For the ſame Reaſon Manna is highly beneficial to old Perſons; for ſince in Old-age, according to the Maxim of *Celſus*, every thing taken into the Stomach becomes aceſcent, and eſpecially ſince, by reaſon of a Defect of the Secretions, a great Impurity of the Humours is contracted, it is for this Reaſon of ſingular Service to free the Primæ Viæ from the Sordes lodged in them. But if an Evacuation of theſe by Stool ſhould be attempted by means of ſtrong and draſtic Medicines, the Patients would ſuſtain a great and ſcarcely reparable Injury, ſince ſuch is the peculiar and pernicious Quality of theſe draſtic Purgatives, that they ſurpriſingly impair the Strength, ſo that an Exhibition of them to old Perſons of weak nervous Syſtems, would make them fall undoubted Victims to that which was intended for their Relief. On the contrary, Manna is of a mild Nature, and excellently calculated for evacuating any acid Sordes, which may be lodged in the Body; for which Reaſon nothing is more proper and efficacious for rendering the Bodies of old Perſons ſoluble.

Beſides, pregnant Women are juſtly to be claſſed among the Number of thoſe who are to be treated with highly gentle Evacuants; for it is very common for Women in this Condition, in conſequence of a Plethora, to fall into a Cacochymy. All Care is, therefore, to be taken, that the impure Juices ſhould be expelled from the Body; and this End is principally obtained by an Elimination of the peccant Humours from the Primæ Viæ. But, for anſwering this Purpoſe, draſtic Purgatives are by no means proper; ſince, by inducing Contorſions in the Membranes of the Inteſtines, and other nervous Parts of the Body, and by exciting violent Spaſms, they ſtimulate the Uterus to an Excluſion of the Fœtus, and, alſo, deſtroy the due Tone of the Stomach. For Women, therefore, in this Condition, gentle Evacuants are far more proper; the beſt of which are the Pilulæ Balſamicæ, Preparations of Rhubarb and Raiſins, and, in a particular manner, Manna, eſpecially with an Addition of ſuch things as corroborate the Stomach, and whole nervous Syſtem. This we are told by *Zacutus Luſitanus*, in *Hiſt. Medic. Princip. Lib.* 2. in the following Words: "Manna, ſays he, may be ſafely exhibited "to pregnant Women, when either Advantage, or abſolute Ne- "ceſſity, calls for it."

If we inquire to what particular Diſeaſes the Uſe of Manna is principally appropriated, we may eaſily perceive, that it is highly beneficial in thoſe Diſorders which are ſupported by a Colluvies of acid and bilious Juices, accompanied with a great Acrimony of the Humours; as, alſo, in Caſes where the nervous Parts are ſpaſmodically conſtricted, or agitated by preternatural Commotions. For this Reaſon, ſince in Coughs, Co-

ryzas, rheumatic, gouty, arthritic, and ſcorbutic Diſorders, there is a conſiderable Acrimony and Impurity of the Humours, Manna muſt in theſe be an highly efficacious Medicine; becauſe, by the Uſe of it, the acrid Humours lodged in the Primæ Viæ are corrected, and, together with a large Quantity of the Serum, eliminated, which might otherwiſe induce a freſh Train of Misfortunes. But Manna is poſſeſſed of a peculiar and uncommon Efficacy, in curing long-protracted Chin-coughs, ſince theſe can hardly be removed without the Uſe of this Medicine. Hence *Proſper Alpinus*, in his Treatiſe *de Medic. Method. Lib.* 9. *Cap.* 12. in a Cough, adviſes the Body to be rendered ſoluble by means of Manna; for this Medicine, by its ſweet and mucilaginous Nature, not only ſheaths up and blunts the acrid Particles which produced the Stimulus internally, but, alſo, ſoftens and ſooths the Parts which are worn, and become rough and dry, by the Cough. Beſides, the acrid Sordes is, by this Medicine, advantageouſly eliminated by Stool, and ſometimes by Vomit.

Beſides, in order either to remove, prevent, or mitigate Catarrhs, Coughs, and Pains of the Joints, nothing is ſo efficacious, as, in the Beginning of theſe Diſorders, to take Manna in Milk, Water-gruel, or Tea; and afterwards to drink Aſſes or Goats Milk, either with, or without the *Selteran* Waters, for ſome Mornings ſucceſſively: By which means the Acrimony lodged within is totally ſubdued and deſtroyed.

Manna is, beſides, an excellent Medicine in Fevers of all Kinds; for, ſince the Fomes of intermittent Fevers is generally lodged in the Primæ Viæ, and eſpecially in the Duodenum, where large Quantities of acid, bilious, and ill-concocted Humours are collected, nothing is, certainly, of greater Uſe, than expeditiouſly to eliminate theſe, and free the Body from them, which is commodiouſly and efficaciouſly done by means of Manna. But that the Operation of this Medicine may be the more effectual, and the better ſuited to the Nature of theſe Diſorders, it is to be mixed with a due Quantity of Bitters, ſuch as the Decoctions of Wormwood, and the leſſer Centaury, as, alſo, with detergent Salts; or, if Neceſſity requires it, with ſome emetic Stimulus; and exhibited on the Days of Remiſſion; by which means every thing, which favours the Production of febrile Diſorders, is remov'd: In like manner, if in burning and bilious Fevers, or in Tertian Fevers, of the bilious and double kind, the Primæ Viæ are to be cleans'd, Manna is an efficacious Laxative, and excellently ſuited to the Intention of the Phyſician, ſince in theſe Diſorders the Quality of the Bile is peccant, and ſince a Flux ſometimes ſpontaneouſly comes on, and happily terminates the Diſorders. But, in bilious Fevers, the moſt commodious Method of exhibiting Manna, is to prepare it into a laxative Julap, in Conjunction with Tamarinds.

But the ſingular Efficacy of Manna is moſt conſpicuous in ſpaſmodic, hypochondriac, and melancholic Diſorders, in which the Patient is not only coſtive, in conſequence of the want of due Moiſture, and the Redundance of acid Juices in the Primæ Viæ, but, alſo, by means of the ſpaſmodic Strictures of the inteſtinal Coats, the Fæces are totally retain'd for ſome Days. Now we are certain from Experience, that it is an infallible Sign of the Obſtinacy of theſe Diſorders, when the Patient remains coſtive, and does not diſcharge his Fæces, unleſs by means of a Clyſter, or the Exhibition of a Laxative. Beſides, if, in conſequence of the Spaſms with which theſe Diſorders are generally accompanied, the periſtaltic Motion of the Inteſtines is conſiderably injur'd; if neither the Chyle can paſs thro' the ſmall Inteſtines, nor the Fæces into the Cavities of the large Inteſtines, nor the Flatulences be diſcharg'd, but the Sordes remain in the Body, aſſume a worſe Quality, and become more acrid by their Stay there, and the Flatulences are repreſs'd, principally to the ſuperior Parts, where they inflate the Stomach, it happens, that by this preternatural Diſtenſion, the Eighth Pair of Nerves, being affected, in conſequence of the Conſent of Parts, ſeverely affects all the nervous Parts of the Body, eſpecially thoſe of the Head and Breaſt, by which means the State of the Patient is render'd worſe.

When this happens to be the Caſe, the principal Intention of Cure is to reſtore the diſorderly periſtaltic Motion to its natural State, and to render the Body ſoluble, that by this means the Sordes and Flatulences may be freely diſcharg'd. But this requires Judgment and Skill, ſince 'tis hardly credible what fatal Errors are, in this reſpect, committed by the common Herd of Phyſicians; for Purgatives, and acrid ſtimulating Medicines, increaſe the Stricture, render the periſtaltic Motion of the Inteſtines more diſorderly, and impair the Strength; for which Reaſon they are rather injurious than beneficial. Tho' Preparations of Aloes are of a ſomewhat mild and gentle Quality, yet, by throwing the Blood into Commotions, they have a Tendency to produce the Hæmorrhoids; and, when the Blood is not diſcharg'd, they excite Pains, and increaſe the Symptoms. Tho' Sena, and the Preparations of it, are neither acrid, nor excite an Effervеſcence of the Blood, yet they generate Flatulences; for which Reaſon they are carefully to be avoided in this flatulent Species of Diſorder. But, ſince Manna is of all other Laxatives the moſt mild and ſafe, 'tis therefore the moſt proper and commodious for rendering the Body ſoluble in hypochondriac Diſorders, ſince it ſooths, alleviates, and relaxes, the ſpaſmodically conſtricted Fibres of the Inteſtines; corrects the acrid Quality of the Humours, leſt they ſhould by their Vellication induce freſh Strictures; and, without impairing the Strength of the Inteſtines, eliminates the Fæces. But we muſt obſerve, that, in Diſorders of this kind, its Conjunction with neutral Salts, as alſo with Rhubarb, is highly beneficial and friendly to Nature, ſince, by an Addition of theſe, its Efficacy is not only greatly increas'd, but the Generation of Flatulences prevented.

As Manna is of ſingular Uſe in that ſpaſmodico-flatulent Diſorder, commonly diſtinguiſh'd by the Epithet hypochondriac, ſo 'tis no leſs conſiderably efficacious in other Diſeaſes, where the Parts contained in the Cavity of the Abdomen are afflicted with Spaſms. Of this we have a remarkable and ſatisfactory Proof in the ſpaſmodic Colic, which racks the Patient with intolerable Pain, and is generally accompanied with an obſtinate Conſtipation; for tho' 'tis cuſtomary, in order to allay the intenſe Pain, to inject large Numbers of Clyſters, with no ſmall Fatigue to the Inteſtines, yet ſuch is often the Violence of the Diſorder, that the Patient receives no Degree of Relief from them. For this Reaſon 'tis certain both from Reaſon and Experience, that, in ſuch a Caſe the beſt and moſt efficacious Medicine is that which, as it were, anoints or covers over the whole internal Coats of the Inteſtines, that by this means the Stricture may be relax'd, and the Collection of acrid Humours, an additional Source of Diſorders, convey'd to the inferior Parts, and eliminated by Stool. Since, therefore, Manna is poſſeſs'd of Qualities ſuited to both theſe Intentions, 'tis ſufficiently obvious, that its Uſe muſt be highly beneficial in colic Pains, eſpecially if, according to the Advice of *Lazarus Riverius*, in his *Prax. Tom.* 1. *Lib.* 5. *Cap.* 1. it is exhibited with Oil of ſweet Almonds, and fat Broth prepared with Fowls.

Among thoſe Diſorders which affect the Kidneys, Bladder, and urinary Paſſages, and which excite uncommon Pains, we may juſtly reckon the Stone, a Suppreſſion, and Heat of Urine, the moſt conſiderable. With reſpect to theſe Diſorders, practical Phyſicians lay it down as a Maxim, that they call for the Uſe of ſuch Medicines, as evacuate by the inferior Parts, that by this means the recrementitious Sordes, which foment and heighten the Diſorder, may be evacuated by Stool; ſince in theſe Caſes the Patient is generally coſtive. But *Fuchſius* in his Treatiſe *de Medend. Morb. Lib.* 1. *Cap.* 38. juſtly obſerves, that by the uſe of draſtic Medicines the urinary Paſſages are irritated and contracted; for which Reaſon we are to uſe ſuch things as gently evacuate the peccant Matter, and operate without exagitating the nervous Parts already too much diſorder'd. Since therefore, 'tis obvious, from what has been already ſaid, that Manna is of all others the moſt ſafe and gentle Laxative, it muſt of courſe follow, that in theſe Diſorders it is of ſingular Service, and excellently calculated for rendering the Body ſoluble.

Nor is Manna only to be commended as a valuable Evacuant in Diſorders of the Bladder, and urinary Paſſages, but it is alſo poſſeſſed of a peculiar Quality, whereby it exquiſitely ſooths and allays the Contorſion and Stricture of theſe Parts, eſpecially when mixed with Oil of ſweet Almonds, before it is exhibited; for tho' this Medicine is not convey'd immediately to the Parts affected, but exerts its Efficacy firſt in the Cavity of the Inteſtines, yet by reaſon of the ſurpriſing Conſent between the Parts of the Abdomen, eſpecially the large Inteſtines, and the urinary Paſſages, its medicinal Virtues are convey'd from the former to the latter. Hence, if the Fibres of the Inteſtines are ſurpriſingly contorted and conſtricted, they are by a proper Doſe of Manna ſooth'd and relax'd; and this ſalutary Effect is convey'd to the Bladder and Urethra; by which means the Spaſms being remov'd, the Pain ceaſes, and a Stone, the Source of terrible Misfortunes, is often diſcharg'd thro' the relax'd and dilated Paſſages. A memorable Inſtance of this we have in *Sydenham*, recorded by himſelf in his Works, where he informs us, that by perſiſting for ſome time in the Uſe of Manna and Whey, he was not only freed from an intenſe Pain about the Kidneys, but, alſo, from a Diſcharge of bloody Urine, ſo that he found himſelf proportionably better after each Doſe. His Method of preſcribing Manna we ſhall here mention: The Potion, then, us'd for the Gravel and Stone by this celebrated Phyſician, was prepared in the following manner.

> Take of the beſt Manna, two Ounces; Cream of Tartar, half a Dram; and of the nephritic Decoction of *Foreſtus*, four Ounces: Mix up for a Potion.

He alſo preſcribes a Potion, as highly beneficial in a Diſcharge of bloody Urine, which conſiſts of two Ounces and an half of Manna, diſſolv'd in two Pints of Whey, with the Addition of a ſufficient Quantity of Lemon or Orange juice.

'Tis alſo to be obſerv'd, that Manna is in ſome degree poſſeſs'd of a diuretic Quality, which it palpably exerts in a Difficulty and Suppreſſion of Urine. But, paſſing over other authentic Inſtances of this, we ſhall ſatisfy ourſelves with the memo-

rable one of a Man of ſeventy Years of Age, who, after a Diſcharge of bloody Urine, was for ſeven Days afflicted with a Suppreſſion of Urine, accompanied with an intenſe Pain about the Region of the Pubes, and a total Retention of the Fæces. Tho' a Catheter was introduced, in order to procure a Diſcharge of the Urine, yet not a ſingle Drop was evacuated by that means. But at laſt I preſcrib'd a Decoction of Manna, which produced ſo happy Effects, that, without any violent Symptoms, ſeveral Stools, and the Diſcharge of ſome Pints of Urine, were procured.

Since, therefore, we aſcribe the Cauſe of this Suppreſſion of Urine to grumous Concretions of Blood lodg'd in the oblique Ducts of the Ureters about their Inſertions into the Bladder; ſo 'tis not to be doubted, but, if, in conſequence of a Compreſſion of the Kidneys by Flatulences, or an Obſtruction of the urinary Ducts by tartareous and mucilaginous Sordes, the Urine ſhould be ſuppreſs'd, Manna is in like manner an efficacious Medicine, ſince it not only evacuates the Fæces, but, alſo, procures a Diſcharge of the urinous Serum; for 'tis highly probable, that the ſubtle, acid, ſulphureous, and volatile Principle, which, in Manna, ſtimulates the nervous Coats of the Inteſtines, does for the ſame Reaſon, in ſome meaſure, ſtimulate and ſolicit the urinary Ducts of the Kidneys to a Secretion and Expulſion of the Urine; ſo that Manna ſeems in this Caſe to be poſſeſs'd of the ſame Efficacy with the inſpiſſated Juice of the Birch-tree, a few Drams of which promote a liberal Diſcharge of Urine.

More Diſeaſes, to the Cure of which Manna contributes, might be enumerated; but at preſent 'tis ſufficient to have mention'd thoſe, in which its Efficacy is moſt conſpicuous; for from theſe the Uſe of Manna may be diſcovered in other Diſorders, eſpecially thoſe ariſing from ſpaſmodic Strictures of the internal Parts; ſuch as almoſt all the Species of Deliriums, Pains, and Convulſions: For from what has been ſaid 'tis obvious, that the continued and uninterrupted Uſe of Manna is of all other Meaſures the moſt efficacious, in Caſes where the Body is to be purged from any Sordes, and at the ſame time more draſtic Medicines cannot be ventured upon.

But, without inſiſting any longer on theſe Things, we ſhall only obſerve, that Manna is of ſingular Uſe in the Cure of thoſe Diſeaſes, for which medicinal Waters are to be us'd; for every body knows, that before the Uſe of Mineral Waters, whether of the cold or hot kind, the Body is to be previouſly prepared by a gentle Evacuant, that, by this means the Sordes being evacuated, theſe ſalutary Waters may, without any Obſtruction, waſh and paſs thro' the Primæ Viæ. But we are to take particular Care, that no Purgatives, containing any acrid Ingredient, be us'd for this Purpoſe; becauſe by injuring the periſtaltic Motion of the Inteſtines, and impairing the due Tone of the Stomach, they are ſo far from being beneficial, that they rather obſtruct and retard the free Paſſage of theſe Waters thro' the tubulous and villous Subſtance of the Inteſtines. In like manner, when the Cure is perfected, 'tis neceſſary, that the Remains of the Waters ſhould, by a pretty briſk Evacuation, be diſcharged from the Viſcera; for which Reaſon Phyſicians, who have the Charge of Perſons Healths, during their Uſe of Mineral Waters, generally preſcribe draſtic Purgatives, of Scammony, Gamboge, Extract of Coloquintida, and Reſin of Jalap, for the moſt part in the Form of Pills; which never fail to prove deleterious, and impair the Strength of the Patients: But the Diſadvantages accruing to the Patients from ſuch a Practice are hardly credible; for Perſons of delicate Conſtitutions, and whoſe Stomachs, and nervous Syſtems, are ſubject to ſpaſmodic Conſtrictions, are, by this means, afflicted with Cardialgias, Loſs of Strength, and violent Gripes; whilſt others are by the ſame means affected with ſuch violent Symptoms, as to induce Deliquiums, and a total Privation of Strength; ſo that they frequently return from theſe ſalutary Waters in a far worſe and dangerous Condition, than they came to them.

I myſelf, after having twenty times frequented the *Caroline* Springs, have often obſerved the ſalutary Effects of theſe Waters fruſtrated, and Health conſiderably impair'd, by the prepoſterous Uſe of draſtic Purgatives; ſo that, inquiring into the Reaſon of this Misfortune, I began to form a Deſign of ſafely evacuating the Remains of the Waters from the Viſcera, by means of Medicines more mild, gentle, and friendly to Nature; and, as I conceived Manna to be excellently ſuited to this Intention, I exhibited three or four Ounces of it diſſolv'd in ſome proper Water, ſometimes with an Addition of two Drams of Cream of Tartar: This Medicine produc'd the deſign'd Effect; for, after procuring ſometimes ten or more Stools, I found, by its means, a large Quantity of Water was eliminated without creating any Pain to the Patient; for which Reaſon, I did not heſitate to follow the ſame Method, both before and after the Uſe of theſe ſalutary Waters; and, having totally rejected the more violent and draſtic Purgatives, eſpecially for ſixteen Years paſt, I have in this manner treated thoſe who committed the Charge of their Health to me, ſo that in one Spring I have us'd twenty Pounds of Manna. Some of the more judicious Phyſicians afterwards followed the ſame Method with the like Succeſs.

Having now conſidered the Virtues of Manna, and the various Caſes in which it is ſingularly beneficial, we ſhall next conſider the moſt commodious and judicious Method of exhibiting it. Firſt of all, then, it is abſolutely requiſite, that we ſpecify and determine its due Doſe; for ſome condemn this excellent Medicine as productive of Flatulences, and for that Reaſon endeavour to diſcard its Uſe. But, if we inquire accurately into this, we ſhall find, that it is rather owing to the Averſion theſe Perſons have to ſweet Subſtances, or the leſs agreeable Method of preſcribing it, than to any faulty Quality really inherent in the Medicine itſelf; for it is cuſtomary with theſe Phyſicians, only to preſcribe half an Ounce, or, at moſt, an Ounce, of Manna. 'Tis not, therefore, to be wondered at, if, by this means, the peccant Matter being put into a Commotion, but not eliminated, the viſcid Sordes ſhould generate Flatulences, eſpecially in Patients already afflicted with them; of which kind, are principally thoſe who labour under hypochondriac and hyſteric Diſorders. That theſe Misfortunes may, therefore, be prevented, we lay it down as a Maxim, that, to Infants and Children, from two Drams to half an Ounce of Manna may be exhibited; and, to Adults, from two to three or four Ounces may be preſcribed, according to their greater or ſmaller Degrees of Strength and Vigour of Body. When exhibited in this Quantity, it will not readily excite Flatulences and Gripes, but prove effectually purgative, and ſometimes, in Caſes where the Stomach is overloaded with Sordes, excite a gentle Vomiting.

The preciſe Manner in which this Medicine is to be exhibited, is, alſo, to be determin'd by the Phyſician, according to the particular Effect he intends ſhould be produced by it; for, as 'tis certain in general, that all Evacuants produce their Effects far more expeditiouſly and happily, if they are diſſolved before their Exhibition, ſo the ſame holds true with reſpect to Manna. But there are various Liquors, which, according to the different Inclinations of different Perſons, are made ſubſervient to the Diſſolution of Manna. Thus, for Inſtance, according to *Proſper Alpinus*, in his Treatiſe *de Med. Method. Lib.* 3. *Cap.* 9. it was cuſtomary, among the *Egyptians*, to uſe it diſſolved in the Water of the *Nile* purified, or in Broth prepared with Fowls. And, in our own Days, the Method of exhibiting Manna is highly ſimple, ſince it may be diſſolved either in Milk, Whey, or Water-gruel; or, inſtead of Sugar, it may be put into Coffee, Chocolate, or Tea, and by that means gratefully convey'd to the Stomach. But if a Medicine is to be artificially prepared of Manna, the diſtil'd Waters of Flowers and Herbs are generally uſed; thoſe, for Inſtance, obtain'd from the Flowers of the *Egyptian* Thorn, Meadow-ſweet, and Elder; as, alſo, from black Cherries, and Paul's Betony. But as theſe fragrant and ſweet-ſmelling Waters are not equally grateful to all Patients, the moſt commodious Vehicles for Manna are pure Spring and Rain-water diſtil'd; or a proper Quantity of Mineral Waters of the cold kind; ſuch as thoſe of the *Spaw*, *Wildungen*, and the *Antonian* Waters: Or *May* Dew may be, alſo, uſed for this Purpoſe. But I generally order laxative Decoctions of Manna to be prepared, by taking an Ounce and an half of Water, to each Ounce of Manna. But, in order to diſſolve the Manna, it muſt be very gently boil'd, leſt, by a violent or too long-protracted Boiling, its ſubtile, volatile, and ſtimulating Principle ſhould be diſſipated in the Air.

But that ſuch a Decoction of Manna may, at once, more effectually anſwer the Intention, and prove more grateful to the Palate, 'tis expedient to add ſome Things which concur to promote the ſame End. Salts are, in a peculiar manner, conducive to this Purpoſe, ſuch as Cream of Tartar, the Arcanum Duplicatum, the Terra foliata Tartari, *Epſom*, and *Sedlitz* Salts; which, as they not only incide, reſolve, and abſterge the viſcid Sordes, but are, alſo, poſſeſſed of a certain ſtimulating Quality, ſo they greatly aſſiſt and heighten the Efficacy of the Manna. With ſuch a Potion a Dram or two of theſe Salts may be mix'd, and, leſt they ſhould be with Difficulty diſſolv'd, they may be melted ſeparately before the Manna is boiled. Then, in order at once to render the Preparation grateful to the Palate, and ſomewhat corroborative, after the Boiling is over, we may to the ſtrain'd Liquor add twenty Drops of the Eſſence of Orange-peel, or two Drops of ſome fragrant or aromatic diſtil'd Oil, ſuch as Oil of Cedar. This medicinal Potion is not to be drank all at once, but at different times, drinking immediately after a few Draughts of Water-gruel.

Beſides, according to the various Intentions of Phyſicians, and different Conditions of Patients, other things may be mix'd with Manna, of which there may be, alſo, other Formulas of Medicines prepared. For, beſides what we have ſaid, when enumerating the Diſeaſes in which Manna is beneficial, it is, alſo, to be obſerved, that this Subſtance is commodiouſly exhibited in burning and bilious Fevers, with Syrup of Lemon-juice, Rob of Tamarinds, Barley-water, Piſan, or Goats Whey. Beſides, in order to kill and diſlodge Worms, a Preparation of Manna, with Mercurius dulcis, and Rhubarb, is highly efficacious: This Subſtance is, alſo, with happy Effects, exhibited in the ſuffocative Aſthmas and Chin-coughs of Children, with Sperma Ceti, Oil of ſweet Almonds, and a little Saffron, uſing Water-gruel as a Vehicle for the Whole. Beſides, if the Symptoms of the Patient indicate the

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Propriety of evacuating the acrid, bilious, and viſcid Sordes, both by Stool and Vomit, to two Ounces of a Decoction of Manna, a few Grains of previouſly diſſolved emetic Tartar, are to be added; and this Preparation is to be taken at different times, drinking immediately after, a liberal Draught of thin Water-gruel. By this means a Vomiting is firſt excited, and ſoon after, a large Number of Stools is procured. This Method of proceeding is principally to be recommended in the Beginning of Fevers, both of the intermittent and acute Kind, when we are pretty certain, that a large Quantity of Sordes is lodg'd in the Primæ Viæ. I have frequently known this emetico-laxative Medicine, with great Succeſs, exhibited in the Beginnings of exanthematous and petechial Fevers, the purple Fever, the Small-pox, and Meaſles, eſpecially when raging in Camps; as, alſo, in the Beginning of that Species of Fever, which is endemial to the *Hungariam*.

Since among the other Diſorders in which Preparations of Manna are beneficial, we have aſſerted their Efficacy, about the Beginning and Eruption of the Small-pox, we ſhall now inquire, whether they may be, with equal Propriety and Safety, exhibited about the Maturation of the purulent Matter. Every one knows what terrible Dangers the Phyſician has to dread in the Small-pox, eſpecially thoſe of the confluent Kind, and what Prudence and Circumſpection are neceſſary in order to avert and prevent theſe Dangers; for, as in the Small-pox in general, ſo more eſpecially in thoſe of the confluent Kind, it generally happens, that about the ninth Day, in conſequence of a freſh Paroxyſm of the Fever, an Increaſe of the Inflammation, and the Violence of the Pain, all the Symptoms are heightened, and the Condition of the Patient rendered manifeſtly worſe. Then an uncommon Uneaſineſs is perceived about the Præcordia, the Patient breathes with Difficulty, his Reſtleſsneſs is increaſed, and his obſtinate Coſtiveneſs ſtill continues. All theſe Symptoms proceed from no other Cauſe, than the vellicating, acrid, and cauſtic Matter, either retained in the Blood, or returning to whence it came, when, being denied a Paſſage thro' the Skin, it is again thrown into violent Commotions, and creates ſo much Uneaſineſs to the Patient. 'Tis, therefore, ſufficiently obvious, that all the Hopes of the Patient's Recovery are juſtly to be placed in the due Excretion of this vellicating and acrid Matter.

In this Caſe, it may ſeem moſt expedient to follow the Tendency of Nature, and force the peccant Matter to the Surface of the Body, ſince this Method has hitherto been univerſally eſteem'd the moſt ſafe and rational of all others. But there are, ſometimes, very weighty Reaſons to forbid it; for ſince it often happens, that the peccant Matter of the Small pox, convey'd to the internal Parts, and eſpecially to the nervous Compages of the Inteſtines, is ſurpriſingly detain'd there by the Obſtruction of the Fæces, in conſequence of which, the Inflammation is increas'd frequently, 'tis ſufficiently obvious, that all bezoardic, alexpharmic, and other Medicines, which promote the Expulſion of this Matter to the Surface of the Body, are, at this time, ſo far from being proper, that they are rather hurtful and pernicious. And I cannot forbear looking upon it as a raſh and hazardous Attempt, to ſolicit the variolous Matter deeply lodg'd in the Inteſtines, to the Skin. A far more ſafe and commodious Method is to remove the Conſtipation, and by a gently ſtimulating Laxative, to evacuate the putrid Fæces, and impure Sordes, by Stool.

For anſwering this Intention, unleſs the Clyſters, prepared of the Ingredients appropriated to this Purpoſe, prove effectual, nothing is more proper than Manna, in conſequence of its mild Operation; and I muſt, in this Caſe, recommend it above all other Medicines. In aſſerting this, I do not rely on my own Experience alone, ſince I have many great and learned Phyſicians concurring with me; and among the reſt, the juſtly-celebrated *Sydenham* and *Freind*, who, in this Caſe, greatly extol lenitive Cathartics, and prefer Preparations of Manna to almoſt all other Medicines. *Freind*, in a particular manner, in his *Commentarius meum de Febribus*, highly extols Purgatives, and eſpecially Manna, in a putrid Fever, ſucceeding the confluent Small-pox; and ſufficiently confirms this Doctrine not only by his own Obſervations, but, alſo, thoſe of others, with reſpect to the happy Effects of Manna.

We now come to give an Account of ſome of the moſt ſalutary Preparations of Manna: The firſt which we ſhall mention, is that uſed by the Emperor of *Germany*, when he drank the *Carolina* Waters; and which is prepared in the following manner:

Take of Cream of Tartar, two Drams; diſſolve and boil in one Pint of Spring-water, to a Conſumption of the half; add three Ounces of the beſt Manna, clarify the Liquor with the Whites of Eggs; adding the whole Juice of a Citron: Then let them boil gently together. When the Liquor is cold, ſtrain it thro' a Linen Cloth, with Citron-peel in it, till it is highly clear and tranſparent. This Potion is, at once, highly efficacious, and ſingularly grateful to the Palate.

'Tis a laudable Cuſtom uſed by ſome, in the Beginning of the Spring, to purge their Bodies from the Sordes they have collected during the Inclemency of the Winter; and for this Purpoſe various Medicines are prepared and preſcribed. But I myſelf, for this Intention, warmly recommend the following Infuſion, of which ſix or eight Ounces are to be drank every other Day:

Take of the beſt Manna, four Ounces; of Currants, two Ounces; of the beſt Rhubarb, and crude Tartar, each an Ounce; of the Tops of the leſſer Centaury, four Pugils; of Cinnamon, and Cardamoms, each a Dram: Infuſe in a Pint and half of *Rheniſh* Wine, and expoſe them to a due Degree of Heat for twenty-four Hours.

Beſides theſe, there are many other Medicines prepar'd in the Shops, of which Manna is either the Baſis, or an Ingredient; of theſe the moſt conſiderable are the Electuarium Diacaſſia with Manna, the Lenitive Electuary with Manna, and the Syrup of Manna; the Uſe of which may be more commodiouſly ſupplied by the following Medicine:

Take of the beſt Manna, one Pound; diſſolve and boil with a gentle Heat, in a Pint and an half of the Water of the Flowers of *Egyptian* Thorn: Infuſe in it, when warm, of the Flowers of the Peach-trees, *Egyptian* Thorn, and Violets, each an Handful; inſpiſſate the ſtrain'd Liquor over a gentle Fire, and, as it becomes cold, add twenty Drops of the Oil of Cedar.

Among the Pharmaceutic Preparations we may, alſo, reckon the liquid Manna, the Preparation of which is given by *Schroeder* in *Pharmac. Chym.* and amended by *Frederic Hoffman* in his *Clav. Schroed.* where he, alſo, gives Directions for preparing the Manna Julepata, and the Manna Tartariſata: But though theſe are, conſidered in themſelves, ſufficiently valuable Medicines, yet it eaſily happens, that they do not anſwer the Expectations of thoſe who uſe them, becauſe in preparing them the Manna is, by the violent Heat and Boiling, often deprived of its Virtues.

We now come, in the laſt Place, to treat of thoſe Medicines which are obtain'd from Manna by the Force and Influence of Fire. With reſpect to theſe, what *Helmont* ſays in his *Treatiſe de Poteſtat. Medicam.* is abſolutely true; which is, that by a chymical Analyſis Subſtances of new Qualities, which had no previous Exiſtence, are produced from it, and that the Manna itſelf becomes acrid, by means of the Fire. I myſelf attempted the Diſtillation of Manna in a Sand Heat: For which Purpoſe putting about four Ounces of it in a Retort, previouſly warm'd with Sand, and increaſing the Fire a little, I firſt obtain'd an acid Liquor, and afterwards one of a dark-red Colour, of a thicker Conſiſtence, and an empyreumatic Smell. Of the former I had about an Ounce, and of the latter about a Dram and an half. As for this acid Liquor obtain'd from Manna, and commonly called its Spirit, 'tis univerſally agreed upon, that it is ſudorific; the Reaſon of which is, without Doubt, to be aſcribed to the empyreumatic Particles with which it is mix'd. This Liquor, alſo, proves a Menſtruum for the Diſſolution of ſome Bodies: In order to make the Experiment, I threw both Coral and Steel into ſome of this Liquor; and, after they were diſſolved, I was furniſhed with the Tinctures of Coral and Steel, poſſeſs'd of the ſame Virtues with thoſe prepared in the common manner by ſomewhat acid Menſtruums. On the contrary, in this Liquor, there did not happen a perfect Solution of Sulphur, as *Schroeder* in his *Pharmac.* and after him *Charas* in *Pharmac. Reg.* aſſert. But the thick, rediſh, oleous, and grumous Liquor had an highly empyreumatic Smell, exactly reſembling that of Sugar thrown on live Coals; and was capable of being mixed both with Water and Spirit of Wine, in each of which it was quickly diſſolved. Nor is it to be doubted but ten Drops of this Liquor are capable of exciting a liberal and profuſe Sweat.

From what has been ſaid 'tis ſufficiently obvious, that the Uſe of Manna has been hitherto unjuſtly rejected by Phyſicians, and that it juſtly recommends itſelf to the modern Practitioners; for I cannot forbear adviſing the Profeſſors of the Healing Art carefully to abſtain from all violent and draſtic Purgatives, ſince they are ſometimes productive of ſo formidable Conſequences, as are hardly to be dreaded from the moſt terrible Diſorder; for which Reaſon *Campegius*, in his *Treatiſe de Cribr. Medicam.* juſtly calls them deleterious and curſed Medicines. Rejecting, therefore, Coloquintida, Scammony, White Hellebore, Turbith, Elaterium, Spurge, and what was only diſcovered in the latter Age, Gamboge, let Phyſicians ſubſtitute, in their Rooms, far more ſafe and innocent Medicines, ſuch as neutral Salts, Manna, Rhubarb, Tamarinds, Caſſia, and Aloes duly corrected and prepared, eſpecially ſince, by ſufficiently large Doſes of theſe gentle Laxatives, the ſame Effects may be obtained, as by the more acrid, draſtic, and offenſive Purgatives. *F. Hoffman.*

Manna may be render'd of a vinous Quality, by diſſolving it in Water, in which a Fermentation may be produced in the following manner:

Diſſolve two Pounds of the beſt Manna, in eight Pints of pure River-water. Strain the Solution, and put about a

third Part of it to be evaporated into an earthen Veſſel, placed in a Sand-heat. Pour the remaining Part of the Liquor into Bottles, which are to be cover'd with a Piece of ſingle Paper, and expoſed to the Influence of the Sun, and the Heat of the Fire, for ſix Months. By this means the Liquor will aſſume a vinous Quality, and this Wine of Manna will reſemble the vinous Hydromel; only it will be neither ſo ſtrong, nor ſo agreeable to the Taſte.

This Wine gently purges ſerous Humours, and the Doſe of it may be from three to ſix Ounces: If this Wine is ſubjected to Deſtillation in Balneo Mariæ, or in a Vapour-bath, we obtain from it a ſpirituous Liquor reſembling Aqua Vitæ; and by Rectification, in the ordinary manner, it yields an inflammable Spirit like Spirit of Wine, but which ſtill retains ſome Smell of the Manna. This Spirit is, alſo, poſſeſſed of the ſame Virtues with the Spirit of Wine.

If, after extracting this inflammable Spirit of Manna, we put the Liquor remaining in the Alembic, and ſuffer it to remain there for a conſiderable time, it will inſenſibly ferment a ſecond time, and become ſour. Then we find, at the Bottom of the Veſſel, a white eſſential Salt of Manna, which is hard, brittle, of the cryſtalline Kind, and formed into Needles reſembling thoſe of the eſſential Salts of Plants. This Salt is, alſo, of an acid and ſomewhat ſweetiſh Taſte; and a Dram of it taken in Broth proves purgative.

MANOBI. *Lemery* calls this a Fruit, but deſcribes it as a Truffle, which grows in *Braſil*, of a very good Taſte. It is ſaid to fortify the Stomach.

MANSORIUS *Muſculus*. The Maſſeter.

MANTICHORA, *μαντίχωρα*. The Name of an *Indian* Animal, which, according to *Ariſtotle*, is furniſhed with a triple Series of Teeth.

MANTILE. The Name of a Bandage. See FASCIA.

MANUCODIATA. The Bird of Paradiſe.

MANUS. The Hand. See BRACHIUM. Certain Troches made of Sugar of Roſes, with an Addition of Pearls, are called *Manus Chriſti perlatæ*; but without the Pearl *Manus Chriſti ſimplices*.

Manus Dei is a Name for a vulnerary, reſolvent, and fortifying Plaiſter, deſcribed in *Lemery's Pharmacopée Univerſelle*.

MANUTIGIUM. Rubbing with the Hand. *Cœlius Aurelianus*, *Acut. L.* 3. *C.* 17. and *Chronic. L.* 1. *C.* 4.

MANYL-RARA. H. M. The Name of a very tall Tree, which grows in the *Eaſt Indies*, bearing a Fruit not unlike an Olive, which is uſed, when ripe, in Food, and is much eſteem'd for exciting the Appetite, and promoting Digeſtion. Of the Leaves boiled with Turmeric-root, and the Leaves of Ginger, and contus'd, a Cataplaſm is made, which powerfully ripens Tumors. Of the Leaves boil'd in Oil of *Seſamum*, with an Addition of the Root of this Plant pulveriz'd, an Ointment is made, which is ſaid to be excellent in the endemial Diſtemper of that Country, called BERIBERI.

MANZIZANION. A Name for the *Colocaſia*. *Aetius. Tetrabib.* 1. *Serm.* 1.

MAON. A Name for the *Tagetes*; *Indicus*; *minor*; *multiplicato flore*.

MARACOT. A Name for the *Granadilla*; *Hiſpanis*; *Flos Paſſionis Italis*.

MARAGOSA. A Name for the *Momordica*; *Zeylanica*; *pampineâ fronde*; *fructu breviori*.

MARANDA *Zeylanenſibus*. *Myrtus Zeylanica odoratiſſima. Baccis niveis monococcis. Herman.*

This is a Species of Myrtle, which grows in the Iſland of *Zeylon*, bearing a ſmall Berry. A Decoction of the Leaves is ſaid to be excellent againſt the Venereal Diſeaſe, if a ſlender Diet is, at the ſame time, obſerv'd.

MARASMODES, *μαρασμώδης*. The Name of a Hectic Fever, in its laſt and worſt Stage.

MARASMUS, *μαρασμὸς*, from *μαραίνω*, to render lean, or tabid. An Atrophy, or Conſumption, in its laſt and moſt deplorable Stage, is thus called.

MARATATABIBA. The Name of a Tree, which grows in *Braſil*, to which I find no medicinal Virtues aſcrib'd.

MARATHRITES, *μαραθείτης*. Wine impregnated with Fennel. *Dioſcorides. L.* 5. *C.* 75.

MARATHRUM. A Name for the *Fœniculum*; *vulgare*; *Germanicum*.

MARAUGIA. A Sort of Shell-fiſh, as it ſhould ſeem, of the Lobſter-kind, mentioned by *Oribaſius*, *Collect. Medic. L.* 2. *C.* 58.

MARCASITA, *Marcaſite*, is a ſort of metallic Mineral, making as it were, the Seed, or firſt Matter of Metals.

On this Principle, there ſhould be as many different Marcaſites as Metals, which is true in Effect, the Name being applied to every mineral Body that has metallic Particles in its Compoſition, though not enough to make it worth working; in which Caſe it would be called Ore.

There are only three Kinds in the Shops, which are, Marcaſite of Gold, of Silver, and of Copper; though ſome repute the Loadſtone, Marcaſite of Iron; Biſmuth, Marcaſite of Tin; and Zink, or Spelter, Marcaſite of Lead.

Marcaſites are found in Mines of Metals; they all contain Sulphur, and a vitriolic Salt, eſpecially that of Copper: Some of them, alſo, contain Antimony and Biſmuth.

MARCELLIUM, *μαρκέλλιον*. The Name of a Medicine ſaid to be good againſt Chilblains. *Paulus Ægineta*, *L.* 3. *C.* 79.

MARCELLUS EMPIRICUS. This Author was of *Bourdeaux*, and wrote, in the time of *Gratian* and *Theodoſius*, the Book now extant under his Name, *de Medicamentis*.

MARCHED. Litharge. *Rulandus*.

MARCHIONIS *Pulvis*. The Marquiſ's Powder. This is thus directed in the *Leyden Diſpenſatory*.

Take of Male Peony-roots, half an Ounce; of the Wood of Miſſeto of the Oak, Raſpings of Ivory, Elks Hoof, Spodium, the Tooth of the Unicorn Fiſh, or, in its ſtead, the Antlers of an Hart's Horn, red and white Coral, and prepar'd Pearls, each a Dram; twenty Leaves of pure Gold. Make a Powder. This is deſign'd for an Antiepileptic, and Abſorbent.

MARTIANI ANTIDOTUS. The Name of an Antidote deſcribed in *Marcellus Empiricus*, *C.* 177.

MARCIATON, *μαρκίατον*. The Name of an Unguent in *Paulus Ægineta*, *L.* 7. *C.* 18.

1. MARGA. Offic. Schrod. 320. Mer. Pin. 218. Aldrov. Muſ. Metall. 221. MARLE.

This is not only of various Species, but, alſo, of different Colours, ſuch as reddiſh-brown, Grey, and Yellow. It is a ſort of pinguious and medullary Subſtance, found in ſome Stones and Rocks, when they are ſplit. It is of a drying, conſtricting, conſolidating, and ſarcotic Quality; but reſolves Tartar, and coagulated Blood. *Schrod. Kentman* enumerates various Species of Marles, ſuch as the white, the pinguious, the ſoft, the ſubcineritious, and the Stony Marle, uſed by Artiſts for making Images; the yellow, and the cruſtaceous Marle, which is found in ſandy Ground, and contains ſome Portion of Gold; and the hard, yellow, and ſandy Marle found in *Holland*, with which the Inhabitants, as in other Countries, dung the Land. *Dale*.

2. MARGA SAXATILIS CINEREA. Offic. Worm. 6. *Marga Goſelaria cineraria*. Agricol. 579. *Marga Goſlarica*. Charlt. Foſſ. 4. ASH-COLOURED MARLE.

This Species of Marle is found in the Cavities and Fiſſures of Rocks, conſiſts of thick Cruſts, is of a cineritious Colour, and a ſomewhat acrid Taſte. It is of an aſtringent emplaſtic Quality, and ſtops Hæmorrhages; when externally applied, it agrees in Virtues with the *Samian* Earth. *Dale*.

3. MARGA SAXATILIS INCARNATA. Offic. Worm. 6. Charlt. Foſſ. 4. REDISH MARLE.

This Species is produced in the Mountains of *Bohemia* and *Liege*: It is a pinguious, lubricous, and ponderous Earth, of a carnation Colour, adhering to the Tongue, and tinging the Fingers with a yellowiſh Hue. This kind of Marle is not only beneficial in Ruptures, Fractures, Defluxions, Hæmorrhoids, and Dyſenteries; but, alſo, reſiſts Poiſons, and peſtilential Diſorders. *Dale*.

4. MARGA CANDIDA. Offic. *Marga Feroenſis*. Charlt. Foſſ. 4. *Marga ex inſulis Feroenſibus*, Worm. 6. *Stenomarga*. Agricol. 578. Morton. Northamp. 62. *Agaricus mineralis*. Imper. 129. Cod. Med. 5. *Lac Lunæ*. Woodw. Act. 8. Plot. Ox. 58. Boet. 413. WHITE STONE MARLE.

This is found in *Germany*, and is a fungous, white, and friable Subſtance. It is of an aſtringent, and refrigerating Quality; ſtops Hæmorrhages, and immoderate Diſcharges of the Menſes. The Powder of it is, by Surgeons, ſprinkled upon Ulcers, in order to dry and conſolidate them. *Geſner*. It is eſteemed a powerful Coſmetic. *Plot*. *Anſelmus Boetius*, when it is hard, refers it to the Lapis Galactites; but, if ſoft, he makes it a Species of Marle; for he is of Opinion, that the Morochthus, the Galactites, and the Lapis Melitites, are only indurated Marle. *Dale*.

MARGARITÆ & *Uniones*. Pearls.

Theſe are a kind of Bezoar, bred in Oyſters; and accordingly they conſiſt of ſeveral Strata, and are really ſtony Concretions. The beſt *Oriental* Pearls are found in the Iſland of *Ormus*, in the *Perſian* Gulf: They are likewiſe gathered in the Gulf of *Mexico*, in the Province of *Coſta Rica*, and in ſeveral other Places of *America*; but theſe *Occidental* Pearls are leſs eſteemed than the former. Small Pearls, commonly called Seed-pearls, are, likewiſe, found on the Coaſts of *Scotland*. Sometimes they are found from two to ſeven in one Oyſter; which ſhews how unjuſtly they are termed *Uniones*, as if there were only one in each Shell. *Valentini*, on the Credit of one *Kregger*, pretends, they are the Eggs of theſe Animals; but this needs Confirmation. When thrown into the Fire, they give an urinous Smell, in a ſmall Degree: They may ſometimes be whitened by taking off the outer Stratum, when yellowiſh; but this diminiſhes their Size. Pearls are a very good Abſorbent, being levigated on the Porphyry.

Porphyry, like Crabs-eyes; but they have, likewiſe, other Qualities, ſince they yield a volatile Salt by the Retort, being, on that account, cordial and depuratory. *Geoffroy.*

MARILE, *μαείλη.* In *Hippocrates, Lib. 2. de Morb. Mulier.* it ſeems to imply exactly what we call *Embers.*

MARIPENDAM. De Laet. *Balſamum fructu racemoſo ex Hiſpaniola.* C. B. *Novum Fructu racemoſo.* J. B. It ſometimes riſes to the Height of two Men, with an Aſh-coloured Stalk, and green Leaves, ſtanding on rediſh Pedicles; the Fruit grows in Cluſters. They gather the young Buds, and tender Shoots; to which ſome add the Cluſters of Fruit, and expreſs the Juice; this they boil in Water to one half, or leſs, till it is reduced to the Conſiſtence of Honey, or Sapa; then let it ſettle, and ſet it aſide for Uſe: It is an excellent Remedy for Wounds and Ulcers, cleanſing them, and repreſſing the Blood. From the Tops is diſtilled a Water more precious than Aqua Vitæ, being very ſerviceable in Wounds, and all Diſeaſes proceeding from Cold; as Pains of the Stomach, or any other Part, if it be drank for ſome Days together. *Raii Hiſt. Plant.*

MARIS, according to *Caſtellus*, and *Linden*, is a Meaſure containing eighty-three Pints, and four Ounces.

MARISCA. An Excreſcence about the Anus; the ſame as *Ficus.* See ANUS.

MARITUS. Authors who write about the Philoſophers Stone, call Sulphur the *Maritus*, or Husband, and Mercury the *Uxor*, or Wife.

MARMARYGÆ, *μαρμαρυγαὶ*, imports Sparks, or Coruſcations, which ſeem to flaſh before the Eyes.

MARMELADA. Marmelade. A Pharmaceutical Term, at preſent better known to the Confectioners than Apothecaries. It is uſually applied to a ſort of Jelly of Quinces.

MARMELOS. The ſame as MARMELADA.

MARMOR ALBUM. Offic. Worm. 42. *Marmor candidum.* Aldrov. Muſ. Metall. 749. Kentm. 52. *Marmor.* Schrod. 354. *Marmor Parium.* Boet. 489. Charlt. Foſſ. 17. WHITE MARBLE

It differs from Alabaſter only in Hardneſs, and in Splendor, when poliſhed. *Galen* tells us, that, taken internally, it diſſolves the Stone.

MARMORARIA, or MARMOLARIA. A Name for the Branca Urſina. *Blancard.*

MARMORATA *Aurium.* Ear-wax.

MARMOREUS *Tartarus.* The hardeſt Species of human Calculus. *Rulandus.*

MARMORACEA *Venena.* Poiſons of ſuch Efficacy and Virulence, that they produce Death, if taken only in a Quantity equal to a Grain of Wheat in Weight. *Caſtellus*, from *C. Rejes.*

MARMOTA. A Marmot, a ſort of large Mountain-Rat, very common in the *Alps.* See MUS ALPINUS.

MAROCOSTINUM. An Epithet for a cathartic Extract, deſcribed by *Zwelfer*, in the *Pharmacopeia Auguſtana.* It takes the Name from *Marum*, and *Coſtus*, two of the Ingredients.

Lemery, in his *Pharmacopeé Univerſelle*, deſcribes this under the Name of *Pilulæ Marocoſtinæ*; and gives another Preſcription for the *Pilulæ Marocoſtinæ Reformatæ. Bates* has taken the former into his *Pharmacopœia. Quincy* deſcribes the *Pilulæ Marocoſtinæ*; but ſomewhat different from *Zwelfer*; thus,

Take Gum Ammoniac, one Ounce and an half; Myrrh, ſix Drams; Aloes, one Pound; Agaric, ſix Drams; Rhubarb, three Ounces; Saffron, half an Ounce; Coſtus, ſix Drams; Aloes-wood, two Drams; Maſtich-herb, half an Ounce: Make a Decoction of the ſix laſt Ingredients, in two Pounds of Damask Roſe-juice, and a ſufficient Quantity of common Water; which preſs out hard, and put to it the Ammoniacum and Myrrh, ſtrained in four Ounces of Vinegar of Squills, and, with the Aloes, evaporate all together to a due Conſiſtence.

It is originally from *Mindererus*, and was calculated to purge off pituitous and watery Humours, which lodge in the Habit of the Body, and produce Dropſies, and other chronical Diſorders. It is, alſo, commended for expelling tartarous Humours, and cleanſing the Liver, and Kidneys. And it has obtained the Reputation of being a Strengthener of the Head and Stomach, and good againſt all Diſeaſes ariſing from the Diſorders of thoſe Parts. The Doſe is from fifteen Grains to two Scruples; but this Medicine is ſeldom made.

MAROGUS. A very ſtrong Narcotic. *Paracelſus.*

MAROTTI, H. M. is a tall Tree, growing in *Malabar*, with Leaves like thoſe of Bay, and bearing a round-oblong Fruit, including a very large, hard, and yellowiſh Stone, containing ten or eleven Kernels.

The Oil, extracted from the Seeds or Kernels of the Fruit, eaſes Pains, and cures the Scabies and Itchings, being rubbed on the Parts: It is good, alſo, for Eyes infeſted with ſalt Humours; and, mixed with Aſhes, it is ſucceſsfully applied to Impoſtumes and Abſceſſes in Cows, and other Cattle, and Beaſts of Burden. *Raii Hiſt. Plant.*

MARULLIUM, *μαρούλλιον.* The Lettuce. *N. Myrepſus, Sect. 1. Cap. 74.*

MARRUBIASTRUM.

The Characters are;

The little Flower-cup is cut into five ſmall Segments, upon each of which a ſmall Spine is produc'd; the Galea of the Flower is almoſt entire and plain; the Beard trifid, with a large entire Segment in the Middle, ſo as to make the Floſcule appear quadrifid. The Flowers are produced in thick Whorles.

Boerhaave mentions ſix Species of this Plant; which are,

1. Marrubiaſtrum; ſideritidis folio; caliculis aculeatis; flore candicante. *T.* 190. *Sideritidis genus, ſpinoſis verticillis.* J. B. 3. 428.

2. Marrubiaſtrum; ſideritidis folio; caliculis aculeatis; flore flavo cum limbo atro-purpureo. *T.* 190. *Sideritis, montana, parvo flore nigro-purpureo, capite medio croceo.* Col. 1. 196. *Sideritis montana, parvo, varioque flore.* C. B. P. 233.

3. Marrubiaſtrum; ſideritidis folio; caliculis aculeatis; flore flavo cum limbo atro-purpureo; comâ flaveſcente. *T. Cor.* 12.

4. Marrubiaſtrum; folio Cardiacæ. *Bocc. Muſ. p. 2. Tab.* XCVIII.

5. Marrubiaſtrum; paluſtre; fœtidum. *T.* 190. *Lamium paludoſum, Belgicum, Meliſſæ folio.* H. L. *Sideritis, Alſines, hexaginis folio.* C. B. Prodr. 111. M. H. 3. 389.

6. Marrubiaſtrum; folio Cardiacæ; odore Meliſſæ. *Boerh. Ind. alt. Plant.*

MARRUBIUM.

The Characters are;

The Leaves are wrinkled; the Calyx is long, and generally furniſhed with five aculeated Appendicula; the Galea is erect, with two Horns; the Beard tripartite, with oblong ſlender Fauces.

Boerhaave mentions nine Species of this Plant; which are,

1. Marrubium; album; vulgare. *C. B. P.* 230. *Park. Theat.* 44. *Tourn. Inſt.* 192. *Boerh. Ind. alt.* 158. *Marrubium album, Praſſium.* Offic. *Marrubium album.* Ger. 561. Emac. 693. Raii Hiſt. 1. 556. Synop. 239. J. B. 316. WHITE HOREHOUND.

Horehound has ſquare, white, hoary Stalks, about a Foot high, having two Leaves at a Joint, which are rugged, white, and downy, roundiſh, and blunt-pointed, and ſerrated about the Edges, ſtanding on pretty broad Foot-ſtalks: Among theſe grow very thick Whorles, of white, labiated, and galeated Flowers, ſtanding in ſtiff hoary Calyces; which end in nine or ten hard, and almoſt prickly, Spinulæ; each Calyx contains four ſmall longiſh Seeds; the Root is woody, hard, and full of Fibres: It grows by the Sides of Roads, and in Lanes; and flowers in *June.* The Leaves and Tops are uſed.

They are hot and dry, pectoral, and good to free the Lungs from hot viſcid Phlegm, and thereby to help old Coughs, eſpecially in cold moiſt Conſtitutions; the Juice being made into a Syrup, with Sugar or Honey, they open Obſtructions of the Liver and Spleen, and are very ſerviceable againſt the Dropſy, Jaundice, Green-ſickneſs, and Obſtructions of the Catamenia, and Suppreſſion of the Lochia, and other Diſtempers of the Female Sex; for which few Herbs go beyond it.

Officinal Preparations are only the Syrupus de Praſſis. *Miller's Bot. Off.*

The Leaves of the white Horehound give no Tincture of Red to the blue Paper; they are very bitter, and have a penetrating Smell. It is probable, that in *Flanders* this Smell may approach to that of Musk; for *Dodonæus* affirms it does ſo. The bitter natural Salt of the Earth, compoſed of marine Salt, Sal Ammoniac, and Nitre, ſeem to be united in this Plant, with a conſiderable Quantity of Sulphur, Phlegm, and terreſtrial Parts.

This Plant, by the chymical Analyſis, yields a great deal of acid Phlegm, Oil, and Earth; a little urinous Spirit; ſome concreted, volatile, and a fixed Salt, a little lixivial.

Thus it is no Wonder, if the white Horehound ſhould be a great Diſſolver, and a good Aperitive; and excellent for thoſe who have the Aſthma or Jaundice. The Juice of this Plant is given to drink, from two Ounces to ſix, for Rheums and ſtubborn Coughs: One Glaſs-full of the Infuſion in White-wine, and ſeveral Glaſs-fulls of Ptiſan, two Pugils of the Tops of white Horehound, are ſufficient for one Decoction: But the Fat muſt firſt be taken off, by ſtraining it through a wet Cloth, and diſſolving it in half a Dram of chalybeated ſoluble Tartar; or twenty Grains of the chalybeated Flowers of Sal Ammoniac; one or two Ounces of the Syrup of Horehound; two Drams of the Tincture of Steel, and two Ounces of Orange-flower-water, may be preſcribed for the Suppreſſion of the Menſes. *Tabernæmontanus* recommends the following Ptiſan for a Retention of Urine:

Boil in four Quarts of Water, one Handful of Horehound-leaves, and as much Roſemary; half a Pugil of Parſley-ſeeds; one Ounce of dried Currants; and as much Sebeſtens and Jujubes; add, at laſt, one Stick of Liquorice, and three Spoonfuls of Honey. *Martin's Tournefort.*

The *Syrupus de Praſſio Meſues* is a very hot Medicine, as *C. Hoffman* obſerves; and fitter for old than young Perſons, for cold than hot Conſtitutions.

Take of Syrupus de Praſſio, two Ounces; Oil of Tartar per Deliquium, one Scruple: Mix them.

The Doſe is one Spoonful, at frequent Intervals. There is no better Remedy than this for the Jaundice.

Dioſcorides ſays, that Marrubium is hurtful to the Bladder and Kidneys, which, by frequent Uſe, it exulcerates. The Antients uſed Marrubium as an Errhine in the Jaundice, to purge Bile by the Noſtrils, which often infeſts the Eyes in a very ſtubborn manner. The Tops of white Horehound, infuſed in White-wine, and drank for three Days together, I have found by innumerable Experiments, ſays *Borellus*, *Obſ. Med.* to be of ſurpriſing Efficacy in provoking the Menſes, [*Simon Paullus* adds, ſpeedily expelling the Secundines] corroborating the Stomach, and removing a Cachexy, and the Pica in Virgins; and the ſame is ſtill more effectual, if mixed with Germander, and the leſſer Centaury.

Conſerve of the Flowers of Horehound, prepared with Honey, and exhibited to the Quantity of an Ounce, for forty Days ſucceſſively, reſtored a Man of Diſtinction, who had long laboured under a Scirrhus of the Liver, to perfect Health, after other Medicines, ſuch as Chalybeates, and Preparations of Ebony, had proved unſucceſsful. *Simon Pauli, Quadripartit.* from *Zacutus Luſitanus*, *Prax. Admir. Lib.* 2. *Obſ.* 48. But I find in the Obſervations collected from *Cheſneau*, and ſent me by my learned Friend Dr. *Hulſe*, a Phyſician in *London*, that this Perſon drank every Morning after the Conſerve, a ſmall Quantity of the Water diſtilled from Horehound, and its Roots. *Raii Hiſt. Plant.*

2. Marrubium; folio rotundo, candidiſſimo.

3. Marrubium; album; latifolium; peregrinum. *C. B. P.* 230. *M. H.* 3. 377.

4. Marrubium; album; anguſtifolium; peregrinum. *C. B. P.* 230. *M. H.* 3. 377.

5. Marrubium; verticillatum; foliis profundè inciſis. *Boerh. Ind. alt.* 156. *Alyſſum Galeni.* Offic. Ger. 379. Emac. 465. *Alyſſum Galeni Cluſio.* Park. Theat. 590. *Alyſſum verticillatum foliis profundè inciſis.* C. B. P. 232. *Marrubium Alyſſon dictum.* Raii Hiſt. 1. 557. *Marrubium, Hiſpanicum, ſupinum, calyce ſtellato & aculeato.* Tourn. Inſt. 192. GALEN's MADWORT.

This is cultivated in the Gardens of the Curious, and flowers in *June*. The Herb is in Uſe, which agrees in Virtues with the white Horehound. *Dale.*

6. Marrubium; Hiſpanicum; ſupinum; foliis ſericeis, argenteis. *T.* 192.

7. Marrubium; folio candidiſſimo, orbiculari, craſſiſſimo.

8. Marrubium; album; peregrinum; brevibus & obtuſis foliis. *C. B. P.* 230.

9. Marrubium; Orientale; foliis ſubrotundis; flore purpureo. *T. C.* 12. *Boerh. Ind. alt. Plant.*

MARRUBIUM is, alſo, a Name for the *Pſeudo-dictamnus; Hiſpanicus; ampliſſimo folio candicante & villoſo*; and for the *Pſeudo-dictamnus; Africanus; foliis ſubrotundis, ſubtus incanis.*

MARRUBIUM NIGRUM. See BALLOTE.

MARRUBIUM NIGRUM LONGIFOLIUM. A Name for the *Phlomis; Narbonenſis; folio Hormini; flore purpuraſcente.*

MARS.

Ferrum. Offic. Aldrov. Muſ. Metall. 129. Fabr. 22. Charlt. Foſſ. 47. Worm. 122. Mer. Pin. 208. Schrod. 377. Schw. 378. *Ferrum. Mars.* Mont. Exot. 13. IRON.

Common Iron, called Σίδηρος in *Greek*, *Ferrum* in *Latin*, and *Mars* by the Chymiſts, is an ignoble, very hard, and ſonorous Metal; which, when poliſh'd, is of a ſhining Colour, between white and livid; but, when unpoliſhed, of a black Colour. Iron is of two Kinds, common and purified: This laſt is termed *Acies, Chalybs*, or *Steel.* No Metal is ſo neceſſary for the Uſes of Life as Iron; nor is any Metal found in ſo great Quantities, almoſt in every Country: It is dug out of the Earth in very different Forms. In ſome Mines it is found pure, either granulated, or in Lumps; in others it is met with in an heavy Stone, of a dark-yellow, or reddiſh Colour; or in an heavy, yellowiſh, or red Sand. Some Ores yield the pure Metal contained in them with little Trouble, requiring only to be broken into ſmall Pieces, and ſo to be melted with Charcoal, in the Space of a few Hours: Other Ores require a great deal of Labour to melt them; and, alſo, the Addition of Quick-lime, Marle, or Stones, to facilitate the Fuſion. The melted Metal is run into large Molds, and hardens into long thick Maſſes: Theſe Maſſes are melted a ſecond time; the flowing Metal being continually ſtirred with an Iron Rod; and, when harden'd, it is beat with great Hammers, till all the heterogeneous, vitrified, or burnt Parts are ſeparated. Iron, thus prepared, may be forged into any Shape, by being firſt ignited, and then beat on the Anvil with Hammers. All Iron is not, however, of the ſame Goodneſs; the toughеſt is the beſt, and that which is moſt brittle of the leaſt Value. This Difference does not proceed from the Metal itſelf, but from the Mixture of earthy and vitriolic Parts.

Steel is made of Iron by frequent Fuſion and Purification; and in the Iron of ſome Mines, this Converſion is eaſily obtain'd; in others, more difficultly; and, accordingly, the Ways of performing it are different. If the Iron be very good, it is melted in Furnaces; and to the melted Metal are added, gradually, equal Parts of Salt of Tartar, or any other alcaline Salt, Filings of Lead, and Shavings of Bullocks Horns, the Metal being kept continually ſtirred. Afterwards the harden'd Maſs is beat into ſmall Bars on an Anvil. But, if the Iron cannot be thus melted, they take Bars of about an Inch Diameter, or leſs, and lay them *Stratum ſuper Stratum* in a proper Earthen Veſſel, with a Mixture of equal Parts of Soot, Charcoal-duſt, and Filings of Bullocks or Cows Horns, or Hairs. When the Veſſel is full, it is cover'd and coated with a proper Lute, and ſet in a reverberatory Furnace. The Fire is gradually increaſed, till the Veſſel is red-hot, and continues ſo for ſeven or eight Hours: Then, the Fire being ſuffered to go out of itſelf, the Iron Rods are taken out, changed into Steel: This is known by breaking them; for if the ſhining metalline Sparks are very ſmall, and very cloſe together, through the whole Thickneſs of the Bar, the Steel is very good; but if they are at greater Diſtances from each other, and have viſible Pores between them, the Steel is of leſs Value. Sometimes theſe Sparks are very cloſe together near the Surface of the Bar, but more diſtant towards the Center; which is a Sign that the Calcination was imperfectly made; and then the Calcination is to be repeated till the Change be thoroughly completed.

Iron is the hardeſt of all Metals, and Steel is ſtill harder, and more rigid, than Iron, if, being ignited, it be thrown into cold Water. Its ſpecific Gravity is to that of Gold nearly as three to ſeven. Iron, long ſteeped in Water, communicates to it a ferrugineous Taſte, being diſſolved by the Water, and turned to a yellowiſh Ruſt. This Solution may be performed in a little time, if the Iron be ſucceſſively wetted with Water, and then dried, for ſeveral times; but, if ſuffered to remain in the Water without ever being dried, it is a long time before it is corroded. This makes it ſo difficult to preſerve Iron from Ruſt; for which the beſt way is to rub it over with ſome oily Subſtance. Filings of Iron, laid in a Heap, and ſprinkled with Water, will grow ſo hot as to ſet Fire to Sulphur, if the Heap be large. By calcining Iron in a reverberatory Furnace, it is reduced to a Calx of a dark-red or purpliſh Colour. When ignited in a ſtrong Fire, till it be near melting, and then beat by the Hammer, it throws off Scales, which are nothing but half-vitrified Iron. When it is melted in the refining Furnaces, a Part of it, mixed with the Charcoal, or other earthy Parts, runs into Scoriæ, which are a kind of Glaſs. This Metal is diſſolved by all Acids; but left untouched by alcaline Salts. Filings of Iron, thrown upon any Flame, take Fire, and emit green or red Sparks. Theſe Filings, mixed with an equal Portion of Nitre, preſently make an Ebullition, and emit copious Fumes of a fetid Smell, then flaſh, and deflagrate. If the Filings are put into Spirit of Sea-ſalt, or of Vitriol, a violent Effervеſcence and Fumes are raiſed. The Fumes are entirely ſulphureous; and, if a lighted Candle be held to them, they flame immediately, fulminating, and often breaking the Veſſels. Iron, expoſed to the Focus of a Burning-glaſs on a Tile, preſently melts, emits Fumes, and then becomes a brittle half-vitrified Subſtance: But, if laid on a Piece of Charcoal in the ſame Focus, it preſently melts as before, and then flies wholly off in Sparks. If the half-vitrified Subſtance, juſt mentioned, be expoſed on a Piece of Charcoal, it preſently recovers the Form of a Metal, that is, the ſhining Colour and Ductility, and afterwards is wholly diſſipated in Sparks. From theſe Experiments it is evident, that Iron conſiſts of a large Proportion of a bituminous Subſtance, which, being united with a vitriolic Salt, is involved in ſo large a Quantity of vitrifiable Earth, as difficultly to deflagrate with Nitre. That the vitriolic Salt is, likewiſe, in a conſiderable Quantity, is evident from the Solubility of Iron in ſimple Water, which ariſes from the Action of theſe Salts on the metallic Earth. There is, however, ſome Difference between the Sulphur contained in Charcoal, and that contained in Iron; ſince Iron, reſtored by the Mixture of Charcoal-ſulphur, and expoſed to the Rays of the Sun in the Focus of a Burning-glaſs, flies off entirely in Sparks. Iron, therefore, conſiſts of a bituminous inflammable Principle, a vitriolic Salt, and a vitriolic vitrifiable Earth. This Earth, united with any inflammable Subſtance by Fire, will become Iron, which accordingly happens in burning any inflammable Bodies, in the Aſhes of which Iron diſcovers itſelf to the Magnet, though before no Signs of Iron are diſcoverable in theſe Subſtances, even when reduced to the fineſt Powder.

Iron is the moſt uſeful of all Metals for human Life; for, beſides the innumerable Kinds of Inſtruments made of it, it furniſhes excellent Remedies in many Diſeaſes. The medicinal Virtues of Iron, taken inwardly, were not unknown to the Antients. *Dioſcorides* attributes to it an aſtringent Virtue, and recommends it in uterine Hæmorrhages. He, likewiſe, orders Wine, or Water, in which a red-hot Iron has been quenched, in the Cœliac Paſſion, Lientery, and Dyſentery, and for reſtoring weak Stomachs. Phyſicians now acknowledge a twofold Virtue in Iron,

one

one aperient, the other aſtringent; for it is obſerved to cure a Suppreſſion of the Menſes, to open Obſtructions of the Liver, Spleen, and other Viſcera, to ſtop Hæmorrhages and Diarrhœas, and to ſtrengthen the relaxed Fibres of the Inteſtines. On theſe Accounts it is reckoned the grand Specific in hypochondriacal Affections, and all kinds of Chloroſes. Some attribute an aperient Virtue to ſome Preparations of Iron, and an aſtringent Virtue to others; but the Truth is, all theſe Preparations are both aſtringent and aperient, though not in the ſame Degree.

For medicinal Uſes, Iron is preferable to Steel; and the Filings of Iron, reduced to an Alcohol, or impalpable Powder, are preferred, by many, to all other Preparations, in promoting the Flux of the Menſes, and in removing Obſtructions of the Viſcera, being given from twelve Grains to half a Dram, once or twice in a Day, in Pills, Lozenges, or Boluſes.

Take of Filings of Iron finely powdered, and paſſed through the Sierce, half an Ounce; of powdered Cinnamon, half a Dram; of the Mucilage of Gum Tragacanth, a ſufficient Quantity to make Pills. The Doſe of theſe Pills is a Scruple, to be taken in the Morning, on an empty Stomach, and repeated four Hours after Dinner, drinking afterwards a Glaſs of Wine and Water.

Take of finely powdered Filings of Iron, an Ounce; of Cinnamon, one Dram; of Cloves, one Scruple; of white Sugar, diſſolved in any pleaſant Simple-water, and then boiled to the Conſiſtence of a ſolid Electuary, four Ounces: Mix them together, and make Lozenges, the Doſe of which is two Drams, Morning and Evening.

Take of the fine Filings of Iron, two Drams; of the Powder of dried Arum-roots, three Drams; Cryſtals of Tartar, two Drams; Gum Ammoniac, Myrrh, Cinnamon, and Nutmeg, of each a Dram; Powder of Saffron, half a Dram; Syrup of Wormwood, a ſufficient Quantity to make an Opiate, or ſoft Electuary. The Doſe is two Drams, to be taken Morning and Evening in a Chloroſis.

Filings of Iron, tied up in a Linen Bag, are, likewiſe, preſcribed to be infuſed in aperient Apozems, and alterative Broths. *Geoffroy.*

Sydenham tells us, "he has been informed, that the crude "Ore of Iron is more efficacious in curing Diſeaſes, than Iron "which has been refined by Fuſion; but, for the Truth of this, "ſays he, I had only the Author's Word, not being aſſured of "it by my own Experience."

Some Years ago, at a Place in *Cheſhire*, I ſaw ſome Labourers taking out of a Ship ſomething which tinged their Skins in ſuch a manner, as to make them reſemble a bronzed Statue, only the Colour was more inclined to red. I found it was a particular ſort of Iron Ore, of the Conſiſtence of a fat Bole, which the Manufacturers of Iron call *Cumberland Ore*, though, I am informed, it is produced in *Lancaſhire*. Upon Enquiry, I was told, that if theſe Labourers waſhed themſelves ever ſo clean, and afterwards uſed any Exerciſe to make them ſweat, they immediately became of the ſame Colour. This Circumſtance made me conclude, that this Sort of Ore conſiſted of extremely fine Particles. I was farther aſſured, that theſe Labourers, whoſe conſtant Employment it was to unload Veſſels of this Ore, were very healthful, and never affected with Aſthmas, Gripings, or any of thoſe Diſorders which ſome metallic Ores are ſubject to communicate. Reflecting, therefore, upon what *Sydenham* relates, as quoted above, I procured ſome of the Ore, and, upon Experience, I found it equal in Efficacy to moſt of the celebrated Preparations of Iron; though I cannot ſay much ſuperior. I muſt, however, remark, that it readily unites with Mercury by Trituration, as in making Æthiops Mineral, in proportion of two Parts Mercury to three of the Ore; and thus a beautiful red Martial Cinnabar is found of conſiderable medicinal Virtue.

Preparations of Iron.

Dr. Willis's *Preparation of* Steel.

Take clean Filings of Iron, and Cream of Tartar in fine Powder, of each a like Quantity: Mix them well, and make them into a Paſte, with White-wine; then ſet them to dry in the Sun, or other gentle Heat: Break it, and, if it has not acquired a greeniſh Colour, powder it, moiſten, and dry it, as before.

This Preparation is as opening as any which are made of this Mineral, and is conveniently enough adminiſtered in Boles or Electuaries; for theſe Preparations render Pills ſo bulky, as to make a Doſe tireſome. It, alſo, yields its Virtues very readily in Tincture, with Wine, or any other Liquor. Its Doſe is from ten to thirty Grains.

Mars cum Saccharo præparatus.

A Preparation of Iron *with* Sugar.

Take Filings of Steel, three Ounces; and brown Sugar-candy, two Ounces: Let them be rubbed together in a dry Mortar, to a fine Powder.

This will certainly require great Labour before the Steel will be fine, though the Sugar will help to break it, and is of much the ſame Effect with it, as the Salt of Tartar; but may make it more pleaſant in ſome Forms. It is ſaid to be thus made in our Hoſpitals.

Crocus Martis aperiens. *Opening Saffron of Iron.*

Let thin Plates or Filings of Iron be expoſed to the Air in dewy Nights, and Rain, until they become very ruſty; then clear off the Ruſt, and do as before, until the Whole is ſo changed: Let all be rubbed in a Mortar, and paſſed thro' a fine Sieve.

This is the moſt proper aperient Preparation of all that are in Uſe; becauſe the Acids, which are in moſt others made uſe of to diſſolve the Iron, render it rather aſtringent, eſpecially in the Primæ Viæ; and what the College order under this Title, with Sulphur, is rather aſtringent than aperient.

Mars cum Tartaro rpæparatus.

Iron prepared with Tartar.

Take equal Quantities of Filings of Iron, and of common white Tartar; put them in a Crucible, and ſet it on a Fire ſtrong enough to make the Materials red-hot, in which Condition let them continue ſome time: afterwards remove it, and, when they are cool, powder them in a Mortar; and what will not paſs a fine Sieve, heat ſo again, and again powder; and this repeat until all goes through: Mix the ſeveral Siftings, and keep them in a Veſſel, cloſe ſtopt from the Air.

This is, indeed, more aperient than the former Preparations; but that Quality it receives from the Tartar. The laſt Burnings and Siftings will be more difficult to perform than the firſt, becauſe moſt of the Tartar goes off then. It muſt be kept from the Air, elſe it will run like the lixivious Salts, on account of the Tartar which is amongſt it; and, for this Reaſon, it is not fit to be preſcribed in any dry Forms, as Powders. There are other Ways of preparing this with Tartar; but that here deliver'd ſeems moſt ſuited to anſwer the Intention of an Opener.

Mars cum Sulphure præparatus.

Iron prepared with Sulphur.

Take equal Quantities of the Filings of Steel, and Flowers of Sulphur: Mix them together, and make them into a Paſte with Water, which leave to ferment for four or five Hours; after which, put it into a Crucible, over a good Fire, and ſtir the Matter with an Iron Spatula. It will flame, and, when the Sulphur is burnt, it will appear black; but, by raiſing and continuing the Heat, it will change to a red Colour, which ſhews when it is enough.

That which the College have lately given under this Title, is little elſe than Sulphur, it being only common Brimſtone, melted in an hot Iron.

This is called, alſo, an *aperient Saffron of Mars*; but the Salts it receives from the Sulphur make it more fixed, and leſs opening, than the former; and, indeed, there is not much Difference between this and the *Crocus Martis aſtringens.*

Extractum Martis aperiens. *Opening Extract of Iron.*

Take eight Ounces of the Ruſt of Iron; put it into an Iron Pot, and pour upon it three Pounds of the Water of Honey, and four Pounds of Muſt, or the Juice of white Grapes perfectly ripe; add to it four Ounces of the Juice of Lemons: Cover it with an Iron Cover, and ſet it in a Furnace, over a little Fire; leave the Matter in Digeſtion three Days; then boil it gently three or four Hours, uncovering the Pot every now-and-then, to ſtir up the Bottom with an Iron Slice; then cover it again, that the Moiſture may not evaporate too faſt. When you perceive the Liquor to be black, you muſt take away the Fire, and leave it a while to ſettle: Paſs warm through a Cloth that which is clear, and evaporate the Liquor in a Sand-fire, in an Earthen Pan, or Glaſs Veſſel, to the Conſiſtence of an Extract.

This may very conveniently be contrived to make other proper Ingredients into Pills, or may by itſelf be made in that Form,

and taken from ten Grains to half a Dram, in any Obſtructions, or where the opening Preparations of Steel are required.

Extractum Martis astringens.

The aſtringent Extract of Iron.

Take eight Ounces of the Ruſt of Iron powdered very fine; put it into an Iron Pot, and put upon it four Pints of a ſtrong red Wine: Set the Pot over the Fire, and, having covered it, make the Matter boil; ſtir it, from time to time, with an Iron Slice, till two thirds of it be conſumed; paſs the Liquor warm through a Cloth, and evaporate it to the Conſiſtence of an Extract.

This, alſo, may be given, as the foregoing, and in the ſame Quantity, in languid Habits, and where the Blood wants Warmth, and Invigoration; as, alſo, in Hæmorrhages, and all kinds of Fluxes.

A Vitriol of Iron.

Drop pure Oil of Vitriol into eight times its Quantity of fair Water, contained in an urinal Glaſs, and ſhake them well together, ſo as to make one pure Liquor; throw in a ſmall Proportion of clean and bright Filings of Iron; a great Ebullition will ariſe, and the Liquor become opaque, hot, and of a duſty Colour; and a perfectly foſſil Vapour, of a particular Odour, will ariſe, ſomewhat reſembling that of Garlick. When the Effervеſcence is over, and the former Iron diſſolved, throw in more, and continue thus till a Part of the Filings remain undiſſolved at the Bottom; then let the Liquor reſt to purify, and depoſite its Fœces: What floats above, then, will be green, and of a ſweetiſh ſtyptic Taſte.

Let this Liquor be filtred, and in a clean Glaſs evaporated to a Pellicule; ſet the Veſſel in a cold, low, ſtill Place, and there will ſoon ſhoot to the Bottom, bright tranſparent green Cryſtals like Emeralds. Let the Liquor be poured off from them; dry them gently, in a warm Air, upon Paper, and keep them in a Glaſs where they will long preſerve their Form. The remaining Liquor, being inſpiſſated as before, produces new Cryſtals; and thus at length almoſt the whole Liquor is converted into Vitriol; tho' the firſt Cryſtals are always the beſt.

REMARKS.

Iron attracts to itſelf the foſſil Acid of Oil of Vitriol diluted in Water, exactly as an Alcaline Salt does in the Preparation of Tartarus Vitriolatus; in which reſpect, therefore, Iron and Alcaline Salts agree. The Iron, thus united with the Acid, alſo becomes ſoluble in Water; and hence the Compound acquires the Nature of a metallic Salt. It conſiſts of Water, Metal, and Acid, united together in a certain Proportion; and ſo long as this Proportion remains, ſo long the Maſs continues ſhining and tranſparent; but as ſoon as only the Water is ſeparated from it by any conſiderable Heat, the whole Maſs preſently becomes opaque, loſes its Greenneſs, and acquires a grey Colour; in this reſpect, alſo, reſembling the Cryſtals of Salt; whence the Chymiſts have called it the Salt of Iron; as alſo becauſe it flows in the Fire: Others rather call it the Magiſtery of Iron, becauſe the whole Body of the Iron is concreted with its Solvent into an uniform ſolid Maſs. It is, alſo, called Vitriol of Iron, becauſe it perfectly, in every reſpect, reſembles native foſſil Vitriol. And hence we underſtand the Method, whereby the ſolid Bodies of Metals, upon uniting with Acids, may become like Salts, diſſolvable in Water, and potable, and thus acquire a new metallic ſaline Taſte, and alſo particular medicinal Virtues. If the Salt of Iron be diluted with an hundred times its Quantity of Water, and drank in the Doſe of twelve Ounces, upon an empty Stomach, walking gently after it, it opens and relaxes the Body, purges, proves diuretic, kills and expels Worms, tinges the Excrements black, or forms them into a Matter like Clay, ſtrengthens the Fibres, and thus cures many different Diſtempers. The like Taſte, Odour, and Colour, and the like Blackneſs of the Excrements, have occaſioned many to imagine, that the chalybeate Waters were thus produced by Nature; eſpecially becauſe thoſe Liquors, when expoſed to the Air, depoſite a copious yellow Sediment, or Oakre: But Dr. *Hoffman* has prudently corrected this Error, by means of Experiments, in his noble Work of Mineral Waters. However, we muſt obſerve, that this Salt of Iron, meeting with alcaleſcent and putrid Matters, and thus having its acid Solvent drank up thereby, is turned into an aſtringent, ponderous, ſluggiſh, metallic Calx, which occaſions inveterate Obſtructions, and therefore proves hurtful in putrid Fevers. And we know, that when Iron Filings are taken in Female Diſorders, where the Body is weak, languid, and abounds with Acidity, the Metal thus produces Eructations, as of Garlick and putrid Eggs, on account of the Acid it meets with; and hence the Heat, before wanting in the Body, is excited, and the Excrements generally turn black; and in this Caſe the Powder of Iron Filings proves much more ſerviceable, than when ever ſo laboriouſly prepared by Chymiſtry. Whence Iron is known to prove uſeful, if Acids abound in the Body, but hurtful where the Body is bilious or hot. This Experiment, duly conſidered, ſhews us the Origin of green metalline Vitriol every where in the Earth; and that it proceeds from Iron corroded by a foſſil vitriolic Acid. Laſtly the Production of Inks principally depends upon this Experiment.

Ludovicus's Vitriol of Iron with Tartar.

Take one Part of the Vitriol of Iron, not acid, but perfectly ſaturated, four Parts of Cream of Tartar, and twenty Parts of Rain-water; boil them together in a Glaſs Veſſel, often ſtirring them with a Stick, till the Maſs becomes grey, thick, and almoſt conſiſtent; but with Care to avoid even the leaſt Burning. Put the Maſs into a tall Bolt-head; pour common Spirit of Wine thereon, ſo as to float four Inches above it; boil them together for an Hour or two, and a red Liquor will be obtained; when cold, decant, and filtre it: Treat the Remainder with freſh Spirit as before, and continue to do this ſo long as the Spirit acquires any Redneſs; then put the ſeveral Parcels together, which thus make *Ludovicus*'s medicated Tincture of Iron.

If the Tincture thus prepared be evaporated to a Pellicule, it loſes its Spirit, and afterwards ſhoots along with the Salt into medicated Cryſtals. And if what remains after boiling with the Spirit, be ſtrongly boiled with ten times its Quantity of Water, and ſtrained through Flannel, till the Liquor becomes clear, and all the Matter be diſſolved by the frequent Addition of freſh Water, and this Liquor be at length exhaled to a Pellicule, and ſet in a cool quiet Place, we ſhall thus again have the opening martial Tartar of *Ludovicus*.

REMARKS.

Phyſicians, having obſerv'd that the excellent medicinal Virtues of Iron, ſomewhat explain'd in the preceding Proceſs, had their Effect ſo long as the Iron continu'd diſſolv'd in a mild Acid, but vaniſh'd, and were precipitated into an unctuous Calx, upon meeting with an Alcali, hence prudently joined the Salt of Iron with a vegetable Acid, in Expectation that it might thus paſs and act upon all the Veſſels of the Body, while it more permanently retain'd a ſaline Nature; and this was the Reaſon of joining the Salt of Iron with the vegetable oily Salt of Tartar, to prevent its being eaſily precipitated in the Body into a Croms, or aſtringent Calx. The Preparation has the Virtue of opening, attenuating, ſtrengthening, and gently evacuating by the Belly and Kidneys; and hence proves curative in leucophlegmatic, ſcorbutic, icteric, hypochondriacal, and hyſterical Caſes, or when the Body is relaxed, weak thro' the Sluggiſhneſs of the Parts, rickety, or abounding with Worms.

It is taken in a Morning faſting, in the Quantity of a Dram, diluted with ſix times its Weight of Water, repeating it thrice, and each time drinking after it a Quarter of a Pint of thin Whey, walking gently upon it, ſo as not to ſweat; this may be continued for nine Days with great Advantage. A few Drops of it may be given to Children troubled with the Rickets, or Worms, and thence become of a bad Habit, mixed with Syrup, or Honey. A Dram of the chalybeated Tartar, taken in the Morning, anſwers the ſame Purpoſes. And hence we ſee the Method of converting Metals into Medicines, and Forms fit for taking; but they are afterwards prudently to be employ'd: Theſe are found to have very good Effects, if they prove gently purgative, and bring away the Fæces of a black, or grey Colour.

The College Diſpenſatory, after the Example of *Riverius*, directs the Salt of Iron to be made in a manner ſomewhat different; that is, with four Ounces of Spirit of Wine, and two Ounces of Oil of Vitriol, kept together in an Iron Pot, till they ſhoot into Cryſtals.

There are ſeveral other ways to make this, all which agree as to the main Efficacy of the Medicine; for every way that impregnates a Liquor with Acid and Iron ſufficiently will enable it to ſhoot into green Cryſtals.

The Doſe recommended by *Boerhaave* of the Salt of Vitriol is very large. *Geoffroy* ſays, it is given from two Grains to a Scruple, in a proper Vehicle: If exhibited in too large a Doſe, it excites Vomiting.

The White, Grey, and Red Calx of the Vitriol of Iron.

1. Take half an Ounce of dry and good Vitriol of Iron, reduced to a Powder in a Glaſs Mortar; apply it in a glaz'd Diſh to a Heat of a hundred and fifty Degrees, keeping it continually ſtirring with a Stick; a little watery Vapour will fly

fly off, and leave a light, white Powder, like Meal, of an inky, ſweet, ſtyptic Taſte; this is the white Calx of the Vitriol of Iron. 2. If this Calx be urged with a ſtronger Fire of near three hundred Degrees, it will become of a greyer Colour, and of a more auſtere Taſte. 3. If this ſecond Calx be calcined in a Crucible, in an open Fire, it grows yellow, red, and at length becomes a deep-purple Powder, of an auſtere Taſte, and ſomewhat cauſtic; which two Properties are the more increaſed, the ſtronger the Fire, and the longer the Calcination; ſo that at length the Powder will become almoſt cauſtic.

REMARKS.

Hence we ſee, that Vitriols, or metallic Salts, preſently loſe their Tranſparency, upon loſing their Water, and fall, as it were, into Aſhes; whence this Operation is called Calcination, and the thing produced a Calx. And when urged with a ſtronger Fire, they no longer remain ſoluble in Water, as conſtantly appears in the third Calx. The firſt is recommended in Medicine, becauſe it retains its native Virtue, may be eaſily mixed with Sugar, and thus commodiouſly given to Children. It is uſually imagined, that the ſuperabundant Acid may be driven away by this Calcination; but Oil of Vitriol does not riſe with ſo ſmall a Heat. The ſecond Calx has the like Virtues, but is ſomewhat more aſtringent, and leſs ſoluble in Water; but the third is not ſoluble in the Body, yet endowed with a cauſtic Virtue, ſo that it can ſeldom be given internally with Safety: Externally applied, it is excellent for eating down, and afterwards conſolidating, the Lips of Ulcers; it ſtops Fluxes of the Lymph, Blood, and Serum: But if this red Calx of Vitriol be long detained in a violent Fire, and afterwards boiled in Water, it impregnates the Water with a vitriolic Sharpneſs. If the Operation be continued till the laſt Water comes off taſteleſs, an inſipid, red, aſtringent Powder, called *Crocus Martis aſtringens*, will remain behind; and is the Body of the Iron calcined by Acid and the Fire; and therefore commonly uſed for aſtringing. The acid Waters, being evaporated to a Pellicule then ſet to ſhoot, afford ſomewhat of a vitriolic Salt.

Geoffroy directs the *Crocus Martis aſtringens* to be made, by firſt turning Filings of Iron into Ruſt, by ſprinkling them a ſufficient Number of times with Vinegar; then by calcining this Ruſt in a reverberatory Heat, till it turns to a very red Powder. It is given ſucceſsfully in Diarrhœas, Dyſenteries, and Hæmorrhages of all kinds. The Doſe is from fifteen Grains to a Dram, in the Form of a Bolus, Lozenges, or Pills.

The Liquor of Iron per Deliquium.

If the red Calx of the Vitriol of Iron be not waſhed with Water, but ſtrongly calcined, ground fine, put into an open Glaſs, and expoſed to the moiſt Air, it grows moiſt, and at length diſſolves into a kind of liquid red Matter, that may be called the Oil of Iron *per Deliquium*.

REMARKS.

The Vitriol of Iron contains a very acid and foſſil Water, ſo that the Water being ſeparated by Fire, the ſtrong and pure Acid remains dry, along with the metallic Part alone; but the Acid, being attractive of Moiſture, grows moiſt by the Water of the Air; and this is the true Reaſon of the Effect; the like obtains in all ſimilar Caſes. The Metals thus diſſolved in their reſpective Acids, then dried, moiſtened in the Air, and dried again, are thus, by repeated Operations, at length, wonderfully opened, reſolved, and even made volatile. The Calx of the Metals, thus diſſolved by the Moiſture of the Air, has the ſame Virtue it was poſſeſs'd of before this Diſſolution.

If Iron mixed with an equal Part of Sal Ammoniac is calcin'd by a very gradual Heat, in an unglaz'd earthen Veſſel, ſtirring it all the time, to prevent as much as poſſible its forming Lumps, and if this is afterwards expos'd to the moiſt Air, it diſſolves, *per Deliquium*, like Salt of Tartar, into a Liquid, five or ſix Drops of which may be taken for a Doſe in any proper Fluid.

The Golden Tincture of the Vitriol of Iron.

To a Quantity of the red Vitriol of Iron, prepared according to the third Operation on the Vitriol of Iron, made perfectly dry, and put into a tall Bolt-head, pour twenty times its Weight of dulcified Spirit of Sea-ſalt; digeſt for a Month, and thus a gold coloured, ſweetiſh, ſtyptic, inky Liquor will be obtained. If this be decanted, and new Spirit put on, and the Operation be thus ſeveral times repeated, the metallic Powder will, at length, remain exhauſted, and all the Tincture be thus extracted.

REMARKS.

This Experiment ſhews, that conſiderable Tinctures may be extracted from Metals, without diſſolving their Bodies; for this is a true Tincture of Iron, ſince one Drop thereof has an incredible Power of producing a black Colour. But this Spirit can never diſſolve all the Calx; but only extract its more ſoluble Part. A few Drops of this Liquor, being taken in *Spaniſh* Wine, upon an empty Stomach, are reſtorative, kill Worms, and raiſe the vital Powers. The chemical *Magi* plac'd their medicated Gold in Iron; poſſibly, therefore, this may be their medicated *Aurum potabile*.

Bates directs a *Tinctura Martis Aurea*, ſomewhat different from the preceding, and which is taken into the *London Diſpenſatory*, under the Title of *Tinctura Martis cum Spiritu Salis*.

Take an Ounce of Filings of Iron, and infuſe them in four Ounces of Spirit of Salt, for two Hours, ſtirring them often; then pour upon it four Ounces of rectify'd Spirit, and digeſt for three or four Hours longer: Then filtre it with a glaſs Funnel, (for it will corrode any Metal) and there will be a beautiful yellow Tincture.

This is very convenient for keeping in the Shops, as well as making; and is agreeably preſcribed in Draughts, or any liquid Forms, for preſent taking, from ten to thirty or forty Drops, at a Doſe, and has all the Virtues of the Metal.

Iron diſſolved in Rhenish Wine.

Put two Ounces of bright Iron Filings into a Bolt-head, and add thereto twenty Ounces, of generous *Rheniſh* Wine; digeſt them together in a gentle Heat, for three or four Days, often ſhaking the Glaſs: Let them afterwards ſtand to ſettle for twenty-four Hours, ſtrain off the Wine, which will appear black, and keep it in a cloſe-ſtopped Veſſel; it is of a ſweetiſh inky Taſte: Pour freſh Wine on the Remainder, and proceed as before. Thus, alſo, a chalybeate Wine will be obtained, but no way comparable to the former; for the particular Part hence obtainable is ſoon extracted from the Iron by the Wine; the whole Body of the Metal not being here diſſolved; ſo that the Production is not a Solution, but a Tincture.

REMARKS.

Hence it appears, that Iron contains one Part which is ſoluble, and another that is inſoluble, in this mild, fermented, oily, vegetable Acid. The former Part is the nobleſt Remedy I am acquainted with, for promoting that Power in the Body by which the Blood is made, as often as it happens to be weakened, through a bare Debility of the over-relaxed Solids, and an indolent, cold, aqueous Indiſpoſition of the Juices. If an excellent medicinal Virtue may, by any Experiment, be gained from Metals, certainly it is this; for no Virtue of any vegetable or animal Subſtance, no Diet, nor Regimen, can effect that in this Caſe, which is effected by Iron; but it proves pernicious where the vital Powers are too ſtrong, whether this proceeds from the Fluids or Solids. I have often thought, whether this was not the potable Sulphur of the Metal, that ſo powerfully reſiſts the Debility of Nature; a Medicine infinitely ſuperior to the boaſted *Aurum potabile*, and a Medicine that never proves pernicious when given where required. Hence we ſee, that Iron has a Part not very remote from a vegetable, and even an animal Nature, and which is extremely eaſy to diſſolve. If a Dram of this chalybeate Wine be mixed with thrice its Weight of Sugar, boiled to a proper Conſiſtence, and be prudently given in the proper Caſes, it makes an incomparable Remedy for the young of both Sexes.

Iron diſſolved in Vinegar.

Put an Ounce of clean Iron Filings into a tall Bolt-head; and pour thereto twenty Ounces of the ſtrongeſt diſtilled Vinegar; boil them together in a proper Furnace for twenty Hours; and, when cold, there will be obtained an highly red and ſtyptic Liquor, nauſeouſly ſweetiſh, and thicker than that made with Wine in the preceding Proceſs. This, being filtred, makes the aſtringent Tincture of Iron, and ſtains the Glaſſes in which it is kept, ſo that it is ſcarce poſſible to be got off again. If freſh Vinegar be pour'd upon the Remainder, it again extracts ſome Tincture, but leſs, and of a weaker Colour, than before, though ſtill chalybeate. At laſt there is left a conſiderable Quantity of metallic Matter, which can be no farther diſſolved by Vinegar.

REMARKS.

REMARKS.

It is ſurpriſing there ſhould be ſo great a Difference between the Tincture of Iron prepared with Vinegar, and that with Wine, both with reſpect to Colour, Taſte, Odour, Conſiſtence, and Effects. It is hence plain, that Iron may eaſily, and in very different Methods, be diſſolved by Acids. This Solution of Iron by Vinegar is wonderfully aſtringent, and, therefore, corroborating, and good againſt Worms; though not to be everywhere raſhly employed; it proves more agreeable, if mixed and taken with Sugar. Hence we ſee how eaſily Iron diſſolved may enter the human Body, and how often, ſince Iron is daily treated and diſſolved by Acids, and the Solution drank down; and hence poſſibly, by inſinuating into the Humours, it may contribute to generate the Stone in the Bladder, as Dr. *Liſter* conceived. Thus much is certain, that Iron grows almoſt every-where, is daily conſumed, riſes out of the Earth, and returns to it again. If any Metal be changeable, or deſtructible, it is certainly Iron.

IRON SUBLIMED WITH SAL AMMONIAC.

Take four Ounces of bright Iron Filings, and as much dry Flowers of Sal Ammoniac; grind them together in a glaſs Mortar, the longer the better. Though theſe two Bodies were ſeparately inodorous, there now riſes from them a volatile, ſubtle, and, as it were, an alcaline Vapour, becauſe the Acid of the Sal Ammoniac is attracted into the Iron; whence the volatile alcaline Part of that Salt, beginning to be ſet free ſponraneouſly, flies off. Let a capacious and dry glaſs Body be at hand, with a wide Mouth; put the Powder into it, that it may lie thin ſpread at the Bottom. Lute on an Alembic-head, with a common Mixture of Meal; apply a Receiver, ſet the Body in a Sand-furnace, and bury it up to the lower Rim of the Head: Firſt make a Fire of two hundred and twenty Degrees, and there will come over a ſharp Vapour, which condenſes into an highly penetrating, volatile, alcaline Liquor. When no more aſcends with this Degree of Heat, raiſe the Fire, that the Alembic-head may grow hot: White Exhalations will now ariſe, and afterwards others of various Colours; the whole Cavity of the Head will be covered with mixed variegated Colours, White, Red, Yellow, Green, Blackiſh, ſo as to repreſent various Flowers, from whence the Preparations take their Name. Proceed with the ſame Degree of Fire for ſix or eight Hours; then let all cool, and there will be found in the Receiver a Gold-coloured, volatile, alcaline, and highly penetrating Liquor, along with a little white and yellow Matter. In the Alembic-head, and its Pipe, will be found a very ſubtile and dry Matter of various Colours: This is to be immediately taken out, and put into a dry and hot Glaſs, to be kept carefully ſtopped; for it would ſoon diſſolve by the Moiſture of the Air, and then run into a Gold-coloured, fartiſh, auſtere, ſaline Liquor. In the dry Form it is called the Flowers of Iron, and in the moiſt, the Oil of Iron *per Deliquium*. The ſame Matter of the Flowers every-where ſticks to the Sides of the Body, though it is here more compact, and as it were melted, and runs ſtrong together by the greater Force of the Fire: This, alſo, is to be taken out, and kept dry. At the Bottom of the Body there remains a browniſh-red Matter, of a very auſtere Taſte; this Matter attracts Moiſture, and preſently reſolves in a humid Air, and runs into a thick, Gold-coloured aſtringent Liquor, which is another metallic Oil *per Deliquium*. This Matter uſually ſwells greatly upon being expoſed to the Air, and thus reſembles ſome kind of Fermentation; but the Flowers, and this Remainder, differ in many reſpects.

REMARKS.

Sal Ammoniac, conſiſting of the Spirit of Sea-ſalt, and the volatile Alcali of Animals, being here ground with the Iron, unites ſome Part of its Acid with the Metal; at the ſame time letting go ſome Part of its Alcali, which, therefore, becomes volatile; the other Part of the Sal Ammoniac, retaining its Nature, and remaining mixed with the Iron, now corroded by the Acid, ſeparates a particular Part of the Iron, which is otherwiſe fixed in the Fire, and carries it up. But, it is not ſo eaſy, as ſome write, to ſublime all the Subſtance of Iron, by Sal Ammoniac; but it here ſeems to be divided into a more volatile Part, that riſes, and another more fixed Part, that ſtays behind; at leaſt, it appears thus to me; whence, I conceive, the Iron is thus ſeparable into different Parts. Hence, alſo, we may underſtand the particular Volatility of Sal Ammoniac, which is able to ſublime a Metal, naturally ſo fixed, and ſo hard to melt, as Iron; whence the Philoſophers have called this Salt the rapacious Bird, the white Eagle, and the Key that unlocks the Bodies of Metals. Theſe Flowers have the ſame Virtues as Mr. *Boyle* commends in the *Ens Veneris*; for they are a wonderful reſtorative, warming, and opening Medicine, containing the open Body of the metallic Sulphur. They have, alſo, an anodyne Virtue, and are often ſomewhat ſoporiferous. The dry Flowers, being digeſted with Alcohol, afford a copious golden Tincture, both metallic and ſulphureous; and the remaining *Caput Mortuum*, after the Sublimation, affords the ſame with Alcohol. The Curious and Induſtrious expoſe the remaining Body of the Oil and Salt to the Air, where it reſolves; then they coagulate and inſpiſſate it, and repeat the Operation, till at length, they ſo wonderfully and deeply disbowel the metallic Maſs, as not to repent their Trouble and Expence. What Chymiſt is ignorant of that Rule, ſo often inculcated, Diſſolve and coagluate? But whether, by repeating this Operation, Mercury might be obtained from the diſſolved Body of Metals, is another Queſtion. I have tried it, tho' ugh without Succeſs; but the Experiments upon Metals, by means of Sal Ammoniac, are of infinite Uſe. *Boerh Chym.*

The *Tinctura Martis Ludovici* is, in the *Edinburgh* Diſpenſatory, directed to be prepared in the following manner:

Take of the Vitriol of Mars, and white Tartar, each two Ounces; and of Spring-water, twenty-four Ounces: Boil to the Conſiſtence of Honey; and, to the Maſs, when taken out, and put into a Matraſs, add a Pint and an half of rectify'd Spirit of Wine: Digeſt for two Days in a Sand-heat, then ſtrain the Tincture.

The *Tinctura Martis Mynſichti* is ordered to be thus prepared in the *Edinburgh* Diſpenſatory.

Take of the Filings of Iron, and of Sal Ammoniac in Powder, each two Ounces: Mix them together, and by degrees, caſt the Whole into an ignited Crucible, that the Vapours may aſcend; and when they riſe no longer, increaſe the Fire, ſo as that the Maſs may glow: Then being at length ſuffered to cool, reduce it to Powder; put it into a Matraſs, and pour upon it a Quart of *French* White-wine; then digeſt in a very gentle Fire, and laſtly filtre the Tincture.

TINCTURA MARTIS GLAUBERI.

Glauber's *Tincture of Steel.*

Take of *Rheniſh* Tartar, and Filings of Steel, of each four Ounces: Reduce them into a fine Powder, and boil them in a ſufficient Quantity of Spring-water, in an Iron Pot, that two Gallons may remain after ſix Hours boiling: Filtre that hot, and then evaporate it to five Pints.

This hath now its firſt Appearance in the College Diſpenſatory; but what is intended to be done with it, cannot well be gueſſed; for it will neither keep, on ſeveral Accounts; nor is it fit to take, becauſe of its Nauſeouſneſs.

The *aſtringent Tincture of Iron*, or *Tinctura Antiphthiſica*, according to *Geoffroy*, is thus prepared:

Take of the Vitriol of Iron, an Ounce; Terra foliata Tartari, two Drams: Powder them ſeparately; then mix them by degrees in a Glaſs Mortar, rubbing them conſtantly, during the Mixture, till they turn to a kind of ſoft Paſte, of a red Colour: Then pour upon them, gently, four Ounces of rectified Spirit of Wine, which will preſently acquire a red Colour, and is then to be poured off by Inclination from the Fæces. The Doſe is from ten to thirty or forty Drops.

It ſtops Hæmorrhages, Gonorrhœas, and the Fluor albus in Women. It cleanſes and dries Ulcers in the Lungs, and is often preſcribed with Advantage in Conſumptions, mixed with equal Parts of Balſam of Capivi. In this Preparation, I have rejected the Sugar of Lead commonly uſed, and have ſubſtituted in its Place the Terra foliata Tartari, which extracts the Tincture full as well, and free from all the Inconveniences which attend the inward Uſe of Preparations of Lead. *Geoffroy.*

The bitter Infuſion of Dr. *Lower* is prepared in the following manner:

Take of the Tops of Wormwood, and the leſſer Centaury, each three Pugils; of the Seeds of Carduus Benedictus, ſix Drams; of Gentian-root, an Ounce and an half; and of the Filings of Steel, ſix Ounces: Let them be macerated for fourteen Days, in three Pints of alexiterial Milk-water, mix'd with one Pint of the leſſer compound Wormwood-water, as prepared in the *London* Diſpenſatory; and a Pint and an half of the leſſer compound Spirit of Wormwood, as prepared in the ſame Diſpenſatory. Let the Veſſel be ſhaken three or four times a Day, and the Infuſion only ſtrain'd immediately before it is to be uſed. The Doſe of this Infuſion is four or ſix Spoonfuls, to be taken each Morning on an empty Stomach.

Dr. *Pitcairn*, in his *Element. Medic. Phyſ. Mathemat. Lib.* 2. *Cap.* 22. adviſes, inſtead of the Gentian-root, always to ſubſtitute Peruvian Bark; and tells us, that this Infuſion ought to be uſed, without Interruption, for at leaſt a Month, in hypochondriacal Diſorders.

EXTRA-

EXTRAORDINARY EFFECTS UPON APPLYING IRON TO SULPHUR.

1. Take of Iron Filings, and Flowers of Sulphur, each an Ounce; grind them together in a Glaſs Mortar, the longer the better; they will thus grow hot, and ſmell ſtrong: Then boil the Powder in Water for half an Hour; pour off the Water, ſtrain and reſerve it; treat the Remainder as before: The ſeveral Waters, when put together, will taſte ſomewhat inky, and, when inſpiſſated, leave a little pure Vitriol of Iron behind.

2. Take eight Ounces of the like Mixture of Iron and Sulphur; make it up into a thick Paſte with Water, ſqueeze this Paſte ſtrongly into an earthen Pot, and ſet it by; it will ſoon ſpontaneouſly begin to grow hot, emit Fumes, and at length often takes Fire. When the Heat is over, the Matter will be found changed into an uniform Maſs; which, being well-ground, and boiled with Water, as in the former Caſe, affords a pure Vitriol of Iron for medicinal Uſe.

3. Melt Sulphur over the Fire, and plunge the End of an Iron Rod into it for ſome time; the Part ſo plunged will thus become calcined and brittle. In the ſame manner, if Iron Filings be put into melted Brimſtone, a Crocus of Iron may be obtained, which, when ground to Powder, becomes almoſt the ſame thing.

4. If Sulphur be apply'd to red-hot Iron, it makes the Iron preſently run into calcin'd metallic Drops, which, alſo, when ground, afford the like Calx.

REMARKS.

In theſe four Experiments, the highly acid Oil of Vitriol, which makes one Part of Sulphur, coming by means of Trituration, or Fuſion, to touch the metallic Part of the Iron, in numerous Surfaces, begins to act thereon, forſaking its oily Part, and uniting with the Iron. And as this Action always generates a violent Heat, it is no Wonder, if, at length, it fires the other oily Part, which is eaſily inflammable, eſpecially if the Quantity were large, ſufficiently compact, thoroughly ground, and cloſe compreſſed. And aſſoon as, by any of theſe Ways, the Acid of the Sulphur has corroded the Metal, a pure Vitriol of Iron is produced; becauſe there is no metallic Foulneſs in the Flowers of Sulphur: And by theſe means artificial chalybeate mineral Waters may be truly produced. Theſe Powders are called *Crocuſes*, by the Chymiſts, on account of their Colour, and are of the aperient Kind, as having an aperitive vitriolic Virtue; whereas other Powders, prepared by the means of Acids and Fire, are called Aſtringent. Theſe are the principal Ways whereby Iron is ſo changed, as, at length, to afford Preparations always of very different Forms, and ſometimes ſuch as the Metal would not have afforded by the means of Fire, or any thing elſe. But particular Metals require particular Treatments; in which reſpect a Variety of Operations is required. *Boerhaave's Chymiſtry.*

Having thus given an Account of the principal medicinal Preparations of Iron, it will be proper to ſay ſomething concerning the Virtues of this Metal, and the Cautions to be obſerved in the Uſe of all the Medicines prepared from it. We have already obſerved, that Phyſicians have aſcribed two kinds of Effects to Iron, one aperient, the other aſtringent. Hence Chymiſts have tortured it various Ways, into Croci, Tinctures, and Salts, by which the aperient or aſtringent Qualities might be extracted; but it is worth Obſervation, that the aſtringent Preparations are often found to prove cathartic and diuretic; that the aperient often ſtop Fluxes; and the Preparations of both kinds promote the Flux of the Menſes, and ſuppreſs them when immoderate. If we inquire into the Cauſe of thoſe various Phenomena, it will be found to be entirely in the Stypticity of Iron; which, according to the different Diſpoſitions of the Body of the Patient, produces different, and even contrary Effects. Therefore, though Iron may often act as an Aperient, yet even then it acts only by its Adſtriction. To conceive this, we are to conſider, that the morbid State of the Blood is of three kinds; the firſt is the glutinous State, in which the Blood, deprived, in a great meaſure, of its ſpirituous Part, ſwims in a thicker Serum; and thus ſticks in almoſt all the ſmall Veſſels, creating Obſtructions almoſt every-where, and, conſequently, Cachexies. The ſecond State is a thick Blood, deprived of a great Quantity of its Serum, whence it is ſaid to be aduſt or melancholic: In this State it eaſily ſtagnates in the ſmall Veſſels, and produces ſcirrhous and ſcorbutic Obſtructions. Thirdly, the Blood may abound with too great a Quantity of Serum, and thereby open to itſelf Paſſages and Chanels, into which the Blood does not naturally flow. All theſe morbid States proceed from the undue Contraction of the Veſſels, and their undue Action upon the Fluids, without which Action theſe Fluids cannot circulate.

Thus when the Serum is too thick, the Elaſticity of the Veſſels is too ſmall to propel the Blood as it ought to be; and hence follow Leucophlegmacies, Chloroſes, Suppreſſion of the Menſes, Cachexies, and other Diſeaſes of the ſame Kind. When the Quantity of Serum is too ſmall, the Blood, if we may ſo ſay, becomes ſolid, and thus eludes the Force of the Veſſels, forming very ſtubborn Obſtructions, ſuch as Scirrhuſes, and others of that kind. Theſe Obſtructions are often followed by Hæmorrhages, difficult to be cured, as is ſeen in Dropſies. Laſtly, when the Veſſels are continually bathed in a great Quantity of thin Serum, they loſe their Elaſticity, and the Blood, being too much diluted, relaxes and weakens the ſolid Parts, paſſes in unuſual Chanels, and thus produces Diarrhœas, Diabetes, Hæmorrhages, Dropſies, and the like.

What can be the Effect of Iron in all theſe Caſes, is evident from its Taſte, which, in crude Iron, as well as in all its Preparations, is ſtyptic, contracting the Fibres of the Tongue, Palate, and of the whole Mouth; whence follows a more copious and frequent Diſcharge of Saliva. Hence we may eaſily judge, what will be the Effect of all Martial Preparations, taken inwardly; that is, to conſtringe the Fibres, to reſtore and increaſe their Elaſticity, by which Effects the Fluids, ſtagnating in the Interſtices of the Fibres, will be expelled; the inſpiſſated Juices broken to Pieces, and made more fluid; and the Motion of all the Fluids accelerated. The ſame Effects are produced in the Fluids; the fibrous Part of the Blood is conſtricted, and the Serum ſqueez'd out of it; and that, either to the Advantage or Prejudice of the Patient, according to the State of his Solids and Fluids; and, therefore, great Judgment is requir'd in preſcribing Iron, and its ſeveral Preparations.

In cachectic Caſes, ſuch as Leucophlegmacy, Chloroſis, Suppreſſion of the Menſes, and other Diſeaſes, in which the Blood is glutinous and viſcid, the Preparations of Iron are of ſovereign Uſe; for, by its aſtringent Quality, it brings the Fibres of the ſolid Parts into Contact, expreſſes the Serum contain'd in the Interſtices between them, and throws it into the Veſſels. Thus the Blood is diſſolved, the Elaſticity of the ſolid Fibres reſtored, the viſcid Juices attenuated, and a due Circulation every-where reſtored. Iron is far from being of the ſame Benefit in ſcirrhous, ſcorbutic, and melancholic Affections; for the Blood being, in theſe Caſes, too much deprived of Serum, the Veſſels, already too tenſe, are further corrugated by the Action of Iron, and their oſcillatory Motion thereby impaired. Hence the inſpiſſated Blood moves ſtill more ſlowly, the fibrous Part being gradually more compacted, and deprived of its Serum. In ſuch Caſes, therefore, Iron is prejudicial; and tho' it be called aperient, it can neither reſolve theſe kinds of Obſtructions, nor ſtop the Hæmorrhages ariſing from them. Exceſſive Evacuations, whether by Stool, Hæmorrhage, continual Sweats, Dropſies, or other Affections, proceeding from too large a Proportion of Serum, are accurately to be diſtinguiſhed by Phyſicians. Iron is of Service in all ſuch Diſeaſes, as it ſtrengthens the ſolid Fibres, expels the redundant Serum, and reſtores the Elaſticity of the Veſſels; but if theſe Evacuations ariſe from ſtubborn Obſtructions, as is uſually the Caſe in hectic Fevers, all Preparations of Iron are hurtful; for, by ſeparating the ſerous from the fibrous Parts of the Blood, and forcing that Serum out of the Body, they increaſe both the Evacuations and Obſtructions. Thus, though the Uſe of Iron may be proper in the Beginning of a Dropſy, it is always hurtful in Dropſies of long Standing; becauſe, in ſuch, the exceſſive Flux of the Serum, having already left the fibrous Part of the Blood almoſt dry, would be ſo much increaſed by the Uſe of Iron, that the Patient, gradually deprived of the Uſe of all his Limbs, would ſpeedily fall a Sacrifice to that Medicine, thus injudiciouſly applied.

Thus all the good and bad Effects of Iron proceed from its Stypticity; by this alone it binds and opens. But it is not to be thought, that all Styptics perform the ſame Effects with Iron in proportion to their Stypticity; Iron having this peculiar to itſelf, that, through all the Stages of Circulation, it preſerves this Quality; whereas vegetable Styptics are ſo much changed in the Primæ Viæ, that the Blood and ſmall Veſſels are hardly affected by them; whereas Iron is only opened by the Juices of the Stomach and Inteſtines, and thereby diſpoſed to Action, as it enters the Blood, by which its Efficacy is diffuſed through the whole Habit, its aſtringent Virtue being every-where exerted. It ought, however, to be obſerved, that Iron is better preſcribed in Subſtance, than impregnated with Salts; for, when united with Salts, it is not ſo eaſily penetrated and diſſolved by the Juices of the Stomach. Laſtly, Exerciſe is extremely proper during the Uſe of Martial Medicines, in order to diſtribute the Particles of the Iron through the whole Habit, to reſtore the oſcillatory Motion of the ſolid Fibres, and to accelerate the Motion of the Blood.

An infinite Number of other Preparations of Iron occur in chymical and pharmaceutical Authors; for which the Curious may conſult particularly the *Collectanea Chymica Leydenſia.*

Melampus is the firſt upon Record, who exhibited Iron by way of Medicine; for he is ſaid to have directed *Iphiclus* to take the Ruſt of a Knife, and drink it in Wine, ten Days together, in order to procure him Children.

MARSIPION, μαρσίπιον, in *Hippocrates's* Treatiſe *de Fiſtulis*, is a Sacculus, or Bag, in which he directs the green Leaves of Capers to be included, and thus applied to the Anus.

MARSUM, or MARSICUM VINUM. A Sort of *Italian* Wine produced in the County of the *Marci* in *Italy*; it is eſteem'd auſtere and aſtringent.

MARSUPIALIS MUSCULUS. The Name of a Muſcle of the Thigh, called, alſo, OBTURATOR INTERNUS.

This is a flat Muſcle, almoſt triangular, ſituated in the Bottom of the Pelvis. It covers the oval Foramen, and almoſt all the Inſide of the Os Pubis and Iſchium. It has its Name from a *Latin* Verb, which ſignifies *to fill up*, *cover*, or *ſtop*.

It is fixed to the internal Labium of all the anterior Half of the oval Foramen, a little to the neighbouring Part of the Obturator Ligament; and, alſo, both above and below the Foramen. It is, likewiſe, fixed to the upper Half of the Inſide of the Os Iſchium, from the upper oblique Notch of the oval Foramen, to the ſuperior Part of the great poſterior Sinus of the Os Ilium, which would be more properly named Sinus Iliacus, than Sinus Iſchiadicus.

From all this Extent the fleſhy Fibres, contracting in Breadth, run down below the Spine of the Iſchium, where they go out of the Pelvis, through the poſterior Notch of the Iſchium. The Inſide of the Body of this Muſcle, or that turned to the Cavity of the Pelvis, is pretty uniform; but the Outſide, or that turned toward the oval Foramen, and which touches the Bone, has four middle radiated Tendons; which, uniting at the poſterior Notch of the Iſchium, run over it, from behind forward, as over a Pulley, each Tendon ſliding in a particular cartilaginous Chanel.

Afterwards, the four Tendons, having got out of the Pelvis, are very ſtrictly united in one large flat Tendon; which, croſſing over that of the Pyriformis, unites with it, having firſt received ſome additional fleſhy Fibres from the two Gemelli.

The great Tendon ſlides freely in a ſort of membranous Vagina, formed by theſe Muſcles, and is inſerted in the Middle of the ſuperior Part of the Cavity of the great Trochanter, adhering cloſely to the capſular Ligament of the Joint, and being united to the Tendons of the Glutæus minimus, and Pyriformis.

The Obturator Internus has nearly the ſame Uſes with the Quadrigemini, in making the Rotation of the Thighs when extended, and the Abduction when bent. But the Mechaniſm of this Muſcle is ſingular in this reſpect, that, by the Paſſage of its Tendon over the ſmall iſchiadic Notch, it acquires a different Direction from that of the Belly, or fleſhy Body.

This Notch ſupplies the Place of a Pully, over which a Rope is thrown, one End of which is faſtened to a moveable Object, which, by pulling the other End, may be brought nearer the Pulley. In this the Pulley performs the Office of a fixed Point, or Fulcrum, with reſpect to the moveable Body. And, in like manner, the iſchiated Notch is a Fulcrum for the Motion of the Thigh by the Obturator Internus. *Winſlow's Anatomy.*

MARTACH or MARTATH. Litharge. *Rulandus.*

MARTAGON. A Species of Lily. See LILIUM. The Chymiſts, alſo, apply the Name to the Matter of the Philoſophers Stone. *Rulandus* explains Martagon, *Silphium.*

MARTECH. *Fallopius* ſuppoſes this to be the ſame as Martach, that is, Litharge.

MARTES. The Marten, an Animal more eſteem'd for the Excellence of its Fur, than any medicinal Virtues it is poſſeſſed of. There are two Sorts, principally found in the Northern Countries. The largeſt is called *Martes*, *Marta*, *Marterus*, *Foina*, *Gainus*, and *Sciſmus*. The ſmalleſt is named *Muſtela Zibelina*, *Mus Scythicus*, or *Sarmaticus*, and *Zobola*.

The Fleſh of the Marten is ſaid to be reſolutive, and good to fortify the Nerves.

MARTIANUM POMUM, is an Orange. *Suetonius.*

MARTIATUM UNGUENTUM. The Soldiers Ointment, is thus prepared:

> Take of freſh Bay-leaves, three Pounds; of Garden Rue, two Pounds and an half; of Marjoram, two Pounds; Mint, one Pound; Sage, Wormwood, Coſtmary, and Baſil, each half a Pound; Olive-oil, twenty Pounds; yellow Wax, four Pounds; *Malaga* Wine, two Pints; and make them all into an Ointment, by Bruiſing, Macerating, Boiling, and Expreſſion.

This is ſaid to have been the Contrivance of one *Martian*, for the Soldiers to preſerve their Limbs from the Injuries they were liable to in long Encampments, and by ſuſtaining Cold.

Nicolaus gives it with an intolerable Croud of Ingredients; and the *Auguſtane* and firſt *London* Diſpenſatories have tranſcribed it from him, with very little Alteration; but later Reviſes of the College have rejected the inſignificant Ingredients, and brought it to that conciſe uniform Compoſition it now ſtands in here; it is eſteemed enough to be pretty frequently preſcribed, and conſtantly kept in the Shops.

MARTYNIA.

This Name was given by the late Dr. *Houſtoun*, to this Genus of Plants, which he diſcover'd in *America*, in Honour to his Friend Mr. *John Martyn*, Profeſſor of Botany in *Cambridge*.

The Characters are;

It hath an anomalous Flower, conſiſting of one Leaf; which is divided into two Lips; the upper Lip is erect, and ſlightly cut into two Parts; but the under Lip is cut into three Parts; the middle Segment being larger than the other two. The Flower is ſucceeded by a Fruit, having a ſtrong thick Covering; in which is included a very hard Nut, having two ſharp crooked Horns at one End; and in the Nut are included four Seeds, lodged in ſo many ſeparate Cells.

Miller mentions three Species.

1. Martynia annua villoſa & viſcoſa, folio ſubrotundo, flore magno rubro. *Houſt.*

2. Martynia annua villoſa & viſcoſa, aceris folio, flore albo, tubo longiſſimo. *Houſt.*

3. Martynia perennis, folio ſubrotundo rugoſo, flore cœruleo, radice dentariæ. *Linn.*

There are no medicinal Virtues at preſent aſcribed to theſe Plants that I know of.

MARU. A Name for the *Cerinthe quorundam*; *major*; *verſicolore flore*. And for the *Horminum*; *ſylveſtre*; *Lavandulæ flore*.

MARUM.

The Characters are;

It has the Appearance of a Shrub; the Leaves are cuſpidated, like thoſe of the Serpyllum; the Flower reſembles that of the Teucrium, one growing in the Ala of each Leaf; it is of an acrid and volatile Smell.

Boerhaave mentions two Species of this Plant; which are,

1. Marum; Syriacum; vel Creticum. *Park. Theat.* 13. *Boerh. Ind. alt.* 182. *Marum Syriacum.* Offic. Ger. 544. Emac. 670. *Marum Cortuſi.* J. B. 3. 242. Raii Hiſt. 1. 527. *Marum Creticum.* Alp. Exot. 288. *Majorana Syriaca vel Cretica.* C. B. P. 224. *Chamædrys incana*, *maritima*, *fruteſcens*, *foliis lanceolatis.* Tourn. Inſt. 205. SYRIAN HERB MASTICH.

This is a lower and tenderer Plant than the Maſtichina, having white hoary Branches and Leaves, green above, and hoary underneath; but leſs than the Leaves of that: The Flowers grow on the Tops of the Stalks, in large, white, hoary Calyces, of a red Colour, and larger than the Maſtichina, having no Galea; and therefore it is, by *Tournefort*, reckon'd a Species of Chamædrys. The Root is ſmall and woody; the Leaves and Flowers have a very piercing grateful Scent, ſo quick that it will cauſe Sneezing. The Cats are great Admirers of this Plant, and it muſt be carefully defended, or they will eat and deſtroy it. It is nurſed up in the Gardens of the Curious, being leſs patient of Cold than the Maſtichina. It grows naturally in *Candia* and *Syria*.

This is accounted a good cephalic and nervous Plant, and is much uſed in cephalic Snuff; but is of little other Service in Phyſic. *Miller's Bot. Off.*

This Plant is very friendly to Nature; the Leaves, rubbed, emit an Odour, which affects the Brain like volatile Salt; but in Summer, when ſcorched, and, as it were, burnt by the fervent Heat of the Sun, they yield no Smell at all, though rubbed never ſo vehemently: Hence it appears to contain an acidulous volatile Salt, and that nothing in Art or Nature affords the like. This Salt is very good againſt Apoplexies, Lethargies, and hyſteric and epileptic Diſorders, provided they proceed from a cold Cauſe. The Spirit, ſprinkled in any Place, diffuſes a moſt grateful Scent; and Paper, impregnated with it, maintains its Fragrancy for a whole Year. It is a Plant of extraordinary Uſe in phlegmatic Diſeaſes, proceeding from the Stomach, the Anaſarca, and ſtomachic and uterine Diſorders. The Conſerve, with Spirit of Wine, yields a Spirit far exceeding *Hungary* Water. It is of Service, alſo, in venomous Bites, a fetid Breath, and is an Ingredient in Theriacal Compoſitions. *Hiſt. Plant. aſcript. Boerhaav.*

2. Marum; Hiſpanicum; nigrum; flore purpureo; Piperella Hiſpanis. *Barr. Ic.* 694. *Boerh. Ind. alt. Plant.*

MARUM VULGARE. See MASTICHINA.

MAS. A Male, among Animals. In Botany ſome Plants are called *male*, and others of the ſame Species, *female*; the male are thoſe which are barren, and bear no Seed; the Female are thoſe which produce Seed. Sometimes the male and female Flowers grow on the ſame Plant.

Sometimes Mercury, and ſometimes Sulphur, is called *Mas* by the Alchemiſts.

MASARANDIBA PISON. A Tree which grows in *Braſil*, very like our *European* Cherry-trees, in every reſpect, except that the Fruit it produces is not ſo round as our Cherries. This Fruit contains a very hard Stone, and a very agreeable milky Juice; which is expreſſed by the Inhabitants of *Braſil*, and taken, by way of Emulſion, as a Remedy for cold Affections of the Breaſt, and Hoarſneſs, either alone, or joined with other Pectorals.

MASCHALE, μασχάλη. The Axilla, or Arm-pit.

MASCHALISTER, *μαχαλιστὴρ*. A Name for the ſecond Vertebra of the Back.

MASCI. A Name for the *Phaſeolus*; *Octocaulis*; *Mungo Perſarum Turcarum maſc. Hiſpaniorum max. Boerh. Ind. alt.*

MASCULINITAS. A Conception of a male Child. *Maſculinans* is an Epithet for the Woman who conceives a male Child: Thus, alſo, *Fœminitas* is the Conception of a female Child; and *Fœminans*, the Woman who conceives it. *Caſtellus* from *Avicenna*.

MASELUC. A Name of the *Molucca*; *Spinoſa. Boerh. Ind. alt.*

MASLACH, a Medicine much in Uſe among the *Turks*; it is called, alſo, *Anſion*, or *Amphion*, and is prepared of Opium: They take a Dram of it at a time, and ſometimes two or three, in order to qualify themſelves the better for Venereal Exerciſes, or to raiſe their Courage when they are going into the Field of Battle. *Caſtellus*.

MASNAPHII, *Confectio*. The Name of a medicinal Compoſition, deſcribed by *Aetius Tetrabib.* 4. *Serm.* 1. *Cap.* 118.

MASPETA, a Name by which ſome call the Leaves of the *Silphium*. *Dioſcorides*, *Lib.* 3. *Cap.* 94.

MASSA. See MAZA.

MASSALIOTICON, the Name of a Plaiſter, commended by *Galen* for a Carbuncle. It takes its Name from *Demoſthenes Maſſaliotes*, and is deſcribed by *Ægineta*, *Lib.* 7. *Cap.* 13.

MASSALIS, *Moſel*, *Maſſariam*, *Mater*. Mercury. *Rulandus*.

MASSETER. The Name of a Muſcle which ſerves to move the lower Jaw. See CAPUT.

MASSICOT. Ceruſs, or white Lead, calcined by a moderate Fire. There are three Sorts of it, the white, the yellow, and the Gold-colour'd; their Difference proceeds only from the different Degrees of Fire, which gives them different Colours. The white Maſſicot is of a yellowiſh-white, and is what has received the leaſt Degree of Heat; the Yellow has received more, and the Gold-colour'd the greateſt Heat of all. They ought to be in the Form of an impalpable Powder, ponderous, and deeply coloured; they are uſed by Painters.

Outwardly applied, they are ſerviceable as Driers; for which Purpoſe they may enter the Compoſition of Ointments, or Plaiſters. *Lemery des Drogues*.

MASSINILIA. A Name for the Species of Tithymalus, called by *Boerhaave*, *Tithymalus*; *Americanus*; *arboreſcens*; *folio cotini*.

MASSOY. A ſort of Bark mentioned by *Ray*, in his Hiſtory of Plants, from the *German Ephemerides*, *An.* 11. It grows in *New Guinea*, where it is beat to a Pulp with Water, and uſed for anointing the Body, in cold and rainy Seaſons. It has a grateful Fragrance, heats, and eaſes Gripes, and Pains of the Belly.

MASTHLE, *μάσθλη*, or MASTHLES, *μάσθλης*. A Skin, Hide, or Thong of Leather. *Hippocrates*.

MASTICATIO. Maſtication. The Action of Chewing the Aliment.

MASTICATORIUM. A Maſticatory; an Apophlegmatiſm in a ſolid Form. See APOPHLEGMATISMUS.

MASTICHE. Maſtich. See LENTISCUS, and BALSAMUM.

MASTICHELÆON, *μαστιχέλαιον*. Oil of Maſtich. *Dioſcorides*, *Lib.* 1. *Cap.* 51.

MASTICHINA.

The Characters are;

The Leaves are larger than thoſe of Serpyllum; the Stalks erect and ſhrubby; the Calyx is long, narrow, tubulous, and expanded at the Top into five long and very ſlender Segments, which are overſpread with a ſubtile Down, to ſuch a Degree as to appear compoſed of nothing elſe: The Galea is erect and bifid, and the Beard trifid, ſo as to make the Flower appear in a manner pentapetaloidal: The Whorles of the Flowers are cloſely ſet, and the Flowers collected into white, lanuginous, oblong Heads.

Boerhaave mentions but one Sort of this Plant; which is,

Maſtichina. *Boerh. Ind. alt.* 156. *Marum*. Offic. Ger. 544. Emac. 670. Raii Hiſt. 1. 520. *Marum vulgare*. Park. Theat. 12. *Sampſuchus ſive Marum Maſtichen redolens*. C. B. P. 244. *Clinopodium quibuſdam*, *Maſtichina Gallorum*. J. B. 3. 243. *Thymbra Hiſpanica*, *Majoranæ folio*. Tourn. Inſt. 197. HERB MASTICH.

This is a ſhrubby Plant, full of round, ſlender, brown Stalks, a Foot high or more, having two ſmall Leaves at a Joint, ſomewhat bigger than Thyme, but elſe much like them: The Flowers grow on the Tops of the Stalks, in ſoft, downy, verticillated Spikes; by which alone it may be known from all other Plants of this Kind; they are ſmall, white, and galeated. The whole Plant has a pleaſant grateful Smell: It is planted in Gardens, continuing ſeveral Years, if not deſtroyed by ſevere Cold: It flowers in *June* and *July*. The Leaves and Heads are uſed.

This is much of the Nature of Marjoram; but differs from it in being, as ſome write, of great Service in the too great Flux of the Catamenia; a Dram of the Powder being given in rough Wine. It is an Ingredient in the Trochiſci Hedychroi. *Miller's Bot. Off.*

It take its Name from *Maſtiche*, Maſtich, becauſe it has the Smell and Virtues of Maſtich.

This Plant is ſudorific, cephalic, and aperient; it is of Service againſt venomous Bites, and a cadaverous Breath. It is hotter than Betony, and not ſo hot as Serpyllum and Thyme, tho' it has the ſame Virtues, only is a little more aſtringent. *Hiſt. Plant. aſcript. Boerhaave*.

MASTICOT. *Helmont* ſays this is a Colour us'd by the Painters, prepar'd from Tin.

MASTIERON. A Name of the Stalk of the Plant, which produces the *Silphium*. *Oribaſii Collect. Medicinal. L.* 12.

MASTOIDÆUS *Muſculus*. The Maſtoide Muſcle.

Winſlow takes notice of two Muſcles under this Name. The firſt is the *Maſtoidæus Anterior*, or *Sterno-Maſtoidæus*.

This is a long, narrow, pretty thick, and moſtly fleſhy Muſcle, ſituated obliquely between the back Part of the Ear, and lower Part of the Throat. It is in a manner, compoſed of two Muſcles, united at the upper Part through their whole Breadth, and ſeparated at the lower.

It has two Inſertions below, both of them flat, and a little tendinous. The firſt is in the upper Edge of the Sternum, near the Articulation of the Clavicula; the other in the Clavicula at a ſmall Diſtance from the Sternum. Theſe two Portions run up obliquely, and unite together at about an Inch above their lower Inſertions, the triangular Space left between them being filled by a Membrane.

The ſternal Portion paſſes foremoſt, and covers the clavicular, both forming one Body or Belly, which, running in the ſame oblique Direction to the Apophyſis Maſtoidæus, is inſerted in the upper and back Part of that Proceſs; over which it likewiſe ſends off a very broad Aponeuroſis, which covers the Splenius, and is inſerted in the Os Occipitis.

The two anterior Maſtoidæi repreſent a great Roman V, the Angle being at the lower Part of the Throat, and the two Crura running up behind the Ears, as may be plainly ſeen without Diſſection.

The Action of the Sterno-Maſtoidæi is different, according as either both Muſcles or only one of them acts, and according to different Situation of the Head and Trunk.

When we keep the Head and Trunk ſtreight, whether in ſtanding or ſitting, both Muſcles preſerve the Head in that Poſture, againſt any Force by which it would otherwiſe be moved backward. This we may be convinced of by laying the Hand on theſe Muſcles, while we endeavour to reſiſt a Force which puſhes back the Head.

One of theſe Muſcles acting alone may have the ſame Uſe, if the Force to puſh the Head back be applied between the anterior and lateral Parts of it. In that Caſe the Sterno-maſtoidæus on the ſame Side would oppoſe this Force; but if it were applied directly on the Side of the Head, that Oppoſition would have no Effect without the Aſſiſtance of the Splenius on the ſame Side.

They both ſerve likewiſe to perform the Rotations of the Head, that is, to make it turn to either Side, as on a Pivot; and in this Caſe, when we turn the Head to one Side, the Sterno-maſtoidæus on the other Side acts, and not that on the ſame Side; this is an Obſervation of Conſequence in paralytical Diſorders.

They both ſerve, in the next Place, to bring the Head near the Thorax, when we lie on the Back, or bend backward in ſitting. And the lower the Head is in theſe Situations, the more Force muſt theſe Muſcles exert to raiſe it. In this Caſe the Sternum, being the fixed Point, muſt remain immoveable; but as its Connexion with the firſt Rib, and the Inflexibility of the Cartilage of that Rib, are not always ſufficient for this, the Muſculi Recti of the Abdomen muſt lend their Aſſiſtance in great Efforts.

In moſt People, we may call this the Co-operation of the abdominal Muſcles, in raiſing the Head, when they lie on their Back, by laying the Hand on theſe Muſcles. But when the Cartilage of the firſt Rib is very much hardened, and the Articulation quite depriv'd of Motion, as where the firſt and ſecond Ribs are partly confounded together, of which I have ſeen Inſtances, in ſuch People the Sternum does not want any other Aſſiſtance to keep it immoveable, and therefore the Co-operation of the Muſcles of the Abdomen will not be perceivable

When, being in an erect Poſture, either ſtanding or ſitting, we lower the Head, the Sterno-maſtoidæi do not act, neither have they any Share in that Poſture. It is produced only by the Relaxations of the poſterior Muſcles, by which alone the Head is ſuſtained in this erect Poſture, and without which it would naturally fall forward, as we ſee in thoſe who fall aſleep, or are taken ſuddenly ill, while ſitting.

The Inſertions of theſe Muſcles in the poſterior Part of the Maſtoide Apophyſes, has made ſome Anatomiſts believe, that they are more proper to bend the Head backward than forward; their Inſertions being behind the Condyloide Articulation of the Os Occipitis; and to this they might have added, that the Neck,

from

from the natural Diſpoſition of the Vertebræ, is better fitted for Flexion backward than forward.

But, in the firſt place, as theſe Inſertions take up a great deal of Room, the moveable Point can only be determined to that Part, which is neareſt the fleſhy Body, and the moſt anterior; and conſequently not ſituated ſo far back as is imagined.

In the ſecond place, as the Motions of the Head forward, by theſe Muſcles, is diſtinct from that of the Neck, the anterior Muſcles of the Vertebræ of the Neck muſt act at the ſame Time, and hinder them from bending backward; ſo that, in this Caſe, the Neck may be looked on as a Pillar, the upper Part of which ſupports the Head, while the Head, acted upon by the Muſcles, carries the lower Part of it forward. It is for want of this Co-operation, that Experiments made on dead Bodies, have been ready to miſlead Anatomiſts.

The ſecond is the *Splenius, ſive Maſtoidæus poſterior.*

This is a flat, broad, oblong Muſcle, ſituated obliquely between the back Partof the Ear, and the poſterior and lower Part of the Neck. It is partly ſingle, and partly made of two Portions, one ſuperior, the other inferior. Theſe two Portions are cloſely united backward, making only one Plane; but they are divided above.

The ſuperior Portion is fixed to the Extremities of the three or four loweſt ſpinal Apophyſes of the Neck, and of the firſt, or firſt and ſecond, of the Back. It is not fixed immediately to the Atrophyſes of the Neck, which are above the laſt, but only by the Intervention of the poſterior cervical Ligament.

It is, likewiſe, fixed to the Edge of the internal ſpinal Ligaments of the other Vertebræ; and, therefore, its Inſertions in the ſpinal Apophyſes are not interrupted by the Diſtances between theſe Apophyſes, but form one thin continued Plane, a little tendinous.

From thence it runs up obliquely toward the Maſtoide Apophyſis, partly under the upper Extremity of the Sterno-maſtoidæus, and is inſerted in the upper Part of that Proceſs, and along the neighbouring curve Portion of the tranſverſe Ridge of the Os Occipitis.

The inferior Portion of the Splenius is fixed to three or four ſpinal Apophyſes of the Back, beginning by the ſecond or third. From thence it runs up, being cloſely united to the other Portion, till it reaches the ſuperior and lateral Part of the Neck, where it ſeparates from it, and is inſerted in the tranſverſe Apophyſes of the three or four ſuperior Vertebræ of the Neck, by the ſame Number of Extremities a little tendinous; which, however, are ſometimes only two in Number. This Portion of the Splenius belongs rather to the Neck than to the Head.

The two Splenii repreſent a great *Roman* V, and the Splenius and Sterno-maſtoidæus, of the ſame Side, form a Figure like a *Roman* A, or the Legs of a Pair of Compaſſes, the Points whereof are in an horizontal Plane. Thus theſe four Muſcles, ſurrounding the Neck, meet alternately at their upper and lower Extremities.

The two Splenii ſerve to ſupport the Head in an erect Poſture, whether in Standing or Sitting; to moderate the Flexion of the Head forward, and to bring it back again to its natural Poſture.

They ſerve alternately to co-operate with either of the Sterno-maſtoidæi for the Rotation of the Head; thus when the Right Sterno-maſtoidæus turns the Head, the Left Splenius correſponds with it by its upper Part; while the lower Part, at the ſame time, turns the Vertebræ of the Neck.

When we lie on one Side, and raiſe the Head laterally, the Splenius and Sterno-maſtoidæus of the oppoſite Side act in Concert. Alſo, when we ſtand, and incline the Head to one Side, it is the Splenius and Sterno-maſtoidæus of the other Side which moderate that lateral Flexion, and afterwards extend the Head, And as the Sterno-maſtoidæus is partly inſerted in the Clavicula, the Latiſſimus Dorſi concurs, alſo, in this Action, and fixes the Clavicle by means of its Connexion with the Os Humeri, which is of conſiderable Advantage in the Action of the Sterno-maſtoidæus. *Winſlow's Anatomy.*

MASTOIDÆUS LATERALIS. See COMPLEXUS MINOR.

MASTOS, *μαστὸς*. A Breaſt. See MAMMA.

MASTUPRATIO, or MANUSTUPRATIO. Manual Stupration, a Vice not decent to name, but productive of the moſt deplorable and generally incurable Diſorders. Thus we have given a remarkable Hiſtory, under the Article AMAUROSIS, of a Series of Diſtempers cauſed by this abominable and unmanly Practice. And, under the Article GONORRHOEA, to this we have attributed the moſt obſtinate Gleets. Beſides theſe, incureable Impotence, Loweſs of Spirits, hypochondriacal Diſorders, and almoſt all Sorts of chronical Diſtempers, are excited by it. And it is worthy of Remark, that People accuſtomed to ſuch Filthineſs, are not ſo eaſily cured of chronical Diſtempers, as others who are Strangers to it. For, as *Celſus*, ſpeaking about Venereal Intercourſes, prudently remarks, *Cavendum, ne in ſecunda valetudine adverſæ præſidia conſumantur.* That is, "We ſhould "take care, during Health, not to laviſh away that Strength of "Conſtitution which ſhould ſupport us in Sickneſs."

MASUCHA, *μάσυχα*. The Name of a compound Medicine deſcribed by *Paulus Ægineta, Lib. 7. Cap. 23.* He, alſo, calls it *Maſuaphium.*

MATALISTA. *Caſtellus*, from *Wedelius*, defines this to be the third Species of Jalap, or Mechoacan, called by the *Indians Matbaliſtic.*

MATER. In Anatomy, the two Membranes inveſting the Brain are called *Dura Mater*, and *Pia Mater*. See CAPUT. In Botany, the *Artemiſia*, Mugwort, is called *Mater Herbarum.* In Chymiſtry, Quickſilver is known by the Name of *Mater Metallorum.*

MATER PERLARVM. Offic. Schrodr. 5. 530. *Concha Margaritifera.* Mont. Exot. 6. Jonſ. Evang. Tab. XIII. Bellon. Aquat. 402. Aldrov. Exang. 418. Charlt. Exer. 64. *Concha Mater Unionum.* Rondel. Aquat. 2. 33. *Concha, Mater Unionum dicta, aut Margaritifera.* Bonan. 93. 11. n. 1. *Concha Margaritifera pleriſque Berberis antiquis Indis dicta.* Liſt. Hiſt. Conch. 3. n. 56. *Concha valvis æqualibus, inæquilatera mediocriter vel leviter umbonata, &c.* Lang. Meth. Teſt. 69. MOTHER OF PEARL.

This is not the Shell in which the Pearl is found, as is commonly ſaid, but a Shell of another Kind, called *Concha Margaritifera*, though it produces no Pearls. This is abſorbent and cordial, in the ſame Degree with Pearls; but then only the pureſt and moſt ſhining Parts of the Shells muſt be uſed, being firſt well levigated on the Porphyry; and theſe, by the Retort, yield a volatile Salt. *Geoffroy.* See CONCHA.

MATERIATURA. *Caſtellus* explains *Morbi Materiaturæ*, Diſeaſes of Intemperature.

MATES. The Name of a Fruit mentioned by *Cluſius*; and by *Caſp. Bauhine*, by the Name of *Fructus, ſubrotundus, durus, eleganter rubens.* They are deſcribed to be of an elegant red, and about the Size of the Seeds of Caſſia, or the Carob-tree.

MATHEDORAM. Sal Gemmæ. *Rulandus.*

MATORIUM. Gum Ammoniac, or Galbanum, *Rulandus.*

MATRACIUM. A Matras, in Chymiſtry, is a round Glaſs Veſſel, with a long Neck, uſed in Digeſtions, and other Operations.

MATRICALIA. Medicines appropriated to Diſorders of the Uterus.

MATRICARIA.

The Characters are;

The Root is annual and fibrous; the Leaves are cut many Ways, and by Conjugations; the Calyx is hemiſpherical and ſquamous; the Flowers are collected into Bunches, or form Umbellas, and are generally marked with white Rays.

Boerhaave mentions eleven Species of this Plant; which are,

1. Matricaria; vulgaris; vel ſativa. *C. B. P.* 133. *Tourn. Inſt.* 493. *Boerh. Ind. A.* 110. *Matricaria, Parthenium.* Offic. *Matricaria.* Ger. 526. Emac. 652. Raii Hiſt. 1. 557. Synop. 93. *Matricaria vulgaris ſimplex.* Park. 83. *Matricaria vulgo minus Parthenium.* J. B. 3. 129. FEVERFEW.

The Leaves of Feverfew are large and winged, divided into ſeveral Sections, uſually about ſeven, that at the End being the largeſt; they are deeply cut-in, or laciniated, of a pale yellow-green Colour. The Stalks are ſtiff, round, or ſtriated, two Foot high, or more, cloathed with ſmaller Leaves, and pretty much branched towards the Top, on which grow large flat Umbels of Flowers, made of ſeveral white Petals, broader and ſhorter than thoſe of the Chamomile, ſet about a yellow Thrum. The Root is thick at the Head, having many Fibres under it; the whole Plant has a very ſtrong, and, to moſt, an unpleaſant Smell. It grows in Hedges and Lanes, and flowers in *June* and *July*. The Leaves and Flowers are uſed.

This is an Herb, particularly appropriated to the Female Sex, being of great Service in all cold flatulent Diſorders of the Womb, and hyſteric Affections; procuring the Catamenia, and expelling the Birth and Secundines. The Juice, to the Quantity of two Ounces, given an Hour before the Fit, is good for all Kinds of Agues. It, likewiſe, deſtroys Worms, provokes Urine, and is good for the Dropſy and Jaundice. *Miller's Bot. Offic.*

It is of conſiderable Service, the Decoction of it being drank, in uterine Affections, as may be inferred from its very Name, in provoking the Menſes, expelling the Secundines, and for hyſteric Diſorders. It performs all the Effects of Bitters, in a commodious manner; and the Herb itſelf, or its expreſſed Juice, expels Worms from the Belly as effectually as Centaury or Wormwood: It is good, alſo, in the Gout. The *Engliſh* and *Germans* call it *Feverfew*, that is *Febrifuge*, from its Effects. Some, as *Braſſavola*, in *Exam. Simpl.* and ſome skilful experienced Women, as *Tragus* obſerves, 1. *Hiſt.* 50. aſcribe to it a purgative Quality; as *Dioſcorides* does to his Parthenion. Bees cannot bear the Smell of Feverfew; for which Reaſon, plethoric Perſons, who are principally ſubject to be ſtung by Bees and Gnats, would do well to carry about them a Bunch of Feverfew, when they walk in Gardens: The ſame Effect may be expected from the *Cotula fetida S. Pauli.* For the Hemicrania, take an Handful of the Leaves of Feverfew, heat them in a Frying-pan, and apply them to the Crown of the Head. *Cheſneau.* Crude Feverfew, applied ro the Crown of the Head, is often found effectual in the Head-ach. *S. Pauli.* The ſame Author tells us, that he uſed

uſed to prepare a Decoction of Feverfew, and the Flowers of Chamomile, and a little Baum, by which he frequently cauſed a preſent Ceſſation of hyſteric Symptoms, with a free and plentiful Flux of the Lochia. *Raii Hiſt. Plant.*

2. Matricaria; vulgaris; vel ſativa; barbulis exiguis.

3. Matricaria; vulgaris; vel ſativa; caulibus rubentibus.

4. Matricaria; vulgaris; vel ſativa; floribus nudis, bullatis.

5. Matricaria; vulgaris; vel ſativa; florum petalis fiſtuloſis.

6. Matricaria; vulgaris; vel ſativa; florum petalis fiſtuloſis & brevioribus.

7. Matricaria; flore pleno. *C. B. P.* 134. *J. B.* 3. 130.

8. Matricaria; flore pleno, petalis fiſtuloſis.

9. Matricaria; flore pleno, petalis marginalibus planis, diſcoidibus fiſtuloſis.

10. Matricaria; foliis elegantiſſime criſpis; & petalis florum fiſtuloſis. *T.* 493.

11. Matricaria; Americana; Ambroſiæ folio; parvo flore albo. *T. App.* 666. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 110.

It is called *Matricaria* from *Matrix*, becauſe it is of ſingular Efficacy in Diſeaſes of the Matrix; it is, alſo, called *Parthenium*, from παρθένος, *Parthenos*, a Virgin, for the ſame Reaſon. There is in all the Species a peculiar Smell, except in the eleventh, which has no Smell. It is proper in all cold Diſeaſes of the Uterus, and has a more bitter, oleous, and acrid Taſte than Chamomile, as ſavouring ſomewhat of Camphire and Caſtor. Hence it is of Service in provoking the Menſes, expelling the Reliques of the Secundines, falſe Conceptions, and the Lochia, when retained by a cold Cauſe. All the Species are medicinal, and retain their Strength for Years. Their Virtues conſiſt in an inflammable, aromatic, and highly volatile Oil: They are of the ſame Uſe as Chamomile; and Baths for the Feet are prepared of them, in order to provoke the Menſes. Feverfew, in Clyſters, diſcuſſes Flatulences, and is of excellent Service in Surgery, for diſcuſſing Tumors and Contuſions. A Salt is prepared of the Aſhes; and, alſo, a Water of the recent or fermented Plant; and an Oil, Conſerve, and Syrup. The Oil, which has the Name of *Oleum Partheniacum*, diſſolves all Tumors, being rubbed on the affected Part. *Hiſt. Plant. adſcript. Boerhaav.*

MATRICARIA MARITIMA. A Name for the *Chamæmelum*; *marinum.*

MATRICARIA *Tanaceti folio.* A Name for the *Leucanthemum*; *Tanaceti folio*; *flore majore.*

MATRISYLVA. A Name for the CAPRIFOLIUM.

MATRIX. The ſame as UTERUS; which ſee. In Botany, it ſometimes imports the Pith of a Plant. *Blancard.*

MATRONALIS VIOLA. A Species of Violet, call'd *Dame Violet.*

MATURANTIA. Maturatives; that is, Remedies which promote the due Formation of Matter.

MATURATIO, Maturation, is properly uſed, with reſpect to Fruits; but it is employ'd relative to the noxious and morbid Humours in the Body, which generate Diſeaſes; and, in this Senſe, it imports their Concoction, Attenuation, or Preparation, in order to their being diſcharged out of the Body.

MATZATLI. A Name for the *Ananas*; *aculeatus*; *fructu Pyramidato*; *Carne Aurea.* See ANANAS.

MAUROMARSON. A Name in *N. Myrepſus*, *Sect.* 7. *Cap.* 6. for the *Marrhubium*, Horehound; probably the black Horehound; for *Myrepſus* uſes ſometimes μαῦρος, to ſignify Black.

MAUZ. A Name for the *Muſa*; *fructu cucumerino*, *longiore.*

MAXEINOS. μαξεινος. A Name for the *Aſellus*, Cod-fiſh.

MAXILLA. The Cheek; or the Jaw.

MAYS.

The Characters are;

It has the Appearance of the Reed; the male Flowers conſiſt of two long, hollow, carinated, fibrous Leaves, with hairy Margins; within theſe Leaves are two others more tender, hollow, and carinated, in the Place and Function of Petals; in the Middle of thoſe is the Coryla, or Coryledon, whence proceed three Stamina; all theſe Parts are ſeated in one Place of the Plant.

In another Place of the ſame Plant are ſituated the round Ovaries, growing in a ſhort and peculiar Calyx, and furniſhed with a very long Tube, and compacted into a cloſe Spike, ſtraitly involved in vaginal Leaves; from whoſe Apex appear eminent the Tubes of the Ovaries.

Boerhaave mentions three Species of this Plant; which are,

1. Mays; granis aureis. *Tourn. Inſt.* 531. *Boerh. Ind. A.* 2. 166. *Triticum Indicum.* Offic. J. B. 2. 453. Raii Hiſt. 2. 1249. *Frumentum Aſiaticum & Turcicum.* Ger. 75. Emac. 81. *Frumentum Indicum Mays dictum.* C. B. P. 25. Theat. 490. *Milium Indicum maximum Mays dictum, ſeu Frumentum Indicum.* Park. Theat. 1138. *Tlaolli ſeu Mayz.* Hern. 242. *Maizium Mexicanis Tlaolli, vulgo Frumentum Turcicum vel Indicum.* Piſ. Mant. Arom. 199. INDIAN WHEAT.

Our Countryman *Gerard*, after *Tabernæmontanus*, multiplies the Species of this Plant, according to the various Colours of the Grain: But they are miſtaken; for moſt of theſe Varieties may be obtained from the ſame Seed. We are of Opinion, with *Matthiolus*, that *Mayz* is native to the *Weſt Indies*, in almoſt all Parts of which it is to be found; and that from thence it was tranſplanted into *Africa*, *Aſia*, and *Europe*. As for the *Indian* Millet of *Pliny*, which, he ſays, was brought into *Italy* in the Time of the Emperor *Nero*, we make no Doubt but it was the *Melica*, or *Sorgum.*

Mayz is ſown in Pits five Feet aſunder, four or five Grains in a Pit; it ſprings up in a few Days, and in the *Indies* it is reaped the fourth Month. In *Germany* we have obſerved it ſown in the Fields, where it delights in a fat, humid, and well-dung'd Soil, and is impatient of Cold and Froſts. The Time of ſowing it varies according to the Quality and Temperature of the Climate; for, in ſome Countries, it perfects and brings its Seed to Maturity in a ſhorter, in others in a longer time. There is one Species, which is ſown and reap'd in three Months; another, which requires only two; and a third, which is ripe in forty Days after Sowing, if we may believe Authors. That it grows remarkably high, and produces ſeveral Ears, is owing to the Fertility of the Soil, or the Temperature of the Climate.

Of what Uſe this Grain is in Medicine, (ſays *J. Bauhine*) we are not as yet well appriſed; however, from its Sweetneſs, and a kind of Viſcidity which belongs to it, we may conclude, that it is of the ſame Temperament with Wheat, and, therefore, muſt of Neceſſity have the ſame Qualities. Hence its Grains are broken and reduced to a very white Meal, which is made into Bread, and other things of that Nature, tho' this Bread has ſomewhat of a viſcous and obſtruent Quality; for which Reaſon, as it is ſaid, they make no uſe of it in *Aſia* and *Turkey*, but under a Dearth of other Corn. The Bread made of it, ſays *Dodonæus*, is, indeed, moderately white, when cleanſed from the Bran, but hard and dry like Biſcuit, without the leaſt Clammineſs; for which Reaſons it is difficult of Concoction, and affords very little or no Nouriſhment to the Body; but is ſlow of Paſſage, and binding to the Belly, like Bread made of Millet, or Panic.

Fr. Hernandez is very laviſh in his Commendation of *Mayz*. It is, ſays he, temperate in Quality, or a little inclining to Heat and Moiſture, of a moderate Subſtance, eaſy of Digeſtion, eſpecially to thoſe who are accuſtomed to it, not of a groſs, or, as ſome think, of an obſtruent and viſcous Subſtance, as we may learn by Obſervation of the *Indians*, who live on this ſort of Bread made into Cakes, and yet are not affected with Obſtructions, or appear ill-coloured: For theſe People affirm, that they are ſenſible of no Oppreſſion of the Stomach, after a hearty Meal; but that, a few Hours after, they are as hungry as if they had eaten nothing, and could fall greedily upon any Food which came in their Way; and that they never knew what the Stone was, before the *Spaniards* came among them: That, among the *Mexicans*, there is no kind of Food more celebrated, or more commodious in acute Diſtempers, being prefer'd even to Piſan, as appears from a thouſand Experiments. It is quick of Digeſtion, ſay they, and Paſſage; affords a Sufficiency of Nutriment to the Body; excites no Senſe of Oppreſſion; mollifies the Belly, and the Breaſt; is a Demulcent of the natural Heat, eſpecially if the Powder of it is ſuffered to freeze in Water in the Winter Seaſon; provokes Urine; and cleanſes all the Paſſages.

C. Bauhine, I know not upon whoſe Authority, writes, that the *Indians*, from an exceſſive Uſe of this Grain in Food, become tumid, and affected with the Scabies; and that the Negro Boys, who often feed on this ſort of Corn, which they beat out of the Ears, inſtead of Bread, waſhing and parching it, can never preſerve themſelves clean from the Scabies, on account of this Grain, which generates Blood too hot, and, in a manner, aduſt. The manner of making Bread and Wine of *Mayz*, by the *Indians*, is deſcribed *Hiſtor. C. B. Lib.* 1. The Meal is of Service in emollient and ſuppurating Cataplaſms; for, by its Viſcidity, it obſtructs the Pores, and is very proper for ſuppurating Impoſtumes. The Juice of the freſh Leaves has a refrigerating Quality, and is good for an Eryſipelas, if Cloths be moiſtened with it, and apply'd to the Part affected. *Raii Hiſt. Plant.* 1250.

Mayz is nutritious like Wheat, but ſomewhat heavier, and with more Difficulty raiſed into a Fermentation, for which Reaſon the Peaſants in *France* uſually roaſt, or parch it, by which means it loſes its Viſcidity; it is very aperitive, and therefore proper in the nephritic Colic. *Hiſt. Plant. aſcript. Boerhaav.* *Dale* ſays, it is uſed in the making of Chocolate.

2. Mays; granis rubris. *T.* 531.

3. Mays; granis albis. *T.* 531. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 16.

MAZA, μάζα, a *Greek* Word, for which there is no *Latin* one, unleſs it may be expounded by *Offa* from *Pliny*. *Maza* was made of the Meal of parched Barley, ſprinkled with ſome Liquid, and was the Food of the meaner ſort of People, being eaten crude with *Defrutum*, or Honey, as we are informed by *Aetius* and *Athenæus*. *Erotian in Hippoc.* ſays, that *Maza* is the Meal of parched Barley, work'd up with ſome Liquid; as *Oxymel*, *Poſca*, *Hydromel*, or Water. It is certain, that *Maza* was a more ordinary Food than Bread, becauſe it was made of Barley, and the other of Wheat, as *Hippocrates* writes, *Lib. de priſca Medicina*; and the ſame Author, almoſt every-where, oppoſes ἄρτος, Bread, to μάζα, *Maza*; particularly, *Lib. de ſalubri Diæta*, where

he adviſes, in the Spring, to exchange Bread, which was moſt proper in the Winter, for *Maza*, as a ſofter and leſs nutritious Aliment; and, *Lib. de priſca Medicina*, he conſiders Bread and *Maza*, in reſpect of Diet, the former as the drier, the other as the moiſter Food.

Maza atriptos, μάζα ἄτριπτος, in *Hippocrates*, is Barley-meal, work'd up with little or no Liquid, *Maza* not work'd at all, or leſs than it ought to be; and ſo it ſignifies in *Ariſtotle*'s Phyſical Queſtions. To this is oppoſed *Maza tripte & rante*, μάζα τριπτὴ καὶ ῥαντὴ, *Maza* work'd up or kneaded, and ſprinkled or moiſtened with ſome Liquid, as appears *Lib. 2. de Diæta*. Μάζα τριπτὴ is *Maza* kneaded and mixed with ſome Subſtance, either actually humid, as Honey, Wine, or Oil; or dry, as Seeds, or Spices, in reſpect of which latter, it is called ξηρὰ, *xera*, dry, as in relation to the other, it is ſtyled ῥαντὴ καὶ ὑγρὴ (*rante & hygre*) ſprinkled, and moiſt.

MAZAMA. A Name of the *Cervus minor Americanus, Bezoarticus*. See BEZOAR.

MAZION, μάζιον. A Diminutive of MAZA

MEATUS. A Duct, or Paſſage. Every Canal in the Body, which conveys any Fluid, may be thus called. The auditory Paſſage is called *Meatus Auditorius*. The Euſtachian Tube is term'd *Meatus a Palato ad Aurem*. The Urethra is called the *Meatus Urinarius*. And the *Meatus Cyſticus* is the Duct which conveys the Bile from the Gall-bladder towards the *Duodenum*.

MECAPATLI. *Hernandez* mentions four Species of *Sarſaparilla*, the firſt of which is called *Mecapatli*. See SARSAPARILLA.

MECAXOCHITL. Offic. Hern. 144. & 873. Nieremb. 320. Raii Hiſt. 2. 1671. Laet. 231. *Piper longum humilius fructu è ſummitate caulis propendente*. Cat. Jamaic. 45. Hiſt. 1. 136. *Saururus humilis folio carnoſo ſubrotundo*. Plum. 53. Fig. 70. Raii Hiſt. 3. 643. *Arbor Piperifera fructu longo Floridana*. Jonſ. Dendr. 180. *Arum moſchatum Ophioglоſſoides ſive pene nudo, Jamaicenſe; an melius Ophioglоſſum moſchatum Jamaicenſe Limonii foliis in extremo ſinuatis?* Almag. 51. SMALL AMERICAN LONG PEPPER.

It is deſcribed by *Fr. Hernandez* as a twining Herb, two Spans in Length, creeping on the Ground, with large fat and roundiſh Leaves, ſweet-ſcented, and of an acrimonious Taſte; the Stalks round, ſmooth, and twiſted, whence ariſe ſmooth Pedicles, which creep on the Ground. At the Origin of each Leaf grow fibrous Roots, like Filaments; the Fruit is very like long Pepper.

Mecaxochitl is hot and dry, and may be reckon'd as a Species of Long-pepper. It is drank with Chocolate, to which it gives a grateful Reliſh: It is corroborative; heats the Stomach, and corrects a fetid Breath; attenuates groſs and viſcid Humours; reſiſts Poiſon; is good for the Colic, and Iliac Paſſion; provokes Urine; and, being mixed with *Tlixochitl*, promotes the Menſes; expels the dead Child, and accelerates the Birth; opens Obſtructions; removes Colds, and Pains proceeding from them; and gives Relief under the Rigors of Fevers. *Raii H. P.*

It grows in *New Spain*, and is an Ingredient in Chocolate, but is rarely found in our Shops. *Dale*.

MECHANICE. Mechanics. In the laſt Age Mechanics began to be much employed for explaining the Phænomena of Health and Diſeaſes; and is ſtill much cultivated in Medicine. See the PREFACE.

MECHOACANNA ALBA. Offic. *Mechocan*. J. B. 2. 149. Ger. 723. Emac. 873. *Mechoacan Rhabarbarum album*. Chab. 120. *Bryonia Mechoacana alba*. C. B. P. 297. *Bryonia alba Peruana ſive Mechoacan*. Park. Theat. 179. *Convolvulus Americanus Mechoacan dictus*. Raii Hiſt. 1. 723. Tourn. Inſt. 84. *Jeticucu Braſilienſibus, ſeu Radix Mechoacan*. Marcg. 41. Piſ. 253. *Tacuache ſeu Radix Michuacanica*. Hern. 164. WHITE MECHOACAN.

Though this is called Bryony by *C. Bauhine* and *Parkinſon*, they being led into that Miſtake by *Monardus*, who calls it ſo; yet ſince their Time it has been found to be a *Convolvulus*; Mr. *Ray* calling it *Convolvulus Americanus Mechoacan dictus*. It has long, ſlender, trailing Branches, twiſting about every thing like the great Convolvulus, with large Leaves not much unlike that, but rounder pointed at the Ends next the Stalk. The Flowers, likewiſe, are much alike, being white, with a little Redneſs on the Outſide; the Root is large, brown outwardly, and white within; uſually parted in two towards the Bottom. It grows in the *Spaniſh Weſt Indies*, from whence the Root is brought to us, in large, round, flat, tranſverſe Slices, of a white Colour, having little Smell or Taſte, eaſy to cut or powder, being not ſo firm and hard as Jalap.

It purges ſerous Humours from all Parts of the Body; and helps the Dropſy, Jaundice, and Rheumatiſm, working with a great deal of Gentleneſs, and without Griping, and therefore it is fit for weakly tender Conſtitutions: But by reaſon that a larger Quantity muſt be given, than moſt People are willing to take, it is grown very much out of Uſe. *Miller's Bot. Off.*

This Root is diſtinguiſhed from Bryony-root, by being more viſcid, being without Acrimony, and of a faint nauſeous Taſte. It is ſaid to be a ſtrengthening Purge, being given in Subſtance from half a Dram to an Ounce; but is not purgative in Decoction. The *Spaniards* prepare from it a white Fecula, called by them *Lac Mechoacannæ*, half an Ounce of which is a Doſe, powdered and mixed in Broth. *Geoff.*

Mechoacan took its Name from the Country where it was firſt diſcover'd, tho' it was afterwards found in ſeveral other Parts of *South America*, as *Nicaragua, Quito*, and *Braſil*.

It purges pituitous, aqueous, and ſerous Humours from all Parts of the Body, and eſpecially from the Head, and nervous Syſtem, and from the Breaſt. It works, alſo, upon Bile, and purges the yellow Water of hydropic Patients; by which very thing we may know, ſays *C. Hoffman*, that it is no ſuch gentle Cathartic. It is of very good Service in an inveterate Cough, the Colic, Gout, and Lues Venerea; but becauſe it is of an hot and dry Nature. *Schroder* adviſes not to continue the Uſe of it for any conſiderable Time in hot Conſtitutions. It is hardly ever taken but in Subſtance, as in Powder, in ſome proper Liquor, generally Wine, though it may, alſo, be taken in Broth. It is never exhibited in Decoction, for it is found by Experience to loſe all its Strength and Virtue in ſuch a Preparation. The Liquor is not to be exhibited by itſelf, but in Conjunction with the infuſed Powder, though *C. Hoffman* writes, that the Liquor taken alone is a Purge. It is not to be kept in Powder; for in this, as in other Powders, the Strength eaſily exhales; the Powder is to be ſomewhat groſs; the Doſe is from half a Dram to a Dram, or two Drams; it is corrected with a third Part of Cinnamon, Aniſe, or Maſtich. Chuſe your *Mechoacan* freſh, whitiſh on the Inſide, but not of a ſplendid White, and covered with an Aſh-colour'd, and not carious Bark. *Raii H. P.*

MECON, μήκων. The *Greek* Name for the *Papaver*, or Poppy.

MECONIUM, μηκώνιον. The concreted Juice of the Poppy, in which Senſe it is the ſame as *Opium*. *Galen de S. F. & de C. M. P. G.* Some, who pretend to more Accuracy, make Opium to be a Tear diſtilling from the Heads of the Poppy, after a ſlight Inciſion; but *Meconium* they will have to be the expreſſed Juice of the Heads and Leaves, or of the whole Plant, which is, therefore, leſs valuable and efficacious than Opium. *Dioſcorid. Pliny, Rhodius ad Scribon. Schroder*. See DIACODIUM.

Meconium is, alſo, a Name for the Excrements contained in the Inteſtines of the Child, after the Birth. See INFANS.

MEDEA. The Name of a Compoſition prepared of Sulphur and humid Bitumen, which, rubbed on the Body, kindles by the Acceſſion of Heat. *Galen de Temper*. It is, alſo, the Name of a Gem, ſo called, becauſe it is ſuppoſed to be the firſt diſcovered by the famous Sorcereſs of that Name; but perhaps it would be more properly called *Lapis Medius*, becauſe brought out of *Media*. It is black, with a Gold-coloured Vein; and yields a Juice of the Colour of Saffron, and the Taſte of Wine; and is commended, eſpecially by the *Magi*, as a Preſervative againſt Drunkenneſs, and a Procurer of Love. *Rulandus* takes it to be a Species of the *Hæmatites niger*, which yields a Saffron-colour'd Juice. The *Medea* is, alſo, found in the Territory of *Manſfeld* in *Germany*, which yields the *Hæmatites niger*, but the Veins are rather of a pale than a Gold-colour. *Pliny* mentions the *Medea*, *Lib.* 37. *Cap.* 10.

MEDENA, in *Paracelſus*, is a Species of Ulcer.

According to *Caſtellus*, *Vena Medena* is the ſame as *Vena Medinenſis*. See DRACUNCULI.

MEDIANA VENA. A remarkable Vein on the Inſide of the Flexure of the Cubit, betwixt the Cephalic, and Baſilic Veins, which is frequently opened in Phlebotomy. See VENA.

MEDIASTINUM, or, as it is ſometimes called, MEDIANUM. This is a double Membrane, formed by the Continuation of the Pleura, which comes from the Sternum, and goes ſtraight down through the Middle of the Thorax to the Vertebræ, dividing the Cavity in two. It contains, in its Duplicature, the Heart; in its Pericardium, the Vena Cava, the Oeſophagus, and ſtomachic Nerves. For a farther Deſcription of the *Mediaſtinum*, ſee PLEURA.

Dr. *Freind* remarks, that the *Mediaſtinum* has a Cavity; at leaſt as it riſes from the Sternum, its two Membranes lie at ſuch a Diſtance, that it is capable of having an Humour or Pus fall down between them, as *Columbus* firſt obſerved, and which he and *Barbette*, order to be taken out by trepanning the Sternum. A Gentleman of Experience and Judgment in every thing relating to Surgery, informed Dr. *Freind*, that Abſceſſes of the Mediaſtinum particularly happen in Venereal Diſtempers, and that in ſuch Caſes he had frequently uſed the Trepan with Succeſs.

Avenzoar gives a very ſingular Caſe of his own, an Inflammation and Abſceſs in the *Mediaſtinum*. Upon his firſt Diſorder, which happened in a Journey, he felt ſome Pain in that Place, which increaſed with a Cough; he found his Pulſe very hard, and his Fever very acute. The fourth Night he took away a Pint of Blood. His Symptoms were but little relieved; however, as he was obliged to travel all Day, he fell aſleep at Night; and during that time the Bandage of the Arm came off. Upon waking he found the Bed ſwimming with Blood, and his Strength very much weakened. The next Day he began to expectorate a ſanious Matter; and though afterwards he grew delirious,

delirious, and large Quantities of Barley-water, as he had beforehand ordered himself, were given him, yet he attributes his Cure to the great Evacuation of Blood, which he had. The Symptoms in this Sort of Abscess, in general, he says, are a continual successive Cough; a tensive Pain Lengthways, a Disorder in Breathing, which makes it frequent and small; an acute Fever; a great Thirst, and a hard unequal Pulse. Therefore Bleeding, in the Beginning, is absolutely necessary.

MEDICA.

The Characters are;

The Fruit is a Pod, which is bent and crooked like a Ram's Horn.

Boerhaave mentions six Species of this Plant; which are,

1. Medica; major; erectior; floribus purpurascentibus. *J. B.* 2. 382. *Raii Hist.* 1. 960. *Tourn. Inst.* 410. *Boerh. Ind. A.* 2. 35. *Medica.* Offic. *Trifolium Burgundicum.* Ger. 1020. Emac. 1189. *Falcata siliqua cornuta sive Medica.* C. B. P. *Fœnum Burgundiacum sive Medica legitima.* Park. Theat. 1113. MEDIC-FODDER.

Medica is so called, as *Pliny* says, from *Media*, because it was brought from thence into *Greece*, in the Time of the *Persian* Invasion, under *Darius Hystaspis*.

It grows not only spontaneously in several Parts of *Spain*, but is, also, carefully cultivated for the Use of Cattle especially, instead of common Hay, because it is so fruitful as to yield several Crops in a Year. The *French* call it *St. Foin*, and *Foin de Bourgogne*; and in the Southern Parts of *France* they sow their water'd Meadows with it, and mow it three times every Year, the Root being perennial, and retaining its Fertility: It delights in a fat and well-manured Soil, as the *Onobrychis*, on the contrary, does in a dry and gritty, or sandy one. In *Spain*, where it is constantly used, it is found, by Experience, to nourish and fatten Cattle, and improve them far beyond any other Fodder, dry or green; but it must be given them with Moderation, because it inflates, and generates much Blood. It fattens the Soil, and is so sweet and nutritive, that it is necessary to restrain Cattle in their feeding on it, lest they should burst, or require Bleeding. It cures most Diseases in Cattle, and *Columella* writes, that nothing is so effectual towards the Cure of Mules when Hide-bound, as *Medica*. The dry Seed, says *Dioscorides*, on account of its grateful Relish, is mixed with Salt in Pickles; the green Seed, made into a Cataplasm, relieves those who want Refrigeration.

2. Eadem (1) flore cæruleo.
3. Eadem (1) flore violaceo.
4. Eadem (1) flore fusco.
5. Eadem (1) flore viridi.
6. Eadem (1) flore ex luteo & violaceo misto. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 34.

Besides the foregoing Species of *Medica*, *Boerhaave* mentions twenty-two other Sorts, with a cochleated Fruit, none of which have particular medicinal Virtues ascribed to them, at present, that I know of.

MEDICAGO.

The Characters are;

The Fruit is flat, orbiculated, and, as it were, full of Seeds, which are generally Kidney-shaped.

Boerhaave mentions three Species of this Plant; which are,

1. Medicago, trifolia; frutescens; incana. *Tourn. Inst.* 412. *Boerh. Ind. A.* 2. 35. *Cytisus.* Offic. *Cytisus incanus siliquis falcatis.* C. B. P. 389. Raii Hist. 1. 973. *Cytisus septimus cornutus.* Ger. 1124. Emac. 1305. *Cytisus siliqua incurva.* Chab. 78. *Cytisus Galeni creditus, Maranthæ cornutus.* Park. Theat. 1471. SHRUB-TREFOIL.

It is cultivated in Gardens, and flowers in the Summer. The Leaves are used, which are of a refrigerating Quality, and discuss Tumors. The Decoction, drank, provokes Urine. *Dioscorides.* Of the Wood hereof the *Turks* make the Hilts of their Swords; and the *Colvieri*, or Monks of the Isle of *Patmos*, their Beads, on which they number their Prayers.

Though the Antients have described but one Species of Cytisus, and that in an imperfect manner, the Moderns have discovered a Multitude of Plants to which they give that Name; and, therefore, the Plant here proposed is as likely to be the Cytisus of *Dioscorides*, as any other of them; and seems to claim that Name before the rest, because *Volckamer* assures us, that the *Turks* make such Use of it, as was said before; whence it follows, that, if it be not a Native of those Countries, it is, at least, well-known there. *Dale.*

2. Medicago; annua; trifolii facie. *T.* 412. *Trifolium, siliqua falcata.* C. B. P. 330. *Medica Lunata*, J. B. 2. 386.

3. Medicago; vulnerariæ facie; Hispanica. See ANTHYLLIS PRIOR. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 35.

MEDICAMENTOSUS LAPIS. This Stone is prepared in the following manner;

Pulverize, and mix together, of the Colcothar, or red Vitriol, remaining in the Retort after Distillation, or, if it cannot be had, of Vitriol calcined to Redness, two Ounces; of Litharge, Alum, and Armenian Bole, each four Ounces: Put this Mixture into a vernished Vessel, and pour as much good Vinegar upon it, as arises two Inches above the Ingredients; stop the Vessel, and leave the Whole in Digestion, for two Days. Then add eight Ounces of Nitre, and two Ounces of Sal Ammoniac: Place the Vessel on a Fire, and consume the Moisture; calcine the remaining Mass, which will amount to eighteen Ounces two Drams, for about an Hour, over a strong Fire, and preserve it for Use.

This is a good Remedy for stopping Gonorrhœas; and the Method of using it for this Purpose is, to dissolve a Dram of it in Plantain or Forge-water, to be injected into the Penis. It is, also, excellent for cleansing the Eyes in the Small-pox; for which End, seven or eight Grains of it must be dissolved in four Ounces of Plantain or Eyebright-water, which is to be used as a Collyrium. It is, also, proper for stopping Hæmorrhages, when externally applied to Wounds. When dissolved in the Water of Knot-grass, it produces almost the same Effects with the styptic Water, and is of a vulnerary Quality.

This Stone is dignified with the pompous Epithet *Medicinal*, on account of the happy and surprising Effects it produces.

The Colcothar remaining in the Retort after the Distillation of Vitriol must necessarily be more proper for this Purpose than any other; because, being deprived of the greatest Part of its Spirits, it must, of course, be of a more astringent Quality.

Litharge, which is a calcined Lead, Alum, and Armenian Bole, are, also, very considerable Astringents, productive of happy Effects in this Composition.

The Vinegar is used in order to unite all these Ingredients, and make them ferment with each other; after which, the Nitre and Sal Ammoniac are easily mixed with the other Materials.

The last Calcination is in order to carry off a Part of the Acid, and augment the Astringency of the Medicine. It, also, renders the Stone of a more fixed Nature, and, consequently, more capable of being kept.

This Medicine, among others, I have, from Experience, found proper for stopping Gonorrhœas, when it is expedient to do so by means of Injections.

In many Cases I prefer the Lapis Medicamentosus thus prepared, to that directed by *Crollius*, in the following manner:

Pulverize, and mix together, of Alum, nine Ounces; of green and white Vitriol, each six Ounces; of Anatron, one Ounce and an half; or, if that cannot be had, an equal Quantity of common Salt; of the Salts of Tartar, Wormwood, Mugwort, Succory, Arse-smart, and Plantain, each two Drams: Put the Mixture in a pretty large vernished Earthen Vessel; pour upon it a small Quantity of the Vinegar of Roses: Mix all well together. Put the Vessel on a moderately brisk Fire, and the Matter will boil, and rise in Bubbles; stir it frequently with a Spatula, and, when it begins to grow thick, add of the Powder of Cerus, three Ounces; and of the Powder of Armenian Bole, two Ounces: Mix intimately, and continue to consume the Moisture of the Mass, till it assumes the Consistence of a Stone. After which, preserve it carefully, because it easily admits the Moisture of the Air.

Towards the End of this Process we may add some Gums, such as the Powders of Myrrh, and male Frankincense, of each half an Ounce. But, in this Case, there must only be a very gentle Fire under the Vessel, for fear of burning the Gums, and dissipating their Virtue, which principally consists in their volatile Parts.

This Species of Lapis Medicamentosus is of a vulnerary, detergent, drying Quality; and is used for the Cure of Itches, scald Heads, Wounds, and Ulcers; for which Purposes, an Ounce of it is dissolved in a Pint of Rain or River-water, in which Linen Cloths are to be dipt, and applied to the Part affected; it is, also, like the former, used for drying Injections.

The green and white Vitriols are of the same Virtues, and produce the same Effects, in this Preparation; for which Reason either may be used without the other.

There is, also, another Species of Lapis Medicamentosus, commonly called *Lapis Philosophorum*, and prepared in the following manner:

Pulverize, and mix together, of Roch-alum, and *Roman* Vitriol, each twelve Ounces; of Cerus, and white Bole, each two Ounces; of the Salt of Tartar, one Ounce; of Camphire, and male Frankincense, each two Drams. Put the Mixture in an Earthen Vessel; pour upon it six Ounces of Vinegar, agitating it with a Spatula. Place the Vessel over a gentle Fire, and suffer the Matter to be indurated to the Consistence of a Stone.

This Preparation is detergent, drying, and proper for curing Ulcers. An Ounce of it, powdered, is to be infused in twelve Ounces of White-wine, and Plantain-water; and, after the Infusion is filtrated, small Linen Cloths are to be dipt in it, and applied to the Part affected. *Lemery Cours de Chymie.*

MEDICAMENTUM. A Medicine.

MEDICINA. Medicine. See the PREFACE.

MEDICINALES DIES are those Days, in Fevers, which are neither critical, nor indicatory; and on which it is proper to administer Remedies of Importance, and to evacuate.

MEDI COCTIO. A sort of medicated Apomeli, described by *N. Myrepsus, Sect. 34. Cap.* 20.

MEDICON. The Name of a poisonous Composition; the same as PHARICUM; which see.

MEDICUS. A Physician.

MEDI MALAGMA. The Name of a Malagma described by *Celsus, Lib. 5. Cap.* 18.

MEDIMNUS, μέδιμνος. A *Greek* or *Attic* Measure of Capacity for things dry, such as Wheat, Barley, Flour, and the like; it contained forty-eight Chœnices, that is, about four Pecks six Pints, *English* Measure. *Arbuthnot.*

MEDITULLIUM, is used sometimes to express the spongy Substance contained betwixt the two Tables of the Cranium, otherwise called *Diploe:* And sometimes it imports the Pith of Vegetables.

MEDIUM. See CAMPANULA.

MEDO. Mead, or Hydromel. *Castellus.*

MEDULLA, in Anatomy, has various Significations. Thus the white Substance of the Brain is called the *Medulla*, or medullary Part thereof, to distinguish it from the cortical Part; and the spinal Marrow is called the *Medulla Spinalis.* See CEREBRUM. But, properly, *Medulla* imports the Marrow of the Bones. See Os. In Pharmacy the Marrows of many Animals are recommended as Medicines: Thus *Schroder* takes notice of the Marrow of the Ox, the Dog, the Stag, the Horse, the Goat, the Kid, the Sheep, and the Calf. *Dioscorides, Lib. 2. Cap. 95.* informs us, that the best Marrow is that of the Stag; next to which is that of a Calf; and after them, in Order, are those of the Bull, Goat, and Sheep. The best Time for collecting Marrows is towards Autumn; for at other Seasons of the Year they appear bloody, and are found to be brittle like Flesh. This is an Observation not so easy to be made, and obvious to none but those who make it their Business to extract them from the Bones, and reserve them for Use.

All Marrows are mollifying, rarefying, give Relief by Friction under Lassitudes, and incarnate Ulcers. The Marrow of a Stag, rubbed on any Part, preserves it from the Bites of venomous Beasts. The Way of curing it, when taken fresh out of the Bones, is the same as for Fat; for first they work it in Water, then strain it through a Linen Cloth, and repeat the Operation till the Water appears pure. After this, they melt it *in Diplomate*, (a double Vessel) taking off the Scum with a Feather; and pour it into a Mortar, where, suffering it to cool, they carefully take away the Fæces, which had subsided to the Bottom, and reposite it in a new Earthen Vessel. If you think fit to reserve it uncured, you are to take exactly the same Method as directed for the Fat of Hens and Geese.

MEELCAGE. See AGE VITA.

MEERN. The Name of a Species of *Indian* Reed, the same as CANNACORUS.

MEGALEION, μεγαλεῖον. The Name of an Unguent described by *Dioscorides, Lib. 1. Cap. 69.* as different from the Mendesium; though *Galen* says, they are the same, in his Treatise *de C. M. S. L. Cap. 2. Lib. 2.*

MEGALOSPLANCHNOS, μεγαλόσπλαγχνος, from μέγας, great, and σπλάγχνον, a Bowel, in *Hippocrates*, is one who has large and tumefy'd Viscera, through some preternatural Affection, as a Schirrhus, œdematous Tumor, or an Inflammation, and especially the last. Thus, 3 *Epid. Stat. pest. Ægr. 13. Apollonius* of *Abdera*, who, after a long and obstinate Pain of the Liver, was at length seized with an Inflammation of that Part, is said to be μεγαλόσπλαγχνος. And, *Lib. de R. V. I. A.* Hydromel is pronounced to be prejudicial to bilious Persons, and μεγαλοσπλάγχνοισι, that is, to such as labour under an Inflammation of some one of the Viscera; for so *Galen* expounds the Word; "For, "says he, in this Place, the common Name (μεγαλόσπλάγχνος) "is appropriated to those who labour under an Inflammation; "since the Fever is not excited by a Scirrhus, or Oedema. It "is certain then, that in acute Diseases, of which he is now "treating, if a Tumor should arise in the Viscera, it can be no "Symptom of a Scirrhus, or Oedema, but of an Inflammation, and the Patient in that Case is called *Megalosplanchnus.*" *Erotian* gives the same Explication of the Word, expounding it of one who has the Viscera tumefy'd by an Inflammation. In much the same Sense is the Spleen, in several Places, said, by *Hippocrates*, to be μέγας, great, when it is tumefied or inflamed; and μέγα ὑποχόνδριον, "A great Hypochondrium," 6 *Epid. Sect. 2. Aph.* 28. is one affected with an Inflammation. In a different and metaphorical Sense, *Megalosplanchnus* is applied to a Person of great Generosity and Virtue; agreeably to which μεγαλόσπλαγχνος, in *Euripides*, is called μεγαλόψυχος, magnanimous; and, with the Antients, the Word frequently signified, one of large and robust Viscera, and qualified, above the common measure, for the Discharge of all bodily Functions. Again, the Term is applied to such Things as cause a Tumefaction of the Viscera; thus, *Lib. de R. V. I. A.* sweet Wine is said to be μεγαλόσπλαγχνος of the Spleen and Liver, that is, tumefactive of those Parts, by the Slowness of its Passage causing Obstructions, and so producing a Tumor and Distension of those Viscera.

MEL. Honey.

Theophrastus distinguishes Honey into three Kinds; the first is, that which the Bees make from Flowers; the second descends from the Air, when, for Instance, a certain Liquor, raised from the Earth, falls down upon it again, after having been concocted by the Sun; the third, which he called μέλι καλάμινον, or Honey of Reeds, is Sugar. *Hippocrates* mentions a Species of Honey, which he calls κέδρινον μέλι, or Honey of Cedar. Some are of Opinion, that this was a sort of Manna produced by the Cedar-tree: But *Salmasius* imagines, that it was rather an Oil, or an oleous Liquor, called *Honey*, because it was of the same Consistence with that Substance, which Turpentine almost is.

That Species of Honey which is produced on Mount *Hymettus*, in *Attica*, and derives its Name from that Mountain, is of all others the best. Next to that, is the Honey produced in the *Cyclades*, and that found in *Sicily*, known by the Name of *Hyblæan Honey.* That Species is best, which is sweet and acrid, fragrant, of a yellowish Colour, not liquid, but glutinous and firm; and which, when handled, is so viscid, as, when drawn out, to shrink back to the Fingers. This Substance is of an abstergent Quality, opens the Mouths of the Vessels, and promotes an Evacuation of the Humours; for which Reason it is very proper to be instilled into sordid Ulcers, and Sinuses. When boiled, it conglutinates disjoined and separated Parts, if applied to them. An Ointment prepared of Honey, and liquid Alum, cures the Lichen: When triturated with fossile Salt, and dropt into the Ears, it is good for Ringings and Pains thereof: If used by way of Ointment, it kills Lice and Nits. A Denudation of the Glans Penis, not proceeding from Circumcision, is perfectly cured, if for thirty Days, especially after Bathing, the Glans is softened with Honey: It deterges the Eyes, and, when used, either by way of an Ointment, or a Gargarism, it cures Quinseys, and Inflammations of the Throat and Tonsils: It provokes Urine, allays Coughs, and is highly beneficial to those who have been bit by Serpents, or here taken too large Quantities of the Juice of Poppy, if exhibited warm, with Oil of Roses. Honey, also, when used either as a Linctus, or a Draught, is good against the poisonous Qualities of Funguses, and the Bites of mad Dogs: But, when used crude, it inflates the Abdomen, and excites a Cough; for which Reason it is not to be used till it is sufficiently despumated. Honey produced in the Spring is best; next to which is that obtained in the Summer; but that with which the Winter furnishes us is esteemed the worst of all, because it is coarse, and produces Eruptions on the Skin.

The Honey produced in *Sardinia* is bitter, because, in that Country, the Bees principally feed on Wormwood: This Species of Honey is, however, an excellent Ointment, not only for Freckles, but, also, for other Spots of the Face. *Dioscorides, Lib. 2. Cap. 10.* and 11. See ÆGOLETHRON.

Honey is thought to be heating, drying, nutritive, abstergent, aperient, friendly to the Lungs, diuretic, and proper for curing Coughs, and resisting the bad Effects of Poison: When used externally, it removes Dimness of Sight, and relieves other Disorders of the Eyes.

Among the Learned it is not perfectly agreed upon, what Honey is; for some assert it to be only a sweet nectareous Juice, discharged from certain Flowers by way of Sweat. This was the Opinion of *Cordus*, who informs us, that it is well known to Country-people, who, from their Infancy to an extreme old Age, have made it their Business to investigate the Nature of Bees, that these Animals, when intending to make Honey, only deposite the Liquor collected from Flowers in their Combs; but that they by no means convey the Honey-like Dew, when it falls, to their Combs; which, says he, I myself have found to be true. Hence, though, when this Honey-like Dew falls, the Bees flock in great Numbers to it; yet this is not with a View to convey it to their Hives, but only to use it as Food, with which they often so glut themselves, as not only to become languid and inactive, but, also, to such an Excess, as to fall the Victims of their Gluttony: Hence the Country-people assert, that these Honey-like Dews are excellent Food for those Animals, but contribute nothing to the Production of Honey. But, says Mr. *Ray*, I am of a contrary Opinion; and not only I, but all those Virtuosi, who have carefully observed the Nature, Action, and whole Oeconomy of Bees, and who are more to be trusted than ordinary Country-people, who, without any Examination, generally embrace and obstinately adhere to the Opinions and Traditions of their Forefathers. For, says that learned Gentleman, with whom I agree, I have observed, that after a Fall of these Honey-like Dews, almost the whole Swarms of the Hives, leaving the smallest at Home, fly abroad, and, with surprising Industry and Expedition, load themselves with Honey, which they convey to their

reſpective Hives; going and coming as often as they can, till the Heat of the Sun has diſſipated the Dew. *Pliny*, in *Hiſt. Natural. Lib.* 16. *Cap.* 8. informs us, that the Honey-like Dews, falling from Heaven, are found in greater Quantities on the Leaves of the Oak, than on thoſe of any other Tree. And Dr. *Butler*, in his Treatiſe *de Apibus*, *Cap.* 6. tells us, that we are more indebted to the Leaves of the Oak, than thoſe of any other Tree, for the Preſervation of the Honey-like Dew, or Liquor, which deſcends from the Air, and of which the Bees make Honey. And *Theophraſtus*, in his Book *de Melle*, affirms, that the Bees make Honey of the Honey-like Dew. *Dale.*

Without entering into any long Diſpute about the Origin of Honey, I ſhall only remark two Circumſtances; one is, that Honey will taſte of the Plants from whence it is collected, as *Dioſcorides* remarks, with reſpect to the *Sardinian* Honey; and, under the Article ÆGOLETHRON, we have ſhewn from unqueſtionable Authority, that the Flowers of this Plant communicate their poiſonous Quality to the Honey which the Bees collect from them: This ſeems to render it highly probable, that Honey is a vegetable Production.

The ſecond Circumſtance is, that Honey, diſſolved in Water, ferments, and hence a vinous Spirit is generated; and this ſeems to put it beyond Diſpute, that Honey is a vegetable Subſtance; for nothing in Nature yet diſcover'd will ferment, and yield a vinous Spirit, except vegetable Subſtances.

Lemery gives the following Account of Honey.

Honey is compoſed of the moſt eſſential Subſtance of various Flowers, which the Bees extract, and convey to their Hives, as proper Nouriſhment: Theſe ſagacious Animals, having, with exquiſite Contrivance, formed ſmall hexagonal Cellulæ, in Plates of Wax, fill them with Honey, which they intend for their Winter Store.

This ſweet Subſtance diſcovers itſelf in ſeveral Species of Flowers, ſuch as thoſe of common Trefoil, Roſes, and Gilly-flowers; for if we chew theſe, eſpecially their inferior Parts, called the *Ungues*, contained in the Calyx, we perceive a ſweet and agreeable Taſte: This Subſtance, in the Bee, and in the Hive, is ſo elaborated, as to render it perfect, and reduce it to Honey.

Four Circumſtances principally contribute to render Honey good: Firſt, The Warmth and Purity of the Air; for it is obſervable, that the Honey produced in hot Climates, ſuch as *Languedoc* and *Dauphiny*, is generally better than that furniſhed in colder Countries. It is, alſo, remarkable, that all the Places in the ſame Country are not productive of equally good Honey; ſince a Mountain, for Inſtance, on one of its Sides, or Declivities, furniſhes far better Honey, than can be found in any other Part of it. But this Difference is, probably, occaſioned by the different Situations, with reſpect to the Influence of the Sun.

Secondly, The Goodneſs of Honey depends upon the Bees, according as they are more or leſs tame, and of the domeſtic Kind; for ſometimes wild Bees take Poſſeſſion of Hives.

Thirdly, The Goodneſs of Honey depends upon the Paſturage of the Bees; for, according to the Nature and Efficacy of the Plants they ſuck, ſo they produce an Honey more or leſs good and fragrant. We, alſo, obſerve that the Places moſt proper for producing good Honey, are thoſe of the mountainous Kind, ſhelter'd from the North Wind, and expoſed to the Eaſt, or South, becauſe in ſuch Places the Bees find Plants of a more aromatic, ſtrong, and efficacious Nature than elſewhere. Beſides, in ſuch Retreats, theſe Animals live with more Tranquillity, than in the Plains.

The Flowers moſt proper for the Production of Honey, are thoſe of Roſemary, Thyme, Lavender, Primroſes, Violets, Marjoram, Baſilicon, Baum, Sage, Roſa-ſolis, Penny-royal, Betony, Gilly-flowers, Marigolds, Lily of the Valley, Roſes, and the *Egyptian* Thorn.

In the fourth Place, The Goodneſs of Honey depends on the Method of preparing it, after it is taken from the Hives; for ſometimes, according to the Management, the Honey produced in one and the ſame Stove is more or leſs beautiful and fine.

Honey may be taken from the Hive at two Seaſons of the Year, that is, the Spring and Autumn. But though Authors are of different Opinions with reſpect to the Choice of theſe different Seaſons, yet the Spring, to me, ſeems to be the moſt proper, for the following Reaſons; firſt, At this time the Bees are in their greateſt Vigour, ſince they then quit the Hive, take Flight, and form new Colonies. Secondly, In the Spring the Bees ſip the Dews, which fall copiouſly in the Month of *April* and *May*, and eſpecially in hot Climates, where, in ſoft and ſerene Weather, this Dew is condenſed, on the Leaves of the Trees, into Grains as large as Coriander-ſeeds, and which are of a ſweet and agreeable Taſte; this is what is commonly called the *Manna of Briançon*. Thirdly, The Spring is preferable, on account of the Goodneſs and Purity of the Juices of the Plants at the Renovation of the Heat.

There are two Kinds of Honey, one of a white, and another of a yellow Colour; the former is extracted without Fire, by laying the Plates of Wax, full of new-made Honey, upon Twigs of Ozier, or putting them into Table-cloths whoſe four Corners are tied to four Supporters, with proper Veſſels under them; by which means there flows from theſe Cakes, or Plates, of Wax, an excellent, white, and beautiful Honey, which coagulates, and is commonly called *Virgin Honey*.

This Species of Honey may, alſo, be obtained from the Cakes of Wax by Expreſſion; but, when procured in this manner, it is not ſo beautiful as the former.

The yellow Honey is extracted from all kinds of Combs found in the Hive, whether new or old, provided they are full of Honey. The Method of obtaining it, is, firſt, to ſqueeze the Combs, and warm them with Water. Then, wrapping them up in Bags of thin Linen, they are ſubjected to the Preſs, in order to have the Honey ſqueezed out; the Wax, in the mean time, remains in the Bags, though ſome ſmall Portions of it always paſs thro' them, as we afterwards find in diſtilling the Honey.

The yellow Honey is moſt common, and prepared moſt univerſally. It ought to be new, concreted, and of a pretty thick Conſiſtence, of a yellowiſh Gold-colour, and of an agreeable Smell. In this Species of Honey the Alchymiſts ſearch for Gold, on account of its Colour, which, in ſome meaſure, reſembles that of this Metal. They, alſo, ſuppoſe, that in this Species of Honey they muſt neceſſarily find a large Quantity of Univerſal Spirit, becauſe it is drawn from Flowers, in which, they imagine, this Spirit is more copiouſly concentrated than any-where elſe.

The White or Virgin Honey is pectoral, excites Expectoration, aſſiſts Tranſpiration, reſtores and confirms the Strength, and renders the Body ſoluble.

The yellow Honey is of a detergent, laxative, digeſtive, attenuating, and reſolvent Quality.

Processes upon Honey, from *LEMERY*.

Diſtillation of Honey.

Put four Pounds of good Honey into a large Earthen Cucurbit; diſtil the Moiſture from it by a moderate Sand-heat, till acid Drops begin to be diſcharged. Then remove the Fire, and preſerve this Water in a Bottle.

It will amount to twenty-five Ounces, be of a yellowiſh Colour, of a pretty agreeable Smell reſembling that of Honey, and of a ſomewhat acid Taſte. It is cordial, pectoral, aperient, and makes Nurſes loſe their Milk, if they drink two Ounces of it twice or thrice a Day: It is, alſo, good for making the Hairs grow, if the Combs uſed are moiſtened with it every Day, or a ſmall Quantity of it be put about the Roots of the Hairs, by means of a Piece of Sponge.

Take the Matter remaining in the Cucurbit, and put it in an Earthen or Glaſs Retort luted, and of which two Thirds remain empty. Then place your Retort in a reverberatory Furnace; adapt to it a large Receiver, and lute the Junctures carefully. Begin the Diſtillation by a gentle Fire, for three Hours, in order to warm the Retort; augment the Fire by little and little, and the Spirit of Honey, together with a ſmall Quantity of black Oil, will come over, in the Form of Clouds, which fill the Receiver. Continue the Fire till nothing more is yielded. Take off the Luting of the Veſſels, and, by means of a Funnel lined with filtrating Paper, ſeparate the Spirit from the black and fetid Oil, of which there will be only a ſmall Quantity. Preſerve both the Spirit and Oil in Phials.

You will have twelve Ounces of a dark-red-coloured Spirit, which deeply tinges the Fingers with an Orange-colour, not to be effaced ſooner than eight or nine Days, and of an highly empyreumatic Smell, tho' not very diſagreeable, and of an acid, ſharp, and pungent Taſte.

This Spirit is an excellent Aperient, and may be put into Julaps, in ſo large a Quantity, as to render them very acid.

The Spirit may be rectified, by diſtilling it with a Sand-heat from a Glaſs Cucurbit, and by keeping that which aſcends laſt, by itſelf, as the moſt ſtrong and efficacious. It is uſed to cleanſe old Ulcers, and conſume fungous and luxuriant Fleſh.

The Oil is accounted good for a Caries of the Bones.

There will remain in the Retort twenty-ſix Ounces of a Matter, which is black, highly ſpongious, and inflammable in conſequence of the fuliginous Subſtance remaining in it. If this Matter is ſubjected to Calcination in an Earthen Veſſel over a brisk Fire, it is, at firſt, kindled, like an ordinary Coal; but is not, like that, reduced to Aſhes; for it will preſerve both its Form and Colour, and only loſe five or ſix Ounces by a Calcination protracted for ten Hours. This Matter, when calcined, acquires a ſomewhat ſaline Taſte; and, if Water is poured upon it, it ferments almoſt like Quick-lime. It is manifeſtly of an alcaline Quality, ſince it produces an Effervescence with Acids.

From this calcined Caput Mortuum of Honey, we may, by Lixivaition and Evaporation, obtain a Dram and an half of a fixed, alcaline, acrid, and penetrating Salt, which is of an aperient Quality, and proper for reſolving and attenuating viſcid Humours. The Doſe of it is from half a Scruple to two Scruples. *Boerhaave*,

ſtance, however, ſeems to ſay, that a fixed Salt cannot be obtain'd from the Caput Mortuum of Honey.

Very large Veſſels are neceſſary for the Diſtillation of Honey, becauſe it requires a great deal of empty Space for its Rarefaction.

The Water firſt obtained is call'd Dew of Honey, and is generally diſtilled by means of a Vapour-bath. It is clear like common Water, ſmells like Honey, and is inſipid to the Taſte, though, at the ſame time, it contains an Acid, for it renders Turnſole red. It is highly eſteemed, and much uſed by Chymiſts, becauſe they imagine it full of an univerſal Spirit, capable of contributing to the Generation of Gold. I could never diſcover any other Virtues in it than thoſe of the common Water of Honey, than which it, alſo, operates more weakly.

The Water of Honey makes the Hairs grow, becauſe it opens the Pores: For this Purpoſe, ſome mix the Juice of an Onion with it, and diſſolve in it a little of the Dung of Mice, in order to render it more efficacious.

Sometimes we find in the Receiver a ſmall Quantity of Wax, ſeparated from the Honey, with the Spirit, in Diſtillation. But if the Honey uſed is pure, no Wax will be found.

Honey contains a great deal more Oil than is ſeparated from it by Diſtillation, ſince a Portion of the Oil always remains intimately mixed with the Water and the Spirit; for if theſe two diſtil'd Liquors are ſuffered to remain in a State of Reſt for ſome Months, a ſmall Quantity of Oil is precipitated to the Bottom, and ſome Portion, alſo, adheres to the Sides of the Veſſel; for the Oil which ſubſides is rendered heavy by the Salts with which the Fire mixes it; and that which adheres to the Sides of the Veſſel greatly reſembles Tartar, not only in the Figure and Diſpoſition of its Parts, but, alſo, in its acid Taſte.

The Spirit of Honey, when rectified, is entirely clear, but ſomewhat yellow; its Smell is empyreumatic, and diſagreeable; its Taſte loſes ſomewhat of its Acrimony. And this is what we call the Spirit, or Acid, of rectified Honey.

We find in the Bottom of the Cucurbit uſed in rectifying the Spirit of Honey, a tartarous Matter, of a black Colour, an empyreumatic Smell, and of an acid penetrating Taſte. This Matter is good againſt Aphthæ, or ſmall Ulcers, formed in the Mouth: It is, alſo, proper for deterging Wounds, and reſiſting a Gangrene; and is, properly ſpeaking, a Tartar of the Spirit of Honey already mentioned. If the rectified Spirit of Honey is put in Digeſtion with Leaf-gold, it diſſolves a ſmall Portion of that Metal, but without producing any ſenſible Effervescence. It, alſo, diſſolves Iron, Lead, and Silver.

The Coal, or black Matter, taken from the Retort after the laſt Diſtillation of Honey, is almoſt inſipid; but, when chew'd, gives ſome faint Indications of Salt, perceptible to the Taſte. If, after the firſt Calcination, and a Separation of the Salt by Lixiviation, we dry it, and repeat the Calcination, it takes Fire as before, and is not reduced to Aſhes, but is no more alcaline, but inſipid, and yields no more Salt.

If we lay upon a Paper a ſmall Quantity of this Coal, reduced to a groſs Powder, and either hold a Knife, touch'd with a Load-ſtone, ſufficiently near it, or gently move the Powder with the Knife, we forthwith perceive a great many Particles of the Coal attracted by the Knife, and adhering to it, in the ſame manner as Filings of Iron do to a Load-ſtone. This Experiment ſhews, that the Coal of Honey contains a certain Portion of Iron, ſince we have not hitherto diſcovered any Matter capable of being attracted by the Load-ſtone, beſides Iron. See the *Memoires de l'Acad. Royale des Sciences*, for the Year 1706.

Though Honey, in its natural State, is poſſeſs'd of an highly ſweet Taſte, yet none of its Principles, when ſeparated, retain that Reliſh of it; on the contrary, we find only theſe Principles to be acid, acrid, or ſaline, whilſt the other Parts are inſipid, and the natural Taſte of the Honey loſt. It is, alſo, impoſſible ſo to remix theſe Principles, as again to produce a ſweet Taſte; for, in order to this, there muſt be a very exact Mixture of the Acid with the Oil, or the Sulphur. The Oil alone is vapid, and paſſes over the Nerves of the Tongue, without making any Impreſſion upon them. The Acid, on the contrary, in ſome meaſure, ſtimulates and irritates theſe Nerves, ſubſervient to Taſte. But, when theſe two Subſtances are united and combined, the Particles of the Oil ſo embrace the acid Particles, as, in ſome meaſure, to abſorb them, and prevent their exciting the ſame Irritation; however, they ſtill irritate enough to give a gently penetrating Quality to the Oil, which is their Vehicle, and produce upon the Nerves ſubſervient to Taſte, the agreeable Senſation we call Sweetneſs. This Reaſoning is agreeable to what is obſerv'd in a great many Experiments; for from all ſweet Subſtances we obtain, by Diſtillation, an Acid, and an Oil; and thoſe Principles being diſunited and ſeparated, there no longer remains any Sweetneſs. Sweetneſs is, alſo, produced by exactly mixing an acid with a ſulphureous Matter; for, if we diſſolve Lead in Vinegar, the Solution will be ſweet. But it does not, from this, follow, that every time we mix acid Liquors with oleous or ſulphureous Subſtances, the Mixture will be ſweet, ſince daily Experience convinces us of the contrary; for, in order to produce Sweetneſs, the Acid muſt be intimately incorporated with the Oil, which is frequently done by Nature, but rarely by Art; ſince, for that Purpoſe, a certain Combination of Principles, not eaſily hit upon, is abſolutely neceſſary. *Lemery Cours de Chymie.*

Processes upon Honey, from BOERHAAVE.

Honey, diſſolved by Water, affords, by Diſtillation, a Water impregnated only with the Smell of Honey.

Take one Part of pure and perfect native Honey, and ſix Parts of pure Rain-water: Mix them well together, and diſtil them in a Glaſs Veſſel, with a moderate Fire. The riſing Vapour collects in watery Drops ſcattered upon the Inſide of the Alembic-head, without running down in Rivulets, though two Thirds of the Water be thus drawn off: Nor has this Water any vinous Odour, but only that of Honey, which often retains the Fragrance of the Flowers whence the Bees collect it. All the Water, which thus comes over, quenches Fire; and, upon drinking, proves very inſipid, without heating, or inebriating.

REMARKS.

Hence we learn, that the moſt elaborate Juices of Plants, produced and perfected in the Cells of Flowers, and thence collected by the Bees, contain nothing at all of that Spirit which they afterwards yield by Fermentation: Whence we clearly ſee, that the Action of the Sun upon the Juices of Plants, ſo long as they remain therein, can never produce the requiſite Effect of a true Fermentation; and, conſequently, that pure Honey has not any heating, drying, or conſtringing Virtue, but one which is attenuating, deterging, relaxing, ſtimulating, and ſaponaceous; whence it has excellent Effects both in chirurgical and internal Caſes. For this Reaſon, ſcarce any thing was more celebrated by the antient Phyſicians than Hydromel, or a Mixture of Honey and Water, as being attenuating, aperitive, purgative, and ſtimulating, yet without Heat. Our Honey-water, however, diſtil'd in a Balneum Mariæ, receives a certain Virtue from the Spirits of the Flowers lodged in the Honey; and thence is accounted extremely uſeful in the way of Collyrium, and Fomentation, applied in Inflammations or Obſtructions of the Eyes, as being, in ſome meaſure, the Waters of the Flowers which afforded the Honey. Our preſent Proceſs, likewiſe, holds in certain freſh-expreſſed and inſpiſſated Juices of Plants, as of Manna, the Pulp of Caſſia, Sugar, and Tamarinds; which, alſo, when mix'd with Water, and treated in the ſame manner, afford no vinous Spirit. The ſame holds of other thinner Juices, as thoſe of Berries, Summer-fruits, the Birch, the Vine, and the like; which, alſo, upon Diſtillation, afford no inflammable Spirit; ſo that the Proceſs is univerſal.

Honey diluted with Water, and fermented.

Dilute Honey with ſuch a Proportion of Rain-water, that the Solution may ſupport a new-laid Egg on its Surface; this is called Hydromel. Fill an upright Cask with it, ſo as to leave the Tap-hole, which is now at the Top, open: Place the Cask ſo as to keep it conſtantly heated to ſeventy Degrees. The Liquor will ſoon begin to ferment, with all the Signs of Fermentation: Let it continue thus, till the Operation be entirely over, when the Liquor will have a ſweet ſpirituous Taſte, and is to be kept in a cloſe Veſſel, under the Title of *Mead*, or *Metheglin*.

Mead, prepared by Fermentation, according to the laſt Proceſs, affords an inflammable Spirit, and a Vinegar, by Diſtillation.

Pour a Pint of boiling Water into the Still; light up the Fire, that the Water may continue ſtrongly boiling; then pour in Mead that has been long kept in a cloſe Veſſel, leaving a third Part of the Still empty; the Fire is now to be increas'd, and the Matter kept frequently ſtirring with a Stick, to continue the Maſs well-mixed. When almoſt ready to boil, clap on the Still-head, and carefully regulate the Fire ſo that the Head may grow thoroughly hot, and the Spirit may diſtil ſufficiently quick through the Worm. Thus an excellent vinous Spirit will come over, not to be diſtinguiſhed from that of real Wine; and the Time it continues to run muſt be obſerved, that this Spirit be kept ſeparate. When it is all come off, if the Receiver be changed, another watry, white, ungrateful, Liquor will follow.

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This Proceſs affords an Example of the Diſtillation of Spirits from a fermented Liquor, together with the proper Caution required. The Remainder of the Mead, after the Spirit is drawn off, ſtill contains ſomething nutrimental; and the Caſe is the ſame in Beer. But if this Matter be artificially treated according to the Proceſs of Fermentation, (ſee ALCOHOL)

it

it cannot be made to ferment again, but it will grow sour and vapid, without turning vinous, so as to afford fresh Spirits; and thus it gradually corrupts more and more.

Processes on Honey, from *WILSON*.

Tincture of Honey.

Take a Pound of pure Virgin-honey; despume it in a clean Earthen Pan, and put to it three Ounces of pure Salt of Tartar (or any other fixed Salt), finely pulveriz'd: Stir them well together, and an Ebullition will arise; stay till it is over, and take of the Scum, and put the Mixture into a Cucurbit uncut, and pour upon it one Pound and an half of tartarized Spirit of Wine: Close the Mouth, and set it in a Heat of Digestion forty-eight Hours. Agitate the Matter three or four times a Day, and in that time the Spirit of Wine will have charged itself with the purest Part of the Honey. Decant it from the Fæces into a new Cucurbit, lute on the Head and Receiver, and draw off one half of the Spirit of Wine in a gentle Heat. That which remains, will be a sweet thick Tincture, being an excellent pectoral Medicine.

Its Dose is from forty Drops, to two Drams.

Sweet Honey Water.

Take of good *French* Brandy, one Gallon; the best Virgin Honey, and Coriander-seeds, each one Pound; Cloves, one Ounce and an half; Nutmegs, one Ounce; Benjamin and Storax, each an Ounce; Benilloes, Number four; the yellow Rind of three large Lemons. Bruise the Cloves, Nutmegs, Coriander-seeds, and Benjamin; cut the Benilloes in small Pieces: Put all into a Cucurbit, and pour the Brandy to them; and after they have digested forty-eight Hours, distil off the Spirit *in Balneo Mariæ*.

To one Gallon of this Water add, of Damask-rose, and Orange Flower-water, each one Pound and an half; of *China* Musk and Ambergrise, each five Grains: First grind well the Musk and Ambergrise, with some of the Water, and afterwards put all together into a large Matrass; shake them well, and let them circulate three Days and Nights in a gentle Heat. Then let all cool; filtre, and keep the Water in a Phial well stopt for Use.

This Water I often made for King *James* II. It is an Antiparalytic, smooths the Skin, and gives one of the most agreeable Scents that can be smelt. Forty or fifty Drops, put into a Pint of clean Water, are enough to wash the Hands or Face with; and the same Proportion to Punch, or any Cordial Water, gives a most pleasant Flavour. *Wilson.*

It is remarkable, that Honey was used by the Antients, in the Composition of their Antidotes and Theriacas, as in Mithridate, the *Theriaca* of *Andromachus*, commonly call'd *Venice Treacle*; and *Fracastorius* has follow'd their Example, in the Composition of his Confection, call'd *Diascordium*. Now, Honey I apprehend to be a very proper Ingredient in such Compositions: For it opens the other Ingredients by fermenting; extracts, and, in some degree, alters their Virtues, and unites them in one common Efficacy. Besides, Opium, and other Narcotics, which are frequently directed in the Antidotes of the Antients, are corrected by Honey; agreeable to which, is the Remark of *Dioscorides*, that Honey relieves the Disorders excited by taking the Juice of the Poppy. When, therefore, we make any of these Antidotes with *Diacodium*, a Medicine results from the Composition, of Virtues very different from those of one which is made with Honey. And this deserves the serious Consideration of Physicians who prescribe *Diascordium*, or any of the other Antidotes made with *Diacodium*.

With respect to Honey, one farther Remark is to be made, which is, that there is a Peculiarity in some Constitutions, which renders them incapable of bearing the least Quantity of Honey, without excessive Gripes, Vomitings, and Uneasiness. And in others, it operates as a Poison; an Instance of which we find in the *Philosophical Transactions*, as follows.

One Mr. *Morley*, of *Bury St. Edmunds*, in an asthmatic Distemper, was advised by some to take a Spoonful of good *English* Honey; which being done, the Patient fell into an universal Swelling, as if he had swallowed the worst of Poisons. Mr. *Goodrick* (who is my Author) prescribed a common Sudorific, which, in competent time, relieved him; and that they might be assured there was nothing amiss in the Honey, they afterwards got the like Quantity at another Place, which was given with the very same frightful Event, and the Party was cured with the same kind of Sweat.

The like Example has been more than once related to me by a noble Lady in *Ireland*, who having received a small Hurt on her Leg, and the Surgeon (unknown to her) mingling, in the Application to be made to it, a little Honey, (for which she had an utter Aversion) the Place affected soon after rankled and grew so bad, that the Lady was constrained to send for him, who had apply'd it, who, being acquainted with her Antipathy to Honey, immediately removed that Plaister, and apply'd another with good Success. *Philos. Transf.*

I don't know, that Physicians have ever directed any Remedy for Disorders excited by Honey; but I must relate what has more than once happen'd to myself, when I was rendered very uneasy, and affected with severe Gripes, and a Diarrhœa, by too plentiful an Use of Honey. On these Occasions I was very much inclin'd by my Appetite to eat Salt-meats, and indulged myself with lean Bacon broiled, from which I found considerable Relief. What renders this Observation, which has a very trifling Air, of more Importance, is, that I find *Dioscorides*, *Aetius*, *Oribasius*, *Paulus Ægineta*, and *Actuarius*, all recommend salt Aliments (ταριχὰς) as a Cure for Disorders excited by the Use of the poisonous Heracleotic Honey mentioned under the Article ÆGOLETHRON. I should imagine, also, that copious Draughts of Chicken-water, made so as only just to taste of the Chicken, as directed by *Sydenham* for the Cure of a *Colera*, would have a very good Effect in Gripes arising from the Use of Honey, especially if, at the same time, Clysters of the same were injected.

I shall end this Dissertation on Honey, with the Character *Quincy* gives of it as a Medicine; first remarking, that it is a popular Remedy for the Stone and Gravel, and that not a bad one.

The medicinal Virtues of Honey, says *Quincy*, are many and great, insomuch that there is no Author, from the most antient Times, but makes mention of them, especially from the divine *Hippocrates*, down to this Age. It is very penetrating and deterging, and is, therefore, good in all Obstructions, especially from viscid and tough Humours. In Infarctions and Stuffing of the Breast, it is of great Efficacy, and wonderfully promotes Expectoration. In short, there is no Disorder from Phlegm, or any thing which is the Produce of a cold Constitution, in which it is not serviceable. But in thin and hot Habits, it is not good. It was antiently used as Sugar is now; and great Pity it is, that it is not at present more used. It does great Service to such as are troubled in a Morning with thick tough Phlegm, with which they cannot be easy, until it is hawk'd up, though it gives much Difficulty and Straining to do it. For this Purpose, it is very conveniently eat over Night upon a Toast, or dissolved in any warm Liquor. Some affirm, it will destroy Worms, drank in Milk. It has been much used in Surgery to cleanse foul Ulcers, either by immediate Application, or washing them with Liquors, in which it had been dissolved.

Mel Ægyptiacum. See Ægyptiacum Unguentum.

Mel Anthosatum. *Honey of Rosemary.*

Take of Rosemary-flowers fresh-gathered, a Pound; of clarified Honey, three Pounds: Mix them together in a Pot, and keep for Use.

Mel Elatines. *Honey of Paul's Betony.*

Take of the clarified Juice of Paul's Betony, and of clarified Honey, each four Pounds; and boil to a due Consistence.

This was never directed before the last College Dispensatory, either by the College, or in any other Dispensatories, that I have met with.

Mel Helleboratum. *Honey of white Hellebore.*

Take of the Roots of white Hellebore, dry'd, and cut into Slices, one Pound; of common clear Water, fourteen Pounds: Let them infuse together for the Space of three Days; and then leisurely evaporate to the Consumption of half the Quantity of Liquor; and boil up, when strained, by strong Expression, to the Consistence of Honey, with three Pounds of the finest white Honey.

Mel Mercuriale. See Bonus Henricus.

Mel Mororum. *Honey of Mulberries.*

Take of the Juice of Mulberries, both of the Tree and Shrub, gathered unripe, and before Sun-rise, and depurated by settling, each one Pound and an half; Honey, strained and despumated, two Pounds: Let them simmer together in a gentle Heat, to a due Consistence.

Mel Rosatum. *Honey of Roses.*

This is made from one Pound of the Juice or Infusion of red Roses, and two Pounds and an half of Honey, boiled together into a Consistence.

Mel Saponis. *Honey of Soap.*

Take of common Soap and Honey, each four Ounces; Salt of Tartar, half an Ounce; Furmitory-water, two Drams; Mix them together.

This stands recommended as a good thing to scour and whiten the Skin; but it may, also, be put to a much more important Use, and will frequently do great Service in the Gout, and rheumatic Pains,

Pains, if it be well rubbed into the Part affected; but it is so penetrating, as sometimes to raise a Blister, and at first may enrage the Pain.

For these Purposes, great Improvements may be made, with the Addition of due Quantities of Camphire and Opium.

MEL VIOLACEUM, *Honey of Violets*,

Is made altogether as the Honey of Roses; but it is little used, and therefore seldom kept in Readiness in the Shops. The Honey of Roses is frequently prescribed in Gargarisms, and, in many Intentions, as a cooling Detergent.

MELAMPODIUM. Black Hellebore, thus called from *Melampus*, the first Discoverer of its Virtues.

MELAMPYRUM.

The Characters are;

The Leaves are conjugated; the Flower is monopetalous, personated and bilabiated, the upper Lip being galeated, and the lower entire. The Fruit is round, bicapsular, and full of Seeds resembling Grains of Wheat.

Boerhaave mentions two Sorts of this Plant; which are,

1. Melampyrum; comâ purpurascente. *C. B. P.* 234. *Raii Synop.* 3. 286. *Boerh Ind. A.* 236. *Tourn. Inst.* 173. *Triticum vaccinum.* Offic. *Melampyrum multis, sive Triticum vaccinum.* J. B. 3. 439. Raii Hist. 1. 774. *Melampyrum purpureum.* Ger. Emac. 96. *Cratæogonum flore vario.* Park. Theat. 1326. COW-WHEAT.

It is called Cow-wheat, because it is grateful Fodder to Black Cattle; it is commonly found among the Corn in foreign Countries, but is not, as far as I can find, of *English* Growth. *Melampyrum*, says *J. Bauhine*, has hitherto been of no Use in Medicine, but has lain neglected. *Clusius* writes that in those Parts of *West Friesland* and *Flanders*, where it is very plentiful, it vitiates the Bread, and makes it black; and that those who feed on it are molested with a Stuffing or Heaviness of the Head, as if they had eaten Darnel. He has often, he says, observ'd Bread discolour'd with this Grain, but never found it ill-tasted, nor esteemed the more unwholsome by the Country-people, who do not trouble themselves to separate it; and *Tabernæmontanus* assures us, that he often eat of this sort of Bread, and that he found it very savoury, and not at all hurtful. *Raii Hist. Plant.*

2. Melampyrum; luteum; latifolium. *C. B. P.* 234. *Boerh. Ind. A.* 236. *Tourn. Inst.* 173. *Cratæogonum.* Offic. *Cratæogonum album.* Ger. 84. Emac. 91. *Cratæogonum vulgare.* Park. Theat. 1326. *Melampyrum sylvaticum flore luteo, sive Satureia lutea sylvestris.* J. B. 3. 441. Raii Hist. 1. 775. Synop. 3. 286. WILD COW-WHEAT.

It grows in Woods, and Places adjacent, Thickets, Hedges, and shady Places, about the Roots of Oaks, and other old Trees, in almost every Country of *Europe*.

It flowers in *June* and *July*, and the Seed is in Use, which, as *Dioscorides* says, stimulates to Venery.

The Name *Melampyrum* is compounded of μέλας, (*Melas*) black, and πυρὸς, (*Pyrus*) Wheat, because it must resemble Wheat, and is, also, an esculent Grain: It is said by many, that, if mixed with Wheat, it affects the Head; but this, again, is contradicted by many others. *Hist. Plant. ascript. Boerhaav.*

MELANAGOGA, μελαναγωγα. Medicines which purge off black Bile.

MELANCHLOROS. μελάγχλωρος. An Epithet for certain Troches, describ'd by *Paulus Ægineta*, *L.* 7. *C.* 12. And likewise of a Plaister describ'd by the same Author, *L.* 7. *C.* 17.

MELANCHOLIA. See MANIA.

Erratic Melancholy is that Species of the Disorder, which most generally seizes Patients in the Month of *February*. It is so called, because those who labour under it, cannot remain for an Hour in one Place; but continually wander about, without knowing where they go. It is by the *Arabians* call'd *Kutubuth*, from an Animal, which, as they inform us, perpetually moves up and down on the Surface of stagnant Waters.

Under erratic Melancholy, the Patients, as we have already observ'd, are in continual Motion, shun Company, love solitary Places, and know not whither they wander. The Colour of the Body is yellowish; the Tongue dry, like that of a Person scorch'd with Thirst; the Eyes dry, hollow, and never discharging any Tears; the whole Body dry and parched; and the Countenance overcast with Gloom, Horror, and Sadness. Such melancholy Patients are more timorous than others; for which Reason they love Solitude, wander in the Night, and seek for Concealment about the Sepulchres of the Dead, and other solitary Places. They endeavour not to meet human Creatures, and, if they should unexpectedly do so, they do not look at them, nor see them; which is undoubtedly owing to their unaccountable Dread and Fear, in consequence of which they suspect and shun every thing; or because they do not advert to external Objects, since their Fancies are always employ'd, and their Thoughts continually dwelling on the Representations of their Fancies. They seek after solitary Places, that they may not be disturb'd in those Speculations, on which their exorbitant Fancies brood; just as the Studious in their Senses shun Company, and all those other Objects, which are capable of drawing their Minds off their favourite Subject. Their Legs are generally full of Ulcers, which cannot be consolidated, since by the continual Motion the peccant Humour is solicited to the Legs.

The Cure is almost the same with that of common Melancholy, since it proceeds from the same Cause, and only differs in Degree, and the Commixture of the Humours. For this Reason, the melancholic Humour, which affects the Spirits in the Head, and disposes the Brain to the Generation of the like Spirits, is to be corrected and evacuated. Then the Head is to be corroborated, and its Intemperature reduc'd to a due State, by moistening and moderately heating, or rather temperate Cephalics. In this Disease copious Venesection is useful, either at one Time, or repeated Intervals, as the Condition of the Patient requires. But, above all Things, Sleep is to be carefully procur'd, since nothing contributes more to the Removal of this Disorder. Purgative Medicines are; also, to be frequently repeated. Some Physicians, when other Measures prove ineffectual, order the Patients to be lash'd, till they forsake their wild Fancies, resume their Reason, and become obedient. But I doubt whether this Practice is safe, since the Dread with which this Species of Melancholy is attended, may by this means be increas'd, and the Patient more exposed to Danger.

The opposite of this erratic Melancholy is the apoplectic Melancholy; for as in the former the Patients are restless and wander about from one Place to another, so in the latter every Circumstance is revers'd; for the Patients appear stupid, and, being apparently destitute of a Locomotive Faculty, seem to be fix'd to a particular Place. When they lie, they care not for erecting themselves; when they sit, they care not for rising; and when they stand, they will not walk, except forc'd to it by their Friends, or the By-standers. They do not shun Men; but, tho' they seem attentive to what is said to them, yet they make no Answer to it; and, being pensive, and wrapt up in the Contemplation of other Things, they do not attend to the Objects of Sight and Touch. They sleep and watch by Intervals, eat their Aliments when held to their Mouths, drink like other People, and in these and the like Things are pretty tractable, and easily manag'd.

Tho' this Disorder is pretty rare, yet *Jacobus Janus* furnishes us with a remarkable Instance of it in a Clergyman of about thirty Years of Age, who, having a larger Fund of Superstition than Sense, fallly imagined that Almighty God could never be reconcil'd to him, on account of the trifling Miscarriages of his Youth; for which Reason, he thought himself unworthy of the Sacred Function he bore. In consequence of this foolish Notion he labour'd so much under the fatal Influences of Despair for a whole Spring and Summer, that he frequently attempted to lay violent Hands, both on himself, and on his Wife, at which times he seemed to act in consequence of a certain Paroxysm. But in the Autumn, the Violence of his Disorder being allay'd, he remain'd preternaturally melancholy, and could not be induc'd to speak, tho' he utter'd frequent and deep Sighs. Tho' he seem'd chearfully to listen to the consolatory Discourses of his Friends and Acquaintances, endeavouring to remove his Grief, and sooth his anxious Thoughts; yet he could never be prevail'd upon to make any Answers to their Questions; tho' he was frequently heard to invoke God in a manner which testified Despair and Horror. For some Weeks after not a Word could be extorted from him; tho' he was often solicited to speak. He slept well in the Night; and in the Morning, when he wak'd, appear'd pensive, and, as it were, immoveable in his Bed. When rais'd out of Bed, and his Clothes put on, he stood like a Statue, only with this Difference, that he put his Hand to his Head and Temples spontaneously. He fetch'd deep Sighs, as melancholy People do; when push'd forwards, and led by the Hand, he walk'd; when brought to a Chair, or Seat, he sat down; when forc'd to sit at Table, he took the Aliments given him by his Wife, and drank as other Persons do, when advis'd to it. His Disorder lasted during the whole Autumn, but began to be diminish'd about the middle of the Winter; so that at last he became capable of exercising his Function; tho' he remain'd dejected for a long time, because he was naturally of a melancholic Habit.

The diagnostic Signs of this Disorder are sufficiently obvious from what has been said. There is a great Difference between a Catoche, and apoplectic Melancholy; since the former generally seizes the Patient suddenly, whilst the latter invades slowly. In the former, the Patient is depriv'd of Sensation and Motion; whereas, in apoplectic Melancholy, both these are retain'd, tho' the Patient cannot use his Senses so quickly as sound Persons do; because their Fancy, being employ'd on certain Objects, cannot advert to others. In a Catoche, the Patients sometimes neither see, hear, nor feel; whereas in apoplectic Melancholy they do all these, tho' they do not testify in Words, that they do so. In a Catoche, the Patients generally have their Members retain'd in the State and Position they are plac'd by the By-standers; whereas, in apoplectic Melancholy, the Patient is capable of moving his Members. Those, also, who labour under a Catoche,

have their Eyes open, and cannot ſpeak, which Symptom is not obſerv'd in apoplectic Melancholy. *Sennert. Oper. Lib.* 1. *Part* 2. *Cap.* 14.

MELANDERINOS, μελανδέρινος. The Name of a Sea Fiſh, like the MELANURUS.

MELANDRYUM. A Name for the *Lychnis*; *Syluestris*; *quæ Been Album, vulgo.* See BEHEN.

MELANORRIZON. *Bruntelſius* is guilty of an Error, in ſaying that *Dioſcorides* calls by this Name the black Hellebore; I ſuppoſe he means *Polyrrhizon*, for *Melanorrhizon*, μελανόῤῥιζον, which is one of the Names of black Hellebore, in *Dioſcorides*, *Lib.* 4. *C.* 151. *Gorræus*, and from him *Caſtellus*, have both run into the ſame Miſtake, probably after the Example of *Bruntelſius*. *Galen*, in his *Exegeſis*, explains μέλαινα ῥίζα, the Root of the aromatic *Aſpalathus*.

MELANPSITHIA, μελαμψίθια. Certain black Wines are thus call'd by *Dioſcorides*, *L.* 5. *C.* 9. It is deriv'd from μέλας, black, and ψιὰ, Joy, Pleaſure, or Exhilaration.

MELANTERIA, μελαντηρία. See CHALCITIS.

MELANTHELÆUM, μελανθέλαιον. Oil of *Melanthium*, mention'd by *Dioſcorides*, *L.* 1. *C.* 46.

MELANTHIUM. See NIGELLA.

MELANURUS. Offic. Aldrov. de Piſc. 62. Rondel. 1. 126. Raii Ichth. 310. Ejuſd. Synop. Piſc. 131. Bellon. de Aquat. 269. Geſn. de Aquat. 542. Salv. de Aquat. 181. Charlt. Piſſ. 15. Jonſ. de Piſc. 31. THE BLACK-TAIL.

It is a Fiſh taken in the *Mediterranean* Sea. Being eaten broil'd, it ſharpens the Sight, and the Broth thereof cures the Colic, as we are aſſur'd by *Kyranides*. *Dale*.

MELANZANA. A Name for the *Melongena*; *fructu oblongo violaceo*.

MELAONES, or MELONES. Black Worms found in Meadows in the Month of *May*, which, when bruis'd, emit an agreeable Smell. Certain yellow Beetles are, alſo, thus call'd.

MELAPHRODITOS *Herba*. *Aetius*, *Tetrabib.* 4. *Serm.* 1. *C.* 21. recommends this as effectual in curing the Bite of a Viper; but I cannot find what Plant he means, neither do I know that it is mention'd by any Botanic Author.

MELAS, μέλας, black, is an Epithet apply'd by antient Authors in Medicine in a peculiar Senſe to the Colour, or Skin; and, alſo, to ſome particular Remedies. In Conformity hereto, in the firſt Place, a Perſon who has a black or ſable Colour preternaturally diffuſed over his Skin, as in the black Jaundice, is call'd

MELANCHRUS, μελάγχρως, or MELANCHROS, μελαγχρὼς, (from μέλας, black, and χρῶς, the Skin) 6 *Epid. Sect.* 2. *Aph.* 27. In this Paſſage ſome Copies for μελάγχρω read μελάγχλωρω, (*melanchlorus*) which is Black inclining to Green, yelloviſh, or a pale-dark Colour [ſee CHLOROS]; and is the Word uſed by *Aretæus*, in his Deſcription of Melancholy, or black Bile.

MELAINA, μέλαινα, is ſometimes uſed by *Hippocrates* ſimply to ſignify the ſame as μέλαινα χόλη, (*melaina chole*) black Bile; particularly *Lib. de Nat. Hom.* and in the Paſſage, *Lib.* 29. *de Morbis*, μέλαιναν ἐμέει δίον τρύσα, "He vomits black Bile, re-"ſembling Fæces." To this Paſſage *Galen* ſeems to have an Eye in his *Exegeſis*, where he ſays, μέλαινα, λέγεσθαί τε ἢ ἢ νόσος ἀπὸ μελαίνης χολῆς συνισαμένη· "*Melaina* the Diſeaſe, the "Matter of which conſiſts of black Bile, is ſo called."

MELAINA NUSOS, μέλαινα νῦσος, the black Diſeaſe. There are two Diſeaſes to which *Hippocrates* applies the Epithet μέλαινα, black, by way of Diſtinction; and both are deſcribed by him at the End of his ſecond Book of Diſeaſes.

In the firſt the Patient, he ſays, vomits black Bile, like Fæces, ſometimes bloody, and ſometimes reſembling ſecondary Wine, at other times like the Ink, or black Juice, of the Polypus, or Cuttleſiſh, and ſometimes ſour as Vinegar; ſometimes he throws up a thin ſort of Phlegm and Saliva, and ſometimes a greeniſh kind of Bile [χολὴν χλωρήν]. When the Matter ejected by Vomit is like black Blood, it ſeems to ſmell of the Slaughter-houſe; the Mouth and Fauces are inflamed with Vomiting, the Teeth are ſet on Edge, and what is vomited ferments on the Ground. After Vomiting, the Patient finds himſelf ſomewhat relieved; he can neither bear Faſting, nor dares to eat freely; for, in the firſt Caſe, he is moleſted with a Rumbling of the Viſcera, and a Sourneſs of the Saliva; and, after Eating, he feels a Weight and Oppreſſion on the Viſcera, with a pungent Pain of the Breaſt and Back, as if inflicted by Pins thruſt therein; there is, alſo, a Pain in the Side, with a ſlow Fever, Head-ach, a Dimneſs of Sight, an Heavineſs of the Legs, and a Blackneſs of the Skin.

The ſecond black Diſeaſe (μέλαινα νῦσος) is attended with the following Symptoms: The Patient is extenuated, and becomes of a dark-red Colour, [ὑποπυρρος] and his Eyes of a paliſh Green [ὑποχλωρος]; his Skin is thin, and his Body weak, and the longer the Diſeaſe continues, the more formidable it grows: He vomits at all Seaſons, diſcharging a thin Matter, as it were by Diſtillation, to the Quantity, perhaps, of two Brochthi. [See BROCHTHUS]. He frequently vomits up his Food, together with Bile and Phlegm; after which a Pain extends itſelf over all his Body; and ſometimes, before he vomits, he is moleſted with a ſlight Shivering, and a Fever; and he is moſt ſubject to vomit, after taking ſweet and oily Things. See MORBUS NIGER.

MELAN PHARMACON, μέλαν φάρμακον, the black Medicine, ſeems to be Ink; or to ſignify what in *Hippocrates* is, alſo, called μέλαν γεγραπτὸν, *Atramentum Scriptorium*, Ink to write with; for ſo *Celſus* and *Paulus* ſeem to have underſtood it. The Place where the Words occur, in *Lib. de Cap. Vuln.* where, in exploring the Fiſſure of the Cranium, he ſays, δεῖ δὲ ὅπῃ τὸ ὀστέον τέτρηται τὸ μελάγματι, δεῦσάς τε τῷ μέλανι φαρμάκῳ τῷ τετριμένῳ· "We ought to pour over the Bone ſome very black Subſtance, "macerated in a Solution of the black Medicine." The Senſe of this Place ſeems to be expreſſed by *Celſus*, *Lib.* 4. *Cap.* 8. in the following Words, *At ſi ne tum quidem rima manifeſta eſt, inducendum ſuper os atramentum ſcriptorium eſt, deinde ſcalpro id radendum*: "If neither then the Fiſſure appears, you are to co-"ver the Bone with Ink, and then apply the Lenticular." And *Paulus*, *Lib.* 6. *Cap.* 90. ſays, we are to pour on the Bone ſome liquid black Medicine, or Ink which we write with. But whether it be writing Ink, or ſome other black Medicine, which *Hippocrates*, in the Place before quoted, directs to be poured upon the Bone, it is certain, that *Galen* had an Eye to that Paſſage in his *Exegeſis*, when he expounds μέλανι φαρμάκῳ by theſe Words, τοῦτο πῶς σκευάζεται, ἐν τῷ περὶ ἑλκῶν αὐτὸς ἐδίδαξεν· "How this (black Drug or Medicine) is prepared, he himſelf "has taught us in his Book of Ulcers." Hence we may infer, that by theſe Words is meant ſome Medicine, whoſe Compoſition is uncertain, ſince we meet with nothing explicitly relating thereto in that Treatiſe; and, therefore, either this Book *Of Ulcers* is imperfect, or we take this black Medicine for ſome other Compoſition among thoſe there deſcribed, and not for *Atramentum Scriptorium*, which is no-where mentioned in that Book. The fore-mentioned Paſſage, *Lib. de Cap. Vuln.* is indeed ſufficiently corrupt; we may, however, collect from it, that by μέλαν φάρμακον, *Hippocrates* means ſome black liquid Medicine, which is to be poured upon the Bone, in order to find out how deep the Fiſſure had penetrated; and whether this be Caricon, deſcribed in the Book *Of Ulcers*, or ſome other Compoſition there deſcribed, or writing Ink, it is a Matter of ſmall Importance. In the ſpurious Additions to the firſt Book of *Hippocrates*; *de Morb. Mulier.* there is a black Medicine, μέλαν φάρμακον, directed to be prepar'd of the *Squama*, and *Flos Æris*, firſt pounded ſeparately, and afterwards mixed.

MELASMA, μέλασμα. A Sugillation, or Bruiſe, which turns black, is thus called.

MELCA, μέλκα, according to *Galen*, is a *Roman* Word, and ſignified a laudable ſort of Food, of a refrigerating and moiſtening Quality, in Uſe among the *Romans*: It ſeems to be a ſort of Oxygala, as we may infer from *Galen*, *Lib.* 7. *M. M.* and *Paulus*, *Lib.* 1. *Cap.* 37. where he directs thoſe who, from an hot Diſtemperature, labour under an Averſion to Food, to uſe a refrigerating Diet; and, among other Aliments of that Quality, he adviſes eating of Melca, which, he ſays, is prepared of Milk. This is confirmed by *Conſtantine*, *Lib.* 18. *de Agricultura*, who aſſures us, that Melca was nothing but Milk repoſited in a new earthen Pot, firſt well ſeaſon'd with boiling-hot Vinegar, by which means there was a Secretion of the thicker Subſtance of the Milk from the Whey: From whence it appears, as we ſaid before, to be a kind of *Oxygala*. *Gorræus*.

MELE, μήλη. A Probe.

MELEAGRIS. Offic. Bellon. des Oyſe: 249. *Gallo-pavo*: Aldrov. Ornith. 2. 35. Geſn. de Avib. 426. Charlt. Exer. 81. Jonſ. de Avib. 39. Mer. Pin. 172. Schw. A. 279. *Gallo-pavo ſive Meleagris & Numidica avis*. Raii Ornith. 169. Ejuſd. Synop. A. 51. Will. Ornith. 113. *Gallus Indicus quibuſdam*. THE TURKEY.

The Fleſh is eſteemed analeptic, or reſtorative, and ſtimulative to Venery. The Food of Turkeys is principally of Vegetable Subſtances, and the habitual Exerciſe not very great; hence their Salts are not very much exalted: They are eſteemed to be of eaſy Digeſtion, eſpecially when young.

MELECH. Salt. *Rulandus*.

MELEGUETTA. A Name for the greater Cardamoms. See CARDAMOMUM MAXIMUM. *Cluſius* mentions a ſpurious Sort of Meleguetta.

MELEIOS, μήλειος. An Epithet for that Species of Alum, which is produced in the Iſland *Melos*.

MELEUKEN. The Name of an *Indian* Fruit, like the Pine-nut. *Raii Hiſt. Plant.*

MELI, μέλι. Honey. See MEL.

MELIA TERRA. See CRETA.

MELIANTHUS.

The Characters are;

Its Root is perennial, and it has the Appearance of a Shrub; the Leaves are like thoſe of Burnet, and the Calyx multifid: The Flower is tetrapetalous and anomalous; ſome of the Petals reſembling a Fan, and others a Cone: The Fruit is like a Bladder, tetragonal, or four-corner'd, quadricapſular, and full of roundiſh Seeds.

Boerhaave mentions two Species of this Plant; which are,

1. Melianthus; Africanus. *H. L.* 414. *Pimpinella, ſpicata, maxima, Africana.* Act. Hafn. 2. 58.

2. Melianthus; Africanus; minor; fœtidus. *Commelin. Rar.* 4. *Boerh. Ind. alt. Plant.*

It is called *Melianthum*, or *Melianthus*, from μέλι, Honey, and ἄνθος, a Flower, that is to ſay, Honey-flower; becauſe in *Africa* its Flower tranſudes Honey.

The Inhabitants of *Africa*, when exhauſted with Heat and Thirſt, crop the Flowers, and ſup the Liquor: This Liquor is much in Uſe among the *Hottentots*, to ſtrengthen and refreſh the Spirits; for which Purpoſe it is very effectual. *Hiſt. Plant. adſcript. Boerhaav.*

MELIAS. The ſame as MELEIOS.

MELICA. A Name for the *Milium*; *Arundinaceum*; *ſubrotundo ſemine*; *Sorgho nominatum.*

MELICERIA, μελιχηρία. The ſame as HYDARTHROS.

MELICERIOLA. A ſmall Meliceris.

MELICERIS, μελιχηρὶς. An encyſted Tumor, thus called, becauſe it contains a Subſtance like Honey. See TUMOR.

Sometimes Meliceris imports the ſame as CERION, or TRAVUS.

MELICHROOS, μελίχροος. Of the Colour of Honey.

MELICHROS, μελιχρός. Sweet like Honey.

MELICRATON, μελίκρατον, from μέλι, Honey, and κεράννυμι, to mix. Hydromel; Water in which Honey is diſſolv'd.

MELIEDES, μελιηδὴς. An Epithet of Wine, importing a Sweetneſs and Flavour reſembling thoſe of Honey.

MELIGEION. *Blancard* explains this, a fetid oleous Humour, of the Conſiſtence of Honey, diſcharged from Ulcers, complicated with a Caries of the ſubjacent Bone.

MELILOTUS.

The Characters are;

The Ovary is a naked Capſule, (not hidden within the Calyx, as in Trefoil) pregnant with one or two roundiſh Seeds; the Flowers grow in Spikes.

Boerhaave mentions twelve Species of this Plant; which are,

1. Melilotus; fruticoſa; lutea; vulgaris; vel Officinarum. *Boerh. Ind. A.* 2. 29. *Melilotus.* Offic. *Melilotus vulgaris.* Park. Theat. 719. Raii Hiſt. 1. 951. Synop. 3. 331. *Melilotus Germanica.* Ger. 1034. Emac. 1205. *Melilotus Officinarum Germaniæ.* C. B. P. 331. Tourn. Inſt. 407. *Trifolium odoratum ſive Melilotus vulgaris, flore luteo.* J. B. 370. MELILOT.

The ordinary Melilot has a large, woody, ſpreading, white Root, from which ſpring many ſlender-chanel'd ſmooth Stalks, two or three Feet high, having at every Joint three oblong, round-pointed, green Leaves, ſet together upon one Foot-ſtalk, ſerrated about the Edges, and frequently gnaw'd by Inſects. The Flowers grow on long Spikes, being yellow, in Shape of Tare or Pea-bloſſoms, but much leſs; to each of which ſucceeds a ſmall, rough, round Pod. The whole Plant, but eſpecially the Flowers, has a ſtrong pleaſant Smell. It grows frequently among the Corn, and in Hedges; and flowers in *June*. The Leaves and Flowers are uſed.

They are accounted mollifying, diſcuſſing, diſſolving, and eaſing Pain; and therefore are frequently ordered in Stuphs and Cataplaſms againſt Inflammations, hard Tumors, and any kind of Swellings. The Melilot-plaiſter made of this Herb, boiled in Mutton-ſuet, Roſin, and Wax, is drawing, and good for green Wounds, but is chiefly uſed in dreſſing of Bliſters.

The only officinal Preparation is the *Emplaſtrum Meliloti, ſimplex. Miller's Bot. Off.* See EMPLASTRUM.

This Plant gives hardly any Tincture of Red to blue Paper; it is acrid, bitter, ſtyptic, odoriferous, and gives a ſlight Nauſea, when chewed; by which, it ſeems, its Salt very much reſembles the natural Salt in the Earth, united with a great deal of eſſential Oil, and terreſtrial Parts.

For, by the chymical Analyſis, the Melilot, beſide a great deal of acid Phlegm, yields, alſo, a good Quantity of Oil of Earth, together with an urinous Spirit, volatile, concrete, and fixed Salt very lixivial.

Therefore this Plant is aperitive, reſolvent, and lenifying. The Ptiſan made of the Tops of it, and Chamomile, is excellent for the Inflammations of the lower Belly, for the Colic, Retention of Urine, Rheumatiſm, and generally in all Caſes where it is neceſſary to facilitate the Courſe of the Humours by lenifying. The diſtilled Water of the Flowers of Melilot has a Smell agreeable enough; but *Cæſalpinus* obſerves, that it increaſes and retains that of other aromatic Waters, with which it is mixed; for which Reaſon it is uſed in the *Eau de Corduc.* The Melilot is uſed in the carminative Clyſters, lenifying and reſolvent Cataplaſms. For the Clyſters they boil the Flowers of Melilot and Chamomile in Tripe-broth, and add ſome Drops of Oil of Anis to the Decoction, ſtrained through a Cloth. For the Cataplaſms boil two Roots of Lilies, with an Handful of Hemlock and Henbane-leaves, and three Pugils of Melilot-tops: Strain all through a Sieve, and mix with it ſome Drops of fetid Oil of Tartar. The Juice of Melilot-flowers, or their Infuſion, in boiling Water, very much aſſwages the Inflammation of the Eyes, eſpecially if, after having taken it from the Fire, there be added a little camphorated Spirit of Wine, ſtrained through a Linen Cloth, to ſeparate the ſuperfluous Camphire. *Martyn's Tourn.*

For mitigating a Pleuriſy, the following Fomentation is approved by Experience:

Take the Herb Melilot, and true Pellitory of the Wall, of each two Handfuls; of Betony, one Handful: Mix them, and boil them in Water, and therewith frequently foment the Breaſt. *Simon Pauli.*

The Emplaſtrum de Meliloto, of *Meſue*, is an excellent Anodyne, and diſcuſſive not only of Flatulencies, but of cold and groſs Matter, in external Tumors, even thoſe of the Liver and Spleen.

Whereas *Dioſcorides* ſays, that Melilot is ſweet-ſcented, he is to be underſtood of the dry'd Herb, becauſe, when green, it has hardly any Smell at all, but, when dry, is very fragrant, as is obſerved, alſo, by *Theophraſtus*, *Lib. 6. de Cauſ. Plant.*

Melilot is called by *Camerarius*, and the *Italians*, *Trifolium Caballinum*, Horſe-trefoil, becauſe Horſes are very greedy of it; and in *England* it is ſometimes ſown for the ſake of providing Fodder for Horſes and Cattle. *Raii H. P.*

It takes the Name *Melilot* from μέλι, Honey, and λωτὸς, *Lotus*, a celebrated Plant among the Antients, not from its ſweet Taſte, for the Leaves, Flowers, and Fruit, are bitter, but becauſe there is no Plant from which the Bees gather ſweeter Honey, or more in Quantity.

The Leaves, beſides their emollient Quality, are endued with a Virtue of heating in a very gentle manner, by their aromatic Quality; the Flowers are, alſo, aromatic and emollient, and, therefore, reckoned among internal Pectorals; but they are more uſed outwardly, as emollient, diſcutient, and anodyne; on which accounts they are ſerviceable in all ſorts of Inflammations, particularly of the *Uterus*, *Teſtes*, and *Anus*, as well as in nephritic and arthritic Pains. The Seeds are diſcutient, aperient, aromatic, and reſolvent. Of the Flowers immers'd in Oil is expreſſed an Oil, to which new Flowers are added, and the ſame ſtill repeated, till it becomes a Balſam of Melilot, which is an excellent Medicine; for it preſerves from Putrefaction, and conſolidates in an extraordinary Degree. The Seeds, reduced to a Flower, compoſe a Plaiſter, which is highly emollient and reſolvent. The Decoction of the Leaves and Flowers taken inwardly is very good to cleanſe the Paſſages obſtructed by Cold. A Decoction of the Tops of the Plant is good for Inflammations of the Inteſtines, the Colic, Retention of Urine, and the Rheumatiſm; they are preſcribed, in Conjunction with Chamomile-flowers, in Cataplaſms, Plaiſters, and Fomentations. *Hiſt. Plant. Boerh. adſcript.*

2. Melilotus; fruticoſa; candida; major. *M. H.* 2. 161. *Trifolium odoratum, ſive Melilotus vulgaris, flore candido.* J. B. 2. 370.

3. Melilotus; lutea; minor; floribus & ſiliculis, minoribus, ſpicatim, & denſe diſpoſitis. *M. H.* 2. 161.

4. Melilotus; lutea; ſeminis pericarpio, magno, rugoſo, rotundo, albo. *M. H.* 2. 161. *Boerh. Ind. A.* 2. 29. *Melilotus vera.* Offic. *Melilotus Italica.* Park. Theat. 719. *Melilotus Italica ſive Patavina.* Ger. 1033. Emac. 1204. *Melilotus Italica folliculis rotundis.* C. B. P. 331. Tourn. Inſt. 407. *Melilotus magno ſemine rotundo, rugoſo.* J. B. 2. 317. Raii Hiſt. 1. 951. ITALIAN MELILOT.

It is a Native of *Italy*, but cultivated with us in Gardens, and flowers in *July*. The Herb and Flowers are uſed, and agree in Virtues with thoſe of the common Melilot. *Dale.*

5. Melilotus; minima; recta; lutea; ſiliquis craſſis, curtis, in capitulum congeſtis; ſemine Fœnigreci. *M. H.* 2. 162.

6. Melilotus; capſulis Reni ſimilibus, in capitulum congeſtis. *T.* 407. *Trifolium pratenſe, luteum, capitulo breviori.* C. B. P. 328. *Trifolium pratenſe, luteum, mas, flore minore, ſemine multo.* J. B. 2. 380.

7. Melilotus; major; odorata; violacea. *Tourn. Inſt.* 407. *Boerh. Ind. A.* 2. 30. *Lotus urbana, Trifolium odoratum.* Offic. *Lotus hortenſis odora.* C. B. P. 331. *Lotus ſativa odorata annua.* J. B. 2. 368. *Trifolium odoratum.* Ger. 1025. Emac. 1195. Park. Theat. 715. Raii Hiſt. 1. 950. SWEET TREFOIL.

This Trefoil has large, hollow, chanel'd Stalks, divided into many Branches full of Leaves, three growing together on long Foot-ſtalks, which are longer and broader than Melilot, indented a little about the Edges. The Flowers grow in ſhort round Spikes, ſet on very long Stalks, of a pale-blue Colour, being ſmall and papilionaceous, ſet each in a particular Calyx, and ſucceeded by ſhort Pods, containing two or three ſmall yellow Seed. The Root is woody and fibrous, periſhing after Seed-time. The whole Plant has a very ſtrong Smell, like Fenugreek-ſeed. It grows with us in Gardens only, and flowers in *June*. The Herb and Seed are uſed.

This is, by many, accounted a good vulnerary Plant, and preferred to Melilot, to keep down Inflammations in Wounds, to cleanſe foul ſordid Ulcers, and to diſſolve hard Swellings; an Ointment or Plaiſter being made therewith, as with Melilot. The Seed is diuretic, and reckoned, by *Galen*, to be an Alexipharmic; but it is rarely uſed. *Miller's Bot. Off.*

This Species is what is meant in the Shops by the Name of *Lotus*, and *Trifolium odoratum*, without the Addition to this laſt of *Bituminoſum*. Its Virtues are moſt conſpicuous in the Oil, the ſame Virtues with that of the common Melilot, but in a more celebrated Degree, as it excels the other in Fragrance. *Dale* ſays, it is alexipharmic, anodyne, diuretic, and vulnerary. *Hiſt. Plant. Boerh. adſcript.*

8. Melilotus; fructu plano, orbiculari, maximo. *Trifolium, peltatum, Creticum.* C. B. P. 329. Prodr. 142. J. B. 2. 381.

9. Melilotus; Ægyptia; minima; foliis eleganter inciſis.

10. Melilotus; Orientalis; folliculis rugoſis.

11. Melilotus; ſupinus; Creticus; luteus.

12. Melilotus; Cretica; humillima; humifuſa; flore albo, magno. *T. C.* 28. *Spica trifolia.* Proſp. Alp. Exot. 168. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 29.

Proſper Alpinus, in his Treatiſe *de Plantis Exoticis*, *Cap.* 75. gives a Deſcription and Figure of this Plant, and informs us, it grows in *Crete*; but ſays, that he does not know of any medicinal Virtues it is poſſeſs'd of.

MELILOTUS, QUINTA, TRAGI. A Name for the *Coronilla; herbacea; flore vario.*

Beſides the foregoing Species of Melilot, *Dale* mentions the following;

MELILOTUS ALTISSIMUS. Offic. *Melilotus vulgaris altiſſima fruteſcens, flore luteo.* Ind. Med. 75. Tourn. Inſt. 407. Herb. Par. 289. WOODY MELILOT.

This Species of Melilot muſt not be confounded with the common Melilot; for, being cultivated in the *French* King's Royal Garden, it never becomes ſo tall, nor ſo ligneous. The Stalks of this are four or five Feet high, firm, hard, chanel'd, branched, ſet with Leaves an Inch and an half long, ſeven or eight Lines broad, obtuſe and notched; thoſe towards the Top are much narrower, and a great deal more pointed; they are ſuſtained by Threes, by a Pedicle an Inch and an half long. The Flowers are yellow, diſpoſed in a Spike; their Standard is three Lines long; the Wings ſhorter and narrower, as is, alſo, the Keel. The Empalement is ſhort, ſmooth, and divided into five Points; out of its Bottom ariſes a Pointal, which becomes a little Cod, a Line and an half or two Lines long, almoſt round, wrinkled, opening into two Parts; containing rediſh Seed, almoſt round, and a little flatiſh. This Plant has leſs Smell than the common Melilot; it flowers in *July* and *Auguſt*; its Seed is ripe in *September*. *Martyn's Tournefort.*

MELIMELUM, μελίμηλον. A ſort of ſweet Apple, mentioned by *Dioſcorides*, *L.* 1. 161.

MELINUM, μήλινον. A compound aromatic Ointment, impregnated with Quinces, the Preparation of which is deſcrib'd by *Dioſcorides*, *L.* 1. *C.* 55. *Paulus Ægineta* directs another Method of preparing this Oil, *L.* 7. *C.* 20.

MELINUM EMPLASTRUM. *Galen*, in his Treatiſe *de Comp. Medic. per Genera*, *L.* 2. *C.* 6. 7. 8. 9. 10. and 11. deſcribes ſeveral Plaiſters under this Title, which are ſo called on account of their Colour. Thus he takes notice of one aſcrib'd to *Andromachus*; another to *Menætus*; another to *Serapion*; and another to *Hera*.

MELIPHYLLON. Baum.

MELES, MELIS, MELUS, MELO, or MELOTUS, are different Names for the Badger. See TAXUS.

MELISSA.

The Characters are;

The Calyx is long, tubulous, and quinquefid, the Segments being diſpoſed in ſuch a manner as to make it appear bilabiated. The *Galea* is erect, roundiſh, and bifid; the Beard tripartite. The Flowers, which are produced from the Wings of the Leaves, are not whorled quite round the Stalk; they are generally ſix in Number, three on each Side.

Boerhaave mentions ſeven Species of this Plant; which are,

1. Meliſſa; hortenſis. *C. B. P.* 229. *Tourn. Inſt.* 193. *Boerh. Ind. A.* 167. *Meliſſa.* Offic. Ger. 558. Raii Hiſt. 1. 570. *Meliſſa vulgaris.* Park. Theat. 40. *Meliſſa vulgaris odore Citri.* J. B. 3. 232. *Meliſſa, Apiaſtrum.* Chab. 417. BAUM, BAULM, or BALM.

The Roots of Baum are long, ſlender, and creeping, ſhooting out, in the Spring, many ſquare Stalks, two or three Feet high, having at every Joint two roundiſh Leaves, broad at Bottom, and growing narrow towards the End, indented about the Edges, and beſet with ſhort ſmall Hairs of a pleaſant Lemon-ſcent. It is but thinly ſet with Flowers, which grow at the Joints with the Leaves, ſeveral ſet together on each Side the Stalks, being of a white Colour, galeated and labiated, ſet in large Calyces; by the Side of each Cluſter of Flowers are ſet two very ſmall green Leaves. It grows only in Gardens, and flowers in *July*. The whole Herb is uſed.

Baum is cordial, cephalic, and good for all Diſorders of the Head and Nerves; chears the Heart, and cures the Palpitation thereof; prevents Fainting, Melancholy, hypochondriac and hyſteric Diſorders; reſiſts Putrefaction, and is of Uſe in malignant and contagious Diſtempers: Outwardly applied, it helps the Stinging of Bees and Waſps.

The only officinal Preparation of Baum is the Simple-water; for the Virtues of which, ſee AQUA.

Baum is reckoned among Cardiacs, and is much extolled by *Foreſtus* for the Syncope and Palpitation of the Heart. It is commended by *Rondeletius* for the Palſy, Vertigo, and other cold Affections of the Brain, being boiled or macerated in Wine, and drank. And *Gratarolus* commends it for ſtrengthening the Memory, and ſharpening the Wit, in whatever manner it be taken. It is of great Service, alſo, in a Retention of the Menſes, or Lochia, and in hyſteric Diſorders; and corrects a fetid Breath.

The good Women in *France* bruiſe the young Shoots, and make them up with Eggs, Sugar, and Roſe-water, into Cakes, which they bake, and give to Women in Labour, or newly delivered, under a great Loſs of Strength, or not well cleanſed from the Secundines. Outwardly, it is of Uſe in Baths for the Uterus, and in Cataplaſms for the poiſonous Stings of Bees, Waſps, and other Inſects. *C. Hoffman* adviſes to gather it for officinal Preparations in the Spring, before the Flowers appear, becauſe, in time of flowering, it ſmells of Bugs.

For the Mania,

> Take of Leaves of Baum, one Handful; cut them, and infuſe them in four Ounces of Spirit of Wine: To which add half a Dram of Pearls prepared. The Doſe is two Spoonfuls.

This Preſcription was a Secret, in the Poſſeſſion of a certain Family of *Montpelier*. *Riverius*. If you deſire, ſays *Simon Paullus*, a Remedy againſt Melancholy, I preſent you with what follows:

> Take of Conſerve of Baum, one Ounce; of Borrage, and Bugloſs, each half an Ounce; Confection of Alkermes, one Dram; with Syrup of the Five opening Roots.

By conſtant taking of this, after the previous Uſe of Univerſals, I remember, he ſays, a Virgin, who was freed from an obſtinate Melancholy, attended with a Chloroſis, and reſtored to her former Health.

It is uſual with our Country-women, ſays the ſame Author, to provoke the Menſes with a Decoction of Baum; and I know, ſays he, one or two, who ſucceſsfully try the Experiment upon themſelves, by only wearing freſh Baum in their Stockings, or Shoes. Many, afflicted with a Trembling of the Heart, and given over by Phyſicians, have been cured only by Water of Baum, mixed with Manus Chriſti to a proper Conſiſtence, and exhibited in pretty large Doſes, in the Time of the Paroxyſm. *Raii Hiſt. Plant.*

It is called *Meliſſa*, from μέλι, Honey; becauſe the Bees are very much employ'd in gathering Honey from this Herb. It is, alſo, called *Meliſſophyllum*, from μέλι, Honey, and φύλλον, a Leaf: And *Apiaſtrum*, from *Apes*, a Bee, becauſe the Bees are much delighted with it: And *Citrago*, from *Citrum*, a Citron; becauſe it has the Smell of a Citron.

This Plant is endowed with extraordinary Virtues; for Pleaſantneſs of Taſte and Smell no Herb exceeds it. The Leaves, infuſed in Wine, impregnate the ſame with its grateful Scent, and render it an highly uſeful and comfortable Medicine in all melancholy Affections; for it mightily exhilarates, being very cordial. The expreſſed Juice has, alſo, an Aſtringency, and is good for thoſe who are ſubject to Melancholy, and hypochondriacal Flatulences; and, in ſuch Caſes, it is always proper to be exhibited, though attendant on hot Diſorders. The Herb, freſh-gathered, and infuſed in half Wine and half Simple-water, cold, or drank after the manner of Tea, affords great Relief to melancholic Patients. If it is infuſed in *Rheniſh* Wine, with an Addition of Honey, it is an excellent Cordial, as I myſelf have found from Experience. From this Circumſtance, Naturaliſts, in their Reſearches after the Nature of Plants, as, alſo, *Crollius* and *Paracelſus*, have affirmed, that the Leaf of Baum reſembled an human Heart. This Herb is an excellent Remedy for hyſteric Women, ſince it wonderfully exhilarates the Spirits. Women ſubject to Rumblings of the Inteſtines, Eructations, and Syncopes, are greatly relieved by Baum-leaves, bruiſed, and held to the Noſe, in the Paroxyſms of theſe Diſorders. A medicated Wine, prepared of this Herb, is highly beneficial in gouty Rheumatiſms, and arthritic Pains, provided it is daily uſed. By Diſtillation an Oil is obtained from this Plant, which ſmells like a Citron. A Decoction of the Leaves corroborates lax Gums. An Infuſion of it with Wine, Ale, or Water, contributes greatly to the Cure of that Species of Melancholy, which draws its Origin from a Defect of Spirits. It is commended againſt Epilepſies, Madneſs, Barrenneſs, Apoplexies, Palſies, Vertigos, and Faintings. It is beneficial in Crudities of the Stomach, Obſtructions of the Menſes, and a Retention of the Lochia. It removes the fetid Smell of the Breath, and is ſerviceable to thoſe who labour under a Retention of Urine. Externally, it is uſed in Cataplaſms, Baths for the Feet, poiſonous Stings of Waſps,

and

and other Misfortunes of a like Nature. *Hiſt. Plant. adſcript. Boerhaav.*

2. Meliſſa; minor; & humilior. *Flor.* 2. 76.

3. Meliſſa; Romana; molliter hirſuta; & graveolens.

4. Meliſſa; peregrina; caule brevi; plantaginis folio. *T.* 193. *Gallitrichum, folio rotundiore, flore magno, violaceo.* J. B. 3. 313.

5. Meliſſa; humilis; latifolia; maximo flore, purpuraſcente. *Tourn. Inſt.* 193. *Boerh. Ind. A.* 167. *Pſeudo-meliſſa.* Offic. *Meliſſophyllum Fuchſii.* Park. Theat. 40. *Meliſſa Fuchſii.* Raii Synop. 3. 242. Ger. Emac. 690. *Meliſſa adulterina quorundam amplis foliis & floribus non grati odoris.* J. B. 3. 233. *Lamium montanum Meliſſæ folio.* C. B. P. 331. Raii Hiſt. 1. 561. BASTARD BAUM.

We muſt not confound this Plant with that which *Cæſalpinus* has called *Meliſſa altera*; which is the *Meliſſa Romana, hirſutior.* Mor. H. R. Blæſ.

It grows in ſeveral Woods in the Weſt of *England*, as about *Totneſs* in *Devonſhire*, and *Haverfordweſt* in *Pembrokeſhire*. *R. Syn. Ed.* 3. 242.

The Creſt of this Flower is ſometimes entire, and ſometimes cut like an Heart. It flowers in *May* and *June*. The Flowers are diſpoſed in a ſimple Ring; they come but three at moſt, out of the Boſom of each Leaf, which makes the Number of ſix at each Ring. Theſe Flowers have each of them a Pedicle, coming immediately out of the Stalk, which is not branched. Out of the Boſoms of the lower Leaves there uſually comes but one Flower, out of the middle ones two, and out of the upper ones three. The Empalement conſiſts of two Lips, the upper one of which is a little reflexed, and ſlightly divided into two little Points, the under one being uſually cut into three Segments, and ſometimes only into two.

It is excellent for a Suppreſſion of Urine: Put two Pounds of it in an Alembic, with an equal Quantity of Herniaria; ſprinkle them with Salt, add a little Water, and leave them in Digeſtion three Days; after which diſtil them in Balneo Mariæ: Cohobate the diſtilled Water three times upon freſh Herbs, bruiſed. Keep the laſt Water in a Bottle, well ſtopt. In a Suppreſſion of Urine give, every four Hours, four Ounces, mix'd with as much White-wine; and anoint the lower Belly, the Perinæum, and Region of the Kidneys, with the following Oil; infuſe in the Sun, for three Days, or boil gently in the ſame Oil, an Handful of Betles, ten Cantharides, and a Scruple of the Seed of Ammi. A Clyſter may be given of the Decoction of Mallows, Meliſſa Tragi, Herniaria, and two Drams of Chips of nephritic Wood. *Martyn's Tournefort.*

6. Meliſſa; humilis; latifolia; maximo flore albo. *T.* 193.

7. Meliſſa; quæ Bugula Luſitanica; odorata. *Corn.* 4. *Bugula odorata, Luſitanica.* M. H. 3. 39. *Clinopodium, Luſitanicum, ſpicatum & verticillatum.* T. 195. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 167.

MELISSA is, alſo, a Name for ſeveral Sorts of MOLDAVICA; which ſee.

MELISSA FRUTICOSA. A Name for the *Galeopſis; Hiſpanica; fruteſcens, Teucrii folio.*

MELISSA MOLUCCANA. A Name for the *Molucca*; and for the *Molucca ſpinoſa.*

MELISSOCHORTON, μελισσόχορτον. In *Engliſh*, Bees-graſs. The Word occurs in *N. Myrepſus, Sect.* 1. *Cap.* 74. and imports the ſame as MELISSA, Baum.

MELISSOPHYLLON. A Name for the *Meliſſa; humilis; latifolia; maximo flore purpuraſcente.*

MELITÆA, or MELITÉA TERRA. Earth of *Malta.* See CRETA.

MELITERA, μελίηρα. The Name of a Powder for external Uſe, deſcribed by *Paulus Ægineta, Lib.* 7. *Cap.* 13. and recommended by the ſame Author, *Lib.* 4. *Cap.* 40. as a good Application to hollow Ulcers.

MELITISMOS, μελιτισμός. A Linctus prepared with Honey.

MELITITES, μελίτης. This ſometimes ſignifies Hydromel; but, more frequently, a Sort of Stone; which is the

Lapis Melitites. Offic. de Laet. 142. Calc. Muſ. 276. Boet. 416. Matth. 1385. *Mellitites.* Aldrov. Muſ. Metall. 668. *Melitites.* Agricol. 606. THE HONEY-STONE.

This Stone only differs in Colour and Sweetneſs from the Lapis Galactites; and the Effects produced by both are, according to *Dioſcorides*, the ſame. But, according to *Galen*, it is ſomewhat more hot and abſtergent than the Galactites. *Agricola*, in *Lib. de Nat. Foſſil.* affirms, that the Galactites and Melitites are produced in the ſame Lime-ſtone Rock. *Wormius* diſtinguiſhes between the Moroethus, the Galactites, and the Melitites, in the following manner: That Moroethus yields a milky Juice, which is deſtitute of the Sweetneſs of Honey, and is neither of a white nor cineritious Colour; but the Galactites is of a white or cineritious Colour, and yields a milky Juice, without any Taſte of Honey; whereas the Melitites is of various Colours, and yields a milky Juice, as ſweet as Honey. But *Jo. de Laet*, in his Book *de Gemmis & Lapidibus*, diſtinguiſhes between theſe three Stones in the following manner: That which is of a cineritious or black Colour is the Galactites; that which is yellow, and in Colour reſembling Honey, is juſtly called the Melitites; whereas that which is greeniſh is the Moroethus, which ſhines like a Gem more than any of the others. *Dale.*

MELITTOMA, μελίτωμα. A Confection, or Sweetmeat, prepared with Honey. Some Authors, by Miſtake, write it *Melitema.*

MELITZANIUM. This Word occurs ſeveral times in *N. Myrepſus*; but his Commentators are not certain what he means. *Fuchſius* gueſſes it to be the *Melanthium ſylveſtre.*

MELLAGO. Any Medicine, which has the Conſiſtence and Sweetneſs of Honey, is thus called.

MELLIFAVIUM. The ſame as MELICERIS.

MELLISODIUM. Burnt Lead. *Rulandus.*

MELOSI. Earth-worms. *Johnſon.*

MELO.

The Characters are;

All the Species produce an oval, ſmooth, chanel'd Fruit, divided into three Capſules, which are cut into two Parts, and full of oblong Seeds.

Boerhaave mentions ſeven Species of this Plant; which are,

1. Melo vulgaris. *C. B. P.* 310. *Tourn. Inſt.* 104. *Boerh. Ind. A.* 2. 77. *Melo.* Offic. Ger. 771. Emac. 917. Raii Hiſt. 1. 644. Park. Parad. 525. *Melones.* J. B. 2. 242. MUSK-MELON.

The Vine, as it is uſually called by Gardeners, which bears this Fruit, has long trailing Stalks, furniſhed with ſeveral Tendrils or Claſpers, and is rough and hairy, as well as the Leaves, which are ſomewhat like Cucumber-leaves, but rounder. The Flowers are yellow, of the ſame Shape, but larger than thoſe of the Cucumbers; and are ſucceeded by pretty large oval Fruit, ſometimes, as it were, divided into ſeveral Parts by deep Furrows, running lengthways, and other times having the Outſide covered with a raiſed Net-work. Its Inſide is of a reddiſh Colour when ripe, of a very pleaſant Scent, and of a ſweeter Taſte than the Cucumber, having a great Quantity of flat oblong Seed included in a moiſt watery Pulp. Melons are ſown yearly in the Spring, and are ripe in *July* and *Auguſt.*

The Seed only is uſed in Phyſic, and is one of the Greater cold Seeds, and a common Ingredient in Emulſions, being cooling and uſeful in Fevers and other inflammatory Diſtempers. It helps the Stone, Strangury, and Heat of Urine. The Fleſh of the Melon is pleaſant and grateful to the Stomach, but muſt be eaten with Caution, being liable to ſurfeit, and bring on the Colic, and Cholera Morbus. *Miller's Bot. Off.*

There is a great Variety in this Fruit, not only with reſpect to the Colour of the Rind and Pulp, the Taſte and Smell, but, alſo, in its oblong Figure, Sextile Diſpoſition, and other Accidents; for *Bauhine* mentions a *Melo reticulatus*, that is, a Melon cover'd with a Rind like raiſed Network; a *Melo turbinatus*, a turbinated Melon; a *Melo magnus, cortice virente lævi, Semine parvo*, a large Melon, with a ſmooth green Rind, and a ſmall Seed; and a *Melo longus*, a long Melon, four Spans in Length, and incurvated like a Cow's Horn.

Though Melons are in high Eſteem among thoſe of a delicate Taſte; yet their Pulp is cold and humid, ſubject to putrefy in the Stomach, and tending to generate Fevers and Gripes. I can eaſily come into the Opinion of *Dodonæus*, ſays *Ray*, that Melons are more difficult of Concoction than Cucumbers, tho' *J. Bauhine* thinks the contrary, becauſe of their ſweet-ſcented Pulp, and for that he himſelf, who labour'd as he ſays, under a cold and phlegmatic Stomach, had found by Experience more than once, the Inconvenience of eating Cucumbers, that they were difficult of Concoction to the Stomach, and excited Eructations a long time after eating them, which ſavour'd of them; whereas he always eat Melons without any manifeſt Inconvenience. On the contrary, for my part, ſays *Ray*, I never receiv'd any Prejudice from eating Cucumbers, but have been very much diſorder'd, and that more than once, by feeding on Melons; but perhaps, ſays he, theſe different Effects are to be attributed to an Idioſyncraſy. To prevent Melons from putrefying in the Stomach, it will be proper to eat them with Salt and Pepper, tho' ſome uſe only Sugar, and to drink plentifully of Wine afterwards.

The Milk of Melons is eſteemed an excellent Remedy in burning Fevers. The Pulp of the Seeds, firſt bruiſed in Spring Water, or ſome other proper Liquor, is paſſed through a very fine Hair Sieve, or a Linen Strainer adapted to the Purpoſe. This Cremor of the Seed may be ſucceſsfully exhibited in feveriſh Diſorders, as we are aſſur'd by *Matthiolus*; it is alſo given in Coughs, Conſumptions, and is very effectual in a burning Heat of Urine. *Raii H. P. p.* 644.

It is called *Melo* from the *Greek* Word μῆλον, *Malum vel Pomum*, an Apple, becauſe its Fruit reſembles, in great meaſure, an Apple.

The Pulp of a Melon is ſaid to be cold, but Experience convinces me of the contrary; for its Taſte and Smell indicate an aromatic Quality, and prove it an aromatic Plant; which is confirm'd by its Effects: For, if eaten to Exceſs, they excite bloody Urine; wherefore it is of an heating Quality, and there is ſcarce any thing in Nature more ſtimulative to Venery than this Fruit. The Pulp affords very good Nouriſhment, if us'd

with Moderation, but then it muſt be eaten upon an empty Stomach. The Seeds have a viſcous and farinaceous Quality; the Melon perfectly ripe affords an aqueous Juice, which is looſening to the Belly, as may be obſerv'd alſo of the Cucumber. *Hiſt. Plant. adſcript. Boerhaav.*

2. Melo; magnus; cortice virente; lævi; ſemine parvo. *J. B.* 2. 244.

3. Melo; Hiſpanicus. *J. B.* 2. 244.

4. Melo; turbinatus. *J. B.* 2. 244.

5. Melo; reticulatus. *J. B.* 2. 244.

6. Melo; pyriformis, moſchatus. *C. B. P.* 311.

7. Melo; rotundus; parvus. *C. B. P.* 311. *Melo, Moſchatellinus, parvus.* J. B. 2. 244. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 78.

MELOCACTUS.

The Characters are;

It has a ſingular Appearance, is ſucculent, echinated, and polygonal, or has many Angles. The Flower is monopetalous, Bell-ſhaped, tubulated, naked, multifid, ſeated in the Ovary, and furniſhed on the Inſide with a Multitude of Stamina. The Ovary becomes a pulpous, ſoft Fruit, full of numerous ſmall Seeds.

Boerhaave mentions two Species of this Plant; which are,

1. Melocactus; Americana; minor. *Echinomelocactus, minor, lacteſcens, abſque tomento, cylindris ſtrictioribus.* Par. Bat. 136. *Ficoides, vel Ficus Americana, Sphærica, tuberculata, lacteſcens, flore albo, fructu rubro pyramidali.* Cat. Hiſt. Beaum. H. A. 1. 105. *Melocarduus mammillaris, minimus, ſeſſilis, uberior, ſpinulis imbecillioribus donatus.* M. H. 3. 171.

2. Melocactus; Indiæ Occidentalis. *C. B. P.* 384. *T.* 653. *Echinomelocactus.* J. B. 3. 93. *Pomum ſpinoſum Opuntiatum.* Munt. Pr. 420. *Melocarduus, ſulcis rectis, ſpinis ad angulos appoſitis major.* M. H. 3. 170. *Ficoides Occidentale ſpinoſum, Melonis facie, coſtis erectis.* H. L. 670. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 83.

It is called MELOCACTUS, from *μῆλον, Melo,* an Apple, and *κάκτος, Cactus,* a Thiſtle, becauſe it reſembles an Apple, and is furniſhed with Spines. It is alſo called *Echinomelocactus*; becauſe it is echinated, or furniſh'd with Spines, or Prickles, like the Echinus, or Hedghog.

The Fruit is eaten, tho' very full of ſandy Grains; and has an Acidity, which is very grateful to the Taſte, and extremely agreeable to the Inhabitants of thoſe hot Countries, whence it comes: But I find no medicinal Virtues aſcribed to it. *Hiſt. Plant. adſcript. Boerhaave. Miller's Dict.*

MELOCARDUUS, a Name for the MELOCACTUS; which ſee.

MELOCARPUS, according to *Blancard,* is the Fruit of the *Ariſtolochia.*

MELOCHIA. See CORCHORUS.

MELOCHITES. A Name for the ARMENUS LAPIS; which ſee.

MELOCORCOPALI Scaligero. *Corcopal Theveti.* Lugd. It is deſcrib'd as a Tree like the Quince-tree, bearing a Fruit ſhap'd like a Melon, of an agreeable Taſte, not unlike that of a Cherry, and ſomewhat cathartic. *Ray* ſuſpects it to be the ſame as the CARCAPULI.

MELOCOTONEA. A Species of Peach is thus call'd.

MELON, *μῆλον,* ſignifies an Apple; a Sheep; or the Cheek; *τὰ μῆλα,* are the Toniſils. *Melon,* or *Mylon,* is alſo, a Diſorder of the Eye, in which it ſwells, and protuberates out of the Orbit. See OCULUS.

MELOMELI, *μελόμελι.* Honey impregnated with Quinces. *Dioſcorides, L.* 5. *C.* 29.

MELONGENA.

The Characters are;

The Flowers are monopetalous, rotated, or Wheel-ſhaped, and multifid; the Fruit is fleſhy, and contains Kidney-ſhaped Seeds.

Boerhaave mentions two Species of this Plant; which are,

1. Melongena; fructu oblongo, violacea. *T.* 151. *Boerh. Ind. A.* 2. 70. *Mala inſana.* Offic. Ger. 274. Emac. 345. *Mala inſana Syriaca.* Park. Theat. 392. *Solanum pomiferum fructu oblongo.* C. B. P. 167. Raii Hiſt. 1. 673. MAD APPLES.

It is cultivated with us in Gardens, and flowers in Summer; the Fruit is uſed. *Dale.* We take this Plant, with *Marggrave,* to be the *Belingel* of the *Portugueſe,* the *Tongu* of *Angola,* and the *Macumba* of *Congo.*

The Apples, being much like thoſe of the Mandrake, have induced ſome Moderns to ſuſpect this Plant to be the male Mandrake of *Theophraſtus,* and, ſuppoſing them to be deadly, to call them *Mad Apples*; whereas, in reality, they excite no Symptoms of Madneſs, but are uſed by the *Italians* and *Spaniards,* in their Sauces and Sweetmeats. They have the Taſte of the Citron. *Margr. Raii H. P. p.* 673.

This Plant induces a Sopor and Madneſs, whence it takes its Name. *Hiſt. Plant. adſcript. Boerhaav.*

2. Melongena; fructu oblongo albo. *T.* 151. *Solanum, pomiferum, fructu inſtar Mali rotundo, albo.* C. B. P. 167. *Boerh. Ind. alt. Vol.* 2. *p.* 70.

This agrees in Virtues with the former.

MELOPEPO. The Squaſh.

The Characters are;

It agrees in all Things with the Pompion, except that its Fruit is roundiſh, ſtriated, angulous, cut into five Parts, and full of flat Seeds, which are affixed to a ſpongy Placenta.

Boerhaave mentions five Species of this Plant; which are,

1. Melopepo; compreſſus. *C. B. P.* 312.

2. Melopepo; fructu maximo; albo. *T.* 106. *Pepo compreſſus, major.* C. B. P. 311. *Pepo, Indicus, compreſſus, maximus.* M. H. 2. 25.

3. Melopepo; Clypeiformis. *T.* 106. *C. B. P.* 312.

4. Melopepo; verrucoſus. *T.* 106. *Cucurbita verrucoſa.* J. B. 2. 222. *Pepo minor verrucoſus.* M. H. 2. 26.

5. Melopepo; tuberoſus; & verrucoſus. *T.* 106. *Boerh. Ind. alt. Plant. Vol.* 2.

It has the Name *Melopepo,* becauſe its Fruit comes near in Size to a Melon, and partakes ſomewhat of the Nature of the *Pepo,* or Pompion.

It is of a moiſtening and refrigerating Quality, and is eſteemed pectoral; the Seeds are reckon'd among the Four cold Seeds. *Hiſt. Plant. adſcript. Boerh.*

MELOPLACUS, *μηλοπλάκους,* is a ſort of Cake made of Quinces boil'd in Wine, adding afterwards Honey, Pepper, and other Seaſoning, at the Diſcretion of the Cook. *Galen, de Aliment. Facult. L* 2. *C.* 27.

MELOSIS, *μήλωσις.* The probing a Wound or Ulcer.

MELOTIS, *μηλωτὶς,* or MELOTRIS, *μηλωτρὶς.* A ſmall Probe; properly one for the Ear.

MELUSI, Mercury. *Rulandus.*

MEMBRANA. A Membrane. By Membrane we underſtand a pliable Texture of Fibres, diſpoſed or interwoven together in the ſame Plane. They differ in Thickneſs according to the Smalneſs of their Fibres, or Number of their Planes. Theſe particular Planes are termed Laminæ, and diſtinguiſhed into external, internal, and middle.

The Difference of Membranes, in general, depends on that of the Fibres, of which they are compoſed. Small Portions of Membranes, eſpecially when they are very thin, are called Pellicles; and ſome membranous Laminæ are united together by the Intervention of a particular Subſtance, compoſed of this ſort of Pellicles, and called the cellular or ſpongy Subſtance. *Winſlow's Anatomy.*

MEMBRANOSUS MUSCULUS. The ſame as FASCIA LATA.

MEMBRUM. A Limb, or Member.

MEMYCYLON. A Name for the *Arbutus. Oribaſii Collect. Medic. L.* 15. *C.* 1.

MEMIGMENON, *μεμιγμένον.* The Name of a *Collyrium* deſcrib'd by *Celſus, L.* 6. *C.* 6.

MEMITHA. Some ſuppoſe the *Memitha* of the *Arabians* to be the *Cerinthe*; but *Cluſius* takes it to be the *Glaucium* of the *Greeks.*

MEMPHITES LAPIS. Offic. Matth. 1388. *Memphites* Aldrov. Muſ. Metall. 707. *Sardonyx Arabica, aliis Memphites.* Geoff. Prælect. 79. MEMPHIS-STONE. *Dale.*

It is a Stone of a pinguious Subſtance, parti-colour'd, of the Size of an ordinary Pebble, and found in *Egypt* near *Memphis.*

They ſay that this Stone, levigated, and rubbed on the Parts which are to ſuffer Cutting or Burning, renders them inſenſible without Danger. *Dioſcorides, Lib.* 5. *Cap.* 148.

What this Stone was, has been unknown ſince the Times of *Dioſcorides. Boetius,* in his Chapter of the *Onyx,* (which is parti-colour'd, and incircled with two diſtinct Zones, the white and the black) ſays, when the white Zone is ſcraped off, and diſcovers under it a black Zone, in Nature of a Stratum, the Stone is called by ſome *Memphites,* and by the modern Jewellers *Camehnia,* as if it were another Gem. And in another Place he quotes the following Paſſage from *Ludovicus Dulcis:* It is called *Memphites* from the City *Memphis*; being taken inwardly, or macerated in Vinegar, it induces a Stupor on the Members, ſo as that they may be amputated without Pain.

MENAGOGUS. The ſame as EMMENAGOGUS.

MENDESIUM, *μενδήσιον.* The Name of an aromatic Unguent, deſcribed by *Dioſcorides, Lib.* 1. *Cap.* 72.

MENDONI. A Name for the METHONICA, *Malabarorum.*

MENDOSA SUTURA. The ſquamous Suture in the Cranium.

MENDOSÆ COSTÆ. The ſpurious Ribs.

MENAGETÆ, in *N. Myrepſus, Sect.* 1. *Cap.* 22. ſignifies the greateſt Cardamoms, or *Grana Paradiſi,* in the Opinion of *Fuchſius.*

MENINGOPHYLAX, *μηνιγγοφύλαξ.* An Inſtrument deſcribed by *Celſus, Lib.* 8. *Cap.* 3. contrived for guarding the Membranes of the Brain, whilſt the Bone is raſped, or cut, after the Operation of the Trepan.

MENINX, μήνιγξ. A Membrane. But the Word in Anatomy is generally uſed to ſignify the Dura and Pia Mater. See CAPUT.

MENISPERMUM. A Name for the *Hedera*; *monophylles*; *Convolvuli foliis*; *Virginiana*.

MENS. The Mind.

MENSES.

Among the natural Actions which prepare proper Juices, and Matter, for carrying on the vital Motions, we may, with the greateſt Juſtice, reckon the menſtrual Purgation of Women; ſince, by means thereof, the ſuperfluous and redundant Blood is evacuated, that what remains in the Veins may circulate with the greater Freedom, and be the more effectually depurated.

The monthly Evacuation of Blood from the Uterus, occaſioned by the Redundance of that Fluid in Women, and the peculiar Structure of the Uterus, as it is of great Importance to Health, ſo it is the means by which the Fœtus is nouriſhed.

The Quantity of Blood, thus monthly evacuated, cannot be exactly and accurately aſcertain'd; for it varies in Women of different Ages, Methods of Life, and Conſtitutions. About the firſt Eruption of the Menſes, the Quantity diſcharged is generally but ſmall; whereas it is conſiderably larger in Women arrived at the Years of Maturity. Lean Women, alſo, and thoſe who abound in Blood, evacuate more than ſuch as are fat, and of a cold Conſtitution; and thoſe who are addicted to Luxury and Idleneſs, a larger Quantity than thoſe who live upon low and ſlender Diet, or uſe much Exerciſe. *Hippocrates*, in his firſt Book *de Morbis Mulierum*, affirms, that two Heminæ are diſcharged; and other Authors, alſo, maintain that one Pint, or one Pint and an half, is evacuated.

The Cauſe of this Diſcharge is nothing but the Redundance of the Blood, the due Evacuation of which is wiſely appointed by Nature for the Preſervation of Health. Phyſicians have entertained various Opinions, with reſpect to the Cauſes of this Diſcharge, whilſt ſome aſcribe it to the Motion and Change of the Moon; others to a peculiar Ferment of the Uterus; others to the Archæus of *Helmont*, who is ſuppoſed to preſide over the human Body; and others to a ſecret and unknown, but wiſe and well-deſigned Law of Nature: But, rejecting theſe myſterious and abſtruſe Principles, which are but ill accommodated to the common Senſe of Mankind, we account for this Diſcharge from Plenitude, or a greater Quantity of Blood than is neceſſary.

The ſoft and lax Texture of the ſolid Parts, together with the Smalneſs of the Veſſels, is the Reaſon why Women abound more in Blood than Men; for the more ſolid the fibrous Parts are, the greater Strength and Reſiſtance they have to impel the Fluids; whereas the ſofter and laxer the Fibres are, the leſs Strength and Efficacy they have for this Purpoſe; and the Pulſation of the Heart and Arteries bears a Proportion to the Strength of the Fibres, and the Capacity of the Veſſels. In Men, the Parts of whoſe Bodies are firmer, and whoſe Veſſels are larger, the Pulſe is briſker, fuller, and quicker, than in Women, in whom, by reaſon of the Softneſs of the Fibres, and the Smalneſs of the Veſſels, it is more languid, ſoft, and ſmall: But ſuch as the Pulſe is, ſuch the Circulation of the Fluids muſt of courſe be; and ſuch as the Orifices of the ſecretory Veſſels are, ſuch is the Tranſpiration, and Conſumption of the Moiſture of the Body. Now, ſince in Women the Blood circulates more ſlowly, and the Veſſels are narrower, than in Men, ſo, in the former, there will be a ſmaller Secretion of the perſpirable Matter, and, conſequently, a greater Redundance of Blood and Humours in the Veſſels. Beſides, Women uſe leſs Exerciſe than Men: But, according to *Sanctorius*, in the ninth Aphoriſm of his fifth Section, human Bodies are always render'd lighter by Exerciſe; ſince it carries off a large Quantity of the Humours contained in them.

That a Plethora is the Cauſe of the menſtrual Diſcharge, may be, alſo, confirmed by ſeveral other additional Arguments; for thoſe Women who indulge themſelves in Luxury and Idleneſs, who are lean, and of a ſoft Habit of the Body, have, in conſequence of their greater Redundance of Blood, more copious Diſcharges; whereas fat Women, in whom the Blood is not ſo much collected in the Veſſels, as diffuſed through the whole Habit; Country-women; thoſe accuſtomed to hard Labour; thoſe juſt recover'd from chronical Diſeaſes; thoſe who in Child-bed, or by means of any other Evacuations, have loſt large Quantities of Blood; as, alſo, thoſe who give Suck, or are pregnant, have but very ſmall, or no menſtrual Diſcharges at all.

The beſt Blood, or that which is moſt richly impregnated with the nutritive Juices, and not that which is moſt peccant and corrupted, is diſcharged from the Uterus: For the Antients, not knowing the Circulation of the Blood, falſely imagined, that the menſtrual Blood was poiſonous and corrupted; becauſe a Suppreſſion of it proved ſo prejudicial to the Body: But the Blood diſcharged from the Uterus is fluid, and florid; in young Girls pretty thin, but in full-grown Women much thicker. But if it ſhould ſtagnate for a conſiderable time in the Veſſels, it may, by its Continuance there, be render'd grumous, black, and fetid.

The peculiar Structure of the Uterus is the Reaſon why this redundant Blood is evacuated from that Part, and not from other Parts; for ſuch is the Fabric of the Uterus, that its Fibres and Veſſels may not only be diſtended and dilated in an incredible manner, but they are, alſo, capable of contracting and reſtoring themſelves again to their former Condition; for which Reaſon the redundant Blood is more eaſily convey'd to the Uterus, and there collected: Beſides, both arterial and venous Veſſels, ariſing from the ſpermatic and hypogaſtric Trunks, ſend off an almoſt infinite Number of Ramifications to the Uterus and Vagina: And theſe Ramifications do not run in a direct Courſe; but are variouſly contorted, crooked, diſtributed, as it were, in a ſerpentine Form, and are very ſmall in Women who are not pregnant; but in pregnant Women they become large, and are ſtretched in proportion as the Uterus is augmented; for, without ſuch an Incurvation and Flexure of the Veſſels, the Uterus could not be diſtended by the Fœtus, without ſome Danger of a Rupture of its Veſſels. Beſides, the Membranes which cover both the internal and external Surface of the Uterus, and through which Veſſels are diſtributed, are covered with no Fat, in conſequence of which, the Veſſels are the more eaſily diſtended and opened: The deſcending Trunk, alſo, of the Aorta is obſerved to be larger in Women than in Men; becauſe in the former a more conſiderable Quantity of Blood is to be conveyed to the Uterus. Beſides, as the perpendicular Aſcent of all Fluids is performed with Difficulty; ſo we find, that the Motion of the Blood through the long and winding Progreſs of the ſpermatic Veins to the ſuperior Parts is perpendicular, and, conſequently, ſlow and languid. In a Word, as the Valves, with which the Veins in the other Parts of the Body are furniſhed, excellently aſſiſt the progreſſive Motion of the Blood, and prevent its Regurgitation, ſo in the Veins of the Uterus, which are deſtitute of Valves, the Blood circulates ſlowly, and, being collected in the larger Veſſels, regurgitates to thoſe of the ſmall and capillary Kind, whoſe tender Orifices it preternaturally diſtends and ſtretches. If, therefore, a larger Quantity of Blood is accumulated, than the Veſſels can either receive, or the Strength of the Heart and Solids can diſpoſe of in a due manner, it can make its Retreat ſo properly to no Part, as to the Uterus: For this Reaſon it is gradually accumulated in the Veſſels, and fills their Sinuſes, till their Extremities, which terminate obliquely in the Uterus, being too much diſtended, at laſt burſt, and diſcharge the Blood into it.

The Eruption of the Blood from the capillary Veſſels of the Uterus is not only produced by its Stagnation in the Veins, but, alſo, by a ſpaſmodic Conſtriction of the Parts; for it is a conſtant Obſervation in Practice, that, in all critical and copious Evacuations of Blood, there are always perceived a certain Coldneſs of the Extremities, a Pain of the Back, an Inflation of the Abdomen, and a Retention of the Fæces, accompanied with Languor, and a Senſation of Weight; for, according to *Hippocrates*, in *Aph.* 39. of *Sect.* 6. too great a Repletion of the Veſſels produces ſpaſmodic Strictures, by which the Circulation of the Blood through the capillary Veſſels is hinder'd: Hence it regurgitates to the larger Veſſels, and, when too copiouſly congeſted about the Heart, renders its Contraction both ſtronger and quicker, as is obvious from the hard and large Pulſe in every violent Eruption of Blood. The Blood, being, therefore, convey'd through the Arteries to the Veſſels of the Uterus, opens their Extremities; and this Effect is the more eaſily produced, becauſe the Veins of the Uterus, being already loaded with Blood, reſiſt the free Circulation of that Fluid.

The menſtrual Blood is evacuated from the minute Veſſels, both of the Uterus and Vagina. It is, however, a great Controverſy among Anatomiſts, whether this Blood is diſcharged from the Veins of the Uterus alone; or thoſe of the Vagina, excluſive of the Uterus: And both Opinions have their reſpective Patrons, who appeal to the Evidence of Senſe, for what they eſpouſe as Truth. I, on the contrary, affirm, that both Opinions may be true; but, becauſe more Veſſels are diſtributed to the Uterus, than to the Vagina, and becauſe the ſpermatic Veins, which are diſtributed through the Ovaria, are very winding, we may juſtly affirm, that large Effuſions of Blood, as in Abortion, proceed from the Veſſels of the Uterus; whereas the ordinary menſtrual Diſcharges proceed from the Veſſels of the Vagina. But whether the menſtrual Blood is diſcharged from Veins, or ſmall Arteries, cannot be accurately determined; but, becauſe it is evacuated Drop by Drop, I am inclined to think, that it rather proceeds from the former than from the latter, eſpecially becauſe, according to *Fantoni*, in his *Anatomia Corporis Humani*, Air blown into the Veins of the Uterus is readily convey'd to its Cavity, and to the Vagina; and becauſe the Coats of the Veins are more eaſily opened, than the Sides of the Arteries.

The Cauſes of this ſtated and periodical Diſcharge of Blood from the Uterus are purely mechanical: Many imagine the Moon to be the Cauſe of this ſurpriſing Phenomenon, becauſe it recurs at a certain State or Phaſis of that Planet: But, becauſe the ſame Effect recurs on a certain Month, Day, or Hour, we are not, for that Reaſon, to aſcribe this Effect to the Influence of the Stars; for, in conſequence of the ſlow Circulation of the

Blood,

Blood, and the languid Perſpiration in Women, it is neceſſary ſome Quantity of ſuperfluous Blood or Humours ſhould be accumulated in the Veſſels; by which means a Plethora is gradually induced. Let us ſuppoſe, then, that a certain determinate Quantity of Blood, a Pint and an half, for Inſtance, is neceſſary to produce this Eruption through the Veſſels of the Uterus; and that, in order to collect this Quantity, a certain Time, twenty-eight Days, for Inſtance, is requiſite; it will from this follow, not that this Time is the direct Cauſe of the menſtrual Diſcharge, but that a certain Time is requiſite to the Accumulation of ſuch a redundant Quantity of Blood, as is ſufficient to excite Spaſms, and produce a Rupture of the Extremities of thoſe Veſſels which terminate in the Uterus: From the particular Quantity, therefore, of menſtrual Blood diſcharged from each Woman, we may eaſily determine how much ſuperfluous Blood, and nutritious Juice, is each Day generated in every individual Woman; and, conſequently, what Quantity ought to be expelled and diſcharged.

Daily Experience proves, that this Diſcharge greatly contributes to the Preſervation of Health; for, when this Evacuation is carried on in a regular and natural manner, a perfect State of Health is enjoyed; but when it happens to be either defective, or exceſſive, it lays a Foundation for an incredible Number of Diſorders. This Doctrine is confirmed by *Hippocrates* in *Aph.* 57. of *Sect.* 5. And *Galen*, in his Treatiſe *de Venæſectione adverſus Eraſiſtratum*, uſes the following Expreſſions: "Does not uner- "ing Nature every Month evacuate the ſuperfluous Blood from "Women? For as the female Sex ſtay much at Home, are un- "accuſtomed to hard Labour, deprived of the Advantages of "the free and open Air, and accumulate large Quantities of "Humours, I am of Opinion, that the Evacuation of theſe ſu- "perfluous Humours is, as it were, the Remedy kindly ap- "pointed and ordained by Nature:" For, in order to the due, equable, and free Circulation of the Blood, which maintains the Soundneſs of all the Parts and Functions, a certain determinate Quantity of Blood is requiſite; and when this Quantity is either exceſſive, or defective, the due Circulation of the Blood, ſo conducive to Health, muſt neceſſarily be diſturbed.

An exceſſive Redundance of Blood, in conſequence of a Suppreſſion of the Menſes, retards the Circulation of the Blood, and impairs the Strength, Elaſticity, and Contraction of the Heart and Veſſels. Hence Stagnations and Congeſtions of Blood, together with Obſtructions of the Viſcera, prove highly injurious, and lay a Foundation for great Numbers of chronical Diſorders; for from a Diminution, or total Suppreſſion, of the Menſes, moſt of the Diſeaſes incident to Women proceed, which are widely different, according to the various Parts they affect: Thus, if Blood ſhould ſtagnate in the Head, it excites Melancholy, an heavy Pain of the Head, a Vertigo, a Dimneſs of Sight, and Dulneſs of Hearing, Paleneſs, Madneſs, and, ſometimes, Apoplexies. On the contrary, when Blood is congeſted in the Præcordia, it produces a Difficulty of Breathing, an Aſthma, a Cough, a Spitting of Blood, a Palpitation of the Heart, and Syncopes. If Blood becomes ſtagnant in the Stomach and Inteſtines, Inflations, Rumblings, Eructations, Uneaſineſs of the Præcordia, Vomitings of Blood, and Gripes, are produc'd. If the abdominal Viſcera are loaded with thick Blood, a Cachexy, an Heavineſs of the whole Body, a Scurvy, a Jaundice, hyſteric Diſorders, purple Fevers, Tumors of the Legs and Feet, and Varices of the Veins, are generated. If too large a Quantity of Blood is accumulated in the Uterus, a *Fluor albus*, Inflammations of the Part, Moles, and Abortions, are produced. But by reſtoring the menſtrual Diſcharge, all theſe Diſorders are either alleviated or remov'd; or they may be prevented by ſeaſonable Veneſection. The particular Method of treating all theſe Diſorders is deliver'd under the Article UTERUS; which ſee.

The Menſes generally make their firſt Eruption in Girls about fourteen Years of Age, and ceaſe between forty and fifty, at which times a large Number of Diſorders are generally produced. This Diſcharge generally begins in Girls about fourteen Years of Age; becauſe at that time a larger Quantity of Aliments is uſed and digeſted, and conſequently a greater Quantity of Blood generated, which in their younger Years was much more ſerous, though well enough calculated for the Nouriſhment of the Body. When this Evacuation begins, the Body is frequently freed from numberleſs Diſorders ariſing from the Redundance of Serum before generated. But this Diſcharge generally ceaſes in Women between forty and fifty Years of Age, becauſe, at that time, the Fibres become more rigid, the Mouths of the capillary Veſſels are block'd up, and the ſpaſmodic Motions which produce this Excretion begin to fail. Unleſs, therefore, we relieve Women at this Age by ſeaſonable Veneſection, or by increaſing the Evacuations by Urine or Tranſpiration, they are generally afflicted with various chronical Diſorders.

Not only Women, but, alſo, Men, who generate large Quantities of Blood, evacuate the ſuperfluous and redundant Part of it by the hæmorrhoidal Veins.

As Women, in conſequence of the Smalneſs of their Veſſels, and the ſoft and flexible Structure of their Fibres, become plethoric, and receive incredible Advantage from the Evacuation of the Menſes, ſo Men of ſimilar Habits and Conſtitutions, in conſequence of an increaſed Plethora, diſcharge the ſuperfluous and redundant Blood by the hæmorrhoidal Veins: The hæmorrhoidal Diſcharge in Men is more frequent than is generally imagined, as Phyſicians much converſant in Practice very well know. But ſuch Men as are full of Juices, of delicate Complexions, and whoſe Fleſh is lax and ſpongious, are moſt ſubject to this hæmorrhoidal Diſcharge; becauſe Perſons of ſuch Habits, in conſequence of their languid Pulſe, and the Narrowneſs of their ſecretory Veſſels, do not evacuate a Quantity of Juices proportion'd to that generated from the Aliments they uſe: Such Men are, in their younger Years, ſubject to Hæmorrhages from the Noſe, or a Spitting of Blood; but, when they are more advanced in Years, they become ſubject to the hæmorrhoidal Diſcharge, which is both more copious and frequent, the more Blood there is accumulated in the Veins.

The hæmorrhoidal Diſcharge is highly ſalutary, becauſe it frees the Body from a Plethora, and conſequently prevents the Diſorders which would, in Proceſs of Time, ariſe from it: For which Reaſon the Antients juſtly dignified this Evacuation by giving it the pompous Epithet of *Golden*; and others call it the bountiful Work of powerful and ſalutary Nature; becauſe it procures Health, and protracts Life to old Age. Nothing is, therefore, more prejudicial, than unſeaſonably to diminiſh, or ſuppreſs, this accuſtomed and ſalutary Evacuation, by improper Diet or ill-choſen Medicines; for by this means violent Obſtructions and Infarctions of the Viſcera, and, in conſequence of theſe, chronical Diſorders, ſuch as Cachexies, Dropſies, the Stone, ſpaſmodic Flatulences, Melancholy, convulſive Colics, and ſciatic Pains, are generated, all which are happily removed, by prudently and ſeaſonably reſtoring the hæmorrhoidal Diſcharge. But we muſt diſtinguiſh between that Species of Hæmorrhoids, which is critical, ſalutary, and evacuates the redundant Blood; and that leſs auſpicious Kind, which draws its Origin from a bad and preternatural Conſtitution of the abdominal Viſcera. In conſequence of this laſt-mentioned Misfortune, we often obſerve cachectic, hypochondriac, and dropſical Patients afflicted with the hæmorrhoidal Diſcharge, which ſometimes afford Relief, and ſometimes proves prejudicial, eſpecially when it is too copious.

The Preſervation of the human Body, which is highly ſubject to Corruption, depends upon the free Circulation of the Blood, which, again, depends on the due Ingeſtion, Retention, and Excretion of ſuch things as are moſt ſuitable to Nature; for the vital Functions conſiſt in the ſeveral Motions both of the ſolid and the fluid Parts. But theſe Motions can neither long ſubſiſt, nor have Matter to exerciſe themſelves upon, unleſs by means of the natural Actions ſubſervient to the due Ingeſtion, Secretion, and Excretion of proper Aliments. The Aliments, therefore, taken, and the Excretions made, are of the greateſt Importance, either to the Preſervation of Life and Health, or the Production of Diſeaſes; for which Reaſon the Phyſician ought always to have a due regard to them. See DIÆTA.

'Tis certain from Experience, that frequently, when by any Cauſe the Menſes are ſuppreſſed, the Blood which ought to have been diſcharg'd by the *Pudenda*, is conveyed to other Parts, and diſcharged in preternatural and uncommon Hæmorrhages. Thus *Horſtius*, in *Præfat. ad Part.* 2. *Obſ. Schenkii, Lib.* 4. informs us, that upon a Suppreſſion of the *Menſes*, the Blood regurgitated, and was diſcharged from the Ears. And *Hollerius* in *Comment. in Lib.* 2. *Sect.* 2. *Coac. Prænot.* as, alſo, *Johannes Rhodius, Cent.* 3. *Obſ.* 51. affirm, that they have known the menſtrual Blood critically diſcharged from the Gums, and the Sockets of the Teeth. But it is more frequently obſerv'd, that this Blood, which ought to be diſcharged from the *Uterus*, is thrown up by Vomit, in conſequence of a Rupture of the Veins of the Stomach; which is ſufficiently confirmed by *Hippocrates*, in *Lib.* 1. *de Morb. Foreſtus. Lib.* 16. *Obſ.* 25. *Panarolus Pentecoſt.* 1. *Obſ.* 6. *Rodericus a Caſtro, de Morb. Mulier. Lib.* 1. *Cap.* 3. *Hoechſtetterus, Obſ. Dec.* 2. *Caſ.* 7. *Stalpart vander Wiel, Cent.* 2. *Obſ.* 17. and ſeveral other Authors. It, alſo, ſometimes happens, that, when the Blood cannot be diſcharged through the Veſſels of the *Uterus*, it is, with a conſiderable Impetus, conveyed to the Lungs, where, burſting the Veſſels, it is diſcharged by Coughing. Inſtances of this are found in *Holler, de Morb. intern. Lib.* 1. *Cap.* 29. *Rhodius, Cent.* 3. *Obſ.* 30. and *Salmuthus, Cent.* 2. *Obſ* 18. In old Women, alſo, when the menſtrual Evacuation ceaſes, a Diſcharge of bloody Urine frequently enſues; ſo that there are Inſtances in which, at every ſtated Period of the *Menſes*, Blood, partly fluid, and partly grumous, has been diſcharged with the Urine.

But every judicious Phyſician muſt readily perceive, that ſuch an Evacuation of the menſtrual Blood from improper Places, muſt neceſſarily be very unſafe and dangerous. But the more noble and neceſſary to Life the injured Part is, the greater the Danger muſt, of courſe, be. Thus, if the Lungs, ſo neceſſary to the various Functions of Life, are affected and lacerated by ſtagnant Blood, an ulcerated and phthiſical State of that Organ is readily brought on. To this Purpoſe we find a memorable Paſſage in *Proſper Alpinus, Medic. Method.* which runs thus: "The "menſtrual Diſcharge is ſuppreſs'd by immoderate Evacuations

" of Blood, or long-protracted Diſeaſes; but if this Suppreſſion " continues for a conſiderable time, the Patients are ſubjected " to terrible Misfortunes, and ſome are ſeized with a Spitting of " Blood, after which they fall into a Phthiſis; an Accident of " which kind happen'd to one *Æmilia*, a young Lady of Diſtinc- " tion, who, by continual Grief and Sorrow, having her Menſes " ſuppreſs'd, was ſeized with a Spitting of Blood, a continual " Cough, and a ſlight Fever, which, a few Months after, put an " End to her Life." *Hippocrates*, alſo, in his firſt Book *de Morb. Mulier.* informs us, "That in ſome Women the menſtrual Blood, " being retained in the Uterus for two Months, regurgitates to " the Lungs, and produces all the Symptoms of a Conſumption." But if this Blood ſhould be lodged between the highly ſenſible Membranes of the Stomach, and become corrupted or coagulated there, a dangerous Inflammation of the Stomach, or an hectic Fever, is produced; or, if it ſhould happen to make an Eruption, the Veſſels of the Stomach, before too much diſtended, are ſo dilacerated, eſpecially if the Spleen is previouſly diſordered, that they cannot be again conſolidated, but a copious Vomiting, frequently recurring, puts an End to the Patient's Life.

An Inſtance of an Epilepſy ariſing from a Retention of the Menſes is found in *Miſcel. Nat. Curioſ. Dec.* 1. *An.* 1. *Obſ.* 85. and another Inſtance of an obſtinate Loſs of Memory brought on by the ſame Cauſe is recorded in the *Acta Haffnienſia*: 'Tis, alſo, certain from Experience, that a Retention of the Menſes, throws the nervous Syſtem into ſuch Commotions, as to excite hyſteric Diſorders; which we find confirmed by *Hippocrates*, in his Treatiſe *de Morb. Mulier. In Miſcel. Nat. Curioſ. Dec.* 2. *An.* 1. *Obſ.* 79. we have an Inſtance of a Dropſy of the Uterus ariſing from a Suppreſſion of the Menſes; and we learn from Experience, that Exulcerations, violent, and even ſcirrhous Tumors of the Uterus are ſometimes produced by the ſame Cauſe. Neither do the external Parts of the Body eſcape the fatal Conſequences of a Suppreſſion of the Menſes, ſince we know from Experience, that by this means they are frequently affected with the Itch, the Elephantiaſis, Boils, eryſipelatous Diſorders, or ſcirrhous Tumors.

As all theſe Misfortunes are, in young Women, brought on by a Suppreſſion of the Menſes, ſo they often happen to thoſe in whom this Evacuation ceaſes, by reaſon of Age; for I have known from Experience, that Women, after fifty Years of Age, eſpecially thoſe of ſanguine Habits, who have formerly been accuſtomed to copious menſtrual Diſcharges, and who lead ſedentary, idle, and delicate Lives, whilſt, at the ſame time, they neglect Veneſection, have been afflicted with violent Cardialgias, accompanied with intenſe Heat and Pain about the Præcordia, the Back, and Scapulæ, eſpecially in the Night-time. I have ſeen others, from the ſame Cauſe, ſeized with intolerable Heat and Pain of the Joints, and eryſipelatous Fevers, whilſt others were afflicted with nephritic Diſorders, accompany'd with Pains of the Loins, and terminating in calculous Concretions. Some Women, after the ſixtieth Year of their Age, have diſcharged bloody Urine, or been ſeized with an immoderate Diſcharge of the Menſes, which has, at laſt, terminated in an Hectic. Some Women, eſpecially thoſe waſted by long Grief, have been afflicted with a Pain of the Left Hypochondrium, accompany'd with an Uneaſineſs and Heat of the Præcordia; and which, afterwards, terminated in a violent Vomiting of Blood, or the Morbus Niger of *Hippocrates*. In ſuch Patients, upon laying open the Body, the Spleen has been found preternaturally large and putrid, the Vaſa Brevia of the Stomach ruptured, and gaping, and the Blood diſcharged from theſe Veſſels into the Ileum. A Lady of uncommon Diſtinction, upon the Ceſſation of her Menſes, in the fifty-third Year of her Age, was ſeized with continual and tormenting Vomitings for half a Year; after which, a Swelling of her Hands and Feet appeared, which, however, was happily removed by Veneſection, and other proper Remedies. *Frederic Hoffman.*

With reſpect to the menſtrual Flux, I am of Opinion, that the Blood is diſcharged from the Extremities of the uterine Arteries, where they open into the Veins; and that this periodical Flux is not excited by the Force which the Contraction of the Heart impreſſes upon the circulating Blood, but by the ſubſequent Impulſe of the contracting Arteries, which forces the Blood out of the Arteries into the continuous Veins. Now, whenever, upon any Occaſion, the Strength and contractile Force of the Arteries is impaired to a certain Degree, the Menſes become deficient, as it happens in lax and cachectic Habits. Hence the Reaſons are obvious, why Aſtringents, as Bitters, the Bark, Steel, and all thoſe Medicines and Methods, which impart Strength to the Fibres, Veſſels, and Viſcera, and increaſe their Elaſticity, and contractile Force, if prudently managed, excite the menſtrual Flux, and cure Diſorders ariſing upon the Suppreſſion thereof. See the Articles CACHEXIA, CHLOROSIS, FIBRA, and UTERUS.

I muſt not finiſh this Article, without taking notice of ſome very idle Pieces of Superſtition, which do no great Honour to human Sagacity. One is, what *Columella* relates of *Democrates*, that, in his Book of Antipathy, he aſſures us, that all thoſe Caterpillers, and other Inſects, which deſtroy a Garden, fall off, and die, if a Woman, with her Menſes upon her, walks three times round each Quarter of it bare-foot, and with her Hair looſe. But, to do Juſtice to this great Man, I muſt remark, that the ſame *Columella* informs us, that the Books, in his Time aſcrib'd to *Democrates*, were really wrote by one *Delus*, or *Bolus*, an *Egyptian*.

It is much leſs ſurpriſing, that *Paracelſus* ſhould believe the menſtruous Blood to be the greateſt of Poiſons; that, with it, the Devil produced Spiders in the Air; and that Fleas, Beetles, Caterpillers, and other Inſects, were generated by it: For as this Enthuſiaſt, who did not want Imagination, was, when young, accidentally depriv'd of his Virility by a Sow, it is remarkable, that he miſſes no Opportunity of diſgracing a Sex, in which he had no Delight.

MENSIS *Philoſophicus*. A Philoſophical, or Chymical Month: This is a very undetermin'd Space of Time; for ſome make it only three Days and Nights, others ten, ſome thirty, but moſt, forty. See MENSTRUUM.

MENSTRUA. The ſame as Menſes.

MENSTRUATIO. Menſtruation.

MENSTRUUM.

This is a barbarous Term, and denotes a Body, which, when artificially apply'd to another, divides it ſubtily, ſo that the Particles of the Solvent remain thoroughly intermixed with thoſe of the Solvend. This Solvent was called a Menſtruum, becauſe the Chymiſts, in its Application to the Solvend, firſt uſed a moderate Fire, for a Philoſophical Month, or forty Days; and hence aroſe the Name of a menſtrual Solvent, at length, barely a Menſtruum.

It is the Property of a Menſtruum to be itſelf equally diſſolv'd, when it diſſolves the Solvend; but, when the Solution is perfected, it may ſometimes happen, that the Solvent and Solvend ſhall ſeparate. The divided Parts, therefore, of the Solvent, muſt inſinuate themſelves among the Parts of the Solvend, ſo as to divide and diſſolve the Body. Hence it appears, that the Action of Menſtruums differs from all mechanical Separations, where the Inſtrument, ſuch as a Knife, Sword, or Saw, while it divides, is not itſelf divided, but remains almoſt entire. But there is ſome Reaſon to ſuſpect, that the ſingle Particles of a Menſtruum act like mechanical Inſtruments, by the Properties of their own proper Size, Figure, Hardneſs, and Gravity. Every Menſtruum, while it diſſolves, is neceſſarily divided into inviſible Particles, and muſt, therefore, be fluid in the Action; and, when the Diſſolution is completed, the Solvent and Solvend muſt become one Fluid.

Cuſtom has given the Name of Menſtruums to many Bodies of a hard, conſiſtent Nature, though, in that State, they cannot act as Solvents; and hence the Chymiſts have divided Menſtruums into Solid and Fluid.

Dry or ſolid Menſtruums may be again divided into five Claſſes. 1. The ſix Metals, Gold, Lead, Silver, Copper, Iron, and Tin; which act upon one another after being fuſed in the Fire, and may be intimately mixed, ſo as to make an apparently homogeneous Maſs, every Particle of which holds the ſame Proportion of a different Metal, as the Whole. For, if ten Ounces of Silver be thus mixed with an Ounce of Gold, and a Grain of this Maſs be given to an Aſſay-maſter, he will diſcover, that it contains one eleventh Part Gold, and ten Parts Silver. The ſame would be the Caſe, if an hundred thouſand Parts of Silver were mixed with one of Gold. Thus the leaſt Particle of Gold may be extended through an immenſe Maſs of Silver, ſo that every the leaſt aſſignable Particle of Silver ſhall contain a proportionable Particle of Gold, while the Particle of Gold remains unchanged among the unaltered Parts of the Silver. 2. The Semi-metals, as Antimony, Biſmuth, Cinnabar, Marcaſites, and Zink, which, when melted, mix with one another, or with Metals; but the Metals, even to the moſt minute Particle, are no longer malleable, but eaſily reduced to Powder. 3. The dry Salts; as Alum, Borax, Nitre, Sal Ammoniac, Sea-ſalt, Vitriol, fixed Alcali, and Mercury ſublimate; which may be ſubtily divided by Fire, and intimately mix with one another, with Metals, Semi-metals, and other Things. 4. Hard, foſſil, ſulphureous Bodies; as Sulphur Vivum, common Brimſtone, Arſenic, Orpiment, and Cobalt. 5. Thoſe foſſile Bodies, called by the Refiners, Cements; which conſiſt of Salts, Sulphurs, and Brick, reduced to dry Powders, and ſtrow'd betwixt Plates of Metal, in order to raiſe their Colour, or ſeparate one Metal from another.

Some Menſtruums, being left to themſelves, after the Solution, concrete into an hard Maſs, which, tho' compounded, appears of a ſimple uniform Nature. In this manner, if melted Lead be mixed with melted Tin, they unite as Water with Water, or Mercury with Mercury. The Caſe is the ſame in all the Metals, and ſome of the Semi-metals. Thus, if a Scruple of Regulus of Antimony be added to a Pound of melted Tin, the Maſs, when cold, will appear uniform, but become entirely brittle. So fixed Alcali unites with Sand in the Fire; and Sulphur and Mercury, by being ground together, turn to a black and dry Powder, which, being ſublimed, produces an apparent ſimple Body called Cinnabar. Many fluid Solvents intimately diſſolve ſome ſolid Maſſes, and after the Solution become an hard, and ſometimes a dry Body. Thus almoſt all the Menſtruums of Metals unite with their reſpective Metals into ſolid Vitriols; and thus ſtrong diſtilled Vinegar, when it has diſſolved Shells, Chalk, and ſtony

Subſtances,

Subſtances, ſeparates from its Water, and, together with the Bodies it diſſolves, forms a dry hard Maſs.

Numerous Menſtruums have a liquid Form, before they act as Solvents; as Vinegar, Water, ſaline, acid, alcaline, and compound Spirits, alcaline Oils *per Deliquium*, &c.

Some Menſtruums become liquid after the Solution, and continue ſo with the Solvent. Thus, in the Diſſolution of five of the Metals with ſimple Mercury, a ſoft Paſte is produced, which may be diluted indefinitely by the Addition of more Mercury; but there is ſcarcely any known Method of reſtoring this Amalgama to its Solidity. All the liquid Acids, after having diſſolv'd Metals in a large Proportion, cannot eaſily be dried; whence many have imagined theſe Solutions to be fixed metallic Oils, and in vain ſought great Secrets in them, though it is no more than a Way of collecting acid Salts in a large Quantity about Metals.

It is now eaſy to obſerve, that many Menſtruums unite Bodies, as well as ſeparate them: For frequently after the Diſſolution the Particles of the Menſtruum preſently join with thoſe of the Solvent, and produce a new Compound, often very different from the Nature of the ſimple reſolved Body. The Parts, however, of the Solvent, after its Concretion, no longer touch one another, but are ſeparated by the Interpoſition of the Particles of the Matter diſſolv'd. And the Particles, which before conſtituted the Solvend, are ſeparated by the Interpoſition of the Particles of the Solvent.

Hence it is plain, that the Parts of the Menſtruums apply themſelves to the Parts of the Solvend; and a certain Cauſe is here required, to make the Particles of the Solvent fly from one another, and approach the Particles of the Solvend, rather than remain in their former Situation. The like Cauſe ſeems to be required, to make the Particles of the Solvend, now ſeparated, remain united with the Parts of the Menſtruum, rather than ſuffer the diſſolving and diſſolved Particles to unite, by their natural Affinity, into homogeneous Bodies.

This Cauſe muſt be ſought as well in the Solvend, as the Solvent; for the Action is reciprocal. Thus, while Aqua Regia diſſolves thrice its Weight of Gold into a yellow Liquor, the Particles of Gold are united with the Aqua Regia, and remain ſuſpended in it, though Gold be eighteen times heavier than Aqua Regia: Whence there muſt be a mutual correſponding Power between the Particles of the Gold and Aqua Regia, whereby they act upon, embrace, and detain each other; otherwiſe the Particles of Gold would fall to the Bottom, the ſaline Particles reſt upon them, and the Water float over both.

If we were to deduce the Cauſe from Similitude of Subſtance, the Action of Diſſolution ſeems to be performed by a certain Power of the Parts of the Menſtruum to attract the diſſolved Parts, rather than to repel them; and is not a mechanical Action, or unfriendly Commotion, but rather an Appetite of Union. Thus, in a violent Solution, the Agitation, Heat, Hiſſing, and Tumult, ceaſe, when all the Parts of the Solvend have united with thoſe of the Solvent; as appears on throwing a Piece of Iron into weak Aqua-fortis.

The whole Solvent never acts once on the whole Solvend. Only thoſe Particles of the Solvent, which touch other of the Solvend, firſt act; and theſe, being ſeparated, freſh Particles of the Menſtruum apply themſelves to others of the Solvend.

Therefore, Part of the Menſtruum acts upon that Part of the Body which it ſtrikes off, and ſeparates; but the Conflict made in this Separation excites a greater Motion in the Menſtruum, by which means other Parts of the Menſtruum are agitated, and applied to other Parts of the Solvend.

Fire certainly excites, promotes, and increaſes, the Action of Menſtruums; for in extreme Cold Solutions are either not made, or made but ſlowly; but they are ſoon performed by the Aſſiſtance of Heat.

Some Menſtruums require a ſtrong Heat, as Mercury, before it will diſſolve Metals: Some a ſmaller; thus Sal Ammoniac, Sea-ſalt, and Salt of Tartar, eaſily diſſolve in Water. Some Menſtruums act with a moderate, but loſe their diſſolving Power, or even acquire a Power of coagulating by a ſtronger. Thus warm Water diſſolves the White of Eggs, which boiling Water coagulates.

This Effect of Fire ſeems to be produced, 1. By impelling, moving, and agitating the Menſtruum, in the manner of a mere mechanical Motion. 2. By its general Power of expanding the Subſtance of all Bodies. 3. By ſeparating the Parts, ſo as to ſet them farther aſunder. In moſt Caſes the Heat is increaſed during the Solution; and even the Action of thoſe Menſtruums is augmented by Heat, which generate a great Degree of Cold in the Solution: Thus Sal Ammoniac diſſolves ſooneſt in warm Water.

Of the Action of Menstruums.

The Changes wrought upon Bodies by the diſſolving Power of Menſtruums ſeem greatly to depend upon the minute Particles of the Menſtruum now ſtrongly cohering with the Particles of the Solvend; and can ſcarcely be attributed to an eſſential Alteration introduced by the Menſtruum into the diſſolv'd Particles. Though pure Metals, ſuch as Gold, Silver, and Mercury, diſſolv'd, ſeem entirely changed; yet they may be eaſily ſeparated from the Menſtruums in the Form of a Calx, which being fuſed in the Fire, the Metal is recover'd unchang'd. Hence it appears, that the Menſtruums have no other Effect, than barely adhering to the Surfaces of the metallic Particles, while divided: Many more Inſtances of this kind may be given.

But it may be objected, That Solution produces new Bodies; becauſe, if red Lead be diſſolved in diſtilled Vinegar, there ariſes Sugar of Lead, when the Acid of the Vinegar is attracted into the Particles of the Lead; and though this Salt of Vinegar be diſtilled in a Retort with a ſtrong Heat, the Spirit of Vinegar is not recovered, but a particular Liquor obtained, which will burn in the Fire. There are many more Inſtances of the like kind; but we muſt conſider, that the adhering Parts of the Menſtruum cannot always clearly extricate themſelves, but remain united. Hence ſome imagine, that the Nature of Bodies is deſtroyed, while there only happens ſuch a ſimple Conjunction of unchanged Particles, under a new Appearance.

Thus the Blade of a Lancet or Knife, when naked, has the Appearance of the Power of Cutting; but, when in the Sheath, it has not, then, the ſame Appearance; tho' in themſelves the Knife, or Lancet, is ſtill the ſame. The eaſier they are to be unſheath'd, the ſooner the Appearance of their cutting Power becomes manifeſt; but, if the Sheath was to be firmly connected with the Blade, we ſhould not ſcruple to ſay, that the Blade was changed. So if a little Cylinder of pure Silver be gilt, and ſo put into Aqua-fortis, the Silver will be perfectly diſſolved, and leave the hollow Covering of Gold entire, floating like a black Film in the Menſtruum. Whence the acid Parts of Vinegar may be ſo united to certain Parts of Lead, as not to ſeparate upon Diſtillation, but eaſily riſe together. It would, therefore, be wrong to aſſert, that the Acid of the Vinegar was thus converted into a new kind of inflammable Liquor by the Contact of Lead: It is highly probable, that this Difference much oftener happens from Combination, than from any Change of the Subſtance; and the like holds, alſo, in Separation. For the Subſtance diſſolved often conſiſts of very different Parts, ſome of which are perfectly taken up by the Menſtruum, while others are rejected, and left ſeparate: Whence, after the Menſtruum is abſtracted from the Solution, there remains a different Subſtance from what was employed as the Solvend. And hence, without Caution, one might be ready to infer, that the Subſtance thus procured was a new one, produced by the changing Power of the Solvent; whereas, in reality, it is only produced by a pure Separation.

Hence we may learn, that the Action of all known Menſtruums depends upon Motion: For, if a Menſtruum did not change the Motion of the Parts upon which it acts, thoſe Parts would remain as they were; in which Caſe the Menſtruum, contrary to Suppoſition, could have no Action at all. The Origin of this Motion we cannot fairly attribute to the common Cauſes of Motion, ſuch as Impulſe, Gravity, Elaſticity, Magnetiſm, and the like; but there is a particular Cauſe, not common to all Bodies, exerted between the Solvent and Solvend. An Inquiry ſhould be carefully made into this Subject, to which we are the more incited, as ſome great Philoſophers have conceiv'd, that all the Actions of Bodies muſt be accounted for mechanically.

When a Solvent divides its Solvend by a mere mechanical Motion, this Motion muſt be generated in the Particles of the Solvent by ſome Cauſe, and this Cauſe is generally Fire. The Particles of the Menſtruum, thus agitated, muſt ſtrike againſt the Surfaces of the united Particles of the Solvend, communicate to them their Motion, and looſen and ſeparate them from the Solid, whether this Action be exerted externally, on the Surface of the Solvend, or internally, by penetrating the Solvend. Though this mechanical manner of acting may have ſome Effect, it is, perhaps, leſs than is generally imagined: For Fluids can produce little Alteration in a Solid, by means of their Quantity, Hardneſs, Figure, and Weight; and the Force they receive from the Fire is but ſmall, and always as capable of acting upon themſelves: The Power of Solution, therefore, muſt depend upon ſome other Cauſe. Thus a Wedge could never cleave Wood by being barely applied to it, or kept floating about it; but muſt firſt be fixed into the Subſtance, and then driven farther by an external Force; an Action not to be expected from the Particles of a yielding Fluid.

Thoſe Menſtruums alone appear to act mechanically, which, by a bare mechanical Motion, ariſing from their Magnitude, Hardneſs, Figure, Weight, and Impulſe, firſt attenuate Bodies, then directly ſeparate from them again, according to their ſpecific Gravities; by which kind of Solution no great Change can ariſe. By this Mark we may diſtinguiſh Menſtruums which act mechanically, from others.

Repulſion, alſo, may cauſe Bodies to ſeparate, after having been mix'd together by Shaking; as in Oil and Water, or Alcohol and Oil of Tartar *per Deliquium*; where not only Gravity, but, alſo, Repulſion, occaſions a Separation, and ſuffers ſimilar things to unite with ſimilar.

When, after Solution, the diſſolv'd Particles remain equally mix'd with thoſe of the Solvent, though, at firſt, they differed

remarkably in their Weight, such a Solution may partly be ascribed to the general mechanical Power, which here almost universally occurs; but principally to another Action, arising from the peculiar Properties of the Solvent and Solvend with respect to each other: As by this Power the Particles of the one attract the Particles of the other, thus both are separated from their former Concretions, and afterwards permix or unite with each other, so as to form numerous new Species of Bodies.

To illustrate this Doctrine by an Example: If a Ball of soft Clay be put into Water, and set over the Fire to boil, the Parts of the Water put in Motion by the Fire will divide the Clay into small Particles, and permix them with the Body of the Water, while the Boiling continues; but when the external Force of the Fire ceases, and the Water comes to rest, and grows cool, all the Clay falls to the Bottom: This I would call a mere mechanical Solution.

But if a Ball of Sal-gem be boiled in four times its Quantity of Water, all the Salt immediately dissolves so perfectly as to remain totally imbibed, suspended, and uniformly diffused in the Water, even after it grows cold, and is thoroughly at Rest; altho' the Gravity of the Salt is much greater than that of Water. Whence it appears, that the Water has a Power, by which it unites to itself the Particles of the Salt, so that they cannot be separated from it by their own Gravity, but remain suspended. The closer or looser Degrees of Adhesion of the Particles of different Menstruums with the Particles of the Body dissolv'd are almost infinite; and hence arise numerous Differences in the Corpuscles produced by Menstruums.

We may now divide all known Menstruums into four Kinds: 1. Those which act by a mere mechanical Power, which are few, and generally simple. 2. Those which, while they in some measure act by a mechanical Motion, principally owe their Efficacy to a certain repelling Power. 3. Such as chiefly act by a mutual Attraction between the Parts of the Solvent and Solvend, which are very numerous. 4. Those which act by the joint Concurrence of the several Properties above-mentioned, and these are the largest Number. If it were possible to class Menstruums according to the Differences of their Actions, and thence to form lower Classes, Chymistry might be brought to Rule, and the Event of every Operation be determined *a priore*; and hence chymical Experiments might be advantageously extended to other Branches of natural Philosophy.

We shall now give an Example of each Kind, with regard to mechanical Solution:

Take an Ounce of pure Silver; put it into a clean strong Crucible, cover'd close with a Tile; set it in a gentle Fire; and, when almost ignited, give a strong Blast-heat, till the Silver runs as thin as Water: Take the Crucible out of the Fire, and, holding it high in the Air, pour the fluid Metal, by a little at a time, into cold Water, that rises at least a Foot in the containing Vessel: Thus the Parts of the melted Silver will enter the Water with a gentle Hissing, and, upon the first Contact, separate into small Grains, and fall to the Bottom, without any further Change, either in the Silver, or in the Water: Thus the melted Silver divides the Water, and is divided by it, while neither are alter'd by the Division, but range themselves according to their respective specific Gravities.

The like Experiment succeeds in Gold.

But, if made with Copper, the melted Metal no sooner touches the Water, than it instantly recoils, and flies off, with an incredible Force, divided into such subtile Particles as scarcely to be found again. Thus there may be Menstruums, which surprisingly dissolve the Solvend by a repelling Power.

Take four Ounces of the Flower of Sulphur; put them into an unglazed earthen Pan, covered with a Tile, to prevent the Sulphur from catching Flame: Set it over a Fire, so gentle as barely to keep the Sulphur melted: Put six Ounces of pure Quicksilver into a strong, clean, Linen Bag, and suspend it over the melted Brimstone; into which, being uncovered, gently squeeze a little of the Quicksilver, and stir them together with an heated Spatula, till, by degrees, all the Quicksilver be mixed in, and a black, brittle, stringy Mass will be obtained; which, viewed through a Microscope, shines, and appears metallic.

Here we see a dry fluid Solvent, and a dry hard Solvend, Substances very different in their Origin, Gravity, Kind, and Degree of Volatility, and little disposed to unite, when entire, which, upon the Contact of their minute Particles, concrete together, by Attraction, so tenaciously, as not again to be separated by Fire. The Causes of this Union are, 1. Fire, which melts the Sulphur, and divides it into its minute Particles. 2. The Division of the Mercury, by passing through the Linen Bag, and falling by little at a time into the Sulphur. 3. The constant stirring of them together. But these three Causes only apply the Mercury to the Sulphur. 4. A Power in both, whereby, when touching in many Surfaces, they attract each other so strongly, as to require a great Force, or a stronger Attractive of either, before they will separate again; and thence mutual Attraction is the principal Cause of the Effect. Whence, 5. arises so strong a Cohesion, that, though sublimed, they do not separate, but rise in minute Particles of Cinnabar, the smallest of which consist of Sulphur and Mercury united. For the Mercury returns from it unaltered, when another dry Menstruum is added, which attracts the Sulphur stronger than the Sulphur attracts the Mercury. Thus,

If twelve Ounces of Cinnabar, made ever so fixed by repeated Sublimation, be ground to Powder, and well mixed with an equal Quantity of clean Iron Filings, then distilled in a strong Fire, all the Mercury comes over, in its own native Form, leaving behind a fixed Mass, made by the Union of the Sulphur and Iron, which always unite more eagerly than Sulphur and Mercury.

As an Instance of the attractive and repellent Kind;

Take a Pound of common Antimony, reduced to Powder: Melt it in a clean Crucible, close covered, till it runs like Water, and discharges a copious white Fume; then take the Crucible out of the Fire, and let it rest in a quiet Place till perfectly cold; when the Surface of the Antimony will appear rough, unequal, and full of Holes.

Upon breaking the Crucible, you will find the bottom Part of the Mass solid, metallic, and shining; but the upper Part porous, white, yellowish, and Lead-coloured: Whence we see, that the Fire, by melting the Antimony, had dissolved its metallic and sulphureous Parts; which, being thus set free, range and associate themselves differently, the metallic with metallic, and the sulphureous with sulphureous, while the metallic and sulphureous mutually repel each other; so that, in this Solution, Fusion by Fire, Repulsion, Attraction, and Gravity, acted together. If this Experiment be supposed not to shew the Nature of a Menstruum, yet many Particulars may hence be learned, which happen in the Actions of Menstruums.

To shew how Menstruums may act by different concurring Ways;

Take four Ounces of fine Antimony, reduced to a subtile Powder: Grind with it two Ounces of hot and dry Salt of Tartar, in an heated Mortar, and a warm and dry Air, the Pestle, also, being made hot: Put the Mixture into a Crucible, and melt with a strong Heat, that the Powder may run thin: Then pour the melted Matter into a melting Cone, and, when cold, knock it out.

Thus we shall have an uniform Mass, perfectly mixed through its whole Substance, by flowing in the Fire like Water, and now resembling Glass, being of an Ash-colour, a caustic Taste, and dissolving in the Air into a purple Liquor. Hence the fixed Alcali, the Sulphur, and the metallic Part of the Antimony, are, by the Action of the Fire, first minutely divided, and then again united into one uniform Substance.

We may now have a Notion of the Solution of Bodies by Menstruums, different from the Opinion of those Chymists and Philosophers, who have conceived, that a certain mechanical Acrimony, acting by an universal mechanical Power, was here the Cause of the Effect; who, when they found, that what dissolved one Body, would not dissolve a softer, have invented several Ways to remove the Difficulty, and apparent Contradictions. But we purpose to inquire into Nature by Experiments alone.

First, we are to consider the Nature of Fire; which we find to be an almost universal Solvent, as it liquifies almost all Bodies, if applied in a proper Proportion to them: For when we rise gradually from the Heat of the Body in Health, to the utmost Violence of the Focus of a burning Concave, we shall find few Bodies which do not resolve into their minutest Particles, with one or other of these Degrees: For though some Substances, as Brick, grow harder with a certain Degree of Heat, yet they vitrify with an intense Fire, as we see in melting Furnaces. And although a few Bodies do not melt in the strongest Fire hitherto known, yet, who can say they would not melt in a stronger? We must, therefore, acknowledge that the Power of Heat is very extensive in the Action of Menstruums.

Again, we are to observe, whether any mechanical, strong, or long-continued Attrition, be concerned in the Action of Menstruums; as this may often supply the Want of Fire, by attenuating, dividing, and rubbing the Parts of Bodies together; whence their fine Particles may act upon each other, and, at length, intimately unite. Thus, by means of M. *Langelotte's* Mill, Gold is said to have been ground into a potable Liquor; and M. *Homberg* informs us, that all Metals, even Gold itself, have been perfectly dissolved, and turned to Liquors, by long grinding them with pure Rain-water.

Next, we are to conſider, that Bodies may be diſſolved after undergoing the Operation of Fuſion, Trituration, or feeling the joint Efficacy of both. For, when thus the Bodies are divided into minute Particles, and intimately mixed, there hence frequently ariſes an Opportunity for them to exert a repelling Force, which, before, was latent: For Inſtance,

Melt pure Lead in an Iron Ladle; then add to it thrice its Weight of pure Quickſilver, and you will thus have a white Amalgama, ſhining like Silver, capable of being kept for Years unaltered. If this Amalgama be ground in a Glaſs Mortar, with a Glaſs Peſtle, the whole Maſs ſoon turns perfectly black; and if Water be added to it, and ground with it, then poured off, it takes away the Blackneſs, and leaves the Amalgama pure again, and capable of being kept as before; but, if ground again, it grows black, and this after numerous Repetitions, as I have tried.

Whence it is plain, that the Mercury, here mixed with the Lead, does not repel this black Matter, either from itſelf, or from the Lead, unleſs this mechanical Triture be uſed; whereby the Mixture is attenuated, its Parts cloſer applied, and more intimately conjoined; whence there ariſes a Power in the Mercury upon the Lead, and of the Lead upon the Mercury; by which the Matter, foreign to both, is repelled and ſeparated from them; which could ſcarce be done by another Operation. If the Amalgama, thus made, be ſeveral times diſtilled with Mercury, and cohobated; thus, alſo, the ſame black Matter may be obtained and waſhed from it, by Trituration with Water: Whence a repelling Force is thus again plainly introduced; by means of which the Separation is afterwards eaſily made.

The Parts both of the Solvent and Solvend, when fuſed or agitated by the Fire, or attenuated and mixed by Trituration, often manifeſt a new and wonderful Power of Attraction and Combination: Whence proceeds a great Variety of Bodies, which did not appear before; as we ſee in the preceding Inſtance of the Amalgamation of Lead; where, upon Triture, there ariſes a wonderful Union of the Mercurial metallic Particles, by this attractive Power, after the repelling had ſeparated the heterogenous Parts, which prevented the mutual Contact of the homogeneous Parts; by which means ſomething unexpected is produced.

If, after the Solution is completed, the Menſtruum be ſeparated from the diſſolved Body, the latter is generally changed into a Calx, or ſome new kind of Subſtance.

Hence almoſt all Menſtruums, even the ſolid Kind, are, at the time of Action, in a fluid Form, except in Trituration; and that muſt be ſo exquiſite as to render the Bodies nearly fluid.

In the following Experiment, all the above-mentioned Cauſes, Fire, Triture, repelling Power, attractive Power, and mechanical Force, concur at once in dry Menſtruums, ſo as to produce all the Effects, as Attenuation, Concretion, Separation, and Change.

Take ſixteen Ounces of Antimony, purified, as has been directed, by a ſimple Fuſion: Reduce it to fine Powder, which we know conſiſts of common Brimſtone, intimately intermixed with the Mercurial Part of the Antimony: Then take twelve Ounces of *Rheniſh* Tartar, and ſix Ounces of pure Nitre, both finely pulverized: Dry them all ſeparately to the higheſt Degree, and mix them thoroughly in an Iron Mortar, and reſerve this Powder for the following Uſe. Next take ſix Ounces of Tartar, and three of Nitre, both powder'd, and mix them well together. Put a clean Iron Ladle over a clear Fire, till it becomes almoſt ignited; then throw into it a ſmall Portion of the Powder of Tartar and Nitre; the Mixture will immediately ſwell, boil, throw out ſmall Sparks, and burn with a livid Flame, leaving behind a white and fixed alcaline Maſs, intermixed with Spots of Green; and, if a freſh Quantity of the ſame Powder be thrown in, it produces the ſame Appearances.

Such are the Effects of the Mixture of an acid, vegetable Salt, with a ſaline, terreſtrial one, upon touching the Fire. Fixed Alcali, well-mixed with Sulphur, inſtantly takes Flame in the Fire, and the Sulphur is immediately diſſolved into a new Subſtance. Hence it appears, that if Tartar, Nitre, and Sulphur, be mixed, and thrown, by little at a time, into an ignited Ladle, a fixed Alcali immediately ariſes, which embraces the Sulphur, diſſolves it, and converts it into a peculiar Subſtance. Hence we apprehend the Effect of applying the firſt-mentioned Mixture to the Fire in the following manner.

Set a large ſtrong Crucible in the Fire, to heat gradually, and equably, without cracking; let it be capable of containing at leaſt thrice the Quantity of Powder to be thrown in; cover it with a Tile; and, when thoroughly ignited, take off the Cover, and throw in two Drams of the Mixture; firſt well heated, with Care to prevent its taking Fire: Upon touching the Bottom of the Crucible, it will burſt into Flame, Smoke, and Sparks; but grow quiet, when ignited. Throw in the ſame Quantity after the ſame manner, and do this by degrees, till all the Powder is uſed; at each time covering the Crucible, after the Matter is thrown in, till the Struggle is over. When the Deflagration is finiſhed, raiſe the Fire till the Matter flow like Water, which may be tried by ſtirring it with a Tobacco-pipe; keep it a while in this Heat; then pour it into a dry Braſs Cone, firſt heated and greaſed on the Inſide with Tallow; a Flame like Lightning immediately ariſes, upon pouring in the melted Maſs, on account of the Tallow; and, by this Flame, the Matter is hindered from ſticking to the Metal. When all is grown cold, invert the Cone, and, by ſtriking it, bring out the Matter, which will appear divided in two Parts; the upper being brown, and weighing about fourteen Ounces, is named Scoriæ; which are brittle, of a fiery Taſte, and run in the Air to a red Liquor. Theſe Scoriæ conſiſt of the fixed Alcali, made by the Tartar and Nitre; and of the Sulphur of the Antimony, melted into one Maſs, by the Alcali in the Fire; and thus, being repelled from the metallic Part, it floats at the Top, while the Metal falls to the Bottom by its own Weight; which, therefore, conſtitutes the other Part, and is of a white, ſhining Colour, like Silver, being very ponderous, and on its upper Surface bearing the Figure of a Star: This Part would be truly metallic, but for its extreme Brittleneſs, which renders it pulverable.

This Experiment illuſtrates all that was above delivered, concerning the Action of dry Menſtruums. 1. Mechanical Trituration renders three Kinds of Matter intimately miſcible. 2. The Fire melts, moves, mixes, and unites them. 3. The Oil of the Tartar, and the Sulphur in the Antimony, taking Flame, fixed Alcali is immediately produced, and directly embraces the Sulphur of the Antimony; whence, by their attractive Force, the Alcali and the Sulphur unite into one Maſs, that eaſily runs in the Fire. 4. At the ſame time there ariſes a repelling Power, between the metallic Part of the Antimony, and the alcaline Salt; which two can never be united in the Fire, but always in Fuſion repel each other, and range themſelves into different Strata, according to their Gravity. 4. The whole heated Maſs increaſes the Strength of the Fire; whence the Motion and Concuſſion becomes the more violent, and throws off a copious Fume with Soot and Sparks, by which thirty-four Ounces of the Powder loſe about ſixteen Ounces in the Operation; the Regulus weighing only about two Ounces and three Quarters.

Let us now conſider the Actions of Solvents, ſo far as they are explicable upon pure mechanical Principles. There is no known Body, whoſe Parts are ſo tenaciouſly combin'd, as not to be ſeparated by a mere mechanical Force alone; and thus even the Diamond may be cut into any Shape, and exquiſitely poliſhed.

Water by continual falling upon Metal or Stones diſſolves them; ſoft Leather long rub'd on the hardeſt Gems, Metals, or Glaſs, gives them a Poliſh; and Wheels of Wood kept conſtantly turning will wear away any Body applied to their Surface. Thus, the ſofteſt Bodies will at length reſolve the moſt rigid into inviſible Particles.

The leaſt and ultimate Particles of any Menſtruum, to us inviſible, may poſſibly be hard, and almoſt unchangeable, tho' in any ſenſible Bulk they appear ever ſo ſoft to our Senſes. Thus, the component Particles of Fire exceed all others in Hardneſs, Smalneſs, Mobility, and Immutability. None have obſerved any Change in an ultimate Particle of true Air; tho' the Air by its Force produces many Changes upon other Bodies. Water and Earth conſiſt of ſuch hard Parts, as not to be changed by Weight, Concuſſion, or Preſſure. So Alcohol receives no Change in its Particles, after ever ſo many Digeſtions, Diſtillations, and Commixtures.

But in every mere mechanical Diſſolution there occurs this Difficulty, that the Particles of the Menſtruum, applied to the Surface of the Solvend, eaſily recoil, ſo as not to act powerfully. But we are to conſider, that the Weight of both the Bodies, and alſo that of the Atmoſphere, may have a great Effect. Whence it is certain, that Menſtruums, which act ſimply by a bare mechanical Power, diſſolve but weakly, unleſs ſome other Power be added: On the other hand, we know, that a ſtrong external Compreſſure of a Fluid to a Solid greatly increaſes the diſſolving Power, *cæteris paribus*. Thus, Bones are little changed by long boiling with Water in an open Veſſel; but ſoon grow ſoft, and diſſolve, in *Papin's* Digeſtor; whence the Parts of the Water are ſtrongly compreſſed, and driven or ground againſt the Subject. Thus, the firſt mechanical Manner of acting appears to be by the Attrition of one Body upon the external Surface of the other.

But when a Solvent alſo diſſolves the inner Subſtance by Attrition, its Particles ſeem to inſinuate themſelves into the Pores of the Solvend, and thus to act upon the internal Surface in the ſame manner, as we have explained of the external Surface. So that here the principal Difficulty is to underſtand, by what means the Solvent enters the Pores of the Solvend.

The firſt Condition requiſite to this Solution, is a proportional Magnitude between the ſmalleſt Pores of the Solvend, and the Particles of the Solvent. No Diſſolution enſues, when the

Parts of the Menſtruum form Concretions, incapable of entering the Pores of the Solvend; but, if theſe Concretions are diſſolved by Water into finer Particles, they may enter the Pores. Thus, put an Ounce of highly rectified Oil of Vitriol into a Glaſs Body; place the Glaſs in Water ſet over the Fire to boil; then put into the Oil of Vitriol five Drams of clean Iron Filings, and ſhake the Glaſs; upon which a great Rarefaction, without Fume or Ebullition, will inſtantly ariſe; the Matter in the mean time remaining ſwelled, but undiſſolved, and of a grey Colour. To another Ounce of Oil of Vitriol, heated in the ſame manner, pour three Ounces of boiling Water; throw into this diluted Oil of Vitriol, five Drams of Iron Filings; upon which a violent Ebullition, Effervescence, and Fume, will ariſe, with a Garlick-ſmell; and the whole Body of the Iron be preſently diſſolved into a green Liquor.

Farther; we ſhould conſider the Figure of the Particles of the Solvent; for mechanical Actions greatly depend upon the Figure of the acting Body. Thus any Body whatever, by the Variation of its Figure only, may acquire a Power for performing many things which it could not perform before: For inſtance, an Ounce of Steel may be formed into a Sphere, a Cube, a Knife, a File, a Saw, *&c.* all which anſwer different Purpoſes, on account of their Figure. In like manner, the ſame Body may act differently as a Solvent, according to the Figure of its Parts, provided the Pores of the Solvend are able to receive them. Hence it may happen, that the reciprocal Power between a Solvent, and a Solvend, ſhall be ſometimes aboliſhed, or perfectly changed, when the Figure of the Surface of either, or both, is changed. This muſt be the Caſe, unleſs we imagine the diſſolving Particles of Bodies to be immutable; which, however, is not probable, becauſe the ultimate Particles of Bodies ſeem not to be the ſame with their diſſolving Particles; and it muſt be allowed, that, in many Inſtances, the diſſolving Particles themſelves ſeem to be changed. But that an efficacious Fitneſs for Action may ariſe in Bodies on account of their Figure, has been elegantly illuſtrated by Mr. *Boyle*, from the Example of a Lock, and its Key. That extraordinary Effects may be aſcribed to the Form of a Body, we ſee in a Bell; which being ſtruck by the Clapper, all the circular Sections of the Bell are changed into innumerable Ellipſes, with a quick reciprocal Motion; thus occaſioning Undulations in the Air, to a great Diſtance, propagating tremulous Motions, Shudderings, and Sounds; hence producing Changes in the Bodies of Animals, Vegetables, and Foſſils; all which depend upon the bare Configuration of the Bell.

The following Experiment is ſuppoſed of that kind, wherein the Figure of the Solvent is changed. To an Ounce of well rectified Oil of Vitriol, add, drop by drop, ſix Ounces of pure Alcohol, made without Alcali; and ſhake the containing Veſſel every time; digeſt the Mixture for a conſiderable time, in a tall well-clos'd Glaſs; then carefully diſtil with Degrees of Fire, till the Matter begins to grow black; upon which change the Receiver, and continue a gentle Fire: Thus a ſulphureous ſuffocating Phlegm will come over, and, at the ſame time, a dulcified, volatile, ſweet-ſmelling Oil of Vitriol, about ſix Drams in Weight, to be kept in a ſtopt Glaſs. The Liquor, thus obtained, produces very different Effects upon Iron, from thoſe wrought upon it by common Oil of Vitriol. This Change may be aſcribed to the Combination of the Alcohol, to Diſtillation, or to both.

A third Cauſe of merely mechanical Solutions ariſes from conſidering, that the leaſt Corpuſcles of a Menſtruum, having the requiſite Inflexibility, may inſinuate themſelves partially into the Pores of the Solvend, which will be filled with Points ſticking out like Briſtles. When, therefore, the Particles of ſuch a Menſtruum are put in Motion, they will ſtrike with a different Direction on all Sides upon the ſticking Particles, which will therefore act as Wedges, to ſhake and ſplit the Solvend. This is the more probable, if we reflect, that, in ſuch Solutions, the uniformly ſmooth Surface of the Solvend is rendered rough and unequal. In mechanical Solutions this appears to be the principal Cauſe.

Laſtly, the fourth Cauſe of mechanical Solution is Fire, which principally ſhakes, agitates, applies, and re-applies, the Particles of every Solvent, having the three preceding Cauſes, which, without Fire, could act no more than a Wedge not driven by an external Force. Fire alſo excites a Motion, Concuſſion, and Attrition, in the Air here preſſed upon, and applied by the Weight of the Atmoſphere againſt the Surface of the Menſtruum. In every Solution, therefore, all theſe mechanical Powers may cooperate; but theſe, alone without the Intervention of other Cauſes, cannot perform the whole Buſineſs. We ſhall therefore proceed to conſider thoſe Solvents, which act by a particular Virtue, and not by any general Property of Body; which are ſo numerous, that we are obliged to reduce them into Claſſes, under general Titles.

Of Aqueous Menstruums.

The firſt Claſs of fluid Menſtruums we make to conſiſt of Water, and aqueous Liquors. But Water, in the Form of Ice, is a Solid, which diſſolves into a Liquor, upon being mixed with dry or fluid Salts, of the fixed and volatile alcaline Kind, with fixed or volatile acid Salts, compound Salts, and the fermented Spirits of Vegetables; and this even in the higheſt Degree of Cold. As a fluid Menſtruum, it begins to act in the next Degree below that of Freezing, or in an Heat of thirty-two Degrees by *Fahrenheit's* Thermometer. The Heat of Water unconfined may in our Climate be increaſed by Boiling from thirty-two Degrees to two hundred and fourteen; but, as it heats the more, by a greater Weight of the Atmoſphere, its Heat may be prodigiouſly increaſed in the Bowels of the Earth; ſo as at great Depths to have, perhaps, an higher diſſolving Power upon many Bodies, than any other known Menſtruum.

In many Solutions, where Water is the Menſtruum, the diſſolving Power increaſes and diminiſhes with the Degrees of Heat. Thus, Water of thirty-three degrees hot diſſolves a certain Proportion of Sea-ſalt, which prevents the Water from turning to Ice, by the ſame Degree of Cold, which would freeze cold Water; and this probably happens by the Interpoſition of the Salt, by which the Surfaces of the Particles of the Water are prevented from coming into mutual Contact. But, when the Cold is increaſed far above the Degree which freezes pure Water, then the ſalt Water begins to contract, and the Salt to collect at the Bottom of the Veſſel in little Cryſtals; and as the Cold gradually increaſes, this Water gradually depoſites more Salt, till at length the Water, nearly deprived of all its Salt, turns to Ice. During the whole Increaſe of the Cold, more and more Salt is continually ſeparated from the Water; and when the Ice is thaw'd, all the depoſited Salt will again be taken up by the Water. On the other hand, if Water, thirty-three Degrees hot, has diſſolved as much Salt as it could in that Degree, and be afterwards gradually heated further, to the Degree of Boiling; and, upon the Increaſe of every Degree, a little more Salt be added; this Salt will be diſſolved every time, till the Liquor boils, after which it will diſſolve no more, though boiled for a long time.

Hence we may draw the following Concluſions: 1. That the Parts of the Salt and Water are not here changed, but ſo conjoined, that the Water now touches the Parts of the Salt, as the Particles of the Salt or Water before touched one another. This Species of Solution is a mere Permixtion. 2. That the Increaſe of Heat increaſes the Power of Permixture, ſo long as the Water can receive an higher Degree of Heat. 3. That aqueous Menſtruums, ſaturated with Salt, grow turbid in the Cold, and depoſite ſaline Cryſtals; but, when heated, grow tranſparent again, and diſſolve the Salt they had depoſited. 4. Boiling Water, ſaturated with Salt, is heavier than Water; whence Brine, in a boiling State, proves hotter by the Thermometer, than pure boiling Water, and requires a greater Heat to boil. 5. The ſolvent Power of Water does not depend upon the Water alone, but requires the Aſſiſtance of Fire to render the Solution perfect. 6. Theſe Diſcoveries, applied to the animal Juices, eſpecially of Mankind, have an extraordinary Uſe, as Water is the principal and moſt copious of all the Liquors contained in the healthy human Body; ſo that in this the other Principles of all the animal Fluids are diſſolved, mix'd, combin'd, and kept fluid. As this Water, therefore, is ſo liable to change from Heat and Cold, it may wonderfully change the Juices. Thus, how greatly is Blood, drawn out of the Veins, changed by Cold from what it was in the Body! And the Urine of an healthy Perſon, in a cold Seaſon, ſoon depoſites a groſs Sediment; which may again be taken up, by warming the containing Veſſel. From the Premiſes one might be tempted to ſay, that the ſolvent Power of Water almoſt always increaſes in proportion to the Heat applied to the Degree of boiling.

But it is dangerous to pleaſe the Mind with general Truths in Phyſics, or to extend our Conſequences beyond Experiments: For in the preſent Caſe there are numerous Experiments, ſhewing that the ſolvent Power of Water decreaſes, as the Degrees of Heat increaſe. Thus Balls formed of Flour, mixed with Water, reſolve in cold or warm Water, but harden in boiling Water. So the White of Eggs mixes intimately with warm Water, but coagulates by boiling; and this Hardening begins with a certain Degree of Heat, and increaſes as the Fire ſtrengthens; though, till this certain Degree be arrived at, the increaſing Heat ſerves to dilute the Subject the better. Underſtand the ſame of Blood.

Hence we ſhould range into Claſſes thoſe Bodies which are always diſſolved by Water, in all the Degrees of Heat. 1. All the known neutral Salts. 2. All the known, pure, volatile, alcaline Salts, obtained from Animals or Vegetables by Putrefaction, or Diſtillation. 3. All the fixed alcaline Salts obtained from Vegetables by Calcination. 4. All Kinds of Acids naturally found in Vegetables, and in all the acid Salts; all Kinds of native, foſſil, acid Salts, with all the vegetable acid Juices, which afford a Spirit or Vinegar by Fermentation; the Acids obtained from Woods by Diſtillation, diſtilled Vinegar, Oil of Sulphur by the Bell, Oil of Vitriol, Spirit of Alum, Spirit of Nitre, Spirit of Sea-ſalt, *&c.* 5. Artificial compound Salts, by the Combination of Acids and Alcalies, ſo as to render them neutral; all which eaſily diſſolve in Water; but Tartar of Vitriol with the greateſt Difficulty. 6. Salts of the Borax kind, which are difficult

difficult to diſſolve. 7. The native Salts of Plants, which are artificially procured, which eaſily diſſolve, and run ſpontaneouſly in the Air. 8. The vegetable Salts, called Tartar, will not diſſolve in Wine, and require twenty times their own Quantity of Water to diſſolve them by boiling. It is difficult to obtain pure Acids in a dry Form, and not without the higheſt Degree of Cold; but fixed Alcali, taken in a melted State from the Fire, preſently attracts the Moiſture of the Air. Hence it is plain, that theſe Salts have a latent Power of attracting Moiſture, and, conſequently, that Water exerts two diſtinct Actions, in diſſolving theſe Salts, the one attractive, and the other ſolutive; both which together conſtitute the Power of aqueous Menſtruums. We muſt alſo, obſerve, that there are ſome Salts highly attractive of Water, which, upon their Combination, turn into a third Subſtance not eaſily diſſolvable in Water. Thus, Oil of Vitriol attracts Water ſtrongly; and fixed Alcali, with Difficulty, lets go the Water it had attracted; but, if the Oil of Vitriol, and fixed Alcali, be mixed in ſuch a Proportion as to form a neutral Salt, this Salt will not eaſily diſſolve in Water. But, when Water is ſaturated with one Salt, it will ſtill diſſolve another, without increaſing the Degree of Heat: Thus, a ſaturated Solution of Nitre will diſſolve a conſiderable Proportion of Sea-ſalt; and the ſaturated Solution of theſe two will diſſolve a conſiderable Proportion of Sal Ammoniac.

Water, as a Menſtruum, diſſolves all thoſe Bodies which are called ſaline, and contain ſome of the above-mentioned Salts, as a principal Part in their Compoſition. Such are, 1. The native Soaps of Vegetables; as all the ripe Juices of Summer Fruits, being a Mixture of Water, Oil, Salt, and Spirit. 2. Certain concreted Juices perfected in a particular Part of the Plant, as the Pulp of Caſſia, Manna, Sugar, Gums, *&c.* which are Soaps containing a copious Oil, mixed with Salt. 3. The more fluid Juices of Vegetables, circulating thro' the Veſſels, and whole Structure, of the Plant; as the Liquors afforded by the Vine, the Walnut, and the Birch-tree, tapped in the Spring; which are all vegetable Soaps, diluted in a large Proportion of Water. 4. All the known animal Juices, except Fat, though none more eaſily than perfect Bile. 5. All the Soaps made of expreſſed vegetable Oils, and fixed vegetable Alcali, mixed, by means of boiling Water, with the fiery Part of Quick-lime, and brought, by boiling, into a hard Maſs. To theſe may be added all the Soaps prepared from diſtilled vegetable Oils, united with the ſharpeſt, drieſt, fiery Alcali, heated and ſtrengthened by Quick-lime, and thus prepared to receive the Oil by pouring it thereon, and expoſing the Whole to the open Air at ſome Depth under Ground. To theſe we add, thoſe Soaps obtained by mixing pure diſtilled Oils with a pure volatile alcaline Salt, without the Interpoſition of any foreign Water, but by a ſlow, careful, repeated Sublimation; whence admirable Remedies are procurable. But the moſt ſubtle Soaps are obtained by uniting the pureſt Alcohol with the pureſt volatile alcaline Salt, which produce a Subſtance in the Form of Snow. We may ſtill add another Soap, prepared by perfectly uniting Salt of Tartar with Alcohol, by a ſecret Treatment. It is here remarkable, that though Oils alone will not unite with Water; yet, when joined with Salts, they preſently diſſolve therein, whilſt the Salts alone are attractive both of Water and Oil. 6. Vitriols, eſpecially the acid Kind, alſo, diſſolve in Water, whilſt they retain their true tranſparent Form; but when the Water is exhaled by a gentle Heat, ſo as to render their Cryſtals opake, the metallic Parts are thereby leſs diſpoſed to diſſolve in Water; and, if highly dried, they will not diſſolve at all: Whence Water diſſolves Metals, only on account of the Acid adhering to the Surfaces of their Particles; and, therefore, quits the Metals ſo diſſolved, as ſoon as the Acid is removed. Thus, Metals diſſolved in Acids, then largely diluted with Water, become potable, ſo as to be received into the Body, mix with the Fluids, act upon the Solids, and produce conſiderable Effects; though this Power laſts no longer, than while they remain diſſolved; and, their Solution depending chiefly on the Acid, if that be remov'd, the Metal remains no longer potable, but turns to a Calx.

What is here ſaid of the Action of an Acid, with reſpect to Water, holds true, alſo, of thoſe Metals which are diſſolved by alcaline Salts. Thus, Copper diſſolved in ſtrong Spirit of Sal Ammoniac, ſo as to afford a fine blue Tincture, if this Tincture be deprived of its Salt, it is thereby greatly changed, and lets fall a dusky Powder. The ſame holds, alſo, of metallic Solutions made with compound Salts. Thus, Sal Ammoniac, or Sea-ſalt, may diſſolve Metals in a certain manner, ſo that they may be diluted with Water, and thus produce great Effects upon the Body; while their Action principally depends upon their being diſſolvable in Water. And yet this does not hold of all Metals; for though Butter of Antimony be highly acid; yet, inſtead of diluting with Water, it immediately, upon the Affuſion thereof, lets fall the Antimony in a white Calx; which, being fuſed by a ſtrong Fire, affords a fine Regulus of Antimony, incapable of being diſſolved in Water.

If pure earthy Bodies be firſt diſſolved in Acids, they may afterwards be perfectly diluted with Water, ſo as to eſcape the Cognizance of the Senſes, and leave the whole Body of the Liquor limpid. Hence we ſee how unſafe it is to infer, that a Liquor is free from Earth, becauſe it appears pellucid.

But Alcalies, when intimately united with Earth, as in Glaſs, cannot be afterwards diluted with Water; ſo great is the Difference between the Solution of the Earth by one kind of Salt and another. The ſubtile, volatile, alcaline Salts of Animals, intimately united with Earth, form a Maſs undiſſolvable in boiling Water; for the Stones generated in Animals I take to conſiſt of theſe Principles and Oil; and, in whatever Part they are generated, they have a Power of attracting to themſelves a ſimiliar Matter, from thoſe animal Juices which approach neareſt to Putrefaction, as the Bile and Urine: Theſe Juices containing Salts nearly alcaline, theſe Salts unite to themſelves the fine Earth, worn off from the Parts of the Body; thus laying the Foundation of new Stones, or enlarging the old, and producing terrible Diſorders.

Hence we may, perhaps, deduce the Reaſon, why the Author of Nature has made nearly all the Aliments of Animals incline to Acidity; for the acid Salts, on this account, predominating in the Stomach, eaſier diſpoſe ſuch Aliments to diſſolve, whoſe firmer Parts cohere principally by means of Earth; whence they would otherwiſe much more difficultly be diſſolved into fluid Chyle. But when afterwards a Matter is to be formed of this Chyle, fit to bind the Solids together, the Tendency to Acidity, which was neceſſary in the Chyle, is changed, and an alcaline Tendency of the Salts introduced; which, by binding the earthy Particles, forms a Structure indiſſoluble in Water. At leaſt we know, that Bones remain ſolid, if ſteeped in Alcalies; but grow ſoft and flexible, if detained in Acids. And, doubtleſs, when the Power of changing Aceſcents into Alcalies is wanting in the Body, the Bones, Cartilages, Teeth, and Ligaments, become ſoft, weak, looſe, and flexible, as we ſee in the Rickets. Hence Acids uſed in the way of Dentifrice, with Deſign to render the Teeth white and gloſſy, may ſoon render the Perſon melancholy, nervous, or paralytic. But if fixed Alcalies, or alcaline Solutions, well diluted with Water, be uſed for this Purpoſe, the earthy Part of the Teeth will remain unhurt.

Sulphurs do not of themſelves diſſolve in Water; but, when intimately mix'd with Alcalies, they readily unite with it; whence we may eaſily underſtand the medicinal Virtues of ſulphureous mineral Waters. Volatile alcaline Salts will, alſo, diſſolve Sulphurs, and render them miſcible with Water; ſo that we ſee, Water, by the Aſſiſtance of Alcalies, becomes an excellent Solvent of Sulphurs. And as this is applicable even to the Sulphurs concealed in Metals and Semimetals, hence we have a way of producing to View ſuch Sulphurs as before lay conceal'd; by which means ſlight Productions have been ſold at high Prices, as great Secrets, and even Princes themſelves have been impoſed upon. I have ſeen a Liquor prepared from Antimony, ſold under the ſpecious Title of a Panacea; a few Drops of which, taken in Wine, were ſaid to cure Diſeaſes ſpeedily, without any ſenſible Effect; and indeed they did Service in ſome Diſtempers. Upon Examination, I eaſily diſcovered this Liquor was prepared by taking levigated Antimony, and putting twice its Quantity of Oil of Tartar *per Deliquium* to it, and digeſting them in a Sand-heat together; whereby the liquid Alcali, diſſolving the Sulphur of the Antimony, thus extracts a red Tincture of a fiery Taſte, and an alcaline, heating, aperitive, diuretic, and diaphoretic Virtue. But as good a Medicine may preſently be procured, by boiling common Sulphur in an alcaline Lixivium; as the Sulphur of Antimony does not differ from common Brimſtone, and as the Alcali does not diſſolve the metallic Part of the Antimony. In like manner, by digeſting powdered Antimony with the alcaline Spirit of Sal Ammoniac, a golden ſulphureous Tincture may be obtained; and as good a one from common Sulphur, as Mr. *Boyle* has ſhewn.

Though Bodies of a glutinous, viſcous, or hard Subſtance remain untouched by Water, yet they may be render'd perfectly ſoluble in it, by firſt uniting them intimately with fixed or volatile Alcalies. Thus, we find putrefied Urine, Salt of Tartar, Soap, Gall, Honey, Sugar, Yolks of Eggs, and the like, being mixed with theſe tenacious Bodies, render them commodiouſly diſſolvable in Water, which hence generally acquires a deterging Power. Oils, Balſams, Roſins, Gums, and the like, by this Treatment, become miſcible with Water.

Having thus explained the diſſolving Power of Water, I ſhall only add a few remarkable Particulars: 1. Hail collected in the Summer-time, after Thunder, conſequent upon a Series of hot Weather, being kept in clean Veſſels, has a different Effect from all other Water; perhaps on account of being purer, carried higher into the Atmoſphere, and froze there before it fell lower. 2. Next to this in Purity, we reckon Snow-water, collected in a cold Winter, in a ſtill Air, and an high ſandy deſert Place, and from the upper Part of a deep Drift. 3. Dew, being a Mixture of aqueous, ſpirituous, ſaline, and unctuous Vapours, and of all ſorts of dry Exhalations, differs greatly from all other aqueous Menſtruums; ſo that the Effects of Dew can ſcarce be determined, or brought under one Claſs: Whence it is no Wonder, that many have thought the Matter of the univerſal Salt was contained therein; and that a ſaline Subſtance, which they call the congealed Spirit of the Univerſe, might be extracted

extracted from it. But it is time to proceed to the other kind of Menſtruums; only firſt obſerving, that Water, floating in the Air, may often act as a Menſtruum, and the Action be falſly aſcribed to the Power of the Air.

Of Oils, and Oily Menstruums.

Oil, conſidered as a Menſtruum, is a fluid Juice, (or capable of being rendered fluid, with a ſmall Degree of Heat) unctuous, burning in the Fire, and immiſcible with Water. Alcohol is excluded from the Claſs of Oils, by its being eaſily miſcible with Water, while in other Properties it has a perfect Reſemblance to them. All Oils are either native, or obtained by Art. Native Oils are every-where found in Foſſils, Vegetables and Animals; and theſe Oils are changed by Art, upon boiling unctuous Bodies in Water, ſo as to melt the Fat, and extract it from its Lodgment: Whence by its Lightneſs it floats upon the Surface of the Water, and may be skimmed off without much changing its Nature. It may, alſo, be obtained by Expreſſion; when, if too much Heat be not uſed in the preſſing, the Oil is but little changed. Sometimes a cloſe Fire is uſed for ſcorching the Subject, and melting away the Oil; as in the obtaining Pitch and Tar from Fir. Laſtly, Oils are obtained by Diſtillation either *per Aſcenſum*, or *per Deſcenſum*.

Scarce any of the diſtilled Oils loſe their Fluidity in the greateſt natural Cold; whereas moſt of the Oils by Expreſſion congeal with ſtrong Cold, as we ſee in Olive-oil and Rape-oil; while others, as Linſeed-oil, do not freeze in the keeneſt Froſt. I have never been able to diſcover, whereon this Difference in Oils depends. Their diſſolving Power is not exerted, unleſs they be in a fluid Form; and, as ſome of them freeze ſooner than Water, their diſſolving Power is leſs durable, with reſpect to Cold, than that of Water; but thoſe which remain fluid in all the Degrees of natural Cold, conſtantly retain their diſſolving Power: Whence it appears not eaſy to fix a common Point of Heat in Nature, at which the diſſolving Power of Oils begins, though it may be nearly limited in any one Species of Oil, after it has been once accurately obſerved. And here it may appear ſurpriſing, that though Linſeed-oil remains fluid in the ſevereſt Froſt, yet, upon Examination, it is then no hotter than Ice, or any other congealed Oil.

When Oil is gradually heated, it does not boil, like Water, with two hundred and twelve Degrees of Heat, but grows conſtantly hotter, without boiling, till the Heat riſes to ſix hundred Degrees: Whence we ſee, why boiling Oil is ſo much hotter, and more ſcalding, than boiling Water. But the higheſt and moſt ſubtile Oils boil the ſooneſt; whereas others receive more Fire before they will boil. Hence we ſee the Difficulty there is to determine the diſſolving Power of Oil; becauſe in Linſeed-oil, for Inſtance, this Power begins with the greateſt Degree of natural Cold, whence it increaſes to ſix hundred Degrees, and in each Degree of Increaſe conſtantly acquires a new Power of acting, whether it be upon the ſame Body in different Degrees of Heat, or upon different Bodies in the ſame or different Degrees: In both which reſpects the Scale is infinite.

It may be ſhewn by Experiments, that Alcohol, though it be an attenuated inflammable Oil, boils much ſooner than Water; and that Oil of Turpentine, tho' much lighter than Water, and conſiderably thin, and inflammable, does not boil when the Water does; any more than Oil-olive. Whence neither Inflammability, nor Levity, nor Volatility, is here the Cauſe; ſince Oil of Turpentine is ſo volatile, as to riſe with boiling Water on Diſtillation.

To diſcover the Degree of Heat in Oil of Turpentine before it boil, put ſome Linſeed-oil into a Copper Veſſel, and ſet it upon a naked Fire; place a Mercurial Thermometer therein, along with the Phial of Oil of Turpentine; which will be found to boil much ſooner than the Linſeed-oil; while the Thermometer ſhews the Degree of Heat. But as theſe Oils, by boiling, throw off their more volatile Parts, and leave the Remainder thicker, they now require more Heat, every Moment, to keep them boiling. Whence Phyſicians need not wonder, that theſe Oils, rendered thick by boiling, heat the Body ſo violently.

As Oil will receive almoſt thrice as much Fire as Water, we may hence eaſily underſtand, that the diſſolving Power of Oil, which Power in Menſtruums depends upon Fire, muſt be much greater in Oil than in Water: For, ſince many Oils remain fluid in the firſt Degree of the Thermometer, whereas Water freezes at about the thirty-third; and ſince the Scale of Heat in Water, while it remains fluid, is but 180 Degrees (its freezing Point being 33, and its boiling Heat 213); and ſince the Scale of Heat in Linſeed-oil is at leaſt up to 600; it follows, that the Power of Heat in this Oil is, to the Power of Heat in Water, as ten to three. And conſidering that many Oils, inſpiſſated by Boiling, may thus receive much more Fire, hence the Scale of the Power of Heat may be ſtill farther extended in ſuch Oils.

The Bodies of Animals, and of Vegetables, are entirely kept from diſſipating, fermenting, putrefying, and changing, by being carefully plunged in Oil; and this for ever ſo long a time, even in the hotteſt Climates. When Bodies are covered with Oil, Inſects alſo are prevented from preying upon and deſtroying them. And after theſe Bodies have remain'd cover'd with Oil, for a proper Seaſon, ſo as to be thoroughly impregnated therewith, they ſeem to become almoſt incorruptible; as appears from Carcaſes treated in this Manner; upon which Diſcovery the Art of Embalming principally depends.

If Bodies are ſuddenly plunged into boiling Oil, they preſently acquire an hard and almoſt ſtony Coat, of a yellow, red, or black Colour, like Bodies ſcorched by a naked Fire; while the inner Subſtance, being agitated by the great Heat of the boiling Oil, is wonderfully changed, digeſted, and ripened; till at length the Whole is conſolidated, and rendered durable, for great Lengths of Time. But when theſe Bodies abound with aqueous Juices, as in Fleſh or Fiſh dried only on the Surface, theſe Juices, contained within the external Cruſt, being thus more than boiled, become ſurpriſingly ſoft, roſcid, digeſtible, and nutrimental Food, thus treated, may be long preſerved; as all the Principles of Bodies ſo prepared, being intimately united, perfect one another, and turn to a Subſtance, that is well defended from the Action of external Cauſes.

Hence we may draw ſome unexpected Conſequences: 1. The Degrees of Heat, received by Bodies from Fire, are not in proportion to the Denſities of the heated Bodies. 2. Yet in the ſame Bodies, gradually rendered more denſe, more Fire may be communicated in proportion to the Increaſe of their Denſity. 3. The Power of receiving a greater Degree of Heat does not depend upon the Bodies being combuſtible in the Fire. Thus, Alcohol, being brought to boil, does not receive more Fire or Heat, though nothing in Nature is more combuſtible; nor does any known Liquor receive leſs Fire: Whence we ſee, it is in vain to ſeek after general Properties in Chymiſtry; but we are to diſcover the particular Properties of Bodies by particular Experiments. 4. Some Metals may be intimately diſſolved in ſome Oils by boiling; ſo as thence to form a Mixture, not eaſily reſolved into its Principles; and by theſe means many noble Diſcoveries have been made for Mechanical and Medicinal Purpoſes.

Thus, put half an Ounce of red Lead into a long-neck'd Phial, and pour into it an Ounce and an half of Oil-olive, and ſhake them well together; heat the Glaſs carefully; then ſet it over the Fire, ſo as almoſt to touch the Coals, and bring the Oil to boil; upon which the red Lead will diſſolve, and mix and unite into a Maſs therewith, when the Oil has acquired a great Degree of Heat. Thus, a metallic Balſam, or an excellent Cement for Water-works, may be prepared. The ſame Experiment will ſucceed, if made with granulated Lead; the Lead firſt melting at the Bottom, even before the Oil begins to boil, or fume: Whence we ſee, that Lead is more eaſily melted than Glaſs; and that Oil cannot be made to diſſolve Glaſs, with any Degree of Heat the Oil will receive. Hence we ſee the Reaſon why melted Lead ſcalds leſs than boiling Oil, and may be nimbly handled, if the Skin be firſt rubbed over with dry Chalk. The ſame Experiment, alſo, ſucceeds with Tin, and a Mixture of Tin and Lead; the Solution of which together is quicker performed, than of either alone. Hence again we may draw further Conſequences; as, 1. That Oils receive, and long retain, much Fire, before they boil. 2. That no Fluid in Nature receives more Fire than Oil; for all Lixiviums, and Oil of Vitriol itſelf, boil ſooner, and prove leſs hot upon boiling; even Quickſilver itſelf boils rather ſooner, or nearly about the ſame time. 3. That a great Force of Fire muſt act upon Oils, before they riſe in Vapour. 4. That Oils communicate the ſame Force of Fire they receive, to the Veſſels in which they are boiled: Whence, though Water may be boiled in Veſſels of Tin or Lead, yet Oil cannot. 5. That the ſame Force of Fire received by the Oils is communicated to the Metals contained therein. 6. That we cannot eaſily find a Way of communicating more Fire to Oil, than by boiling it; for if one would endeavour to make Oil collect more Fire, we muſt find a Way of compreſſing the Oil in the containing Veſſel with a greater Weight, than that of the Atmoſphere, whereby Heat might be increaſed in Proportion: Whence it appears, that Oil, compreſſed by the increaſed Weight of the Atmoſphere at great Depths in the Earth, may acquire a moſt violent Heat, if it ſhould there meet with a ſtrong Fire; when, if Water ſhould happen to touch the Oil in this State, it might occaſion moſt terrible Earthquakes; which may poſſibly be one Phyſical Cauſe of Vulcanos. 7. Oils, when they remain fluid, will not permit more Heat to be communicated to the containing Veſſel, than to themſelves; and, therefore, prevent all Veſſels from melting, which will not fuſe with leſs than 600 Degrees of Heat. 8. Hence the Author of Nature has ſet a Limit to Fire; which Limit checks its Power upon the moſt inflammable Matter we know.

In order to explain the diſſolving Power of Oils, it muſt be remembered, every expreſſed, crude, vegetable Oil conſtantly contains Water, as may appear upon boiling expreſſed Oil of Almonds in chymical Glaſſes; whereby an aqueous Vapour is raiſed, and, condenſing in the Neck of the Veſſel, forms viſible

Drops,

Drops, which, falling back upon the boiling Oil, occaſion great Commotion and Crackling, which may in ſome Degree affect the manner of Solution. Hence, after this Water is diſcharg'd by long boiling, the Property of Oil, as a Menſtruum, is changed.

Beſides this Water, Oils contain a certain ſubtile latent Salt, ſuppoſed to be very penetrating, which is generally acid and volatile, as in ſome of them is manifeſt by the Smell. Theſe Salts appear in the Form of acid Spirits, collecting themſelves like Water, and ſeparating from the Oil, ſo as not to be again eaſily mixed therewith; though it is not eaſy to free the Oil perfectly from its acid Spirit, which continues to riſe through the whole Diſtillation, but in the greateſt Quantity at firſt.

Chymiſts, therefore, ſhould carefully diſtinguiſh whether the diſſolving Power of Oils be not owing to the Water and Acid they contain; otherwiſe great Errors might ariſe: For we ſee in Painting, that Colours, diſſolved in Oil which has been boil'd, unite and ſink in better, dry quicker, and remain more beautiful, than when mixed up with crude Oil. Thus, alſo, the particular Power, which the ſofteſt Oils are ſuppoſed to have of diſſolving Metals in a gentle Heat, ſeems principally to proceed from the latent Acid, and not from the oily Part; it having been obſerved, that Oil-olive, when mixed with very fine Filings of Iron, Copper, or Lead, and long digeſted together, a Part of the Metal is thus taken up by the Oil, ſo as to give it a new Colour, and extraordinary Properties. Hence the Power of Oil, as a Solvent, has been extended too far; for this Power does not remain in Oils, after they have been long boiled, and are deprived of their latent Acid. Hence, the Poliſhers of Braſs and Copper have obſerved, that their Work cannot be well preſerved from Ruſt and Tarniſh, by rubbing it over with crude Oil; but much better by beſmearing it with boiled Oil, eſpecially if a little Ceruſs, or black Lead, be added in the boiling, ſo as perfectly to imbibe this Acid. Dr. *Hoffman* has ſhewn by Experiment, that even diſtilled Oils contain an Acid.

Thoſe Oils which are obtained by Diſtillation from alcaline or putrefied, vegetable or animal Subſtances, abound with volatile alcaline Salts; which may be copiouſly ſeparated from them, by a gentle Fire, in a white ſolid Form: Whenever, therefore, we would explain the Properties of Oils, we ſhould carefully ſeparate them from all foreign Salts, and examine them pure; otherwiſe we can never form a right Judgment of their Virtues.

Oils obtained by Diſtillation with or without Water by the Retort, conſtantly leave Earth behind them, upon being rediſtilled to Drineſs in cloſe Veſſels, and gradually become more ſubtile, leſs adheſive, more fluid and tranſparent; and, when rediſtilled fourteen times, or more, they each time become different Oils, and different Menſtruums; ſo as, at length, to become penetrating anodyne Medicines, excellent in many obſtinate Diſtempers. Whence the elder *Helmont* imagined, that the Oil of human Blood, thus diſtilled ſeveral times with Spirit of Salt, till no Fæces were left behind, would prove a diaphoretic Medicine, capable of diſſolving, like a Menſtruum, all preternatural and other mortal Obſtructions and Coagulations in the Body. The excellent Dr. *Hoffman* aſſures us, he has prepared Oils in this manner, and gives an high Commendation of their medicinal Virtue; and another leſs faithful Writer affirms, that the univerſal Remedy may be obtained by means of an Oil prepared in this manner. On this Subject, *Raymond Lully*, and *Iſaac Hollandus*, deſerve to be conſulted.

All kinds of Oils have a certain ſubtile, volatile Subſtance adhering to them, and ſeparable from them, called their preſiding Spirit; which is a moveable odorous high-taſted thing, produc'd by Fire, and the true Cauſe of very great Effects. This Spirit, being innate in Oils, detained and confined in them, communicates thereto a ſingular efficacious Virtue, no-where elſe to be found. This Spirit exhales from many Oils ſpontaneouſly with a gentle Heat; mixes with the Air; and, when it entirely quits them, leaves them inſipid and unactive, ſo as ſcarce to be diſtinguiſhable from one another. Their diſſolving Power ſeems principally to proceed from this Circumſtance, that Oils are diſpoſed to receive much Fire into themſelves, and apply it to other Bodies.

1. Moſt Oils mix with other Oils, though ſome of them not eaſily; as in the Diſtillation of Turpentine and Amber; where the Oils, raiſed by different Degrees of Fire, are different in Weight, Conſiſtence, Colour, and Situation, ſo as not readily to unite with each other. 2. True reſinous Bodies melt and diſſolve in Oils. 3. So do many of the Gums, ſuch as have a Mixture of Roſin. 4. So, likewiſe, do condenſed Oils or Balſams. 5. So do Sulphurs, both the natural and artificial, and both the liquid and ſolid; and this, tho' concealed in other Bodies. Thus, Antimony, finely powdered, or ſublimed into Flowers, being boiled with Oil, ſoon affords a thick red Balſam of Antimony, tho' it proceeds only from the Sulphur of the Antimony, diſſolved by the Oil, which leaves the metallic Part untouched; and the ſame holds, alſo, of the other Semimetals, abounding with Sulphur.

Of Alcohol, or Spirituous Menstruums, properly so called.

Eminent Chymiſts have aſſerted, that Alcohols could not be united with a pure fixed Alcali; and this is no Wonder, as the Effect may be prevented by the leaſt aqueous Moiſture in either the Salt, or the Alcohol: But, if pure Alcohol be applied to perfectly dry Salt of Tartar, a rich Tincture is immediately extracted, and a true Combination made. Hence we cannot be too inquiſitive into the Nature of this Liquor, which, on account of its Excellence, we eſteem the firſt among ſpirituous Menſtruums.

Alcohol is prepared from Vegetables alone, by bare Fermentation, and repeated Diſtillation. It is beſt obtained from Wine, Mead, or Beer; for, though theſe Liquors may quench Fire, yet the Spirit obtained from them by Diſtillation is inflammable; and, when all Water is perfectly ſeparated from this Spirit, we obtain pure and perfect Alcohol. Oil, alſo, is called Alcohol, when it mixes with Water, and is totally inflammable. Animal and vegetable Subſtances, when perfectly putrefied, may have their Oils ſo ſubtilized and volatilized, as to be inflammable in the open Air; and, by repeated Diſtillation, ſuch Oils may be ſo attenuated, as almoſt to mix with Water. When, therefore, the diſſolving Power of theſe Spirits is to be determined, we muſt firſt regard what kind of Spirit it is; for common Brandy contains much Water, a liquid, acid, volatile Salt, a diſagreeable Oil, and Alcohol; rectified Spirit of Wine contains leſs Water, leſs of the nauſeous Oil, a volatile acid Spirit, as before, and mere Alcohol. Perfect Alcohol, prepared without Addition, contains neither Water, acid nor groſs Oil; and, if once gently drawn off from fixed Alcali by Diſtillation, it becomes highly purified; and, as there are theſe Differences in this Spirit, we are carefully to regard them.

1. Perfectly pure Alcohol diſſolves Water, and all aqueous Liquors. 2. Conſequently, Wines of all kinds. 3. It diſſolves all ſpirituous fermenting Acids, as the Tribe of Vinegars. 4. All pure Oils. 5. All true vegetable Roſins. 6. Moſt of the gummy Roſins. 7. Pure volatile alcaline Salts. 8. Perfectly dry and fix'd alcaline Salts. 9. Moſt of the Soaps. 10. Sulphurs firſt opened and diſſolved by Alcalies. But it does not touch compound or native Salts; as Sal Ammoniac, Sea-ſalt, and Nitre; nor pure Earth, pure Sulphur, Mercury, Metals, Semimetals, nor Stones, whether vulgar or precious. See Alcohol.

Of the alcaline and acid spirituous Menstruums.

Moſt Chymiſts, under oily and ſpirituous Menſtruums, have ranged two Kinds, which might rather be termed Saline, or Compound. This happens, becauſe theſe Menſtruums uſually appear in an unctuous Form; and are generally not only volatile, but liquid and ſubtile: Whence ſome Acids, and ſome Alcalies, have been called by the Name of Spirits, on account of their ſubtile, volatile, and unctuous Appearance; though they differ greatly from each other, not only in Kind, or as to Acid and Alcali, but, alſo, acid from acid, and alcaline from alcaline Spirit. We, therefore, firſt divide the ſaline ſpirituous Menſtruums into the Acid and Alcaline Tribes; this Diſtinction being abſolutely neceſſary. Next, we divide the alcaline Spirits from one another; ſome of them being ſimple; and others compound. The ſimpleſt of theſe conſiſt of Water, and an extremely ſubtile, volatile, alcaline Salt, both together appearing in the Form of a thin, pellucid, and ſomewhat unctuous Liquor; as the pure alcaline Spirit of Sal Ammoniac: And to this Claſs belong the numerous alcaline Spirits obtained both from Animals and Vegetables, after being deprived of the Oil, that is ready to adhere thereto; as we daily ſee practis'd by the Chymiſts, who can thus produce them from the hot, antiſcorbutic Plants, putrefied Vegetables, and all animal Subſtances. The more compound Kind uſually conſiſt of Water, the volatile Salt juſt mentioned, and a fetid Oil, into which three Parts they may be ſeparated; and, therefore, are a kind of volatile alcaline Soap, diluted in a Proportion of Water barely ſufficient to diſſolve it. The acid and commonly volatile Liquors are alſo called Spirits, by the Chymiſts, for the Reaſon above aſſigned; but all theſe, when examined, prove to be acid Salts diſſolved in pure Water. Thus, Oil of Vitriol, and *Oleum Sulphuris per Campanam*, ſeveral times diſtilled with boiling Water, become in a great meaſure, volatile. Upon this Conſideration, therefore, I ſhall here drop the Name of Spirits, and for the future call them by the Name of Saline Menſtruums.

Of the simple saline Menstruums.

It is a Saying of the Alchymiſts, That ſuch as do not underſtand Salts, can never arive at the grand Secrets: And no Wonder, as various Salts have great Energy in the diſſolving of Bodies.

I call Salt a Body which diſſolves in Water, and, if not volatile, fuſes in the Fire, having a ſapid Taſte. When a Salt is pure, or either naturally, or artificially, ſeparated from every thing elſe, it conſiſts of Particles too minute, to be diſtinctly and ſeparately viewed, even by the Help of the beſt Glaſſes; ſo that we can pronounce nothing as to the Figure of theſe Particles. And when ſaline Bodies are reſolved into the ultimate Particles, from whence they are formed, they thus ſeem to become perfectly volatile; ſo as, when ſeparated from each other, and from all foreign Subſtances, to fly off into the Air. Therefore, when theſe laſt Particles

ticles of pure Salt concrete into ſenſible Cluſters, they always are held together by ſome intermediate Particles; particularly thoſe of Water and Earth, which here ſerve for a Cement, and make the Aſſociation permanent. Hence we ſee, that, as the original Particles of Salt can ſcarce ever be confined in Veſſels, ſo we can ſay little of their chymical Actions; but, when they appear in a ſtable Form, we may have ſome Certainty of them in this compound State.

We muſt, next, conſider the principal Differences of Salt, ariſing chiefly from the different ſaline Principles, of which they are compoſed: And though theſe Principles are ſeparately known, yet, doubtleſs, they have a certain peculiar Property reſpectively. A ſecond Difference ariſes from the other Principle, which, uniting with the ſaline one, conſtitutes the Salt. We, therefore, divide all Kinds of Salts, into ſuch as differ, either in reſpect of their ſaline Principle, their connecting Principle, or both. And, with regard to the firſt Diviſion, I diſtinguiſh Salts, and ſaline Menſtruums, into the following Claſſes. 1. Fixed Alcalies. 2. Volatile Alcalies. 3. Native vegetable Acids. 4. Fermenting vegetable Acids. 5. Fermented vegetable Acids. 6. Vegetable Acids obtained upon Burning. 7. Vegetable Acids procured by Diſtillation. 8. Native foſſile Acids. 9. Foſſile Acids procured by Burning. 10. Foſſile Acids procured by Diſtillation. 11. Neutral Salts; as Borax, Nitre, Foſſile Salt, Sal-gem, Sea-ſalt, and Sal Ammoniac. 12. Other Salts compoſed of theſe ſimple ones. Each of which Salts ſhould be examined, in order to find out their peculiar Properties, whereby we may come to a true Knowledge of them, ſo far as regards the diſſolving of Bodies.

Of fixed Alcali, as a Menstruum.

Having already given *Boerhaave*'s Account of the Phyſical Marks, the Nature, and Properties of Alcalies, under the Article Alcali, that illuſtrious Author, in conſidering fixed Alcali as a Menſtruum, proceeds to make the following Queries, as Particulars deſerving to be farther inquired into.

1. Whether all fixed Alcalies are generated by Fire alone? 2. Whether all volatile Alcalies are produced by a putrefactive Heat? 3. Can any fixed, or volatile Alcalies long retain their Nature in the open Air? 4. Whether their Nature will not be altered, or the Salts changed, ſo as to become neutral or ſaponaceous, by thus meeting with acid or oily Particles? 5. Will not the ſame happen in the Bodies of Plants and Animals? 6. Is not a large Quantity of compound Salts thus daily produced; eſpecially of ſuch Salts, whoſe component Acid is every-where common, and ready at hand? 7. As natural Acids, or thoſe produced by fermenting Vegetables, abound every-where, is there not, in Nature, a very common Salt, of the ſame Kind with regenerated Tartar, or the Spirit of *Mindererus*, made with a volatile alcaline Salt, and diſtil'd Vinegar, being a mild, penetrating, moveable Salt, of no great Taſte? But there is nothing of this Kind more deſerving to be known, than the Origin and Nature of the moſt common uſeful Salts, as Sea-ſalt, Sal-gem, and Nitre; which, whether they are made by a Combination of their own Acids, ſuch as we find by chymical Diſtillations, and a fixed vegetable Alcali, deſerves to be inquired; or whether, being produced ſimple by Nature, they are not rather changed, than ſeparated, by Fire. Many eminent Chymiſts maintain, that all theſe Salts are naturally produced from the Mixture of Acids with Alcalies. But it is highly probable, that Salt was contained in the Sea, before the acid Spirit of Salt was preſent therein, and before any fixed Alcali was made from Vegetables. On the other hand, no known Experiment hath hitherto produced the leaſt fixed Alcali from Sea-ſalt. Nor do I learn, that the acid Spirit of Sea-ſalt was ever hitherto found naturally, but always as produced by Art, or by Fire; and this rather by a Change, than a Separation, of Parts. It is true, theſe Acids, properly mixed with Alcalies, regenerate, in ſome ſort, the Salts which afforded the Acids, though always with ſome Difference between the native and artificial; which ſhews we cannot be ſo certain as to the Compoſition and Reſolution of theſe Salts, as ſome Authors pretend. We may hence learn what Caution is required in uſing Alcalies as Solvents, ſince a Change in any Circumſtance, or a ſlight Addition of a foreign Subſtance, may eaſily change an Alcali, and produce a Salt that ſhall not operate as a pure Alcali, but according to the Nature which is thus introduced.

If, to an hundred Weight of clean Sand, or Flint, reduced to a Calx, and ground to fine Powder, an hundred and fifteen Pounds of pure fixed Alcali be added, and thoroughly mixed therewith, and the Mixture be ſet in a Glaſs-houſe Furnace, with a moderate Fire, for an Hour, and kept ſtirring all the while, the Fire being afterwards increaſed for five Hours, while the Stirring is all along continued, a Maſs will thus be obtained, rightly diſpoſed for making the fineſt Glaſs. If this Maſs be put into dry Casks, and kept in a warm dry Place, for four or five Months, the Ingredients will thus be more intimately united. If now the Matter be put into Glaſs-houſe Pots, ſet in the hotteſt Part of the Furnace, it will thus melt into a kind of viſcous, thick, and apparently unctuous Fluid, caſting up a Froth to the Surface, as it boils; which Froth, riſing more and more, often amounts to a fourth Part of the whole Maſs. This frothy Matter being carefully ſcummed off, as it riſes, till no more appears, and the remaining purify'd Matter being kept in conſtant Fuſion for two or three Days, the Matter, thus remaining behind in the Pot, is what the Glaſs-men call their Metal; and, when cold, makes the beſt Sort of Glaſs. Now, unleſs this was proved by daily Experience, who would have ſuſpected, that fixed Alcali, which runs into a Liquor in a dry Air, ſhould thus, with Sand, melt into a Matter ſo like a Metal, except in Malleability?

This affords us an Inſtance how ſuch Menſtruums, as have a ſtrong diſſolving Power, may permanently concrete with the Bodies they perfectly diſſolve; the Concretion being the ſtronger, as the Solution was more perfect. Hence we learn, that Alcalies, when they diſſolve perfectly, may be ſo changed in the Action, as totally to loſe their ſaline Nature; for though Glaſs contains near a third Part of Alcali in its Subſtance, yet it retains not the leaſt Mark of an Alcali. It is extraordinary, that the Glaſs thus made melts into a tenacious, tough, ductile Maſs, ſo as to be formed into Veſſels of any Figure, and ſticking ſo ſtrongly to Iron, as to be thereby taken out of the Melting-pot. Another remarkable Particular is, that two opake Bodies ſhould thus concrete into a pellucid Solid, not to be diſſolved by any known Menſtruum; though itſelf, in part, conſiſts of the moſt ſoluble of all Salts.

As the Vegetables which afford fixed Alcali by burning, contain an Acid, which adheres more or leſs to the Alcali, the alcaline Salt muſt conſequently be of a different Nature, than if no Acid adhered to it: Underſtand the ſame of Oil and Earth adhering to the Salt. On theſe Accounts there will be a great Difference between fixed Alcalies, as they contain more or leſs of theſe Principles: Whence it is no Wonder, that certain Experiments with Alcali, as related by ſome Authors, do not ſucceed, when try'd with different Alcalies.

Alcalies, alſo, may receive great Alterations from being added to other Subſtances: Thus, being mixed with Quick-lime, a Salt may be obtained ſo ſtrong and corroſive, as to diſſolve and fuſe almoſt all the Solids of Animals and Vegetables by boiling: Whence we ſee a ſtrong alcaline Solvent may be prepared from the ſame Ingredients which make Glaſs. Again, fixed Alcali, rendered ſtronger by Quick-lime, and afterwards dried at the Fire, eaſily melts like Wax; and thus, by an extraordinary Virtue, lays hold of, and diſſolves, Bodies put into it. This, perhaps, is the incerated Salt of ſome antient Chymiſts.

There are, however, ſome Bodies, upon which fixed Alcali has no Effect, as a Menſtruum: Thus, it does not affect pure Quickſilver; and hence it exerts no diſſolving Power upon thoſe Metals, which, according to the Adepts, conſiſt of a pure Mercury, and a fiery, metallic, fixing, ſulphureous Spirit. Thus, Gold and Silver are not changed by it, that I know of, though it has ſome Action upon the other Metals; perhaps, becauſe to their Mercurial Parts they have another added, which approaches to the Nature of an unctuous and ſulphureous Subſtance. But as theſe external Sulphurs are not eaſily ſeparable from the metallic Matter with which they concrete, hence it often happens, that, when theſe alcaline Salts act upon ſuch Sulphurs, they may ſeem to change the Mercurial Parts of the Metals intimately united with the Sulphur, without being able to touch the Mercury in its own pure Nature. Here, therefore, the diſſolving Power of Alcalies, with reſpect to Metals, ſeems to be limited; for, when applied to calcined Metals, and aſſiſted by the Force of Fire, they ſeem not capable of diſſolving that Sulphur which fixes their Mercury, and gives them the metallic Form; no Method of applying fixed Alcalies having hitherto, that I know of, obtained the Mercuries of Metals: So that, if what Mr. *Boyle*, *Tachenius*, and M. *Homberg*, relate of recovering the Mercuries of Metals be true, ſome ſecret Proceſs is required, to make theſe regenerating Alcalies enter the fixing Sulphur of Metals.

Both the fixed and volatile Alcalies have a diſſolving Power, 1. Upon animal, vegetable, and mineral Subſtances; ſo far as theſe contain Oils, Balſams, Gums, Roſins, or gummy Roſins, or conſiſt of unctuous Matters; as, alſo, upon Sulphurs, whether pure, compounded, or joined with other Materials; all which theſe Alcalies excellently open, attenuate, reſolve, and diſpoſe to mix intimately with Water, Alcohol, and Oils. 2. Theſe Alcalies, alſo, act as a Solvent upon ſuch Bodies whoſe component Parts are held together by an acid Cement, which being thus attracted by the Alcali, the component Parts now ſeparate, or fall aſunder. 3. After certain Bodies have been once diſſolved by an acid Menſtruum, pure Alcalies often exert a new Power, ſo as to diſſolve ſuch Bodies better, than if applied to them before they were thus diſſolved by the Acid. Hence the Alchymiſts direct, in order to obtain the Mercuries of Metals, that the Metals be firſt calcined by Acids, and afterwards be treated with Alcalies.

Whether any volatile Alcali exiſts in Nature, without the Aſſiſtance of Putrefaction, or the Diſtillation of animal or vegetable Subſtances, is not eaſy to determine; unleſs we ſhould ſay, that the particular Salt, found in mineral Waters, is of this Kind, tho' ſuch Salt cannot be juſtly reduced to the Claſs of volatile Alcalies: However, Dr. *Hoffman* has ſhewn, that they rather belong thereto, than to the acid Tribe. On the other hand, all animal

and

and vegetable Subſtances are, by Putrefaction, brought to afford a perfect volatile alcaline Salt; the acrimonious pungent Vegetables, and all animal Subſtances, afford it upon bare Diſtillation; and ſuch animal Juices as are not alcaline, yet, upon being mixed with fixed Alcali, are ſo changed as immediately to yield alcaline Exhalations, and, by the Action of the Fire, afford a volatile Alcali, the other Parts being attracted into the fixed Alcali. Theſe Salts, however produced, may by chymical Treatment be render'd pure, of the ſame Virtues, and of the ſame Form; their Virtues being ſimilar to thoſe of fixed Alcalies, though with ſome Difference: Thus volatile Alcalies act, and are agitated ſpontaneouſly, or by a very ſmall Degree of Heat; whereas fixed Alcalies require a much ſtronger Aſſiſtance from Fire, in order to their acting; volatile Alcalies fly off the inſtant they are heated, and, therefore, do not exert their diſſolving Power, when applied to heated Bodies; while fixed Alcalies ſooner enter the Bodies they diſſolve, when aſſiſted by Heat; and remain conſtantly applied to every fixed Subject they act upon. But, when volatile Alcalies are purpoſely kept cloſe to a Subſtance to be diſſolved, a moderate Heat then increaſes, and quickens their diſſolving Power; as we ſee upon applying the volatile Salt of Urine, for Inſtance, to the warm Skin, and covering the Salt with a ſticking Plaiſter; for thus there ſoon ariſes Heat, Pain, and Inflammation upon the Skin, followed by an Ulcer, and a black Eſchar. Allowing for theſe Differences, the Action of volatile Alcali may be underſtood from the Hiſtory given of fixed Alcali. See ALCALI.

ACID MENSTRUUMS are conſider'd under the Article ACIDA.

NEUTRAL SALTS, CONSIDER'D AS MENSTRUUMS.

By neutral Salts we here underſtand ſuch as are neither acid nor alcaline, but ſeem to be a ſaturated Mixture of the two. Let us firſt conſider Sal Ammoniac, which eaſily diſſolves in Water, and runs per Deliquium in a moiſt Air, ſo as thus to make an extremely pungent, penetrating Liquor, capable of diſſolving groſs, gelatinous, pituitous, and gummy Concretions in the Bodies of Animals, being not only admirably attenuating, reſolving, and inciding, but, alſo, ſudorific, diuretic, and ſtimulating, to the ſalival Glands, and, at the ſame time, greatly preventive of Putrefaction. This Solution of Sal Ammoniac, boiled or digeſted with gummy or reſinous Vegetables, reſolves them intimately, and this diſpoſes them to reſolve in aqueous or ſpirituous Menſtruums. Iron Filings, boiled in it, are excellently diſſolved and turned into an admirable, aperient, and invigorating Medicine. Being digeſted with Filings of Copper, it produces a beautiful blue Liquor; a few Drops of which, taken upon an empty Stomach, often prove good againſt Worms, and epileptic Fits.

The pure dry Salt, being ſublimed into Flowers, and then very well ground, and mixed with Foſſils, and ſublimed together with them in cloſe Veſſels, produces very extraordinary Effects as a Menſtruum; whence it has been called by the Alchymiſts the *White Eagle*, or the *Philoſophical Peſtle*. If ſulphureous Bodies, Metals, or Semimetals, be treated in this manner, they are thus attenuated, opened, volatilized, and perfectly changed: Whence moſt excellent Remedies are, in this manner, prepared, and ſcarce ſo well in any other; as we ſee in making the Flowers of Lapis Hæmatitis, Ens Veneris, Ens Martis, *&c.* The Changes of Colour produced in Antimony, by being ſublimed herewith, are very extraordinary. And many of the antient Chymiſts have called this Salt, the Key for unlocking the Secrets of Nature: It has this excellent Property, that it is ſcarce changed in Sublimation, except by the Bodies it is mixed with: When added to Aqua-fortis, or Spirit of Nitre, it preſently changes them into Aqua Regia. With fixed alcaline Salts it ſoon changes, partly into a pure volatile Alcali, which directly acts as ſuch, and partly into a new Salt, reſembling Sea-ſalt. A ſaturated Mixture of the Spirit of Sea-ſalt, and a pure, volatile, alcaline Spirit, immediately produces Sal Ammoniac; which may, alſo, be made by ſubliming a Mixture of Sea-ſalt, Urine, and Soot: Whence it ſeems to be a ſemivolatile Sea-ſalt; ſo that its Power, as a Menſtruum, chiefly reſembles that of Sea-ſalt. It cannot, therefore, be more improved, than by being ſeveral times ſublimed from pure, dry, decrepitated Sea-ſalt, in cloſe Veſſels; which is the beſt Method of obtaining the Flowers of Sal Ammoniac.

Though Sea-ſalt, Sal-gem, and Spring-ſalt, differ in their Origin, yet they are of the ſame Kind, and may all be conſider'd as Sea-ſalt; which by means of the Sea-ſalt Springs, and Salt Mines, is diſtributed over all Parts of the Earth, as the univerſal Preſervative againſt Putrefaction. This Salt eaſily diſſolves in Water, and runs per Deliquium in a moiſt Air, ſo as to make a Brine, or an excellent Menſtruum, producing nearly the ſame Effects as the Brine of Sal Ammoniac.

Sea-ſalt decrepitates over the Fire, and, being afterwards reduced to fine Powder in a warm dry Mortar, it may be melted in the Fire; where it readily paſſes through the Pores of the Crucible, and vaniſhes. If Semimetals, or metallic Foſſils, are mixed with this Salt in Fuſion, great and peculiar Changes are thus produced. I mixed eight Ounces, of moiſt, undecrepitated Sea-ſalt with two Ounces of powder'd Antimony; and, after long grinding them together, I put the Mixture into a Crucible, and, covering it with another Crucible, I faſtened them together with a ſtrong Luting; then ſetting them in a reverberating Furnace for twenty-four Hours, and increaſing the Fire at laſt, to make the Salt run, I found, upon opening the Veſſel, a dusky Maſs, with white Spicula riſing on the Top; then, reducing the Whole to Powder, I treated it as before, and obtained a ruddy Maſs, with the more metallic Part at the Bottom; and, upon repeating the Proceſs, and uſing a ſtrong Fire of Fuſion, almoſt all the Salt paſſed through the Pores of the Veſſel; leaving at the Bottom a ruddy Maſs of Antimony, ſurpriſingly changed; whence we ſee, by an Example, how this Salt may act as a dry Menſtruum, by means of Fire.

This Salt may be uſed, on many Occaſions, with a much greater Effect than any other Salt; and, therefore, is uſually applied, in a dry Form, mixed with Brick-duſt, in the Buſineſs of Cementations, in order to introduce extraordinary Changes as to the Exaltation, Separation, and Ripening of Metals. In this Operation we are to obſerve, that the dry Sea-ſalt, here mixed with the Brick-duſt, turns to a volatile acid Spirit, reſembling Aqua Regia, and acting like that upon Metals. When, by theſe means, the Sea-ſalt is turned to a Spirit, and ſeveral times returned back upon a pure decrepitated Salt, a ſurpriſing particular Solvent is thus obtained from the Sea-ſalt: To this Purpoſe, I ſhall here relate a laborious Experiment.

To two Pounds of Spirit of Salt, I added, by Degrees, as much pure, dry Sea ſalt, in fine Powder, as the Spirit would take up; then, purifying the Liquor by Reſt, and ſtraining, I put it into a tall chymical Phial; and, inverting another of a ſmaller Kind thereon, I carefully cemented them together; then expoſed the Matter to the Heat of the Sun, from the tenth of *May* to the tenth of *July*. After this I diſtilled, in a Retort, with a gentle Fire, till a thick Liquor, appearing like Oil, and containing hard Cryſtals of Sea-ſalt, remained at the Bottom. What was diſtilled over, I now poured back, and drew off afreſh, repeating this Operation thrice; then found the Salt remaining at the Bottom was ſpongy, fat, and oily. After this I repeated the Operation twenty times, and again poured back the Liquor laſt diſtilled, and left them mixed together for five Months; then with a gentle Fire I drew off an almoſt inſipid Phlegm, till the acid Spirit began to riſe; when, changing the Receiver, and diſtilling with a ſtronger Fire, I obtained an extremely ſtrong, acid, ponderous Oil of Salt, which I kept ſeparate, and obſerved, that the Salt remaining at the Bottom of the Retort, after all theſe Diſtillations, was extremely acid, and conſiderably fixed. I put this Salt in a glaſs Diſh, and expoſed it to the Air of a Cellar, where it ran *per Deliquium* into a Liquor; which being purified by ſtraining, and united again to the Phlegm, Spirit, and Oil of Salt, before drawn over, I thus, at length, by a new Diſtillation, obtained a Menſtruum of ſuch Efficacy, as made me not repent of my Labour. Sea-ſalt, being diſſolved, purified, and cryſtallized, affords a ninth Part of a ſaline Subſtance, having a bitter auſtere Taſte, and not ſhooting into Cryſtals; and this Part being taken from it, the Salt becomes the purer.

The common Nitre, being produced from animal, alcaline, and calcarious Subſtances, is eaſily turned to fixed Alcali, and a volatile Acid. It, alſo, appears of a particular Nature, when applied to Bodies as a Menſtruum; and its Operations are here ſo intricate, as ſometimes ſcarcely to be explained. When expoſed to the Fire in a pure and dry State, it there ſoon flows with certain Bodies, like Water; and thence ſurpriſingly promotes their Melting, though otherwiſe of difficult Fuſion; and thus attenuates, divides, and intermixes their Parts, even while it acts upon them in no other reſpect. Whence it comes to be uſed in Metallurgy, as a Flux for Metals.

But if the Matter, thus mixed with the Nitre, contains any thing oily, unctuous, or ſulphureous, this ſuddenly deflagrates with the Nitre in the Fire, raiſes a violent Flame, and greatly increaſes the Heat: Whence the Application and Action of the Nitre being ſtronger, it greatly changes, divides, fuſes, and ſeparates the Bodies in a different manner than is otherwiſe known; the Nitre, at the ſame time, loſing its own Nature, or turning to a kind of Sal Polychreſtum, which has a different diſſolving Power from that of Nitre: Whence the Action of Nitre upon Bodies is of one ſort before it deflagrates with them, of another during the Deflagration, and of a third after the Deflagration is over.

When Nitre is melted along with a vegetable Coal, its Parts are ſtrongly agitated, ſo as in like manner to agitate the Bodies to be diſſolved; at the ſame time diſcharging particular active Fumes, capable of penetrating and diſſolving many Bodies in the Fire. But, when the Nitre is thus changed to fixed Alcali, it does not flow, unleſs the Fire be violent; and then, according to its penetrating and particular Nature, it begins to act as a fixed alcaline Menſtruum; and thus acquires and exerts a new diſſolving Power.

If the Bodies thus to be diſſolved by Fuſion with Nitre contain Earth, Stone, Alum, Virriol, Bole, or the like, the Nitre is immediately changed into a ſtrong acid volatile Salt, or Spirit of Nitre, which, now agitated with ſo violent a Fire, penetrates,

diſſolves, and greatly changes the Subject, thus acting by one of its Parts like Aqua-fortis; while the other Part, remaining at the Bottom, acts by a very different diſſolving Power. Hence we may underſtand, what a great Effect this Salt may have, when uſed in the way of Cementation, along with metallic Matters; for thus it changes into a corroſive Spirit, capable of altering metallic Subſtances various Ways.

If pure Nitre be fuſed in a ſtrong Fire, along with Regulus of Antimony, it, at length, produces a kind of cauſtic Stone, which acts after a manner peculiar to itſelf, being a very fixed Salt of difficult Fuſion, and uncommon fiery Acrimony: Whence it appears, what a prodigious diſſolving Power this Salt may have, when mixed with Regulus of Antimony, and applied to Bodies in the Fire.

If Powder of Sal Ammoniac be thrown upon Nitre melted in a clean Crucible, a gentle Flaſh will be produced, as if a burning Coal was thrown upon the Nitre; while the Salt is thus every Moment changed in the Fire, till at length, being ſaturated with the Sal Ammoniac, it flaſhes no longer; but turns to a new Kind of reddiſh Salt, of a very particular Nature, little known or conſidered by the Chymiſts; but while the Nitre, and Sal-ammoniac, are thus mixed with other Bodies in the Fire, different Kinds of Solutions will be made at different times; and, conſequently, different Effects produced at each time, while the Bodies remain together in the Fire. Theſe Particulars are ſeldom carefully regarded by the Operators; whence they frequently meet with unexpected Accidents, while they overlook ſuch things as may alter the Succeſs of their Experiments. If one Part of Sea-ſalt, and two of Spirit of Nitre, be diſtilled together, the Liquor that comes over from them, with a gentle Heat, will prove an *Aqua Regia*, and acts entirely as ſuch; while the Salt remaining behind will be Nitre, and, when thoroughly dried, will act as Nitre, though, at the Beginning of the Operation, it acted as *Aqua Regia*, in the Liquor diſtilled over. Whence we ſee, what a great Difference may be in the Action of a Menſtruum, at different times of the Operation. So, again, if one Part of pure Nitre, and three Parts of the Spirit of Sea-ſalt, be diſtilled together, they yield a ſtrong *Aqua Regia*; while the dry Salt, remaining in the Retort, is again left true Nitre, Which ſhews us how careful we ought to be in the Uſe of theſe Menſtruums, to prevent being impoſed upon. So, likewiſe, if the Spirit of Nitre, with a proper Proportion of any Alcali, be uſed as a Solvent, they ſoon turn to Nitre, and act as ſuch at the End of the Operation. If *Glauber* ſays true, that Nitre may be made from a Mixture of Sea-ſalt, fixed Alcali, and Quick-lime, burnt and ignited in the Fire, and afterwards expoſed to a moiſt Air; theſe three Subſtances, being uſed together in Cementation, muſt have a very different Effect from what one might otherwiſe imagine.

Native Borax, being diſſolved in Water, filtred and cryſtallized, has a ſomewhat ſweetiſh and bitteriſh Taſte; but is neither acid nor alcaline. By ſtrong Diſtillation it affords mere Water; while the Part that remains behind, turns to Glaſs, incapable of being diſſolved in Water. When mixed with Sand, and urged with a violent Fire, it affords no acid Spirit. It greatly promotes the Fuſion of Metals, and thus, alſo, has numerous other Effects, which could not otherwiſe be ſo eaſily obtained.

If what is above delivered of ſaline Menſtruums be well underſtood, it will not be difficult to conceive, that various Combinations of Salts ſhould produce many new Kinds of ſaline Menſtruums, having ſingular and uncommon diſſolving Powers. Theſe Combinations are ſometimes made by Art and Contrivance, and ſometimes accidentally, ſo as to ſurpriſe by their unexpected Effect, and thence come to be regiſtred in Books of Chymiſtry; and, from theſe two Origins proceeds that vaſt Stock of Menſtruums with which Chymiſtry abounds. Thus, when volatile Alcalies are mixed with the fixed Kind, the former are always rendered ſtronger, and more volatile, by the Action of the Fire; whilſt the latter, attracting the acid Particles, which perhaps remain'd in the volatile Alcalies, as alſo the Oils, but retaining the terreſtrial Particles, hence become different, or more compounded, and productive of other Effects. Fixed Alcalies, being united with native vegetable Acids, afford an extraordinary compound Salt, of a mild, aperient, and diuretic Nature; as we ſee upon mixing Salt of Wormwood with Juice of Lemons, and the like in a proper Proportion; whereby a Salt is procured of very different diſſolving Powers from the Parts it was compoſed of, or from any other Salts; and, when volatile Alcalies are mixed with theſe Acids, another Kind of compound Salt is produced, differing greatly from the former, made with fixed Alcali. When fixed Alcalies are properly united with pure, fermented, vegetable Acids, they, upon mixing, afford many extraordinary Phenomena, and produce a neutral, mild, volatile, penetrating, ſaponaceous Salt; the Effects whereof upon animal, vegetable, and foſſile Subſtances, have made me ſometimes ſuſpect it to be the volatile Salt of Tartar, ſo highly extolled by *Helmont*. Perhaps, of all the neutral Tribe of Menſtruums, there is not one that more deſerves to be conſidered, and made uſe of, than this; as might be ſhewn by numerous Examples, and as remarkably appears by its diſſolving the Body of Myrrh, which with Difficulty yields to Alcalies and Acids, ſo as to be rendered potable, and miſcible with the Blood; but, by being properly digeſted with this neutral Salt, it is intimately and inimitably diſſolved for the Purpoſe. The ſame Salt, if carefully made, intimately unites with Spirit of Wine, ſo as to afford an excellent Menſtruum. Hence we might eaſily confute the Error of the modern Chymiſts, who make Alcalies and Acids the Principles of all things, and aſſert, that their Virtues are deſtroyed by mixing them together. On the contrary, it is certain, that the pure Alcali of Tartar, properly mixed with the volatile Acid of Vinegar, makes a neutral Salt, of a much more noble Virtue than the ſeparate Acid or Alcali. When a pure volatile Alcali is exactly ſaturated with the ſtrong Spirit of Vinegar, we have thus a limpid, lightly ſaline, volatile, compound Liquor, able to paſs through almoſt all Kinds of Bodies, ſo as to diſſolve them, without any conſiderably viſible Conflict. Whence ſome have highly eſteemed this Liquor, in curing Diſorders of the Eyes and Ears, ariſing from Concretions. What has likewiſe been reckoned a great and ſucceſsful Secret for reſolving cold, glandulous Swellings is, to foment them with a Mixture of putrefied Urine and Vinegar, the Part being firſt rubbed, and the Liquor applied warm.

Hence we may underſtand, that the Conſequence of mixing fixed or volatile Alcalies with fermenting Acids will be, a Stoppage of the Fermentation, after the Production of a ſudden Effervеſcence, and the conſequent Production of neutral Salts. The like neutral Salts will, alſo, be produced, upon mixing the ſame Alcalies with the Acids obtained either by Diſtillation, or the burning of Woods in the Fire.

When theſe fixed Alcalies are united to a native foſſile Acid, new compound Salts, greatly differing from one another, are produced. Thus, if hot Oil of Tartar *per Deliquium* be gradually dropt upon a Solution of pure Alum in Water, till the Point of Saturation is obtained, an earthy Calx will be precipitated; and if the clear Liquor, floating above it, be filtred, the native Acid of the Alum, here attracted by the Alcali, will afford a Salt like vitriolated Tartar, but without any metallic Part, and of an excellent diſſolving Power, as a Menſtruum, and of conſiderable medicinal Virtue. So, if to a warm and clear Solution of white, green, or blue Vitriol, the ſame Solution of fixed Alcali be added, after the ſame manner, we obtain a compound Salt, conſiſting of the fixed Alcali, and the foſſile Acid, which had diſſolved the calcarious Matter, the Iron, or the Copper, naturally diſſolved in the Vitriols. Whence, again, a neutral vitriolated Tartar is produced, differing from the common, as its Acid had not felt the Force of ſo ſtrong a Fire, and, therefore, better preſerves its native Virtues; it alſo better depoſites its metallic Parts, except the Vitriol was from Copper, whoſe metallic Part, remaining in the Solution, tinges the Salt of a blue Colour.

When fixed Alcali is intimately mixed with Sulphur, the foſſile Acid of the Sulphur is attracted into the Alcali; and hence ariſes a Salt reſembling the former, though of a ſomewhat different Nature, as appears by the Figure of the Cryſtals it ſhoots into: This ſeems principally occaſioned by the unctuous Part, which being mixed in with the Sulphur, alſo, joins itſelf to the fixed Alcali, and fouls the Salt; thus making a more compound Salt of different Taſte, Odour, and Virtue.

Thus, upon mixing vitriolic or aluminous Waters, or their unctuous Sediments, with fixed Alcali, the metallic or terreſtrial Part, diſſolved in them, being now ſeparated, the acid Solvent will unite with the Alcali, into a kind of vitriolated Tartar where the diſſolving Power is peculiar or different from that of other Salts; as appears by applying it to Metals, Semimetals, Sulphurs, and other foſſile Subſtances. This Salt uſually retains its diſſolving Power more permanently than any other compound Salt; its Acid, as well as its Alcali, being more fixed, and both thus united into a very fixed neutral Salt. Nor do we know any other Acid, which, when apply'd to this vitriolated Tartar, is able to ſeparate the Acid it contains; whereas the native Acid of Vitriol commonly expels the Acid from all other Salts.

When pure volatile alcaline Salts are mixed with theſe native foſſile Acids, a particular Kind of ammoniacal Salts are thus produced. Theſe may be called Semivolatile vitriolated Tartars, and highly deſerve to be regarded by Chymiſts, on account of their remarkable diſſolving Property; and by Phyſicians, on account of their conſiderable, aperitive, attenuating, reſolving, ſtimulating Virtues.

Hence may be underſtood, what will follow upon mixing common Sal Ammoniac with the Vitriols, and committing the Mixture to the Fire. Thus, the Acid of the Vitriols, being attracted into the alcaline Part of the Sal Ammoniac, releaſes the acid Spirit of the Sea-ſalt, which makes the other Part of the Sal Ammoniac; this Spirit, being volatile, is thus ſeparated, whilſt, by the Union of the vitriolic Acid with the alcaline Part of the Sal Ammoniac, a ſemivolatile vitriolated Tartar is produced; the remaining Part being a metallic Maſs, before contained in the Vitriol, but now precipitated in the Form of Fæces; or elſe, being again diſſolved by the Spirit of Salt, affords a new Kind of metallic Solution. Hence we have a juſt Foundation for judging of the Event of combining fixed, or volatile Alcalies with all the

native fossile Acids, however they may lie concealed in Metals, Earth, Oils, or other Salts.

Let us next consider those Menstruums which arise from the Combination of fixed Alcalies with a fossile Acid obtained by Fire. When pure fixed Alcali is perfectly saturated with the acid Spirit of Sea-salt, Sea-salt seems to be regenerated. When saturated with the Acid of Nitre, it re-produces Nitre; and with the Acid of Alum, of Sulphur, or Vitriol, it constantly makes the Tartarum vitriolatum. In the same manner, when pure volatile Alcali is united with Spirit of Sea-salt, there arises a true Sal Ammoniac; and when mixed with Spirit of Nitre, or Aqua-fortis, a semivolatile Nitre is produced. If the same volatile Alcali be united with Oil of Vitriol, with Oil of Sulphur by the Bell, or with the Acid distilled from Alum, it thus produces a semivolatile vitriolated Tartar. Hence it appears how many and what surprising Actions of Menstruums arise from the mixing of certain Bodies together, and applying them to the Fire. And, without an exact Knowledge of such a Variety of Particulars, we can never have an adequate Knowledge of the chymical History of Menstruums.

We now proceed to consider the Action of Menstruums made by uniting pure simple Salts with other Salts. Thus, if pure Alcali be added to the Brine of Sea-salt, an earthy Matter is precipitated; and the Salt now obtained by Crystallization from the clear Liquor will be a purer Sea-salt. The same fixed Alcali, being added to a Brine of Nitre, changes the Liquor thick and milky, and precipitates an earthy Matter, whereby the Nitre obtained from this Solution becomes extremely pure. When fixed Alcali is added to the Brine of Sal Ammoniac, it seizes the Acid of that Salt, sets the volatile Alcali free, or suffers it to fly off, leaving a pure, fixed Sea-salt at the Bottom of the Vessel. If a pure volatile Alcali be added to the Brine of Sea-salt, it makes the Liquor thick, then purifies it, and flies off: It does the same, when added to a Solution of Nitre, or to a Solution of Sal Ammoniac. Vegetable Acids, fermented or not, produce but little Alteration, by being mixed with Sea-salt, Nitre, and Sal Ammoniac. Of the Menstruums arising from the Mixture of fossile Acids with these Salts, we have already produced Examples; and shall only add, that if Quicksilver be incorporated with calcined Vitriol by long grinding them together, and decrepitated Sea-salt be added thereto, and the Mixture be put to sublime in a glass Vessel, with Degrees of Heat, in a Sand-furnace, the Acid of the Vitriol thus turns the Acid of the Sea-salt into a Spirit, which now dissolves the Mercury, and makes it rise to the Top of the Vessel in the Form of pure Mercury Sublimate, which is no more than the Spirit of the Sea-salt attracted into the Quicksilver, and thus united therewith, into an uniform, vitriolic, mercurial Mass, soluble in Water. There are numerous surprising Instances of this kind, in the History of Menstruums, which may be all understood by the Principles here laid down. Let it only be remembered, that in what way soever Salts are united with Salts, new saline Productions, and new Menstruums, will arise; whence the Art of Chymistry may be perpetually improv'd, and new Phenomena produced, not only affording Pleasure to the Mind, but increasing our Knowledge of the native Properties of Bodies, and often leading to great and unexpected Discoveries for the Accommodation of Life.

New Menstruums of particular Virtues may be infinitely made, by variously combining different Menstruums together, by reducing every Menstruum to its utmost Degree of Purity, and by reducing some of them into their minutest Particles; for, upon these three Particulars, the extraordinary Skill of the principal Chymists seems chiefly to depend. It would be endless to give all the Instances that might be produced to this Purpose; we shall, therefore, content ourselves with the following: Suppose an extremely pure, strong, and subtile, fermented, vegetable Acid was wanting: Take fine Verdegrise, prepared from Copper, corroded by the subtile Vapour of a fermenting Acid: Add to it twenty times its own Weight of the strongest distil'd Vinegar that can be made; digest them together, till the Verdegrise is dissolved into a deep-green Liquor, which being thoroughly purified by Filtration, and inspissated over a gentle Fire, to a Pellicle, set it in a quiet Place, where it will shoot into Crystals, of the Colour of an Emerald, consisting of the Acid of the Vinegar, and the dissolved Copper; pour off the Liquor, collect the Crystals, and repeat the Process, till no more Crystals can thus be obtained. If, now, the Verdegrise, saturated with the Acid, be dry'd in a warm Air, then distil'd in a Glass Retort, with Degrees of Fire, you may obtain a most pure, and perfectly strong, vegetable Acid, no way participating of the Copper. But the same Experiment does not succeed with Lead, Tin, or Iron; whereas Copper thus attracts the Acid separately from the aqueous Part, and without changing its Nature, while other Substances would also attract and separate it, but, at the same time, render it impure. A Vinegar, for this Purpose, may be made from Beer, Cyder, Perry, Honey, Sugar, Manna, and the like.

To shew that, by compounding one Menstruum with another, new and excellent Salts may be procured, let it be recollected, that regenerated Tartar, properly prepared, may be intimately united with pure Alcohol, and thus produce a vegetable Menstruum, composed by the close Union of the most subtile vegetable Particles, Alcali, Acid, and Sulphur: Whence the Effect of such a Liquor is extremely great, both as a Menstruum, and a Medicine.

We shall now proceed to make the following Inferences:

1. It is not certain, whether any Menstruum has a Power of dissolving any Subject, without the Assistance of Fire; as no Experiment could ever be made in a Place destitute of all Fire, and, as most of the known Menstruums act the better, when assisted by a certain Degree of Fire.

2. Menstruums can scarce act as such, unless reduced to a fluid Form, or at least, approach thereto; as they chiefly do, by the means of Fire, Air, Water, and Triture; which four Causes usually excite the latent Powers of Menstruums.

3. Certain Menstruums contain a Cause within themselves, apparently capable of exciting Motion; though in Reality it depends upon the near Approach of another Body. Thus, if a good Load-stone be suspended by a Thread, and hangs at Rest in a great Degree of Cold, it will seem to have no active Virtue; but, if Iron comes near it, a Motion is produced in both these Bodies, till they come together, and remain in Contact; and this kind of Power generates Motion spontaneously, without the Assistance of any Fire sensible to us; and is not excited by Motion. So likewise, strong Spirit of Nitre, confined in a close Vessel, yields an acid Fume, constantly playing about the Surface of the Liquor, and issuing out whenever the Vessel is unstopped. The same Appearances has the Fume of the alcaline Spirit of Sal Ammoniac; and the Spirit of Sal Ammoniac, made with Quick-lime, affords a Fume much more volatile and moveable. This kind of Bodies, therefore, strangely retain, and strangely excite Motion; and possibly there are such continually floating about in subterraneous Places, till they rest in some one Body, where they unite, fix, and thus produce numerous compound Substances; but we are always to remember, that Air, even in the utmost Cold, has a constant vibratory Motion, and therefore may often excite the Motions we here speak of; as, on the other hand, Solutions are often immediately performed, by means of the Motion peculiar to the Menstruum arising from it; whilst a considerable Motion of another kind, and proceeding from a different Cause, would not produce the Effect. Thus, if a Piece of fine *English* Chalk be calcined in a strong Fire, or even in the Focus of a burning Concave, it will scarce be changed by this violent Motion; nor, again, by being exposed to a hot and cold Air, either at Rest, or agitated by strong Winds; and though it be long boiled in Water, or a Brine of Salt of Tartar, it will not dissolve; but it immediately melts and disappears in cold Vinegar: Whence we see there is a very great Difference between the Motion excited by the reciprocal Force of the Solvent and Solvend, and the Motion excited by Fire, Air, Water, and Impulse.

4. The Acrimony of a Menstruum, which excites Pain, corrodes, or consumes the Parts of the human Body, is no Sign, that such a Menstruum is suited to dissolve other Bodies. Thus, Oil of Vitriol, Spirit of Nitre, Spirit of Salt, and *Aqua Regia*, though they readily consume the Flesh, do not dissolve Wax and Sulphur; though these two may easily be dissolved in the human Body.

5. Many Bodies, incapable of dissolving in certain Menstruums, may be fitted for dissolving therein, by being previously dissolved in another Menstruum. Thus, if common Sulphur be boil'd ever so long in Alcohol, it dissolves no more than a Stone in Water; but, if the Sulphur be first melted with Salt of Tartar into a dusky Mass, cold Alcohol will soon dissolve the Sulphur intimately. Some eminent Chymists have conceived so highly of this regular and successive Application of different Menstruums, particularly Mr. *Boyle*, and Mr. *Homberg*, that they say even Metals may, by these means, be resolved into their component running Mercury, and fixing Sulphur. But, after many Experiments, I have not found, that Metals could be thus turned into Mercury.

6. Certain Menstruums dissolve such Bodies, as before Trial might be judged little suited thereto: And this holds both on the Side of the Solvent, and Solvend. Thus, the viscid and tenacious Body of native Turpentine is so penetrating in the Body, as very soon to give a Violet-smell to the Urine, change its Colour, and warm the Person who takes it; it dissolves Oils and Rosins with a gentle Heat, and even the gummy Rosins, which can scarce otherwise be dissolved. The Yolk of an Egg would scarce be suspected of any solvent Power from its obvious Properties; yet, by being ground with any of the Gums, Oils, Rosins, or Balsams, it dissolves them better than any other Menstruum, destroys their Tenacity, renders them miscible with aqueous and spirituous Liquors, and fit to enter the circulating Fluids of Animals. The White of an Egg, when boiled to Hardness, and distilled *in Balneo Mariæ*, affords a limpid aqueous Liquor, of no considerable Smell or Taste, and of no saline, acid, or alcaline Nature; yet what a particular Power it may have, even upon Metals, appears from *Paracelsus*, and *Helmont*, who judg'd it the propereſt Thing in preparing their medicated Mercury. And if the White of an Egg, after Boiling, be suffered

fered to run *per Deliquium* in a Cellar, it turns to a kind of pure Water, which diſſolves the hard tough Subſtance of Myrrh, better than any other Menſtruum.

7. Hence therefore Acidity, Acrimony, or a ſaline Property, diſcovered in any Menſtruum, can never aſſure us, that ſuch a Menſtruum will diſſolve a given Subſtance, till we find by particular Experience, that a Solution enſues, upon putting the Bodies together. Thus, if any known Acid, whether ſtrong, or ſmall, be put to common Sulphur, and aſſiſted by Heat, it will not diſſolve the Sulphur. So Spirit of Nitre, which diſſolves other Metals, will not touch Gold: Whence we cannot ſay in general, that Acids diſſolve Metals; but, properly, that certain Acids diſſolve theſe or thoſe particular Metals. A Perſon who had often experienced the corroſive Virtue of ſtrong, fixed Alcali in numerous Subſtances, might perhaps expect it would diſſolve all Bodies; but he would ſoon be undeceived, upon finding it does not affect Quickſilver, Silver, or Gold; and the ſame holds alſo of Salts. Hence we cannot ſay, that Acids, Alcalies, or Salts, are Solvents univerſally; but only with reſpect to their determinate, definite Subjects, whereto Nature has fitted and limited them.

8. So again, univerſally, a cautious Chymiſt, finding a Body diſſolved, will not infer, that an Acid, an Alcali, or a neutral Salt, was the Cauſe of the Solution, unleſs other Circumſtances determined this to be the Caſe; yet the modern Chymiſts have often deviated from this Rule, through a Fondneſs for general Concluſions. Suppoſe a Perſon ſure, that Gold was diſſolved into its leaſt Particles, and that there was no other known Salt which would diſſolve Gold, beſides Sea-ſalt, or Preparations thereof; yet he could not hence juſtly infer, that Sea-ſalt was here the Solvent: For pure Quickſilver will alſo diſſolve Gold; though Quickſilver be as far from an acid, alcaline, or acrimonious ſaline Nature, as any known Subſtance in the World.

9. We may add, that there is no general or abſolute corroſive or diſſolving Acrimony, this being always relative, and holding only true of the Solvent, and Solvend, and not of the Solvent, in reſpect to all other Bodies. Thus, if upon ſeeing the corroſive Virtue of *Aqua-fortis*, in a thouſand Inſtances, upon animal, vegetable, and mineral Subſtances, we ſhould hence conclude it would corrode all other ſoft and tender Subſtances, we might ſoon correct ourſelves by obſerving, that it will not diſſolve ſoft Wax, or brittle Sulphur.

10. On the other hand, it is no ſafe Concluſion, that becauſe a Menſtruum proves mild and innocent to the human Body, it will not therefore diſſolve other Bodies: For Oil-olive may be ſafely received in a large Quantity into the Stomach and Inteſtines; though it readily diſſolves Sulphur and Wax, which Acids will not touch. Melted Wax, though ſo mild a Subſtance, is ſaid to extract the red Colour of Coral, which long ſuſtains a violent Fire without changing, and even reſiſts the Force of Alcalies. Hence the hardeſt Bodies, with regard to our Senſes, and found to be ſuch by their reſiſting of Fire, do not require, in order to their Solution, Solvents apparently corroſive.

Upon the Strength of the Doctrine here delivered, it cannot appear impoſſible to diſcover, in Art or Nature, a peculiar Menſtruum, capable of diſſolving ſome one thing inſoluble by almoſt all others; whilſt, at the ſame time, this Solvent ſhall not diſſolve other Subſtances of a much weaker and ſofter Texture. The way of diſcovering ſuch a Menſtruum is by ſucceſſively applying all ſorts of Menſtruums to the Body, whoſe Solution is required; and, here, what might be judged the leaſt proper for the Purpoſe, may ſometimes beſt anſwer the End. Thus, though Cancers, and the Stone in the Bladder, have hitherto proved incurable, yet we ought, on no Account, to deſpair of diſcovering Remedies for them, and particularly of finding a Method of diſſolving the Stone, without injuring the Bladder; ſince it is by no means a Conſequence, that the Bladder ſhould be corroded by the ſame Remedy which diſſolves the Stone.

The Spirit of Rye-bread has a ſurpriſing Power to diſſolve certain Stones; yet does not corrode any Part of the human Body: And the Water which boiled Whites of Eggs ſpontaneouſly runs into, diſſolves many Subſtances; yet may be poured into the Eye with Safety.

11. Moſt Menſtruums, at the time they diſſolve and change the Subject, are alſo changed by it, the Action being reciprocal; and though Water, Alcohol, and Mercury, hence receive but little Alterations, yet they are gradually changed by the Operation.

12. It is a great Error to ſuppoſe, that the purer any Menſtruums are made, the more powerfully, or the more perfectly, they always diſſolve; becauſe their diſſolving Power is often diminiſhed, in proportion to their Purification. Thus, Lead is always more difficultly diſſolved in *Aqua-fortis*, the ſtronger the *Aqua-fortis* is made; and more eaſily, when the Menſtruum is diluted with a proper Proportion of Water; and ſeveral Examples may be brought to the ſame Purpoſe. On the other hand, the utmoſt Purity is often required in a Menſtruum, to make it a proper Solvent: Thus, diſtilled Oils require perfect Alcohol to diſſolve them totally into an uniform Liquor; the Interpoſition of Water preventing the Effect. Hence we cannot abſolutely pronounce of Menſtruums, whether they ſhould be weak or ſtrong, in order to diſſolve certain Subjects; but the Matter muſt be determin'd by Experiments.

13. There is nothing more remarkable in this Doctrine of Menſtruums, than the Production of new Powers by their Action; which Powers, before, exiſted neither in the Solvent, nor Solvend; but depend entirely upon the Union of both, after the Solution is performed. Thus, an Infant might ſafely ſwallow a few Grains of Quickſilver, or a very few Drops of Spirit of Salt; but, if theſe two Bodies are united, ſo as to make corroſive Sublimate, three or four Grains thereof would prove a violent Poiſon. Chymiſts, being thus admoniſhed, will, it is hoped, not always expect, that the Productions of their Solutions muſt be either innocent or medicinal, only becauſe the Simples employ'd in them were ſo. Whoever has regard to Truth and Virtue, will think, that if any new Production be thought deſerving of a Trial as a Medicine, it ſhould be done ſlowly and carefully; beginning with a moderate Doſe, and having the Mind intent upon the Event and Circumſtances: Thus, our Chymical Doctrine of Menſtruums may lead us to underſtand all the beſt and greateſt Diſcoveries which the Art is able to make: *Boerhaave's Chymiſtry.*

MENSURA. A Meaſure See PONDUS; under which Article there i a Table of Meaſures and Weights.

MENTAGRA. This was a kind of obſtinate Tetter, which *Pliny, Lib.* 26. *Cap.* 1. informs us, firſt appeared in *Italy* in the Reign of *Claudius Cæſar*. It began upon the Chin, and extended itſelf over the reſt of the Face, even to the Eyes; and deſcended to the Neck, the Breaſt and Hands. It did not endanger Life; neither was it painful; but was extremely frightful to look at. Neither the Women, nor the ordinary People, nor the Slaves, were affected with it; but People of the firſt Condition only. They brought Phyſicians from *Egypt*, in order to cure it, which is a Country fruitful in ſuch kind of Diſtempers. The Method of Cure was to cauterize, in ſome Parts even to the Bone, otherwiſe it would return. And the Cauteries left Scars more unſeemly than the Diſtemper.

It is remarkable, that in the Pontificate of Pope *Pelagius*, the Summer after an Inundation of the *Tiber*, abundance of People were affected with an epidemical Eruption of Puſtules, which were very malignant, and which the Phyſicians had never before ſeen, nor did they know how to cure. This made ſome think, that the Lues Venerea ow'd its Origin to an extraordinary Overflowing of the *Tiber*, which happen'd in the Pontificate of *Alexander* the Sixth, at the time that *Charles* of *France* invaded *Italy*.

This epidemical Diſorder might poſſibly be the ſame as the *Mentagra*; and this laſt, in the Reign of *Claudius*, might happen after ſome great Inundation: What makes this the more likely is, that they were oblig'd to ſend to *Egypt* for Phyſicians, where this Malady was epidemical, probably from frequent Inundations.

MENTHA.

The Characters are;

It has a creeping Root; the Flower is quadrifid, and, tho' without Apperrance of a Galea, or Beard, has its Lip in a manner divided into two Parts; the Whorles of the Flowers are cloſely diſpoſed. The Plant has a pleaſant, balſamic, and aromatic Smell.

Boerhaave mentions thirteen Species of this Plant; which are,

1. Mentha; rotundifolia; criſpa ſpicata. *C. B. P.* 227. *J. B.* 3. 2. 218.

2. Mentha; criſpa; Danica; aut Germanica; ſpecioſa. *Park. Theat.* 32.

S. Paullus tells us, that he had obſerved the circular Motion of the Blood ſuppreſs'd by a ſimple Decoction of the *Mentha criſpa* [it is uncertain whether he means this Sort, or the *Mentha criſpa verticillata*, C. B. or the *Mentha ſpicata rotundifolia criſpa*, J. B.] to ſuch a Degree, that not a Drop could be evacuated from the Foot, tho' attempted by a very dextrous Surgeon with a myrtiform Lancet, which he enter'd three or four times, to a good Depth, into the moſt conſpicuous Veſſels of that Part. The Maid had firſt prepared a Bath for the Feet, into which ſhe had put ſome Bundles of Mint; this Bath her Miſtreſs made uſe of. Perhaps, ſays *Ray*, *S. Paullus* took that for the true Cauſe, which had no Influence at all in the Caſe; for to me it does not ſeem probable, that Mint ſhould produce any ſuch Effect. *Raii H. P.*

3. Mentha; rotundifolia; ſpicata; rubra. *C. B. P.* 227. *Menthaſtrum ſpicatum, cultum, folio rotundiore, rugoſo.* J. B. 2. 318. *Siſymbria, Mentha, agreſtis, ſativæ Menthæ Cruciatæ congener aut eadem.* Lob. Obſ. 272.

4. Mentha; criſpa; verticillata. *H. Eyſt.* 0. 7. F. 5. F. 1 *Mentha rotundiore folio glabro, Pulegii flore.* M. H. 3. 369. *Mentha.* 1 *Dod. p.* 95.

5. Mentha; criſpa; verticillata. *C. B. P.* 227. *Mentha* 1 *Dod. p.* 95. *Mentha, criſpa, verticillata.* H. Eyſt. Æſt. 0. 7. F. 5. Fig. 1. *Mentha vulgata, ſerpens, rotundiore folio, Pulegii flore coronato.* Lob. Obſ. 271.

Boerhaave ſeems to make theſe two diſtinct Species, but *Dale* thinks them the ſame, and tells us, that they grow in watery Places

Places, and flower in the Month of *August*. The whole Herb is uſed. The Powder of it, daily uſed, is, by *Stockerus*, recommended againſt a Weakneſs of the Stomach: And *Ettmuller* commends it againſt Vomiting.

6. Mentha; anguſtifolia; ſpicata. *C. B. P.* 226. *Raii Hiſt.* 1. 532. *Tourn. Inſt.* 189. *Boerh. Ind. alt.* 185. *Mentha.* Offic. *Mentha Romana.* Ger. Emac. 680. *Mentha Romana anguſtifolia ſive Cardiaca.* Park. Theat. 31. SPEAR-MINT.

Spear-mint has many ſquare Stalks, which, in good Ground will grow to be two or three Feet high, having two long ſharp-pointed Leaves, ſet oppoſite at a Joint, without Foot-ſtalks, high-vein'd underneath, thinly ſerrated about the Edges. The Flowers grow in long Spikes, on the Tops of the Stalks, ſet on Whorles, being ſmall and purpliſh, having a Galea and Labella ſo ſmall, that they are hardly perceivable; a white long Pointal ſtanding out of their Mouths. The Root creeps and ſpreads much in the Earth, being long and ſlender. The Leaves, Stalks, and Flowers, have a pleaſant agreeable Smell: It is planted in Gardens; and flowers in *July*; dying every Year. The whole Herb is uſed.

Mint is an Herb of great Uſe in all Diſorders of the Stomach, as Weakneſs, Squeamiſhneſs, Loſs of Appetite, Pain, Hiccough, and Vomiting: It is, likewiſe, accounted good to ſtop a Gonorrhœa, the Fluor Albus, and the immoderate Flux of the Menſes. A Cataplaſm of the green Leaves, applied to the Stomach, ſtays Vomiting; and, to Womens Breaſts, prevents the Hardneſs and Curdling of the Milk. *Parkinſon* commends a Decoction of Mint, to waſh the Hands of Children, who are broken out with Scabs and Botches.

Officinal Preparations of Mint are a ſimple Water and Spirit, a compound Syrup, and a diſtilled Oil. *Miller's Bot. Off.*

The Leaves of Mint put into Milk prevent its Coagulation, ſo that no Cheeſe can be prepared of it; they will not even ſuffer Milk to coagulate in the Stomach: For which Reaſon, ſays *C. Hoffman*, it ought to be in frequent Uſe with thoſe who feed much on Milk, or have no other Food. Here *Ray* takes Occaſion to make the following Reflection: "Milk, *ſays he*, received "into the Stomach, if that be rightly diſpoſed, muſt, according "to the Order of Nature, coagulate; and, therefore, where the "Stomach is ſound, and in due Order, there is no Neceſſity of "ſearching out Remedies for preventing Coagulation, but, only, "for the due Regulation of it, where the Stomach is infirm, or "abounds too much with an Acid; for though Milk, at its firſt "Reception into the Stomach, be coagulated, yet this Coagulum "is again diſſolved before it deſcends into the Inteſtines, which "is not ſo eaſily effected, if the Subſtance be hard and denſe be-"yond a due Degree."

The Juice of this Herb, and its diſtilled Water, are frequently uſed, in order to ſtop Vomitings: Thus, according to *Hartman*, two Ounces of this Water, drank once or twice, ſtop the moſt violent Vomitings.

This ſame diſtilled Water is much uſed by Nurſes, in order to remove thoſe Gripes with which Infants are ſo frequently ſeized. According to *Turner*, the Smell of Mint corroborates the Brain, and not only preſerves, but, alſo, increaſes, the Memory.

Authors ſeem to contradict each other, with reſpect to the Virtues of this Plant; ſince ſome affirm, that it proves a Stimulus to Venery; whilſt others maintain, that it prevents Venereal Dreams, and nocturnal Pollutions.

In *England* it is cuſtomary to boil Mint with Beans and Peas, in order to correct their flatulent Quality.

Of dry Mint, with an Addition of an equal Quantity of Rue, and a ſmall Portion of Canary-ſeeds, duly boiled in Vinegar of Ale, is prepared a Cataplaſm, which, firſt, ſurpriſingly reſolves Milk coagulated in the Breaſts, and, then, totally prevents the Generation of any for the future. This Cataplaſm is ſucceſsfully and promiſcuouſly uſed by Women in Child-bed.

Want of Appetite is excellently removed by an Elixir of Mint, prepared by Infuſion with ſome proper Spirit, and the Addition of a ſmall Quantity of Sugar. D. *Hulſe*, from *Ettmuller. Raii Hiſt. Plant.*

Mint abounds in a ſubtle and ſedative comforting Oil, which is highly friendly to the Nerves. But its Power of corroborating the Tone of the Stomach and Inteſtines is not only owing to this Oil, but, alſo, to a ſubaſtringent earthly Principle: For which Reaſon this Herb, either in Subſtance, or infuſed in Water, Wine, or Brandy, is highly beneficial, whether uſed internally, or externally, in ſtopping Hiccoughs, Vomitings, immoderate Fluxes, and Colics. I cannot forbear recommending Mint-water, whether prepared with Wine or Water, to the Uſe of all Families. After the previous Uſe of Purgatives, I have known inveterate Gonorrhœas, and a Fluor albus, happily removed, only by means of ſpirituous Mint-water, exhibited in due Quantities. *F. Hoffman de Præſt. Remed. Domeſt.*

7. Mentha; anguſtifolia; ſpicata; magis ſerrata. *Mentha quarta.* Dod. p. 95.

8. Mentha; latifolia; ſpicata; magis ſerrata.

9. Mentha; arvenſis; verticillata hirſuta. See CALAMINTHA PALUSTRIS.

10. Mentha; arvenſis; verticillata; folio rotundiore; odore aromatico. *D. Vernon. Raii Syn.* 123.

11. Mentha; hortenſis; verticillata; Ocymi odore. *C. B. P.* 227. *Boerh. Ind. alt.* 185. *Mentha fuſca.* Offic. *Mentha fuſca ſive vulgaris.* Park. Theat. 31. Raii Synop. 3. 232. *Mentha Cardiaca.* Ger. 553. Emac. 680. *Mentha verticillata minor acuta, non criſpa, odore Ocymi.* J. B. 3. 216. RED MINT.

This Plant is produced in Gardens, and watery Places; and agrees in Virtues with the other Species of Mint. *Dale.*

12. Mentha; rotundifolia; paluſtris; ſeu aquatica major. *C. B. P.* 227. *Tourn. Inſt.* 189. *Boerh. Ind. alt.* 185. *Mentha aquatica, Siſymbrium.* Offic. *Mentha aquatica rubra.* Park. Theat. 1243. *Mentha aquatica ſive Siſymbrium.* J. B. 3. 223. Ger. Emac. 684. Raii Hiſt. 1. 533. Synop. 3. 233. *Mentha aquatica.* Ger. 555. WATER-MINT.

This Mint has ſquare, hairy, brown Stalks, about a Foot high, or more, with two pretty large Leaves at a Joint, ſet on ſhort Foot-ſtalks, broad at the Baſis, and narrower toward the End; ſerrated about the Edges; of a very ſtrong Smell, ſomewhat like Penny-royal: The Flowers grow on the Tops of the Stalks, in round Spikes, with one or two of the ſame, a little lower, on the Stalks, at the Setting on of the upper Leaves: They are ſomewhat larger than common Mint, of a pale-purple Colour: The Root is ſtringy and fibrous. It grows in Ditches, and watery Places; and flowers in *July*.

Water-mint is rather hotter than Garden-mint, being carminative, expelling Wind out of the Stomach, and helping the Colic, opening Obſtructions of the Womb, and procuring the Catamenia. The Juice, dropped into the Ears, is good to eaſe their Pain, and help Deafneſs; but it is not much uſed. *Miller's Bot. Off.*

The Leaves of this Plant are acrid, bitter, aromatic, and make but a ſlight Impreſſion upon blue Paper: It has a very aromatic, volatile, oily Salt, is very ſtomachic and diuretic, and may be uſed as Tea. *Martyn's Tournefort.*

This Plant is produced in moiſt Soils, and flowers in the Month of *July*. The Whole of it is uſed; and in Virtues agrees with the other Species of Mint.

This Plant, as we are told by Mr. *Dale*, was, by an illiterate *London* Quack, eſteemed ſo powerful a Specific againſt the Stone, that, when he had Occaſion to exhibit it for that Purpoſe, he retired to his Cloſet, and cut it ſo ſmall, that it was no eaſy Matter to diſcover what Plant it was. At laſt a ſmall Quantity of this Arcanum coming into the Hands of one Dr. *Watſon*, he ſowed it in his Garden, and the Produce revealed the Secret.

This Mint is juſtly commended againſt Pains of the Stomach: For which Reaſon the Water diſtilled from it is by ſome called Colic-water. *Dale.*

13. Menthaſtrum; Chalepenſe; anguſtifolium; rarò florens. *Boerh. Ind. alt. Plant.*

The two firſt Species are eſteemed the moſt beautiful of all the others, and have both the Taſte and Smell of Penny-royal; for which Reaſon they may be uſed as a Succedaneum to it. The twelfth Species is commended for its acrid, balſamic, and aromatic Quality; is of an heating Nature, and highly extolled for the happy Effects it produces on the Stomach. *Sydenham* informs us, that he cured Hiccoughs and Vomitings by giving every Hour an Ounce of Mint-water, cold: It is beneficial to Patients afflicted with atrabiliarous and hyſteric Diſorders. In bloody Dyſenteries, the Herb bruiſed, and applied to the Abdomen, is a ſovereign Remedy; but is ſaid to deſtroy that Power to which we give the Name of Virility: But I know not why Authors have aſſerted this; ſince I am rather of the contrary Opinion. It is carminative, and excites copious Eructations, as *Martial* tells us,

Nec deeſt ructatrix Mentha, nec Herba ſalax.

It cures all Diſorders of the Stomach, and Iliac Pains, when proceeding from a cold Cauſe. It is beneficial in the Scurvy; provokes Urine, and the Menſes. The Herb boiled with Whey, and applied externally to the Face, ſolicits eryſipelatous Swellings, and Inflammations of the Fauces, to the Surface; and, by that means, relieves the internal Parts. A few Drops of the Spirit of Mint, exhibited in *Spaniſh* Wine, prove an excellent Medicine againſt Diſorders of the Stomach. Externally, the Leaves, or the Spirit mixed with *Rheniſh* Wine, are applied to the Abdomen, in order to ſtop Vomiting. Of the tender Tops an excellent Conſerve is prepared; as, alſo, a Spirit, which exceeds all other Carminatives, and is an excellent Cordial; and an Oil, of which an Elæoſaccharum and Balſam are made, which are highly beneficial againſt Convulſions proceeding from a cold Cauſe; and are excellent for the Cure of Contuſions and Wounds. This Plant, alſo, kills Worms. *Hiſt. Plant. Boerh. adſcript.*

Beſides the foregoing Species of Mentha, *Dale* mentions the four following; which are,

1. MENTASTRUM. Offic. Ger. Emac. 684. *Mentaſtrum ſpicatum folio longiore candicante.* J. B. 3. 221. Raii Hiſt. 1. 532. Synop. 3. 234. *Mentha ſylveſtris folio longiore.* C. B. P. 227. Tourn. Inſt 189. HORSE-MINT.

This wild Mint grows not ſo tall as the garden Mint, nor ſo much branched, having ſquare, hoary Stalks, with two long ſharp-pointed Leaves, hoary likewiſe, eſpecially underneath, and ſerrated about the Edges, without any Foot-ſtalks. The Flowers grow at the Ends of the Stalks, in long, narrow Spikes, being ſmall and purple. The whole Plant has a ſtrong, but not unpleaſant Smell.

Horſe-mint is much of the Nature of Water-mint before-mentioned, and is good for the Wind and Colic of the Stomach, to procure the Menſes, and expel the Birth and Secundines, being an Ingredient in the Troches of Myrrh, much uſed in theſe Caſes. *Miller's Bot. Off.*

2. MENTHA SYLVESTRIS. Offic. *Mentha ſylveſtris rotundiore folio.* C. B. P. 227. Tourn. Inſt. 189. *Mentaſtrum.* Ger. Emac. 683. *Mentaſtrum folio rugoſo rotundiore, ſpontaneum flore ſpicato, odore gravi.* J. B. 3. 219. Raii Hiſt. 1. 532. Synop. 3. 234. ROUND-LEAVED HORSE-MINT.

This Species is produced in watery Soils. The Whole of it is uſed, and, according to *Chomel*, is good againſt Diſorders of the Stomach, and thoſe of the hyſteric Kind. *Dale.*

3. MENTHA PIPERIS SAPORE. Offic. *Mentha ſpicis brevibus & habitioribus, foliis Menthæ fuſcæ ſapore fervido Piperis.* Raii Synop. 3. 134. *Mentha Paluſtris ſpicis brevioribus & habitioribus, foliis oblongis, ſapore Piperis.* Raii Hiſt. 3. 284. PEPPER-MINT.

The Leaves of this Mint are broader, and ſomething ſhorter, than thoſe of Spear-mint, growing on Foot-ſtalks half an Inch long, ſharply ſerrated about the Edges. The Stalks are ſquare, about two Feet high. The Flowers are numerous, and grow in looſe oblong Spikes on the Tops of the Branches; they are bigger than thoſe of Spear-mint, but of the ſame Colour, and more thickly ſet. Both Leaves and Flowers have a pleaſing Scent, and an hot biting Taſte, like Pepper. The Root is ſlender and creeping; it grows in ſeveral Places, both in *Eſſex* and *Hertfordſhire*.

This Mint is eſteemed, by ſome, to be an excellent Remedy againſt the Stone and Gravel; which ſeems to be very probable, for, beſides its hot and biting, it has, alſo, a very diſcernible nitrous Taſte. *Miller's Bot. Off.*

4. AURICULARIA. Offic. *Auricularia Indorum ad ſurditatem efficax*, EARWORT, *vulgo* MARLOW *Mentaſtrum minus.* Ger. Emac. 685. *Mentaſtrum hirſutum.* Park. Theat. 34. *Mentaſtri aquatici genus hirſutum ſpica latiore.* J. B. 3. 222. Raii Hiſt. 1. 533. Synop. 3. 234. *Mentha paluſtris folio oblongo.* C. B. P. Tourn. Inſt. 189. CYLONIAN PLANT.

Doctor *Marlow*, in his Obſervations, mentions a Plant under the Name of *Planta Zeylanica*, without any other Deſcription or Characteriſtic, whereby it may be known, and its Uſes derived down to Poſterity. Hence 'tis diſputed, among Botaniſts, what Species of Plant this may poſſibly be; and though the whole of them agree, that it is a Species of Mint, yet what that particular Species is, remains ſtill dubious. Doctor *Pluckenet* is of Opinion, that it is a kind of Mint, growing in *Maryland*, which he takes notice of in his *Mantiſſa*. But Dr. *Sloane* is of Opinion, that it is a certain Species of Water-mint. Nor is this Conjecture improbable, becauſe in ſome ſmall Portions of this Plant, ſhewn me by Mr. *Finch*, an Apothecary, in *London*, and Succeſſor to Dr. *Marlow*, I perceived an exquiſite Smell of Water-mint; and Mr. *Finch* affirmed to me, that this Plant was produced in *England*, notwithſtanding the exotic Name given it by Dr. *Marlow*. *Dale. Pharmac.*

MENTHA AQUATICA. A Name for ſeveral Sorts of PULEGIUM; which ſee.

MENTHA CATARIA. A Name for ſeveral Sorts of CATARIA; which ſee.

MENTHA CORYMBIFERA. See BALSAMITA.

MENTHA FELINA. A Name for the Cataria; major; vulgaris.

MENTHASTRUM. See MENTHA.

MENTULAGRA. A Diſorder of the *Penis*, induced by a Contraction or Convulſion of the *Erectores Muſculi*, and inducing Impotence. *Caſtellus.*

MENTUM. The Chin.

MENYANTHES.

The Characters are;

The Root is perennial, and creeping; the Leaves reſemble thoſe of the Bean in Form and Size, three of them growing upon one Pedicle; the End of the Pedicle becomes a monopetalous, quinquefid, and expanded Calyx; the Flower is Funnel-ſhap'd, and deeply cut into Segments; the Inſides of which are elegantly fimbriated with white Cirrhi, and they are collected into a *Thyrſus*: The Fruit is oblong, bivalvular, unicapſular, furniſhed with a long Tube, and rough Apex, and full of round Seeds lying in the Bottom of the Calyx.

Boerhaave mentions two Species of this Plant; which are,

1. Menyanthes; paluſtre; latifolium, triphyllon. *Tourn. Inſt.* 117. *Boerh. Ind. A.* 205. *Raii Synop.* 3. 285. *Trifolium paluſtre, paludoſum.* Offic. *Trifolium paluſtre.* J. B. 2. 389. C. B. P. 327. Raii Hiſt. 2. 1099. *Trifolium paludoſum.* Ger. 1024. Emac. 1194. Park. Theat. 1212. *Trifolium fibrinum.* Offic. *Acopa Dioſcoridis.* Hiſt. Oxon. 3. 604. BUCK-BEAN, or MARSH-TREFOIL.

Marſh-trefoil has ſmooth round Stalks, three or four Inches long, on which grow three longiſh, round Leaves, ſomewhat reſembling the Leaves of Beans; among theſe ariſe Stalks about two Feet high, bare of Leaves, and bearing on the Top a Spike of whitiſh-purple Flowers, of one Leaf divided into five Segments, whoſe Inſide is covered with a curled Downineſs, having five whitiſh Chives in the Middle, all ſet in five-cornered Calyces. The Seed is ſmall and brown, growing in roundiſh Seed-veſſels; the Root is long and jointed, with many whitiſh Fibres at each Joint. It grows in marſhy, boggy Grounds, and flowers in *May* and *June*. The Leaves are uſed.

This is reckoned a great Antiſcorbutic, and very ſerviceable for the Gout, Rheumatiſm, and Dropſy, and is much uſed in Diet-drinks for thoſe Diſtempers. It is likewiſe a good Stomachic, and is made uſe of againſt intermitting Fevers. *Miller's Bot. Off.*

Being analyſed, beſide ſome acid Liquors, it yields ſome concreted, volatile Salt, and a good deal of Earth and Oil. It contains ſome Sal Ammoniac, wrapped up in Sulphur, and terreſtrial Parts; ſo that it is good for the Scurvy, Gout, Cachexy, and Dropſy. In a Fit of the Gout, give the Patient, every four Hours, a Glaſs of the Decoction of this Plant. *Martyn's Tourn.*

Simon Paulli commends it greatly in ſcorbutic Caſes, and ſays 'tis more ſubtle and penetrating than the *Naſturtium*. *Bartholine*, alſo, juſt mentions it. It ſeems, at this time, to be coming into great Repute in many chronical Diſtempers. Many uſe it in their Families in the Form of Tea; and experience its conſtant Uſe to be very effectual againſt Scrophulas, the King's-evil, and all obſtinate ſcorbutic Diſtempers. Its Taſte, at firſt Uſe, is not very grateful, being ſomewhat of a nauſeous Bitter; but Time wears off that Diſlike.

2. Menyanthes; paluſtre; anguſtifolium; triphyllon. *T.* 117. *Trifolium, paluſtre, minus, acutiori folio.* C. B. P. 327. *Boerh. Ind. alt. Plant.*

MENTZELIA.

The Characters are;

It hath a Roſe-ſhaped Flower, conſiſting of ſeveral Leaves, which are placed in a circular Order, and reſt on the Flower-cup, which afterwards becomes a membranaceous tubulous Fruit, containing many ſmall Seeds.

Miller mentions but one Sort of this Plant; which is,

Mentzelia foliis & fructibus aſperis. *Plum. Nov. Gen.*

The Name was given to this Plant by Father *Plumier*, who diſcovered it in the *French* Settlements, in Honour to Dr. *Mentzelius*, who was Phyſician to the Elector of *Brandenburgh*, and who publiſhed an Index of Plants in *Latin*, *Greek*, and *High Dutch*.

This Plant grows plentifully in the Iſland of *Jamaica*, but I know of no medicinal Virtue aſcribed to it.

MEPHITIS. A poiſonous Exhalation; or what the Miners call a Damp. Dr. *Mead*, ſpeaking of Mephitical Exhalations, ſays, that it is notorious, that People may be poiſoned by venommous Steams, and Exhalations, or a poiſonous Air, taken into the Body by the Breath.

And Authors, upon many Occaſions, make mention of it; but, when they come to explain the particular Manner how this kills, they moſt commonly reduce it to ſome of the Poiſons which prove deſtructive, by being admitted into the Stomach, alleging, that malignant Fumes and Airs are, therefore, fatal, becauſe impregnated with Arſenical, Mercurial, and the like deleterious *μιάσματα*, or Particles, that convey theſe into the Blood; which, being of a very corroſive Nature, muſt neceſſarily do Hurt both to the fluid and ſolid Parts.

And indeed, that the Fumes of theſe ſame Minerals are very pernicious, and Air filled with their Atoms very unfit for Reſpiration, is moſt certain: But to argue from hence, that all deadly Vapours, and malignant Airs, owe their Miſchief to theſe only, is too fond and ill-grounded a Conceit; ſince, upon a due Inquiry, it will appear, that there may be, and are, mortiferous Exhalations from the Earth, infecting the Air, of a Nature ſo different from any of thoſe Poiſons, that the very Subſtance, from which they ariſe, may not be at all hurtful, though taken into the Stomach itſelf.

Venomous Steams and Damps from the Earth, the *Latins*, in one Word, called *Mephitis*.

This, as many other *Tuſcan* Words, comes from a *Syriac* Theme, which ſignifies to blow or breathe.

And in antient Times ſeveral Places were notorious for them: So the *Mephitis* of *Hierapolis* was very famous, of which *Cicero*, *Galen*, but more particularly, and from his own Sight and Knowledge, *Strabo* makes mention.

Such another was the *Specus Corycius* in *Cilicia*, which upon the Account of its ſtinking deadly Air, ſuch as is thought to proceed from the Mouth of Dragons, which the Poets give to *Typhon*, was called *Cubile Typhonis*. This *Pomponius Mela* deſcribes, and it is, indeed, as antient as *Homer*; for *Arima*, in which he places it, was, as *Euſtathius* ſays, a Mountain of *Cilicia*.

Neither

Neither are ſuch Fumes as theſe infrequent now-a-days; and though moſtly taken notice of in Mines, Pits, and other ſubterraneous Places, yet they are ſometimes met with on the Surface of the Earth too, eſpecially in Countries fruitful of Minerals, or impregnated with imbowelled Fires: Such are *Hungary* and *Italy*, which latter, as *Seneca* obſerves, has always been, more than any, remarkable for them.

I ſhall therefore, having had the Opportunity of making ſome Remarks upon one of the moſt famous in all theſe Parts, give as good an Account as I can of that, and its manner of killing; which though I dare not affirm to be univerſally applicable to any *Mephitis* whatſoever, yet ſeems plainly to be the Caſe of moſt of them; and where it is not, this ſimple Miſchief will only be found to be complicated with another; and then ſome extraordinary Symptoms or Appearances in the Animals killed will eaſily make a Diſcovery of the additional Venom and Malignity.

This celebrated *Moſeta*, taken notice of, or at leaſt ſome other hereabouts, even in the Time of *Pliny*, is about two Miles diſtant from *Naples*, juſt by the *Lago d'Agnano*, in the Way to *Pozzoli* or *Puteoli*; and is commonly called *La Grotta de Cani*, becauſe the Experiment of its deadly Nature is frequently made upon Dogs; though it be as certainly fatal to any other Animal, if it come within the Reach of its Vapour; for *Charles* the Eighth of *France* proved it ſo upon an Aſs; and two Slaves put into it, by Order of *D. Pietro di Toledo*, Viceroy of *Naples*, with their Heads held down to the Earth, were both killed.

'Tis a ſmall Grotta, at the Foot of a little Hill, about eight Feet high, twelve long, and ſix broad; from the Ground ariſes a thin, ſubtle, warm Fume, viſible enough to a diſcerning Eye, which does not ſpring up in little Parcels here-and-there, but is one continued Steam, covering the whole Surface of the Bottom of the Cave; and has this remarkable Difference from common Vapours, that it does not, like Smoke, diſperſe itſelf into the Air, but quickly after its Riſe falls back again, and returns to the Earth; the Colour of the Sides of the Grotta being the Meaſure of its Aſcent; for, ſo far, it is of a darkiſh-green; but, higher, only common Earth, and this is above ten Inches. And, therefore, as myſelf found no Inconvenience by ſtanding in it, ſo no Animal, if its Head be kept above this Mark, is in the leaſt injured: But when (as the manner is) a Dog, or any other Creature, is forcibly held below it, or by reaſon of its Smalneſs can't hold his Head above it, it preſently, like one ſtunn'd, loſes all Motion, falls down as dead, or in a Swoon, the Limbs convulſed, and trembling, till, at laſt, no more Sign of Life appears than a very weak, and almoſt inſenſible Beating of the Heart and Arteries, which, if the Animal be left there a little longer, quickly ceaſes too, and then the Caſe is irrecoverable; but if ſnatched out, and laid in the open Air, ſoon comes to Life again; and ſooner, if thrown into the adjacent Lake.

In this ſhort, but accurate Hiſtory of the *Grotta de Cani*, I have ſet down thoſe Particulars, which do not only diſtinguiſh Mephitical Exhalations from common and innocent Fumes, but, alſo, give Hints ſufficient, I think, mechanically to determine the Reaſon and Manner of their ſurpriſing Effects.

And, not to ſpend Time in refuting the Opinions of others, I ſhall only take notice, that here can be no Suſpicion of any true Venom, or real Poiſon: If there was, it were impoſſible, that Animals taken out of the Grotta, ſhould ſo immediately recover the Effects of it, without any remaining Appearance of Faintneſs and Sickneſs, or ſuch-like Symptoms as thoſe ſuffer, who have been breathing in an Air impregnated with malignant corroſive Effluvia; beſides that the venomous Corpuſcles would certainly, in ſome degree, at leaſt, infect the Air in the upper Part of the Cave, which continues pure, and fit for Reſpiration. Neither, indeed, after what manner ſoever this Poiſon be imagined to act, whether by diſſolving or coagulating the Blood, could its Efficacy be ſo ſudden and momentaneous, without ſome Marks of it in the Creatures kill'd, when opened, which yet diſcover nothing of this Nature extraordinary, neither in theſe, nor in the ſolid Parts.

In order, therefore, to underſtand wherein this deadly Quality conſiſts; I ſay, in the firſt Place, that Life, ſo far as it reſpects the Body, is, in one Word, the Circulation of the Blood; that is, its Motion in conical, diſtractile Veſſels, from the Heart to the extreme Parts, and its Return to the Heart again, by the ſame Canals inverted; for 'tis upon this that all animal Functions, all Senſe and Motion, voluntary and involuntary, depend; ſo that the Regularity of this Courſe is the Meaſure of Health, or the moſt perfect Life, as its various Irregularities are the Occaſions of Sickneſs and Diſeaſes, or a beginning Death.

Now all the animal Operations and Offices which proceed from this Circulation, are the Effects of ſeveral Secretions of Liquors of very different Natures, out of the ſame fluid Maſs: It was, therefore, abſolutely neceſſary, that the Blood, before it be diſtributed to the Organs, ſhould be ſo comminuted and broken, as that no Coheſion of its Parts ſhould hinder the Separation of the Juices from it, when it arrives with a determinate Force at the Orifices of the ſecretory Veſſels.

This Work is done in its Paſſage through the Lungs, by the repeated Compreſſion of the Air in thoſe Bladders upon the Arteries with wonderful Contrivance diſperſed among them. Herein lies the Uſe and Neceſſity of Reſpiration; and the ſudden Miſchief of ſtopping it, in that the whole Maſs of Blood being to paſs this Way, upon a Check here, there preſently enſues a Stagnation, that is, a Ceſſation of all animal Functions, or Death; which will be more ſpeedy, if not only no Air is inſpired, but a Fluid of a quite different Nature from it ſucceeds in its Place.

Wherefore it muſt be obſerved, that this good Effect of the Air is performed by its Elaſticity; and that no Fluid whatſoever, that we know beſides, is elaſtic, at leaſt to any conſiderable Degree, that is, has a Faculty of expanding and dilating itſelf when compreſſed; no, not Water, as near as that is thought to approach to Air in its Nature.

And, as to the preſent Caſe, I took notice before, that this Vapour is one continued and uninterrupted Steam; and that, quickly after its Riſe, it falls down again; that is, that it has little or no Mixture of Air with it, or no Elaſticity; and is, on the other hand, very heavy, when forſaken by the Force of Heat, that drove it upwards.

So that I make no Queſtion, but that Animals in this Place, inſtead of Air, inſpire mineral Fumes, that is, a thin watery Vapour, impregnated with ſuch Particles as do, when united together, compoſe ſolid and heavy Maſſes; which is ſo far from helping the Courſe of the Blood through the Lungs, that it rather expels the Air out of the Veſiculæ, and ſtraightens the Paſſage of the Blood-veſſels, by its too great Gravity; whereupon the Bladders are relaxed, and ſubſide, and the Circulation is immediately interrupted. But if the Animal be, in time, removed out of this Steam, that ſmall Portion of Air, which does, after every Expiration, remain in the Veſicle, may be powerful enough to drive out this noxious Fluid; eſpecially if the Head of the Creature be held downwards, that ſo its Gravity may forward its Expulſion; or it be thrown into Water, which by aſſiſting, upon the Account of its Coldneſs, the Contraction o the Fibres, promotes the retarded Circulation of the Blood; as we every Day experience in a *Deliquium Animi*, or ſwooning Fit.

Though, if this Stagnation continue too long, no Art can renew Life, no more than in one perfectly ſtrangled, nor will the Lake of *Agnano* itſelf be of any Service; which ſhews that there is no ſingular Virtue in that Water beyond any other; nor is it, as ſome have fondly imagined, a peculiar Antidote to the Poiſon of the *Grotta*.

The bad Effects of ſuch Fumes as this will be the more certain, becauſe the inſpired mineral Particles twitch and irritate the Membranes, which are hereupon contracted to that Degree, as not to be able to recover their Tone; and ſo the Force and Action of the Lungs is quite loſt.

It appears from all this not to be at all neceſſary to make any farther Inquiry into the particular Nature of theſe mineral Particles, ſince they do, in this Caſe, act chiefly by their Gravity, which is common to them all: Though, indeed, the greeniſh Colour of the Earth, together with its ſubacid Taſte, very much (as *L. di Capoa* obſerves) like to that of the Phlegm of Vitriol, ſeem to declare them, if not altogether, yet principally, at leaſt, to be vitriolic.

To conclude this Part of our Diſcourſe; I think it a ſufficient Confirmation of this Reaſoning, that in Frogs, killed in this Grotta, the Bladders of the Lungs (more viſible in theſe Creatures than in moſt others) were found ſubſided, and quite empty of Air. But, if any one deſires a further Proof, he may, according to theſe Principles, make (as *Lionardo di Capoa* did) an artificial *Mephitis*; for if Antimony, Biſmuth, or any other ſuch Mineral, be finely powdered, and moiſtened with Aqua-fortis, or Spirit of Nitre, there will ariſe a great Heat, and a thick, dark Smoke, in which, as in the *Grotta di Cani*, Torches are extinguiſhed, and Animals, though but ſlowly, ſtifled and killed. And this Effect will be more ſenſible, and equal to the moſt violent Mephites, if the Antimony or Marcaſite be mixed with Bitumen, and the Spirit of Nitre, or Aqua-fortis, intirely depurated from all its Phlegm.

Thus I have ſhewn how Death may enter at the Noſtrils, though nothing properly venomous be inſpired. It were, perhaps, no difficult Matter, to make it appear, how a leſſer Degree of this Miſchief may produce Effects, though ſeemingly different from theſe now mentioned, yet in Reality of the ſame pernicious Nature; I mean, how ſuch an Alteration of the common Air, as renders it in a manner mephitical, that is, increaſes its Gravity, and leſſens its Elaſticity, (which is done by too much Heat, and at the ſame time too great a Proportion of watery and other groſſer Particles mixed with it) may be the Cauſe of epidemic Diſeaſes, and, it may be, more eſpecially of thoſe, which, by reaſon of their untoward Symptoms, are uſually called malignant.

For it is very remarkable, that *Hippocrates* obſerved the Conſtitution of the Air, which preceded peſtilential Fevers, to be great Heats, attended with much Rain, and Southern Winds;

and *Galen* takes notice, that no other than a moiſt and hot Temperament of the Air brings the Plague itſelf; and the Duration of this Conſtitution is the Meaſure of the Violence of the Peſtilence. *Lucretius* is of the ſame Mind; for, in his admirable Deſcription of the Plague of *Athens*, *Theſe Diſeaſes*, ſays he, *either come from the Air, or ariſe from the Earth.*

——— Ubi *Putrorem humida* nacta eſt
Intempeſtivis *Pluviiſque*, & *Solibus* icta.

In ſhort, the general Hiſtories of epidemic Diſtempers almoſt conſtantly confirm thus much, and would have done it more, if the vain Notion of occult Venoms had not poſſeſſed the Minds of Authors, and made them regardleſs of the manifeſt Cauſes.

This is notorious enough in thoſe Countries where malignant Diſeaſes are moſt rife: Thus it is a very common Obſervation in the *Eaſt Indies*, that during the dry Heats the Seaſon is healthful; but, when the Rains fall, immediately upon the hot Weather, then untoward Fevers begin to threaten.

The ſame is obſerved in *Africa*; for, (as *Joan. Leo* relates) if Showers fall there during the ſultry Heats of *July* and *Auguſt*, the Plague and peſtilential Fevers enſue thereupon, with which whoſoever is infected hardly eſcapes.

And here I might, by reflecting on the Uſe and Neceſſity of Reſpiration, and the particular Manner of performing it, (of which I have hinted ſomething already) and conſidering withal the true Nature of Fevers, eaſily ſhew how ſuch a Conſtitution of the Air, as this is, muſt neceſſarily produce ſuch Effects; might run over the Propoſitions of *Bellini*, which, as they plainly evince malignant and peſtilential Fevers to be owing to a viſcid and tenacious Lentor, or Slime, which firſt obſtructs the capillary Arteries, and, afterwards, being diſſolved by Heat, ferments with the Blood, and changes it into a Maſs unequally fluid and glutinous, and, therefore, unfit for all the Operations of the animal Oeconomy; ſo it would be no uneaſy Task to prove, that Air, at the ſame time hot and moiſt, being leſs able to comminute and break the arterial Fluid in the Lungs, than is neceſſary, in order to prepare it for Secretions; it is no Wonder, if, when the Blood, paſſing through the capillary Veſſels, arrives at the ſecretory Organs, the Coheſion of its Parts not being ſufficiently removed, inſtead of deriving ſeveral Juices out of it into the Glands, it leaves its moſt glutinous and viſcid Parts ſticking about the Orifices of theſe Veſſels; which, though they may, at firſt be waſhed away by the repeated Impulſes of the ſucceeding Blood, yet, the Cauſe continuing, and theſe Strokes growing ſtill weaker and weaker, (from a leſſer Quantity of Spirits being ſeparated, and hence a more languid Contraction of the Heart) theſe Obſtructions are increaſed to that Degree as not to be removed, till, by the violent Agitation of a greater Heat, this ſlimy Mucus is thrown into the Blood again; and there, in the Nature of a Ferment, ſo diſturbs its Mixture, and changes its Compages, as to make it a Fluid of quite different Properties, that is, altogether unfit for the ſame Functions or Offices.

This Effect will be the more certain, becauſe a damp Air upon the Surface of the Body checks inſenſible Perſpiration, ſo that a great Quantity of this being detained, the Obſtructions are ſtill greater in the ſmall Tubes; whereas, indeed, upon the account of a more than ordinary Heat, this Diſcharge ought to be in an increaſed Proportion.

Such a Diſpoſition of the Blood as this the Antients called putrid; and, to ſpeak plainly, it is a beginning Stagnation, with a ſucceeding Heat and Fermentation.

Nor would it be amiſs here to take notice, how unjuſtly ſome Authors have quitted the Conſideration of plain Cauſes, for occult Venoms, and *Deleterium quid*; have brought in the Θεῖον τι (*ſomething divine*) of *Hippocrates*, to favour their fond Hypotheſis; though his beſt Interpreter, *Galen*, underſtood by this Expreſſion no ſuch thing as they mean; but, on the other hand, only the manifeſt Conſtitution of the ambient Air, ſuch as himſelf has deſcribed in his Aphoriſms, and which is exactly the ſame with what we have been diſcourſing of.

And, therefore, not only does *Minodorus* rightly remark, that, in his whole *Epidemics*, *Hippocrates* never once mentions any Venom or Poiſon as the Cauſe of malignant Diſeaſes, but the divine old Man himſelf, in another Treatiſe, expreſly teaches us, that all Maladies equally, or one as much as another, proceed from the Gods, there being nothing more divine in this than in that, each acknowledging its own natural and manifeſt Cauſe.

But I willingly wave inſiſting upon theſe Heads, as well as the Hints which might be taken from this Theory, of ſome Uſe, perhaps, in the Cure of theſe Diſtempers; and leave to our Phyſicians to judge upon how good Grounds they do, in Caſes of this Nature, under the Notion of Alexipharmics, give ſuch Medicines as raiſe a great Heat, both in the Stomach and Blood; only praying them to take care, leſt, while they are engaging the animal Spirits in War with Malignities, they ſend treacherous Auxiliaries to the ſuppoſed weak Party; that is, that they either raiſe new Tumults and Diſorders, of worſe Conſequence than the original Miſchief; or, at leaſt, by clogging the Wheels, and throwing Duſt upon the Springs, of the firſt Machine in the Creation, check and interrupt the Action of Nature, when it is employed about the moſt nice and critical Work.

Neither can I, though an Occaſion be fairly offer'd, by any means be induced to intermeddle in the Controverſy of thoſe Gentlemen, who, by the Help of two Words, are made Maſters both of Philoſophy and Phyſic; I mean the violent Aſſertors of *Acid* and *Alcali*: Theſe ſcanty Principles fall infinitely ſhort of that vaſt Variety there is in the Works of Nature; however, for their ſakes who are as yet advanced no farther, I will adviſe the contending Parties (becauſe little Good is got by quarrelling) to think of an Union; and, if they can find no Remedies but out of theſe two Tribes, to make uſe of ſuch as reſult from a prudent Mixture of each; if this Project does not take, to reſolve, however, on both Sides, to diſtinguiſh the different Times of the ſame Diſeaſe, and know, that as, on the one hand, acid Medicines are often as certainly hurtful in the latter End, as they do Service in the Beginning, of the Fever; ſo, on the other, thoſe which are alcalious muſt neceſſarily, for the ſame Reaſon, do Miſchief in the firſt Periods, for which they are profitable, in the laſt Days of the Diſtemper.

By what Mechaniſm this comes to paſs, they will eaſily underſtand, when they have learned what Alteration ſuch things as theſe are, make in the human Body; nor will it then be a difficult matter to convince them, that he is equally a fond Slave to an Hypotheſis, who, becauſe Acids are ſometimes of great Service in Fevers, concludes, that their Origin is alcalious; as he, who, knowing that ſtagnating and fermenting Juices do eaſily turn to Acidity, from thence argues, that Alcalies are the only Cure of this Stagnation and Ferment.

But Dr. *Pitcairn* has abundantly demonſtrated the Weakneſs of theſe Mens Reaſonings, and the Vanity of ſuch immechanical Theories.

And here I would put a Period to this Part of the Diſcourſe, were it not that theſe Diſtempers being ſometimes contagious, and Contagion being juſtly reputed a real Poiſon, it may be worth while to examine what this is, and wherein it conſiſts; more eſpecially, becauſe ſome may, perhaps, be ready to think this to be an Argument of an occult Venom being the firſt and original Cauſe.

We are, therefore, to take notice, that when a Fever is communicated by way of Infection from one already diſeaſed, this moſt commonly happens in the latter End of the Diſtemper, that is, when the fermenting Blood is throwing off great Quantities of its active fermentative Particles upon the Glands of the moſt conſtant and eaſy Secretion; ſuch are thoſe in the Surface of the Body, and the Mouth and Stomach: By theſe means, therefore, the Liquid of inſenſible Perſpiration, and the Sweat, is impregnated with theſe μιάσματα; and thus the ambient Air becomes filled with them; ſo that not only (as *Bellini* argues) may ſome of theſe Effluvia inſinuate themſelves into the Blood of a ſound Perſon through the Pores of the outward Skin, but, alſo, in Inſpiration through the Membranes of the Lungs; for he has, in another Place, demonſtrated how the Air, or ſomething from it, may this way come to be mixed with the arterial Fluid; and thus the like Ferment will be raiſed here, as was in the originally diſtempered Subject.

This may be one, but there is, perhaps, another yet more dangerous manner of Infection, and that is, by the Breath of the Diſeaſed taken in by a By-ſtander, eſpecially in the laſt Moments, ſeizing the Stomach, and fixing a Malignity there. For it is upon this ſcore, that thoſe who are infected do preſently complain of an extreme Pain and Nauſea in the upper Orifice of the Stomach, that all Authors agree in the admirable Uſe of Vomits, timely given, in this Caſe; theſe, by their ſtimulating Force, removing the very Minera of the Diſeaſe; and, likewiſe, that often in peſtilential Illneſſes, the Stomach, when opened, has been found gangrened and mortified: This made *Van Helmont*, who had obſerved this Part in one killed by a Plague-Infection, perforated and eroded in ſeveral Places, no otherwiſe than he had ſeen in one poiſoned by Arſenic, conclude, that the Plague, for the moſt part, begins in the Stomach, from a coagulated Tartar there.

Herein lies the Difference of Contagion, from the firſt Invaſion of malignant Diſtempers: The Effects of the one are the Cauſe and Beginning of the other; and, therefore, it is no Wonder, if, though the Symptoms in the former are, by a gradual Increaſe, wrought up to their Height, they do, however, in the latter, even at the very firſt, diſcover their ill Nature and Violence, and, like a re-inforced Enemy, by ſurer Strokes, make quicker Diſpatch. And this, alſo, is the Reaſon of the great Increaſe of Funerals in Plague-time, in that one Death is thus added to another.

If it be difficult to explain the particular Manner how the Stomach comes to be thus affected, we muſt not, therefore, deny matter of Fact; and may, however, probably conjecture, that the laſt Breath of one dying of a malignant Diſtemper proves thus pernicious, in that thoſe fermenting active Particles, which, as we juſt now obſerved, the Blood diſcharges upon the Glands of the Mouth, Stomach, Lungs, *&c.* impregnating the Air in

its Paſſage through theſe; when the ſame happens to be immediately inſpired by a ſound Perſon, it may eaſily taint the ſalival Juices in the Mouth, which are very glutinous, and of a fermenting Nature, and, therefore, ſuſceptible enough of contagious Effluvia, but, eſpecially, of ſuch as proceed from the ſame Liquor infected in the ſick Party. Now the Spittle is continually ſwallowed down into the Stomach, and ſo will quickly impreſs its Labes, or ill Quality, on ſo tender and ſenſible a Part; that is, will lodge theſe corroſive Salts (for ſuch we may ſuppoſe the Particles of Infection) in the ſecretory Ducts: Whereupon the Glands being obſtructed, little Tumors are, by the Afflux of their Fluid, raiſed here-and-there, which, breaking, become ſmall Ulcers, and produce that diſmal Train of Symptoms, which we have already related.

And here it may not be amiſs to take notice, that all Authors agree one great Cauſe of peſtilential Diſtempers, eſpecially in Armies and Camps, to be, dead Bodies lying expoſed and rotting in the open Air; the Reaſon of which is plain, from what we have been advancing: For Battles being generally fought in the Summer-time, it is no Wonder if the Heat acting upon the unburied Carcaſes, and fermenting the Juices, draws forth thoſe active Particles, which in great Quantities filling the Atmoſphere, when they are inſpired, and let into the Stomach, do affect it after the manner already deſcribed.

To illuſtrate this Matter, I ſhall relate a remarkable Story, told me by the late Dr. *Baynard*. The Body of a Malefactor was hung up in Chains in the Country. After a few Months, in very hot Weather, it was Sport and Paſtime to ſome Boys, playing thereabouts, to ſwing the Carcaſe up and down: One, more bold than the reſt, ſtruck it with his Fiſt upon the naked Belly, which, being outwardly parched and dry, and, from the Falling down of the Humours, ſwelled and tenſe, was eaſily burſt by the Blow: Out guſhed a Water ſo corroſive and fiery, that, running down the poor Lad's Arm, it cauſed a violent Excoriation, and a very hard matter it was to preſerve it from being truly mortified. What this Serum could do upon the outward Skin, the more volatile Parts of it would, without all doubt, effect upon the more tender and ſenſible Membranes of the Stomach, if a conſiderable Number were fixed there; the Fluids of human Bodies being ranker, and more abounding in active Salts, than thoſe of other Creatures, which are not continually repaired and nouriſhed by the Juices of Animals.

The Way by which bad Food, unripe Fruits of the Earth, *&c.* produce malignant and peſtilential Diſeaſes, is not very different from that by which we have obſerved unwholſome Airs to be the Cauſe of the like Effects. For the Juices with which thoſe ſupply the Blood, being corrupted, neceſſarily make a Fluid of quite other Properties than what the animal Oeconomy requires; that is, neither fit for Nutrition, nor for the Secretion of thoſe Liquors which in the ſeveral Organs are to be derived from it; whereupon the ſmall Tubes are obſtructed by an unequally glutinous Slime: And it is, therefore, no Wonder, if, beſides the other Symptoms enſuing, ſore Puſtules, Inflammations, Ulcers, *&c.* (more common in Fevers from this Cauſe than from any other) are raiſed on the Surface of the Body.

This is the Ground of the common Obſervation, that a Famine is very often ſucceeded by a Peſtilence. And this Calamity generally begins among the poorer Sort of People, whoſe Diet, to be ſure, is the worſt.

The chief City of *Surat*, in the *Eaſt Indies*, is ſeldom or never free from the Plague; and yet it is obſerved, that the *Engliſh*, who trade there, are in no Danger of being infected by it. Now the chief of the Natives in this Place are *Banians*, who neither eat Fleſh, nor drink Wine, but live very poorly upon Herbs, Rice, Water, *&c.* and moſt of the Inhabitants do the like, except Foreigners. This poor Fare, together with the Heat of the Climate, makes them ſo liable to malignant Diſtempers; from the Attacks of which thoſe who feed well are more ſafe and ſecure.

Thus much concerning poiſonous Exhalations and Airs, ſo far as the Conſideration of the *Grotta de Cani* has led us on to inquire into their Effects; for though there may be other Alterations of this ſame Element, differing in their Nature from this we have inſiſted on, and yet equally pernicious and hurtful, yet we take no notice of any of them, in regard that thoſe which are from arſenical, mercurial, and the like Fumes, are reducible to another Species; and thoſe which proceed from a Change of the known Properties of the Air, may be eaſily explained by what has been already delivered about this. I ſhall, therefore, rather chuſe to make ſome Remarks on the Miſchief of another Fluid, which, as it is the next in Uſe to this we have been treating of, ſo the bad Qualities of it, when it comes to be alter'd, muſt neceſſarily be almoſt equally fatal and dangerous.

I mean Water, which is of ſo conſtant Service, not only for our Drinks, but, alſo, in preparing of our Fleſh and Bread, that it may juſtly be ſaid to be the Vehicle of all our Nouriſhment; ſo that whenever this happens to put on other Properties than are neceſſary to fit it for this Purpoſe, it is no Wonder if, in its Paſſage through the Body, theſe make ſuitable Impreſſions there.

Thus, at *Paris*, where the River *Seine* is ſo full of ſtony Corpuſcles, that even the Pipes, through which it is carried, are incruſted and ſtopped by them, the Inhabitants are more ſubject to the Stone in the Bladder, than in moſt other Cities. The ſame I have obſerved in the Baths of *Abano*, a few Miles from *Padua*, to that Degree, that it is neceſſary very frequently to clear the Wheel of a Mill, driven by the Current of theſe Springs, from the great Quantity of petrified Matter with which it is from time to time incumbered.

In like manner, let the groſs Particles, with which the Water is ſaturated, be of any other Nature, metallic, ſalt, *&c.* theſe, according to their various Gravity, the Capacity of the Canals, and ſuch-like Circumſtance, will, when they come to circulate in the animal Body, be, by the Laws of Motion, depoſited on one Part or other. So thoſe mineral Bodies, and nitrous Salts, which abound in the ſnowy Waters of the *Alps*, ſo certainly ſtuff and enlarge the Glands of the Throat in thoſe who drink them, that ſcarce any who live there are exempted from this Inconvenience.

For this Reaſon, the Choice of Water, for Drink, among the Antients, was by Weight; the lighteſt being preferred, as moſt free from all heterogeneous Bodies.

The Cauſe, therefore, of poiſonous Springs, is their having corroſive Corpuſcles mixed with their Water; which cannot fail, when forſaken, in the Canals of the Body, of their Vehicle, to do the ſame Miſchief as they would if taken by themſelves undiluted, only with this Difference, that they may in this Form be carried ſometimes farther into the animal Oeconomy, and ſo, having paſſed the Primæ Viæ, diſcover their Malignity in ſome of the inmoſt Receſſes. Thus the *Fons Ruber* in *Ethiopia*, mentioned by *Pliny*, about which abundance of native Minium, or Cinnabar, was found, ſhewed its ill Effects chiefly on the Brain; and therefore *Ovid* ſays of it,

——— Si quivis Faucibus hauſit,
Aut furit, aut patitur mirum Gravitate Soporem.

We ſhall not need to enlarge on this Matter, ſince any of the before-mentioned mineral Poiſons may thus impart their deadly Quality to Waters; and accordingly there are Inſtances of arſenical, mercurial, *&c.* Fountains, of which the Hiſtories may be ſeen in the Collections of the learned *Bartius*, and one very remarkable in the *Philoſophical Tranſactions*, N°. 8.

But, as we before took notice concerning Airs, ſo it may be worth the while to obſerve of Waters, that there are ſome Alterations of them, which, though not properly poiſonous, yet are of ſo great Conſequence in their Effects, that they may very well deſerve to be regarded.

This I ſhall do with reſpect to a great Abuſe committed in this Kind, about the City; and that is, in the chuſing of ſtagnating impure Well-water for the Brewing of Beer, and making other Drinks. Such a Fluid, indeed, has oftentimes a greater Force and Aptneſs to extract the Tincture of Malt, than is to be had in the more innocent and ſoft Liquor of Rivers; but for this very Reaſon it ought not, unleſs upon mere Neceſſity, to be made uſe of. This Quality becomes owing to the mineral Particles, and aluminous Salts, with which it is impregnated.

A late Author, by ſearching into the firſt Accounts of the Diſtemper we call the *Scurvy*, deſcribed by *Pliny* and *Strabo*, under the promiſcuous Names of *Stomachace* and *Scelotyrbe*, and examining the authentic Hiſtories of it in later Years, made by the moſt obſerving Phyſicians in thoſe Countries where it was unhappily revived, as *Olaus Magnus*, *Balduinus*, *Ronſeus*, *J. Wierus*, *Solomon Albertus*, and others, finds that the Origin of it was in all Times and Places charged upon the Uſe of unwholſome ſtagnating Waters. Then, by comparing together the clayey Strata of the Earth about the Cities of *London*, *Paris*, and *Amſterdam*, he ſhews that where the Water is worſt, there the Malady is moſt rife: So that he has put it out of all doubt, that moſt of the perplexed and complicated Symptoms, which are ranged under this one general Name, if they do not entirely owe their Birth to the Malignity of this Element, do, however, acknowledge it to be their main and principal Cauſe.

And, indeed, *Hippocrates* himſelf, as he has very plainly decyphered this Diſeaſe, by the Title of Σπλῆνες μέγαλοι, or *Great Spleens*; ſo he does very particularly, in another Treatiſe, take notice, that drinking of ſtagnating Well-waters muſt neceſſarily induce an ill Diſpoſition both of the Spleen and Belly.

If we inquire into the Reaſon of ſuch ill Effects, we muſt conſider, that Clay is a mineral Glebe; and that the groſs Particles, and metallic Salts, with which Waters paſſing through ſuch a Bottom do abound, are, as Dr. *Liſter* obſerves, not to be maſtered; that is, indigeſtible in the human Body. Not only, therefore, will theſe cauſe, as he very well argues, calculous Concretions in the Kidneys, Bladder, and Joints, and, as *Hippocrates* experienced, hard Swellings in the Spleen; but they muſt neceſſarily, oftentimes, by their corroſive Quality, twitch and irritate the ſenſible Membranes of the Stomach and Bowels, and thus hinder and interrupt the Digeſtion of our Food. Nay, beſides all this, when they come into the Blood, it is no Wonder, if the ſmall Canals of inſenſible Perſpiration are frequently ſtopt and obſtructed

obſtructed by them; for it is upon this ſcore that *Sanctorius* teaches us, that heavy Water converts the Matter of Tranſpiration into an Ichor, which, being retained, induces a Cachexy.

What Miſchiefs will enſue hereupon, every one ſees; not only Pains in the Limbs, livid Spots in the Surface of the Body, Ulcers, *&c.* from the Acrimony of the undiſcharged Moiſture; but many beſides of thoſe perplexing Symptoms which go by the Names of *Hyſterical* and *hypochondriacal*, may take their Riſe from the ſame Source; for the before-cited *Sanctorius* has remarked, that the Flatus, or Wind, ſo inſeparable from thoſe Caſes, is no other than the Fluid of Perſpiration rude and unfiniſhed.

If theſe Inconveniences are oftentimes not felt, at leaſt not till towards the declining Age, in ſtrong and active Habits of Body; yet I am, from very good Experience, aſſured, that they deſerve Conſideration in weaker Conſtitutions, and a ſedentary Life, eſpecially of the more tender Sex.

I have the Honour to be nearly related to a worthy Perſon, who led formerly an afflicted Life from the frequent Returns of violent colic Pains, till ſhe was, with happy Succeſs, adviſed by the noble *Van Helmont* not to drink (as ſhe then did) Beer brewed with Well-water; and her Health is even now ſo far owing to this Management, that an Error in it is unavoidably followed with the wonted Complaints.

For theſe Reaſons *Pliny* tells us, that thoſe Waters are condemned in the firſt Place, which, when boiled, incruſtate the Sides of the Veſſels; and that our Well-waters do this, nobody, who looks into the Tea-kettles of our Gentlewomen, can be ignorant.

And, indeed, in antient Times, when Phyſic was more a Science, which is now more a Trade, as that Part of it which relates to Diet was more carefully ſtudied than it is now-a-days; ſo this Point particularly, of which we are treating, was of ſo great Moment, that *Hippocrates*, who wrote the beſt Book on the Subject that ever was publiſhed, has, in a great meaſure, accounted not only for the Diſeaſes, but even for the Temper and Diſpoſition of the People of ſeveral Countries, from the Waters with which Nature has ſupplied them. *Mead on Poiſons.*

MERCURIALIS, Mercurial. An Epithet of all Preparations of Mercury. But the *Atra Bilis* is, alſo, call'd the Mercurial Humour; and the Diſeaſes thence generated are nam'd Mercurial Diſeaſes.

MERCURIALIS.

The Characters are;

The Leaves are crenated, and grow by Pairs oppoſite. The Cup of the Flower conſiſts of one Leaf, which expands, and is cut into three Segments; theſe are male and female in different Plants: The Flowers of the male grow in long Spikes, and conſiſt of many Stamina and Apices, which are loaded with Farina: The Ovary of the female Plant becomes a teſticulated Fruit, having a ſingle round Seed in each Cell.

The Species of *Mercury* principally us'd in Medicine are the following;

Mercurialis; teſticulata; ſive mas Dioſcoridis & Plinii. *C. B. P.* 121. *Tourn. Inſt.* 534. *Boerh. Ind. A.* 2. 106. *Mercurialis.* Offic. *Mercurialis mas & fœmina.* Ger. 262. Emac. 332. Park. 295. J. B. 2. 977. Raii Hiſt. 163. *Mercurialis annua glabra vulgaris.* Raii Synop. 54. FRENCH MERCURY.

French Mercury grows about a Foot high, full of ſmooth angular Stalks, beſet with narrow Leaves, about an Inch and half long, broadeſt in the Middle, and ſharper at both Ends, indented about the Edges, of a pale-yellow, green Colour. The Flowers are ſmall and ſtamineous, of a greeniſh Colour, growing in Spikes, which ariſe from the Boſom of the Leaves: Thoſe of the female fall off without any Seed. The male has a couple of teſticulated Seeds at the End of the Spike. The Root is fibrous, and periſhes after it has flower'd, and given Seed; it grows frequently in Gardens, and in waſte Places, and among Rubbiſh.

The Leaves and Stalks are uſed, and are aperient and mollifying; the Decoction thereof purges choleric and ſerous Humours; it is moſtly uſed in Clyſters. *Matthiolus* commends a Decoction of the Seeds with Wormwood, for the yellow Jaundice. The Juice takes away Warts. *Miller's Bot. Offic.*

Pena, Lobel, and *J. Bauhine,* found ſomething nitrous in this Plant; it is of an herby Taſte, a little ſaltiſh, and gives no Tincture of red to blue Paper. I believe the great Quantity of Sulphur, with which it abounds, hinders the Sal Ammoniac from manifeſting itſelf; for, by the Chymical Analyſis, it yields a great deal of volatile concrete Salt, Oil, and Earth. *Hippocrates, Dioſcorides,* and *Galen,* agree that this Mercury is purgative; the Syrup made with its Juice is laxative and aperitive. The Water, in which it has been macerated cold for twenty-four Hours, is given for the Dropſy, Cachexy, Vapours, and Greenſickneſs: This Plant is uſed in Semicupiums for the Suppreſſion of the Terms; for it is very emollient alſo; and they make thoſe Perſons who are believed to be barren, take three Ounces of its Juice depurated, and mix'd with two Drams of Tincture of Steel. This Mercury is employ'd in the *Syrop de longue Vie.* This is the manner of making it:

Take twelve Pounds of *Narbonne* Honey, eight Pounds of the Juice of Mercury, and two Pounds of that of Borrage in a Kettle; ſet it upon the Fire, and mix the Juice, and the Honey, with a wooden Spatula, and ſtrain them without letting them boil; then add three Pints of white Wine, in which four Ounces of Gentian-root have been infuſed for twenty-four Hours. Then ſet the Kettle again upon the Fire, and mix the Juices with the Wine, and Pieces of Gentian; ſtrain thro' the ſame Bag without letting it boil; after this boil the ſtrained Liquor to the Conſiſtence of a Syrup.

Take a Spoonful of it in the Morning faſting, and eat nothing for two Hours after; it keeps the Belly open, purifies the Blood, and keeps away the Gout, Sciatica, and ſuch-like Diſeaſes. This Plant is an Ingredient in the lenitive Electuary, in the *Catholicum* of the Deſcription of *Du Verney,* and in the ordinary Decoction for laxative Clyſters. *Martyn's Tournefort.*

Mercurialis; montana; teſticulata; & ſpicata. *C. B. P. Tourn. Inſt.* 534. *Boerh. Ind. a.* 2. 106. *Cynocrambe.* Offic. Ger. 263. Emac. 333. *Cynocrambe mas & fœmina, ſive Mercurialis repens.* J. B. 2. 979. *Cynocrambe mas & fœmina.* Raii Hiſt. 163. *Mercurialis perennis repens Cynocrambe dicta.* Synop. 53. *Mercurialis ſylveſtris Cynocrambe dicta vulgaris.* Park. 295. DOGS MERCURY.

This Plant grows in Woods and Hedges, and flowers in the Spring. The Whole of it is us'd; and tho' *Prevotius, Moreton,* and others, affirm it to be poſſeſs'd of the ſame Virtues with the former, yet the Effects it produc'd on ſome Perſons near *Shropſhire* ſufficiently prove it to be of a ſoporiferous and malignant Quality. It is a poiſonous Plant; for which Reaſon it is very injudiciouſly ſaid to be the Mercury of the Shops, by *Rhaſeld* in his *Hodegus Botanicus Buxb.*

What Species of Plant the *Cynia* or *Cynocrambe* of *Dioſcorides* may be, is not yet determin'd among Botaniſts. *Cæſalpinus* affirms, that it is a Species of *Atriplex*; and *Caſpar Bauhine* will have it to be a Species of *Parietaria. Lonicerus* refers it to the *Apocynum,* and *Matthiolus* makes it ſome Species of Mercury, all of which, eſpecially the female Mercury, agree with the Deſcription given of the *Cynocrambe* by *Hippocrates. Dale.*

Mercurialis; fruticoſa; incana; teſticulata. *Tourn. Inſt.* 534. *Boerh. Ind. A.* 2. 106. *Phyllon.* Offic. *Phyllon Arrhenogonon & Thelygonon folio incano Monſpeſſulana.* J. B. 2. 981. *Phyllon Thelygonon.* Ger. 263. *Phyllon Arrhenogonon ſive Marificum & Thelygonon ſive feminificum.* Ger. Emac. 333. *Phyllon marificum & feminificum.* Park. 296. Raii Hiſt. 1. 164. *Phyllon teſticulatum & ſpicatum.* C. B. P. 122. CHILDRENS MERCURY.

This Species, in *England,* is found only in the Gardens of the Curious, and flowers in the Summer. The whole Herb is uſed, and, according to *Cluſius,* much eſteemed in *Barbary,* againſt thoſe Diſeaſes which are in a peculiar manner incident to Women. Some recommend a Decoction of it for thoſe who have been bit by a mad Dog. *Magnol.*

MERCURIUS. Mercury, or Quickſilver.

Quickſilver, called *Hydrargyrus, ſive Argentum vivum,* Offic. *Hydrargyrus,* Græcor. *Mercurius Chemicorum, Argentum fuſum Theophraſti, Argentum Mobile Ariſtotelis, Vomica Liquoris Æterni Plinii,* and *Zaiba,* or *Zaback,* of the *Arabians,* is a fluid metallic Subſtance, cold to the Touch, of a ſhining ſilver Colour, very heavy, volatile, and which will unite with moſt Metals, eſpecially Gold; to which it joins itſelf very cloſely.

Quickſilver is found ſometimes in its fluid Form in the Bowels of the Earth; and, in that Caſe, it is firſt well waſhed with Water, to clear it from Earth; then ſometimes with Vinegar and Salt, to carry off all other metallic Parts; and laſtly, it is paſſed through Cotton, or dreſſed Leather, and then has the Name of Virgin Mercury.

It is likewiſe found in Glebes, or in form of a red ſulphureous Mercurial Mineral, called *Cinnabar,* or of a ſtony Glebe, ſometimes red, ſometimes yellow, ſometimes dark, and ſometimes of a Lead-colour.

From theſe Glebes Quickſilver is extracted by ſimple Diſtillation, ſometimes *per Aſcenſum,* the Mineral being put in Retorts, and ſet in a ſtrong Degree of Fire, by which the Quickſilver is raiſed in Fumes, Part of which, ſticking againſt the Neck of the Retort, are there collected, and run down into the Receiver; and the reſt are condenſed directly in the Receiver, which, for this Purpoſe, is half filled with Water.

The other way of Diſtillation is *per Deſcenſum,* which is performed in this Manner, and is the moſt expeditious, where the Mineral is rich. The Mineral, being beat ſmall, is put into earthen Veſſels, with very narrow Mouths, which are ſtopped with Moſs freſh-gathered from Trees. Other earthen Veſſels, like the former, but with wider Mouths, are buried in the Ground; and upon theſe the other full ones are inverted, their Mouths being let into thoſe of the lower ones. In this Poſition their

Necks are firmly cemented together with a proper Lute, the lower Veſſels being wholly under Ground, the upper wholly above Ground. An Area of a ſufficient Extent being thus filled, a Fire is lighted round the Veſſels, by the Heat of which the Quickſilver drains through the Moſs, out of the upper Veſſels into the lower. At a proper time they dig theſe up, and pour the Quickſilver into Bottles.

The Quickſilver Mines in *Hungary*, *Carinthia*, and *Friuli*, are very rich; there are, alſo, ſome ſuch Mines in *France*, eſpecially about *Montpelier*, and ſome Places of *Normandy*.

When the Mineral contains a great Portion of Sulphur, the Quickſilver cannot be extracted without adding ſomething to abſorb the Sulphur, and ſet the Quickſilver at Liberty, and render it fluid. Such Additions conſiſt in Wood-aſhes, Pot-aſh, Quick-lime, Filings of Iron, and the like, with which the Mineral is to be diſtilled.

Quickſilver is the heavieſt of any known Metal, except Gold, which is to Mercury nearly as four to three, and, therefore, ſinks in it, whilſt all other Metals ſwim. Quickſilver may likewiſe be mixed, or amalgamated, as it is called, with all other Metals and metallic Subſtances, but moſt difficultly with Antimony, Iron, or Copper. It penetrates Metals, diſſolves and makes them brittle; whence it is by ſome reckoned the firſt Matter of all Metals, but without any ſufficient Foundation. It is, therefore, to be reckoned a metallic Subſtance *ſui Generis*, fluid, heavy, diviſible into very ſmall Parts, and extremely volatile. Fire ſeparates it into a very ſubtle Vapour, and in that Form diſſipates it entirely; whence Alchymiſts have given it the Name of the *Run-away Slave*. It is, likewiſe, eaſily diſguiſed many ways, and may again be reſtored to its priſtine Form; whence it has got the Name of *Proteus*.

It readily unites with Sea-ſalt, and, thus joined, a very gentle Heat ſublimes them in form of a white ſaline, cryſtalline Maſs, known by the Name of corroſive Sublimate. It does not ſo eaſily join with Nitre or Vitriol. It is more eaſily diſſolved by the Acid of Nitre, but very difficultly by Oil of Vitriol. Alcaline Salts work no Change in it; but it is in ſome meaſure fixed and extinguiſhed by ſulphureous Salts. By long Trituration with Sulphur, it is changed into a very black Maſs, which, being ſublimed by the Force of Fire, becomes an intenſely red, ſhining, radiated Maſs. When Quickſilver has been diſſolved by Spirit of Nitre, and that Spirit again evaporated by Fire, it remains in Form of a red Powder; but, if the ſame Solution be precipitated with Salt of Tartar, it appears a Saffron-colour'd Powder at the Bottom. With Sea-ſalt it gives white Precipitate; and with Lime-water, a yellow.

It is very difficult to analyſe Quickſilver, becauſe, as ſoon as any Degree of Fire is applied to it, it flies off, and thus baffles the Pains and Induſtry of the Artiſt. However, by being long expoſed to a very gentle Fire, in a glaſs Veſſel, with a very long Stem, it begins, by degrees, to be turned into a greyiſh Powder, which, by a long Digeſtion, becomes yellowiſh, and at length red.

Thus reduced to a Calx, it is heavier than when fluid, and, alſo, a little more fixed in the Fire; but if it be urged with a conſiderable Fire, it evaporates, leaving only a little fixed Earth behind. If this Calx be burnt gently with Charcoal-duſt, it turns immediately to running Mercury. By long Trituration it may, likewiſe, be reduced to a greyiſh Powder, ſome Particles detached from the Body, with which it is rubbed, hindering the immediate Contact of its Particles. When expoſed to the Focus of a great Burning-glaſs, it preſently evaporates in Fumes, without leaving any Remainder; but, if the Calx of Mercury calcined *per ſe* be thus expoſed on a Tile, it firſt melts into a Subſtance like Glaſs, then evaporates ſpeedily, leaving a ſmall Quantity of a browniſh Powder behind, which afterwards vitrifies. But if the ſame Calx be laid in the Focus of ſuch a Glaſs, on a Piece of Charcoal, it melts into a Glaſs in the ſame manner; then runs on the Coal, and becomes again pure Quickſilver before it evaporates. Hence it ſeems evident, that Quickſilver conſiſts of a volatile, vitrifiable Earth and Sulphur, to which it owes its metalline Splendor and Fluidity; but, if theſe Particles of Sulphur be again reſtored to it, it recovers both again. Quickſilver was by the Antients ranked among Poiſons. *Dioſcorides* aſcribes pernicious Effects to it; and from his Authority, doubtleſs, it was, that *Galen* reckoned it highly corroſive; for he owns he never made any Trial of it himſelf. The Name of it is not found in *Hippocrates*; whence it is probable, that it was not in Uſe in his Time. But before *Avicenna* it was uſed externally, though ſeldom internally, being ſtill reckoned a Poiſon by moſt Phyſicians. *Actuarius* ranks it, however, among Medicines; but *Meſue* applied it only for curing cutaneous Diſeaſes, though *Avicenna* obſerves, that many had drank it without any bad Effect, and that it paſſed through the Anus unchanged. About two hundred Years ago, though it was ſtill believed by ſome to be poiſonous, it began by many to be uſed inwardly; they having obſerved, as *Fallopius* relates, that it was given in that manner by Shepherds to their Cattle to kill Worms, without any bad Effect; whence they concluded, that it might be ſafely given to Men likewiſe, and that, therefore, crude Mercury was not to be reckoned a Poiſon.

Thus *Braſſavolus* and *Carolus Maſitanus* tell us, they gave it to Children troubled with Worms, from two to twenty Grains, and always with ſome Succeſs; and that ſeveral Midwives gave it to Women in difficult Labours, though, perhaps, not always with any viſible good Effects. *Matthiolus* relates, that ſome Women with Child drank each a Pound of Quickſilver to procure Abortion without any bad Sequel; and it is commonly known, that the Workers in Quickſilver take this Method to cheat their Maſters of conſiderable Quantities, by firſt ſwallowing it, and then voiding it with their Fæces, from which it is eaſily cleanſed by ſimple Waſhing. It muſt, nevertheleſs, be owned, that the Uſe of it, whether outwardly or inwardly, can never be long continued without Miſchief; for the Miners, and others employed about it, though of the ſtrongeſt Conſtitutions imaginable, ſeldom remain four Years in that State, but are ſeiz'd with Tremblings, and Palſies, and all die miſerable. By an injudicious Uſe of it, whether outwardly apply'd, or inwardly taken, the Nerves are, likewiſe, affected, weakened, corrupted, and contracted; whence Tremblings, Spaſms, Palſies, and too great an Attenuation of the Fluids, which often brings on a fatal Salivation, Ulcers in the Mouth and Throat, and incurable Looſeneſſes.

Quickſilver judiciouſly adminiſtered is, however, undoubtedly a moſt excellent Medicine; it opens the Pores, ſmall Veſſels, and Ducts of the Glands; reſolves obſtructed Humours, attenuates thoſe which are too thick and viſcid, eſpecially the Lympha; and diſſipates Concretions, even in the remoteſt Parts of the Body. On all theſe Accounts it is found to be of ſingular Service in Tumors, ſwelled Glands, ſcirrhous Spleen, Meſentery, or Liver, Ganglions, Strumæ, and other ſuch Diſeaſes. It likewiſe blunts the Acrimony of the Fluids, and hence performs Wonders in Venereal Tumors, Buboes, and Ulcers, in cutaneous Puſtules, Scabs, and other Affections of the Skin; univerſal Remedies of the preparatory, and eſpecially of the evacuating Kind, having not only gone before the Uſe of Mercury, but being continued along with it. For as all theſe Diſeaſes ariſe from a viſcid Serum, become cauſtic by a long Stagnation, if it be divided and reduced to a fluid State by Quickſilver, before a Paſſage is prepared for it out of the Body, it muſt either exert its Efficacy on the Part, where it was firſt lodged, or, by removing to other more noble Parts of the Body, bring on Symptoms more dangerous than the firſt. Therefore, before the Patient begins to take Mercury in any Form, his Body ought to be cautiouſly prepared by Bleeding, to leſſen the Plenitude of the Veſſels; by warm Bathing, and the Uſe of diluting Medicines, that the Humours may become more fluid, and the ſolid Fibres ſofter; as, alſo, by Purging, that a Way may be opened for the Paſſage of the diſſolved Humours out of the Body. Theſe Paſſages are, likewiſe, to be kept open during the Time that Quickſilver is taken, leſt the Humours be intercepted in their Courſe, and be turned a more dangerous Way; and the Patient ought to be kept warm, leſt Cold ſtop or diminiſh inſenſible Perſpiration, which ought likewiſe to be encouraged by gentle Exerciſe.

Quickſilver, not only taken inwardly, but, alſo, by Unction, evacuates the Humours by Stool, Sweat, and inſenſible Perſpiration; but the moſt common Method of its Operation is by the Evacuation of a mucous Saliva, whence it is termed a Salivation. This Way of Purging was entirely unknown to the Antients, and is thought the moſt effectual Remedy for Venereal Diſeaſes; for the Cure of which it was firſt uſed by *Jacobus Carpenſis*, a Phyſician of *Bologna*.

From whatever Country Quickſilver is brought, that is thought the beſt, which, is moſt pure, of the moſt ſhining white Colour, moſt fluid, and which being evaporated, leaves no Remainder behind it. That is to be rejected, which is of a livid or pale Colour, which does not run into Globules exactly ſpherical, but oblong, reſembling little Worms or Tears, which are ſure Signs, that it is adulterated with Lead, Biſmuth, or ſome other Metal.

Native or Virgin Mercury ought always to be purified before it is uſed inwardly; becauſe it is poſſible it may be ſtill mixed with ſome metallic, ſulphureous, or arſenical Particles. The moſt ſimple Way of purifying Quickſilver is, by paſſing it through dreſſed Leather, by which it is purged from the more groſs Parts, that may be mixed with it. Some waſh it with Vinegar and Salt: But it is much ſafer to diſtil in a Retort with Quick-lime, Pot-aſh, or Filings of Steel, by which Method Mercury is obtained more pure than by any other.

Mercury is uſed in Phyſic, either crude, that is, being only firſt purified; or differently prepared. Crude Mercury is given, in Subſtance, to kill Worms, from a Scruple to three Drams; being firſt well rubbed with Sugar in a glaſs Mortar, till it is diſſolved into inviſible Parts, adding a Drop or two of Oil of ſweet Almonds, to keep it from returning to its native Form. Decoctions of Quickſilver are likewiſe much uſed, being made by boiling a Pound of Mercury in ſix Pints of Water for an Hour: The clear Liquor is given both to Children and Adults for their common Drink. Quickſilver is a great Enemy to all Sorts of Vermin, as well as to Worms; and it ſuddenly kills or baniſhes them, being applied in an Ointment to any Parts of the Body where they are found.

Crude

Crude Mercury is likewiſe given in very large Quantities in the Iliac Paſſion, even two or three Pounds; and it often ſucceeds in removing the Obſtruction: But, if the Obſtruction be very great, ſo that the Mercury remains a great while in the Inteſtines, it may do them an Injury, merely by its great Weight. To cure the Itch, Quickſilver Girdles are uſed with very good Succeſs, when the Precautions above-mentioned are duly obſerved. The Quickſilver is to be beat up with the White of an Egg, till both are turned to a thick Froth, which is rubbed on a Cotton Girdle, and, when dry, is wore round the Loins.

Mercurial Ointments cure the Itch, and all Diſeaſes of the Skin. It is uſed in the *Emplaſtrum de Ranis cum Mercurio* of *Vigo*, in the *Unguentum Neapolitanum*, and in Mercurial Pills, of which the beſt Form, in my Opinion, is this:

Take of good Rhubarb, Trochiſci Alhandal and Agaric, each a Dram; Scammony, and waſhed Aloes, each a Dram and an half; of Quickſilver, killed in Turpentine, half an Ounce; Syrup of Peach-flowers, a ſufficient Quantity to make a Maſs of Pills. The Doſe is from a Scruple to a Dram and an half, in Venereal Complaints, Rheumatiſms, and Obſtructions of the Meſentery and Viſcera. In the Pox theſe Pills are taken by ſome every Day, or every other Day.

No Subſtance has been treated in ſo many different Manners by Chymiſts as Mercury, both for Medicinal and Alchemical Uſes; for, ſince they believed it to be the firſt Matter of all Metals, they have left nothing untried to fix it. But, though, after all their Labours, they have not been able to gain their propoſed End, they have, however, enriched the Materia Medica with many excellent Remedies. It is here to be obſerved, that ſome Chymiſts call the Preparations of Mercury either by the Names of Oils, or Salts, which are not to be looked upon as Principles or Subſtances extracted from that Metal, but as ſaline or oily Bodies mixed with it: For hitherto no Art has been able to reduce Mercury to its firſt Principles; for, being extremely volatile, it flies off, before any thing of its Texture can be diſcovered. *Geoffroy.*

Boerhaave gives us the following Proceſſes upon Quickſilver.

The Purification of Quicksilver.

1. Take Mercury bought of the Company of *Amſterdam*; put it into a Piece of Leather, cut round, and formed into a little Bag; tie this Bag cloſe at the Top with a ſtrong Packthread, and ſqueeze it ſtrongly over a large glazed Diſh; the Mercury will be thus ſtrained pure, through the Pores of the Leather; laſtly, ſqueeze the Bag tight, that the Whole may come through. I have not found this Mercury to leave any Foulneſs behind.

2. I have diſtilled Two Pounds of this Mercury in a clean glaſs Retort, with a Sand-heat, into a glaſs Veſſel fitted to the Receiver, and open at both Ends, ſo as to have its lower Part plunged under Water; the whole Body of the Mercury thus comes over without leaving any Fæces, even tho' the Diſtillation were thrice repeated in the ſame Retort: For ſtill I had two Pounds of Mercury, a very ſmall Quantity of a thin, fine, red Powder, of ſcarce any Weight, remaining in the Retort, but no Feculency; ſo that the Mercury, even by this Trial, was pure; which is a principal Recommendation of this Commodity.

3. Take a Pound of this Mercury; put it into a Retort, and add to it two Pounds of clean Lime, ſlaked in the Air; diſtil in a Retort, with a Sand-heat; and a Pound of Mercury will be obtained again; ſo that even thus no Feculence is found, which, if there was any, would certainly appear in this Method.

REMARKS.

Theſe are the common Ways of purifying Mercury, and fitting it for the following Operations; and this is the Method I always uſe. Hence we ſee the Volatility of Mercury; the Degree thereof; and the Purity of the Company's Mercury at *Amſterdam*.

Quicksilver dissolved in Aqua-Fortis.

Take four Ounces of pure Mercury, and ſix Ounces of Aqua-fortis; put them into a clean Urinal, ſurrounded with a ſmall Fire, that the Whole may grow warm: The Maſs of Quickſilver will begin to bubble at the Bottom, and conſume, whilſt red Fumes, and an Heat, are produced. When the Mercury is diſſolved, add a little more, ſo that ſome Part may remain undiſſolved, even in the Heat: Pour off the Liquor, when cold, into another Glaſs; the Quickſilver will be diſſolved into a pellucid, uniform Liquor, even tho' examined by the Microſcope: It is of an auſtere Taſte, ſmells like Spirit of Nitre, or Aqua-fortis, and is as colourleſs as Water.

REMARKS.

Hence we ſee, that the very opake Body of Quickſilver becomes pellucid by Aqua-fortis, or Spirit of Nitre; and, though ſo many times heavier than the Menſtruum, hangs ſuſpended in a Liquor fourteen times lighter than itſelf; ſtill remaining Quickſilver, and unchanged, only ſurrounded with the Acid, as will appear hereafter. It is here ſo equably diſtributed in the Fluid, that, if a ſingle Drop thereof be artificially examined, it will appear to contain a proportional Part of Mercury, in reſpect of the whole Liquor from whence it was taken; which is a Particular that deſerves the Conſideration of Chymiſts, and thoſe who underſtand Hydroſtatics: Whence we ſee, that the Mercury here is very finely divided; that the Acid is uniformly united with each Particle of the Mercury; and that this Acid, equably united with the Mercury, is intimately diſtributed therewith, amongſt its watery Parts. This Solution is violently cauſtic, ſo that it can ſcarce be touched, as burning all the Parts of the Body with violent Pain and Heat: Whence it becomes effectual in extirpating Warts. If a ſmall Part of a Drop touches the Skin, it preſently turns it purple. Neither Aqua Regia, nor Spirit of Salt, eaſily diſſolve Mercury; yet corroſive Mercury Sublimate is a true Salt of Mercury, diſſolved by the Spirit of Sea-ſalt, or Aqua Regia; for it produces all the true Effects thereof: And, if put to Salt of Tartar, regenerates Sea-ſalt. If firſt precipitated, it may be diſſolved in Aqua Regia; but it can alone be ſublimed into a Mercurial Salt, along with Sea-ſalt.

The Vitriol of Quicksilver.

1. If ſo rich a Solution be made of Quickſilver in Aqua-fortis, or Spirit of Nitre, as that no more will diſſolve therein by Heat, and the Solution be poured into a cold Glaſs, there ſpontaneouſly ſhoots to the Bottom, a ſaline, white, tranſparent Matter, from whence the Liquor being poured, this Matter remains ſharp, moiſt, ſaline, ſoluble in Water, and not ſafe to be touched.

2. If the remaining Liquor be inſpiſſated to half, and ſet in a cold Place, Cryſtals, like the former, will ſhoot.

3. But if one Part of Quickſilver, along with two of pure decrepitated Sea-ſalt, reduced to Powder, be diſtilled in a Glaſs Body, with a ſtrong Fire, for five or ſix Hours, and, when cold, the Glaſs be broke, there will be found a ſolid dry Mercury, ſublimed in the Form of Vitriol; and the common Mercury Sublimate is a true Vitriol of Mercury, tho' ſemivolatile.

REMARKS.

Quickſilver, therefore, is reduced to an imperfect Vitriol, with Spirit of Nitre, and to one that is perfect, with Spirit of Salt; but with Spirit of Nitre it is fixed; and with Spirit of Salt, volatile. The Vitriol is ſharpeſt that is made with Spirit of Salt.

The white Precipitate of Mercury.

Take a Solution of Mercury, made ſo ſtrong, that Aqua-fortis, or the Spirit of Nitre, can diſſolve no more; whence there remains no more Acid, than what is requiſite to diſſolve that Proportion of Mercury; add twice the Quantity of pure Water; then have at hand a ſtrong and hot Solution of Sea-ſalt; let this fall, by a Drop at a time, into the Solution of Mercury; upon which the Liquor will immediately become white, opake, and turbid, where the Solution of Sea-ſalt fell: After ſhaking the Veſſel, a white Precipitate will fall to the Bottom, and a limpid Liquor float above. After the Solution of Sea-ſalt no longer makes the Liquor turbid, let the Veſſel reſt for ſome time, till all the white Powder is fallen; then gently pour off the limpid Liquor, till all this white Powder be ſeparated. Shake the Remainder along with the white Powder, and put into a Paper Filtre, ſet in a Glaſs Funnel; a limpid Liquor will come away, which may be added to the former; and a white Powder will remain on the Paper: To this pour ſeveral hot Waters, till what comes through be as inſipid as it was poured on. After which the white Powder will remain almoſt taſteleſs in the Filtre; dry the Paper with its Powder, by a gentle Fire; and afterwards keep it ſeparate, under the Title of the *White Precipitate of Mercury.*

REMARKS.

The acid Spirit of Nitre, here attracted into the Mercury, and now diſſolved in the Water, becomes an Aqua Regia, as ſoon

as it is mixed with the Sea-salt; but Aqua Regia does not dissolve Mercury like Spirit of Nitre; therefore the Mercury is let go by the former Solvent, and falls in a Precipitate to the Bottom. The Water washes the Aqua Regia from the Powder that externally adhered to it; yet in this Powder some of the Acid still adheres to the Body of the Mercury; whence it has a particular Virtue, as may be shewn by many Experiments. The Powder, thus prepared, is, perhaps, the best Remedy hitherto afforded by Mercury, for internal Use: It operates effectually, and with considerable Safety. If ground with thrice its Weight of Loaf-sugar, it makes what may more properly be called a Mercurial Panacea, than, perhaps, other laborious Preparations of Mercury; for, however Mercury may be treated, its medicinal Virtue principally depends upon a certain Quantity of Acid adhering to its metallic Part: This acid Virtue, if it abound, and appear externally, in the Mercury, acts with more Violence, but with less Safety: If more sparingly added, and more united to the Mercury, it acts more slow, more mild, and safe; and this is the Case with our present Precipitate. If the saccharine Powder above-mentioned be given in the Quantity of nine Grains to a Person fasting, it purges, vomits gently, kills Worms, opens and cleanses the Vessels concerned in preparing the Chyle, resolves Phlegm, and thus cures many Distempers, such as the Gonorrhœa, Itch, and Venereal Ulcers. If this Dose be several times repeated daily, it raises a kindly Salivation. If a Dram of this white Precipitate be well mixed with an Ounce of Pomatum, or the Ointment of Roses, it makes an excellent and safe Unguent in cutaneous Disorders, and proper for curing the Itch, Breakings out in the Face, and inveterate Ulcers. It is, therefore, no Wonder, if it should be substituted in the room of the boasted Panaceas. If this Powder be put into a Glass, set over the Fire, and kept constantly stirring with a Glass Rod, and thus be long and gently calcined, it becomes so mild as scarcely to purge, vomit, or salivate; and, therefore, acts very gently when taken internally; and, in this Form, the Chymists commend it as a Diaphoretic and Corrective; but, thus treated, it is so mild as to have little curative Virtue. If a little of this Powder be rubbed upon a warm and polished Copper-plate, it presently gives it the Appearance of Silver; but this soon goes off again in the Fire.

Red Precipitate of Mercury.

1. Take a Pound and an half of the liquid Solution of Mercury, made according to the second Process; put it into a Glass Retort, that will hold twice the Quantity; apply a Receiver, and distil with so small a Fire as not to make the Matter boil, yet bring it almost to Dryness; there will remain a solid, white, ponderous Mass at Bottom, which is extremely corrosive and fiery, so that it cannot be handled. There sticks up and down to the Sides of the Glass, somewhat of a red, yellow, or white Matter; the Mercury then beginning to dry, in a manner that is pleasant to behold. The Liquor driven over is a weak and considerably pure Spirit of Nitre, fit for the cleansing of Glasses, and other Uses. This Operation, therefore, is a kind of coagulating Mercury into Vitriol.

2. Put the Retort into a Sand-furnace, and lute on a large Receiver; distil with a gentle Fire, so that the Drops may follow each other, at the Distance of four or five Seconds. Continue thus, till red Fumes begin to rise; then immediately apply another large and clean Receiver; the Liquor that comes over is a stronger and purer Spirit of Nitre, to be kept for its particular Uses. Urge the Remainder with Degrees of Fire, and Fumes will continue, and at length very red ones will fill the Receiver: Then keep up the Fire to the utmost, for two or three Hours; there will be found in the Receiver a yellow and exceedingly strong Spirit of Nitre, which will afford yellow Fumes for Years, if confined in a clean Glass: And, by these means, an exceedingly strong Spirit of Nitre may be procured, as being, in some measure, rectified; though it thus, in some respects, changes its Nature, as it will not so well take Flame with distilled Oils. All being now cool, there will remain, at the Bottom of the Retort, a solid Mass, of a shining-red Colour; between which and the Neck, as, also, in the Neck itself, will be found a Matter of very various and beautiful Colours; as white, yellowish, yellow, greenish, reddish, and highly red. Break the Retort carefully; take out the red Matter in the Belly of the Glass, and separate it carefully from that which appears less red on the Surface; for this latter is very corrosive: Keep the red Part by itself, under the Title of the *Red Precipitate of Mercury*.

3. The Chymists, admiring this shining Mercury, and the remarkable Fixedness thereof, which was before volatile, imagined, that, by repeating the Operation, they might convert it into a fixed Gold: They, therefore, poured fresh Spirit of Nitre to it, drew it off again, and, by often repeating the Operation, thought to obtain Gold; which *Sylvius*, in his posthumous Works, asserts to have been thus done: But this is incredible to the cooler Chymists. *Paracelsus*, in the Preparation of his Precipitate, directs the Spirit of Nitre to be often drawn off from the Mercury.

Remarks.

Hence we learn the changeable Nature of Mercury, from fluid to solid; from volatile to fixed; from mild to corrosive; and from white into almost all kinds of Colours. But, however it is prepared with the Acid of Nitre, yet it may be recovered, in its native Form, and original Weight, unchanged, if it be distilled in the Retort along with fixed Alcali, Quick lime, or Iron Filings. This Precipitate, which is called *Vigo*'s Precipitate, is sharp and corrosive, occasioning Pain, and producing an Eschar, when externally applied; and hence, afterwards, it always occasions a thick white Pus, and thus cleanses the Lips and Bottoms of Ulcers, and disposes them to heal. It is dangerous to give internally, as inflaming the Viscera by its caustic Virtue, and occasioning Anxiety, Pain, Vomiting, Purging, Griping, and operating, also, by Urine and Sweat. If given in too large a Dose, which should never exceed three Grains, or if too often repeated, it occasions a Salivation, with all its Symptoms; and thus cures many Distempers, which are not easily curable any other Way: It is more violent and dangerous than the white Precipitate. *Paracelsus* and *Helmont* shew how to mitigate it, by several times distilling Alcohol upon it; and thus indeed it becomes milder, by losing much of its Acid; but, at the same time, it requires to be given in a larger Dose. They, also, corrected it with the same Success, by distilling from it the Water of the White of Eggs. Others dissolve it in strong distilled Vinegar, by Boiling; then strain and purify, and, by several times distilling the Vinegar off, render the Powder more mild. But there seems to be little gained by all this, white Precipitate being already the Thing here required. In short, the acrimonious Acid, adhering to the Mercury, causes it to operate in a very small Dose; and the more this Acid is in it, and the more external to the Mercury, the more violently it acts, and *vice versa*. If this Precipitate be put into a thin, hollow, glass Dish, set over the Fire, and continually stirred with a Tobacco-pipe, it will change of a deep Colour; and, if long continued thus, it becomes so much the milder, so as, at length, scarcely to act at all.

Mercury sublimate.

Dissolve half a Pound of Mercury in a sufficient Quantity of Aqua-fortis, according to the second Process; carefully inspissate it to a white dry Mass, according to the first Direction in the third Process: Take, also, ten Ounces of decrepitated Salt, and as much common Vitriol calcined to Whiteness. Grind these two Salts for a long time separate, in a glass Mortar, with a glass Pestle, in a dry and warm Place; then mix them together, and carefully mix in the Mercury among them. Put the Powder into a Bolt-head, of which it may fill only a third Part; cut off the Neck of the Glass, so as to leave only about seven Inches thereof above the Body: Set it in a Sand-furnace, so as that the Bottom of it may touch the Iron Pot; and let the Sand rise exactly to the Surface of the contained Matter. Apply a very gentle Fire, and increase it by very small Degrees, till a Vapour exhales out of the Mouth, which Vapour is to be avoided as highly pernicious to the Lungs. When all the Moisture is perfectly evaporated, stop the Mouth of the Glass with Paper, and increase the Fire till the Pot be red; a corrosive Mercury Sublimate will rise to the Sides of the Glass in white transparent Crystals: Let the Glass cool, and break it, and separate the Sublimate carefully from the Fæces, and soft Powder on the top, and keep it in a dry Glass. For the Method used at *Venice*, consult *Tachenius*, in his *Hippocrates Chymicus*.

Remarks.

The white Mercury, here employ'd, contains Aqua-fortis mixed in among it; the white Calx of Vitriol, mixed with Sea-salt, enters this Salt, and drives out the Spirit; and, whilst these two act upon the Mercury by the means of Fire, there is made an Aqua Regia by the Spirit of Nitre contained in the Mercury, and the Spirit of Sea-salt set free by the Acid of Vitriol. The Phlegm is first discharged by a gentle Fire; the strong acid Part of the Aqua Regia unites with the Mercury, and corrodes it; but this Aqua Regia is of the Nature of Sea-salt. The Spirit of Sea-salt fixes the Quicksilver not like the Spirit of Nitre, but rather makes it semivolatile: And hence the Mercury is sublimed, and is a true solid dry Vitriol of Quicksilver, that remains consistent in the Air. The Basis of this Vitriol is pure Quicksilver, and the other Part, the strongest Spirit of Sea-salt, that can any way be obtained; so as here to appear in a solid Form. With respect to this acid Spirit of

Sea-salt, the Preparation is a Lapis infernalis of Mercury, and a most violent Corrosive, presently converting all the Parts of the Body it touches, into an Eschar, that soon falls off; whence it consumes obstinate Callosities in Ulcers, as, also, Warts, and indurated Glands. That eminent Surgeon, *Johannes a Vigo*, was acquainted with it; and hence composed his Troches of Minium, which are an incomparable Remedy for consuming scrophulous Tumors, and eradicating them by Suppuration. The Taste of this Vitriol is abominably austere. A Grain of it, dissolved in an Ounce of Water, affords an excellent Cosmetic, if cautiously used. It proves poisonous to all cutaneous Insects, by bare Lotion. If a Dram of this Solution be softened with Syrup of Violets, and drank twice a Day, it performs Wonders in many reputed incurable Diseases; but it requires to be cautiously used by a prudent Physician, and should not be ventured upon, unless the Method of managing it be known. This Mercury, when mixed with Metals and Semimetals, has very excellent and inimitable Effects, even such as would surprise a Chymist. It wonderfully changes Silver itself. Certainly, this Mercury Sublimate is a Key that serves to open numberless chymical Secrets. By means of it, perhaps, some Proportion of Silver may be converted into Gold, that could not before be found therein. Hence, also, is obtained the acute Menstruum of Mr. *Boyle*, and other Things. No Chymist will repent of the Labour he employs upon this Sublimate. We see, that Aqua Regia will dissolve Mercury better than any Aqua-fortis, provided it be first dissolved in the latter; and the Spirit of Salt will sublime it, tho' before fixed with Spirit of Nitre. If, according to the Direction of Mr. *Boyle*, this Mercury be sublimed with an equal Weight of Sal Ammoniac, it will afford a wonderful Salt.

Geoffroy's Directions for making the Mercury Sublimate are these.

Take any Quantity of pure Quicksilver, dissolve it in Aqua-fortis, and distil the Solution to Dryness. With the remaining saline Mass, mix four Parts of decrepitated Sea-salt, and sublime in a glass Matrass with a short Neck. What rises, is a white saline crystalline Body, called corrosive Sublimate, or the poisonous Dragon.

When taken inwardly, it proves a corrosive Poison, of the same Nature with Arsenic; but the Symptoms it causes, are quicker, and more terrible. It is used externally to consume proud Flesh, and to deterge old Ulcers. The Phagedenic Water is made of it, by dissolving half a Dram in a Pint of Lime-water. The Solution is yellowish.

The Cure for those Persons who have unfortunately taken Mercury Sublimate, is performed by drinking large Quantities of Milk, Oil, or fat Broths, while the Poison remains in the Primæ Viæ; but, after it has got into the Blood, alexiterial Medicines are to be used, such as *Venice* Treacle, Mithridate, Bezoar, Powder of Vipers, Contrayerva-root, and such-like, and afterwards a Milk-diet.

Relative to this Poison, *Sydenham* gives the following very remarkable Case.

About two Months since, a Person in my Neighbourhood desired me to visit his Servant, who had taken a large Quantity of *Mercury Sublimate*, being melancholy mad for Love, as I afterwards heard. The Poison had been swallowed near an Hour, when I came, and his Mouth and Lips much swelled; he was extremely sick, had a burning Pain in the Stomach, and was almost killed with Heat. I ordered him to drink three Gallons of warm Water, as quick as possible, and to take a large Draught of the same, after each time of Vomiting; and as soon as it appeared, from the Gripings, that the Poison was going downwards, I also directed warm Water alone to be plentifully thrown up by way of Clyster, in order to wash his Bowels. The Wretch comply'd, being now very desirous to live, and drank several Pints of Water more than I had directed. He told his Friends that were by, that the Water, which first came up, was very acrid, by reason of its being saturated with the poisonous Salt; but that it was less acrid after every Vomiting, till at length it became insipid, and the Gripes that succeeded were remedy'd by injecting Water alone Clysterwise. By this simple Method, the Patient was recovered in a few Hours; only the Swelling of his Lips did not immediately fall, and his Mouth remained ulcerated; occasioned by the Particles of the Poison, which came up with the Water by Vomiting; but these Symptoms yielded in four Days to a Milk-diet. I preferred Water to Oil, (which is generally used by the less knowing without Success) and all other Liquors, because, being very thin, it seemed fitter to absorb the Particles of this poisonous Salt, than any other Liquor that was thicker, or already impregnated with the Particles of some other Body.

Of this corrosive Sublimate is made Mercurius dulcis, called *dulcified Sublimate*, *Aquila alba*, the *Dragon tamed*, and *Calomel*, in the following manner.

Take of corrosive Sublimate, sixteen Ounces; grind it thoroughly in a Marble Mortar, pouring in, by slow Degrees, twelve Ounces of crude Quicksilver, well purify'd. Continue to grind them, till the whole Quicksilver disappears, and then the Powder will be of a leaden Colour. This Powder, put into proper Glasses, to the Height of an Inch or two, is sublimed by a slow gradual Fire, into a white Mass; which, being separated from the Fæces, and powdered, is, again, sublimed.

This Preparation purges gently, divides all viscid pituitous Humours, kills Worms, and is reckoned a sovereign Medicine in Venereal Diseases. The Dose is from six to thirty Grains in Pills, or a Bolus; and, if the Use of it be continued for several Days, it will raise a Salivation. It is most commonly mixed with other purging Medicines; and some chuse to give it in this manner, every other Day, in order to cure the Pox without Spitting.

Turbith of Mercury.

1. Put four Ounces of pure Quicksilver into an urinal Glass; pour thereon eight Ounces of rectified Oil of Vitriol; heat them gently and slowly; then put the Glass upon burning Coals, that the Matter may boil gently, with Care to avoid the Fumes; to which Purpose, the Operation should be performed under a Chimney, that the Vapour may go off without coming at the Lungs. The Quicksilver, running at the Bottom of the Oil of Vitriol, will thus begin to dissolve. Continue the same Degree of Heat, till all the Mercury be dissolved; the Mass will be white like Snow; calcine it with the same Degree of Heat, to Dryness, or till it fumes no longer; it will be an exceeding white and snowy Powder, but intolerably sharp, so as not to be touched: It is called the white Calx of Mercury, made with Oil of Vitriol. The Operation succeeds in this manner, but scarcely in those commonly directed.

2. Grind the dry and hot Mass in a dry Mortar, to fine Powder; have at hand a Glass full of clean hot Water, at least twenty times the Weight of the Mercury; throw the Calx into it; at that very Instant, the white Powder falls thro' the Water to the Bottom, and acquires a beautiful Lemon-colour. Shake the Vessel for some time, that the Powder may be well mixed with the Water; then let all settle; decant the Liquor into another Glass; wash the remaining yellow Powder with several hot Waters, till it becomes perfectly insipid; then dry it thoroughly with a gentle Fire: This beautiful yellow Powder is called Turbith Mineral.

3. Let the first Liquor, poured off, stand for some time; then strain and inspissate it to a third Part; it will be a Mercurial Water; for, if a little Oil of Tartar be dropt in it, a reddish Precipitate will fall to the Bottom; and the Liquor may be kept under that Title.

Remarks.

Thus the strongest Oil of Vitriol, united to Mercury, makes a white fixed Powder, that will endure a very strong Fire, as being much more fixed than one would imagine. We see there are different Effects of different Acids, with regard to the Colour. The white Colour here is not changed with the most violent Fire, though it was easily with the Spirit of Nitre. This white Powder, however, being calcined, becomes exceedingly corrosive, and thence poisonous. Here we see a new Colour immediately arise, in a particular Manner, upon the bare Contact of Water; for if this white Powder be properly prepared, and laid in the open Air, it soon grows yellow on its Surface, by attracting the Moisture of the Air. This seems to be the Powder, with which, when rightly prepared, *Paracelsus* performed Wonders, as appears from his Hospital Surgeon; and this is sufficiently attested by *Oporinus*, who declares he has frequently been employed in making it. It may be rendered milder, by burning Spirit of Wine upon it, after the Manner of the antient Chymists, who, by these means, took away from their metalline Calces the Salts, that, externally adhering thereto, rendered them too sharp, so that only the Salts intimately united might remain behind. The prudent *Sydenham*, who is a cautious and sparing Commender of the Chymists, gratefully acknowledges, that, by means of this Medicine, Diseases, otherwise incurable, might be cured. Mr. *Boyle* relates, that by a small Dose hereof, used as a Sternutatory, the whole Body has been changed, and even Cataracts cured. A Woman at *Paris* is, also, said to have herewith cured Persons given over. Hence it seems an extraordinary Medicine, in stubborn and obstinate Cases; but it requires a skilful Physician, and should not be used, when safer Remedies may suffice. It is serviceable in the Dropsy, as well as in the Venereal Disease; and, also, in the most obstinate Diseases of the Glands. *Helmont* says, that Oil of Vitriol is here converted into Alum, barely by the Contact of Mercury; but this is either speaking improperly, or not justly; but when that excellent Author directs the

Fire

Fire of the Vitriol of Copper to be poured upon *Vigo*'s Powder, and thence diſtilled, for preparing the ſecret Cathartic of *Paracelſus*, if I underſtand him right, it makes this Medicine: For if the Fire of the Vitriol of Copper be the ſtrongeſt Oil of Vitriol, as ſoon as this is poured upon red Precipitate, it immediately renders the Spirit of Nitre volatile, cauſes it to fly off from the fixed Mercury, and ſoon after, ſupplying its Place, produces the Calx of Mercury as above. If the Water of Whites of Eggs be ſeveral times diſtilled from it, this takes away the Acid externally adhering thereto, and renders the Powder milder, though it will ſtill operate ſufficiently, which is an Effect ſeldom procurable any other Way. But if, by Fire, any thing elſe be here underſtood of a more ſubtile Nature, I can fix no other Meaning to it; but by comparing *Helmont* with *Paracelſus*, I ſuſpect it is no more than what I have ſaid. Metals alone have little Effect upon the Body, except by their Bulk, Figure, and Weight; but by Addition of Salts, eſpecially the acid Kind, they acquire new Properties, and thoſe often ſurpriſing, and very different, according as the Acids are more fixed therein, or adhere more externally. In the Form of Vitriol they act very violently; but, if calcined in this Form, the Calx grows gradually milder; and by a long-continued ſtrong Calcination, which drives out the Acids, they become mild, though before exceedingly ſharp, as we ſee happens in *Turbith*; and thus their Operation becomes milder, and, at the ſame time, proportionably leſs effectual. Thoſe Chymiſts and Phyſicians, therefore, are miſtaken, who, having found that this *Turbith* performed extraordinary Things, but operated violently, endeavoured to mitigate its Virulence, which indeed may be eaſily done, but not ſo as to have the ſame Effects when mitigated, as before. The Ways of mitigating the Acrimony, are by taking away the Acid, by waſhing the Preparation with Water, by frequently diſtilling pure upon it to Dryneſs; by pouring Alcohol upon it; by diſtilling ſeveral Parcels of Alcohol upon it to Dryneſs; by grinding it along with more metallic Matter, as in the Preparation of *Mercurius dulcis*, by the Addition of alcaline Salts, which abſorb the Acids; by grinding the Matter with Chalk, Crabs-eyes, teſtaceous Powders, or the like Abſorbers of Acids; by a long-continued Calcination; and, laſtly, by Fixation with a Fire gradually increaſed from a moderate Heat to the higheſt that Glaſs will bear.

The fiery Oil of Mercury.

Take Mercury, calcined with Oil of Vitriol, to a dry ſnowy Calx, as in the preceding Proceſs; ſuffer it to cool; put it into an Urinal Glaſs, and pour thereon an equal Quantity of Oil of Vitriol; boil, as before, almoſt to Dryneſs, with great Care to avoid the Fumes; it now dries with much more Difficulty, and requires a longer Time, and a much ſtronger Fire. When the Powder is dry, put the ſame Quantity of Oil of Vitriol to it, and proceed as before; at length it will ſcarcely dry by a long-continued and ſtrong Fire, but begin to ceaſe flowing, and to grow rigid like fixed Oil; being highly ſharp, cauſtic, and not to be touched, like the *Ignis Gehennæ* of *Paracelſus*: By this means the Mercury is ſo fixed with the Oil of Vitriol, as not to go off with the violent Action of the Fire.

REMARKS.

This Experiment ſerves to ſhew the Method of impregnating, ſaturating, and incerating Metals by Acids, to any Degree; and, alſo, of fixing volatile Mercury by them, ſo far as is poſſible: But no Metal is hence to be expected; for, in whatever manner Mercury is fixed with Acids, yet it is again recoverable in its priſtine State, by grinding it with twice its Weight of Iron Filings, and diſtilling it in a glaſs Retort, with the higheſt Degree of a Sand-heat.

For Æthiops of Mercury, ſee Æthiops Mineralis.
For factitious Cinnabar, ſee Cinnabar.
For Mercury amalgamated with Metals, ſee Amalgama.
For Metals waſhed with Mercury, ſee Amalgama.

Other Preparations of Mercury.

The *Mercurius Præcipitatus per ſe* is thus prepared:

The Mercury firſt well purified, put it into a flat-bottomed Glaſs, called *Vas Infernale*, which being ſet in a Sand-heat, the Fire is gradually increaſed, and the Metal turns firſt to an Aſh-coloured Powder, and, at length, becomes very red. It cauſes Vomiting, purges downward, and provokes Sweat, being given from two to ſix Grains. *Geoffroy.*

Mercurius præcipitatus Solaris per se, according to the *Pharmacop. Bateen.* is made of an Amalgama prepared of four Ounces of Mercury, with half an Ounce of Gold fuſed with Antimony, and placed in the *Vas Infernale*, taking the Matter often out, and triturating it according to Art.

The *Green Precipitate* is thus prepared:

Take of pure Mercury, four Ounces; of thin Copper-plates, an Ounce: Diſſolve them ſeparately in Spirit of Nitre, then mix the Solutions, and evaporate to Dryneſs. The remaining Maſs, being reduced to Powder, is digeſted, with diſtilled Vinegar poured on it, to the Height of ſix Fingers-breadth above it. When the Vinegar is tinctured green or bluiſh, it is poured off, and more put in its Place, as long as the Maſs can communicate any Tincture: then all theſe Tinctures, being mixed together, are evaporated to the Conſiſtence of Honey; and this Subſtance, when cool, grows hard; and, being reduced to Powder, is kept for Uſe.

It purges both upward and downward, and is reckoned by ſome a Specific in a virulent Gonorrhœa. The Doſe is from two to eight Grains, to be repeated every Day, or every other Day, till the Running ceaſes. Others reckon it an unſafe Medicine, becauſe of the poiſonous Quality of the Copper.

The *Violet*, or *Black Precipitate*, called by ſome Diaphoretic Mercury, or the Mercurial Panacea, is uſually made in this manner:

Take of pure Sulphur, four Ounces, and melt it in an earthen Veſſel over a Charcoal-fire: Into the melted Sulphur throw, with great Care, ſix Ounces of very clean Quickſilver, ſtirring it conſtantly with an Iron Rod; and, when they are perfectly incorporated, add four Ounces of Sal Ammoniac. Let this Maſs be ſublimed in a glaſs Veſſel; and, mixing the Sublimate with the Fæces, let them be again ſublimed; and repeat this Operation four times; then ſeparate the heavy, blackiſh or bluiſh Maſs, at the Bottom of the Veſſel, from the other light, rare, yellowiſh Subſtance, which is of no Uſe.

The laſt Preparation of Quickſilver in *Geoffroy* is the *Mercurial Panacea*, ſo called from its extraordinary Qualities; and which, ſays he, may be juſtly named *Panacea Ludoviciana*, becauſe the Secret was bought, and made public, by *Lewis* XIV. It is made in the following manner:

The crude Quickſilver is purified by being firſt made into Cinnabar, and then extracted from thence. Of this Mercury revivified from Cinnabar, is made corroſive Sublimate, which muſt be thrice ſublimed; twice with Sea-ſalt, and once without any Addition. Part of this Sublimate is again reduced to running Mercury, and the remaining corroſive Sublimate is made *Mercurius dulcis*, by nine Sublimations. Laſtly, this *Mercurius dulcis* is put in Digeſtion for three Weeks, with any aromatized Spirit of Wine; and afterwards ſeparated from the Liquor, and dried for Uſe.

This is undoubtedly an excellent Medicine in all Venereal Affections; and is recommended, alſo, in Rheumatiſms, Obſtructions of the Meſentery and Glands, King's Evil, the Itch, Tetters, and Worms. Some uſe it, alſo, for the Scurvy; but, in my Opinion, no Preparation of Quickſilver can be proper in that Diſtemper. The Panacea more readily ſalivates than *Mercurius dulcis*, becauſe this latter often paſſes off by Stool. *Geoffroy.*

Mercurius Resuscitatus.

Mercury revived from Cinnabar.

Take Cinnabar, one Pound; calcined Tartar, or Pot-aſhes, one Pound; Calx viva, two Pounds; grind theſe well together, and put them into a Retort, leaving, at leaſt, one Part in three empty; place it in a Reverberatory Furnace, and ſet to it a Receiver; let it ſtand twelve Hours, and then kindle a Fire, increaſing it gradually to the fourth Degree; keep it ſo till the Mercury is all come over into the Receiver, which will be in ſeven or eight Hours time; then waſh away the Filth, and ſtrain the clean Mercury through a clean Napkin, into an earthen Diſh.

Pulvis Principis: *Prince's Powder.*

Take of the red corroſive Precipitate of Mercury, half a Pound; grind it very well upon a Marble or Porphyry-ſtone; put it into a Cucurbit with two Quarts of Water; Place it in a Sand-furnace, and give it a Fire to make it ſcalding hot; let it ſtand ſo twelve Hours, ſtirring it about once in two Hours; then let it cool, and decant the Water. Put this Precipitate into Water a ſecond time, and a third, repeating the Operation as before. Then dry the Precipitate, and grind it with double the Weight of the Salt, extracted from the Reſiduum of the Tinctura Metallorum: Put them into a Cucurbit with Water; proceeding in all things as above, till the Precipitate remain inſipid; then

dry it, and boil it in Spirit of Wine: Decant the Spirit when cool, and dry the Precipitate.

This is emetic and cathartic, and is preſcribed in Venereal and Chronic Caſes. The Doſe is from three Grains to half a Scruple. The ſeveral Ablutions ſerve only to leſſen the Quantity and Pungency of the Salts, which the Precipitate received in Making from the Aqua-fortis, and ſo to render it milder in the Operation.

MERCURIUS VITÆ. See ANTIMONIUM.
For the *Arcanum Corallinum*, ſee ARCANUM.

HERCULES BOVII.

The moſt proper Method of preparing this Medicine, is the following, directed by *Thomaſus Bovius*.

Take of calcined Vitriol, and Nitre, each one Pound; diſtil in a Reverberatory Furnace; pour the diſtilled Liquor upon one Pound of calcined Sea-ſalt in a glaſs Retort, draw it off by a gentle Sand-heat; for it eaſily aſcends: The Mercury is to be diſſolved with one Portion of this Liquor, and the Gold by another; then both Solutions, when joined, are to be drawn off; and, after frequent Cohobations, adding at each time, about a third Part of the ſame Menſtruum, let the Diſtillation be repeated till the Matter is ſufficiently fixed; which when duly edulcorated, is to be kept for Uſe. The Doſe is from three to five or ſix Grains: Or,

Take of purified Mercury, four Ounces; of the Filings of Gold, half an Ounce; make an Amalgama, to which, when waſhed, and put into a Retort, pour the aforeſaid Menſtruum of *Bovius*; draw off in a Sand-furnace; and, after frequent Cohobations, adding at each time about a third Part of the ſame Menſtruum, let the Diſtillation be repeated till the Matter is ſufficiently fixed. Then let the Matter be calcined on a red-hot Plate of Iron, and edulcorated by frequent Waſhings, and burning Spirit of Wine upon it. The Doſe is from three to ſix Grains: It operates gently by Vomit; and often affords ſingular Relief in very terrible Diſorders, becauſe, getting beyond the Primæ Viæ, it operates immediately on the Maſs of Blood. *Willis*.

As the Aurum Vitæ is a celebrated Mercurial Preparation, we ſhall, under this Article, give Dr. *Bate's* Directions for its Compoſition. This Medicine therefore is prepared in the following Manner:

Take of Gold, two Drams; of purified Mercury, two Ounces, ſeparately diſſolved in their proper Menſtruums, duly mixed, and in a Retort diſtilled to Driness. Calcine the remaining Calx, edulcorate by waſhing with Water, and an artificial Kindling of Spirit of Wine.

This Medicine is ſaid to ſurpaſs all other Cathartics, to remove Worms, cure the Lues Venerea, Petechial Diſorders, the Plague, and Quartan Fevers. The Doſe is from three to ſix or eight Grains, with Sugar of Roſes, in an Egg or Broth, or in Pills, eſpecially when joined with Scammony, and moiſtened with Aqua-vitæ burned upon it.

The Curious may find many more Mercurial Preparations in the *Collectanea Chymica Leydenſia*.

FREDERIC HOFFMAN'S DISSERTATION ON MERCURY.

Mercury is ſometimes ſo adulterated, as to produce very terrible and uncommon Symptoms: Thus, Mercury is commonly adulterated with Lead; but this Fraud is, I think, adverted to by none except *Quercetan*, in his *Conſilium de Lue Venerea*; for by the Intervention of *Biſmuth*, Lead, if its Quantity is not too large, may be forced through Leather, and rendered ſo fluid and moveable, as to prevent all Suſpicion of Fraud. Hence 'tis obvious, how inſufficient and ſuperficial the Depuration of Mercury muſt be by ſuch an Expreſſion alone. But what terrible Effects are produced by Lead internally taken, is ſufficiently obvious to any one, who is but a little converſant in the Writings of practical Authors; and a ſmall Quantity of it is abſolutely deleterious, when treated in a manner not unlike that uſed when Mercury is adulterated with it. But what ſome aſſert, which is, that Quickſilver attracts and aſſociates with itſelf metallic Impurities from Mines of Lead, Antimony, and Arſenic, ſeems to be entirely groundleſs; for, in thoſe Parts where Quickſilver is copiouſly obtained, Mines of this Kind are not contiguous to thoſe of the Mercury: Beſides, Quickſilver, which is eaſily mixed with ſome metallic Subſtances, nevertheleſs, when inherent in the Ore, and coagulated with the Vapour of the Sulphur, admits no intimate Mixture of Metals, or other contaminated Bodies. But, notwithſtanding theſe Circumſtances, it happens from other Cauſes, that all the Species of Mercury have not an equal Purity, and Subtilty of Parts. Hence one Species is often found far more valuable than another. That Mercury, however, is ſufficiently good, and fit for moſt Purpoſes, which, when expoſed to the Fire, is quickly and totally exhaled, ſo that no Part of it is left. That, alſo, is good, which, by Digeſtion, neither throws a foul Sordes up on its Surface, which is generally produced by the Biſmuth, nor contracts a Pellicle on its Surface, but quickly acts upon Metals, and ſpeedily deſtroys their Coheſion. 'Tis a common, tho' falſe Opinion, that good and genuine Mercury, after Depuration in a ſilver Veſſel, leaves a yellow Spot behind it; which however is never readily obſerved, unleſs the Mercury has been frequently amalgamated with Gold, and afterwards ſeparated from it, or depurated, and revived after the Method of *Philaletha*, which we ſhall in the Sequel deſcribe.

We now come to conſider the Elements or Principles, of which Mercury conſiſts. But this Subject is ſo involved in Perplexities, and ſo incumbered with the ſubtile Hypotheſes of the Atomiſts, as to furniſh the Mind with nothing but vague and general Speculations. From rational and conſiſtent Principles of Chymiſtry, more probable and uſeful Truths might be diſcovered; but, even by theſe, this obſcure Subject has not been fully explained. 'Tis, however, certain, from the Experiments of various Authors, and eſpecially of *Becher*, that all Metals are compos'd of a certain ſolid and compact Earth, which conſtitutes their Baſes and Body. But ſince there are only two principal Kinds of Earths; the one comprehending the fuſible Earths, which are fit for being colliquated into vitreous Subſtances, and, therefore, called vitreſcent; the other containing the calcareous, that is, ſuch Earths as cannot be colliquated by the ſtrongeſt Fire, but are, by its means, burn'd to a Calx, or a light and porous Subſtance; hence it follows, that ſince the former Species of Earths are furniſhed with theſe Properties of Metals, Weightineſs, Fuſibility, and Malleability, Metals muſt enter their Compoſition. Such a ſolid Earth, therefore, of a fuſible and vitreſcent Nature, intimately, and in its minuteſt Particles, mix'd with an unctuous Matter more or leſs acid in ſubterraneous Cavities, by means of the Ether, conſtitutes the Matter of metallic Subſtances, the Variety of which depends only on the different Purity and Proportion of this Earth, with reſpect to the unctuous Matter, and the different Mixtures of theſe with each other. This is ſo effectually confirmed by the Experiments of *Becher*, in his *Phyſica Subterranea*, and of ſome others, that there is not the leaſt Poſſibility of entertaining a Doubt about it. We may, therefore, affirm, that Mercury, tho' differing from other Metals, with reſpect to its Fluidity, has yet the ſame common Origin with them; and that its conſtituent Matter, and conſiderable Weight, are owing to this ſolid and compact Earth; but that it contains a ſmall Quantity of the unctuous Subſtance, for which Reaſon it is not compacted into a ſolid Conſiſtence, like other Metals, but more eaſily yields to the brisk Undulations of the Ether, from which it derives its Fluidity. And, if we carefully advert to the Matter, it will be ſufficiently obvious, that, ſince this ſolid Earth, which conſtitutes the Baſis of Mercury, is, by the highly-accelerated and internal Motion of the Ether, continually circumagitated, all its moſt minute Particles muſt, by this rapid Agitation round their Axis, aſſume a round Figure, and become highly ſmooth and poliſh'd Globules of a ſurpriſing and indefinite Smalneſs. From this Smalneſs and Mobility of the globous Particles of Mercury, ariſe not only its Properties, but, alſo, the Effects it produces on other metallic, as well as animal and organic Bodies.

Thus, therefore, we firſt account for that Fluidity in Mercury, which is ſo ſurpriſing, that nothing in Nature comes up to it; for it is entirely deſtitute of Humidity. Hence Mercury is by the Chymiſts called *a dry Fluid, which does not moiſten the Hands*. This Circumſtance ſeemed ſo ſurpriſing to *Fallopius*, that he call'd Mercury the *Miracle of Nature*. But the principal Cauſe of this Fluidity is the ſubtile Ether* copiouſly intermixed with the minute Globules of the Mercury. By the brisk and continual Agitation of this Ether the Particles of Mercury have their Situations ſo changed, and are ſo disjoined, that they eaſily yield to the Contact or Action of other Bodies, in which it is univerſally agreed that the very Eſſence of Fluidity conſiſts. But this Fluidity is not accompanied with Moiſture, becauſe the Particles, of which Mercury is compounded, are poliſhed, and highly ſmall; in conſequence of which they can neither be eaſily ſtopt in their Motion, nor readily adhere to other Bodies; which happens when Fluids are compoſed of branchy, viſcid, or more flexible Parts, ſuch as Oil, Water, and a great many others. But that this ethereal Subſtance is the Cauſe of Fluidity in Mercury, beſides the various Hypotheſes of Philoſophers, may, alſo, be proved by this, that, by means of Effervescence and Ebullition performed with various Salts, skilful Chymiſts can from Lead, or Regulus of Antimony, obtain a ſufficiently fluid Mercury; which happens partly becauſe the Salts, uſed for this Purpoſe, deſtroy the Coheſion of theſe Metals, and render them fluid; and partly becauſe by the Conflict, and mutual Re-action of theſe Salts, a large

* *Hoffman*, inſtead of ſuppoſing this Ether to exiſt, and its Action, ſhould either have proved it, or ſaid nothing of it; for Hypotheſes of this kind are far from conveying Knowledge, and improving the Underſtanding.

Quantity of the ethereal Fluid is either produced, or collected, and put into a more rapid Motion, by which the yielding, and before highly moveable Particles of Metals are continually carried round their Axis, and by this means aſſume the Nature and Properties of Mercury. Beſides, upon this brisk and lively Action of the Ether on the minute Particles of the Mercury, depends its Volatility, which is ſo great, that upon the Acceſs of a gentle Heat it diffuſes a large Quantity of Effluvia, as is ſufficiently known from its Effects, when uſed as an Amulet, if we may believe the Accounts taken from *Hercules Saxonia*, by *Wedelius*, in *Tract. de Medendorum Facultat.* But if, by an intenſe external Heat, that of Fire, for Inſtance, the Elaſticity and Expanſion of the Ether in the Mercury are augmented, the Particles of the Mercury are gradually elevated, and exhaled in the Form of an almoſt inſenſible Vapour.

Beſides the Volatility and Fluidity of Mercury, it is, alſo, ſo heavy, as in Weight to exceed all other Metals, except Gold. The Matter of this Gravity is, without doubt, ſupplied by that ſolid Earth, from which Mercury has its Conſiſtence. All the Particles of this Earth, though highly ſmall, are yet ſo denſe, and lie ſo cloſe to each other, that they form Interſtices ſo ſmall as only to admit the Ether, and exclude the groſſer Air, as is certain from various Barometers, but eſpecially that of *Torricelli*. Hence, notwithſtanding the brisk inteſtine Agitation of all the Parts of Mercury, for the Continuation of which the ſubtile Ether is abundantly ſufficient, yet Mercury, of itſelf a denſe Subſtance, is ſo compreſſed by the circumambient Atmoſphere, as neceſſarily to conſtitute a Body of remarkable Weight. But though Fluidity and Mobility may at firſt ſeem rather to diminiſh than augment the Gravity of Bodies, yet the contrary may be proved from the moſt common Experiments; for we obſerve, that melted Metals are ſpecifically heavier, than ſuch as are ſolid: Thus, for Inſtance, if ſolid Silver is thrown into a Quantity of the ſame Metal fuſed, the former ſwims upon the latter. The ſame holds true in Ice, which is ſpecifically lighter, and takes up a proportionably larger Space, than fluid Water.

From the principal Properties of Mercury, already enumerated, we may, as it were, from ſimple and demonſtrative Principles, account for its Effects on other Bodies. That Solution, then, of Metals produced by Mercury, in what we call Amalgamation, is only to be aſcribed to the minute Globules of Mercury, which, being ſtrongly exagitated, eſpecially by external Heat, quickly enter the Pores of all Metals, except thoſe of Iron; and, by their deſtructive Motion, ſo disjoin and ſeparate the Coheſion of all the Parts, that, in minute Bulks, they ſwim in the Globules of Mercury, and reſemble a Subſtance of the ſame Ductility with Wax. Beſides, Mercury produces more powerful Effects on the human Body, than any other Medicines: For, if Quickſilver, properly ſubdued with Lard, is applied externally, by way of Ointment, to the Body, and even its tendinous Parts, or if repeated Doſes of the *Mercurius præcipitatus dulcis* are exhibited internally, the minute Particles of the Mercury, put in Action by the Heat of the Body, not only in conſequence of their globular Figures, and ſmooth Surfaces, but, alſo, by means of their ſpecific Gravities, quickly continue the Motion: For which Reaſon they eaſily enter the moſt remote and narrow Receſſes of the Body, break through the viſcid and impervious Humours lodged in them, and, by their Gravity, ſtimulating the moving Fibres, rouſe them to more frequent Contractions, and, by that means, accelerate the Circulation of the Humours through all the Veſſels; and all theſe Effects are produced without any Violence. But, if there is a large Quantity of acrid Salts in the Humours, and if theſe Salts ſhould approach to, and be united with, the Globules of Mercury, theſe Salts, before of a mild Quality, aſſume a pernicious and corroſive Nature: For which Reaſon, being forcibly applied to the moving and nervous Fibres, they not only throw them into violent Commotions, but, alſo, ſtimulate them to greater Contractions. Hence the interſpers'd Blood-veſſels are compreſſed, and the free and natural Circulation of the Blood through them intercepted: By this means an unequal Diſtribution of the Humours is made, and a too copious Congeſtion of them to the laxer Parts, and ſuch as are leſs ſubject to Conſtriction, is produced. But there are many lax lymphatic Glands, falſly taken for thoſe of the conglomerate Kind, ſince they rather conſiſt of a Compages of Veſicles and Cellulæ looſely cohering with each other, which are more lax than the other Parts; and of this Sort, in particular, are the ſpongious and glandular Coat of the Fauces, and the Tonſils, together with the other ſalival Glands, to which when the Mucus and Saliva are copiouſly congeſted, and, as it were, derived from other Parts, theſe Glands become ſo remarkably turgid, as, if a Swelling of the Tongue happens at the ſame time, which it frequently does, to bring on a conſiderable Danger of Suffocation. When this Tumor is broken, either by the Weight of the Mercury, or by means of the ſmall Ulcers, which are ſufficiently manifeſt from the fetid Smell, and produced by the Mercury aſſuming a corroſive Quality by the Acceſs of the acrid Salts of the Humours, there is produced a liberal Diſcharge of the Saliva, which, if a due Regimen is uſed, is protracted for ſome Weeks. But that, during this Salivation, there is a copious Congeſtion of Humours to the ſalival Veſſels from other Parts, is ſufficiently obvious from this, that, in ſuch a Courſe, the whole Habit of the Body is remarkably collapſed, or rather conſtricted, and the Veins, before conſpicuous and turgid, either plainly diſappear, or are very ſmall; ſo that Men, before ſufficiently full of Juices, appear waſted, decayed, and unſeemly; which is a manifeſt Sign, that the Skin, or tendinous and membranous Parts, together with the ſubjacent Veſſels, are remarkably conſtricted; and conſequently that the Acceſs of the Blood, and other Humours, to theſe Parts, is diminiſhed; which, in all Probability, happens, alſo, in the other membranous Parts, ſince their State and Condition is the ſame. Beſides, a Salivation, when immoderate, may be checked, or even ſtopt and diverted by the Exhibition of Sudorifics, with a warm Regimen, or by means of Purgatives; for, by the former, the equal Diſtribution of the Humours through the whole Body is reſtored, and by the latter a Congeſtion of them to other Parts, that is, the Inteſtines, is produced.

From what has been ſaid it is ſufficiently obvious, that the Action of Mercury on the human Body may be ſo heightened, that, becoming highly contrary and incongruous to the vital Motions, it aſſumes the Nature of a Poiſon: For ſince, as we have already obſerved, by the Agility and Gravity of the globular Particles of Mercury no very violent Commotions are excited, for this Reaſon, if any Diſadvantages attend the Gravity of crude Mercury, theſe muſt happen in ſuch Caſes as do not admit of violent and brisk Commotions. When, for Inſtance, there is a Redundance of thick Humours, theſe may, by the violent Commotion, be ſo impelled into the Subſtance of the Viſcera, and other Parts, that, not finding an eaſy Paſſage, violent Infarctions, and other Diſorders ariſing from them, are juſtly to be dreaded. But theſe Diſadvantages are rather to be aſcribed to the Ignorance and Raſhneſs of the Phyſician, than to any inherent Fault in Mercury. But if, by external Cauſes, the Operation of Mercury is heighten'd, violent and pernicious Commotions of the Humours are eaſily excited, as we principally obſerve in Mercurial Suffumigations, the Violence of which is ſometimes fatally experienced by Gilders, and confirmed by melancholy Inſtances given by various Authors. Beſides, if a ſtrong nitrous Acid, or that of common Salt, is intimately mixed with Mercury, a Concretion is produced, as is obvious from making Sublimate Mercury, a very ſmall Doſe of which proves an highly rank and virulent Poiſon; for tho' neither of theſe, ſeparately, is equally offenſive to the Body, yet, when theſe Salts are united with the Globules of Mercury, they, by the rigid Spiculæ with which they are furniſhed, ſo ruffle and diſcompoſe the ſmooth and poliſhed Surface of the Mercurial Globules, that they adhere more eaſily than they did before, to the Fibres of the Parts, and are, by the increaſed Motion of Gravity, more deeply imprinted in them; by which means they not only violently corrode them, but, alſo, induce inordinate and ſpaſmodic Motions of the nervous Syſtem, which never fail to prove fatal to the Patient: But, though the ſmooth Globules of Mercury may be render'd rough by the ſaline Sordes of the Humours, and tho', from this Circumſtance, principally, ariſe the prejudicial Commotions of the Humours, produced by the prepoſterous Uſe of crude Mercury, yet theſe Globules cannot, in like manner, aſſume a corroſive Quality, unleſs there is a violent Intemperature of the Humours, or unleſs, in thoſe Diſeaſes which proceed from ſuch a Peccancy of Humours, it is exhibited crude, or by a previous Correction not ſufficiently accommodated to them. Hence we may eaſily infer, that the cautious Uſe of Mercury, or even a Salivation excited by its means, are of themſelves by no means prejudicial to the Body, but are, rather, highly beneficial, in removing ſeveral obſtinate and chronical Diſorders, eſpecially thoſe ariſing from a conſiderable Lentor and Immobility of the Humours, or their too great Spiſſitude, and the Infarction of various Parts, eſpecially thoſe of the glandulous and excretory Kind, ariſing from this Circumſtance: For theſe Diſorders are generally ſo obſtinate, as by no means to yield to the milder Medicines obtained from the Animal and Vegetable Kingdoms; for theſe, whether of a reſinous, or of a ſalino-ſulphureous Nature, are eaſily ſo obtunded, and precipitated, by the Sordes of the Primæ Viæ, as only to tranſmit into the Blood a kind of Exhalation, which will ſoon be overpower'd by the large Quantity of that peccant Fluid. On the contrary, ſaline Medicines, tho' in other Caſes highly efficacious, are, nevertheleſs, inſufficient for conquering the Obſtinacy of chronical Diſorders; for thoſe of the volatile Kind, by exagitating the Blood too impetuouſly, excite preternatural Commotions, and, in a particular manner, throw the Humours, if they are not, before, ſufficiently moveable, into the excretory, or even the more noble Viſcera, from which they cannot be ſo eaſily expreſſed, ſince the Efficacy of the volatile Medicine is diſſipated: Hence it happens, that theſe Viſcera are violently infarcted, and a Foundation laid for far more terrible Diſorders: But if the Salts are of a fixed Nature, whether alcaline, alcalino-vitriolic, tartareous, or of any other Kind, they either do not extend their abſtergent Virtue beyond the Primæ Viæ; or, if any Part of them reaches the Maſs of Blood, it is carried off by the excretory Ducts, by Urine for Inſtance, be-

fore it can produce an Effect of any Importance. Of greater Efficacy, therefore, than all theſe, or, perhaps, than all the other Metals, is Mercury, which, in the manner above-mentioned, rouſes the torpid and immoveable Humours; divides and attenuates thoſe which are viſcid; removes the Infarctions of the Glands, and other Parts; ſeparates and abſterges the ſalino-ſulphureous Particles of the Venereal Taint, and other polluted Matter, lodged in them, and adhering to the moſt remote Glands, and even in the Laminæ of the Bones, not without an uncommon Danger of Corruption; and afterwards, by a profuſe and liberal Diſcharge of Saliva, eliminates the Serum from the Body.

The many and great Encomiums, therefore, beſtowed upon a Salivation, in order to remove the Obſtinacy of the Lues Venerea, are by no means frivolous and ill-grounded, eſpecially ſince, by the uninterrupted and conſtant Experience of two Centuries, they are ſo confirmed, that no one has with Succeſs made an Attempt to depreciate and diſcredit the prudent Uſe of a Salivation. Beſides, there have been in former Ages, and ſtill are in our own Days, skilful and celebrated Authors, who have recommended this Method of Cure in other chronical Diſorders, and ſuch as would not yield to the Efficacy of milder Medicines: But, as this in general is ſufficiently obvious from their Writings, we ſhall only enumerate a few of the principal Cafes, in which they recommend a Salivation. For the Cure, then, of a violent Itch, or even of an Elephantiaſis, before the Appearance of the Lues Venerea, Quickſilver mixed with Ointments, and applied in that Form, was uſed by the *Arabians*, and principally recommended by *Meſue in Antidot.* and *Serapion*, as appears from *Sennertus*, who in his *Praxis*, *Lib.* 6. *Par.* 4. *& Cap.* 21. treats of this at greater Length. *Sylvius*, alſo, in his *Method. Medend.* warmly recommends the Uſe of a Salivation, for the Cure of an obſtinate Itch; and affirms, that this Method ought, alſo, to be uſed in other obſtinate Diſorders. Among others, the celebrated *Willis*, in his Treatiſe *de Scorbut. Cap. ult.* affirms, that in an inveterate, and what we call a cold Scurvy, a Salivation is ſo far from being uſeleſs, that, to ſome, it has been found to yield an immediate Relief. And *R. Lentilius*, treading in his Steps, in various Paſſages of his *Miſcel. Pract.* but eſpecially in the ſecond Part of that Work, gives us Inſtances of a ſcorbutic Atrophy perfectly cured by means of a Salivation, though not without conſiderable Uneaſineſs to the Patient. An Inſtance of a dropſical, ſcorbutic, and cachectic Habit, cured by a Salivation, is found in *Miſcel. Nat. curioſ. Decad.* 2. *An.* 3. *Obſ.* 173. *Ballonius*, in his *Epid. Lib.* 2. highly commends a Salivation for the Cure of a Quartan Fever: And *Willis*, in his Treatiſe *de Feb. Cap.* 4. gives us an Inſtance of a Woman happily cured of a Quartan Fever by Salivation. This Piece of Practice was, perhaps, firſt founded on an Obſervation of *Hippocrates*, who, in his *Epidem. Lib.* 1. *Sect.* 3. informs us, that obſtinate intermittent Fevers frequently terminate in a critical Salivation, the Truth of which, at preſent, quadrates with the Experience of judicious Phyſicians. *Sylvius*, *in Prax. Med. Append.* 8. thinks, that in arthritic Pains, when acid and viſcid Humours abound, a Salivation would be beneficial out of the Paroxyſm: That the Pains of the Gout were removed by a Salivation, but ſo as to return after three Years, we read in *Wedelius's Tr. de M. F.* In Madneſs and Melancholy it is extolled as a ſovereign Remedy, by *Rolfinckius*, *Epiſt. cognoſc. Part. aff. Lib.* 1. *Cap.* 12. as, alſo, by *Willis*, in *Path. Cerebr. Part.* 11. *Cap.* 12. who affirms, that he knew ſeveral mad Perſons cured by a copious Salivation long protracted. In obſtinate Head-achs, *Rolfinckius*, *in Meth. M. Sp. Lib.* 6. *Sect.* 3. *Cap.* 1. highly recommends a Salivation, where he, alſo, makes mention of an epileptic Patient infected with the Lues Venerea, cured of both his Diſorders, by means of a Salivation. And *Willis*, in the Part already quoted, *Cap.* 3. after in vain uſing Cathartics and Specifics in Epilepſies, orders a Salivation. In Cataracts, and perfect Blindneſs ariſing from them, *Riverius*, in *Prax. Lib.* 2. *Cap.* 5. and *Boyle*, *de Util. Phyſ. Experim.* highly commend a Salivation. *Rhodius*, alſo, *in Analect. ad Septal.* obſerves, that an Obſtruction of the Optic Nerve, and an Amauroſis ariſing from it, after in vain uſing Alterants, and other ophthalmic Medicines, was happily diſcuſſed by a Salivation. For the Cure of inveterate Ulcers, a Salivation is recommended by *Cardilucius*, *in Offic. Sanitat.* And *Morton*, who in *Phthiſiolog. Lib.* 1. *Cap.* 5. ſtyles it the laſt Aſylum of malignant Ulcers.

In conſequence of theſe Encomiums, the Efficacy of a Salivation is become ſo common a Topic of Converſation, that not only Phyſicians, but, alſo, Surgeons and Barbers, boaſt of great Feats they have performed by it. But it is neither proper, nor are the Obſervations of the moſt skilful Phyſicians ſo contrived, that any one may raſhly lay them down as the Model of his Practice; for, unleſs the Nature of the Diſeaſe is perfectly diſcover'd, and a due Regard had to the Diverſity of Circumſtances, it is not to be doubted, but a Salivation may be as quickly productive of bad, as ever it was obſerved to be of good Effects. But the Circumſtances which ought to be duly weighed before the Uſe of a Salivation, are often ſo latent and obſcure, that they cannot poſſibly be known: Hence it is, that Patients by this Method, which, in the ſame Diſorders, afforded immediate Relief to others, are either to no Purpoſe render'd highly uneaſy, or, which more frequently happens, are expoſed to imminent and irreparable Danger. For this Reaſon *Willis*, in *Pharmac. Rat. Cap.* 8. ingenuouſly confeſſes, that, by repeated Salivations, he removed the Impetigo of a young Woman, though not ſo effectually but it again returned with the ſame Virulence, notwithſtanding ſhe uſed a very exact Regimen. This Phyſician had not taken ſo precarious and uncertain Meaſures, if he had duly conſidered the various Circumſtances, by which the Obſtinacy of the Diſorder was ſupported and cheriſhed. For the like Reaſon a Quartan Fever, at other times happily cured by a Salivation, was unexpectedly excited by its means, as we are informed in *Act. Hafn. Vol.* 5. *Obſ.* 46. And *Wedelius*, in *Miſcell. Nat. curioſ. Decad.* 2. *An.* 4. *Obſ.* 120. gives us a fatal Inſtance of the bad Succeſs of Mercurial Unction, in arthritic Pains. In a Word, there are ſo many Inſtances of Salivations, which have produced bad Effects, that it would be both ſuperfluous and tedious to enumerate any more of them. And, if the genuine Worth of Salivation was to be diſcredited by contrary Obſervations, I believe as many Inſtances of its bad, as of its good Effects, might be given: But it is unfair to diſcredit a Method, ſupported by the juſteſt Obſervations of the greateſt Men, by ſuch means: But, from the many Inſtances of bad Effects, produced by Salivation, I think it plainly follows, that the Encomiums beſtowed on this Practice are too general; and that the Patients ought not to be expoſed to the Danger attending it, except abſolute Neceſſity requires it; when, according to the Maxim of *Celſus*, it is more expedient to uſe a dubious Remedy, than none at all; for precarious Hope is preferable to abſolute Deſpair. But Raſhneſs, and unreaſonably bold Attempts, ought never to ſtain that ſalutary Art, the principal End of which is the Health and Safety of Mankind.

Though we are not raſhly, and without juſt Grounds, to diſpute the Efficacy of a Salivation in a Lues Venerea, even of the moſt obſtinate and inveterate Kind, yet it muſt be owned, there are many Circumſtances, which either abſolutely do not admit of a Salivation in a Lues Venerea, or which, if neglected and overlooked, render it highly dangerous. But, ſince this is ſufficiently obvious to thoſe converſant in Practice, we ſhall only conſider the principal Diſadvantages ariſing from the prepoſterous Uſe of Salivations. Among the moſt frequent Symptoms of a Lues Venerea, of ſome ſtanding, we may juſtly reckon the various Diſorders incident to the Palate, to the Uvula, and the Tonſils; together with the Eroſions and Exulcerations of the Fauces, which, ſpreading deep into the ſubjacent Parts, often reſemble an eating Cancer, and cannot be totally cured and conſolidated, till the Diſorder which gives Birth to them is effectually ſubdued and removed. In this Caſe, therefore, if in any, we are to obſerve this Maxim, that the peccant Matter is neither to be convey'd to, nor evacuated by, the Part affected: Otherwiſe it muſt almoſt neceſſarily happen, that, by an Accumulation of the Saliva, which, to the Taſte of the Patient, is æruginous, virulent, and has its Qualities heighten'd by the Mercury, a Gangrene muſt be produced, and ſoon after ſucceeded by a fatal Sphacelus of theſe Parts: Of which, among others, *Hildanus* furniſhes us with ſome remarkable Inſtances, in *Cent.* 3. *Obſ.* 92. The Uſe of a Salivation is, alſo, diſcharged, in Caſes where, beſides a Redundance of thick and viſcid Humours, the Patients Strength is much impaired; and this is, indeed, a highly juſt and rational Maxim; for ſince, in conſequence of the Languor of the whole Body, and the Defect of a due Tone, and ſufficient moving Force, all the Parts, and even the more noble Viſcera, are preternaturally flaccid, hence it happens, that the viſcid Sordes of the Humours, being thrown into violent Commotions by the Efficacy of the Mercury, are eaſily, and in great Abundance, thrown into theſe Viſcera, but cannot, in conſequence of the Weakneſs of the moving Fibres, be afterwards ſo eaſily expelled from them: Hence theſe accummulated and peccant Humours become ſtagnant, and induce terrible Symptoms of various Kinds: For if theſe are copiouſly forced to the Glands of the Fauces, the Maxillæ, the Tonſils, or even the Tongue, theſe Parts become ſo tumid, that Deglutition and Reſpiration are entirely intercepted. With reſpect to theſe Misfortunes, the Reader may conſult *Sennert. Prax. Med. Part.* 4. *Lib.* 6. *Fallopius*, in his Treatiſe *de Lue Venerea*; and *Sylvius*, in his *Meth. Med. Lib.* 2. *Cap.* 11. But a more infallible and irreparable Misfortune is produced, when theſe Sordes are conveyed to the Brain, already weaken'd by previous Diſorders; for, by this means, Palſeys, Apoplexies, and other terrible lethargic Diſorders, muſt neceſſarily be ſoon produced. But ſince, in a Lues Venerea of ſome ſtanding, and deeply rooted in the Humours, there is generally a large Quantity of peccant Humours, and ſince the Strength of the Patient is, for the moſt part, much exhauſted, either by the Force of the Diſeaſe, previous Intemperance, Surfeits, or an Exceſs of Venery, hence it often happens, that, in thoſe Circumſtances, a Salivation, by ſome thought the only ſovereign Remedy for a Lues Venerea, is highly improper and abſurd. For this Reaſon a skilful Phyſician muſt bethink himſelf of ſome other equally efficacious Method, accommodated to ſuch Circumſtances, eſpecially ſince it is well known, that Decoctions of the Woods operate but in a very faint and languid manner, in a Lues Venerea of a conſiderable ſtanding.

A great many are indeed of Opinion, that, even in theſe Circumſtances, the Body may be render'd fit for bearing a Salivation; if, for Inſtance, before its Uſe, the Redundance of the peccant Humours is leſſened, and their Spiſſitude corrected by Veneſections, Purgatives, and the repeated Exhibition of Sudorifics. But I rather approve of the Opinion of *Sydenham*, who, in his Treatiſe *de Lue Vener.* informs us, that, by ſuch Meaſures, the Body is no more prepared for bearing a Salivation, than the Bodies of Soldiers would be prepared for Battle, by cutting their Nerves. Theſe are the principal Caſes in which a Salivation is improper in a Lues Venerea.

But if we make a general Eſtimate of the other Diſorders, for which we have above obſerved a Salivation was commended, we ſhall find their State and Condition to be of two Kinds: For they are either habitual, and ſupported by Cauſes deeply rooted in the Body; or they conſiſt in a Peccancy of the Humours, in their irregular Motion, for Inſtance, or their bad Qualities. If they are of the former Kind, that is, if they are hereditary, or ſupported by an Exulceration and Corruption of any of the Viſcera abſolutely neceſſary to the vital Motions, or by ſcirrhous Obſtructions, or tartareous Concretions copiouſly accumulated, and becoming ſolid, in any Parts of the Body, they cannot be perfectly ſubdued and removed either by a Salivation, or any other means whatever,

Afferat ipſe licet ſacras Epidaurius herbas.

It is, therefore, expedient, when Health cannot be reſtored, to attempt the Mitigation of the Symptoms of the Diſorder, that by this means the Patient may paſs the remaining Part of his Life with as much Eaſe as poſſible; for if a Patient, in this Condition, is ſubjected to a Salivation, he will, in vain, be rack'd with numberleſs Pains; or, what to me ſeems more probable, his Death will, by that means, be conſiderably accelerated; for this ſevere and exhauſting Method by Salivation, will either totally deſtroy the ſmall Degrees of Strength left by the Violence of the Diſeaſe, or, at leaſt, put the Patient into ſuch a deplorable Situation, that he cannot eaſily recover them; becauſe, when the Saliva, which is the principal Menſtruum of the human Body, is for ſome Weeks ſucceſſively exhauſted, or, by the Acceſs of the Mercury, contaminated, and ſpoiled by an æruginous Nidor, the Digeſtion of the Aliments, and Elaboration of the Chyle, on which the Preſervation of the Strength depends, muſt be greatly weakened. But if, without any conſiderable Diſorder of the Viſcera, theſe chronical Diſeaſes ſhould proceed from a Peccancy of the Humours, they both may be cured, and frequently are ſo, by other Medicines, which prove equally efficacious, without exciting theſe Commotions, and exhauſting Diſcharges of Saliva, which, for the moſt part, are more terrible than the Diſorder itſelf. Beſides, upon a mature Conſideration of all Circumſtances, I ſee no Neceſſity for ſo copious Diſcharges of Saliva in the Cure of moſt chronical Diſeaſes; for, when a Redundance of the Humours is to be removed, which, however, rarely happens in chronical Caſes, this End is more properly obtained by Evacuations, attended with leſs Trouble, and made from more convenient Parts, by Veneſection, for Inſtance, Purgatives, and Medicines of a diuretic Quality. If, on the contrary, the Quality of the Humours, whatever it is, is to be corrected; if, for Inſtance, their too great Lentor and Viſcidity, and various tartareous, ſalino-ſulphureous, acrid Subſtances, ſheathed up under theſe, are to be removed; the Intention is beſt anſwered without theſe exhauſting Salivations, or the Uſe of Evacuants; for Humours of this kind are moſt commodiouſly and properly corrected by ſuch Medicines as by a conſtant, but not too quick and impetuous an Action, excite ſtronger Commotions in the moving Fibres of the Parts, and produce more frequent and ſyſtaltic Motions in them; in conſequence of which repeated Concuſſions, and quicker Tranſpreſſions, the Humours are, in the porous and muſcular Subſtance of the Body, ſo divided and attenuated, that the ſaline Sordes, ſheathed up in them, are rendered fit for paſſing gradually and inſenſibly through proper Emunctories, provided theſe are, by a ſuitable Regimen, kept ſufficiently pervious and open.

Since, therefore, this Method of Cure is not only the moſt ſafe and pleaſant, but, alſo, ſufficiently efficacious, it ought juſtly to be ſubſtituted in the room of a tedious and troubleſome Salivation, eſpecially ſince in Circumſtances which do not admit of a Salivation, as we have above obſerved, ſuch Medicines are neceſſary, as are capable, without exciting any uneaſy and dangerous Commotions, of ſubduing chronical Diſeaſes, which prove too obſtinate for the milder Medicines obtained from the Vegetable and Animal Kingdoms. For this Purpoſe, the Chymiſts have judged Mercury the moſt proper of all other Subſtances; but, at the ſame time, it muſt be corrected in ſuch a manner, as that, being diveſted of its draſtic Qualities, it may, without exciting a Salivation, exert its Efficacy and Influence on the human Body. For this Reaſon various Authors have invented various Preparations of Mercury, moſt of which, not anſwering the Characters given of them, are juſtly exploded, as uſeleſs in the modern Practice. But the others, whoſe Uſe is confirmed by frequent and repeated Experiments, as they are not to be found in the Pharmacopeias, Diſpenſatories, and other Collections of Recipes, ſo they are uſed by few, and only known to thoſe who are converſant in Chymiſtry. Hence we ſee the Uſefulneſs of this Art, which is ſo neceſſary to a Phyſician, that, without an accurate Knowledge of it, *Sylvius* affirmed, he could neither acquire a Reputation at firſt, nor ſupport and maintain it afterwards. But, that we may have ſome certain Foundation for making an Eſtimate of the numberleſs Preparations of Mercury, we ſhall, from what has been ſaid, take a View of thoſe Properties, which produce, and give Birth to, the draſtic Quality of Mercury. Now theſe are, the Mobility of the Globules of which it is compoſed, and their Tendency to attract acrid Humours, from the Acceſs of which thoſe Commotions, produced by the Uſe of Preparations of crude Mercury, principally ariſe. Mercury is, therefore, moſt commodiouſly and efficaciouſly corrected by the Addition of ſuch a Subſtance, as, being itſelf free from a draſtic Quality, is capable of being ſo diſperſed and mixed with the Mercurial Globules, that by its Intervention the too ſtrong Adheſion of the acrid Salts may be prevented, and, at the ſame time, the too briſk Impetus of the Mercurial Globules checked, without totally deſtroying their Agility, and penetrating Force, but leaving them in ſuch a Condition, as that they are capable, by their conſtant, and, as yet, ſufficiently ſtrong Action, of exciting briſker Motions in the moving Fibres, without any violent or prejudicial Commotions.

It ſeems to have been the Opinion of many, that Mercury is very properly corrected by an Admixture and Sublimation with Sulphur. This gave Birth to the Production of Cinnabar, and its various Species, which really differ very little from each other; for it is ſufficiently known, that each of them is produced by a Mixture of Quickſilver with Sulphur. But whether the Sulphur is of the common foſſile Kind, and is united with the Mercury in the Mines, whether it is added artificially, or, laſtly, whether it is extracted from Antimony, after the Reguline Subſtance is diſſolved by the Salts of Mercury Sublimate, yet it is ſtill the ſame Sulphur, and, conſequently, muſt, in each Caſe, produce a Cinnabar of the ſame Nature and Qualities, the Efficacy of which, in removing obſtinate Diſorders, and eſpecially Epilepſies, is ſo highly extolled, that there is no Neceſſity for any additional Encomiums. And certainly this is a Remedy ſo highly ſafe and innocent, that it may confidently, and without any Fear of Danger, be exhibited to Patients of all Ages and Conſtitutions, in all Diſorders, whether chronical or acute; for the Sulphur, which is intimately mixed, and cloſely aſſociated, with the Mercury, by its unctuous Subſtance, not only bridles and ſtops the Motion of the Mercurial Globules, and checks their Impetus, but, alſo, hinders the external Salts from acting on the Mercury, and adhering to it. Hence it is that Cinnabar, by means of the moſt intenſely acid Liquors, is neither diſſolved, nor acquires a virulent Taſte; which, however, eaſily happens, when theſe acid Liquors are poured upon Quickſilver. In Cinnabar the Sulphur is ſo intimately mixed with the Mercury, that, though it is boiled in the ſtrongeſt Lixivium, it is not, as moſt People think, by that means diſſolved. Hence ſome are too much, though in vain, afraid of the Uſe of Cinnabar in thoſe Diſeaſes where there is a ſaline and acrid Intemperies, joined with a preternatural Thickneſs of the Humours, ſuch as a Scurvy, for Inſtance, ſince the Cinnabar can by no means be changed. The Opinion of thoſe is, alſo, falſe and groundleſs, who claſs Cinnabar among the anodyne, demulcent, and abſorbent Medicines; and, by that means, to no Purpoſe, augment the Number of theſe, which is already too large; for whatever Relief theſe Medicines afford in Diſorders of the Brain and Nerves, is principally produced by their gently diſcuſſing the extravaſated Blood and Lymph ſtagnating in theſe Parts.

But ſince in Cinnabar the Mercury is ſo much fixed, as to be in a great meaſure deprived of its natural Agility, when uſed in this manner, which is the common Cuſtom, it rarely or never produces any conſiderable Effect; for, if we form a Judgment from what has been ſaid, we muſt evidently perceive, that two or three Grains of Cinnabar, by which a large Quantity of abſorbent Powder is rather tinged than heightened in its Efficacy, can produce no Effect; and, if any happy and ſalutary Effect is produced by the Medicine thus faintly tinged, it is undoubtedly owing to the Efficacy of the other Ingredients, and not to the Cinnabar. But this Circumſtance by no means detracts from the Virtues of Cinnabar, which would be ſufficiently conſpicuous, if it was only duly prepared, and exhibited in a larger Doſe; for it is certain, from the Writings of Men equally famed for their Skill in Phyſic, and Veneration for Truth, that in former Times, when Cinnabar was frequently uſed by *Hartman* and *Michaeli*, it produced very conſiderable and ſalutary Effects: But we muſt obſerve, that they uſed Cinnabar not once or twice, as at preſent, but, at leaſt, ſix times ſublimed; and, in my Opinion, not without good Reaſon; for by the violent Motion of the Fire or Ether, which, in Sublimation, agitates the Cinnabar, the Mercurial Subſtance is divided, attenuated, and rendered more ſpirituous; by which means the Cinnabar is more exalted, and, as it were, refined. Beſides, it is abſolutely neceſſary, that the Cinnabar ſhould, by long Trituration, or rather an artificial

Elutriation, be reduced to Particles of the ſmalleſt Surfaces, or into a Powder far more fine and impalpable, than it is commonly to be had in Shops; for, unleſs it is thus fine, the groſs and weighty Molecules of the Cinnabar, which are not capable of being diſſolved by the Juices of the Body, will remain a dead and inactive Weight in the Primæ Viæ, but never convey their Influence to the Maſs of Blood and Humours. Beſides, we muſt carefully obſerve, that, if in the Cure of the more terrible Diſorders of the Lymph, and nervous Syſtem, any thing is to be attempted by means of Cinnabar, it is to be exhibited in far larger Doſes, than it generally is, from fifteen Grains, for Inſtance, to one Scruple, to half a Dram, or more, previouſly diluted in ſome aqueous Vehicle, and exhibited for one Doſe. And this Doſe, according to the Circumſtances of the Patient, is to be repeated twice or thrice a Day; which Method may, without any Danger, be continued for a conſiderable Number of Days, provided the Body is all the while ſufficiently ſoluble, and the Strength of the Primæ Viæ unimpair'd. *Stahl*, as is obvious from his Notes *ad Poterium*, frequently uſed this Method with Succeſs, tho' his Practice, in this reſpect, has not as yet been imitated. But that learned Phyſician confirmed me in the Juſtneſs of this Practice, by many Caſes, which he generouſly communicated to me. At *Clauſthal*, a Town near the *Black Foreſt*, and fam'd for metallic Mines, the Epilepſies and Convulſions of the Miners, produced by Falls, and Blows of the Head, were, by this Method of exhibiting Cinnabar, ſo ſpeedily and efficaciouſly cured, that ſome miraculous Effect was thought to have been produced. Cinnabar, exhibited in the above-mentioned Doſe and Manner, produced the like Effect at *Halberſtad*, in a Man of ſixty Years of Age, who, after a violent Contuſion of the Head, remained dumb for ten Days, was more than thirty times every Day ſeized with an epileptic Fit, and lay entirely deprived of the Exerciſe of his Reaſon. But by a Scruple of Cinnabar alone, exhibited thrice a Day, for ten Days ſucceſſively, he was, without any other Remedies, effectually reſtored to his former Health. I ſhall not, at greater Length, inſiſt upon the ſpeedy and ſurpriſing Relief, which, by this Method, has been afforded in epileptic Caſes, leſt I ſhould be ſuſpected to over-do my Encomiums on Cinnabar; which, when exhibited in proper Caſes, and in ſufficient Doſes, repeated according to the Circumſtances of the Patient, will always prove efficacious. But I muſt here obſerve, that, by the prepoſterous and ill-grounded Cowardice of many, eſpecially in determining the Doſes of Medicines, it happens, that the Obſtinacy of chronical Diſeaſes is ſo rarely ſubdued by the Efficacy of Medicines; which, conſidering the ſcanty Doſes in which they are exhibited, is almoſt none at all, but rather blunted, and wearied out by a tedious Expectation. But, at the ſame time, unleſs the Cauſe of the Diſorder is removed, the Patient can never, by theſe Means, be reſtored to Health.

But as Cinnabar only produces its due Effects, when exhibited in large Doſes often repeated, ſo it cannot be endur'd in ſo large Quantities, but by thoſe whoſe Primæ Viæ are ſufficiently ſtrong; for, if the Fibres of the Stomach and Inteſtines are flaccid, and deſtitute of their due Tone, and conſequently their periſtaltic Motion impair'd, the accumulated Cinnabar, which, by means of the Mucus, adheres to the Sides of theſe Parts, greatly oppreſſes them. Beſides, as the Mercury is ſo fixed by the Subſtance of the Sulphur, which, when throughly melted by the Force of Fire, is intimately mixed with its ſmalleſt Globules, Cinnabar is, for this Reaſon, ſomewhat ſlow and languid in removing obſtinate chronical Diſorders. For which Reaſon, in Caſes of this Nature, we juſtly prefer to Cinnabar an extemporaneous Mixture of Mercury and Sulphur, which, on account of its Colour, is called Æthiops Mineral; for the Sulphur, which, in ſuch a Mixture, is interſperſed and mixed with all the Globules of the Mercury, prevents the Acceſs of acrid Salts, and, at the ſame time, becauſe it is not ſo firmly mixed, and intimately colliquated with them, does not ſo powerfully bind up, and check their Mobility and penetrating Quality, as in the Cinnabar. Beſides, Æthiops Mineral is, by *Mayern* and *Harris*, extol'd not only for killing Worms, but, alſo, for removing Cachexies, Scurvies proceeding from a cold Cauſe, and even a Lues Venerea, or other Diſorders which require the reſolvent Efficacy of Mercury; in which Caſes, a ſmall Doſe of it produces happier Effects, than can be obtained by far larger Quantities of Cinnabar, eſpecially if, in preparing it, we uſe pure and native Sulphur dropping from ſubterraneous Caverns, previouſly deprived of its redundant Acid, and rendered more ſubtile by repeated Sublimations with Quick-lime. By which means it may be ſo corrected and exalted, as to prove a far more powerful Reſolvent, and Sudorific, than the common and more impure Species of Sulphur. When mixed, therefore with the Mercury duly depurated by boiling in Wax, and Sublimation, with a large Quantity of Quick-lime, it affords a Medicine at once highly ſafe and efficacious.

The other Preparations, Corrections, and Elaborations, of Mercury, which paſs under various pompous Names, and are promiſcuouſly recommended, are ſo incredibly numerous, that it would be too tedious to enumerate the various Species of precipitated Mercury alone. Beſides, ſo few of them anſwer the great Encomiums beſtow'd on them by their boaſting Authors, that, in many reſpects, crude Mercury, mix'd with Sugar for internal Purpoſes, or with proper Ointments for Unction, is poſſeſſed of a leſs draſtic Quality, and often produces more happy Effects. 'Tis, therefore, ſuperfluous to make a laborious Diſquiſition into the Natures of each of theſe Preparations, ſince, from what has been ſaid, we may eaſily form a Judgment of their reſpective Qualities. Moſt of the Compoſitions of Mercurial Medicines, deſtin'd for internal Uſe, which are at preſent known, agree in the moſt material and important Circumſtances; and the whole of the Affair conſiſts in this, that the Mercury, whether by itſelf, or previouſly amalgamated with other metallic Bodies, be diſſolved by acid and corroſive Menſtruums, and afterwards, by Precipitation with Salts of an oppoſite Nature, or by an Abſtraction of the acid Menſtruums, depriv'd of its Mobility, and reduced to a Powder. But, when treated in this manner, it anſwers neither of the Ends, which ought to be obtained by the Preparation; for the Spiculæ of the cauſtic Menſtruums are intimately mixed with the Globules of the Mercury, ſo that they cannot afterwards be ſeparated by any Elutriations, however frequent, or by Deflagrations with Spirit of Wine; and, conſequently, cannot be diveſted of that corroſive and draſtic Quality, which the Mercury, by that means, acquires. If the Mercury, rather contaminated than corrected in this manner, is taken internally, it generally excites a ſudden Salivation, violent Purgings, impetuous Vomitings, or Eroſions in the Primæ Viæ, and other Parts, not without a manifeſt Danger of future and greater Misfortunes. But moſt of the laborious Preparations of Mercury have a Tendency to excite theſe violent Commotions; and ſuch as are of an oppoſite Nature, as they are very few, ſo, if they produce any ſalutary Effects internally, theſe are not owing to the Efficacy of the Menſtruums, and cauſtic Salts, by which means a draſtic Quality muſt neceſſarily be excited; but as they are joined with ſuch Bodies, as, by interpoſing themſelves between the Globules of the Mercury, check their Impetus, hinder the Combination of the Salts, and by this means prevent Commotions in the Body, they act in a ſalutary Manner.

But the Bodies which produce this Effect, and are commodiouſly mixed with Mercury, are highly pure Metals, no-ways unfriendly to the Conſtitution, ſuch as pure Gold and Tin, which excellently check the Violence of Mercury, as is ſufficiently obvious from frequent Obſervation, and eſpecially from the Effects of the *Mercurius Diaphoreticus Jovialis*, which is moſt properly prepared thus: With Laminæ of pure *Britiſh* Tin, and Mercury well depurated, an Amalgama is made without Fire. From this Amalgama, placed in a glaſs Retort, a ſufficient Quantity of the Spirit of Nitre is drawn by means of a Sand-heat. The whitiſh Powder, remaining in the Bottom of the Retort after the Abſtraction of the Spirit, is to be edulcorated as well as poſſible with Rain-water; in order to obtain which End the more effectually, Spirit of Wine is to be frequently deflagrated upon the Powder, that by this means the Spiculæ of the Menſtruum, adhering to it, may be the better drawn out, and afterwards the more eaſily receiv'd into the warm Water. But that the Spiculæ of the corroſive Menſtruum which cannot be carry'd off by Elutriation, may be deſtroy'd, the Powder is for ſome Hours to be carefully triturated on a Marble, pouring on it, at proper Intervals, a ſufficient Quantity of the Liquor of fix'd Nitre. And this Trituration is to be repeated three times, the Powder being ſuffer'd to become dry before each time; and, laſtly, the dry'd Matter is to be put into warm Water, and the Powder which ſubſides, collected for Uſe. This Preparation rarely or never excites a Salivation, unleſs when it is exhibited in too large a Doſe, or its Uſe is too long perſiſted in; but, in a far ſmaller Doſe than Cinnabar, it generally exerts its Efficacy by ſomewhat increaſing inſenſible Perſpiration, or by exciting Sweats, if a proper Regimen is obſerved; for the Sulphur of the Tin, the Preſence of which is diſcovered by its kindling with Nitre, in the Subtilty of its Parts, far exceeds the common Sulphur, or the impure Sulphur of Antimony, uſed in the Preparation of Cinnabar; in conſequence of which, it not only checks the exceſſive Impetus of the Mercurial Globules, but alſo prevents the Acceſs of acrid Salts, whilſt, at the ſame time, it does not ſo effectually fix and obtund the penetrating Quality of the Mercurial Globules, as the coarſer Sulphur does in Cinnabar.

But, if in the room of Tin we ſubſtitute Gold, or at leaſt add a Portion of the latter to the former, and intimately mix them with the Mercury, a Medicine will be produced, in Efficacy far exceeding that laſt deſcrib'd; for, as the Gold, in conſequence of its being an homogeneous Subſtance, is eaſily and intimately mix'd with the Mercury, ſo, by the conſiderable Weight of its minute Parts, interſperſed with its Globules, it heightens its Virtues, and renders it more efficacious, whilſt it changes the too ſudden Impetus, which the Mercurial Globules would otherwiſe excite in the human Body, into a more conſtant, and, in conſequence of its Gravity, a more penetrating Action. Beſides, Gold is only capable of being acted upon, and diſſolved, by the moſt powerful Menſtruums, ſuch as Aqua Regia; in conſequence of which, when united with Mercury, it prevents that Acceſs of acrid Salts, which otherwiſe readily happens in the Juices of the human

human Body; by which means it excellently prevents the violent Commotions, which would otherwiſe be excited. Various Mixtures of Gold with Mercury are contrived, in order to reduce them to the Form of a Powder: But the leaſt expenſive Method is this; *Hungarian*, or any other Species of pure Gold, is to be diſſolved in Aqua Regia. Into this Solution a proper Quantity of duly depurated Mercury is to be gradually inſtill'd. Upon this, the Gold, together with a Portion of the Mercury, is forthwith precipitated to the Bottom in the Form of a Powder, which, when the Menſtruum is poured off, is to be gathered, corrected by the Addition of ſome alcaline Liquor, and carefully edulcorated by frequent Elutriations, and Deflagrations of Spirit of Wine. But if a ſufficient Quantity of *Aurum Fulminans*, or, which is better, of that rediſh Powder precipitated by Water from a Solution of Gold and Tin, is, by long Trituration, and the Aſperſion of Water, duly mixed with white precipitated Mercury previouſly well waſh'd, a Medicine is obtain'd of equal Efficacy with that laſt deſcribed, and generally leſs expenſive. But tho' theſe Medicines are pretty efficacious, if duly exhibited, yet ſince, in theſe Preparations, the Gold is not intimately mix'd with the Mercury, but only adheres to the Surfaces of its Globules, as is evident from this, that by a moderate Fire the Mercury may be again ſeparated from it, and ſince Medicines of this kind cannot be perfectly diveſted of the Acidity of the corroſive Menſtruum, hence it happens, that, not agreeing well with delicate and tender Conſtitutions, they often excite a Salivation, tho' of a far milder and more gentle Kind, than thoſe raiſed by the Compoſitions of crude Mercury. For this Reaſon the Chymiſts have earneſtly deſired ſuch a Correction of Mercury, as, without the Addition of corroſive Menſtruums, might be commodiouſly carry'd on by the moderate Action of Fire, and conſiſt in its intimate Mixture with Gold; which End may ſo commodiouſly be obtained by the Method preſently to be laid down, in ſuch a manner, that the Mercury, its former Texture being chang'd, is converted into an highly-fix'd Powder of a rediſh purple Colour, and not eaſily to be reduced to its conſtituent Parts. 'Tis to no Purpoſe to object, that this Powder, in conſequence of its fix'd Nature, can produce no conſiderable Effects on the human Body; for tho' it is Proof againſt the Action of the Fire, and tho' the Texture of the Gold uſed in preparing it is ſo firm, as to reſiſt the Influence of corroſive Menſtruums, yet, by the Mercury, previouſly exalted in a proper manner, and render'd more ſpirituous, the firmeſt Coheſion of Gold may be thoroughly diſſolved, and, by a ſubſequent Digeſtion, its minuteſt Parts ſo united with the Globules of the Mercury, that from this mutual Coalition there may be produced a concreted Subſtance, not only capable of being quickly exagitated by the gentleſt Heat of the Body, but, alſo, productive of very ſingular Effects, by no means to be obtained by the other Corrections of Mercury, as is ingeniouſly demonſtrated by *Stahl in Notis ad Poterium*, in the following Words: " Tho' very few Remedies of ſingular Efficacy are pre-
" par'd with Gold, yet this Metal is of great Uſe and Service
" in the Preparation of an highly efficacious Medicine, if it is
" reduc'd to a due Temperament by a ſtrict and intimate
" Union with Mercury, which abounds with an highly active
" mineral Spirit; for the fixed Subſtance of the Gold receives
" the highly minute Particles of the Mercury into its Pores;
" ſo that an equable Harmony and Proportion betwixt them is
" produc'd: Hence, in my Opinion, nothing is a more proper
" Corrector for Mercury than Gold, whilſt, at the ſame time
" nothing exalts, actuates, and increaſes the medicinal Virtues
" of Gold, ſo effectually as Mercury.

In order, therefore, to produce a ſtable and permanent Mixture of Gold with Mercury, the firſt thing neceſſary is, to ſeparate from the latter, that Mineral Earth, with which it abounds, and is, as it were, loaded, that by this means the ethereal Fluid may afterwards act more forcibly on the more pure and ſubtile Globules of the Mercury, and, by forcing them effectually into the Pores of the Gold, mix them intimately with the pure Earth contain'd in that Metal. The Mercury prepar'd in this manner is ſometimes call'd *Virgin Mercury*; and at other times diſtinguiſhed by the Epithets *animated*, and *philoſophical*. Tho' this Mercury, is with great Expences prepared in different Methods by the Chymiſts, yet we ſhall not pretend to form a Judgment of any of them. That Method, however, deſcrib'd, tho' in myſtical Terms, by the Author who aſſumes the Name of *Philaletha*, in his *Introitus apertus ad occluſum Regis Palatium*, and from him, as the *Literati* think, tho' ſome, what more diſtinctly, taken by the Author of *Riplæus Redivivus*, is found to anſwer upon making the Experiment; and is, therefore, highly celebrated by the more skilful Chymiſts. But, as the myſtical Style of theſe Authors is not to be comprehended without ſome Thought and Conſideration, I ſhall, in plain and intelligible Language, give the Deſcription of animated Mercury, communicated by *Stahl*, and which, from my own Experience, I have found to be accurate and juſt. This Author, then, orders common Quickſilver to be amalgamated with genuine Martial Regulus of Antimony, (for the common ſort does not attract the ſmalleſt Particle of Iron) by means of the *two Doves of Diana*, which many of the myſtical Chymiſts take to be two Parts of Silver; to which they have been perhaps induc'd, by ſome imaginary and hieroglyphical Analogy between Silver and Doves, or, perhaps, by the Authority of *Alexander Suchtenius*, who formerly attempted the Correction of this Species of Mercury, as we may ſee in his *Tract. de Antim.* 2. But others, and eſpecially *Becher*, in *Supplement. Phyſ. Subterr.* aſſert, that by theſe two Doves are meant two Salts, alcaline Salt, for Inſtance, and Sal Ammoniac. Both theſe Opinions are agreeable to Reaſon, and confirm'd by Experience; but the Proceſs will proceed more expeditiouſly, if one Part of Regulus of Antimony, and two Parts of Silver, are melted by means of Fire; and if to theſe, when united, we add Mercury, with a due Quantity of theſe Salts; and thus make an Amalgama. Then the Amalgama is to be ſtrongly triturated in a glaſs Mortar, pouring upon it, at proper Intervals, a ſufficient Quantity of Rain-water; which by that means becomes black, and, when pour'd off, exhibits a Powder of the ſame Colour, which, when kindled, diffuſes a fetid Smell, tho' Salts were not us'd in the Amalgamation. But this Trituration, with frequent Affuſions of the Rain-water, is to be continued, till all the Regulus of Antimony is ſo effectually waſh'd off, that nothing but the pure Amalgama is left. After this, the Amalgama is to be put into a glaſs Retort, and the Mercury abſtracted by a Sand-heat. By this means the pure Silver is left in the Bottom of the Retort; and this Silver, when mixed with the Regulus of Antimony, is again to be amalgamated by the Addition of the Salts, afterwards depurated by the like Trituration, and laſt of all diſtil'd. When theſe Meaſures are repeated for at leaſt ſeven or nine times, a much more pure and ſubtile Mercury is afforded, which not only acts more powerfully upon other Metals, but, alſo, produces more conſpicuous and ſalutary Effects on the human Body. The Mercury muſt be exalted in this manner, in order to render it fit for the Preparation of this celebrated and efficacious Medicine. This Diſcovery, tho' originally made and perfected by Experiments, is nevertheleſs ſupported by Reaſons, which greatly illuſtrate it; for whilſt the Martial Regulus of Antimony is, by its Colloquition, intimately mixed with the minuteſt Globules of the Silver, the Subſtance of that Fluid, which was before ſmooth and poliſh'd, is, by the angular and irregular Parts of the Regulus, ſo chang'd, that the minuteſt Parts of the Silver not only acquire unequal Surfaces, but, alſo, have their Interſtices render'd ſmaller, into which when the Mercury is, by a due Amalgamation, and the mutual Conflict of the Salts, violently and impetuouſly forc'd, the groſs and impure Earth of the Mercury is, as it were, ſeparated, and torn from its Adheſion with the other Parts; and is afterwards, when the Globules of the Mercury enter ſmaller and more tortuous Pores, to be abſterg'd and remov'd; together with the heterogeneous Parts of the Regulus, by means of frequent Triturations and Waſhings. The Mercury produc'd by this laborious Preparation is to be afterwards added to pure Gold; to one Part of which, three or four, or (according to *Philaletha*) only two Parts of Mercury, are to be united and join'd by the common Method of Amalgamation. After this, the Amalgama is to be put into a glaſs Phial with a flat Bottom, that the Heat may act on a larger Surface. Then the Phial, when the groſſer Air is exhauſted, leſt, being expanded by the Heat, it ſhould burſt the Veſſel, is to be hermetically ſeal'd; and, in that Species of Furnace call'd *Athanor*, expoſed to a proper Digeſtion, for ſeven, or even nine ſolar Months, ſucceſſively, gradually proceeding from a fainter to a ſtronger Degree of Fire. As in this Digeſtion the Whole of the Affair conſiſts, ſo, if it is duly made, the Amalgama will be gradually converted into a rediſh Powder; which, during the firſt Months of the Digeſtion, is not ſo corrected, but that it will excite Fluxes or Salivations, eſpecially in tender Conſtitutions. But by a protracted Digeſtion it is ſo perfected, and diveſted of all its draſtic Qualities, that the fixed Powder produc'd by it may be ſafely exhibited to the Quantity of two, three, or four Grains for a Doſe, and thus perſiſted in for ſome Days; ſo that thoſe of the moſt delicate Conſtitutions have no Reaſon to be afraid of having a Salivation, or any of the Commotions produc'd by the Preparations of crude Mercury, excited by it.

This Exaltation and Correction of Mercury is, therefore, the moſt proper and agreeable to the Principles of rational Chymiſtry: And, as this Method is claſs'd among the more abſtruſe and ſacred Myſteries, 'tis, alſo, ſo highly eſteem'd by the curious and induſtrious Part of the Chymiſts, that they have judg'd Mercury, thus animated, neceſſary to the Diſcovery of the Philoſophers Stone: But, ſtruck with Terror at the Fate of others, who have wrote on this Subject, I ſhall only conſider the medicinal Uſes of Mercury thus prepar'd, which are not only very conſiderable in themſelves, but, alſo, ſuperior to thoſe of other Medicines. For this Reaſon it has, by ſeveral eminent Phyſicians, been with uncommon Succeſs preſcrib'd for various obſtinate Diſeaſes, which would not yield to the Efficacy of other Medicines. Thus, as I have been inform'd by *Stahl* it was frequently ordered by *Crelles*, an eminent and ſucceſsful Practitioner. The Efficacy alſo of this ſolar

animated Mercury was at *Hall* often happily experienced by the celebrated Chymiſt *Hochgræff*; eſpecially in ſubduing thoſe Reproaches of Mercury, Quartan Fevers, and Gouts: So that ſome who labour'd long under the former, and one afflicted with it for four Years ſucceſſively, were, by a few Doſes of this Medicine, reſtor'd to perfect Health and Eaſe: But, among the gouty Patients, who were by means of this Medicine quickly cur'd, we may juſtly reckon a certain Man, who, being miſerably rack'd with fix'd arthritic Pains, and Contractions of his Limbs, was perfectly reſtor'd to his former Health, without ever having had a Relapſe. The Succeſs of *Cnoeffelius*, in curing the Gout with Mercury thus fix'd, may be ſeen in *Append. ad Miſcell. Nat. curioſ.* and confirm'd by unexceptionable Witneſſes that is, the Perſons cur'd. With reſpect to this, the Reader may conſult that Work, intituled, *Epiſtola de Curata Podagra per D. Andream Cnoeffelium, Gorlitzii*, 1644. Theſe Inſtances ſufficiently prove, that the Encomiums beſtow'd on this Medicine are not groundleſs and overdone, but ſupported by Experience; So that there is no manner of Doubt, but that, without any Dread of Danger, this Medicine is capable of producing ſuch ſalutary Effects in obſtinate Diſorders, if really curable, as can neither be obtain'd by any other Remedies of the Animal and Vegetable Kingdom hitherto known, nor by a Mercurial Salivation, which is not only harſh, and attended with violent and often dangerous Commotions, but is, alſo, frequently highly tedious. The Uſe of the ſolar animated Mercury is preferable to a Salivation, becauſe it may be gratefully exhibited to the moſt delicate Conſtitutions in a due manner, and ſmall Doſes, provided it is once or twice a Day taken, and its Uſe perſiſted in, according to the Circumſtances of the Patient; which may be done in a ſufficiently grateful manner, if the Doſe is mix'd with Conſerve of Roſes, or any other agreeable Conſerve, without the Uſe of any other Medicines. But, before the Exhibition of this Preparation, the Primæ Viæ muſt be freed from thoſe Sordes, which might prevent the Efficacy of the Medicine, by Abſtergents, whoſe Efficacy is heighten'd by a gently ſtimulating reſinous Purgative; ſince draſtic Purgatives, as they are rarely proper, ſo they are always prejudicial, in the Beginning of a Cure: The Primæ Viæ may, alſo, according to the Situation of the Patient, be freed from the Sordes contain'd in them, by a Vomit; which, however, is not to be exhibited without the previous Uſe of ſaline and inciding Medicines. When this Medicine is taken, after ſuch a previous Preparation of the Body, 'tis proper to drink after it ſome warm aqueous Liquor; ſuch as Tea, Coffee, an Infuſion of *Paul's* Betony, or a Decoction of Sarſaparilla, and China, heighten'd by Saſafras-bark. Theſe diluting Liquors make the Medicine exert its proper Efficacy, render the Body perſpirable, and receive the ſaline Sordes, diſengag'd by the Force and Energy of the Medicine, and which, being diſpers'd in them, may be without any Violence afterwards eliminated from the Body thro' proper Emunctories, eſpecially thro' the Pores of the Skin, provided they are kept ſufficiently open by due Regimen, in which, by proper Cloths, the external Cold is excluded without inducing an intolerable and troubleſome Heat, and the whole Body is preſerved in a gentle and moiſt Warmth; for profuſe Sweats are ſo far from being neceſſary, or productive of happy Effects, in the Cure of almoſt all chronical Diſeaſes, that they rather exhauſt the Strength, already too much impair'd in the Courſe of a ſlow Diſorder. But, if ſuch Sweats are forc'd, and, as it were, extorted, as they often are, the greateſt Misfortunes, eaſily productive of Infarctions of the Viſcera, are to be dreaded. With reſpect to this, the Reader may conſult various Paſſages of *Sylvius* in *Prax. Med.* but eſpecially *Append. Tract.* 3. Let all violent and ſudden Commotions, therefore, be avoided, as much as poſſible; and, as this Medicine is not productive of ſuch Effects, the viſcid and peccant Matter will not, by one or two Doſes of it, which Quacks affirm of their Medicines, be ſubdued and eliminated; but muſt be conquer'd by the continual and uninterrupted, tho' mild and gentle, Action of it. Thus, tho' *Lucas Tozzi*, Phyſician to Pope *Innocent* the Twelfth, in his *Praxis Medica*, aſſerts, that by Mercury thus fix'd, exhibited only ſeven times, he totally remov'd a Lues Venerea, and a Quartan Fever, without being ſo arrogant, as to call his Veracity into Queſtion, I muſt only ſay, that I can hardly believe, that in cold Climates, ſuch as are more Northerly, and where, in chronical Diſorders, there is ſuch a Viſcidity and Redundance of the peccant Humours, the like Effect can be ſo ſpeedily, and in ſo few Days, produc'd by this Medicine. Such an happy and ſalutary Effect will, however, without any Violence to the Patient, be much accelerated, if, after the repeated Uſe of the Medicine for ſome Days, we interpoſe balſamic and ſaline ſulphureous Medicines, the moſt conſiderable and efficacious of which are *Stahl's Elixir*, *Balſamicum*; or the *Spiritus oleoſus*, prepar'd according to the Directions of *Sylvius*, and accommodated to the Situation of the Patients: And certainly a moderate Doſe of theſe, daily taken between Meals, and duly perſiſted in, calmly accelerates the Cure of chronical Diſorders; an Effect not to be produc'd by more violent Means: For, as the languid Digeſtion is by this means promoted, the Chyle, before not ſufficiently ſubdu'd, and, by its Viſcidity, contaminating the Humours, is corrected, and, as it were, ſheath'd up, in theſe balſamic Subſtances. The vital Energy and Turgeſcence of the Humours before ſuppreſs'd, and, as it were, ſuffocated, by their preternatural Lentor, is ſo animated with freſh Vigour, that the Fomes of the obſtinate Diſorder is thereby ſeaſonably deſtroy'd, eſpecially if the Efficacy of the Midicines is back'd by a proper Regimen.

But, however eaſily the rich and proſperous Part of Mankind may be able to ſupport the Continuation of a Cure attempted by this ſolar Mercury, yet thoſe who are ſtraitened in their Circumſtances, can by no means afford the Expences neceſſary for ſuch a Courſe; for which Reaſon, I think they may, at a far cheaper Rate, have the ſame Ends anſwered by the *Mercurius Diaphoreticus Jovialis*: And in this Sentiment I am confirmed, not only by the Experiments made by skilful Phyſicians, but, alſo, by the Compoſition of the Medicine, in which every thing is calculated for promoting the ſame Ends with Mercury. As the Operation of this Medicine is ſomewhat more quick and ſpeedy than that of ſolar animated Mercury, ſo, when it is exhibited in large Doſes, in thoſe Diſorders, where there is a violent Intemperature of the Humours, ſuch as a Lues Venerea, and a Scurvy, it excites a Kind of Salivation; yet this Salivation, unleſs excited by improper Doſes of it, is ſo gentle, as hardly to be perceived by the Patients, or, at leaſt, is ſupported without any Trouble. But in other Caſes, where there is not ſuch a large Quantity of acrid Humours, but rather an Immobility and Spiſſitude of the Juices, it promotes the Cure without a Salivation, a Circumſtance peculiar to itſelf. Beſides, a Diſcharge of the Saliva, excited by this Medicine, may almoſt be univerſally prevented, if the Cauſes concurring to it are only ſeaſonably checked and removed. And ſince, only by the Acceſs of a violent Acrimony, the Medicine can be ſo heightened, as to excite any Degree of a Salivation, this can never happen in the Maſs of Humours, where the Acrimony is not ſo diſengaged and intenſe, that it can attack and mix itſelf with the Globules of Mercury, ſheathed up in the pure Sulphur of the Tin: But, if ſuch a Misfortune can happen any-where, it muſt be in the Primæ Viæ, which in moſt chronical Diſorders, beſides other Sordes, are alſo loaded with a large Quantity of acid Humours: And, ſince the Medicine is for a conſiderable time lodged in the Primæ Viæ, it may more eaſily aſſume a droſſy Quality in them, than in the Maſs of Blood. In order to prevent this theſe Sordes are, before the Uſe of the Medicine, to be, as effectually as poſſible, removed by mild and proper Cathartics of a gummous and reſinous Nature, ſuch as Galbanum, Ammonial, Bdellium, and Maſtich, rendered ſomewhat briſker by a proper Quantity of red Myrrh, and a ſmall Quantity of the Extractum Aloeticum of *Ludovicus*; for theſe Subſtances, by their gummous and mucilaginous Parts, embrace the Acid of the Primæ Viæ, and ſo ſheath up and obtund its Spicula, that it may be gently carried off without any violent Symptoms, which, in Caſes of this Nature, are excited by more draſtic reſinous Subſtances. After the previous Uſe of ſuch a Cathartic, repeated according to the Condition of the Patient, the Medicine is to be exhibited in Conjunction with temperate earthy Subſtances; which, as they more quickly abſorb the Acid, than the Mercury corrected with the Sulphur of the Tin, ſo, by keeping it free from all foreign Acrimony, they render it capable of exerting its mild and gentle Efficacy: But if, by the Addition of the abſorbent Powders, the Bulk of the Medicine, and much more its Continuation, ſhould prove uneaſy, in the Morning, and, if 'tis neceſſary, in the Evening, we may exhibit a Doſe of the Diaphoretic Mercury alone, from ſix to ten Grains, but no more; and, when the Patient goes to Bed, let him take a ſufficient Doſe of the abſorbent Powders, that is, from two Scruples to one Dram, in ſome proper aqueous Vehicle. But the mild and gentle Operation of this Medicine will be the more effectually promoted, and a Salivation entirely prevented; if, by a proper Regimen, the Body is kept duly warm, or, in proper Caſes, a mild Sweat for ſome Hours is promoted by now-and-then exhibiting Sudorifics of a neutral Kind, ſuch as the Spiritus Alexipharmacus Buſſii Correctus, the ſuccinated Liquor of Hartſhorn, and the Bezoardic Tincture, without an Acid. Theſe, when ſeaſonably interpoſed between the Doſes of the Mercury, for the moſt part, by one mild and gentle Sweat, remove the beginning Salivation, as is obvious from the Obſervations of many practical Phyſicians; much more might a Salivation, if it was to be produced by the Uſe of the Mercurius Diaphoreticus Jovialis, a Medicine ſufficiently corrected, be prevented by this means. As this Medicine, therefore, when exhibited in the Manner now directed, is entirely diveſted of all draſtic Qualities, ſo it may confidently be preſcribed even in a ſcorbutic Intemperature, though of a pretty violent Kind, ſince it is much more ſafe than Preparations of crude Mercury, which, as alſo a Salivation, are not only innocent, but, alſo, ſalutary, in a Scurvy, if we may believe *Willis* and *Lentilius*, in the Paſſages already quoted; though, at the ſame time, I ſee no neceſſity for raſhly imitating their Example:

But if, in Cases of this Nature, any one is afraid to use the diaphoretic Mercury, now mentioned, he may have recourse to another, though not so efficacious, yet no contemptible Mercurial Preparation, which we call Æthiops Mineral: And, indeed, this Medicine is so fortified against the Access of an Acid, that, like other Preparations of crude Mercury, it does not acquire an adventitious and austere Taste, with distilled Vinegar, or Spirit of Verdegrise, though their Acidity should be heightened by some Quantity of the Spirit of Vitriol: Besides, it is so mild, and so effectually divested of every drastic Quality, that Children afflicted with Worms are, without any Disadvantage, capable of bearing repeated, and sometimes large Doses of it. From ten to fifteen Grains of this Medicine may therefore safely be exhibited to a Person in the Flower of his Age; and, if in obstinate Diseases it should operate in too languid a Manner, the Efficacy of each Dose may be previously augmented, by adding to it a Grain or two of the Sulphur Antimonii Conerdingiani, or some other more diaphoretic Sulphur of Antimony, which is generally made without the Assistance of a precipitating Liquor. The Reguline Parts of this Preparation, intimately mixed and contemperated with the Substance of the Sulphur, by a proper Stimulus, so augment the Efficacy of this Medicine, that a small Dose of it is capable of producing Effects, otherwise in vain expected from larger Quantities of it. Among the great Number of Mercurial Medicines, I reckon the three last-mentioned, not only the most properly corrected, but also the most efficacious, only with this Difference, that I give the Preference to the solar animated Mercury; but, when it cannot be had, I substitute, in its room, the Mercurius Diaphoreticus Jovialis: And to tender and delicate Patients I appropriate Æthiops Mineral, a Medicine, which, though easily prepared, is yet preferable to many far more laborious Compositions.

As the Brevity of our Design will not allow us to give a long Catalogue of the chronical Diseases, in which these Medicines are proper; or to specify when, to whom, in what Manner, and at what Time, they are to be exhibited, we shall only observe, that 'tis agreed upon by almost all Physicians, whether antient or modern, that the Fomes of most, if not of all chronical Disorders, consists in a Lentor, Mucidity, Spissitude, tenacious Viscidity, or whatever other Names different Authors have been pleased to give to the Immobility of the Humours: For as by the due Transpression, and equable Circulation of the Humours, through the solid Parts, the due Fluidity of the former is preserved, the Secretion of the recrementitious Parts, through proper Emunctories, promoted, and in a Word, the Vigour of the whole Body maintained; so, when this Circulation, the most simple, though the principal Instrument in preserving Life and Health, becomes languid, the Humours become concreted and inspissated, the saline, acid, and sulphureous Sordes, or whatever else of a recrementitious Nature is derived from our Aliments, cannot be sufficiently disengaged, much less thrown off by proper Emunctories, since the Impulse of the Humours to that is slow and languid; for which Reason they are frequently infarcted and obstructed. As, therefore, the defective and languid Motion of the Blood is the principal Cause of chronical Disorders, so the Faults of the Humours are best, and most naturally, corrected, by restoring the Circulation to its due and natural State. But since by a brisk and sudden Commotion no happy Effects are produced, and since a more constant and mild Motion is necessary, such as I have demonstrated may be produced by the Mercurial Remedies above-mentioned, 'tis sufficiently obvious, how efficacious these must be, even in the Beginnings of chronical Disorders, such as a Cachexy, for Instance, or a Scurvy proceeding from a cold Cause, and their Consequences, which are Accumulations of the Lymph, and painful Infarctions of various Parts, which tend to a Corruption. These Medicines are, also, highly efficacious in obstinate chronical Fevers, and arthritic Disorders, especially those of the cold Kind, or such as are accompanied with serous Tumors of the Part affected; in long-protracted Head-achs, and that Disorder called Clavus, from its being fixed in a particular Part of the Head; in various cutaneous Disorders, such as a Lues Venerea, violent Itches, Impetigos, the Elephantiasis, and the black Jaundice, when not arising from stony Concretions in the Gall-bladder, or biliary Ducts; in the various Species of Dropsies, and œdematous Tumors, especially when produced by long Obstructions of the Menses, or Suppressions of other usual Evacuations, and not accompanied with any considerable Disorder, or scirrhous Obstructions, of the Viscera; for as these can never be removed, a Cure can never be performed. But these Medicines are more efficacious, and produce their salutary Effects more quickly, in Disorders of the Brain, arising from the Accumulation and Stagnation of a peccant Lymph or Serum. These Mercurial Preparations are also singularly efficacious in lethargic Disorders of long standing, Epilepsies, and Palsies. They are, besides, proper for destroying Worms in Infants and Children, and removing those Obstructions, which are produced by the Milk and Pulses they use; but especially for opening the Obstructions of the Meseraic Glands; and consequently removing the Atrophies arising thence, which as they but little yield to other mild Medicines, and are often increased by vitriolated Tinctures of Mars, and other Medicines improperly called aperient, so they require Medicines, which by a constant, but gentle Impulse, act upon the infarcted Parts, without creating violent Commotions, which the tender Bodies of Infants are unable to bear. In such Cases, therefore, the Efficacy of these Mercurial Preparations is sufficiently obvious, from what has been said. But, notwithstanding the justly celebrated Efficacy of these Preparations, 'tis still necessary, they should be exhibited and prescribed by a skilful Physician, who has carefully investigated the Nature of the Disorder, knows the most proper Seasons of using them, and the Cases in which they will prove beneficial. It must, also, be considered, whether any Evacuation, together with an universal Correction of the peccant Matter, is necessary; and, if it should, we must attentively discover what particular Parts are most proper to have this Evacuation made by, that thus by a proper Regimen, and the due Interposition of Sudorifics, Diuretics, or Purgatives, this peccant Matter may be commodiously conveyed to these Parts. These, and some others, are the general Cautions to be observed in the Cure of chronical Disorders, and constitute the most important Part of Medicine. *F. Hoffman.*

Dr. Cheyne's Opinion of Mercury.

Mercury, judiciously manag'd, seems to me to be the only true Panacea, and universal Antidote, sought by the wise, and boasted of by pyrotechnical Enthusiasts. Mercury seems pointed out and impressed by the Signature of the God of Nature, for the Cure, at least for the Relief, of intelligent Creatures, made miserable by hereditary Diseases, by natural Appetites irregularly indulged, by Ignorance, bad Example, and Frailty, in the human Kind, especially made so by high Food, and spirituous Liquors mostly. I will not run into the subtle and too refined Qualities of this only secondary and true sensible Fluid in all Nature, (which, though entertaining to Philosophers, would be of little Use in the Practice of Physic; our Senses and Sensations being so obtuse, as to be little hurt by Indivisibles or Minutenesses) but take those that are manifest and incontestable, which are, first, Its Gravity, which is, at least, fourteen times more than that of the other sensible Fluid in Nature, that is, Water: From whence flows its Momentum and Force, in opening a Way to itself in all animal Tubes, where the Resistance is less than its Force, or where the Aperture is naturally to be effected. Secondly, The Rotundity of its component Particles, which, in all Probability, holds to its very last and least Particles; for to the least invisible Particle (when compress'd on a smooth polished Glass) it continues still globular; and the less the Particle is, the more perfect the Spheres, so that its very least Particles must, on that Account, be perfect Spherules, as is evident by fine Microscopes. Thirdly, The Smoothness and consequent Softness of these Particles on sensible animal Substances, they having no Points to tear animal Fibres and Tubes, and by their Globosity touching them in a Point only; and this is evident from its great reflective Virtue, every the least Globule being a perfect Speculum. Fourthly, Its readily answering, by this extreme Smalness of its Parts, the least Impulse; for, on the least Compressure between smooth polish'd Glasses, it readily flies into perfect Spherules, innumerable, and invisible even to the finest Glasses; so that the least Heat or Action puts it into Motion, as is evident from its Ascent in glass Tubes, or in an Alembic, not so readily, indeed, as Water or Air, (for that were supposing it to act contrary to the universal Law of Gravity) but by reason of this Smalness of its Particles, and its greater Degree of Attraction, more readily in proportion to its Density and Gravity, than any other Fluid. Fifthly, Its greater Degree of attractive Force, and Adhesion to some Bodies or Particles of Matter more than to others, as to Gold, and Salts of all Kinds; which probably may arise from the Smalness of their Pores, which can only receive and retain so small Particles as those of Mercury probably are. These are sensibly known and acknowledged Properties peculiar to Mercury, from whence all its great and salutary Effects on animal Bodies may be readily explain'd, and render'd intelligible, without running into Finesses and Subtilties; and these salutary Effects are, indeed, great and many.

The great Art required to make Mercury the most useful, salutary, and beneficial possibly, in the several Cases, is, first, to divide it into the smallest Particles possible, and then to unite it with some other Medium, which may keep these Particles separated, and at a Distance, from one another, so as not to be readily united again into larger Globules or Clusters; by which means it may be more easily introduced into the smallest Fibres, and capillary Tubes, by the Force and Course of the Circulation, to render them pervious, dissolve their obstructing Slime, and carry it out of the Habit by the common Sewer, (the Guts) or the Emunctory, urinary or perspirative Drains, which Qualities make the proper and peculiar Excellency of Mercury above all other Medicines. When it is given crude, and in Substance, or in its grosser Preparations, that is, without chymical Fire, beyond all Doubt (as we daily see by its sensible Effects, and some-

ſometimes by its viſible Appearance in Subſtance on the Surface of the Skin) ſome of its ſmalleſt Parts, by their Mobility, attractive Force to one another, and ready Aſcent, paſs through the whole Body, not only in the Courſe of Circulation, but even through the Sides of the Tubes themſelves, through the Membranes and Parenchymatous Subſtance; but then this Effect is not ſo ſoon, ſo readily, and effectually, produced in the crude Subſtance, as in ſome of its Preparations, where it is minutely divided, and its Particles kept ſeparated, and at a Diſtance, from one another, to enter ſingly the ſmall Tubes. Secondly, To endeavour to make the Medium of the Diviſion, this Cover and Shell of the Particles, and the Matter they are united with, as ſalutary and conducive to the Intention of the Cure as poſſible; or to mix the Particles of the Mercury with ſome vegetable or mineral Subſtance, that has been found, by Experience, ſpecific in the Diſtemper given. This will be more plain, in running through ſome of the moſt common Preparations of Mercury.

There is ſcarce a Body, or Kind of Matter, with which Quickſilver, with Labour and Art, may not be incorporated, or intimately mix'd. It may be united either with Salts by chymical Fires, as in Sublimate, Precipitate, Calomel, and the like; but as the Salts, when thus divided, have a ſtrong Stimulus, are extremely active, and ſo neceſſarily produce very violent Pains and Evacuations of all Kinds *qua data Porta*, I think, they are extremely dangerous in delicate Conſtitutions, and tender Bowels; eſpecially if they muſt be long continued, to alter the whole Maſs, and perform the Cure of a great and ſtubborn Diſtemper: All of this kind I call Mercurial's *cum Stimulo*. Secondly, Or with Sulphur, Antimony, Sugar-candy, Turpentine, Crabs-eyes, and the like; eſpecially ſuch Bodies as are harmleſs, and not violently active Medicines, and are not ſo ready to run the Patient into great Evacuations, and conſequently more proper for tender Bowels, and weak Conſtitutions, when deſign'd as Alteratives. Sulphur in Æthiops, indeed, will gripe and purge there; but this is readily prevented, by joining equal Quantities of Crabs-eyes, *Crocus Martis*, Aſtringents, or proper teſtaceous Powders, which by their abſorbent Quality will make this an admirable, eaſy, and ſafe Medicine, I think, above all others, if long continued, as I have often found with great Pleaſure. Native and factitious Cinnabar, alſo, is as ſafe and eaſy as Sugar, but muſt be long continued to produce any ſenſible Benefit, being weak, though, of all the Preparations, it is the moſt proper, and will, at laſt, have the ſafeſt and beſt Effect on very ſlender Habits, becauſe tender Conſtitutions are more eaſily alter'd. The *Alcaliſatus*, by the ſtrong Friction required to unite the Mercury with the Crabs-eyes, divides it the moſt minutely; and, by the natural Poroſity of the Crab's-eyes, there are prepar'd Cellules to ſeparate and retain them aſunder, whereby it would be the moſt ſafe, active Preparation hitherto, I think, found out, but that, like Calomel, from its infinite Diviſion, and the Smalneſs of the Particles, it is apt to ſalivate, if given in any Quantity, without interſpers'd Cathartics: But every Preparation of Mercury hitherto in Uſe will do the ſame, except Cinnabar, and, therefore, muſt be watch'd. But, I think, the moſt effectual way of adminiſtring Mercury to a given Diſtemper, is to unite and combine it, (by pounding, rubbing, or with Fire) with that ſpecific Medicine, that has been found moſt effectual in that Diſeaſe: Thus, for Example, in the Scurvy, Gout, Eryſipelas, and cutaneous Defedations, plain Quickſilver, Æthiops, or Alcaliſatus, well rubbed into Gum Guaiacum, and joined to an Aloetic, will be found the moſt effectual Remedy: In Hyſterics, theſe, joined to Gum-pills, with an Aleotic or Extract of the Bark, or of wild Valerian with Millepedes, theſe, I ſay, in ſuch a Caſe, will do great Matters. In Obſtructions of the Menſes, Æthiops with Steel does excellently: In Intermittents Mercury, with Bark and Steel, either in Subſtance, in an Electuary; or in Pills, as with the Extract of the Bark and Salt of Steel: In an Inflammation of the Eyes, Æthiops with Millepedes, and the Lenitive Electuary, or the *Electuarium Diacaſſiæ cum Manna*, joined with Milk of Sulphur; and the ſame in the Piles, or hæmorrhoidal Inflammations and Tumors: In the Eryſipelas, and every other Inflammation, and in Diſorders of the Stomach and Bowels, Æthiops, or Alcaliſatus, with Rhubarb, in Pills, or in an Electuary: In a Rheumatiſm, Æthiops, or Alcaliſatus, with Gum Guaiacum, in large Doſes: In the Sciatica, Æthiops, or Alcaliſatus, with boil'd Turpentine: In the Jaundice, Æthiops, or Alcaliſatus, with *Venice* Soap, or the *Sapo Philoſophorum*, and with Lime, or calcin'd Egg-ſhells: In an Anaſarca, or even beginning Aſcites, Æthiops, or Alcaliſatus, with Reſina Jalapii; and ſo in other chronical Diſtempers. All I intend here, is, that, ſuppoſing the Preparations of Mercury attenuate the Juices, and open Obſtructions, the moſt readily and effectually of any thing known, that then another Medicine or Medicines may be joined to it, that is known or acknowledged to be moſt effectual in the Diſeaſes given. I neither ſet down Forms, nor determine Concomitants: That muſt always be under the Direction of the Phyſician in ordinary, without whom no one in their Senſes ought to venture on Mercury, either ſimple, or any-how prepared; for it is either a divine Antidote, or may become dangerous by a wrong manner of uſing it, without due Regard to the Caſe, and the Patient, as well as the Form. But, judiciouſly and properly manag'd, ponderous Medicines, and Mercurial Preparations, are not only the ſole univerſal Attenuants and Deobſtruents, but, alſo, the moſt ſimple, natural, and efficacious Deſtroyers of Viſcidity and Acidity, or whatever ſaline Cachexy. *Cheyne's Diſeaſes of Body and Mind.*

MERDASENGL. Litharge, according to *Fallopius*.

MERGEN. Coral. *Rulandus*.

MERGUS. Offic. Bellon. des Oyſe. 180. *Merganſer*. Aldrov. Ornith. 285. Jonſ. de Avib. 97. Charlt. Exer. 101. Raii Ornith. 335. Ejuſd. Synop. A. 134. *Mergus ſerrati-roſtrum*. Mer. Pin. 180. Will. Ornith. 253. THE GOOSANDER, or DUN-DIVER.

This is a Fowl well known upon the Sea-coaſts. The Liver, of it, when ſtale, taken with Hydromel, in the Quantity of two *Ligulæ*, is ſaid by *Dioſcorides* to expel the Secundines. *Aetius* recommends the Liver roaſted, and taken with Oil, and a little Salt, as an excellent Remedy againſt the Conſequences of the Bite of a mad Dog. The entire Bird, roaſted, is eſteem'd good for a Leproſy, and Diſorders of the Spleen. The Blood is alexipharmic, and good againſt venomous Bites; and the Eggs are ſaid to be a Remedy for a Dyſentery, and Diſorders of the Kidneys and Stomach.

MERICOS, *μεριϰός*. Topical.

MERITA TERRA. Turmeric. See CURCUMA.

MERLANGIUS, *ſive Aſellus marinus*. Ind. Med. 15. *Marlangus altera, Aſellorum ſpecies*. Bellon. de Aquat. 124. *Merlangius*. Jonſ. de Piſc. 1. *Merlanus ſecunda Aſellorum ſpecies*. Rondel. de Piſ. 1. 276. *Aſellus minor alter*: Aldrov. de Piſc. 287. *An Aſellus mollis minor, ſive Aſellum omnium minimus*? Raii Ichth. 171. Ejuſd. Synop. Piſc. 56.

Dale informs us, that certain ſmall Bones, like the Dentalia, which are ſold in the Shops, are taken out of the Heads of all the Species of Aſelli; but that this Species affords the genuine Sort.

MERLUCIUS. See ASELLUS.

MEROPS. Offic. Aldrov. Ornith. 1. 871. Charlt. Exer. 94. Bellon. des Oyſe. 267. Geſn. de Avib. 539. Jonſ. de Avib. 81. *Merops, ſive Apiaſter*. Raii Ornith. 147. Ejuſd. Synop. A. 49. Will. Ornith. 102. *Apiaſter*. Bellon. des Oyſe. 225. THE BEE-EATER.

It is frequently found in *Crete* and *Italy*. The entire Bird, and its Heart, are recommended in cardiac, icterical, and ſtomachic Diſorders. The Gall, mixed with Honey, and the Juice of Rue, is ſaid to cure Suffuſions of the Eyes. *Dale*.

MERULA. The Black-bird. See COLLYRION.

MERULA. Offic. Salv. de Aquat. 223. Bellon. de Aquat. 260. Rondel. de Piſc. 1. 172. Charlt. de Piſc. 14. Geſn. de Aquat. 543. Aldrov. de Piſc. 32. *Merula Turneri*. Mer. Pin. 186. *Tardus niger*. Raii Icht. 326. Ejuſd. Synop. Piſc. 137. THE COOK-FISH.

It is found in the Ocean. *Trallian* recommends it in an hepatic Dyſentery from a cold Intemperature, and Epilepſy. *Pliny* relates, that it is good in Diſorders of the Liver, and Fevers. *Dale*.

MESARÆON, *μεσάϱαιον*. The Meſentery. Hence the Arteries and Veins, diſperſed therein, are called the Meſaraic Veſſels.

MESEL, or MOSEL. Tin. *Rulandus*.

MESEMAR. The ſame as MISMAR.

MESENTERIUM. The Meſentery. From *μέσος*, Middle, and *ἔντεϱον*, an Inteſtine. See COELIA, and HECTICA. For an Account of the meſenteric Glands, ſee CHYLUS.

The Diſorders incident to the Meſentery deſerve our moſt attentive Conſideration, ſince the ſuperfluous Humours of the Veins are eaſily conveyed to it, and lay a Foundation for very terrible Diſorders, ſuch as a Cholera, Melancholy, Fluxes, Gripes, Cachexies, Atrophies, Languors, ſlow and erratic Fevers, together with other Diſeaſes, whoſe Natures are not to be diſcover'd without great Difficulty. When the Meſentery is affected with a Tumor without Inflammation, the Tumor is generally, at firſt, lax and ſoft, but, ſome time after, becomes entirely dry and indurated. This Tumor, and the Part in which it reſides, are inſenſible of Pain; for which Reaſon the internal Swelling, which lies pretty deep, is only to be diſcovered by a rough Touch.

In this Caſe, the Part affected is diſtended, leſſens the Diameters of the Inteſtines, and, by that means, occaſions Coſtiveneſs; which Effect is by no means produced by a Tumor of the abdominal Muſcles, or prominent Fat; for neither of theſe affect the Inteſtines. The Fat, alſo, when laid hold of by the Hand, may be diſtinguiſhed from the abdominal Muſcles. But, when the Tumor is lodged in the abdominal Muſcles, it is always diſcoverable by the firſt Touch, and is ever painful when preſſed, and ſometimes painful without any Compreſſion. Beſides, a Tumor of the abdominal Muſcles is prominent when not preſſed, perceptible upon the mildeſt Touch, and of an oblong Figure, like that of the Muſculus Rectus. *Lommii Medic. Obſervat.*

Obſtructions of the Meſentery proceed from the ſame Cauſes with thoſe of the Liver and Spleen, but happen more frequently and eaſily, by reaſon of the Narrowneſs of the meſaraic, and, eſpecially, of the lacteal Veſſels, which convey the Chyle to the Organs allotted for the ſecond Digeſtion. And when the Chyle, which is ſo often mixed with crude and groſs Humours, as to ſtagnate, and produce Obſtructions, in the lacteal Veins, the meſaraic Veins are, alſo, obſtructed by groſs Humours convey'd from the Liver, Spleen, and other Parts, and lodged there for a conſiderable time. During the Stay of theſe Humours, they become gradually thicker, ſo, as at laſt, ſometimes, to produce a ſcirrhous Tumor. With theſe Humours are, alſo, ſometimes, mixed groſs Flatulencies, which generally prove the Cauſes of violent Symptoms. To the Obſtruction, alſo, or rather the Contraction, of theſe Veſſels, we refer the Compreſſion of the Glands diſperſed through the whole Subſtance of the Meſentery; for theſe, increaſing beyond meaſure, as happens in ſtrumous Perſons, compreſs the meſaraic Veins, and hinder not only the due Diſtribution of the Chyle, but, alſo, the Circulation of the Blood.

The diagnoſtic Signs of Obſtructions of the Meſentery are divided into three Claſſes; which either indicate the Species of the Diſeaſe, the Part affected, or the productive Cauſe.

The Signs which indicate the Species of the Diſorder, that is, Obſtructions of the Hypochondria, and their Cauſes, are the ſame with thoſe producing Obſtructions of the Liver and Spleen. But the Signs which in a peculiar manner indicate, that the Meſentery is affected, are Tenſion and Reſiſtance in the Middle of the Abdomen, under the Stomach, and in the Umbilical Region; where there is, alſo, a Senſe of Weight, ſometimes an obtuſe Pain, and ſometimes one of an highly acute kind, when Flatulencies are contained in theſe Parts: A Pain is, alſo, ſometimes, perceived in the Back, to which the Meſentery is affixed; Rumblings and Noiſes happen in the Belly; Eructations are excited, and Vapours are raiſed to the Head, by which means various Symptoms are produced: In a Word, all the Symptoms which generally attend Melancholy, indicate Obſtructions of the Meſentery, becauſe that Diſorder is produced and cheriſhed by Obſtructions of the ſame kind.

As for the Prognoſtics: This Diſorder is not of itſelf very dangerous, becauſe the Meſentery is capable of bearing great Diſturbances, without any immediate Danger to Life. Beſides, generous Remedies may be uſed for the Cure of this Diſorder, which, when duly exhibited, generally produce the deſired Effect, unleſs the Diſorder cauſes hypochondriac Melancholy, which, on account of the obſtinate Nature of the melancholic Humour, is generally called the Reproach of Phyſicians. But as the Meſentery is not furniſhed with an exquiſite Senſation, and as the Obſtructions of it are generally not very troubleſome to the Patient, they are often neglected, and lay a Foundation for other highly dangerous Diſorders.

The Cure of this Diſorder is to be performed in the ſame manner with that uſed for removing Obſtructions in the Liver. See HEPAR. *Riverius, Prax. Med. Lib.* 13.

The Meſentery is, alſo, ſometimes inflamed, in which Caſe there is an internal Senſe of Weight, without any manifeſt Pain. A ſlight Fever is, alſo, produced, which is attended with ſo mild a Train of Symptoms, that the Patient is capable of performing the ordinary Duties of Life. In the Beginning of the Diſorder, a certain rediſh Sanies is diſcharged by Stool. But, when an Abſceſs is formed, a white Pus is evacuated, and moſt generally mixed with the Excrements. It is, alſo, ſometimes diſcharged in great Quantities, pure and unmixed, eſpecially when the Abſceſs is ſituated near the inferior Inteſtines. Now it is certain, that this Pus muſt be conveyed from the Meſentery, becauſe it could not deſcend from other Parts, without either Pain, or a Mixture of other Matter, or a violent Fever. *Lommii Obſervat. Medic.*

As the Meſentery is, as it were, a kind of Drain, in which the more noble Parts depoſite their Superfluities, which are afterwards diſcharged by Vomit or Stool, thus, in ſome Patients, we obſerve, at certain Intervals, a large Quantity of vitious Humours evacuated either by Vomit, or Stool. Now, if theſe Evacuations, in conſequence of an Obſtruction of the Paſſages, through which they were before diſcharged, or any other Cauſe, are hindered, theſe Humours, being retained and remaining long in the Part, conceive a preternatural Heat, which lays a Foundation for Putrefactions, Inflammations, Fevers of various kinds, and Abſceſſes. But an Inflammation is, in a particular manner, excited, when the Blood, accumulated in the meſaraic Veins, is diſcharged into the Subſtance of the Meſentery, by the Aperture of any of the venous Ramifications. But, ſince the Blood is greatly accumulated in theſe Veins by means of Obſtructions, for this Reaſon the Cauſes of an Inflammation in the Meſentery may be referred to the common Cauſes of other Inflammations.

The Acrimony and corroſive Quality of the Humours, alſo, contribute a great deal to the Production of an Inflammation in the Meſentery; as, alſo, a Fall, or Blow, on the hypogaſtric Region; a Weakneſs of the attractive, concoctive, or retentive Faculty of the Liver; an exceſſive Heat of the Body; or an unſeaſonable Uſe of Refrigerants; a critical Effort of Nature in malignant Fevers; or the Small-pox, conveying the peccant Humours to the Meſentery; and a Diarrhœa, or Dyſentery, unſeaſonably ſuppreſſed.

The diagnoſtic Signs of an Inflammation in the Meſentery are a languid, latent, and ſlow Fever, without any Thirſt or violent Symptoms, a Loſs of Appetite, a Senſe of Tenſion and Weight below the Stomach, without any conſiderable Degree of Hardneſs, and capable of being only known by preſſing upon it. This Tenſion is, alſo, without any conſiderable Degree of Pain, becauſe the Meſentery is only furniſh'd with a kind of dull and obtuſe Senſation. The Stools, alſo, are chylous, and generally ſucceeded by the Diſcharge of a thin Ichor, without any Senſe of Pain, ſometimes pure and unmixed, and ſometimes mixed with the Fæces.

The Symptoms now enumerated are mild and gentle, if the Meſentery is only inflamed; but if the Liver, Spleen, or Inteſtines are, alſo, affected with an Inflammation, the Symptoms are more violent, and ſome particular Signs indicate the reſpective Diſorders of theſe Parts: For ſince Inflammations and Abſceſſes of the Meſentery, when unattended with other Diſorders, are highly latent on account of the dull Senſation of the Part, and as the Myſentery performs no Function in the Body, the Injury done to which can be diſcovered, but is only ſubſervient to the Diſtribution of the Chyle and Blood, its Diſorders are, for this Reaſon, rather to be gueſſed at, than certainly and infallibly diſcovered; when, for Inſtance, during the Preſence of a Fever, and other Symptoms, no Signs of an affected Liver, Spleen, or Inteſtines, appear. When the Inteſtines are inflam'd together with the Meſentery, the Diſorder is diſcovered by a ſemitertian Fever, which *Spigelius* obſerved to be generally produced by an Inflammation of theſe Parts. This Diſorder is, alſo, different from an Inflammation of the abdominal Muſcles, becauſe in theſe the Tumor and Pain run according to their Direction, Figure, and Situation. For the moſt part, alſo, the Tumors of the abdominal Muſcles are oblong, or diffuſed over the whole Abdomen, and poſſeſs principally the exterior Parts, ſo that they are perceptible by the gentleſt Touch, and generally accompanied with intenſe Pain and a violent Fever.

This Diſorder is, alſo, to be carefully diſtinguiſhed from Tumors of the Diaphragm, which have hitherto been adverted to by very few Phyſicians; for theſe are always accompanied with a conſiderable Difficulty of Breathing, a Revulſion of the Hypochondria, an hard and ſmall Pulſe, without any Senſation or Appearance of Tumor in the Hypochondria. Beſides, if the Tumor proceeds from an hot Cauſe, an acute Fever, intenſe Pain, Deliriums, and Convulſions, enſue; which Symptoms never happen in Inflammations of the Meſentery, when not complicated with other Diſorders.

As for the Prognoſtic of this Diſorder, Inflammations of the Meſentery are highly dangerous, ſince, for the moſt part, they degenerate into Abſceſſes, or bring on a Putrefaction and Corruption of the Meſentery. The morbific Matter is, alſo, by the Efforts of Nature, frequently tranſlated to other Parts, without being removed from the Habit: Hence the Diſorder recurs, and often continues for many Years, or during the Patient's Life; in which Caſe, ſometimes the Fever returns, and is ſometimes changed into a Colic; the Inflammation alſo, or, at leaſt, a preternatural Heat, returns. Inflammations of the Meſentery are to be cured in the ſame Manner with thoſe of the Liver and Spleen. See the Articles HEPAR and LIEN.

Inflammations of the Meſentery frequently terminate in Abſceſſes, though, at the ſame time, every Abſceſs of this Part does not proceed from Inflammations, but, for the moſt part, from peccant and putrid Humours, accumulated in the Meſentery; ſo that Abſceſſes of this Kind are gradually produced without any previous Fever, or other violent Symptoms, juſt as in other Parts we obſerve Atheromata, Steatomata, Melicerides, and other Species of Abſceſſes, generated without any previous Inflammation; and when Abſceſſes of this Kind break, the Pus being evacuated, the Ulcers remain, and are not to be cured without great Difficulty. But if theſe Humours are highly pituitous, melancholic, or of ſuch a Quality, as to reſiſt Putrefaction and Corruption, they frequently become ſo concreted and indurated, as to degenerate into a Scirrhus. Sometimes they alſo acquire the Hardneſs of a Stone; for 'tis certain from the Obſervations of many practical Authors, that Stones have been found in the Meſentery.

The Diagnoſtic of Abſceſſes of the Meſentery is ſometimes eaſy, and at other times highly difficult; for if an Abſceſs proceeds from an Inflammation of the Part, and if this Inflammation is previouſly diſcovered by the Signs before-mentioned, and continues for a conſiderable time, 'tis a Sign, that the Inflammation could not be diſcuſſed, but is ſuppurated and transformed into an Abſceſs. But when an Abſceſs proceeds from peccant Humours, remaining long, and at laſt becoming putrid, in the Meſentery, the Diagnoſtic is ſo highly difficult, that many Authors, who have wrote the Hiſtories of ſuch Abſceſſes, inform us, they did not diſcover them, till they laid open the Patients Bodies after Death; for though they may be generally diſcovered

by the Touch, yet they ſometimes lie ſo deep as to fruſtrate this Method of Diſcovery; and the Senſation of the Part is ſo dull and languid, that the Abſceſs ſometimes diſcovers itſelf by no internal Pain; but, becauſe theſe Misfortunes happen in various Ways, they are to be diſtinguiſhed in the following Manner.

If an Abſceſs of the Meſentery is accompanied with a conſpicuous Tumor, it is to be diſtinguiſhed, both from an Inflammation and a Scirrhus: It is diſtinguiſhed from an Inflammation, if it does not draw its Origin from one, there is no Fever, or at leaſt a very ſlight one preſent, nor any other Signs which could indicate an Inflammation: But, if an Abſceſs ſhould ſucceed an Inflammation, it is only to be diſtinguiſhed by its Duration and Continuance: For if the Symptoms of an Inflammation have continued for thirty or forty Days, or perhaps longer, 'tis a Sign, that the Inflammation has degenerated into an Abſceſs. An Abſceſs of the Meſentery is diſtinguiſhed from a Scirrhus by this, that the latter is exceſſively hard, whereas, in the former, a certain Softneſs is perceived. Beſides, a Scirrhus is entirely deſtitute of Pain, of which there are always ſome Degrees perceived, in an Abſceſs at leaſt, when it is ſtrongly compreſſed. Beſides, Abſceſſes of the Meſentery are to be diſtinguiſhed from Tumors of other Parts, by their Situation, as we have already obſerved concerning Inflammations of the Meſentery.

But, if an Abſceſs is formed in the Meſentery without any conſpicuous Tumor, it cannot be certainly and infallibly diſcovered: We may, however, conjecture at ſuch a Misfortune, if a Loathing of Food, a Nauſea, and Vomiting, are preſent, without any manifeſt Diſorder or Fault of the Stomach; if there is a kind of Satiety after taking even the ſmalleſt Quantity of Aliments, Laſſitudes and Languors of the whole Body, without any manifeſt Cauſe, preternatural Coſtiveneſs, or an uncommon Solubility of Body; during which the Excrements diſcharged are highly fetid, and ſometimes bloody, without any Suſpicion of a Dyſentery. To theſe Signs we may add, continual Watchings; and, if the Patient ſhould at any time fall aſleep, he is uneaſy for the time, and falls into Deliquiums, accompanied with cold Sweats: And though ſometimes neither Fever nor Pain are perceived, yet, for the moſt part, a kind of ſlow Fever is conſpicuous, of which if no manifeſt Cauſe appears, we may conjecture that it depends upon this Misfortune, if ſome of the now-mentioned Signs accompany it. Beſides, if the Abdomen is violently compreſſed, a certain internal Pain is perceived by the Patient. 'Tis true, in Parts entirely ſound, Pains may be excited by violent Compreſſion; but if a greater Pain is perceived in one Part of the Abdomen more than another, ſo that when all its Parts are ſeparately handled, if, upon the Approach of the Hand, there is gradually a greater Pain felt upon the handling of ſome particular Part, we have juſt Ground to ſuſpect, that an Abſceſs is lodged there.

But, if a purulent Matter is diſcharged, then the latent Abſceſs becomes manifeſt: For the moſt part, however, a Pus is evacuated, poſſeſſed of various Qualities and Conditions, according to the different Diſpoſitions of the Part affected, or thoſe contiguous to it. Hence a large Quantity of unmixed and whitiſh Pus is ſometimes, without any Senſe of Pain, diſcharged into the Inteſtines. Sometimes the Pus, when the Abſceſs is lodged near the Extremities of the large Inteſtines, is diſcharged, in Conjunction with the Fæces. 'Tis, alſo, ſometimes conveyed to the Kidneys, and evacuated along with the Urine; ſometimes, being copiouſly diſcharged, it either flows into the Cavity of the Abdomen, or appears externally under the Form of an Abſces, ſo that a large Quantity of Pus is ſometimes diſcharged through the Navel; and ſometimes Worms, generated by the Corruption of the Meſentery, are evacuated along with the Pus: And the Pus evacuated by Stool, which happens moſt frequently, is ſometimes pure, as we have already obſerved; and at other times mixed with Blood or Sanies. Sometimes, alſo, a black and fetid Blood, or a blackiſh Matter of a different Nature, or a Subſtance of various Colours, is evacuated. But whether the purulent Matter is conveyed from the Meſentery, the Liver, or any other Part is only to be known by the Signs expreſſive of a Diſorder in that particular Part.

When the Abſceſs is broken, and the Afflux of Pus continues, 'tis certain that an Ulcer is lodged in the Meſentery, which is ſometimes ſoon cured, ſometimes continues long, and at other times renders the whole Part putrefied and ſphacelated.

As for the Prognoſtic of this Diſorder, an Abſceſs of the Meſentery is highly dangerous; for if it continues long in the Part, which frequently happens, it acquires a maligant Prutrefaction, and either induces a Gangrene of the Part, or throws the Patient into a Conſumption, or a Dropſy. If, alſo, the Abſceſs breaks, and the Ulcer is not quickly cured, but acquires a bad State and Condition, a Gangrene, an Atrophy, or a Conſumption, is induced. Sometimes, alſo, when the Abſceſs breaks, and an highly corrupted Pus is diſcharged into the Cavity of the Abdomen, the Patient dies ſuddenly. But a Scirrhus of the Meſentery is leaſt dangerous, and, if recent, admits of a Cure; but, if it is very inveterate, brings on a Dropſy.

The Meaſures to be taken in the Cure of theſe Diſorders ought to be varied according to their different Natures and Conditions. And, firſt, an Abſceſs already formed, indicates the Propriety of its Apertion and Evacuation; for which Purpoſe it is to be ſoftened by means of aperient and purgative Medicines, of the ſame Kind with thoſe proper for removing Obſtructions of the Liver and Spleen; not omitting, at the ſame time, the external Uſe of emollient and relaxing Subſtances, Fomentations, Cataplaſms, and Liniments, which attenuate the Matter of the Abſceſs, and relax the Paſſages, that thus the Pus may be the more commodiouſly evacuated.

When the Abſceſs is opened, the Ulcer is to be deterged and conſolidated, by means of the ſame Remedies uſed in Ulcers of the Stomach, Liver, Kidneys, and Uterus, which may be varied at the Pleaſure of the Phyſician, according to the different Habits of the Body, or the various Conditions of the Diſtemper.

A Scirrhus of the Meſentery is to be cured by the ſame Remedies to be uſed for the Cure of a Scirrhus of the Liver and Spleen. *River. Prax. Med. Lib.* 13. See HEPAR and LIEN.

MESERA. Alexandrian Tutty. *Rulandus.*

MESEREON. A Name for the *Thymelæa; Lauri folio, deciduo; ſive Laureola fœmina.*

MESIANUM. The Name of a Plaiſter, the ſame as ANICETON; which ſee.

MESIRE. A Diſorder of the Liver, mention'd by *Avicenna*, accompanied with a Senſe of Heavineſs, Tumor, Inflammation, pungent Pain, and Blackneſs of the Tongue.

MESOCOLON, *μεσόκωλον*, from *μέσος*, middle, and *κῶλον*, the Colon. See COELIA.

MESOGLOSSI. The Muſcles of the Tongue, called *Genioglossi.*

MESOMERIA, *μεσομήρια.* All that Part of the Body which lies betwixt the Thighs. *Ruffus Epheſius.*

MESOMPHALION. The Navel.

MESOPHRYON, *μεσόφρυον.* That Part of the Face which lies betwixt the Eye-brows. *Ruffus Epheſius.*

MESOPLEURIOS, *μεσοπλεύριος.* An Epithet of the Intercoſtal Muſcles.

MESOPOTAMENON. An Epithet for an Ointment deſcribed by *Paulus Ægineta, Lib.* 7. *Cap.* 21.

MESPILUS.

The Characters are;

The End of the Pedicle becomes an Ovary, whoſe Apex forms a quinquefid, ſtellated Calyx, with long, acute, expanded Segments; the Flower is roſaceous and pentapetalous, grows upon the Ovary, and has numerous Stamina ariſing from the Margin of the Calyx; the Ovary, which is furniſhed with five Tubes with gaping, bifid Apices, becomes a crown'd, carnous, ſoft, unicapſular Fruit, generally containing five Seeds.

Boerhaave mentions thirteen Species of this Plant; which are,

1. Meſpilus; Germanica; folio Laurino, non ſerrato; ſive Meſpilus ſylveſtris. *C. B. P.* 453. *Tourn. Inſt.* 641. *Boerh. Ind. alt.* 2. 256. *Meſpilus.* Offic. Ger. 1265. Raii Synop. 3. 453. *Meſpilus ſativa.* Ger. Emac. 1453. *Meſpilus vulgaris.* J. B. 1. 64. Raii Hiſt. 2. 1460. Park. Theat. 1422. THE MEDLAR-TREE.

The Medlar-tree grows to be about as big as an Apple-tree, having ſeveral Thorns upon the younger Branches; the Leaves are long, and ſharp-pointed. The Flowers are five leaved, white, about as big as Apple-bloſſoms, and are ſucceeded by round Fruit ſomewhat flat at Top, with a large open Umbilicus, including five hard Stones; it grows only in Gardens, and flowers in *May*. The Fruit is not ripe till towards *November*, being hard, and of a rough, auſtere Taſte, and is the only Part uſed.

Medlars are cooling, drying, and binding, eſpecially before they are ripe, and are uſeful in all kinds of Fluxes. The ripe Fruit, eaten too freely, is ſubject to tie up the Stomach, and cauſe the Colic. The Lapilli, or hard Seed, are accounted good for the Gravel and Stone: They are an Ingredient in the Syrupus Myrtinus. *Miller's Bot. Off.*

Dale ſays, the Fruit is cooling, drying, and of an auſtere Taſte; that it is very aſtringent, and binding, and injurious to the Stomach; eſpecially whilſt hard. When ſoften'd, they are leſs aſtringent, not ſo injurious, and quickly rot, and then only they are eatable: They are uſed both externally, and internally, in Diarrhœas and Dyſenteries.

2. Meſpilus; folio Laurino; major. *C. B. P.* 453.

3. Meſpilus; folio Laurino; fructu dulci.

4. Meſpilus; Apii folio laciniato. See ARONIA.

5. Meſpilus; Apii folio laciniato; flore pleno.

6. Meſpilus; Apii folio; ſylveſtris; ſpinoſa; ſive Oxycantha. *C. B. P.* 456. *Raii Synop.* 3. 453. *Tourn. Inſt.* 642. *Boerh. Ind. alt.* 2. 256. *Spina alba, Oxycantha.* Offic. *Spina appendix vulgaris.* Park. Theat. 1025. *Oxyacanthus.* Ger. 1146. Emac. 1327. *Oxycanthus Galeni.* Raii Hiſt. 2. 1458. *Oxyacantha vulgaris ſive Spinus albus.* J. B. 1. 249. THE WHITE-THORN, or HAW-THORN.

This is well known to be an Hedge-tree, or Buſh, having many tough Branches, ſet alternately with ſharp Thorns; the young Twigs are rediſh, cloathed with ſmall Leaves, divided into three, and ſometimes five Segments, coming forth over-againſt the Thorns. The Flowers grow in Cluſters, conſiſting of five white Leaves, with rediſh Apices in the middle; of a pleaſant Smell, and are ſucceeded by ſmall round, umbilical Berries, of a fine red Colour, containing a pretty big Stone, divided into two, and covered with but a little Pulp. Theſe Trees grow every-where in the Hedges, flowering in great Plenty in *May*, whence they are called *May* Buſhes by the Vulgar. The Berries, or Haws, are ripe in *September*. The Flowers and Fruit are uſed.

They are accounted diuretic, and good for the Stone and Gravel, as, alſo, for the Pleuriſy. Of the Flowers is made the Aqua Nephritica. *Miller's Bot. Off.*

By the chymical Analyſis it yields, beſide ſeveral acid Liquors, an urinous Spirit, no concreted volatile Salt, but a good deal of Oil and Earth: Thus it probably contains a Salt, like that of Coral, wrapped in a good deal of Sulphur, and mixed with a little Sal Ammoniac. *Tragus* affirms, that the diſtilled Water of the Flowers, or the Spirit drawn in diſtilling them with Wine, in which they have been macerated for three Days, gives great Relief in the Pleuriſy and Colic. *Martyn's Tournefort.*

In general, it agrees with the Medlar in Virtues.

7. Meſpilus; ſpinoſa; ſive Oxyacantha; flore pleno. *T.* 642. *Oxyacantha, ſive Spina alba, flore pleno.* Munt. H. 186.

8. Meſpilus; ſpinoſa; Pyri folio. *Boerh. Ind. alt.* 2. 257. *Pyracantha.* Offic. Park. Parad. 604. Raii Hiſt. 2. 1459. *Pyracantha quibuſdam.* J. B. 1. 51. *Oxycantha Theophraſti.* Ger. Emac. 1604. *Oxyacantha ſive Spina acuta Pyri folio.* C. B. P. 454. *Meſpilus aculeata Pyrifolia.* Tourn. Inſt. 642. EVERGREEN THORN.

It is cultivated in Gardens. The Part in Uſe is the Berry, which agrees in Virtues with that of White Thorn. *Dale.*

9. Meſpilus; ſpinoſa; ſive Oxyacantha Virginiana; nigra.

10. Meſpilus; ſpinoſa; ſive Oxyacantha Virginiana; maxima. *Oxyacantha; Americana, Calcar Galli dicta.* Raii.

11. Meſpilus; ſylveſtris; ſpinoſa; hirſuta; Apii folio palmato; fructu majore. *H. Cath.*

12. Meſpilus; folio rotundiore; fructu nigro, ſubdulci. *Tourn. Inſt.* 642. *Boerh. Ind. alt.* 2. 257. *Dioſpyros.* Offic. J. B. 1. 75. Raii Hiſt. 2. 1461. *Meſpilus Alni effigie, lanato folio, minor.* C. B. P. 452. *Vacciñia alba.* Ger. 1230. Emac. 1416. *Vitis Idæa tertia Cluſii.* Park. Theat. 1458. WHITE WHORTLES.

It grows upon the *Alps*, and mountainous Places; and flowers in *May*. The Fruit is ſaid to eaſe Coughs, and promote Expectoration.

13. Meſpilus; folio ſubrotundo; fructu rubro. *T.* 642. *Cotoneaſter, folio rotundo, non ſerrato.* C. B. P. 452. *Cotoneaſter.* J. B. 1. 73. *Chamæmeſpilus. Geſneri.* Boerh. Ind. alt. Plant. *Vol.* 2. 257.

MESPILUS is, alſo, a Name for ſeveral ſorts of CRATÆGUS; which ſee.

MESQUITE. The Name of an *American* Tree, like an Oak, but bearing a Pod like the Kidney-bean. It is not uſed in Medicine; but the Seeds, called *Huitzaſe*, are employed in making Ink, like Galls, and fattening Cattle; and ſometimes Bread is made of them, in a Dearth of Corn. *Lemery des Drogues.*

MESSALINÆ DENTIFRICIUM. A Dentrifice deſcrib'd by *Scribonius Largus.*

MEST. Sour Milk. *Rulandus.*

MESUE. The Name of an *Arabian* Phyſician. See the PREFACE.

METABASIS, μετάβασις, from μεταβαίνω, to paſs, or migrate, from one Place to another. A Tranſition, for Example, from one Medicine to another; or a Change of one Remedy, or Method, for another.

METABOLE, μεταβολή, from μεταβάλλω, to change. A Change of any Kind.

METACARPIUS.

This is a ſmall very fleſhy Muſcle, ſituated obliquely between the large internal Annular, or tranſverſe Ligament of the Carpus, and the whole Inſide of the fourth Metacarpal Bone.

It is fixed by a ſmall ſhort Tendon to the Os Orbiculare, and to the neighbouring Part of the large Ligament of the Carpus. From thence its Fibres run more or leſs obliquely, toward the Inſide of the fourth Metacarpal Bone, in the outer Edge of which they are inſerted. The Fibres of this Muſcle are of unequal Lengths, and extend all the Way to the Articulation of the firſt Phalanx of the little Finger with the fourth Metacarpal Bone; but they have no manner of relation to that Finger.

The Metacarpius ſerves to turn the fourth Bone of the Metacarpus towards the Thumb, and, at the ſame time, to increaſe the Convexity of the Back of the Hand, which is called making *Diogenes's Cup.* The fourth Bone, thus moved, carries the third along with it, by reaſon of their Connection, which ſtill augments the Hollow on one Side, and the Convexity on the other. *Winſlow.*

METACARPUS, or METACARPION. The Part of the Hand betwixt the Carpus and the Fingers. See BRACHIUM.

METACERASMA, μεταχέρασμα. The ſame as CERASMA, according to *Galen.*

METACHORESIS, μεταχώρησις, from μεταχωρέω, to recede, or remove from one Place to another. A Seceſſion of a morbid Humour from one Part to another, and, conſequently, of the Diſtemper excited thereby.

METACINEMA, μετακίνημα, in *Hippocrates, Prædict. Lib.* 2. imports a Removal of the Pupil of the Eye from its proper Situation.

METACONDYLI, μετακόνδυλοι. The laſt Joints of the Fingers next the Nails.

METALLAGE, μεταλλαγή, from μετὰ, importing Tranſition, and ἀλάσσω, to change. The ſame as METABOLE.

METALLUM. A Metal. There are, properly, but ſix Metals, Gold, Silver, Copper, Tin, Iron, and Lead. But Philoſophers have added a ſeventh, which is Mercury, though it agrees with Metals in nothing but Weight, and being found in the Bowels of the Earth.

Geoffroy defines a Metal to be an hard, ſhining, mineral Body, fuſible by Fire, concreſcible by Cold, ductile, and capable of amalgamating, or being intimately united to Quickſilver. Metals are divided into baſe or imperfect, and noble or perfect: Imperfect Metals are thoſe which loſe much by being expoſed to Fire, ſuch as Lead, Tin, Iron, Copper, and they are baſe or ignoble, as being not much eſteemed. Perfect Metals are thoſe which undergo all Trials by Fire, without any ſenſible Loſs, ſuch as Gold and Silver; and theſe are called noble, as being highly eſteemed.

The Chymiſts have ſhewn, that Metals are nothing but bituminous Subſtances, which have undergone a long Digeſtion; for, by depriving them of their Sulphur, they are reduced to Aſhes, and then to Glaſs. This is eaſily ſeen in the imperfect Metals: For if any of them be expoſed to a long Heat, and eſpecially to the Rays of the Sun, collected by a large Burning-glaſs, the ſulphureous Principle flies off, and only a Calx, or Aſhes, will be left behind, which, in a more vehement Degree of Fire, are preſently vitrified; and, by reſtoring the Sulphur, this Glaſs may again be reduced to Metal.

TINCTURA METALLORUM.

Tincture of Metals.

This is a celebrated Remedy in *Holland, Germany*, and many Parts of the North; and is, by ſome, kept as a great Secret, tho' it was made public in 1687. in a Book printed at *Leyden*, intitled *Chymia Rationalis.*

This Tincture is made with Tin and Copper, to which ſome add Gold, and double its Quantity of martial Regulus of Antimony, melted together. There reſults from thence a metallic Maſs, to which ſome Chymiſts have given the Name of *Electrum minerale.* They pulverize this Maſs, and then, with Nitre, and Powder of Charcoal, reduce it by long Detonation to a kind of Scoriæ, whoſe Colour inclines to a pale Green: They pulverize it once more hot, and ſet it to digeſt in a certain Quantity of Spirit of Wine, or Spirit of Juniper, to which it gives a very beautiful Red. *Memoires de l'Acad. Royale des Scienc. An.* 1700.

It is intended for a Deobſtruent.

METALLURGIA. Metallurgy, is that Part of Chymiſtry, which is concern'd in the Separation, Depuration, and Preparation of Metals. And ſometimes it implies the digging them out the Mines.

METALLUS. *Helmont* uſes this Word in the ſame Senſe as METALLUM.

METAPEDIUM, μεταπέδιον. The ſame as METATARSUS.

METAPHRENON, μετάφρενον. The Back; properly the Part betwixt the Shoulders.

METAPOROPOEIA, or METAPOROPOIESIS, μεταποροποιία, or μεταποροποίησις, from μετὰ, importing a Change, πόροι, a Paſſage, and ποιέω, to make. An Induction of a Change in the Pores of the Body. See METASYNCRISIS.

METAPTOSIS, μετάπτωσις, from μεταπίπτω, to change either for the better, or the worſe. A Change of one Diſtemper into another; either by *Diadoche*, or *Diadexis*, as it is call'd, when the Change is for the better, and the morbid Matter removes from a noble to a more ignoble Part; or by a *Metaſtaſis*, when the Change is for the worſe, and the morbid Matter removes from an ignoble to a more noble Part. *Caſtellus.*

METASTASIS, μετάστασις, from μετατίθημι, to transfer, ſignifies a Tranſpoſition and Settlement of ſome Humour, or Diſeaſe, on ſome other Part. Sometimes *Metaſtaſis* means ſuch an Alteration of a Diſeaſe, as is ſucceeded by a Solution, as in *Aph.* 7. *lib.* 5. where, it is ſaid, τὰ ἐπιληπτικὰ ἐκ παίδων πρὸ τῆς ἥβης γίνεται μετάστασιν ἔχει, &c. "Epileptic Diſorders, whenever "they happen before the Age of Puberty, ſuffer a *Metaſtaſis*;

"but,

" but, if they ſeize the Patient after the Age of Twenty-five, " they generally accompany him to his Grave." *Galen*, commenting on this Place, ſays, κυρίως, &c. " Properly ſpeaking, there " is a *Metaſtaſis* of a Diſeaſe, when it is tranſlated from one " Part to another; but improperly, and by an Abuſe of the " Word, a Solution is ſo called: And in this latter Senſe I " think it plain that *Hippocrates* uſes the Term *Metaſtaſis*; for " the epileptic Fit is not only ſolved by a Tranſlation of " the Humours which excited it, to ſome other Part, but the " Diſeaſe itſelf is perfectly cured."

METASYNCRISIS, μεϛασύγκρισις, from μετὰ, a Prepoſition importing Change, and συγκρίνω, to collect, or mix together, in the Senſe which *Theſſalus* meant by it, is a Change which he pretended to effect in the whole Body, or only in ſome Part of it. *Galen* expreſſes the Word *Metaſyncriſis* by *Metaporopoiefis*, a Change in the Pores. For the clearer underſtanding the Force, and true Signification, of theſe two Words, we are to conſider the Opinion of *Aſclepiades*, with relation to the Bodies of Animals, which, he fanſy'd, were formed, as well as every thing elſe in the Univerſe, by the Concourſe of Atoms; for which Reaſon he called all Bodies συγκρίματα, *Syncrimata* or συγκρίσεις, *Syncriſeis*, Mixtures, becauſe they were, according to him, an Effect of a Collection and Mixture of Atoms. The ſame Author, the better to explain what happen'd to Bodies, made uſe, alſo, of the Verbs συγκρίνεσθαι (*ſyncrineſthai*) and διακρίνεσθαι (*diacrineſthai*) *to mix*, and *to ſeparate*; the firſt of which Words imported the Union of thoſe Atoms for the Formation of a Body, and the other their Diſſolution; there wanted a third Term to expreſs the Alteration, which is made, when theſe ſame Bodies, after being diſunited, returned to their firſt State; and that Word was μεϛασυγκρίνεσθαι, (*metaſyncrineſthai*). *Cœlius Aurelianus*, who was himſelf a Methodic, renders this Word by *recorporare*, and μεϛασύγκρισις, which was formed of it, by *recorporatio*. I know not indeed whether *Aſclepiades*, who uſed the Words συγκρίνεσθαι and διακρίνεσθαι, made uſe alſo of μεϛασυγκρίνεσθαι, but *Caſſius*, who was one of his Diſciples, uſed that Word: Whence it appears, at leaſt, that *Theſſalus*, who lived a long time after *Caſſius*, was not the Inventor of it: But however that be, *Galen de S. F. Lib.* 5. *Cap.* 25. obſerves, with good Reaſon, that *Theſſalus* did not keep himſelf within the Bounds of the *Method*, when he made uſe of this Word, ſince it was impoſſible to underſtand what was meant by this Term, without firſt ſuppoſing, as a thing known, the Exiſtence of theſe ſmall Bodies, and their meeting together. Now this extended farther than what the Methodics profeſſed to know; for they would allow of no Penetration into Cauſes, which were leſs remote and occult, than thoſe Principles of *Aſclepiades*.

The celebrated *Cyclus Metaſyncriticus* of the Methodics, then, is a long-protracted Courſe of Remedies, perſiſted in with a View of recorporating, or reſtoring the Particles which compoſe the Body to ſuch a State as is neceſſary to Health.

METATARSIUS.

This is a fleſhy Maſs, lying under the Sole of the Foot. It is fix'd by one End, in the fore Part of the great Tuberoſity of the Os Calcis; and, running forward from thence, it terminates in a kind of ſhort Tendon, which is fixed in the Tuberoſity, and poſterior Part of the lower Side of the fifth Bone of the Metatarſus.

The *Metatarſius* moves the laſt Bone of the *Metatarſus*, much in the ſame manner as the *Metacarpius* does that of the *Metacarpus*. By this Action it draws, alſo, the fourth Bone along with it, and contracts the Sole of the Foot, increaſing the Convexity of the upper Side; provided that the Foot is not become inflexible by long wearing ſtrait Shoes, by old Age, or by any other Conſtraint or Indiſpoſition. *Winſlow.*

METATARSUS, from μετὰ, and after ταρσὸς, the *Tarſus*. The Aſſemblage of ſmall Bones, articulated to the *Tarſus* at one End, and to the Toes at the other.

METATHESIS. A Tranſpoſition, or Change of Place, us'd with reſpect to morbific Cauſes, which, when they cannot be evacuated, are remov'd to Places where they are leſs injurious. Thus a *Metatheſis* of a Cataract is a Depreſſion thereof, ſo that it may no longer intercept the Rays of Light.

METAXA, μέταξα. Silk.

METEL. A ſort of *Nux Vomica*, but ſomewhat larger. *Raii Hiſt. Plant.*

METEOROS, μετέωρος, from μετὰ, and ἄειρω, to elevate; elevated, ſuſpended, ſublime, erect, tumid. Thus μετέωρα ἀλγήματα are expounded by *Galen*, *Com. ad Aph.* 7. *lib.* 6. ſublime Pains, thoſe which are above the Peritonæum, or affect the ſuperficial and external Parts of the Body; theſe Pains are oppoſed to ſuch as are deeply ſeated, and called τὰ μὴ μετέωρα, not ſublime, but deep, and ſeated within the Peritonæum. And τὰ ὑποχόνδρια μετέωρα, *Aph.* 67. *Lib.* 5. are expounded in *Galen* by τὰ ἐκτεινόμενα, φυσώδη καὶ τέλμινα (Hypochondria) tumefy'd and diſtended with Flatulences. Sometimes they are expreſſed by τὰ ἐπηρμένα, elevated, tumid, and inflamed, 1 *Epid. Ægr.* 8. Hence μετεωρισμὸς ſignifies an highly elevated Tumor, and μετεωρίζεσθαι, 5 *Epid.* and *Coac.* is uſed in the ſame Senſe. But μετεωρισμὸς, in *Progn.* and *Coac.* 494. ſignifies the Patient's raiſing himſelf in order to ſit up, which if he does in a light and eaſy manner, it is there ſaid to be a good Sign. Again, μετέωρα πνεύματα καὶ ψεύματα, *Lib. de R. V. I. A.* are the Spirits and Humours in a State of Elevation and Suſpenſe, no way determin'd in their Courſe, but diſpoſed to a Flux or Evacuation. In another Senſe μετέωρον πνεῦμα is a ſublime and erect Reſpiration, which is performed with raiſing the whole Body, and elevating the Thorax. Again, *Lib. de ſalub. Diæta*, we are directed in the Summer τὰ μετεωριζόμενα κάτω ὑπάγειν, to evacuate the Humours which are then in a State of Elevation, or Æſtuation, and Fermentation, by Purging; this Elevation of the Humours ſeems to be what the Chymiſts call *Exaltation*. And to the ſame Purpoſe, *Lib. de priſca Medicina*, we read, ὅσον δ' ἂν χρόνον ταῦτα μετέωρα ᾖ, καὶ ἄπεπτα, καὶ ἄκρητα, " So long as theſe " [the Humours] are elevated, and unconcocted, and untem- " pered, neither the Pain, nor the Fever, can by any Art be " ſubdu'd"; nor can this be effected, as he ſays a little after, πρὶν ἀποκαθαρθῆ τε, καὶ καλῶς ὀρεσθῇ, καὶ μιχθῇ τοῖσιν ἄλλοισι, " before " they are evacuated, depreſſed, and mixed with others."

METHEMERINOS, μεθημερινός. An Epithet of a Quotidian Fever.

METHODICA SECTA. The Methodic Sect. See the PREFACE.

METHONICA. The Superb Lily, *vulgo*.

The Characters are;

The Root is carnous, and of the Figure of a rectangular Rule, or Carpenter's Square, and very poiſonous. The Stalks are ſcandent; the Leaves are alternate, Lily-ſhaped, and running out at the Apex into a Tendril. The Flower is naked and hexapetalous, the Petals being elegantly ſinuated, and reflected quite backwards; it is furniſhed with ſix Stamina, and bears in its Centre the Ovary, which becomes an oval Fruit, tricapſular, and containing little roundiſh Seeds.

Boerhaave mentions but one Sort of this Plant; which is,

Methonica, Malabarorum. *H. L.* 688. *Methonica.* Ac. R. Sc. 1706. T. 7. F. 5. *Nienghala Zeylonenſium.* Muſæi Zeyl. *Lilium Zeylanicum ſuperbum.* Vulgo & H. A. 1. 69. Plukn. 116. 3. *Mendoni.* Raiz. d'Empoſe Luſitan. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 134.

It is planted in Pots, and cultivated for its Beauty; but I find no medicinal Virtues aſcribed to it.

METL. A Name of ſeveral Species of *American* Aloes. *Raii Hiſt. Plant.*

METOPION, μετώπιον. The Name of an Ointment deſcrib'd by *Dioſcorides*, *L.* 1. *C.* 71. Thus nam'd becauſe the Plant which produces *Galbanum*, a principal Ingredient in this Unguent, was call'd, in *Egypt*, *Metopion*.

METOPON, μέτωπον. The Forehead.

METRA, μήτρα. The *Uterus*, or Womb.

METRENCHYTA, μητρέγχυτα, from μήτρα, the *Uterus*, and ἐγχύω, to infuſe, or pour into. Injections for the *Uterus*.

METRENCHYTES, μητρεγχύτης, of the ſame Derivation as the preceding Word. A Womb Springe.

METRETES, μετρητής. An *Attic* Meaſure, containing ſomewhat more than nine Gallons. See MENSURA.

METROCELIDES, from μήτρα, a Mother, and κηλὶς, a Spot, or Mole. A Mole, or Mark, impreſs'd upon the Child, by the Mother's Imagination. *Caſtellus* from *Theophilus Bierlingius*.

METROPROPTOSIS, μητροπρόπτωσις, from μήτρα, the *Uterus*, and προπίπτω, to fall down. A Deſcent of the *Uterus*, or *Prolapſus Uteri*. In the old College Diſpenſatory, there is a Plaiſter directed by the Title of *Emplaſtrum* μητροπροπτωτικόν.

MEVIUM. A Name for the Venereal Diſeaſe. *Fallopius.*

MEUM.

The Characters are;

The Root is perennial; the Leaves are capillaceous, and much ſlenderer than thoſe of Fennel. The Seeds are long, and bigger and broader than Fennel-Seeds.

Boerhaave mentions but one Sort of this Plant; which is,

Meum. *Ger.* 895. *Emac.* 1052. *Raii Hiſt.* 1. 432. *Synop.* 3. 207. *Boerh. Ind. A.* 49. *Meum & Meum Athamanticum.* Offic. *Meum vulgatius.* Park. Theat. 888. *Meum foliis Anethi.* C. B. P. 148. Tourn. Inſt. 312. *Meum vulgare ſeu Radix Urſina.* J. B. 3. 2. SPIGNEL.

The Root of Spignel is about a Finger thick at the Head, which is covered with ſtiff Hairs or Briſtles; it runs deep into the Earth, and is divided into ſeveral Branches, of a very ſtrong aromatic Smell. The Leaves are not very large, but divided into ſeveral very fine Segments; the ſmalleſt and ſlendereſt of any Plant we have, of a dull, dark, green Colour. The Stalk grows to be a Foot or more high, not much branched, with a few ſmaller Leaves growing thereon, bearing on the Top Umbels of ſmall, white, five-leav'd Flowers. The Seed is longer and larger than Fennel, two growing together, which are ſtriated on the Back; it grows in ſome Parts of the North of *England*, and flowers in *June*. The Root is the only Part uſed.

It

It is hot and dry, carminative, and expelling Wind; and helps the Colic and Gripes. It is, alſo, alexipharmic, and good againſt peſtilential Diſtempers, being an Ingredient in the Theriaca and Mithridate. It is of Uſe likewiſe againſt the Stone, and Stoppage of Urine, and good in all uterine Diſorders. *Miller's Bot. Off.*

It diſcuſſes Flatulencies, and is principally uſed for Inflations, and Eructations of the Stomach, for provoking Urine and the Menſes, for Catarrhs, and for expectorating the Tartar of the Lungs: Hence it is an Ingredient in many Compoſitions.

The Root, as well as that of Mint, is furniſhed with an excrementitious ſort of Humidity, which flies to the Head, and there excites the Head-ach; for which Reaſon it ought not to be too frequently uſed, eſpecially by thoſe who have made a Vow of Chaſtity, or abſtain from Venery on ſome other Account; for, by the ſame Influence it affects the Head, it excites Venereal Deſires. *C. Hoffman.* This perhaps is the Reaſon, why in *Weſtmorland*, where it grows very plentifully in the Meadows and Paſtures, it is called *Bawd-money*.

It has the Name *Meum* from the *Greek* μεῖον, *mion*, leſs, becauſe of the extreme Slenderneſs of its Leaves.

The Seed, Leaves and Root, are uſed. The Seed has the ſame Virtue, as that of Fennel; but is more balſamic, and recommended in an Aſthma, where there is an Adheſion of ſlimy and viſcid Matter, provided there be no Inflammation. They ſay, that no Plant is a greater Provocative to Luſt than *Meum*. Chewed in the Mouth faſting in the Morning, it corrects a fetid Breath, ſtrengthens the Gums, and rectifies the Diſorders of the Stomach. *Hiſt. Plant. aſcript. Boerhaav.*

Beſides the foregoing Species of *Meum*, *Dale* mentions the following:

MUTELLINA. Offic. *Mutellina, Meum umbellâ purpuraſcente.* Mont. Ind. 48. *Mutellina.* J. B. 3. 66. Raii Hiſt. 1. 453. *Meum Alpinum Germanicum, illis Mutellina dictum.* Park. Theat. 889. *Phellandryum Alpinum, umbellâ purpuraſcente.* Tourn. Inſt. 307. GERMAN or MOUNTAIN SPIGNEL.

It grows on hilly Places, and the Herb is in Uſe, to which *Monti* attributes the ſame Virtues as to the common *Meum*.

MEUM SPURIUM. A Name for the *Seſeli; perenne; folio glauco breviori.*

MEZEREON. A Name for the *Thymelæa; Lauri folio; deciduo; flore purpureo; ſive Laureola fœmina.*

MIASMA, μίασμα. Contagion.

MIGAMBE. The Name of a Plant, which grows at *Angola* in *Africa*, and at *Braſil*; to which I find no medicinal Virtues aſcrib'd.

MICHA, or MICHACH. Copper. *Rulandus.*

MICHAELIS ANGELI ANTIDOTUS. The Antidote of *Michael* the Archangel. The Name of an Antidote deſcrib'd by *N. Myrepſus, Cap.* 294, 295.

MICLETA ANTIDOTUS. An Antidote preſcribed by *N. Myrepſus, Sect.* 1. *Cap.* 206.

MICROCOSMETOR. An imaginary Being, repreſented by *Dolæus*, as reſiding in the Brain, and governing the Animal Faculties.

MICROCOSMOS, μικρόκοσμος, from μικρὸς, little, and κόσμος, the World. The Microcoſm, or Little World; that is, Man, who is ſo called by way of Eminence, as being an Epitome of all that is wonderful in the Great World, or Macrocoſm.

MICROLEUCONYMPHÆA.

The Characters are;

The Calyx is bifoliated; the Flower tripetalous, and adorn'd with nine Stamina; the Ovary is tricapſular, furniſhed with three Tubes; the Capſules are ſometimes divided into two; the other Parts are leſs than thoſe of the Nymphæa.

Boerhaave mentions but one Sort of this Plant; which is,

Microleuconymphæa; quæ Nymphæa; alba minima. *C. B. P.* 193. *Raii Hiſt.* 2. 1320. *Boerh. Ind. A.* 282. *Morſus Ranæ.* Offic. Ger. Emac. 818. *Nymphæa alba minima, ſive Morſus Ranæ.* Park. Theat. 1253. *Nymphæa minor, ſive Morſus Ranæ.* J. B. 3. 773. *Stratiotes foliis Aſari, ſemine rotundo.* Raii Synop. 3. 290. FROG-BIT.

It grows in muddy and ſlow Waters, and flowers in *July*. The Herb is uſed, and agrees in Virtues with the *Leuconymphæa*.

MICRONYMPHÆA.

The Characters are;

It is leſs than the Nymphæa in all its Parts; the Calyx and Flower are pentapetalous.

Boerhaave mentions one Species of this Plant; which is,

Micronymphæa; quæ Nymphæa; lutea; minor; parvo flore. *C. B. P.* 194. *Nymphæa, minor, lutea.* J. B. 3. 772. *Nymphæa, lutea, minor, ſeptentrionalium.* Lob. Ic. 595. *Boerh. Ind alt. Plant. Vol.* 1. *p.* 282.

It grows in Ditches, and agrees in Virtues with the Nymphæa. *Boerhaave.*

MICROSPHYCTOS, μικρόσφυκτος. A Perſon whoſe Pulſe is very ſmall.

MICTIO, or MICTUS. An Excretion of Urine.

MIDYON. A Species of Oak, mentioned by *Theophraſtus*. In *N. Myrepſus, Sect.* 1. *Cap.* 156. Midyon is mentioned as an Ingredient in an Antidote there deſcribed; but *Fuchſius*, his Interpreter, thinks it a Miſtake for Miſy.

MIENCAPHETITES. The Name of an Antidote, deſcrib'd by *N. Myrepſus, Sect.* 1. *Cap.* 393.

MIFRES. Aſphaltum. *Rulandus.*

MIGRANA. The ſame as HEMICRANIA.

MILAX. The ſame as SMILAX.

MILESIUS. An Epithet for the fineſt Wool.

MILIARIS FEBRIS. The Miliary Fever.

The Miliary Fever is ſo called from the Puſtules, or Veſicles, which principally appear on the ſuperior Parts of the Body, and in ſome meaſure reſemble Millet-ſeeds. But, in my Opinion, this Diſorder ought rather to be called the *Veſicular Fever*, becauſe the Puſtules are Veſicles, at firſt, full of a limpid, and, afterwards, of a whitiſh and almoſt Pearl-coloured Serum.

Though ſome are of Opinion, that only peſtilential and petechial Fevers ought to be claſſed among thoſe of the malignant Kind; yet, I think, ſome others, of a quite different Species, juſtly deſerve to be ſo.

Among this Number we reckon all ſuch Fevers as are communicated either by Contact, Exhalations, or any other Method of Contagion; as, alſo, thoſe Fevers which are, from the Beginning, accompanied with a violent and fixed Pain in any particular Part of the Body, ſuch as the Head, the Inteſtines, the Region of the Kidneys, or the Joints. To this Claſs, alſo, belong thoſe Fevers, in which the Patient is afflicted either with a Colic, a Gravel, a Gout, a Rheumatiſm, or Child-birth Pains, as original Diſeaſes, when, at the ſame time, the Symptoms of ſuch a Miliary Fever do not yield to thoſe Remedies, which generally prove efficacious in removing thoſe Diſorders, when of the primary Kind.

Among the malignant Fevers, we may, alſo, reckon thoſe in which the animal Spirits ſuddenly fail, and are oppreſſed; as, alſo, thoſe in which the above-mentioned Symptoms ſeem to depend upon no evident Cauſe, but upon a kind of latent Poiſon, by the Antients called an *Occult Quality*, and by the Moderns, Vapours.

To this Claſs, alſo, belong thoſe Fevers, in which, from a Cauſe ſimilar to that laſt-mentioned, the Hopes of Recovery are ſucceeded by a ſudden Death. Now, as all theſe Symptoms diſcover a proportionable Degree of Malignity, ſo I have obſerved them happen in a Miliary Fever, which, in the *Indies*, rages with a Degree of Malignity equal to that of the petechial Kind.

A Miliary Fever is of two Kinds, ſimple and compound. The ſimple is when none but miliary Puſtules appear; the compound Kind is when, with the miliary Puſtules, there are, interſperſed, red papillary Puſtules, which, when appearing alone, are called a *Raſh*.

It is, alſo to be obſerved, that the miliary Puſtules are ſometimes mixed with thoſe of the Small-pox; and that the former are gradually dried up, in proportion as the latter become tumid; whereas the miliary Puſtules remain after thoſe of the papillary Kind are dried up.

That I may, with the greater Diſtinctneſs and Perſpicuity, give the Hiſtory of the Miliary Fever, I ſhall enumerate its antecedent, concomitant, and ſubſequent Signs.

This Diſorder, then, is preceded by a weakly Conſtitution of Body, whether natural, or brought on by exceſſive Evacuations, or the Uſe of too ſmall a Quantity of Aliments; a ſerous State of the Blood; a weak and tumid Mind, eaſily ruffled and diſcompoſed by external Impreſſions, as in Women, and effeminate Men; cloſe and intenſe Thinking, or a gloomy Sadneſs; an Obſtruction, or Ulcer, accompanied with Pain in ſome particular Part of the Body: For this Reaſon thoſe who have been long afflicted with the Colic, Gout, Stone, or Ulcer of the Kidneys, are more ſubject to the Miliary Fever than others. In Women this Diſorder is preceded by an internal Heat, either with or without a Thirſt, eſpecially about the time of their Labour. In conſequence of this Circumſtance, their Pains are leſs violent than uſual; their Spirits, alſo, are ſunk, without any evident Cauſe; and their Breaſts ſo oppreſſed, as to lay a Foundation for the deepeſt Sighs; and, as in other Fevers, they are almoſt always cold externally.

A Miliary Fever is frequently accompanied with a Pain reſembling that of a Woman in Labour, a Colic, a Gravel, a Pleuriſy, or a Rheumatiſm. The Breaſt is alſo oppreſſed, and the Spirits ſunk. But, after two or three Days, the above-mentioned Pain being removed, an Horror, and then an alternate Cold and Heat of the whole Body, are produced; but this Heat is gentler and more natural, than that which accompanies an ordinary continual Fever; the Palm of the Hand is intenſely hot, but the Heat of its convex Part is ſomewhat more mild; the Pulſe is frequent, but weak; the Spirits are often greatly ſunk; and the Breaſt, as it were, oppreſſed by an huge Weight, fetches deep Sighs; and, which is, of all others, the moſt inſeparable Concomitant of this Diſorder, Sleep, upon its firſt Ap-

proach, is ſuddenly interrupted; for the Patient often remains for ſome Days and Nights, and generally longer than in any other Fever, without Sleep; whilſt, at the ſame time, he is neither ſeized with a Delirium, nor a Pain of the Head: A remarkable Inſtance of which, ſays the celebrated Sir *David Hamilton*, I myſelf ſaw, in a certain Woman of Diſtinction, under the Care of Dr. *Francis Bernard*, and who, during the Courſe of this Fever, was afflicted with Watchings, for a whole Month, without any Delirium, or Pain of the Head. The Tongue is ſometimes covered with a white Cruſt, and at other times reſembles that of a ſound and healthy Perſon. The Urine is ſometimes pale, like common Water; and at other times retains its natural Colour: And young Phyſicians, being frequently miſled by this Symptom, imagine the Diſorder to be what they call *Vapours*. Thoſe who labour under a miliary Fever, are ſometimes afflicted with a Pain of the Stomach, eſpecially after Sleep. Sometimes, alſo, they are ſeized with a Diarrhœa, either through their own Negligence, or in conſequence of the prepoſterous Practice of the Phyſician; whilſt, for Inſtance, heating Medicines, uſual in hyſteric Paroxyſms, are preſcribed without Diaphoretics. Hence, inſtead of the regular and benign Workings of Nature, which would expel the morbific Matter by a Diaphoreſis, a violent and rapid Fermentation throws it upon the Inteſtines. The Patient is ſometimes coſtive, whilſt at other times he is afflicted with a preternatural Solubility of Body, accompanied with a Pain of the Stomach and Inteſtines. Sometimes the Tongue, and Hands, when held out for the Phyſician's Information, tremble; and the Patient ſpeaks, as it were, with a tremulous Voice. Thoſe who are afflicted with a Miliary Fever, are, alſo, frequently ſeized with Convulſions, Deliriums, and a Difficulty of Breathing. The Exacerbations of theſe Symptoms recur like the Paroxyſms of an intermitting Fever. An Oppreſſion of the Breaſt productive of Sighs, an uncommon Sinking of the Spirits without any evident Cauſe, Watchings, and that tumultuous Agitation of the Spirits commonly called a *Hurry of the Head*, when the Patient compoſes himſelf for Reſt, as, alſo, a frequent and weak Pulſe, accompanied with whatever other Symptoms, are always Signs, that the miliary Puſtules are about to make their Eruption; and all theſe Symptoms continue, till the Puſtules become prominent, after which the Patient is freed from moſt of them.

Theſe Puſtules are, for the moſt part, only conſpicuous on the Breaſt, Neck, and Interſtices of the Fingers; though they are, alſo, ſometimes found over all the Body, and, being daily and gradually increaſed, they at laſt diſappear, the Cuticula, in the mean time, remaining rough in thoſe Parts where they were. Sometimes theſe Puſtules itch, eſpecially in the compound Miliary Fever, where the Puſtules are intermixed with thoſe of the red papillary Kind. It is, alſo, to be obſerved, that the ſimpler this Species of Fever is, the more mild its Symptoms always are; a Circumſtance which not only renders the Patient, but, alſo, the more incautious Sort of Phyſicians, careleſs and inadvertent. By this means the Fever is either rendered more dangerous, or another Diſorder produced, ſince, for the Want of that Care and Caution, which are neceſſary at firſt, this Fever ſometimes begins with a Train of violent Symptoms, ſuch as Pain of the Stomach, Loſs of Appetite, internal Heat, Oppreſſion of the Breaſt, a Sinking of the Spirits attended with Sighs, an irregular Return of Heat and, Cold, Watchings, and other Diſorders of a like Nature.

In the Decline of this Diſorder, the ſuperior Parts of the Hands are often moiſt, with a cold Sweat.

Whether the miliary Puſtules appear on a certain fixed and ſtated Day, is a Circumſtance not eaſily determined, ſince the firſt Appearance of this Diſorder is highly uncertain, and the Accounts given of it, by the Patient, not to be depended upon. But ſo far as I have been able to diſcover, they generally begin to make their Eruption on the tenth or eleventh Day from the Beginning of the Diſorder, when its Progreſs is regular: But they begin to be dried up about the eighteenth Day, or, where the Quantity of the morbific Matter is large, about the twenty-firſt or twenty-ſecond Day.

I firſt endeavoured to diſcover the Time of their Eruption in thoſe Women, whom, three Days after their Labour, I heard complaining of an Horror, or Cold, ſucceeded by a preternatural and uncommon Heat; for, when I ſaw the Puſtules on their Breaſts and Necks, I concluded that they had, for a conſiderable Number of Days, laboured under a Miliary Fever; and, ſtrictly examining into what happened from the Beginning of the Diſeaſe, I found that, before their Delivery, they had been afflicted, either with a preternatural Heat, or a Pain of ſome particular Part, accompanied with a violent Oppreſſion of the Breaſt, Sighs, and a Sinking of the Spirits; and, as they imagined theſe Symptoms depended upon their approaching Labour, they thought they would be removed when it was over: And though their Pains are milder than uſual, yet they are ſucceeded by an Oppreſſion of the Breaſt, accompanied with Sighs, a Sinking of the Spirits, by Midwives called Fear and Vapours, together with a frequent and weak Pulſe; all which generally prognoſticate the Eruption of the miliary Puſtules, which, in Child-bed Women, is promoted by Sweating in Bed. From the firſt internal Heat, therefore, or Pain before Labour, till the Eruption of the Puſtules after Labour, there are generally eleven Days: But the Patient's Ignorance of her own State, and the inciſtinct Account of it ſhe gives to the Phyſician, generally ſo diſconcert him in forming his Prognoſtic, that the moſt curious and accurate Profeſſor of the Art can hardly venture to aſcertain the preciſe Day of the Eruption.

The Conſequences of a Miliary Fever, ſo far as I have been able to obſerve, are a Swelling of the Thighs, Legs, and Feet, not always unaccompanied with Pain; a Tumor and Abſceſs of the Breaſts; a Depravation of the Memory; an immoderate Diſcharge of the Lochia and Urine; a kind of Indiſpoſition reſembling the hypochondriac or hyſteric Diſorder; and an internal Heat, accompanied with Weakneſs, Languor, and a Loſs of Appetite. Sometimes one, ſometimes another, of theſe Misfortunes happen, when the Fever, either in conſequence of its own malignant Nature, or the bad Management of the Phyſician, terminates in an unlucky manner.

As for the internal Cauſes of a Miliary Fever, this Diſorder ſeems to depend partly on an exceſſive Seroſity, and a kind of acid Acrimony in the Blood, and partly on a preternatural Commotion of the nervous Fluid. This Conjecture ſeems probable, not only from the preceding Hiſtory of the Diſeaſe, and the Remedies calculated for its Removal, but, alſo, from the Diſſection of the Bodies of thoſe who have fallen Sacrifices to it.

The Acrimony and Acidity of the Blood may be diſcovered by the Secretions made in this Species of Fever; for the Urine is paler, liker that of an healthy Perſon, and diſcharged in larger Quantities, than in a burning Fever, in which the Blood, and nervous Fluid, are impregnated with ſalino-ſulphureous Particles. We find, in like manner, that, in the Beginning of a Dropſy, a copious Diſcharge of pale Urine is excited by the Uſe of Oxymel of Squills. In a Miliary Fever there is, alſo, a more copious Diſcharge of the Saliva, than in one of the burning Kind: In the former the Thirſt is generally leſs, and the Tongue cover'd with a leſs viſcid Humour, than in the latter. Beſides, the Matter of the miliary Puſtules, which are Veſicles full of Serum, ſeems to be ſecreted by the above-mentioned Acid, juſt as the Serum of Milk is by the Affuſion of any Acid.

The Truth of this Theory is, alſo, evinced by the Qualities of the Medicines calculated for the Removal of this Diſorder; which are thoſe of the teſtaceous kind, ſuch as Crabs-eyes, and other Subſtances capable of abſorbing Acids.

The ſame Thing is, alſo, confirmed by the Subſtances which prove injurious in this Diſorder; for Lemon-juice, and all other Subſtances of an acid Taſte, are hurtful in a Miliary Fever.

The ſerous State of the Blood is proved by the Heat, which, in this Diſorder, is milder than in a burning Fever; and the more ſimple the Miliary Fever is, the ſmaller is the Degree of Heat, with which it is accompanied; for when thoſe red Puſtules, which we commonly call a Raſh, are interſperſed with theſe of the Miliary Kind, all the Symptoms render the Diſorder more like a burning than a Miliary Fever; and tho' thoſe who labour under an Anaſarca, in which the Blood abounds with Serum, are ſometimes ſeized with a Miliary Fever, yet they are never afflicted with one of the burning Kind.

The ſerous State of the Blood is, alſo, proved by the Time in which the miliary Puſtules make their Eruption; for theſe, in conſequence of the Seroſity of the Blood, and the gentler Heat and Motion, are not ſo ſoon expelled as thoſe of the papillary and variolous Kind, in which the Blood abounds with a larger Quantity of Sulphur; in the ſame manner as common Water, is, by equal Degrees of Heat, longer before it boils, than Wine or Brandy. For this Reaſon, alſo, the animal Spirits are, in this Diſorder, firſt of all put into a Commotion.

The ſerous State of the Blood is, alſo, proved by the Remedies uſed for the Cure of this Diſorder, which are a continued Diaphoreſis, and the ſucceſſive Application of Veſicatories, which at once diminiſh the Seroſity, and correct the Acidity, of the Blood, and nervous Fluid. Beſides, the Cure of this Fever is perfected by Nature, by eliminating, in ſome meaſure, the Serum of the Blood, in the Generation and Production of the Puſtules. Nor are diluting and aqueous Liquors ſo beneficial in this as in burning Fevers; but Broths, prepared of Fowls, are rather to be copiouſly drank. Beſides, whatever hinders the Diminution of the Serum by a Diaphoreſis, proves injurious in this Diſorder; ſuch as external Cold, and heating Medicines, not poſſeſſed of a diaphoretic Quality.

The Acidity, as well as Seroſity, of the Blood are ſufficiently demonſtrated, by the Diſſections of thoſe who die of a Miliary Fever; for in ſome Parts the Blood is coagulated, and of a blackiſh Colour, like that produced in Oil by an Affuſion of the Spirit of Vitriol; but the ſame Blood, when taken out of the Veſſels, tinges a Linen Cloth with a pale Colour. In other Parts the Blood is ſo ſerous, that the Veſſels which contain it are of a pale Colour on that account: An Inſtance of which we have in one of the following Hiſtories; and I lately ſaw one not unlike it, in a certain illuſtrious Youth, of about twenty-one Years of Age, who died of this Fever for want of a ſeaſonable

Uſe of proper Meaſures. Upon laying open his Abdomen, Thorax, and Cranium, the Veſſels were in ſome Parts diſtended with a blackiſh and coagulated Blood: But this Blood, when out of the Veſſels, tinged a Linen Cloth with a pale Colour. We, alſo, frequently find, from Experience, that Blood, which, in conſequence of drinking a large Quantity of generous Wine, is of a rediſh Colour, when flowing from the Veins, nevertheleſs diſcovers its Seroſity by the pale Colour with which it tinges a Linen Cloth. In other Parts of this Carcaſe the Blood appeared ſerous, and turgid, with a pale Colour. The Heart, alſo, together with the Plexus Choroides, which, by reaſon of the numerous Blood-veſſels of which it is compoſed, is almoſt always red, was of a highly pale Colour; a Circumſtance which proves, that the Blood was both ſerous and acid: Nor is it to be doubted but the nervous Fluid, proceeding from the Blood, had acquired the ſame Qualities.

That the febrile Intemperies is firſt excited in the nervous Fluid, is ſufficiently proved by the nervous Symptoms which appear firſt, ſuch as the Pain, the Sinking of the Spirits, the Watchings, and other Symptoms above enumerated: But at the ſame time there are no Symptoms, which, in the leaſt, indicate a febrile Fervor of the Blood; ſuch as a violent Heat, a ſtrong Pulſe, a Pain of the Head, Thirſt, Drineſs of the Tongue, and red Urine, diſcharged in a ſmall Quantity. That the febrile Intemperies firſt begins in the nervous Fluid, is, alſo, obvious from the Things which prove beneficial in this Diſorder; ſuch as, a Mind, for Inſtance, free from all exorbitant and tumultuous Paſſions. This febrile Commotion ſeems, therefore, to derive its Origin from a Tranſlation of the Serum of the Blood to the nervous Fluid, from whence it affects the Maſs of Blood.

Moſt Phyſicians are of Opinion, that an acute continual Fever, which is not of the malignant Kind, draws its Origin, principally, from an Obſtruction of the cutaneous Glands, and a Plethora of the Blood-veſſels, produced by that means: And it is highly probable, that the like happens to the nervous Fluid, in a ſimple Miliary Fever; for as, by the Obſtruction, the Nerves are render'd tenſe, ſo, from this Tenſion, ariſes the Pain, which generally appears the firſt of all the other Symptoms; for which Reaſon it is rather to be ſoothed and allayed by diaphoretic Medicines, which diminiſh the Plethora, and leſſen the Obſtruction of the capillary Veſſels, than by Laudanum; in the ſame manner as the Patients are, by the Eruption of petechial and variolous Puſtules, more effectually freed from Pain, the primary Symptom of thoſe Diſorders, than by the Uſe of Laudanum.

The nervous Fluid, having its Quantity enlarged, and its Motion retarded, by the Obſtruction of the capillary Nerves, impreſſes an irregular Motion on the animal Spirits, and affects the Patient with an Horror.

But the Cold is ſucceeded by an Heat, becauſe the nervous Fluid, when the Obſtruction is removed, is more copiouſly conveyed into the Maſs of Blood, and by that means accelerates its Circulation. Nor even in this Caſe, in which the Blood abounds with ſerous and acid Particles, which check its Motion, is the Pulſe ſo great as in other Fevers, which are firſt excited in the Blood, when impregnated with ſaline and ſulphureous Particles.

The Heat and Cold mutually ſucceed each other, but in an irregular manner: This is occaſion'd by the Seroſity of the Blood, and the nervous Fluid ſecreted from it, which are, for this Reaſon, ſooner affected by Medicines, Exerciſe, much Speaking, or the Paſſions of the Mind. For this Reaſon nothing more effectually contributes to hinder the irregular Returns of the Heat and Cold, than lying in Bed, and Reſt.

The Sighs and Oppreſſion of the Breaſt ariſe from a Stagnation of the nervous Fluid in the capillary Nerves of the Breaſt; for, after an Eruption of the miliary Puſtules, the Patients are freed from this Oppreſſion: This Symptom by no means draws its Origin from Serum lodged in the moſt minute Veſſels of the Aſpera Arteria, ſince by that means an Aſthma would be produced, and the Oppreſſion mitigated by pectoral Medicines, which, however, together with all ſuch Subſtances as prevent the Eruption of the Puſtules, are, in this Caſe, prejudicial.

This Oppreſſion is accompanied with a Defect of Spirits, becauſe the Blood being ſerous, there is, for that Reaſon, a ſcanty Secretion of Spirits into the nervous Fluid. This Defect is, alſo, owing to the Seroſity of the nervous Fluid, by means of which the animal Spirits are clogged, and oppreſſed; for, when the Seroſity is diminiſhed by a Diaphoreſis, the animal Spirits are ſet at Liberty, and the Patient ſeems to recover freſh Strength, juſt as a Porter, upon laying down his Burden, begins, gradually, to reſume his Breath: But this does not happen in a Defect of Spirits, ariſing from an Hypercatharſis. And it is obſervable, that the Pulſe of Patients labouring under a Miliary Fever, whilſt they are afflicted with a Defect of Spirits, and when they are freed from it, exactly reſembles that of Perſons fatigued by Burdens, and gradually recovering their natural State. But in Caſes where too copious Evacuations are made, the Weakneſs of the Pulſe is proportioned to the Depreſſion of the Spirits.

By too brisk a Motion of the animal Spirits, Patients labouring under the miliary Fever are rendered incapable of ſleeping, and often delirious; and, when they compoſe themſelves for Reſt, they complain of a certain Confuſion of the internal Senſes.

Their Freedom from a Pain of the Head, during their Courſe of Watching, depends upon the languid Impetus of the Blood to the Brain; for tho' it circulates ſomewhat more briskly, than in ſound Perſons, yet its Motion is ſtill more faint and languid, than in other Fevers, whether of the intermittent, or continual Kind. For this Reaſon, alſo, the Thirſt is, in a miliary Fever, far more moderate than in one of the burning Kind. The Urine, alſo, is paler, more reſembling that of ſound Perſons, and diſcharged in larger Quantities, becauſe the Acidity of the Blood produces a Separation of the Serum. For which Reaſon, alſo, Patients labouring under miliary Fevers are ſubjected to frequent Vomitings.

In conſequence of the Seroſity of the animal Spirits, the antagoniſt Muſcles are not always kept equally contracted; by which means convulſive Motions are produced. But if, in conſequence of ſuch a Seroſity, the Contraction of the Muſcles is but ſmall, a Tremor of the Tongue and Hands is only produced.

If, in the Beginning of this Fever, the Patient, miſtaking his Diſorder for Vapours, riſes out of Bed, and uſes hot Medicines, the Motion of the Blood and Spirits is, by that means, increas'd; and Nature, inſtead of producing the miliary Puſtules, is ſtimulated to a prepoſterous and unſeaſonable Secretion of the morbific Matter. Hence various Symptoms are produced in various Parts, and the Miliary Fever appears under the Form of ſome other Diſorder. If it affects the Stomach, a Nauſea and Vomiting are produced; if the Inteſtines, Pain, and a Diarrhœa. In which Caſe, the Pain and Diarrhœa are ſooner removed by a gentle and protracted Diaphoreſis, than by the Uſe of Laudanum, or Aſtringents; and if the Patient ſhould have only two or three Stools, without Gripes, or a Defect of Spirits, I am of Opinion, that neither Opiates, nor Aſtringents, ought to be us'd; for there is often a ſufficient Quantity of Matter to be carry'd off both by Stool, and the miliary Puſtules; for which Reaſon the Prevention of their Eruption by Stools is not to be dreaded. The Truth of this we ſufficiently experience in Caſes, where there is a large Quantity of Matter to be ſecreted; in the Small-pox, for Inſtance, where neither Clyſters, nor Veneſection, prevent the Eruption of the Puſtules. Nor, during the whole Courſe of the Small-pox, is any Misfortune produced by a gentle Diſcharge of the Menſes.

The Weakneſs of the Pulſe is produced by the Seroſity of the Blood, and nervous Fluid; for hence ariſe a Defect of the animal Spirits, and a languid ſyſtaltic Motion of the Heart.

In a Miliary Fever, the Prognoſtics are theſe following: If, in the Beginning, the Patient has uſed an improper Regimen, and the Phyſician has exhibited ſuch heating Medicines as do not excite a Diaphoreſis, tho' the Symptoms ſhould at firſt be pretty mild, yet the Diſorder is often dangerous, becauſe it either terminates in the Death of the Patient, or proves chronical, and long-protracted.

If, from the Beginning of this Fever, any particular Part is affected with Pain; if the Patient is hot, without any Senſe of Pain; or if he labours under a Sickneſs of the Stomach; and if theſe Symptoms are ſucceeded by alternate Heats and Colds recurring at unequal Intervals, a Defect of the Spirits, an Oppreſſion of the Breaſt, accompany'd with Sighs, and an eaſy Reſpiration; and, at laſt, if the Puſtules make their Eruption with a gentle and continual Diaphoreſis; the Patient is, for the moſt part, in a hopeful Condition.

If the Delirium, the Convulſions, or the Apoplexy, ſhould, from the pathognomonic Signs of this Fever, ſuch as the violent Oppreſſion of the Breaſt, the Sighs, and the Defect of Spirits, appear concomitant Symptoms, and happen in the Beginning of the Diſorder, they eaſily yield to the diligent Efforts of the Phyſician, and the Influence of proper Medicines. But, in the Progreſs and Decline of the Diſeaſe, when the Patient is weak, and the miliary Puſtules are, by Cold, or, perhaps, a prepoſterous Practice, repel'd, a Tranſlation of the morbific Matter is made to the Brain and Nerves; a Cataſtrophe ſoon ſucceeded by Death.

In a Miliary Fever, a ſudden Suppreſſion of a Diarrhœa, whether ſpontaneouſly, or by the Abuſe of Opiates and Aſtringents, lays a Foundation for an Apoplexy, eſpecially if the Patient was before diſpos'd to that Diſeaſe, in conſequence of a Plethora, and an unfavourable Structure of the Parts.

When the Urine, being diſcharg'd yellow, ſuddenly becomes pale, the Phyſician is to be upon his Guard, in order to prevent a Tranſlation of the morbific Matter.

In Child-bed Women, afflicted with this Fever, a Diarrhœa is a dangerous Symptom; becauſe it not only hinders the Eruption of the Puſtules, but, alſo, the Diſcharge of the Lochia.

A difficult Reſpiration, a Privation of Voice, a Trembling of the Tongue, and more eſpecially a nervous Dyſpnœa, are to be claſs'd among the dangerous Symptoms attending this Diſorder.

The more the Patients are diſpos'd to Sleep, they, for the moſt part, recover the more happily.

Perſons of a mild and ſweet Diſpoſition are more eaſily cur'd of a Miliary Fever, than ſuch as are the unhappy Victims of turbulent and unruly Paſſions.

If Nature and the Phyſician take the ſame Meaſures, and, as it were, act in Concert, the Patients recover their Strength immediately after the Deſiccation of the Puſtules, unleſs, in conſequence of a Redundance of the morbific Matter, there ſhould be ſome of its Remains depoſited on ſome particular Part.

If in a Scarlet Fever, after the red Colour is gone, miliary Puſtules appear, they prognoſticate the Safety of the Patients.

The Cure of a ſimple Miliary Fever.

From the Nature of a ſimple Miliary Fever, as already deſcribed, we muſt perceive, that the following Intentions of Cure muſt be purſued. The Acidity of the Blood, and nervous Fluid, muſt be corrected, their Seroſity removed, and the animal Spirits ſet at Liberty, and reſtored; ſince, by theſe means, the moſt dangerous Symptoms are prevented, and a due Equilibrium between the Motion of the Blood, and that of the animal Spirits, reſtor'd. After theſe Meaſures are taken, we muſt wait a proper Time for the Eruption of the Puſtules, produc'd by a Matter duly diſpos'd.

In order to correct that Acidity of the Blood, and nervous Fluid, which gives Birth to Coagulations of the Blood and Secretions of the Serum, alcaline Medicines, and eſpecially thoſe of the teſtaceous Kind, are to be choſen; ſuch as Crabs-eyes, prepared Pearls, and others of a like Nature. In order to diminiſh the Seroſity of the Blood, and nervous Fluid, thoſe Subſtances are moſt efficacious, which promote a gentle and continual Diaphoreſis, the moſt conſiderable of which are the compound Powder of Crabs-claws, Goa-ſtone, and Oriental Bezoar; for, by the repeated Uſe of theſe for ſome Days, the bad Qualities of the Blood, and nervous Fluid, are corrected; and the Pulſe, being reſtored to a ſtronger and briſker Motion, accelerates a more laudable and equable Eruption of the miliary Puſtules. Indeed, if no Regard was to be had to a Diaphoreſis, and if no other Intention was to be purſued, than the Exaltation of the Blood, and animal Spirits, the hotter Cardiacs, ſuch as Virginian Snake-root, Wine, and others of a like Nature, might be copiouſly exhibited. But in this Fever, theſe, and other Things of a like Nature, are rarely proper, in order to promote the Eruption of the Puſtules; for the Secretion of the morbific Matter cannot be well carry'd on, when the Blood is in a violent Ferment. Beſides, Deliriums, convulſive Motions, and other Misfortunes of a like Nature, are often produced by the Uſe of hot Medicines: All the Secretions, therefore, whether promoted by Nature, or Art, are moſt properly made by ſlow Degrees; and this End is moſt efficaciouſly obtained by teſtaceous Subſtances, which not only cheriſh a moderate Heat, but, alſo, correct the peccant Qualities of the Fluids, and promote a Diaphoreſis.

Veſicatories are, alſo, highly efficacious, not only in diminiſhing the Serum, but, alſo, in preventing Coagulations, by means of the volatile Salt they contain; for which Reaſon no Remedy is generally more powerful in ſoothing Commotions of the animal Spirits, procuring Sleep, or elevating the depreſs'd and languid Spirits; for ſo far are Veſicatories from hindering the Eruption, that, by their means, the morbific Matter being in ſome meaſure diminiſh'd, Nature is rendered capable of more eaſily throwing off the Remainder thro' the uſual Emunctories; nor are we to apply more Veſicatories at a time than one, but only one after another, unleſs ſome violent Symptom ſhould indicate the Propriety of ſuch a Practice. We muſt, alſo, obſerve to apply a freſh Veſicatory, as ſoon as the Ulcer, produced by the former, is dry'd up; ſince I have often obſerv'd, that, immediately upon the Deſiccation of the Ulcers, all the Symptoms were exaſperated, and again mitigated by the Application of other Veſicatories.

In the Year 1697. ſome Patients, ſeiz'd with a Miliary Fever, were not only afflicted with a Pain, but, alſo, with a Swelling of the Head; but theſe Symptoms were gradually abated by the ſucceſſive Application of Veſicatories. The Diſorder of the Forehead was removed by Veſicatories apply'd behind the Ears; that of the Temples and Eyes, by their Application between the Scapulæ; and that of the Cheeks, Lips, and Fauces, by the Application of Veſicatories to the Arms, Thighs, and Legs: And, 'tis obſervable, that, from the Deſiccation of one Ulcer, the Pain and Tumor were ſuddenly augmented, till another was excited by the Application of a freſh Veſicatory.

In the Year 1704. ſome Patients, labouring under this Diſorder, were ſeiz'd with a Pain of the Fauces, reſembling that with which a Quinſey is attended. And though, upon the Appearance of this Symptom, many dy'd ſuddenly, yet all, ſays Sir *David Hamilton*, who were under my Care, eſcap'd ſafely, by means of a gentle and continual Perſpiration.

In a Miliary Fever, Cathartics are never to be uſed, unleſs their Propriety is indicated by ſome violent Symptom. An emollient Clyſter is, however, often proper for cleanſing the Primæ Viæ.

Veneſection is, alſo, rarely proper, unleſs indicated by ſome violent Symptom, ſuch as an Aſthma, a Pleuriſy, or ſome other Diſorder of a like Nature.

In a Miliary Fever, the Paſſions of the Mind are, as much as poſſible, to be guarded againſt; and whatever Circumſtances, whether of a grateful or diſagreeable Kind, throw the animal Spirits into Commotions, are prejudicial. Reſt in Bed is, alſo, to be preſcrib'd. If a contrary Regimen is uſed in the Beginning of this Fever, the Matter of the miliary Puſtules about to move to the Surface of the Body, being repel'd to other Parts, produces dangerous Symptoms. If, in order to remove theſe Symptoms, ſuch Medicines are uſed, as are improper for ſubduing the primary Diſorder, either Death, or a chronical Diſeaſe, without any future Eruption of the Puſtules, enſue. Hence we underſtand why Child-bed Women generally recover ſo eaſily from this Diſorder, that is, becauſe, by lying at Eaſe in Bed, they procure a gentle and perpetual Diaphoreſis, and are treated with diluting Aliments, inſtead of heating Medicines; for it has been frequently obſerved, that, among Women in this Condition, ſuch as ſeem'd to enjoy a tolerable State of Eaſe, whilſt in Bed, were, upon their getting out of Bed, ſeiz'd with ſuch a Sinking of Spirits, that they ſeem'd ready to die; and ſome of them have really died ſuddenly. Such of them, alſo, as quit their Beds too ſoon, imagining themſelves to be only hyſteric, are rendered worſe by that raſh and incautious Step.

A memorable Inſtance of this we have in one Mrs. *Shepherd* in *Bartholomew-lane*, who, being ſeized with an Oppreſſion of the Breaſt attended with Sighs, a Confuſion of the internal Senſes, and a Palpitation of the Heart, not only imagined herſelf vapouriſh, but was, alſo, by thoſe who ſaw her, thought to be in that Condition; for which Reaſon it was judged expedient ſhe ſhould get out of Bed. But as ſoon as ſhe had put on her Clothes, Tremors, and convulſive Motions, were added to the former Symptoms. I, ſays Sir *David Hamilton*, being called, from the Oppreſſion of the Breaſt, the Sighs, and the Sinking of the Spirits, concluded that ſhe laboured under a Miliary Fever, was in a dangerous Condition, and could not be preſerved without a gentle and continual Diaphoreſis: I, therefore, preſcribed Reſt in Bed, without admitting any Viſitants; a Veſicatory to be applied between her Scapulæ; and directed the following Bolus to be taken every ſixth Hour, with ſome proper Julap:

> Take of the compound Powder of Crabs Claws, and Sperma Ceti, each one Scruple; of Saffron, ſix Grains; and of the Syrup of Cowſlips, a ſufficient Quantity: Make up into a Bolus.

By theſe Meaſures her Cure ſucceeded ſo happily, that in two Days time the convulſive Motions were almoſt entirely remov'd; and the miliary Puſtules, at laſt appearing, became gradually larger; and the Serum diſcharged from them, till the very time they were dried up, was thicker and whiter than uſual.

It has, alſo, been ſometimes obſerved, that when Child-bed Women, labouring under a Miliary Fever, have quitted their Beds too ſoon, they have, by that means, been cut off by a ſudden Death. This Misfortune is, no doubt, produced by the Cold repelling the Matter of the Miliary Puſtules upon the Nerves. For which Reaſon, ſays Sir *David Hamilton*, when I am called to Women in Labour, and obſerve the pathognomonic Signs of a Miliary Fever, I order them to keep in Bed, and compoſe themſelves for the Delivery of the Fœtus.

It is, alſo, obſervable, that Child-bed Women, who in Bed have appeared pretty well, have, upon their riſing, been ſeiz'd with ſuch a Sinking of Spirits, that they appeared as if they were dying: For which Reaſon theſe, as well as Women in Labour, getting the Fœtus extracted as ſoon as poſſible, are, when they perceive a Languor, and Oppreſſion of the Breaſt, without any evident Cauſe, to deſpiſe the fooliſh Advice of their Nurſes, and confine themſelves to Bed, in order to have a gentle and continual Diaphoreſis excited.

The Cure of the Symptoms attending a Miliary Fever.

All the Symptoms of a Miliary Fever, taken collectively, are, in my Opinion, to be removed by the ſame Medicines, which would be proper to be uſed, if theſe Symptoms appeared ſeparately, and by themſelves; unleſs ſome important Circumſtance, to be judged of by a skilful Phyſician, ſhould contraindicate ſuch a Practice.

A Pain of the Head, or any other Part, is far more infallibly removed by a gentle and continual Diaphoreſis, than by Opiates; juſt as in petechial Fevers, and the Small-pox, we find the Pain is by no means to be removed, till the Matter to be expelled appears on the Skin. When, therefore, ſays Sir *David Hamilton*, I am called either to a Woman in Labour, or a Patient labouring under any other Pain, and obſerve a Defect of Spirits, and a frequent, but weak Pulſe, omitting the Uſe of Narcotics, I act in Concert with Nature, and forthwith direct my Intentions to excite a Diaphoreſis. But, if the Intenſeneſs of the Pain indicates the Uſe of Opiates, I order Diaphoretics to be mixed with them; otherwiſe they either do not ſooth the Pain, or bring on ſome other Misfortune in its ſtead; and, if the Pain is of the pleuritic Kind, or ſuch as diſcovers an Inflammation in any other Part, Veneſection is rarely to be omitted.

But when the Heat and Cold recur alternately, but in an irregular manner, as they generally do, a gentle Diaphoreſis, excited

cited by means of the compound Powder of Crabs-eyes, without any heating Subſtances, is highly beneficial. This Medicine, though deſpiſed by ſome, ſays Sir *David Hamilton*, I have often found ſurpriſingly efficacious: Of this we have a remarkable Proof in one Mrs. *Bolton*, who, on the ſecond Day after her Labour, was ſeized with a Pain of the Abdomen, near the Top of the Thigh. But, the Pain of this Part being ſomewhat mitigated, ſhe was afflicted with alternate Heats and Colds, Watchings, and an Oppreſſion of the Breaſt, attended with Sighs and Languor; at laſt, after ſome Days, the miliary Puſtules appeared. But by every ſix Hours exhibiting a proper Doſe of the compound Powder of Crabs-eyes, in order to continue the Diaphoreſis, by checking all the Symptoms, by treating the Patient with diluting Aliments, and a little *Canary* Wine, and ordering her to keep her Bed for fourteen Days after the Eruption of the Puſtules, ſhe was perfectly reſtored to Health; though before her Labour an hectic Heat, a Cough, and a difficult Reſpiration, ſeem'd to expoſe her to the Danger of a Conſumption. It is, therefore, obvious, that many, ſeiz'd with a Miliary Fever, are with great Difficulty reſtored to Health, either for the want of due Care in the Beginning, as if the Patients were only hyſteric; or by the Abuſe of hot Medicines, which expel the morbific Matter, not in a critical, but in a ſymptomatic manner. And it is worth Obſervation, that as, during the Courſe of this Fever, I, for the ſake of Experiment, neglected its Uſe, by which the Diaphoreſis was ſtopt, and all the Symptoms augmented; ſo, by repeating the Uſe of it, all the laudable and favourable Symptoms of the Diſorder were again brought back.

The Watchings of Perſons labouring under Miliary Fevers are removed by Veſicatories, Reſt in Bed, Freedom from all Noiſe, and preſerving the Mind unruffled by the Sallies of exorbitant Paſſions.

In order to remove the Delirium, diaphoretic Antimony, exhibited by itſelf, is highly efficacious; and though this Medicine is, by ſome Phyſicians, eſteemed a Calx, deſtitute of all Virtue, yet I have often in Conjunction with other Medicines, and always by itſelf, preſcribed it with Succeſs, not only in Watchings, but, alſo, in a Delirium.

Watchings are, alſo, often removed by a gentle and continued Diaphoreſis; which, if it cannot be obtained by the compound Powder of Crabs Claws, is, rather than by means of any other Medicines, to be procured by Spirit of Hartſhorn, to be drank in a Poſſet prepared with Sage, rather than in an Infuſion of that Herb, becauſe the former affords more Nouriſhment, which, in this Fever, is neceſſary.

If Opiates are ever to be uſed in this Fever, it is after the Veſicatories. And when the Patient is afflicted with a Diarrhœa, or the Eruption of the Puſtules retarded, the moſt proper and efficacious Medicines are the Diaſcordium, or *Venice* Treacle.

In removing the convulſive Motions, with which Miliary Fevers are attended, I have found nothing more effectual, than anointing all the Joints with Eſſence of Amber, and frequently exhibiting about twenty Drops of it in ſome proper Liquor.

In an Oppreſſion of the Breaſt, attended with Sighs, and eſpecially with a convulſive Aſthma, a gentle and continued Diaphoreſis, the Uſe of the Spirit of Hartſhorn, and the Application of Veſicatories, are highly beneficial.

In a Defect of the Spirits, eſpecially when accompanied with a Palpitation of the Heart, I have found nothing more effectual than Treacle-water, either by itſelf, or in ſome proper Vehicle, with a few Drops of Sal volatile oleoſum, and a proper Quantity of the Powder of Saffron.

In the Tremors attending Miliary Fevers, the animal Spirits are to be recruited by proper Medicines, the moſt efficacious of which is Saffron; as, alſo, by nouriſhing Liquors; ſuch as Broth of Fowls, and others of a like Nature.

In univerſal Convulſions, eſpecially when ariſing from a Tranſlation of the morbific Matter to the internal Parts, I have ſucceſsfully uſed Cupping with Scarification. Then I order heating and volatile Spirits to be put into the Patient's Mouth, and Clyſters to be injected, which are highly beneficial in Convulſions, and more eſpecially thoſe of Children.

Sickneſs, attended with a Nauſea, and a preternatural Heat of the Breaſt, are Signs of approaching Aphthæ. But theſe Symptoms are mitigated by a Diaphoreſis, continued till the Tongue is covered with Aphthæ; at which time it is obſervable, that the Aphthæ are increas'd in proportion as the miliary Phitules are dried up; and that the miliary Puſtules are again elevated, in proportion as the Aphthæ on the Tongue diſappear. It, alſo, ſometimes happens, that the Remains of the Fever are, after the Deſiccation of the Puſtules, derived to the Aphthæ, which are nouriſhed and ſupported by them.

The Vomiting is prevented by exhibiting ten Grains of the Salt of Wormwood, mixed with one Scruple of the compound Powder of Crabs-eyes, eſpecially if the febrile Heat recurs at equal Intervals, unleſs this Practice is contraindicated by ſome Symptom, ſuch as an Inflammation of the Tonſils, which is increaſed by the Uſe of lixivial Salts.

A Diarrhœa happening in a Miliary Fever, I have often found to be augmented by Aſtringents; or, if ſuppreſſed, ſucceeded by ſome other more terrible Symptom. For which Reaſon, ſays Sir *David Hamilton*, I, in this Caſe, ſucceſsfully order a Veſicatory, that, by the joint Means of that, and the Diaphoreſis, there may be a Revulſion made of the ſerous Matter from the Glands of the Inteſtines. I, alſo, order a Scruple of prepared Pearls to be exhibited either by themſelves, or with ſome proper Diaphoretic; and the Uſe of this Medicine is to be repeated for ſome time.

I have often found the Efficacy of a Veſicatory in curing a long-protracted Diarrhœa, during the Courſe of a Miliary Fever; for I had a Patient of Diſtinction, who, after Child-birth, among other Symptoms of a Miliary Fever, labour'd under a Diarrhœa ſo violent as to produce a Suppreſſion of the Lochia; and by the following Method I removed her Diſorder, which had laſted for a conſiderable Number of Days:

> Take of Sperma Ceti, and compound Powder of Crabs Claws, each one Scruple; of Saffron, five Grains; and of the Syrup of Cowſlips, a ſufficient Quantity for making into a Bolus, to be taken every ſixth Hour in a Spoonful of common Julap.

I, alſo, ordered a Veſicatory to be applied between her Scapulæ; by which means the miliary Puſtules appear'd, and the Diarrhœa was gradually diminiſh'd.

If the Theriaca, or other Opiates, are to be uſed in Miliary Fevers, 'tis certainly after the Uſe of Veſicatories, which prevent their bad Effects; which Advantage is, alſo, obtained by mixing Sudorifics with them. But I am convinced, that Laudanum, exhibited by itſelf, generally ſuppreſſes all the Evacuations; or, if it ſhould happen otherwiſe, the Phenomenon is not to be aſcrib'd to the Laudanum, but to ſome other Cauſe; juſt as if, after taking *Peruvian* Bark, or Claret Wine, a Diarrhœa ſhould be produced by a large Quantity of morbific Matter, a Weakneſs of the Inteſtines, or a certain Antipathy not to be accounted for. Nor is it any Objection to this Doctrine, that, after taking Laudanum, a Sweat is ſometimes produced, and the variolous Puſtules enlarged, ſince neither of theſe Circumſtances depend immediately upon the Nature of the Laudanum, but on the State and Condition of the Diſtemper. For as in Fevers, during the Fermentation, the Blood is in too rapid a Motion, and Nature, if we may ſo ſpeak, not at Leiſure for a Fermentation, for which Reaſon the Patient diſcharges a thin Urine, but, after the Fermentation is over, a thick and turbid Urine, with an Hypoſtaſis; ſo in like manner, when, after taking Laudanum, the violent Motion of the Blood is check'd, the Nerves relax'd, and the Pores open'd, Sweats in Fevers, and the Pus in the Small-pox, are, by theſe means, more eaſily eliminated. The Nature, therefore, of a Medicine is not to be aſcertained from any remote and precarious, but from its proximate and immediate Effect; ſince, in ſome Patients, Laudanum renders the Body ſoluble. Inſtances of a like Nature frequently occur, and, if duly conſider'd, would, in a great meaſure, prevent a great many of the ungenteel Diſputes and Altercations of Phyſicians.

The compound Miliary Fever.

The compound Miliary Fever is, when the miliary Puſtules are interſpers'd with red Papillæ, commonly called a Raſh, or with petechial Eruptions, the Small-pox, or Meaſles.

The Symptoms of this Diſorder are almoſt the ſame with thoſe attending that Species of Fever called *Synochus*, only the Patients are, in the former, more afflicted with a Sinking of the Spirits, and Sighing, than in the latter; they are, alſo, more ſubject to Watchings, and their Urine bears a nearer Reſemblance to that of ſound Perſons.

In this Diſorder the miliary Puſtules are ſometimes not only intermixed with others of a rediſh Colour, but, alſo, remain after theſe laſt-mention'd Puſtules are totally dried up: But, in the Meaſles and Small-pox, the miliary Puſtules generally precede theſe Diſorders, and accompany them in their Beginnings.

In a compound Miliary Fever, the Symptoms ſeem rather to proceed from ſome Diſorders of the Blood, than of the nervous Syſtem, ſince the Pulſe is frequent and ſtrong, the Heat intenſe, the Tongue dry, and the Thirſt immoderate; whereas 'tis quite otherwiſe in a ſimple Miliary Fever. But a Defect of Spirits, and Sighs produced by the Oppreſſion about the Breaſt, are Symptoms common to them both.

As for the Cure, in Caſes where miliary Puſtules accompany the Meaſles and Small-pox, diaphoretic Medicines, pretty hot in their Natures, are ſafer than in the Small-pox appearing by themſelves.

External Cold, or a cold Regimen in any reſpect, are dangerous, and frequently prove the Cauſes of a ſudden Death, even when moſt of the Symptoms lay a Foundation for expecting an happy Termination of the Diſorder.

For this Reaſon hot Opiates, ſuch as Diaſcordium, and others of a like Nature, produce more happy Effects, than Diacodium,

or Laudanum, when the Miliary Puſtules appear in Conjunction with the Small-pox.

Of some Diseases which succeed Miliary Fevers.

Beſides the Conſequences of a Miliary Fever already mention'd, there are two, which, ſomewhat more frequently than the reſt, occur; that is, a Tumor of the inferior Parts of the Body, and an hectic Heat.

Sometimes the Feet, Legs, Thighs, and Groin, are remarkably ſwell'd, ſometimes without, but, often with more an immoderate previous Pain: This Swelling is produced by a Congeſtion of the Remains of the morbific Matter, in conſequence of preposterous Methods uſed for the Cure of theſe Fevers.

This Species of Diſorder is to be cured by exhibiting every Night cathartic Pills, together with Opium itſelf, or ſome Opiate. The Opiate, ſays Sir *David Hamilton*, I preſcribe, is one Scruple of the Pilulæ de Cynogloſſo; and I am directed in my Choice of a Cathartic, by the Nature of the Symptoms. Thus, for Inſtance, when the Appetite and Digeſtion are diminiſh'd, I give half a Dram of the Pilulæ Stomachicæ; in a Suppreſſion of the Lochia or Menſes, a proper Doſe of the Pilulæ Aloephanginæ, or the Pilulæ fœtidæ; ſometimes, alſo, I order four or five Grains of the Reſin of Jalap, to be added; and on other Occaſions, I order a Draught of the bitter Decoction without Sena, twice a Day. If ſtronger Cathartics are to be uſed, I exhibit them every other Night, and order ſome ſtomachic Decoction to be taken on the intermediate Days. By following this Method I have rarely fail'd to produce a happy Cure, after a great many other Medicines have been uſed to no Purpoſe.

When the Tumor is without Pain, I uſe Cathartics without Opiates; but, if the Swelling is a concomitant Symptom of the Miliary Fever, it is diſſipated by a Diaphoreſis duly protracted without any other means.

Both the ſimple and cathartic Spirits of Scurvy-graſs are of ſingular Efficacy for removing this Swelling ſubſequent to the Miliary Fever. The Efficacy of the ſimple Spirit I experienc'd in Mr. *Bellaſis*, who, about the eightieth Year of his Age, being ſeized with a violent Miliary Fever, was, by the King, committed to my Care. In this Patient the Fever, when remov'd, was ſucceeded by a Tumor from the Groin to the Toes, which after the Application of Veſicatories to no Purpoſe, at laſt yielded to the Uſe of ſimple Spirit of Scurvy-graſs.

The Efficacy of the joint Uſe of the ſimple Spirit of Scurvy-graſs, and that of the cathartic Kind, prepared with Jalap, I experienced in one Mrs. *Lane*, who ſome Years before had been afflicted with a Miliary Fever in Child-bed. She being ſeized with a violent Pain, and a Swelling from the Groin to the Toes, was committed to the Care of two very eminent Phyſicians, but to no Purpoſe. This Patient I perfectly cured, by giving twenty or thirty Drops of the ſimple Spirit of Scurvy-graſs, thrice a Day, for two Days ſucceſſively, in ſome proper Vehicle, and every third Day about an hundred Drops of the cathartic Spirit of Scurvy-graſs, and a proper Doſe of the *Pilulæ Matthæi* at Bed-time.

An hectic Heat, a Diminution of Appetite, and a Defect of the vital Spirits, are, alſo, ſometimes the Conſequences of a Miliary Fever, eſpecially when the Patients quit their Beds too ſoon.

The Method of treating theſe Caſes with Succeſs is this; Every Morning, for ſome Days, let the Patient take ten or eleven Grains of the Salt of Wormwood, in a ſmall Draught of Spaw-water; and, if the Spirits are highly defective, let him drink after it, by little and little, two Pints of the ſame Water. Or if Spaw-waters cannot be had, he may take his Salt of Wormwood in a proper Quantity of Bath-water, drinking after it two Pints of the ſame, in like manner, that by this means the Remains of the Acid, which in this Fever is always productive of Miſchief, may be diſcharged along with the Water and Salt of Wormwood.

If a Pain of the Head ſhould be induced by the Uſe of the Salt of Wormwood, I order ſome lenitive Medicine to be exhibited every third or fourth Day at Bed-time. Saline and acid Subſtances are not to be uſed; and too much Exerciſe, either of Body or Mind, is carefully to be avoided; for I have often ſeen a Relapſe produced by either of theſe Errors; nor is the Relapſe of an intermittent Fever more effectually produced by the prepoſterous Uſe of the *Peruvian* Bark. In this Caſe Aſſes-milk, with the teſtaceous Powders, and eſpecially Pearls, generally proves highly beneficial. *Hamilton de Febre Miliari.*

MILIARIUM. A tall narrow Veſſel, uſed in the antient Baths for heating Water.

MILIOLUM. A ſmall Tumor in the Eye-lid, of the Size of a Millet-ſeed. *M. A. Severinus.*

MILITARIS HERBA. The ſame as Stratiotes; which ſee.

MILIUM.

The Characters are;

It hath a looſe divided Panicle; and each ſingle Flower hath a Calyx, conſiſting of two Leaves, which are inſtead of Petals, to protect the Stamina and Piſtillum of the Flower, which afterwards becomes an oval ſhining Seed.

Boerhaave mentions ſeventeen Species of this Plant; which are,

1. Milium; ſemine luteo. *C. B. P.* 26. *Theat.* 502. *Tourn. Inſt.* 514. *Boerh. Ind. A.* 2. 162. *Milium.* Offic. Ger. 73. Emac. 80. J. B. 2. 446. Raii Hiſt. 2. 1251. *Milium vulgare album.* Park. Theat. 1136. MILLET.

Millet has large, broad, Graſs-like, ſomewhat hairy Leaves, encompaſſing the Stalk, which grows to be three or four Feet high, bearing on the Top a large Panicle, hanging down the Head, compoſed of a great Number of ſlender Stalks, having many ſmall Glumes growing on them, including ſmall, white, hard, ſhining Grain: It is ſown more in foreign Parts, than here in *England*; and is there uſed for Food. It is ſown in *April*, and ripe in *Auguſt* and *September*.

Millet is cooling, drying, and binding, ſomewhat windy, and not eaſily digeſted; a ſtrong Decoction of it with Figs and Raiſins, mixed with Wine, and drank warm a-bed, is a very good Sudorific, though it is ſeldom uſed. *Miller's Bot. Off.*

Milium, κέγχρος, according to *Varro*, is of *Greek* Derivation; for firſt it was called μίλιν (*Milin*), afterwards μίδιν (*Midin*), and μελίνη (*Meline*), a common Name to it with Panic. But *Voſſius* proves, that μελίνη, in *Dioſcorides*, *Galen*, and others of the Antients, ſignifies only Panic; and therefore ſome are inclined to the Opinion of *Feſtus*, that it is called *Milium*, from *Mille*, a thouſand, becauſe of its numerous Seeds.

Millet, by Conſent of Authors both antient and modern, is refrigerating and drying; it is of bad Juice, difficult of Digeſtion, binds the Belly, and generates Flatulencies; it is, however, well known to be a very grateful Food to many Nations at preſent. In former times it ſerv'd to make Bread, under a Dearth of better Corn, as we are aſſured by *Dioſcorides*, *Pliny*, *Galen*, and others of the Antients. Among the *Italians*, ſays *C. Bauhine*, Loaves made of Millet, which are yellow, and eaten hot by many, not out of Neceſſity, but for their Sweetneſs; but, when this Bread is grown hard, it is quite black. Of the Flour of Millet and Milk the *Italians* make fine Cakes, which muſt be eaten as ſoon as dreſſed, or elſe they become glutinous, and ungrateful to the Taſte. In former times they made a ſort of white Puddings of Millet, as *Pliny* tells us. And among the *Coſſacks* and *Tartars*, their principal Food is Millet, the crude Meal of which they mix with the Milk of Mares, or with Blood drawn from the crural Vein of their Horſes. A Pudding, prepared of Millet, boiled in Milk, with an Addition of Butter, and Sugar ſprinkled over it, is much in Requeſt among the *Germans* at preſent; and theſe Puddings have been long ago introduced into *England*, and are ſtill in Faſhion.

The Flour of Millet was formerly us'd in Fomentations for the Gripes, and for Pains of the Head and Nerves; it was applied externally in Bags, becauſe the Uſe of it in Cataplaſms was difficult, on account of its Friability. If the Membrane of the Brain happens to wounded, it is excellently conglutinated, ſays *Archigenes*, by infuſing thereon the Juice of Calaminth, and ſprinkling it with the dry Flour of Millet. A Decoction of Millet, with Figs and Raiſins, is called, by *Heurnius*, a noble Sudorific and Diuretic. Or, take of a Decoction of Millet, boiled till it burſts, four Ounces; White-wine, two Ounces. Let the Patient take it hot. *Cheſneau. Raii Hiſt. Plant.*

Millet is diuretic and aſtringent; the Seeds are of extraordinary Service in Diſeaſes of the Lungs, and Exulcerations of the Kidneys; made into a Cataplaſm, they are anodyne and reſolvent. *Hiſt. Plant. adſcript. Boerhaav.*

2. Milium; ſemine nigro. *C. B. P.* 26. *Th.* 505. *J. B.* 2. 18. 446. *M. H.* 3. 196.

3. Milium; Arundinaceum; ſubrotundo ſemine; Sorgo nominatum. *C. B. P.* 26. *Boerh. Ind. A.* 2. 162. *Tourn. Inſt.* 514. *Sorghum.* Offic. Ger. 77. Emac. 83. Raii Hiſt. 2. 1252. *Sorghi.* J. B. 2. 447. *Melica, ſive Sorghum.* Park. Theat. 1136. *Milium Arundinaceum, ſive Indicum, ſemine ſubrotundo.* C. B. Theat. 511. INDIAN MILLET.

It delights in a fat and humid Soil; for which Reaſon ſome ſow it in their Fields to correct their Luxuriance. It was brought from *India* into *Spain*, *Italy*, and other warm Countries: They ſow it in Summer, and reap it in Autumn.

The Seed is like Panic both in Taſte and Temperament. The pooreſt ſort of People in *Italy*, and the Peaſants in the *Paduan*, grind the Seed, and make it into Loaves, which are friable, and afford but little Nutriment, being black, difficult of Digeſtion, and binding. It is more uſual to make Puddings, or White-pots, of the Flour, and Milk. In *Tuſcany* they ſow it more for the ſake of feeding their Poultry, than to ſerve as Aliment for Men. They, alſo, give it to their Cows, Horſes, and Swine. Of the Pith of the Stalks is prepared an excellent Remedy for the Strumæ; the Preparation of which ſee in the *Bauhines*, and *Matthiolus*; which laſt Author commends, alſo, the Flowers, for uterine Fluxes, and the Dyſentery. *Raii Hiſt. Plant.*

4. Gramen; ſylvaticum; panicula miliacea ſparſa. *C. B. P.* 8. *Th.* 141.

5. Gramen; ſegetum; altiſſimum; panicula ſparſa. *C. B. P.* 3. *Th.* 141.

6. Gramen; arvenſe; panicula criſpa. *C. B. P.* 3. *Theat.* 32.

7. Gramen; nodoſum; avenacea panicula. *C. B. P.* 2. *Theat.* 18.

8. Gramen; agrorum; ſpica venti. *M. H.* 3. 200.

9. Gramen; pratenſe; majus; latiore folio; Πόα Theophraſti. *C. B. P.* 2.

10. Gramen; pratenſe; majus, anguſtiore folio. *C. B. P.* 2. *Prodr.* 11. *Th.* 29. *M. H.* 3. 201.

11. Gramen; pratenſe; paniculatum; medium. *C. B. P.* 2. *Th.* 30. *M. H.* 3. 201.

12. Gramen: pratenſe; minimum; album & rubrum. *Ger. Park. M. H.* 3. 201.

13. Gramen; paniculatum; aquaticum latifolium. *C. B. P.* 3. *Th.* 40. *M. H.* 3. 201.

14. Gramen; pratenſe; ſerotinum; panicula longa purpuraſcente. *Raii Synop.* 260.

15. Gramen; aquaticum; fluitans; multiplici ſpica. *C. B. P.* 3. *Th.* 41.

16. Gramen; exile; hirſutum. *Ger.*

17. Milium; Indicum; arundinaceo caule; granis nigris. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 162.

MILIUM ARUNDINACEUM. See LACHRYMA JOBI.

MILIUM SOLIS. A Name for the *Lithoſpermum; majus; erectum.*

Beſides the foregoing, *Ray* mentions another Species of *Milium*, under the following Head;

Milium Arundinaceum, ſemine plano, & albo. C. B. *Sorghi album, Milium Indicum, Dora.* J. B. It grows in *Arabia*, and, alſo, in *Cilicia* and *Epirus.*

This Plant is ſuppoſed to be the *Dora* of the *Arabians.* It is dry, nouriſhes little, and binds the Belly. The Seeds are very white, and yield a Flour, of which they make a ſavoury Sort of Bread in the Form of Cakes, which they bake under the Aſhes. The Inhabitants chew the Stalks, and by that means extract a ſweet Juice out of them, in the ſame manner as they do out of Sugar-canes. In the Iſle of *Corcyra* (*Corfu*) they feed their Pigeons with this Grain; and in *Cilicia* they ſow it, to ſupply their Want of Wood for Fuel. *Raii Hiſt. Plant.*

MILLEFOLIUM.

The Characters are;

The Leaves are very finely cut; the Calyx is ſquamous, and almoſt cylindrical; and the Flowers are very cloſely collected into Umbellas.

Boerhaave mentions fifteen Species of this Plant; which are,

1. Millefolium; purpureum; majus. *C. B. P.* 140. *Prodr.* 72.

2. Millefolium; purpureum; minus. *C. B. P.* 140.

3. Millefolium; vulgare; album. *C. B. P.* 140. *Tourn. Inſt.* 496. *Boerh. Ind. A.* 112. *Millefolium.* Offic. *Millefolium vulgare.* Park. 893. Raii Hiſt. 1. 345. Synop. 91. *Millefolium terreſtre vulgare.* Ger. 914. Emac. 1072. *Millefolium Stratiotes pennatum terreſtre.* J. B. 3. 136. *Achillea vulgaris, flore albo.* Act. Reg. Par. An. 1720. 320. YARROW.

Yarrow has a white creeping Root, which ſpreads much on the Surface of the Ground. The Leaves are long and narrow, having on each Side ſeveral very finely divided Pennæ. The Stalk is firm and erect, a Foot or two high, ſomewhat hairy, and beſet alternately with ſmaller, and rather finer Leaves. The Flowers grow on the Top of the Branches in flat Umbels, each Flower being made of five little, white, roundiſh Leaves, ſet about a Thrum of the ſame Colour, growing in a ſcaly Calyx, in which is contained flatiſh white Seed. It grows every-where in the Fields, and flowers in *June* and *July.* The Leaves are uſed.

Yarrow is cooling, drying, and binding; very ſerviceable in all Kinds of Hæmorrhages; whether Spitting or Vomiting Blood, Bleeding at the Noſe, Dyſentery, or the too great Flux of the Menſes, or violent Flooding, cooling and tempering its immoderate Heat and Sharpneſs. It, alſo, helps a Gonorrhœa, Strangury, Heat of Urine; and, applied outwardly, is of Service againſt Ruptures, and to ſtanch the Bleeding in freſh Wounds. *Miller's Bot. Off.*

This Plant is a little acrid, bitter, aromatic, and gives a conſiderable Tincture of red to blue Paper. It ſeems to me, that the acid Part of the natural Salt of the Earth, diſengaging itſelf of the other Principles thro' the Texture of this Plant, forms, with the terreſtrial Parts, an aluminous Salt, united with a little eſſential aromatic Oil.

By the chymical Analyſis are extracted from the Yarrow ſeveral acid Liquors, a great deal of Earth, no volatile concrete Salt, and a little urinous Spirit.

Thus this Plant is vulnerary, reſolvent, and aſtringent. It is uſed in Piſans, and Infuſions, after the manner of Tea. Some boil its Leaves in Broths, to ſtop all Sorts of Hæmorrhages, and eſpecially the irregular Flux of the Piles, and Fluor albus. Its Juice is preſcribed from eight Ounces to ſix; the Powder, from a Dram to half an Ounce: It is mixed, alſo, with Paſte, to make aſtringent Biſcuits. *Tabernæmontanus* ſays, the Water of Yarrow is good for the Epilepſy; and that the Wine of Mead, made with this Plant, ſtops all Sorts of irregular Fluxes. *Martyn's Tournefort.*

It is called *Millefolium* from the Multitude of its Leaves; *Achillea*, from *Achilles*, who firſt diſcovered its Efficacy in the Cure of Wounds, as *Pliny* tells us, and with the ſame cured *Telephus.* It is, alſo, called *Stratiotes*, from στρατὸς, an Army, on account of its Uſefulneſs in the Camp, as an excellent Vulnerary.

Later Obſervation, ſays *C. Hoffman*, has taught us, that our Millefolium is ſo far from ſtopping an Hæmorrhage, that it rather excites one. But *J. Bauhine* ſuppoſes, that the Reaſon why Blood happens to be provoked from the Noſtrils with Millefoil, is becauſe they are rubbed. It is, alſo, ſo violent a Diuretic, that the Uſe of it for a conſiderable time, procures bloody Urine. *Hoffman*, therefore, makes a Diſtinction, and ſuppoſes the *Millefolium acerbum*, or harſh-taſted Millefoil, to have a conglutinating Virtue; and the bitter Sort to be deobſtruent, diſſolvent, diuretic, helminthic, or a Deſtroyer and Expeller of Worms, and the like: Now there is a manifeſt Acrimony and Bitterneſs in the *Millefolium minus Cordi*, and the *Millefolium nobile Tragi.*

But, whatever are the Qualities by which it produces ſuch an Effect, *Riverius*, in his *Obſervations*, produces many Examples of Hæmorrhoids cured by Decoctions of Millefoil; and many other Writers have experienced the ſame.

I know ſome Women, ſays *S. Paullus*, who have preſerved themſelves from Abortion, by only making a proper Uſe of the common Millefoil.

For Spitting of Blood, take two Drams of the Powder of Millefoil, in the Juice of Plantain. Millefoil is very proper to provoke Blood from the Noſe, by its Roughneſs, and prickly Hardneſs, opening the capillary Veins; for which Purpoſe they put it into the Noſtrils, and then, by rubbing and preſſing them, cauſe them to bleed after an eaſy manner, and in a ſufficient Quantity: Hence we call it *Noſe-bleed.*

The tuberous Excreſcence, which is ſometimes found on the Root, proceeds from the poiſonous or fermentative Liquor infuſed into the Wound or Puncture inflicted by ſome Inſect, together with its Egg: This Liquor, mixed with the Juice of the Root, excites a Tumor, which becomes the Receptacle, and, as it were, the Matrix of the Egg, and Worm, which is to be hatched, or excluded; and affords it Aliment and Security. *J. Cornutus*, therefore, was miſtaken, in making the tuberous Millefoil a diſtinct Species.

For an exceſſive Flux of the Menſes, *Sennertus* gives the following Preſcription: Take Juice of Millefoil, three Drams; Sugar, one Ounce. *Raii Hiſt. Plant.*

4. Millefolium; maximum; umbella alba. *C. B. P.* 140. *Prodr.* 72.

5. Millefolium; nobile; Tragi. *Boerh. Ind. A.* 112. *Achillea.* Offic. *Achillea, ſive Millefolium nobile.* Ger. 915. Emac. 1703. Raii Hiſt. 1. 346. *Achillea ſideritis, ſive nobilis odorata.* J. B. 3. 140. *Millefolium nobile.* Tourn. Inſt. 496. *Tanacetum minus album odore Camphoræ, ſive Achillea Dioſcoridis.* C. B. 132. ACHILLES's IRONWORT.

It grows in *Germany*, by the *Rhine*; in *Languedoc*, about *Montpelier*; and in every Part of *Italy*; and flowers in *July.*

It repreſſes all Sorts of Hæmorrhages; and, outwardly uſed, is an excellent Vulnerary.

6. Millefolium; Orientale; altiſſimum; luteum; Abrotani folio. *T. Cor.* 37.

7. Millefolium; Orientale; erectum; luteum. *T. Cor.* 37.

8. Millefolium; Orientale; erectum; flore flaveſcente. *T. Cor.* 37.

9. Millefolium; tomentoſum; luteum. *C. B. P.* 140. *J. B.* 3. 138. *Stratiotes, Millefolia, flavo flore.* Cluſ. H. 330.

10. Millefolium; luteum; magis tomentoſum; & altius.

11. Millefolium; luteum; majus; folio lato.

12. Millefolium; Orientale; foliis Tanaceti incanis; radiis pallide luteis. *Ptarmica, Orientalis, foliis Tanaceti incanis, ſemifloſculis florum pallide luteis.* T. Cor. 37.

13. Millefolium; odoratum; Monſpelienſe. *Pillet.* 271.

14. Millefolium; Tanaceti foliis; flore albo. *M. H.* 3. 38. *Tanacetum montanum, album, tenuifolium, flore candido.* Bocc. Muſ. Plant. T. 26.

15. Millefolium; vulgare; majus; album; foliis eleganter variegatis. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 112.

Beſides other Names before-mentioned, it is, alſo, called *Herba Carpentaria*, Waggoners Herb, becauſe it is much in Uſe among Carriers and Waggoners, to ſtop Bleeding. The firſt and ſecond Species were in Requeſt among the Antients; they are repreſſive of Hæmorrhages, and at the ſame time ſtrengthening and aſtringent, and are proper for a Gonorrhœa, when proceeding from a Laxneſs of the Parts, and a Solution of the Humours. Externally it is of Service in the Tooth-ach, Hæmorrhoids, Hernia, Tumors of the Penis, Head-ach, Pterygia of the Eyes, and poiſonous Stings or Bites. *Hiſt. Plant. adſcript. Boerh. p.* 169.

MILLEFOLIUM MONTANUM. A Name for the *Ptarmica*; *Alpina*; *Tanaceti foliis.*

MILLEFOLIUM AQUATICUM. A Name for the HOTTONIA; it is, alſo, a Name for the *Potamogeiton*; *floſculis ad foliorum nodos*; and for the *Potamogeiton*; *foliis pennatis*.

MILLEGRANA MAJOR. A Name for the *Herniaria*; *glabra*.

MILLEGRANA MAXIMA. A Name for the *Knawel*; *folio Alſines*; *glabro*; *floſculis plurimis*.

MILLEPEDES.

Aſelli, Millepèdes & Oniſci. Offic. *Aſelli.* Schrod. 5. 338. Jonſ. de Inſect. 126. *Aſelli, Millepedes.* Ind. Med. 15. *Aſellus.* Mouff. 202. Charlt. Exer. 57. Mer. Pin. 203. *Aſellus lividus major.* Raii Hiſt. Inſect. 42. *Oniſcus ſive Aſellus.* Aldrov. de Inſect. 632. WOOD-LICE, SOWS, or CHURCH-BUGGS. *Dale, p.* 354.

Millèpedes, ὄνοι, which are found under Veſſels that hold Water, are little Animals, with numerous Feet, which, at a Touch with the Hand, roll themſelves up into a ſpherical Figure.

Drank in Wine, they cure a Difficulty of Urine, and the Yellow Jaundice. Made into a Litus with Honey, they help the Quinſey. Bruiſed, and heated with Oil of Roſes, in a Pomegranate-ſhell, they are effectual, being inſtilled, for the Tooth-ach. *Dioſcorides, Lib.* 2. *Cap.* 37.

They are ſmall Inſects, ſcarce a Finger's-breadth in Length, and near half a Digit in Breadth, and of a livid blackiſh Colour.

They are of fine Parts; digeſt, attenuate, abſterge, and open: Hence they are of ſingular Efficacy in reſolving a tartareous Mucilage, and reducing the Stone to a Mucilage, in opening Obſtructions of the Viſcera, and, conſequently, for the Jaundice, nephritic Pains, Dyſury, Colic, Aſthma, and the like. Outwardly, the Powder of them is good for the Eyes, and Pains of the Ears; and, made into a Litus, for the Quinſey; apply'd alive, they cure a Phagedæna.

Theſe are ſo much in the Acquaintance of the common People, that they ſeem to be Maſters of their Medicinal Virtues, and uſe them in many Caſes, without any other Direction. They are, by all Experience, found to be very diuretic and abſterſive; which makes them not only frequent in the Preſcriptions for Diſorders of the Kidneys, but, alſo, in Obſtructions of the Viſcera, and in the Jaundice particularly. They abound with a nitrous Salt, which they ſeem to derive from what they live on. It is ſomewhat volatiliz'd by its Digeſtion and Circulation in the Inſect, as ſuch Salt always is, more or leſs, in proportion to the digeſtive Powers of Animals, into whoſe Food it enters; yet not ſo much, but that it is brackiſh and pungent to the Palate. This makes their deterſive Quality extend further than the larger Glands, and enables them to ſcour even the minuteſt Paſſages, and keep the Nerves clean from Viſcoſities, and ſuch Things as would clog their Springs, whereby they are good in Palſies, Epilepſies, and all nervous Diſtempers. And, alſo, becauſe they open, and, as it were, by their Minuteneſs and Aſperities, cut their Way through any Obſtructions, they are good in Strumas, ſcrophulous Tumors, and inveterate Ulcers. Very remarkable Cures have been performed in theſe Caſes by a long Uſe of them. They are much the beſt taken in Subſtance, or bruis'd in White-wine, the Liquor being drank without ſettling fine, elſe a great deal of a ſaline Matter will fall to the Bottom. Theſe are greatly in Uſe amongſt all Practical Authors, and frequently to be met with in the preſent occaſional Preſcriptions. *Sennertus*, in the third Book of his *Practice*, commends them againſt the Stone in the Bladder. *Riverius* gives Inſtances of Wonders perform'd by them in inveterate Strumas and Ulcers, as does, alſo, that Honour to our Country, Mr. *Boyle*, who takes notice of them for the ſame Intention, in his Diſcourſe of the Uſefulneſs of Experimental Philoſophy.

MILLERIA.

The Characters are;

It hath a compound Flower, conſiſting of ſeveral Florets, and one Half-floret, contained in one common Flower-cup; but theſe Florets are barren, and the Half-floret, which is fruitful, is ſucceeded by one Seed, which is ſurrounded by the Flower-cup.

Miller mentions four Species of this Plant, none of which have any Medicinal Virtues aſcrib'd to them, that I know of.

MILPHOSIS, μίλφωσις, or μίλφαι. A Baldneſs of the Eye-lids. It is thus call'd according to *Aetius*, *Tetrab.* 2. *Serm.* 3. *Cap.* 2. becauſe, when the Eye-laſhes are fallen off, the Edges of the Eye-lids appear red, as if colour'd with μίλτῳ, *Minium*.

MILTOS, μίλτος. A Species of *Rubrica*, red Earth, or *Minium*. See RUBRICA.

Hippocrates, in his Treatiſe of Ulcers, recommends this as a proper Application to Burns.

MILVUS. Offic. Bellon. des Oyſe. 130. Schrod. 5. 321. Raii Synop. A. 17. Mer. Pin. 170. Aldrov. Ornith. 1. 391. Geſn. de Avib. 549. Jonſ. de Avib. 13. Charlt. Exer. 72. *Milvus, vulgaris cauda forcipata.* Will. Ornith. 41. *Milvus cauda forcipata.* Raii Ornith. 74. THE KITE, or GLEAD. *Dale, p.* 393.

Of Uſe in Medicine, are the whole Bird burnt, the Head, Liver, Gall, Dung, and Fat. The Aſhes of the Bird, burnt, are ſaid to be effectual in the Gout and Epilepſy, being taken inwardly; the ſame is ſaid of the Head and Liver, being burnt; and the latter is, alſo, an Ingredient in ophthalmic Medicines. The Blood, mix'd with Nettles, and apply'd, is ſaid to give Relief under the Gout; the Gall enters the Compoſition of Collyria, for the Eyes; and the Fat is uſed to anoint the Parts pained with the Gout. *Dale* from *Schroder*.

MILVUS. Offic. Bellon. de Aquat. 195. Salv. de Aquat. 188. Aldrov. de Piſc. 140. Raii Ichth. 293. Ejuſd. Synop. Piſc. 89. Charlt. de Piſc. 29. Jonſ. de Piſc. 66. *Hirundo.* Rondel. de Piſc. 1. 284. Geſn. de Aquat. 434. *Pirabebe prima.* Piſon. Ἰκτῖς. Oppian. THE KITE-FISH. *Dale, p.* 376.

It is taken in great Plenty both in the *Ocean* and *Mediterranean*, and the Gall thereof is uſed to abſterge an Albugo, or whatever elſe in the Eye may occaſion a Dimneſs of Sight.

MILZADELLA. A Name for the *Galeopſis*; *lutea*; *amplioribus foliis*; *maculatis*.

MIMOSA.

The Characters are;

The Flowers are monopetalous, Funnel-ſhaped, uſually furniſhed with a Multitude of Stamina, and collected into Heads. The Pod is either ſimple, bivalve, and full of oblong Seeds; or compounded of ſeveral Parts, united by tranſverſe Joints, each of which Parts is pregnant with a roundiſh Seed; the Leaves are endued with a Syſtole and Diaſtole.

Boerhaave mentions ſeven Species of this Plant; which are,

1. Mimoſa; folio lato Sennæ; ſpinoſa.

2. Mimoſa; major; fruteſcens; ſpinoſa; ramulis communi pediculo in orbem coactis. *Plukn. Alm.*

3. Mimoſa; non ſpinoſa; major Zeylanica; Domino Hermanſ. Excellentiſſimi Domini Syen. *Breyn. Cent.*

4. Mimoſa; Zeylanica; ſiliculis articulatis tenerrimis; glabris; ſemine minimo.

5. Mimoſa; Surinamenſis; ſpinoſa; repens tenuifolia; flore cæruleo.

6. Mimoſa; Surinamenſis; tenui Acaciæ folio; ſiliqua nigra; glabra; articulata; ſemine nigro; longo.

7. Mimoſa; ſpuria; de Pernambucq; dicta Mimoſa Italica. *Zanon.* 151. *Herba Mimoſa, non ſpinoſa, λεπτομακροκέφαλος, ſive Spuria de Pernambuca.* M. H. 2. 200. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 56.

MINA, μνᾶ. The Attic *Mina* was either nummary, or ponderal: In the firſt Acceptation, it was the ſixtieth Part of a Talent, and contained a hundred Drachmæ or Denarii, amounting, in our Coin, to three Pounds four Shillings and ſeven Pence. *Mina*, conſidered as a Weight, was alſo divided into an hundred Drachmæ. See DRACHMA and DENARIUS.

Mina was, alſo, a medicinal Weight, conſiſting of ſixteen *Roman* Ounces, as appears by *Dioſcorides* and *Galen*, and *Cleopatra in Coſmeticis*, who tells us, that *Mina*, as a Weight, contained ſixteen Ounces, one hundred twenty-eight Drams, three hundred eighty-four *Scrupula*, or Scruples, ſeven hundred ſixty-eight *Oboli*, one thouſand fifty-two *Lupini*, two thouſand three hundred and four *Siliquæ*, and ſix thouſand one hundred forty-four *Æreoli*. It is evident, that there was an antient *Attic Mina* of ſixteen *Roman* Ounces. All Authors, and particularly the Fragment printed with *Galen*, of the Compoſition of Medicines, agree in this. It is affirmed, in the ſecond Chapter of that Fragment, that the *Attic* and *Egyptian Mina* contain ſixteen Ounces. *Cleopatra, Cap.* 7. ſays a *Mina* weighs ſixteen Ounces, though in another Place of the ſame Author, it is ſaid, that an *Attic Mina* had twelve Ounces and an half; when they ſpeak of Ounces, they mean the *Roman*, which is our *Averdupois* Ounce. *Arbuthnot, of Weights and Meaſures.*

MINARI, *ſeu Pongam.* H. M. A ſiliquous, or Pod-bearing Tree, in the Provinces of *Paracaro* and *Mangatti* in the *Eaſt-Indies*: It has a papilionaceous Flower, and the Pods are long and broad, and lie one upon another, on the flat Side. It is eaſily propagated; for the Branches require only to be laid on the Ground, in order to take Root; it bears Flowers and Fruit from *April* to *January*, and is always green.

The Wood ſerves to burn; a Bath, prepared of the Flowers, diſcuſſes Flatulencies, and mitigates the Pains of the Gout; a Suffumigation of the Flowers removes a Fever; and their Juice, ſeaſonably applied, cures the venomous Bites of Serpents. *Raii H. P.*

MINEA. A very bad Species of Myrrh, mentioned by *Oribaſius, Collect. Med. L.* 12.

MINERA. Properly a metallic Ore; but, by a very bold Figure, it is uſed by ſome Authors, to expreſs the morbific Matter which excites and ſupports a Diſeaſe.

MINERALIA. Mineral Subſtances. Philoſophers divide all compound natural Bodies into Animal, Vegetable, and Mineral. According to this Diviſion, all Subſtances, which are neither Animal, or Vegetable, muſt be Mineral.

MINISTER. An Aſſiſtant to a Surgeon; or a Perſon who takes care of the Sick.

MINIUM. *Pliny* tranſlates the *Greek* κιννάβαρι, by *Minium*. See CINNABARIS, where all the Significations of this Word, among the Antients, are explained. By *Minium*, at preſent, Red-lead is principally underſtood. See SATURNUS. The *Trochiſci de Minio* are deſcribed under the Article CORRODENTIA.

MINORATIO. A ſlight and moderate Evacuation, which only leſſens the Humours.

MINUTA. An Epithet for a very violent Fever, accompanied with a Syncope, which is ſaid to reduce the Patient ſo much, that he cannot ſupport it longer than four Days. *Caſtellus.*

MINYANTHES, according to *Blancard*, is the ſame as MILLEFOLIUM.

MIPPI. A Name for the *Cereus*; *ſcandens*; *minor*; *polygonus*; *articulatus*.

MIRABILIS. Wonderful. An hyperbolic Epithet for many Medicines.

MIRABILIS PERUVIANA. See JALAPA.

MIRACAIBA. The Name of a Sort of Palm, which grows in *Braſil. Raii Hiſt. Plant.*

MIRACH. An *Arabic* Word, importing the ABDOMEN.

MIRITI. A *Braſilian* Species of Palm. *Raii Hiſt. Plant.*

MIRMIDONES, in *Paracelſus*, imports Chimeras, Fancies, or idle Dreams. *Caſtellus.*

MISADIR, or MIXADIR. Sal Ammoniac. *Rulandus.*

MISANTHROPIA, μισανθρωπία, from μῖσος, Hatred, and ἄνθρωπος, a Man. An Averſion to the Converſation of Men. It is a Symptom of Melancholy.

MISCE. Mix. This is generally expreſſed at the End of Preſcriptions, by *M.*

MISERERE MEI. A Name for the Iliac Paſſion.

MISMAR. A Corn on the Toes.

MISOPTOCHOS, from μῖσος, Hatred, and πτωχὸς, a Beggar. An Epithet for the Gout, which ſeldom inhabits with a Beggar; but frequently accompanies the Rich, Idle, and Luxurious.

MISSA. A Name for the Philoſophers Stone.

MISSADAN. Quickſilver. *Rulandus.*

MISCERASSI. Gypſum. *Rulandus.*

MISSIO *Sanguinis*. Letting of Blood.

MISY. See CHALCITIS.

MITELLA, in Surgery, is a Scarf for ſuſpending the Arm; in Botany, the Name of a Plant.

MITELLA.

The Characters are;

The Root is perennial; the Leaves reſemble thoſe of the *Cortuſa*, and the End of the Pedicle expands into a monophyllous, quinquefid, open Calyx. The Flower is roſaceous, pentapetalous, ſpiked, the Petals growing out of the Interſtices of the Segments of the Calyx. The Fruit is roundiſh, acuminated, opens into the Form of a Biſhop's Mitre, and contains a Multitude of Seeds.

Boerhaave mentions four Species of this Plant; which are,

1. Mitella; Americana; florum petalis integris. *T.* 242. *Cortuſa Indica, vel. Hedera terreſtris.* Stap. in Theoph. 366. *Sanicula, montana, Americana, repens.* H. R. Par.

2. Mitella, Americana, florum petalis fimbriatis. *T.* 242. *Sanicula ſeu Cortuſa Americana, altera, flore minuto fimbriato.* H. R. Par.

3. Mitella; Americana; flore ſquallidê purpureo, villoſo. *Cortuſa, Americana, flore ſquallide purpureo, villoſo.* Flor. 287.

4. Mitella; Americana; maxima; tinctoria. See ACHIOTL. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 207.

It has its Name *Mitella*, from the Reſemblance of its ſeminal Veſſel to an epiſcopal Mitre; but I find nothing ſaid of its medicinal Uſe.

MITHRIDATIUM. It is reported, that the famous *Mithridates*, King of *Pontus*, guarded himſelf againſt the Effects of Poiſon, by taking every Morning a certain Antidote. *Serenus Samonicus* informs us, that, when *Pompey* took the Baggage of this Prince, he was much ſurpriſed to find, that his Antidote conſiſted only of twenty Leaves of Rue, a little Salt, two Walnuts, and as many Figs.

The Medicine now called *Mithridate* is much more compounded, and is thus directed.

Take of *Arabian* Myrrh, Saffron, Agaric, Ginger, Cinnamon, Spikenard, Frankincenſe, and Seeds of Treacle, Muſtard, of each ten Drams; of the Seeds of Hartwort, Opobalſamum, or, in its ſtead, expreſſed Oil of Nutmegs, ſweet Ruſh, *Arabian* Stœchas, the true Coſtus, Galbanum, *Cyprus* Turpentine, Long Pepper, Caſtor, Juice of Hypocyſtis, Styrax, Opopanax, and *Indian* Leaf, or, in its ſtead, Mace, of each one Ounce; of Caſſia-bark, Poley-mountain, white Pepper, Scordium, Seeds of wild Carrot, Carpobalſam, or Cubebs, Troches of Cypheos, and Bdellium, of each ſeven Drams; of Spikenard cleanſed, Gum Arabic, *Macedonian* Parſley-ſeed, Opium, the leſſer Cardamoms, Fennel-ſeeds, Gentian-root, red Roſe-flowers, and Dittany of *Crete*, of each five Drams; of Aniſeeds, Aſarum, Acorus, or Calamus Aromaticus, Orrice, the greater Valerian, and Sagapenum, of each three Drams; of Meum-root, Acacia, Scinks, and the Tops of St. John's-wort, of each two Drams and an half; of the beſt Canary, enough to diſſolve the Gums and Juices, which will uſe about twenty-ſix Ounces; of clarified Honey, as much as the Weight of all the Ingredients, except the Wine; and make into an Electuary. *S. A.* It may alſo be prepared with Diacodium inſtead of Honey.

This is reckoned one of the officinal Capitals. *Zwelfer*, in his Notes upon the *Auguſtan* Diſpenſatory, blames ſome of the Ingredients, with his uſual Freedom on ſuch Occaſions, either as uſeleſs, or out of the principal Intention of the Whole; but he ſeems to have taken much more Pains than was needful, in diſtributing the ſeveral Ingredients into Claſſes for powdering, becauſe all, except the Gums, are as well ſo ordered together; and every ordinary Operator knows how to diſſolve the Gums and Juices, that will not powder, in the Wine. This is greatly uſed as a Cordial, an Opiate, and a Sudorific; all which Intentions it is fitted for, from the ſeveral Simples in its Compoſition, of thoſe Virtues. Its Doſe is from one Scruple to two Drams; and in moſt Caſes, both as a Cordial, and an Alexipharmic, is a much better Medicine than the *Venice* Treacle. But this, as all other antient Officinals, has many Ingredients, which might have been as well, or better, left out, becauſe they bear no Affinity to the main Deſign of the Whole. Thus the Agaric is not only uſeleſs, but hurtful, by making the Medicine more nauſeous: The Succus Hypocyſtidis anſwers no End at all; the Caſſia-bark ſhould be rejected, becauſe it renders the Medicine ſlimy; the Poley-mountain, Daucus-ſeeds, Gum Arabic, red Roſes, Dittany of *Crete*, Gentian-root, and Acacia, have neither of them Virtues of any Reſemblance, to what is aimed at by this Compoſition; and, conſequently, are more a Clog than a Help to the Whole. It would, therefore, make a much better Medicine, if the other Ingredients of the right Intention were proportionably increaſed in their Quantities, ſo as to make the Opium, to which particular Regard is to be had, ſtill bear the ſame Proportion in the Whole.

MITRALES VALVULÆ. The Mitral Valves of the Heart. See COR.

MIVA. Marmalade.

MIXAITHRION, or MIXAITHRIA, μιξαίθριον, or μιξαιθρία. *Galen* explains this, Serenity of Weather, with Showers ſometimes interpoſed. It occurs in *Hippocrates, Epidem. L.* 1.

MIXOPYOS, μιξόπυος. Mixed with Pus; an Epithet for Urine in *Hippocrates, Epidem. L.* 1.

MIXTURA SIMPLEX.

Take of the *Spiritus Theriacalis Camphoratus*, (deſcribed by *Bates*) ten Ounces; Spirit of Vitriol, two Ounces; rectified Spirit of Tartar, ſix Ounces. Digeſt in a Glaſs Veſſel, hermetically ſealed, for three Weeks, that they may be exactly united.

It excites Sweat, reſiſts Putrefaction, and is good in malignant Fevers. The Doſe is a Dram, more or leſs. *Pharmacop. Batean.*

MIXTURA TUBULARIS. A Mixture to ſmoke.

Take the outward Hulls of Piſtachio-nuts, two Ounces; Colts-foot, Betony, Roſemary, all dried, of each three Ounces: Cut them ſmall, and add to them the ſmall Raſpings of Guaiacum, three Ounces; white Amber, and Olibanum, groſsly bruiſed, of each one Ounce and an half; Maſtich, one Ounce; diſtil'd Oil of Nutmegs, one Dram. Mix all together.

Or,

Take of Betony, and Colts-foot, each two Ounces; Roſemary-flowers, and Piſtachio-hulls, of each one Ounce; Cardamoms the leſſer, one Ounce and an half. Cut them ſmall, and add Oil of Aniſeed, ſixteen Drops; Oil of Cinnamon, eight Drops: And mix.

Or,

Take Piſtachio-hulls, one Ounce; Colts-foot, two Ounces; Tobacco, half an Ounce; Oil of Aniſeed, eight Drops. Cut ſmall, and mix together, for ſmoking.

Either of theſe may be ſmoked by Perſons ſubject to Catarrhs, and Defluxions of Rheum; which, for want of drawing off by ſuch warm and drying Things, would foul, relax, and ſpoil the Glands, and, at laſt, deſtroy the due Texture of the Lungs themſelves. But theſe are adviſeable to thoſe only, who have contracted ſuch an Habit of Smoking, that they cannot leave it off.

MIXQUITL. A Name of ACACIA. *Raii Hiſt. Plant.*

MNA, μνᾶ. The ſame as MINA.

MNASÆI *Pharmacon*. The Name of an emollient Plaiſter, deſcribed by *Galen*, *L.* 1. *C.* 4. *de Comp. M. P. G.* and of another directed by *Paulus Ægineta*, *L.* 7. *C.* 17.

MNEME. *Caſtellus* informs us, that this is a Name for a Cephalic Balſam, deſcribed by *Junken*; I believe it is the ſame as the *Balſamum Vitæ*, deſcribed by *Schroder*, *L.* 2. *C.* 41.

MNEMECEPHALICUM *Balſamum*. This Balſam is ſaid to have been purchaſed from a certain *Engliſh* Phyſician, by *Charles* Duke of *Burgundy*, at no leſs a Price than ten thouſand Florins;

Florins; and ſome Authors aſſert it to be of ſo uncommon Efficacy, as to preſerve in the Mind the perpetual Remembrance of Things paſt. Whether this be true or falſe, is beſt known to thoſe who have experienced its Virtues. 'Tis, however, prepared in the following Manner.

Take of the Juices of the Leaves of Baum and Baſilicon, and of the Juices of the Flowers of Tamariſk, Lilies, Primroſes, Roſemary, Lavender, Borage, and Broom, each two Ounces; of Lilies, Roſes, and Violets, each one Ounce; of Cubebs, Cardamoms, Grains of Paradiſe, Yellow Sanders, Carpobalſamum, Orris, oriental Saffron, Savory, Piony, and Thyme, each half an Ounce; of liquid Storax, and Storax Calamita, of Opopanax, Bdellium, Galbanum, Gum Hedera, and Ladanum, each ſix Drams; of the Roots of long Birthwort and Piony, and of the Oils of Turpentine, Nard, Coſtus, Juniper, Bays, Maſtich, Been, and Spike, each five Drams.

Reduce to a Powder the Ingredients which ſhould be ſo treated; mix all together, and diſtil from an Alembic, with due Degrees of Fire, till the Water and Oil are ſeparated. The Method of uſing this Balſam is ſaid to be this: The firſt two Months, the Paſſages of the Noſtrils and Ears are duly to be anointed with the Bulk of a Pea of it; the two following Months, every third Day; and for two other Months, twice a Week; then once a Week; then once each Fortnight, till a whole Year is expired; and afterwards, in the ſucceeding Years, once each two Months. *Sennert. Pract. Lib.* 1. *Cap.* 5.

MNIUM. A Sort of Maſs. See the Explication of Botanic Terms under the Article BOTANY.

MOCHLIA, *μοχλία*. This is defin'd, A Reduction of the Bones from an unnatural to a natural Situation.

MOCHLICA. Draſtic, or violent Purges.

MOCHUS. A Name for the *Ervum verum*.

MADAGAM. The Name of a Shrub, which grows in *Malabar*, call'd *Pomifera Indica, flore Rhododendri; fructu pyriformi*.

A Decoction of the Root and Bark is ſaid to remove inveterate Pains of the Head. A Potion is prepar'd of the Leaves, of Efficacy in reſtoring the ſuppreſs'd *Catamenia*.

MODERNI. The Moderns. As the antient and modern Medicinal Writers are frequently mention'd in this Work, I judg'd it neceſſary, in order to explain what I mean by the one and the other, to fix ſome particular Time as a Limit betwixt them. The Revival of Learning in *Europe* was caus'd by the Deſtruction of the *Greek* Empire, at the ſacking of *Conſtantinople* by *Mahomet the Great*; for on that Occaſion many learned *Greeks* retir'd from that City, and brought with them the Sciences into *Italy*. The Day, therefore, on which *Conſtantinople* was taken, may be eſteem'd the Birth-day of Learning, with reſpect to the Weſtern Parts of *Europe*. This was *May* the twenty-ſeventh 1453. All the Medicinal Authors, therefore, who wrote before this *Æra*, I call Antients, and thoſe who ſucceeded them Moderns.

MODIOLUS. The Crown, or Saw of the Trepan. See CAPUT.

MODIUS. A Meaſure of Capacity for things dry, containing ſixteen Sextaries, or Pints.

MODUS ſometimes ſignifies a Meaſure, or Proportion. *Rhodius in Scribon. Larg.*

MOGILALIA, from *μόγις*, importing Difficulty, and *λαλέω*, to ſpeak. A Difficulty of Speech.

MOGORI FLORES. The Name of certain very fragrant Flowers, deſcrib'd by *Breynius*, from which the *Indians* diſtil a very fragrant Water, of the ſame Uſe as Orange-flower-water.

MOLA. This has various Significations; for the *Patella* is ſometimes thus call'd; and the *Dentes molares*, and the Jaws, are by ſome nam'd *Molæ*.

But *Mola* generally ſignifies a fleſhy Maſs, which grows preternaturally in the Womb.

La Motte ſays, that a Mole, and a falſe Conception, ſeem to be the ſame thing, except that, if it is excluded before the ſecond or third Month, it is called a falſe Conception; if after that time, a Mole. And thus it is diſtinguiſhed by *Mauriceau*.

The Signs of a Mole, or falſe Conception, are the ſame as thoſe of a true one; except that in a true Conception the Belly often grows flat, and leſs, till the End of the ſecond Month; on the contrary, a Woman who has a Mole, or falſe Conception, grows big from the very firſt, and her Belly continues to increaſe till the End of the ſecond or third Month, at which time it generally comes away. If it happens to ſtay longer, it frequently proves fatal to the Woman, cauſing violent Floodings, which are not to be remedied without Delivery, before which a Woman is often reduc'd to the utmoſt Extremity; eſpecially if a ſkilful Midwife is not call'd in time.

A Mole is not, like a Child, invelop'd in Membranes; nor has it any Waters, or Secundines, itſelf performing the Office of the Secundines, and being in the ſame manner attach'd to the Uterus, from whence it derives its Nouriſhment by means of its Veſſels: Hence it appears, that, as ſoon as a Mole is excluded, the Flooding ceaſes.

When a falſe Conception, or a Mole, comes away before the End of the third Month, the Woman is frequently deliver'd of it without any Aſſiſtance, but never without Floodings; but it often happens, that a ſkilful Hand is neceſſary to bring it away.

A Mole is to be extracted in this manner. A Finger is to be introduc'd thro' the Vagina into the Os Uteri; and, if the Mole cannot be brought away with one Finger, a ſecond is to be introduc'd; and with theſe the Mole is to be taken hold of, and extracted.

It is to be obſerv'd, that in caſe, when a Mole is brought away, the Flooding continues, it is to be ſuſpected, that either a Part of it, or another entire Mole, is left behind, which is, therefore, to be found, and brought away as the firſt. *La Motte*.

A Mole, ſays *Weipfer*, is a fleſhy Subſtance, of an irregular Form, produced in the *Uterus*, either from a Concretion of the menſtruous Blood, from a Retention of Part of the Secundines, or from an imperfect Conception. Virgins and Widows are ſeldom affected with this Diſorder, but married Women frequently. The Forms and Sizes of Moles are extremely different. Sometimes they have no Connection with the *Uterus*; ſometimes they are attached to it by a Blood-veſſel, or fleſhy Fibre; and ſometimes they are ſtrongly and intimately conjoined. They are generally diſcharg'd alone, but ſometimes excluded with the Fœtus. If they are generated alone, they are uſually brought forth about the ſecond or third Month, and are preceded by the ſame Pains, which attend a real Delivery; ſometimes theſe Pains are more violent, the Symptoms more ſevere, and the Hæmorrhage is often ſo exceſſive, as to endanger the Life of the Mother. Sometimes Moles continue many Months in the *Uterus*, and acquire the Size of a mature Fœtus.

Theſe falſe Conceptions are generally accompanied, for the firſt four Months, with the ſame Symptoms which attend a natural Pregnancy; but afterwards they afford Signs, by which they may eaſily be diſtinguiſhed. For, 1. a Mole excites no Motions in the Womb, like a live Child, after the fourth or fifth Month of Pregnancy. 2. A Mole diſtends the Belly equally, but a Child makes it moſt prominent toward the Navel, or one Side. 3. A Mole changes its Situation in the Belly, according to the Poſture of the Mother; a Circumſtance never obſerved in a living Fœtus. 4. In a falſe Conception, little or no Milk is collected in the Breaſts; but the Breaſts, in a natural Pregnancy, are more and more diſtended with Milk. 5. More ſevere Symptoms attend a falſe Conception; the Complexion is diſagreeably altered, the Appetite is vitiated, the whole Habit is impaired, and the Region of the Loins and Pubes is affected with excruciating Pains. Sometimes a Dropſy, when it reaches the Abdomen, alſo, occaſions theſe Symptoms.

When a Mole, and not a Child, certainly appears to be contained in the *Uterus*, its Expulſion ſhould be attempted by proper Medicines; and, if theſe prove ineffectual, an expert Operator, ſhould endeavour to extract it, by judiciouſly introducing the Hand into the Womb. If the Mouth of the Womb be too ſtrongly contracted to admit the Hand of the Operator, it will be neceſſary to excite the Mother's Throes by brisk Cathartics, and ſtrong Clyſters, while the Mouth of the Womb, and Parts adjacent, are, in the mean time, gradually relaxed and opened by the Application of emollient Fomentations. One or two Fingers may now be gently inſinuated, and by degrees the whole Hand, to lay hold of the Mole. If the Mole, as is often the Cauſe, adheres firmly to the *Uterus*, it ſhould then be gently ſeparated by the Fingers, before its Extraction, as we are told by *Hildanus*, who performed this Operation. But, if the Fingers are unable to make this Separation, it will be neceſſary to uſe a Pair of long and obtuſe-pointed cutting *Forceps*, like that repreſented in *Tab.* LV. *Fig.* 1. Laſtly, if the Mole be too large to be extracted entire, it may be carefully ſeparated, and brought out in Pieces, either with the Fingers, a falciform Knife, or a Hook, repreſented in *Tab.* LIV. *Fig.* 17, 18. Thoſe who are deſirous of further Information, particularly with regard to the Extraction of the Mole, may conſult the Obſervations of *Hildanus*, *Roonhuſch*, and *Mauriceau*. To conclude, when a Mole occaſions no bad Symptoms or Uneaſineſs in the Mother, and its Extraction appears difficult, no Violence ought to be uſed, ſince we have many Inſtances of their being retained with little Detriment, to the Patient, during Life.

MOLARIS LAPIS. The *Mill-ſtone*. It is thus diſtinguiſh'd.

Lapis molaris. Offic. Aldrov. Muſ. Metall. 721. Cup. Hort. Cath. Supp. 2. 53. *Lapides Molares*, Charlt. Foſſ. 17. Boet. 524. *Molæ*. Worm. 41. *Molares*. Mer. Pin. 212. THE MILL-STONE.

It is digged out of the Quarries in *Derbyſhire*.

I find this, says *Dale*, inſerted in the Catalogue of officinal Simples, at the End of *Shipton*'s Diſpenſatory; but, for what Reaſon, I cannot gueſs, ſince the only Uſe we know of it in *England* is to grind Corn. But the Grit of the Mill-ſtone, may probably have the ſame Virtues as that of the Whetſtone. See Cos.

MOLDAVICA. *Turkey* Balm, or Baum.

The Characters are;

The Leaves are long, narrow, and crenated; the Galea, or Creſt, is arched, bifid, and reflexed upwards; the Beard is divided into two Parts, which are united by marginated Fauces; the Calyx is tubulous, cut into two unequal Parts, and cloſes when mature; the Seeds are of an oblong Figure.

Boerhaave mentions ſix Species of this Plant; which are,

1. Moldavica; Betonicæ folio; flore cœruleo. *T.* 184. *Meliſſa, peregrina, folio oblongo.* C. B. P. 129. M. H. 3. 408. *Meliſſa, Turcica multis dicta.* I. B. 3. 2. 234. Tab. Ic. 351.

2. Moldavica; Betonicæ folio; flore albo. *T.* 184. *Meliſſa Moldavica, flore albo. Citrago Turcica, flore albo.* H. Eyſt. Æſt. o. 7. F. 2. Fig. 2.

3. Moldavica; Americana; trifolia; odore gravi. *T.* 184. *Cedronella, Canarienſis, viſcoſa, foliis plerumque ex eodem pediculo ternis.* H. A. 2. 81. *Dracocephalo affinis, Americana, trifolia, odore Terebinthinæ.* Volk.

4. Moldavica; Orientalis; Betonicæ folio; flore magno, violacea. *T. Cor.* 11.

5. Moldavia; Orientalis; Betonicæ folio; flore magno, albido. *T. Cor.* 11.

6. Moldavica; Orientalis; ſalicis folio; flore parvo, cœruleo. *T. Cor.* 11. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 168.

It is called *Moldavica* from *Moldavia*, the Name of the Country whence it was brought, and where it grows without Culture.

This Plant, ſays *Boerhaave*, was brought to me from *Moldavia* in *Turkey*, by a Botaniſt, who gave it the Name of *Moldavian Turkey Baum*; but, for avoiding a Synonymy of Names, I think we had better call it *Moldavica*. There is nothing ſaid of its Virtues; the firſt and ſecond Species have exactly the Smell of Baum, and may be uſed inſtead of it; they have a very ſtrong balſamic Smell. The third is like *Peruvian* Balſam, and is perhaps endu'd with the ſame Virtues. *Hiſt. Plant. adſcript. Boerhaav.*

MOLENDESIS, in the *Theatrum Chymicum*, *Vol.* 5. is a Defect of Heat.

MOLGA. The Salamander. *Rulandus.*

MOLIBATO. *Rulandus* explains this by *Calchum*, *Æs Flumbi.*

MOLLE. The *Indian* Molle, or Maſtich-tree.

The Characters are;

The Leaves are pinnated, and terminate in an odd Lobe; the Flower is roſaceous, and the Fruit like a Grain of Pepper.

Boerhaave mentions but one Sort of this Plant; which is,

Molle. *Cluſ. in Manard.* 312. *Lentiſcus, Peruana.* C. B. P. 399. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 258.

The Tree, being wounded, yields a very fragrant Reſin, like that of the *Lentiſcus*. *J. Bauhine* deſcribes this Reſin, or Gum; and ſays, that it much reſembles what is ſold in the Shops by the Name of *Gum Elemi*, only it appears a little whiter. This Tree grows plentifully in the Valleys and Countries of *Peru*.

The Decoction of the Bark makes a Fomentation of extraordinary Efficacy in Pains of the Legs, and Inflations. Of the ſmall Branches are made very ſerviceable Toothpicks. Of the Fruit boiled in Water, according to the Meaſure of Decoction, they prepare either a Wine, or a very good ſort of Drink, or Vinegar, or Honey; the Decoction of the Leaves gives Relief under Pains proceeding from a cold Cauſe. The Gum diſſolved in Milk is ſaid to abſterge Things in the Eye cauſing Dimneſs of Sight. *C. Romanus* aſſured *J. Bauhine*, from his own Experience, that a Dram and an half of it was an excellent Purge. *Monardes* writes, that the Powder of the Bark cleanſes and heals Wounds, being ſprinkled thereon; the ſame faſtens looſe Teeth, and reſtores the Gums, when fallen away, or abſceding from them. The Leaves, bruiſed, emit a moſt excellent and remarkable Smell; Cloths dipped in their Decoction, and apply'd to Wounds hot, or the Powder of the Bark ſprinkled thereon, haſtens the Cure by preventing the Flux of the Humours to the Part. The ripe Grains have on their Superficies a very ſmall Quantity of a pleaſant and very palatable Pulp; the reſt is extremely bitter. They make a Drink of them, by gently rubbing them between their Hands in warm Water, till all the Sweetneſs is rubbed out, carefully avoiding the Bitter, which would ſpoil the Drink. They ſtrain this Water, and keep it ſome Days, till the Fæces ſubſide. This Drink is clear and limpid, very grateful, and no leſs wholſome, eſpecially for thoſe who labour under Diſorders of the Kidneys or Bladder; and the more, if it be mixed with the Drink prepared of Mayz. The ſame Water, being more fully boiled, becomes a very good Honey; and, being expoſed to the Sun, with an Addition of I know not what Ingredients, is converted into very good Vinegar. It is uſual with *Empirics* to exhibit in this Water the Buds of the Tree, after they have been expoſed to the Night-dew, under the Paroxyſm of a Fever, and with good Succeſs. *Raii H. P.*

MOLLIFICATIO. A barbarous Term for a Palſy of the Muſcles of any particular Part, as the Anus.

MOLLUCCA. A Crab which has juſt caſt its old Shell, and acquired a new one, which is ſoft.

MOLLUGO.

The Characters are;

The Leaves are ſoft, diſpos'd five or more at a Place, neither rough, nor hairy. The Fruit conſiſts of a Pair of dry Seeds, which are lunated, or of the Figure of a Creſcent, or Half-moon.

Boerhaave mentions three Species of this Plant; which are,

1. Mollugo; montana; latifolia; ramoſa. *C. B. P.* 334. *Boerh. Ind. A.* 148. *Mollugo montana.* Offic. *Rubia ſylvatica lævis.* J. B. 3. 716. Raii Hiſt. 1. 481. *Gallium, ſive Molluga montana.* Ger. 967. Emac. 1127. *Gallium flore albo majus, ſive Mollugo montana.* Park. Theat. 564. *Gallium montanum latifolium ramoſum.* Tourn. Inſt. 115. MOUNTAIN WILD MADDER.

It grows in mountainous Places, and flowers in *July*. The Herb is uſed, which agrees in Virtues with the two other Species which follow. *Buxbaume* obſerves, that this Plant is ſold in our Shops under the Name of the *Matriſylva*, or *Aſperula. Dale.*

2. Mollugo; hexaphyllos; latifolia; caule firmio ri,rubello, tenui; flore albo. *Rubra Pyrenaica, folio Molluginis.* Tourn. Flor. 2. 58.

3. Mollugo; Americana; folio Parietariæ. *Vaill. Anonymos Americana, foliis Parietariæ ſcabris, floribus albis, ad foliorum ortum vix conſpicuis.* Plukn. Phyt. 136. 4. *Boerh. Ind. alt. Vol.* 1. *p.* 148.

It has its Name from *mollis*, ſoft, becauſe of the Softneſs of its Leaves. The whole Plant has the outward Appearance of the *Rubia*, or Madder, but is ſoft on the Inſide: It is ſaid to have an aperitive Virtue. *Boerhaave.*

MOLLUGO is, alſo, a Name for the *Cruciata; glabra; folio nervoſo, rigido; Bacca gemella, ſicca, biſpida; flore lacteo.*

Beſides the foregoing Species of Mollugo, *Dale* mentions the following, which he takes to be the *Alyſſum Plinii.* See ALYSSUM. It is thus diſtinguiſhed:

Mollugo. Offic. *Mollugo vulgatior.* Park. Theat. 565. Raii Hiſt. 1. 481. Synop. 3. 223. *Mollugo montana anguſtifolia, vel Gallium album latifolium.* C. B. P. 334. *Rubia anguſtifolia aſpera.* J. B. 3. 715. *Gallium album vulgare.* Tourn. Inſt. 115. *Alyſſum Plinii, Lib.* 24. *Cap.* 11. BASTARD MADDER.

It grows in Hedges and Buſhes, and flowers in *June*. The Root is uſed, and has the ſame Virtues as that of the common Madder, but is milder. *Dale.*

MOLOCH, in Chymiſtry, is a Leaden Pot, through which Mercury is made to paſs in the Fire. *Caſtellus* from *Libavius.*

MOLOCHINE, μολοχίνη. An Epithet for a green Plaiſter, deſcribed by *Galen*, *Lib.* 2. *Cap.* 2.

MOLON. A Name for the FILIPENDULA.

MOLOPS, μόλωψ. A Sugillation, or a red or purple Spot, which appears in ſome malignant Fevers, on the Surface of the Skin.

MOLUCCA. *Molucca* Balm, or Baum.

The Characters are;

The Calyx is expanded, large, Bell-ſhaped, as it were, membranaceous, and open. The Galea is hollow, the Beard tripartite, the middle Segment commonly bifid. The Flower is very ſmall, and concealed in the Centre of the Calyx. The Seeds are angulous, and hardly covered.

Boerhaave mentions two Species of this Plant; which are,

1. Molucca. *J. B.* 3. 2. 234. *Meliſſa, Moluccana, odorata.* C. B. P. 229.

2. Molucca; ſpinoſa. *Dod. p.* 92. *Meliſſa, Moluccana, fetida.* C. B. P. 229. *Molucca aſperior, Syriaca, & Maſeluc Turcarum.* Lob. M. H. 3. 380. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 173.

This Plant takes its Name from the *Molucca* Iſlands, where it was diſcovered. It is a Vulnerary, and very good in a Phthiſis, being uſed as Tea. If the Diſeaſe be attended with Spitting of Blood, the expreſſed Juice is of Service, on account of its aſtringent Quality, which is adapted to an Hæmoptoe. No Plant is a better Lithontriptic, the Leaves being infuſed in Wine, or Spirit of Wine. It has the Virtues of Baum, but ſmells ſomewhat ſtronger. Here it may be proper to obſerve, that the perfectly cerulean Colour of all Plants proceeds from the Fatneſs of the Soil in which they grow; this is univerſally true of them all, and particularly in the Inſtance before us. *Hiſt. Plant. adſcript. Boerhaav.*

MOLUCCANA. See MOLUCCA.

MOLY.

The Characters are;

It reſembles Garlick in every reſpect, except that it has a ſweet Smell, or, at leaſt, one not very diſagreeable.

Boerhaave mentions ſeven Species of this Plant; which are,

1. Moly; latifolium; Liliſlorum. *C. B. P.* 75. *Moly Theophraſti.* Cluſ. H. 191. See ALLIUM.

2. Moly; Indicum. *Cluſ. Hiſt.* 192. *Caucaſon, Moly Indicum vocatum.* Lob. Ic. 162.

3. Moly; anguſtifolium; umbellatum. *C. B. P.* 75. *Moly Dioſcoridis.* Cluſ. H. 192.

4. Moly; moſchatum; capillaceo folio. *C. B. P.* 76. *Prodr.* 48.

5. Moly; Virginianum; moſchatum.

6. Moly, quod Gethioides; ſylveſtre. *Col.* 2. 7.

7. Moly; parvum; caule triangulo. *C. B. P.* 75. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 146.

All the antient Interpreters of *Homer* expound his *Moly*, by πήγανον ἄγριον, wild Rue; becauſe the *Cappadocians* and *Galatians* gave that Herb, which is a Native of their Country, the Name of *Moly*. This Plant, however, is quite different from *Homer's Moly*, which, *Theophraſtus* tells us, was ſtill to be found in his Time in *Arcadia*, with the Leaf of the Sea-onion, and the Root of the Bulbus. With reſpect to this the following Paſſage in *Pliny*, *Lib.* 25. *Cap.* 24. ought to be conſidered: "There is an Herb, much celebrated by *Homer*, which the Gods "as he ſuppoſes, call *Moly*. The Diſcovery of it he aſcribes to *Mer*- "*cury*, who propos'd it as a Preſervative againſt the moſt power- "ful Inchantments. The true *Moly* of *Homer* grows, they ſay, "at preſent, about *Pheneum*, and in *Cyllene*, in *Arcadia*. It "has a round and black Root, of the Bigneſs of an Onion, "and the Leaf of the Sea-onion; but it is difficult to be dig'd "up." Here the Author confounds together different Relations; the former Part he takes from *Theophraſtus*, who ſays, that *Homer's Moly* grew in *Arcadia*, in the ſame Form as he there deſcribes; but then he adds, ἃ μὲν ὀρύττειν γε εἶ) χαλεπὸν, ὡς Ὁμηρός φησι· "it was not difficult to be dug up, as *Homer* ſays:" The contrary of this is taken by *Pliny* out of *Homer*, and ſubjoined to the Deſcription of *Theophraſtus*, with a View, probably, that it might appear to be the ſame *Moly*, which, he tells us, ſome Phyſicians, well vers'd in Herbs, had perſuaded themſelves they had found growing in *Italy*; in Confirmation of which, "he had "ſent him, out of *Campania*, a Root thirty Feet in Length, "which, with much Difficulty, and the Labour of ſome Days, "was dug up from among the Stones and Rocks; and yet, after "all, was not entire, but broken off." We may judge, by this ſingle Inſtance, what a skilful Botaniſt our Author was, who could imagine, that the *Moly* deſcribed by *Theophraſtus*, with the Leaf of the Sea-onion, and a round black Root, like that of the Onion, was the ſame with the Root ſent him from *Campania*, thirty Feet long, and yet not entire, the End of it being broken off, and left among the Stones, becauſe it could not be taken up. How did he know, that ſo long a Root, whoſe whole Length he never yet ſaw, was a Species of Bulbus? Nay, its Length rather proved it to be otherwiſe than bulbous. This Root of *Pliny*, then, agrees with the *Moly* of *Homer*, in nothing but the Difficulty of its being dug up. But this is denied by *Theophraſtus* of the *Moly* of *Arcadia*, which, in other reſpects, agrees with that in *Homer*. *Pliny*, then, in order to make his *Campanian* Root agree with the *Moly* of *Theophraſtus*, confirmed the Difficulty of its Digging, contrary to the Senſe of his own Author, by the Credit of another Author. To this he adds, with relation to the ſame *Moly*, "The *Greek* Au- "thors have deſcribed it with a yellow Flower, though *Homer* "ſays it was white." I know not what *Greek* Authors he means; there is nothing like it in any of them now extant; nor do I ſuppoſe there was any ſuch Difference in their Accounts, for ſome have even called wild Rue, μῶλυ, *Moly*, becauſe it, in ſome meaſure, reſembles the true *Moly*, in its black Root, and Milk-white Flower: So very improbable is it, that any Writer ſhould ſay, that it had a yellow Flower. *Pliny* ſeems to have imagined thus from an imperfect Tranſcription of the Paſſage of his Author, into his *Adverſaria*, where ſomething was omitted; he had inſerted what follows, μῶλυ τὰ μὲν φύλλα ἔχει ἀγχούσῃ ὅμοια, ἄνθη λευκοίοις ὅμοια· "*Moly* has Leaves like thoſe of the Agro- "ſtis, and Flowers like thoſe of the Leucoia:" But omitted what follows, that is, γαλακτόχροα, "Milk-white." Now, becauſe the *Greeks* often call the *Viola lutea* abſolutely λευκόϊον, *Leucoium*, he underſtood ἄνθη λευκοίοις ὅμοια, to be *yellow Flowers*. An Author in the *Priapeia* ſeems to have followed *Pliny*, when he ſays of the *Moly*,

—— *de qua Flos aureus exit.*

"Whence proceeds a Gold-coloured Flower." Obſerve how juſtly he has expreſſed that in *Homer*, of the *Moly*;

—— γάλακτι δ' ἄνθος ἐϊκελον ἄνθῳ.

"A Flower like Milk" (in Whiteneſs). I have often diverted myſelf with the Debates of two very learned Botaniſts, who have hotly diſputed, to no Purpoſe, whether the μόλυζα, *Molyza*, of *Hippocrates* were the μῶλυ, *Moly*. The μόλυζα, or, as ſome wrote it, μάλυζα, in *Hippocrates*, is an Head of Garlick, and has no relation to the *Moly*. Thus we read, *Lib.* 1. *de Mulierb.* μόλυσαν κεφαλὴν ἀποξέσας· "having peeled an Head of Garlick." *Galen* obſerved both Readings in the following Paſſage in his *Exegeſis*, which is to be read thus, μόλυζα κέφαλὴν ἁπλῆν τὴν κεφαλὴν ἔχον, ἣ μὴ διαλελυμένην εἰς ἄγλωβας, τινὲς δὲ μάλυζαν· "Garlick, which has a ſingle Head, not divided into two Cloves; "ſome call it μάλυζα (*Malyza*)." The common Editions read corruptly, τινὲς δὲ μῶλυ. *Heſychius* ſays, μόλυζα μονοκέφαλον κρόμμυον, τινὲς δὲ μάλυζαν· "*Molyza* (μόλυζα) is ſingle-headed "Garlick, by ſome called *Malyza*" (μάλυζα). And *Pſellus*, of antient medicinal Terms, ſays, μάλυζα αἱ τῶν κρομμύων κεφαλαί· "Malyzæ are Heads of Garlick." In *Erotian*, μόλυξ (*Molyx*), is written for μάλυζα (*Malyza*).

From the Premiſes it appears, that there are two Kinds of *Moly*, and thoſe very different; the *Cappadocian* or *Galatian*, and the *Homerican* or *Arcadian*; and here lies the Homonymy. The *Cappadocian* was the wild Rue, which was called *Moly* by the *Cappadocians* themſelves; for *Dioſcorides* tells us, *L.* 3. *C.* 53. that the Plant, which ſome call *wild Rue*, is the ſame, which in *Cappadocia* and *Galatia* they call *Moly*. The ſame Plant, he ſays, was called by the *Syrians*, *Beſaſa*, by others *Harmala*, from whence comes the *Arabic Harmol*, though applied by an *Arabian* Botaniſt to another *Moly*. But the *Cappadocian Moly* is expreſſed in *Arabic* by *Satab-bari*, that is, wild Rue. However, wild Rue, properly ſo called, is different from this *Moly*; tho' ſome have, indeed, beſtowed on this latter the Appellation of *wild Rue*. *Avicenna*, therefore, *Lib.* 4. *Fen.* 6. *Tract.* 3. *C.* 33. rightly diſtinguiſhes between *Harmel*, and wild Rue; for *Harmel* is not wild Rue, but only a Species of it. The Tranſlators, therefore, would have done better in rendering the *Arabic* Word *Harmel* into *Latin* by *Cappadocicum Moly*, the *Cappadocian Moly*, than by *Ruta ſylveſtris*, *wild Rue*. *Salmaſius*, *de Homonym. Hyl. Iatr.*

We learn from *Photius*, that the *Moly* was fabled to have ſprung up from the Blood of a Giant, who was killed by *Circe*.

MOLYBDÆNA, in Pharmacy, is a metallic Recrement thus diſtinguiſhed;

Molybdæna, & Plumbago factitia. Offic. Schrod. 460. *Molybdæna, ſive Plumbago.* Matth. 1349. *Plumbago.* Worm. 136. Charlt. Foſſ. 56. PLUMBAGE.

The beſt Molybdæna is like Litharge, yellow, ſomewhat ſhining, and of a pale-red under Levigation; but, boiled in Oil, takes an Aſh-colour; what is Sky-colour'd, or of a Leaden-colour, is not good. It is generated in the Furnaces adapted for the refining of Gold and Silver. There is, alſo, a foſſile Sort, which is found about *Sebaſtia* and *Corycum*. Generally ſpeaking, the moſt valuable is what has no Reſemblance of Scoriæ, nor is ſtony, but yellow and ſhining.

It has the Virtues of Litharge, and the Scoriæ of Lead; and is burnt and waſhed after the ſame manner. But the *Molybdæna* is a more proper Ingredient in lenient and ſticking Plaiſters, called *Lipara*, and with very good Effect; for it incarns and cicatrizes; but it is by no means adapted to enter the Compoſition of agglutinant and deterſive Medicines. *Dioſcorides, Lib.* 5. *Cap.* 100.

Plumbage is that Recrement, which, in the Purification of Gold and Silver with Lead, being concreted and calcin'd, adheres to the Furnace. Its ſuperior Part reſembles Litharge, its inferior Aſhes, and its Middle is a Subſtance compounded of both. It is of the ſame Virtues with Litharge, and ſomewhat cold, though, at the ſame time, not poſſeſs'd of an abſtergent Quality. *Dale.*

MOLYBDÆNA, alſo, ſometimes ſignifies black Lead, according to *Lemery*.

MOLYBDÆNA, in Botany, is a Name for the *Plumbago*; *quorundam.*

MOLYBDOEIDES, μολυβδοειδὴς. This is deſcribed as a Stone of the Colour of Lead, to which the Virtues of the *Scoriæ* of Lead are aſcrib'd. *Caſtellus* conjectures, that it may be the ſame as Lead-ore.

MOLYBDOS, μολυβδός. Lead. See SATURNUS.

MOLYZA, μόλυζα. An Head of Garlick, or Garlick having an Head not diviſible into Cloves. *Galen. Exegeſis.*

MOMISCUS, μόμισκος. The Part of any of the *Dentes Molares* next the Gum. The *Dentes Molares* themſelves are, alſo, called *Momiſci.*

MOMORDICA.

The Characters are;

The Flower conſiſts of one Leaf, is of the expanded, Bell-ſhap'd kind, but ſo deeply cut, as to appear compoſed of five diſtinct Leaves: Theſe Flowers are ſome male, (or barren) others female, growing upon the Tops of the Embryo, which is afterwards changed into a Fruit; which is fleſhy, and ſometimes more or leſs tapering and hollow; and, when ripe, uſually burſts, and caſts forth the Seeds with an Elaſticity; which Seeds are wrapped up in a membranous Covering, and are, for the moſt part, indented on their Edges.

Boerhaave mentions five Species of this Plant; which are,

1. Momordica; vulgaris. See BALSAMINA.

2. Momordica;

2. Momordica; fructu luteo; rubescente. *H. Eyst. Aut.* o. 1. *f.* 4. *Fig.* 3.

3. Momordica; Zeylanica; pampineâ fronde; fructu breviori, *T.* 103. *Pavel.* H. Mal. 8. 18.

4. Momordica; Zeylanica; pampineâ fronde; fructu longiori. *T.* 103. *Pandi Pavel.* H. Mal. 8. 17.

5. Momordica; Americana; fructu reticulato; sicco. *Commel. Rar. Exot.* 22. *Boerh. Ind. alt. Plant.*

MONÆ, in *Paracelsus*, signifies the *Nates*.

MONAS, *μονάς*. Unity. In Chymistry, it seems to import the Union of the Virtues of Simples, and is much the same as *Clyssus*, or *Elixir*.

MONBIN. *The Hog Plum-tree.*

The Characters are;

It hath a Rose-shaped Flower, consisting of several Leaves, which are ranged in a circular Order; from whose Cup arises the Pointal, which afterward becomes an oval, fleshy, soft Fruit, inclosing an hard Stone, in which are contained four Kernels, or Seeds.

Miller mentions but one Sort of this Tree; which is,

Monbin, Arbor, foliis Fraxini, fructu luteo racemoso. *Plum. Nov. Gen.*

This Tree is a Native of the warmest Parts of *America*, where it grows in the *Savannas*, and low marshy Places, in great Plenty. It rises to be forty or fifty Feet high, and divides into a great many crooked Branches, which are beset with winged Leaves, somewhat like those of the Ash-tree. The Flowers, which appear in the Spring, are produced in large pyramidal Bunches, at the Extremity of the Branches, which are of a white Colour, and are very sweet. These are succeeded by several yellow, oval-shaped Plums, growing in Clusters. The Wood of this Tree, being soft, is used, instead of Cork, to stop Bottles in *America*. *Miller's Dict.*

MONEDULA. Offic. Jonst. de Avib. 26. Bellon. des Oyse. 286. Charlt. Exer. 75. Schw. A. 305. Raii Ornith. 125. Gesn de Avib. 468. *Monedula sive Lupus.* Aldrov. Ornith. 1. 770. Will. Ornith. 25. Raii Synop. A. 40. *Graculus vel Monedula.* Mer. Pin. 172. THE JACKDAW.

The Flesh of this Bird is used, and, when applied externally, dissolves Tumors, and proves beneficial in scrophulous Swellings. *Dale.*

MONEMBASIATICUM. This Word occurs in *N. Myrepsus, Sect.* 1. *C.* 467. It is a sort of Wine, which *Fuchsius* conjectures to be the same as *Malvaticum*, Malmsey.

MONEMERON. The Name of a Collyrium in *Marcellus Empiricus, C.* 8. and of others in *Galen, L.* 4. *C.* 2. *de Comp. M. S. L.* and *Aetius, Tetrab.* 2. *S.* 3. *C.* 101. so called, because it is said to perform a Cure in one Day.

MONERES, *μονήρης*, is properly an Epithet for a Boat with a single Oar. But it is figuratively applied to a melancholy Person, who has a strong Love for Solitude.

MONOCEROS. See UNICORNU.

MONOCOLON, in *Paracelsus*, is the *Intestinum Rectum.*

MONOEMEROS. The same as MONEMEROS.

MONOMACHON. The Intestine, called otherwise CÆCUM.

MONOMELUM. The Name of a *Collyrium*, described by *Aetius, Tetrab.* 2. *Serm.* 3. *C.* 101.

MONONYCHA. The same as MENYCHA; which see.

MONOPAGIA, or MONOPEGIA. A Pain in the Head, affecting only one Point. *Castellus*, from *Velescus de Taranta*, explains it an *Hemicrania.*

MONOPHYLLON. A Name for the *Smilax*; *unifolia*; *humillima.*

MONORCHIS, *μόνορχις*. A Person who has only one Testicle, is thus called.

MONOSITIA, *μονοσιτία*, from *μόνος*, single, and *σῖτος*, Meat. The eating of one Meal a Day only.

MONOSPERMALTHÆA. The Name of a Genus of Plants, established by Mr. *Danty d'Isnard*, in the Memoires of the Academy of Sciences for 1721. Of this he mentions two Species; which are,

1. Monospermalthæa arborescens; villosa, folio majore. *Betonica arborescens, foliis amplioribus, ex Insula Barbadensi, flore luteo minimo. Raii Hist.* 3. 297.

2. Monospermalthæa arborescens, villosa; folio minore. *Betonica arborescens, Madraspatana, villosis foliis, profunde venosis. Pluk. Phytog. Tab.* 150. *Fig.* 5. *& Alm.* 67. Adde *floribus luteis, summo caule in breviorem spicam glomeratis. Pluk. Mant.* 31. *Raii Hist.* 3. 297. *Num.* 6.

MONS VENERIS. The superior external Part of the Female *Pudendum*, cover'd with Hair.

MONTIA.

The Characters are;

It hath a Funnel-shaped Flower, consisting of one Leaf, whose under Part is tubulous, but the upper Part is expanded, and cut into five Parts; the Fruit, which succeeds the Flower, is a bicapsular, flat Seed-vessel, which is surrounded on the Borders with a Plume, which expands like Rays.

Miller mentions but one Sort of this Plant; which is,

Montia arborescens, abutili folio serrato, fructu racemoso. *Houst.*

This Plant was discovered by the late Dr. *William Houstoun*, near old *La Vera Cruz*, in *New Spain*, who gave this Name to it, in Honour to Dr. *Monti*, Professor of Botany at *Bononia.*

It grows about sixteen or eighteen Feet high, and hath a woody Stem, which divides into several Branches; these are beset with Leaves, somewhat like those of the yellow Mallow, which are five Inches long, and four broad, ending in a Point; these are sawed round the Edges, and have a Down on their under Sides. The Flowers are of a greenish-yellow Colour, and are produced in Bunches. The Season of its flowering is in *January*, in the native Place of its Growth, and the Seeds are ripe in *March. Miller's Dictionary.*

MONTIFRINGILLA. A Bird, called the Mountain Chaffinch.

MONYCHA *Animalia*, from *μόνος*, single, and *ὄνυξ*, an Hoof. Animals, whose Feet are solid, and undivided.

MORA, in *Paracelsus*, is mentioned as a Symptom of the Venereal Disease. It seems to be a Callosity or Hardness of the Skin.

MORBILLI. The Measles. See VARIOLÆ. This Disease, says *Sydenham*, arises in *January*, and increases daily till the Approach of the vernal Equinox; after which Time it abates in the same gradual manner, and disappears in *July*. It principally attacks Children, especially those under the same Roof with one affected with it. It is preceded with a Chilness and Shivering, and an Inequality of Heat and Cold, which succeed alternately, during the first Day; the second Day, these terminate in a perfect Fever, attended with vehement Sickness; Thirst; Loss of Appetite; the Tongue white, but not dry; a slight Cough; Heaviness of the Head and Eyes, with continual Drowsiness; an Humour, also, generally distils from the Nose and Eyes, and this Effusion of Tears is a certain Sign of the Approach of the Measles. To which must be added, as no less certain, That though this Disease principally shews itself in the Face by a kind of Eruptions, yet, instead of these, large red Spots, not rising above the Surface of the Skin, rather appear in the Breast; the Patient sneezes, as if he had taken Cold; the Eye-lids swell a little before the Eruption; he vomits; but is more frequently affected with a Looseness, attended with greenish Stools; but this happens generally in Children, during Dentition, who are, also, more fretful in this Distemper than ordinary. The Symptoms usually grow more violent till the fourth Day, at which time, generally, little red Spots, like Flea-bites, begin to appear in the Forehead, and other Parts of the Face, which, being increased in Number and Bigness, run together, and form large red Spots in the Face, of different Figures; but sometimes the Eruption is deferred till the fifth Day. These red Spots are composed of small, red Pimples, seated near each other, and rising a little higher than the Surface of the Skin, so that they may be felt upon pressing them lightly with the Finger, though they can scarcely be seen. From the Face, where only they first appear, these Spots extend, by degrees, to the Breast, Belly, Thighs, and Legs; but they affect the Trunk and Limbs with Redness only, without perceptibly rising above the Skin.

The Symptoms do not abate here, upon the Eruption, as the Small-pox; yet I never found the Vomiting continue afterwards, but the Cough and Fever grow more violent; the Difficulty of Breathing, the Weakness of, and Defluxion upon, the Eyes, constant Drowsiness, and Loss of Appetite, persisting in their former State. On the sixth Day, or thereabouts, the Eruptions begin to dry, and the Cuticle separates, whence the Forehead and Face grow rough: But, in the other Parts of the Body, the Spots appear very large and red. About the eighth Day, those on the Face vanish, and very few appear in the rest of the Body; but on the ninth Day they disappear entirely; and the Face, Limbs, and sometimes the whole Body, seem as if they were sprinkled over with Bran, the Particles of the divided Skin being raised a little, and scarce cohering, so that, as the Disease is going off, they fall from all Parts in Scales.

The Measles, therefore, generally disappear on the eighth Day, when the Vulgar, deceived by the Term of the Duration of the Small-pox, affirm, that the Eruptions are struck in; though, in reality, they have run through the Course assigned them by Nature; and they suspect, that the Symptoms, which succeed upon their going off, are occasioned by their striking in too soon. For it is observable, that the Fever, and Difficulty of Breathing, increase at this time, and the Cough becomes more troublesome, so that the Patient can get no Rest in the Day, and very little in the Night. Children are subject to these Evils, which come on at the Declension of the Disease, especially if an heating Regimen, or hot Medicines, have been used to promote the Eruption; whence arises a Peripneumony, which destroys greater Numbers than the Small-pox, or any of its concomitant Symptoms; yet, notwithstanding, if this Disease be skilfully treated, it is not at all dangerous. These bad Symptoms are, likewise, often followed by a Looseness, which either immediately succeeds

ceeds the Diſeaſe, or continues ſeveral Weeks after the Diſeaſe, and all its Symptoms, are gone off, with great Danger to the Patient, on account of the continual Waſte of Spirits hence ariſing. Sometimes, alſo, after uſing an exceeding hot Regimen, the Eruptions turn livid, and then black; but this happens only in Adults, who are irrecoverably loſt, upon the firſt Appearance of the Blackneſs, unleſs they be immediately relieved by Bleeding, or a cooling Regimen.

As the Meaſles, in their Nature, nearly reſemble the Small-pox, ſo do they, likewiſe, agree pretty much therewith in the Method of Cure which they require; hot Medicines, and an hot Regimen, are very dangerous; though they are frequently uſed by unskilful Nurſes, to drive the Diſeaſe from the Heart. The following Method ſucceeded beſt with me:

I confined the Patient to his Bed for only two or three Days after the Eruption, that the Blood might gently breathe out the inflamed and noxious Particles, that are eaſily ſeparable through the Pores, in a manner ſuitable to the Nature of the Diſeaſe; and allowed no more Cloaths, nor a larger Fire, than he accuſtomed himſelf to, when in Health. I forbad all Fleſh-meats, and permitted Water-gruel, Barley-broth, and the like, and ſometimes a roaſted Apple, for Diet; and, for Drink, either Small-beer, or Milk boiled with thrice its Quantity of Water. To relieve the Cough, which almoſt always attends this Diſeaſe, I ordered a Draught of ſome pectoral Decoction to be taken between whiles, with a proper Linctus. But I principally obſerv'd to give Diacodium every Night, throughout the Diſtemper. Thus,

Take of the pectoral Decoction, a Pint and an half; Syrup of Violets, and Maidenhair, each an Ounce and an half: Mix them together for an Apozem, to be taken in the Quantity of three or four Ounces, three or four times a Day.

Take of Oil of ſweet Almonds, two Ounces; Syrup of Violets, and Maidenhair, each an Ounce; fine Sugar, enough to make them into a Linctus: To be taken often in a ſmall Quantity, eſpecially when the Cough is troubleſome.

Take of black Cherry-water, three Ounces; Syrup of white Poppies, an Ounce: Mix them together for a Draught, to be taken every Night.

In Children, the Doſe of the Pectorals and Opiate muſt be diminiſhed in proportion to their Age.

This Method ſeldom fails of curing, beſides being preventive of every other Symptom, which is not the neceſſary and unavoidable Attendant of the Diſeaſe; the Cough is the moſt troubleſome one, which, however, is nothing dangerous, till the Diſeaſe be gone off; after which, if it ſhould continue a Week or two, it may be eaſily cured by the Uſe of the open Air, along with proper Pectorals; and indeed it generally abates by degrees ſpontaneouſly, and at length ceaſes.

But if, by uſing Cardiacs, and too hot a Regimen, after the Ceſſation of the Diſeaſe, the Patient's Life be endangered (which is a very common Caſe) by the violent Fever, Difficulty of Breathing, and other Symptoms that uſually afflict ſuch as have a Peripneumony, I have, with great Succeſs, ordered even the tendereſt Infants to be blooded in the Arm, in ſuch Quantity as their Age and Strength indicated. Sometimes, alſo, when the Diſeaſe has been urgent, I have not been afraid to repeat the Operation; and thus have I preſerved many Children in imminent Death: Theſe Symptoms ariſe in Children upon the Ceſſation of the Meaſles, and prove ſo fatal, that they may juſtly be eſteem'd the principal Miniſters of Death, deſtroying greater Numbers than the Small pox; nor have I hitherto diſcovered any other certain Method of conquering them. Bleeding, alſo, cures the Looſeneſs, which, as we ſaid, ſucceeds the Meaſles; for, as it ariſes from the Effluvia of the inflamed Blood flowing into the Inteſtines, (as is likewiſe uſual in the Pleuriſy, Peripneumony, and other Diſeaſes cauſed by Inflammation) and irritating them to diſcharge their Contents, this Remedy alone will relieve, as it makes a Revulſion of the ſharp Humours; and, likewiſe, reduces the Blood to a due Temper.

Nor need any one be ſurpriſed at my bleeding young Children, ſince, as far as I have hitherto been able to obſerve, it may be as ſafely performed in them, as in Adults. It is indeed ſo neceſſary in the Fever above-mentioned, and in ſome other Diſorders, which Children are ſubject to, that there is no curing them without it. For Inſtance, How are Children to be reliev'd without Bleeding, during Dentition, in the Convulſions happening to them in the ninth or tenth Month, accompanied with a Swelling and Pain in the Gums, whence the Nerves are compreſſed and irritated, and the Fits, alſo, proceed? In this Caſe, Bleeding alone is to be preferred to all the celebrated Specifics yet known; ſome of which prove detrimental by their adventitious Heat, and, while they are ſuppoſed to cure the Diſorder, increaſe it by their manifeſt Heat, and deſtroy the Patient: Not to mention, at preſent, the great Relief which Bleeding affords in the Chin-cough in Children, in which it far exceeds all Kinds of Pectorals whatever.

What has been ſaid of the Cure of thoſe Symptoms ſucceeding the Meaſles, after its Diſappearance, may ſometimes, alſo, hold good, when the Diſeaſe is at the Height, provided the Symptoms be occaſioned by an artificial Heat, if the Expreſſion may be allowed me.

In *January* 1674. ſays the ſame Author, there aroſe a different Species of the Meaſles from that which began in the ſame Month in 1670. and yet it proved as epidemic, but not equally regular, nor ſo conſtantly kept its Train of Symptoms; for ſometimes the Eruptions came out earlier, and ſometimes later, whereas in the other Kind they always appeared on the fourth Day, incluſive, from the Beginning of the Illneſs. Beſides, the Eruptions here appeared firſt on the Shoulders, and other Parts of the Trunk; but, in the other Species, they firſt ſhewed themſelves in the Face, and, by degrees, ſpread over the reſt of the Body. In this Species, likewiſe, I rarely found, that the Skin peeled off, like branny Scales, upon the Diſappearance of the Eruptions, which happened as certainly, after the other Kind, as after a ſcarlet Fever. Moreover, this Sort proved more deſtructive, when unskilfully treated, than the former; for the Fever, and Difficulty of Breathing, which uſed to come at the Cloſe of the Diſtemper, were more violent here, and reſembled a Peripneumony more. But though this Species of the Meaſles was anomalous and irregular, with reſpect to the Symptoms juſt mentioned; it nevertheleſs anſwered, in general, to the Deſcription already given, and, conſequently, the Method of Cure differed little.

MORBUS. A Diſeaſe.

MORBUS ATTONITUS. The Epilepſy.

MORBUS CADUCUS, or COMITIALIS, is the Epilepſy, or falling Sickneſs; called by the latter Name, becauſe People were ſeized with it ſuddenly, in the *Comitia*, or public Aſſemblies of the *Romans*. See EPILEPSIA.

MORBUS GALLICUS, HISPANICUS, INDICUS, or NEAPOLITANUS. The Venereal Diſeaſe.

MORBUS HERCULEUS. The Epilepſy.

MORBUS NIGER, or the Black Diſeaſe of *Hippocrates*. See MELAS.

As in an Hæmoptyſis, a frothy, thin, and florid Blood, is now-and-then expectorated in Coughing, ſo, in the Black Diſeaſe of *Hippocrates*, a concreted Blood, of a blackiſh-red Colour, and mixed with a large Quantity of inſipid, acid, or viſcid Phlegm, is thrown up by Vomit.

This Diſorder is generally preceded by a pungent and tenſive Pain of both Hypochondria; and the Eruption, or immediate Appearance, of the Diſeaſe is almoſt always accompanied with an Anxiety, and compreſſive Pain, of the Præcordia, and a Conſtriction of ſome one of the Sides: Beſides, no Diſcharge of Blood is ſo readily, or ſo often, accompanied with Faintings, as the Black Diſeaſe of *Hippocrates*, eſpecially when the Blood evacuated is fetid and corrupted.

The Seat of this Diſeaſe, and the Source from which the Blood is diſcharged, is in the Stomach, though, in conſequence of the Conſent of the Parts, the Spleen is affected; and muſt, therefore, be conſider'd as another Seat of the Cauſe of the Diſorder, as is obvious from diſſecting the Bodies of thoſe who die of this Diſeaſe: Thus, in ſuch Patients, the Spleen is almoſt always found tumid, infarcted, and ſometimes indurated. And as for the Heart, which is every-where furniſhed with a large Number of Veſſels, it is obſervable, that, when the arterial and venous Vaſa brevia, eſpecially thoſe diſtributed through the ſuperior, Left, and more ſlender Part of the Stomach, and there covered with an highly tender Membrane, are open'd or broken, they diſcharge that Blood, which, during Life, was thrown up by Vomits; for which Reaſon they are found varicoſe, and diſtended with black Blood, the Subſtance of the Stomach being, at the ſame time, corrupted in that Part. Thus *Riolanus*, in *Anthropolog. Lib.* 2. *Cap.* 17. informs us, that, in a Diſcharge of Blood by Vomit and Stool, he found one of theſe Vaſa brevia as broad as a Perſon's little Finger. Other Inſtances of the ſame Kind are found in *Columbus*, *Rerum Anatomic. Lib.* 15. *Wedelius*, in *Phyſiolog. reformat. Platerus*, *Obſerv. Lib.* 2. and *Bonetus*, *Medicin. Septentrional. Lib.* 3. *Sect.* 5. *Cap.* 4.

'Tis not, however, improbable, tho' it rarely happens, that ſuch a Vomiting of Blood may proceed from other Veſſels of the Stomach, if they are corroded by acid and corroſive Juices, or by Poiſons. That this has happen'd, we may conclude, if an acute Pain of the Stomach has preceded, and if the Blood, thrown up by Vomit, is black, acid, ſtupefies the Teeth, ſcorches the Fauces and Mouth, and, when thrown upon the Floor, riſes in an Ebullition, according to the Deſcription given by *Hippocrates*, in *Lib.* 2. *de Morbis*, *Sect.* 17.

As Perſons of ſlender and tender Conſtitutions are, of all others, moſt ſubject to internal Hæmorrhages, ſo 'tis certain from Experience, that, in this Diſorder, there happens an Hæmorrhage of the Stomach, eſpecially if the Patients are of ſo delicate a Turn of Mind, as to be eaſily ſuſceptible of Commotions; for

Bodies

Bodies of this Kind are generally furniſhed with ſmall Veſſels, whoſe Subſtance is tender, and, conſequently, eaſily capable both of Diſtention and Rupture. Hence proceeds the Effuſion of Blood.

Young Women are obſerved to be principally ſubject to this Diſorder, eſpecially ſuch of them as are coſtive about the time of Puberty, when the Menſes firſt begin to appear, and when they are afterwards ſuppreſs'd, or too ſcantily diſcharg'd; for, when they are thrown into Commotions by Anger or Frights, whilſt, in the mean time, the inferior Parts are refrigerated, or when the Phyſician, by Vomits, prepoſterouſly endeavours to remove the Symptoms ariſing from the Regurgitation of the Blood from the Uterus to the Stomach, a Vomiting of Blood is eaſily brought on.

In like manner, after an intermittent Fever, unskilfully treated, and too ſoon ſtopt, I have known a Suppreſſion of the Menſes happen in Women of a tender and delicate Texture; and if the Phyſician, by ſtrong and hot Emmenagogues, endeavours to reſtore this Evacuation, he will produce terrible Conſequences; and I myſelf have twice had an Opportunity of obſerving a mortal Vomiting of Blood brought on by this means.

I have, alſo, obſerved, that ſome old Women, who, when their Menſes have ſtopt, and they themſelves been waſted with violent and long-protracted Grief, have, for a conſiderable time, complain'd of preſſory Pains in the Left Hypochondrium, accompany'd with Want of Appetite and Weakneſs; after which, a ſudden and impetuous Vomiting of Blood prov'd mortal.

'Tis, alſo, certain from Experience, that pregnant Women, when they are plethoric, and neglect Veneſection, are ſeiz'd with a Vomiting of Blood, eſpecially, when, about the Middle of their Geſtation, their Stomachs have been frequently thrown into violent Commotions. But becauſe in this Caſe the Blood they vomit is diſcharged thin, and in a ſmall Quantity, it ſeems more probable, that it comes from the Corrugations of the ſmall Arteries in the Oeſophagus and Fauces, than from the Veſſels of the Stomach itſelf; for which Reaſon it is leſs dangerous.

On the contrary, in difficult Labours ariſing from an unnatural Situation of the Fœtus, I have ſometimes obſerv'd a copious and mortal Vomiting of Blood. I have, alſo, obſerv'd Women in Labour ſeiz'd with a Vomiting of Blood, which did not prove mortal; but theſe Patients vomited but a ſmall Quantity of Blood, were plethoric, and had neglected Veneſection in the latter Part of their Geſtation.

There are, alſo, ſome Men of valetudinary Conſtitutions, and ſubject to hæmorrhoidal Diſcharges, who, when this Evacuation is diminiſh'd, or totally ſuppreſs'd, complain of Anxieties of the Præcordia, Cardialgias, cold Sweats, alternate Heats and Colds. If ſuch Patients evacuate by Stool, and vomit a feculent Blood of a cadaverous Smell, and if the Paroxyſm recurs frequently, they generally, ſoon after, die of a Deliquium.

Of a leſs dangerous Nature was that Epidemical Vomiting of Blood, which lately happen'd at *Martisburg*; for, tho' ſome Quarts of a dark-colour'd blackiſh Blood were vomited up by the Patients, who were principally Adults among the common People, yet the Strength was only impair'd, but not the Life deſtroy'd. At the ſame time there happen'd, eſpecially in plethoric Perſons, Spittings of Blood, which were, alſo, removed without any great Difficulty; for, about the Equinoxes, in conſequence of the various and ſudden Changes of the Atmoſphere from Hot to Cold, and from Cold to Hot, the free and equable Circulation of the Blood is diſturb'd; ſo that, eſpecially when it is redundant, it ruſhes impetuouſly to ſome particular Part, and makes an Eruption, which ceaſes, when a large Quantity is diſcharged.

With reſpect to the Progreſs of the Diſeaſe, we muſt obſerve, that the ſpaſmodic and oppreſſive Pain of the Stomach, which is generally accompany'd with an Heat, and Vomiting of Blood, is not to be taken for an Inflammation of the Stomach; for an Inflammation of this Part is always accompany'd with a Coldneſs of the Extremities, a violent Heat about the Præcordia, Thirſt, a Fever, a contracted, weak, and quick Pulſe, which Symptoms do not attend a Vomiting of Blood; nor, in an Inflammation of the Stomach, can the Patient bear warm Liquors, and the external Application of hot Tiles and Cloths; which, however, afford ſingular Relief in a Vomiting of Blood.

But, as all Hæmorrhages eaſily return ſometimes a Week, ſometimes ſome Months, and ſometimes ſome Years after, ſo the ſame happens in Hæmorrhages of the Stomach; for ſince, in conſequence of the Effuſion, a Weakneſs of the Parts is induc'd, they are afterwards leſs capable of reſiſting the Blood, copiouſly and briskly convey'd to them. Hence this Blood retains its former Courſe, ſtops in theſe Parts, and, at laſt, breaking the Veſſels, diſcharges itſelf. Beſides, 'tis ſometimes obſervable, that Nature, in Hæmorrhages, generally reſumes the ſame Parts ſhe had formerly evacuated herſelf by; and that, eſpecially in Hæmorrhages of the Noſe, there is almoſt always a Dropping of Blood from that Noſtril whence the Hæmorrhage was firſt made.

The Danger of the Morbus Niger is not equally great in all Patients, though, at the ſame time, there is hardly any Species of Hæmorrhages of a more dangerous Nature. There is not, however, ſo great Danger to be dreaded, if a Fever is abſent, and if the Diſorder ariſes from a Plethora, produced by a Suppreſſion of the natural Evacuations. On the contrary, if a Fever is preſent; if the Blood vomited is corrupted, fetid, and black; if the Diſeaſe ariſes from a preternaturally large and corrupted Spleen, or an indurated Liver; and, laſtly, if the Diſeaſe is accompany'd with Deliquiums, the Danger is great, and the Symptoms prognoſticate a ſpeedy Death, as is obſerved by *Hippocrates*, in *Aphor.* 37. *Sect.* 6. and in his Prognoſtics.

The Danger is far greater, and more certain, if, as it ſometimes happens, the Vomiting of Blood is accompany'd with Diſcharges of black, Pitch-like, and fetid Matter by Stool; for this Circumſtance generally denotes ſpeedy Death, according to *Hippocrates*, who gave the Name of the *Black Diſeaſe* to this Diſorder.

This Diſcharge of bloody Matter, both by Vomit and Stool, does not proceed immediately from the Veſſels of the Stomach, nor from the Blood extravaſated in the Cavity of the Stomach, but rather from ſome of the other Viſcera, or ſmall Inteſtines, eſpecially the Ileum, and a Rupture of the meſaraic Veſſels, which are only cover'd with a weak and ſlender Coat; for, in Patients, who dy'd of this Diſorder, I have often found theſe Veſſels diſtended with black Blood, and the Stomach filled with a ſimilar bloody Matter.

The Patients ſubject to theſe terrible Diſcharges of black Matter by Stool, whether with or without a Vomiting of Blood, are either hypochondriac, or diſpoſed to hæmorrhoidal Diſcharges; for, in ſuch Patients, the Blood is not duly, but in a faint and languid manner, convey'd thro' the meſaraic Veins. Hence ariſe painful Diſtentions and Spaſms of the Veſſels diſtributed under the Membranes, and, at laſt, hurtful Congeſtions and Effuſions of the Blood. By theſe Marks the Morbus Niger may be excellently diſtinguiſhed from the hæmorrhoidal Diſcharge; which, tho' its Matter is ſometimes blackiſh, is by no means accompany'd with ſuch intenſe ſpaſmodic Pains of the Inteſtines; and is ſo far from threatening Death, that it rather affords great Relief.

This blackiſh Matter, diſcharg'd by Stool, is generally highly fetid, becauſe the diſcharg'd Blood, being, as it were, fermented with the Fæces in the Cavity of the Inteſtines, in conſequence of the Exaltation of its ſulphureous alcaline Principle, degenerates into an highly fetid Putrefaction. And, as this fetid Putrefaction is highly injurious to the nervous Fluid, hence it ſoon impairs the Strength, and deſtroys the vital Motions, of the Body; ſo that preternatural Loſs of Strength, with which this Diſeaſe is always accompany'd, is not to be accounted for from the Nature and exceſſive Effuſion of the Blood, but rather from its putrid Corruption.

The Cure.

In the Cure of this terrible Diſorder, the Phyſician ought to have a due Regard to the Diverſity of Conſtitutions, Cauſes, and Times; for one Method of Procedure is requiſite under the Paroxyſm, and another, when it is remov'd. One Set of Meaſures are expedient, when the Diſorder ariſes only from a Redundance and Orgaſm of the Blood, and the Excretion is, as it were, critical; and another, when it ariſes from Pains and Spaſms forcing the Blood to the internal Parts; and ſtill another, when it ariſes from a Corruption or Obſtruction of any of the Viſcera, from an external Cauſe, from Poiſon, or any other corroſive Matter.

Under the Paroxyſm itſelf, if the Body is plethoric, and the Motion of the Blood preternaturally determined from the external to the internal Parts, Veneſection in the Arm is highly beneficial. But the Quantity of the Blood to be taken away, and the proper Times for repeating the Veneſection, are to be determined by a cautious and skilful Phyſician, according to the Repletion of the Veſſels, the Conſtitution, Strength, and Age of the Patient.

When the Blood is in too violent a Commotion and Orgaſm, and the Pulſe impetuous and ſtrong, Spring-water, or Plantain-water, in a Pint of which a Dram of pure Nitre, and half an Ounce of the Syrup of wild Poppies, have been diſſolv'd, gradually and ſlowly drank, are highly beneficial; for this refrigerating and cooling Potion, at once, corrects the Acrimony of the Humours, checks the elaſtic Efferveſcence of the ſulphureous Parts in the Veſſels, and ſo ſtrengthens and corroborates the relaxed Orifices of the open'd Veſſels, that they afterwards come more eaſily into Contact, and are conſolidated.

Beſides, in this Diſorder, Emulſions are always beneficial, eſpecially when the Region of the Præcordia, principally about the Left Side, is afflicted with pungent and vellicating Pains, and ſpaſmodic Strictures, and when the Patient is rack'd with an intolerable Thirſt and Heat. Theſe Emulſions may be prepared of the Four cold Seeds, and Poppy-ſeeds, with the antiſpaſmodic Waters, prepared of the Flowers of the Lime-tree, Lilies of the Valley, Primroſes, *Egyptian* Thorn, wild Poppy, Piony, and black Cherries, with the Addition of a ſmall Quantity of Nitre, and a ſufficient Quantity of the Syrup of white Poppies.

Beſides, in order to relax the ſpaſmodic Stricture of the Inteſtines, and divert the impetuous Afflux of the Humours to the

Part

Part affected, Clyſters of the emollient and demulcent Kind are highly beneficial, but they muſt be impregnated with ſome gently ſtimulating Ingredient, corrected with Nitre, and frequently injected.

Among the external Remedies appropriated to this Diſorder, we muſt, alſo, reckon thoſe which exert their Influence by checking the Spaſms, corroborating the Stomach, and diſcuſſing the peccant Matter. For anſwering this Intention, I have found nothing more efficacious than Oil of Camphire, prepared thus:

Diſſolve one Dram of Camphire in one Ounce of the Oil of ſweet Almonds; and then drop into it twenty Drops of the Oil of Roſe-wood.

The whole Region of the Præcordia, and Left Hypochondrium, are to be anointed with this Oil; and afterwards a Bag, filled with the Flowers of *Roman* Chamomile and Elder, the Herbs Mint and Wormwood, and boiled in Vinegar of Roſes, or red Wine, is to be applied warm.

But if a large Quantity of Blood is already evacuated, and the Strength conſiderably impaired, Ligatures are to be made on the Joints, in order to check the violent Effuſion of the Blood; and theſe Ligatures are afterwards to be cautiouſly removed. I know it has, alſo, been preſcribed with Succeſs, to immerſe the Hands and Feet, to the Wriſts and Ancles, in cold Water, that the Cold may the longer detain the Blood in the minute Veſſels, and its Return to the Heart, by this means, be ſomewhat retarded.

Out of the Paroxyſm, in order to prevent the Return of the Diſorder, it is proper to exhibit half a Dram of the Powder of Rhubarb, either by itſelf, or with Crabs-eyes; or twelve Grains of the Troches of Amber, and half a Grain of Camphire, taken twice every Week, before going to Bed, in a Draught of Spring-water: For Rhubarb is a kind of Specific for gradually removing Obſtructions. In this Diſorder great Service is, alſo, done by Infuſions of Paul's Betony, Knot-graſs, the Tops of Yarrow, Liquorice-root, and Fennel-ſeeds; ſome Cups of which muſt be drank daily. For ordinary Drink, the Patient may uſe pure and light Spring-water, in which Iron has been extinguiſh'd; or he may, alſo, uſe acidulated Whey.

This Diſorder is to be treated in a particular manner, if it ariſes from a Suppreſſion or Obſtruction of the Menſes; for in this Caſe a Vein is to be opened in the Foot, and the Body render'd frequently ſoluble by Clyſters prepared of emmenagogue Ingredients, ſuch as Mugwort, Peny-royal, Wall-flowers, Bay and Juniper-berries; or temperate Emmenagogues, of the ſame Nature, may, alſo, be; at the ſame time, exhibited in Decoctions or Infuſions.

Another Method of Cure is, alſo, requiſite, when the Veſſels of the Stomach, corroded by acid or acrid Liquors, diſcharge their Contents, and produce this Vomiting of Blood. In this Caſe the earthy and alcaline Powders are of ſingular Efficacy in correcting the Acrimony, and obtunding the corroſive Quality, of the Humours; and, for conſolidating the ruptured Veſſels, Milk, boiled with Starch, is a Medicine of all others the moſt efficacious.

In all Hæmorrhages of the Stomach, produced by whatever Cauſes, we are not, without the greateſt Caution, to uſe Opiates and Narcotics, becauſe they augment the Loſs of Strength with which this Diſeaſe is always attended. We are, alſo, carefully to abſtain from ſtrong, ſtyptic, aſtringent, and vitriolic Medicines; for, by means of theſe, the Eruption of the Blood is, indeed, ſtopt; but the Blood, ſtagnating in the Veins, becomes putrefied, and a violent Inflammation, with a Sphacelus, is to be dreaded. Or, at beſt, if the Body is cachectic, the Diſorder is eaſily converted to a Dropſy. When the Vomiting of Blood is remov'd, the Patient is afterwards carefully to abſtain from Emetics, and Preparations of Aloes, by which an Orgaſm, an immoderate Motion, and a Congeſtion of the Blood to the Stomach, is brought on, and the Diſorder eaſily excited afreſh. *Hippocrates* juſtly adviſes, that oleous and pinguious Subſtances are to be avoided; to which we may add, alſo, ſweet Subſtances; for though theſe are excellent for ſeaſoning Aliments, yet they favour the Generation and Return of this Diſorder, becauſe, by too much relaxing the dilacerated Veſſels, they rather invite than prevent an Afflux of the Blood.

Hippocrates, in *Lib.* 2. *de Morbis*, *Sect.* 5. has given the following Directions with reſpect to the Cure of the Black Diſeaſe: "In this Diſorder, ſays he, purgative Medicines are to be frequently exhibited; as, alſo, Whey, and Milk, if they can be had. The Patient is to abſtain from ſweet, oleous, and pinguious Subſtances; but is rather to uſe ſuch as are cold and purgative, unleſs he is too weak. Blood is to be taken from his Arm. If he is coſtive, let his Body be rendered ſoluble, by an emollient Clyſter. Let him abſtain from Venery and Surfeits; neither let him walk, nor exerciſe himſelf too much. Let him not drink hot Liquors, nor eat acrid and ſaline Subſtances: And, if he obſerves theſe Meaſures, he will, in Proceſs of Time, get free from the Diſorder."

Observation I.

A certain young Man, having for a long time laboured under a Quartan Fever, and being, at laſt, prepoſterouſly cured by an Empiric, contracted a bad Habit of Body, a livid Complexion, a certain Tumor about his Eye-lids, and a continual Languor of Strength; beſides, he frequently complained, eſpecially after the Uſe of flatulent Subſtances, or after any Commotion of Mind, of a Pain of his Left Side, a Coſtiveneſs, and Tenſion of the Inteſtines. At laſt, when, walking on Foot for ſome Miles, he had ſpent himſelf pretty much, and had ſome Quarrels with his Companions, he was ſuddenly ſeized with a copious Vomiting of black Blood, which frequently returned. His Excrements were, at the ſame time, black as Pitch, and highly fetid. In this Condition the Patient frequently fell into Deliquiums, when he raiſed up his Body, and, in the Space of twenty-four Hours, died. Upon diſſecting his Body, next Day, the By-ſtanders were not able to endure the highly fetid Smell. The Vaſa brevia were black, and ruptured; and both in the Cavity of the Stomach, and in the Ilium, there was a black fetid Sordes, and its Veſſels were, alſo, black. The Liver was ſomewhat harder than in a natural State; but the Spleen was ſo hard, as almoſt to reſemble a Cartilage; and its exterior Subſtance, which was of a whitiſh Colour, could hardly be divided with a ſharp Knife; but the little of the internal Part, which remained ſoft, was full of black Blood.

Observation II.

Being called to a Gentlewoman of a delicate and tender Conſtitution, ſeized with a violent Vomiting of Blood, her Huſband ſhew'd me two Baſons full of Sordes, conſiſting of concreted Blood and Phlegm, which ſhe had vomited up. Her Pulſe was weak, and her Strength ſo much impaired, that, when ſhe raiſed her Body, ſhe fell into a Deliquium. For this Reaſon I affirmed her Caſe was dangerous. I exhibited Analeptics and Corroboratives; but next Day, after vomiting ſome Matter like Waſhings of Fleſh, intermixed with ſmall Grumes of dark-colour'd Blood, ſhe died calmly. Upon inquiring into the Cauſe of her Diſorder, I found, that after Child-birth ſhe was ſeized with an anomalous Tertian Fever, then raging; that this Fever, after five Paroxyſms, was removed by a neighbouring Phyſician; but that, for three Months after, her Menſes were ſtopt, which Circumſtance brought on a violent Pain of her Left Hypochondrium; that her Mother, being alarm'd at this, implored the Aſſiſtance of another Phyſician, who gave her a Medicine, which, to me, ſeemed to be Elixir Proprietatis without any Acid, and with the Eſſence of Zedoary, and Amber: Of this ſhe was daily to take fifty Drops, in old and generous *Rheniſh* Wine, uſing for common Drink well-hopt Malt Liquor. But hardly were three Weeks expired, till ſhe fell into the Morbus Niger, which put an End to her Life.

Observation III.

A Woman, of about thirty Years of Age, during the Diſcharge of her Menſes, was terribly frighted; and, whilſt ſhe was yet trembling, took a large Draught of cold Water; by which means ſhe was ſeized with a Trembling of the Joints, and a Want of Appetite; at the next Return of her menſtrual Period, they, indeed, flowed, but in too ſmall a Quantity; and ſhe was afflicted with a violent Anxiety of the Præcordia, a Nauſea, a Vomiting, a Coldneſs of the Extremities, and a Redneſs of the Face. On the third Month all the former Symptoms returned, accompanied, for three Days, with copious Vomiting of Blood, which greatly impaired her Strength. *Frederic Hoffman.*

MORBUS REGIUS, is the Jaundice: But ſome Authors call the King's Evil by this Name.

MORBUS SACER. The Epilepſy.

MORDEHI. The Inhabitants of the *Eaſt-Indies* are frequently ſubject to a Diſeaſe, by them called *Mordehi*, which is no more than a diſordered Stomach. The perpetual Heat, the copious Sweats excited by it, and the ſupervening Cold, very much weaken the Stomach. Now, if the Inhabitants ſhould either eat or drink too liberally, eſpecially at Night, the Concoction of their Aliments muſt, of courſe, be unduly carried on; for which Reaſon Diarrhœas are not only very frequent, but, alſo, with great Difficulty cured among them. *F. Hoffman, de Morbis Endemiis.*

MORDEXYN. At *Goa*, the principal Colony of the *Portugueſe*, in the *Indies*, the Inhabitants are much ſubject to a Diſorder called *Mordexyn*, which ſeizes the Patient ſuddenly and unexpectedly; is attended with a Nauſea, and continual Vomiting; and often proves fatal. *Frederic Hoffman, de Morbis Endemiis.*

MORDILAPIDES. Small Fiſhes, which are frequently found under Stones; I take them to be Loaches.

MORETARIUM. The ſame as MORTARINUS.

MORETUS. A ſort of cordial Julap, thus called from the Syrup of Mulberries, which ſhould be an Ingredient in it.

MORHNA, or MORLUA. The Cod-fiſh. See ASELLUS.

MORIA, *μωρία*. The ſame as MOROSIS.

MORINA.

The Characters are;

It hath a tubulous anomalous perſonated Flower, conſiſting of one Leaf, which is divided into two Lips: The upper Lip is, again, divided into two Parts; but the under Lip is divided into three. From the Flower-cup, which is, for the moſt part, bifid, ariſes the Pointal, fixed like a Nail in the hinder Part of the Flower; but is barren, for the Flower-cup reſts on the Embryo, and is ſurrounded by another, as a Sheath, in which are many roundiſh and angular Seeds.

Miller mentions one Sort of this Plant; which is,

Morina Orientalis, Carlinæ folio. *Tourn. Cor.*

This Plant was diſcovered by *Tournefort*, in his Travels in the *Levant*, who gave it this Name in Honour to Dr. *Morin*, a Phyſician at *Paris*. *Miller's Dictionary*, *Vol.* 2.

It is cordial, cephalic, and ſtomachic; good for reſiſting the Influence of bad Air, and to excite the Tranſpiration of peccant Humours, being taken in Infuſion or Conſerve. *Lemery des Drogues.*

MORINGA *Lentiſci Folio*; *Fructu magno anguloſo, in quo Semina Ervi.* J. B. *Arbor*, *exotica Lentiſci Folio.* C. B. *Moringa.* Ferrar. Flor. Park. Acoſt. *Modringou.* H. M.

It is a Tree growing in *Malabar*, and other Countries of the *Eaſt-Indies*, about ten Yards in Height, and in Bigneſs, as much as a Man can fathom; it is cultivated in Gardens and Orchards, only for the ſake of its Fruit, which, as *Acoſta* ſays, is a Foot in Length, of the Thickneſs of a Radiſh, and remarkable for its eight Corners, and much valued for its delicious Taſte.

Of the Leaves, Roots, Bark, and Fruit of this Tree, they prepare antiſpaſmodic Pills. The Root of the Tree, as *Acoſta* tells us, ſupplies the Place of the Unicorn's Horn, and the Bezoar-ſtone; and is the true Theriaca, which the *Malabarians* uſe as an Alexipharmic againſt all Sorts of Poiſon, particularly the Bites of thoſe moſt venomous Serpents, commonly called *Cabras de Capellas*, and other poiſonous Inſects and Animals, taking it inwardly, and externally applying it; the mere Juice of the Bark, mixed with Water and Garlick, drives theſe Serpents from their Houſes. *Acoſta* found the Root to be of ſingular Efficacy in the Cholera Morbus. The Juice of the Leaves, mixed with Pepper, is inſtilled into the Eyes for the Vertigo; and, with an Addition of Ginger, it removes a Fever. The Root is much in Requeſt with thoſe who labour under an Elephantiaſis; many of whom, they ſay, have been cured by the continued Uſe of it. *Acoſta.* Uſed as a Peſſary, it procures Abortion. *H. M.*

The Bark, bruiſed in Water of Rice, is proper for an Oedema, and, with an Addition of Cumin, for the Tooth-ach, and the poiſonous Bites of Dormice; the Juice, taken up the Noſtrils, is good for a Mania; and the ſame, drank, cures racking Pains of the Joints, proceeding from a Cold; the Juice of the Leaves diſcuſſes Venereal Tumors, and expels Worms in the Feet, and ſuch as are generated in Ulcers. *H. M. Raii Hiſt. Plant.*

MORMYROS, *μορμύρος*. A Sort of Sea Fiſh, mentioned by *Aldrovandus.*

MORO. An Abſceſs of the Fleſh, reſembling a Mulberry. *Rulandus.*

MOROCHTHUS, *μόροχθος*.

Lapis Morochthus. Offic. Boet. 411. De Laet. 140. Matth. 1385. Calc. Muſ. 275. *Morochthus aliis Leucogæa*, *Leucophragis*, *Galaxius*, *Graphida*, *Galactites.* Worm. 71. Charlt. Foſſ. 30. *Morochthus.* Aldrov. Muſ. Metall. 668. Agricol. 606.

WHITE MARKING-STONE.

The Stone *Morochthus*, which ſome call *Galaxius*, or *Leucographis*, is produced in *Egypt*, and is uſed by the Fullers in whitening their Linen, as being of a ſoft Subſtance, and eaſily diluted. It is ſuppoſed to be of an emplaſtic Quality, and good for Spitting of Blood, the Cœliac Paſſion, and Pains of the Bladder, being taken in Water, as alſo for uterine Fluxes, being taken in like manner, or applied in a Peſſary. It is likewiſe an Ingredient in Collyria, or ophthalmic Medicines of a ſoft Conſiſtence; for it fills up a Cœloma, and repreſſes Defluxions: Made into a Cerate, it cicatrizes ſuch Ulcers as happen in the tender and ſoft Parts of the Body. *Dioſcorides*, *Lib.* 5. *Cap.* 152.

MOROSIS.

The *Greek* Word *μώρωσις* correſponds to what we commonly call *Stupidity*, a Diſorder, which, though commonly thought incurable, is nevertheleſs, according to the Opinions of the moſt celebrated Phyſicians, to be either totally removed, or at leaſt greatly alleviated, by proper Meaſures.

This Diſorder, according to the celebrated *Willis*, proceeds either from a Fault of the Brain, or from a bad Condition of the animal Spirits, or from both theſe in Conjunction.

Thus, for Inſtance, it is produced, when the animal Spirits are deprived of their active Particles, and become vapid, languid, and incapable of exerting themſelves in a due Manner, in Conſequence of their being clogged with aqueous and terreſtrial Particles.

But though this Diſorder frequently ariſes only from a Fault of the animal Spirits, yet it is oftener produced by ſome Imperfection of the Brain: Thus, for Inſtance,

1. It is a common Obſervation, that the Genius, in ſome meaſure, depends upon the Bulk and Figure of the Head, and conſequently, of the Brain: Hence it is become proverbial, that either too ſmall, or too large, a Quantity of Brains are Marks of Folly and Stupidity. And though this does not always happen, yet it is frequently found to hold true. The Reaſon of both is ſufficiently obvious, becauſe, in a ſmall Brain, too few Spirits are generated and ſecreted; whereas a preternaturally large Brain is generally of a Texture too coarſe and ignoble to produce a Quickneſs and Vivacity of the mental Powers.

2. Since, in order to a due Diſtribution of the Spirits from the Center to the Circumference of the Brain, and their equable Return from the latter to the former, 'tis requiſite the Brain ſhould be of a duly globular Figure, hence we obſerve, that Perſons, whoſe Craniums are preternaturally depreſſed or acuminated, labour under an Imperfection of the mental Powers, or are what we call *ſtupid.*

3. As a due Texture, and laudable Temperament, of the Brain, with reſpect to Cold, Heat, Drineſs, and Humidity, are requiſite to Brightneſs of Genius; ſo 'tis obvious, that its Reverſe, which is Stupidity, muſt be produced by a want of theſe. Some Climates are, by the unlucky Influence of their Atmoſphere, ſaid to incline their reſpective Inhabitants to *Stupidity.* Thus, for Inſtance, *to be born in Bœotia*, is, in the emphatic Language of Antiquity, a proverbial Expreſſion, importing that the Perſon, to whom it is applied, is a *Fool.*

4. *Stupidity* may not only ariſe from theſe Faults of the Brain, which are already enumerated, and are, for the moſt part, original and connate; but, alſo, from its bad Conformation, with reſpect to its Pores and Veſſels, brought on by adventitious Cauſes; and, in conſequence of which, the animal Functions are unduly performed. Thus, if theſe Pores and Veſſels are too much conſtricted, they do not admit a Quantity of Matter ſufficient for a due Generation of Spirits. If, on the contrary, they are too much relaxed, they admit, along with the Matter deſtined for the Generation of the Spirits, heterogeneous Particles, highly unfriendly to the animal Oeconomy. There may be, alſo, an Inequality in the Conformation of theſe Pores and Veſſels; when, for Inſtance, they are more wide and pervious in one Part of the Brain, than in another. This, perhaps, is the Reaſon why ſome Perſons receive juſt enough Impreſſions of Things, but, at the ſame time, form wrong Judgments concerning them. Perhaps, alſo, 'tis for this Reaſon, that thoſe who are bleſſed with an Imagination ſufficiently ſtrong and lively, are curſed with a treacherous and fallacious Memory.

It ſometimes happens, that both a bad Condition of the animal Spirits, and a Fault or Imperfection of the Brain, concur to the Production of Stupidity. And whichever of theſe is firſt affected, will, of courſe, ſoon convey a proportionable Diſorder to the other; for, if languid and inactive animal Spirits are not freely conveyed through theſe Pores or Veſſels, they will either not be ſufficiently extended, or again coaleſce. If, on the contrary, the Spirits, in conſequence of a bad Structure and Conformation of the Brain, cannot expand themſelves duly, they will, at laſt, become ſlow and torpid, and acquire a peccant Diſpoſition, capable of producing Stupidity.

Stupidity, as we have already obſerved, is ſometimes original and connate; and this Species of the Diſorder is either *hereditary*, or *accidental*; *hereditary*, when Fools beget Fools; that is, when the languid and effete Particles of the Parent conſtitute the animal Organs of the Child; and *accidental*, when wiſe and ingenious Parents procreate dull and ſtupid Children. Thus, in Parents addicted to Study, Reading, and Meditation, the moſt rich and generous Particles of the Blood are conveyed to the Brain, in order to ſupply a ſufficient Quantity of Spirits; in conſequence of which, too few of theſe generous Particles deſcend to the ſpermatic Veſſels.

Though, in the Brute Creation, the Temper and Genius of the Parent is conveyed through a long Series of the Offspring, when duly managed, yet it often happens otherwiſe in the human Race; ſince Parents, by Intemperance, Luxury, and an irregular Courſe of Life, have their Conſtitutions ſo broken, and their Strength ſo impaired, as to procreate languid and valetudinary Children. Hence, the Offspring of Parents loaded with Age, or propagating their Species when too young, or of ſuch as are addicted to Drunkenneſs, Softneſs, and Effeminacy, are generally curſed with a dull, an heavy, and a ſtupid Genius. The ſame Misfortune is alſo incident to thoſe who ſpring from Parents afflicted with Diſorders of the Brain, ſuch as Palſies, Epilepſies, a Carus, and Spaſms: So that 'tis an unſpeakable Advantage, to ſpring from Parents bleſſed with a ſound Mind in a ſound Body.

Various evident Cauſes concur to the Production of Stupidity in Perſons originally ſound. Thus ſome Perſons, at firſt ingenious and acute, in the Decline of Life, without any conſiderable Error in Regimen, become gradually dull, and at laſt ſtupid, becauſe the Blood, and nervous Fluid, by degrees, loſe their native Vigour, and become languid and inactive; for 'tis obſerva-

ble, that the Genius of ſome Perſons is variouſly brighten'd, or beclouded, according to the various Periods of their Age. Thus ſome, who in their Childhood are the Admiration of all around them, for their Sagacity, Docility, and Quickneſs of Apprehenſion, afterwards become the Scorn of their Acquaintance, on account of their Dulneſs and Stupidity; whereas, on the contrary, it often happens, that Perſons in their Infancy dull, and inſuſceptible of the Impreſſions of Literature, afterwards become remarkable for the Penetration of their Judgment, and the Sprightlineſs of their Genius. In this Caſe, the animal Spirits, being at firſt clogg'd and incumber'd, at laſt emerge, and exert themſelves with due Vigour; whereas, in the former, being at firſt too free and uncouſin'd, they are ſoon diſpatch'd, and leave the Patient dull and ſtupid. Hence Children in their Infancy dull may afterwards become ſufficiently ingenious, when the Temperament of the Brain is chang'd, and its ſuperfluous Humidity evaporated.

Stupidity and Dulneſs are, alſo, frequently produced by violent Blows and Concuſſions of the Head, by frequent Drunkeneſs, Surfeiting, and the exceſſive Uſe of Opiates; by violent and ſudden Paſſions, ſuch as Frights, and exceſſive Sorrow; and by Diſeaſes of the Brain, ſuch as Epilepſies, Palſies, Apoplexies, and a Carus.

There are various different Species of this Diſeaſe: Thus, for Inſtance, it is diſtinguiſh'd into Folly and Stupidity. In the former, the Patients dexterouſly and quickly enough apprehend ſimple Things, and retain them ſufficiently in their Memories; but, for want of Judgment, compound and divide their Notions ill, and are ſtill more unlucky in drawing Inferences; whereas, in the latter, that is, Stupidity, the Imagination, the Memory, and the Judgment, are ſo defective, that the Patient neither apprehends quickly, nor reaſons well.

There are various Gradations and Degrees of Stupidity; ſince ſome, who are incapable of acquiring Literature, and the liberal Sciences, are yet well enough qualified for the mechanic Arts; whilſt others, abſolutely incapable of either of theſe, are nevertheleſs adapted to the Fatigues of Agriculture, and the toilſome Labours of a Country Life. Others, incapable of every Employment, can only be taught what is neceſſary to the Preſervation of Life, and the common Method of behaving in the World; whilſt others are ſo ſuperlatively ſtupid, that they hardly underſtand any thing at all; but act and ſpeak in an abſurd, ridiculous, and inconſiſtent manner.

As for the Prognoſtics of this Diſeaſe; Stupidity, whether hereditary, or produc'd by unknown Cauſes, if it remains to the Years of Puberty, is ſcarcely ever cur'd, tho' it frequently happens, that Children at firſt dull and ſtupid, upon a laudable Change of the Brain, and animal Spirits, become ingenious and docile.

Stupidity ſucceeding an inveterate Epilepſy, or produc'd by an evident Cauſe, ſuch as an Injury done to the Head, or the Sally of ſome violent Paſſion, if it continues long, becomes incurable.

The Species of Stupidity, which principally conſiſts in a Loſs of Memory, and ſucceeds Lethargies, and lethargic Diſorders, ſometimes ſpontaneouſly ceaſes, when theſe Diſeaſes are cur'd. In the Cure, therefore, of this Species of Stupidity, the principal Intentions are, to free the animal Spirits from their languid and torpid State, and to render them capable of circulating freely; and expanding themſelves duly in the Pores and Veſſels of the Brain.

It has been ſometimes obſerv'd, that fooliſh and ſtupid Perſons have been cur'd, and their Genius render'd more acute and bright, by a Fever. Thus *Huartus* informs us, that, at *Corduba*, a Fool, being ſeiz'd with a violent malignant Fever, in the middle of the Diſeaſe acquir'd an uncommon Judgment and Penetration, which remain'd with him during the future Part of his Life. Inſtances of this kind may be accounted for from this, that the febrile Heat ſometimes rarefies and diſpels the Matter which injures the Brain, and by that means produces the Stupidity.

As for the Cure of this Diſorder, *Stupidity*, whether connate, or adventitious, if it is not a Folly incapable of Change or Inſtruction, may be greatly alleviated, tho' not totally remov'd. For this Purpoſe, both the Phyſician and the Preceptor are to join their Care, in order to poliſh the Patient's Mind, and drag him, as it were, from the brute to the human Species.

As ſtupid Perſons, therefore, become as ſlowly acquainted with the common Notions and Ideas of Things, as Children do with Words; ſo 'tis expedient they ſhould conſtantly be inſtructed by a careful and laborious Preceptor, who ſhould never become weary of inculcating the ſame things over and over again: For by this means, the Spirits, tho' naturally torpid and inactive, will, by the perpetual Exerciſe, be ſomewhat rous'd and brighten'd; and, being continually excited, will make, in the Brain, tho' coarſe and groſs, Tracts or Paſſages, tho' imperfect, for their own more free and eaſy Expanſion. But, that this Intention may be the more effectually obtain'd, ſuch Medicines as clear the Brain, purify and refine the Blood, the nervous Fluid, and animal Spirits, are to be exhibited.

In order to purify the Blood, gentle Purges, and Veneſection, if the Strength permits, frequently, tho' moderately repeated, are to be us'd. Beſides, in order to derive the feculent Matter more effectually from the Brain, Fontanels are to be made in the Arms, or in the Legs, or in both. In ſuch Patients as are fat, and have a moiſt Brain, it is ſometimes expedient to make two Fontanels near the Scapulæ. For this Purpoſe Trepanning is by ſome, alſo, highly commended, ſince by its means the Brain perſpires more freely. The Patient ought to uſe Food of a light and attenuating Nature, to live in a free and dry Air, and to take but moderate Sleep.

If, after the due Uſe of theſe Meaſures for a conſiderable time, no ſalutary Effect is produc'd, 'tis in vain to attempt any thing farther by Medicines: But if, by their means, any hopeful Signs of Recovery begin to appear, it is expedient every Day, at medicinal Hours, to exhibit alterative Medicines for a long time. The Medicines, in a peculiar manner calcuted for the Removal of Stupidity, are theſe following.

Take of the ſuccinated Spirit of Sal Ammoniac, ſix Drams: Of this, exhibit between fifteen and twenty Drops, every Evening and Morning, in three Spoonfuls of the following diſtil'd Water, drinking ſeven Spoonfuls of the ſame after it. The diſtil'd Water is thus prepar'd:

Take of the Leaves of Miſleto, and recent Apples each ſix Handfuls; of the leſſer Sage, Roſemary, Savory, Mother of Thyme, Calamint, Peny-royal, Marjoram, and the greater Rocket, each four Handfuls; of the Roots of Angelica, and Maſterwort, each ſix Drams; of Zedoary, the leſſer Galangals, Calamus Aromaticus, and Winter's-bark, each two Ounces; of Cloves, Nutmeg, Mace, Cinnamon, Ginger, each one Ounce; of Cubebs, Cardamums, and Grains of Paradiſe, each ſix Grains: Upon all theſe, when cut ſmall, and bruis'd, pour twelve Pints of the beſt Canary Wine: Digeſt cold in a cloſe Veſſel for three Days; then diſtil all together, and let the Liquor obtain'd be adulcorated with Sugar when us'd. Its Doſe is two or three Ounces.

After the Uſe of the Spirit of Sal Ammoniac, for fifteen or twenty Days, other Medicines are to be us'd for about as long, ſuch as the Spirits of Soot, Harts-horn, and of the human Cranum. The Tinctures of Coral, Antimony, Caſtor and Amber, *Quercetan*'s Elixir of Life, Elixir Proprietatis, and Spirit of Lavender.

Or,

Take of the Conſerve of the Flowers of Lilies of the Valley, ſix Ounces; of the preſerved Roots of Sweet Flag, of Ginger preſerved in the *Indies*, and of preſerv'd Nutmeg, each half an Ounce; of the Species Diambræ, two Drams; of Aloes-wood, Yellow-ſanders, the beſt Zedoary-root, Cubebs, and *Jamaica* Pepper, each a Dram and an half; of prepared Coral, two Drams; and of the Syrup of preſerved Ginger, a ſufficient Quantity for making an Electuary; of which two Drams are to be taken Morning and Evening, drinking afterwards three Ounces of the diſtil'd Water before preſcrib'd.

Thoſe whoſe Brains are too moiſt, ſhould every Morning drink Coffee, with Sage-leaves previouſly boil'd in it. Thoſe whoſe annual Spirits are faint and languid, ſhould, on the contrary, drink Chocolate for common Drink. Ale, or Small-beer, ſhould be uſed in three or four Gallons of which, after the Fermentation is over, the following Bag ſhould be put.

Take of the Leaves of Sage dried, four Handfuls; of Cubebs, one Ounce; of Cloves and Nutmegs, cut and bruis'd, a ſufficient Quantity: Mix all together, and put in the Bags.

External Applications, ſuch as Cucuphas, or medicated Caps, Plaiſters, and Liniments, are alſo uſed in this Diſorder. Thus a Cucupha, to be uſed in it, may be thus prepared.

Take of the Flowers of Lily of the Valley, Roſemary, and Stœchas, each one Handful; of *Celtic* Spikenard, two Drams; of the Roots of the Cyperus, the leſſer Galangals, and Florentine Orris, each three Drams; of Laudanum, Benjamin, Balſam of Tolu, and Amber, each two Drams; of Nutmegs, Cloves, Mace, and Cinnamon, each one Dram and an half: Reduce all to a fine Powder, to be ſew'd up in Cotton in a Cap.

A Plaiſter, to be uſed by Patients labouring under Stupidity, may be prepared in the following manner.

Take

Take of the Emplaſt. Flor. Unguent. two Ounces; of Tacamahac, Caranna, and Balſam of *Tolu*, each three Drams; of the Powders of Amber and Myrrh, each two Drams; of Cloves, Nutmeg, and Mace, each one Dram. Melt all together into a Maſs, of which make a Plaiſter, to be ſpread on Leather, and applied to the Head when ſhav'd.

A Liniment may be prepared thus:

Take of the Oil of Palm, half an Ounce; of the Balſam of Capivi, three Drams; of *Peruvian* Balſam, one Ounce; of the Oil of Nutmegs, by Expreſſion, two Drams; and of the Oil of Amber, half a Dram: Make into a Liniment for the Head. *Willis.*

See ANACARDIUM.

MOROXOS. The ſame as MOROCHTHOS.

MORPHÆA. Morphew. This is defined to be a Species of Leproſy, differing from it in this, that the Seat of the Leproſy is in the Fleſh, but that of the Morphew in the Skin.

MORPHNOS. A Species of Eagle mentioned by *Aldrovandus*.

MORPIONES. Crab-lice. Theſe, being flattiſh, ſtick ſo faſt with their Claws to the Skin, as to create much Difficulty to diſlodge them. Being viewed by a Glaſs, they nearly reſemble the ſmall Crab-fiſh, and thence are called, by ſome, Crab-lice, by others Plactulæ, Morpiones, Petolæ, and Peſſolatæ. They uſually infeſt the Arm-pits, Eye-lids, Eye-brows, and Pudenda.

Turner, in his Diſeaſes of the Skin, gives the following Caſe, as an Example of the Method of treating this ſort of Vermin. A young Man, long labouring under an intolerable Itching of the Pubes and Scrotum, had almoſt flayed the Parts by ſcratching. Upon narrowly obſerving the Roots of the Hairs, I perceived, in their Interſpaces, ſome of the Crab-like Vermin, ſo riveted, as it were, in the Skin, that I could only raiſe two or three of them, to convince him of the Cauſe of his Complaint.

The Tenderneſs of the Parts rendering him unable to bear any of the uſual Applications, I mixed up one Dram of Quick-ſilver with two Ounces of Diapompholyx. I ordered him to ſpread this thin upon a Cloth, and apply to the Parts, and to ſecure his Dreſſing with a ſmall Bag-truſs. In a few Days he was eaſed, the Lice coming daily away, dead, upon the Dreſſings.

In others, who have not thus excoriated themſelves, I have ſeen Hundreds fall from the Arm-pits, and Pubes, dead, upon the firſt Application of a Rag wet with the Milk of Sublimate. This ſort of Vermin is reckoned to prognoſticate ſpeedy Mortality to thoſe they abandon, when not removed by Medicine.

MORSELLUS, or MORSULUS. A Lozenge, or Troche.

MORSUS. A Bite. Figuratively it is uſed to expreſs a ſort of Pain reſembling that which is excited by a Bite, or by Gnawing.

Orpheus, in his Hymn to *Mercury*, ſays, that Coral in Powder, and mix'd with Wine, is good againſt the Bites of Serpents.

The *Pſylli*, a People of *Libya*, were famous amongſt the Antients, for curing the Bites of Serpents, by ſucking the Wound. One of theſe *Pſylli* was made to ſuck the Wounds *Cleopatra* had receiv'd from the Aſps. It was ſaid no Serpent could hurt theſe *Pſylli*.

MORSUS DIABOLI, in Anatomy, is the fimbriated, or jagged Extremity of the Fallopian Tubes of the *Uterus*. But, in Botany, *Morſus Diaboli* is a Name for the *Scabioſa, integrifolia, glabra, radice præmorſa*.

MORSUS GALLINÆ is the *Alſine*. Offic.

MORSUS RANÆ is the *Microleuconymphæa*.

MORTARIOLUM, in Chymiſtry, ſeems to be a ſort of Mold, for faſhioning Cuppels. In Anatomy, the Sockets of the Teeth are thus called.

MORTARIUM. A Mortar. Mortars are uſually made of Wood, Marble, Iron, Braſs, Lead, or Glaſs; but Care muſt be taken not to uſe them indifferently; for acid and corroſive Subſtances will corrode Metals, and, if pounded or rub'd in metal Mortars, will be impregnated with the Qualities of Metal, or be utterly ſpoiled. Thus, alſo, very hard Subſtances will, by rubbing, wear away a Part of Wooden, or even Marble Mortars; and a Medicine will be ſpoiled by having the Raſpings of the Wood, or the Powder of the Stone, mixed with it.

MORTIFICATIO. A Mortification, or Sphacelus. See GANGRÆNA.

MORUM. An Excreſcence on the Surface of the Skin in many Parts of the Body, reſembling a Mulberry. When this happens upon the Eye-lids, the *Arabians* call it *Alchute*.

MORUS.

The Characters are;

The Leaves are rough, and of a roundiſh Form. The Flower is amentaceous, conſiſting of three Stamina, which ariſe from a Calyx, compoſed of four Leaves; in the Centre of the Flower is an aqueous Receptacle, or Cell. The Fruit, which grows at a Diſtance from the Flower, is compoſed of a long Axis, to which grow, on every Side, Eggs, cauſing it to appear as if it conſiſted of a Multitude of little Conglomerations, each of which conſiſts of a ſmall ſucculent Berry, furniſhed with a wreathed Tube, which is ſurrounded with four ſmall Leaves; the Union of a Multitude of theſe conſtitutes the Fruit; the Seeds are of a roundiſh Form.

Boerhaave mentions three Species of this Plant; which are, 1. Morus; fructu nigro. *C. B. P.* 459. *Tourn. Inſt.* 589. *Boerh. Ind. A.* 2. 209. *Morus.* Offic. Ger. 1325. Emac. 1507. *Morus nigra.* J. B. 1. 118. Raii Hiſt. 2. 1429. Park. Parad. 596. *Morus nigra vulgaris.* Park. Theat. 1491. THE MULBERRY-TREE.

The Mulberry-tree grows to be a large tall Tree, with a brown rugged Bark, ſhooting out its Leaves very late in the Spring, when the Winter's Froſts are paſt, which are large, and ſomewhat rough or ſcabrous, broad at the Baſe, and growing narrower towards the End, ſerrated about the Edges, and ſet on ſhort Foot-ſtalks. The Flowers ſtick cloſe to the Branches, each compoſed of four ſmall Leaves, growing in Cluſters. The Fruit is oblong, conſiſting of a great Number of Acini, ſet together in a round Form, of a deep-purple Juice; it grows in Gardens, and the Fruit is ripe in *Auguſt* and *September*. The Bark of the Root, and the Fruit, are uſed.

The Bark of the Root is ſomewhat warm and dry, opens Obſtructions of the Liver and Spleen, and helps the Jaundice. The unripe Fruit is drying and binding, uſeful in all Kinds of Fluxes, and very good for Inflammations in the Mouth and Throat. The ripe Fruit is cooling, and ſomewhat looſening; good to allay the Heat of burning Fevers; it is grateful to the Stomach, and creates an Appetite.

Officinal Preparations are the *Syrupus* and *Mel Mororum*. *Miller's Bot. Off.*

The Fruit of the black Mulberry-tree, called, in the Shops, *Mora Celſi*, while immature, is cooling, dry, and very aſtringent; and is, therefore, proper in Diarrhœas, Dyſenteries, the Cœliac Paſſion, an immoderate Flux of the Menſes, and Spitting of Blood; outwardly they are ſerviceable in Inflammations and Ulcers of the Mouth and Fauces.

The ripe Fruit of the Mulberry-tree, taken in the Beginning of a Repaſt, and before other Food, according to *Dioſcorides*, looſens the Belly; but, eaten laſt, after other Food, is eaſily corrupted, and hurtful to the Stomach. *Pliny* tells us, and what he ſays, is confirmed by Experience, that it is cooling, quenches Thirſt, and excites an Appetite; if it be eaten laſt, it ſwells upon the Stomach, which is, alſo, the Opinion of *Galen*. *Horace*, on the contrary, ſays,

——Ille ſalubres
Æſtates peraget, nigris qui Prandia Moris
Finiet, ante gravem quæ legerat Arbore Solem.

"The Way to paſs the Summer in Health is, to finiſh your "Meals with black Mulberries, gathered before the Heat of the "Day." Others, alſo, will have Mulberries to be grateful and friendly to the Stomach. *Galen* conjectures, that Mulberries participate, in a very ſmall meaſure, of that Property which Cathartics poſſeſs in an high Degree; and that they are hereby qualified not only for an eaſy Secretion, but are, alſo, diſpoſed to corrupt, if retained long in the Belly; and he ſuppoſes the whole Tree, in all its Parts, to be endued with a kind of Virtue compounded of a reſtringent and cathartic Quality. In the Bark of the Root, however, it is certain, that a purgative Quality, with a ſort of Bitterneſs, prevails ſo far as to qualify it for deſtroying the broad Worm.

The Juice of ripe Mulberries is very ſerviceable in ſtomatic Medicines, that is, ſuch as are adapted to the Mouth and Fauces. *Plin. Lib.* 23. *Cap.* 7. gives the following Preſcription of a Medicine of this Kind, which he calls *Panchreſtos Stomatice*, and, alſo *Arteriace:*

Take of Juice of Mulberries, three Pints; evaporate it gently, to the Conſiſtence of Honey; after which take of dry Omphacium, two Drams; of Myrrh and Saffron, each one Dram: Bruiſe them, and mix them together for Decoction.

There is not prepared a more agreeable Remedy for the Mouth, Aſpera Arteria, Uvula, or Stomach; other Ways of preparing a *Stomatice* are preſcribed in the ſame Chapter. A Decoction of the Leaves, either by themſelves, or with the Bark, uſed as a Gargariſm, eaſes the Tooth-ach. *Schroder.* The ſame bruiſed in Oil, or Vinegar, according to *Schwenckf.* and applied, cure Ambuſtions. *Dioſcorides.*

The Syrup of Mulberries, by its grateful Acidity, is very uſeful in Fevers, to extinguiſh Thirſt, and allay the burning Heat; it is of no leſs Service in Inflammations, Puſtules, or Ulcerations of the Mouth, Palate, Uvula, Tonſils, Throat, and Fauces. The Wood is ſerviceable in Works which require Bending, and is of a ſolid Subſtance, and no leſs durable in Water than Oak: It is thought to be eternal, as we are told by *Theophraſtus*, and to grow black with Age, like to *Lotos*. *Raii H. P.*

The

The Fruit, according to *Bartholine*, is very good for the Scurvy, and reckoned among Cardiacs. The *Diamorum* is very proper to be taken in Cases where a Putrefaction, and Alcali, predominate. *Hist. Plant. adscript. Boerhaav.*

2. Morus, Fructu albo. *C. B. P.* 459. *Morus alba.* J. B. 1. 119. *Morus candida.* Dod.

3. Morus, Fructu albo; humilior; profundius laciniata. *C. B. P.* 459.

For the manner of preparing the *Diamoron*, see MEL.

MORXI. The Name of a pestilential Distemper, very common in *Malabar*, and other Parts of the *East Indies.*

MOSA. A sort of Aliment very common in *Germany*, among the Country People, made of the Meal of Wheat, or Spelt, and Milk; and like what we call thicken'd Milk. It is esteem'd a great Error to feed Children too much with this.

MOSCH. According to *Castellus*, a sort of roriferous Vessels, said to be discovered by *Bilsius*, in the Kidneys.

MOSCHATA NUX. See NUX MOSCHATA.

MOSCHATELLINA.

The Characters are;

The End of the Pedicle unfolds itself into a three-lob'd Calyx, expanded like a Star, and not caducous. The Ovary grows out of the Placenta, seated in the Centre of the Pedicle, within the Calyx; and has on its Sides five Tubes; the fifth Ovary on the Apex has, sometimes, four Tubes, and appears quadricapsular, containing four Seeds. The Flowers grow to the Sides of the Calyx, are quinquefid, and furnished with ten Stamina; the fifth Flower, elevated above the rest, is quadrifid, and furnished with eight Stamina. The Flowers and Ovaries, which are always five in Number, are compacted together into the Figure of a Cube, deficient only on its lowest Side.

Boerhaave mentions one Sort of this Plant; which is,

Moschatellina foliis Fumariæ bulbosæ; de quâ Cordus. *J. B.* 3. 206. *Ranunculus nemorosus, Moschatellina dictus.* C. B. P. 178. M. H. 2. 438. *Ranunculus; minimus Septemtrionalium, herbido, mustoso flore, & Muscatella* Cordi. Lob. Ic. 674. *Aristolochiæ rotundæ concavæ similis herbula, Tragi Radix cava minima.* Tab. *Denticulata.* Lugd. 1296. *Boerh. Ind. alt. Plant.*

It is called *Moschatellina*, as a Diminutive from *Moschus*, Musk; that is to say, a small Plant smelling like Musk. The Root of the Plant is resolvent, vulnerary, and detergent. *Hist. Plant. adscript. Boerhaav.*

MOSCHELÆUM. A sort of aromatic compound Oil, in which Musk is an Ingredient.

MOSCHOSITERON, *μοσχοσίτερον.* This Word occurs in *N. Myrepsus, Sect.* 3. *Cap.* 92. *Fuchsius* interprets it Fenugreek.

MOSCHUS. The Animal which produces Musk, is thus distinguished.

ANIMAL MOSCHIFERUM. Offic. Raii Synop. A. 127. *Moschius sive Moschi Capreolus.* Schrod. 5. 301. *Capra Moschus.* Aldrov. de Quad. Bisul. 743. Jonst. de Quad. 55. *Capreolus Moschi.* Ejusd. Tab. 29. Gesn. de Quad. 695. *Capra Mosch, aliis Cervus odoratus.* Charlt. Exer. 10. THE MUSK ANIMAL.

This Animal seems neither to be of the Goat nor of the Hart-kind. The only Part of it in Use is Musk, which is a grumous, pinguious, and unctuous Substance, not unlike grumous Blood, of a blackish rusty Colour, of a somewhat acrid and bitter Taste, of a fragrant grateful Smell, and found in Follicules, situated near the Navel of the Animal: It is of an heating, drying, attenuating, discutient, cordial, alexipharmic, and, consequently, cephalic Quality: It is principally used in Palpitations, and all other Disorders of the Heart, because it cherishes, rouses, and refreshes the vital Spirits. For the same Reason it is, also, used in Disorders of the Head and Nerves, produced either by cold or gross Humours, as, also, in Colics. Externally it deterges Specks of the Eyes, dries up moist Defluxions, proves a Stimulus to Venery, and restores the diminished Hearing.

The Generation of Musk has laid a Foundation for no small Disputes among Authors; some affirming one, and some another thing; for some maintain it to be a purulent and excrementitious Humour, concocted and collected in the Follicule, near the Navel of the Animal: But, according to them, the Animal itself, of a salacious and lascivious Disposition, by rubbing its Belly against Stones and Trees, tears this Follicule, and, by that means, discharges the Humour contained in it, which, being coagulated by the Air and Sun, is concreted into that Substance we call Musk. Others maintain, that the Musk is not evacuated by any Dilaceration of the Follicule, but flows spontaneously through an excretory Duct, allotted for that Purpose. Others affirm, that Musk is only the Follicule of the Animal, cut out after it is killed: And this Opinion is confirmed by our Merchants, who, for the most part, buy the Musk contained in its natural Follicule. Others are of Opinion, that Musk is Blood extravasated, and collected into Apostems, by beating the Animal till Tumors and Abscesses are raised, which being, as it were, by a Ligature constricted into Follicules, are afterwards cut out, and afford the Musk. Others are of Opinion, that all the Parts of the Animal afford Musk. In my Opinion, Musk seems to be an excrementitious Blood, which has undergone various Concoctions and Alterations in its proper Follicule, and is either naturally secreted, and collected by human Industry, or contained in the Follicule of the Animal, when killed at a proper Season: But the crafty and fraudulent Merchants add the Blood, Skins, and other Parts of the Animal to the Musk; and with this Mixture they stuff Bags, made of the Skin, and sell them for true and genuine Musk-follicules: But this Piece of Fraud is easily discover'd by the Skilful, and the Cautious; for that Musk, which, when burned, evaporates, is thought to be genuine; but if, when burned, there remains something like a Coal, it is adulterated. The Curious may, for their farther Satisfaction, consult *Schrockii Historia Moschi. Dale.*

MOSCOLEA. The same as MOSCHELÆUM.

MOSQUITÆ.

Bontius, in his Treatise *de Medicina Indorum*, informs us, that the Eruptions which *Celsus* calls *Papulæ*, and *Pliny*, *Sudamina*, are, in the *Indies*, as common as the Bites of that Species of Insect which the *Portuguese* call *Mosqueta:* These Papulæ are of a reddish Colour, somewhat rough, thrown out upon the Skin by Sweat, for the most part possessing the whole Body, and, at their first Appearance, accompanied with an intolerable Itching, and a perpetual Desire of scratching. Strangers, on their first Arrival, are more exposed to these Eruptions, as, also, to the Bites of the Musquetas, than those who have resided in the Country for some time; so that, by way of Ridicule, a Person labouring under any of these Misfortunes is called *Organ Baron*, which, in their Language, signifies a Man lately arrived: They, also, by way of Reproach, tell him, That the Musquetas and Papulæ demand a kind of Tribute, or Tax, for that Milk and Butter which he has consumed; for those who have resided in that Country for a long time, give themselves the pompous Name of *Orang Lamme*, that is, Veterans. The Papulæ, when expelled by Nature, are only to be ranked among the cutaneous Disorders. But when either these, or the Bites of the Musquetas, are rashly treated, or the Skin torn off by the Nails, they often produce malignant Ulcers, not to be cured without the greatest Difficulty.

Sit neglecta solent incendia sumere vires.

In order, therefore, to remove this troublesome Itching, I cause Water to be mixed with Vinegar, adding a proper Quantity of Nitre, or Sal Prunellæ; and the Body is to be fomented with a Linen Cloth, dipt in this Liquor; or, if a more acrid Preparation is wanted, recent expressed Juice of Lemons is to be added: Though, by this means, an intense Pain is at first produced, yet it soon decreases so far, as to be more tolerable than the troublesome Itching. I, also, advise Physicians and Surgeons by no means to prescribe Purgatives, however mild, in the Papillæ, lest the bilious and acrid Matter, being, by their means, convey'd to the Intestines, should bring on a Dysentery; but, rather, either to leave the Cure to Nature, or assist the Excretion of the peccant Matter by Sudorifics; for, through the Carelessness or Ignorance of some, I have often seen such Misfortunes happen.

MOSYLETICUS BLASTUS. A Name for the Species of Cassia, the third in Goodness. *Oribasius, Med. Collect. Lib.* 12.

MOSYLLON, *μόσυλλον.* An Epithet for the choicest Cinnamon in *Galen. Lib. de Theriac. ad Pison. Cap.* 12.

MOTACILLA. Offic. Schrod. 5. 321. Mer. Pin. 178. *Motacilla alba.* Aldrov. Ornith. 2. 726. Gesn. de Avib. 557. Jonst. de Avib. 86. Charlt. Exer. 96. Schw. A. 386. Raii Ornith. 237. Ejusd. Synop. A. 75. Will. Ornith. 171. *Cnipologus.* Bellon. des Oyse. 356. THE WATER-WAGTAIL.

This Bird is celebrated for its Virtue in wasting the Stone. *Dale.*

MOTELLA. Aldrovandi. *Lota Gallorum.* Jonst. A Fish much like a Lamprey, but somewhat larger, and more round, furnished with small reddish Scales, and marked with black Spots. *Lemery* informs us, that the Spawn injures the Stomach, and excites Gripes; and that the Fat is emollient, and good to remove Specks of the Skin.

MOTOS, *μοτός.* Lint.

MOUL-ELAVOU, *sive Arbor lanigera spinosa*, H. M. *Gossipium arboreum Caule spinoso*, C. B. is a fine, tall, lanigerous, or Cotton-bearing Tree, sometimes no less than fifty Feet in Height, and eighteen in Compass, in the Stem or Trunk.

The Down, or Cotton, serves to stuff Beds and Pillows. The Bark of the Tree pulverized, and with the Juice of Lemons reduced into the Form of a Liniment, mitigates all Kinds of Inflammations, and consolidates Fractures of the Bones: Mixed with burnt Wine of the *Indian* Nut, or Cocoa, it makes a Liniment for the Herpes. Of the Bark of the Root is prepared an excellent Emetic. The sweet Liquor collected in the Bosom of the Flower, exhibited with the Leaves of the Tamarind, potently evacuates watery Humours by Stool and Urine. *Raii Hist. Plant.*

Moul-ila, seu Moul Elavou. H. M. The *Indian* Lemon, with umbellated Flowers, and a small Fruit. The Fruit is round, cover'd with a dark-green, thick, and rugged Rind, of the Colour of Citron-peel, and of the same Taste, only hotter, and more acrimonious, and inclosing an acid juicy Pulp; for which Rea-

son

ſon it ſerves to boil with Food, inſtead of Lemons and Pepper, and is, alſo, thought proper to be preſerved with Sugar, or Honey, as a Strengthener of the Stomach, a Promoter of Digeſtion, and Deſtroyer of Worms; it is, alſo, pickled in Brine and Vinegar; and with an Addition of Garlick, Muſtard, and Ginger, enters the Compoſition of the *Atsjar*. *Raii Hiſt. Plant.*

MOULLAVA, H. M. is a ſiliquous *Indian* Plant, with a yellow pentapetalous Flower, and a ſmooth Pod, containing generally four Seeds: It grows to the Height of eight or nine Feet, and delights in ſandy Places; it is an Evergreen, flouriſhes moſt in a wintry Seaſon, and the Fruit is ripe in *November* and *December*. It is of no medicinal Uſe but only to the *Pollias*, (ſo they call the Poor in thoſe Countries) who receive the Smoke of the Leaves up their Noſtrils, and ſo cure themſelves of the Head-ach and Vertigo. *Raii Hiſt. Plant.*

MOUROUVE. J. de Laet. Ind. Occid. *Lib.* 16. *Cap.* 11.

All we know of this Plant is, that it is not much different from a Plum-tree, bears a yellow Flower, and a Fruit like a Cherry, with a long Pedicle, a ſmall Stone, and a ſaffron-coloured and ſweet Pulp. *Raii Hiſt. Plant.*

MOXA. See ARTEMISIA CHINENSIS.

Moxa is a kind of downy Subſtance, taken from the Leaves of a ſort of *Indian* Mugwort, which is uſed by the *Indian* Nations, as ſomething of the ſame Kind was formerly employ'd by *Hippocrates*, and other antient Phyſicians, in cauterizing Parts afflicted with Pain. Some Moderns highly extolled this Operation, as the moſt effectual Remedy for curing, and even wholly extirpating, the Gout. For this Purpoſe,

Make a Cone of Lint, Tow, Moxa, or a certain Species of Agaric, about a Thumb's-breadth in Height, (ſee *Tab.* XXXIII. *Fig.* 12. at the Letters A and B) like thoſe uſed in a Fumigation: Stick the Baſis of the Cone on the affected Part, with Gum Arabic, or Gum Tragacanth, and fire its Point with a Candle. By theſe means the Cone will be gradually conſumed; the Part will be, by degrees, cauterized; and thence Pains in the Gout will frequently have ſome Remiſſion. If Pain is not removed by the firſt, a new Cone muſt be applied; and the Operation repeated, till the Pain ceaſes.

But, though this Proceſs was for ſome time highly commended in *Europe*, it is now entirely diſuſed, and not without Reaſon; for, beſides the acute Pain produced, it has often little or no Effect. Among the *Chineſe* and *Japoneſe*, however, this Operation and Acupuncture continue in the higheſt Eſteem. Theſe Cauterizations are, alſo, ſaid to be at preſent uſed by the *Arabians*. More may be ſeen on this Head in *Rhynius de Arthritite*, *Cleyerus in Medicina Sinica*, *Purman in Obſerv. Valentini polychreſt. exotic.* in *Kempfer's Amœnit. exotic.* and in his *Hiſtor. Japon. Nat.* and in a particular Diſſertation by Sir *William Temple*.

MUCAGO. Mucilage.

MUCHARUM. A barbarous Word, importing an Infuſion of Roſes, made with warm Water, or ſuch an Infuſion ſweeten'd with Sugar, and reduced to the Conſiſtence of a Syrup.

MUCILAGO. Mucilage. A Mucilage is any viſcid and glutinous Liquor; thus called, perhaps, from the Mucus of the Noſe, which it reſembles in Conſiſtence.

PREPARATION OF MUCILAGES.

For making this we muſt have four Veſſels, either of *Delft* Ware, or of common Earth, varniſhed. In one of theſe we muſt put a Dram and an half of white Gum Tragacanth, bruiſed: In another we muſt put half an Ounce of the Seeds of Pſyllium; in another, three Drams of Quince-ſeeds; and in the fourth, ſix Drams of the Root of Marſhmallows, well cleanſed, cut into ſmall Portions, and bruiſed. Upon the Gum Tragacanth we muſt pour two Ounces and an half of Strawberry-water; and as much of Betony-water: Then we muſt cover the Veſſel, and place it over hot Aſhes, for three or four Hours, or till the Gum is entirely melted, and incorporated with the Water: Then the Matter is to be paſſed through a proper Sierce, and is called the Mucilage of Gum Tragacanth.

MUCILAGE OF FLEAWORT.

On the Seeds of the Pſyllium we muſt pour three Ounces of Strawberry-water, and as much of Betony-water: Then we muſt cover the Veſſel, and allow the Matter to ſtand in Infuſion over warm Aſhes, for eight or ten Hours: Then we muſt boil the Infuſion gently, and ſtrain it by Expreſſion; and this is the Mucilage of Pſyllium.

MUCILAGE OF QUINCES.

On the Quince-ſeeds we muſt pour two Ounces and an half of Betony-water; and as much of that of Strawberries: Then we muſt cover the Veſſel, and leave the Matter in Infuſion, for eight or ten Hours: Then we are to hear the Infuſion, till it is almoſt ready to boil: Then it is to be ſtrained by Expreſſion; and this is the Mucilage of Quinces.

MUCILAGE OF THE ROOTS OF MARSHMALLOWS.

On the Marſhmallow-root pour Betony, and Strawberry-water, of each ſix Ounces: Cover the Veſſel, and leave the Matter in Infuſion, warm, for eight or nine Hours: Then boil to a Diminution of two Thirds; ſtrain the Decoction, expreſſing it ſtrongly: And this is the Mucilage of Marſhmallows. *Lemery Pharmac. Univerſelle.*

MUCILAGO, Mucilage, alſo, imports the Mucilage of the Joints.

This Liquor, which principally ſerves to moiſten the Ligaments and Cartilages of the Articulations, is ſupplied by Glands, which are commonly ſituated in the Joint after ſuch a manner as to be gently preſſed, but not deſtroyed, by its Motion. By this means, when there is the greateſt Neceſſity for this Liquor, that is, when the moſt frequent Motions are performed, the greateſt Quantity of it muſt be ſeparated. Theſe Glands are ſoft and pappy, but not friable; they are moſtly of the conglomerate Kind, or a great Number of ſmall Glandules are wrapt up in one common Membrane. Their excretory Ducts are long, and hang looſe like ſo many Fringes, within the Articulation, which, by its Motion and Preſſure, will prevent Obſtructions in the Body of the Gland itſelf, or its Excretories, and will promote the Return of this Liquor, when fit to be taken up by the abſorbent Veſſels, which muſt be in the Joints as well as in the other Cavities of the Body; and, at the ſame time, the Preſſure on the excretory Ducts hinders a ſuperfluous Secretion, while the fimbriated Diſpoſition of theſe Excretories will not allow any of the ſecreted Liquor to be puſhed back again by theſe Canals towards the Glands, as *Cowper* has juſtly remarked. Beſides theſe congloremate Glands, we meet ſometimes with ſmall ſimple Folliculi, obſerv'd by *Morgagni*, which are full of Liquor.

Upon preſſing theſe Glands with the Finger, we can ſqueeze out of their Excretories a mucilaginous Liquor, which ſomewhat reſembles the White of an Egg, or Serum of the Blood, but is manifeſtly ſalt to the Taſte. It does not coagulate by Heat, as the Serum does, but turns, firſt, thinner, and, when evaporated, leaves only a thin ſalt Film. Different Salts have much the ſame Effect on it as the other Juices of our Body; for Acids coagulate it, and Alcalies attenuate it. The Quantity of this Mucilage, conſtantly ſupplied, muſt be very conſiderable, ſince we ſee what a plentiful troubleſome Diſcharge of Synovia follows a Wound or Ulcer of any Joint, of which Liquor the Mucilage is a conſiderable Part.

The Veſſels which ſupply Liquors for making the Secretion of this Mucilage, are to be ſeen without any Preparation; but, after a tolerable Injection of the Arteries, the Glands are cover'd with them.

In a ſound State we are not conſcious of any Senſibility in thoſe Glands; but, in ſome Caſes, which I have ſeen, when they inflame and ſuppurate, the moſt racking Pain is felt in them: A melancholy, though a ſure Proof of their Nerves.

Theſe mucilaginous Glands are commonly lodged in a cellular Subſtance, which is, alſo, to be obſerv'd in other Parts of the Bag formed by the Ligaments of the Articulation, and contains a pinguious Matter, that muſt neceſſarily be attenuated, and forced through the including Membranes into the Cavity of the Joint, by the Preſſure which it ſuffers from the moving Bones.

If, then, the Oil is conveyed from this cellular Subſtance, and if the attenuated Marrow paſſes from the Cancelli of the Bones by the large Pores, near their Extremities, or in their Cavities, and ſweats through the Cartilages there into the Articulations; which it may, when aſſiſted by the conſtant Heat and Action of the Body, more eaſily do, than when it eſcaped through the compact Subſtance of the Bones in a Skeleton; if, I ſay, this Oil is ſent to a Joint, and is incorporated with the Mucilage, and with the fine Lymph, that is conſtantly ouſing out at the ſmall Arteries diſtributed to the Ligaments, one of the fineſt Liniments imaginable muſt be produced; for the Mucus, diluted by the Lymph, contributes greatly to its Lubricity, and the Oil preſerves it from hardening. How well ſuch a Mixture ſerves the Purpoſe it is deſigned for, *Boyle* tells us he experienced, in working his Air-pump; for the Sucker could be moved with much leſs Force after being moiſtened with Water and Oil, than when he uſed either one or other of theſe Liquors. And, I believe, every one, at firſt View, will allow the diluted Mucilage to be much preferable to ſimple Water. This Synovia, as this Liquor, compoſed of Oil and Mucilage, is commonly called, will, therefore, while in a ſound State, effectually preſerve all the Parts concerned in the Articulations ſoft and flexible, and will make them ſlide equally on each other, by which their mutual Detrition and Overheating may be prevented, in the manner daily practiſed in Coach and Cart-wheels, by beſmearing them with Greaſe and Tar. After this Liquor of the Articulations becomes too thin, and unſerviceable, by being conſtantly

ſtantly pounded, and rubbed between the Bones, it is reaſſumed into the Maſs of Blood, by the proper abſorbent Veſſels, which the Articulations have in common with all the other Cavities of the Body.

When the Synovia is not rubbed betwixt the Bones, it inſpiſſates; and, ſometimes, when the Head of a Bone has been long out of its Cavity, this Liquor fills up the Place of the Bone, and hinders its Reductions; or, if a Joint continues long unmov'd, the Synovia cements the Bones, and occaſions a true Anchyloſis. *Ambroſe Paré* ſays, he has frequently ſeen ſuch Caſes; and *Hildanus* gives a particular Example of it. If the Synovia becomes too acrid, it erodes the Cartilages and Bones, as frequently happens to thoſe who labour under the Lues Venerea, Scurvy, Scrophulæ, or Spina Ventoſa. If this Liquor is ſeparated in too ſmall a Quantity, the Joint, as *Galen* remarks, becomes ſtiff; and when, with Difficulty, it is moved, a crackling Noiſe is heard, as People advanced in Years frequently experience. This Sort of Diſeaſe *Aquapendente* very accurately deſcribes, and rationally accounts for. If the Mucilage and Lymph are depoſited in too great a Quantity, and the abſorbent Veſſels do not their Office ſufficiently, they may occaſion a Dropſy of the Joints, which *Hildanus* has at large treated of. From this ſame Cauſe, alſo, the Ligaments are often ſo much relaxed, as to make the Conjunction of the Bones very weak: Thence ariſe the Luxations from an internal Cauſe, which are eaſily reduced, but difficultly cured; and, frequently, when ſuch a ſuperfluous Quantity of this Liquor is pent up, it becomes very acrid, and occaſions a great Train of bad Symptoms, ſuch as Swelling and Pain of the Joints, long ſinuous Ulcers and Fiſtulas, rotten Bones, Immobility of the Joints, Marcor and Atrophy of the whole Body, hectic Fevers, and ſeveral others. Moſt of theſe Symptoms from the diſeaſed Mucus of the Joints, *Hippocrates* very accurately deſcribes; and *Hildanus* gives the Hiſtories of a great many People labouring under them. *Monro's Oſteology.*

MUCOCARNEUS, in *M. Aurel. Severinus*, is an Epithet for a Tumor, or Abſceſs, which is partly fleſhy, and partly filled with a ſort of Mucus.

MUCOR, is the ſame as Mucus.

MUCOSÆ GLANDULÆ are the Glands diſcovered by *Cowper*, in the Penis, commonly called *Cowper's Glands.*

MUCRO, in Anatomy, is the acute Point of the Heart.

MUCRONATUM OS, or, more properly, MUCRONATA CARTILAGO, is the Enſiform Cartilage.

MUCUITABA & MOCITAIBA *Braſilienſibus.* Marcgrav. *Pyriformis Braſiliana.*

The Name of a large Tree, not unlike a wild Pear-tree, to which I find no medicinal Virtues aſcribed.

MUCUNA GUACU. *Piſon.* The largeſt and moſt beautiful Species of Phaſeolus growing in *Braſil.* It grows on a Tree of the ſame Name. The Pod has a black Shell, almoſt as hard as a Stone, and covered with ſoft yellow Hair, is an Hand's-breadth long, and three Fingers-breadth wide. When broke open, it diſcovers three or four very beautiful globular Beans, divided by Interſtices of a ſcarlet or red Colour, round, ſmooth, and with a large Eye, which, being macerated in Water, are deprived of ſome Part of their noxious Quality; and, being prepared with *Tipioca de Mandihoca*, are eaten by the Natives, ſo that their poiſonous Quality does not ſeem ſo deeply implanted in them by Nature, as not to admit of proper Correctives; for though the interior Subſtance of the Bean, by its Acrimony, and biting Property, vellicating the Viſcera, excites great Perturbations in the Body, and purges violently by Stool and Vomiting, the cooling and demulcent medicinal Aliment, prepared of the *Tipioca*, ſerves as an Antidote, and is, therefore, preferable to other Things employed to correct it. *Raii Hiſt. Plant.*

MUCUS. That viſcid Fluid, which is ſecreted in the Membrana Pituitaria, and diſcharged from the Noſe upon blowing, is thus called.

MUGIL. Offic. Raii Ichth. 274. Ejuſd. Synop. Piſc. 84. Aldrov. de Piſc. Salv. de Aquat. 75. Jonſ. de Piſc. 73. Charlt. de Piſc. 32. *Cephalus.* Rondel. de Piſc. 1. 260. *Cephalus, ſeu Mugil.* Bellon. de Aquat. 210. *Cephalus Rondeletii.* Geſn. de Aquat. 349. THE MULLET.

It is taken in the Sea; the Fleſh is uſed in the Kitchen, and the Part ſerviceable in Medicine is the BOTARGUM; which ſee.

MUGO. A Name for the Mountain-pine.

MUIVA *Braſilienſibus.* Marcgr. A pomiferous Tree of *Braſil*, bearing a round Fruit, with a ſoft Pulp, and a Multitude of very ſmall Acini, or Stones. The Natives care not to eat the Fruit, but leave it to be devoured by the Birds; and I find no medicinal Virtues aſcribed to any Part thereof. *Raii Hiſt. Plant.*

MULÆ. Puſtules contracted either by Heat or Cold.

MULLA. A Name for ſeveral Species of Jeſſamy, one of which is the *Nulla Mulla*, or *Sambac*; for which ſee JASMINUM. Another is the

Hudda Mulla. H. M. *Geſſemicum, vel Jaſminum Catalonicum multiplex.* Park. The Leaves, bruiſed, and fried in Oil, and applied, cure the Bite of a mad Dog. The Root, boiled with Calamus aromaticus, in Water of Rice, reſiſts the Poiſon of Serpents. A third Species is

Tsjeni Mulla. H. M. *Jaſminum Indicum flore albo odoratiſſimo.* A fourth,

Tsjiregam Mulla. H. M. *Jaſminum Indicum, flore polypetalo exalbido, fructu minori.* Of the Leaves of this Species, boiled in Oil, is prepared a Balſam, which, the Head being anointed with it, removes all Affections of the Eyes, and ſtrengthens the Sight. The Powder thereof, mixed with Fat and Saffron, cures Itchings of the Skin, being anointed therewith. A fifth Species is the

Catu Pitsjegam Mulla. H. M. *Jaſminum Indicum, flore polypetalo, candido, ovis rufeſcentibus.* A ſixth is the

Katu Tsjiregam Mulla. H. M. *Jaſminum Indicum, flore polypetalo, candidiſſimo, fructu majore.* The Leaves, boiled in Oil, cure Diſeaſes of the Eyes. The Root, exhibited with Calamus aromaticus, is an excellent Remedy for the Bites all Kinds of Serpents. The laſt Species is the

Katu Mulla. H. M. *Jaſminum Indicum, flore pentapetalo candidiſſimo, fructu Tsjiregam Mulla.* The Juice of the Leaves is of Service in boiling of Oil, and of no other Uſe. *Raii Hiſt. Plant.*

MULLUS. Offic. Bellon. de Aquat. 276. Schonef. Ichth. 47. Raii Ichth. 285. Ejuſd. Synop. Piſc. 90. *Mullus minor.* Salv. de Aquat. 236. *Mullus Geſneri.* Aldrov. de Piſc. 131. *Mullus Barbatus.* Rondel. de Piſc. 1. 290. Jonſ. de Piſc. 39. *Mullus Barbatus Rondeletii.* Geſn. de Aquat. 565. *Mullus Barbatus minor.* Charlt. de Piſc. 18. THE LESSER MULLET.

This Fiſh, frequently eaten, is thought to procure Dimneſs of Sight; being cut open, and apply'd raw, it cures the Bites of the Sea-dragon, the Scorpion, and the Spider. *Dioſcorides, Lib. 2. Cap. 24.*

MULSUM, generally, is us'd to expreſs Hydromel; but ſometimes imports Wine mix'd with Honey.

MULTIPEDÆ, the ſame as MILLEPEDES.

MULTISILIQUOUS Plants are ſuch as have, after each Flower, many diſtinct, long, ſlender, and, many times, crooked Caſes, or Siliquæ, in which their Seed is contain'd; and which, when they ripen, open of themſelves, and let the Seeds drop. Of this Kind is the Bear's-foot, Columbines, common Houſleek, Navelwort, Orpine, and the like.

MULUS. Offic. Schrod. 5. 302. Aldrov. de Quad. 358. Geſn. de Quad. 702. Charlt. Exer. 4. Mer. Pin. 166. Jonſ. de Quad. 15. Schw. Quad. 62. Raii Synop. A. 64. THE MULE.

This is an Animal got by an Aſs upon a Mare. The Hoof, Urine, and Dung, are us'd in Medicine. The Hoof, us'd as a Suffumigation, is ſaid to check too profuſe menſtrual Diſcharges; burnt and taken internally, it is reported to cauſe Barrenneſs, and in an Ointment, to cure an *Alopecia.* The Urine, together with its Sediment, is recommended as a Cure for Corns. The Dung ſtops Hæmorrhages of the Womb, and is good for a Dyſentery, and Pains of the Spleen. *Dale* from *Schroder.*

MUMIA. *Mummy.* See AMBRA.

There are two kinds of Mummy; the firſt of which has its Original from human Carcaſes, dry'd by the Sun and Sands in the Deſarts of *Africa*, ſuch as thoſe of *Zara, Libya*, &c. where the Winds ſometimes bury whole Caravans in the Sands. Theſe Bodies, by drying, become of the Conſiſtence of Horn, and very light. Theſe are called white Mummies, but are not us'd in Medicine. The ſecond Sort are the embalmed Bodies found in *Egypt*, which are very rare, and ſeldom to be met with among the Druggiſts; in place of which they ſell us Parts of Bodies embalmed with Myrrh, Aloes, and Incenſe, *&c.* by the *Jews.* This Mummy is reckoned a good Reſolvent of coagulated Blood, after Falls or Blows, and a good Antiſeptic; acting not only by its bituminous and balſamic Parts, but, alſo, by the volatile Salts of the Carcaſe, from which it is made. By diſſolving it in Spirit of Wine, we eaſily obtain a Tincture which contains its balſamic Qualities. *Geoffroy.*

But Mumia has been apply'd by *Paracelſus, Helmont*, and the Chymiſts, to other things, both real, and imaginary. Thus *Mumia Medullæ* is the Marrow of the Bones; *Mumia Elementorum* is defined the Balſam of the external Elements, and *Mumia Tranſmarina* is *Manna. Mumia*, alſo, imports a Water collected in a Phial from the Breath of a Man received therein, after waſhing his Mouth with Water. *Mumia* has, farther, a very ſingular Signification, being defined, An extremely ſubtile, ſpirituous, and ætherial Subſtance, innate in every Body, and remaining therein, in ſome meaſure, after Death, and capable of correcting its own morbid Diſpoſition, and that of other Bodies; and of preſerving and confirming a ſound State.

MUNDATIO. Purification, or Depuration.

MUNDIFICATIVA. Cleanſing, purifying, or deterging Medicines.

The *Mundificativum ex Apio* is deſcrib'd under the Article APIUM.

The *Mundificativum Paracelſi* is thus directed.

Take

Take of Turpentine and Honey, each half a Pound, and the Yolks of four Eggs: Boil these to the Consistence of an Ointment, adding to every Ounce, a Dram of red Precipitate of Mercury.

MUNDUBI *Brasilienſibus*. Marggr. *Aracus ὀτόγας, Americanus*. Park. A Species of *Indian Aracus*; the Seeds of which, eaten in too large Quantities, are said to excite a Pain in the Head.

MUNDUY GUACU. A Name for the *Ricinoides*; *Americana*; *folio Goſſypii*.

MUNGO. A Name for the PHASEOLUS, OCTOCAULIS.

MUNTINGIA.

The Characters are;

It hath a Rose-shap'd Flower, consisting of several Leaves, which are placed in a circular Order, from whose Cup arises the Pointal, which afterwards becomes a globular, soft, fleshy, umbilicated Fruit, in which are contained many small Seeds.

Miller mentions three Sorts of this Plant; which are,

1. Muntingia folio sericeo, molli fructu majori. *Plum. Nov. Gen.*

2. Muntingia folio Ulmi aspero, fructu minimo glomerato. *Plum. Nov. Gen.*

3. Muntingia folio Corni, fructu minore. *Plum. Nov. Gen.*

These Plants, all of them, grow in *Jamaica*, and several other Parts of *America*. They were discovered by Father *Plumier*, who gave them the Name from Dr. *Muntingius*, who was Professor of Botany, at *Groningen* in *Holland*, so that we have no *English* Name for them. *Miller's Dictionary*, *Vol.* 2.

MURÆNA. The Lamprey. See LAMPETRA.

MURALIS HERBA. Pellitory of the Wall. See PARIETARIA.

MURECI. The Name of a bacciferous Tree, which grows in *Brasil*, whose Fruit is like the Gooseberry, of which the *Indians*, in *Brasil*, made cathartic Potions. *Raii Hist. Plant.*

MUREX. A Species of Purple Fish. The Fish is said to be aperitive; and the Shell is us'd as an Absorbent, when reduced to Powder.

MURIA, Brine, produces the same Effects with Salt, and is of an abstergent Quality. It is successfully used by way of Clyster, in dysenteric Patients, whose Intestines are corroded. It is, also, properly used in the same manner against sciatic Pains of long Standing. In Fomentations, it may be used as a Succedaneum for Sea-water. *Dioscorid. Lib.* 5. *Cap.* 128.

Brine is used, in Surgery, as a Fomentation in Inflammations, and Gangrenes. Hence, an Acrimony in the Juices, resembling that of Brine, is call'd a *Muriatic Acrimony*.

MURMENTUM. A Name for the MUS ALPINUS. *Rulandus*.

MURRHA. A Name for the Chalcedony.

MURUCUGIFERA ARBOR. De Laet. The Name of a very tall Tree, which grows in *Brasil*, like the wild Pear-tree.

MURUCUIA. A Name for the *Granadilla*; *pentaphyllos*; *flore cæruleo*, *magno*; and for the *Granadilla*; *Hispanis*; *flos Passionii Italis*.

MUS. Offic. Gesn. de Quad. Digit. 714. Charlt. Exer. 25. *Mus domesticus*. Schrod. 5. 303. Mer. Pin. 167. Jonst. de Quad. 115. *Mus domesticus minor*. Aldrov. de Quad. Digit. 417. Schw. de Quad. 114. *Mus domesticus vulgaris seu minor*. Raii Synop. A. 218. THE MOUSE.

The whole Animal, and its Dung, are used in Medicine. The Mouse, cut up alive, and apply'd, draws out Splinters, Darts, and Arrows, and cures the Bites of Scorpions, extracting the Poison; the Ashes cure the involuntary, or nocturnal Flux of Urine; the Dung purges Infants by Stool, is used in Clysters, cures an Alopecia, absterges Scurf from the Head, diminishes Stones in the Kidneys or Bladder, and removes a Condyloma, Verruca, Ficus, Marisca, and the like Tumors affecting the Anus. *Dale* from *Schroder*.

MUS ALPINUS. Offic. Schrod. 5. 303. Aldrov. de Quad. Digit. 445. Gesn. de Quad. Digit. 743. Jonst. de Quad. 117. *Mus Alpinus*, *Marmota*. Charlt. Exer. 19. *Mus Alpinus Plinii*, *Marmota Italis*. Raii Synop. A. 221. THE MOUNTAIN MOUSE.

It lives in the highest Parts of the *Alps*, and the Fat is used, being recommended in nervous Affections, and for Stiffness and Contractions of the Joints. *Schroder*.

MUS ARANEUS. Offic. Schrod. 5. 303. Raii Synop. A. 239. Aldrov. de Quad. Digit. 441. Charlt. Exer. 25. Gesn. de Quad. Digit. 747. Jonst. de Quad. 116. Schw. Quad. 114. Mer. Pin. 167. THE ERD-SHREW, HARDY-SHREW, or SHREW-MOUSE.

It is an Inhabitant of the Fields, and has been found by Experience to be peculiarly serviceable in Affections of the Anus, being burnt, and apply'd with the Fat of a Goose. *Dale*.

MUS MAJOR. Offic. *Mus domesticus major*. Schw. Quad. 115. *Mus major*, *sive Sorex*. Mer. Pin. 167. Jonst. de Quad. 115. Ald. de Quad. Digit. 417. *Mus major*, *Rattus*. Schrod. 5. 303. *Mus domesticus major sive Rattus*. Raii Synop. A. 217. *Sorex domesticus*. Charlt. Exer. 25. THE RAT.

The Part in Use is the Dung; nine Pieces of Rat's-dung, swallowed, are accounted, by some of our good Women, a singular Remedy for a Suppression of the Menses. *Dale* from *Platerus*.

MUSA.

The Characters are;

The Root sends forth Shoots, while the Stalk, after producing its Fruit, decays. The Stalk is like a Reed, without Branches, but running into very large Leaves, which are first convolved, as in the *Cannacorus*, and afterwards expanded in the Form of a Circle at the Top of the Stalk. The Flowers and Fruit are dispos'd in Clusters, and inclosed in Sheaths, as in the Palma, or Date-tree; the Flower is polypetalous, anomalous, and grows on the Apex of the Ovary. The Ovary is like that of a Cucumber, soft, tricapsular, esculent, full of Seeds, and furnished with a long Tube, which has a globular Apex.

Boerhaave mentions two Species of this Tree; which are,

1. Musa; fructu cucumerino, longiori. *Boerh. Ind. A.* 2. 171. *Musa*. Offic. *Musa Serapionis*. Ger. 1332. Emac. 1515. *Musa Arbor*. J. B. 1. 148. Park. Theat. 1495. Raii Hist. 2. 1314. *Muza ex flore Sinensi*. Jonst. D. Icon. 470. *Mauz*, *Musa*. Alpin. Ægypt. 78. *Palma humilis longis latisque foliis*. C. B. P. 508. *Ficus Indica racemosa*, *foliis & fructu amplissimis*, *Musa Arabibus dicta*. Pluk. Almag. 145. *Bala*. Hort. Mal. 1. 17. Tab. 12. &c. *Banana*. Pis. (Ed. 1648.) 75. THE PLANTAIN-TREE.

It grows in both *Indies*, and the Fruit is used, which is very nourishing, provokes Urine, and stimulates to Venery.

Musa is the *Arabic* Name for this Plant, which by *Pliny*, as we suppose, is called *Pala*, from the Word *Bala*, which is the Name by which it is known to the *Malabarians* at this Day. Tho' all Botanists reckon it among Trees, it hardly deserves the Name of a Shrub, much less of a Tree, since it has an annual Stalk. By *Oviedus*, and others, it is called *Platanus*; whence comes our *English* Name, the Plantain-tree; unless we should rather think it was so called from its Resemblance to Plantain, in its ribbed and fibrous Leaves.

The Fruit is esteemed delicious Food; and, they say, was never known to create any Disorder, tho' eaten never so freely. *Linschooten* says, that it has a sweet Taste like Flour and Butter mixed together; and, therefore, may supply the Place of Bread and Milk-meats, with a simple kind of Diet, by which the human Body may be supported without any other Food.

As to its Virtues, *Alpinus* speaks thus: The Fruit is of a soft, viscid, fat, and sweet Substance, extremely grateful to those who use to eat it, and very nourishing, but burdensome to the Stomach, difficult of Digestion, and generates a thick and viscid Juice, which causes Obstructions of the Viscera, and especially of the Liver; it is, however, beneficial in a Cough, and an Asthma proceeding from Heat. The *Egyptians* use the Decoction with good Success in a Cough, excited by a Distillation of hot Humours, and for Inflammations of the Pleura, Lungs and Kidneys, and for a Dysury; it is, also, said to stimulate to Venery, eaten raw or boiled.

The Authors of the *Hortus Malabaricus* tell us, that the Root bruised, and taken in Milk, cures the Vertigo; that the Water of it, mixed with Sugar, is drank with good Success, for a burning Heat of the Kidneys, and for Pains excited by the Urine; and relieves those whose Bodies have been infected with Quicksilver. The Pith of the Tree, or the whitish medullary Substance, which bears the Fruit, being bruised, and taken inwardly with Honey, is good for Affections of the Eyes, as is also Butter, in which Slices of the Fruit have been fry'd.

It grows in all Parts of the *East* and *West Indies*, and also in *Africa*. The *Ficus Indica* of *Linschooten* I take to be only a Variety, not a Species, of the *Musa*; for it appears to be the same with that described by the Authors of the *Hortus Malabaricus*, both from the Synonyma, and the Place where it grows; for the *Malabarians*, he says, calls it *Palan*, and those of *Bengal*, *Quelli*, which are Names much like the *Bala* of the *Hortus Malabaricus*, and *Keli*. Among the Species, also, or Varieties, I find one, both in the *Hortus Malabaricus*, and in *Linschooten*, called *Cadalin*.

The Leaves, which are an Ell long, and three Spans broad, or, according to *Lerius*, six Feet long and two broad, equal in Dimensions to those of the *Lapathum Aquaticum*, supply the *Indians* at *Goa* with much useful Furniture for their Houses, and the *Turks* make use of them instead of Paper; a Shoot is often loaded with a hundred Plantains, cluster'd together like Grapes; and the Branches, from whence they hang, often grow to such a Bigness, that, when lopped off with the Fruit, they can hardly be carry'd upon a Pole between two Porters. The Plant bears Fruit all the Year, and supplies the *Indians* with Provision every Day. *Raii H. P.*

The Leaves of the *East Indian* Plantain-tree are sometimes so large, that a Man may cover his whole Body with one of them, and are said to be those with which *Adam* and *Eve* cover'd their Nakedness; which seems more probable, than that they should make use of the Leaves of the common Fig-tree for that Purpose, as represented by the Painters. The whole Stem or Trunk of the Plant consists of Leaves placed one upon another,

another, almoſt like thoſe of the Palm-tree. *Hiſt. Plant. adſcript. Boerhaav.*

2. Muſa; caudice maculato; fructu recto, rotundo, breviore odorato. *Sloan.* 192. *Boerh. Ind. alt. Plant. Vol.* 2.

MUSADI. Sal Ammoniac.

MUSARIUM *Collyrium.* The Name of a *Collyrium* deſcrib'd by *Trallian*, *L.* 2. *C.* 10.

MUSCA. Offic. Schrod. 5. 344. Aldrov. de Inſect. 342. *Muſca carnaria vulgaris*, Raii Inſect. 270. *Muſca carnivora, in macellis uſitata.* Mer. Pin. 199. THE FLY.

There are various Species of Flies, but the common Sort are moſt generally us'd, and theſe prevent a Falling off of the Hairs. *Schrod.*

MUSCARI. *Muſk or Grape Hyacinth.*

The Characters are;

It hath a bulbous Root; the Leaves are long and narrow, the Flower is hermaphroditical, conſiſting of one Leaf, and ſhap'd like a Pitcher, and cut at Top into ſix Segments, which are reflex'd; the Ovary becomes a triangular Fruit, divided into three Cells, which are full of round Seeds.

Boerhaave mentions twelve Species of this Plant, none of which have any medicinal Virtues aſcrib'd to them, that I know of, except the firſt, which is the *Muſcari*; *obſoletiore flore, ex purpurâ virente*; for which ſee BULBUS VOMITORIUS.

MUSCATELLA. A Name for the MOSCHATELLINA.

MUSCERDA. Mouſe-dung. See MUS.

MUSCIPETA. The Name of a ſmall Bird, remarkable for little beſides deſtroying Flies. 'Tis, however, ſaid to be aperitive and reſolvent.

MUSCIPULA. See LYCHNIS.

MUSCO-FUNGO. A Name for ſeveral ſorts of LYCHNIS.

MUSCOSÆ GLANDULÆ. Some of the conglobate Glands are thus call'd, to diſtinguiſh them from the conglomerate Glands, which are call'd *Glandulæ Vaſculoſæ. Caſtellus.*

MUSCULUS. A Muſcle.

All the Motions of the human Body, whether general or particular, whether natural or preternatural, are immediately performed by Organs which Anatomiſts name Muſcles; and theſe are found in all the moveable Parts of the Body. I do not here ſpeak of Motions cauſed merely by the Elaſticity of certain Parts, by certain Impulſes, or by the Force of Gravity.

The Muſcles, in general, are Bundles of Fibres of different Figures and Sizes, and, for the moſt part, conſiſting of two different Portions; one of which is thick, ſoft, more or leſs red, and ſometimes pale, forming what is called the Body, fleſhy Subſtance, or Belly of the Muſcle. The other is thin and ſmall, of a cloſe Contexture, and very white, forming the Extremities, and other Parts termed by Anatomiſts, Tendons or Aponeuroſes. The fleſhy Portion is the principal and eſſential Part of the Muſcle, being never wanting; but the tendinous or aponeurotic Portion is in ſome Muſcles ſo very ſmall, as to be inviſible. Both Portions are covered by a particular Membrane.

The Antients, who compared a Muſcle to a Rat, or other Animal, flayed, divided it into the Head, Belly, and Tail; but the Moderns, finding this Compariſon very lame and faulty, have left off the Uſe of all theſe Terms, except that of Belly; and, inſtead of the other two, they uſe thoſe of Beginning, or Origin, and Inſertion. Some of the lateſt Authors think it moſt proper to call one End of the Muſcle, the fixed Point, or Fulcrum, the other the moveable Point.

All theſe Terms, whether old or new, tend to miſlead us, and that of Fulcrum is without Foundation. The beſt and moſt ſimple Diviſion of a Muſcle is into the Body or fleſhy Portion, which, in ſome Muſcles, may be termed the Belly, and the Extremities, whether tendinous, aponeurotic, or fleſhy.

The Fibres of which a Muſcle is made up, go by the general Name of moving Fibres; and each of them, as well as the whole Muſcle, is partly tendinous, and partly fleſhy. They are, for the moſt part, ranked in Faſciculi, in a lateral Situation, with reſpect to each other, and diſtinguiſhed by membranous, cellular, or adipoſe Septa, as by ſo many particular Vaginæ.

Theſe Fibres are connected to each other, and to the intermediate Septa, by a great Number of very ſmall, fine Filaments, the capillary Extremities of Arteries, Veins, and Nerves running over them, and they are incloſed in a thin, membranous, cellular Covering, called the proper Membrane of the Muſcle, being a Continuation of the Septa or Vaginæ already mentioned.

All theſe Septa or Vaginæ communicate with each other by a mutual and reciprocal Continuation of their cellulous Texture, and they are bound down tranſverſely by filamentous or fibrous Pellicles, which croſs them at ſmall Diſtances from one another, and lie nearly in the ſame Direction through the whole Body of the Muſcle. The ſame ſort of Frænæ are obſervable between the moving Fibres, which connect them together, and appear to be, in ſome meaſure, nervous.

The particular Structure of each moving Fibre is not as yet ſufficiently known. They may all be divided into ſeveral ſmaller Fibrillæ; and the Subſtance of their fleſhy Portion is believed by ſome to be cellulous, and by ſome to be veſicular, and by others to be ſpongy or medullary. Some of the Antients imagined this Portion to be hollow, and that it contained a ſort of Pulp called by them Tomentum, more or leſs ſaturated with Blood.

When we examine a moving Figure through the beſt Microſcopes, both the fleſhy and tendinous Parts appear contorted, but the latter not ſo much as the former. Having injected any coloured penetrating Liquor, we may, by the Help of an ordinary Microſcope, diſcover a very fine and cloſe vaſcular Net-work, which inſinuates itſelf between all the Fibres, covering or being twiſted round them, and likewiſe ſpread on the Septa.

The fleſhy Portion may be contracted or ſhortened, and relaxed or elongated. The tendinous Portion yields but very little, reſiſting any Force tending to prolong it, except it be ſo violent as to diſorder its Texture.

The Diſpoſition of the moving Fibres is different in different Muſcles, and their tendinous and fleſhy Portions do not always lie in the ſame ſtreight Line, but make oppoſite Angles with each other. In ſome Muſcles, the fleſhly Portion is not all of the ſame Length, in others it is nearly equal, but the Fibres unequally and gradually diſpoſed at the Sides of each other, forming all together an oblique Plane.

Some are diſpoſed like Radii, others form Planes more or leſs incurvated; and ſome form complete Circumferences, the two Extremities meeting and uniting together.

The tendinous Portions, being only the Supplement of the whole Length of the Muſcle, may be of equal or unequal Lengths, according to the Diſpoſition of their Inſertions. They may be very ſhort at one End of the Muſcle, and very long at the other. When the fleſhy Plane is partly oblique, they vary gradually in Length; and, when that Obliquity is reciprocal at both Ends, in form of a Lozenge, the tendinous Portions are alternately long and ſhort.

In ſome Muſcles each moving Fibre is nearly of the ſame Length with the Body or Belly of the Muſcle; in others the fleſhy Fibres are very ſhort, though the Body of the Muſcle formed by them be very long. In the firſt Kind, the Fibres run more or leſs ſtreight from one End to the other, and are never very numerous. In the ſecond, they are ſituated obliquely, and are conſequently in great Numbers; ſo that the Length of each Fibre is not always to be meaſured by that of the Body of the Muſcle to which it belongs.

Theſe different Portions of Fibres are not equally to be met with in all Muſcles. Some have two or more Tendons, ſome only one, but of different Lengths; others have none at all, or at leaſt none that can be perceived.

But there is no Muſcle without a fleſhy Portion, which alone being capable of Contraction is abſolutely neceſſary; whereas the Tendons in many Places are only Productions, by which the Muſcles are fixed to Parts at a Diſtance from them.

Many Muſcles are obſerved to be covered by an aponeurotic Expanſion of different Degrees of Strength and Size, which ſeems to ariſe from one or more of the neighbouring Tendons. In proportion as it is extended it grows thinner, and then loſes itſelf in the cellular Membrane, called formerly the common Membrane of the Muſcles.

There are likewiſe ſtrong ligamentary Membranes of another Kind, by which many Muſcles are covered, as by a Girth, and which may be termed broad or ligamentary Bands or Coverings. They are made up of ſeveral Planes of ſtrong white ſhining Fibres, croſſing each other; and they are ſtrongly fixed along one or more Bones, almoſt in the ſame manner as the interoſſeous Ligaments of the Fore-arm and Leg. They furniſh Septa or common Vaginæ to the Muſcles, which they cover, and likewiſe particular Vaginæ to the Tendons, thinner than thoſe of the fleſhy Portions.

Theſe common Bands and Vaginæ ſerve to gird and confine the Muſcles, and to keep them in their Places in great Efforts. They likewiſe, in ſome meaſure, ſupply the Place of Tendons, and multiply the Inſertions. The looſe Portions of theſe Membranes are lined on the Inſide with other very fine Membranes which are continually moiſtened by a mucilaginous Liquor, to preſerve the Muſcles and Tendons contiguous to them, from Friction.

Beſides theſe Bands and Septa, there are other ligamentary Frænæ peculiar to the long Tendons, called by the Name of annular Ligaments; the general Deſcription of which ſee under LIGAMENTA.

The Difference of Muſcles is very conſiderable, and depends on many Circumſtances, the principal of which are the Size, Figure, Direction, Situation, Structure, Connection, and Uſe; and it is from theſe Differences that the Names of the greateſt Part of the Muſcles are taken. From their Size they are termed Great, Middle, Small, Long, Broad, Thin; from their Figure, Triangular, Scalenous, Square, Rhomboidal, Indented, Orbicular, Deltoide; from their Direction, Streight, Obliique, Tranſverſe; from their Situation, Superior, Inferior, External, Internal, Anterior, Poſterior, Right, and Left. Theſe four Differences, and the Names derived from them, are eaſily comprehended

hended; but what relates to the other three, requires a little further Explication,

As to their Structure, Muſcles are either ſimple, or compound. Simple Muſcles are thoſe whoſe fleſhy Fibres, or rather the fleſhy Portions of their moving Fibres, are all uniformly diſpoſed, and terminate in Tendons, lying either in a ſtraight, or an oblique Line, in the manner already explained.

Compound Muſcles are thoſe whoſe fleſhy Fibres are diſpos'd obliquely, in ſeveral particular Ranks, repreſenting the ſame Number of ſimple Muſcles, with their Fibres lying in oppoſite Directions. In proportion to the Number of theſe Ranks, or Series, the Muſcle is ſaid to be more or leſs compounded.

When the compound Muſcle is made up of two ſimple Muſcles only, theſe are ſo diſpoſed as to repreſent a Feather, and the compound Muſcle is from thence termed Penniform. In ſome of theſe Muſcles one of the Tendons appears to be ſlit or divided, in order to contain the fleſhy Portion between its two Parts, while the other runs through the Body of the Muſcle, diminiſhing gradually in Size as it advances, in the ſame manner as we ſee in a Feather. In others, there is only one middle Tendon between the Series of fleſhy Fibres, which are, by their other Extremity, fixed to other Parts. In more compound Muſcles, the Tendons at one Extremity may all unite together, while thoſe at the other remain divided.

But there are ſtill other Kinds of compound Muſcles. Some are made up of two, placed Endwiſe, and joined together by a common Tendon; ſo that this Tendon, the two Muſcles and the two Tendons at their Extremities, lie all in a Line, and form the whole Length or Extent of the compound Muſcle, which is termed Digaſtricus, or Biventris; and, if three Muſcles be thus joined, the Compound is called Trigaſtricus.

Some are made up of two Muſcles, more or leſs, in a lateral Situation with reſpect to each other, and united at one Extremity; others are made up of three or four Muſcles, ſituated in the ſame manner; and, if they are united to that Extremity which the Antients call the Head of the Muſcle, they are call'd Bicipites, Tricipites, *&c.* according to the Number of theſe Heads; but, if they are joined at the other Extremity, they are called Bicornes, Tricornes, *&c.*

The Muſcles are fixed, by their Extremities, to different Parts, and in different Places, of the human Body. The greateſt Part of them are inſerted in Bones alone. Some are fixed partly to Bones, and partly to Cartilages, as thoſe of the Ear and Noſe; ſome partly to Bones, and partly to the Integuments, as ſeveral Muſcles of the Face, which may, therefore, be termed Semicutaneous, in Imitation of thoſe in Brutes, which, being inſerted in the Integuments alone, are from thence term'd Cutaneous. In ſome the Fibres make an entire Circle, without terminating any-where by their Extremities. Of this Kind are ſeveral of thoſe called Sphincters, to which may be added the Heart, Stomach, and Inteſtines. All the Muſcles have, likewiſe, a ſort of Connection with the neighbouring Parts; but this is only lateral by means of Membranes.

The Names taken from the Connections and Inſertions of Muſcles are generally of two Kinds; one Common, and referred to ſome conſiderable Part of the Body, as when we ſay, the Muſcles of the Head, of the Thorax, Abdomen, Arm, Leg, Eye, Lips, and the like; the other Proper, ſpecifying more particularly the Inſertion of each Muſcle, as the Maſtoideus, Sterno-maſtoideus, Coraco-brachialis, Anconeus, Peroneus, and the like. Some Names have no Relation to the Inſertions, as thoſe of Ulnaris and Radialis, which are given to Muſcles which lie upon the Ulna and Radius, without being inſerted in either Bone.

The Names of the firſt Kind relate more to the Uſes of Muſcles, than to their Inſertions; and are, for the moſt part, ill founded, and ready to miſlead us; the Names of the ſecond Kind are inſtructive; and thoſe of the third are tolerable.

The general Uſe of the Muſcles is to move all the Parts of the Body, whether hard, ſoft, or fluid. Moſt of the hard and ſoft Parts are moved by theſe Powers being fixed to them; and they move the reſt, without any ſuch Inſertion.

The Muſcles, fixed by both Extremities to hard Parts reciprocally moveable, may accordingly move either Part: Thus the Muſcles inſerted by one Extremity to the Os Humeri, and by the other to the Ulna, may move the Ulna upon the Os Humeri, and the Os Humeri upon the Ulna.

Muſcles, fixed by one Extremity to hard Parts, and, by the other, to ſoft Parts, cannot perform theſe reciprocal Motions; becauſe, in this Caſe, the hard Parts muſt remain immoveable, the ſoft Parts only being moved, as in the Muſcles of the Ball of the Eye, and thoſe of the Lips.

The Fluids, of whatever Nature or Conſiſtence they be, are moved, in ſome Caſes, by being immediately puſhed or projected by the Muſcles, as we ſee in the Heart; in others, by the Canals being preſſed upon, as in the oblique and tranſverſe Muſcles of the Abdomen. And there are other Muſcles, which ſtop or retard the Motion of the Fluids at one time, and facilitate or accelerate it at another, as all the Sphincters.

The Uſe of each Muſcle in particular is confined to the Motion of one or more moveable Parts. Some Parts require a certain Number of Muſcles to move them, whereof ſome act one Way, and ſome another. Several Muſcles, for Inſtance, move the Os Humeri upon the Scapula; and of theſe ſome raiſe, others depreſs it; ſome turn it forward, ſome backward, and others round upon its Axis. In like manner, the fore Arm is moved upon the Os Humeri by certain Muſcles, whereof ſome extend, and others bend it.

The general Enumeration of the Muſcles of the human Body, which is commonly made, is founded on their ſuppoſed particular Uſes. We meet with Liſts of the Muſcles of the Head, of the Thorax, Abdomen, Extremities, Eye, Noſe, Lips, and the like; and to the different Muſcles, ſaid to belong to each Part, Names are given, ſpecifying ſome determinate Uſe, ſuch as Raiſers, Depreſſors, Adductors, Abductors, Flexors, Extenſors, *&c.*

This Method of diſtributing and naming Muſcles is very well ſuited to the Memory, and may be retained for thoſe which are not entirely, or are not at all, fixed to Bones. But, with reſpect to thoſe Muſcles which are inſerted in Bones alone, this Way of talking is very capable of miſleading Beginners, of begetting falſe Ideas, of obſtructing the Progreſs of Knowledge, and even of making able Philoſophers, Phyſicians, and Surgeons, fall into conſiderable Miſtakes.

When ſeveral concur nearly in the ſame Motions, they are termed Congeneres; thoſe which act in oppoſite Directions, are relatively and alternately called Antagoniſts. Thus all the Muſcles which extend or bend the fore Arms are Congeneres; and thoſe which extend it are Antagoniſts to the Flexors, and theſe again reciprocally Antagoniſts to the Extenſors.

There muſt, at leaſt, be two Muſcles, to intitle them to the Name of Congeneres; but that of Antagoniſt may be given to one Muſcle, as well as to ſeveral. Many Muſcles contribute to the ſame Motion without being Congeneres, where, by acting in an oblique Direction, they produce a third Motion, which is direct and determinate. This is termed a combined Motion, and may be ſucceſſively continued in different Directions, as that of the Arm in turning a Sling, or the Handle of any heavy Machine. Laſtly, when all the Antagoniſts on every Side, or all the Muſcles that move a Part, act equally, and keep the Part fixed in a middle Direction between all the Motions of which it is capable, they are ſaid to be in a Tonic Motion.

To move any Part, or to keep it in a determinate Situation, all the Muſcles belonging to it muſt co-operate, ſome of them drawing the Part directly to the Situation or Attitude deſigned; ſome moderating this firſt Motion, by acting in a contrary Direction; and others directing it laterally. The firſt Kind of theſe Muſcles I call Principal Movers; the ſecond, Moderators; and the third, Directors.

All theſe Kinds are to be found in the Articulations by Enarthroſis, and in many of thoſe by Arthrodia. The Director Muſcles are wanting in thoſe by Gynglymus, being there unneceſſary. The Moderators in general are the ſame with thoſe termed Antagoniſts, and the Want of their Action is, in many Places, ſupplied by the Weight of the Part to which they are fixed, or by the additional Weight, or Reſiſtance, of ſome other Body.

The Action of the Muſcles in general, or, to ſpeak more properly, the Mechaniſm of this Action, conſiſts chiefly in the Contraction or Shortening of their fleſhy Portion; by which the Extremities of the Muſcle are brought nearer to each other, and, conſequently, the Parts are moved to which theſe Extremities are fixed. It is, I ſay, the fleſhy Portion alone, which is ſhortened; the Tendons retain always the ſame Length, and only follow the Motions of the other Parts, much in the ſame manner as in drawing a great Weight by Ropes fixed to it, where the Arm alone is ſhortened, while the Ropes only follow that Motion.

The principal Phenomena of muſcular Action are theſe: The fleſhy Portion appears harder and more ſwelled in the time of Action than of Inaction, as may be readily perceived by touching it in both States. The Hardneſs of this Swelling increaſes in proportion as the Motion is continued, as is, likewiſe, evident by the Touch; and it likewiſe increaſes by merely adding to the Weight or Reſiſtance of the Part moved, though its Situation does not continue to be changed.

In many Muſcles this Action may be determined to any Degree of Velocity and Space, that is, may be proportioned to the Velocity and Space of the Motion; may be increaſed, and diminiſhed, accelerated, retarded, or ſtopt; and may be made to ceaſe in an Inſtant, and be produced again in another Inſtant.

During the Contraction of a Muſcle, its Fibres are bent thro' the whole Length, or formed into very ſmall fine Folds, in alternately oppoſite Directions, as may be plainly ſeen in Animals freſh-kill'd, when the Butchers cut their Fleſh while it remains warm, though the Blood has been let out, and the Entrails removed. By opening living Animals, and, alſo, in great Wounds, the fleſhy Fibres have been diſcovered to grow pale during their Action, and to turn red again when at Reſt.

To theſe Phenomena we muſt, likewiſe, add, that where ſeveral Muſcles are fixed to any moveable Part, they are all in a State of Contraction, in every Motion of that Part; but they are not all in the ſame Degree of Action, becauſe the principal

Movers act more than the Moderators and Directors, or collateral Muſcles, if any belong to the Part. This Co-operation of the Muſcles is eaſily perceived by touching them, when the Part they belong to is moved with a conſiderable Force. It muſt, however, be remembered, that I except the Moderators and Antagoniſts when any Weight or Aſſiſtance ſupplies their Action.

Laſtly, there are ſome Motions, to which the Muſcles, commonly believed to produce them, contribute nothing at all, but which depend ſolely on the Relaxation of the Antagoniſts to theſe Muſcles, or thoſe which lie on the oppoſite Side. This is ſeen evidently in ſupporting the Body by one Hand, reſting on a low Table, the Joint of the Elbow being in that State ſuffered to yield to the Weight of the Body, or to bend ſometimes ſlowly, and ſometimes faſt; for if, at the ſame time, we feel, with the other Hand, the Flexor and Extenſor Muſcles of the fore Arm, the firſt will be found perfectly relaxed, and the latter very much contracted. Thus it is evident, that ſome Muſcles may be relaxed to determinate Degrees of Velocity and Space, with the ſame Certainty as they can be contracted.

This laſt Phenomenon gave me room to conclude, that the Action of the Muſcles in general conſiſts as really in the Relaxation of the moving Fibres when contracted, as in the Contraction of them when relaxed, whether this Action be performed ſucceſſively, or inſtantaneouſly. For this Reaſon, when I began to ſpeak of the Action of the Muſcles, I did not ſay abſolutely, that it conſiſted in the Contraction of the fleſhy Portion, but only that it principally proceeded therefrom. I do not here ſpeak of theſe Motions which are out of our Power, and which one can determine only in Part, as thoſe of Reſpiration; or not at all, as that of the Heart.

The particular Mechaniſm, or immediate Cauſe, of muſcular Action, has very much tortured the Brains of many Philoſophers. The extreme Delicacy of the Texture of a moving Fibre, and great Number of Phenomena, ſome of them very obvious, which have not been attended to, have hitherto prevented the Diſcovery of this Myſtery. Several Hypotheſes have been form'd concerning the Structure of this Fibre, which, as already ſaid, has been ſuppoſed ſpongy, vaſcular, veſicular, contorted, elaſtic, and the like; and concerning the Concurrence of different Fluids with the ſuppoſed Structure of the Fibre: And Syſtems have even been founded wholly on the Spring or Elaſticity of the ſolid Parts, of which a Muſcle is compoſed.

But by conſidering attentively the Phenomena already mentioned, eſpecially the three firſt, concerning the Velocity, Space, and Duration of muſcular Action, all theſe Syſtems may be deſtroyed. For hitherto no Inſtance can be found either in natural Effects, or in thoſe of Art, of any Exploſion, Fermentation, Ebullition, Injection, Inflation, Imbibition, Vibration, Elaſticity, *&c.* by which we can regulate and determine, to a given Degree, the Space, Velocity, and Duration, of any artificial Motion, or by which we can begin and put an End to ſuch Motions, in an Inſtant of Time, at our Pleaſure. It is therefore altogether to no Purpoſe to amuſe ourſelves with what has been ſaid on this Subject; another Method muſt be followed, which conſiſts in collecting and examining all the Phenomena that can fall under our Obſervation.

Till ſome ſuch lucky Diſcovery is made, what can hitherto with the greateſt Certainty be gathered from the Structure, Conformation, and Action of the Muſcles, is, that their Strength depends on the Number of their fleſhy Fibres, and the Extent of their Action on the Length of theſe Fibres.

For where-ever Strength is more neceſſary than large Degrees of Motion, there we find the Fibres of Muſcles proportionably increaſed in Number, and that their Situation in a narrow Compaſs is artfully provided for by the oblique Diſpoſition of them already mentioned. In like manner, where-ever there is more Occaſion for a large Degree of Motion than for Strength, the fleſhy Fibres are of a proportionable Length. In a Word, the Strength of a Muſcle is as the Number of its fleſhy Fibres, and the Extent of its Motion as the Length of theſe Fibres.

To underſtand the Uſes and Contrivance of each Muſcle in particular, we muſt conſider attentively its Place or Situation in general, its internal Conformation, Inſertions, particular Situation, Direction, and lateral Connection, and the Relation and Compoſition of its Parts. We ought, likewiſe, to examine how the neighbouring Muſcles are diſpoſed for producing ſimple Motions, and how thoſe which are at a greater Diſtance, can produce combined or compound Motions.

It ought, moreover, to be obſerved, that in ſome Subjects the Muſcles vary, ſome being wanting, and others added in different manners; ſo that we ought to regulate ourſelves by what happens moſt frequently and univerſally, that we may not render the common Caſes obſcure for the ſake of a few which are extraordinary, and which ought to be conſidered in the ſame Light as we do the Inſtance of ſix Fingers, eleven Ribs, and other Varieties of the like kind.

Muſcles, fixed only to Bones, act as ſo many Powers applied to Levers. By a Lever we underſtand a long inflexible Body, like a Rod or Bar, by the Help of which we raiſe Weights, and overcome Reſiſtances, which it would be more difficult, or impoſſible, to do with the Hands alone.

A Lever, in order to act, is applied to three different things, at three different Places of its Length; at one Place to the Weight, or reſiſting Body, at a ſecond to the Power by which it acts, and at a third to a Fulcrum, which, with reſpect to the other two, ought to be immoveable; ſo that the whole Length of the Lever is, as it were, divided by three Points, which may be termed the fixed Point, Point of Reſiſtance, and Point of Powers.

Theſe three Points may be diſpoſed in three different manners: 1. The fixed Point may lie between the Power and the Weight; as when the Stone-cutters and Paviors raiſe or move Stones with Iron Croes. 2. The Weight may lie between the Power and the Fulcrums; as when Maſons move large Stones by applying Croes to them, ſomewhere near the Middle. 3. The Power may lie between the Weight and Fulcrum, as when Braziers ſcrape Copper in order to tin it, by laying one End of the Scraper on their Shoulder, the other on the Metal, and holding the Middle in their Hands.

From theſe three Diſpoſitions three different Kinds of Levers have been eſtabliſhed. In the firſt the Fulcrum, or fixed Point, is in the middle; in the ſecond the Weight, and in the third the Power.

In the Action of Levers, the following Maxims are to be obſerved as ſo many general Rules. The greater the Diſtance of the Line of Direction of the Power from the Fulcrum; leſs Force is neceſſary to overcome the Reſiſtance. The nearer that this Line of Direction is to the Fulcrum, more Force is neceſſary to overcome the Reſiſtance, or to raiſe the Weight. When the Line of Direction of the Power paſſes through the fixed Point, and conſequently falls in with the Direction of the Lever, the Power can produce no Effect. See SPIRITUS ANIMALES.

MUSCUS. Moſs.

Botanic Authors enumerate a great Number of Moſſes, the Virtues of ſome of which are ſpecified under the reſpective Articles of their Name.

Muſcus. Offic. *Muſcus Uſnea.* Chab. 559. *Muſcus arboreus: Uſnea Officinarum.* C. B. P. 361. Raii Hiſt. 1. 114. Synop. 3. 64. *Muſcus arboreus villoſus.* J. B. 3. 763. Synop. 22. *Muſcus arboreus vulgaris & quercinus.* Park. 1372. *Muſcus Quernus.* Ger. 1369. Emac. 1558. HAIRY TREE MOSS.

This Moſs conſiſts of a great Number of long, ſlender, hoary Strings, ſomewhat tough and hard, hanging down ſome Length from the Branches of the Trees they grow on, which are uſually old Oaks: It is ſeldom to be met with in *England*, and therefore very rarely preſcribed by Phyſicians.

It is accounted reſtringent and ſtyptic, and good to ſtop Bleeding, and all Kinds of Fluxes. *Miller's Bot. Off.*

It has an aſtringent Taſte, but in other reſpects is various, as thinner, thicker, ſhorter, longer, generally whitiſh, but ſometimes, though rarely, rediſh, and ſometimes black. It is chiefly found on Oaks, Poplars, Elms, Beeches, Apple-trees, Pear-trees, Pine-trees, Pitch-trees, Fir-trees, Cedars, Larch-trees, and many others of the moſt conſiderable Species of Trees. The Moſs which grows on the Cedar, Larch-tree, Pine and Fir, is ſweet-ſcented: The next in Value is what grows on the Poplar; the White is beſt; the Black is condemn'd; the Red is of a middle Kind; the leaſt eſteemed is what grows on Oaks. *C. B.* from *Dodonæus.*

It is found on old Oaks, and ſcarlet Oaks of the Wood of *Valena*, not far from *Montpelier*, whence it is brought to the Druggiſts; for the Powder of it is the Baſe of what they call at *Montpelier*, *Pulvis Cyprius*, or, in the vulgar Tongue, *Corps de Cypre gris.*

This Kind of Moſs is very rare in *England*, nor do I remember, ſays *Ray*, ever to have ſeen it; perhaps it is more frequent in foreign Countries, though I have very rarely had the Fortune to meet with it in my Travels: Once I obſerved great Plenty of Moſs in a Wood of old Firs in *Bavaria*, hanging down from the Boughs, which very well anſwer'd the Deſcription given by *Dodonæus* of the *Muſcus arboreus villoſus*, and, being gather'd and repoſited in Papers, dyed them of a yellow Colour, inclining to a Red, as if they had begun to be ſinged by the Fire; and, tho' ſeveral times removed, and put into freſh Papers, it ſtill communicated the ſame Colour to them, even after many Years. If therefore, it be not found in greater Plenty at *Montpelier* than elſewhere, it could by no means be ſufficient for ſo great a Quantity of *Pulvis Cyprius*, as is every Year prepared and ſold in that City. Beſides, if this Moſs, which grows on the *Quercus* and *Ilex*, be good enough to ſerve as a Baſis for that celebrated, ſweet-ſcented Powder of *Montpelier*, it cannot be eſteemed of ſo little Value, as *C. Bauhine* would have it, unleſs, perhaps, they are obliged to make uſe of it for want of better; which does not ſeem probable, becauſe this *Pulvis Cyprius Monſpelienſis* is eſteemed the moſt excellent Preparation in its Kind. But, to ſpeak the Truth, I ſuſpect that thoſe of *Montpelier* take for the Baſis of their *Pulvis Cyprius*, what we, with *J. Bauhine*, call the *Muſcus arboreus ramoſus*; and make the ſame Uſe promiſcuouſly of the *Muſcus arboreus pellatus & ſcutellatus ejuſdem*, I mean what grows on the *Quercus* and *Ilex*, partly becauſe theſe

Moſſes

Moſſes are found every-where in great Quantities, and partly becauſe *Fer. Imperatus*, who was himſelf a Druggiſt, and perfectly well acquainted with the Ingredients of theſe Sorts of ſcented Powders, writes, that both theſe Species of Moſs indifferently enter ſweet-ſcented Compoſitions. This we write by Conjecture, not denying, but that the *Muſcus arboreus* may be apply'd to the ſame Uſe, whenever it can be found.

The *Muſcus capillaceus longiſſimus* of *C. B.* ſeems not to differ from the foregoing Species; or, if there be any Diſtinction between them, it may well enough be learnt from the bare Title.

D. Sachſ. writes in the *Ephemer. Germ. An.* 2. that the *German* Surgeons make uſe externally of the *Muſcus arboreus*, pulverized, for repreſſing Hæmorrhages from Wounds. *Raii H. P.*

MUSCUS MARINUS. Offic. *Muſcus maritimus capillaceus Dioſcoridis.* Park. 1288. *Muſcus marinus capillaceus Dioſcoridis, & Donati.* R. H. 79. *Muſcus marinus verus Dioſcoridis.* Donat. p. 61. SEA-MOSS.

This Plant, which is ſlender, capillary, and without a Foot-ſtalk, is found in the *Adriatic* Sea. The Whole of it is uſed, is of an inſpiſſating Quality, checks Congeſtions of Humours, and refrigerates the Parts affected with arthritic Pains. *Dioſcorides.*

This Plant is taken for the Muſcus Marinus of *Dioſcorides* by *Conſtantine*; with whom I rather agree, than with thoſe who take the Corallina of the Shops, for the Mucus Marinus of *Dioſcorides*, which *Parkinſon* takes to be the Fucus with a capillary Leaf of *Theophraſtus*. *Dale.*

MUSICA. Muſic.

Dr. *Mead* in his Treatiſe of Poiſons, ſpeaking upon the Cure of thoſe who were bitten by a Tarantula, by Muſic, remarks, that brisk Harmony excites lively Species of Joy and Gladneſs, which are always accompanied with a more frequent and ſtronger Pulſe, or an increaſed Influx of the Liquor of the Nerves into the Muſcles, upon which ſuitable Actions muſt immediately follow. And if we conſider, that People in this Country are ſprightly, and ready to Exerciſe, and that in ſuch a State of the Fluids a ſlight Occaſion preſents a ſtrong Species, as a greater cannot another time, the Influence of Muſic on the Mind will appear to be ſo much the more powerful and certain.

As for the Body, ſince it is ſufficient for the Purpoſe of putting the Muſcles into Action, to cauſe thoſe Tremors of the Nerves, by which their Fluid is alternately dropt into the moving Fibres; it is all one whether this be done by the Determination of the Will, or the outward Impulſions of an elaſtic Fluid. Such is the Air; and that Sounds are the Vibrations of it, is beyond Diſpute.

Theſe, therefore, rightly modulated, may ſhake the Nerves, as really as the *Imperium Voluntatis* can do, and, conſequently, produce the like Effects.

That this is ſo, beſides what we ſhall add, we may be convinced by a Story, which Mr. *Boyle* relates out of *Scaliger*, of a Knight of *Gaſcony*, whom the Sound of a Bagpipe would unavoidably force to make Water; for this Secretion, we know, is regularly the Effect of an arbitrary Contraction of the Muſcle of the Bladder.

The obſtinate continuing of the *Tarantati* in this Exerciſe is doubtleſs, in a great meaſure, owing to the ſtrong Opinion they have of receiving Advantage from it, being encouraged by the By-ſtanders, and having always believed, and been told, that it was the only Cure in theſe Caſes.

The Benefit from Muſic is not only their dancing to it, and ſo evacuating, by Sweat, a great Part of the inflammatory Fluid; but, beſides this, the repeated Percuſſions of the Air hereby made, by immediate Contact, ſhaking the contractile Fibres of the Membranes of the Body, eſpecially thoſe of the Ear, which, being continuous to the Brain, communicate their Tremblings to its Membranes, and Veſſels, by theſe continued Succuſſions and Vibrations, the Coheſion of the Parts of the Blood is perfectly broken, and its Coagulation prevented; ſo that the Heat being removed by Sweating, and the Coagulation by the Contraction of the muſcular Fibrillæ, the wounded Perſon is reſtored to his former Condition.

If any one doubts of this Force of the Air, let him conſider, that it is in Mechanics demonſtrated, that the ſmalleſt Percuſſion of the ſmalleſt Body can overcome the Reſiſtance of any great Weight which is at Reſt; and that the languid Tremor of the Air, which is made by the Sound of a Drum, or Trumpet, may ſhake the vaſteſt and ſtrongeſt Edifices.

But, beſides all this, we muſt allow a great deal to the determinate Force, and particular Modulation, of theſe trembling Percuſſions; for contractile Bodies may be acted upon by one certain Degree of Motion in the ambient Fluid, though a greater Degree of it, indifferently qualified, may produce nothing at all of the like Effect: This is not only very apparent in the common Experiment of two-ſtring'd muſical Inſtruments, toned both to the ſame Height; the Strings of the one being ſtruck upon, thoſe of the other will ſound; and yet a much greater Motion of the Air may not cauſe any ſenſible Vibration at all in the ſame Chords; but, alſo, by the Trick which many have, of finding the Tone or Note peculiarly belonging to any Wine-glaſs; and, by accommodating their Voice exactly to that Tone, and yet making it loud and laſting, they will make the Veſſel, though not touched, firſt to tremble, and then burſt; which it will not do, if their Voice be but a little either too low, or too high.

This laſt Conſideration makes it no very difficult Matter to conceive the Reaſon, why different Perſons, infected with this Venom, require oftentimes a different Sort of Muſic, in order to their Cure; inaſmuch as their Nerves, and diſtractile Membranes, have differing Tenſions; and conſequently, are not in like manner to be acted upon by the ſame Vibrations.

Nor are we to wonder at the Oddneſs of this Method and Practice; for Muſic, although it be now-a-days applied to quite different Purpoſes, was antiently made great Uſe of, for the removing of many, and thoſe, too, ſome of the moſt difficult and obſtinate Diſeaſes.

For this we have a famous Teſtimony in *Galen* himſelf, who tells us, that *Æſculapius* uſed to recover thoſe, in whom violent Motions of the Mind had induced an hot Temperament of Body, by Melody and Songs. *Pindar* mentions the ſame thing; and, indeed, from hence not only the Notion, but the very Name, of Charming, ſeems to have taken its Origin. *Athenæus* relates, that *Theophraſtus*, in his Book of Enthuſiaſm, ſays, Iſchiadic Pains are cured by the *Phrygian* Harmony. This Sort of Muſic was upon a Pipe, and the moſt vehement and brisk of all the Antients knew; ſo that, indeed, it was ſaid to raiſe thoſe who heard it, to downright Fury and Madneſs; and ſuch we have obſerved to be required to the Venom of the Tarantula.

But what is, beſides, in this laſt Authority, very obſervable to our Purpoſe, is the Manner of uſing this Remedy; and that was by playing upon the Part affected: Which confirms what we have juſt now advanced, concerning the Effect of the Percuſſion of the Air upon the contractile Fibres of the Brain; for Piping upon any Member of the Body, cannot be ſuppoſed to do Service any other way, than by ſuch Succuſſions, and modulated Vibrations, as we before mentioned. And this, indeed, *Cœlius Aurelianus* agrees to, who calls this Practice, *Decantare Loco dolentia*, and ſays, that the Pain is mitigated and diſcuſſed by the Tremblings and Palpitations of the Part.

Aulus Gellius not only relates this ſame Cure of Iſchiadic Ails as a thing notorious enough; but adds, beſides, out of *Theophraſtus*, that the Muſic of a Pipe, rightly managed, healed the Bites of Vipers.

And not only does *Apollonius* mention the Cure of Diſtractions of the Mind, Epilepſies, and ſeveral other Diſtempers, this ſame Way; but *Democritus*, in his Treatiſe of *Plagues*, taught, that the Muſic of Pipes was the Medicine for moſt Diſeaſes; which *Thales* of *Crete* confirmed by his Practice, when, ſent for by the *Lacedemonians* to remove from them the Peſtilence, he did it by the Help of Muſic.

All which Inſtances evince this Remedy to have been very antient, in many Caſes; and indeed, as *Cœlius Aurelianus* takes notice, that the firſt Uſe of it was aſcribed to *Pythagoras* himſelf, ſo he having ſettled and founded his Sect in thoſe very Parts of *Italy*, which are the Country of the Tarantula, going then under the Name of *Græcia Magna*, now *Calabria*, it is not, I think, at all improbable, that he may have been the Author and Inventor of this Practice there, which has continued ever ſince; eſpecially, ſince *Iamblichus* affirms, not only that he made uſe of Muſic in Phyſic; but particularly, that he found out and contrived ſome Harmonies to eaſe the Paſſions of the Mind, and others for the Cure of Bites.

This Hiſtory of the Effects of Muſic in Medicine, however ingenious, with reſpect to the Cure of that Diſtemper, cauſed by the *Tarantula*, muſt be of leſs Weight, if, as there is ſome Reaſon to believe, this Diſorder is only imaginary; and the Notion of its prevailing in ſome Parts of *Calabria*, only founded on a vulgar Error, and a Tradition handed down from Father to Son, from Time immemorial. See TARANTULA.

MUSTELA. Offic. Schrodr. 330. Mer. Pin. 190. Bellon. de Aquat. 130. *Muſtela fluviatilis.* Aldrov. de Piſc. 577. Geſn. de Aquat. 601. Charlt. de Piſc. 40. Raii Synop. Piſc. 61. *Muſtela fluviatilis, noſtratibus* EEL-POUT *nomine a Belgis mutato, &* BURBOT *Gallico vocabulo dicta.* Ejuſd. Ichth. p. 125. *Muſtela altera.* Schonef. Ichth. 49. THE EEL-POUT, or BURBOT.

This Fiſh is found in Rivers, and its Liver, Stomach, and Spine, are uſed. The Liver, when ſuſpended in a Glaſs Veſſel, and expoſed to a due Degree of Heat, is colliquated into a yellow Liquor greatly beneficial in Specks of the Eyes, and Dimneſs of Sight. The Stomach is highly recommended againſt Diſorders of the Uterus; but, when drank in ſome proper Liquor, is principally beneficial in expelling the Secundines, and removing Colics. The Spine, when reduced to a Powder, is ſaid to cure the Epilepſy. *Schrodr. Dale.*

MUSTELA. Offic. Charlt. Exer. 20. Geſn. de Quad. Digit. 752. Mer. Pin. 167. Schw. Quad. 116. *Muſtela vulgaris.* Aldrov. de Quad. Digit. 307. Jonſ. de Quad. 105. Raii Synop. A. 195. THE WEASEL.

This

This Animal itſelf is uſed, when diſemboweled, preſerved in Salt, and dried in the Shade. Its Stomach is, alſo, uſed. Two Drams of the Animal, prepared in the manner above-mention'd, and drank in Wine, are an inſtantaneous Remedy againſt the Venom of all Kinds of Serpents; and againſt Poiſons, taken internally. The Stomach, when filled with Coriander-ſeeds, and preſerved for a due Time, if drank in ſome proper Liquor, is beneficial in Epilepſies, and Wounds inflicted by Serpents. This Animal, when burnt in an Earthen Veſſel, is ſerviceable in arthritic Pains. Strumous Swellings are leſſened by being anointed with the Blood of this Animal, or its Aſhes mixed with Vinegar. Theſe are, alſo, beneficial in Epilepſies. *Dioſcorides. Dale.*

MUSTELUS. The Hound-fiſh. See GALEUS.

MUSTUM. Muſt. The Juice of the Grape before it has undergone Fermentation.

MUSTUS. The white Calx of Urine. *Rulandus.*

MUSULA, MUSSELA, or MUSSULA. The black Weaſel, which, according to *Paracelſus*, excites the Epilepſy.

MUTELLINA. See MEUM.

MYACANTHA. Butchers-broom. See BRUSCUS.

MYAGRO AFFINIS. A Name for the *Rapiſtrum*; *arvenſe*; *folio articulato*; *acuto*: And for the *Turritis*; *folio Leucoii.*

MYAGRO SIMILIS. A Name for the *Rapiſtrum*; *arvenſe*; *folio auriculato*; *acuto.*

MYAGRUM.

The Characters are;

It has a turbinated Fruit, like an inverted Pear, unicapſular, preſſing in the Stalk, containing one Seed, with two empty Cells.

Boerhaave mentions two Species of this Plant; which are,

1. Myagrum; monoſpermum, latifolium. *C. B. P.* 109. *Prod.* 52. *T.* 211. *Raphaniſtrum, monoſpermum, latifolium, ſiliculis fungoſis, glabris, auriculatis.* M. H. 2. 267.

2. Myagrum; ex Sumatra & Syria; ſemine ſpinoſo, ſimili capiti aviculæ. *Zanon.* 142. *Roſa Hierichuntica alia.* Camer. Ic. 42. *Boerh. Ind. alt. Plant. Vol.* 2. *p.* 2.

This Plant is poſſeſſed of the ſame Virtues with the Rapiſtrum, but is not recommended for any particular Purpoſe. The Oil, however, obtained from it by Expreſſion, is excellent for rendering the Skin ſoft and ſmooth. *Hiſt. Plant. adſcript. Boerhaav.*

MYAGRUM MAJUS. A Name for the *Alyſſon*; *ſegetum*; *foliis auriculatis, acutis.*

MYAGRUM, *ſiliqua longa.* A Name for the *Turritis*; *folio Leucoii.*

MYAX, μύαξ. The ſame as MYTULUS; which ſee.

MYCE, μυκὴ, or MYSIS, μύσις, from μύω, to wink, ſhut up, or obſtruct. A Winking, Cloſing, or Obſtruction. It is applied to the Eyes, to Ulcers, and to the Viſcera, eſpecially the Spleen, where it imports Obſtruction.

MYCES, or, MYCE, μύκης, or μύκη. In Botany it imports a Fungus. In Surgery, it is a Fungus which ariſes in Wounds or Ulcers.

MYCHTHISMOS, μυχθισμὸς, from μύζω, to mutter, or groan. In *Hippocrates, Coac. Prænot.* 519 it ſignifies a ſort of Sighing, or Groaning, during Reſpiration, whilſt the Air is forced out of the Lungs.

MYCONOIDES, μυκοειδὲς. An Epithet for an Ulcer, which is full of Mucus.

MYCTERES, μυκτῆρες. The Noſtrils. *Myxter*, μυξὴς, is uſed to ſignify the Noſe.

MYDESIS, μύδησις, from μυδάω, to abound with Moiſture. This imports, in general, a Corruption of any Part from a redundant Moiſture. But it is applied, particularly, to the Eye-lids, by *Galen.*

MYDON, μυδὼν. Fungous Fleſh in a fiſtulous Ulcer. *J. Pollux.*

MYDRIASIS, μυδρίασις. A Diſeaſe of the Eye, conſiſting in the preternatural Dilatation of the Pupil, and a conſequent Dimneſs.

MYDROS, μύδρος, in *Hippocrates*, is a Ball of Iron, or a Stone, which is directed to be heated in the Fire, and quenched in Urine for a Fomentation, *de Morbis Mulierum, Lib.* 2.

MYGALE, μυγάλη. A Name for the Mus Araneus.

MYLACRIS, μυλακρὶς. The Patella. *Gorræus.*

MYLE, μύλη. The Patella, or a Mole of the Uterus.

MYLOGLOSSI. Two Muſcles of the Tongue, thus called, becauſe they ariſe from the Roots of the Dentes Molares. See LINGUA.

MYLOHYOIODÆI. The two Muſcles of the Os Hyoides. See LINGUA.

MYLOPHARINGÆUS. The Name of a Muſcle of the PHARYNX; which ſee

MYLON. A Diſorder of the Eye. See OCULUS.

MYLOS. The Name of a Sea-fiſh, mentioned by *Galen.* It is a kind of Cray-fiſh.

MYOCEPHALUM. A ſmall Tumor in the Uvea Tunica of the Eye, like the Head of a Fly, from μυῖα, a Fly, and κεφαλὴ, an Head.

MYODES PLATYSMA. A muſcular Expanſion in the Neck, from μῦς, a Muſcle, and πλατὺς, broad. See CAPUT. It is called *Quadratus Genæ.*

MYOLOGIA. A Treatiſe or Deſcription of the Muſcles; from μῦς, and λόγος, a Diſcourſe.

MYOPIA, or MYOPIASIS. Short Sight, a Diſorder of the Eyes; from μύω, to ſhut, and ὤψ, the Eye; becauſe People ſo affected generally half-ſhut their Eyes, when they look intenſely on an Object.

MYOPS. A Perſon who is ſhort-ſighted, or cannot ſee at a Diſtance.

MYOSOTIS. Mouſe-ear-chickweed.

The Characters are;

It reſembles the Alſine in every reſpect; only the Flower is larger, and the Fruit, which is like the Horn of an Ox, opens at the Apex.

Boerhaave mentions ſix Species of this Plant; which are,

1. Myoſotis; Hiſpanica; ſegetum. *T.* 245. *Alſine corniculata.* Cluſ. H. 184. *Lychnis ſegetum, minor.* C. B. P. 204.

2. Myoſotis; hirſuta; altera; viſcoſa. *T.* 245. *Alſine, altera, viſcoſa hirſuta.* C. B. P. 251.

3. Myoſotis; incana; repens. *T.* 244. *Lychnis, incana, repens.* C. B. P. 206. *Ocymoides, Lychnitis, radice reptante.* J. B. 3. 353.

4. Myoſotis; tenuiſſimo folio rigido. *T.* 245.

5. Myoſotis; Alpina; latifolia. *T.* 244. *Caryophyllus holoſtius, Alpinus, latifolius.* C. B. P. 210. Prodr. 104.

6. Myoſotis; Orientalis; perfoliata; folio Lychnidis. *T. C.* 18. *Boerh. Ind. alt. Plant. Vol.* 1. *p.* 215.

This Plant derives its Name from the *Greek* Words μῦς, a Mouſe, and ὦς, an Ear; becauſe it has hairy Leaves, and grows longitudinally, like a Mouſe's Ear. *Hiſt. Plant. adſcript. Boerh.*

MYOSUROS.

The Characters are;

The Root is annual; the Leaves are gramineous, like thoſe of the Coronopus, but not laciniated; the Calyx is quinquefolious, each Leaf being furniſhed with an Appendix, tending downwards; the Floſcules are herbaceous, and furniſhed with a great Number of Stamina, which proceed from the Circumference of the Bottom of the Ovary; the Seeds are diſpoſed in a long Spike.

Boerhaave mentions but one Species of this Plant; which is,

Myoſuros. *Offic. J. B.* 2. 512. *Raii Hiſt.* 2. 1332. *Synop.* 3. 251. *Boerh. Ind. A.* 2. 202. *Cauda Muris.* Ger. 345. Emac. 426. *Holoſteum Loniceri Cauda Muris vocatum.* Park. Theat. 500. *Holoſteo affinis Cauda Muris.* C. B. P. 190. *Ranunculus gramineo folio, flore caudato, ſeminibus in capitulum ſpicatum congeſtis.* Tourn. Inſt. 293. MOUSE-TAIL.

This Herb flowers in *May*, and is found in the Fields, and by the Way-ſides. The Whole of it is uſed, and by ſome thought to be poſſeſſed of the ſame Virtues with Plantain and the Coronopus. *Dale.*

MYOTOMIA. A Diſſection of the Muſcles; from μῦς, a Muſcle, and τέμνω, to cut.

MYRACOPON, μυρόκοπον. An Epithet for a ſort of Ointment recommended againſt Laſſitude, by *Galen, de C. M. P. G. Lib.* 7. *Cap.* 12.

MYRICA. A Name for the *Tamariſcus, Narbonenſis.*

MYRINGA, or MYRINX. A barbarous Word, importing the Membrane of the Tympanum in the Ear.

MYRIOPHYLLON. Offic. *Millefolium aquaticum.* Ger. 678. Emac. 827. Raii Hiſt. 1. 459. *Millefolium aquaticum vulgatius.* Park. Theat. 1256. *Millefolium aquaticum umbellatum capillaceo brevique folio.* C. B. P. 141. *Millefolium aquaticum Fœniculo ſimile umbelliferum.* J. B. 3. 8. WATER-FENNEL.

This Plant is produced in marſhy Soils, and flowers in the Month of *April.* The Whole of it is uſed, and is thought to be poſſeſſed of a vulnerary Quality. *Dale.*

MYRIOPHYLLON *aquaticum minus.* A Name for the *Potamogeiton*; *floſculis ad foliorum nodos.*

MYRIOPHYLLON, *equiſeti folio fluviatile.* A Name for the *Hottonia.*

MYRISTICA NUX. The Nutmeg. See NUX MOSCHATA.

MYRITES. A Name for the *Caucalis*, in *Oribaſius's Medic. Collect. Lib.* 11.

MYRMECIA, μυρμήκια. A ſort of Wart about the Size of a Lupine, with a broad Baſe, deeply rooted, and very painful. It grows on the Palms of the Hands, or Bottoms of the Feet. *Celſus, Lib.* 5. *Cap.* 28. See NÆVUS.

MYRMECITES. A ſort of Stone, mentioned by *Pliny, Lib.* 37. *Cap.* 11. thus called, becauſe it has the Figure of an Ant (μύρμηξ) naturally impreſſed upon it.

MYRMECIZON, μυρμηκίζων. An Epithet for a ſort of Pulſe, the ſame as FORMICANS; which ſee.

MYRMECALEON. An Inſect, called the Lion-piſmire; more famous for its Oeconomy, and taking its Prey, than any medicinal Virtues. It is, however, ſaid to be emollient and reſolutive, applied externally.

MYROBALANI. Myrobalans.

Theſe are Fruits of the Plum Kind, which grow in the *Eaſt Indies*

Indies. They were much uſed by the *Arabian* Phyſicians, and their Succeſſors, till of late Years; but, at preſent, they are much out of Uſe, and ſeldom preſcribed. There are five Sorts, the Indica, Citrina, Chebula, Billerica, and Emblica.

The Indica is thus diſtinguiſhed;

Myrobalanus Inda, nigra. *Offic. Myrobalanus Indica.* Ger. 1316. Emac. 1500. Raii Hiſt. 2. 1531. Park. Theat. 246. *Myrobalani nigræ octangulares.* C. B. P. 445. *Myrobalani Indæ, nigræ, ſine nucleis.* J. B. 1. 204. INDIAN, or BLACK MYROBALANS.

This is a ſlenderer and narrower Fruit than any of the following, having a Shew of eight Ridges, though to be diſcerned but in a few of them; they are hard, tough, and black, both Inſide and out, of a rough auſtere Taſte. *Miller's Bot. Off.*

The Citrina is thus diſtinguiſhed;

Myrobalanus, Citrina flava. *Offic. Park. Theat.* 206. *Myrobalanus.* Ger. 1316. Emac. 1500. Raii Hiſt. 2. 1531. *Myrobalani teretes, Citrini, bilem purgantes.* C. B. P. 445. *Myrobalani Citrinæ.* J. B. 205. CITRON, or YELLOW MYROBALANS.

This is about as big as an ordinary Plum, of an oval Shape, having five remarkable Ribs, ſtanding up high. It has a pretty thick Bark, and under it a large, pentangular, hard Stone, ſharp-pointed at both Edges: It is of a ſtyptic reſtringent Taſte. *Miller's Bot. Off.*

The Chebula is thus diſtinguiſhed;

Myrobalanus Chebula. *Offic. Ger.* 1316. *Emac.* 1500. *Park. Theat.* 206. *Raii Hiſt.* 2. 1531. *Myrobalani maximi, oblongi, anguloſi, pituitam purgantes.* C. B. P. 445. *Myrobalani Chebulæ citrinis ſimiles, nigricantes.* J. B. 1. 205. CHEBULE MYROBALANS.

This is the largeſt and longeſt of all the Myrobalans, of a dark-browniſh Colour, five-cornered, containing more Subſtance, and a leſs Stone, than either the following, or the Citron Myrobalan. It is of a rough reſtringent Taſte. *Miller's Bot. Off.*

The *Bellerica* is thus diſtinguiſhed;

Myrobalanus Bellerica. *Offic. Ger.* 1316. *Emac.* 1500. *Park. Theat.* 247. *Raii Hiſt.* 2. 1532. *Myrobalani rotundæ Bellericæ.* C. B. P. 445. *Myrobalani Billericæ rotundiores.* J. B. 1. 209. BELLERIC MYROBALANS.

This is rounder and ſmoother than any of the reſt of the Myrobalans, ſomewhat reſembling a Gall, but more oblong than having the Appearance of five blunt Ridges. It has a large Stone under a Bark of but little Thickneſs. *Miller's Bot. Off.*

The Emblica is thus diſtinguiſhed;

Myrobalanus Emblica. *Offic. Ger.* 1316. *Emac.* 1. 500. *Park. Theat.* 247. *Raii Hiſt.* 2. 1531. *Milicanaram.* Hort. Mal. 1. 69. *Myrobalani Emblicæ.* C. B. P. 445. *Myrobalani Emblicæ in ſegmentis nucleum habentes anguloſæ.* J. B. 1. 206. EMBLIC MYROBALANS.

This is a roundiſh Fruit, ſomewhat flat at each End, of a black Colour, eaſily ſeparating into ſix Parts, containing an hexangular, roundiſh, white Stone, under a Bark of no great Thickneſs. *Miller's Bot. Off.*

All theſe Myrobalans come from *India*, and, according to *Garcias ab Horto*, grow on Trees reſembling Plum-trees.

The Citrins are ſaid to purge Choler, and the Indicæ Melancholy, and the other three, Phlegm at firſt, and the Choler. Whatever they do when they are freſh, they may purge but little when dry, being rather ſtyptic and binding, and are of little Uſe; and the only officinal Preſcription they are put into, in the new Diſpenſatory, is the Decoctum Epithymi. *Miller's Bot. Off.*

Geoffroy ſays, that they purge gently, and ſtrengthen the Inteſtines at the ſame time; and, therefore, are very proper in Diarrhœas and Dyſenteries, and make a good Succedaneum for Rhubarb; only the Doſe muſt be larger; and they may, likewiſe, be very conveniently mixed with Rhubarb.

All the Species of Myrobalans are of a refrigerating, drying, and aſtringent Quality, as is obvious from their acid and ſomewhat acrimonious Taſte, reſembling that of Services. According to *Caſpar Hoffman*, they are uſed in Indiſpoſitions of the Eyes, which are eaſily ſubject to cold Diſorders; they are, alſo, beneficial in Fallings off of the Hair, and in a Looſeneſs of the Teeth, which, however, they render black. They are eſteem'd good againſt the Want of a due Tone in the Stomach, Liver, and other Viſcera; in which Caſe *Meſue* affirms, that they exhilarate the Body, and preſerve it florid and youthful, render the Colour of the Skin agreeable, and communicate a grateful fragrant Odour to the Breath: Sweet Myrobalans are, alſo, claſſed among the Purgatives. The Chebule, Belleric, and Emblic Myrobalans purge Phlegm; the yellow Myrobalans, yellow Bile; and the *Indian* Myrobalans, black Bile.

Myrobalans, exhibited in Subſtance, or by themſelves, inſtead of purging briskly, prove a violent Aſtringent; and this Effect they produce ſo much the more, the finer they are powdered, according to *Meſue*; or the longer they are boiled, according to *Melichius*, in his Diſpenſatory; for which Reaſon they are never exhibited in this manner with an Intention to purge.

They, as well as Rhubarb, are, by ſome, exhibited, toaſted, in Dyſenteries; and under this Form they purge very little, and are ſtrongly aſtringent, but much more ſo when burnt. Infuſions of them are more purgative, and leſs aſtringent, than Decoctions. The *Indians*, however, as *Garcias* informs us, for purging, uſe them only in Decoctions, though in larger Doſes than thoſe uſed among us. When preſerved, they purge but little, and are of an aſtringent Quality. When there are large Quantities of them, they may be either preſerved recent, or dried, and afterwards moiſtened; the former are highly active, and the latter of a dull and languid Quality. The Chebule are, alſo, preferable, to the Emblic Myrobalans: According to *Meſue*, the former, when preſerved, corroborate the Stomach, excite an Appetite, promote Digeſtion, enliven the rational Powers, and quicken the Sight.

There are three Qualities in Myrobalans, which ſtand in need of Correction; the firſt is their aſtringent Virtue, by means of which they produce Obſtructions; for which Reaſon they are not to be exhibited to ſuch as are ſubject to thoſe Misfortunes. But this Diſadvantage is corrected by mixing them with acrid and diuretic Aperients, ſuch as all the Species of fragrant and odoriferous Seeds. Secondly, that Acrimony, by means of which they adhere to the Stomach in ſuch a manner as not to paſs into the Inteſtines, but operate ſlowly, is to be corrected. Thirdly, that Quality by which they corrugate the Subſtance of the Stomach and Inteſtines, is to be corrected. The two laſt-mentioned Diſadvantages attending Myrobalans are to be removed by mixing them, during their Trituration, with unctuous Subſtances, ſuch as Oil of ſweet or bitter Almonds; or, alſo, by mixing Raiſins, or the Caſſia Fiſtula, with them. Theſe are the Sentiments of *Meſue*, collected by *J. Bauhine.*

Caſpar Hoffman forbids the Uſe of Myrobalans, even in thoſe Fevers, in which there is no future Obſtruction dreaded. He, alſo, ſeems to think, that preſerved Myrobalans are productive of bad Effects in diary Fevers; and that the Uſe of them is unſafe in any Caſe whatever.

As Myrobalans in Subſtance never purge, Phyſicians never exhibit them, unleſs in Conjunction with other Subſtances, ſuch as the Electuarium Eleſchoph, the Hamech Tryphora Perſica, and ſome others of ſimilar Qualities; and, when they do preſcribe them, it is with an Intention to break the Force, and check the Efficacy, of other Purgatives.

Falloppius ſays, that the higheſt Doſe of the Decoction or Infuſion of Myrobalans is four Drams; but he himſelf never preſcribed above two or three. *Raii Hiſt. Plant.*

MYRON, *μύρον.* An Ointment, medicated Oil, or Unguent.

MYROPISSOCERON, *μυροπισσόκηρον.* The Name of a Topic for an Alopecia, quoted by *Galen, de Comp. M. S. L.* from *Soranus.*

MYRRHA. Offic. C. B. P. 501. Jonſ. de Dendr. 350. J. B. 1. 311. Park. Theat. 1593. Raii Hiſt. 2. 1841. *Myrrha Troglodytica.* Offic. Geoff. Trach. 361. MYRRH.

This is a Gum, which is brought from the *Eaſt Indies*, in Lumps of ſeveral Magnitudes; the beſt of a brown or reddiſh-yellow Colour, ſomewhat clear, of a fatiſh reſinous Subſtance, not hard to break, and, when powdered, of a bright-yellow Colour, of an aromatic Smell, and a warm bitteriſh Taſte.

Myrrh, is of an opening, heating, and drying Nature, reſiſts Putrefaction, and is of great Service in uterine Diſorders, opening the Obſtruction of the Womb, procuring the Menſes, expediting the Birth, and expelling the Secundines. It is good, alſo, for old Coughs and Hoarſeneſs, and the Loſs of the Voice; and is very uſeful againſt peſtilential and infectious Diſtempers, both taken inwardly, and thrown upon burning Coals, and the Fume received. Outwardly applied, it cures Wounds and Ulcers, and prevents Gangrenes and Mortifications. The Oil, per Deliquium, made with Eggs, is good to take off Freckles, and to clear the Face of Tan and Sun-burn.

Officinal Preparations are, Tinctura Myrrhæ ſimplex & compoſita, Trochiſci de Myrrha, and Olium Myrrhæ per Deliquium. *Miller's Bot. Off.*

Myrrh is brought from *Ethiopia*, and *Arabia Felix*; but we are ignorant of the Tree from which it flows. It is an excellent Stomachic, good in Indigeſtions, aperient, deobſtruent, emmenagogue, aſtringent, and vulnerary; and is uſed in Looſeneſſes, to deſtroy the Acrimony of the Humours in the Inteſtines. Outwardly applied, it is a powerful Reſolvent; and the Tincture of Myrrh and Aloes is a good Vulnerary, and prevents Mortifications. Myrrh, put into the White of an hard Egg, in the Place of the Yolk, and laid in a cool Cellar, reſolves into an Oil per Deliquium. It is an Ingredient in many Compoſitions, ſuch as the Emplaſtrum divinum, Emplaſtrum ſtiticum, Theriaca, and the like. It is generally choſen ungulated, that is, marked with ſmall white Specks, in the Shape of Nails. The Antients mention a liquid Myrrh, which we are ignorant of; there is, however, ſome ground to think, that it is an oily Liquor, found in the Body of the Tree; and this was the Myrrh offered by the Magi to our Saviour, becauſe it was very precious, and an Ingredient in the richeſt Perfumes. *Geoffroy.*

Myrrh is by the *Greeks* called σμύρνα, and μύρρα; from which the *Latins* have borrowed *Myrrha*, is the *Æolian* Dialect for σμύρνα. But the Word *Myrrha* is more probably derived from μύρον, an Ointment. Nothing certain is delivered, either by the Antients or Moderns, with reſpect to the Tree, which produces the Myrrh. *Theophraſtus* affirms, that this Tree, to which he gives the Epithet *Thurifera*, is ſlender, low, ſhrubby, with an hard Trunk, crooked and contorted near the Earth, and ſomewhat thicker than the Calf of a Man's Leg; and that it has a Leaf reſembling that of the *Thus*, though aculeated, and not ſmooth like it. *Dioſcorides* affirms, that the Myrrh-producing Tree is like the *Egyptian* Thorn; and *Diodorus* makes the Tree, which produces *Thus*, like to the *Egyptian* Thorn; and compares the Myrrh-producing to the Maſtich-tree.

Fuchſius is of Opinion, that the Myrrh of the Shops is not genuine, becauſe the Characters of Myrrh, delivered by *Dioſcorides*, do not agree to it. *Braſſavolus*, and others, take the Myrrh of the Shops for *Bdellium*; and there is ſuch a near Reſemblance between theſe Subſtances, that the Incautious and Unskilful may, very readily, take the one for the other. *Langius*, and others, affirm, that *Benjamine* is poſſeſſed of all the Properties of the beſt Myrrh. Moſt Authors condemn the Myrrh of the Shops, and think it is not to be accounted genuine, and of the beſt Kind. But *John Bauhine*, *Parkinſon*, and others, converſant in examining ſimple Medicines, affirm, that genuine Myrrh is imported to us, though often adulterated with Gum; and anſwer the Arguments adduced in Oppoſition to their Opinion.

According to *Galen*, the beſt Myrrh is that which is clean, rough to the Taſte, dry, and friable, ſmooth, and conſiſting of ſmall Globules, externally of one Colour, but internally ſomewhat rediſh, with whitiſh Veins running through it; of a fragrant Smell, but of an hot and bitter Taſte. According to *Dioſcorides*, it muſt alſo be recent.

But that Species of Myrrh is preferable to all others, which from the Place, in which it is produced, is called Troglodyty, and is of a paliſh or greeniſh Colour, ſhining: And,

As for the ſeveral Species of Myrrh, the Frauds of the Merchants, and the different Methods of Adulteration, we have nothing certain concerning them; only *Galen* orders us to beware of uſing the *Opocalpaſum* or *Opocarpaſum*, mixed with Myrrh. Now the Opocarpaſum, according ro *Caſpar Hoffman*, is the *Indian* Myrrh of *Pliny*, collected from a certain Thorn; for *Pliny* falſely aſſerts, that Myrrh is adulterated with this Subſtance. But *Galen* affirms, that the Opocarpaſus may reſemble the beſt Myrrh; which, however, is not true. The Opocarpaſus was certainly a poiſonous Juice, which produced a deep Sleep, and a ſudden Suffocation. And *Galen* affirms, that, in the Courſe of his Practice, he knew ſeveral Patients killed, by inadvertently uſing Myrrh, mixed with Opocarpaſus. But of what Plant, Tree, or Herb, this Opocarpaſus was the Juice, none of the Antients have informed us; and it ſtill remains a Secret to the Moderns. But thoſe who have uſed the Opocarpaſus, are relieved by Draughts impregnated with Hemlock.

Myrrh, according to *Dioſcorides*, is of an heating and ſomniferous Quality; though, according to *Caſpar Hoffman*, it does not induce Sleep in all Patients, on which Aromatics produce that Effect, but only in ſuch Patients, whoſe Heads are naturally cold, or otherwiſe infarcted with Phlegm. But *Coräus* affirms, that the Stacte, by means of a certain Heavineſs induced on the Senſes, procures Sleep. Myrrh is alſo of a conglutinating, drying, and aſtringent Quality; but ſome deny it to be aſtringent, ſince it provokes the Menſes, and expels the Fœtus. It ſoftens and opens the Uterus, when ſhut up. It ſpeedily provokes the Menſes, and expels the Fœtus, when applied with Wormwood, Cream of Lupines, or Juice of Rue. Myrrh is, at preſent, highly commended by ſome in difficult Labours; and its ſometimes ſtopping the Menſes, is owing to that Quality, by which it dries and conſumes the Serum. A Pill of it, as large as a Bean, is uſed for inveterate Coughs, Orthopnœas, Pains of the Sides and Thorax, Fluxes, and Dyſenteries. But in theſe Caſes, according to *Caſpar Hoffman*, it is not beneficial, in conſequence of an aſtringent Quality, which it is by no means poſſeſſed of; but by means of its drying up, and digeſting, the acrid and corroſive Humours. Myrrh, alſo, prevents Rigors, preceding febrile Paroxyſms, if the Bulk of a Bean of it is drank in Water, with a ſufficient Quantity of Pepper. When it is put under the Tongue, and the Juice of it ſwallow'd, it removes a Roughneſs of the Arteria Aſpera, and an Hoarſeneſs of the Voice. By its Bitterneſs it kills Worms, and is, by ſome, chewed for a diſagreeable Breath. It is uſed by way of Ointment, in Conjunction with Liquid Alum, for Pains of the Arm-pits. When incorporated with Wine and Oil, it corroborates the Gums and Teeth. It conglutinates Wounds of the Head, when ſprinkled upon them. When mixed up with the Fleſh of Snails, it cures Contuſions of the Ears, and denudated Bones. When uſed by way of Ointment, in Conjunction with Poppy-juice, Caſtor, and Glaucium, it cures Inflammations, and Diſcharges of Pus from the Ears. When made into an Ointment, with Caſſia and Honey, it cures *Vari*; and, when mixed with Vinegar, removes an Impetigo. An Ointment prepared of Myrrh, Ladanum, Wine, and Oil of Myrtle, prevents the Falling off of the Hairs. It allays long-continued Defluxions from the Head, if applied by way of Ointment, with a Feather to the Noſtrils. It fills up Ulcers of the Eyes, and removes thoſe Specks and Aſperities, which darken the Pupil of the Eye.

Moſt of theſe Effects are produced by the drying and abſtergent Quality of Myrrh; for which Reaſon it was greatly uſed by the Antients for the Preſervation of dead Bodies. But, according to *John Bauhine*, Myrrh is not beneficial to all Patients, ſince, according to *Galen*, the Smell of it, excites an Head-ach in ſome Perſons, before perfectly ſound. And *Galen*, according to *Caſpar Hoffman*, 5. *Simpl.* 19. reckons Myrrh among thoſe Subſtances, which, when liberally uſed, in conſequence of their too great Humidity, render ſome mad, and deſtroy others.

Some Moderns affirm, that Myrrh is beneficial in Dropſies; and *Matthiolus*, for that Purpoſe, orders it to be drank with Agrimony.

Schroder informs us, that, externally applied, it is beneficial in St. *Antony*'s Fire, a Gangrene, Tumors, old and recent Wounds, eſpecially of the Head, for which Reaſon it is ſo frequently uſed in adheſive Plaiſters.

The *Bœotian* Myrrh of *Dioſcorides*, which he ſays is the Root of a certain Tree growing in *Bœotia*, is of a drying emollient Nature; and, properly uſed in Fumigations, is not now known. The *Egyptians* are, at preſent, ſaid to chew Myrrh in the time of the Plague. *Raii Hiſt. Plant.*

STACTE. Offic. J. B. 1. 315. C. B. P. 501. Raii Hiſt. 2. 1842.

STACTE, according to *Dioſcorides*, is only liquid Myrrh: There were two Manners of collecting it among the Antients; for, as *Pliny* would have it, it either flowed ſpontaneouſly from the Tree, without an Inciſion; or it was expreſſed from the Myrrh, bruiſed with a moderate Quantity of Water, as we are informed by *Dioſcorides* and *Cordus*. It is never found in the Shops. *Dale.*

TINCTURE OF MYRRH.

Put into a Matraſs of fine Myrrh, in Powder, one Pound; of Spirit of Wine, four Pounds: Invert another Glaſs into the Mouth of the Matraſs, to make a double Veſſel; lute the Juncture, and ſet it in a gentle Heat of Sand to extract its Tincture.

This has the Virtues of the Gum, but is ſeldom given inwardly; externally, it is in great Eſteem among our Surgeons, for cleanſing foul Ulcers, and to exfoliate carious Bones.

ANOTHER TINCTURE OF MYRRH.

Take of Myrrh, half an Ounce; Salt of Tartar, two Drams: Mix them well together, and put them into a moiſt Place, for a Week; then add to them eight Ounces of rectified Spirits, and draw out the Tincture by a gentle Heat.

The Salt of Tartar is directed to lie with the Myrrh in a moiſt Place, becauſe the Air diſſolves it ſo into the Body of the Gum, that, when it comes into the Spirit, it much ſooner gives its Tincture, than it otherwiſe would.

COMPOUND TINCTURE OF MYRRH.

Take of the beſt Aloes, and Myrrh, each an Ounce; *French* Brandy, a Pound: Digeſt, and ſtrain for Uſe.

OIL OF MYRRH.

Half fill a Retort with coarſe Myrrh; put it to a Receiver, when in a Sand-furnace; give it Fire, by degrees, to the greateſt Height; when the Fumes ceaſe, let out the Fire, and in the Receiver there will be a fetid Oil, and an acid Spirit.

This is reckoned diaphoretic and diuretic, but is ſeldom preſcribed; externally, it brings bad Ulcers to a kind of Suppuration. Its Doſe is from eight to twenty-four Drops, in any proper Liquor.

MYRRHINE. The Myrtle. See MYRTUS.

MYRRHIS.

The Characters are;

The Petals are unequal, and is the Seed ſtriated, and reſembles the Beak of a Bird.

Boerhaave mentions fifteen Species of this Plant; which are,

1. Myrrhis; perennis; ſemine ſtriato; alba; major; odorata. *Boerh. Ind. alt.* 69. *Myrrhis.* Offic. *Myrrhis magno ſemine, longo, ſulcato.* J. B. 3. 77. Raii Hiſt. 1. 431. *Myrrhis major vel Cicutaria odorata.* C. B. P. 160. Tourn. Inſt. 315. *Myrrhis major vulgaris, ſive Cerefolium majus.* Park. Theat. 935. *Cerefolium magnum ſive Myrrhis.* Ger. Emac. 1039. SWEET CICELY.

The Leaves of ſweet Cicely are large and winged, with ſeveral long Pinnæ on each Side; ſo that they pretty much reſemble the

Leaves

Leaves of Fern, of a pleaſant aromatic Smell; the Stalks are ſomewhat hairy, and chanel'd, beſet with the like Leaves, but ſmaller, bearing on their Tops Umbels of white five-leaved Flowers, which are ſucceeded by pretty large long Seed, deeply furrowed, and having five ſharp Ridges. The Root is thick, and ſpreading with many Fibres. It is ſown in Gardens, and flowers in *May* and *June*. The Leaves and Seed are uſed.

This is more a ſallad Herb than an officinal one; being much of the Nature of Chervil, of hot and thin Parts, and good for cold windy Stomachs; it opens Obſtructions of the Liver and Spleen, and provokes Urine. *Miller's Bot. Off.*

The Leaves have ſome Reſemblance to thoſe of Fern, whence it is called by many *Sweet Fern.*

Myrrhis agrees with Cerefolium, or Chervil, in Temperament and Virtues. The Root, taken in Wine, cures the Bites of Spiders: It purges Women after Childbirth, and provokes the Menſes. Boiled in Honey, and taken, it is good for a Conſumption, and expectorates viſcous Humours. The Decoction of it in Wine, taken two or three times in a Day, is a Preſervative from the Plague; the Decoction of the Herb and Root is uſed to provoke Urine; an Extract is, alſo, made of them againſt the Peſtilence, and the Epilepſy in Children.

The Root of the larger Myrrhis, or *Cicutaria odorata*, C. B. uſed in a Decoction, or any other Form, is a Cure for malignant Diſeaſes; for which Reaſon, ſays *S. Paulus*, I have recourſe to it for want of the Root of the Carline-thiſtle. *Raii H. P.*

2. Myrrhis; annua; ſemine ſtriato, lævi; tuberoſa; nodoſa; coniophyllon. *M. U.* 44. *M. H.* 3. 302. *Cicutaria, bulboſa.* C. B. P. 161. *Bulbocaſtanum, coniophyllon.* Cam. H. 31.

3. Myrrhis; perennis; alba; minor; foliis hirſutis; ſemine ſtriato, aureo. *M. H.* 3. 301. *M. U.* 44. 45. 46. 66.

4. Myrrhis; perennis; alba; minor; foliis hirſutis. *M. H.* 3. 301. *M. U.* 44. 45. 46. 66.

5. Myrrhis; perennis; alba; minor; foliis hirſutiſſimis. *M. H.* 3. 301. *M. U.* 44. 45. 46. 66.

6. Myrrhis; perennis; alba; folio glabriori, viridiori, ſplendente.

7. Myrrhis; annua; glabra; alba; minor. *Ind.* 17.

8. Myrrhis; annua; ſemine ſtriato, lævi. *M. U.* 44. *Chærophyllum ſylveſtre.* C. B. P. 152. *Apium ſylveſtre.* Germ. 1020.

9. Myrrhis; annua; ſemine ſtriato, aſpero, oblongo; nodoſa. *M. U.* 44. 67. *Chærophyllum ſylveſtre, alterum, geniculis tumentibus.* T. 314.

10. Myrrhis; annua; ſemine ſtriato, villoſo, incano. *Tourn. Inſt.* 315. *Boerh. Ind. alt.* 69. *Daucus Creticus.* Offic. *Daucus Creticus verus.* Ger. 874. Emac. 1029. *Daucus Creticus verus Dioſcoridis.* Park. Theat. 896. *Daucus foliis Fœniculi tenuiſſimis.* C. B. P. 150. *Daucus Creticus ſemine hirſuto.* J. B. 3. 56. Raii Hiſt. 1. 463. CARROTS OF CREET, or CANDY CARROT.

The true Daucus has a pretty long thick Root, from which ſpring ſeveral fine winged Fennel-like Leaves, but having the Segments more thinly ſet on the Stalks, of a whitiſh-green Colour: The Stalks grow to be about two Feet high, beſet with the like Leaves, and having on the Tops Umbels of ſmall, white, five-leaved Flowers. The Seed is long, ſlender at both Ends, and ſwelling in the Middle, covered with a white downy Hoarineſs, of a pleaſant Smell, and a ſharp hot Taſte: It grows originally in *Candy*, and other Places in the *Levant*; and flowers in the Summer.

The Seed only is uſed, which is warming, aperient, and uſeful in Diſorders of the Kidneys, as Stone and Strangury, provoking Urine, as, alſo, the Catamenia: It expedites the Birth, and brings away the After-birth: It is, likewiſe, accounted alexipharmic, and good againſt the Bites and Stings of venomous Creatures; and is an Ingredient in Theriaca, and Mithridate. *Miller's Bot. Off.*

The Parts in Uſe are the Seeds, which are oblong, grey, acuminated, hairy, and of a fragrant Smell and Taſte: They are of ſingular Efficacy in uterine Affections, and diuretic. Thus it diſcuſſes Flatulences, and is principally uſed in Obſtructions of the Menſes, Strangulations, and Pains of the Matrix, in the flatulent Colic, Hiccough, Dyſury, inveterate Cough, and the like Diſorders. *Dale* from *Schroder.*

11. Myrrhis; Sicula; elatior; tenuioribus foliis. *M. H.* 3. 302. *Chærophyllum, Siculum, foliis Sophiæ, villoſo ſemine.* T. 314. *Daucus, ſecundus, Siculus, foliis Sophiæ.* Zan. 80.

12. Myrrhis; Orientalis; folio anguſtiori Peucedani; ſemine villoſo. *Ind.* 17. *Daucus Cretenſis verus.* Lob. Ic. 1. 722.

13. Myrrhis; trifolia; Canadenſis; Angelicæ facie. *T.* 315. *Angelica Canadenſis, trifolia, quorumdam.*

14. Myrrhis; folio Angelicæ rugoſo hirſuto. *Chærefolium, folio rugoſo Angelicæ, aromaticum.* Bocc. Muſc. Tab. XIX. *Podagraria hirſuta, Angelicæ folio & odore.* Vaill. Diſc. 44. 45.

15. Myrrhis; foliis Paſtinacæ læte virentibus. *T. C.* 22. *Daucus Paſtinacæ folio ſiclæ.* Zan. 78. *Boerh. Ind. alt. Plant.*

It takes its Name, eſpecially the firſt Species of it, from Myrrh, which it reſembles in Colour and Foliature, and, alſo, in Smell: The Seeds are ſtriated, but, if black, they belong to the *Chærophyllum*, or Chervil.

The firſt has the Taſte of Cloves, is uſed in Sallads, and has the aperitive, exhilarating, diuretic, and demulcent Virtues, of the Clove, and is a very good Antiſcorbutic, the expreſſed Juice being taken in Whey, to the Quantity of ſome Ounces. A Cataplaſm, prepared of the Leaves, is applied to the Perinæum and Oſſa Pubis, for Bruiſes by Falls, and for Contuſions. It is an excellent Remedy, in a Suppreſſion of Urine, from a Spaſm of the Bladder, or its Sphincter, and to provoke the Menſes, or diſcuſs Tumors. The other Species have a reſolvent, maturating, emollient, and ſuppurating Quality, and are, therefore, uſed in maturating Cataplaſms. The Seeds are aromatic, and have a very penetrating, inciding Property, and are recommended by *Helmont* for the Stone: They cure, alſo, flatulent Affections. The firſt Species is diſcutient and reſolvent, and may be exhibited in the Pleuriſy, as, alſo, in the Peripneumony, with Whey and Honey, in order to reſolve the Phlegm: It is, alſo, proper in hot Diſtempers, as well as chronic, which, though ſeeming to imply a Contradiction, is nevertheleſs true: It potently exhilarates, and is, therefore, exhibited to melancholy Patients in Whey.

The *Chærophyllum Hiſpanicum veterum* has its Name, which imports exhilarating Leaves, [from χαίρω, to rejoice, and φύλλον, a Leaf] from its Effects. The former Kind, that is, from the firſt to the fifth, incluſively, have ſomewhat poiſonous, as partaking ſomething of the Nature of the Cicuta; the latter Species, from the ſixth to the fourteenth, and eſpecially the ninth and tenth, are commended for their aromatic Quality. The eleventh is not eaſily diſtinguiſh'd from the Cicuta major, or greater Hemlock; it has Tubera, and is, therefore, called *Bulbocaſtaneum.* The ninth and tenth are ſold promiſcuouſly in the Shops, under the Title of *Daucus Creticus*; in all theſe the Taſte is the ſame. The freſh Leaves of the ninth Species, bruiſed, are made up with Salt and Wine, into the Form of a Cataplaſm, which reſolves all Kinds of ſlow and inflammatory Tumors. The Seed is hairy, and an Ingredient in all Antidotes. It is very good for the Stone in the Bladder, as *Helmont* himſelf, though a Chymiſt, allows, if an Handful thereof be put into a Barrel of Beer: This Beer, being drank, cures all ſcorbutic, arthritic, and nephritic Pains, and is, alſo, good for a Retention of Urine in Children, when it happens, as is often the Caſe, from Weakneſs; as, alſo, for a Cachexy, Phthiſis, Aſthma, and Epilepſy. *Hiſt. Plant. adſcript. Boerhaav.*

MYRRHIS is, alſo, a Name for ſeveral ſorts of CHÆROPHYLLUM.

MYRRHIS SYLVESTRIS. A Name for the *Caucalis; ſylveſtris; folio Chærophylli.*

MYRSINATON. The Name of a Plaiſter, deſcribed by *Paulus Ægineta, Lib.* 7. *Cap.* 17.

MYRSINELÆON. Oil of Myrtles, deſcribed by *Dioſcorides, Lib.* 1. *Cap.* 48.

MYRSINITES. An Epithet for Wine impregnated with Myrtle-branches. *Dioſcorides, Lib.* 5. *Cap.* 137.

MYRTIDANON, μυρτίδανον. By this *Hippocrates* means a round Fruit, or Berry of the Indicum, which the *Perſians*, as he tells us, call Pepper. But in *Dioſcorides, Lib.* 1. *Cap.* 156. it is an Excreſcence, which grows upon, and embraces the Trunk of the Myrtle; and which is more aſtringent than the Myrtle itſelf. *Myrtidanum Vinum* is Wine impregnated with the Berries of the wild Myrtle. *Pliny, Lib.* 14. *Cap.* 16.

MYRTILLUS. A Name for the *Vitis Idæa; foliis oblongis, crenatis; fructu nigricante.*

MYRTITES. A Compoſition of Honey, and the Juice of Myrtle-berries.

MYRTOCHEILIDES, μυρτοχειλίδες. A Name for the Nymphæ of the female Pudenda.

MYRTOCISTUS. *Cluſius* calls a Species of Axyrum by this Name.

MYRTON, μύρτον. The CLITORIS.

MYRTUS.

The Characters are;

The End of the Pedicle paſſes into an Ovary, on the upper Extremity of whoſe Margin grows a ſhort, quinquefid, and ſtellated Calyx. The Flower is roſaceous, pentapetalous, growing on the Ovary within the Calyx, and furniſhed with very numerous Stamina. The Ovary, in the Centre of its Apex, bears a ſmall Placenta, whence it ſhoots forth a long ſlender Tube, and at laſt becomes an umbilicated, tricapſular, oblong Fruit, containing a Multitude of Kidney-ſhaped Seeds.

Boerhaave mentions thirteen Species of this Plant; which are,

1. Myrtus; communis; Italica. *C. B. P.* 468. *Raii Hiſt.* 2. 1502. *Tourn. Inſt. Boerh. Ind. alt.* 2. 255. *Myrtus.* Offic. *Myrtus Bætica ſylveſtris.* Ger. Emac. 1412. Park. Theat. 1454. *Myrtus vulgaris nigra & alba, ſativa, & ſylveſtris.* J. B. 1. 510. COMMON MYRTLE.

This is a little Tree or Buſh, ſhooting forth many ſlender, tough Branches, ſometimes brown, and ſometimes of a reddiſh Colour, on which grow ſmall, oblong, ſharp-pointed, green Leaves, ſet alternately on the Stalks, of a very pleaſant aromatic Smell; among theſe come forth the Flowers, each ſingly on a ſhort Foot-ſtalk, conſiſting of five white, round Leaves,

full of a great many white Stamina, which being fallen, the Calyx becomes a ſmall round, black Berry, with a ſmall Crown on the Top, as big as a Juniper-berry, full of ſmall, white Seeds. It grows wild in *Italy* and *Spain*, and flowers in *Auguſt*; the Leaves are ſometimes, but the Berries moſt generally, uſed.

They are both of them drying and binding, good for a Diarrhœa or Dyſentery, Spitting of Blood, and catarrhous Defluxions upon the Breaſt, the Fluor albus, the Falling down of the Womb, or Fundament, both taken inwardly, and uſed outwardly, in Powders and Injections.

The only officinal Preparation is the Syrupus Myrtinus. *Miller's Bot. Offi.*

This Plant is cultivated in ſome Gardens, and flowers in the Month of *June*; both its Leaves and Berries, which are us'd in the Shops, are of a blackiſh Colour, of an oblong round Form, of an aſtringent Taſte, and a faint and languid Smell. Both of them are refrigerating, drying, and highly aſtringent; the Powder of the Leaves, if ſprinkled on the Axillæ and Groin, prevents their fetid Smell. Theſe Leaves, if the Body is rub'd with them, ſtop immoderate and profuſe Sweats. They, alſo, prove beneficial in catarrhous Members, and Fluxes; they are an excellent Defenſive in an Herpes, heal Putrefactions of the Mouth, ſtop Hæmorrhages of the Noſe, and cure a Polypus. The Berries mitigate Inflammations of the Eyes; and are beneficial in Luxations of the Joints, and Fractures of the Bones. *Dale* from *Schroder*.

2. Myrtus; Balſamica; foliis mali Granatæ. *H. L.*

3. Myrtus; foliis odore Nucis Moſchatæ, cauliculis rubentibus; vulgo odore Citri. *Schuyl. Cat. Hort.* 49.

4. Myrtus; latifolia; Romana. *C. B. P.* 468.

5. Myrtus; latifolia; Bœtica, ſecunda; vel foliis Laurinis confertim naſcentibus. *C. B. P.* 469.

6. Myrtus; anguſtifolia, Bœtica, *C. B. P.* 469.

7. Myrtus; flore pleno. *Corn.* 203.

8. Myrtus; folio Buxi. *Schuyl. Cat. Hort.* 49.

9. Myrtus; minor; vulgaris. *C. B. P.* 469.

10. Myrtus; minor; foliis ex luteo variegatis. *H. L.*

11. Myrtus; foliis minimis & mucronatis. *C. B. P.* 469.

12. Myrtus; foliis mucronatis, ex albo & viridi variegatis; *floſculis rubrocandidis.* H. R. D.

13. Myrtus Zeylanica. See VITIS IDÆA. *Boerh. Ind. alt. Plant.*

Some derive its Name from *Myrrha*, Myrrh, becauſe it ſmells like Myrrh; and others will have it ſo called from an *Athenian* young Woman named *Myrtha*, who was beloved by *Pallas*, and after her Death changed by her into this Tree.

This Tree, as well as all the Myrtles, abounds with oily and balſamic Particles, is ſweet-ſcented, and contains an aſtringent Juice. In Virtues it is much of the Nature of *Caryophyllata*, or Avens; for which Reaſon the tender and freſh Leaves may be infuſed in Water, and taken after the manner of Tea in all thoſe Diſtempers, for which the *Caryophyllata* is recommended. The Leaves, with the Fruit, or Berries, are uſed internally and externally, and are all aſtringent. The Syrup prepared of it, or the Juice of the Berries, are proper in an immoderate Flux of the Menſes and Hæmorrhoids; the Syrup alone is effectual in the Dyſentery and Diarrhœa; the Leaves, boiled, and reduc'd to the Form of a Cataplaſm, are very ſucceſsfully apply'd in Luxations; and its Rob is good in all Diſorders, which require Refrigeration and Aſtringency. *Hiſt. Plant. adſcript. Boerhaav.*

MYRTUS BRABANTICA. A Name for the *Gale*; *Frutex odoratus ſeptemtrionalium.*

MYSIS, *μύσις*. See MYCE.

MYSTERION, *μυστήριον*. The Name of an Antidote mentioned by *Galen*, *L.* 7. *de C. M. S. L. C.* 5.

MYSTRON, *μύστρον*. An *Attic* Meaſure for Liquids, containing two *Cochlearia*, and an half. It is equal to one Forty-eighth of a Pint.

MYTIS, *μύτις*. The black Juice which is found in the Mouth of the Sepia or Cuttle-fiſh. *Galen Exeg.* who alſo informs us, that it is the Name of a Fiſh mention'd by *Hippocrates*.

MYTTOTON, *μυττωτόν*. A kind of *Salmagunda*, made of Garlick, and Onions; ſometimes with an Addition of Cheeſe, Eggs, Oil, and Vinegar. It was eſteemd an ordinary Country-food, and perhaps might be ſomewhat like what *Virgil* means in the ſecond *Eclogue*, when he ſays,

Theſtylus et rapido feſtis meſſoribus æſtu
Allia, ſerpyllumque, herbas contundit olentes.

MYTULUS. Offic. Schonef. Icht. 54. Bellon. de Aquat. 397. Geſn. de Aquat. 277. Rondel. de Aquat. 2. 48. *Mytuli.* Mer. Pin. 193. *Mytuli Rondeletii.* Aldr. de Exang. 512. Liſt. Hiſt. Conch. 3. n. 200. *Muſculus ex cæruleo niger.* Ejuſd. Hiſt. Animal. Ang. 182. *Muſculus.* Bonan. 102. n. 30. THE MUSSEL.

It is taken in our Seas. The Shell is uſeful in Medicine, and is an alcaline Subſtance, of the ſame Virtues with other Shells.

MYURUS, *μύουρος*. An Epithet for a ſort of ſinking Pulſe, when the ſecond Stroke is leſs than the firſt, the third than the ſecond, and ſo on. Of this there are two Kinds; one when the Pulſe ſinks ſo, as never to riſe again; the other, when it returns again, and riſes in ſome degree. Both are eſteem'd of bad Preſage. The Word is derived from *μῦς*, a Mouſe, and *οὐρά*, a Tail. But it is ſometimes wrote *μείουρος*, and then it ſeems to have its Derivation from *μεῖον*, Leſs.

MYXA, *μύξα*. Mucus. But in Botany

MYXA, is a Plant; the Characters of which are,

The Flower is pentapetalous, roſaceous, and cluſter'd. The Ovary in the Bottom of the Calyx becomes a Plum-ſhaped Fruit, ſeated within the Calyx, and containing a ſimple Stone, or elſe three Capſules, furniſhed with a long Pedicle, and in each Capſule a Nucleus, or Kernel.

Boerhaave mentions but one Sort of this Plant; which is,

Myxa. *Boerh. Ind. A.* 2. 246. *Sebeſten.* Offic. *Sebeſtena, Myxa ſive Myxara.* Ger. 1315. Emac. 1499. *Sebeſtina domeſtica.* C. B. P. 446. *Myxas ſive Sebeſten.* Park. Theat. 252. *Myxa domeſtica.* J. B. 198. *Prunus Malabarica fructu racemoſa, calyce excepto.* Raii Hiſt. 2. 1563. THE SEBESTEN.

This is a ſweet Fruit, in Shape like one of our Plums, of a black Colour on the Outſide, having a flattiſh wrinkled Stone: It is the Fruit of a Tree like a Plum-tree, that grows in *Egypt* and *Aſſyria*, whence they uſed formerly to be brought; but, for theſe many Years, they have been quite Strangers to our Shops.

They are accounted cooling and moiſtening, and uſeful againſt ſharp, thin Defluxions upon the Lungs, helping Coughs and Catarrhs, and taking off the Heat of Urine. *Miller's Bot. Off.*

This Plant is produced in *Egypt* and *Aſia*, and flouriſhes in the Spring. Its Fruit, which is the only Part us'd, is ripe in the Autumn, reſembles a common Prune, is of a blackiſh Colour; and under a carnous, ſweet, and honeyiſh Pulp, includes a Kernel. Sebeſtens are in an intermediate Degree between Hot and Cold: They, alſo, moiſten, ſoften, and obtund the Acrimony of the Humours. They are principally us'd in acrid Catarrhs, acrid Urine, bilious Fevers, and Obſtructions of the Belly. In a Word, as in Figure, ſo in Virtues, they reſemble Damſons. *Dale* from *Schroder*.

MYXINOS, *μύξινος*. The Name of a ſort of Mullet.

MYXORRHOOS, *μυξόῤῥοος*. Abounding with Mucus.

MYXOSARCOMA. A ſort of Tumor; the ſame as MUCOCARNEUS.

MYXOTER, *μυξωτήρ*. The ſame as MYCTER; the Noſe.